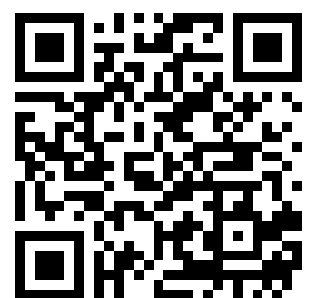

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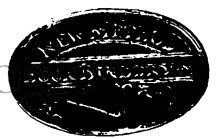
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THE
JOURNAL
OF
THE AMERICAN INSTITUTE OF
ARCHITECTS

The Agenda for Architects

*A Memorandum of
Procedure and
Progress*

Issued as a Supplement
to this number and
recommended to the
serious attention
of all architects
as a new docu-
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JANUARY
1921

JOURNAL OF THE
AMERICAN INSTITUTE OF
ARCHITECTS

Volume IX

JANUARY, 1921

Number 1

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1918 City
812,109 square feet of
Barrett Specification Roofs.

Photo at right.
1917 City
815,986 square feet of
Barrett Specification Roofs.

Note that the 1918 City shown at the top of the page exceeded the Five Year City and almost doubled the Nine Year City.



After the photograph by G. H. Van Anda

THE UNION THEOLOGICAL SEMINARY: From the Campus of Columbia University

JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

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No. 1

Shadows and Straws

A COMPETITION, to some architects, is like the smell of smoke to a charger. To others, especially the young, it looms a shining magic gate, beyond which lies the flowery field of established practice. With age, no matter what the degree of prosperity and oftentimes in prosperity, no matter what the age, the competition has no power to thrill. Age and prosperity stale many things. Thus there are many minds on the subject of how competitions should or should not be regulated. Even the man who never entered one and never will has a point of view and competitions may always be relied upon as a faithful and hardy, albeit a thorny, perennial.

This year the Competition Committee of the Institute is studying the exceptions to the Competition Code suggested at the last convention by the delegates from the Boston Chapter, which was as follows:

The Institute recognizes the right of the Owner to purchase unlimited professional service on a basis of adequate remuneration and control. No competition, therefore, shall be held to exist where two or more architects prepare sketches at the same time and in the same manner for the same project, provided the following conditions are complied with:

The Owner shall employ a professional advisor. He shall be an architect of the highest standing, and his selection shall be the Owner's first step. The professional advisor shall see that each architect employed be informed as to all the others, and the remuneration for the preliminary service so rendered be uniform for all and agreed upon by the Owner, and that all the architects so employed are satisfactory and adequate.

The professional advisor shall see that all drawings requested of the architects be on the same basis and presented in the same manner, and he shall act in an advisory capacity only, the Owner not being obliged to accept the recommendation of the advisor in making the final selection.

THE NEW YORK CHAPTER began its new luncheon meetings—an experiment in itself of much more than passing interest (there must have been seventy-five

men present), with a discussion of the above clause. The discussion was opened by Mr. Corbett, who explained that while the competition *per se* did not interest him as much as formerly, (as he is not old, he must be prosperous!) it was so closely related to the vital problem of the young men and their relation to the Institute that it could not be ignored. In order to find out what younger men really felt he reported that he had recently dined with a group of twelve, all foreign trained, all in active practice, all men who normally should be in the Institute. Why not? And so he asked the twelve why not. The first replied that the Institute was dead from the neck up. The second confessed that he had attended one chapter meeting of fifteen men who had nothing to say. He was bored to death, but prepared to try again, until he overheard the President remark that it was the best meeting in years. A third replied that in the joy and ecstasy of having landed his first commission he was later dismayed on finding that a member of the Institute had offered to handle the job at two per cent less. (Mr. Untermeyer please note.) A fourth, to whom he explained as a reason for joining, that the Institute did a great and noble work, bluntly inquired of Mr. Corbett whether he belonged to the Salvation Army, which also did a great and noble work. But Mr. Corbett was quite evidently the master of the occasion for he concluded his address by reporting that he had brought with him to the meeting a baker's dozen of applicants for membership. Incidentally he expressed his faith in the young men—the Institute of to-morrow—believing that they meant to be fair and straight but that they must have a chance to show what they could do, independently of social connections. Generally, many of them were convinced that the Institute's competition regulations, to which membership would bind them, were handicaps which they must carry in the struggle to establish a practice. Yet, as they were all beneficiaries of the Institute so they belonged inside and not outside.

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Mr. Magonigle thought the trouble was that the Chapter, and indeed the Institute, had lost the way and had lost their sense of proportion; that they had come to deal with architecture purely as a profession and not at all as an art; that after the Code of Ethics, the Code of Competition, and The Schedule of Charges had been compiled and machinery established for putting them into effect, the professional side of the practice was covered except for an occasional inquiry and a comparison of these regulations with existing conditions to see whether they needed adjustment or modification, but that for architecture as an art the field of discussion was boundless and there are no horizons. He cited the flourishing meetings of the Architectural League devoted to art as proof of his contention that men would congregate where the artistic problems of the profession were discussed.

Perhaps, however, it ought to be pointed out that the "occasional inquiry" is not a thing that can be so lightly dismissed. It is no doubt true that most architects would prefer to practice an art rather than a profession, but amid the vicissitudes of the present business arrangement, it is somewhat difficult of accomplishment. Professional problems are very annoying. No one likes them very much. But in admitting the necessity of establishing certain rules and of occasionally comparing them with existing conditions, the ground is sown and planted for the persistent blooming of these annoying flora. Someone has to make the comparison. The profession is unwilling to leave it to any individual or group. Therefore, a vehicle has to be provided and discussion made possible. The functions of the Institute are determined by its members, and not by any abstract losing of the way, seems a fair conclusion.

MR. ARTHUR RICE presented the viewpoint of the Boston Chapter in an admirable manner. He was not concerned with dogma but frankly exposed what he believed to be, from the standpoint of the business man at least, an intolerable situation. That is to say, an owner could not today employ several architects to study his problem simultaneously, even though he compensated them adequately, without in effect setting up a competition in conflict with the Institute's regulations. And the business man didn't like it because he is used to buying in the market as he pleases. The restriction makes him take an unfortunate view of the profession, said Mr. Rice, who pointed out that morally there seemed to be no reason why a man should not buy service from three architects at the same time or why three architects should not sell service to the same man at the same time. The Institute however, penalizes any of its members who take part in this kind of a competition.

Mr. Rice felt that the oft-made comparison with other professions did not apply. It is true, he said,

that one does not deal with lawyers or doctors in this manner but he felt that a building operation was quite a different thing. (One wonders.) Thus there seemed to be a definite existing evil and his plea was really first for its recognition and then for a willingness to seek the cure. Under the modification suggested an owner might sit down with two, three, or more architects and a professional adviser and enjoy the advantage of an intimate discussion of his problem while the professional adviser would supervise the details, as recited in the resolution. Then the competitors would go back to work, cease consulting with the owner, and finally turn in their solutions. This arrangement would prevent the owner from unconsciously giving the ideas of one architect to another, as is easily possible when a half dozen men are continually showing sketches and consulting with the owner; and it certainly must be admitted that an architect's ideas are the only things he has to sell.

The difficulty exists, said Mr. Rice, and it ought to be cleared up, in doing which the Boston Chapter does not wish to tear down the Competition Code. And the trouble does not come from the owners, added Mr. Rice, but from the architects, who are too careless to safeguard their own standing. He begged for a full and frank discussion that the Institute Committee might have something tangible to lay before the next convention.

SUPPORTING Mr. Rice's contention that a definite difficulty existed, Mr. Ewing pointed out that if it was professionally irreproachable when a client chose to employ any number of architects one after another, on the same problem, why could they not be worked abreast instead of tandem?

Mr. Swartwout remarked that the proposed addition to the Code did away with three things hitherto held as the main safeguards to a competition— anonymity, mandatory award to the winner, and the decision left in the hands of a jury, of which one member at least was an architect. Mr. W. S. Post recalled the old-time competition where in his belief absence of anonymity worked no hardships. It was political conditions, he thought, which had led to the insistence on anonymity, which also had been demanded by a great number of men returning from the Beaux Arts school in Paris. They wished to insure a consideration of their drawings upon their merits in order the more quickly and successfully to compete against the prestige of the established practitioner. Mr. Magonigle feared that any system of modifying competition practice might have the effect of making the exception prove the rule. Keep to the uniform code, said he, and do not try to fill one with special privileges.

Mr. Butler supported Mr. Swartwout in believing

SHADOWS AND STRAWS

that anonymity was the real key to a fair competition. He expressed his contempt of the men who declined to enter an unregulated competition with the excuse that the Institute forbade it, and reminded the meeting that the present Code was created to put an end to an intolerable condition, as every architect who had experienced the old system knew.

Mr. Litchfield suggested the creation of a Board of Appeals in each Chapter to which should be given the power of simplifying procedure when necessary. Mr. Magonigle offered the comment that the competition program is not sufficiently advertised and that more information about it, given to architects would help to clarify the situation. Mr. Swartwout deplored the omission of the fixed percentage charge from the present competition program and believed that in general it would be unfortunate to make any change. Mr. Murchison suggested that competition were clearly divisible as between public and private work and that two entirely different codes were required.

On a sense of the meeting vote, eighteen supported the general principles of the suggested modification, and nineteen were opposed. The hour was late and many men had returned to their offices. A special committee was appointed to consider the question and report at the next meeting, giving special attention to the conflict between "tandem and abreast."

A LISTENER might have asked several questions. What did the young men think at the end of the discussion? Really, consideration of them seemed to have been lost to sight. The talk revolved more or less around the point of view of the established practitioner. Why were there no young men to speak for themselves?

Also, one could hardly escape the impression that the man behind the scenes was really that sacred figure now known as the business man. He is the one who spurns anonymity, and resents being told "how to run his business." Very likely. But is there much of anything to prove that this sacred figure is entitled to continue running the world? What is the source of his sacredness? Might not that be a point worth examining into? Would not architecture be better without him than with him? Perhaps nothing could be done about it after his imperial toga had been found to be all baubles and cheese-cloth, but if nothing could be done it would be well to know it and save further worry.

IT IS INTERESTING to turn from these things to the newspaper point of view, and to look through the spectacles of a lawyer, who, as Mr. Ackerman points out, seems more bent upon finding a human victim than upon discovering what is really the matter. On the morning after the meeting of the New York

Chapter, the *World* headlined the Institute as a trust, and took a column and more in which to point out its iniquitous methods, as follows (we quote from the *World's* account of the investigation of the building industry):

One trust, it was charged, is composed of the most prominent architects in the country, operating through the American Institute of Architects, which has its headquarters in Washington.

The complaint against the architects is not so much that they are extortionate in their fees as that by means of a "code of professional practice," or "code of ethics," they prevent young men entering the profession from making a livelihood. It is asserted that the code forces all architects to charge identical fees. The result of this is that a builder goes to experienced men in the larger firms, rather than to the younger men, as the cost is the same.

The charge against the American Institute of Architects created something of a sensation, as for half a century the organization has borne the highest reputation. There is not an architect of standing in the entire country who does not belong to it, and who is not proud of the fact. Membership is considered a mark of integrity and distinction, and those entering the field consider joining a necessity.

Samuel Untermeyer, counsel to the committee, undertook to show how the Institute works to the detriment of building. He placed on the stand Burt L. Fenner, a member of the firm of McKim, Mead & White, and President of the New York Chapter of the Institute. This chapter, Mr. Fenner said, comprises about 250 architects, and includes the most prominent members of the profession in the city.

It developed immediately that the Institute issues a document which it calls the "Professional Practice of Architects," and which deals with the fees to be charged by all members.

"What is the per cent charged for reconstruction in the City of New York?" asked Mr. Untermeyer.

"Generally speaking it is 6 per cent," replied the witness.

"And in country work?"

"That varies all the way from 5 to 15 per cent., but these rates are not mandatory."

"We'll see about that," observed the counsel. "Let me read you something from this Professional Practice of Architects, or code of ethics. It says, 'The architect's professional services consist of necessary conferences, preparation of preliminary studies, &c., for which, except as herein mentioned, the minimum charge, based on the total cost of work completed, is 6 per cent.' That is pretty definite, isn't it?"

"Yes," agreed Mr. Fenner. "It is what the architect believes he should receive for his services."

"And this is supplied to the members of the forty chapters throughout the country?"

"Yes."

"It also says here that it is proper to make a charge higher than 6 per cent?"

"Yes. It is necessary in order to keep out of the poorhouse."

"I don't think we will discuss the poorhouse. Now, it says that an architect is entitled to compensation for articles purchased under his direction, even though not

designed by him. Is that another of the rules of the code of ethics?"

"No, I have the canons of the ethics here in a separate document."

Mr. Untermeyer read other rules and showed that the last revision had been made in 1908 when the cost of construction was much less than at present. In fact, the witness himself agreed that the increase had been all of 200 per cent.

"But the fees of architects remain the same, do they not?" asked the counsel. "That is, you have not decreased your per cent in fees?"

"That is correct," was the response.

"But you get more money, as you are paid according to the cost of the work?"

"The amount of the fee has increased in proportion."

The witness said he thought this fair, as architects' expenses have gone up with other things and building takes longer than formerly. He thought the 6 per cent. rate fair also, and he insisted that many firms cut under the percentage established as proper.

"But what chance has a young man got in your profession as against the great established firms like your own?" Mr. Untermeyer asked.

"The young man, in many cases," responded Mr. Fenner, "is paying no attention whatever to the rate which the Institute feels is a fair rate."

"Don't you know as a matter of fact that architects of the city do not consider it professional for men to do work below this rate?"

"I know the opposite is true."

"I have discussed it with a great many men and I know that it is given as the reason for not reducing the rate. They say it is an unprofessional thing and it brings upon them the contempt and disfavor of their more important brethren. You yourself have said that the 6 per cent. rule is generally observed."

"I have said that this is the rate most architects charge."

Mr. Untermeyer tried to get the witness to say he would aid in abrogating the rule, but he would not. He insisted

it was best for the profession and that young men got along well enough under it.

UNQUESTIONABLY the *World* is rendering a great service in aiding to expose the corruption of the building industry in its town, but it gets excited and so does Mr. Untermeyer. There are men who may hide behind the Schedule of Charges in order to defend an unreasonable fee, but no member of the Institute believes the Schedule to be mandatory.

The *New York Globe* put the matter very well in an editorial, as follows:

Mr. Untermeyer's recent thrust at the American Institute of Architects had its distinctly humorous aspect. A 6 per cent fee, if mentioned as customary in an official bulletin of the Institute, represents in Mr. Untermeyer's opinion a kind of price agreement calculated to make for exorbitant costs in housing. Mr. Fenner president of the New York Chapter, denied that the rate was mandatory or always observed, but he had no need to make a defense. Mr. Untermeyer attacking the architects for housing abuses was like Mr. Gompers accusing W. Z. Foster of Bourbonism. The Lookwood counsel has taken an important part in the fight for better housing, but the New York architects were in it before him. They were back of the programme adopted by the governor's housing committee. Through their *JOURNAL* they have developed the idea that housing should be built for use instead of for speculation. Individual architects influential with the official body have advocated community planning and cooperative housing. Although they could not get evidence against Thirty-third Street, they gave their private opinion of it freely. No group has done so much, in fact, to create the public sentiment which has made the Lookwood hearing possible. They can afford to smile at Mr. Untermeyer's suggesting that in charging \$600 for the planning and constructional supervision of a \$10,000 building they are taking an unfair profit.

The Blot on the Escutcheon—II

By FREDERICK L. ACKERMAN

The Investigation*

THUS FAR the investigation has engaged itself with the more or less obvious; it has not as yet penetrated very far into the jungle of collusive action and cross purpose which, it cannot be denied, is a part of the present system of production. Certain facts have been brought out which illuminate that splendid spirit of cooperative ownership which exists under this system, between building employers and employees; between various employee groups; and also between those supplying building materials and everybody who uses or needs buildings. Something likewise has been revealed concerning Government of the people, by the people, etc., when

*The story of the investigation into building conditions in New York City was begun in *THE JOURNAL* for December.

administered by politicians under the beneficent guidance of hucksters. The matter of credit and the fraternity of lenders has not been looked into as yet.

More than a month of testimony may not be reduced to a few words, but it is possible to block in the broad masses of what has been revealed. There need be no great doubt that there are stone rings, plumbing rings, rings in about all of the thirty odd building trades. There are clearing houses with modern up-to-date systems of card indexing, keeping a watchful eye upon the matter of competitive bidding to insure that it is not competitive. And there is that very vexing and complex institution—the Building Trades Council—or Brindell. Too much altogether to set out in detail—but something may be gained from a few fragments of testimony.

THE BLOT ON THE ESCUTCHEON

The Master Builders

The nature of the relationship as between Brindell, President of the Building Trades Council, was disclosed in the testimony of November 12th. Some considerable light was shed upon the function of the modern "Master Builders" and the modern "Business Agent" and how they go to their work.

Mr. Robertson, of Todd, Irons & Robertson, builders of the Cunard Building and the Cunard Piers is testifying. Following the story of his first satisfactory meeting with Brindell, which resulted in ending a strike on the Cunard Building in two and a half hours we are taken behind the scenes:

Q. What did he (Brindell) say to you then?

A. We just talked about general conditions, that's all, and I mentioned the fact that we had this—I realized that Brindell was quite a power in the labor world and that I wanted to get his friendship, and I mentioned the fact that we had this big dock job coming along and invited him up to look at the plans. I knew he was President of Dock Builders Union, or high official in the Dock Builders Union, who would be very much interested in that job, and I invited him up to the office to see the plans and take lunch with me the following week.

Q. Did he say anything to you at that time other than you have told us?

A. We discussed the general conditions of the job, how much money was lost on account of the strike condition on the job, and how it would be a wonderful thing if a strike insurance could be got, so there would not be any strike on the job.

Q. Who spoke of "strike insurance?"

A. I think that was a term he used.

Q. Tell us in what connection he used the term "strike insurance," because that is new.

A. Well, insurance against any labor trouble on the job.

Q. He asked you if you would not want strike insurance?

A. Yes, if we could get strike insurance it would be a good thing to have.

Q. When he asked you if you would not want strike insurance, what did you say?

A. I said it would be a mighty nice thing to have. . . .

I said, that it would be a very nice thing to get matters straightened out so that we could get his help and advice and his cooperation in settling these labor questions. I asked what sort of arrangement I could make and he quoted the sum of \$50,000.

Q. Said he wanted \$50,000?

A. Yes, sir.

Q. For doing what—strike insurance?

A. Well, that is the term, I suppose, sir.

Q. That is what he called it?

A. Yes, sir.

Of course there was a great deal of talk about terms; but the matter was finally settled by leaving the first "insurance" payment on the seat of Brindell's automobile.

The second payment also was made after a visit to the

Hotel Commodore, where an appointment had been made by telephone. Mr. Robertson was, he said, getting quite a lot of information out of Brindell.

Q. About what?

A. In regard to prices of labor.

Q. In regard to labor?

A. Yes, sir.

Q. What kind of information?

A. I wanted to know what was going to happen and whether there was going to be a raise in wages and whether they were planning to make any further demands. . . .

Q. What took place then?

A. We had lunch together, and practically the same thing happened again, and I made another payment to him.

Q. What was practically the same thing?

A. We had lunch together and after lunch we went in an automobile around the block to my office, and just before I got out to go to the office I left some money on the seat of the automobile, amounting to \$6,149.

Q. Why did you make it such an odd amount?

A. I didn't want to have these even amounts—it was all handled through our bookkeeping accounts by our bookkeeper, and I didn't want the even amounts to go through. . . .

Q. And you are going to stay shy?

A. I hope so. I feel this way about it, Mr. Untermeyer. I made a certain agreement with Mr. Brindell to pay him certain money. Mr. Brindell has been of a great deal of assistance to me in doing the work.

Q. You mean in preventing strikes?

A. No, giving us information as to how to run the work.

Q. Giving you information as to when it was going to be raised in price?

A. Yes, sir.

Equal Opportunity and Free Bargaining

The critic who speaks disparagingly of the ancient and time-worn principles of equal opportunity and free bargaining—who says that these principles (habits of thought) are to be rated as make-believe under modern conditions of large scale finance, machine industry and the world market—is held suspect, particularly if he makes plain just what he means.

In point of popular apprehension free competition stands as the cyclopean foundation which alone will support industrial production, sustain culture and insure progress. It is a good old (theoretical) business principle which has latterly been prescribed by captains of industry and finance and by Chambers of Commerce as a sort of a tonic for labor. This prescription ordinarily reads: The open shop for yours."

But it seems that the use of this prescription is limited—as to its application; it is prescribed for workmen; but those who prescribe it evidently have little regard for its value—at least they do not take what they prescribe, as this bit of testimony shows:

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Q. That International Association covers, doesn't it, every man engaged in the business of quarrying limestone, of contracting for limestone, cutting limestone, throughout the length and breadth of this land?

A. I think so.

Q. Each set of men engaged in the limestone business, having their yards and factories where they cut the stone and contracting for its erection, they are in local associations, are they not?

A. Yes.

Q. And all those local associations are in this National Association, that also included the quarrymen, the owners of the quarries?

A. Yes.

Q. So that the whole trade in limestone is a group, isn't it?

A. It is.

Q. One vise and grip.

A. (No answer.)

Q. Now the local associations pay into the national association on the basis of their entire output, don't they?

A. Yes.

Q. And you pay into the local association on the basis of your entire output?

A. Yes.

Q. And then you have another inside group called the Hettrick group, inside your local association, in which you pay again?

A. Yes.

Q. And it all comes out of the people who want to build property, doesn't it?

A. Yes.

Q. Inside the Hettrick group of fifteen members there is your little group of nine on the Courthouse, isn't there?

A. There are nine men who wanted to assist me.

Q. Now, are there any more subdivisions for which the public is asked to pay?

A. No.

Reading another part of the by-laws Mr. Untermeyer asked whether it meant that if a man bid on a job and all the bids were rejected by the architect, the contractor could not bid again.

"I think it works that way," replied Hanlein.

Q. You know it reads that way, don't you?

A. Yes.

Q. And the local associations have the same regulations, haven't they?

A. Yes, sir.

Q. And that is what is called the Code of Practice?

A. Yes, sir.

Q. And that means, doesn't it, that if an owner of a building asks two men to estimate on it, and he does not like their estimates, and he throws them out, you cannot get a man in your business to bid again?

A. That is the way it is.

Q. He has got to take one of those two, no matter what he thinks about them?

A. Yes, sir.

Q. Or not put up his building?

A. Yes.

Mr. White, of the George A. Fuller Company, said that a

builder could not buy sand and gravel from separate dealers. Sand, gravel and broken stone have to be bought from the same dealer, he said.

The witness then took up estimates obtained on the Chelsea Exchange Bank, which was being altered. Fourteen estimates were obtained from dealers in brick. All but one dealer estimated at \$22.70 a thousand. This was on Sept. 21, 1920. The last dealer put in an estimate of \$22.

Fourteen estimates were obtained from cement dealers. All were uniform. The price was \$5.10 a barrel at the site. The cement concerns from whom the estimates were obtained were scattered all over the eastern part of the country.

It was here that White said that if he wanted to buy cement in Newark or Philadelphia for a building in New York he could not do so at any price. He could only go to a dealer, and that one not outside the district.

Q. So that net work of combination among the cement people encircles the whole country, does it, and all the localities?

A. Yes, sir; the national organization of them controls the price of cement in the whole country.

Q. Is that the cement combination which the Federal Government has been for a year or more gently tapping with its finger-tips in the form of a civil suit in the Federal Court?

A. I think is is, sir.

Q. Have you heard of its having gotten anywhere up to date?

A. No, sir.

Q. Yave you heard of the suit ever having been tried?

A. I have not, sir.

Q. Have you any idea whether the scheme will be at all different by the time they get to trial from the one when they started the suit?

A. I have not, sir.

Q. You know that it isn't difficult to switch these combination plans, don't you?

A. I would infer that it would not be impossible.

Q. So that by the time you get to trial in a civil case the manufacturer bobs up with another plan than the one that is in the suit?

A. Yes, sir.

Price Competition

Any disparaging remark regarding the value of that system of production and distribution known as price competition is likely to be set down as an attack upon the very foundation of society. For price competition is viewed as the springs of action. Above all it should rule in the labor market. But as in the case of material supply, in the matter of bidding, it would seem that regard for this highly rated procedure is confined to homiletical discourse rather than action. Witness the procedure in the New York Court House:

Hanlein denied that certain percentages were assigned to the various contractors in the group of eight, but said that "we spoke of what they would do." He was finally forced to admit that there was a discussion as to the percentage of

THE BLOT ON THE ESCUTCHEON

the job that each man wanted and that when the various demands were added up they made 150 per cent, or half as much again as the job called for. He said his own estimate was to take 40 per cent of the work and give the others the remainder.

The witness admitted to Mr. Untermeyer that when it was found that the estimates were above 100 per cent they were not scaled down, but that the estimate he submitted was on the basis of 150 per cent of the work which his associates demanded. Hanlein insisted that the other men merely promised to do whatever work he called on them to do, and if he did not call on them for any work they were not to "get a nickel."

Although a contractor agreeing to take a certain part of the work might stand for a heavy loss, all agreed to go in without knowing the price at which Hanlein was to bid for the job, the witness asserted. Later he said that "there was not going to be any loss," according to the expectations of the contractors. He was unable, he said, to tell what the profit on the Court House contract was to have been, for he never knew what it would cost him. Mr. Untermeyer called this an extraordinary arrangement and Hanlein said it was.

Q. Had you ever done anything for these eight concerns for which they were to make such an arrangement as you have outlined?

A. I didn't.

Q. They were under no obligation to you?

A. No.

Q. They were in business for their health or for money, which?

A. They were in business for money.

Q. And this you thought would bring them money, if you chose to give them any part of the contract, and if you didn't, if it was a loss, they would lose money; did you ever hear of such an arrangement before in all your life?

A. No, sir.

Q. Do you ever expect to hear of one like it again?

A. (No answer.)

The Business Agent

Brindell's relation to labor has not been made clear by direct evidence; laborers have not been called upon to testify. But something may be gleaned from the testimony as it bears upon this point. Brindell is a sort of lineal descendent of "Sam" Parks of New York and "Skinney" Madden of Chicago. "Walking delegate" has become "business agent." Evidently "delegate" failed to express the increasing power resident in those who were able to manipulate labor to their own advantage. "Business Agent" may be far fetched as a descriptive term; but it has this merit: it conveys an idea of that impersonal outlook which characterizes those who deal in commodities in the interest of price and of profit to themselves only. Besides, in point of magnitude, the deals, negotiations, and methods, were of such a character as to call for the adoption of a new terminology. And for this purpose "business" is no doubt a better word to use.

Of course the situation is complicated by virtue of the fact that in this case the commodity was articulate; it lacked something of that businesslike impersonal outlook of its own business agent. But labor is viewed as a commodity and upon this concept turns the tale of the business agent—Brindell. How Brindell acquired his power over labor is a long story; but it is hardly to be denied that the trading attitude of the old-line officials in the conservative unions counted for much; it was out of this attitude that he built his machine.*

What is significant, as throwing light upon the attitude of all of those—architects, builders, material men, and labor group—who were fairly well informed as to what was going on, is the fact that the only open protest and revolt came from a few small groups of so-called radical unions. The only thanks which these unions received was expressed in employers' advertisements running to brand those in revolt as "ultra-radical" and "un-American." This was no doubt due to the fact that these same unions had proposed a building guild for the production of houses without profit. That they had endeavored to break Brindell's alliance with the contractors was not sufficient to count in their favor. This is as much as need be stated at this time—pending further developments.

But the reporter remains puzzled, particularly regarding the news reports and editorial comments. He does not understand so much excitement about "restraint of trade;" and the general attitude toward Brindell is baffling. He reads the financial journals, the market dealings; he can find no evidence anywhere to indicate that production for a profit can be other than restraint of trade. Under a system of price competition production of everything *must be controlled in the interest of price.*

He read columns of argument which run to rationalize that labor is a commodity to be bid for in the open market; and that conditions will not be "normal" until there is a "labor surplus." But if labor is a commodity, why all this fuss about manipulating it in the interest of private profit? The reporter wants to know how the "business agent's" action, in demanding a bonus for the delivery of labor, differs, for example, from demanding a bonus in the case of a loan, a mortgage, or in forestalling the calling of a loan? Or, how is such action related to the issuance of credit at a fancy price to those who would hold cotton or sugar or what not in storage until the community needs it so badly as to pay the price? Possibly all this will be cleared up when Mr. Untermeyer penetrates further into the jungle—and possibly it may not.

*For a detailed statement of how Brindell came to his power, and the conflict between the labor groups—see "The Building Scandal," by George Soule, *The Nation*, Nov. 17, 1920.

Aerial Photography and Architecture

By PAUL P. CRET

MUCH HAS already been written about aerial photography and the service it rendered during the war. The origin of this service was the necessity of knowing the system of defenses of the enemy accurately enough to make a plan from which firing data was calculable. Its development gave rise to the most ingenious deductions, such as locating the position of batteries, of machine gun nests, of billeting areas, dugouts, points of passage of the supplies or reserves, and ascertaining plans of the enemy from work going on back of the lines. However, it is not the military side of the question that it is here proposed to outline. The value of aerial photography is no longer under discussion in the army. It remains to be seen what use can be made in peace time of the experience gained in the last six years.

A technique has been evolved, observers have been trained, special cameras designed and perfected. Are all these efforts to be wasted, now that stern necessity is no longer urging us? From several countries, answers to this question came recently, showing that there are some attempts to work out applications of this newborn art; and to speak only of those of interest to our profession, I can mention the project presented to the trustees of the Carnegie Foundation by Messrs. Smith and Krimmel, formerly of the United States aerial service, graduates in architecture of the University of Pennsylvania; and a recent study, "L'Aviation au Travail," published in "L'Architecture" by Mr. Henry Balleyguier, administrator of the Compagnie Aérienne Française.

Aerial Photographs as Documents

What interest have architects in aerial photography? We will point out two distinct applications ready for immediate use:

1. A new method of representation of executed work, improving our supply of information on some aspects of architectural work.

2. A new process of preparing maps, surveys, perspective views, used chiefly in city planning.

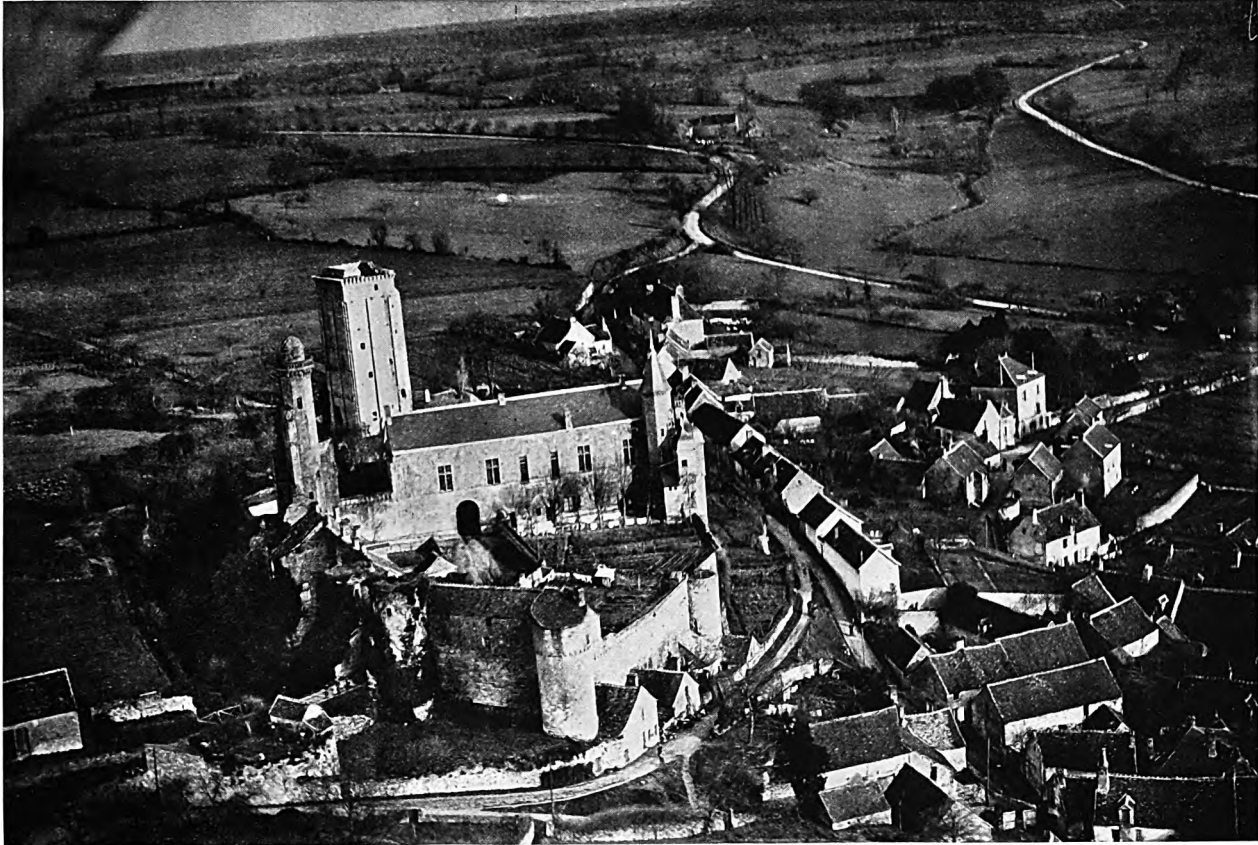
All architectural work, like all other arts and sciences, is based on the study of past efforts to which we are endeavoring to add our contribution to suit new conditions, new methods of construction, new esthetic requirements. We need, therefore, to gather information on the architecture of the past and on contemporary development. As early as the XIIIth century, Villard de Honnecourt was sketching, in his notebook, churches, statues, animals, details of decorations. The Renaissance piously gathered drawings of Roman monuments. Then books became more and more num-

erous, more and more accurate in each century. Photography, and the processes of printing photographic data, at the end of the XIXth century, gave a very valuable addition to the architectural drawings in use up to that time. Although it does not replace geometrical drawing as a document, it supplements it in the most useful way. It is such an extension and betterment of our methods as was brought by photography that we expect from aerial photography.

Terrestrial photographs, as they were called during the war, show well enough one element only of architecture, the elevation. They are powerless to show the plan on account of perspective distortion. Take, for instance, a garden: That which gives it artistic value, the proportioning of its parts, the shape of its paths, the form of its pools or lawns, is almost lost to the student of photographs. He has then to resort to the geometrical plan, usually lifeless and without color values and shadows, which are just as important an element in a plan as in elevation. In the same way, a group of buildings the picturesque arrangement of an irregular plan, could not be adequately photographed until the airplane came. Take for instance the view of Le Grand Pressigny, a manor built in the XVIth century in the walled enclosure of a feudal castle. Many terrestrial photographs would be required to attempt (and not altogether successfully) to convey an idea of the irregularly shaped castle, ruined in part, its towers dismantled, but its donjon still standing, of the court filled and tilled into an orchard, of the village pressing its houses at the foot of the walls, and of the aspect of the surrounding country. This single picture tells the whole story.

A chateau, typical of so many in France, is that of the Chateau de l'Orfraise. From the aerial view we see at a glance the transformation of the primitive castle in the XVIth and XVIIth centuries; the plan of the formal garden laid as a decorative carpet in front of the house; the entrance court, and the kitchen garden. A horizontal photograph would give us the exact layout of this garden and a survey of the estate. The photograph taken from the airplane gives the two kinds of documents; an absolute plan, usually taken from 3,000 to 15,000 feet altitude, which, when taken by a trained operator, is a geometrical plan correct in every particular; and the oblique views, taken at any altitude and giving us what was crudely attempted by the so-called bird's-eye views.

The view of the Chateau de Villandry is from a negative of Mr. Thomas E. Hibben, a University of Pennsylvania student. It shows the chateau, and its most interesting garden recently restored exactly as it



Press Illustrating Service

LE GRAND PRESSIGNY: From an aerial photograph

was in the XVIth century. It is most fascinating to compare such a picture with the naive, "vues cavalières" of the work of Ducerceau. One can readily see what interest there would be for us in a book made up of documents such as these, presented at a sufficient scale to make their study convenient. Messrs. Krimmel and Smith, to whom I am indebted for the foregoing illustrations, are now endeavoring to obtain the support of the Carnegie Foundation in order to collect material for such a book. Mr. Smith is already in Italy, as fellow of the American Academy in Rome, and is preparing a list of subjects—gardens, civic improvements, public squares, to be photographed in Italy, France, and England.

The desirability of such a collection has been enthusiastically endorsed by the architects they have consulted, and I hope that they will succeed in their enterprise. What added value would be given to a book such as "Choix de Grandes Compositions Exécutees" by Gromort, if supplemented by aerial photographs! We can foresee the interest of future books on city planning, when the improvements will be shown precisely as they are, or when a comparison between actual conditions and a proposed scheme will be shown side by side.

An interesting attempt in this direction was made about ten years ago in Paris, in the book "Paris Vu en Ballon" by Decugis and Schlechter, utilizing, as the title shows, photographs taken from a balloon. The airplane has, however, given us a carrier which takes us to the exact spot where the picture is to be made, and as the camera has been much improved during the war, it is now possible to get pictures from high altitudes, and therefore as accurate as a geometrical plan, as we will see below.

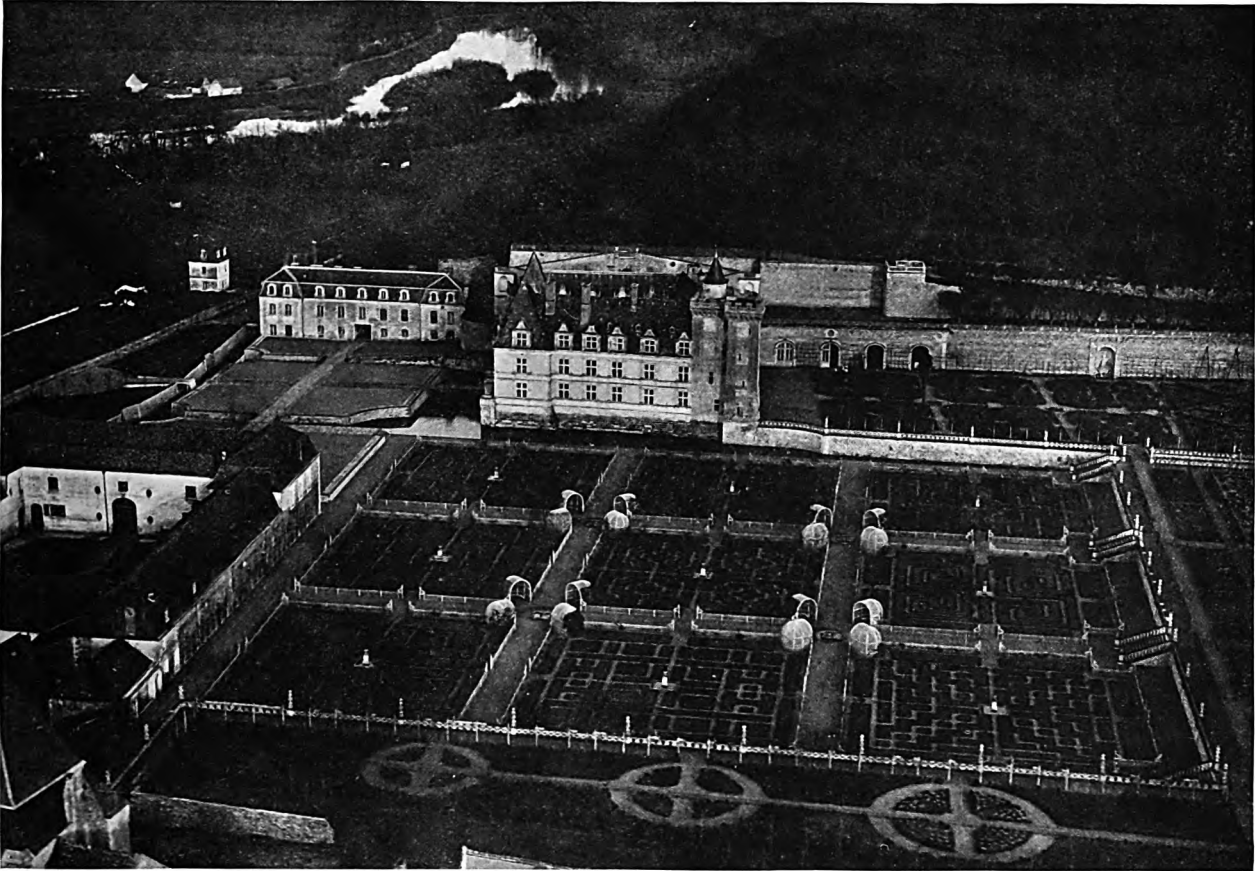
Surveying by Aerial Photography

This application of the studies made during the war by the topographical sections of the French Army has been recently explained at length in a paper by Mr. Balleyguier, published in *L'Architecture* No. 16, 1920, and in following issues. It illustrates the work of the *Compagnie Aérienne Française*, and we will sum up briefly the results achieved.

Any survey or large plan involves the following operations:

The accurate location of a few prominent points (polygonation): the measurement of height; the measurement of details; the drawing of the map.

The aerial photograph offers a simplification of these



By Thomas E. Hibben

CHATEAU DE VILLANDRY: From an aerial photograph

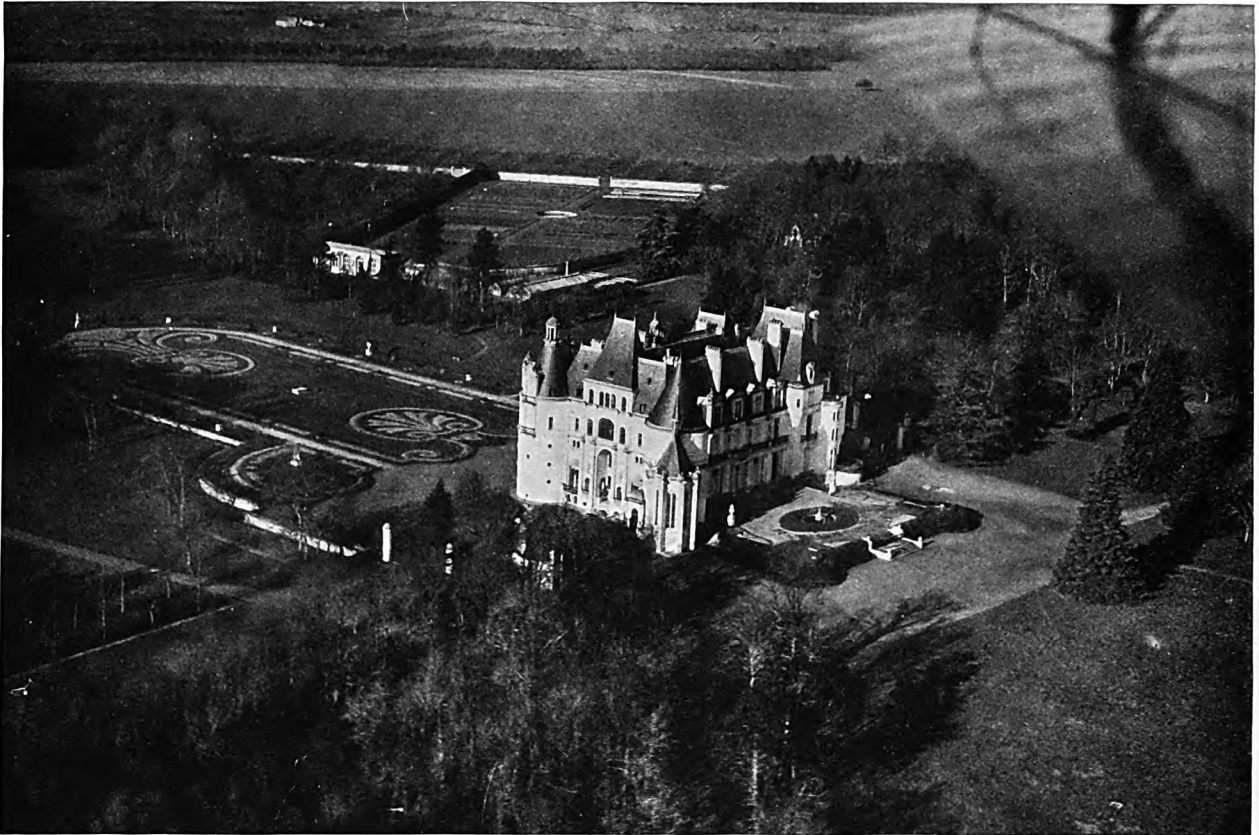
methods resulting in a considerable saving of time. One of two methods may be pursued: Either a rapid survey by a set of horizontal pictures, or an accurate survey with the contour lines by means of three sets of photographs.

All those who have had to study civic improvement schemes know how difficult it is to find sufficient data in the city plan divisions of most of the cities. These plans usually show proposed improvements and not the actual conditions. They are made of small sections, which do not fit one another when an attempt is made to cover a large area. They give little or no information of the detailed conditions of each block or portion of the city. Finally, the actual aspect of the ground cannot be surmised by a study of these maps.

The first process mentioned above (rapid survey) proceeds as follows:

1. The airplane flying at an altitude of 3,000 to 15,000 feet takes horizontal pictures.
2. For each negative, three points are measured on the ground by the usual surveying methods.
3. These three points are drawn at the chosen scale and placed on a wall. The corresponding negative is then placed in a stereopticon and given the proper in-

clination whereby the three points of the projected negative are superimposed on the three corresponding points on the wall. This corrects the deformation of the negative due to imperfect horizontality of the camera, while it gives an enlargement at the chosen scale of the negative. If a photographic paper is then placed on the wall, a print of the negative at the scale of the map is obtained. By proceeding in the same way, with several negatives, any area can be photographed and drawn from the photographic enlargements. The coefficient of error of the survey obtained by trained operators is only one-hundredth of an inch for maps at the scale of 1/150 in. up to 1/1000 in.! This is far more accurate than the city surveys. The objection made is that differences of level in the area photographed result in a distorted planimetry. However, these distortions can be corrected by a simple method, and for negatives taken at the altitude given above, they are negligible for any difference of level not superior to eighty feet. This type of plan is now largely made by the Compagnie Aérienne for the towns of France, which are compelled by law to prepare a plan of improvements. It has, therefore, passed the experimental stage and its advantages are well known.



Press Illustrating Service

CHATEAU DE L'ORFRAISIÈRE: From an aerial photograph

The second and more accurate method of surveying is too technical to be adequately summed up in these notes. We can say, however, that it gives a coefficient of error of only four inches for the actual location of points in plan, and less than two feet for the actual heights above grade. This process requires, like the first one, the surveying by ordinary methods of a few basic points.

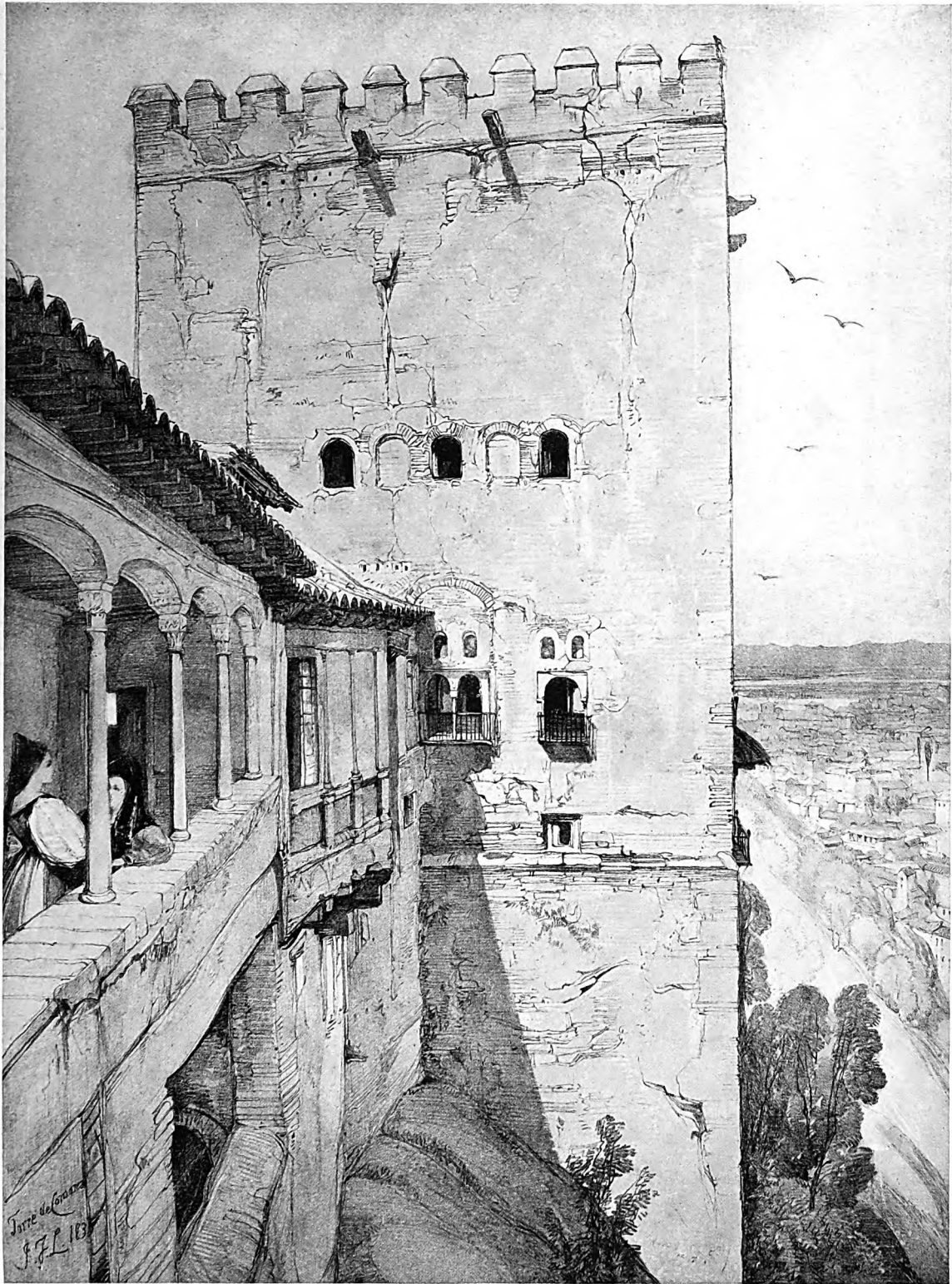
Another application of aerial photography is the keeping up to date of city plans, if they are considered sufficiently accurate. In this case, without other surveying, a city map can be kept constantly corrected by comparison with recent photographs. It was the method used during the war by the topographic sections of the army, which accepted as an accurate basis the maps of a region and endeavored only to complete them by the addition of the network of trenches, the new roads, tracks, and other works. These were copied from aerial photographs after a simple correction of horizontality of the negative by means of a perspective gridiron.

If these rapid surveys are of great value to the city planner, he will also find oblique photographs of portions of a city most convenient in the study of improvements. Here is, for instance, (Fig. 5) a view of a portion of Paris, la Cité. It is useless to point out to the

readers of *THE JOURNAL* of the Institute, the value of this kind of documents in planning now thoroughfares, bridges, or in trying to convey to laymen the meaning of the proposed improvements. The type of buildings, the character of the neighborhood, the main highways, are apparent at a glance. I have no doubt that before long new methods of using aerial photographs will be brought forward. The results that I have just outlined are already more than promises.

The Last Straw

"A renaissance Unique—'a home that will never grow old'—a symmetrical combination of Italian, modern and semi-gothic architecture," is the fervid description of a house offered for sale in a Los Angeles newspaper. And to crown the other glories, we learn that it is "well placed on one acre of land, terraced and landscaped along the most artistic lines, with shrubbery, vines, flowers and a Naiadic white marble grotto of Grecian contours for bathing and fountain display, all combining to assert a charming evidence of Beauty, Time and Place." Some assertion—and "the trimmings to plumbing fixtures all of solid silver!"



After sketch by J. F. Lewis, 1835

THE ALHAMBRA: The Tower of Comares

Drawn on stone by J. D. Harding



After the lithograph by J. F. Lewis

THE ALHAMBRA: From the Alameda del Darro



After the lithograph by J. F. Lewis, 1835

THE ALHAMBRA: The Gate of Justice



After a photograph by George Herbert Gray.

THE OLD COLLINS HOTEL—CONNECTICUT.

The old Collins Hotel, formerly the half-way house between New Haven and Woodbury, on the Naugatuck Road. The three doorways gave entrance to the general waiting room, the bar room and the ladies' waiting room. The old double-faced sign, which hung over the middle of the road, bears the date of 1811, placing it in that period of early American architecture which followed the publication of the work of the brothers Adam. The style was admirably adapted to the work of the times and its current revival has proven it to be adaptable to many types of present day buildings, as is witnessed by the frequent appearance all over the country of the motive of the portico of "Homewood," near Baltimore. It is regrettable that the life of the period was not longer. It was cut short by the revival of the Greek phase of the "Classic Revival," which, tho' it produced some excellent buildings, was heavier, less flexible, and so less suitable to prevailing requirements.—GEORGE HERBERT GRAY

The Great Building Adventure

The English Building Guilds at Work

By G. D. H. COLE

ONLY A FEW weeks ago I attended the opening ceremony on the site of the first contract of the London Guild of Builders at Walthamstow. Work is now there in full swing and before long it will be in progress on several other sites also in the London area. A contract at Greenwich is almost fixed up and negotiations are also far advanced in connection with a big job for the Hammersmith Borough Council.

Applications, I am told, are pouring in upon the Guild from all over London and the Home Counties and it is perfectly clear that in London at least the Building Guild movement is not likely to be held up for want of work to do. Nor is it only the local authority that is anxious to show some real results to the citizens, and that is eager to avail itself of the new facilities afforded by the Guilds; there is also a steadily increasing stream of applications from Public Utility Societies and even from private individuals.

Beginning Carefully

So far the Building Guilds both in London and in other parts of the country are walking warily and are only taking on work which they know they can handle at once without difficulty. As soon, however, as these first contracts have been got satisfactorily under way there is no reason why expansion should not be very rapid indeed; for the main difficulties in getting the Guild movement started in the first instance have lain in the settlement of preliminaries and in the formulating of contracts and arrangements for the work in a fully satisfactory form. With these initial difficulties overcome, the promoters of the Guild movement believe that there is nothing to hinder a very rapid development of Guild building all over the country. They are not worried by the fact that a large number of contracts have already been entered into by the local authorities with private contractors for there is so much work to be done that the occupation of a small part of the field makes very little difference. Nor are they worried by the fact that the Ministry of Health is at present endorsing Guild contracts only on an experimental basis and has announced its intention of limiting their number until the first results are known, for the Guildsmen know full well that, if they make a success of the work which they are just beginning, the need for houses is so urgent that no theoretical consideration or objections to the Guild method will be allowed to stand in the way of its extension.

The Test of Guild Methods

Of course, it is true to say that the real test of the Guild method comes only when work is actually begun.

The Building Guildsmen recognize fully that they have to prove, by actually delivering the goods, that they can do the work of house building better and more expeditiously than anyone else. They have to show that the new motive—the motive of public service under free conditions—to which they are appealing, has real power behind it, and that men will work under self governing Guild conditions with a better heart than they have worked under private capitalism. This can only be proved by actual experience, but the leaders of the Guilds of Builders are very greatly encouraged by the reception which the Guild idea has received throughout almost every section of the Building trades operatives. Not only are the leaders keen, but the rank and file members of the building Trade Unions have entered into the spirit of the Guild and show every sign of meaning to make it a success.

It was impossible not to realize this when one listened to the speeches and talked to the men who were to do the work at Walthamstow the other day. These men are going into the job in a very different spirit from that in which they have ordinarily approached a new piece of work. They are really keen; they recognize that something far more than the success or failure of the particular contract on which they are engaged depends on their efforts, and to an unsympathetic observer they would seem almost ridiculously eager to play their part in the making of a new industrial system.

The Appeal to a New Spirit

The essential meaning of the Building Guilds lies in the appeal which they make for a new basis of industrial organization and a new spirit in industry. For a good many years now there has been a growing amount of talk among workers about the control of industry. The demand that the workers shall control their own industry has steadily gained ground, and has become a part of the official policy of most of the big Unions. During these years those who have been preaching the new ideas to ever more sympathetic audiences have naturally often grown tired of talking and wondered when they would be able, to any extent at all, to put their theories to the test of practice. These men have welcomed the coming of the Building Guilds as an opportunity which they had hardly dared to expect—an opportunity which could hardly have come, or come with so good a prospect of real achievement but for the extraordinary position in which the building industry is placed at the present time, and but for the manifest inadequacy of the existing resources of private capital and the public authorities alike to get built the houses which the people need.

Difficulties

These preachers of the Guild idea realize, indeed, that, even under the favorable conditions which have presented themselves it is not likely to be easy to make a success of the Guild movement in an environment that is essentially hostile to it. However right may be the Guild idea, with its appeal to the motive of service, it is not easy to shift over suddenly from the existing industrial conditions to the making of such an appeal. It is not easy to isolate a particular industry or a part of a particular industry and to make of it an oasis of Guild organization in the midst of a capitalistic system. It is the less easy because even such an industry as building, although it lends itself readily to the Guild idea, is essentially dependent at many points upon other industries to which the Guild idea has not been and cannot immediately be applied. There is for example the whole difficulty of ensuring the regular delivery of all types of materials required in face of a possible boycott or attempt to fob off the Guild with inferior supplies. The building material industry is largely dominated by big firms and associations which might easily, if the Guild stood by itself, exert a powerful check on its successful development. This problem however has been largely dealt with by the entry into partnership with the Guilds of the Co-operative Wholesale Society, which can whenever necessary act as a purchasing agent for the Guild, and secure materials from abroad as well as from at home. In the case of one material at least, cement, the opening of alternative sources of supply through the Co-operative Wholesale Society has already proved its usefulness.

Wages *versus* An Ideal

Then there is the danger, of which much was made when the Guilds were first projected that, with labor as scarce as it is now, private firms, especially where engaged on the less urgent work, the cost of which is not so material a factor, may seek to entice away the best men from the Guilds by the offer of wages considerably in excess of the ordinary district rates and conditions. The promoters of the Guild movement however, do not take this danger very seriously. They believe that their idea and plan of industrial democracy is good enough to hold the best men whatever inducements may be offered to them to go elsewhere or to withdraw their labor from house building in order to reap high rates from luxury work. The Guildsmen are trusting not so much to the material inducements which the Guild itself offers in the form of regular pay irrespective of weather conditions as to the compelling power of the Guild idea itself. Whether they are right or wrong can only be determined by the test of actual experience, but they are very confident and I believe rightly so.

The Guild leaders are relying on the fact that the Guildsman will feel that the Guild is his own concern as he has never been able to feel when he has been working for a private firm. He will be himself a member of the Guild and ultimately will have a share in its administration. On the job on which he is occupied he will have a direct control of the actual working conditions, and the men under whom, as foremen and administrators, he does his work will be his own men drawn from his own Unions, which are parties to the Guild scheme. He will be "on the strength" of the Guild and his relation to it will be not a discontinuous relation terminating with the particular job on which he is engaged, but a continuous relation to be maintained as long as there is service to be done in the building industry. He will feel, not merely that the Guild is his "show" and that of his fellows, but that it is nobody else's "show," and that no one is making a profit out of his labor. He will be producing directly for use and under conditions which make utility the sole test of production.

Sceptics may say that these considerations will have a strong appeal only to a very small number of men; the Guildsmen believe that their appeal will be very wide indeed and that it will be strong enough to work a fundamental change in the whole attitude of the ordinary man towards the work which he has to do. They are admittedly idealists; but after all most of the world's great changes have been wrought by idealists aiming at achievements which have been decried as impossible.

Designer and Craftsman Again Together

One of the most significant features of the Guild movement is the extent to which not only manual workers but men connected with every aspect of the building industry from architects downwards have rallied to the Guilds. Indeed, one of the restrictions at which the Guildsmen are most fretting at the present time is that they cannot find work to do which will afford full scope for the varied abilities at their command. In most cases, where they accept public contracts they have to work to plans already prepared and to accept standards of housing accommodation which they regard as far too low. Wherever I have come in contact with Building Trade Unionists who have accepted the Guild idea, I have found that one of the strongest desires which they possess is the desire to do good work and actually to raise the standard of house planning and house building.

Most of us have been too ready to believe that the keen desire to do good work the craftsman's pride in making things well—had been crushed out of the average worker by the conditions of modern industry. I have found, however, that this desire is still strongly present. Deep down it is true and finding little

ARCHITECTS AND DRAUGHTSMEN

expression as a rule in the day's work, it is still there and can be appealed to as soon as the opportunity arises.

In these early contracts the Guilds have perforce to accept for the most part the existing standards and the plans already prepared by the local authorities and approved by the Ministry of Health. They can still build well, but only within limitations which they believe to be unduly restrictive. If the Guilds succeed, I am convinced that one of their results will be a new awakening of craftsmanship in the building industry, and this awakening will be made the more productive of good results by the fact that architects and administrators are organized in the Guilds together with all the various grades of manual skill. The Guilds are the first institutions since the Middle Ages that have really brought designer and craftsman together again. It will, of course, take time, even if their success be as great as can possibly be hoped, for this coming together of the complementary factors in good building to produce its result. But I see in the Guild movement from

this point of view a better sign of hope for British building than has been afforded by any craft movement of recent times.

All this that I have written will no doubt seem to most of my readers far too optimistic, and may appear to them to be a statement altogether out of proportion to the real significance of the Guild movement. They may be inclined to say that it is right to give the Guilds a trial side by side with other forms of building by contract or direct labor, but to regard them as merely one way the more, not differing essentially from the others, of mobilizing labor for the work of house construction. The Guildsmen will not object if they are so regarded for all they want is an opportunity to put their theories to the test, and they recognize that the public will only believe in their power to transform the building industry in proportion as they do actually succeed in transforming it. They are content to begin in a small way because they believe that their idea is a big idea and that once started it will go forward to big things by its own momentum.

Architects and Draughtsmen

Various Studies of their Relations

Report of the Joint Sessions of the Preliminary Committees of the Boston Chapter of the American Institute of Architects and of the Boston Architectural Club appointed to confer on matters concerning office relations.

EXTRAORDINARY conditions existing in the building world of to-day and the experience of other cities with draughtsmen's organizations and questions of office relations within the architectural profession indicate that an inquiry into these matters is advisable at this time. Any radical change in professional relations should be made only after the most careful consideration. To this end committees were appointed by the Boston Chapter of the American Institute of Architects and the Boston Architectural Club, which have met in joint session in the Great Hall of the Boston Architectural Club at frequent intervals during the past two months.

This Joint Committee does not believe in looking upon the Architect merely as an employer of labor, and upon the draughtsman as an artisan with a definite labor commodity to sell, preferring to regard both as brother members of the profession and the draughtsman as a potential architect. However, the distinction between the Architect as the head of the organization and the draughtsman who is employed by him at a wage, is generally understood, so the terms "Architect" and "Draughtsman" are used in this report to designate the two parties whose relations are being discussed. Throughout the discussion a spirit of mutual confidence and a desire for an intelligent understanding of the view-point of both parties were displayed. A general improvement in conditions affecting the welfare of the profession was the goal rather than material gain in specific points.

It is everywhere evident that closer organization among

the members of the profession is needed. It further appears that the best interests of the profession, the architect, and the draughtsman are served, not by an organization of the trades union type, affiliated with a central body, but rather by a local professional society such as the Boston Architectural Club where there are no rigid distinctions among the members, and all the effort and money expended is entirely devoted to the good of the architectural profession. It is plain that if the Club and the Chapter are to succeed in this very important work of uniting all those engaged in the profession, they must represent more completely the architectural profession of this city. They must present a revived and enlarged membership which shall covenant to support the organizations in this work.

The Committee recommends the establishment and maintenance of a joint standing committee on office relations, whose membership shall include an equal number of architects and draughtsmen, to study in detail the questions raised by this committee to establish a permanent organization, and to receive and pass upon and publish the findings on any dispute or requests for rulings which may be brought before it by the Chapter, the Club, or any individuals who have subscribed to the agreements under which this standing committee is operated. It shall maintain the liaison between the two organizations and assist in coordinating their work, and act as the court of office relations between the two.

By agreement, the Committee excluded from its discussions individual incidents of the past and devoted its

attention to the broad general questions of the present day. A rejuvenated organization such as is proposed would renew a healthy professional spirit among the members and arrest the exodus of trained and experienced men, who, the Committee has been informed, are steadily leaving the profession for other fields where the future seems to hold more promise. The Committee considered in detail the principal questions upon which the proposed organization might be called upon to deliberate and gives below its impressions:

The Wage

The Committee believes that the whole question of office relations and draughtsmen's organizations and the unrest in the profession is in a large measure a matter of adequate compensation to the draughtsmen on the one hand and proper return in service to the architect on the other. No fixed rule or wage schedule could be arranged to meet this question, architects' offices vary too widely in size and character to enable them to conform to rules of practice such as are applied by trades unions, and the personal note, to a large degree, must control professional relations.

The Committee believes that after careful consideration, an adequate living wage should be established for draughtsmen of a certain degree of proficiency and experience below which men of this standard would not be expected to work. Observance of this standard would steady the employment question and prevent excessive undercutting during slack times, a practice which in the past has worked injury to the profession and to the individual draughtsman. Men whose experience and training did not warrant placing them in the qualified group are a problem for further consideration. This class, which included the "office boy" and junior draughtsmen and the student, should be carefully trained as apprentices and adequately compensated. A sane and sympathetic handling of this group would develop genius to the greatest degree and yet curtail the crop of mushroom draughtsmen of little use to the profession.

Profit Sharing

The Committee believes that the architect and the draughtsman can be of the greatest service to each other and to the profession by mutually encouraging permanent office organizations through which the architects may receive the most efficient and sympathetic cooperation from the draughtsmen, and the draughtsman may receive encouragement as to his future in the profession and an adequate and steady compensation for his work. In associations such as these, the two parties share each others responsibilities and should share each others profits and losses. To achieve this, it is only necessary that a sound business system be established to provide for the lean years and at the same time pay the permanent personnel a proper living wage, in ratio to the individual ability or position and based on the normal year, plus a proper share of the profit in a successful year. This system would stabilize salaries, encourage permanency and strong personal interest, and reduce draughting expenses through increased efficiency. The Committee recommends to the careful consideration of the members of the Chapter and of the Club, a system of profit sharing, based on a living wage, as one solution of the wage question.

Hours

The Committee is not aware that there is any great difference of opinion as to good practice in regard to hours of work. The existing practice—thirty-nine hours per week—appears to be satisfactory. It believes that on general principle all offices should close at 5 o'clock in the afternoon, and that work after hours should receive additional compensation. It disapproves voluntary unpaid overtime as a general thing, which reacts unfairly on other men who must necessarily quit their office at the closing hour. The Committee approves, where practicable, a more generous attitude toward permitting time off where the time will be faithfully made up and recommends to the careful consideration of the architects the matter of Saturday closing during the summer, on a basis of equivalent time rendered, a system in successful operation in many large offices.

Inspecting Work

The Committee recommends that all draughtsmen be encouraged to give greater attention to work under construction and that a general practice be adopted of permitting men to make frequent visits during office hours to buildings on which they are working, models, materials, etc.

Draughtsmen's Private Work

The Committee believes that it is detrimental to the interests of the architect, to the future of the draughtsman, and to the profession as a whole, for draughtsmen steadily employed in an office to attempt to carry on private architectural work of any size, outside of office. The usual results are that the work itself suffers through lack of proper attention and with it the professional standing of the draughtsman and the reputation of the profession, and the outside work encroaches on the draughtsman's time in office hours and causes loss of time and interest to the architect. The Committee recommends that proper and generous arrangements to be made by architects to encourage draughtsmen to bring into the office their outside work, to receive proper credit and compensation and cooperation in making the work worthy of the organization.

Employment

The Committee recommends that a spirit of frankness be encouraged among all parties in the many phases of the employment question. It urges a feeling of mutual trust and confidence and deplors a continuance of any of the practices of the past that are opposed to it. It approves the maintenance of an open exchange where architects and draughtsmen alike may post their wants and receive information. It recommends an adequate period of notice by architects and draughtsmen in case of dismissal or change of position.

FREDERIC E. CLAYTON,
Secretary.

The Committees: For the Boston Chapter—Messrs. J. Harleston Parker, *Chairman*, Edwin J. Lewis, J. Lovell Little. For the Boston Architectural Club—Messrs. William Adams, *Chairman*, Niels H. Larsen, Morris Feather, E. L. Morgan, F. E. Clayton, W. Roger Creeley (*ex officio*).
October 22, 1920.

PUBLIC ARCHITECTURAL SERVICE

Resolutions Adopted at a General Meeting of the Architects and Draughtsmen of Newark, New Jersey, and Vicinity.

As is disclosed in the resolutions that follow, the question of unionization of draughtsmen and the closed shop idea was the subject of discussion at the meeting referred to. The sense of the meeting was unanimous that neither architects nor draughtsmen desired to affiliate with any union. The resolutions were as follows:

Whereas, The Building Trades Council of Essex County has notified Architects, Engineers, and Contractors that after November 1, 1920 "all plans and drawings to be acceptable in the field must be made by Union Architects and Draughtsmen belonging to the International Federation of Technical Engineers, Architects and Draughtsmen's Unions," and

Whereas, The Draughtsman is the future Architect in training for his profession, he being a part of the Architect's organization, representing him in interpreting the drawings and specifications as a part of each contract, as such the Draughtsman necessarily being in the same position of neutrality in his decisions as the Architect himself. Even the independent Architect not being in a neutral position if his men were allied with the craftsmen's unions and he (the Architect) allied with the employers, the contractors whose work he has to judge and control,

Be It Resolved, That the Architects and Draughtsmen here assembled do hereby agree to ally themselves with the New Jersey Society of Architects (if not allied thereto already) for the purpose of having a truly representative organization in which all questions affecting the interests of Architects and Draughtsmen alike may be fully considered and equitably and fairly adjudicated.

Conclusions of the Illinois Chapter:

The investigations of the Illinois Chapter reveal a tendency toward unionization only among certain classes of draughtsmen. That particular group which might well be called professional or migratory draughtsmen seems to be organized to a greater or less extent, but the very nature of their occupation, and the fact that not many of this type are in the employ of the purely professional architect, has not caused the members of the Illinois Chapter any great concern, except in so far as this tendency might spread and involve the well being of that more cultured and ambitious class which constitute the personnel of the average architectural office.

Mature consideration has been given by the Chapter to the possible results of an expansion of this movement, and in each case, the conclusion has been reached that to combat movements of this kind does not necessarily

insure success and might involve action not compatible with the dignity of the profession.

It is therefore the sense of the Illinois Chapter that a wholesome cooperative relationship between the architect and his regular employee would result in a condition wherein the employee would gladly forsake the assumed protection of unionism in favor of more cultural and beneficial pursuits, and the Chapter has directed its efforts along these lines. The most representative body of regular architectural draughtsmen in this locality is the Chicago Architectural Club, the personnel of which is of that high type of young men whose efforts should be conscientiously fostered as a part of any architect's duty, and as an initial step in the right direction, the Committee on Professional Relations of the Illinois Chapter has endeavored to show these young men that the keenest interest exists in their work and welfare, and that the architects, as a body, can be depended upon for assistance and aid under any and all circumstances.

In reciprocating this cooperative spirit, the Club has recently amended its By-laws to bring about an Allied Membership to which all members of the Illinois Chapter and of the Illinois Society of Architects are invited to join.

Subsequently a joint committee of the Illinois Chapter, the Chicago Architectural Club, and the Illinois Society of Architects, was created for the purpose of keeping in constant touch with the problems of the younger architects, and before which body all such matters are to receive consideration. The Illinois Society of Architects has also devoted a page of its "Bulletin" to the use of the Club for announcement of their activities and other matters of publicity.

We believe that the spirit and atmosphere of such a wholesome condition, if expanded and extended to other fields of the draughtsmen's activities, will prevent, effectually and permanently, any undesirable combinations among that type of men whose services and cooperation we need and value.

The opinions and the record of action of the Illinois Chapter on this matter will be one of the subjects to be presented at the Convention through the Convention Action Committee.

ALBERT M. SAXE, *Chairman*,
Professional Relations Committee
Illinois Chapter, A. I. A.

Public Architectural Service

In explaining to architects the benefits to be derived by the "Own-Your-Home" expositions, soon to be held in Chicago, New York, and other large centers, Mr. Henry K. Holsman, the professional adviser in the competition to be held for house plans, calls attention to the fact that the expositions are designed to give a very considerable emphasis, in the public mind, to the part played by the architect in the designing of small houses. He points out, as a truism, that the logical way to keep the value of architectural ser-

vices in the minds of the people is to do some conspicuous public good.

The plans accepted and awarded prizes are to be widely published and fac-simile models are to be made of the first prize winning designs, for exhibition at the expositions, with smaller models of the other prize winners. The effort being made is indeed an extraordinary one and the careful planning of the details ought to insure a result commensurate with the expenditure of time and money.

Housing and Community Planning

JOHN IRWIN BRIGHT, *Associate Editor*

Frequent requests are received by the Chairman of the Institute Committee on Community Planning. They come generally from Chambers of Commerce and similar bodies and they ask for information which will help them to solve their housing shortage, which, as is generally stated they do not seem able to do under "present conditions." To almost all of these requests the following letter is sent as the answer which best meets the situation and its publication in these columns may be of assistance to other groups and individuals seeking light on the subject.

MY DEAR MR.....:

Your letter of has been received. An unsatisfactory business condition is prevalent over the entire world and any special difficulties you may have in are probably of detail and not of principle. You speak of your efforts to find a way out of your trouble under "present conditions" and your letter bears the printed motto, "A Real Industrial Center." Both of these are significant expressions for the first causes one to ask what are the "present conditions" that limit your field of inquiry, and the second draws attention to the unfortunate fact that your "Real Industrial Center" is made only more real by its typical dearth of proper dwellings.

Now if any progress is to be made in there must be first a frank acknowledgment that industry and housing react on each other in the following manner: Whenever industry realizes that it is suffering from the bad housing of its working force then housing stands a fair chance of constructive attention. But the converse is not true, for when industry is prosperous it is conspicuously indifferent to the home surroundings of its operatives. I hope that you may be able to grant that by and large this is a statement of an historical fact, although it is possible that it is not true of your locality. Then again you are circumscribing your field of investigation to the present with all its impossible handicaps. Why not imagine a new set of circumstances?

I assume that in as elsewhere the lowest price of a decent dwelling is more than the workman can afford to pay. The final amount is the addition of a multiplicity of items starting with the land, continuing through with the various charges of speculators, brokers, bankers, material men, contractors, labor and agents. Truly a complicated and formidable array. Your job is to reduce the aggregate sum by one half, or failing in this to induce some outside financial power such as a large manufacturing concern or a governmental agency to subsidise the operation. Always provided you refuse to raise your eyes from "present conditions." Neither singly nor collectively will or can the present collaborators in house building surrender enough profits to make a decisive difference in the final cost, so the subsidy is the only salvation—"under present conditions." It is with the utmost regret that I arrive at this conclusion for I know full well that no economic system can long exist on such a basis.

The truth is that as a profit-making industry the build-

ing of low and even of moderate priced houses has failed. Even when we dispute the causes we must acknowledge that the patient's heart has almost ceased to beat. We have apparently arrived at an impasse, and yet there is one thing which has not been tried, an idea which demands no new legislation, no divergence from the usual technique of business life. It demands vision, faith in humanity and that courage of pioneers which any school boy knows is inherent in the breast of every American.

You probably have some corporations in whose stockholders by banding together and acting as a unit can accomplish more than would be possible by individual effort. They own the company outright but each individual holder does not demand the power to administer his share of the estate without regard to the common interest. Such a policy would result in speedy bankruptcy.

Now why don't you start a new industry in viz: a town or at least a part of a town. Conduct it just like any of your other industries with stockholders and bond holders, conserving its assets, paying dividends or distributing surplus in the usual way.

Have you not some land in suitable for housing where the first cost will be moderate, not much above farm value, and where under public or cooperative ownership the blight of land speculation can be definitely eliminated. If the tract is large enough shops and various public utilities can be included and the profits from the rental of franchises and business sites and the increment of land values could be applied to the general betterment of the town and to the lowering of living costs. The aim being to improve civic conditions rather than to make money, dividends must be limited and the surplus devoted to municipal improvements. The cost of building will not be affected primarily by the scheme. That is a problem apart although the broader public vision of the new order will aid in its solution. It is rather an attempt to reduce the cost of living in a city and to improve conditions therein. As in any other business a certain magnitude of scale is requisite to success. It will be difficult to plan too big. The danger will be in the other direction.

There is a slight difference in the scheme as outlined and the typical corporation in the application of profits and surplus. This is because the money earned by a business venture is only the means to an end, viz: the enjoyment of a home in pleasant civic surroundings, whilst in this new proposal we are dealing with the ultimate object of our desires. Therefore, there is no incentive for the dissipation of profits among individuals. On the contrary every rule of reason calls for their disbursement in the common interest. To regard the city itself as an enterprise comparable to a business corporation is perhaps unusual but entails no new departure in law or finance.

This is the one experiment which has not been tried in this country. We are at a standstill, and the next step is the self-owning town or a government subsidy.

Very truly yours,

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The Agenda for Architects

With this number of *THE JOURNAL* there is distributed as a supplement a reprint of the Agenda for Architects. The sub-title explains that it is a Memoranda of Procedure and Progress wherein the multifarious duties devolving upon the architect in connection with a building undertaking and in relation with all parties concerned are arranged sequentially according to the usual methods of procedure.

Every architect is earnestly requested to make a trial use of the Agenda, either by itself or in connection with his own system of checking and recording the various acts and operations entailed. The Agenda as at present arranged is the result of several years work on the part of Mr. Day and the committee that worked with him, but it is realized that improvements may be suggested by those who use the document, and that additions may be required in order to cover things that have been overlooked. Very likely it may not be possible to include, in one document, an Agenda that will exactly fit all the needs of architects whose practice involves methods of procedure based upon many differing local conditions, but it is believed that an Agenda ultimately may be provided which will serve the very important purpose of helping to standardize, in the greatest degree possible, the administrative side of a building operation. In the course of time such a standardization would confer an immense benefit upon the whole building industry.

Architects are besought to make the result of their experience with the Agenda known to the publishers, and to address all inquiries and communications to the Editor of *THE JOURNAL*.

Correspondence Symbols and Rubrics

TO THE EDITOR:

One day in quest of information, or perhaps only inspiration, I carefully reviewed my collection of architectural magazines. I confidently expected to find numerous good examples of contemporaneous country houses but after scanning several thousand prints I discovered that less than twelve showed real spontaneity of design or anything that could be called *elan*. The rest of them were useless, even harmful, and were carefully refiled and stored on their valuable shelf room. They are still there and are receiving daily accretions. It may be that on that particular occasion I was hyper-sensitive to impressions and that in a less exacting mood I would have been content with a somewhat lower standard of art; perhaps my view point was for the moment lacking in charity, but however that may be my disappointment was tempered by the comforting thought that in the event of my office equipment being destroyed by fire those particular files could never be replaced. And yet I continue to subscribe to the architectural magazines, and methodically segregate photo-

graphs of country houses under the symbol OI.12 and village churches under the rubric O5.327, all according to the immortal Dewey.

There is no doubt of it; I have a most extraordinarily complete loose leaf library of recent architectural effort. Whenever my office is dominated by the concept of "Boys, get the money," and I confess that I view with warm tolerance all incoming checks,—then the hours spent with scissors and stamping machines earn occasional desultory and generally unsatisfactory dividends. But these illustrations are the pabulum demanded of the architectural press by its subscribers, the members of the profession, and no fault can be found with the purveyors.

In the September *JOURNAL OF THE A. I. A.* are published some of Troy Kinney's etchings of dancers and what in the name of "normalcy" has dancing in common with architecture! Grace, silhouette, form, and joy of life are portrayed upon every plate. That is all. But isn't that everything and isn't the depressing character of my reference library largely due to the lack of these qualities. The commonplace, the obvious are so dangerously tangible! Any office boy knows the physical if not the legal difference between a school house and a private dwelling, and can be entrusted to properly Deweyize them. But the modern practitioner has not time for subtlety or grace or charm so we mechanically clip, paste and classify to the *n*th power and utilize our shelves for morgues. Of course we shun the use of the true word; we say "architectural libraries."

In a strictly literal sense it is impossible to regard as architecture the etching of a dancing girl but if it possesses the great quality of design why torture ourselves with definitions? Why insist on intercolumniation and fenestration? We are stressing the incidental, illustrated by the floor system and half timbering, forgetting that the sole lasting test of architecture is beauty of design.

Sincerely yours,

JOHN IRWIN BRIGHT.

News Notes

PROTESTING against the exploitation of the National Parks for water power purposes the Rhode Island Chapter has asked its senators and representatives in Congress to oppose the projects and to vote for the bill introduced by Senator Jones, which exempts the Parks from the Federal Water Power Act.

CHAPTER dues have been raised to \$15 for Twin City Members and \$10 for others, in the Minnesota Chapter. A committee has been appointed to look into the matter of a Chapter Prize for students at the school of architects in the University of Minnesota.

FLANKING Jackson Square in New Orleans are the Pontalba buildings, landmarks familiar and beloved. The good news comes that these have been purchased by a citizen of New Orleans in order that they may be preserved as a part of that priceless inheritance which New Orleans has seemed all too dilatory in safeguarding. We understand that the same benefactor has bought the Paul Morphy house on Royal Street. All honor and glory to his name, although the pleasure he derives in these good works must be ample recompense.

THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

OFFERING to serve the building industry in its territory in every possible way, the Pittsburgh Chapter held a large meeting late in November, which was addressed by Mr. D. K. Boyd, and adopted the following:

"Resolved, That it is the sense of this meeting that the urgent necessity for harmony and hearty cooperation among all factors in the building industry has been fully demonstrated and that each representative of organization here assembled with the Pittsburgh Chapter, in his individual capacity, is in sympathy with the desire of the Pittsburgh Chapter to bring about further measures toward securing some effective means of formulating a definite program and securing results."

BARRE, Vermont, offers prizes for the design of a Soldiers and Sailors monument, \$2,500 to be paid to the winner as a part of his commission, the whole of which shall not exceed 10% of the gross cost of the monument, for which \$60,000 has been appropriated. Four other prizes of \$500 each will be paid the authors of the four drawings which rank next. There are three prizes for sculptors. Full information may be obtained from Mr. W. A. Murray, Chairman of the Committee of Quarry Owners, Barre, Vt. In view of the fact that the Committee desires to obtain a design through a competition that will in every way be acceptable to the Institute, this seems a most interesting step in the right direction.

AT THE November meeting of the Boston Society of Architects, Mr. Frank W. Bayley of the Copley Gallery talked upon the works of John Singleton Copley. He spoke of Copley as a great portrait painter, his work giving evidence of a love of color, good taste and faultless composition, wherein the garments, the hair, the draperies and other accessories were all designed with great care as to their harmony, and all the adjuncts carefully weighed. Copley is remarkable in having produced great American works of Art without having come under the influence of foreign masters. He was born in 1737 and was married in 1769. He lived on Beacon Hill in Boston. In 1774 he went to England and never returned, as his wife and family were loyalists. Mr. Copley was a woman of great charm and social influence.

In 1753 Copley painted his first portrait, a likeness of Parson Wilstead. These early attempts were somewhat crude, but in the three years subsequent to that date he made wonderful progress. The name of Copley carries us back to the fine old men and the celebrated beauties of his time, and the collection of his paintings include such prominent personages as John Hancock, Dorothy Quincy, Samuel Adams, Benjamin Pitman, General James Warren, Mr. and Mrs. James Burr of Fairfield, Conn., and many others of like note. Copley arrayed his women to suit himself, and to produce the best compositions. Several portraits were shown in which the same pose and same clothes were used for different heads. Not only did Copley paint, but he was very successful in the use of pastels as a medium. His pastels are very pure and the colors in excellent taste. One of his most important pastels was discovered by Mr. Bayley in a house in Roxbury.

After Copley's emigration to England one must be very careful in identifying his work, as he assumed the mannerisms of his contemporaries in art. Some of his English portraits are very fine, and he attained a wide reputation

in England, even having been recommended to paint the three children of George III. His English work extended over a period of forty years, and included not only portraits but many historical compositions. His life was divided into three periods. The first was passed in Boston. During his second period he lived in London, where his work was accepted by the Royal Academy, and where he had an opportunity of realizing the dreams of his youth. The latter period of his life was one of anxiety and disappointment. He died in 1815 at the age of seventy-eight. His work has lived because it was good and because it did not violate the basic principles of art.—*Bulletin of the Boston Society of Architects.*

ACCORDING to the decisions of the War Memorials Council, no memorials shall be placed in permanent American Military Cemeteries unless the designs submitted and the sites proposed have been approved by the War Memorials Council, the Quartermaster General and the Secretary of War; individuals and organizations are advised not to solicit or accept contributions for such memorials prior to such governmental approval. Permanent tablets will be provided for marking the location of American Cemeteries established in Europe during the World War, after the bodies of our dead shall have been evacuated to their former homes or to the concentration cemeteries designated for permanent retention.

Consideration was given to appeals for the retention of various cemeteries in Europe in addition to those which have been already designated for permanent use, but it was felt that such action would furnish precedent for many other appeals and the consequent extension of our future mortuary obligations beyond the reasonable bounds of proper maintenance. The Council therefore adhered to its former decisions, in favor of but four permanent cemeteries on the continent of Europe; at Suresnes on the outskirts of Paris, Romagne, in the Argonne region; Belleau Wood where soldiers and marines made common history, and Bony in the Department of Aisne, which will be known as "Flanders Field," where American and British troops were massed in resistless advance; together with one permanent cemetery to be established near London for the repose of our men who fell in Great Britain while en route to the front.

The Council expressed a conviction that the time has arrived for the adoption of a comprehensive scheme for the completion, reforestation, and beautification, of the undeveloped sections of Arlington National Cemetery, and that Congress should be asked to give to this project the consideration it deserves and to devote to the improvement of National Cemeteries in the United States as full measure of sympathy and provision as is being given to similar projects in Europe.

There shall be no variation in the governmental headstones recently approved for graves of all world-war dead, save in the individual inscriptions now authorized by statute and regulations or necessary to indicate service in the army, navy, or marine corps; except that there may be placed within the rosette at the head of each stone an emblem of religious faith, to differentiate Christian and Jewish dead, such as a cross or the "Star of David."

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with professional societies, organized bodies, and the following Committees of the Institute, working toward improvements in building materials and methods, and higher ideals in the sheltering of humanity:

BASIC BUILDING CODE, CONTRACTS, FIRE-PREVENTION, STRUCTURAL SERVICE

Committee Activities

Standardizing Elevators. (33a)—About a year ago the Elevator Manufacturers Association invited the Institute to cooperate in establishing standards of platform sizes, capacities and speeds for passenger and freight elevators. Early in 1920 the Committee on Standards of the Manufacturers Association and a Sub-Committee of the Committee on Structural Service met in New York to survey the scope of the proposed work and decide upon method of procedure. The conclusion was quickly reached that for passenger elevators, platform sizes and capacities bore a fixed relation to each other, and that these two related factors in the problem of elevator design, together with the factor of speed, were determined, in a proper lay-out for elevator equipment, by so-called service requirements. That is, the building population and the percentage of that population that must be moved within 15 or 20 minute periods when the traffic peak is reached, as for example just before nine in the morning, at noon, and after five in the afternoon, are the basic traffic requirements. It is interesting to note in this connection that the percentage of a building population that must be moved during the periods of traffic peak varies in different cities, but in each city the variations between buildings of the same use classification is remarkably slight.

Thus, with the building population known or approximated and the number of people to be moved from the first floor during traffic peaks determined, the elevator problem resolves itself into factors of car size (number of people per car), trip time, and the interval at which cars must leave the first floor. The latter determines the number of people that can be loaded, and hence the car's size.

Trip times are affected by the operator's skill, but principally by safety interlocks on interlocking doors and other devices designed to safeguard the public. Hence, standardization relates itself to safety requirements.

It was known that the Committee on Protection of Industrial Workers of the A. S. M. E. was at work on a Safety Code for passenger and freight elevators, and the conference therefore believed that a means should be found of effecting close cooperation between the groups working on standardization and on Safety Code. The two committees decided that the American Engineering Standards Committee offered the most promising approach to securing the cooperation needed, and the Chairman of the Committee on Structural Service was authorized to request the A. E. S. C. on behalf of the Elevator Manufacturers and the Institute to promote the formulation of the proposed standards under its procedure. The request was made, and on September 21, 1920, in response to an invitation from the Standardization Committee, representatives of sixteen

interested national bodies and government departments and bureaus met in New York. The invitation addressed to these national bodies read in part as follows:

"It has been suggested that the conference should consider:

1. The need and practicability of standardizing capacities, platform sizes, and methods of test, of both passenger and material-handling elevators.
2. The effect of such standards, if established, on any proposed or future elevator safety code.
3. The relation of both such standards and such code to fundamental engineering requirements, as determined by traffic characteristics, material-handling, conditions, and factors of safety in operation."

The conference voted unanimously to adopt the suggested program. An Executive Committee was appointed, and also a Committee to appear before the A. S. M. E. Committee working on the elevator safety code which Committee was scheduled to meet the next day. The A. S. M. E. Committee was not inclined to consolidate its work with that of standardizing, principally because the work on the code was approaching the wind-up and it was thought unwise to delay it pending the formulation of even tentative standards. The A. S. M. E. Committee, however, appointed an informal conference sub-committee to discuss the tentative safety code with the Committee on Structural Service. There were two conferences on the code, in the course of which the architects suggested several changes in arrangement, provisions and phraseology, all of which were accepted by the engineers and by them recommended for adoption by the Committee on Protection of Industrial Workers. The recommendations were considered by the large Committee at its meeting on December 15th and in the main adopted and written into the code. By invitation, the Institute will hereafter be represented on the A. S. M. E. Committee.

The Executive Committee, appointed by the Standards Conference, met on November 17th, and recommended to the A. E. S. C. that the A. S. N. E., the A. I. E. E., and the A. I. A. be invited to become sponsors for the proposed standards, that the sponsors organize a working committee (known under the A. E. S. C. procedure as a Sectional Committee) on which beside the sponsors the following bodies will be represented: American Institute of Consulting Engineers, American Society of Civil Engineers, American Society of Safety Engineers, Building Official Conference, Bureau of Standards, Bureau of Yards and Docks, Navy Dept., Electric Power Club, National Association of Building Owners and Managers, Elevator Mfgs. Assoc. of N. Y., Elevator Mfgs. Assoc. of U. S., Nat. Assoc. of Mfgs., Supervising Architect's Office of the Treasury Dept.

The economic importance of standards for elevators can not be over stressed. With standard platform sizes, and therefore hoistway sizes as well, established, the supporting frames for cars will become a staple product. When speeds and capacities are standardized hoisting engines may also pass into the staple class and be stocked. With these standards elevator manufacturers may operate their plants continuously; architects and engineers will not have to wait as now for equipments to be manufactured to meet a wide and unnecessary variety of requirements. When an architect designs his building all he need do is to determine with the owner or building operator upon the traffic requirements, select the standards which most nearly meet the conditions and with his given hoistway sizes lay out his corridors, steel, and so forth. Designing, so far as it should be dictated by traffic (people or material) requirements becomes an almost exact science, and with the passage of time we shall see fewer and fewer inadequate and inefficient elevator equipments. In the future, the designer may not with complacency borrow a few inches from the elevator hoistway in order to enlarge a slop sink closet, for such action will mean special elevator work and a cost that will penalize him.

The Experience Pool

Under this caption, the Committee on Structural Service will record from time to time, statements of experience received in connection with investigations conducted for the purpose of answering inquiries addressed to the Committee.

Sound Deadening Floors. (19g)—The Structural Service Committee received the following request for data on the sound deadening of floors:

"Sometime ago in the building of a house where we desired to achieve a result above criticism, we failed to accomplish what we hoped in the matter of securing immunity from noise passing through a floor above a large living room. The ceiling is of an open timber construction; that is to say, 4" x 6" cross beams spaced 12" on centers, are carried on three 12" iron girders and rest upon 2" x 4" cleats bolted to the girders. The girders are boxed with 7/8" chestnut plank, and long panels are framed in between the cross beams. The under flooring 7/8" matched spruce is nailed to the upper surfaces of the cross beams. Over this is laid two layers of one-ply Cabot's floor quilt. Over this quilt, 2" x 2" sleepers. The air space is filled, or was called to be filled, with 2" of mineral wool. To the 2" x 2" sleepers laid 12" on centers, was nailed the upper floor of 7/8" x 2 1/4" plain oak. The result, in spite of these precautions, is a noisy floor."

"Several reasons are given by way of explanation. First in importance, in the eyes of some critics, is that we failed to provide a sufficient air space; second that we neglected to float the floor—*i. e.*, run the quilt up the walls of the room behind the base; third, that we erred in nailing the 2" x 2" sleepers to the under floor; fourth, that we neither used the proper insulating material nor in a quantity sufficient to obtain a favorable result. The rectification of this problem is of some importance to us, our desire being to remedy the defect beyond all peradventure of failure. We would appreciate any recommendation based upon a know-

ledge which others have gained through the success of dealing with a floor of similar construction."

The information in the committee file indicated that the sound transmission of this floor was probably due to the following causes:

FIRST—By nailing the finished floor to the sleepers, the sleepers (through the quilt) to the sub-floor, the sub-floor to the beams, and the beams casing to the beams, direct contact for the transmission of sound was established between the finished floor and the finished ceiling.

SECOND—That this direct connection between the finished floor and finished ceiling will largely counteract the sound-deadening efficiency of any quilt or felt or any filling between the sleepers.

THIRD—That eel grass and similar quilts are not as efficient sound insulators as hair felts.

FOURTH—That eel grass and similar quilts are compacted under even comparatively light loads and their efficiency thereby reduced. That the nailing of the sleepers to the sub-floor compacted the quilt between the sleeper and the finished floor.

FIFTH—That the dead air space between the sleepers is a sound conductor, and that so long as direct contact is maintained, increasing the air space will not materially effect the result.

SIXTH—That a mineral wool filling between the sleepers will in a comparatively short time settle and compact with corresponding loss of efficiency.

A description of the floor construction together with this tentative diagnosis of the cause of the sound conductivity was sent for criticism and suggestion to a number of the leading authorities on this subject. The following replies were received:

Bureau of Standards, Washington D. C. "Your diagnosis under the first four headings is probably entirely correct. There is no evidence to contradict your statements. Under the fifth heading we agree with the conclusion that so long as direct contact is obtained by nailing sleepers to sub-floor and finished floor to sleepers, increasing the air space will not materially affect the results. The dead air space serves to reduce transmission effectively only so long as the connection between the bounding walls is kept down to a minimum or is effected only with relatively unelastic materials."

"We are not in position to discuss the sixth point."

Prof. F. R. Watson, University of Illinois.—"I think you are quite correct in stating that the direct connection due to nailing the various members of the floor together so as to make a continuity of structure will furnish a path for the transmission of sound, and that this will largely counteract the effect of sound absorbers between the floors. The theory of the subject, which is supported by experiments, states that sound is stopped; that is, reflected, when it meets a new medium differing in elasticity or density. Such a discontinuity is furnished by the boundary between a solid and air, such as masonry-air or to a less extent by wood-air, or wood-hairfelt since hairfelt is largely composed of air cells. It is quite necessary, however, for the reflection of sound that the air space be not bridged over to a second solid. This is the usual fault in buildings because it is usually necessary for practical considerations, to bridge over the air gap. Thus in the flooring you mention, the air gap is bridged by the nails; double plaster walls are connected at least at the ceiling and floors, etc., so that the efficiency of the sound insulation is largely annulled.

"My investigations show that paper lined materials are more efficient sound insulators than material without lining. For instance, hairfelt 1/4" thick, lined on both sides by paper, transmitted less sound than unlined hairfelt 1/2" thick. The paper reflects considerable sound and is also set in vibration thus transmitting pressure vibrations to the enclosed eel-grass, felt, etc.,

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which tends to absorb the energy. The efficiency of such quilts is augmented by increasing the thickness. Compacting then reduces their efficiency.

"A dead air space appears theoretically to be a good insulator. To be effective the air space should not be bridged over; also, the boundaries of the air space should have considerable rigidity. If the boundaries consist of thin members, they are likely to vibrate and set up a drum action. The bounding member nearest the sound vibrates and creates pressure waves in the dead air space that sets the second bounding member in motion and thus passes the sound on the side furthest from the source. It is necessary that the bounding members be rigid and massive for good insulation.

"Mineral wool is likely to settle, as you state, and thus reduce the efficiency. In testing this material in a section of vertical wall, I found it necessary to adopt special devices to prevent its settling during the course of the test. Ground cork or dry cinders appear better suited to this purpose.

"In addition to the foregoing points, attention should be paid to ventilating flues and pipes. An otherwise well insulated floor may be largely reduced in efficiency because of ventilation and pipe openings that allow easy passage of sound. Another factor of importance is the large area of the floor cited. A small load or impulse at the center of a large span will have a relatively large effect. For instance, a person dancing in the middle of the floor above the living room could set up a considerable vibration of the ceiling of the living room below and thus create sound. A piano resting on the floor would create a similar effect when the keys were struck."

Mr. Theodore Lyman, Director, Jefferson Physical Laboratory, Harvard University.—"In this matter you can not do better than to consult either Mr. Clifford M. Swan, of the Johns-Manville Company, or Dr. Paul Sabine, Riverbank Laboratories, Geneva, Ill., or both. These gentlemen are well fitted to give you sound advice upon this subject."

Dr. Paul E. Sabine, Riverbank Laboratories, Geneva, Ill.—"The failure of the floor construction described in the way of sound insulation seems to me, as well as to yourself, to be largely a matter of construction. The rigid connection of the finished floor through the sleepers and felt to the ceiling construction below practically annuls any possible advantage than may arise from the use of the deadening felt. The transmission of sound through solid construction is much greater than through the air space, so that the effect of the air space is practically nil.

"As to the relative merits of the various sound insulating materials, I may say that I have not yet tested a sufficiently large number of different materials to speak authoritatively on this question.

"The mineral wool filling between the sleepers, possesses practically no merits in the form of construction used. The only way that I can suggest to secure reliable information on this subject, is to await the results of further experiment.

Prof. C. L. Norton, Mass. Inst. of Technology.—"I have no further information on the subject in question and the only person whom I know who has given the matter much thought is Mr. Clifford Swan who was associated with Professor Sabine at Harvard and later with the Johns-Manville Company, in New York."

Mr. C. M. Swan, Acoustical Engineer, H. W. Johns-Manville Co.—"I regret to state that I have no report showing the relative sound-transmission values of the various deadening felts and quilts on the market nor am I aware that any reliable figures on this subject are available.

"I am sending you copies of literature on various Johns-Manville deadening felts in accordance with your request. The various brands of Keystone Hair Insulator have varying degrees of efficiency for sound-deadening purposes. I recommend as the most effective for this work the Double Neptune and Arctic Brands."

A letter of inquiry was written to six manufacturers of felts and quilts claimed to be efficient for the purpose. Information was requested relative to the existence of any reports of tests of the various felts and quilts being used for sound deadening of floors.

It would appear from the replies received that none of these manufacturers are prepared to furnish disinterested technical data upon which to base claims for superiority of their products. The following quotations from two of the replies are illuminating examples of the kind of data furnished by manufacturers:

1. "The most important point in selecting a sound deadener is to secure one that is sanitary. . . . Some years ago we warned against the use of cattle hair . . . also pointed out the danger of contracting anthrax from its use. . . . You probably noted in the press lately, the increase in the number of anthrax cases . . . an amendment had been made by the Board of Health requiring the sterilization of all hair used in toilet articles . . . is in our opinion the most sanitary deadening felt on the market. For this reason it is used very extensively."

2. "We are frank to acknowledge that we don't really know of any very elaborate publication covering the merits of deadening felts. In fact we are under the impression that the architects and engineers have become so familiar with this subject, that it really has not appealed to any one to write up the merits of deadening felts."

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Plasticity of Mortars and Plasters. (3m)—(*Technologic paper of the Bureau of Standards No. 169 "Measurement of Plasticity of Mortars and Plasters."*)

Since the more plastic mortars and plasters not only require less labor but also tend to a better quality of work, the plasticity of the material is of considerable economic value. It is a property for which the consumer pays, and a means of accurately measuring degrees of plasticity is therefore of practical value. The above deals in the main with descriptions of various types of apparatus that have been used for this purpose and describes in detail the improved apparatus recently constructed by the Bureau. It also contains much data of value relative to plasticity, of which the following is an abstract:

Definition and Description of Plasticity.—It is generally accepted that a plastic material is composed of inert solid particles suspended in a liquid medium. The term "plastic material" when used in connection with such materials as mortar and plaster is defined as indicating that the material possesses the characteristic of working freely and easily under the trowel and having marked ability to hold its water. In distinction to this there are sticky materials which hold their water, but pull and are "rubbery" under the trowel, and sandy materials which are "harsh" and dry

out quickly. This gradation of plasticity—sticky, plastic, sandy—is the one generally accepted.

Plasticity is thus dependant upon two factors, the time during which the material can be worked and the work required to spread it during that time. Of these two factors the former is of far greater importance than the latter. It is in fact the predominating factor. For, example it requires less work to spread sand than lime, but sand dries out so quickly that it can not be spread to the same thinness nor worked for the same length of time and is, therefore, less plastic.

If one plaster can be worked on the wall for 30 minutes and one for only 15 minutes the former would be generally accepted as the more plastic regardless of the relative quantities of work required to spread the two. If, on the other hand, two plasters can be worked for exactly the same length of time, then that plaster is the more plastic which requires the less work to spread it.

On this theory, plasters have been divided into classes according to the length of time which they can be worked and those in each class have been ranked according to the work required to spread them.

Relative Plasticities of Miscellaneous Materials.

Class.	Relative force required to spread	Material.
30-minute...	14	"Cal"* soaked overnight.
	51	Finishing hydrate, soaked overnight.
25-minute...	20	"Cal" not soaked.
20-minute...	37	Dehydrated clay.
15-minute...	24	Finishing hydrate, not soaked.
	34	Non-plastic hydrate, soaked overnight.
10-minute...	12	Celite.
	13	Nonplastic hydrate not soaked.
	15	1:4 lime mortar.
	16	Cement No. 1.
	16	Cement No. 2.
5-minute...	3	Cement No. 3.
	5	Very fine sand.

*"Cal" is a proprietary material which is intended to be added to concrete to accelerate its early hardening.

It will be noted from the above table that before soaking, the finishing hydrate is not much better than the non-plastic. Soaking raises the finishing hydrate three classes, the non-plastic hydrate only one class. Materials in the 20-minute class or better can be used as finishing plasters, those below the 20-minute class can not.

Range of Plasticity.—Plastic materials vary in length of plastic range. As a general rule the more plastic the material the greater will be this range. If increasing amounts of water are added to hydrated lime, the change in consistency will occur in the following order: dry powder, damp powder, sticky mass (practically solid when moulded), plastic material, liquid. Suppose a given hydrate changes from a solid to a plastic material when mixed in the proportion, 80 per cent lime, 20 per cent water and when the proportion is 50 per cent lime, 50 per cent water, the material changes from a plastic material to a

liquid. Then the plastic range of this lime is $80 - 50 = 30$ per cent.

Effect of Consistency on Plasticity.—If a lime paste is not plastic no amount of water which may be added to it can render it so. The converse of this is also true; a plastic lime remains plastic regardless of the quantity of water which may be added. These statements are true only when the material does not approach too closely to either a solid or liquid condition. Consistency however does have some little influence on plasticity. Experience shows that a wet paste will have somewhat, though very little, better spreading qualities, than a dryer one made of the same material.

Plasters are usually spread on absorbent surfaces. They must be mixed with enough water to make them plastic and they must be able to retain that water against the suction of the surfaces on which they are spread. The length of time during which a plaster can hold enough water to maintain its plasticity will depend somewhat on the quantity of water originally present but chiefly on some inherent property of the plaster which gives it its ability to retain water.

Effect of Proportion of Sand upon Plasticity.—The quantity of sand which is added to a lime paste to make a plaster is governed almost entirely by the plasticity. The mortar mixer adds as much sand as he can without making the mortar so lean that it can not be worked successfully. Since the plasticity of sand is lower than that of lime, the replacement of lime by sand will cause a continuous decrease in plasticity. At a certain point it will be found that the plasticity of the mixture is so poor that it can no longer be used for the purpose intended. This point indicates the sand-carrying capacity of the lime.

The sand-carrying capacity will also be found to vary with the purpose for which the material is used. For finishing coat work the lime must be in the 20-minute class; for scratch coat work on metal lath a 15-minute class lime will possibly be satisfactory; and for brown coat work a 10-minute class lime may be used.

A dolomitic (magnesian) hydrate (see S. S. D. December Issue of JOURNAL), in the neat paste, has a greater plasticity than a high-calcium hydrate. The tests also indicate that a mortar made of a dolomitic hydrate is more plastic than one made of a high-calcium hydrate, regardless of the proportion of sand, up to that point where both are so lean that there is little difference between them. The tests also show that the addition of a small amount of sand to a high-calcium hydrate slightly improves its plasticity.

Hydrated and Quick-lime.—While any kind of quicklime, when properly slaked will produce a putty of very great plasticity—different limes have different degrees of plasticity, depending probably upon the quality of the lime and the size of the grains. Hydrated limes are divided very sharply, into two classes, on the basis of their plasticity,—the "finishing" limes and all other hydrates. In the main the "finishing" limes are made from a kind of limestone peculiar to a small district in Northwestern Ohio, but as the art of making hydrate is improved, it is probable that finishing hydrates will be made elsewhere. In fact this has already been achieved in one or two cases. The material

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used for the final coat of wall plaster must have plasticity in a very high degree. Neither portland cement nor calcined gypsum have sufficient plasticity to be used for this purpose without the addition of lime.

The Carson Blotter Test.—One of the methods formerly used to some extent to measure plasticity, the Carson blotter test, is of particular interest in that no special apparatus is required. A tin cup, a piece of blotting paper and a table knife are the only essentials.

Mix the lime with water in the cup. Use enough water to make a good plastering consistency, although this point is not very important. It is usual to let the paste soak overnight before testing it, in accordance with the custom of soaking hydrate overnight before using it. In the morning try to spread the lime out on the blotter with the knife and note "how it works."

In the hands of an experienced operator this method is perfectly trustworthy. Very small differences in plasticity may be detected. It is impossible, however, to test one lime and compare its behavior with that of another lime which has been previously tested by another operator. Comparisons can only be made when both samples are tested at the same time by the same operator.

Plywood Panels. (1926)—(*Data on the Design of Plywood for Aircraft. Report No. 84 by the National Advisory Committee for Aeronautics.*) This report gives the results of investigations made by the Forest Products Laboratory to determine the mechanical and physical properties of plywood and how these properties vary with the density, number, thickness, arrangement of the plies and direction of the grain of the plies. The following is an abstract of the data of value in connection with the architectural use of plywood:

The selection of veneer species and thickness introduces elements quite distinct from those involved in the design of an ordinary structural member of wood. More variables are involved, for in addition to the properties of the various species there are added unique properties due to the number of plies and thickness and direction of the grain of the various plies.

Wood is a non homogeneous material, with widely different properties in the various directions relative to the grain. The large shrinkage of wood across the grain with changing moisture content may introduce distortions in a board that decrease its uses where a broad, flat surface is desired. The shrinkage from the green to the over-dry condition across the grain for a flat-sawed board is about eight per cent and for quarter-sawed board about four and one-half per cent, while the shrinkage parallel to the grain is practically negligible for most species. In building up plywood a step is made in obtaining equality of properties in two directions parallel and perpendicular to the edge of a board.

Definition of Plywood.—Much confusion has been caused by the indiscriminate use of the terms "Veneer" and "Plywood." The former term should be restricted to the relatively thin sheets of wood cut with special veneer machinery from the surface of a log revolving in a lathe or by slicing or sawing from the face of a log, known, respectively, as rotary, sliced, and sawed veneer. "Plywood," on the other hand, refers to the combination of several plies or sheets

of veneer glued together, usually so that the grain of any one ply is at right angles to the grain of the adjacent ply or plies.

Warping of Plywood.—On account of the great difference in shrinkage of wood in the direction parallel to the grain and perpendicular to it, a change in moisture content of plywood will inevitably either introduce or relieve internal stresses. If in a three-ply construction, having the grain of the core at right angles to the grain of the faces, the moisture content is lowered, the core will tend to shrink a great deal more than the faces in the direction of the grain of the faces. This subjects the faces to compression stresses and the core to tensile stresses. If the faces are of exactly the same thickness and of like density the stresses are symmetrically distributed and no cupping should ensue.

If the grain of one face of a 3-ply panel runs in the same direction as the core, the internal stresses are no longer symmetrically distributed, since the compressive stress in one face has been removed. This face now shrinks a great deal more than the other face in the direction of the grain of the latter. The result is cupping. A high ratio of core to total panel thickness in a 3-ply panel gives flatter panels than using all plies of the same thickness.

Rule of symmetry to reduce warping.—In order to obtain symmetry an odd number of plies must be used, and the plies should be so arranged that for any ply of a particular thickness there is a parallel ply of the same thickness and of the same density on the opposite side and equally removed from the core. Even so small a difference in thickness as may result from unequal sanding of the two faces is sufficient to introduce unequal forces and cause cupping if the moisture content is changed.

Direction of the Grain of the Plies.—In careless construction the successive plies may not always be glued with the grain either exactly parallel or exactly at right angles to the core. A construction involving angles other than 0 and 90 degrees introduces twisting stresses. Tests have shown that deviation as small as 5 degrees from the standard 90 degree construction may introduce considerable twisting.

Moisture Control.—Since a change in moisture content may introduce cupping and twisting if the panel is not carefully constructed, the moisture content of the veneer should be so controlled as to give as far as practicable plies of the same moisture content before gluing, and finished panels should have about the same moisture content when they leave the conditioning room as they will average in use.

Relation of Density of Veneer to Warping.—Numerous tests have shown that the warping of plywood panels when subjected to varying moisture contents is least for panels made of low density veneer, and that in general warping increases with increasing density.

Shrinkage of Plywood.—The shrinkage of plywood is only about one-tenth as great as that across the grain of an ordinary board. It will vary, however, with the species, the ratio of ply thickness, the number of plies, and the combination of species. It is usually negligible and can be detected only with laboratory instruments of precision.

Effect of Increasing the Number of Plies.—Whether three or more plies should be used depends on commercial con-

siderations and the use to which the panel is to be put. An increase in the number of plies results in a decrease in the tensile and bending strength parallel to the grain of the faces and an increase in the corresponding strength at right angles to the grain of the faces. The greater the number of plies used for a given panel thickness, the more homogeneous in properties is the finished panel. Where great resistance to splitting is desired, as in plywood that is fastened along the edges with screws and bolts and is subject to forces through the fastenings, a large number of plies affords a better fastening.

Glued joints are more likely to fail when thick laminations are glued with the grain crossed than when thin laminations are used. When plywood is subject to moisture changes, stresses in the glued joint due to shrinkage are greater for thick plies than for thin plies. Hence with many thin plies the glued joints will not be as likely to fail as with a smaller number of thick plies.

Uses and Properties of Various Species.—The following low-density species are satisfactory for core stock in plywood: Basswood, fir (grand, noble, and silver,) redwood, Spanish cedar, white pine, spruce (red, white, or Sitka), yellow poplar, western hemlock, sugar pine, and cotton gum.

On the basis of their mechanical properties, veneer species used for face stock of plywood, may be grouped as follows:

Group 1.—Beech, birch (sweet or yellow), hard maple, black walnut.

Group 2.—White elm, red gum, soft maple, mahogany (African or true) sycamore.

Group 3.—Basswood, Spanish cedar, fir (grand, noble, or silver), cotton gum, western hemlock, sugar pine, white pine, yellow poplar, redwood, spruce (red, white or Sitka).

When a flat panel, high bending strength or high column strength with minimum weight are desired and finish is of less importance, species of group 3 should be used as face stock. Some of these species, such as spruce, can not be finished properly without a considerable amount of sanding and all but light sanding is undesirable because it may unbalance the construction.

Where hardness, resistance to abrasion and strength of fastenings are factors of importance the woods in group 1 should be used. Where finish is desired species of group 1 or group 2 should be used. Where plywood must be steamed, or soaked and bent into a form in which it is to remain, species of group 1 or group 2 should be used.

Size and Thickness of Commercial Veneer.—The average length of sawed veneer sheets is about 14 feet, and the maximum 24 feet, the average length of sliced veneer is about 10 feet, and the maximum 18 feet; rotary-cut veneer averages about 6 feet with a maximum of 16 feet. Sawed and sliced veneer sheets are limited in width by the diameter of the log, whereas rotary cut veneer may be any width consistent with easy handling. Sawed veneer is seldom cut less than 1/28 inch thick. Rotary-cut veneer of some species may be cut as thin as 1/100 inch to almost 1/2 inch in thickness. Sliced veneer ranges in thickness from about 1/100 inch to a little over 1/16 inch.

Glues.—The Forest Products Laboratories have published a number of Bulletins giving data on the subject

of glues. A digest of these Bulletins will be published in the February JOURNAL.

Swimming Pools. (35 k)—Within the last ten years the municipal swimming pool has become an established institution, and with it have come new sanitary problems. In 1917 the State of California adopted an act known as the Swimming Pool Act and in 1919, rules and regulations were adopted by the State Board of Health, providing for the healthfulness, cleanliness and safety of public swimming pools. Special Bulletin No. 35, the "Sanitation of Swimming Pools," published by the California State Board of Health is a compilation of all the publications of the Board on this subject. It contains the Swimming Pool Act, the Regulations of the State Board of Health, a discussion of the Sanitation of Swimming Pools and of the Disinfection of Bathing Suits and Towels. The following is an abstract of the recommendations made in the matters of swimming pool design, construction and water supply.

Materials.—Concrete, massive construction or reinforced, is the best material with which to build a pool. Wood or earth in any part of the pool should never be used. The walls, floors and walks should be surfaced with white tile, cement (white or gray) or other impervious material. For ease in cleaning, the finished surfaces should be smooth, but floors and walks should be rough enough to prevent slipping. White cement is preferred to gray cement on account of its color, and where the latter is used it is sometimes painted a white enamel finish in order to give to the pool a more sanitary appearance.

Size and Depth of Pool.—Pools should be made sufficiently large to accommodate the summer holiday crowds. It is this patronage which is most apt to cause the breaking down of the pool sanitation if it is at all inadequate. Small town pools appear to require providing for about 100 persons per thousand population. The average attendance will, of course, run much less than this but the size of the pool, quantity of water supply, number of dressing rooms, toilets and showers should be adequate for the maximum patronage.

In many instances the quantity of water available will limit the size of the pool. If the water supply is limited it is unwise to make the pool too large. For example, if the water supply is limited to 30 gallons per minute or 43,000 gallons in 24 hours, under the best manipulation and without filtration about 100 bathers could be accommodated and a pool 60 feet long by 20 or 25 feet wide would be the largest it would be wise to build. As a rough figure, 400 gallons of "pure" or "purified" water per bather is needed. The Board of Health recommends 800 to 2,000 gallons per person for a continuous addition of new water without the use of disinfecting solutions. If the supply is not more than 200 gallons per bather a recirculating, filtration and disinfecting system must be used.

Pools should be laid out to conform to the sizes and proportions required to make swimming records "official." The intercollegiate swimming rules require that the length of the pool shall be in multiples of 15 feet and the width in multiples of 5 feet. The general proportions of the pool should be long and narrow. The length should be from three to four times the width.

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The shape of the bottom of the pool and the depth are important features. To comply with the intercollegiate swimming rules, the minimum depth should be not less than 3 feet and the maximum depth at least 8 feet. A minimum depth of 8' 6" opposite diving stands and spring boards is required by the regulations of the State Board.

For a children's pool the minimum depth of 3 feet is too great. If, therefore, the patronage includes children, a small shallow wading pool, possibly attached to the shallow end of the main pool, should be provided.

The best shape for the main pool is one which provides a maximum depth at a point just forward of the end of the spring board and a broad area at the shallow end suitable for general swimming and wading. Most bathers remain in the water not over 5 feet in depth and this portion of the pool floor should have a slope of not more than one foot in 15 feet. A maximum of one foot in 20 feet is recommended. As the deep end of the pool usually has a rather steep slope, the change from the flat slope to the steep slope should be made at a depth of not less than 5' 6" or 6 feet as a protection against inexperienced swimmers slipping if they chance to walk off the flat slope.

Scum Gutter.—A scum gutter on all four sides of the pool should be provided. The shape of the gutter should be such that access to it by the bathers would be difficult. Drainage outlets should be of such size and spacing that all overflows and splash will be promptly carried away into the sewer and not returned to the pool or the circulating system. Gutters or drains, along the top or side of the wall, open and accessible to the bathers, should not be used.

The gutter should be recessed with not more than one inch projection beyond the face of the wall above. A slight projection will assist in preventing drippage from the wall above re-entering the pool. To avoid any obstruction in the pool the scum gutter should be designed to serve as a hand rail. For this reason it must have a minimum depth of about $3\frac{1}{2}$ inches and for good drainage should pitch $1\frac{1}{4}$ to $1\frac{1}{2}$ inches in 10 feet toward the drain outlets.

Curbs.—The entire pool should be surrounded by a raised concrete curb, at least 2 inches high on the walk side by 12 inches wide. This curb serves as a space on which bathers may sit and as a check against walk drainage flushing into the pool. The proper height of the curb above the water level is 18 inches. The overflow or scum gutter automatically maintains the height of the water.

Walks.—Walks surrounding the pool may slope toward or away from the curb to a grating covered drain or to drain outlets in the walk. Walks should be at least 4 feet wide in the clear and should have a slope of at least one half inch per foot to the drains. All corners should be rounded.

Walk drains should be carefully designed. Material carried in them represents the worst pollution about the pool. It contains suit drippage and a large amount of sputum and effete matter. Designs which provide for a pitch of the walk toward the pool without a raised curb to intercept it, carry this filth to the point where bathers are most apt to lounge.

Inlets and Outlets.—The best inlet and outlet arrange-

ment is the one which will most quickly permit changing the entire contents of the pool. An arrangement of inlets and outlets giving the maximum uniformity of displacement of "used" by "incoming" water, and the maximum avoidance of short-circuits or "dead" areas should be used. Nothing could be worse than a single outlet and a single inlet. Experiments show that the bulk of the pool is practically "deadwater" when such an arrangement is used.

The use of branch inlets about 10 feet apart at mid-depth, or even staggered in the vertical, along one side, with outlets similarly located on the opposite side is an approved arrangement. The use of fountains and the omission of the scattered outlets, using instead the scum gutter as an outlet, may, if the water supply is abundant, be satisfactory. When filtration and recirculation are employed the inlet and outlet lines both lead toward the filter. It is a wise plan, even when the water supply appears to be abundant and recirculation not necessary, to so lay out the outlet and inlet lines that a filter plant can be installed later if it should be desired. The main drain should be at least 6 or 8 inches in diameter and should connect with a sewer or drainway which is known to be large enough to carry the full stream of drainage water.

Miscellaneous Features.—Dressing rooms, shower rooms, lavatories and toilet rooms should be commodious, well ventilated and well lighted, preferably by natural light. They should be conspicuously located. All wooden surfaces should be painted white. Floors should be of tile, cement or other similar material but not of wood. They should pitch at least $\frac{1}{4}$ inch per foot toward grating covered drain channels or floor drains, and in all cases away from passageways or the pool, except that when the raised curb is used the gangway around the pool may pitch to a grating covered gutter just back of the curb.

There should be at least one shower head for each 30 dressing rooms. Showers should be supplied with both hot and cold water and should be conveniently located with respect to all the dressing rooms. There should be at least one toilet room for each 30 women's or children's dressing rooms and at least one toilet for each 60 men's dressing rooms. There should be urinals to accommodate at least 5 per cent of the capacity of the men's dressing rooms. Toilet and urinal rooms should be located for ease in finding from every dressing room and from the pool. Sand beaches, earth walks, board walks, lawns and the like, which may contribute contamination or objectionable filth to the pool or premises should not be permitted.

Water Supply.—One of the most important and difficult standards to be set for swimming pools relates to the water supply. The main requirements are that the water shall be continuously clean, clear and bacterially safe. It should be free from noticeable scum, suspended or floating objects or particles. It should be so clear that bathers may be seen on the bottom of all parts of the pool. Clearness, however is not an index to the bacterial condition of the pool. A pool may become prohibitively polluted long before it begins to discolor. The California State Board of Health has adopted as a tentative standard a total bacterial count of 1,000 colonies per cubic centimeter on

agar incubated at 37.50 C., and a B. Coli count of one (1) per cubic centimeter for the pool water in any part of the pool, examined within 48 hours after sampling.

There are two distinct methods of meeting the requirements for a proper supply or sanitary condition of the water *e. g.*, the "fill and draw" or "dilution" method and the recirculating method. These two methods are sometimes combined.

By the "fill and draw" or dilution method the pool is emptied and refilled with new water at intervals of from one day to one week and the addition of a constant stream of new water between cleanings at a rate which will displace the used water at least once in two days. The amount of new water required varies greatly with the concentration in the pool, class of patronage, care in enforcing showers regulations and general sanitary surroundings. The continuous addition of from 800 to 2,000 gallons of new water per bather is recommended but the exact amount can not be established except by trial. Pools which are emptied nightly may be able to maintain proper bacterial safety. If the water is held for longer periods, some form of disinfection should be used in addition.

Intermittent applications of disinfecting solutions direct to the pool, morning or evening or both are sometimes used in connection with the "fill and draw" method, especially if the water supply is limited. A solution of hypochlorite of lime, known as bleaching powder or chloride of lime may be used, or any solution containing the same active ingredient.

In all cases fresh material having a strength measured as available chlorine sufficient to dose the pool with 2 to 5 pounds of available chlorine per million gallons is essential. Ordinary chloride of lime runs about 25 per cent available chlorine. With ordinary chloride of lime, 1.5 pounds of dry powder per 100,000 gallons in the pool is a good average dose. Copper sulphate is sometimes used but it is a weak germicide and if used in sufficient amount gives the pool a milky appearance. Its use is highly recommended for algae or moss control but not for disinfection.

The more modern method of handling the water supply, with a view not only to economy but to maintaining a better bacterial condition in the pool, is the rotating or circulating of the pool contents by pumps through filters of adequate capacity, after which it is disinfected or chlorinated and returned to the pool as "purified" water. It is not uncommon to find that this "purified" water is actually cleaner and safer than the new water used in filling the pool.

The foreign matter such as lint from bathing suits, growths of slime, cuticle, dead algae, and similar coarse material is held in suspension during the day when the pool is patronized but within a short time after bathing is over it settles to the bottom. The filter can be effective in removing this only so long as it is in suspension and reaches the outlets. Therefore a filter should be designed and operated to handle the entire pool capacity in from 6 to 14 hours or one swimming day. Unless the water is rotated daily, algae growths will become established. There is little benefit, however, in recirculation or filtering the water when there is no swimming going on.

In designing filters it is well to figure on a capacity of 2 gallons per square foot of sand surface per minute. It

appears that provision for the use of alum or coagulating chemicals is unnecessary with a swimming pool filter, the reason probably being that the slime in the pool water naturally provides the coagulum. Either open or closed filters appear to yield good results. The former is usually the cheaper, at least in first cost. The chlorination of swimming pools is apparently highly efficacious. The dose needed and the circulating period vary with the clearness of the pool water, patronage, etc.

Ordinarily, 0.5 pounds of chlorine per 100,000 gallons of water is sufficient for swimming pool disinfection. The chemical may be added in the form of chlorine gas, in which case a chlorinator apparatus is used, or it may be used in the form of bleaching powder mixed into a solution, and fed into the supply at a rate proportionate to the flow. Bleaching powder is weaker than chlorine gas by about 70 per cent, therefore about three times as much, or 1.5 pounds per 100,000 gallons must be used. Apparatus for the handling of bleaching powder consist of a concrete tank holding 300 gallons and a small concrete orifice tank for regulating the feed of the solution. In either case the chemicals may be applied at any point in the circulating system.

Heating the pool water may be a necessary feature where the new water is very cold. A temperature in the pool of 64 degrees F. is quite cool, while a temperature of 68 degrees F to 75 degrees F. is comfortable to most people. In the case of a recirculating system, the returned water may be passed through a series of coils over an oil or coal furnace. Some heaters are equipped with steam pipes within a water chamber set in the circulating system.

Note.—The California State Board of Health has done considerable inspection work and investigation of Swimming Pools since the data was collected for publication in the above Bulletin. It is stated by Mr. Ralph Hilscher, Director of the Bureau of Sanitary Engineering that while more recent investigations have caused a change in some of their views, relative to construction and design, nevertheless, in the main the information in Bulletin 35 may be safely followed by architects in designing pools.

Landscape Design. (38)—The United States Department of Agriculture has published Farmers Bulletin, No. 1087, "Beautifying the Farmstead," by F. L. Mulford, Landscape Gardener, office of Horticultural and Pomological Investigations. The bulletin points out the importance of improving the surroundings of farm houses, the neglect of which is stated to be due usually to one or more of the following causes:

(1) The opinion that it will require too much time and work for upkeep, (2) a feeling that the improvements will be unsuited to farm conditions, (3) a belief that adequate improvement will be too expensive, (4) indifference, (5) a lack of understanding of what can be accomplished by expending a little effort in this direction. Among the subjects treated are the following: desirability of making plans for improvements in advance, location of the buildings, walks and drives, service features, lawns, terraces and planting.

Note.—The influence of our present system of taxing improvements is, in the opinion of many, the reason why so much farm property is unimproved.

THE
JOURNAL
OF
**THE AMERICAN INSTITUTE OF
ARCHITECTS**

The English Building Trades Guilds at Work
ORDWAY TEAD

The Blot on the Escutcheon—III
FREDERICK L. ACKERMAN

Cooperative Offices for Architects
EDWIN H. HEWITT

The New Method for Reciprocal Registration

The Congress of the Building Industry

The Institute and Architectural Exhibitions

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FEBRUARY
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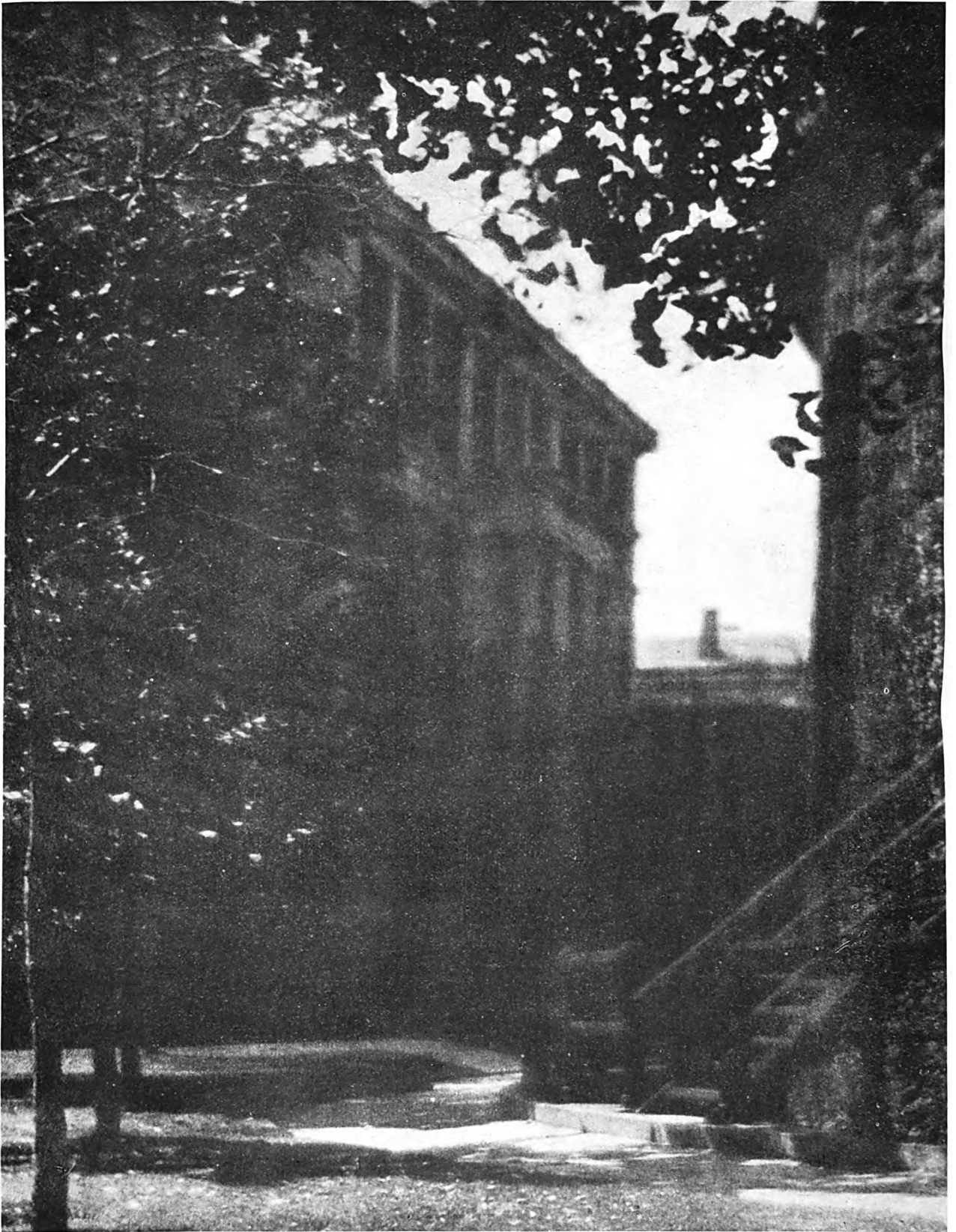
In Detroit, the First & Old Detroit National Bank is erecting a large office building, of which Albert Kahn is the architect. In the same city, the Durant Building, one of the world's largest buildings, also designed by Mr. Kahn, is nearing completion.

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After the photograph by G. H. Van Anda

A VIEW AT COLUMBIA UNIVERSITY, NEW YORK CITY

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Shadows and Straws

LEGISLATIVE ACTION is proposed in New York State, as a result of the Lockwood investigation, for the control and regulation of the building industry. Several bills for the creation of a Department of Public Works are likely to be introduced into the next Congress. Senator Calder has introduced a bill for the creation of a Bureau of Construction and Housing in the Department of Commerce.

Therefore it is plain to be seen that the people of the United States are looked to for support of legislative measures affecting the building industry. After the revelations in New York, and the inability of the industry properly to function in satisfying the ordinary needs for shelter, law-makers may not be wrong

in assuming that their constituents will indorse almost any kind of regulation that may be prescribed. For these reasons, the Congress of the Building Industry seems to have an auspicious setting for its labors. It is the personnel of the whole industry that should study this great problem with an open mind. It is their problem.

Following Mr. Cole's story of the English Building Guilds in the January issue, there is published immediately below another story by Mr. Tead, of the Bureau of Industrial Research of New York City, who visited England late last year for the purpose of seeing what the Guilds were doing.

The proposed Congress and Senator Calder's bill are also dealt with in this issue. C. H. W.

The English Building Trades Guilds

By ORDWAY TEAD

I. The Immediate Background.

THE PROGRESS of an idea from the realm of theoretical discussion to that of practical accomplishment is inevitably an educational process—educational both for those who are translating their ideas into action, and for those who can observe developments. The English "building trades guilds" in the last ten months have been progressing in this fashion; and for us in America who witness the same confusion and shortage in our own housing situation there is unquestionable educational value in this experiment.

To understand this recent English experience it is perhaps well briefly to summarize its antecedents even though these have previously been treated at length in the columns of THE JOURNAL. Several facts stand out: The pre-war shortage of homes for people of moderate means which has now become doubly acute; the lamentable failure of the Ministry of Health, the national agency responsible for the housing program, to build houses; the refusal of private enterprise to come to the rescue since whatever profits there are in building, are

found in office and other non-domiciliary structures; the bad blood, indifferent morale and general demoralization from the point of view of economical and expeditious production of the English building trades, although they have worked principally under union shop conditions; the conflicts of interest acutely recognized and kept acutely to the front; and finally, as a beginning toward good will and a better understanding, the formation in 1916 of a Building Trades Parliament composed of thirty-three representatives of the organized employers in this industry and thirty-three of the trade unionists—the most significant step which it has so far taken being the appointment of a Committee on Scientific Management and Costs,¹ which in 1919 submitted a report² calling upon the industry to pool its surplus profits, improve management methods; pay capital only market rates and eliminate unemployment. Three of the eight employer members signed

¹ The Committee was composed of sixteen men, of whom eight represented the building trade employers and eight the building trade employees. Thus the report had the extraordinary merit of emanating from a body representing the whole building industry.

² See The Industrial Council for the Building Industry. Garton Foundation. London, 1919. See also THE JOURNAL for September, 1919.

this report, including the Chairman, Mr. Thomas Foster. The report was referred back to committee without definite action by the Council and in the interval between this and the second submission, Mr. Malcolm Sparkes (who had been instrumental in the formation of the Building Trades Parliament) came to believe very strongly in what were perhaps the logical implications of the Foster Report to which he had previously been a signatory. He took the "guild" position, and in an appendix to the report in its present form argued for the creation of a National Building Guild in which the employers would take their places as salaried members of the industry—organized for public service and not profit; thus head and hand workers alike would be united under the slogan, "The Team Spirit for the Public Service."

The body of the main report remains substantially the same in its present form; but in addition to Mr. Sparkes' appendix there is a dissenting report signed by all the employers, except Mr. Foster, who have withdrawn their signatures to the main document.

This revised report with the new appendix and the dissenting employers' statement was resubmitted at the August 1920, quarterly meeting; but such a strong opposition to it had developed among the employer members that the first effort was to refuse reappointment to the offending committee. The attempt was unsuccessful, but so much of the two days' meeting was consumed in arguing this point that consideration of the report itself was deferred to the November meeting.

At that meeting the opposition and the sharp divergence of opinion and outlook continued to be so acute that it was felt best not to press the acceptance of the report to a vote. Instead, action was taken requesting the committee to reconsider its findings "in the hope of finding more general agreement between the two interests represented on this council."

II. Forming the Guilds.

Meanwhile the pressure of events and the appeal of the guild idea have been too great to await the deliberations of a body where the employers were not only reluctant to entertain any new proposals but took the position that "a system, which has persisted in all ages, and in all countries, has only done so because it is the best, and is the system found by experience to be the best for supplying a nation's need."¹

In fact, as far back as January 1920, the building trade unions of Manchester had organized a "guild committee"² under which they proposed to do building work on their own account and without the intervention of private contractors. They called in

¹ Appendix III. Minority Report of Employers on Management and Costs Committee. London, 1920.

² See THE JOURNAL for March 1920, p. 128.

³ See THE JOURNAL for July 1920, p. 266.

⁴ The Rules of the Guild of Builders (London) Limited. London, 1920. p. 3.

Mr. S. G. Hobson, one of the conspicuous advocates of the guild idea and made him secretary of their group.

By May the example of the Manchester group had fired the imagination of the London unions and with the active cooperation of Mr. Sparkes, working with them as an unattached but interested individual, they organized the London guild.³

Early in September 1920, the Ministry of Health finally approved contracts with the Manchester and London guilds and a total of 800 working class houses are now in process of construction in these two cities. The Ministry has been so far won to experimenting with guild contracts that Dr. Addison announced on November third that eight contracts comprising 1003 houses have been approved by the Ministry; although it was further intimated that a top limit of fifteen guild contracts would be set for the present until the results of the guild construction are seen. Of these eight contracts at least five are now finally signed and work is under way.

Meanwhile, as is indicated by this increase in the number of guilds sufficiently well organized to get business, the idea is spreading rapidly; by November first, 1920, there were over eighty local guild committees of building trade workers. And forty-eight of these sent delegates to a conference held in Manchester on October ninth to formulate plans for federating the local guilds into a National Building Guild.

A parallel development which although theoretically on a quite different basis is fundamentally in the same direction, is the increase in "direct labor." Under this arrangement the municipal authorities do their own contracting and deal directly with the unions. The Ministry of Health has approved contracts for over 8000 houses to be built by direct labor under 101 different local authorities.

III. Guild Administration.

The extent of actual accomplishment in translating the guild idea from theory to practice has now been indicated; and it remains to make clear how these local bodies are functioning and doing business. The basic unit of organization is a district guild committee which is composed of one delegate elected from each of the building trades unions in the district for one year and one delegate also from any other group "of building trade workers within the said area, whether administrative, technical, clerical or operative, that may be approved by the board of directors."

This provision is intended to make it possible for draughtsmen, managers, foremen and the like to organize and secure representation in the management of the guild. Already the surveyors, architects and engineers have organized and elected representatives under this provision, and the decorative painters and sculptors are organizing. There is also included one representative from the committee of workers on each of the two local

THE ENGLISH BUILDING TRADES GUILDS

contracts. It is this body of delegates (chosen presumably because of their expressed belief in the guild idea and desire to forward it) which becomes the corporate entity known in London as the Guild of Builders (London) Limited. And the Manchester organization is in all essential points a similar one, although it organized under the no-profit clauses of the joint-stock company act. The London Guild is registered under the Industrial and Provident Societies Acts 1893-1913; it has stock with the nominal value of one shilling a share but carrying no dividend rights, and each delegate holds one share which is transferred to his successor upon his withdrawal.

There is thus created a legal entity which transacts the business and is authorized:

1. To carry on the work of Builders, Decorators and General Contractors.
2. To undertake all branches of supply whether as Merchant, Manufacturer, or Transporter.
3. To carry on any other work which the Society may think necessary or desirable or capable of being carried on in connection with the objects and purposes above set forth, or any of them, or calculated directly or indirectly to promote the same.
4. To acquire, cooperate or unite with any other Society, Company, or Organization which the Society may think necessary or convenient for the attainment of any of the objects of the Society.
5. To do all such things as are directly or indirectly incidental or conducive to the attainment of the above objects or any of them, including the power to purchase, hold, sell, exchange, mortgage, rent, lease, sublease, surrender, accept surrender of, and deal with lands of any tenure and to erect, pull down, repair, alter, or otherwise deal with any building thereon. Each object of the Society shall be taken to be an independent object, and not to be governed by any other object.¹

¹Idem. (2).

In practice this body will consist of between twenty and thirty members and it is therefore further provided that the whole of the members of the society shall constitute the Board of Directors. The idea of keeping the Board large is to involve every member in the fullest possible knowledge of affairs and interest in them. Provision is made, however, for the delegation of work to standing or special committees and it is probable that much of the intimate and detailed work will be done either by these committees or by executives chosen by the Board.

Major executives responsibility is given to a Secretary—in London Mr. Sparkes has been chosen for this post. And to salaried superintendents and managers is given large scope on the actual construction operations. Indeed great stress is laid upon this feature of administrative method as distinguished from the self-governing workshop idea where the workers on the job elect their managers. Says the prospectus of the High Wycombe Guild:

The Guild Committee will be responsible for the appointment and removal of managers, and for the fixing of their salaries.

It is important to notice here the difference between the Guild practice and that of the self-governing workshops which have so often been set up without conspicuous success. The manager of a self-governing workshop is responsible to his own staff. The Guild Manager, however, is responsible—through the Guild Committee—not only to his own staff, but to the whole of the organised Building Trade Operatives in the District. This gives him security without weakening the full democratic control of the workers.

Salaries.

The difficulties of the payment problems are fully recognized. There is no disposition to ignore the value or the relative scarcity of organizing and directing ability; but the policy is nevertheless to induce managerial and technical workers who are sufficiently interested in getting the guild idea into action to "volunteer for service" and take somewhat less in salary than they might command in the open market. Those in subordinate executive and clerical positions receive the going rates, and the manual workers are paid the standard union scale. What would happen when unions working for private contractors strike for a new scale, presented of course one of the interesting questions. But it is thought that no crisis will be caused in the immediate future on this issue now that the London District Council of the National Federation of Building Trade Operatives has stated that work on guild contracts will not be stopped by any building trade dispute in the London area.

There is one important qualification regarding the pay of the manual worker. The costs on the London and Manchester contracts have been figured to allow "wet time" pay; and if they have been figured correctly and if the work is organized so that indoor jobs are always available in wet weather, the guilds will easily be able to pay all workers engaged on those contracts on a weekly rather than an hourly basis. Labor costs are thus made a first charge on the enterprise. And as long as any one contract lasts the workers are assured a full weekly wage. The ultimate hope is to go even further and enable the member to draw guild pay "in sickness or accident, in bad weather or good, at work or in reserve."

The selection of those workers who shall work on the actual contracts in hand may present some difficulties. The procedure has been to ask those to enroll who are willing to "volunteer for guild service and undertake to do my part in the execution of the contracts undertaken by the guild." On this basis over 12,000 workers in various crafts and including brain as well as manual workers have enrolled. Workers for actual jobs are chosen by the local group in the order of their enrollment. However, vexing ques-

tions as to the relative efficiency on the job of different members of the same craft promise almost inevitably to arise.

Distribution of Earnings.

The guild constitutions embrace other interesting provisions. There is to be complete publicity of accounts; cost accounting is to be actively carried on for all operations; surplus earnings "after providing for unemployment pay, for the interest upon any loans according to the rates respectively agreed to be paid, shall under no circumstances be distributed as dividends, but shall be applied as follows:

1. In the reduction of the preliminary expenses incurred in forming the Society, and remaining unwritten off in its books, at such rate, being not less than 5 per cent per annum as the Society from time to time direct.
2. In providing additional buildings, plant, and equipment.
3. In providing a reserve fund.
4. In further improvements of the Society's service, by means of education, technical training, and research.
5. And for any other purpose as the Society may determine.

IV. Credit and Contracts.

Negotiations over the present contracts have raised interesting questions of which the most important is the securing of credit. The guild constitution provides for the borrowing of money by loans, loan stock and deposits from members and other persons. And some small advances have necessarily been made in order that the guilds may start doing business. But an obstacle early arose in the dealings with the Ministry of Health because of the reluctance of the guilds to pay the usual performance bonus or underwriting required of private contractors. The position of the guilds was that the pledge of their members to do the work on guild contracts was a better guarantee than the financial one. In fact, the assurance of willing labor was held to be the very best guarantee conceivable. The Government refused to concede this, but agreed finally that it would be satisfactory if the performance of the contracts was insured. The Insurance Department of the Cooperative Wholesale Society was therefore called upon and it agreed to write a policy calling for a premium of five shillings on each hundred pounds' value up to twenty per cent of the total value of the contract.

The securing of advances for raw materials and wages was also possible on the one hand because the Cooperative Wholesale Society was willing to give credits, and on the other, because the Government promised to settle weekly for work done, and thus make it possible to pay wages and salaries out of these remittances. And another form of contract is being devised under which the local authorities as well as the cooperative societies may supply the materials. It is

recognized by the guild executives that these favorable conditions are to an extent fortuitous and that money loans may be necessary as the development goes on; but stress is laid on the soundness of the guild's credit because of its mobilized labor power which the guildsmen hold to be the fundamental basis of credit in any case. And it is interesting to see that the C. W. S. which is really another working class organization, is ready to extend credit because of its concurrence in this belief.

In this connection the difference in the vocabularies of the Manchester and London guilds has significance. The Manchester groups mention their potential "monopoly" of the labor power of the industry as the reason for their strong position for securing credit. In London the idea of monopoly is all but repudiated as an invidious conception—the emphasis being throughout, on the service motive, development of the team spirit, and on the enlightened goodwill of those in the industry.

Construction Economies.

The terms of the contracts are valuable evidence of the prospective economy of guild operation. The houses being built under the London contract are to cost approximately 950 pounds each. This charge is figured to include all labor and material at cost and to it is added 40 pounds on each house to enable the guild to pay full weekly earnings to all workers regardless of weather, plus 6% of this estimated cost to cover plant and head office expense. This figures out as a charge based on actual wages and material costs plus ten per cent, made up of four per cent to provide continuous pay, three per cent for plant and three per cent for overhead.

This makes it in effect a "cost-plus" contract, which admittedly has its dangers; but with the increased efficiency of the individual worker which the guilds count on and the usual inspections by the Government the chances are good that estimated costs will not only be met but be undercut. The difference between this form of contract and the usual "cost-plus" contract is important, however, for the ten per cent added is in this case added to material and manual labor costs in order to cover administrative costs. No profit is expected or calculated for. Under American cost-plus contracts, of course, the ten per cent would be the per cent of profit over and above all costs.

It is this expected ability to deliver the goods at the bottom price which gives the guild its economic advantage. The price of £950 is £100 (\$500) less than any private contractor's bid on the London contract; which means on a \$5,000 house a saving of at least ten per cent. This is the immediate saving to the municipality which holds the title to the houses; and of course, it makes possible a lower rent. But it is hoped and expected that with the improved morale of a group

THE ENGLISH BUILDING TRADES GUILDS

of workers freed from the sense of creating private profit for others, with lessened capital charges and no dividends to meet, and with the large scale purchase of materials, greater savings will accrue. In case this happens the surplus will be used for social purposes, and it will be possible to bid lower on future jobs.

The Test of Morale.

It is, also, informing to see the kind of obstacle which the guilds are encountering in other localities where they have made bids. They are in certain instances being arbitrarily turned down although offering the best price, because of political preferment and fear of "doing the employing contractor out of business." And in either case, chances are being given the private contractors to revise their bids to see if it is possible for them to approximate those of the guild.

It is impossible to speak yet as to the success of the guilds. Formidable problems will at once occur to every practical student to which a solution seems difficult. Will the guilds, for example, be willing to pay for the type of executive and technical ability which they should have to enable them to continue to compete with private contractors? For it is manifest that their success depends upon their ability to do business in active competition with capitalist enterprise for some years or decades to come.

Again, will the fact of guild employment at standard rates be sufficient incentive to enlist the permanent interest of the manual worker and secure a reasonable degree of working efficiency? Despite what the guilds say about the new status of the worker where the profit motive is absent, will his status be in fact very different from that of wage earners in other industries today?

The central problem appears to be one of morale. Can a working morale be built up in the world of mental workers to impel them to cooperate on a basis of public service rather than primarily of personal aggrandizement? And can it be built up in the world of manual workers to enable them to see the value of mental work sufficiently to pay for it, and to get also a real joy and satisfaction out of the day-by-day work they are themselves doing?

It is on questions like these that the experiment in the English building trades, while in no sense conclusive, can provide useful and timely evidence.

There are, moreover, those who feel that the mountain has labored and brought forth a mouse in that after all these years of guild propaganda there are only contracts for some hundreds of houses to show as the tangible achievement; while the need is for thousands of homes. Such criticism helps to keep the enthusiast's imagination sober and his confidence in the rightness of his idea tempered with patient openmindedness. But it also misses sight of the difficulties which attend

the building on solid administrative foundations of any going enterprise which is to compete with capitalist undertakings. The magnitude and complexity of the work of coordinating the several managerial functions and especially those that have to do with the orderly progress of construction and the relations of managers to managed, is likely to be unappreciated except by the initiated. And any project that involves the construction of several thousand houses and results in efficient and humanly satisfactory performance on the job is not to be lightly regarded.

VI. The Guild Theory.

It remains, finally, to give explicit statement to the theoretical basis of this development. In the introduction to his appendix referred to above, Mr. Sparkes makes the following statement which shows the guild idea at work in the setting of this one industry:

5. This presentation of a great scheme of industrial self-government without any demand for its acceptance or threat of penalties for non-acceptance, is, we believe, unique in industrial history, but we are convinced that only in such conditions can the greatest qualities of human nature be given full play unchecked by strategic precautions based on the old technique of suppressed war.

6. The scheme of joint control by committees of employers and operatives outlined in the Interim Report, was criticised in several quarters as expensive, bureaucratic in tendency and difficult to work. We are frankly impressed by these criticisms and, in the light of further discussion, we admit that the original proposals contained too much of interference and too little of adventure. If we erred, however, it was not that we asked too much but that we did not ask enough.

7. The plan we now present for discussion and voluntary adoption, as already described, is a complete scheme of democratic control based upon the whole of the personnel of the National Federation of Building Trade Operatives and other approved organizations of building trade workers whether administrative, technical, clerical, or operative.

8. Every requirement of the Interim Report is met, and met in a manner that is simple, flexible, and capable of immediate realization.

9. Our task has been greatly simplified by the extremely rapid development of the Guild idea throughout the whole of the building industry. This makes possible and practicable, proposals which, even six months ago, would have been dismissed as utterly visionary and "Utopian." A National Guild of builders—a great combine of autonomous units, organized to secure for the public service the immense advantages of industrial combination—stands out today as the logical development of the local Guilds of Builders that are now springing up in various parts of the country.

10. A clear division of functions between the national and local organizations would, however, seem to be advisable. The National Guild would be mainly concerned with the purchase, manufacture and supply of materials; the Local Guilds, mainly with the actual erection of buildings. The whole of the property of the operating units

would, however, be vested in a properly constituted National Guild Authority.

11. Guild organization is based upon the following simple but fundamental principles:

(a) Its motive is organized public service, the whole industry pulling together as one team for the common purpose.

(b) The final voice in the control of the industry is transferred from those who, at present, own the property, to those who do the work, the Boards of Directors being elected on a democratic basis by the whole registered personnel of the industry, no one, duly qualified, being excluded.

(c) Labor is no longer regarded as a commodity to be purchased or discarded as required. Guild pay is continuous, in sickness or accident, in bad weather or in good, at work or in reserve.

(d) There is complete publicity as to costs, charges, and prices, the Guild having nothing to conceal.

(e) Borrowed capital is to be paid for as the hired equipment of industry, at limited rates of interest without powers of control.

(f) All surplus earnings are devoted to the improvement of the service.

12. Every one of these principles was clearly endorsed in the Interim Report, but, in place of the dual control, there advocated, the present scheme unites the parties in Guild Committees on which every approved organization of Building Trade Workers is to be represented.¹

In concluding, Mr. Sparkes makes reference to the relation of the guilds, as they develop, to the existing Building Trades Parliament whose sober deliberations the guild activities have so far outstripped, and he well

¹Report of Management and Costs Committee, London, 1920. Appendix II, pp. 8-9.

says that "It is not anticipated that the Guild will carry on more than a portion of the building activities of the country. The Building Trades Parliament, therefore, will continue to be recognized as the central representative assembly of the whole industry, coordinating and developing its work and extending and perfecting its universal and voluntary codes. It seems reasonable to suppose that the Building Industry of the immediate future may develop along two lines:—(a) Guild enterprise, as herein described—(b) Regulated private enterprise. If this be so, then the Building Trades Parliament will acquire a supreme value and importance as the great clearing house for ideas, before which every new proposal or achievement may be fully ventilated and discussed by men who are keenly desirous that the foundations of new industry shall be well and truly laid."

Whether or not these new bodies provide a practical instance of the way in which certain industries may be soundly socialized, it is premature to judge. And the guilds will in any event work against great odds and under handicaps deliberately created by those who fear them. But one conclusion is certain. Any successful step toward socialization must, as the leaders of these guilds understand, reconcile the inevitable demand for economical production with the irrepensible desire of the great body of manual workers for some satisfaction in and through their work. Precisely to the extent that the promise of the guilds in this direction is substantiated by the facts, will their social utility, permanence and growth be assured.

The Blot on the Escutcheon—III

By FREDERICK L. ACKERMAN

THE Lockwood Committee, led by Mr. Untermeyer has continued to hack its way through the dismal swamp of collusive action and cross purpose, ordinarily spoken of as the building industry; as yet there are no signs of a clearing ahead.

The Helping Hands

At this writing a hundred indictments more or less have been found by three Grand Juries busily engaged in sifting the evidence. What constitutes this evidence is too complicated a matter to set forth here; but a few fragments of testimony may again be used as samples. Here is an illuminating incident showing how deeply business traffic is concerned (?) with the production and distribution of needed goods!

It seems that the officers of the Munson line did not know that the New York Sand Trust would use no sand except from its Long Island beds. So, 1,200 tons of sand, purchased in Holland last spring, was brought here as ballast in the hold of the steam-

ship Munares. Agents of the line called about every sand dealer in the city and offered the sand at a low figure; none were interested; they would not even inspect the sand. It was offered free to them; they refused it as a gift. Finally, this sand worth \$1,500 in the hold was dumped at sea; for dumping, the Munson line paid \$2,400.

Almost everybody entertains the notion that financial business, loan transactions and the like, is what make the wheels of industry go round. Some few are inclined to believe that such is not the case. These latter hold that financial business is interested solely in the question of price and profits; and that as a consequence it must operate to retard the free flow of needed goods and materials. Our mistake in trying to understand the situation is that we judge the acts of individuals without considering that they are compelled either to employ such methods or go down and out. Does anyone think otherwise after what happened to the Munson sand? If they are still unconvinced let us look at a most

THE BLOT ON THE ESCUTCHEON

illuminating bit of testimony regarding the production and the delivery of Hudson River brick. After some little difficulty, Mr. Untermyer found that several loans had been made by the Peoples Bank of Haverstraw to brick dealers up the Hudson.

Everett Fowler, President of the Peoples Bank of Haverstraw, N. Y., President of the Greater New York Brick Company and one of the largest manufacturers of common brick in the State, said he manufactured 38,000,000 bricks a year in two yards. He gave the capacity of all Hudson yards as 1,200,000,000 but said that this year only 400,000,000 had been manufactured.

It developed that this concern was organized by the large brick interests and the witness reluctantly admitted that the object was to get a uniform selling price. He could not say how much the company disposed of as a selling agent, but other witnesses had testified that it disposes of more than half of all the brick marketed in the city.

"And this gives you a channel through which this uniformity of price can be maintained?" inquired Mr. Untermyer.

"I would not say anything about the uniformity of price," was the answer.

"But you organized the company for that purpose?"

"Yes, and it failed afterward."

Mr. Untermyer then took up the matter of advances made to brick dealers up the Hudson by the Peoples Bank of Haverstraw.

"I am referring," he said, "to an arrangement by which the weak manufacturers are said to have been kept off the market with their brick by advancing money on future consignments. Don't you remember, in 1919, advances were made to men who were financially weak in the business? These brick are under the shed and are they not kept off the market by these loans?"

"Not that I know of," responded the witness.

Q. You know perfectly well, don't you, that when business is dull, when there is no great demand for brick, if there is an unlimited supply, no restraint or restriction on the supply, the market is broken, isn't it? A. It is very apt to be.

Q. And you are a very large manufacturer of brick, aren't you? A. Not very large.

Q. But you were interested in maintaining the market, weren't you? A. Certainly.

Q. And you are interested in keeping a surplus of brick off the market that would interfere with the price? A. I never tackled that part of the game.

Q. If you loan money on brick with the idea it is being kept off the market, that would be part of the game, wouldn't it, which you never tackled? A. In a way, I don't say that way.

The Modern Building Bees

One of the boldest and tightest of the combinations *as yet* discovered is that which exercises control over marble. From the evidence it appears that there are

37 members of the combine in New York and about 100 in the balance of the country. The New York group operated in the Metropolitan district through the Marble Industry Employers Association, and outside the city through the Material Association of Marble Employers. Contracts, signed with three labor unions, made it impossible for a contractor outside these Associations to get a piece of marble set. Bids were open for comparison; only one set was sent to the builder, who could take the lowest or leave it. If he changed from marble to any other material the unions quit the job. If a member disobeyed the rules—out he went.

Much of the work was done by the day under an agreement with the unions. The marble contractors added a nice little profit for the labor employed. For example: one contractor hired a setter and helper for \$16 per day. The builder paid the contractor \$25.75 per day plus 10% for supervision. There followed an endless amount of testimony concerning combinations in many other lines, all of which ran to show a similar state of affairs; and shortly after it had been shown how the charge for towing brick down the Hudson had been advanced recently something like a thousand per cent, the "Architectural Trust" came into the lime light.

The Architectural Trust

"Fee for Architects Fixed by Institute—Lockwood Committee considers national body a trust after B. L. Fenner tells of 'ethics' code—Counsel contends this deprives younger men of jobs."

So ran a caption carrying the "news"¹ on this phase of the inquiry. This caption is not quite in accord with testimony; but on the whole the press made light of the matter, editorial comment running to the effect that if the Architectural profession was not out after more than 6%, including cost and profit, the matter was hardly worth considering regardless of whether this fee was "recommended" or "mandatory." Some said that it disclosed a fine spirit. Anyway, 6% did seem like a very trivial matter when taken in relation to percentages that ran up into three figures, particularly since it does take some little training and considerable ability to prepare the necessary instruments of service and to steer the building operation through the troubled, murky waters of the huckstering world of the building trades.

In the talk about this phase of the matter it apparently did not occur to the press in general that perhaps the world of business traffic might have done better had it given the men who make up this group of 6 percenters just a little more power and a little more authority—put a little more responsibility upon them. Manifestly they must have been doing

¹See THE JOURNAL for January 1921.

their work with something else in their heads than getting away with the swag. Thus far this bit of testimony stands as conspicuous evidence that there still remains in the building world a number of men still carrying on, in a small way to be sure, the spirit of workmanship as best it may under the hampering conditions of judgment rendered in terms of price. One might be led to the optimistic conclusion, now that so much had been revealed as to what goes on in the world of business traffic, that henceforth ability—success—would be rated in terms of integrity, workmanship and that sort of thing. But the reporter takes no such view of the situation; he knows that when this inquiry shall have come to a close and the victims of our point of view shall have been disposed of by due process of law—ability and success will again be rated in terms of price just as before.

On the Misuse of Words

Returning now to the original statement of Mr. Untermeyer as to the scope and purpose of this investigation; and taking into account his recent statement as to what will be taken up next, we note that the matters with which the Committee has been dealing are referred to in a general way as belonging to the field of *industry*. For the next step will have to do with *financial business—banking and loaning*.

This statement in reference to two phases of the inquiry is presumptive evidence that what we have been dealing with thus far is viewed as an *industrial or technological process*—something standing more or less distinct from the field of *financial business*. But the entire evidence runs to demonstrate that the process of building from first to last is a matter of *financial business*—a matter of huckstering. For at not a single point is the industrial—technological—process of producing materials and erecting buildings free from the restraints imposed by the price system.

Action—the production of materials and the rection of buildings—occurs when, and only when the need for a free flow of materials from producer to consumer has been so controlled or restrained as to give those who control or restrain the same a differential advantage which can be expressed in terms of price. *Under this system action takes place as a consequence of having for a time obstructed the industrial process in the interest of price.*

The reporter is not satisfied with this phase of the investigation; it has been an attempt to lodge the blame for obstructing the process of building upon individuals. As he views the system of business traffic, no one can possibly engage in production except he gives the best of his energies to so regulating what he produces as to advance or maintain prices. Not so to act is business suicide.

From the Frying Pan into the Fire

Our notions relating to competition and free bargaining were the outgrowth of conditions surrounding handicraft industry and petty trade as the same existed two centuries ago. These notions—habits of thought—later formulated as “principles”—are no longer workable under the modern conditions of machine industry, big business, and the world market.

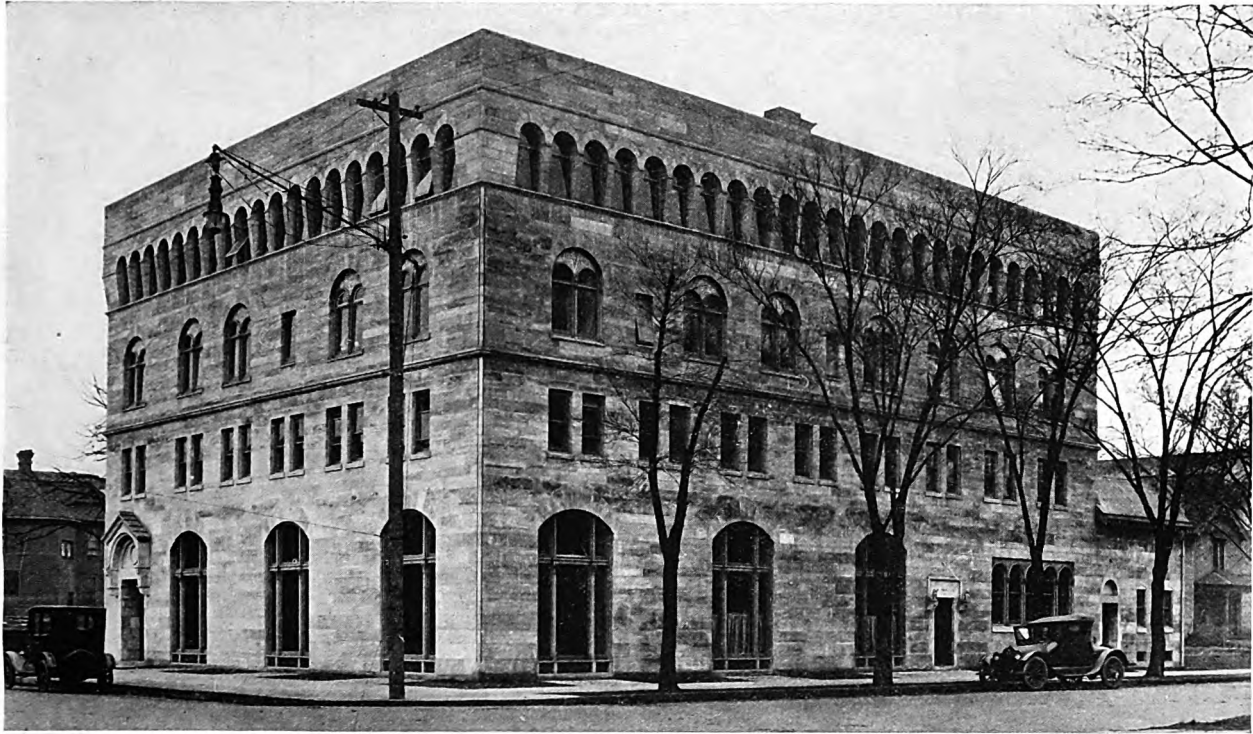
There is no space here to recite in detail how the various associations, corporations, or whatever the organizations of sub-contractors and material men were called, carried on their practice of fixing prices of materials or determining who should submit the low bid already agreed upon; or distributing the contracts among the members of a group in trade; or “fixing” matters with the “business agents” of the unions so that no one outside could secure labor. It is sufficient merely to say that these organizations of sub-contractors and material men were eminently successful in carrying out what they set out to do.

From the view point of the press and the people it seems that to discover precisely what these organizations did is the all important matter; yet what was going on in a general way was fairly well known. These organizations of material men and sub-contractors have been operating, so the evidence runs, to defeat the system of price competition—acting in restraint of trade. This is rated a serious matter. So, what is above all needed, says opinion, is to break up these organizations. But it is not quite clear to the reporter that a great deal is to be gained by such a procedure. From the view point of technology what is above all needed under modern conditions is a coordination of productive effort.

If we take a genetic view of these organizations of sub-contractors—this new institutional arrangement within the building trades—we discover that they are the offspring of free competition and the price system. A score of years ago the general contractor was engaged, for the most part, in producing buildings under the lump sum contract—secured always under a system of price competition. His profits were most easily secured by playing one sub against the others—always on the basis of price. And in this playing of one against the other it was not unusual—it is fair to say that it was the rule—to resort to some rather persuasive measures.

Under the pressure exerted by the general contractors in beating down prices there was no other outcome; the “subs” and material men had to exploit labor or they had to “get together” to protect themselves or go under. They exploited labor and they also got together; they did not go under; and these organizations and the present state of

Continued on page 48.



1200 SECOND AVENUE SOUTH, MINNEAPOLIS, MINNESOTA

Cooperative Offices for Architects

AS WORKED OUT BY A GROUP OF ARCHITECTS AND ENGINEERS IN
MINNEAPOLIS, MINNESOTA

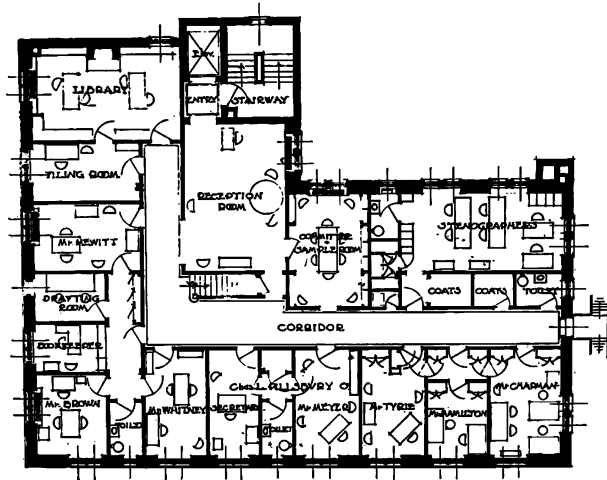
By EDWIN H. HEWITT

ARCHITECTS are not alone in encountering difficulties, sometimes amounting to real hardship, not to mention steadily mounting rents, in securing necessary office space in which to conduct their professional practice. Like physicians and surgeons, however, they have special requirements fundamentally necessary to the proper functioning of their practice. Hence, various interesting and valuable solutions of office arrangement and administrative equipment have been from time to time worked out. While these solutions have ranged all the way from those evolved by the smaller firms, with comparatively modest requirements, to the more important systems of the larger offices, a study of them all indicates the space problem to be a major one. Scarcely any one seems to have answered the question raised by space that is only partially or not at all used during the working hours of the day and yet which is, however, essential to the proper conduct of an architect's practice.

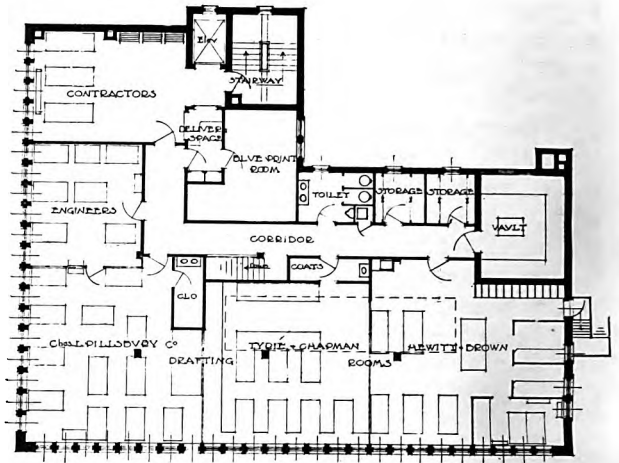
It is generally found necessary to provide a lobby, or reception room, client's rooms, a room where con-

tractors may figure drawings and obtain instructions from heads of departments, file room for the storing of technical material, as well as space for samples, provision for library, fireproof storage or vault for the safety of original drawings, correspondence and papers, corridors, and closets. In the usual office buildings, the architect finds considerable difficulty in so arranging the space to provide for the above needs that it will be convenient both to his employes and the public, well lighted, securing the necessary privacy for certain parts of the work, and yet providing for the reception of clients. Other professions, especially physicians and surgeons, have found that a duplication, in various offices, of these space requirements and arrangements necessarily places a considerable burden upon the practitioner and hence it is no new thing to find them cooperating to the extent of cutting down duplication without necessarily sacrificing their individuality in practice.

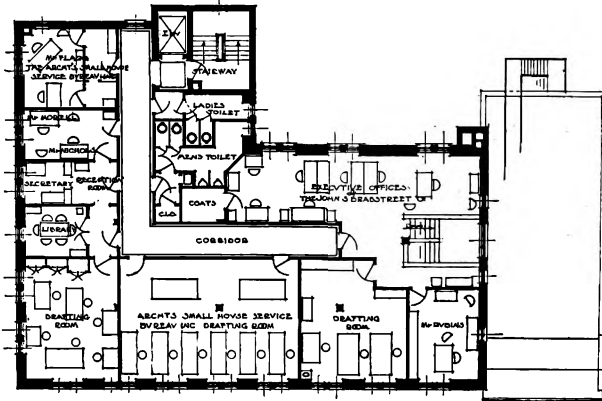
The originators of the particular building program here described conceived the idea that an association



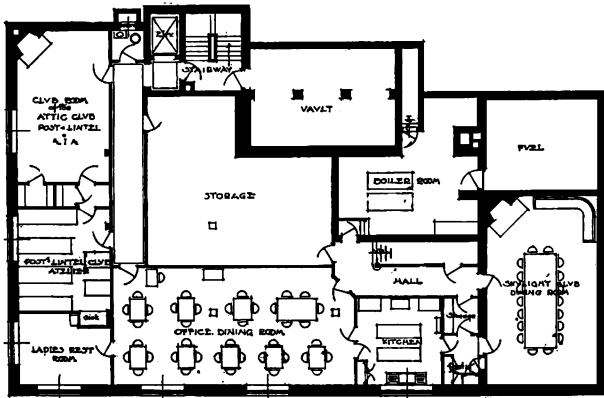
THIRD FLOOR PLAN



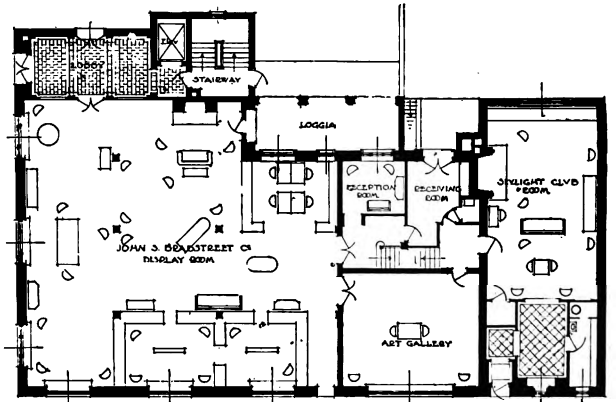
FOURTH FLOOR PLAN



SECOND FLOOR PLAN



BASEMENT FLOOR PLAN



FIRST FLOOR PLAN

FLOOR PLANS

COOPERATIVE OFFICES FOR ARCHITECTS



THE JOINT LIBRARY

of architects could be formed in conjunction with landscape and city planning experts and a firm engaged in general engineering practice which would not only accomplish the solution of the troublesome problem of space and arrangement, but which might successfully lighten the load in the financing of a building program. To develop the situation in a concrete way, diagrams were drawn out of the average requirements in square feet of the various offices, particular attention being paid to those portions of each plan involved—reception room, library, client's consultation, samples, storage space, which might be considered a duplication. When the diagrams were placed side by side, it was apparent at once that a cooperative use of this space would narrow down the space required for the more exclusively executive portions of these firms' requirements, and that if a higher rent be charged for the space used in common, a building could be erected and financed, providing the cost of the building site and its carrying charge in the way of taxes, and so forth, was not too large.

The next step was to make a study of the available building sites, due attention being given to orientation and accessibility on the part of the public.

Such a site was soon discovered near enough to the center of the city to be available to clients and business men, and in line with the general trend of growth of the city. The purchase was made, and Hewitt & Brown designed the building; then was organized the H. B. C. Building Company to finance, build, and manage the property. The plan as worked out, while modest in its proportions still demonstrates its practicability in daily use.

One of the sources of confusion in an architect's office, especially in restricted spaces, is the coming and going not only of clients, but of material men, contractors and their foremen and others interested in building operations. This coupled with the usual mechanism of the practice, including draughting and stenographic rooms, creates an impression of confusion which is not conducive to efficient work. Particular care, therefore, was given to the plan of directing the business so that the contractors and foremen could have access to heads of departments, the material men be received in the proper place where their information could be received and compiled, and the comfort of the client being fully considered in his consultation with the architects.

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It is a great gain so to dispose the work-rooms that they are immediately accessible and yet not in general evidence to either client or contractor. There is a gain, therefore, all around in convenience in transacting the business of the various offices. The building contains not only architects, engineers and landscape architects, but a well-known firm of interior decorators all separate and autonomous, and yet so grouped as to work separately or together as occasion would require.

In addition to the above, space is provided for several clubs for artists and younger members of the profession who all feel the advantage of a community of interests provided by convenient space in this building.

The building was erected at a cost of \$150,000 by the H. B. C. Building Company, and opened for occupancy the second of November, 1920. It is built on a site having a frontage of 65 ft. on Twelfth street and 110 ft. on Second avenue, and is four stories in height. The first story is occupied by The John S. Bradstreet Company, interior decorators, and the Skylight Club—the latter so arranged as to connect with the art gallery of the Bradstreet Company. This enables the rooms to be thrown together on occasion when larger space is required and special exhibitions are held.

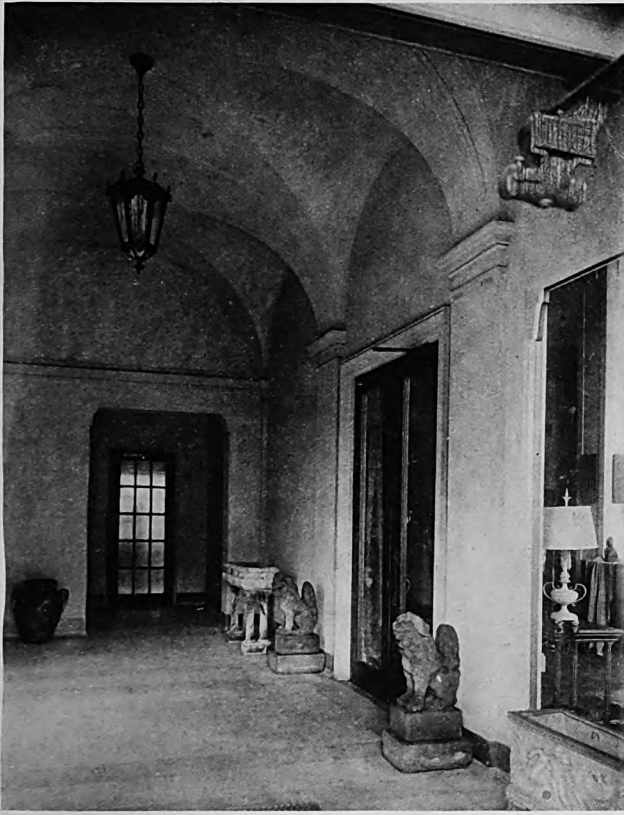
The second floor contains the executive offices of

the Bradstreet Company, the offices of Morell & Nichols, landscape architects and engineers, and the executive office of The Architects Small House Service Bureau.

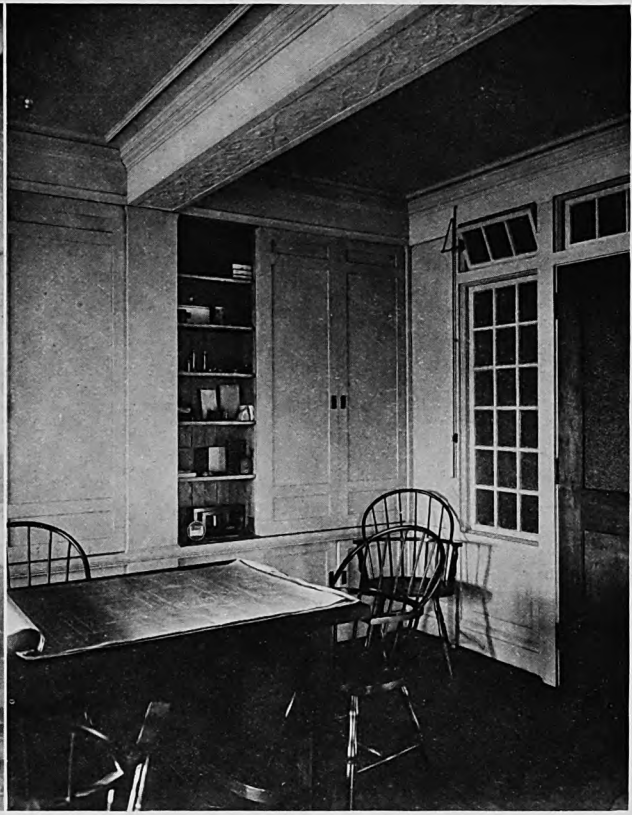
The third and fourth stories are especially designed for the private offices, library, sample room, committee and clients' room, blue printing room, contractors consultation and reference room, stenographers room, drafting rooms, and a large fire-proof vault for permanent records, drawings and correspondence. The group of professional men located on these two floors is composed of the following: Hewitt & Brown, architects and engineers; Wm. Channing Whitney, architect; Tyrie & Chapman, architects; and Charles L. Pillsbury Co., engineers. Not the least of the advantages of the plan is the special advantage of proximity and the facility for making the knowledge and experience of each available to the others. This community of interests is most delightful and helpful. In the basement there are provided two dining rooms, one for the use of the Skylight Club, before mentioned, and the other known as the Blue Print Tea Room for the convenience and pleasure of the occupants of the building and their friends. In addition to this, the dining room is available for use at the meetings of the Minnesota Chapter of the American Institute of Architects, as well as the Post and Lintel Club, com-



TYPICAL PRIVATE OFFICE



ENTRANCE



CONSULTATION ROOM



RECEPTION ROOM

COOPERATIVE OFFICES FOR ARCHITECTS

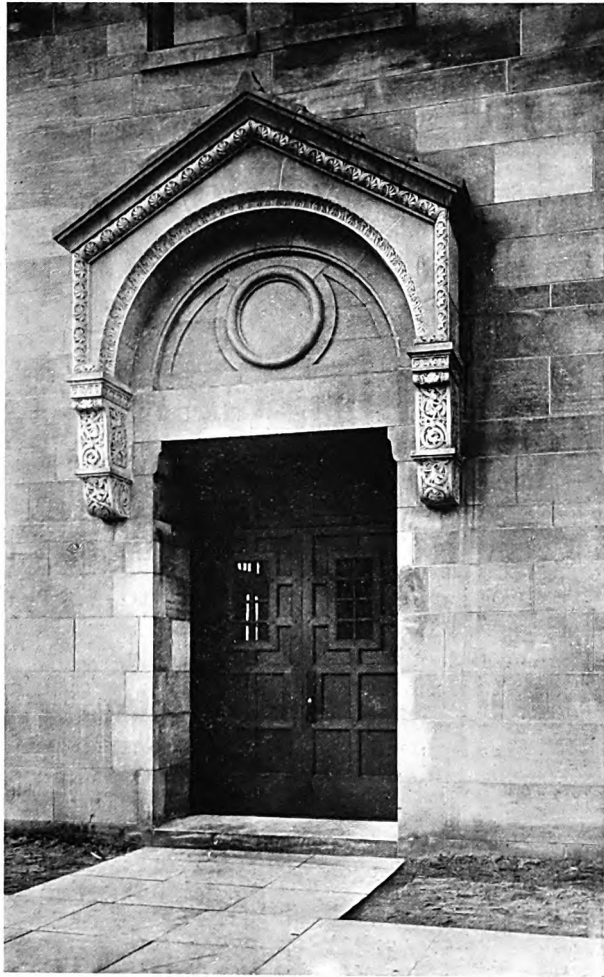
posed of the younger architects of the city, and the Attic Club whose members are young artists and illustrators—so that the building is used to capacity, not only during the working hours of the day and the leisure hour, but in the evening.

It required a degree of courage and optimism to put this plan through during this last year of extraordinary difficulties. The builders had their usual number of strikes during the course of operation, financing was difficult, and yet the building company and their friends had faith that they must prepare themselves for the future; and the whole purpose in building is not merely to furnish pleasant quarters and associations, but its specific purpose is to enable the various firms to practice their professions in the most efficient manner. They feel that by maintaining efficient assistants, the more capable

and better trained the better, that they can maintain their organizations to a higher point of efficiency than in their old quarters where space was maintained to carry the peak of the load when the offices were filled with work. It is apparent that with mutual helpfulness in times of strain, work can be produced efficiently and rapidly to the better interests of the profession and their clients.

A word as to the style of building:

This adaptation of the Florentine or Tuscan type of design was chosen because it permitted the use of unusual spacing for the windows. There was no need of symmetry and it permitted the securing of maximum light in the drafting rooms where its need was greatest. The architects feel that they have accomplished a most desirable thing in providing a uniform distribution of light where most needed.



ENTRANCE DETAIL

Continued from page 40.

affairs particularly as it concerns labor stands as the result of this system of price competition.

It is all very well to say, as every one is saying: let us return to the system of price competition. But the evidence runs to indicate that this system does not work. It certainly has not worked in the building industry; and nowhere in all of Christendom is it working ⁽¹⁾. So let us repeat: the matter will bear repetition. It is a system that stands solely upon the ability of those engaged in its operation to hold or advance prices through controlling this or that, or curtailing the production or the distribution of goods. As a system its sole concern is with pecuniary facts—prices; it cannot concern itself with production other than in the interest of prices. It is not a system of production. This is what the present point of view refuses to recognize.

But what set all this agoing? One might assume that an inquiry into the present deplorable state of affairs would pay some little attention to a genetic study of the situation. But that of course is asking too much of an inquiry which aims at disposing of the matter on grounds confined to the legalities of the case. The inquiry and the following judicial action will come to rest when the matter has been thus disposed of. So what may confidently be looked for is some more restrictive legislation which will no doubt introduce another element of friction to the machine.

Something to Talk About Anyway

But to return to the course of the investigation. Toward the end of December the question of open shop versus closed shop came into view. That is, it appeared in the form of legal evidence rather than merely a matter, already notorious, bearing upon the general situation. Testimony concerning this came largely from three witnesses, Paul Starrett, President of the George A. Fuller Construction Company; Louis Horowitz, President of the Thompson Starrett Company, and Mr. Grace, President of the Bethlehem Steel Company. The question revolved around the policy of the Iron League and the National Erector's Association and the action of Walter Drew, Counsel for these two associations.

⁽¹⁾ See Article by Gareth Garrett entitled "Alice Economics" in *The New Republic* for December 29, 1920. To quote: "Current economic notions may be represented by a series of Mad Hatter riddles. Thus:

Q. Why is everybody ruined?

A. *Because the country is rich.*

Q. How shall the country impoverish itself in order that people may prosper again?

A. *We must sell our surplus abroad to people who cannot pay.*

Q. That is lending. When the foreign countries pay us back we shall be truly rich?

A. *No, indeed. We cannot afford to let them pay us back, for we should then be worse off than ever. We have already too much of our own. That is why we are ruined."*

Again only the outstanding features of the testimony may be noted. Mr. Starrett related how he had been bluntly informed by Frank B. McCord of Post & McCord that his days were over as the erector of his own steel unless he joined the open shop movement. Mr. Horowitz said concerning this same matter:

"When I pleaded with Mr. Grace he said his company has gone through a very bitter fight in order to control their own shops and they were afraid that if steel continued to be erected under union conditions it would merely open the door to the unions, which would demand union conditions in the shops. He said he could not possibly run the risk of that danger."

Mr. Starrett said that the Fuller Company had an excellent equipment for handling steel construction, but that they had to dismantle their plant.

"When was it you stopped erecting your own steel?" Mr. Starrett was asked.

"When the league became militant," was the answer.

"What happened to your equipment?"

"We sold part and shipped some to other parts of the country where the Iron Erectors Association had not gotten control."

The witness said he tried to get a bid from the American Bridge Company for steel to be used in the construction of the Metropolitan Life Building annex, but got no reply until after the contract had been let to Levering & Garrigues, who belonged to the league. Nor could he get bids for other steel. He was forced to put all jobs out and pay middleman's profits which might have been saved to the owner. Moreover, inferior men were used on the jobs. He placed the savings by union labor at 25 per cent. Both of these items of expenses were, of course, passed along to the public.

Turning to the testimony of Mr. Grace a few fragments will serve to indicate how a number of doubtful points regarding policy were cleared up. Take for example, a resolution adopted by the National Steel Fabricators Association Nov. 1919, in which the members went on record "unreservedly and entirely in favor of the open shop in all the fabricating plants, and that it be recommended that the policy of the members of the association will be to adjust their business so that the steel fabricated by them is erected open shop; that the Executive Committee be instructed to use all influences within its power with mills, fabricators, manufacturers and business associates to bring about that policy."

A long, interesting and most illuminating verbal duel followed in which Mr. Untermyer gradually drew forth the meaning—in terms of action—of the last part of the resolution. And it seems "all influences within its power" has been interpreted both as regards the spirit and the letter. Then there was

THE BLOT ON THE ESCUTCHEON

a period of rather difficult going in Mr. Untermyer's attempt to get some details. What was brought out concerning collective bargaining cannot be abbreviated—the subtle distinctions are too subtle to record except by repeating:

Q. Do you believe in what is known as collective bargaining? Do you know what is known as collective bargaining? A. I have never liked the term collective bargaining.

Q. I don't know whether you like the term. You know what it means, don't you? A. No I don't know what it means.

Q. Then why don't you like it? A. Because I don't know what it means.

Q. How many years have you been in business? A. You mean in the steel business? A. Since 1899.

Q. And you have been at the head of this great corporation since then? A. No, I did not quite get that job to start with; I have been President since 1913.

Q. And you have studied industrial economics, haven't you? A. I have got my ideas and views on industrial economics, yes.

Q. You have made addresses on the subject? A. I am not much of a public speaker. I presume I have.

Q. But you say you don't know what collective bargaining is? All right Mr. Grace, that is all. A. I know what employes' representation is.

Q. Is there anything else you want to say? A. I want to be sure that you have all you want from me on that topic. We have a system of employes' representation.

Q. Don't you know the War Board tried to put in the system of collective bargaining in your concern and you would not stand for it? A. We did put in a system of employes' representation, if that is the same thing, in conjunction with the War Labor Board, of which I think you know, personally.

Q. No, my understanding was that you did not put that in? A. Yes, we did put in a system of employes' representation; they may have called it collective bargaining; if it is the same thing, all right.

Q. What sort of representation do you allow? Tell us about what sort of representation you allow to employes. A. I can send you a pamphlet.

Q. No, I get so many pamphlets. A. But you would like to have that one.

Q. Cannot you tell us briefly what representation is allowed your employes in formulating policies in dealing with the company? A. They elect their representation to deal with the management of the company in all phases affecting the service rendered by them. Working very satisfactorily.

Q. You take the liberty, don't you, of joining trade associations and acting as a unit in other organizations with them jointly? A. No, no, Mr. Untermyer.

Q. Answer the question. A. We have no association.

Q. You deny your employes, don't you, the right of acting jointly with employes of other concerns in dealing with you and your association? A. We would not recognize it.

Q. But you expect other people to recognize dealings in which you enter as a member of trade associations, don't

you, while denying your employes the same right? A. I have told you the relations we have.

Q. Don't you consider it discrimination for you to direct a person who is to erect your steel, that he shall discriminate against the union? A. I don't think we say to him that he must discriminate against a union.

Q. Don't you believe that when you direct him, in the purchase of your steel, that he must see to it that other than union men, or at least in addition to union men, shall erect it, you are discriminating? A. I think we are asking him not to discriminate; that is my interpretation. He is discriminating because he rules out the non-union man.

Q. He rules out the non-union man? A. Yes, when he won't employ him.

Q. Isn't he discriminating against the union man as a union man, if he were to follow your directions? A. No, I am not saying employ non-union men; I don't care how many union men he employs. Some of the best workers in the country are union men. We have lots of them, I am sure, in our employ.

Q. Do you know you have? A. Yes.

Q. Do you know how many? A. A number of our workmen.

Q. You don't deal with them? A. We deal with them as a part of our employes representation system; they have a voice in electing the men who speak for them.

Q. You don't deal with them as union men? A. Not as union men, no.

Q. You don't consider that discrimination against union men? A. Not at all, because they have their voice in representation.

Q. With respect to the effort of the Thompson-Starrett Company to purchase steel to be erected by them under a closed-shop policy, would you still persist in your decision not to sell any steel to them? A. Yes, unless it was willing to stop discriminating against the non-union men.

Q. It would not make any difference to you whether they did not get any steel anywhere else? A. Not as far as I am concerned, because I don't believe in the closed-shop principle.

Q. It would make no difference if operations in the city of New York were caused to cease, you would continue in your policy to refuse to give them steel? A. That is what I would recommend to my associates.

Q. That is what you think your associates would follow? A. I should hope they would.

The reporter encounters difficulty in recording how this testimony was rated by *Public Opinion*. Editorial comment for the most part ran to support Mr. Grace. But support was sometimes half hearted; the position had to be rationalized, and that was difficult. However, the *New York World* of December 15th had this to say in an editorial entitled "How Steel Rules New York:"

"When manufacturers undertake to dictate the particular kind of labor that purchasers of their product shall employ they have but one step to take before limiting builders and owners as to the use and the occupancy of their properties. Aside from the intolerable tyranny of this situation as respects capital, labor and housing in

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New York, the attitude of the steel-makers confirms everything charged against them last year at the time of the strike and since substantiated by the report of the Inter-church committee."

The N. Y. *Times* in an Editorial of December 16th handles the question much more delicately when it says:

"The transcendent consideration, however, is with regard to the fight for the closed or the open shop. At the time of Mr. Starrett's interview with Mr. Grace the great steel strike was a recent memory. The inhumanity of certain conditions of employment which it revealed should not blind us to the real nature of that struggle."

"Conservative and reputable unionism also—which is to say the vast body of organized labor in America—has its grievance. Whatever defence the steel masters have lies in the fact that we are in the midst of a struggle between traditional American individualism and imported socialism. With thoroughly American unionism, compromise and conciliation are possible; but not with unionism that attacks out basic industries in the intent to 'control' and 'possess' them."

(The reporter would like to ask the *Times* what the difference is between "traditional American Individualism," as its operations have been revealed by the Lockwood investigation through the testimony of the employing group, and "imported socialism," or any other group method which seeks to control production and distribution in its own interest rather than in the interest of the common welfare. Manifestly no group can be allowed to control the functions by which life's necessities are supplied.)

Even more significant is the prepared statement issued by Mr. Paul Starrett some ten days after his appearance before the Lockwood Committee with a view of clearing up the impression that he was a supporter of the closed shop.

"I am a strong believer in open shop. It is my belief that laws should be passed making the closed shop illegal. This does not mean that I am inimical to unions. I believe unions are a benefit to the men and to the employer, if properly run. Taking our own business, it is of great advantage to us to be able to make bargains with representatives of unions, establishing wages upon which to base our estimates for work.

"The building business in the large cities, especially where fine work is necessary, under present conditions cannot be properly done without the use of union labor, for the reason that 90 per cent at least of the good mechanics are in the unions, and a good mechanic is worth in productiveness at least twice as much as a poor mechanic.

"I have always taken the position in arguments with labor delegates that they have no right to prevent a man from earning his living because he does not join their unions. I have stated to important officials in the unions that I believed, as I do believe, that the interest of the unions would be best advanced and placed in the proper light before the public if they would themselves declare for the open shop. Labor organizers claim that this is impracticable on account of union politics.

"We use union men exclusively on our work where we control the situation, for the reason that they are the most efficient, and therefore the most economical for us to use. I believe that if the unions would come out for the open shop inside of a very short time all the first class business in New York would be 100 per cent union, and the unions themselves would have the cordial support of the public. In other words, my position is that I am strongly in favor of the unions properly run on the open shop principle.

"The ill-advised action of the Building Trades Employers' Association in signing an agreement with the Building Trades Council, headed by Brindell, to make all building construction in New York 100 per cent union, against the protest of their entire Iron League membership, forced the resignation of this membership from the Building Trades Employers' Association and precipitated a costly and hopeless fight.

"For the past fifteen years steel in New York has been erected on the open shop principle, although a number of the influential members of the Iron League operated 100 per cent union, and practically all the union steel erectors had steady employment. I believe that if this union had followed along the lines on which it had been working it could have built its membership up so that within a short time all steel erection in New York would have been on a union basis."

So, it seems some doubt is abroad. If organized labor will not rest its case, as it is hoped, with merely some talk about it—like a high school debating society—then the matter must be disposed of by organizing the forces of the State so that *we* may "control the situation" as Mr. Starrett puts it.

It looks to the reporter as if both parties in interest want the closed shop, hence he rates what is being said against it on the score of its being un-American, etcetera, as so much buncombe.

So far as concerns this phase of the industrial situation it seems that about all that has been gained by the inquiry is to bring us around to our point of departure. Possibly we see a little more clearly the issues involved and how forces are being marshalled to prolong the weary struggle. The prospect of bringing about a condition of organized industrial effort (technological) within this sector of the industrial situation appears to be a little more dubious as a result of what has been revealed and said about it.

A Congress of the Building and Construction Industry

The First Assembly to be held in Chicago in the Early Spring of 1921

The purpose of the Congress, the formation of which has been several times discussed in these columns, and according to the recent printed announcement from which the following is quoted, is to bring together General Contractors, Sub-Contractors and Workers in the building trades, Architects and Engineers, Producers of and Dealers in building materials and equipment, jointly to do certain vitally necessary things which can only be done by a united industry; for example:

To make a scientific survey of the needs of the industry in workers and of how these needs may be met; to study the present methods of training and enlisting personnel; and to discover and correct the causes of the progressive decline in the supply and quality of workers in the industry.

To study the needs of the industry in and the sources of supply of raw materials and manufactured products; the quantities of such now available, and to determine the national requirements of construction in 1921 and succeeding years.

Through these and other fundamental investigations made cooperatively by a united industry, to reconstruct the industry into a balanced mechanism competent to provide the service which the public must have, and thus to restore confidence both without and within the industry and reconcile the need of the industry for its own prosperity and the need of the public for adequate economical construction.

The Call to Meet the Crisis

Every one of you who draws a livelihood from building and construction activities is called to join in a movement directed toward penetrating the invisible barrier which prevents the industry's reacting to the rapidly mounting demand for the product of its collective effort.

It is a strange and unwholesome situation when the demand for building and construction of every character has reached the stage of a crisis, and the industry which alone can satisfy that demand is paralyzed; when men are willing to work with their hands and with their heads, when the nation is in distressing need of the result of their work and no work is offered.

Continuance of the situation serves not only to discredit the industry in the eyes of the community, but also to delay the possibility of prompt recovery to normal productivity and of confidence within the industry itself.

What is the industry going to do about it?

Causes of the Existing Critical Situation

The responsibility for the industry's present paralysis does not rest with a single group or interest or element, but with all. The industry has been split into groups or functional elements, each organized about a narrow interest.

The industry has been a headless, inarticulate body. It has suffered the consequences of the self imposed isolation, the independence of action and separateness of policy of each of its several elements. Each element has gone its own way solving its immediate problems without regard

for or an understanding of the result of its actions upon the other elements. Each has been victimized by both over production and under production. Each has devoted its best thought and energy to futile attempts to influence the play of destructive economic forces which might never have been released had they and the conditions which created them been understood.

Necessity for Cooperation in the Industry

The world in which we work today is the subject of forces of combination, concentration, consolidation and cooperation. In such a world the only kind of action which promises success in the future must spring from a new spirit of association and cooperation.

Such action, if intelligently carried forward, will be in the public's interest and, therefore, must also be in the interest of the industry. The right type of cooperation under liberal leadership offers the only method of reconciling the demand of the industry for its own prosperity and the demand of the public for adequate and economical construction. Such a meeting of minds, such a recognition of common purpose, means fundamentally that the industry must organize itself as a public service, frankly assuming the obligations of a group associated with the primary purpose of supplying the public need.

But to do this, to take even the first cautious steps in this direction, requires knowledge. It requires the facts of the present conditions and an understanding of the present interests of each element or group and its peculiar problems in order that effective and acceptable remedies may be proposed.

Function of the Congress

The purpose, as expressed by the Executive Board, is not to create another national organization. The Congress should not be regarded as an organization, but as an institution. It is to be a deliberative body or forum without mandatory powers. For its own enlightenment it may, if it so decides, create and direct or employ research agencies. And to give its efforts continuity it may set up executive machinery.

The driving power behind the movement is the fervent hope that the Congress may become a brain for the building and construction industry; that it may become an instrument for securing facts, for thinking in terms of facts, and for planning the future course of the whole industry as a unified, frictionless, productive mechanism. But there is no thought that the Congress should usurp or infringe the prerogatives of, or limit the autonomy of any existing organization.

Some of the Problems Demanding Consideration

The present problems which concern vitally the whole industry and which the Congress might with profit consider are many and diverse. Among them may be mentioned the following:

How is the industry to prepare itself to meet the demand for structural materials; a demand not potential but which will become real when the vast amount of projected work

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is released? In the future, how shall the industry escape the stifling effect of both under production and over production?

How is an adequate supply of skilled craftsmen in the several trades to be provided and maintained?

How is genuinely cooperative effort by employers and wage earners (whether the wage earners are organized or unorganized) to be substituted for the antagonism which, in the past, has checked production?

How shall abundant credit resources be made available, at reasonable cost, to the industry in order that it may function in satisfying public need?

How shall the industry be lead to adopt a uniform and equitable policy in bidding and with respect to contract terms and conditions?

How shall the proper and economical functions of the respective elements of the industry be defined, and how shall performance be assured in order that maximum efficiency may be attained?

The immediate duty of the first Congress will be to get all these various elements and interests organized effectively as parts, to operate effectively as a whole upon the immediate crisis at hand, viz., to rehabilitate the industry, to restore public confidence in the industry, and the industry's confidence in itself.

With this job well done other far-reaching activities may then be undertaken. But the further efforts of the Congress must more or less stand or fall upon its record in its first great attempt. Out of the discussion of these first problems, naturally there will crystallize a program of action stretching far into the future; a program not conceived in the wisdom of a single group or element, but in the enlightened understanding of the whole self-conscious unified industry.

Active participation on the part of all individuals and organizations is essential if the first National Congress is to be a success.

Who is so dead that he fails to respond to the call of the future, that strange, possessing, inspiring something which urges to the fulfillment of responsibility?

The Real Problem

Speaking at the recent meeting of the Executive Board of the Congress, at Pittsburgh, Mr. M. B. Medary, Jr., summed up the truth of the situation in these words:

"I am one of those who believe that the situation in the building industry is only a sub-division of the situation in which all industry finds itself everywhere. And, therefore, what this organization will find to do is not to search into the details of the situation confronting the building industry, but rather to try to find out what is basicly wrong with the industrial situation generally.

"The reason we should do this is that we are one part of industry; and we happen to know the conditions confronting our own particular branch of industry and we seem to be developing a collective mind upon the necessity for examining the causes of our present difficulties. Some subdivision of the whole industrial group in this country has to make a beginning, has to start to find out what is basicly wrong. I do not believe we shall find the trouble is due to this or that or the other detail, or some condition

peculiar to some element of the industry. Each element in the building industry has been entirely separate, going its own way and making no effort to keep in touch with the other elements or to inform itself in regard to what is best for the interests of the industry as a whole. The result has been in reality a series of working agreements between different elements whose attitudes toward each other have been largely hostile. These working agreements, in some instances, amount to nothing more or less than an armistice between two warring groups; yet every one of these elements is a partner in one cooperative enterprise known as the building industry. If we can make a start toward substituting cooperation for this indifference and hostility, we shall pave the way, blaze the trail, for all other industries. We ought to get out of the minds of people the idea that here is a group creating some sort of national organization to which all little local differences can be brought and by it thrashed out; that through it agreements can be made. What we are trying to do is to set up a building industry of which every element is really a partner and is conscious of its obligations to every other partner."

Funds Are Needed

Individual leadership belongs to the dead past. The problems of to-day involve too many interests, are too vast and too complex for the individual to grasp or successfully cope with them. They call for group leadership and the collective mind. The men who will ultimately form the leading group of the building and construction industry are scattered from coast to coast. They must be brought together or put in contact through some medium for the exchange of ideas and collective thought. The maintenance and operation of such a medium costs money. The Congress Executive Board makes an earnest appeal for funds to defray the expenses of organizing and convening the first Congress. The Board will gratefully receive contributions of \$10 from individuals and of from \$250 to \$500 from national organizations.

Checks should be made payable to Sullivan W. Jones, Secretary-Treasurer, and sent to him at No. 19 West 44th Street, New York City.

Some of the men thus far identified with the Congress movement are:

General Contractors—W. G. Luce; F. G. Webber; A. P. Greensfelder; Otto M. Eidlitz.
Sub-Contractors—L. K. Comstock; Oscar A. Reum; Frank W. Howard; Ronald Taylor.
Engineers—Morris Knowles; F. C. Shenehon; F. A. Burdett.
Architects—Robert D. Kohn; M. B. Medary, Jr.; E. J. Russell; S. W. Jones.
Labor—Thos. R. Preece; James P. Noonan; John H. Donlin; Geo. F. Hedrick.
Manufacturers—Wharton Clay; W. L. Hodskin; Oswald Speir.
Investment Bankers—Walter Stabler.

The first Congress is to be convened in Chicago early in 1921. This first Congress will be composed of fifteen delegates from each of the named elements of the industry.

What is the Matter with the Building Industry?

Three Points of View

The following letter was written to Dr. Jean Wagner during his recent visit in this country. It is from the pen of a young Swiss workman, an engraver by trade, and one might well venture to say that he speaks the words that millions of inarticulate humans cannot utter. Here is his letter; it was published in *The Standard*:

Bien cher frere:

I don't know when I shall be able to send you these lines as I am just writing from the shop at odd moments when I have finished all of my work and am waiting for the next task. My work here has become more and more odious during the last few months, because I am compelled to work against all the rules of true art. You know that by "art" I mean respect for the materials upon which one works, and for the manual and mechanical processes which one uses; also the most perfect adaptation possible of an object to its end, the decorating stressing the fundamental objects of the construction. In short, one must be true and honest if he is to create something beautiful. My employers have not the slightest comprehension of these principles; they imagine that a work of art is a thing richly decorated, covered with jewels, and very expensive. I cannot make them understand.

For the last year I have had to put up with all sorts of humiliating conditions, not to speak of the deplorable sanitary conditions in the workshop; the absence of sun and light, the presence of incredible filth; as well as the lack of tools.

Work has become more scarce and my employers more difficult to deal with. Last Friday in the course of a rather lively discussion, one of them took occasion to say that we were "not compelled to work together always." I answered by giving two weeks' notice. Our discussion had been provoked by their insistence that I should *saboter* a piece of work. . . . This is quite in keeping with present-day standards. So I am leaving the shop because I am anxious to do honest work.

Socialism is and ought to be chiefly a reorganization of work, a new orientation of the whole of life. It can no longer consist merely in the material betterment of the lives of the poor, but must involve the establishment of economic, social and political conditions which will enable all men to discover the true joys of life; joys of creative effort, joys of duties fulfilled, joys resulting from the complete harmonization of all the acts of every-day life with ethics and religion. This is my profound conviction, and I should like to help in the propagation of such a gospel in the day and evening schools, and elsewhere.

I have no idea when and where I shall find new employment; all the same I am happy to leave my present job where I have suffered so much. The study of the history of mediaeval art, to which I have devoted much of my spare time during the past year, has shown me even more clearly the decadence which my poor craft has suffered. Shall I be able to find employment in any branch of my trade in which I shall be able to observe the ethics of craftsmanship, without which any activity becomes odious servitude? It would be my greatest happiness to find any

occupation in which I should feel that I was truly useful—a task to which I could yield myself without stint, and at the same time earn my living.

It is sad to lie down at night, feeling utterly tired out, and to have to confess to oneself that this fatigue is the product of nothing more than the miserable effort to collect the few pennies necessary for existence, to produce some benefits for an employer, and to encumber the market with an added superfluity of shoddy goods. For man's satisfaction nothing is quite so precious as the sense of having done a worthy task well, however modest it may be . . .

Ton ami, H. L. J.

At the joint meeting of the National Building Granite Quarries Association and the Granite Paving Block Manufacturers' Association, recently at Atlantic City, the following statement was printed on the banquet menu:

"The Golden Rule.

"On this, the occasion of our annual joint banquet, we assemble with our guests in a spirit of goodfellowship and cheer. We have gathered from the North, South, East and West for the purpose of getting better acquainted with one another and to further the welfare of our industry by cooperative thought and action.

"Our industry is an ancient one, which has come down through the centuries with an accumulated heritage of noble and useful accomplishments. The basic material of our industry is Granite, old as the very hills, and unchanged throughout centuries of civilization. It is our great privilege to transform everlasting granite rock from its age-old resting place in mother earth, into highways, bridges, buildings and memorials for the use, comfort and pleasure of our fellow-men and for future generations. Surely this is a worth-while endeavor: one which we, who engage in it, may well be proud of and desire to further to the best of our ability and resources. Our Associations are the results of this pride and desire, and by cooperative effort do we hope to place and maintain our worth-while industry on the plane in industrial life which it is entitled to hold.

"We, who are privileged to manage this transformation of natural granite into products for the use and welfare of our fellow-men, must see to it that we discharge our duty to the fullest extent, and by our cooperative efforts render a *service* not only to each other but to *society*. By such service only can we justify our purposes, and uplift our industry, and by such service only can we hope to prosper as individuals.

"The badge, which we have adopted for this convention, contains a symbol of the spirit which must be our constant guide—this symbol is the 'Golden Rule.' We will do well to adopt this as our permanent inspiration, and if we continue to apply the 'Golden Rule' in our dealings with each other, with our workmen, and with all whom we serve both our industry and society will benefit thereby."

Mr. Electus D. Litchfield presented the following point of view at the January meeting of the New York Chapter:

A few days ago, I received a circular letter on the paper of The Illinois Chapter of the American Institute of Archi-

pects and signed by Henry K. Holsman its president, which contains the following paragraphs:

"The American Institute of Architects realizes that the architectural profession and the services it can render to society are not properly appreciated by the people, to the detriment of the profession and the community.

"The architectural profession has not received as much public recognition as other professions because it has not hitherto performed as much public service. The logical way to keep the value of architectural services in the minds of the people, is to do some conspicuous public good."

"It would be hard to better express my own feelings as they relate to the New York Chapter and its recognition by the City of New York. Not only is the doing of some conspicuous public good the logical way to keep the value of architectural service in the minds of the people—it is the only way in which this chapter of the Institute can obtain the respect and interest which is its due from the members of the architectural profession itself. We have been disturbed at the lack of attendance at our past meetings, and we have been heartened and pleased by the splendid attendance at our last one, but if we continue to devote our efforts and our interests solely to the consideration of such technical, academic, and purely professional discussions as that which occupied us at our last meeting and to which this meeting of today is devoted, we cannot hope to continue the interest of even our own members. The responsibilities of the architectural profession in the City of New York are too great. If the Chapter will not assume them, some other body will.

"Today the general public is amazed at the revelations which have been made as to the relations which have existed in the building trades between the employers and the labor bosses. The structure reared for beneficent purposes by the Employers' Association is crashing about their heads. The Employers' Association and the Board of Arbitration have done untold good, but with the passing of the Board of Arbitration, and with the unsettled conditions which have been a result of the war, its usefulness has passed. A new body must be formed in New York, sensitive to the rights of the employer, the worker, and of the public, to whom both employer and employee are expected to give real service. No one can question, least of all the architect himself, that he stands between the building employer and the worker with a mind and heart sensitive to the rights of both. It is one of his noblest functions to hold the scales level between owner and builder, and no one, by education, training and practice is in better position to realize what is fair in the relations be-

tween building employer and employee. Mr. Russell of St. Louis, as a member and one of the originators of the Board of Jurisdictional Awards, and Mr. Boyd in Philadelphia, have shown what the architect can do when he applies himself to this task, but time goes on and not a word is heard here of any activity in the direction of a new and logical guild in which builder, worker and architect have part and which will serve to maintain workable conditions—just to the public, to the employer and to the employee.

"But this is not the only way in which the New York Chapter should be of service. Has the time utterly come to an end when the Chapter shall have more of the energy and public spirit of those who placed upon the statute books the Art Commission of the City of New York—who created The Fine Arts Federation—who called for and obtained the appointment of a City planning Commission for the city; are there no more great problems to be solved? We pride ourselves that we are citizens of no mean city. We congratulate ourselves upon Fifth Avenue as one of the most beautiful and important avenues of the world. We know, as perhaps no one else knows, that if the people of New York are not careful, the glory of Fifth Avenue will depart. Does it mean nothing to us that one after another of the great works of architecture which have helped to give Fifth Avenue its name, are being lost? Do not we realize that the removal of the colonnade of the Knickerbocker Trust Company was a loss out of all comparison with the benefit received. The Vanderbilt house at Fifth Avenue and 52nd Street has been recognized for two generations as a great architectural achievement. It gives us pleasure each time we pass it and yet not one word is heard of protest, at the changes which we soon will see in its alteration for business purposes. Are we not concerned that Commissioner Whalen proposes the complete destruction of High Bridge? Do we feel that the proposed Victory Hall will be an adequate War Memorial for this city, and if so are we satisfied that Pershing Square provides an adequate location? If we do not consider it a proper memorial, are we doing or saying anything to lead public opinion in the right direction?

"In all these matters the New York Chapter should say something. It should say something good if it can, but it should say something. It we are not to lead in matters of this nature, to whom is the leadership to be left? We should consider before we speak, but then we should be vocal not through the public press alone, but through delegates to the Merchants' Associations, the Chamber of Commerce and other representative civic bodies. Why do we not do so? Is the Chapter, as an influence in our public life, dead or only sleeping?"

The Proposal to Revise the Competition Code

In the January JOURNAL there was narrated the discussion at the December meeting of the New York Chapter which was devoted to the proposed revision of the Competition Code as suggested by the Boston Chapter at the last Convention. At the January meeting of the Chapter, the special committee appointed to report upon the matter, found itself unable to come to any definite agreement. Mr. Corbett, the Chairman of the Committee, after having explained that he felt himself to be somewhat in the posi-

tion of a lawyer who had been handed the defense of some poor miscreant whose case no one wanted, said that the Committee, neither in personal discussion nor in written opinion, had been able to agree upon a report. They were unanimous only in disagreeing with the suggestion contained in the amended revision which had been prepared recently by a subcommittee of the Boston Chapter.

However, he himself had come to the conclusion that the kernel in this particular problem was related wholly to

PROPOSAL TO REVISE COMPETITION CODE—SUBSIDIES KILLED

the submission of sketches. He cited the Circular of Advice which states plainly, as the definition, that "a competition exists when two or more architects prepare sketches at the same time for the same project, . . ." and he thought it certain that this clause supported his contention that "sketches" were the crux of the matter. Architects might compete, apparently, in every other way known, by solicitation, showing of photographs, submission of letters, importuning of friends, but the moment a sketch appeared they were doomed under the Institute's regulations. Thus it seemed to him that a possible solution might be found in the addition of the word "anonymous" immediately before the word "sketches" in the Circular.

Mr. Embury rather humorously outlined certain apparently contradictory clauses in the Circular as saying in effect that the Institute did not believe in competitions, that it would only permit them under certain regulations, and that few men were fit to enter competitions anyway. All of this applied with great severity to the younger men who believed that the best way they had of advancing their merits was by the submission of sketches. Therefore a membership in the Institute seriously limited their ability to get on and establish a practice. His indictment of the circular evoked a good deal of amusement and apparently considerable sympathy. It was resolved, after a general discussion that the special committee should prepare suggestions for re-wording the Circular of Advice so that there might be removed from it any semblance of an indication that the Institute is indifferent or antagonistic to the young men in the profession, and in order that the re-wording might be laid before the next meeting and submitted to the Committee on Competitions for possible action at the next Convention.

The amended revision suggested by the Boston Chapter was as follows:

"Regulations for the simultaneous employment of Architects by one client.

"The Institute recognizes the right of an owner to purchase unlimited professional service on a basis of adequate remuneration and control. To allow architects to render such service while safeguarding the profession from the admitted evils of unregulated or ill-regulated competitions, the Institute has adopted the following regulations:

"In the furtherance of desirable publicity, no architect shall submit sketches or render service until he has procured from the owner or his duly authorized representative a statement either that he is the only architect being employed for this service, or if another is being employed, the terms of that architect's employment which terms must be specific, inclusive and adequate.

"In the event that an architect is being already employed and the owner wishes to employ still another on the same project, the architect requested to render such additional service must at once notify in writing the President of the Chapter. He shall state the terms of his employment by the owner and the name of the other architect or architects being employed on the project.

"The terms of employment of all architects employed simultaneously on a given project must be at least as favorable to those who are engaged subsequently as to those originally engaged.

"It shall be the duty of the President at once to notify

the architect first employed by the owner and all others simultaneously employed by him as to the names of those employed and the terms of their service.

"Violations of these regulations in any essential particular may be reported to the President as unprofessional conduct."

The Boston Chapter considered the revision at its last meeting but expressed no definite opinion, referring the question back to the Committee with instructions to confer with the New York and other chapters. The Boston Chapter Committee believes the form to be distinctly preferable to the original revision, as published in our January issue, and considers that were it put in force it would encourage architects to charge a price for their sketches sufficient to discourage the client from asking others to submit them. The Committee also feels that the revision would not interfere with the Competition Code in any way, except for slight rearrangement of the clause defining a competition, and that architects would be in a stronger position in relation to the business world, inasmuch as they would then be able to do simultaneously what they can now only do sequentially—or to revert to the simile used last month, they could work abreast as well as tandem.

British Subsidies to House Building Killed

According to statements in the English press; the Ministry of Health Bill, after a stormy passage through the House of Commons, and the abandonment of many of its provisions by the Government, was refused a second reading by the House of Lords, on December 14th, last. In passing sentence of death on the measure, the Peers have incurred a grave responsibility. The legislation it was hoped they would pass included provision for the extension of time for the payment of the subsidies to private contractors engaged on the building of working-class houses. One of the effects of the defeat of this important measure is that the building subsidy to thousands of houses will cease on Dec. 31. From 24,000 to 26,000 houses are in course of erection by private builders, who had hoped to earn the State subsidy. Some of these houses will be completed by the end of the present month, and will accordingly receive the full subsidy. But half of them, it is authoritatively stated, will, as a result of their Lordships' action, fail to qualify in time for any part of the subsidy, and others will earn only part of the bounty.

The Ministry of Health at present possesses power to grant the full subsidy to houses finished by the end of December. So far only 4,000 houses have been completed. The Bill, among other things, extended the period in which the subsidy might be earned to April, 1921. It is said that large numbers of houses were commenced on the basis of this proposal, and that the effect of the rejection of the Bill will be stop building, as the Ministry is now unable to pay any subsidy after Dec. 31. The last Government measure of importance defeated in the Lords was the Welsh Disestablishment Bill in 1912. This was subsequently carried into law under the Parliament Act.

In a subsequent statement it was said that in order that building operations on uncompleted houses may continue after Dec. 31 the Government proposes to give the builders

a public guarantee that the subsidy will be paid, as provided in the rejected Bill, during the early months of 1921. To carry out this pledge a Bill will be introduced at the commencement of next session.

It will be interesting further to watch the progress of house subsidies in Europe. Holland, Finland, Denmark, and other countries have invoked them as remedial measures in the face of the most serious housing shortage ever known, but any student of economics knows very well that they present no fundamental answer to the so-called housing problem. The sums so granted must be derived from taxation, and as the Interborough Railway System says as part of its propaganda in New York City for a higher fare, "Higher taxes mean higher rents." Assuredly they do. Until they do not, no solution of the housing problem is in sight.

C. H. W.

The Proposed Government Bureau Of Building Construction and Housing

The investigations of the building industry conducted by the Senate Committee of which Senator Calder was Chairman have culminated, in one particular direction, (the scope of the committee's research was the whole problem called reconstruction), in a Bill introduced into the Senate on December 30, 1920, the text of which is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established in the Department of Commerce a bureau to be known as the Bureau of Building Construction and Housing.

SEC. 2. That the said bureau shall be under the control of a Director to be appointed by the President by and with the advice and consent of the Senate who shall receive an annual compensation of \$8,000.

SEC. 3. That the said bureau shall collect, collate, arrange, publish, and disseminate information from time to time to such an extent as may be prescribed by the Secretary of Commerce in relation to the best knowledge and practices in building construction work, development of sound methods of financing of individual home building and of extended home-building operations, the possibilities of standardization of constructional units and material, conservation in the use of lumber and other building materials, fluctuations in wholesale prices of building material, conditions of the sources of supply and amounts of building material at different centers, various methods of city planning, economic and practical methods for the elimination of slums and the formulation of building codes in order to bring about a greater uniformity in such codes in the various cities and States of the Union.

SEC. 4. That there is hereby authorized to be employed by said bureau a chief clerk and such assistants, clerks, and other employees at such rates of compensation and in such numbers as Congress may from time to time provide by appropriations.

SEC. 5. That the Secretary of Commerce is hereby directed to furnish sufficient quarters, office furniture and equipment for the work of this bureau.

SEC. 6. That this Act shall take effect and be in force from and after its passage.

It is also reported that an effort will be made by the Bureau of Standards, at this session of Congress, to secure an appropriation sufficient to permit it to undertake the preliminary work of a Basic Building Code.

Competition

For a Monument to the Uruguayan "Gaucho" in Montevideo, Uruguay.

It is proposed to erect in the city of Montevideo a monument commemorating the part played by the *gaucho* in Uruguay's history and industrial development. The principal figure will be the *gaucho* himself, one of the most picturesque characters of the world. In a way he is a survival of the old Spanish colonial days. He has been called the cowboy of South America, and he was that, but he was and is much more than what is comprehended by the name "cowboy" in the United States.

He was first of all a horseman, a man who spent most of his life in the saddle, but he was also a rancher, a trapper, a hunter and a pioneer. Like the French Canadian *habitant* he was most often a halfbreed—Spanish father and Guarani Indian mother—but he was not an Indian in any sense of the word, nor did he live as the Indians did. He was the pioneer of white civilization on the pampas, or plains.

Sculptors from Uruguay, and from all the American countries, including the United States, are invited to submit designs upon the following bases and conditions: The principal sculptural work will be executed in bronze. The artist is at liberty to employ in connection with the monument other materials, but preference is to be given to those of Uruguayan origin. The monument will be erected in the city of Montevideo, in the circle at the intersection of the Artigas Boulevard and Eighth of October Street. Properly to conceive the work, the artist should be familiar with the history, habits, and customs of the *gaucho*, so as to reflect his psychological character during the entire period of Uruguayan and South American independence.

The total cost of the monument is fixed at 60,000 pesos gold (at par exchange about \$62,040 U. S.), including the artist's remuneration, and all materials, work and transportation expenses necessary to the complete setting up of the monument. The only cost not to be included is the foundation for the monument, which will be executed by the commission in accordance with the instructions of the artist.

The time limit for submitting the cast and other exhibits mentioned expires on July 15, 1921, at 5 p. m.

Further information and a plat of the site where the monument is to be erected may be obtained on application to the Pan-American Union, Washington, D. C.

American Architecture at the Paris Salon

Detailed arrangements are announced for collecting and judging the work of American architects destined to be sent to this year's Salon at Paris. The Committee on Foreign Building Cooperation, of which Mr. Charles Butler is Chairman, will act as jury, and final date of February 14 has been set for the arrival of exhibits in New York City.

The Standard Examination for Reciprocal Registration

At the meeting in St. Louis, in November, of the representatives of the State Boards of Architectural Registration, there was permanently organized the National Council of Architectural Registration Boards. A Constitution and By-Laws were adopted. The latter contain provisions which are likely in the future to govern the question of reciprocity between State Boards of Registration. That is to say, grave difficulties have hitherto existed, because the requirements of no two laws are the same. Thus a state having a high standard of examination for permission to practice architecture has rightly demurred at granting reciprocity to architects duly registered in a state where the examination standards were lower.

The National Council of Architectural Registration Boards has worked out a method by which, under a Standard N. C. A. R. Examination, an architect may be relieved from all difficulties in case he wishes to practice in any state having registration laws. The examination can be taken in his own state, if a registration law is there in force, or if not, then at the nearest point where an Architectural Registration Board is in existence. A fee of twenty-five dollars is involved.

For architects who wish merely to be transferred, under a registration law, from one state to another, a separate method of procedure has been provided to avoid personal appearance before the State Board in the state to which transfer is desired. This involves the filing of an application with the National Council of Registration Boards, and a fee of fifteen dollars.

Naturally, the organization is voluntary, and no state can surrender the rights inherent in the law under which Registration was established, but any qualified architect of good standing can now be relieved of all doubt and difficulty, in case he desires to practice in a state having a registration law, by applying to the National Council of Architectural Registration Boards, Emery Stanford Hall, Secretary-Treasurer, 3230 West Monroe St., Chicago, Ill. The President of the Council is Mr. Emil Lorch, University of Michigan, Ann Arbor, Michigan, and the Vice-President is Mr. Arthur Peabody, Madison, Wisconsin.

The Institute and Architectural Exhibitions

The success of the architectural exhibition held in connection with the last Convention in Washington has passed quite beyond the bounds of even those ardent expectations upon which the success of the project rested. The difficulties of assembling the material were great. It was almost a herculean task to find the necessary space for the exhibits within such range of the Convention meeting place as would afford convenient access to the showing. The Committee of Washington architects performed a remarkably fine piece of work, as the delegates all testified. The exhibition was a success far beyond the dreams of its sponsors.

But even beyond that, it remains to record, once again, the fact that as a direct result of this exhibition there is to be a showing by American architects at the Paris Salon of 1921. The French Government, at the urgent suggestion

of those French architects who happened to be in Washington at Convention time, has cordially welcomed the idea of an exhibition of American architecture in Paris, and plans for this are well under way, as THE JOURNAL has already recorded.

It also must be remembered that last year the Institute sent an extensive exhibit of plans and photographs to the Pan-American Congress of Architects at Montivedeo; another exhibit of material was sent to the International Town Planning Conference at Brussels, the exhibits having subsequently been requested for local exhibitions at Ghent, Bruges, Antwerp, and other places, and finally, that the Institute was asked to help gather a collection of work from the various architectural schools for a showing at the exhibition of the Architectural Association in London last summer. Owing to the shortness of the notice, only a small amount of material was sent over, but the work was very well received and occupied a prominent place in the London exhibition.

It seems beyond question that the work done by the Exhibition Committee in Washington last year will prove to be the forerunner of a very wide circulation of the work of American Architects.

Architectural Designers for the Philippine Islands

The Bureau of Insular Affairs has been asked to locate two Architectural Designers at a salary of \$4,000 each, for the Philippine Islands. Appointees to these positions will be furnished transportation from their place of residence to the Islands, the cost of which will be deducted from their salaries in ten monthly installments and refunded to them after two years satisfactory service. The contract period is for two years.

Applicants should at once apply for Form B. I. A. 2, and announcement No. 64, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Customhouse, Boston, Mass.; New York, N. Y.; New Orleans, La., Honolulu, Hawaii; Post Office, Philadelphia, Pa.; Atlanta, Ga., Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Calif.; Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Competitors will not be required to report for examination at any place, but will be rated on the following subjects, which will have the relative weights indicated:

<i>Subjects.</i>	<i>Weights.</i>
1. General and technical education and preliminary or apprenticeship experience.....	30
2. Responsible experience and fitness....	70
Total.....	100

Competitors will be rated upon the sworn statements in their applications and upon corroborative evidence. Applicants must have graduated in architecture from a technical school or college of recognized standing, and have had at least one year's subsequent experience in architectural design.

American Academy in Rome.

Announcement of Competitions for the Prizes of Rome in Architecture, Sculpture and Painting.

The Annual Fellowship in Architecture of the value of \$1,000 a year for three years. The Annual Fellowship in Sculpture of the value of \$1,000 a year for three years. The Annual Fellowship in Painting of the value of \$1,000 a year for three years.

The awards are made after competitions, which are open to all unmarried men, citizens of the United States, who comply with the regulations of the Academy. Entries will be received until March first.

The purpose of these competitions is to select from among the available practitioners and advanced students in each of the arts of architecture, sculpture, painting and landscape architecture in the United States, the one best fitted to fill for three years the position of Fellow of the American Academy in Rome.

That one is best fitted whose natural capacities, general culture and professional training are such that he can best gain in the three years of his Fellowship and apply to the advancement of art in the United States after his return, a keen understanding of the qualities which give to the classics in all the arts their universal appeal, of the technical methods by which those qualities were secured in classic examples of his own art, and of the inter-relation of the arts with each other and with the general civilization of which they are a part.

Candidates are therefore to be judged not merely by their solutions of the specific problem set before them in

these competitions but also by any competent corroborative evidence of their fitness which they may submit.

For detailed circular giving particulars, apply to C. Grant LaFarge, Secretary, American Academy in Rome, 101 Park Avenue, New York City.

New Members Elected

BOSTON: S. W. St. Clair. COLUMBUS: Orlando C. Miller; Robert R. Reeves, Columbus. GEORGIA: William E. Dunwoody, Jr., Macon; William Bordley Clarke, Morton Henry Levy, Savannah; R. S. Pringle, Atlanta; George L. Pfeiffer, Lemon City, Florida. ILLINOIS: Byron H. Jillson, Chicago. IOWA: Ralph Arnold, Sioux City. KANSAS CITY: J. H. Felt, Kansas City. LOUISIANA: Richard Koch, New Orleans. MICHIGAN: Harry S. Angell, August William Balle, Christian W. Brandt, Ralph Collamore, Alexander G. Donaldson, Alvin E. Harley, J. Phillip McDonnell, Walter R. Meier, Clarence W. Palmer, Harold M. Shepherd, Keith W. Smith, J. H. Gustav Steffens, F. Orla Varney, Detroit; Leonard H. Field, Jr., Jackson. MINNESOTA: Charles S. Haire, Helena, Montana; George Owen Huey, Minneapolis. NEBRASKA: Edwin B. Clarke, Hiram A. Salisbury, Omaha. NEW YORK: J. Edgar Willing, New York City. OREGON: H. Newton Thornton, Idaho Falls, Idaho. PHILADELPHIA: Virgil L. Johnson, Donald M. Kirkpatrick, Sydney E. Martin, Philadelphia; G. Morris Whiteside II, Wilmington, Delaware. TEXAS: Herbert M. Greene, Dallas. WASHINGTON, D. C.: E. H. Moeller. WASHINGTON STATE: Roland E. Borhek, Earl N. Dugan, Tacoma; Harold O. Sexsmith, Seattle; Rudolph Weaver, Pullman; Harold C. Whitehouse, Ernest V. Price, Spokane.

The Work of the Structural Service Committee and the Structural Service Department of The Journal

The Structural Service Department of THE JOURNAL in the revised form adopted by the Structural Service Committee of the Institute is meeting with a most gratifying approval, not only in the United States but in far away countries where more and more copies of THE JOURNAL are circulating. One of the members of the Institute writes to us as follows:

"The American Institute of Architects should have a very considerable sum of money at its disposal for such work as you are doing and any other kind of work which the national body of our profession should do. Consideration might well be given to the financing plan of the trade unions, contractors' associations and numerous other trade organizations which practically compel their members to pay assessments which provide funds adequate for all professional or trade purposes.

"My partner says that architects ought to do the same thing and, speaking for ourselves in accordance with his suggestion, we are ready at any time to give one per cent of our gross income. We might even consider doing this before the matter became general; if half of the membership agreed to it I think we would go in. I can form no idea as to what amount this would produce but \$100,000 annually would be a small estimate.

"I see no hope whatever of getting sufficient funds by dues or contributions. If some such plan as this were put into execution, we could employ competent assistants to do all the work which is not thrust upon generous public spirited members and you may be very sure the entire membership would sit up and take notice and keep itself informed as to the purposes and methods adopted in the expenditure of such a fund.

"Think it over!"

The joint work of the Structural Service Committee of the Institute and the Structural Service Department of THE JOURNAL (and the two are absolutely interdependent) costs in the neighborhood of \$8,000 a year, the whole of which is, with the exception of the appropriation from the Institute (\$50 for 1921), borne by THE JOURNAL. It entails a voluntary service which, if adequately remunerated, would involve many more thousands, and the opportunities for usefulness to the architectural profession are countless.

A special committee of the Board of Directors is now considering the whole question of an increased Institute revenue and no doubt the matter will come before the Convention in Washington next May.

NEWS NOTES

News Notes

PRELIMINARY meetings held in Savannah, Georgia, at the instance of Mr. H. W. Witcover, have resulted in the agreement among architects to form a local organization in which the spirit of the Institute will prevail and which will be the means of gradually bringing the members into the Georgia Chapter. It is believed by the sponsors of this movement that the results will exceed any that might be gained by the formation of a State Society, since the gatherings of such a body would necessarily be few, and costly to the members in both time and money. Local organizations will, on the other hand, provide that means for interchange of opinion which is of the highest importance in bringing the profession together.

FROM MADRID comes the news of an unprecedented shortage of houses. According to recent advices not a room is to be had. Madrid has increased its population by some 200,000 in the last few years, and as is the case with all cities, is steadily growing at a rate quite beyond the power of building to deal. The Government is being urged to enact rent laws and to find some way of stimulating the construction of new houses. Naturally, however, it finds itself in the same predicament as all other countries.

RENT LAWS have an effect upon housing, but probably it is more adverse than favorable. News comes from Belgium that the law restricting rents has been evaded in many cases by the sale of the houses. It is said that these sales are easily made to foreign purchasers who, taking advantage of the low rate of exchange, and the high rents, are able to take an attractive profit.

FOLLOWING in the footsteps of England and Holland, Finland now grants a subsidy to house builders. It is in the form of a non-interest bearing loan to the value of 30% of the cost. At the end of ten years the house is to be valued and the State will write off two-thirds of that portion of the investment which is not then paying interest. As a scheme for keeping rents low—or at least for making them very low in ten years time—this seems to be one of the best of the various subsidies that have been invented.

STANDARDIZATION of mouldings and sizes, in connection with the work of the National Lumbermen's Association toward that end, is receiving the cooperation of the Washington State Chapter, the special committee having asked each member of the Chapter to submit sketches of nine moulding contours to the committee.

COMMUNITY planning effort by Chapters, as a public service, meets with curious rewards. One Chapter offered its services to the proprietor of a sub-division, asking payment only for the bare costs of making studies and sketches. The answer was an offer of shares of stock in the sub-division as a payment.

JOINT REGISTRATION of architects and engineers was discussed at length at the December meeting of the Boston Society of Architects. On a vote to record the sense of the meeting, a joint law was not favored. On a previous motion the meeting recorded itself as opposed, by a two-thirds vote, to the registration of architects in Massachusetts.

EDUCATION in architecture offers many opportunities. The Baltimore Chapter is considering a plan for marking some of the more important of the old buildings in its city with the names of the architects.

AFFILIATION with other technical organizations has been much considered of late by various Chapters. Baltimore has decided to affiliate with the new Engineers' Club, where accommodations will be provided for Chapter meetings.

LEST THE lot of architects be thought too difficult at home, we are moved to reprint the letter of Mr. Chas. McLachlan, Honorary General Secretary, Architects and Surveyors' Assistants Professional Union, of England, addressed to the editor of *The Architect*, London. Mr. McLachlan says: "May I warn those members of the profession contemplating taking up positions anywhere outside the United Kingdom. It does not follow that every such position is no good, many of them, of course, being very valuable; but it is most vital that everyone contemplating such should obtain the very best advice possible beforehand. My Union has collected a file of information from members and others, though much more would be welcome, and will give all advice possible, and I have no doubt the professional institutes would also be only too willing to advise their members.

"Recently I have had complaints from Singapore, India, and other places which, being rather limited as to the size of their professional staffs, might lead to victimisation if I named them. There are one or two points worth making public:

"(1) The written agreement of any Government, public body, firm, or individual requires very careful consideration before signing.

"(2) It seems doubtful whether contracts made in this country are legally binding abroad, even in some of our own little Colonies.

"(3) The shilling in Britain, the rupee in India, and the Eastern dollar seem to have much the same purchasing power: rate of exchange should never be taken into consideration when the salary is not stated in sterling.

"(4) A wife should never go out with her husband at first, but should follow if he finds conditions satisfactory.

"(5) Most salaries abroad will be found to be suitable only for bachelors.

"(6) Future promotion should not be overlooked. A man in the jungle is not usually on the spot for the next preferment that offers and it is usually filled from home.

"(7) There is no place for the poor white man, where the white man only maintains his footing by real or assumed social superiority.

"(8) Duration of life in an unsuitable climate.

"I have just had a chat with an ex-officer who went out East with his wife. At the end of five months he has returned with the loss of nearly £400 capital and his wife's health ruined, because it is more profitable to live in this country without a job than it was to live there on his salary, and that looked a lot in £ s. d. It is usually only traders that make money; every penny earned by the professional man is usually every penny spent."

OFFICIAL ARCHITECTURAL Departments are much to the front in England, where the encroachment of the

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Government's Office of Works appears to have made a serious inroad upon private practice, with further invasions looming ominously in the future. In a letter to *The Times*—which is of course the most thunderous note of protest it is yet possible to raise in England—the President of the R. I. B. A. points out the plain fact that Governments do not produce, by departmental administration, good results in building from the architectural point of view, and that they do not build as economically as under the method of private contract. But in England the economic pressure, greatly aggravated by the war, is perplexing the Government very sorely, and those upon whom the solving of the riddle devolves have apparently little insight into what is at bottom the cause of the trouble. The housing problem is likely to develop far beyond the immediate issue, ere any country extricates itself from present financial difficulties, and in the meantime the practice of architecture will experience many adventures.

THE RECENT FIRES which destroyed the West Virginia Capitol caused the loss of irreplaceable state records. It recalls the burning of the Parliament Buildings at Ottawa, the fire in the State Capitol at Albany, New York, and very recently, the fire in the Department of Commerce at Washington. In all of these there were lost manuscripts, documents, records, and books of inestimable value. Of the loss at the Department of Commerce in Washington, Chief Clerk Fitzgerald says: "The records destroyed could not be replaced if we had the entire wealth of the United States at our disposal. There are no duplicates." And in this case the destruction involved census records dating back to the first census in 1790. The material gathered in the last census was spared only because it happens to be kept apart during its digestion by the Department. But those who know the situation in Washington may well ask how much longer the Archives Building will be delayed. Let us hope that the next Congress will speed it to completion. In the meantime, the architects of the country might well take it upon themselves to inquire into the fire hazard attending the preservation of their own State and City Records.

Book Reviews

Housing and the Housing Problem. By Carol Aronovici; National Social Science Series.

This little volume (163 pages) includes chapters on the housing problem as revealed by surveys made in various cities of the United States, on legislative programs based on such surveys, on garden cities, and on town planning—the latter theoretically discussed as to basic principles, and practically exemplified in numerous communities in Europe and America. Much recent and valuable data are included. On the whole, the book is a distinct contribution to housing literature in America.

Much original material has been incorporated by the author, based on housing surveys he has directed during the past ten years. There is also included a condensed statement of material which has been previously published by Dr. Aronovici in the *JOURNAL*, dealing with housing projects in Europe.

Should the Government help in financing small homes construction? Does the tariff penalize housing develop-

ment? What effect does housing legislation have on increasing rents? These and like practical and timely topics are also discussed.

A fair indication that the author has kept both feet on the ground in his treatise, is the fact that of the 163 pages in his book he devotes only three to his eighth chapter, which discusses "The Community of the Future." His book is a very practical, sane presentation of the housing problem.

BERNARD J. NEWMAN.

Correspondence

The R. I. B. A. and the A. A.

EDITOR, THE *JOURNAL* OF THE A. I. A., DEAR SIR:

In the most interesting article on "British Architects and American Architecture" in your issue of December 1920, I notice one small point to which I should like to call attention. In speaking of Mr. Robert Atkinson's address the writer of the article calls the Architectural Association "a smaller rival of the Institute." To those who do not know our British organizations these words may be misleading. Almost any other term would more truly represent the relationship between the Architectural Association and the R. I. B. A.—"fosterchild," "daughter society," "protege," would be more to the point.

The Architectural Association was started many years ago by members of the R. I. B. A. as an educational body (the R. I. B. A. does no direct teaching) and since its foundation it has never failed to receive the sympathy and assistance of the parent body. Its President is *ex officio* a member of the Council of the R. I. B. A., it receives an annual grant which we shall be glad to increase when our finances permit, we have endowed Scholarships tenable at the Architectural Association, and in every way in our power we have fostered the development of the one great architectural school in this country, which is entirely controlled by the profession.

Believe me, yours very truly,

IAN MAC ALISTER,
Secretary, R. I. B. A.

NOTE.—The Editor regrets the oversight and offers his apologies to both societies

Obituary

George W. Von Arx.

Elected to the Institute in 1916.
Died at Jersey, City, N. J., October 25, 1920.

The Journal for 1920

Index and Bound Volumes

Subscribers are informed that an Index of THE *JOURNAL* for 1920 has been printed and will be mailed upon request.

We are now ready to bind volumes at the following prices: Half Morocco, \$5.25; buckram, \$3.25, the cost of postage being additional. Back numbers will be supplied in all cases possible, but volumes for binding must be in our hands not later than February 28.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

The Experience Pool

Under this caption, the Committee on Structural Service will record from time to time, statements of experience received in connection with investigations conducted for the purpose of answering inquiries addressed to the Committee.

Scraffito. (21f)—The Structural Service Committee received the following request for data on the subject of "Scraffito:"

"Can you give us any information, or refer us to any one who can, with reference to specifying scraffito. We have not sufficient information available here upon which to base our specifications, and will appreciate any information that will assist us in that direction."

The following is an abstract of the reply to this inquiry: In the *American Architect*, July 3, 1918, is an article on "Scraffito" by Mr. F. Friederang. This article contains considerable information on the subject but gives no specification. Messrs. Carrere & Hastings have used scraffito extensively and we communicated with their office and were referred to Menconi Bros., Sculptors, New York City. This firm has had a wide experience in the execution of this class of work and Mr. Raphael Menconi who was interviewed on the subject, stated that he had never seen a specification for "Scraffito" and he did not believe it possible to write one that could be literally followed. Climatic conditions and the kind and condition of the surface to which the finish is to be applied make it inadvisable, he believes, to attempt to hold to hard and fast rules.

The same precautions must be observed in connection with "scraffito" as are necessary to insure a high class job of portland cement stucco. It is four coat work. The finished thickness should be from $\frac{3}{4}$ " to 1"; not less than $\frac{3}{4}$ ". Clean sand properly graded in size, high grade portland cement, not too quick setting, and the best quality mineral coloring matter are essentials. Mr. Menconi recommends that no more lime be used than is absolutely necessary for plasticity. It is his custom to test the cement and sand to be used by making several small moulds of varying mixtures. He says that, as a general rule, the proportion used is about one part portland cement to three parts clean washed sand.

The first and second coats are practically the same as for the first two coats of three coat portland cement stucco work. The masonry should not be so dry that it will absorb too much of the water from the mortar, neither should it be so thoroughly saturated with water that it will stop all suction. The second coat is primarily a portland cement mortar "brown" coat and should be applied after the first coat has obtained its initial set but before it has

dried out. The third coat is portland cement mortar colored with mineral coloring matter. It should be between an eighth and a quarter of an inch in thickness and applied as described for the second coat. In warm dry weather it may be necessary to add lime to this coat to prevent setting too rapidly to allow the final coat to be applied and the pattern scratched. The fourth and final coat is a brush coat of portland cement grout. As soon as this has reached its initial set the design is transferred to this finished surface and the thin coating of cement grout is scratched away, thus leaving the colored mortar exposed. The designs are drawn full size on detail paper, the outlines are perforated and are transferred by dusting with powdered charcoal after being placed in position on the wall. Next to the quality of the raw materials used Mr. Menconi lays particular stress on the length of time that should elapse between coats. This, he claims, depends in such a large measure upon the temperature and humidity of the air that he believes a hard and fast rule would not insure the best results. (See also THE JOURNAL, February, 1916.)

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Glues and Glued Joints. (19e61)—How best to guard against the not infrequently disastrous results attending the use of veneered woodwork if exposed to the weather, as for example exterior doors, has long been a problem with many architects. The Forest Products Laboratories have conducted extensive research work on the strength and resistance of glued joints and the following abstract has been prepared from data published in their Technical Notes.

Water Resistant Glues.—Water resistant glues are of two general types, those made from blood albumen and those made from casein. The water resistant qualities of both of these are well demonstrated by the acceptance test imposed on plywood manufactured for use in airplanes. Samples of the plywood are boiled in water for eight hours or soaked in cold water for ten days. An acceptable product will show no separation of the plies under such treatment. Both casein and blood glues are materially weaker wet than dry. Casein glues tested wet commonly

have 20 to 40 percent of their dry plywood shear strength, and blood glues 50 to 75 per cent. When, however, plywood using these glues is redried after being soaked, the original strength of the glue is very largely recovered. Ordinary glues which are soluble in water are not very effective in cementing linoleum. When subjected to moisture the glue disintegrates and the linoleum comes loose. Casein glues are admirably adapted to this purpose.

Casein and Blood Albumen Glue.—Casein glues are made from casein which is obtained from milk. They are comparatively inexpensive and the materials from which they are made are readily available. They are applied cold, will set without the application of heat and are used for gluing material of all thicknesses. They can be obtained in the prepared state ready for mixing with water or they can be made directly from the ingredients at the time the glue is used. Casein glue requires only an ordinary press, such as is used, with or without retaining clamps, for animal and vegetable glues.

Commercial casein is a very variable product and for glue making much trouble is caused by its lack of uniformity. The indications are, however, that practically all caseins of a reasonable degree of purity can be made into satisfactory glues by the same formula, simply by varying the amount of water used. Lime is probably the most essential constituent used with casein to produce casein water-resistant glue. The actual quantity required depends on the purity of the lime. Blood albumen glues are not at present used for gluing anything thicker than veneer. The joints must be made with a hot press having hollow plates heated with steam.

Commercial Liquid Glues.—Most of the commercial liquid glues are manufactured from the skins, heads and swimming bladders of fish. Others are made by special treatment of the glue extracted from the hides, skins and bones of cattle; some for special uses are prepared from starch, from various gums or from casein. Some liquid glues are entirely unsuitable for woodworking purposes while others compare favorably in strength with hot glues. A commercial liquid glue, in addition to uniform high adhesive strength, should "set" and dry rapidly. In its container it should remain fluid and workable at all ordinary temperatures. It should be elastic and shock resistant and should not be unusually susceptible to the action of high temperatures, high humidity, molds and bacteria.

Glued Joints.—To get full strength from any glue proper surface contact is imperative. The proper application of pressure is important in all glued work but doubly so in the manufacture of plywood. Work is sometimes improperly dried and is then expected to hold together in damp rooms. Glue attains its full strength only when it is thoroughly dried and this necessitates removing the moisture absorbed from the glue by the wood. It is very commonly asserted that scratched surfaces make stronger glued joints than smooth surfaces. Comparative tests, however, indicate that the strength of these two types of joints are practically the same. Tests indicate that the thickness of the glue line in plywood may vary considerably without noticeably affecting the shear strength. In heavier joints, however, the thickness of the glue line apparently has much to do with the holding power of the joint.

Glue joints, made with either casein or animal glue, between wood surfaces which have been coated with shellac or varnish have low or very erratic strength, and therefore all shellac or varnish should be carefully cleaned from wood which is to be glued, if high strength is desired. The results obtained from the use of shellac do not indicate that it has gluing proportions which compare favorably with casein or animal glue.

It is common practice among plywood manufacturers to dry veneer down to very low moisture content before gluing it. The object in doing so apparently is to prevent shrinkage of the veneer and consequent marring of the appearance of the finished panel. Such preliminary drying, however, may not be necessary. Veneer panels glued with casein glue at moisture contents of over 50% proved as strong and as desirable as those made under dryer conditions. Panels made at high moisture content checked if dried too rapidly, but this difficulty could be avoided by proper operation of the kiln. Very dry veneer is more likely to break or split than damp veneer.

Strength of Glued Joints.—A glue shear strength of 100 to 125 lbs. per sq. in. is considered sufficient for most purposes for which plywood is used. For airplane use the shearing strength of casein and blood albumen glues in plywood is required to be at least 150 lbs. per sq. in. Most plywood tested showed considerably higher values than this, many glue joints averaging as high as 3,000 lbs. per sq. in. Commercial liquid glues differ very widely in strength. One tested exerted a binding force of less than 50 lbs. per sq. in. and one of more than 3,000 lbs. per sq. in. According to the data obtained a high grade liquid glue should have an average shearing strength of not less than 1,700 pounds per sq. inch.

Casein and animal glues, when properly used, have shown shear values of 2,400 lbs. or more per sq. in. Few commercial American woods have an average shearing strength greater than this, the average being less than 2,000 lbs. Casein glue test joints, using blocks of maple with the grain running the same direction commonly have a shearing strength of 2,000 to 2,500 lbs. per sq. in.

In general, veneer panels glued with blood glue show higher average strength under varying conditions than those glued with casein glues. It seems possible, however, that casein glues will in time be developed which will be the equal of blood albumen glues in this respect.

Effect of Oils in Strength of Glues in Plywood.—There is little likelihood of plywood being dangerously weakened by the action of oil or gasoline on the glue joints. Panels glued with animal, vegetable, blood albumen, and casein glues were immersed for nearly a year in engine oil and gasoline. All the glues weakened somewhat during the early part of the test, the animal and vegetable glues more than casein and blood albumen glues. The total loss of strength in any case, however, was small enough to be negligible under most severe conditions of service.

Hardening and Dustproofing Cement Floors. (3b2). (Report of Service Tests on Concrete Floor Treatments by the U. S. Bureau of Standards).

Purpose of Tests.—These tests were conducted in order to comply with numerous requests for information concerning the relative merits of various concrete floor treat-

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ments. They include a number of proprietary treatments and also a few "home treatments." The investigation has been based mainly upon observations of treated concrete floor panels under actual service conditions, and, therefore, the results are not quantitative or necessarily conclusive, but are in general indicative of what may be expected of the various treatments when exposed to such conditions for the stated periods of use. The report gives the behavior of the various treatments placed side by side under as nearly the same traffic conditions as could be obtained for a test of this kind.

Description of Tests.—The materials were applied to slabs in the corridors of one of the buildings of the Bureau of Standards, the floors of which had begun to dust and crumble at the surface. The first materials were applied about five months after the floors were completed and other treatments were applied during the following six months. The sections of the floor referred to as panels are eight feet square. The traffic on the different panels is similar, but the panels near the entrance are subjected to more use than those near the ends. With the exception of the fact that laboratory machines and office fixtures are occasionally moved over the floors, the panels are subjected only to light foot traffic.

Materials.—The materials included in these tests are given in the following list. The proprietary materials were in most cases submitted by the manufacturers, and the others were prepared in the laboratory according to formulae which have been recommended.

Proprietary Materials.—

TRADE NAMES.	MANUFACTURERS.
Vitrograin	The Arco Co., Cleveland, O.
Flintox	Toch Bros., New York City.
Acid Proof Filler	Toch Bros., New York City
Cement Filler	Toch Bros., New York City.
Lapidolith	L. Sonneborn Co., New York City.
Crystalrox	General Fireproofing Co., Youngs- town, O.
Saniseal	Master Builders Co., Cleveland, O.
Colorseal	Master Builders Co., Cleveland, O.
Magnesium Fluosilicate	U. S. Lead Refinery Co., East Chi- cago, Ind.
Indurite	Ceresit Waterproofing Co., Chicago, Ill.
Liquid Concrex	A. C. Horn, Long Island City, N. Y.
Esco	Preservative Products Co., N. Y.
Bilchaco	Billings Chapin Co., Cleveland, O.
Concreto	Murphy Varnish Co., Newark, N. J.
Minwax	Minwax Co., New York City.
Thermowax	The Thermowax Co., Dallas, Tex.
Saum's Pre- servative	The Sagendorph Co., Philadelphia, Pa.

Home Treatments.—Sodium Silicate, Aluminum Sulphate, Linseed Oil, Fuel Oil and Soap, and Soap Treatment.

Results of Tests.—In order to avoid difficulties arising from direct reference by trade names the materials and tests are described by the Bureau of Standards under reference letters.

Treatment A.—This treatment consisted of a 15% solution of magnesium fluosilicate applied in three coats diluted

as follows: 1st., one part solution to two parts water; 2nd, one part solution, one part water; 3rd, two parts solution to one water. The panel has been in service two years and three months. The surface is quite hard and shows no wear except on a few small areas, which are rather soft and can be readily scratched. It appears that these areas were originally the high places and did not receive the proper amount of the treatment.

Treatment B.—This material was also a solution of magnesium fluosilicate approximately 8.7% in strength. It was applied in three coats diluted in the same way as material A, regardless of the weaker solution. This treatment was applied six months later than the above and has been in use one year and nine months. The panel shows considerable wear and is scratched in many places due to moving materials over it. It seems probable that the solution was too weak and did not afford the proper amount of the hardening element.

Treatment C.—This was a 14.5% solution of magnesium fluosilicate. Instead of being applied as the other materials of this type, it was applied copiously in one coat without dilution. This panel has been in service two years and two months. It is in good condition and uniform in appearance. No wear is apparent.

Treatment D.—This treatment consisted of a 11.5% solution of magnesium fluosilicate applied in three coats diluted as material A. The panel has been in service one year and eight months. It shows no definite signs of wear and is uniform in appearance.

Treatment E.—This treatment consisted of a solution of magnesium fluosilicate approximately 18% in strength containing a small amount of zinc fluosilicate. It was applied in three coats diluted like material A. This panel was very poor before the treatment was applied, *i. e.*, it was crumbling badly at the surface. It was hardened to such an extent that no appreciable wear has occurred since the treatment was applied. It has been in service two years.

Treatment F.—This material consisted of a solution of magnesium fluosilicate approximately 7.3% in strength, containing 2.6% magnesium sulphate and 4.5% of free hydro-fluosilicic acid. It was applied in three coats diluted like material A. The panel has been in use one year and eleven months. It shows considerable wear and the surface can be easily scratched.

Treatment G.—This was a 16% solution of zinc sulphate with about 4.5% free sulphuric acid. It was applied without dilution in two coats. After the first treatment had dried for four hours, the surface was scrubbed with hot water and mopped dry when the second was applied. This panel has been in service two years and three months. The surface is very hard and uniform. No signs of wear are apparent. The treatment gives a darker appearance than the original concrete.

Treatment H.—This treatment consists of a 20% solution of sodium silicate containing a small addition of an organic acid. It was applied without dilution in two coats 24 hours apart. The slab was covered with a bridge of plank until dry. This panel has been in service two years and two months, and shows no signs of wear. The surface is hard and uniform. The treatment gives a brighter and more uniform appearance than the original.

Treatment I.—This is a home treatment consisting of an 8% solution of commercial sodium silicate applied in three coats. Each treatment was preceded by a thorough scrubbing of the surface with water. The panel has been in service two years and two months. The surface is very hard and shows no signs of wear. The treatment gives a uniform appearance which is lighter than the original.

Treatment J.—This treatment consisted of a 15% solution of aluminum sulphate applied in three coats which were dilutions of the original solution as follows: 1st., one part solution to two parts water; 2nd., one part water to one part solution; 3rd., two parts solution to one part water. The treatment was applied liberally with a white-wash brush at intervals of 24 hours. This treatment was applied to several panels in the corridor and to the floor of one large laboratory room where it was necessary to keep the dust down on account of the machinery. The treatment has been in use one year and six months and has proved quite satisfactory. The surface is not quite so hard as was obtained by some of the other treatments but it has been effective in holding the dust. This is a very economical home treatment which can be easily applied without interfering with the traffic.

Treatment K.—This was a gray paint consisting of a pigment of basic lead sulphate, siliceous matter, and carbon in a tung oil rosin varnish vehicle (mineral spirits thinner). The surface was thoroughly cleaned by sweeping and the paint applied in two coats 24 hours apart. The surface was covered with a bridge of plank until thoroughly dry. This panel has been in service two years and two months. The coating is showing the effects of wear at the parts most used. While the paint is not worn entirely through, the lighter color at these places gives the floor a lack of uniformity in appearance.

Treatment L.—This material was a china wood oil varnish, which was applied in two coats 24 hours apart. The floor was dry cleaned as for treatment K and kept covered with a bridge of plank until dry. The slab has been in service for two years and one month. The surface has a few scratches due to moving machinery over it and is slightly lighter in color where most used which shows that the coat is wearing thin at these places.

Treatment M.—This was also a china wood oil varnish applied in two coats at an interval of 24 hours, and kept covered with a bridge of plank until dry. The panel has been in service two years and two months and shows no appreciable signs of wear.

Treatment N.—The material consisted of a thin bodied mineral spirits varnish applied in two coats at an interval of 24 hours and kept covered with a bridge of plank until dry. The panel has been in service two years and one month. The coating seems to be worn through where most used as shown by the lighter color at these places. This panel was originally weak and crumbling badly and hence the test was quite severe.

Treatment O.—This was a gray paint with a pigment of basic lead sulphate, zinc oxide, barium sulphate, siliceous matter, and carbon in a linseed oil, rosin (and probably some tung oil) vehicle, having a mineral spirits thinner. After the panel was swept clean the first application was thinned with a material called the reducer, which was of the

nature of a thin bodied varnish. After 24 hours a coat of the paint was applied without the thinner. Each coat was covered with a bridge of plank until dry. This panel has been in service one year and five months, and shows no signs of wear except a few scratches which were probably caused by moving machinery over it. The treatment gives a wax-like surface which is not especially resistant to scratching but seems to be reasonably durable under foot traffic.

Treatment P.—This was a very thick paint consisting of a pigment of zinc oxide, lithopone and bone black in a varnish vehicle containing rosin. It was applied in one coat after the floor had been thoroughly swept. The one gallon sample received for this test was only sufficient to cover the 64 sq. ft. The directions required two applications but the one gave a thick elastic coat which was considered sufficient for the purpose in view. This treatment has been in service one year and six months. It shows several large scratches due to moving machinery over it and a few small spots have blistered and worn away. The thick film obtained with this material is very pleasing to walk upon but has not proved durable under the conditions to which it has been subjected. It is believed that a preliminary roughening of the concrete would avoid blistering, and give a coating that would be satisfactory for office purposes.

Treatment Q.—This treatment consisted of a solution of heavy hydro-carbon wax in a light hydro-carbon oil applied to the surface in two coats 24 hours apart. The panel has been in service two years and three months and shows considerable wear. The object of this treatment is only to hold the dust and no claims are made as to hardening the surface.

Treatment R.—This treatment consisted of a mixture of waxes applied to the floor in a molten condition. It was applied in sections which were heated with a special apparatus before and after the application. The object of this treatment is similar to that of Material Q. More wax is left on the surface which acts as a binder to loose particles. One panel and one office room were treated with this material. Both show considerable wear. Under the office chairs the treatment seems to be worn through. This has been in service two years and four months.

Treatment S.—This treatment consisted mainly of linseed oil with a small addition of citronella. It was applied in one coat and kept covered until dry. While this panel has not proven entirely satisfactory, it appears to be harder at this time than it was one year ago. The panel probably should have had two applications instead of one. The directions advised one coat for new floors and two coats for old badly worn floors. The appearance obtained was not uniform which indicates that the proper amount of the treatment was not applied and hence it is believed that little weight should be given the test.

Treatment T.—This treatment consisted of four applications of raw linseed oil thinned with turpentine. It has been in service two years and two months. The results obtained at first were not satisfactory but the surface appeared to harden gradually until at present it is quite hard. It appears to be resisting the wear very well.

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Treatment U.—This treatment and the one following are what might be called janitor processes. It has been noticed that concrete floors under actual use sometimes take on a polish or present a wax-like appearance. In order to determine if this condition was due to the precipitation of soap in the concrete, some sections of the floor were frequently scrubbed with a thick soap solution. The polished condition did not occur in this case which was believed to be due to the fact that the floor was very porous and hence the solid matter from the treatment was not retained in the concrete.

Treatment V.—This treatment was an emulsion of fuel oil and soap in the proportion of three quarts of oil, two bars of ivory soap and four gallons of water. This treatment was not included in the series described above but was applied recently in the corridors of another building, the floors of which were originally much better than those described. The emulsion was applied with a mop at intervals of a week of two. About ten applications were made and the floors were greatly improved. They do not appear to be dusting and the surface is somewhat harder than the original. This application leaves the floor slippery for a few hours.

Conclusions.—1. The above described experience with materials of the magnesium fluosilicate class indicates that very good results may be obtained by such treatments but that there is a need for more knowledge concerning the proper strength of solution and method of application.

2. The zinc sulphate treatment has given excellent results.

3. The surface coating materials are most effective in entirely eliminating the dust. The length of service that can be obtained from this type will usually be limited to a year or two depending on the nature of the traffic, but since the greater portion of the floor does not usually receive a large amount of wear, the worn places may be resurfaced at a small expense.

4. Two home treatments, *viz.*, I and J, have proven very successful and are quite inexpensive to apply. The following instructions are given for the use of the home treatments:

A. Sodium Silicate Treatment.—Commercial sodium silicate usually varies in strength from 30 to 40 per cent solution. It is quite viscous and has to be thinned with water before it will penetrate the floor. In ordinary cases it will be found satisfactory to dilute each gallon of the silicate with four gallons of water. The resulting five gallons may be expected to cover 1,000 sq. ft. of floor surface, one coat. However, the porosity of floors varies greatly and the above treatment is given as an approximate value for estimating purposes.

The floor surface should be prepared for the treatment by cleaning free from grease, spots, plaster, etc., and then thoroughly scrubbed with clear water. To get the best penetration the floor should be thoroughly dry, especially before the first application, and if practical it is well to let it dry for several days after the first scrubbing. The solution should be made up immediately before using. It may be applied with a mop or hair broom and should be continuously brushed over the surface for several minutes to obtain an even penetration. An interval of 24 hours should

be allowed for treatment to harden after which the surface is scrubbed with clear water and allowed to dry for the second application. Three applications made in this manner will usually suffice but if the floor does not appear to be saturated by the third application a fourth should be applied. This treatment when properly applied gives a very hard surface that is bright and uniform in appearance. The commercial sodium silicate can be obtained from wholesale druggists usually at a cost of 40c or less per gallon.

B. Aluminum Sulphate Treatment.—The solution of aluminum sulphate for this treatment should be made in a wooden barrel or stoneware vessel. The amount required may be estimated on the basis of one gallon of solution for each 100 square feet of area. For each gallon of water $2\frac{1}{2}$ lb. of the powdered sulphate will be required. The water should be acidulated with commercial sulphuric acid by adding 2 cc. of the acid for each gallon. The sulphate does not dissolve readily and has to be stirred occasionally for a period of a few days, until the solution is complete.

The floor should be cleaned of grease, spots, plaster, etc., then thoroughly scrubbed. When the surface is entirely dry, a portion of the sulphate solution may be diluted with twice its volume of water and applied with a mop or hair broom. After 24 hours dilute a portion of the original solution with an equal volume of water and apply in the same manner as the first. Allow another interval of 24 hours and make an application using two parts of the sulphate solution to one part of water. Each application should be continually brushed over the surface for several minutes to secure a uniform penetration. After the third application has dried, the surface should be scrubbed with hot water. This treatment will give good results at a cost equal to that of the sodium silicate treatment.

Editor's Note.—The analyses made by the Bureau of Standards of seventeen proprietary materials result in the interesting disclosure that those hardeners and dust-proofers which do not function merely as binders and which are not surface coatings, that is, those which undergo a chemical change after application, depend for their effectiveness upon the use of one of a relatively few well known and readily procurable ingredients.

Community Buildings.—The development of community buildings has been so recent and it is so essentially an outgrowth of rural life and conditions that knowledge regarding them has, necessarily, been fragmentary. In many cases the knowledge of this class of building has been limited to impressions gained from observation of a few isolated examples.

In a recent publication of the Bureau of Agriculture, Bulletin No. 825 "Rural Community Buildings in the United States" is briefly described the classification, character, maintenance, operation, management and uses of this type of building. There are also given descriptions of a number of community buildings that have been recently erected in different sections of the country.

The character of this class of building is given as follows: "The simplest of these buildings, often found in the open country, generally contain, first, an auditorium, the movable seats of which permit it to be transformed into a dining room, an athletic room, or a hall for dancing;

second, a stage, with curtains and dressing rooms for theatricals; third, a kitchen, equipped with stove, utensils, dishes, and cutlery. Often the assembly room is on the first floor and the kitchen and a separate dining room in the basement. Farmers' buildings frequently contain special rooms for the use of cooperative economic enterprises. In the smaller towns, besides these rooms there are often a library and reading room, a game room, a women's rest room, and rooms which serve as meeting places for various organizations.

"In the county seats and larger towns the buildings are often quite complete, having besides the usual rooms an office room, special rooms for banquets, a cafe, a gymnasium, billiard and bowling rooms, an agricultural exhibit room, and rooms for the county agricultural agent, the county home demonstration agent, the visiting nurse, and the secretary of the commercial club. Community buildings provided by town or county government also contain rooms for the different officials, the post office, and sometimes a social room for the fire department.

"Equipment in these buildings varies from the plain chairs and tables, stove, cooking utensils and dishes, and organ of the simpler structures, to the fine furniture, opera chairs, stage scenery, gymnastic, bowling, billiard, athletic and game-room apparatus, books and magazines, piano, moving-picture machine, and first-aid facilities of the finer ones. Those in the open country are generally heated by stoves, lighted by oil or gas lamps, procure water from their own pumps, and have outside toilets, while those in the towns have furnace heat, electric lights, running water, inside toilets, and hot and cold baths.

"The sites in both town and country range from a size little larger than the building to one of several acres. Those with the larger sites are often provided with baseball diamonds, tennis, volley-ball and basket-ball courts, tracks, and athletic fields, and equipped with playground apparatus. Many buildings, both in town and country, have horse sheds or garages on the premises."

Official Tests and Advertising

Whenever advertising, based upon authoritative tests, appears to be misleading by reason either of omissions or of conclusions unwarranted by the facts, and the case comes to the attention of the Committee on Structural Service, mention will be made of it under this caption.

Metal Lath and Tests at the University of Illinois. (39a)—The attention of the Structural Service Committee was called to an apparent discrepancy between advertised claims made by the General Fireproofing Company and the report of these tests published in the November number of THE JOURNAL.

The claims made by the General Fireproofing Company were: "Recent tests conducted at the University of Illinois prove 2" solid plaster partitions on metal lath and channels to be the most sound-proof of all types of fire-proof construction."

The General Fireproofing Company was advised that a careful reading of the report of the tests did not seem to justify the advertised claims. In reply the General Fireproofing Co. made the following explanation:

MR. SULLIVAN JONES,
Care The American Institute of Architects,
19 West 44th St., New York, N. Y.

DEAR SIR:

We have your letter of December 8th on the subject of our advertisement in the November issue of the *Architectural Record* with particular reference to the claims made as to the soundproof qualities of solid metal lath and plaster partitions.

I am going to agree with you immediately that, technically, our claims were broader than were actually demonstrated by Professor Watson's tests. To show you, however, that in spirit at least it was not our intention to mislead and that we felt that Professor Watson's test, if not demonstrating specifically claims made, at least largely justified our statements, I want to give you the following as our line of reasoning used as the basis for this ad.

The Gypsum Block interests have at various times published tests showing the superiority of their material over clay tile from a sound resisting standpoint. Professor Watson's tests showed conclusively that a solid metal lath and plaster partition was decidedly superior to the Gypsum or Plaster Board partition and, consequently, we felt justified in stating that our type of partition was really superior to all other types in this respect.

We did not feel it to be good ethics to mention specifically the names of competing products and do not yet feel that our doing so would have been good advertising. However, we really should have stated that our type of partition was proven superior to the other types tested as this was all that Professor Watson's test actually covered.

I am very anxious to correct any misleading impression which may have been given by our ad and if your editorial policy does not prohibit I will be very glad to have you publish this letter.

I want to say that we are heartily in accord with the work which you are doing and that we are more than willing at any time to stand back of you in any way we can. I hope and believe that this work which you are undertaking will not be of the superficial character which has marked so much of advertising censorship which has been exercised in other fields at times. In other words, I know that you and your committee will recognize that a censorship of technical advertising requires a careful study of the facts underlying it and that in doing this you will not only clean up advertising pages, but will also bring to the attention of the Institute much valuable and authoritative information.

I shall await with very much interest your further comments on this matter. Very truly yours,

THE GENERAL FIREPROOFING COMPANY,
(Signed) W. B. Turner, *Manager of Sales.*

Bishopric Sheathing and the Omaha Tests. (191)—The July 1920 number of THE JOURNAL contained an advertisement of Bishopric Board from which the following statements are quoted:

"Bishopric Wins Again! (This time its sheathing). Put to Rigid Tests by Omaha City Officials, Once More Overcomes Prejudice with Facts."

"The figures given in the following dispatch from T. R.

STRUCTURAL SERVICE DEPARTMENT

Porter, of the Omaha Daily *World-Herald*, were taken from official records of Chief Building Inspector R. E. Edgecomb, who conducted the tests."

"Omaha, Neb., June 15. A test of the strength of different plans of frame construction has just been conducted by the Omaha City Building Department in the presence of fifty of the most prominent contractors and architects of the city"

"The tests took place in the Sunderland yards on Tuesday, June 10, with Chief Building Inspector Edgecomb in charge. Mr. Edgecomb was assisted by deputy inspectors from his office force."

The following letter, relative to these tests, from Mr. Edgecomb was referred to the Structural Service Committee:

AMERICAN INSTITUTE OF ARCHITECTS,
The Octagon, Washington, D. C.

DEAR SIRs:

"I beg to call your attention to an advertisement in the July issue of *THE JOURNAL* of your Society, by the Bishopric Manufacturing Company. This advertisement is concerned entirely with a description of certain tests which were made in this City. Many things in this description are considerably exaggerated if not misrepresented. The advertisement would have the reader believe that this was an official test by the Omaha City Building Department which is not true. The tests were initiated and carried out by Sunderland Brothers Co., of this City, who are agents for Bishopric Board. Among others, I attended the tests as a matter of information and observation. This Department did not officially approve the method of performing the tests, nor the apparatus used.

"This advertisement would have the reader further believe that the panels constructed to represent ordinary construction with the usual required sheathing failed utterly, with a crash. It states, 'the wreckage was total.' This is an entire misrepresentation. There was not a great deal of difference between the manner of failure of the usual type above referred to, and that constructed with the Bishopric Sheathing. However, the loads and deflections referred to on the advertisement are, in the main, correct. May I further advise that Bishopric sheathing construction, direct on exterior wall studding, has not been approved heretofore in this City and is not yet approved for use in this City.

"While the tests referred to tend to show up well for the Bishopric Sheathing as regards its strength, there are other points that enter into the consideration of its approval, such as durability, weather-proofness, etc.

"I regret that a Company of the apparent standing of the Bishopric Manufacturing Company should take this means of furthering the use of their material. I would be glad to have you insert this letter in your *JOURNAL*, if you so desire, as it is my desire to counteract any misrepresentation of the actual facts.

"If you desire any additional information, I would be very glad to reply."—R. E. EDGECOMB, *Chief Engineer in charge, Building Department.*

A copy of the above letter was sent by Mr. Edgecomb to

the Bishopric Mfg. Co., who, in reply, stated in part as follows:

"If you will look over this advertisement carefully you will see that it is entirely a quotation from T. R. Porter of the Omaha Daily *World-Herald*, who took his figures, as we understood it, from the official records of your department.

"This company did not distribute anything in the way of a report or figures on the test because we did not wish to use anything in publicity not given out, issued and sanctioned by your department, and for that reason the entire advertisement is a dispatch from Mr. T. R. Porter of the Omaha Daily *World-Herald*."

Copies of these two letters were sent to Mr. J. D. Sandham, A. I. A., of Omaha with a request that he make an investigation and report the facts. It was also suggested that he inquire as to whether or not Mr. Harry Lawrie, A. I. A., was correctly quoted in an advertisement occurring in another publication.

The following reply was received from Mr. Sandham:

"I enclose a pamphlet 'Report of Tests' put out by Sunderland Bros. Co., Omaha; also a statement in typewritten form by Harry Lawrie, A. I. A. (handed me by Mr. Lawrie on Sept. 29, 1920); also one copy each of two letters (March 22 and April 26, 1920) from Engineer R. E. Edgecomb to Sunderland Bros. Co.

"Mr. Edgecomb brought out in his talk with me on October 2nd the fact that in no sense were the tests made or conducted by him or his department, but that the tests were made before him (and several members of the Advisory Board to the Building Department); thus, statement by Bishopric Manufacturing Co., is according to Mr. Edgecomb misleading—and more correctly stated by Sunderland Bros. Co. at the foot of front cover of enclosed pamphlet. ('Conducted June 10th, 1920, at Sunderland Brothers Company's West Yard for the City of Omaha, Building Dept.) Even this statement would more nearly accord with the facts had it read: 'Conducted by Sunderland Brothers Company before the City of Omaha Building Department.'

"As to the advertised statement that the wood sheathing panel gave way with a crash. The wreckage was total—you can judge from inspection of photograph reproduced on page 3 of the Sunderland pamphlet.

"As to Mr. Porter and the *World-Herald*: I understand that Mr. Porter has been upon the staff of the paper for some time; inspection I caused to be made of the paper's files from June 10 to 20, 1920 (both inclusive) failed to reveal a published article upon the subject of this test. The advertised reference to dispatch would seem to indicate the text as coming from Mr. Porter and not necessarily as a newspaper article.

"As I did not attend the test my own information is of course gleaned from other sources. Have you noticed that the dispatch from Mr. Porter continually refers to Bishopric 'sheathing'? It is my understanding that the product tested was their 'stucco board' (so recorded in the Sunderland pamphlet). These products are materially different. Not that I believe the 'sheathing' product would have 'failed' sooner—I merely bring out the fact that the manufacturer advertises the misnomer.

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"I take it that whatever notes, readings and graphs were taken or prepared by the Building Department were in the nature of record for the Department and its Advisory Board—Mr. Edgecomb relying upon such notes, etc., rather than upon any which might be handed him by other parties. I believe this to be his translation of any statement that the tests were 'supervised' by him, he maintaining that he did not 'conduct' the tests."

In the letter from Mr. Lawrie referred to, the following statements are made:

"At the invitation of Sunderland Bros. Co. I attended the tests made of Bishopric Board on June 10, 1920, and only stayed long enough to see tests Nos. 1 and 2.

"I stated to Sunderland Bros. representative before the tests were made that I did not consider their method of test the proper one, nor did I consider their apparatus sufficiently staple to make the tests, and during the operation of test No. 1 the testing machine had to be braced to the roof of the shed overhead and loaded with cement bags.

"In an interview with Mr. T. R. Porter held in my office after the tests were made, I stated to him that I was surprised at the showing made and that if the tests were correctly and accurately made it showed the Bishopric Board stronger by about 11 to 3 than the ordinary sheathing on studs and in this relation I also talked to Mr. Edgecomb while the tests were being made and he stated to me that he was surprised at the showing made but that the figures corresponded very nearly to those he had on file in his office.

"I stated to Mr. Porter that if the Building Department of the City of Omaha had in mind only the question of strength, based upon the tests made and if the tests were correctly made and if they allowed such construction in the revised building code then such construction would materially cheapen the cost of building both as to material and carpenter work.

"I also stated to Mr. Porter that I had used Bishopric Board in my practice but that I would not use the board, nor advise my clients to use it, without additional reinforcement or insulation, as I considered that to use it without such reinforcement or insulation would make too thin a wall for a dwelling house in a climate such as ours where both heat and cold are extreme.

"Mr. Porter has only quoted me in part and not in whole."
(Signed) HARRY LAWRIE, A. I. A.

Upon receipt of the above report the following letter was written, on Nov. 22, 1920:

THE BISHOPRIC MANUFACTURING COMPANY,
Cincinnati, Ohio.
Attention Mr. C. H. Dreyfus, Secretary.

DEAR SIR:

Shortly after the publication of the July issue of THE JOURNAL of the American Institute of Architects, which issue contained a report, in the form of advertising by the Bishopric Manufacturing Co., of the "Omaha Tests," the Institute received a letter from Mr. R. E. Edgecomb, Chief Engineer in Charge, Building Department of the City of Omaha, pointing out the misleading character of the statements contained in the advertisement mentioned.

One of the functions of the Committee on Structural Service is to edit advertising in THE JOURNAL. For that reason Mr. Edgecomb's letter to the Institute was referred to us. The Committee instituted an investigation which turned up certain facts that in justice to the readers of THE JOURNAL ought to be made public either through a statement by you or through an editorial statement in the pages of THE JOURNAL. The following are the facts referred to:

1. The tests in question were conducted by your Omaha agents, Sunderland Bros. Co., on their own initiative and without official connection with or countenance by Mr. Edgecomb or the City Building Review Board of Omaha.

2. That Mr. T. R. Porter who wrote the "dispatch" used in the advertisement was employed by Sunderland Bros. Co. to report the tests.

3. That the "dispatch" has not been published as a news item in the daily press.

4. That the information contained in the "dispatch" is not in accordance with the facts.

Yours very truly,
(Signed) SULLIVAN W. JONES, *Chairman.*

On December 7, 1920, another letter was written:

THE BISHOPRIC MANUFACTURING CO.,
Cincinnati, Ohio.
Attention Mr. C. H. Dreyfus, Secretary.

DEAR SIR:

I have not had from you an acknowledgement of my letter of November 22nd, in regard to the "Omaha Tests." The whole matter is one which is of such importance that there should be no delay in clearing away the misunderstanding. Some sort of statement should be made in the January issue of THE JOURNAL. I hope that such a statement will be made by you.

Very truly yours,
(Signed) SULLIVAN W. JONES,
Chairman Structural Service Committee, A. I. A.

Up to January 3, no reply had been received to either of the above letters.

Mr. Edgecomb was sent an advance copy of the foregoing statement. He says that the tests have not resulted in a change in the city ordinance requiring the use of wood sheathing.

Linking Up Advertising with Editorial Matter.—

THE JOURNAL is not infrequently requested to give advance information to advertisers relating to the publishing of illustrations wherein the products of the inquiring advertiser are used. Although THE JOURNAL does not engage in publishing "current work" it invariably takes the trouble to inform the advertiser that the practice of requesting advance information of this kind is not a good one. In itself, it seems simple, but the facts are that the arrangement is easily abused and in the past that abuse has led to the publication of much material not because of its architectural merit but because of its power to attract advertising. Architects understand "linking-up" too well to be fooled.

THE
JOURNAL
OF
**THE AMERICAN INSTITUTE OF
ARCHITECTS**

Guilds and Guarantees

The Digressionists

Architects and Stage Settings

The Le Brun Scholarship 1920-21

The Theory of Registration

Architectural Schools in England and France

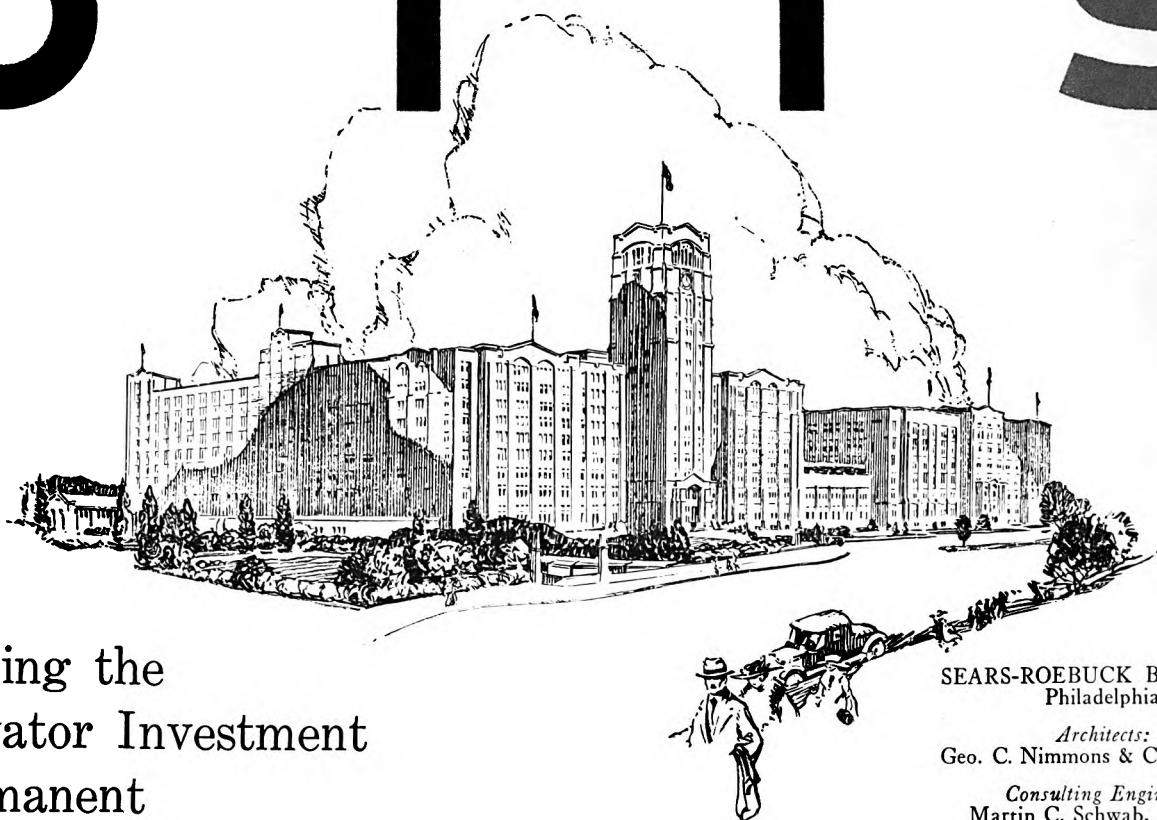
Placebo---or the Knife?

Movies and Morals

On the Road to Marathon

MARCH
1921

OTIS



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MARCH, 1921

No. 3

Shadows and Straws

MODERN PEOPLES are not much given to the worship of magic and the black arts. It may be a pity that this is so. Perhaps there were compensations that are denied to those whose faith has been transformed into the unconscious worship of other things. Take the word "guarantee," for example. One would have supposed that it had been worn threadbare, so common has become its use in advertisement, yet now and then we are reminded that the desire for faith in magic has not altogether faded from the human mind, for the promise of a guarantee still casts the spell that once was associated with the alchemist, the witch, and the medicine-man.

Mr. Walker, writing in the *Architectural Review*, dismisses the Building Trades Guilds of England with the somewhat contemptuous remark that they give no "guarantee." This is quite true. On the other hand, for purposes of accuracy, it should be mentioned that their faithful performance is insured, in part, at least to the satisfaction of the Ministry of Health, and it seems undeniable that they are building cheaper and better than in the old way. However, considerations of a financial "guarantee" aside, is not architecture, for example, quite as likely to prosper under the influence of a moral concept, as under the handcuffs of a legalized guarantee? If any industry in the world is today in a more deplorable situation, under the guarantee system, than the building business, it would be hard to find it.

AS TO THE CRIMES of the guarantee, read the testimony wormed from reluctant contractors in the recent investigation of the building industry in New York City. Mr. Robertson, for example, guarantees (we suppose) the Cunard Company, under a cost plus contract. Brindell, the trades union autocrat, guarantees Mr. Robertson against a strike, for the trifle of \$50,000.00, carelessly left, in varying sums, on the seat of Brindell's automobile. Back of Brindell are the rest of the guarantees distributed in sums which correspond to the importance of the guarantor—the politicians ranking high, very likely, as everyone supposes, since it is inconceivable that a situation such as has existed in New York City could possibly develop with-

out the guarantee of that power which reaches far and wide, under our system of government. And these guarantees, despicable and immoral as they are, still depend upon a moral concept for their keeping—the concept of obligation to keep a promise. It is a curious state of affairs, this sense of honor among thieves, but it is a rather sinister augury for the guarantee, as we discover into what offices guaranteed thievery has crept. In business, the guarantee went by the board, in the last stress of falling prices, as snow before a summer sun. The *Saturday Evening Post*, which surely may be regarded as the champion of American business men and their methods, laments bitterly over the breaking down of moral standards as evidenced by the wholesale cancellation of contracts in the last episode of the deflation process. The *New York Times*, quite as ardent as the *Post* in its championship, baldly announces, in headlines that must have cost a desperate sigh, that there are "Less Morals In Business—New York Bankers Frankly Say There Has Been a Slump in Ethics." The headline writer was more comic than he guessed, of course, and these citations are not adduced in order to enlarge the indictment they convey. They are quoted more by way of revealing the strangely forgotten fact that guarantees do not guarantee, even though they be legal contracts.

THE ENGLISH Building Trades Guilds have adventured under a new principle. They will not work for a profit. One may ridicule them and seek to laugh them out of court, if one wills, but the fact remains that they have adopted the one principle which is likely to give any essential promise of good workmanship and an honest result. In spite of all obstacles, natural and contrived, they seem to be building at less cost than under private contract, and so far, none of them have defaulted, nor have there been complaints that their work was not up to the agreed standard. It is even reported by impartial authorities that they are building better, but the test of that statement lies in the future.

Perhaps it is not wise—and certainly it is not fair—to speak contemptuously of a group of men actuated by

the very highest motives—the motives of the professional man, who puts service ahead of the reward. The Institute's Canons of Ethics say that "It is unprofessional for an architect to guarantee an estimate or contract by bond or otherwise." If the Guildsmen conceive their work as a professional service to be discharged in the best interest of the common welfare, why should they give a guarantee other than that morally implied in their own canons of ethics? Is it not about time to imagine that perhaps the moral concept is the best one, when all is said and done? Is it not upon the morality of the architect that the client must rely? And who shall say that the morals of Guildsmen are not as trustworthy as those of architects? And last of all, why does the American Institute of Architects tell its members that it is unprofessional to guarantee costs? Because it knows that the professional spirit cannot survive when men become interested in protecting their own guarantee rather than in truly serving those who trust them. For my part, I say God speed to the Guildsmen, whatever may be the end of their adventure, for they carry, to my mind, the one banner which points the way to anything worth while in this sorry world of ceaseless combat over prices and profits, with its endless and fruitless efforts to legalize and guarantee that which can never come to rest except upon the plain and simple base of individual morality—or, in the building industry, the honor of the craft.

IN THIS number of THE JOURNAL there are illustrations of stage settings, perhaps the most useful digression, of which field Mr. Magonigle writes so alluringly, into which an architect could venture. What other offers so fine an opportunity for the study of scale, for example? And coincidentally, where is a greater skill in decoration required? True it is, that there are many opinions on the subject of the stage setting itself. Too many, perhaps, since "The play's the thing," after all, and the futility of much of the stage setting talk is a good deal of a bore. For in this, as in all other things, there are no final ultimate absolute standards—for which, thank Heaven—just as there are no finalities in the interpretation of "Tristan," or the "Heldenleben" or the "Pathetique" or the "Eroica," or for Hamlet, or King Lear, or Othello. The very immensity of these imaginings makes it possible for new minds constantly to be discovering, interpreting, revealing, and it is even so with the designer of stage settings. Only let him beware of the pit that modern artists too easily dig for their fellows. We do not go to see stage settings, but to see a play. We do not go to hear Toscanini, or Bodansky, but to hear Wagner; or to hear Strinsky or Stokowsky, but to hear Beethoven, Schubert, or Tchaikowsky—or to hear Caruso, Farrar, Sembach, Ruffo, or Muratore, but to hear Massenet, Puccini, Verdi, or Wolfe-Ferrara. Or, do we really go for the other reason? Have we been educated, at last,

by endless newspaper adulation, and clever publicity, to go because of the performer rather than because of the thing performed? That is the pit that modern artists dig for each other. For to be willing to submerge one's work and one's identity in order that the greatness of a complete work of art may not be obscured is to attain the heights of Parnassus indeed.

Thus the architect in his studies of stage settings is brought into intimate contact with the conceived idea of another. Temptation at once assails him and suggests that he may win for himself a passing plaudit, by being unique, or bizarre, or stern, or comic, or anything one wills. But to study the play and by its success to rise or fall, is the test of all those who seek to help in the interpretation of the drama. Perhaps one of the reasons why we now have so little that is really great, on our stage, is because of this ceaseless competition for the public eye, whereby actor, manager, and designer compete with and against both the play and the playwright—where vanity and the "star" system have slowly combined to produce a public palate which has more and more to be tickled with the single artist rather than with the composite harmony of a great work of art. Hero-worship is thrilling, but it leaves a jaded appetite.

YET THE TRUE field of stage setting has much to recommend it for exploration by architects. Rightly studied it might produce that kind of humility which would end the present inharmonious settings of our streets and towns, by teaching architects to efface their wish for solitary triumph and substitute that larger desire for an ordered and harmonious environment. Our world is a stage, after all, largely set in architectural ugliness, if we look closely at it, and that seems such a pity. Moreover—and perhaps most of all—architects need much to learn how to play. Architecture suffers from being taken too seriously. We cannot possibly keep up the pace that the apostles of education would set. There must be breathing places. Resting spots we must have. And where for rest and change do we turn, from our unremembered infancy on, except to the joyous world of Make Believe. There lies the only pure freedom that man knows.

And by the way, is it not very likely that architecture was born out of the love of a primitive people for make-believe? And is it not, for that reason, quite as likely to languish in a world which adores actualities and believes in guarantees?

REGISTRATION is very ably discussed in this issue by Mr. Emery Stanford Hall, who also illuminates the new method proposed for granting reciprocal privileges to architects who wish to practice in a state other than their own. Mr. Waid writes about the proposed new joint law for engineers and architects in the State of Minnesota, to several of the provisions of which he takes exceptions.

C. H. W.

The Digressionists

WE HAVE been informed upon unimpeachable authority that the way of the transgressor is hard. Not so that of the Digressor, which, while hedged about with dread, lies level and smiling, flower strewn. The footpad Duty, ready with his "Stand and deliver" lies in wait for him in vain upon the highroad of the professional career whilst he, lingering in bypaths of dalliance with Muses not his own, unbusked, unbraced, the vigilant sinews of hours of business all relaxed, treads the flowery meads of Digression. He knows the fearful pleasures of the moment stolen from a busy day in a rightful, perchance even gainful, occupation. And too, he knows the open joy of those rare times when, unafraid and unashamed, mounted upon his hobby he ambles or canters or madly gallops as his spirit prompts. We may not conceive him as entirely freed from certain preoccupations with the stirrings of conscience—if we do it is only because he has succeeded for a moment in escaping from her thralldom (if Conscience may indeed be figured as feminine) for he like other men of our day and land are heritors of the Puritan tradition if not of that chilly ichor which coursed in Pilgrim veins and which has provided refrigeration for the things of the spirit for these many generations—not to keep them fresh alas! but to freeze them into inaction, to cool young impulse. For Puritan blood is liquid, if it be not fluid, Conscience, and Conscience doth make cowards of us all. Mr. Grundy and his wife and progeny weigh upon our minds. We fear they will not regard us as Serious People. They would have us look with sad and steadfast eyes upon the goal *they* have in view, the ideals of conduct *they* have erected for themselves and hence for all right-minded, high-souled creatures. They are the groove cutters for the world and woe unto him found out of the groove appointed. And the Digressor more than half of his precious time digresses with a lively apprehensive sense of the policeman's hand of the tribe hovering about the nape of his neck ready to pluck him back to the serious business of life as understood and appointed by the *Famille Grundy*. If then we take our courage in our hands and digress in their very teeth it is with a defiant carriage of the head, a touch of bravado in the flourish of the tail, that in themselves betray the essential fear which haunts us. The age demands the specialist and a narrow allegiance in a narrow field. You are an honest poet and would fain be cobbler also. "Nay! friend," says Mr. Grundy, "we have all our cobbling done by specialists in the business. I fear you are not a serious person. If you wish to retain our good opinion you will not venture out of the field of poetry. Versatility is the infallible sign of the frivolous."

So waylaid, so herded, so inhibited, it is little to be

wondered at that the solitary Digressor should go in fear and trembling, hiding his joy and pride as a shameful lapse from the normal. Nor that if two or three such should encounter each other in the course of the stealthy operation of their questionable impulses, they should be drawn together by that sense of the safety which lies in numbers, organize for their greater security and peace and seek out others of like mind to join their fellowship. This is at least the plausible explanation of the foundation of the Digressionists, a body without a constitution (although remarkably vigorous for its twelve short years) but with a Chief Digressor of annual election who struts his brief hour and then is seen no more in that high place for another five and twenty years. Of course the secret official account of the nativity, written almost in the very hour of labor, unhappily savors of that defiant bearing to which reference has been made; it is pretended (and the mere fact that one may now quite openly give names and dates, provides a measure of the growth of courage by contact) it is, I repeat, pretended that upon a day in the springtime of nineteen hundred and eight, three men, to wit, James Monroe Hewlett, Charles Ewing and Grosvenor Atterbury took open counsel together and plotted for the flouting and discomfiture of Mr. and Mrs. Grundy and all their works. They declared for a restriction of membership to architects in number not above twenty-five and their qualifications to be besides that of unanimous approval as one of the twenty-five best fellows in the world, that they should during each year abjure and forswear for a space their chosen profession, and paint or fiddle, play or sing, etch or write or model or otherwise digress; that their digressions should be annually exhibited upon pain of being cast out into Grundy's bosom; that they should be judged, not by a jury of their peers but of those deemed their superiors by virtue of their being open and professed practitioners of the Digressive arts; that a medal of bronze should be awarded each year for the most worthy digression but that until some other Digressionist should have developed sufficient strength to wrest it from him the medal should be given for the first seven years to James Monroe Hewlett; and last and not least that they would adopt as their emblem the Flying Fish as best expressive of the furtive life of the Digressionist—a periodical emergence into an element not his own. This last provision is a politic rather than a base concession to public opinion—for your true Digressor in his heart regards all elements as his.

The Digressor admires the severe fibre of him who keeps within his banks, cutting his channel deeper year by year, gurgling to himself profoundly in his depths, his eye fixed on Plumbing or Professional Practice or Plans for Housing the Poor. But at the risk of seem-

ing shallow, your Digressor, brimming with the abundance of his fancy, his spirit refusing to be confined, spreads abroad in a wide and sympathetic flood, reflects the sky and lets the breeze of heaven play upon his bosom. With such wide horizons, with there a mountain peak, here smiling uplands and the breath and beckon of forests, the beacon lights of Plumbing fail of allure as goal or guide posts. How shall it profit a man to follow forever paths appointed—like the roads of China worn by the feet of millions from the level of the plain to deep and dusty ravines—snuffing up the dust of his predecessors with a passionate, nay, religious exaltation, nourished and sustained by the meagre spiritual diet to be extracted from conformity.

No sight is more sad than the lapse of a Digressionist. When the scent of the flesh-pots comes over the wide waters, when old Material Prosperity waves her golden platter, his grieved companions watch him trim his sails, make the channel and vanish from their ken. The pious Bunyan saw, in a vision, Life as a bridge of such perilously, even criminally, flimsy construction that there were many Gaps in the Footway through which at his appointed Time the Wayfarer fell and was whirled away by the River of Death. Such Gaps for the Faithless were provided in the unwritten law of the Digressionists and any Bunyan safe ashore might have marked the thinning of the Ranks, heard the far faint cries of Regret as one by one the Waters of Oblivion took their Own again. And thus it were invidious to reveal the original roll of membership or note the

changes time has wrought. Suffice it to say that those who so far have stepped warily and so survived and those who have taken the places of the lost are, in this year of grace nineteen hundred and twenty, Frederick L. Ackerman, Chester H. Aldrich, Grosvenor Atterbury, John P. Benson, William W. Bosworth, George S. Chappell, John Cross, William A. Delano, Charles Ewing, Howard Greenley, Bertram G. Goodhue, J. Monroe Hewlett, Frederick C. Hiron, Frank H. Holden, Edward T. Howes, Austin W. Lord, H. Van Buren Magonigle, J. Layng Mills, Robert Burnside Potter, Edward L. Tilton, John Almy Tompkins, Alexander B. Trowbridge, Breck Trowbridge, Ernest Tyler, Arthur Ware. Once a year they meet and dine and exhibit their digressions to show their faith in the virtue that lies in doing something else. Once a year George Chappell sings his immortal songs and tells his immemorial stories. Once a year John Benson repeats what he can remember of the roaring sea ballad he wrote upon a time, and Potter, astronomer and poet, scales the empyrean and tells us what he there beholds, Aldrich, Atterbury, and Trowbridge discourse more or less sweet music. Once a year they all, *ventre à terre*, course in pursuit of the prize. And once a year the god of the Grundys, Duty, footpad ashore, pirate afloat, lurks behind the headland while the little shallop Digression, manned by her trusty crew and loaded to the guards with booty, slips by in a cloud of flying fish, unperceived.

H. VAN BUREN MAGONIGLE.

The Blot on the Escutcheon—IV

By FREDERICK L. ACKERMAN

SINCE THE last writing, the Courts of Law have been busily engaged in sifting some of the matter brought to light by the Lockwood Committee Investigation. Some trivial fines, as viewed by the reporter, have been imposed upon a few of those engaged in the building industry who, mistaking it for the building business, worked together to defeat the primary end of industry which is producing goods for those who actually need them. These trivial fines, like numerous other matters, again serve to puzzle the reporter. Presumably they represent but a very small fraction of the financial gains derived from obstructive action by the building business men. No doubt they serve, in a small way, to reimburse the State for the expense of carrying on the investigation and the prosecution—every little bit helps. But no great stigma is attached to anyone for being fined. And so the fines stand as a sort of surtax upon income derived from a form of business enterprise which apparently has nothing more than a faint tinge of illegality about it.

The trial of Brindell is now over; some little glints of light are being shed daily upon the modern ways of

the Modern Business Agent and the Modern Master Builder. But all of this has to do with doings of the enterprising obstructionists already discussed.

With the Happy New Year came the effort of the Lockwood Committee to have its powers extended so that it might continue upon its way of investigation. Mr. Untermyer wanted to pry into the purely financial phases of the building business. At present it does not appear that the Legislature will grant this authority; chances stand at about one thousand to one. There is a vast amount of publicity concerning an "invisible lobby" working at Albany to head off the granting of such powers to the Lockwood Committee. There may or there may not be such a lobby; the reporter knows nothing about it. But he knows that what might be revealed by such an inquiry stands clearly revealed without any inquiry whatsoever. One may get at it from reading the financial sections of our daily newspapers; or by holding a mirror up to his own attitude when he contemplates going into a promising financial "deal." Possibly this "invisible lobby" is nothing more than our Point of View as reflected by our legislative body.

THE BLOT ON THE ESCUTCHEON

Maybe we don't want the matter of investment for a profit looked into; it might reveal how we came by our vested interests. It may be that we prefer not to know.

But, after all, we know that financial business is an impersonal matter—a matter of making money. We also know that the advancement of financial credit is the grant of a privilege. It affords the borrower a differential advantage in bidding against other business men for the control and use of industrial processes and materials. We know that credit is used where its use promises the largest return to the borrower in terms of price. I say in terms of price—not in terms of useful or needed goods. The production of useful or needed goods is a matter of industrial activity and not financial manipulation.

So the question arises: why in the world should we investigate our financial institutions? Can it be that we expect to find them engaged in lending money to the lowest bidder? Do we assume that they are doing other than that for which they were created? Surely we cannot hold our financial institutions guilty for doing that which was so clearly set forth in their charters granted by the State. Surely they are not to blame for not advancing credit to those who don't want it because it would not pay them to use it—simply because someone needed this or that badly. All this again is a matter of busying ourselves about investigating the notorious.

Everyone with a trace of gray matter knows that the conditions under which credit is advanced with respect to housing are not in the slightest degree affected by the need for housing. (Here the reporter notes the reader shaking his head—but the reporter would call attention to the state of affairs throughout that part of the world where modern culture and the modern industrial system had had time to demonstrate its true worth). To proceed: Under the rules of business enterprise it should be a sign of mental sclerosis to advocate the idea that loan credit be advanced with respect to actual need.

The conditions under which loans are advanced for houses are fixed by other totally unrelated circumstances. What settles the question of an advance of credit for housing is the urgency of the demand for credit on the part of nations who very likely cannot pay; or for the development of this or that speculation in Mexico or Mesopotamia; or for speculating at home; or for the beneficent purpose of withholding all sorts of greatly needed goods from the market in order to sustain or advance prices.

It is said by those who are supposed to know that this matter turns upon the law of "supply and demand." But there is this curious and very significant thing

about the "law of supply and demand." It is a law which touches the pecuniary circumstances of the case only. Demand is not used in the sense of want or of need. What we mean when we use this phrase is *effective demand* or the ability to pay the price; the price is set at "all the traffic will bear;" and the price which measures all that the traffic will bear is nicely taken care of, in the typical case, by seeing to it that production (the supply) is so regulated as to keep the supply somewhat short of the actual need. And for the accomplishment of this, loan credit comes in to play its part. Advances of credit made with a view of holding goods in storage take care of this matter.

There is really little occasion for an investigation of the obvious. And yet, maybe, it would be worth while. For possibly the part that loan credit plays in shaping the conditions of the common welfare is not so obvious after all. Just suppose that we were to have an investigation into this matter of financial business; and suppose that the fact should be revealed that: "Funds of whatever character are a pecuniary fact, not an industrial one; they serve the distribution of the control of industry only, not its materially productive work." Then we would be confronted with the still more difficult question of what to do with this very disconcerting fact.

NOTE. Since the above was written, news comes of the sentencing of Brindell to a five to ten years' term in Sing Sing and that he will be arraigned on other charges; also of the imposing of fines upon others who carried on their business in restraint of trade or in such a manner as to interfere with the workings of the "law of supply and demand."

Coincident with this news there appeared another news item relating to the formation of an association with a view to "pooling" 400,000,000 pounds of surplus copper. The purpose of this pooling is to withdraw this copper from the market and hold it for export sales. The news items in reference to this pooling operation stated that the withdrawal of these 400,000,000 pounds of copper is to be made possible by the issuance of "debentures" underwritten by a syndicate of bankers and to bear interest at the rate of 8%.

The reporter does not know what to make out of these news items of a single day. It is so very difficult to tell what is restraint of trade, and what is sabotage, and what is not. Possibly it is all a matter of magnitude. On the face of the evidence it would seem that one may organize to restrain trade as much as one likes if the action to that end can be brought under cover of a loan of funds or the issuance of debentures. But even so, it is quite puzzling.

Architectural Education in England and France

THE CONFERENCE on Architectural Education, organised by the R.I.B.A. and the Société des Architectes diplômés, of which a full account appears in the *Journal of the R.I.B.A.* (from which we quote), was held at Paris Nov. 12 and 13, 1920, as part of a scheme for promoting cordial relations between architects in the two countries. Early in 1913 the Architectural Association of London organised an exhibition of selected drawings by students of the Ecole des Beaux-Arts, and a number of distinguished French architects then visited London. This event was followed, in 1914, by a representative exhibition of British architecture which aroused a considerable amount of interest, not only among architects, but among the general public. A number of British architects visited Paris on that occasion and were most hospitably received by their French confreres, and it was decided that there should be a further meeting in London at some date in the near future.

British architects present at the Paris Conference in November last included: Mr. John W. Simpson, President R.I.B.A., Mr. Paul Waterhouse, M.A., F.S.A., and Mr. W. G. Newton, M.A., M.C., Chairman and Hon. Secretary respectively of the Board of Architectural Education; Mr. Alexander N. Paterson, M.A., A.R.S.A., President of the Institute of Scottish Architects; Professor C. H. Reilly, M.A., Director of the School of Architecture, Liverpool University; Professor Patrick Abercrombie, Head of the Department of Civic Design Liverpool University; Mr. H. M. Robertson, S.A.D.G., Principal of the Architectural Association School of Architecture; and Mr. Arthur Davis, Founder of the London Ateliers. Mr. G. Gilbert Scott, A.R.A., President of the Architectural Association, who had arranged to attend, was prevented at the last moment by indisposition.

The first session of the Conference was held at the Ecole des Beaux-Arts on Friday, 12th November, when the following Papers were read in French:

"A Survey of Architectural Training at the Ecole Nationale et Spéciale des Beaux-Arts," by M. Jules Godefroy, Chef d'Atelier et Membre du Conseil Supérieur de l'Enseignement de l'Ecole des Beaux-Arts.

"A Survey of the Scientific and Constructional Training at the Ecole des Beaux-Arts," by M. Arnaud, Professeur de Construction à l'Ecole des Beaux-Arts.

"The Relations between French and British Architects," by Mr. John W. Simpson, President R.I.B.A.,

"Architectural Education in Great Britain," by Mr. Paul Waterhouse,

"The Architectural Association Day Schools," by Mr. Howard Robertson.

"The School of Architecture of the University of Liverpool," by Professor C. H. Reilly; read by Professor Patrick Abercrombie.

"The Position of Architectural Education in Scotland," by Mr. Alexander N. Paterson; read by Mr. Arthur Davis, who also gave a brief statement with regard to the London Atelier, of which he was the founder and first "Patron."

"The Study of Old Buildings," by Mr. Arthur Keen, *Hon. Secretary R.I.B.A.*, read by Lieut.-Colonel Cart de Lafontaine.

The paper read by Mr. Waterhouse was more or less retrospective in character, but it uncovers many mile-

stones that are not without their lesson to the present generation. Said Mr. Waterhouse: Here in brief is our history. Up to the middle of the nineteenth century pupilage was the only way to the profession. Armed with his father's money, the would-be architect tapped, so to speak, at the door of one of the great ones (would that they always had been great ones!), and when once the young man was admitted, the process was simply one of "wait and see." In any case the master got his fee—in most cases, or at least in many, the pupil got his brass plate and was recognized as a professional man. Far be it from me to say that pupilage had not its good points. It certainly had them, but it had also its defects.

We owe it to the Royal Institute of British Architects that these defects—these dangers—were not overlooked. The Council saw that, even if the door to the professional was not an absolutely open door, it was a door without a key; and the first-fruits of their efforts to provide a key were, so to speak, the now almost forgotten Voluntary Examination which, besides merely passing (and ploughing), awarded "distinction" to those who reached a certain standard. In spite of the natural disgust which mankind feels towards examinations, the "Voluntary" was a moderate success; and though its "plough" was no bar to the Associateship (if indeed people were ploughed) it is at least a fact that those who in the year '63 successfully underwent the test were the first English architects who could claim that their entrance into the profession had some qualifying stamp. After all, the great value of the Voluntary was that it was the "thin edge of the wedge." The wedge itself began to make itself felt in 1882, when the Obligatory Examination came into force. The Institute had taken the step of deciding that the "Obligatory" was the sole way of entrance to the Associateship. By that time and by that decision the die was cast, and we know what came with the casting of the die. Architectural education thereupon became systematised. I am quite aware that architectural classes already existed in our colleges, that there were even professors of architecture, and that the school of the Royal Academy had already rejoiced the hearts of its creators. But it is true, incontestably true, that from that day the system of instruction in architecture became unified—too much unified, some will say; but are they fair?

What was at that time the obvious duty of the Institute as head of the profession? It was, as no one dare deny, to establish a standard; not a standard of excellence—for examinations can never ascend to the High Heaven of Art—but a standard of insufficiency of ignorance if you like (for ignorance and knowledge are but relative terms) below which the entrance should be definitely barred. And so it was that education became standardized and stabilized, and passed out of the hands of the former architect masters. Pupilage, as any one could have foreseen, was doomed and almost dead; and it is to the honor of those leaders of the profession who thus lost their gains that they were the leaders of the movement that destroyed the system. Let us at the same time shed a tear over pupilage. The contact with the realities of architecture afforded by a good office

ARCHITECTURAL EDUCATION IN ENGLAND AND FRANCE

gave the student something which he is at least in danger of losing under a scholastic and academic system. But the faults of pupilage outweighed its merits, and the architects of the past generation were wise as well as generous when they killed the goose that laid those golden eggs.

A word about crammers. Crammers or coaches sprang into birth with the advent of the Obligatory Examination, and naturally had to meet the suggestion that they stuffed their pupils with tabloid architecture which was to be discharged undigested on the day of the examination. One can only speak from experience, and I can only say of the instructor who crammed me that he was a first-rate teacher, and that he helped me to collect certain facts which have always been of use or of pleasure to my career as an architect. In any case, when people speak of crammers as an evil I am always inclined to answer that noxious crammers are, if they exist and prosper, a direct result of a bad examination system. If our examination, with its written and oral tests, cannot distinguish crammed knowledge from honest work, the fault lies with the examiners.

To return to history. Schools were started, schools flourished and schools grew. This establishment and growth prospered even more when the old Obligatory Examination gave way to out present three-fold system of progressive tests. This, as you know, took place in 1887, and there is no need for me to enter here into a description of those three examinations, the Preliminary, the Intermediate and the Final. The particulars which will be given by my English colleagues of the curriculum in the schools will make this plain and clear.

What I must allude to is the advent of the system of recognition. By a happy accident of language the French word for recognition means also gratitude, and if our French friends are led into thinking that by recognition we imply gratitude to the schools they will not be far wrong. It was in gratitude to these schools, which had reached a certain level of teaching, that the Institute granted them the privilege of exempting their pupils from our Intermediate Examination. The Institute, as we know, holds the reins as regards this exemption, retaining the power, through its external examiners, of withholding exemption from any particular pupils—or indeed from the whole school if the standard is not maintained. And as we know, there has arisen in quite recent days a most interesting development of the system of recognition—the granting to certain school of advanced curriculum exemption under well-defined conditions from the Final Examination itself, or at least from a very large part of it.

Is there not something significant in the change of title which our Board once underwent? The Board of Examiners became, you know, the Board of Architectural Education. The change certainly synchronised with a change of personnel which was enough to justify the alteration of appellation; but it has a wider significance. It proclaims to all the world what, after all, we all knew—that examination is only a humble tool in the hand of education. What we all seek after is the well-instructed architect. He is the aim. The way to get him is by education, and examination—which in itself is worth nothing—becomes as the gauge of education, as its stimulus, its encouragement and its test, a thing of value, a

thing which is itself capable of infinite improvement, refinement, and—in some cases—of wise suppression.

The work of the Architectural Association Schools was described by Mr. Howard Robertson, Principal of the Schools, who said, in part, as follows:

The Architectural Association Schools have developed since 1901, during the period when pupilage was in vogue, and during the present epoch when the system is practically abandoned. It has, therefore, had to cope with the different conditions, and this has resulted in changes of method and a rather startling present-day growth. In addition to basic changes taking place in the system by which a student prepares for his ultimate professional work, there have been parallel developments as regards the Professional Societies and their Board of Architectural Education. These have been largely due to the strongly marked desire for a proper school training which would bring with it certificates of competency replacing the graded examinations in vogue during the "pupilage" period. The Architectural Association Schools have provided for this requirement by extending their course of studies so as to ensure a sound theoretical training, aiming at a standard rather higher than would be strictly necessary for the passing of the professional examinations. To secure this result, and so fit its students to become trained architects and potential wage-earners, is the aim of the school during its graduate and post-graduate courses, which, if fully followed, occupy a period of five school years.

It is realized that a good general education is a first requirement, and the school entrance examination is of such a standard as to ensure that the students have this, and that consequently they are entitled to exemption from the Preliminary Examination of the Royal Institute of British Architects. After admission to the school, the students enter the graduate course of three years, the first two of which are in the elementary and the third year in the advanced school. Successful fulfilment of the three years' tests entitles students to exemption from the R.I.B.A. Intermediate Examination, and the diploma granted at the termination of the further two years of post-graduate work brings with it exemption from the R.I.B.A. Final Examination.

The work carried out in each of the five years has been systematised so as to be carefully graduated and to arrange to give the best possible results for the average students and not with the idea of forcing and obtaining startling results from a favoured few. It is possible briefly to recapitulate the various years and the work done in each.

The First Year students study the elements of buildings both in their architecture and construction. They receive explanations of the *raison d'être* of each element, these being synchronised with historical lectures showing the application of first principles. Geometry, perspective, freehand, sciography, and colour values, etc., are taught progressively, but pure design is only studied sufficiently to form a basis for construction. The lessons learned in technique and theory are finally applied during each of the three terms in the execution of classic detail such as the Orders.

In the Second Year the students specialise in portions of the practical and theoretical instruction given. More complex details of construction are studied and architectural design progresses based on historical periods—at first, compositions based on elements of the best examples of the principal periods, and, finally, original designs inspired by historical styles. Courses of lectures on history decoration, construction, and the theory of design continue throughout all the years in the graduate course, and are synchronised with the practical work in the studios, while freehand and drawing are, of course, also studied.

The Third Year allows increased scope for design, there being no restriction to periods or styles, and construction is more advanced, working drawings being prepared with the design subjects as a basis. Twelve hour studies in design are frequent, and the teaching of composition in mass and detail occupies a proportionately larger time than in the second year. Design and construction are taken as one subject and not dissociated, and every effort is made to fit students for the commencement of outside work in architects' offices which will follow during the post-graduate course. A strong feature of the English architectural student has always been his attention to measured work and outdoor sketching, and every encouragement is given for the prosecution of these during the holidays.

In the Fourth and Fifth Years, forming the post-graduate courses, the curriculum is arranged to provide further training to an enhanced standard and incidentally to satisfy the Board of Architectural Education. The time spent is almost evenly divided between advanced design and construction, with the addition in the Fifth Year of special subjects, such as "Decoration" or "Town Planning." It is also required that the students show proof of at least six months' experience in practical building work either during or after these years, before the final diploma is granted.

In addition to the five years' day course described, the Association provides an evening atelier for design and life drawing, to furnish proper educational facilities for those unable to attend the day school.

An interesting feature of the schools is the increasing number of female students, there being at present 27 out of a general total of over 200 in the day schools.

A word must be said regarding the spirit animating the staff in the teaching of design. In England there is no architectural teaching tradition as in France, and this has resulted in the past in a lack of sequence in method, but has given scope for the formation of a new teaching tradition which adapts the best methods of sister school, however modified to suit the English temperament and English architectural needs. In the Association Schools acknowledgement is made to France for the training given in theory of design and composition; and from America much has been learned regarding the general organization of the educational scheme. The school aims, however, at forming future architects who will have at their command a thorough theoretical and technical equipment, to be used not necessarily for the furtherance of one particular style or manner in architectural design, but rather as a basis for the satisfactory solution of the ever-changing problems confronting the architects of to-day and of the future.

Over the Coffee and Cigars

The Supreme Court Judge was very genial. It was after dinner and the ladies having retired the men were willing to listen to his reminiscences of interesting cases over which he had presided. The company included a college professor, two attorneys, a physician, and an architect. The Judge had just finished telling about a matter in which the Appellate division decided a case on the basis of public policy rather than that of law, which the Court of Appeals promptly reversed! So the discussion naturally turned on the traditional points of view of law as against morals, at which point the architect broke in with a question: "Judge, I wish you would tell me why you think it is to the credit of your profession that one of the most distinguished attorneys in the United States should plead in a professional matter in a manner so shocking to the moral sense as when, about a year ago, he argued an appeal before the Board of Directors of the American Institute of Architects for a member who was threatened with expulsion? He claimed in his argument that it was proven that his client had consulted an attorney before committing the act which was charged as unprofessional and that the attorney had told him he was within his rights to act in that way. 'Now,' said the distinguished counsel at the appeal, 'I hold that when a professional man in good faith seeks advice of counsel and follows that advice in good faith, he cannot be held by any professional body to have violated his professional obligation.'"

The Judge smiled. "What happened after this plea?" he asked. "His expulsion was unanimously confirmed," was the reply, at which the Judge waved his hand as much as to say, "Well you didn't take the the attorney's plea seriously," and the college professor said something to the effect that "Why shouldn't a lawyer plead anything that would help his client?"

"Do all reputable architects belong to the American Institute," said His Honor, "Well, hardly," the architect began, but one of the attorneys broke in with "What you can say, Judge, is that none belong who are not reputable."

"By the way," said the Professor, "what about the Lockwood Investigation and the architects, how did that come out?" "Oh, that was perfect rubbish," said the architect; "to attempt to show that we were a trust keeping the young men out of practice and fixing prices! Why, the streets are full of poor devils of architects willing to work for two or three per cent or a suit of clothes." "Surely," said the learned Judge in his most dignified black robe style, "We must admit that the architects' six per cent fee is recognized only as being the maximum amount that he may collect from an owner when no definite agreement has been made in advance. It is to that extent a protection to the owner." The company nodded and the architect grinned his assent. R. D. K.

JOURNAL Back Numbers

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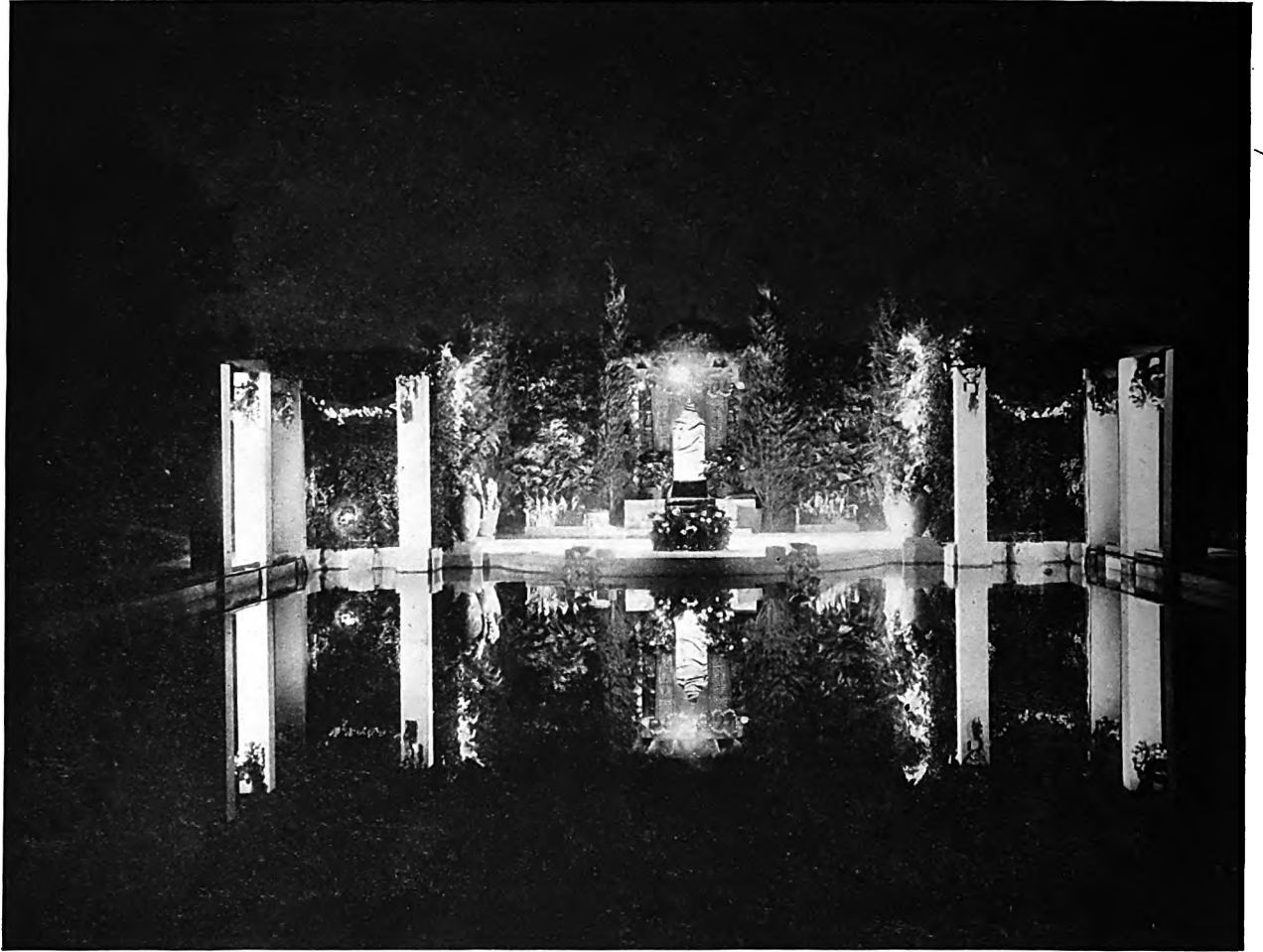
LORD AND LADY ALGY: William Faversham's Production, 1919
Tableau—The unmasking of Lord Algy
and Tudway. Designed by Howard
Greenley



A WATTEAU PICTURE: Designed by J. Monroe Hewlett



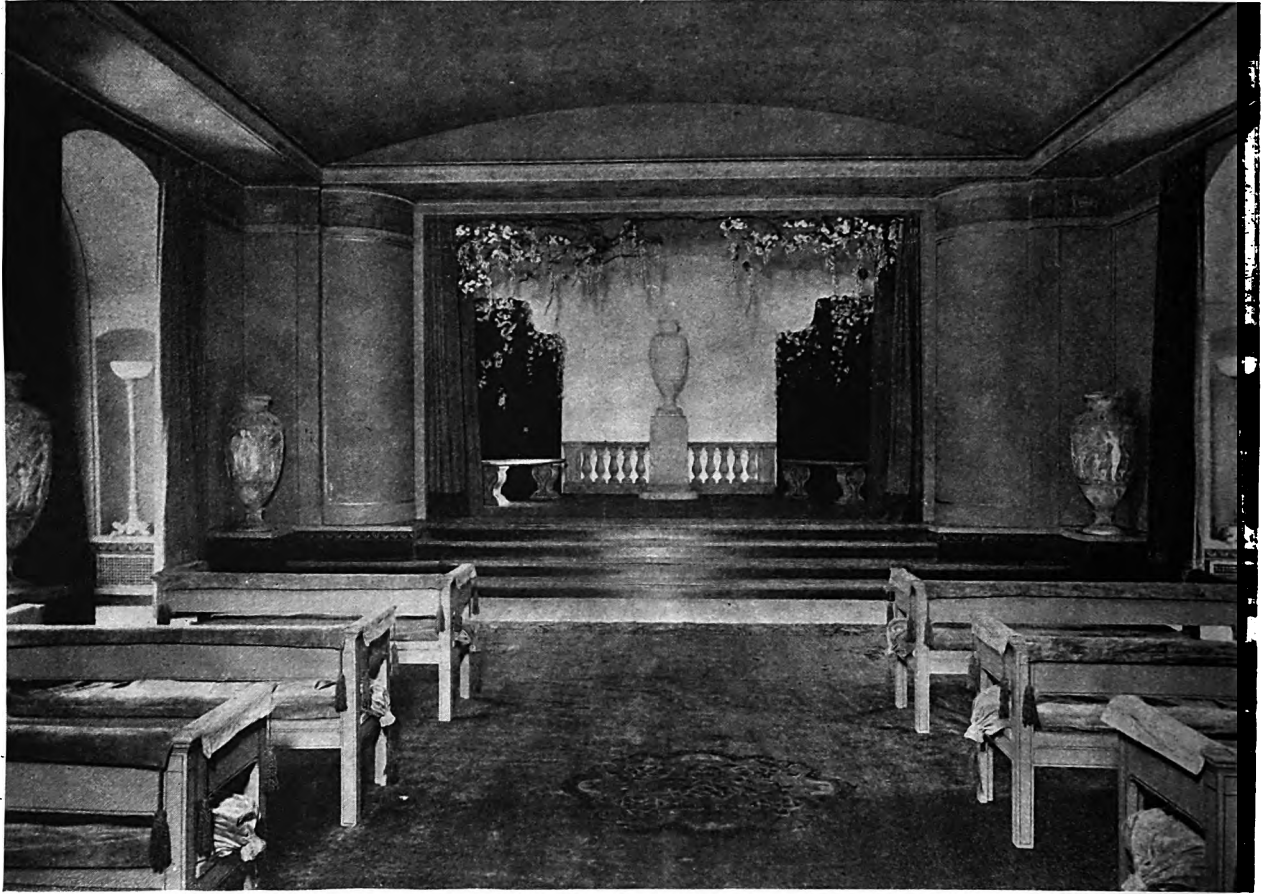
A WATTEAU PICTURE: Designed by J. Monroe Hewlett



NOCTURNE: A Persian fantasy. Written, designed and produced by Howard Greenley



NOCTURNE: A Persian fantasy. Written, designed and produced by Howard Greenley



BETWEEN TWO RAYS OF MOONLIGHT: Theatre and stage setting designed by Howard Greenley



BETWEEN TWO RAYS OF MOONLIGHT: Setting designed by Howard Greenley



THE DOOR: Tragedy in one act, by Mildred Cram.
Produced at the Garden Theatre, New
York City, April 1918, by the Comedy
Club. Setting designed by Howard
Greenley

Le Brun Scholarship Competition, 1920-21

IN THE Le Brun Scholarship Competition for 1920-21, conducted by the New York Chapter A. I. A., the Jury has made the following awards:

Traveling Scholar, Oliver Reagan, New York City.
First Honorable Mention, Robbins L. Conn, New York City.

Second Honorable Mention, Edward S. Lacosta, New York City.

Third Honorable Mention, Charles J. Irwin, Brooklyn, N. Y.

The following men, whose names are given alphabetically, were mentioned by the jury for the excellence of their work: Howard Stanley Atkinson, Philadelphia, Pa.; John S. Burrell, New York City; Louis Fentnor, New York City; J. Harold Geisel, Philadelphia, Pa.; Owen L. Gowman, New York City; Carl W. Lason, Boston, Mass.; Benjamin Moscowitz, New York City; John G. Schuhmann, New York City; Edgar F. Stoeckel, New York City.

The interest in the Competition was very gratifying, forty-one sets of drawings being presented, representing thirteen states, widely distributed throughout the country.

Committee: Charles Butler, Ernest Greene, R. H. Hunt, William M. Kendall, Louis Ayres, Chairman.

Under the terms of the Scholarship, fourteen hundred dollars is paid to the successful competitor who binds himself to take a European trip of at least six months and to devote well and truly that length of time to travel and the study of

architecture otherwise than entering any school or atelier or attending lectures, it being intended that the benefit derived from this traveling scholarship shall supplement school or office experience. He must leave before March 1, 1921, unless otherwise agreed with the Executive Committee and his proposed route must be approved by them.

In setting the problem for 1920-21, the Committee, desiring to follow the intent of the Deed of Gift by presenting a practical problem and one which comes under the observation of many communities in various parts of the United States, selected the following program:

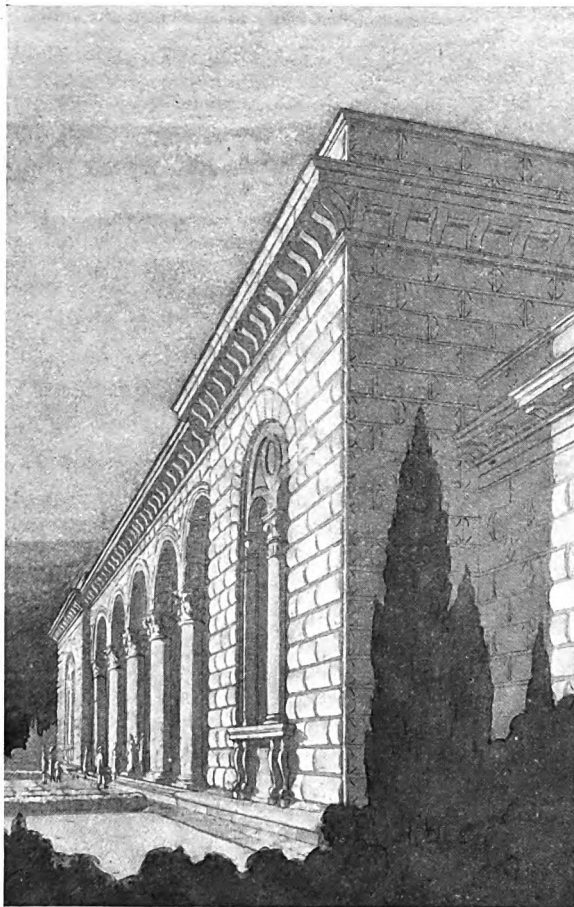
The main line of an important railroad, passing through approximately the center of a prosperous manufacturing city of from one hundred to one hundred and fifty thousand population, is about to raise its tracks, allowing the crossing streets to pass under them, the problem being the planning and designing of the passenger station with its appurtenances and surroundings.

It is supposed that the city is a growing one with a proper municipal pride in the esthetic quality of its public buildings, parks and streets, and the railroad company is pro-

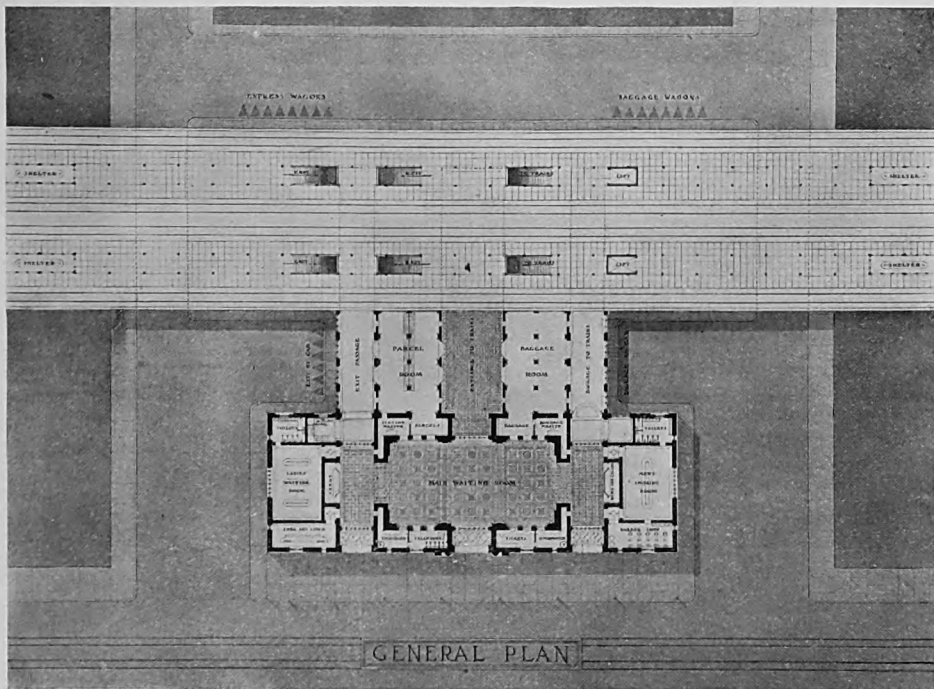
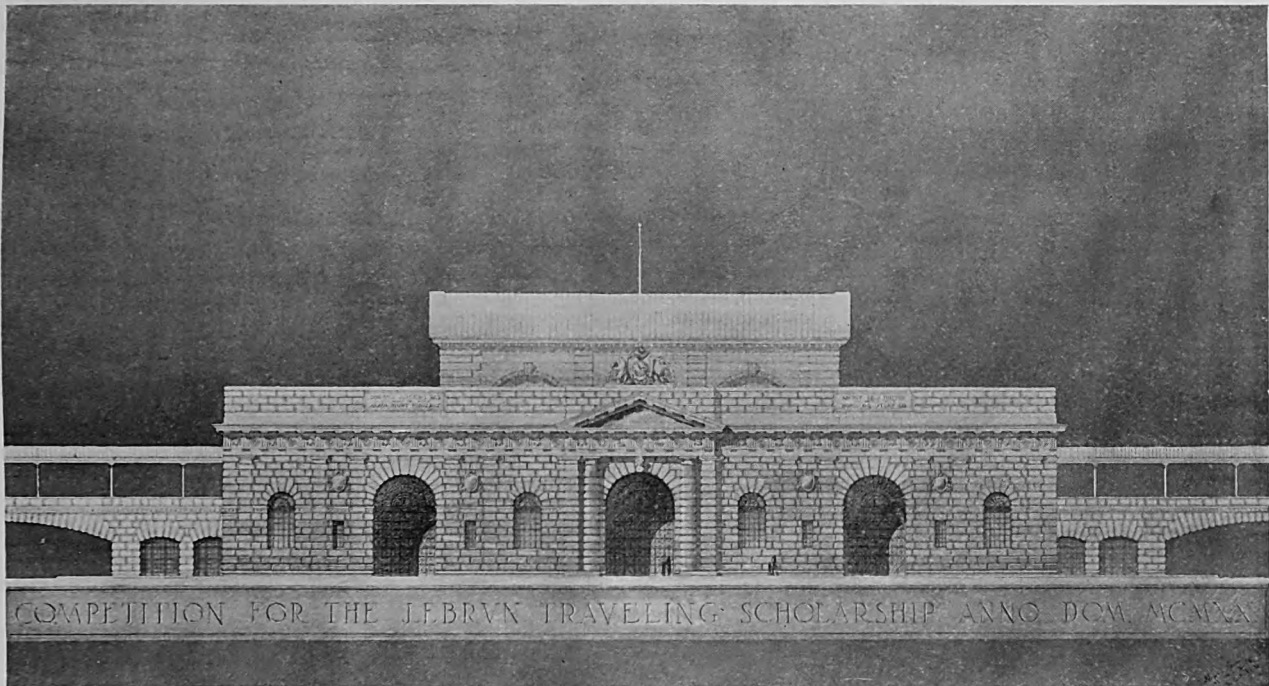
posing that the new station shall be as well planned and designed and of as enduring and pleasing material as any of the city's public buildings. The size, materials, type of architecture, etc., are left entirely to each competitor who may, if he wishes, accompany his drawings with a brief typewritten statement (also signed) setting forth the argument for his scheme. If he so choose, he may locate the city in some particular region of this country and develop his scheme and selection of materials to suit and express the climatic or other general conditions of the region.

It is assumed (though not at all obligatory) that the principal public functions will be near the level of the streets and that stairways or ramps will lead up to the platforms and shelters between the tracks, that the problem involves the possible utilization in whole or in part of the space beneath the tracks as well as the open portion of the plot. The drawings must show the entire structure, including the viaducts crossing the two streets and the side

away from the main approach to the station, as one of the main problems of the general design is to combine into a harmonious and pleasing whole the two structures, the viaduct carrying the railroad and station proper. The site and streets are assumed as flat and the accompanying plot plan shows the spacing of tracks and the size of platforms, location of tracks on plot, size of same and of the abutting streets. The two streets passing under the tracks are of lesser importance but traffic will, of course, come by them to the station. The 100-foot street parallel to the railroad is the main approach and on it there is a trolley.

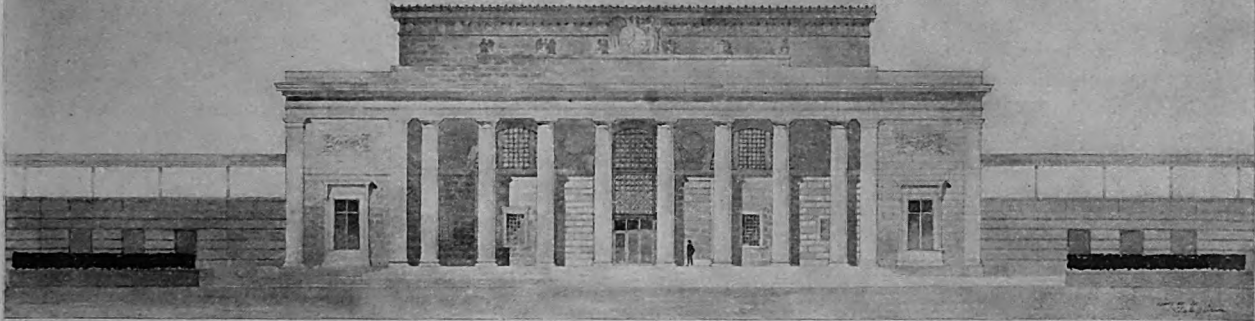


SCHOLARSHIP AWARD—Oliver Reagan

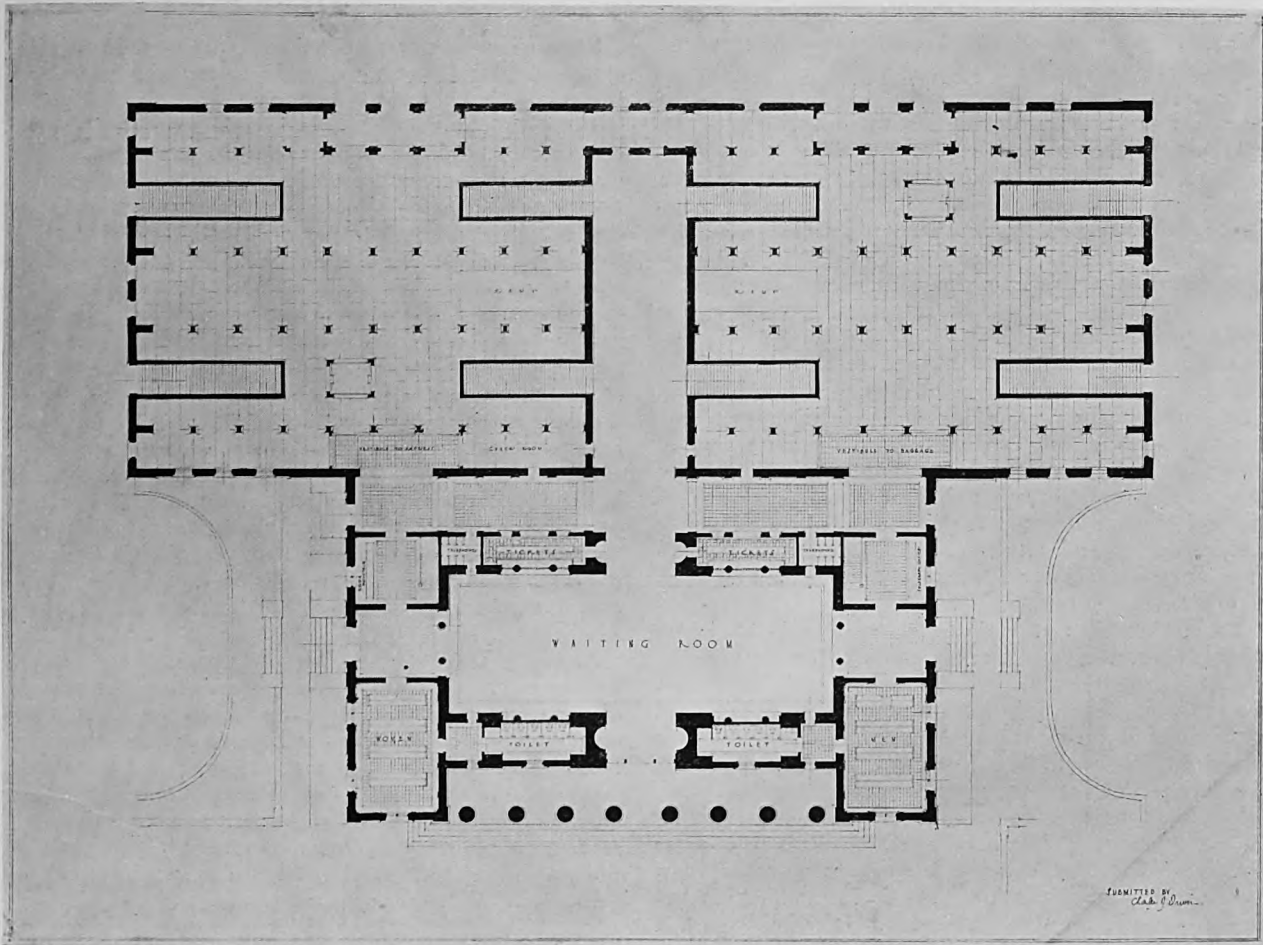


FIRST HONORABLE MENTION—Robbins L. Conn, New York City
Main Elevation and General Plan

THIRD HONORABLE MENTION



LE BRUN TRAVELING SCHOLARSHIP COMPETITION



THIRD HONORABLE MENTION—Charles J. Irwin, New York City
Main Elevation and Plan of Station

Legal Regulation of Standards of Architectural Practice¹

By EMERY STANFORD HALL²

It may be safely asserted that a majority of the members of the architectural profession stand today as a unit in favor of some form of professional regulation. At least a majority believe in the establishing of a minimum educational experience and character standard as a condition precedent to the use of the professional title of architect. But as to whether this standardization shall be promulgated and enforced under the police power of the state as a measure of protection of the life, health and safety of the public in the form of a license, or under the power of the state to establish educational measures of fitness in the form of a titular standard, there is much difference of opinion.

The License Form of Police Regulation

The fundamental theory of the License Form of Police Regulation is that protection of the public welfare can best be secured by the state first assuring itself of the expert knowledge of a certain designated class of its citizens and then depending on that class to act for the public's good. This theory is founded on the idea that if a man knows what is the right action to take and knows the calamitous consequences of wrong action, he will ordinarily do the right thing, acting either from moral sense or on account of the fear of evil consequences of wrong doing. By way of illustration, if an ordinary citizen makes a mistake in construction which causes jeopardy to life or property and that jeopardy becomes an actuality he can be held responsible under the civil law for damages; but, if a proven expert does the same thing, he, because of his proven knowledge, can be held on the criminal law for a deliberate act to cause injury to his fellow-men. He, the expert, is estopped from setting up a plea of ignorance as an excuse for dangerous practice. If his act should result in loss of life, the expert may be held for manslaughter or murder, according as the outcome is proved to have been either the result of careless or deliberate intent. On the basis of this theory the license form of legislation says to the ordinary citizen, "Thou shalt not do certain things of thyself without the assistance of certain approved experts." By so doing it makes experts in that particular branch, so far as that line of endeavor is concerned, quasi public officials and depends on them as such to guard the public's interests, even against what may seem to be their own private interests.

License confers certain duties on a selected class in exchange for certain service to the public on the part of that class. On no other basis can license be justified in equity. To argue that license is justified in protecting a certain class of citizens in their vocational means of livelihood over other citizens is to argue without legal basis. Class legislation for class purposes is unconstitutional and, therefore, class legislation is only justifiable on the ground of corresponding public benefit. Our friends who argue for license to insure themselves jobs against the other fellow are arguing without the law. The license method of regulation is restricted in its application. It can only go just so far as the limitation of police power which includes only

the protection of life, health and property. In architecture, this can only include that portion of architectural practice which has to do with structural safety, sanitation, and the conservation of property. (Unfortunately America has not progressed sufficiently far in its legal theories to believe that wounds against the aesthetic sense constitute real injuries to society.)

Titular Registration

Titular Registration is nothing more nor less than the establishment of an educational standard. It serves merely as a unit of attainment—a professional measuring stick, if you will—which may be exceeded in good measure, but must never be less than certain standards. Titular registration confers no special privilege on any class of individuals. It does not say to the public, "You must employ thus and such persons," but it does say to the public that if they elect to employ thus and such persons with the right to bear certain title, they will find these persons reasonably skilled in the fundamental principles of their special line of endeavor.

Summary

License standards are limited legally to mere knowledge of safety. Titular standards have no legal limitation and may be made as high as the profession desires. License regulation prescribes that certain work must be done by a certain class. Titular registration lets any class do the work, but proves how much better and more efficiently work may be done by certain especially well qualified classes. License regulation affords a limited protection to the ignorant portion of the public. Titular registration affords no such protection. Therefore, titular registration should not be adopted in any state until that state has first provided a comprehensive state building code, to safeguard the life, health and property of its citizens—the unwise as well as the wise. Then every reason in favor of the license system of regulation will have been eliminated by providing for the benefits accruing out of this system in another way. With a comprehensive building code, which in the very nature of things will have to be more or less complicated and technical in interpretation, the public will find it necessary to retain competent professional advice in the interests of expedition and economy, and for this purpose the competent architect will be the most practical advisor.

At the St. Louis meeting,³ representatives of the various architectural registration boards legislative committees of architectural societies in states having no registration laws, members of the Board of Directors of the American Institute of Architects, and guests, met and compared experiences in the enforcement of registration and license laws, and, in the matter of endeavor to secure legislation, seemed to be, from sentiments expressed from time to time, unanimous in favor of the titular form of architect-

¹ From a paper read before the Illinois Society of Architects.

² Secretary and treasurer of National Council of Architectural Registration Boards.

³ See THE JOURNAL for December 1920 and January 1921.

THE MINNESOTA REGISTRATION LAW

tural regulation in preference to the license form. Yet they took no definite action, due to the fact that they believed that any pronunciamento on this subject should come officially from the American Institute of Architects.

Administration

In the matter of administration or registration laws, certain difficulties seemed to stand out pre-eminently. Among these, the question of reciprocal exchange of registration between states was foremost.

Regarding this situation, the following facts were brought to the front: That, while it was recognized that there is a common denominator of interest between all learned professions and that professions must stand together as one solid and united body on the principle that the public is entitled to have and maintain a class of thoroughly trained experts, a class to whom it may turn on occasion and find competent and unprejudiced advice on any technical subject, it is evident that the vitality of the professions can best be promoted by preserving the distinct identity of the different elements forming the body of professionalism.

It was observed that professional regulation seemed to prosper best when administered under the educational department of state administration; and it was admitted that, so long as we live under our present national constitution and the doctrine of state rights in local affairs is held as organic law, there will always be differences in laws in different states regulating the practice of architecture as of all other professions.

It was observed that, as legislatures differ in personnel, so will there be different laws promulgated by them, and also that the very nature of an architect's business leads to inter-state activities and emphasizes the importance of some form of reciprocal exchange between the states. In view of these observations, it seemed evident that there should be some national agency that could use its good offices to secure uniform standards of registration requirements and facilitate reciprocal exchange of registration between states.

Reciprocal Registration

Facing the foregoing facts, the St. Louis meeting did the obvious thing—organized the National Council of Architectural Registration Boards, and stated its purpose to be as follows: "Its object is to foster the enactment of uniform architectural laws, equality of standard in examinations of applicants for state registration or licensure, and the establishment and maintenance of reciprocal registration between states having registration laws."

In working out the purpose of the National Council of Architectural Registration Boards it has been discovered that in a majority of the states the examining committees or boards have discretionary power with reference to the maximum scope of examinations and entrance requirements, but do not have discretionary power with reference to minimum requirements which are in many cases fixed by law. With these limiting restrictions in mind, it was quickly seen that it would be possible to prepare an examination outline which would meet the requirements of every state having registration laws, although such an examination would be in excess of the requirements of

many, if not all, states. This furnished the Council with the idea that it might work out a Standard N. C. A. R. Examination which could act as the common denominator for all examinations and afford a standard medium of exchange between states, and the promulgation of such an examination was made part of the object of the Council. *Of necessity, it is purely an optional examination; no one is compelled to take it.* But any one who elects to take the examination and passes with creditable marks has a right to surmise that his transfer of registration from state to state will be very prompt and with the minimum of inconvenience, for he will know that he has passed an examination before one examining committee which meets practically every requirement of every other examining committee in every other state and is in excess of the requirements in most of the states.

The mode of procedure was explained in *THE JOURNAL* for February 1920, and further information may be had from the office of the Council, 3230 West Monroe St., Chicago, Ill.

The Minnesota Registration Law

By D. EVERETT WAID

A registration bill appears to be on the eve of enactment into law by the Minnesota legislature. It contains some excellent provisions but its chief interest to architects should be its warning. Architects elsewhere, contemplating legislation should study some of its features. Its title is, "An act to regulate the practice of Architecture, Professional Engineering and Land Surveying."

Section 2 provides that everyone in bona fide practice when the law goes into effect may continue to practice without a certificate of registration. This is wise because it does not force a board to issue certificates of competency to men not really qualified and thereby help, in a positive way to impose upon the public and to discredit the profession. It might be questioned whether the exception which bars old practitioners from public work if they are not registered, is constitutional. On the whole, Section 2 is admirable.

Section 3 provides that the Registration Board shall be composed of three architects, three different kinds of engineers and one surveyor, and that "in determining the qualifications for registration as architects, a majority vote of the architect members of the Board only, shall be required." But it is possible to hold meetings when the architects of the Board would have only two votes out of six.

Section 10 gives the Board power to revoke the certificate of an architect, or, such revocation having been made, to reissue a certificate of registration. It is conceivable that such a Board, especially if it has come under political influence as sometimes happens, may abuse its power and make its own interpretations of an ambiguous provision.

Assuming, however, that this joint registration act were so safeguarded that the architects of the Board have in their hands not only the power to determine the qualifications of architects but the power to issue or withhold certificates, and the power to revoke and reissue them, the composition of the Board is still open to criticism.

Correspondence¹

Multiform Housing and the Architect

There should be at least five architects on a Board which has such drastic power over other architects. Experience in administration of such powers brings a realizing sense of the difficulties to be solved in many cases, and of the wisdom of placing the responsibility of decisions in difficult cases upon a majority of at least three. The Institute model law provides that if only three architects are present they must agree unanimously. And in actual work in doubtful cases the three will sometimes defer a decision until a subsequent meeting when the differing points of view and the added wisdom of four or five members can be brought to bear.

This bill seems to place a ban upon foreign architects. American architects are doing important buildings in China, South America and in Europe. It seems un-American to deny to others the same privilege which we enjoy. The Board of Examiners should have power to permit a foreign architect to practice in this country under bond or such other assurance of his ability and integrity as may be reasonable. But to forbid his practicing in Minnesota unless he takes a Minnesota architect into partnership on his commission, is surely commercialism of a sort most discreditable to an honorable profession.

This bill gives the Board broad powers in determining an applicant's qualifications. The requirement of four years' actual practice in addition to graduation from an approved architectural four years' course precedent to registration is admirable. But no minimum standard of general and technical education is fixed for those who are not graduates of an architectural school. Such a minimum seems essential as a basis for reciprocity among the several states.

This bill permits the Board to recognize membership in the American Institute of Architects as conclusive evidence of qualifications to practice architecture. However gratifying that may be to the Institute, it is a grave question whether it is right in principle. It may well be doubted whether it is right or possible to give the American Institute the quasi-governmental functions which the Royal Institute of British Architects enjoys. There are also some provisions of the Minnesota bill which would be interestingly discussed by a lawyer. One of these is the granting to corporations the right to practice architecture and engineering.

The consideration of greatest present interest to the Institute brought forward by this bill, however, is that of joint registration of architects and engineers. A casual reading of this document impresses one with the diversity and complexity of educational requirements in the two professions, and the many problems and difficulties facing a single Board of Examiners in administering a joint law. It is possible that two Boards of Examiners could cooperate and use one office and one clerical force for their routine work. Both Illinois and New York possess educational departments which administer for a dozen Boards of Examiners for as many different professions—architecture, engineering, medicine, optometry, dentistry, nursing, and others. But is it not far wiser instead of enacting one complicated law for two different professions, to pass parallel laws which can so easily be harmonized to prevent any conflict. Architects and engineers can cooperate in the most friendly and effective way to secure the simultaneous enactment of such laws.

OF THE many aspects of low-priced multiform housing which have been treated extensively in the architectural publications, there is one yet remaining, which, it seems to me, architects have not fully grasped. This is the place of this type of housing in the profession of architecture.

Housing in low-priced apartments is today the greatest field in architecture which still remains to be developed. Architecture has made extraordinary progress in other directions, particularly in the individual house and in the more costly and more monumental classes of buildings. In these classes, the architect is now looked upon as a necessity, because the public has come to learn that the employment of his services offers the surest prospect of obtaining a result successful from every point of view. The prestige of architecture in these fields is due to the high standards set by well-known architects, who, in turn, owe much to the wonderful leadership of that group headed by McKim, Hastings, Post, and many others who did so much for the profession a generation ago. When this great achievement is considered, one may indeed regret that similar services have not been at the disposal of the public in the field of low-priced and tenement housing, in which the mass of the people in our cities must live.

As everyone knows, this type of dwelling has been usually the worst possible in design and construction; and today the situation of those who are compelled to occupy them is worse than ever before. The rapidly increasing congestion in cities, the mounting land values, and the high cost of construction and the shortage of housing space are conditions which require some measures of relief. The architect alone can solve this problem, and in doing it he can win popular confidence and support to an extent not hitherto attained.

Thus a wonderful opportunity is open to the architect—perhaps the greatest one which has ever come to him in American life. It is, however—and I cannot emphasize this truth too strongly—an opportunity which will require all the resources which the architect has in him if he is to make the most of it. He must show vision, imagination, the highest professional integrity, and the greatest ability and initiative. More specifically, he has many obstacles to overcome, which it is my purpose to point out briefly.

The first is the threatened competition of speculative building, particularly that more formidable type of it which has been growing up in recent years. I mean the contracting firms, containing in their organizations architectural and engineering services, which have, in a degree, taken the place of the architect in commercial work. The architect should lend all his energy and his intelligence in

¹THE JOURNAL desires to make its columns valuable as a medium for an exchange of thought on all matters relating to the profession of architecture. All such expressions, whether in editorials, or otherwise, must obviously be accepted as expressions of individual opinion. Contributions are invited, all articles to be signed by the name or initials of the writer in acknowledgement of their source and the writer's responsibility.

CORRESPONDENCE

combating the efforts of these builders. Instead of hanging back, as some architects unfortunately appear to be doing—disparaging themselves and their profession, to its great injury, offering nothing constructive to help it—the architect should be foremost. At no time should he surrender his directing leadership. The integrity of his disinterested professional position, his training, and above all his vision, entitle him to provide the mind which governs a building operation. It is leadership and initiative which will enable architects to meet the competition of contracting firms.

The other obstacles in the way of the architect's entrance into the field of low-priced multiform housing concern chiefly the inertia of the public, who do not yet realize how they have been exploited by the speculator, whether investor, builder, or real estate operator, and, I must add, the speculative type of architect, who has undertaken to supply them with homes. To understand what this means, I may cite some facts drawn from the recent history of tenement housing in New York, and from my own experience in this class of work.

When the Tenement Act of 1901 was passed, it contained so many complicated restrictions, which had been designed to end forever the building of the horrible tenements of the old "dumb-bell" and "railroad" types that it defied all efforts to design satisfactory new substitutes. Finally, after two or three years, a few able architects succeeded in solving the law by designing the type which has become known as the "new law" tenements on 25 foot front lots. Though this new type seems unsatisfactory today, it was indeed a great improvement over the old law tenements, and might have opened the way to a real solution of city tenement housing. Unfortunately, however, the development stuck there. Speculators at once seized upon the new plan and reproduced it endlessly in a most stereotyped way. Wherever they changed it, it was generally for the worse, in design as well as construction. Their object was usually greed—exploiting the public to the utmost.

I regret to say that some architects shared in this unfortunate activity. They established a custom of selling plans and specifications for \$75.00 or less, and I believe that when it is realized how this practice resulted in driving out the few capable architects in the field, in preventing other practitioners of standing from entering it, to the degradation of architecture, no one will feel that considerations of professional etiquette should prevent me from condemning individuals of this type.

In view of the conditions, it is not surprising that plans and specifications were so poor that they were in many cases almost impossible to interpret or to carry out. They lacked study from the economical side as well as in design. Supervision of construction was hardly practiced, and the execution of the work was left almost entirely to the builder. He was allowed to work out the final results as best he knew how, and to his own advantage. The client had little protection. The custom had grown up in the mills of executing full sizes, attempting to imitate drawings made by capable architects. There is nothing so necessary to good practice as the preparation of careful $\frac{3}{4}$ " and full-size drawings, but many architects left this duty to the

contractor, whether from ignorance, or underpayment, or greed, I do not know. Thus the architect gave way to the contractor. On the other hand, this class of architect yielded too much to the client, beginning in the early stages of the design, and allowed initiative and ideals to be stifled. Deferring unduly either to client or to contractor robs the architect of his power. Practices such as these, if they still exist anywhere, should be abandoned. It is the testimony of the Building Department of New York City that there are too many plans and specifications which are superficially and ignorantly prepared.

It was with the idea of bettering the miserable situation in low-priced multiform housing that I entered the field about fifteen years ago. Formerly I had been a general contractor, and before that I began my career in the real estate business. Hence I had come to appreciate, from the outside, the deficiencies of many of the architects with whom I had had dealings, and I determined to do what I could to put this type of architecture on a proper basis. It has not been an easy task.

I have thus described the situation in tenement housing. Architects who would see this field reclaimed in the interest of good architecture should understand fully the conditions which have prevailed there, if they are to be successful in the effort. First of all vision is needed—vision and imagination to see the vast possibilities in city housing, of the educational and civilizing effect on the people which might come from providing them with livable, efficient, economical and beautiful homes with garden space, where they can obtain recreation now impossible in the streets. But the architect will have little success if he can not back up his ideas with an ability to carry them out in bricks and mortar, and even then he must expect to fight for them continually against ignorance and greed and inertia. Initiative is every bit as necessary as professional vision and ability.

Furthermore, the architect must pay great heed to the financial aspect of his projects. This, in fact, is a side of architecture which can still be strengthened in all fields, because every building, even if not of the type called commercial, may need to be sold some time. In housing, no project can be a success in which the architectural design—and execution—is not paralleled with a financial structure just as carefully designed and executed, as the technical one. This financial structure should enter into all phases of finance—capitalization, loans, amortization, land values costs, rentals, management, and operation, and should be considered in the light of competition with other buildings. This work should not be left to a speculator. The architect is best able to do it, because of his superior knowledge of design and construction, and because of his dependable professional standing.

In conclusion, I offer this short account of my experiences in low-priced multiform housing, in the hope that it will be of value to architects. I trust they will see what the improvement of this class of buildings means to architecture. Ability to serve the public is the true measure of the worth of a profession. This is why I believe that when the architect becomes responsible for the housing of the people, his profession will enjoy its greatest prestige and standing.

ANDREW J. THOMAS.

The Proposed Revision of the Competition Code

The Special Committee of the New York Chapter, referred to in our last issue, reported at the February meeting, that after thorough consideration of the question it recommended no change in the existing Code except that the following changes are suggested in Article 3, striking out everything after the first sentence in the second column on Page 5, and substituting the following:

Open Competitions

Open.—In this form all architects who desire to do so may compete.

The Open form has the advantage that it may lead to an unusual solution of the problem or to the discovery of a designer of unsuspected merit.

As the owner should feel bound, not only legally, but in point of honor to retain as his architect the competitor to whom the award is made, he may reserve the right event of the award being made to an architect without sufficient experience in practical matters, to require that he select as his associate an architect of proven experience.

Mixed Competitions

Mixed.—A combination of the two forms of competition above described.

Omit all of Article 4 and all of Article 5, and renumber remaining articles to conform with these omissions.

This change is suggested in answer to the criticism that the present code provides no opportunity for the brilliant young man to show his talents.

In regard to the simultaneous submitting of sketches by different Architects for the same job, it was admitted by all members of the Committee that if any change were made in the present code affecting this question (*i. e.*, definition of a competition) it should be fundamental and go to the root of the matter—that mere exceptions to the present rule would not do, as they would only complicate an already complicated situation. For this reason the proposal of the Boston Chapter was unanimously disapproved.

The proposal to define competitions as only those carried on anonymously was considered by all members of the committee to be fundamental enough and go to the root of the difficulty. Two members supported this idea, but three opposed it on the ground that while it might correct the present difficulties arising from the simultaneous submission of sketches, it would seriously affect all buildings, especially the important ones which would naturally go to competition under the present code. They believe that any loosening of the regulations whereby political building Committees might secure drawings from several members of the Institute under conditions other than those now made mandatory, would frustrate all the work accomplished to date in bettering competition conditions throughout the country and nullify the real value of the present competition code which these same political building Committees are now forced to use if they are to stand before their constituents with any semblance of decency and fair dealing.

The "Own Your Home" Exposition

The Publicity Manager of the exposition has issued a statement to say that more than 500 plans are expected from the competing architects. The prize-winning plans will be first exhibited in conjunction with the first annual "Own Your Home" Exposition in the Coliseum at Chicago, March 26th to April 2d, according to Robert H. Sexton, managing director. Real Estate Boards throughout the country are evidencing much interest in the "Small House Competition," cooperating in connection with the "Own Your Own Home" movement as sponsored by the National Association of Real Estate Boards.

The Philadelphia Real Estate Board has asked that an exhibition of the prize-winning designs be held there, and similar requests have been received from Boston, New Haven and the newly organized society, Art Center, Inc., New York City.

"The entire program seems to have met with a very agreeable and very general response throughout the country," says Mr. Henry K. Holsman, architectural adviser. At the Chicago "Own Your Home" Exposition, a fac-simile of the first prize-winning house will be constructed of lumber, and the front elevation of the first prize-winning brick home is to be erected by exhibitors who have already been allotted space. One of the largest department stores in New York City will build a fac-simile home in its establishment. Other fac-similes and models will be seen at the third annual "Own Your Home" Exposition in New York City during the two weeks of April 16th to 30th. Arrangements are being made for publishing the plans in book form for popular national distribution. Sets of plans, complete with specifications, ready for erection, will be made available at small cost to prospective home owners, architects and builders.

On the Way to Marathon

We started, certainly, much too late. Marathon is only fifteen miles from Athens, but the direct path lies over Pendeli (as the marble mountain Pentelikon is now happily called), and we meant to walk most of it; Greek mountains, moreover, are hard and rough going. We had almost resigned ourselves to defer it; but the noonday sun shone gloriously, and by a common impulse we three young archæologists shut up our large tomes, rushed off to change into our kit and collect provisions, and presently found ourselves in the motor-bus for Cephisia, a beautiful resort to the northeast of Athens. The way was lined with trees and groves; at Cephisia itself you hear the sound of running water, rare in this arid land; while above its white houses and luxuriant gardens soar the shapely peaks of Pendeli, the bare white marble flashing from its huge buttresses. Our route lay over the northern shoulder of the mountain, by the village which first welcomed the stranger god Dionysus to Attica (how else should it still bear his name Dionysos?), and was also the birthplace of Thespis; then down through a deep and wild ravine to the Plain of Marathon, just at the place where the Greeks are supposed to have encamped all those days before the battle.

Over fragments of Pentelic marble we wound upward through a delicious heath-like country of pines and firs,

ON THE WAY TO MARATHON

huge boulders and rocky knolls. Suddenly, at the ridge we looked down upon the sea and the Plain of Marathon, still a long way off, and a tumbled wilderness of ravines stretching toward it from our feet. At that sight no words came to any of us. That small strip of dead level plain, with the stream winding sluggishly through its marshes towards the sea, seemed destined by nature for some great moment in history,—the only bit of flat ground the eye could see amid the riot of beautiful mountain contours.

By this time it was late afternoon, and we lost no time in plunging down into the shadow of the ravine. The doubtful path soon vanished, and for two hours we toiled along, through thick brushwood and undergrowth,—the beautiful, formidable shrubs of Greece, full of aroma, and thorns, pungent in both senses at once. Adventures accumulated in the gathering dusk; crossing of torrents which grew bigger and wilder as we descended; scrambles up ridges attracted by the profile of a hut or a human figure silhouetted on the skyline; encounters with a Wallachian shepherd, who spoke Greek and even understood ours, but assured us that we could not possibly find our way down before night; and with troops of fierce dogs, who made the hillside ring with their baying as we approached, but proved susceptible, happily, to the argument of the lifted stone. We were already considering which of the boulders near would make the best shelter for the night, when one of us descried a white bell-tower sticking up apparently out of the earth at our feet. It was the belfry of a tiny church, perched on a slope so steep that we could have jumped on to its roof. We clambered down, assured of finding at least some kind of road. Then suddenly, in what we had taken to be a ruined house, to the right of our steep descent, we spied a light, streaming from the most diminutive of windows. Counsels were divided. Two of us had been properly brought up to be nervously distrustful of unknown houses at nightfall; but the third threw scruples aside and just knocked at the door. Before the knocking was over there came out the thin, bent figure of an old priest. He had seen us from the window and come out at once with a candle to let us in. He looked a little wild and dishevelled—an ascetic type, in fact,—but he had the kindest brown eyes in the world. When we asked the way to Marathon he would not hear of our going on, and almost forcibly shut the door on us when we were inside; and I think his obvious and touching kindness and (perhaps even more) a roaring log-fire in the deep hearth-recess of one of his two small rooms reassured our timidity. It appeared that he was sole tenant for seven months of the year of this poor little “monastery,” returning for the summer to a big one on Pendeli—a place of fabulous wealth, by his account. It would be hard to describe what sumptuous entertainment Father Pavlos provided out of the meagre conditions in which he lived. From about half-past six, when we arrived, to half-past eleven, when at last he retired to rest, he was never still for a moment. All the time he was pottering about, seeing to some little detail for our comfort; fresh logs of wood for the fire, a donkey’s saddle to supplement the scanty chairs, wine and cognac to make good the absence of tea or coffee (“At Pendeli they have *tsai* (tea) and better wine than this; but I have few things, you must excuse it!”); finally, the preparation of supper. In this

last business hieratic and culinary ritual were pleasantly intermingled, and the frequent washing of hands went oddly with the appearance of the places and utensils in which the food was kept. First he fetched out of a deep cupboard a dried fish and put it, just as it was, in the log fire where it was quickly roasted. He found—heaven knows where—some tomatoes and onions, which he made very skilfully into a salad. Out of a drawer he took a number of slices of dried bread and proceeded to soak them well in a bowl of water; then cleared a little table in the inner room, his bedroom, placed candles on it (his little habitation seemed chockful of the taperlike candles they use in the churches, a native industry in Attica), a couple of plates—for four persons!—then the fish, salad, and bread, and a tin of sardines (I am sure very precious), and a fork each; and bade us sit down. We did so, and for an hour at least we sat there, he continually urging us to eat and producing new dishes which he besought us to taste (with the constant apologetic refrain: “At Pendeli they have better food, but I have few things, you must excuse!”), while eating next to nothing himself. The menu seemed inexhaustible, and included before we had done white goats’-milk cheese—the very curd to which Polyphemus likened his Galatea’s cheek,—nuts and pomegranates, boiled beans, sweet cake, and finally *krasi* (wine) and more *krasi*, from a great wooden wine-flask, tempered, if we chose, with water from tall amphorae with narrow necks standing on the floor.

He told us his name, and asked ours. Surnames mean nothing to Greek country-folks, and he just brushed these aside and fixed on what he could of our Christian names, freely transforming them to his taste. One of us thus became Helenitza, the second Elevationitza, the third Marioula. And we were really grateful to the old man for thus rechristening us. For when at last we three found ourselves stretched side by side on a rug by the fire (I fear the old man had despoiled his own bed of some of its covering), it seemed quite impossible to keep up formalities and say: “Is my elbow hurting you, Miss—?” And so, thanks to Father Pavlos, Marioula, Elevationitza, and Helenitza we remained.

In the morning we bade our host farewell. He would accept nothing but some candles for his church. “It is in the Gospel,” he said quite simply, “that we should entertain strangers,” and that, one felt, was enough for him.

Thanks to this fortunate misadventure (which a friend afterwards playfully compared to the visit of the “three ladies,” weary and wayworn, to the abode of the Lord Love, in Dante’s canzone), we passed the night nearer than most pilgrims to the site of the battle—the village of Marathon lying far inland. The site itself is marked by a great mound (*Soros*), approached by a straight, narrow road. Pine trees, wild and ragged, grow in a wide ring round its base, their tops nearly level with its summit. Beyond stretched the bare level line of the sea, and the Euboean hills, dark and gaunt in the morning light. It was unspeakably impressive. The thought of the close kinship, across centuries, between that field, where the Athenians lie buried, and so many fields in France today, made the place hardly bearable. It had that simplicity of the greatest things which seems to express everything.

MABH., in the *Manchester Guardian*.

From Our Book Shelf

Placebo—or the Knife?

It is exceedingly rare that an author is obliging enough to include a review of his own work in the book. But this is one of the many original features of "The Housing Famine"¹ and can be explained by the fact that the author is plural. In fact there are three of them in utter disaccord one with another, and a very human desire to deliver one ultimate and crushing rejoinder led each one of the trio to write a final chapter summing up the bad points of his opponents' arguments. A few words were also introduced relating to the soundness of their own respective views.

The book is a triangular debate on the Housing Problem between John J. Murphy, at one time Tenement House Commissioner of New York City; Mrs. Edith Elmer Wood, a well-known writer on housing, and Frederick L. Ackerman, an architect who has fully earned the right to speak on social and economic subjects.

In the course of the seventy-two short chapters, the heat of the argument leads the first two opponents to wander at times from their stated principles and to avoid confusion their own convenient summaries should be read first and kept in mind while following the arguments. Deviations from the straight line are particularly easy to Mr. Murphy and Mrs. Wood for their logic has no very deep root in economics, but Mr. Ackerman finds it easy to remain on, or rather in, safe ground, because he sometimes fails to come to the surface. This is not a very grave charge to bring against a philosopher except, as in this case, when writing for a popular audience. But it must be said that one of the most difficult things to do is to clothe basic thoughts in language understandable to the uneducated. The heaviest responsibility for any lack of contact lies with the untrained reader and not with the thinker.

Mr. Murphy and Mrs. Wood being at all times visible to each other engage in somewhat of a duel, and only when they stub their toes on one of Mr. Ackerman's roots do they stop to investigate the cause of their pain. They are quite convinced that they are far apart and can never be reconciled because they demand different forms of governmental remedies, and Mrs. Wood, liking her dose (there are such people) is sure that Mr. Murphy is a very odd person because he cries out that all medicine is horrid. Mr. Murphy knows his Adam Smith and Henry George. He is an individualist and to him government is an unfortunate necessity but at the same time, he places great hopes in the rearrangement of taxes, surely a governmental function if there ever was one. Mrs. Wood wants housing to be included in the class of public utilities, a state activity by its very term. So they make faces at each other and argue between themselves that Ackerman is an impossible personage. Mrs. Wood says that town planning makes one feel better and Mr. Murphy says that there is something in it if it were not that the servants surreptitiously drain the bottle. It is quite impossible to keep it around! To quote him literally, "The town planning scheme becomes merely an adjunct to some real estate boom." Then Mr. Ackerman points out that they all agree in blaming congestion for the housing shortage and proposes to inquire into the causes of congestion. But this is not practical, his opponents cry, what we want is houses. They are somewhat annoyed at the interruption and return to their amicable quarrel. All three make the curious

statement not once but many times, that the removal of the burden of taxation from houses is necessarily a subvention. Now this can only be true if it can be shown that taxation is now applied scientifically and with justice. This no one can seriously maintain. When a tax is beyond the ability of the citizen to pay, it is always shifted to other shoulders. It is a rule that applies even to corporations. The three debaters agree that modern industry does not pay their operatives enough to live in a proper house, in other words he is not receiving a living wage. How can the removal of a tax on an object beyond the working man's economic power of acquisition, be construed as a subsidy?

There is no doubt that Mr. Murphy and Mrs. Wood have a great advantage over Mr. Ackerman in that almost any of their suggestions will get houses built—some houses—for a while. The recently abandoned English subsidy, unsound as it was, nevertheless did result in the erection of a good number of houses. A supply of cheap money, from any source, also will have this temporary effect, but there can be no final answer to the riddle unless Mr. Ackerman's analytical method is followed. With remorseless logic he links up cause and effect. He is the scientist, abstruse, if you will, but always searching after truth. Bad and insufficient housing is caused by congestion brought about by modern industrial methods, governed by concentration of economic power in pursuit of profit. That is his theme and to him it is only an irritating waste of time to investigate means for building more houses in places where congestion is already unbearable. He is content to expose the futility of his opponent's position and without proposing a definite line of action, to show why all remedial measures have failed of their large purpose. His argument is characterized by a frank pessimism and yet of the three points of view, it alone has any promise for the future. J. I. B.

Movies and Morals

The logical working of a student mind was never more beautifully exemplified than in Mr. Lubschez's tale of how the moving picture came to be.² He is almost parsimonious in the use of words, and yet he unfolds his story with a precision all too seldom met with in an excursion of this kind. Other students of the subject would find it difficult to pick a flaw in the result of Mr. Lubschez's research, I would say, so simple and clear is his recitation of the sequential steps, the footprints of which run back through the sands of almost twenty centuries.

Architects will perhaps be especially interested in what Mr. Lubschez calls his opinions and convictions, which indicate a certain philosophical attitude toward the development of the human mind. But it may very well be asked whether the art of making things easy for mankind has had the effect of stimulating intelligence. A certain measure of symbolism is introduced into the moving picture, and that is precious. Whether in bringing literature and drama to men in condensed form, and so widening, as the author claims, the sphere of man's mental horizon, will have the effect of elevating him above the low intellectual level of

¹"The Housing Famine: How to End It." By John J. Murphy, Edith Elmer Wood, and Frederick L. Ackerman. E. P. Dutton & Co., New York, 1920.

²"The Story of the Moving Picture." By Ben J. Lubschez. New York, 1920. Reeland Publishing Company.

NEWS NOTES

the American, or any other bourgeoisie, may very well be questioned. The mind is sharpened by use, and not by being used as a film. And up to the present, in our passion for inventing educational lenses that shall cast their image on the brain, we seem to be creating consumers rather than in producing creators.

Fortunately, Mr. Lubschez wrote his book before the Blue Law Charger was snorting on our sinful horizon, with Wilbur Crafts astride in all the shining splendor of immaculate virtue. Speaking of the dreadful, dreadful effect of the movies, Mr. Crafts said (to quote a press report) in reference to one of our cinema celebrities, characterized by the apostle of sweetness and light as "the mother of all the vamps." Why, said he, "that vampire woman seduced a banker. Later in the play she seduced two young men, and before the play ended she seduced a billionaire. I would rather have my son stand at a bar and drink two glasses of beer than have him see that vampire woman. He may get over the beer in a week, but he could not forget that vampire woman until he was eighty years old."

The historian, however, unlike the rest of us who gleefully pay our eighty-five cents to see Charlie, has sure sanctuary from Sir Wilbur de la Vertu Veritable, parbleu, for he needs but to recite the fact that in 1889, it was the Reverend Dr. Hannibal Goodwin who hit upon the idea of using the celluloid film, without which there would be no movie, and no avalanche of sin upon us. Indeed, it is very plainly up to Mr. Crafts to explain the Reverend Goodwin. Mr Lubschez has explained everything else.—C. H. W.

News Notes

ENGLISH newspapers seem to reflect the opinion that the British Government allowed the subsidy on houses to be withdrawn as a means of effecting a drop in the cost of building materials, the prices of which rose as subsidies were increased. Also, it appears that the resignation of Mr. Stephen Easton as Director of Production in Housing, as a protest against the Guild contracts, was the forerunner of a powerful movement to compel the Ministry of Health to revise the Guild contracts. The Guildsmen point out that in reality the revision is asked for in order to make the houses they are building cost as much as the prices asked by private builders. Up to the present the Guild contracts have not been revised, a Daily News representative writing that the request for their revision is inspired by the National Federation of Master Builders.

APPROVING the present Competition Code the San Francisco Chapter formally adopted the resolution "that in the opinion of this Chapter, the present attitude of the Institute toward competitions should be maintained," and that "where competitions are found to be a necessity there should be no tendency on the part of the Institute to lower the safeguards now established."

BIRMINGHAM, England, one of the first cities to impose restrictions on "luxury building," has now taken off the ban because of the increasing unemployment in the building trades.

POSTPONEMENT of the dedication of the Lincoln Memorial at Washington is announced because of the fact, referred to early last year in these columns, that the settling

of the approaches has not yet ceased. These were not carried down to bedrock, as were the foundations of the memorial itself, the engineers having reckoned that it would be far cheaper to let the approaches settle and then to join them permanently to the main structure. From nine to twenty-four years were allowed for full settlement.

EXTENSION of its evening courses in building construction to include mechanics and plan reading is announced by City College at New York City. The classes are designed for the employees in the offices of architects and contractors.

ACCUSATIONS that the English Building Trades Guilds, with their schemes for whole-time payment of workers, irrespective of weather or other conditions, were encouraging "convalescent homes," seem fairly to be answered by the quarterly report of the Manchester Guild, wherein it is shown that payments for lost time amounted to but one per cent of the total paid in wages during the period.

RESIDENTIAL quarters for government officials are to be built by the Government of Bengal, the occupants to pay one-tenth of their salaries as rental.

RELATIONS between the architect and the decorator, in New York City, are to be discussed by a committee of three from the New York Chapter, Messrs. Embury, Chairman, Shreve, and Ewing, with a committee representing the Interior Decorators.

MINNESOTA Chapter has voted to offer the services of the Chapter at a fee of six per cent, which includes architectural, engineering, and mechanical service as well as superintendence, to the Board of Education of Minneapolis. A Committee of five, Messrs. Chapman, Whitney, Haxby, Brown, and Downs, was appointed to present the above offer to the Board of Education and report back to the Chapter Executive Committee.

PLANS of the Idaho Society of Architects for combating the free plan service of the lumber companies in Idaho were outlined to the Oregon Chapter at its last meeting by Mr. H. Newton Thornton of Idaho, the Chapter voting its hearty approval of the plan which also embraces a campaign of public information designed to tell the people what an architect can offer.

CHAPTERS of the Institute are beginning to respond to the suggestion of the Oregon Chapter that lantern slides be prepared, devoted to local architectural material, and deposited with the Institute at Washington, so that they may be available at small cost for lectures.

REPORTING on the project for creating a National Department for Public Works, Mr. M. O. Leighton, the engineer in charge of the National Public Works Department Association states that the Association ceased on January 1 last, for lack of funds. He expresses the opinion that the passage of the Smoot-Reavis Joint Resolution, in the House, providing a joint committee to study methods of reorganization in the departments will facilitate final action on a Public Works Department.

HIGH BRIDGE, threatened with demolition by the authorities of New York City, will be conserved, as a result of the activities of committees from the New York Chapter of the Institute and the American Society of Civil Engineers. The Chapter committee was com-

posed of Messrs. Henry Bacon, Arnold Brunner and Ernest Flagg.

PUBLIC INFORMATION is the subject of a second circular letter sent to the Secretaries of all Chapters, and reminding them that a thorough and willing cooperation is required if results are to be secured. A number of Chapters have taken the matter up in earnest, but many Chapters have not yet replied to the first circular letter addressed to them some time ago. The Secretary of the Committee appends to his present letter a very detailed outline of suggestions to be used in preparing material for dissemination in the public press and elsewhere. This work has now been presented in the most carefully studied form ever presented for the consideration of the members of the Institute, and it is quite plainly "up to them," if they wish it carried through.

"YOU GET \$25.00 profit on every \$100.00 sale made to your customer with no effort on your part" reads a circular sent out by a lighting fixture firm in Philadelphia, and received by a member of the Institute, who reports that he has been approached in many different ways during years of experience but "never like this."

MR. ROBERT O. DERRICK, Architect, formerly with Murphy & Dana, Architects, New York City, has been admitted, as a partner, to the firm of Brown, Preston & Derrick, Architects and Engineers, 406-407 Empire Building, Detroit, Michigan.

GRADUATED in architecture from Rose Polytechnic Institute in 1912, Mr. Oliver Reagan, winner of the Le Brun Traveling Scholarship and whose drawings are illustrated in this issue, worked in offices in Louisville, Kentucky and Columbus, Ohio, coming to the office of H. Van Buren Magonigle in New York City in 1914. He continued his studies in that office and in the Corbett and Columbia ateliers, with three years in the A. E. F. Air Service.

LAWS permitting the establishment of zoning regulations in the cities and towns of Connecticut are advocated by the Connecticut Chapter, which has instructed its Legislative Committee to cooperate with others to secure the passage of the necessary legislation.

SYMPATHIZING with the project advanced by State Architect Arthur Peabody for the establishment of a School of Architecture at the University of Wisconsin, the Wisconsin Chapter has voted that it is "heartily and emphatically in favor of founding" the proposed school."

MR. JOHN W. SIMPSON, President of the R. I. B. A., in addressing the Manchester Society of Architects recently, remarked, according to the *Manchester Guardian*, that the Institute was already the envy and admiration of architects in other parts of the world. There was, however, still great need for consolidation, and a scheme was in course of preparation. So far as registration of architects went, the Institute was determined to preserve its standing and that of its allied societies. Another point to which it steered was decentralisation but with the intention of maintaining a common policy such as was desired by the various societies.

Architects were blind enough to imagine they could manage their own affairs best; they were, in fact, sick

to death of being governed, and being governed, moreover, by the interference of officials. The moral was that they as a profession needed political power. A scheme had just been completed for a professional defence union, and he hoped to see such a union powerfully in existence.

Obituary

Oswald Speir.

Quietly, steadily, thoroughly, and with that conscientious devotion known only to the artist who seeks after truth, Oswald Speir added no inconsiderable mite to the advancement of American architecture. If he early forsook the profession itself, it was perhaps because he saw an almost unploughed field inviting cultivation by someone willing to forego the plaudits of popularity in order to achieve an inconspicuous but necessary work. There can be no doubt of his affection for building, for it must have inspired him to give to the development of the elements of the American architectural revival, the best years of his life. Many architects will attest not only his generous cooperation, but his wide knowledge of the material in which he believed so wholly. His influence is visible from Madison Square Garden in New York City, to innumerable buildings along the Pacific Coast.

Mr. Speir was born in New Orleans in 1864 and died suddenly on February 2, 1921. Except for one year spent in the study of architecture, his whole time had been given to the terra cotta industry. He was secretary of the National Terra Cotta Association at the time of his death, an event which was surely hastened by the untiring effort he had put forth in the discharge of duties to which he steadfastly refused to set any limit. Architecture is the poorer by his untimely death and the profession has lost a well beloved friend.

Henry Thomas Hare

Henry Thomas Hare, Past-President R. I. B. A., died at his residence, Farnham Common, on January 12. He was about sixty years of age, a native of Scarborough, and was educated privately at Sheffield and Harrogate, serving his articles in 1876 and subsequently studying at the Ecole des Beaux Arts. He was the Ashpitel Prizeman of 1886 and became an Associate of the R. I. B. A. in 1887. He became a Fellow in 1898 was subsequently Vice-President, 1904-1908; Hon. Sec., 1909-1913; President, 1917-1919.

"During his long and distinguished career," says the *Architects' Journal*, "he was responsible for the design of a considerable amount of work, one of his earliest buildings being the Town Hall at Oxford. His most ambitious and perhaps most familiar work in London is the United Kingdom Provident Institution in the Strand, opposite the Church of St. Clement Danes. The County Buildings, Stafford, and the Town Hall, Henley, are among his better known buildings of civic character, while in the collegiate branch of architecture, Westminster College, Cambridge and University College of North Wales, Bangor, stand to his credit. There can be no doubt, however, that he excelled most in the planning of libraries, and it is by this work that he will be chiefly remembered."

Mr Hare's practice will be carried on by his partner under the title of Henry T. Hare and Bertram Lisle.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Committee Activities

Nomenclature for Welded Pipe.—The Executive Committee and Advisory Board of the National Pipe and Supplies Association at its meeting in New York on November 11th adopted the following resolutions:

Whereas, the distributors of Pipe for many years used terms to designate the various types and makes of Pipe that have not been truly descriptive of same, and

Whereas, it is the desire of this Association to cooperate in every way with the manufacturers in the development of trade practices and customs of accepted merit, and which will be fair and intelligible to the manufacturer, distributor and public alike,

IT IS HEREBY RESOLVED by the officers and members of the Executive Committee and Advisory Board of the National Pipe and Supplies Association in their Fall meeting, held in New York City on Thursday, November 11th, that it is their judgment that the terms employed by the American Society for Testing Materials in differentiating between Iron and Steel Pipe, viz: (a) *Welded Wrought Iron Pipe*, (b) *Welded Steel Pipe*, should be accepted and adhered to by the distributors of both Iron and Steel Pipe, this being in the interest of the manufacturers of the Pipe, those who distribute it and those who use it, each being entitled to know clearly and without doubt the make and quality of the Pipe involved in the transaction.

The nomenclature for wrought iron and steel pipe which has become standard through the terminology used in the standard specifications for pipe prepared by Committees A-1 and A-2 of the American Society for Testing Materials and adopted by the society is as follows: The term welded pipe is the generic term descriptive of both wrought iron and steel pipe. The term welded wrought iron pipe describes the product heretofore generally specified as "*genuine*" wrought iron pipe. The term welded steel pipe describes steel pipe.

The necessity of using the term *genuine* wrought iron pipe arose from a practice followed by dealers in pipe and finally expressed in the following rule adopted some years ago by the Central Supply Association: "Wrought iron pipe is a term used to distinguish wrought from cast pipe. It is construed to mean merchant pipe and is generally made from soft steel. Persons desiring to obtain pipe made from puddled iron must designate genuine wrought iron pipe, for which an extra charge is made." This rule has been printed in the hand-books and catalogues of many of the jobbers and distributors of pipe and fittings.

The action taken by the Executive Committee and Advisory Board of the National Pipe and Supplies Association together with the accurately descriptive terminology employed in the Standard Pipe Specifications of the A. S. T. M. makes it proper for architects and engineers to use the English language correctly in writing their specifications, and to do away with superfluous adjectives.

The Committee on Structural Service recommends that

the word *genuine* be abandoned and when wrought iron pipe is desired that it be specified as "welded wrought iron pipe," and when steel pipe is desired it be specified as "welded steel pipe." If this distinguishing terminology is employed in the specification there should be no confusion and the consumer has solid ground upon which to base a demand for delivery of the material he wants.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Measurement of Reflection Factors. (51).—Scientific Paper of the Bureau of Standards No. 391. "Measurement of Diffuse Reflection Factors, and a New Absolute Reflectometer, by A. H. Taylor, Associate Physicist.

In the practical application of light and illumination it is often desirable to determine the reflection factors of various surfaces. In the design of a lighting installation a knowledge of the reflection factors of the walls and ceilings enables the illuminating engineer, with the aid of prepared tables, to estimate the size and number of lamps which will be required to produce the desired illumination. The determination of reflection factors with precision is one of the most difficult feats in photometry.

The paper describes the nature of reflection, earlier reflectometers, the new absolute reflectometer, the theory of reflectometer, experimental results, effect of specular reflection from test surfaces, precautions in use of reflectometer. The most important points are summarized and a bibliography of works on the subject is included.

It is stated that the instrument described should find a large field of usefulness in photometry and illuminating engineering in that it furnishes a method of measuring the reflection factors of surfaces in situ. Apparently no other instrument has been proposed for this purpose which is accurate and portable. It can be adapted for use with any good type of portable photometer.

Physical Properties of Woods. (19a)—The U. S. Department of Agriculture, Forest Products Laboratory, in cooperation with the University of Wisconsin, Madison, have recently conducted an exhaustive investigation of the mechanical and physical properties of a large number of different woods with especial reference to their suitability for use in aircraft construction. A description of these

investigations and the results and conclusions reached has been published in a 149 page booklet entitled, "Aircraft Design Data." Note No. 12. Wood in Aircraft Construction.

The fact that the investigations were conducted primarily with regard to aircraft construction does not detract from their value to architects but owing to the fact that properties of woods not considered in the usual commercial grading rules were investigated and reported upon actually increases their value. The commercial grading rules in general have to do only with certain defined defects and do not take into account the quality of the wood itself. Two boards may be both of the same commercial grade and yet one may be dense, heavy and strong and the other light and weak.

The following is a partial list of the subjects which will be found to be of especial interest in connection with wood for general construction work or finish: Mechanical and Physical properties; variability in the strength of wood; defects affecting strength; storage and kiln drying; veneer and ply wood; defects due to improper drying; glues and gluing; tables of compressive tensile and shearing strengths and hardness, etc.

A short statement or description is given of eighty-five species of woods, and the following typical examples indicate the character of the information given.

"Eastern white pine.—Tests today show eastern white pine somewhat below spruce in hardness and rather low in shock-resisting ability. It, however, runs quite uniform in its strength properties, is very easily kiln dried without damage, works well, stays in place well, and is recommended for aircraft construction as a substitute for spruce in spruce sizes."

"Basswood.—Basswood is light in weight and low in practically all its strength properties. It is one of the best species to receive nails without splitting and is used extensively for webs, veneer cores, and similar work."

Turpentine. (25a)—(U. S. Department of Agriculture Bulletin No. 898. "Turpentine, Its Sources, Properties, Uses, Transportation and Marketing with Recommended Specifications," by F. P. Veitch and V. E. Grotlisch.)

Sources.—Gum turpentine, known also as oil of turpentine, spirits of turpentine, or "turps," is a light volatile, oil obtained from various species of the pine tree. Approximately 75 per cent of the world's supply of gum turpentine is made in the United States. By far the greater part of this is obtained from the Southern longleaf yellow pine. Wood turpentine, made by distilling with steam or destructively distilling resinous stumps and dead timber, is gradually becoming important in this country. At present somewhat less than 10 per cent of the total production of turpentine is wood turpentine.

Manufacture.—Gum turpentine is made by distilling, in the presence of a small quantity of water, the oleoresin or gum obtained by scarifying or "chipping" the living tree. The equipment used for distilling the turpentine from the gum or resin is simple and has not been materially improved in the past 50 or 60 years. The gum is placed in a still containing a small percentage of water, the presence of which lowers the temperature at which the turpentine will distill. At the beginning of the operation the distillate

consists of about 45 per cent of turpentine and 55 per cent of water. When nearly all the water originally present has been distilled over, a small stream of water is allowed to flow into the boiling gum in the still through an opening in the still head. Usually the mixture of turpentine and water is received in an openheaded barrel. The turpentine being lighter than the water, rises to the top and is run off through a pipe into another barrel from which it is either pumped to a storage tank or bailed into barrels, ready for shipment to the market.

Chemical Nature and Properties.—Freshly distilled gum spirits of turpentine consists of several similar and closely related compounds known as terpenes, together with small and varying quantities of oxidized derivatives thereof. The empirical formula of the terpenes is $C_{10}H_{16}$ indicating that turpentine consists almost entirely of carbon and hydrogen.

Turpentine combines directly with oxygen, chlorine, bromine, iodine, hydrogen chloride, nitric acid, sulphuric acid, and many other chemically active substances. On standing for some time in a partially filled container, especially when exposed to the light, or on exposure to the air for a shorter period in the form of a thin film, turpentine absorbs oxygen from the air (becomes oxidized). At the same time small quantities of hydrogen peroxide are liberated. As a result of the absorption of oxygen the turpentine becomes more viscous and oily and turns yellow, a solid white deposit often forming at the bottom of the bottle. The odor becomes sharp and disagreeable, the specific gravity, the refractive index, and the boiling point are raised, and the percentage distilling up to certain limits becomes less. Small quantities of acetic and other acids are formed in the turpentine.

Spirits of turpentine is believed to owe its superiority as a paint thinner to its property of absorbing oxygen from the air, the drying of paint being due to the absorption of oxygen from the air by the linseed or other drying oil, forming a hard insoluble film of linoxyn. It is said that turpentine acts as an oxygen carrier, transferring oxygen from the air to the linseed oil, and finally adding to the paint film the non-volatile residue left after evaporation, which also acts like a drying oil.

Uses of Turpentine.—The principal use of turpentine is for thinning paints and varnishes, approximately 85 per cent of this country's consumption being employed for this purpose. About 45 per cent is used by the manufacturers of these products, and the other 40 per cent by painters in mixing and thinning paints and varnishes at the time of application. Some 5 per cent of the domestic consumption is used for medicinal purposes. About 3 per cent is used in the manufacture of various kinds of polishes.

Transportation of Turpentine.—The greater portion of the turpentine is shipped from the South Atlantic ports in wooden barrels holding from 50 to 52 gallons. Steel drums replace barrels to only a slight extent either for domestic or foreign shipments.

Grades.—The grade of turpentine is determined chiefly by the color, which varies from almost colorless to a decided yellow, depending on the age of the gum from which the turpentine was made, the season of the year when the gum was collected, the care shown in its distillation, its

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age, and the amount of exposure to light or air undergone after distillation.

Four merchantable grades of turpentine, known as "water-white," "standard," "one shade off," and "two shades off," are recognized on the primary naval stores markets. "Standard" is the basis for price quotations.

Water white. The color of a column 150 mm. in depth shall match a No. 1 yellow Lovibond tintometer glass.

Standard. The color of a column 50 mm. in depth shall match a No. 1 yellow Lovibond tintometer glass.

One shade off. The color of a column 25 mm. in depth shall match a No. 1 yellow Lovibond tintometer glass.

Two shades off. The color of a column 15 mm. in depth shall match a No. 1 yellow Lovibond tintometer glass.

Effect of Storage.—No marked change in the composition and properties of turpentine occurs when it is stored in completely filled tanks or in filled barrels for as long as from 12 to 18 months. When stored for some time in partially filled iron tanks, however, it has a tendency to become oxidized and changed in composition, which causes it to thicken, resulting in a higher specific gravity and boiling point, with corresponding lower percentages distilling below any usually designated temperature.

The specifications of the Government, the railroads, the American Society for Testing Materials, and a majority of the large users of turpentine require that at least 90 per cent shall distill below 170 degrees C.

Adulteration.—A wide difference exists between the price of turpentine and that of the light oils, such as benzine, kerosene, "varnish makers' and painters' naphtha," and "mineral spirits," derived from crude petroleum and benzol (also sometimes called benzene, which is not the same as benzine), xylol, and so-called solvent or coal-tar naphtha, derived from coal tar. These oils, which usually are comparatively cheap, are often used to adulterate the more expensive turpentine.

From 10 to 20 per cent of the samples purchased by the Bureau of Chemistry at different times during recent years from retail paint, hardware, and general stores have been found adulterated. Some of this was done by unscrupulous wholesalers who furnished the turpentine to the dealers, and some by dishonest retail dealers. Under present conditions, it is not always possible to determine where the fault lies.

Simple Tests for Adulteration.—In the case of fresh turpentine which has not been scorched in making, become oxidized by standing in a tank, or been contaminated with oxidized turpentine, no testing is needed. Such turpentine will always pass the specified requirements.

When turpentine is adulterated to the extent of 10 per cent or more, a careful observer familiar with turpentine can usually determine the fact by one or more of the following simple tests:

Odor.—The presence of kerosene, gasoline, benzol, or solvent naphtha is usually revealed by its odor. Wood turpentine is best distinguished from gum spirits by its odor. The odors of these materials can not be described; they can be learned only by actual trial and experience. Lack of the characteristic turpentine odor is good ground for a careful test to determine the purity of the sample.

Grease spot.—Pour a little of the suspected turpentine on a piece of white writing paper. If the bulk of the sample evaporates rapidly from the paper, leaving a greasy spot which evaporates very slowly or not at all, the turpentine is probably adulterated with kerosene or heavy solvent naphtha, or contains a large percentage of heavy turpentine which will not distill below 170 degrees C. The odor of the grease spot often determines the nature of the adulterant. Greasy spots around bung or spigot holes of turpentine barrels are also indicative of these adulterants.

Bead.—When a perfectly clean dry bottle is partly filled with turpentine and violently shaken for a moment the bead or foam that forms will immediately pass away if the turpentine is pure and fresh. If the foam persists for 5 seconds or more, the turpentine probably is adulterated or old.

Evaporation test.—Set a 5 inch watch glass near an open window where a gentle air current can blow across it. Carefully place in it 5 cc (a tablespoonful) of the turpentine, so that the glass does not become wet with the turpentine beyond the edge of the surface of the liquid. Then carefully pipette or dip out 2 cc., or about half of it (a scant teaspoonful). Observe the rim of the turpentine film after 3 hours. If the rim is continuous or more or less regular in outline, the turpentine is probably pure. If, however, the rim is made up of a chain of distinct drops or beads, or if the liquid appears to flow back to the center of the glass in distinct streams, it probably is adulterated with mineral oil or is an old turpentine of high specific gravity. The unevaporated residue will also smell of mineral oil if kerosene or any other oil which is less volatile than turpentine has been used as an adulterant.

Needless to state, if all these simple tests are definite, there can be little doubt that the turpentine is adulterated. When these tests are negative, however, it can not be safely assumed that it is not adulterated to a small extent or very carefully to a large extent with a specially prepared turpentine adulterant or substitute.

Sterilization of Water. (29:6)—(Ultra-Violet Rays in Water Purification. Reprint No. 576 from the Public Health Reports of the United States Public Health Service). This six page, 5 $\frac{3}{4}$ " x 9" reprint contains short abstracts of the following articles on the ultra-violet method of water purification:

Ultra-violet rays finish treatment of Henderson (Ky.) water supply; Smith, A. T., Engineering News-Record, vol 79, pp. 1021-1022, 1917. Ultra-violet ray sterilization of water; Parkinson, N. F., Annual Report of the Provincial Board of Health, Ontario, Canada, vol. 33, pp. 156-216, 1914. Ultra-violet rays; their advantages and disadvantages in the purification of drinking water; Spencer, R. R., J. Am. Water Works Assn., vol. 4, pp. 172-182, 1917. The use of ultra-violet rays in sterilizing water; Am. City, vol. 17, pp. 239-241, 1917. Ultra-violet ray sterilization of water; Dallyn, F. A., and Parkinson, N. F., Annual Report of the Provincial Board of Health, Ontario, Canada, 1914; Can. Engr., vol. 29, pp. 686-692, 1912. The bactericidal action of ultra-violet rays; De Voogt, J. G., Delft, Z. Hyg., vol. 81, pp. 62-68, 1916. Development of ultra-violet water disinfection; Anon., Eng. News, vol. 74, pp. 634-636, 1915. Ultra-violet rays and their application for sterilization of water; Von Recklinghausen,

M., J. Frank, *Inst.*, vol. 178, pp. 681-704, 1914; *J. Am. Water Works Assn.*, vol. 1, pp. 565-588; *Chemical Abstracts*, vol. 8, p. 3830, Germ-destroying power of ultra-violet rays applied to sterilization of water and disinfection of trade packages in breweries; Moufang, F. Kirn. a.d. Nahe. *Allgem. Z. Bierbrau. Malzfab.*, vol. 43, pp. 151-155, 1915, A method for drawing off liquid in a thin layer in connection with sterilization by ultra-violet rays; Billon-Daguerre, *Compt. rend. Ac. d. Sc.*, vol. 161, pp. 18-20, 1915, Water sterilization by ultra-violet rays; Seager, J. A., *Municipal Engr.*, vol. 45, pp. 415-418, Water treatment by the aid of ultra-violet rays; Schwartz, L., and Aumann, J. Gasbel, vol. 56, pp. 520-522; cf. *Chemical Abstracts*, vol. 7, p. 1069, The sterilization of water by the aid of ultra-violet rays with a mercury-vapor lamp; Ebert, F. A., *Gesundh. Ing.*, vol. 37, pp. 170-171. The sterilization of water with ultra-violet rays; Silbermann, A., *Univer. Bern. Z. Hyg.*, vol. 77, pp. 189-216. Sterilization of water by ultra-violet rays of the mercury-vapor quartz lamp; Von Recklinghausen, M., *Proc. Am. Inst. Elec. Eng.*, vol. 33, p. 1048, Sterilization of water by ultra-violet rays of the mercury-vapor quartz lamp; Von Recklinghausen, M. Discussion. *Proc. Am. Inst. Elec. Eng.*, vol. 33, p. 1906, 1914, Violet-ray sterilization for Niagara Falls filters; Anon., *Eng. Record*, vol. 69, p. 701, Purification of water by ultra-violet rays; Von Recklinghausen, M., *J. Am. Water Works Association*, vol. 1, pp. 565-588; ch. *Chemical Abstracts*, vol. 8, p. 2847.

Placing Concrete. (4b2)—(Technologic Paper of the Bureau of Standards No. 175. "Pouring and Pressure Tests of Concrete" by W. A. Slater, Engineer Physicist and A. T. Goldbeck engineer of tests.) The object of the pouring tests was to determine to what extent a satisfactory job of concreting could be secured under conditions likely to exist in field work during the construction of concrete ships, that is, in pouring vertical slabs four inches thick and containing a mass of reinforcement and using concrete of a consistency so dry that when cured it would give a high strength.

The concrete was proportioned by volume, using one part of a standard portland cement, two-thirds of Potomac River sand, and one and one-third parts of gravel. The gravel was graded in size from one-fourth to one-half inch. The amount of water used in mixing was 12.5 per cent of the combined weight of the dry materials. The form was vigorously pounded with hand hammers throughout the pouring. Air bubbles were released by the pounding and rose to the surface of the concrete. The rising of air bubbles continued for a considerable length of time, and had not entirely stopped when pouring was completed and the pounding was discontinued.

The test indicated that with gravel aggregate used it was practical to obtain a smooth dense surface, in spite of the narrow and constricted space between the forms and the obstruction of the reinforcement. The quality of concrete obtained by pouring into forms which were well pounded during the pouring was quite uniform. The maximum loads and computed stresses obtained in flexure tests of shallow beams made from the pouring test specimens were reasonably consistent. A working stress of 1500 pounds per square inch in flexural compressure, provides an ample factor of safety against compression failure with concrete of the quality used in these tests.

Measurements of the pressure of concrete against forms were made during the pouring of a large reinforced concrete test specimen. A concrete, one part cement, two-thirds part sand and one and one-third part gravel, as in the pouring test, was used. Measurements were taken at a number of positions on the specimen during the filling of the form.

As a result of this test it was found that; (a) The maximum pressure against the forms during pouring of concrete was equivalent to that of a liquid weighing about 124 pounds per cubic foot. (b) The maximum pressure was that due to the head of concrete existing at the end of about 40 minutes. After that time the pressure gradually decreased in spite of increasing head of concrete.

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THE
JOURNAL
OF
**THE AMERICAN INSTITUTE OF
ARCHITECTS**

The Report for the Town of Coconut Grove

JOHN IRWIN BRIGHT

With a Foreword by THOMAS ADAMS

The Small House Bureau of Minnesota

EDWIN H. BROWN

What is an Architect?

WILLIAM H. STEELE

More Illustrations of Stage Settings

The Approaching Annual Convention

APRIL
1921

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Number 4

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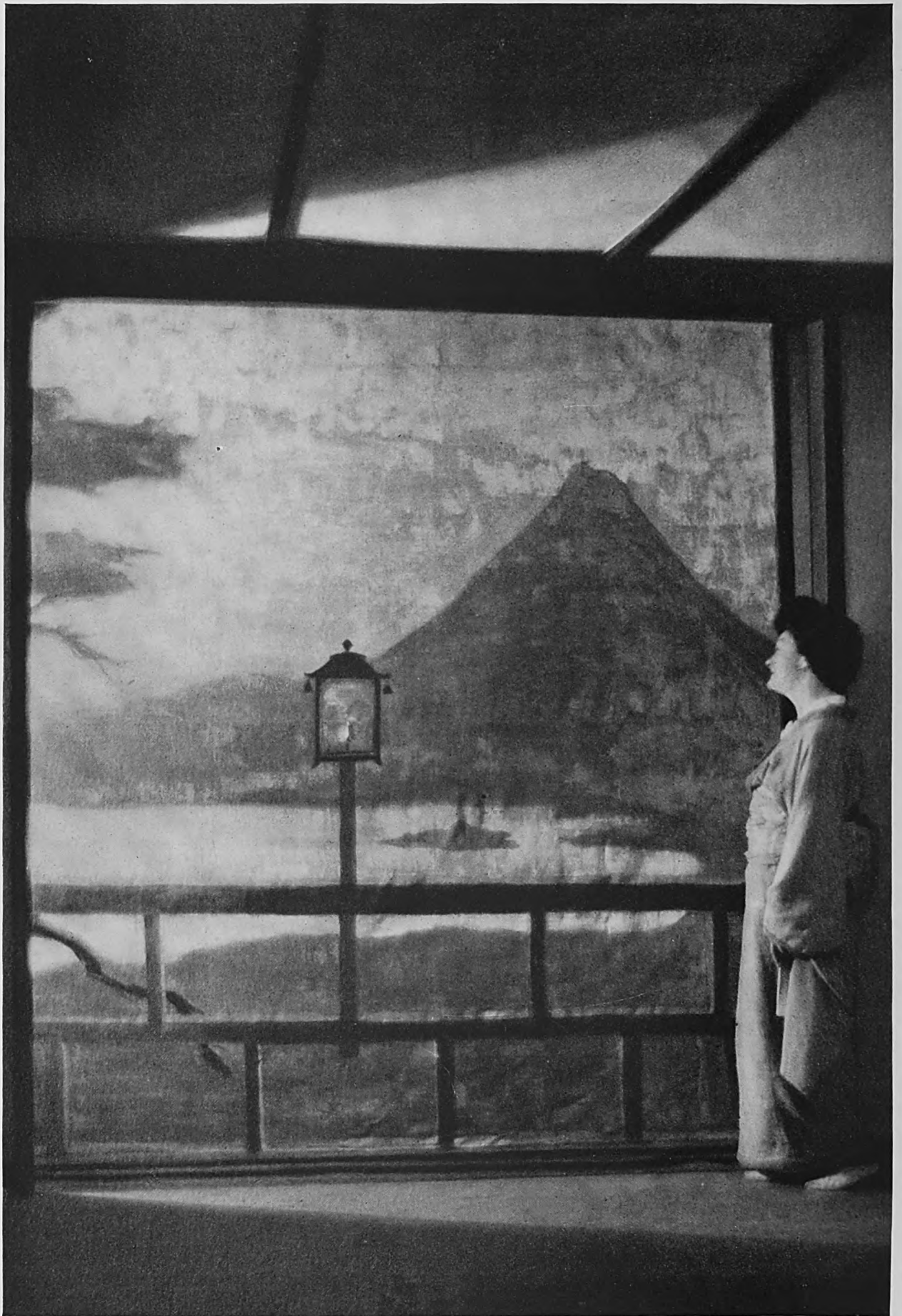
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SHADOWS: A Japanese Pantomime. Written, produced, and designed by H. Van Buren Magonigle.

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Shadows and Straws

BEFORE the next issue of THE JOURNAL reaches the majority of its readers, the Annual Convention will be in session at Washington. This year should bring forth a large attendance. Work is not generally pressing, interest in professional problems is keen, and this Convention, by reason of the very large increase in the membership of the Institute, will invite the largest number of delegates ever elected by the Chapters. In addition, there should be a generous representation of the State Societies, to which invitations have been extended, following the precedent inaugurated last year.

The architectural exhibition will be a feature this year, as it was last, and will have the additional interest of awards for the best work in plan and design, the exhibition for this purpose being divided into six sections—domestic, ecclesiastical, public, commercial, industrial, and institutional. A gold medal will be awarded in each class, provision therefor having been made by a generous gift from a member of the Institute. Likewise the exhibition should be improved because of the more extensive hanging facilities offered by the Smithsonian Institution, for the Convention will be held in their newest building generally known as the National Museum. Here also will be a large hall capable of seating 500 people, with a smaller one holding 100. It is hoped to arrange meetings on a more interesting plan than formerly, and perhaps to make provision for suitably entertaining those whose interests run either to the esthetic or the practical.

As usual there will be pre-convention meetings of numerous kinds—education, registration, competitions, community planning; and a two days session of the Board of Directors. Also, it is the hope of the Chairman of the Committee on Small Houses, we believe, that there may be a meeting of all those interested in learning of the work of the Small House Bureau of Minnesota, reported on so favorably by President Kendall and Mr. Kohn, on their return from a visit to the Pacific Coast. Those delegates who can arrange to arrive in Washington a day ahead of the Convention will no doubt find an extraordinary opportunity for preparing themselves to vote intelligently during the next three days.

ONE OF THE pressing questions will be that of Registration. Last year the Convention referred the matter of joint registration with Engineers, for further study, to the Committee on Registration. Since that time the National Council of Registration Boards, composed of men who are in charge of the administration of registration laws in the several states having such laws, met at St. Louis, as already recorded in these pages, and unanimously opposed the principle of joint registration. During the same period, one joint law has been passed in Minnesota, and was referred to over the signature of Mr. Waid, in our last issue. Briefly it may be said that joint registration is opposed principally because of the inherent danger of giving either profession any chance of acquiring power over the other, and because, as the engineers outnumber the architects about ten to one, it is believed that a joint law should not be enacted. Safeguards, however carefully devised to defeat untoward meddling on the part of either profession, might do very well at the beginning, but when future amendments were concerned, as is certain to be the case, the influence exerted by engineers would far outweigh any that could be brought to bear by architects. "No entangling alliances" is the maxim of those who oppose, and their argument has of course been well supported by the Council of Registration Boards.

On the other hand the proponents of Joint Registration declare their faith in the principle because it tends to bring the two professions together harmoniously, to obviate quarrelsome and disturbing activities on the part of either profession in attempting to secure legislation designed to benefit the one and injure the other, (of which there has already been example), and also because of the general tendency in all State administrations to reduce the number of Boards and administrative agencies. Likewise it is pointed out that the whole principle of registration is more likely to receive favorable consideration by any Legislature when its support springs from a harmonious concert of architects and engineers.

A third form of registration has now made its appearance in the Parallel Laws presented to the Legislature of Nebraska, and this principle has many sup-

porters. A comparison of the parallel laws, indicates their very clearly stated purpose, and presents two very interesting definitions of the two professions, in which, perhaps for the first time, they are distinguished from each other in language offering a sound basis for a judicial determination of the two fields. At least, the definitions are an example of that recognized necessity for definition which is so likely to spring up under laws not carefully drawn. As we go to press, we learn that the Nebraska law has failed of passage in the present legislature, which is not unusual. Rarely has any registration bill been enacted on the first try. The sponsors of this one are confident.

COMPETITIONS will be present, as usual. The proposed amendments suggested by the Boston Chapter last year and somewhat revised since then, have been discussed by several Chapters but generally with disapproval so far as we are able to learn. The Oregon Chapter, according to our information, strongly supports the present Code, except that it would apparently welcome the amendment proposed by the Boston Chapter. But this would seem to present a flat contradiction, since the amendments do, in fact, quite alter the spirit of the Code. But the Boston Chapter, we believe, has faith that it will be able to meet the situation, by a change which will not affect the Code. Certainly it has made an heroic effort to meet what it believes to be a genuinely troublesome condition.

FELLOWSHIPS will not, apparently come before the Convention, since the special committee appointed to study this question, has not completed its labors. It now proposes a questionnaire to all members, as a means of securing a consensus of opinion, and it is our hope that in taking such a referendum it will call attention to the exhaustive study of "Fellows and Fellowships" which appeared in *THE JOURNAL* for February, 1919.

The question is far from being a sentimental one. It is involved in a principle of organization which ought to be most carefully weighed and considered as to its effect upon the advancement of architecture, and not as to the benefits to be conferred upon architects.

THE RECENT APPROVAL, in principle, of the charters presented for the new Chapters in Kansas and Montana, appears to indicate that these two latest additions to the list may be in active existence at the time of the Convention. Also, it is not unlikely that the Secretary may have the pleasure of announcing two or three more possible new Chapters that loom on the not far distant horizon. These events, taken in connection with the phenomenal growth of the Institute during the last twelve months, seem to lend support to the theory that the Institute should take an attitude of the utmost friendliness to State Societies, offering them, as it does now, the privileges of the floor at Convention, and all help and encouragement in

the meantime. At the same time, there is steadily growing a faith, emphasized by the Chapter and Membership growth to which we have alluded, that the mission of the Institute is not to foster State Societies as permanent necessities, but rather to lend such effort to the growth of Chapters, and above all, to such an elevation of standards required for admission to practise architecture, that the number of men who cannot, for any reason, join the Institute, shall steadily decrease. This applies not only to the question of ridding the profession of the incompetent, but also to the establishment of a level of competency where all architects may not only be members of the Institute, but where their professional livelihood shall be assured. Only by a high quality of service steadily improved by the imposition of higher and higher standards, can the public be won to a true valuation of the architect. Ceaselessly combating every tendency toward monopoly, the Institute must bend its steps in the direction we have indicated. It must, as a matter of principle, refuse to assume that we shall always have a large class of architects who cannot join the Institute, and, on the contrary, must work for the establishment of standards which will eliminate, to the irreducible minimum, all practitioners who cannot, for no matter what reason, become members of the basic organization upon which these duties now devolve.

THE AMERICAN INSTITUTE of Architects was asked to lend its encouragement and support to the formation of the American City Planning Institute. It did so, much against the feeling of a great many who feared that the architectural character of the city planning movement might be side-tracked with unfortunate results. They held no particular brief for architects, for they recognized how seriously the profession has ignored the problems which have been accumulating thick and fast. Yet they declined to believe that architecture can safely be laid to one side in any discussion of city planning.

As compensation for their regret, came the hope that the American City Planning Institute would certainly go deeply into the economic aspects of city planning. Here was a great work that needed the doing, and which had been ignored almost completely. The vast avenues of research opened up by the land problem, by taxation, and by commercial and industrial sabotage, seemed so intimately related to our urban ills that they could not be ignored by any Institute of scientific research. And for what is an Institute if not for that?

The Committee on Community Planning of the American Institute of Architects has made a great contribution along these lines, and its effort has been heartily welcomed by the intelligent city planners both in this country and abroad. And of course it requires something more than intelligence in carrying on a scientific work of this kind. Courage is also needed,

THE ARCHITECT

in a high degree, for one must not become concerned with what the clients are going to say when the inexorable distillations of science are held up before them. One must hold no briefs. One must not be concerned with the sale of any particular nostrum. One must seek to find out why it is that our communities are steadily piling up their debt, steadily finding it necessary to raise valuations, and steadily increasing the rate of assessment thereon, while we fall further behind in schools, play spaces, air, light, sanitation, with a declining quality in almost all that we do. Yet there are those who still cry their wares—"zoning," for example—with an amazing bravado. How can one dare to offer a cure for our mounting ills until science has turned the light on full and clear? Wilfully to refuse to lift the mantle of darkness seems something akin to a pathetic betrayal of the coming generations, of our children and our children's children. Will an Institute arise to lift the mantle of blackness that now hangs over the Reasons Why and the Causes Of?

MUCH SERIOUS WRESTLING with the problem presented by the building industry is now being done. A good deal of it is specious, but there are those who are earnestly trying to find a way out of what at present looks somewhat like an impasse. The resolutions drawn up by twenty members of the Illinois Chapter are published in this issue, but one finds it difficult to see wherein the last clause of all does not nullify all that went before. The "Philadelphia Plan" presented by the Council of Associated Building Trades of that city is an exceedingly able presentation of the problem. It contains an earnest plea for co-

operation to reduce waste, eliminate lost motion, and arrange for a fair wage and a fair profit. It seems a pity that the report did not go farther and deal with fundamentals, for until we are willing to understand them, we shall not get far.

Very commonly our ears are assailed, for example, with the phrase "over production." What does it mean? To many it is one of the most carefully designed deceptions ever practised upon a stupid people. They believe that the real phrase which we ought to get to know is "under consumption." Then we might begin to perceive that as a nation we cannot begin to consume what we produce. Why not? Because people cannot buy the things. What! we cannot buy back what we produce! No, we cannot, and yet there are millions of our people who need the things that cannot be sold. Why can they not buy them? And thus we arrive in the neighborhood of what is the matter, and of what will continue to be the matter, more and more, and ever increasingly more, until we are willing to get down to the truth. Mr. Ackerman deals with that phase of our system called "sabotage" or "restriction of output," in this issue. It is part of the faulty system of distributing the results of production. It is universally practiced, because forsooth, there is not much else to do under our system of measuring production in terms of a money price and of trying to convert the results of production into money under the competitive system of selling. We may keep on repairing, and tinkering, and plugging, but it would be better, very much better, to try to understand what is the matter. Or shall we still go on with the betrayal of those to come?
C. H. W.

The Architect

A Quest of the Definition

By WILLIAM L. STEELE

SEEKING THE DEFINITION of the word "architect" is one of the quests that look easy until you begin to work on it. My little four year old boy has been asking me lately the "Why" as to the names of things. He is filled with wonder because water is called "water" and queries how it happened to be so named and why it wasn't named something else. We grown-ups sometimes wonder why some men are called "architects" and it is evidence of the number of such practitioners that a definition of the term is necessary for the sake of clear thought, wise recommendation, and sound action. In attempting to define the term "architect" the question presents itself "Do we wish to define the architect as he is or as he ought to be? Do we want to define him in terms of history, ancient and modern, and to deduce therefrom what he is likely to be in the future?" Again, one may construct a theory after the fact, or deduce the theory

from commonly accepted basic principles leaving facts to adjust themselves to it as best they may.

I know very well what I *think* an architect really is, but I sometimes wonder if I am all wrong. My dilemma arises from the fact that so many of us profess the same principles and so few of us agree in practice. We preach fairly well but only a Philadelphia lawyer could square our work with our preaching. It may be that our trouble is due to our lack of careful definition of terms. We use the same words and perhaps give them different meanings. The idea that the jumble of inconsistencies found in the present-day practice of architecture is due to dishonesty and insincerity is abhorrent. It seems nearer truth to say that we are careless about our definitions, thus getting a false sense of values, and we are shallow in methods of thought and study.

We are trying to earn a living so we must be at least

practical. We are striving to win applause or fame so we must "catch the crowd." We are keen for money and all that money will buy, so we must not keep too fine an edge on our consciences. So we drift, and it is an astonishing sensation when some clear eyed, level headed chap, says to us: "Stop, men. Tell me something. You have been bringing me your contradictory stories, your quarreling and fault finding, your various suggestions, your diverse opinions. The only thing you agree upon is that something is wrong. You want me to tell you what that is. You want me to help you. I am depressed and saddened by the lack of harmony and common purpose among you. I would despair but for your eagerness for light. I dare not think that desire on your part is feigned. I may be able to help you, but I tell you now that it will be only by assisting you to help yourselves. You say you are all architects. How can I find your common denominator? Some of you are doubtless right, but you cannot all be right. I challenge you—Tell me—What is an architect?"

Separated from my fellows, backed up into a corner, obliged to "stand and deliver" under penalty of falsehood toward my chosen calling, I muster up my courage, command my faculties to assist me, and I answer bravely, but, I trust, without conceit or egotism:

The word architect is an ancient one, appearing in the Latin as "architectus" and in the Greek as "architecton" (ἀρχιτέκτων). It meant in those days, lexicographers tell us, "master builder." The English prefix "arch" comes from the Greek "archi" (ἀρχι) meaning "beginning" from which we get "archaic," and means "chief, eminent, greatest, principal." There is of course the other Greek word "arche" (ἀρχή) etc. So some have said that the architect is one who merely begins the *work* (τέχνη) and a lot of men are actually claiming to practice architecture who do nothing more than that. The prospective builder is given a roll of blue prints, the "architect" takes his fee, the Owner and the Contractor "go to it," and the "architect" concerns himself about it absolutely not at all.

The architect in history emerges from obscurity now and then to give us a glimpse of himself not "conducting an office" but strictly "on the job." His drawings are lost, but his buildings tell us that he devoted his time to comparatively few "commissions." He seems to have developed a great deal of his work *in situ*, so spontaneous and uncalculated it often appears. He must have been on good terms with all sorts of craftsmen because of the spirit of harmonious good nature expressed in what they did for him. Sometimes he was a Bishop, or a poet, or a painter, or a sculptor. The architect of the past, concerning whom we know anything at all, was possessed by the creative impulse combined with the practical knowledge and ability to express that impulse in terms of building. He used the

"vernacular." He was not worried about "periods" and "styles." He wrought with faith, and the strength of his idealism abides to this day to haunt us and shame us when we contrast it with our own barren skepticism and materialistic cleverness. He could not have done what he did had he been a mercenary, content with selling an idea and then divorcing himself from the fascinating union of the idea to the inert matter which becomes its manifestation.

In 1901 Louis Sullivan published in an obscure builders' journal a series of discussions on the philosophy of architecture entitled "Kindergarten Chats." Few read them and some who did said they did not understand them, but those little essays anticipated by twenty years the discussion in which we are now engaged. They contain teachings, which, if applied, I verily believe would set us all on the road to an Architectural Millennium.

In Chapter XLII, "What is an Architect?" Mr. Sullivan enumerates a great many factors, human and otherwise, that enter into a building and says: "All these men and all these things enter into the creation of a building, do they not? And yet they are not architects * * * and yet as regards a building the builder has his function, the engineer has his, * * * and so on and on in an ever increasing cycle which extends ever outward from the center to the borders of our civilization and inward to the center. And why? Because Man has a desire to shelter himself and his products from the elements. Yet, so far, we have no architect. And why? Because none of these people and none of these things is called architect. Yet there is a name architect, and therefore there must be a function architect—a real function—a real architect—an architect *solus*. * * * I want to isolate the architect and study him, just as biologists isolate a bacillus and study him. The bacillus is not the fever, the bacillus is the bacillus. So the architect is not the building, the architect is the architect. The bacillus causes the fever by acting on the body corporeal; so the architect *causes the building* by acting on the body social. The simile is not a nice one; in fact it's rather crude; but it gives you an idea of what I'm thinking.

"But, on the other hand, the architect is a *product* of the body social; a product of our civilization. My simile breaks down here in a measure, but let it go—I'm through with it—So we approach him from two sides—as a product and as an agency; so of course I come at once to his true function, namely the double one: *To Interpret* and *To Initiate*.

"What is he to interpret and what is he to initiate? What is it that justifies the name architect, what is his special, exclusive function? What is he expected to do, and what is he, alone, assumed to have the capacity to do under our scheme and arrangement of civilization?"

"I hereby wave aside from the inquiry, the hybrid-architect:—the architect who believes himself an en-

THE ARCHITECT

gineer, a carpenter, a merchant, a broker, a manufacturer, a business man or what not—and never stops to inquire if he is or is not an architect. If the merchant, broker, etc., were architects they would be called architects. Conversely, the architect who deems himself merchant, broker, etc., ceases to be architect and becomes hybrid, just to the extent that he believes it.

“Of course I assume that other men than architects may be and are products and agencies, and interpret and initiate. The dramatist may be such, the merchant is such, and many others; in fact, in the broadest sense, all are such in larger or lesser degree, under the terms and conditions of modern civilization. But not one of these is expected to interpret the wants of the people with a view to initiate buildings. Hence the true function of the architect is to initiate such buildings as shall correspond to the real needs of the people.”

Further on in the same essay he says that the architect “must cause a building to grow naturally, logically and poetically out of its conditions.” And he further defines an architect as a “poet who uses not words but building materials as a medium of expression; just in the same sense that a painter uses pigments as his medium of expression; a musician, tones; a sculptor, the marble block; a literatus, the written word; and an orator, the spoken word. And like them, to be truly great, really useful, he must impart to the passive materials a subjective or spiritual quality which shall make them live—otherwise he fails utterly and is, in a high sense, a public nuisance instead of a public benefactor.”

In the next paragraph he says: “It goes without saying that a knowledge of construction, equipment, methods, processes and workmanship are part of his technical equipment whereby he has the efficiency and power to express the poetic thought just as language and a knowledge of words are the technical equipment of the literatus. It is not, I take it, the words that make the poem; it is the manner in which the words are marshalled, organized and vitalized, that makes a poem a poem. And just so with building materials; they must be vitalized in order that a real building may exist. Therefore, to vitalize building materials, to animate them with a thought, a state of feeling, to charge them with subjective significance and value, to make them a visible part of the social fabric, to infuse into them the true life of the people, to impart to them the best that is in the people—as the eye of the poet, looking below the surface of life, sees the best that is in the people—such is the real function of the architect.”

Ruskin said: “An architect must be a great sculptor or painter * * * If he is not—he is only a builder.”

It seems perfectly clear that an architect must have a genuine sense of beauty. He must possess this organically. He must have studied it and come to realize how inextricably beauty is bound up with truth and

goodness. He must realize that to be an architect he must have something that no one else possesses, so far as building is concerned. I believe that loss of faith in that fundamental principle is responsible, more than anything else, for the condition in which the architectural profession finds itself today. We are hustled aside on the market place because we are considered as not fully accredited. We have ceased to *inspire* and nothing is left for us but to *compete*. And we are competing now not only with each other but with the engineer, the specialist-builder, the plan-factory, the real estate promoter and the increasing number of contractors, carpenter-architects, and their ilk, who feel that their best interests are served by eliminating the architect. And yet—

The architect is now, as always, the Master Builder. His diploma does not define him nor does his certificate of membership in an architectural society. He may be working alone in ignorance of the ethics of the profession. But he must be honest and sincere. He must know his resources and his limitations. He must remember that his responsibility does not cease until the building which he designed is finished. He must be capable of designing a building “naturally, logically and poetically,” and able to convey his design to the Owner and the Builder so that they fully understand what he intends. He must be able to superintend the work of the Builder so that the final result will be what he had in mind in the beginning, developed and modified in detail, but essentially the same. He must be free from bias, unprejudiced, fair minded, conservative in all good and valuable things, progressive in dismissing the non-essential, frivolous and bad things. He must, fundamentally, render *service*. Only so may he aspire to honor his profession and only so may he hope to be worthy to call himself Architect. The architect is supposed to be a professional man. The professional man has only one standard of service and that is the highest of which he is capable. The architect must have an understanding mind. He must be able to distinguish between “hero-worship” and “the things which the heroes worshipped.” He must accept humbly and thankfully his heritage from the past but must keep himself free and untrammelled in the light of the living present. “To Emulate but not to Imitate” ought to be the slogan. If he must *borrow* let him be careful lest he *steal*. Let him define himself in his thought and redefine himself in his acts and in his work. If the terms of the equation do not balance let him be sure that his *thought* term is high enough and that his *work* term is not too low.

It seems impossible, to me, to formulate a concise definition of what is an architect. Whatever phraseology we employ, if the profession of the architect is to endure, it is mandatory upon us to see to it that our definition is interpreted only in terms of altruistic, high-minded, whole-hearted, persevering endeavor.

Housing and Community Planning

The Plan For Coconut Grove

NOTE: The Associate Editor of the Housing and Community Planning Department of THE JOURNAL temporarily abdicates in this issue, with becoming modesty, in order that there may be presented a piece of his own work—a work so tremendous in its implications as to transcend, in our opinion, any piece of town or city planning work ever done in the United States. Only Letchworth and Canberra offer any parallel for Mr. Bright's economic concepts; and both of these were based upon a completely new departure, whereas Mr. Bright applies the same concept to a town already in existence and which needs, as do thousands of our towns and cities, something more than the physically planned solution of their difficulties due to disordered growth. Mr. Bright shows them the way out, financially, which is what no other American town or city planning scheme has ever done, to our knowledge. THE EDITOR.

Foreword

By THOMAS ADAMS¹

IN THE following report, Mr. John Irwin Bright presents us with a remarkable town-planning thesis and a unique solution of the problem of rebuilding the town of Coconut Grove. Perhaps a criticism based on the point of view of those who hold that a town is a mere happening, built up of unrelated and inert parts and incapable of elastic treatment of its surroundings, would be the best kind of a preface to such a report. I am too much in accord with Mr. Bright's argument and solution to give a stimulating introduction.

Mr. Bright looks upon a town as a thing of growth—as something alive and yet not predestined to grow according to an immutable natural law. He does not ignore existing conditions but does not permit them to control and thwart his judgment of what is needed to improve them.

The most radical proposal, and the most original and attractive, is that which suggests the creation of a productive park round the town. Here Mr. Bright takes issue with those who accept haphazard town development as a natural growth and who still believe in the fallacy that land may have a high building value when it adjoins a town even if there is no prospect of increase of population to acquire it for building.

"If", says Mr. Bright, "the town should surround itself with a protective strip of land exactly as the private owner does with his own home it would be free from the danger of parasitic growth." Here is a significant phrase that gives us a new concept of the application of the garden city principle of the agricultural belt. Why, indeed, should a town not have its garden area as well as the dwelling? Is it because land is too scarce on this continent? Or is it because we are not resourceful and wise enough to plan towns on sound principles?

Mr. Bright has come to the conclusion that the only way permanently to reserve a productive park strip is for the municipality to own the land so reserved. On a recent occasion the writer expressed the same view in opposition

¹Town Planning Advisor to the Commission of Conservation, Canada.

to those who claimed that it would be practicable to reserve an agricultural belt round a city by means of a zoning ordinance. Undoubtedly Mr. Bright's conclusion is sound. An agricultural belt to be permanent must be owned by the municipality.

As Mr. Bright says, in conclusion, the most effective tool to execute a plan is the control of the value and the use of the land in the best interest of the citizens. I would only add to this that the value should have regard to the use—and that the use should first be fixed by a plan as a condition precedent to the determination of the value for assessment and other purposes.

The estimates which accompany the report are based on information which can only be obtained on the ground. Therefore, the only comment I feel free to make with regard to them is that the fact that they are presented shows that Mr. Bright has faith enough in his conclusions to put them to the test of a detailed financial statement of costs.

The citizens of Coconut Grove may congratulate themselves on the opportunity which Mr. Bright's report gives them to be pioneers in a sound system of town development.

The Town of Coconut Grove, Florida

A REPORT on its physical, social and economic features with suggestions for their control in the future, divided into two parts: first, a description of the existing conditions and suggestions for the improvement of certain details, and secondly, the study of the problem of the central business area.

I. How it Grew.

The Town of Coconut Grove unlike many others in Florida is of a slow and gradual growth. For the major part of its existence there have been no very serious municipal problems. There always was an abundance of land at reasonable cost and apart from the familiar laws governing property there seemed to be no reason for any public control over its use.

At a convenient road crossing a few shops established themselves but there was not enough trading to cause uncomfortable congestion on the converging roads. It is quite true that the land on the bay front was, almost from the start, held at a relatively high price and was given over to private estates of an average size of over six acres. For climatic reasons the sea coast is the most desirable residential quarter of the town and quite naturally it fell into the possession of the first comers or of the wealthier class of the population. Back of these properties the land was gradually taken up in the usual way, each new resident placing his dwelling as seemed to him best without any thought of the future relation between the separate units of the individuality thus coming into being. For all towns have character almost in the same way as has a living organism and cannot be regarded as a mere agglomeration of unrelated cells. Failure to comprehend that this universal natural law applies to cities and towns as

HOUSING AND COMMUNITY PLANNING

well as to any other form of evolution results in a deformed, distorted growth. Coconut Grove is no exception to the law. But the principle itself received at times partial recognition for when the question arose as to the respective areas to be occupied by the white and the colored races it was treated from a community and not wholly an individualistic point of view. It is unfortunate that when the agreement was entered into it was done without a proper realization of the influence the mere design of the areas could have upon the welfare of the town. This lack of foresight, fostered by an unscientific road system, and aggravated by the gradual increase of the population has brought about an unfortunate situation. Colored Town, little by little, has taken the form of a wedge with its apex resting on the Ingraham Highway and its base on the railroad, effectually dividing the town into two parts. The district to the south-west of the wedge is nearer most of the Bay Front properties and for that reason is appreciably more valuable than the land to the north-east from which it is isolated except by way of the main highway.

Land Values.

From the standpoint of land values there are four main divisions. First, the bay front land, second, the area lying directly behind it, third, the northeastern part, and fourth, the dividing Colored Town. But this last district is indeterminate in extent and on its borders the land nominally for white occupation is depreciated in value and largely unoccupied. For the present it is sufficient to point out that the high value of much of the municipal land is due to its scarcity or rather to the limited supply of that quality which makes it desirable. Other areas considerable in extent, are depressed in value owing to the unfortunate distribution of population. The isolation of will other areas prevents their settlement. In several ways this group of causes engenders losses or prevents the realization of proper values. The limitation of the desirable portion of the land whether brought about by a deliberate policy or a thoughtless toleration leads to congestion and high prices and increases the cost of living for the inhabitants. It is a system which may be profitable to a few but the net result to the town is a loss. When the land value is depressed by untoward circumstances the loss is more evident but, as in the former instance, it is shared by the great majority of the people.

These four sections may be further analyzed. 1. There are thirty-five Bay Front properties occupying about 220 acres. They form a strip of an average depth of one quarter of a mile and about a mile and a half long. At the northern extremity there is a forty foot road ending at the shore line. A mile to the south there is another road thirty feet wide also giving access to the sea. With these two exceptions the sea front is entirely occupied by private estates. (See map.) 2. The area lying immediately back of the Bay Front land is about 300 acres in extent. While in actual measurement these are the figures yet for reasons presently explained all of the land is not available. It is a residential district devoted to fair sized lots and without overstepping the boundaries of the town there can be no further increase in size. (See map). 3. One hundred and fifty-five acres at the extreme northeast end of the town contain the shopping center and many private dwellings where the lots

as a rule are smaller than those at the other end of the town. (See map). 4. By actual count three hundred and five acres are regarded as being within the confines of Colored Town but actually a considerably greater amount should be included. Most of the excess should be subtracted from the second district already described. It forms a wedge with its base on the railroad and its apex just touching the Ingraham Highway. The average density of houses is but slightly more than one to the gross acre, far beyond the economic power of the lessees or owners to properly maintain. This is evidenced by a somewhat bedraggled and forlorn appearance. The population could live more comfortably and under better surroundings on one-half of the land they now occupy.

On Map No. 1 will be shown very clearly the degree of population density and the relative size of each district.

The Street System.

The street system of the town is a combination of two ideas; the direct regional route paying but secondary attention to the local characteristics and a gridiron plan based upon the government geodetic survey. But while the regional roads are planned with a definite though perhaps remote transportation end in view the right angle roads are not influenced in the slightest by any considerations of local convenience. The Ingraham Highway and the Florida East Coast Railway are the two lines of regional transportation paralleling the sea board and serve their purpose fairly well. The railroad is entirely too close to the shore line in its passage through Miami but when it reaches Coconut Grove there is a distance of a mile between it and the sea, a space quite sufficient for the free development of the town.

With one or two unimportant exceptions all the other roads are without change in direction and intersect each other at right angles. The section lines provide a simple and convenient method of land division for purposes of sale and roads naturally follow their boundaries even though the land itself has not yet been brought under cultivation. The law which permits the free occupation for the purposes of roads of a strip of land thirty feet wide, fifteen feet on each side of a section line is another important reason for the checkerboard highway system.

A rectangular system is not wholly bad; there is much to be said in its favor. Within certain limits and between certain points it is direct and the different properties can be easily identified and platted. But when used to excess it is subject to very grave objections. After all the main purpose of a road is to provide a means of getting from one place to another with the least friction expressed in terms of time and money, and when traffic over a gridiron system subjects the community as a whole to unnecessary expense it should be modified in its design or even abandoned in favor of another scheme. Repeated in too many units it becomes inexpressibly dreary and depressing, a disadvantage that can not always be expressed in terms of money but which, nevertheless, is very serious. There is no doubt that the street system suffers from the handicap of having followed in general the geodetic survey lines. Moreover the roadbeds are of an insufficient width to accommodate modern traffic. It is much easier to remedy the latter defect than the former. In each case it is chiefly

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SUMMARY SHEET

Block.	Present Land Value.	Number Lots Occupied now.	Value of New Lots Occupied.	Numbers on New Plan.	New Value of Lots Excluding Business.	Number of New Lots Occupied.	Increase in Value of lots occupied (see detailed sheets.)	Decrease in Value of lots occupied (see detailed sheets.)	Net increase in value of lots occupied.
A	28,000	0	.....	I	8,000	0	.....	.....	.....
B	30,000	3	9,000	II	13,250	1	4,000	500	.....
C	25,000	8	12,100	III	23,000	1	6,525	50	.....
D	20,000	1	2,500	IV	38,000	3	500	.....	.....
E	32,100	8	32,600	V	23,000	7	13,200	4,400	.....
F	27,700	5	14,500	VI	37,500	8	11,550	.....	.....
G	65,000	14	23,000	VII	30,600	10	9,750	5,000	.....
H	274,000	9	75,000	VIII	12,000	2	31,500	6,500	.....
I	129,000	8	54,500	IX	57,500	2	4,000	4,000	.....
J	90,000	12	29,000	X	27,500	8	10,500	500	.....
..	.....	..	.....	XI	34,000	8	.....	.....	.....
..	.....	12	.....	XII	115,000	2	.....	.....	.....
	720,800	68	252,200		419,350	52	91,525	20,950	70,575

Buildings demolished number 16.

OPERATING—Three Tiers of Bed Rooms in Hotel.

An issue of interest-bearing securities to cover:

(1) The cost of all buildings.....	\$2,860,000
(2) Value of old dwelling area.....	\$720,800
Value of new dwelling area.....	419,350
Difference.....	\$301,450
To be settled with exchange of city bonds. (Bal. sheet of Corporation shows \$258,700 available) and \$22,650 in securities of the Corporation.....	22,650
(3) Sale of Corporation Securities for working capital.....	117,350
(4) Total capitalization.....	\$3,000,000

<p>Dr.</p> <p>Interest on securities at 6%..... \$180,000</p> <p>Group of business buildings.</p> <p style="padding-left: 20px;">Insurance and upkeep, 2½% bldg. cost, \$1,500,000..... \$37,500</p> <p style="padding-left: 20px;">Amortization, 2% on bldg cost, \$1,500,000..... 30,000</p> <p style="padding-left: 20px;">Taxes ½ of 1% of bldg. and land, \$1,250,000..... 8,060</p> <p style="text-align: right; padding-right: 20px;">75,560</p> <p>Hotel, 3 tiers of bed rooms.</p> <p style="padding-left: 20px;">Insurance and upkeep, 5% of bldg. cost, \$1,300,000..... 65,000</p> <p style="padding-left: 20px;">Amortization, 2% of bldg cost, \$1,300,000..... 26,000</p> <p style="padding-left: 20px;">Hotel Mgrs. Salary..... 10,000</p> <p style="padding-left: 20px;">Taxes, ½ of 1%, bldg. and land, \$1,425,000..... 7,125</p> <p style="padding-left: 20px;">Service, wages, etc..... 33,000</p> <p style="text-align: right; padding-right: 20px;">141,125</p> <p>Garage:</p> <p style="padding-left: 20px;">Insurance and upkeep, 2½% of bldg., \$60,000..... 1,500</p> <p style="padding-left: 20px;">Amortization, 2% of bldg., \$60,000..... 1,200</p> <p style="padding-left: 20px;">Taxes, ½ of 1% of bldg. and land..... 350</p> <p style="text-align: right; padding-right: 20px;">3,050</p> <p>General Administration..... 15,000</p> <p style="text-align: right; padding-right: 20px;">Total..... \$414,735</p> <p style="text-align: right; padding-right: 20px;">Surplus..... 48,191</p> <p style="text-align: right; padding-right: 20px;">Grand Total..... \$462,926</p>	<p>Cr.</p> <p>Rent of dwelling lots \$419,350 at 6%..... \$25,161</p> <p>Rent of Business Bldgs., (Gross profit is 12½% of cost, \$1,612,000)..... 202,500</p> <p style="padding-left: 20px;">Rentable space..... \$300,000</p> <p style="padding-left: 20px;">Sq. ft. less 10% unlets..... 30,000</p> <p style="text-align: right; padding-right: 20px;">\$270,000</p> <p style="padding-left: 20px;">Gross Revenue is 75 cents per sq. ft.)</p> <p>Rent of Hotel:</p> <p style="padding-left: 20px;">280 Beds x 120 ds. 3360 x 6.00..... 201,600</p> <p style="padding-left: 20px;">Restaurant, net profit..... 14,000</p> <p style="padding-left: 20px;">Baths, net profit..... 9,000</p> <p style="padding-left: 20px;">Cigars and Miscellaneous..... 2,025</p> <p style="text-align: right; padding-right: 20px;">226,625</p> <p style="padding-left: 20px;">Gross profit is 15.9% of cost, \$1,425,000.</p> <p>Garage:</p> <p style="padding-left: 20px;">Rent of outside garages..... 8,640</p> <p style="padding-left: 20px;">Gross profit 12.34%, 15.00 per month per space.</p> <p style="text-align: right; padding-right: 20px;">Total Revenue..... \$462,926</p>
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HOUSING AND COMMUNITY PLANNING

Town of Coconut Grove

BALANCE SHEET FOR THE CORPORATION.

Cost of dwelling area, Sec. A.....	\$720,800	Sale of Central Plaza.....	\$40,480
Cost of Roads at .17¾, Sec. A.....	65,700	Sale of Road System, 834,000 sq. ft.....	166,800
Cost of School Land.....	7,500	Sale of School Land, 7500 less 900 for remnant on Station Road.....	6,600
Small Parks deeded to Town, 191,600 square feet... There should be returned to the town 50% of the cost of the Central Plaza and the Road System as the values are largely due to these improvements.....	38,000 103,640	Sale of School Park Land.....	82,360
Town Land, Sec. A—		Sale of Bay Front Park, 372,600 sq. ft.....	230,000
Buildings destroyed and moving houses, Sec. A...	100,000	City Hall Land, including above item of 900 sq. ft., 46,400 sq. ft.....	9,300
Cost of Present Colored Town.....	220,000	Garage Land.....	10,000
Buildings destroyed and moving houses in C. T.....	99,000	Business Land @ .831/3.....	112,000
Cost of Land, Section B.....	27,000	Hotel Land.....	125,000
Golf Links, 60 acres.....	36,000	Residential Land, Section A @ .20.....	419,350
	<u>1,417,640</u>	Residential Land, Section B @ .07½.....	146,500
Balance to be used for the construction of roads, landscape work, etc.....	273,125	Residential Land, Section C @ .07½.....	210,375
		Golf Links.....	36,000
		" "	36,000
		Sale of Park Section near Railroad.....	60,000
Total.....	\$1,690,765	Total.....	\$1,690,765

BALANCE SHEET FOR THE TOWN.

The Town will receive for its land in Section A the present average value of residential land in the area, .17¾ per square foot. The Town will pay for its land the new average value of residential land in the area assumed to be .20 per square foot. In Sections B and C the assumed value is .07½ per square foot.

Purchase of New Road System, Sec. A, 834,000 sq. ft... \$166,800		Sale of present Road System, Section A, 370,000 sq. ft @ .17¾.....	65,700
Central Plaza.....	40,800	Gift of the Corporation to the Town 50% of the value of the Road System, Section A, and Central Plaza.	103,640
School Park.....	82,340	Two small Bay Front Parks and the four minor Parks..	150,000
City Hall Property.....	9,000		<u>319,340</u>
Bay Front Park.....	230,000	Balance.....	269,600
Park Section near Station.....	60,000		<u>\$588,940</u>
Total.....	\$588,940	Total.....	\$588,940

BALANCE SHEET FOR COLORED TOWN.

LAND VALUES OLD AND NEW.

Dr.		Cr.	
Purchase of land, 188 acres at \$600.....	\$112,800	Sale of present land.....	\$219,000
330 buildings to be moved at \$300 per bldg.....	99,000	275 A @ \$600.....	\$165,000
	<u>211,800</u>	30 A @ \$1800.....	54,000
Other expenses.....	7,200		<u>219,000</u>
	<u>\$219,000</u>		<u>\$219,000</u>

Assets and Liabilities.

Amount which can be borrowed to be expended for roads, water, electricity or other local municipal needs.....	\$95,700	New Land—	
		310 Occupied Lots @ 300.....	\$93,000
Reserve.....	95,700	303 Unoccupied Lots @ 300.....	90,900
	<u>\$191,400</u>		<u>183,900</u>
		Business Land, 37,772 sq. ft., @ .20.....	7,500
			<u>\$191,400</u>

Operation of Occupied Areas.

Interest at 6% on Borrowed Amount.....	\$5,742	Rent of dwelling lots, 183,900 @ 6 %.....	\$11,034
Taxes, ½ of 1% of Land Value.....	957	Rent from Business Land, 7,500 @ 6%.....	450
Administration.....	3,000		
Balance for local needs.....	1,785		
	<u>\$11,484</u>		<u>\$11,484</u>

a matter of expense and the good will of the property owners. But this is a matter that can best be decided during the adoption of a town plan and it is now only necessary to call attention to the loss borne by the community by reason of a deficient road system. It should not be forgotten that some losses and expenditures can be written off the books but the drain of resources inherent to faculty transportation net can never be amortized. It is a permanent handicap. It takes its toll every day of the year. The only reason why we submit to it is the difficulty of its appraisal in terms of money. Instead of a determinate quantity we are forced to rely upon estimates, which, in the nature of the case, can never be completely convincing. But nevertheless it is possible to weigh with sufficient exactitude the advantage of changing the system in whole or in part.

Outside the limits of the business center there does not seem to be sufficient reason for a radical change in the road map. In its present state it may leave something to be desired but the annoyance and expense of disturbing the property lines, not to mention the new construction entailed, would hardly warrant the outlay of money.

But whatever the cost, the Ingraham Highway must be relieved of a part of the burden of its through traffic. The mere widening of the road bed will not suffice. Freight transportation by means of motor trucks is constantly on the increase and a by-pass must be found. On Map No. 2 is shown a new road for this traffic close to the railroad right of way. It would connect with a similarly placed road farther to the south and with the road system of Miami. It would have the advantage of forming an effective by-pass although very accessible to Coconut Grove and would not trespass on any residential property. The commercial development of South Florida is increasing and now demands more than one regional road. Modern traffic conditions require road foundations, surfaces and widths which cannot always be economically supplied in conjunction with units of a secondary character. But quite apart from any question of road engineering it is very dangerous to have motor trucks weighing, with their loads, many thousands of pounds continually dashing through the center of the town. The construction of this new thoroughfare is one of the first things that should be undertaken.

Even though a new road were built the Ingraham Highway should be widened in its entire trajectory through the municipality. It is at present but thirty feet wide between fences and it should be twice that width generally and even more in certain places. Through the civic center and for some distances on either side a width of one hundred feet would not be excessive. Suitably planted, the effect of the broad spacious avenue, flanked on both sides by the dwellings which sooner or later will be built, will be most delightful.

There are three troublesome angles in the main highway that should be straightened out. One is in the civic center and receives special attention later on in the report. Another is outside the present limits of the town near the boundary of Miami. Coming from the north the turn is at an acute angle made more difficult by a short but rather steep grade. The third is near the Sunshine Inn and while it is the least objectionable of the three yet the cut-off,

illustrated on the maps, would be to some advantage. The distance saved would not be considerable, not over three hundred and fifty feet, but it would permit the treatment, without any structural changes, of the present inadequate primary road as a satisfactory secondary road. It would also release some property values now lying dormant. In a similar way a lane commencing at a point below the rectory of the Episcopal Chapel and ending at the Ingraham Highway and the property of the Adirondacks School would make available some very desirable residential land and would add to the privacy of the Bay Front properties lying between the lane and the water.

There is no mention in the report of the very interesting subject of the beautification of streets; this, as well as kindred other subjects of lighting, drainage, sewage disposal, street furniture, planting and other more or less important details could only be properly discussed in a thorough town-planning report.

The Productive Park.

The modern town almost without exception believes that its prosperity is dependent upon an unlimited physical expansion. It is a conception dedicated to the accumulation of riches, not for the benefit of the city itself but for a small minority of its inhabitants. It is responsible for the twin evils of overcrowding and dispersion which when carried beyond a certain point produce municipal bankruptcy. It can hardly be maintained that living conditions for the majority of the population become more desirable as a city increases in size—indeed the reverse is generally true and the civic consciousness should therefore be alert to prevent immeasurable and uncontrolled growth. The prime function of a city should be to create a pleasant place in which to live. In the case of Coconut Grove geographical, climatic and economic conditions oppose any large massing of people. Also a rather special social factor encourages the adoption of an exceptionally large standard of dwelling lots over a considerable portion of the town. As a preliminary to the platting of the entire area a close study of the subject of population density should be made, but it is probably safe to assume, and for the purposes of this report it has been done, that the maximum number of citizens living in the confines of the municipality will never exceed seven thousand five hundred.

While not without precedent, it is an unusual thing to restrict the growth of a town and it might be well to point out in this connection why such a policy is desirable, and what will in all probability be your fate if you fail to control your own destiny. The city of Miami to your north is growing in leaps and bounds and eventually Coconut Grove will become one of its suburbs—unless you wish otherwise.

It is one thing to determine a certain theoretical size and quite another thing to find a practical way of realizing the ideal. The fixing of a boundary line is of no avail for there is nothing to prevent dealers in real estate from organizing small, incoherent settlements on the outskirts which sooner or later will have to be admitted into the municipality. These small units develop, answerable to no rule but their own. Their street systems and their theory of lot subdivision are very often at variance with a broad public interest, and as they are absorbed, one after another, they

HOUSING AND COMMUNITY PLANNING

end by imposing their character upon the main body. Now, among individuals such an intolerable state of affairs is recognized and prevented. In the country or a small town each possessor of a dwelling has the foresight to surround his house with enough land to make it impossible for an irresponsible neighbor to build against it. In a city where, on account of the scarcity of land it is impossible to have free standing buildings, the law permits rows of houses, but, in greater or lesser degree, assures light and air to each owner and also free access to the front and rear of his property. The city, while protecting the individual from aggression, has for itself no effective control over new settlements which may attach themselves to its boundaries and as a result of its helplessness it frequently discovers that its future state is determined for it by interests entirely separate from its own. The modern city plan is a house without outside walls; acres and acres of floor space but no walls!

There is a very simple remedy at hand for our aimlessness. If the town should surround itself with a protective strip of land exactly as the private owner does with his own home it would be free from the danger of parasitic growth. The relief which it would enjoy would be absolute, untempered by any fear of the future.

For the principle of the protective girdle there are, fortunately, several recent and very successful examples. The most noteworthy is at Letchworth, England, a town of approximately the same area and population as Miami. The Zone, containing about 2,600 acres, serves the double purpose of protection and production, for it is intensively farmed and is the source of supply of much of the food required by the town. The land, while leased to farmers and other cultivators, is owned by a corporation holding the property in trust for the benefit of the inhabitants. Eventually the title is to be vested in the municipality. The major part of the strip should be deep enough to serve as a barrier against outside interference and of an area great enough to be cultivated economically. It is for this latter reason that it is termed on the diagram a "Productive Park Strip." It is essential that this land should be under municipal ownership, or at least held in trust for all the citizens, and for legal reasons it would be considered a park. In many cases the lessees would be able to live in the town and still cultivate their properties, and even if it seemed preferable to remain on the farms or groves they would in all cases be near enough to the town to be able to enjoy all its advantages. As far as the groves of Coconut Grove are concerned the isolation of the tillers of the soil would be a thing of the past.

On the map the idea is shown in diagrammatic form. There is no attempt to reduce to figures this part of the scheme for the reason that the outlines and extent of the park cannot now be foreseen. There is no reason that the contour should be even—there is every likelihood that it would not be—so a statement of principles together with an assumed extent of 1,354 acres is thought to be sufficient at this time.

II. The Civic Center.

The present center of business is on a 300-foot length of the Ingraham Highway just south of Grand Avenue where the roadway is widened from thirty to fifty feet. It is a perfect example of what has already been called the

twin evils of overcrowding and dispersion and it is almost unbelievable that a town so sparsely settled as is Coconut Grove should have a congested area, yet, in this small district, traffic and pedestrians are huddled together in a most uncomfortable way. Coming from Miami, it is the front door of the town and it cannot be denied that the impression produced upon the beholder is distinctly unfavorable. Today the discomfort may be supported with difficulty but tomorrow there will arise a quite intolerable situation and before values of land and buildings can increase to such an extent as to make impracticable the needed changes, the town authorities have wisely decided to investigate the means by which a better order can be instituted.

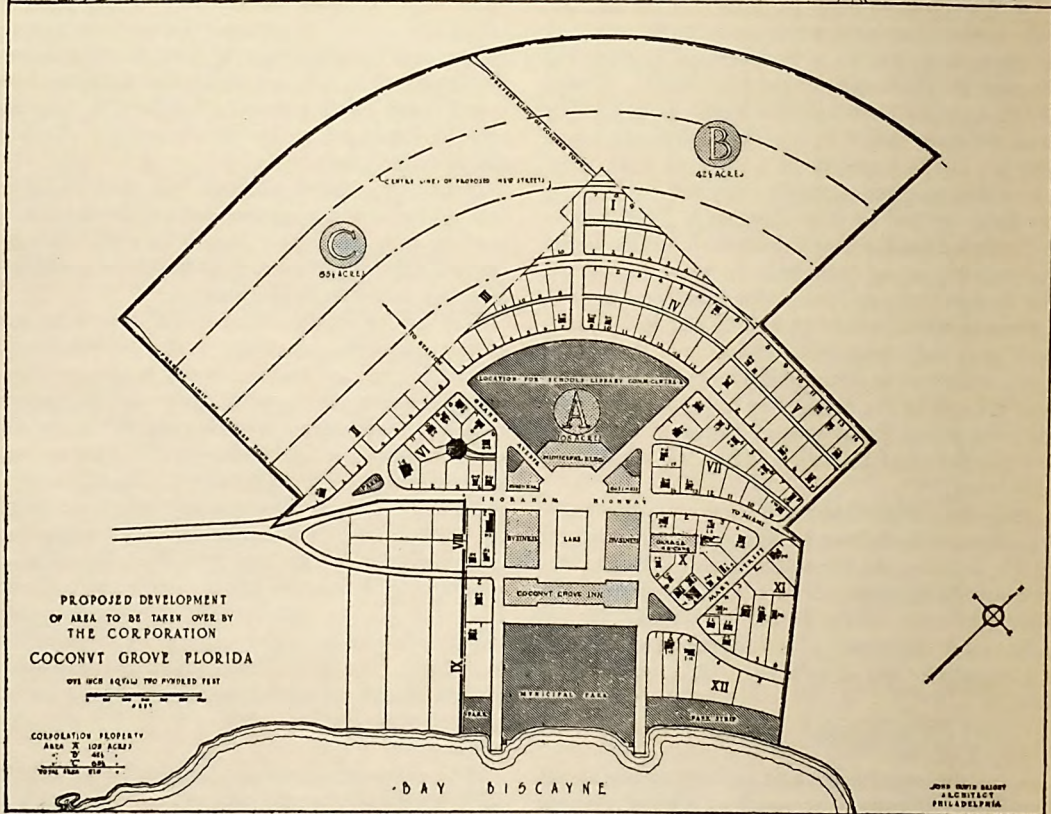
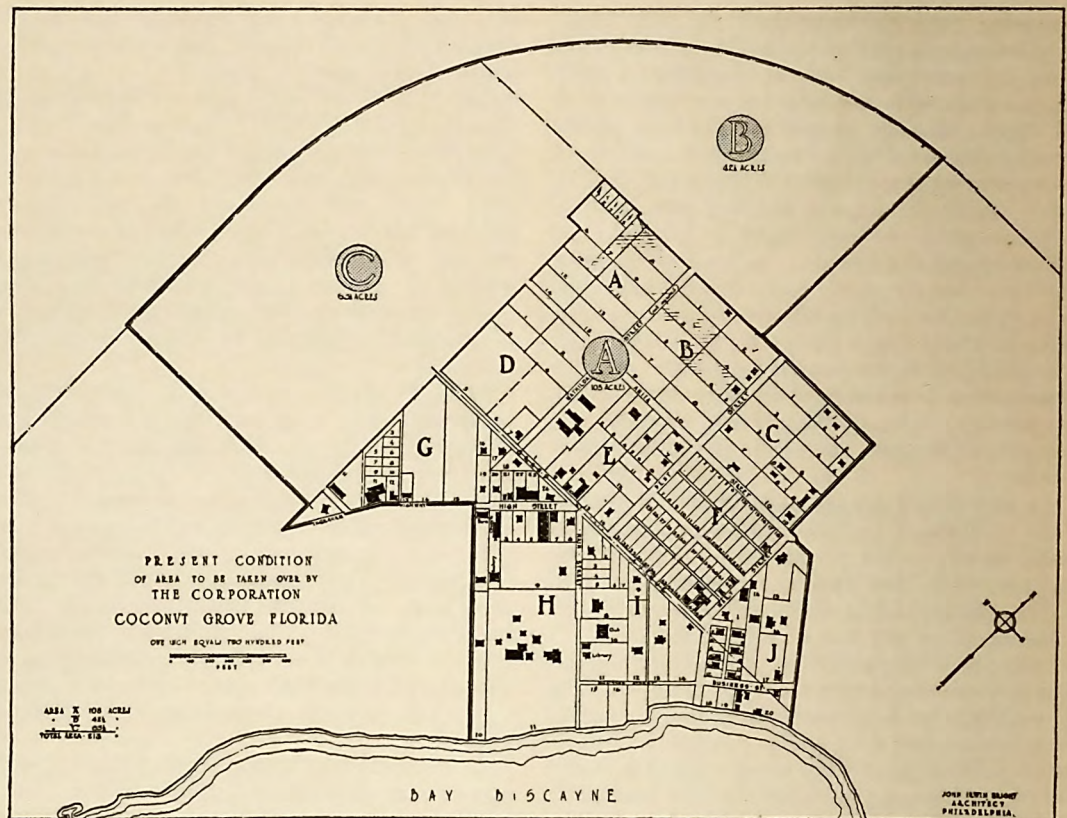
At the inception of the idea the usual difficulties began to appear. The town government, to achieve any real reform, would have to be endowed with powers to plan, zone, to regulate the number of houses to the acre and the size of the house to the lot, to own and administer various enterprises and to condemn land in excess of actual requirement. It possesses none of them in workable form and probably could never obtain the right to excess condemnation, the constitutionality of which, has not yet been fully decided. The municipality would have to petition the legislature for any powers which it does not yet possess, and under the most favorable circumstances much time would probably elapse before any relief could be expected.

Contrasted with the impotence of the city, which has no powers save those delegated to it by the State, the individual may exercise all the rights which have not been taken from him. He may plan and zone and do many things with his own property and for this reason the simple expedient has been adopted of forming a corporation to take over all the necessary land and by a flanking movement to capture for city planning the heights occupied by the private citizen.

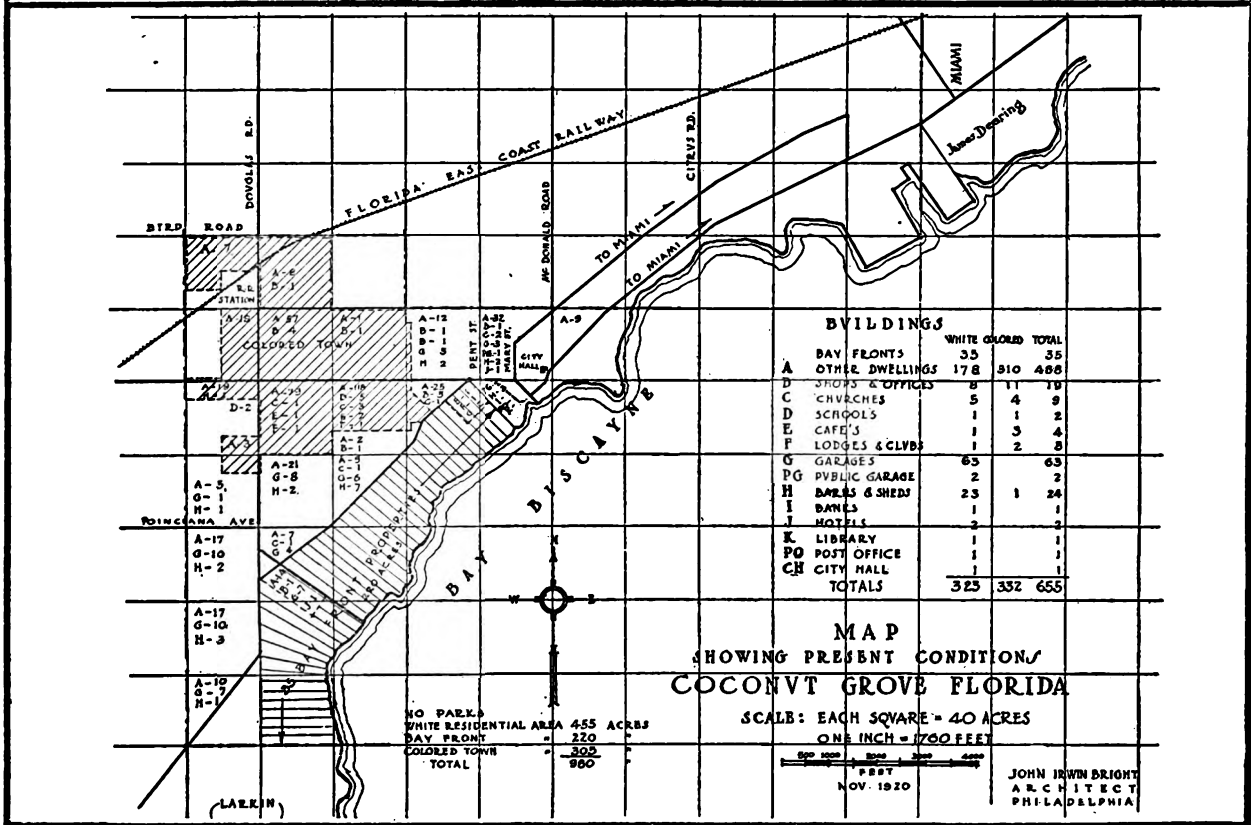
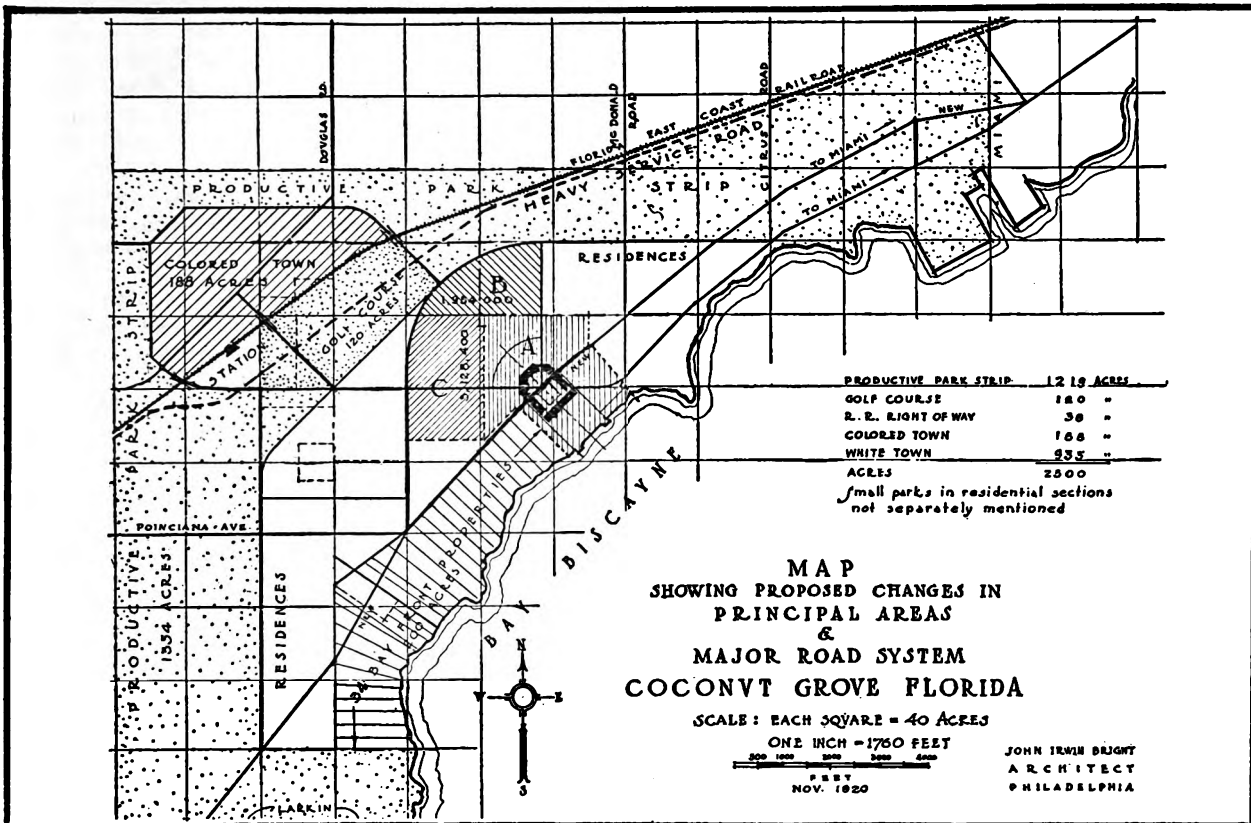
It must be clearly understood that what is being attempted is a program for the future—one which may take some years to bring to its fruition. Had it been the intention to finish immediately the entire group of buildings a radically different scheme would have been presented.

It is evident that a mere building scheme, even though of the simplest character, would require capital for its execution, all of which, under ordinary circumstances would have to be supplied from outside sources. What reason is there to suppose that the returns would be sufficient to interest local investors? Not to mention the general public? A replanning of a sufficiently large area invariably reveals unsuspected mines of wealth. Why should it not be used in this instance for the benefit of the community which creates it? The old values can remain as they are. Some of them may seem to be rather high but taking it by and large the increase revealed by the substitution of an ordered plan for a disordered plan is very large. It is available if held in one block, not otherwise, and the establishment of a corporation with all the present land owners as share holders is the answer to the riddle.

The company would buy the land now belonging to the individuals and would proceed to plan and build upon a large scale. How land value is now dissipated and how it could be made useful under a different conception of owner-



COCONUT GROVE, FLORIDA



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ship can be seen from an inspection of the financial sheets. The balances for the town and the company practically neutralize each other, but the new plan shows broad roadways and spacious parks where none existed before.

Several factors influenced the size and location of the area selected.

Section A on account of its compactness and present property lines but chiefly because it is the natural civic center and the business area.

Section C because it facilitates the relocation of Colored Town.

Section B because it will make easier the readjustment of the road system of the town.

A corporation is an Individual in law. Its estate is subject to the laws of the commonwealth but within the confines of its borders it possesses enough of the rights of the individual to serve our purpose.

It is proposed:

That each land owner, within the geographical limits prescribed, exchange the title to his land for its full value in obligations of the new company.

That the plan of the estate should be considered as one of its chief assets, and that the new location for any house should bear a definite value; that the difference in value between the new and old locations should be credited or debited to the individual. That such differences should be regarded as debts against the company or the individual as the case may be and should be liquidated as such time and in such manner as can be subsequently decided.

In order to fully illustrate the point a schedule has been prepared showing how the change could affect each individual owner in Section A. The land values, both new and old, are believed to approximate the truth, but must not be regarded as absolutely correct. The changes in location shown on maps and schedules are only to exemplify the scheme. In practice new sites could be chosen by the stockholders themselves and as there are many more lots than present owners the rearrangement would entail but little difficulty.

It is also assumed and so noted that certain buildings can be moved and certain others will have to be destroyed—the entire cost to be borne by the corporation.

The ownership of the land is vested in the corporation, owned in turn by the holders of its obligations. It would be advisable however, to base control upon units of ownership rather than upon units of money value. The latter conception is one of physical force and however justified in a business organized essentially for profit, would be of doubtful expediency in this venture. It is true that financial failure must be guarded against and money arrangements must be sound and clear. But we have here quite a different case permitting some deviation from usual business technique. This great effort is not undertaken in order to "make money." An ideal is sought after and this ideal can be summed up in a few words: "To make Coconut Grove a pleasant place in which to live."

Long term leases with readjustment periods are recommended.

In the case of a lessee desiring to surrender his stock ownership it must first be offered for sale to the parent company. All the details of such an agreement should be worked out with the parties interested but the main lines are very simple and, save a provision against specula-

tion in leases, differ in no essential detail from the familiar stock company.

Example No. 1: Lot No. 16, Block G, Map 3: The schedule shows the present land value to be \$600. For the purpose of illustration the house is moved on Map 4 to Block VI, No. 6, the value of which is \$3,000. If this should be in accord with the desires of the present owner he would be expected to take up stock in the company to the amount of the difference of the two sums. His house would be moved at the expense of the corporation and would remain his property if he so desired.

Example No. 2: Lot No. 19, Block G, Map 3: The schedule shows the present land value to be \$4,000. The house upon it is assumed to be transferred to Block VI, Lot No. 4, shown on Map No. 4, the value being but \$2,000. The present owner would receive \$2,000 in stock of the Company in addition to the value of his own lot. As before the ownership of the house could be vested in the tenant.

Example No. 3: When a house is marked "demolished" on the schedule the owner may or may not choose a new location. His decision would not affect the principle of compensation for his land and buildings.

The balance sheets show the idea pushed to its logical conclusion. The corporation is the ground landlord and its tenants may or may not be stockholders in the enterprise. The corporation purchases the areas A, B, and C, the land now known as Colored Town, the part to be devoted to a new Colored Town and enough land to complete the golf course. It sells back to the city at a unit price all the land required for streets, parks and other public uses. The school receives its land back at its original price. The company returns title to all the remainder, although it might be preferable to form a separate corporation for Colored Town.

The company would not only lease the residential land but also the land used for business purposes. It is here especially that large increments can be realized. In order to complete the picture the company is assumed to erect and operate the buildings. This is fully explained in the financial schedules.

Several important details have been omitted; *e. g.*, the returns from the land in areas B and C and the financing of the new buildings for Colored Town as the necessary special information was not available at the time of the writing of the report. It is true that the calculations are based upon the book values of a running concern but on the other hand no mention is made of the amortization of the debt and the returns from areas B and C, factors which would steadily strengthen the financial condition of the company.

The Road System.

From a point in the Civic Center are drawn five concentric streets uniting the highway systems of both wings of the towns. They provide a natural way for local traffic to by-pass the Plaza. Fortunately most of the road work in the Corporation's estate is on freshly planned territory where there is a total absence of the handicap of old property lines.

The quadrant of roads in the rear of the City Hall gives that concise form to the plan which is of the first importance in the economical administration of public

HOUSING AND COMMUNITY PLANNING

services. Only the main roads are shown. In its passage through the business center the Ingraham Highway is 100 feet wide whilst all other streets are 60 feet. No attempt is made at this time to suggest details of design, planting and lighting. The highways outside the Estate have already been described.

The Buildings.

Although the Construction Program is for the future there is no good reason why some of it could not be started at the present. If followed without change in its salient points it would definitely terminate the era of unrelated individual effort which is responsible for the prevailing unsatisfactory and uneconomic conditions. The cost, financing and operation of the group and the surrounding parks and open places are fully explained in the several balance sheets, based, it should be remembered, on the premise of a going concern. But a word of explanation of the design and method of construction is necessary.

The Municipal Building.

The municipal building is placed upon land owned in fee simple by the city. In plan and elevation it follows the classic precedents found in Cuba and Spanish America. The style is characterized by open interior court-yards treated in a simple and intimate fashion, high ceilings and exterior arcades. But little decoration is employed, the design consisting almost entirely of flat wall surfaces pierced with openings harmoniously spaced. The only important ornament is the sculptured group over the central entrance. Upon entering the main portal, a few minor offices and two interior courts can be seen through a perspective of arches. Two flights of stairs and elevators give access to the second floor where the more important administrative work is transacted and where the Assembly Room is placed. On the wings are the Departments of Police and Fire. Their entrances are upon the radiating main streets.

The plaza and the public gardens in the rear are connected by a triple row of arched passageways running under the building.

The Business Buildings.

The Business Buildings are five in number, four on the plaza and the public garage outside of the main group proper. Their plans and elevations harmonize with the architecture of the City Hall and they are so arranged that when the need arises, they may be built in sections. The interiors can be readily altered to suit any purpose.

Some definite suggestions are shown. The Post Office is placed on the corner of the Plaza and the road leading to the Station. The banks, for more than one may be desirable, are stationed at the ends of the line. A Theatre occupies the center of one of the large side buildings and opposite to it is the Garage and Machine Shop. The entrance to the Theatre is from the Plaza but the Garage opens upon the bordering street in order to preserve the sidewalks and roadways of the central square free for pedestrian and ordinary traffic. An automobile show room is provided and above the repair shop is a dead storage space. On the other side of the street is a low one story public garage. The general public enter into an interior courtyard, and the surrounding residents have private

entrances from their own properties. A group of three graceful water towers, visible from afar, will form a distinctive landmark to the town. One is on the public garage, another is over the private octagon garage to the southwest of the Plaza and the third breaks the skyline of the hotel.

The rest of the business buildings are devoted to shops around interior courts into which delivery wagons may enter thus concealing from public view all rubbish and litter. An arcade entirely surrounding both of the large units and partially surrounds the small units. It will not only serve as a shelter from inclement weather but is architecturally beautiful and screens from view disfiguring bulk windows and signs. Stairways and pushbutton elevators give ready access to the second floor which may be devoted to several uses. Some shops will require two stories. Offices will be demanded and in the portion near the hotel apartments would no doubt be popular. Each apartment would have in front of it the promenade over the arcade and through ventilation would be afforded by the open court in the rear. Service from the hotel could no doubt be provided.

The Hotel.

Only one plan is shown for the hotel although the financial sheets describe the returns from two tiers or three tiers of bed rooms respectively. Owing to the control over the land value the building need not be starved to pay for the site. Indeed this is the keystone of the whole scheme. The land for each building is fixed at a certain level not because it is the price that could be obtained in the open market but because it is in accord with the whole financial framework of the corporation. If the conception is good economics it follows that it is economical.

Although the hotel is more generously planned than is usually the case, the charges under the management of the corporation are very moderate. All the bed rooms are open on the outer walls, and are entered from an open corridor surrounding interior courts. At one end is the bathing establishment with Turkish baths and a swimming pool; at the other end is the kitchen. The main dining room is on the ground floor with galleries convenient to the ball room. The hotel is placed at the lower end of the Plaza and commands a view of the bay across the public park. From the other side the City Hall is seen with its image inverted in the central sheet of water. Four rows of coconut trees border the artificial lake screening the soft yellow of the enclosing walls with their green and picturesque foliage.

The Lake.

The lake, while considerable in extent is very shallow and its cost is almost negligible when compared with the entire program. But it is in the highest degree decorative and would wonderfully enhance the beauty of the surrounding buildings.

Colored Town.

The unfortunate situation of Colored Town has already been described. The only way to solve the problem is by a re-planning which should be undertaken in the interests of both races. Entirely apart from money considerations a better living and economic standard will result from the reform.

In lieu of the 305 acres now considered to be Colored

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Town the new suburb will contain about 188 acres. But while Colored Town at present is mostly a wilderness the new plan will show the houses gathered in an orderly way around a beautiful central group. At present there are three hundred and ten dwellings scattered over the landscape. The new scheme shows the same three hundred and ten dwellings, moved and installed without expense to their owners, to an improved environment. Three hundred and three additional lots are ready for occupancy. There is no crowding. The individual holdings are considerably larger than under the old order. Ten per cent of the area is devoted to parks and open spaces. When established it will be possible to provide the necessary public utilities most of which are now economically impossible. The plan is much like the quadrant near the Civic Center except that the road system is the half of an octagon instead of being part of a circle. The Plaza contains the semi-public buildings, much smaller than those on the Ingraham Highway, but of the same quality of design. The Town is surrounded by the Productive Park and in addition there are placed among the dwelling groups a number of small pieces of public land to be used for play grounds or for purposes of cultivation. There will always be some individuals who will welcome the change to take care of more land than is contained in their own holdings, and these unallotted spaces lend a much-to-be-desired elasticity to the scheme.

On one side of the center is placed a large bath-house for men and on the other side a bath house for women and a day-nursery. Here children can be cared for while their mothers are about their work. The railroad will be spanned at three points by overhead bridges eliminating the dangerous grade crossings.

If it is decided to put the scheme in operation the corporation will buy all of the land now known as Colored Town as well as the land for the new village. The area after having been planned will be sold back to the people who are living there or to a corporation representing them. The new ownership might take the form of a corporation underlying the original one. In order to encourage independence of action without jeopardizing success a benevolent leadership might be very necessary.

The profit to the negro will chiefly lie not in money but in the improved living condition that will inevitably be brought about.

Type of Construction.

The construction would no doubt be similar to that already familiar in Coconut Grove. A cement block covered with stucco, when carefully handled, is a satisfactory material and it would be desirable to use the native stone for corners. The elements of the design are extremely simple and repeat themselves in a way which will result in great economy of construction. Most of the arches are of one size and could be cast in concrete from one mould and set up when desired. The same unification holds good for the other details.

Summary.

The position of the war memorial received more study than any other part of the plan. For many reasons it was decided to depart from the customary, free standing monument and use a wall treatment. The main road

curves as it approaches the plaza placing the memorials in direct line of sight. Taken in conjunction with the entire plan there is no doubt that a decorated wall surface would be much more satisfactory than any form of shaft or isolated sculpture. Several types are suggested in the appended sketches.

The financing of the parks is shown on the balance sheets. There is no item set aside for their beautification as the choice between a simple and an elaborate scheme could better be made at some future time. They form a nucleus of a park system which should receive much further attention. They provide a proper setting for all the public, semi-public, and important business structures now and in the future. Other more intimate spaces would no doubt be desirable but can only be adequately discussed in a complete town planning project.

The description of the plan and the economics of the civic center and its surrounding dwellings and parks form an answer to the oft repeated question, "How can a town plan be executed?" Quite apart from public spirit and inclination the tools must be at hand and among them the most effective by far is control of the value and the use of land in the best interest of all the citizens. It is the chief means by which the realization of the ideal is attained

JOHN IRWIN BRIGHT.

Drastic Regulation

THE MEETING of the New York Chapter in March was attended by 121 men, and the number no doubt indicated the extent of the interest in the proposed amendment to the Building Code of New York City. Seldom has so drastic a remedy been suggested as a correction of evil. Briefly, the new law would compel registration of all individuals under provisions for determining competency, connected with the essential processes of erecting buildings in New York City, and would cause a forfeiture of their registration certificate, for any "wilful" violation of the code, for two years. Mr. Rudolph Miller, the Superintendent of Buildings, explained the law to the members of the Chapter, and the Chapter testified as to its unlimited confidence in Mr. Miller. Generally, there was no question in the mind of those present as to the desirability of putting an end to present evil and dangerous practices in violation of the New York Code, but there was an almost equal agreement that the punishment should be made to fit the crime, and that even the word "wilful" would not act as a deterrent to graft and corruption in the administration of the law, were any future superintendent of buildings at any time so inclined. Possessing a colossal power, he could extract tribute or conduct political espionage to an alarming and dangerous extent.

Mr. Miller believed that these things were safely obviated by giving to architects and others the right of appeal to the Board of Appeals, and by a clause which would compel the Superintendent of Buildings either to grant a Registration Certificate or state his reasons within ten days, but there still seemed great doubt in the minds of the Chapter members as to whether those safeguards were sufficient to thwart the too well known corruption which runs through all civic administration, wherever it is subservient to political interests. The question of supporting or of disapproving the bill was laid over for another meeting.

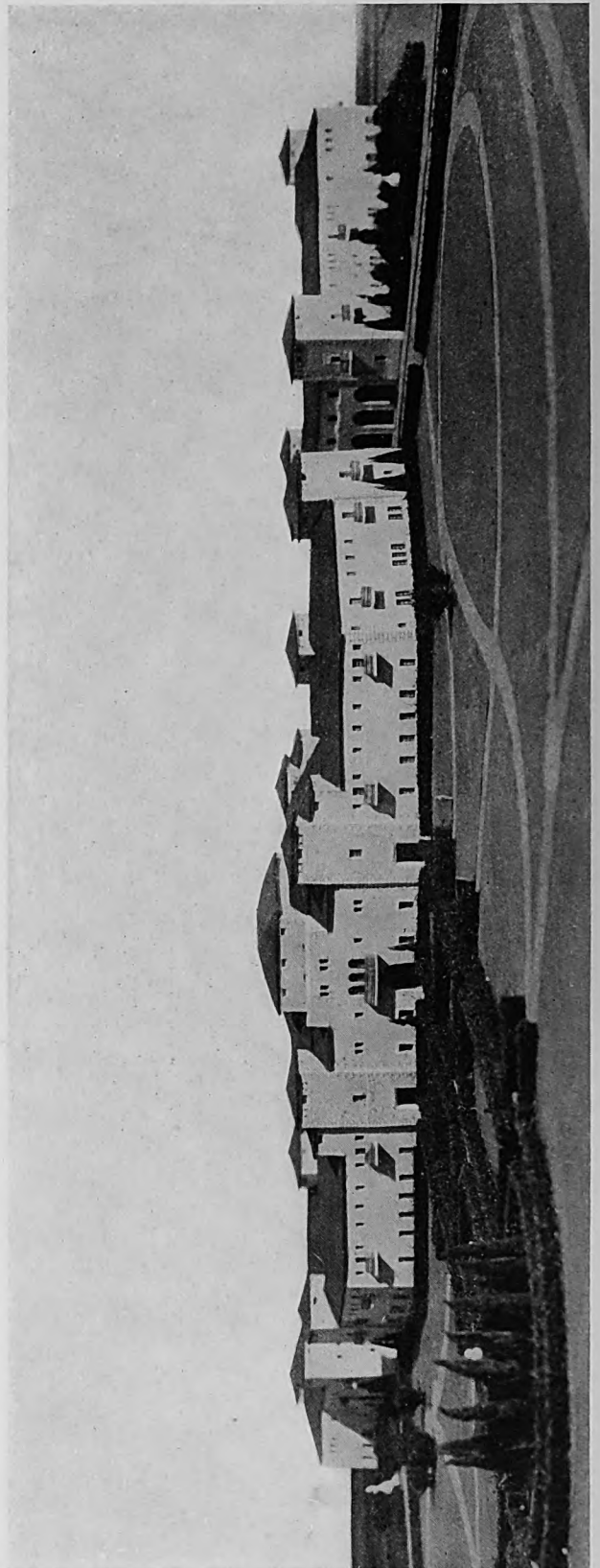
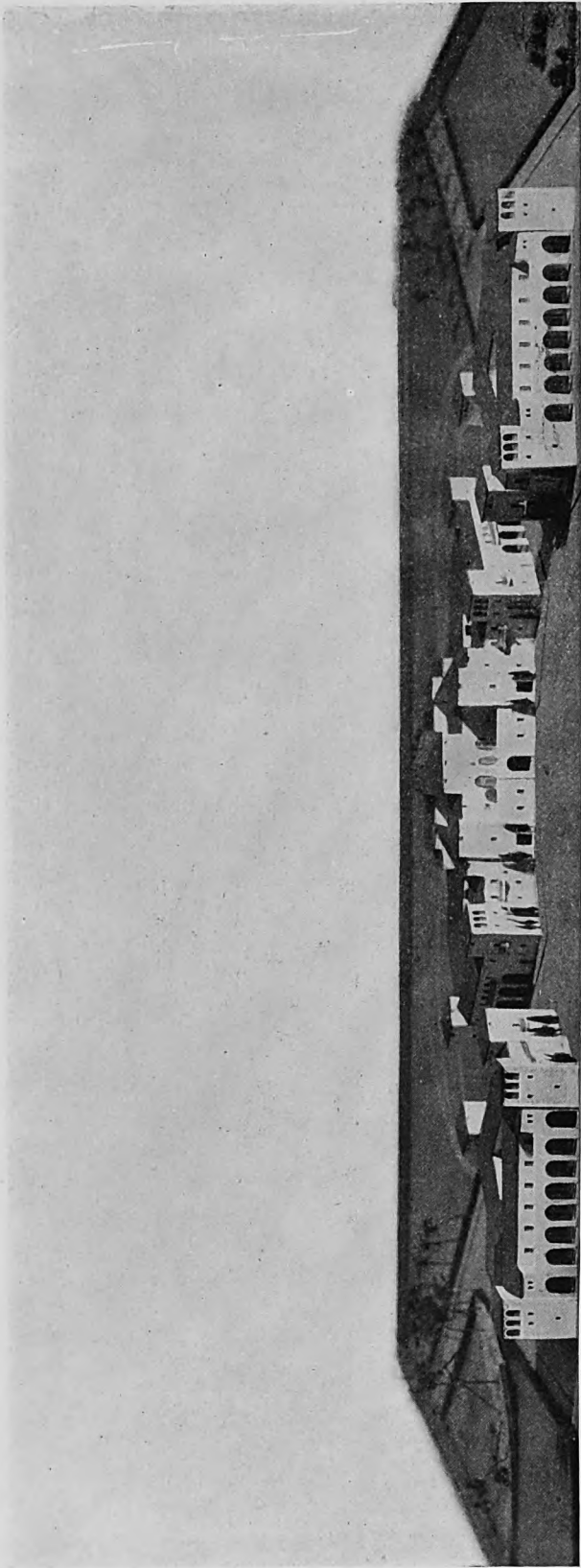
A PRELIMINARY
REPORT FOR
COCONUT GROVE
FLORIDA

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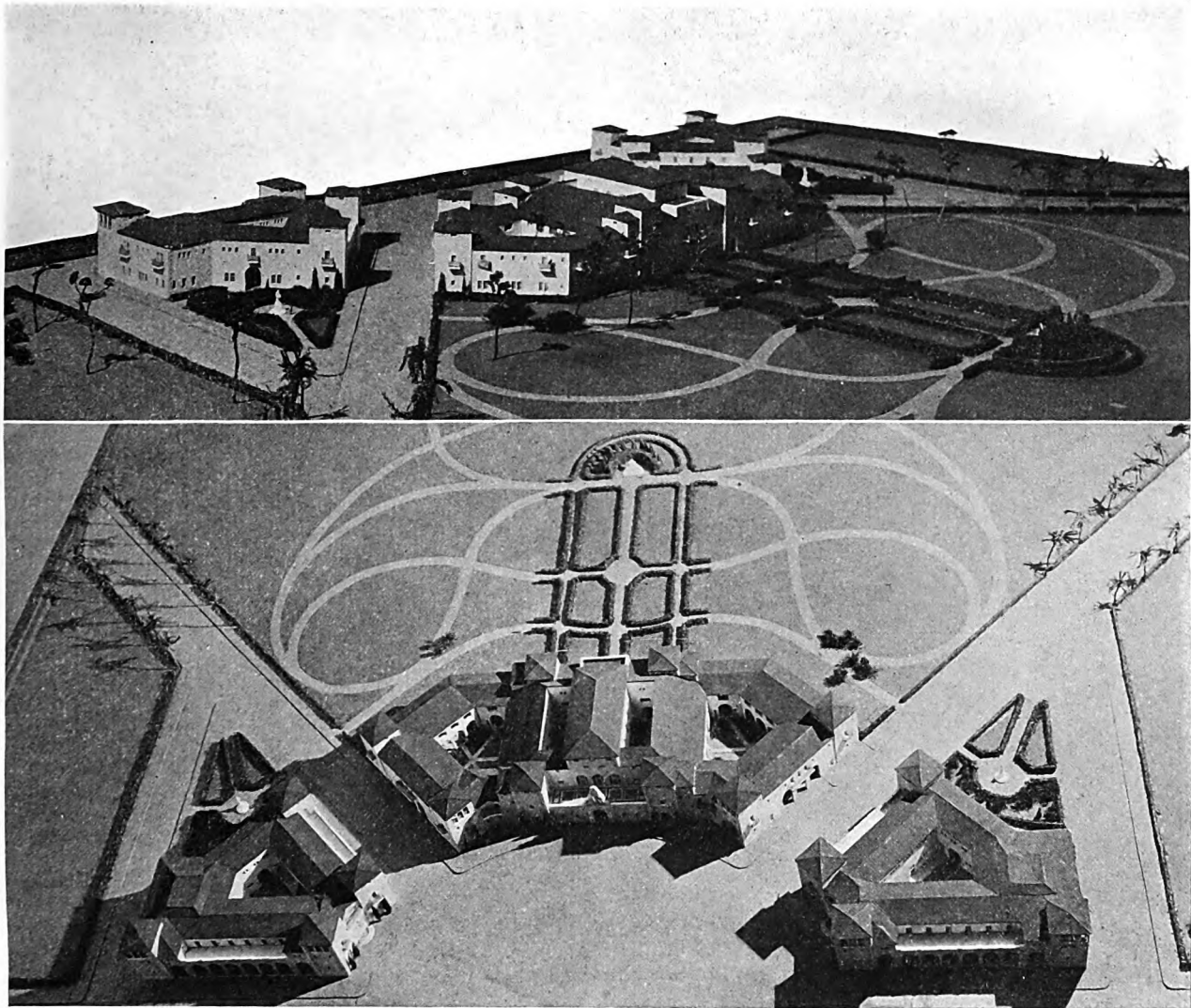
A TOWN PLAN

JOHN IRWIN BRIGHT
ARCHITECT PHILADELPHIA





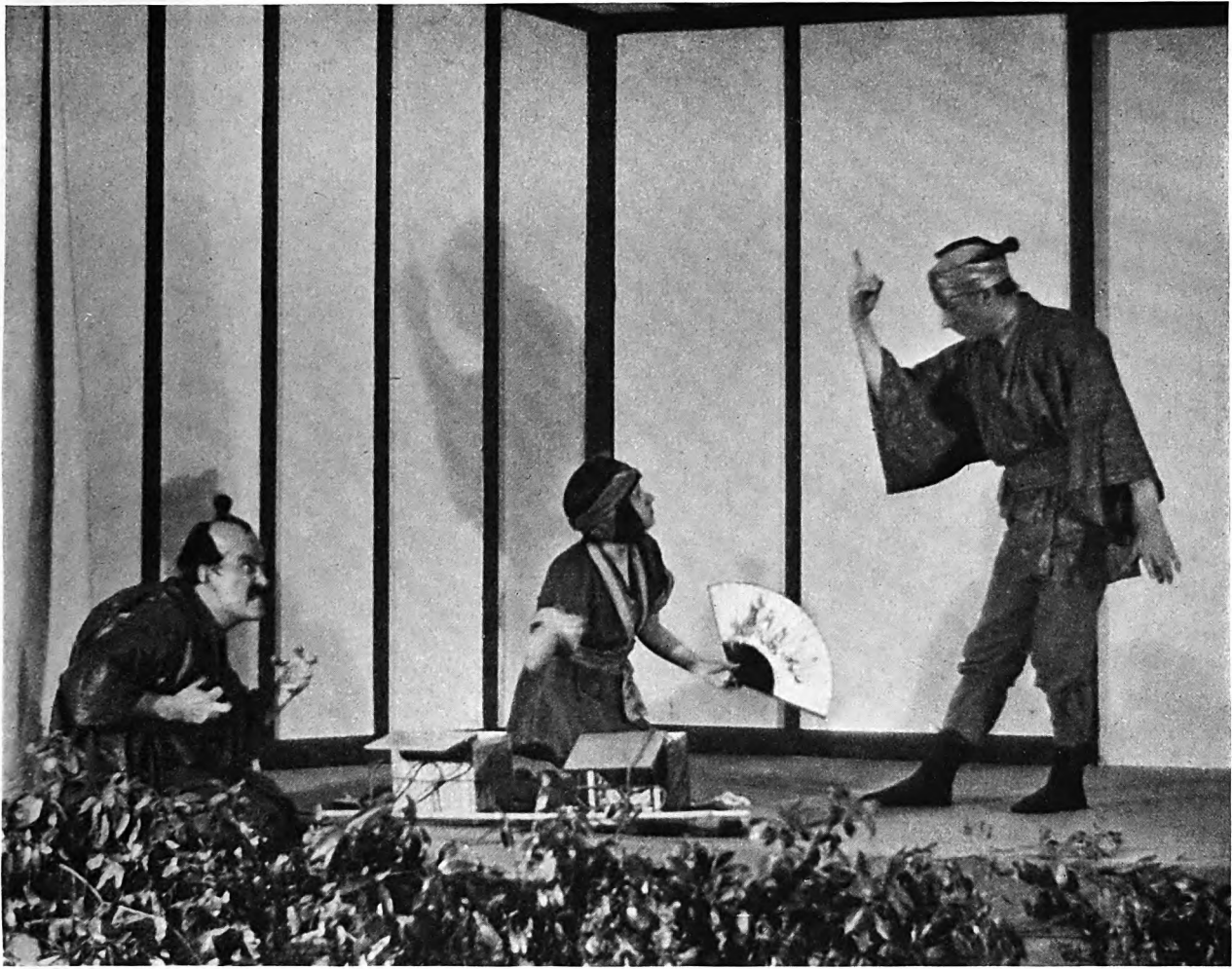
ELEVATIONS OF THE MODEL. MUNICIPAL GROUP, COCONUT GROVE.



PERSPECTIVE VIEWS OF THE MODEL. MUNICIPAL GROUP, COCONUT GROVE.



SHADOWS: First Act—Enter the Prince



SHADOWS: Third Act—Afternoon; the shadow lengthens



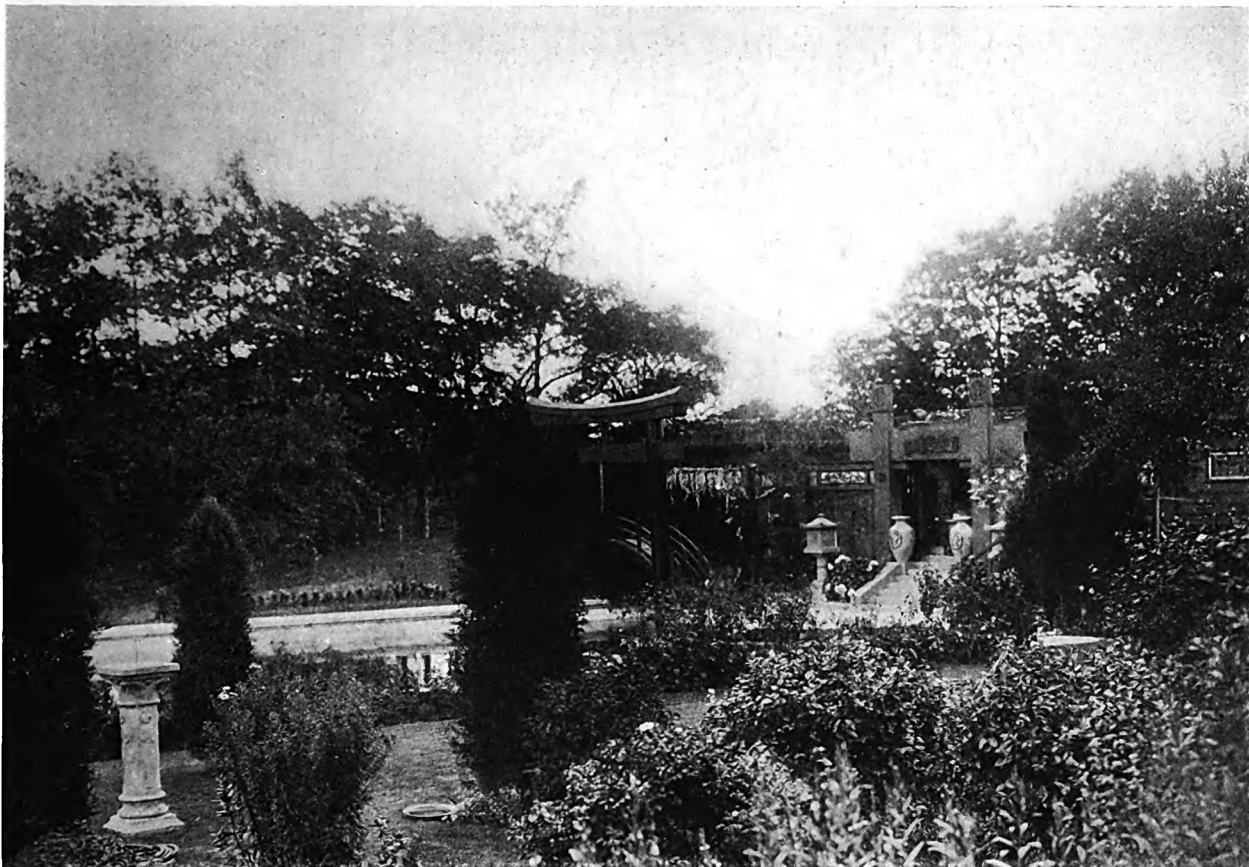
SHADOWS: Third Act—The Shadow strikes



SHADOWS: Third Act—He prepares to follow his Prince into the Great Silence



IPHIGENIA IN TAURIS: Metropolitan Opera. Designed by Howard Greenley



SEPTEMBER MOON: A Japanese fantasy. Written, designed and produced by Howard Greenley



A KISS FOR CINDERELLA. Designed by J. Monroe Hewlett

Architects' Small House Service Bureau of Minnesota, Inc.

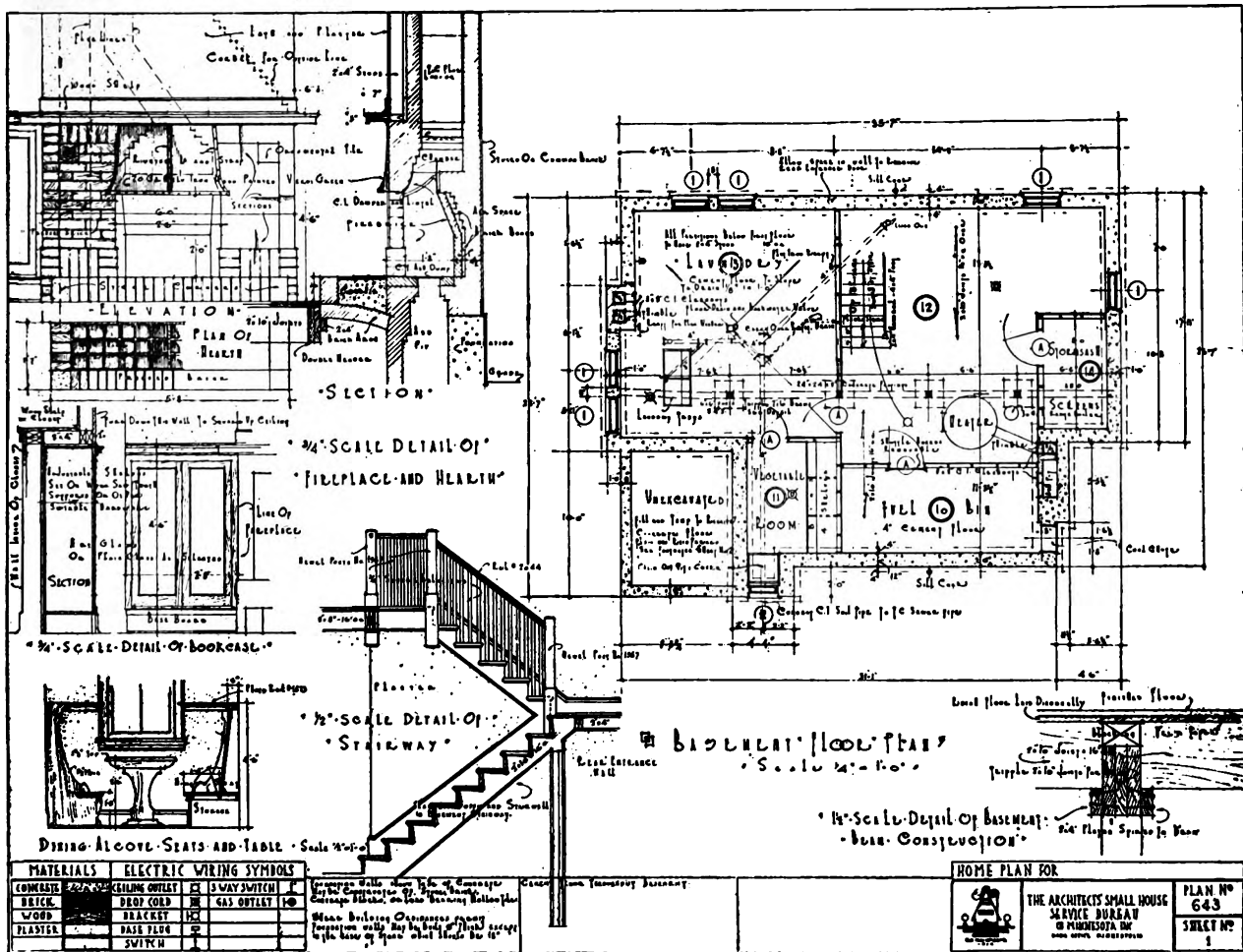
Through the Committee on Small Houses of the American Institute of Architects the plan of organization and proposed operation of The Architects' Small House Service Bureau of Minnesota was presented to the Institute at its Convention held at Washington, D. C., in May of 1920. It there received the endorsement and approval of the delegates in Convention assembled and was encouraged to continue. It presented to the Institute its first publication, "How to Plan, Finance and Build YOUR HOME," outlined its thought of operation, its proposed methods of advertising, and the service it intended to give.

Practically one year has passed since that time. The Bureau proceeded along very quiet and modest lines, advertising in a small way only because of lack of funds. The results of this desultory work were most surprising and the Bureau discovered that it had a very large and difficult problem ahead of it. It was slowly working out a means to meet this problem when the answer arrived in a very interesting manner. The solution of this problem is practically accomplished and by the time this appears in print the Small House campaign of the Bureau will have

been launched in a thorough and surely successful manner.

Such interest was taken in the small but definite statements of the Bureau's early advertising that papers all over the country reprinted bits of it and gave considerable editorial space thereto. Some time, about July of 1920, Mr. Maurice I. Flagg, Director of Sales of the Bureau, received a communication from Mr. King H. Pullen, Acting Trade Extension Manager of the Southern Pine Association, inquiring into the Bureau's methods and policies. Too much credit cannot be given to Mr. Pullen and the Southern Pine Association for both seeing an opportunity and taking advantage of it. They have proved to be the most desirable clients that could be imagined.

Following an interchange of letters Mr. Pullen visited Minneapolis and met the members of the Bureau. After looking into the work they had done, were doing and planned to do, he asked them if they could undertake to issue a book of one hundred different house plans, with full working drawings, specifications and Bills of Material or Quantity Surveys for the Southern Pine Association. After due deliberation a Contract was entered into with the Southern Pine Association along the following lines:



WORKING DRAWING SHEET—SMALL HOUSE BUREAU

THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

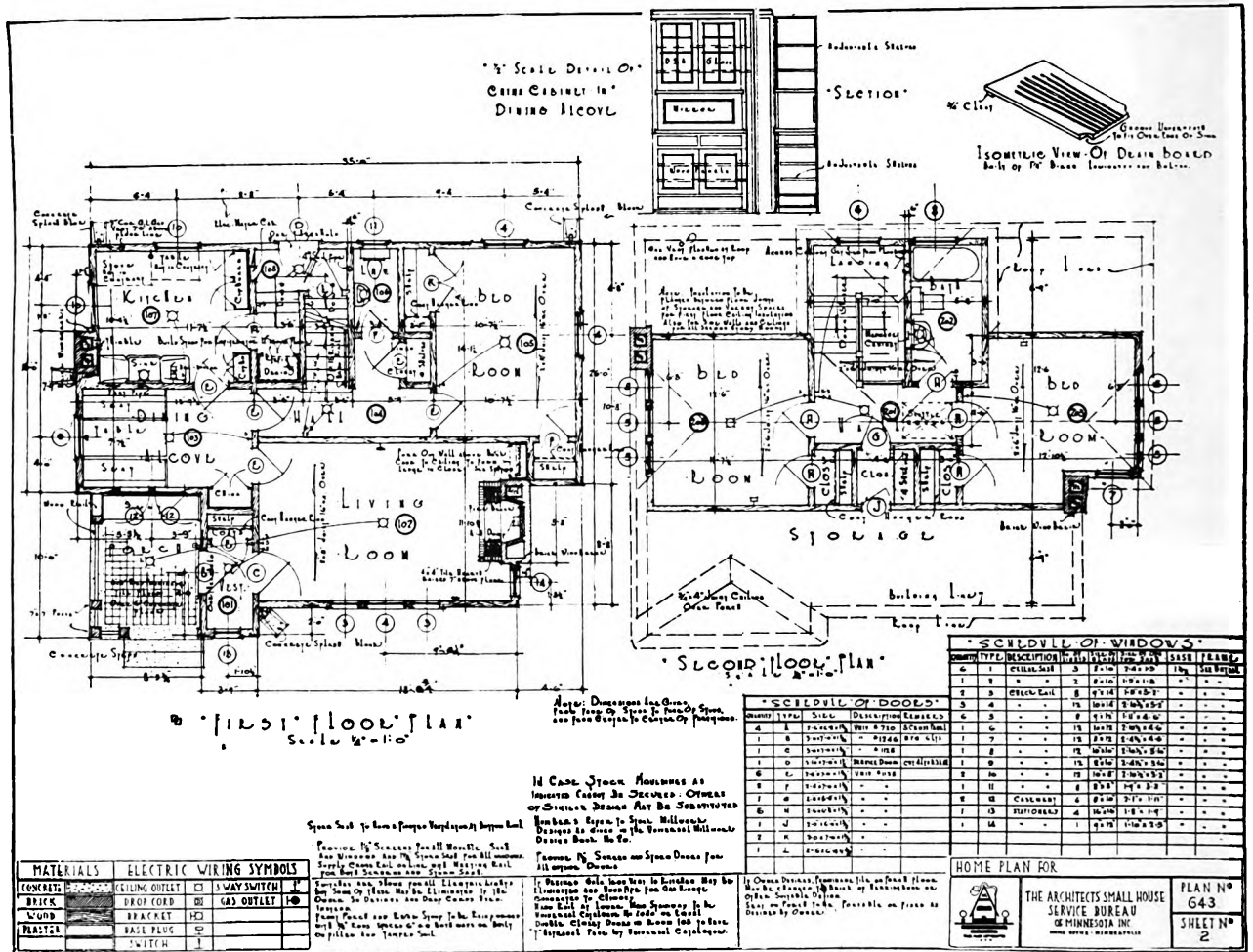
The Bureau to provide one hundred complete sets of plans for homes of three, four, five and six rooms, together with specifications and quantity surveys; the Bureau further to provide all the editorial matter covering the entire procedure of planning, financing, and building homes; all of this to be turned over to the Southern Pine Association by January 1, 1921. The Southern Pine Association, as its part of the contract, was to pay for publishing the above work in a proper book as soon as the material was received; the Southern Pine Association was further to carry on a national campaign of advertising the Service and was to place the books and plans in the hands of its thousands of sales offices throughout the country. All of the advertising and editorial matter was to be subject to the scrutiny and control of the Bureau and all of the work was to be carried out in a spirit of strict accordance with the ideals and ethics of the American Institute of Architects.

The Southern Pine Association, much to the gratification of the Bureau, took the broad gauge point of view that real service rather than a straight campaign for the sale of lumber was the main requisite. So the designs and plans in the book cover all types of homes; brick, hollow tile, stucco, as well as all wooden construction. The writer

wishes to express his gratification at the cooperation and readiness of both the Bureau and the Southern Pine Association in keeping strictly to any rulings or suggestions laid down by the Committee on Small Houses of the Institute. The contract was signed late in July, 1920. The Bureau was somewhat puzzled as to how to tackle the problem and it was well into September before they had arrived at a method or even an appreciation of the enormous problem that they had taken on so blithely.

To one who has never attempted such a problem the difficulties and puzzles that arise in laying out a program covering one hundred different homes, based on the demands of the United States in general, without duplications, without, so far as is possible, omissions of desired types, cannot be imagined. A special committee of the members of the Bureau spent nearly a month in laying out the program. This program was then divided among the different members asking for pencil sketches to be submitted by a given date. These sketches were then analyzed by the committee, accepted or returned for further study, until the complete program in sketch form could be visualized.

In the mean time the Working Drawings Committee had been busy working out the number and size of sheets,



WORKING DRAWING SHEET—SMALL HOUSE BUREAU

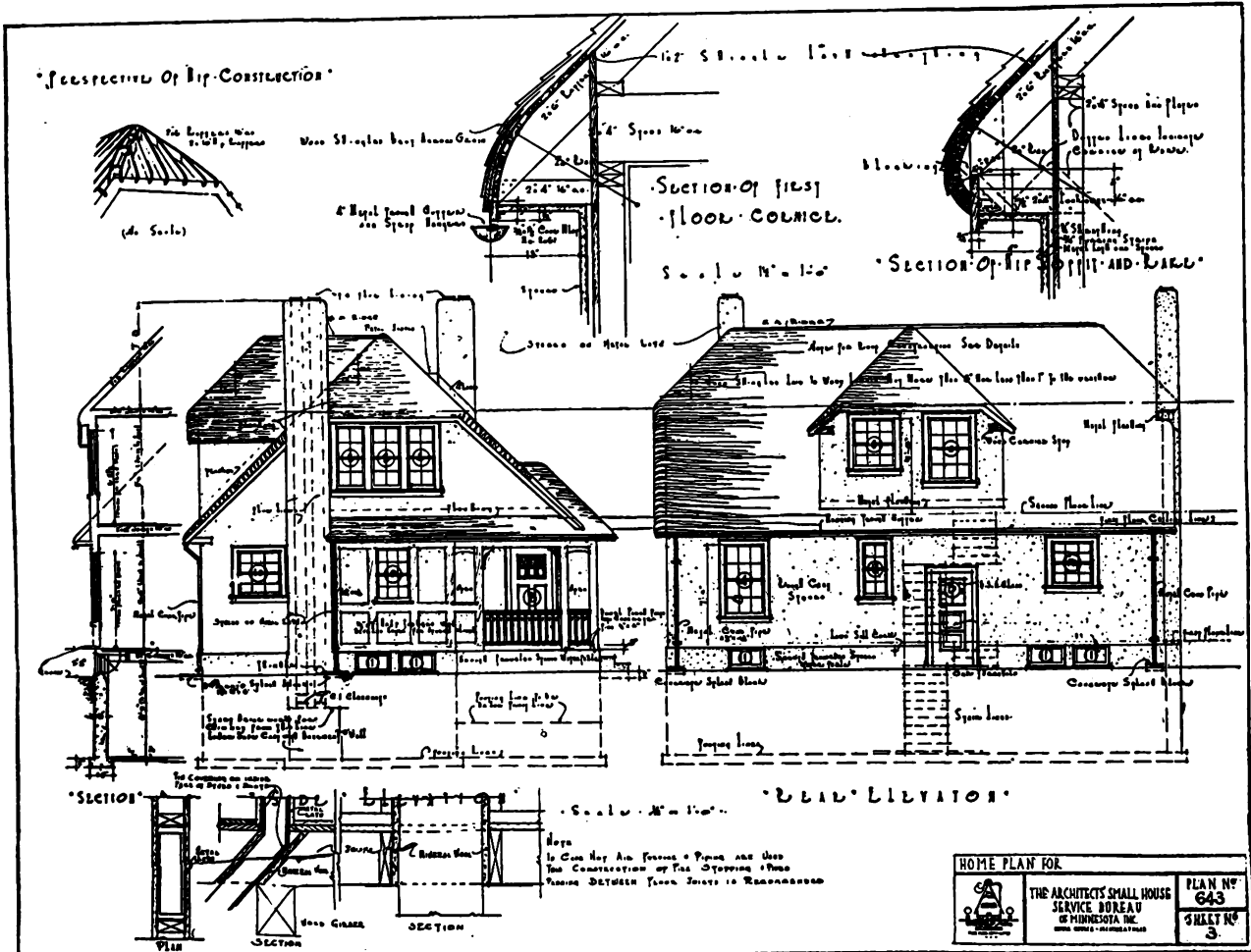
ARCHITECTS SMALL HOUSE SERVICE BUREAU OF MINNESOTA, INC.

standard methods of presentation, symbols, and other details, so that the final work, though done in many different offices, should all be along the same lines and of a necessary high standard. One of the members was appointed Technical Director and he watched the work in the different offices, giving weekly reports to the members of the exact state of the contract. A meeting of the Directors was held once a week during the working out of the contract and criticisms and comments were made freely at these meetings so that each member knew just how he stood in his share of the work in relation to the rest. The Working Drawings Committee made a rough check of the work in pencil stage sending it back with notations to the members doing the actual work. After the final inking in of the drawings they were checked and rechecked by the Committee until it was reasonably sure they were as accurately done as possible. Each member of the Committee was responsible for a certain part of the work, one on stairs, one on general dimensions, one on plumbing, one on lighting, and so forth.

And again, in the meantime, came the making of the rendered perspectives for publication in the book. Mr. Jules Crow, of New York, came to Minneapolis for two months and worked on this doing nearly fifty per cent of the one hundred perspectives. The balance were done by

Mr. Roy Childs Jones, Mr. Jefferson M. Hamilton, and Mr. Rhodes Robertson. The quality of their work and the devotion shown to it speak for themselves in the results as achieved in the book as published. And again, a special committee was at work on a specification that should fit the work, and on the colossal job of getting out quantity surveys that should be accurate. A capable man was found for this and the work done by him and his assistants had, of course, to be checked by the members. Finally, Mr. Flagg and Mrs. Flagg were at work on the editorial matter. The descriptions of the houses and much of the text containing the personal intimate home touch were done by Mrs. Flagg. Here, again, came the careful checking and almost daily consultations and advice with the Editorial Committee.

To the credit of the Bureau and all its members and helpers be it said that on the day before Christmas Mr. Flagg was authorized to telegraph the Southern Pine Association that the Bureau had completed its part of the contract. Since that time the editors and printers have been busy and at the time this is written the book is ready to go to press and will probably be on the market before this goes into print. With the colossal job ahead of the Bureau its other work was allowed to ride of itself until the contract was finished. In spite of that inquiries kept



WORKING DRAWING SHEET—SMALL HOUSE BUREAU

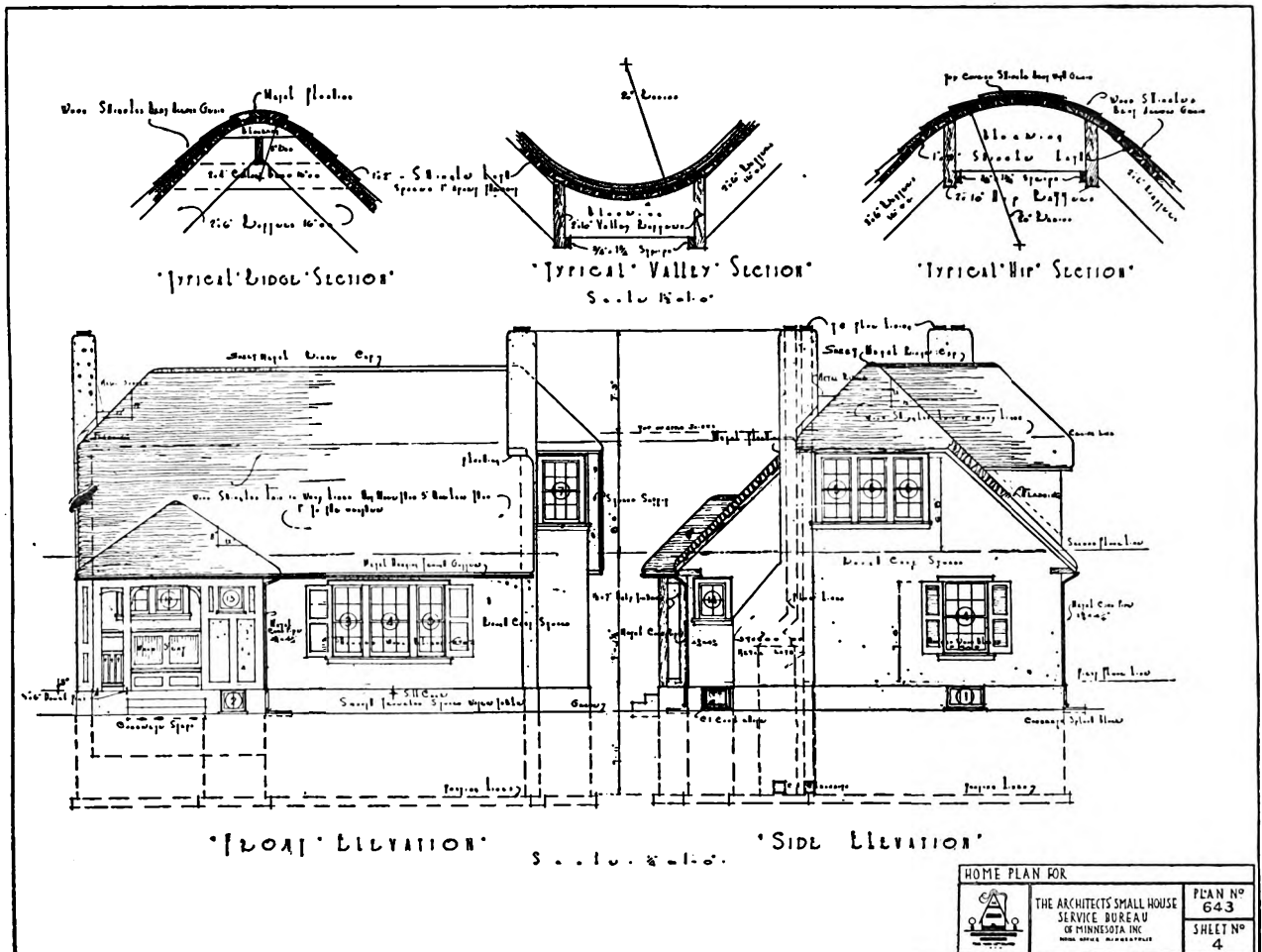
coming in and many of the old plans were sold. Building conditions were such that few of these were even started in actual construction but this spring should see them under way. If the building season opens at all the Bureau will be smothered in work.

Its entire effort has been devoted to making possible a complete and comprehensive service. The day an inquiry, or rather order, is received for a plan, the complete set of drawings, specifications and quantity survey will be mailed to the buyer or handed to him in person. Much time and thought has been expended on being sure of this prompt service, to say nothing of the perfection of the set of plans ready to be delivered. The Bureau has realized that it has entered the field of small homes, hitherto almost unknown to the profession in general, and that it must make such a showing as will prove that architecture is a real profession and that an architect can give real service. If the Bureau cannot give such a service as has never been given before by any so-called plan services it will not justify its existence. The writer feels that the service as planned and ready now is more than adequate to fully justify itself.

One of the most interesting things about the entire year's experience has been the discovery, and this has been doubted by many in the profession, that a group of

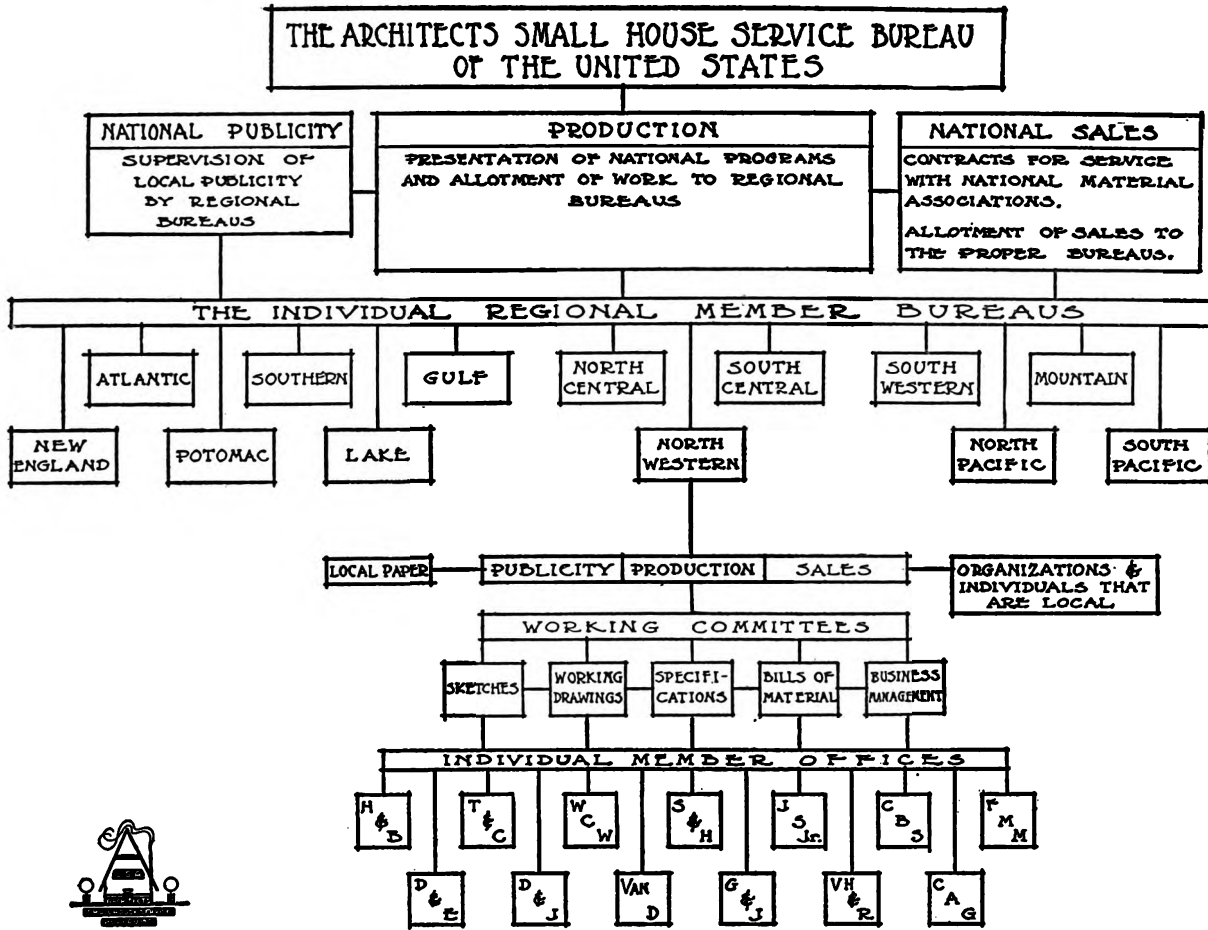
architects can all work together in the finest spirit of rivalry for the best that is in them, can cooperate thoroughly, can give and take criticism, can abolish all of the old time professional jealousies, and can do a big job in a thoroughly efficient and business-like way. No individual architect, firm or workman has his mark on any of the work produced. It is all done by the Bureau and all the members stand as a unit in accepting praise or blame for any and all parts of the work done.

While, previous to this time, no publicity has been given to the fact that the Bureau had a contract with the Southern Pine Association for one hundred homes, nevertheless the news has leaked out and a number of inquiries have come in as to whether the Bureau has sold itself to the lumber industry, whether the Southern Pine Association had the control of the Bureau's future work, and a number of similar queries started by I know not what methods of reasoning. Suffice it to say that the Bureau has a contract with the Southern Pine Association similar to the contract of any architect with any owner. The Bureau has undertaken a definite piece of work for the Association which it is carrying out to the best of its ability. As with any piece of architectural work the drawings, specifications and quantity surveys are "Instruments of Service,"

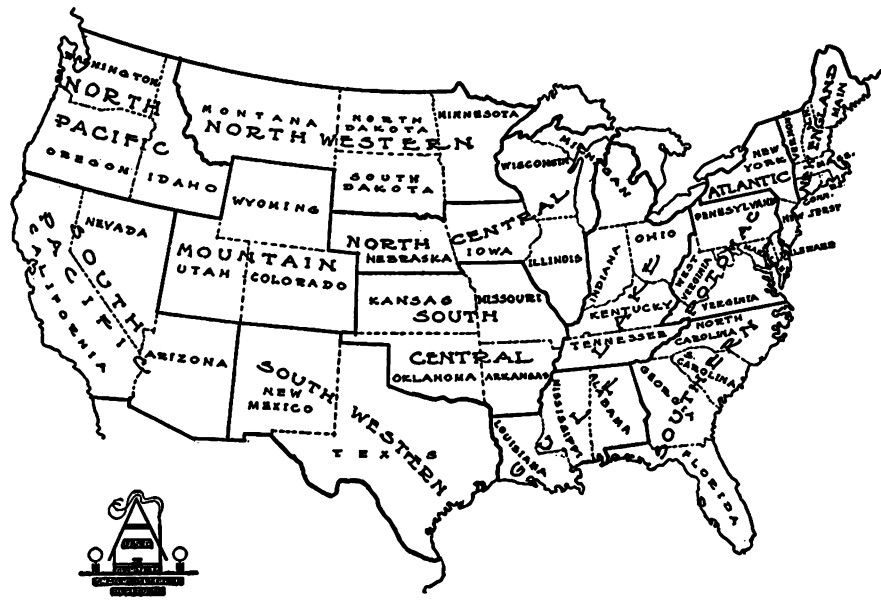


WORKING DRAWING SHEET—SMALL HOUSE BUREAU

ARCHITECTS SMALL HOUSE SERVICE BUREAU OF MINNESOTA, INC.



- ADMINISTRATIVE DIVISIONS OF -
- THE ARCHITECTS SMALL HOUSE SERVICE BUREAU -
- OF THE UNITED STATES -



and, as such, are the property of the Bureau. Such an organization as the Bureau, must of necessity, deal with large numbers of plans, and, therefore, cannot enter the field of individual designing. Its object, perforce, is to prepare completed work that will sell to those people that cannot afford the cost of individual planning by an architect. The vast majority of small home work being done with ready-made plans or no plans at all, it is felt, with confidence, that ready-made plans such as are furnished by the Bureau will fill a great lack in this country.

It has been further stated that the work of the Bureau will be in direct competition to that of many architects. Inasmuch as the work is limited to small houses this would affect but very few architects. Those few who are making a living by such small work will find the answer by joining a Bureau, taking over its work, doing the supervision that will be called for, doing the large amount of work that a Bureau must do and which, by the very size of the work developing on the horizon, will enable it to pay properly for such work. Furthermore the class of work turned out by the Bureau will serve to educate the public as to what an architect can and should do, and will be of almost inestimable value in helping the struggling architect in the small remote communities to keep up his standards and maintain his place in the profession.

The Committee has found, throughout the past year, that the need for a great organization, covering the entire country, was immediate. Otherwise there would be duplication of effort in different parts of the country. Following, therefore, the instructions of the Convention, it has laid out the plans for the Architects' Small House Service Bureau of the United States, Incorporated. This central body has been formed and is getting the various regional Bureaus in the different parts of the country under way. If the rest of the profession will follow the lead of Minnesota in this regard, the next year will see many regional Bureaus established and working together to cover the small house work of the entire country. It will see several hundred architects profitably employed in producing plans for small houses, and the springing up, from one end of the country to the other, of a home building nation, building homes that are livable and useful, economical, safe and good looking. And these homes will ultimately be designed by architects who live in the different localities and thoroughly understand the many and various problems of building in their own bailiwicks.

The charts attached show the districting and organization of this national Bureau and the organization of each component part thereof.

EDWIN H. BROWN.

"TYPICAL ROOF-FRAMING" "PERSPECTIVE" - No. Scale

"1/4" SCALE DETAILS OF "PORCH AND BENCH"

"1/4" SCALE DETAIL OF "CASEMENT WINDOWS"

"1/2" SCALE DETAIL OF "OUTSIDE DOOR FRAME - SILL"

"1/2" SCALE DETAIL OF "WALL-FRAMING"

"KITCHEN CABINET" - Scale 1/2" = 1'-0"

SECTIONS

MATERIALS	ELECTRIC WIRING SYMBOLS
CONCRETE	CELLING OUTLET
BRICK	DROP CORD
WOOD	BRACKET
PLASTER	BASE PLUG
	SWITCH
	3-WAY SWITCH
	GAS OUTLET

HOME PLAN FOR
 THE ARCHITECTS' SMALL HOUSE SERVICE BUREAU OF MINNESOTA, INC.
 PLAN NO. 643
 SHEET NO. 5

WORKING DRAWING SHEET—SMALL HOUSE BUREAU

The Congress of the Building Industry

Commenting on his recent visit to the Pacific Coast made in the interest of the Congress of the Building Industry, Mr. Robert D. Kohn, Chairman of the Congress says:

"The most surprising point about the meetings held in various Cities with contractors, architects and labor men in the interest of the Congress of the Building Industry was the unanimity with which the idea was welcomed. There were questions as to the practicability of the plan, but there was a very general willingness to join in the effort to bring together the various elements in the building industry in an attempt to cooperate in clarifying the functional relationships of the parts to the whole. In some Cities contractors had actually approached the architects in unsystematic and incompletely thought-out efforts to get together; in others the various professional branches of the building industry had joined to coordinate their efforts; in no place had any effort been made to bring all the elements together.

"Two criticisms of the Congress plan, in the course of this visit to the coast, deserve public attention. The first was that the Institute by encouraging this new move is really creating a new organization when one has already been established to do the same thing. This objection was heard from people who had evidently not distinguished between what the Congress of the Building Industry proposes to do and the programme of the Federation of Construction Industries. In general it was easy enough to point out that the Congress of the Building Industry will lay its primary stress on the function of investigating the status of the various branches of the building industry, looking into requirements as to supplies of building materials, the requirements and supply of labor of various kinds, the training for the crafts, the basis of building credits, the methods of contracting, with a view to finding out our own faults, correcting existing evil and setting the industry right as a whole. The Congress of the Building Industry is not a boosting organization. It practically says that the Building Industry as a whole cannot expect to get on its feet, and become prosperous by merely shouting that people ought to build and build now. The Congress organization says 'there is something the matter

with us and there is a great deal the matter with the whole industrial machine of which we are a part. Until we can start our industry in the right direction we cannot expect the public to have confidence in us. We are trying to create an industry conscience, an industry public opinion which will at least make impossible the unfair, disgraceful combinations and restrictions which have marked the functioning of the building industry throughout the whole country.' The Board of Directors of the American Institute of Architects voted last year to authorize this move for a 'Congress' because it knew of no other organization that was minded to do this fundamental job.

"The other criticism voiced by some contractors, and architects in the course of the Pacific coast meetings and elsewhere was to the effect that the job we had set out to do was too difficult. It is true that the realization of the purposes of the Congress movement will not be reached within the life time of any one now interested in it. The great result produced by this kind of a movement as against one that strives merely for an immediate prosperity boosting result is in the nature of a by-product; the new relations created by cooperation. It matters not whether the ends we wish to attain are in a large measure reached in the near future. It does matter very much indeed that in the working toward these ends, in the process, we achieve more good than in the measures of attainment of our efforts. The greatest advantage we hope for is that when all of the various functioning parts of the building industry in any community get together and consider the problems of the industry, unexpected things of value will come out of the relationship. In other words, great good will come out of the means, no matter how much may be attained of the end sought.

"It is an exceedingly hopeful sign to those who are devoting much time to the Congress movement, trying to organize local effort, to find that steps are being taken toward creating local groups not only in Omaha, Philadelphia, Boston and New York, but, since the recent trips of Mr. Kendall, Mr. Kohn and Mr. Russell, also in Minneapolis, Seattle, Portland, San Francisco, Los Angeles, Dallas, Louisville and New Orleans."

The Building Industry

Two Analyses

The following letter has been addressed to the Calder Senate Committee on Reconstruction:

Twenty of the leading Architects of Chicago were invited to meet and give their opinions and suggestions for submission to your honorable body. Thirteen Architects met, and after discussing the matter in two sessions, the following categorical statements respecting the existing hindrances to building and their corresponding remedies were agreed upon by the undersigned. The chief hindrances are:

1. Popular belief in the existence of monopolistic fixing of the price and the output of labor and the fear of juris-

dictional and other strikes and lockouts with an attendant system of graft and frightfulness.

2. A popular belief in the existence of artificial regulation of price and output in the production and distribution of building materials with and without the connivance of organized labor, together with inadequate and manipulated transportation facilities.

3. High cost of money for building enterprises with exceedingly high commission charges for building loans.

The suggested remedies are respectively:

1. The prohibition of the use of force or coercion strikes and lockouts for the settlement of jurisdictional or

or wage disputes and the restoration of the right of every citizen to enter as an apprentice or tradesman any field of endeavor he chooses without let or hindrance from any organization except the Government itself.

2. The creation of a permanent bureau or department of buildings at Washington leading to the democratization of building associations and the prohibition of artificial fixing of prices and output and the protection of the rights of any individuals to enter production fields without let or hindrance from any association.

3. The enactment of a law making the postal savings and other savings deposits of the people available for individual home building and ownership at rates commensurate with savings deposit interest in conjunction with a national building bureau or department, operating in a manner similar to the farm loan banks system and furnishing low cost plans and desirable information relative to individual or single family home building.

We further beg to state there is now such a volume of projects on file in the Architects' offices in Chicago being held up by the prevailing unsatisfactory building conditions that if released could not possibly be built within the next two years with the available supply of organized labor and building material; and further, we believe that even if money were available on easy terms the cost of building could not be very materially reduced within the next few years and might be increased on account of the limited supply of building materials and labor.

Respectfully submitted, Henry K. Holsman, President, Illinois Chapter, American Institute of Architects; F. E. Davidson, President, Illinois Society of Architects; N. Max Dunning, Ralph C. Harris, Albert M. Saxe, Robert S. Ostergren, J. A. Armstrong, H. B. Wheelock, Irving K. Pond, Alfred S. Alschuler, D. H. Perkins, J. C. Llewellyn C. H. Hammond, G. C. Nimmons, John A. Nyden, Richard E. Schmidt.

Our Philosophy of Restriction

The investigation of the Lockwood Committee has thrown some light upon the question—what is the matter with the building industry? But still the question remains, for the same ready answers are ventured today as prior to the investigation. It is the fault of Labor—strikes, high wages, low output, sabotage. It is the fault of money lenders—they will not advance much money for building—money is tight. It is the material man's fault—he is not producing—his plants are on part time or shut down—there is an "understanding" between material men. It is the contractor's fault—his organization is inefficient. It is the investor's fault, the speculator's fault—neither will invest. It is—but why add to the list of reasons advanced under a partisan view point as to who is to blame?

The investigation revealed clearly the existence of a conscious policy—the restriction of output—operating in every phase of the building industry. But with the mere matter of restriction of output the investigation was not concerned. It was concerned with collusive action—with individuals acting together with a view of controlling output and maintaining or advancing prices. Collusive action was discovered, penalties were imposed upon the

offenders. Opinion has it that the way is now clear. Having busted these little combinations we are now in a position to organize the building industry on the basis of "service" and "cooperation." But while we are talking about "service" and "cooperation" we are also talking about how much better it will be, having busted the combinations acting in restraint of trade, to get back to the basis of price competition. Evidently we propose to "cooperate" in organizing the building industry as a "service" to be rendered under the rules of price competition.

Certainly this is confusing. What do we mean by service—by cooperation? What do we understand by price competition? To render service, or to cooperate implies action animated by some other idea than that of getting something for nothing. What we evidently have in mind is that our action shall be directed always toward some useful end. It implies the removal of all barriers and obstructions which retard the production and the distribution of goods. Cooperation or the rendering of service are ideas which are readily grasped when action is conceived in terms of *use* or in a technological sense. In fact technological knowledge consists mainly of efficient ways and means. But the ideas of cooperative effort and service do not lend themselves to interpretation in terms of merchandising or business traffic. For business traffic is a matter of buying and selling with a view to securing as wide a margin of net money returns above cost as possible. This margin of net money returns above cost is obtained by so manoeuvring as to gain a differential advantage which can be expressed in terms of price. Under the rule of business traffic the question of price has come to so completely control the situation that action in the interest of the common welfare may only be taken when it may be shown that such a move will show profit in terms of price.

Living, as we do under the rule of price, this statement is not likely to be accepted. But there is evidence a plenty at hand; almost any edition of a financial journal, or almost any daily newspaper will disclose captions, news items and editorials relating to plans looking toward the control of this or that commodity in the interest of price. Controlling or checking production—withdrawing goods from the market—are such commonplace acts as to warrant no unfavorable comment in the financial columns. It is the technique of business traffic and is blameless, of course, under the competitive system.

One reads for example, "world's supply of cotton hangs on price," and of the burning of the cotton crop and of the plans imposed by lenders of credit looking toward restricting the acreage planted. All this is done with a view of maintaining or advancing prices, although the need for more cotton be great. Under the rules of business traffic, too much milk to sell (at a high price) is a far more serious matter than not enough to drink. So that when spring comes the farmers are warned to curtail production notwithstanding the fact that the children of the tenements do not have enough to drink. Social functions are organized with a view of raising funds to supply milk to the hospitals while the producers are turning it into the streams or feeding it to the pigs. There may be a dearth of goods and houses—prices may be beyond the means of a majority to pay—yet at the first rumor of a fall in prices, factories go on short time or close altogether.

NEW YORK STATE ASSOCIATION—OBITUARY

All this is a matter of common notoriety; and we assume that such was always the case. It is really a modern phenomenon. Since the rise of the regime of money and price economy a shortage of goods—even a world shortage—has come to be viewed as evidence of business prosperity and national welfare. What we refer to as “over production” has come to be the central concern of business. The community may be in need; its inability to buy at the going price is taken as evidence of over production, so completely have we fallen under the rule of price.

But what is true of business is equally true of labor under the existing regime of money and price economy. Just as the business man goes into business traffic to make money so the purpose of work is to get wages. “By the test of money and prices, scarcity of product and shortage of labor are blessings without disguise, since the one is good for business and the other good for the workers. So that as this works itself out under the price system the gains of one become the losses of the other.”¹ This of course is recognized and as a consequence we find that the trade unionist, in his effort to create a situation advantageous to himself, has become, not as so many would have it a revolutionist or what not, but a man who proceeds to his work under the flag of business principles. He attempts to better his condition by resort to various ways and means of manipulating the price of what he has to dispose of—his labor. What this amounts to in the end is the conscious restriction of output. Giving less service for a stipulated wage, is getting a higher price for one’s labor—it is keeping the price up—it is controlling output.

That all who engage in business traffic and all who work for wages are guided by a single philosophy—the philosophy of the restriction of output—is not ordinarily granted. Reference to this is ordinarily a matter of partisan exposition—an attempt to blame it all on the other fellow. Take, for example, two editorials in the *Boston Herald*. These contained a detailed account of the numerous regulations of the trades unions, the net effect of which is to restrict output. The point of the articles, as suggested by the titles, was to show how labor was at the root of the housing problem. Labor was restricting output and the implication was that labor was wholly to blame. These editorials, setting forth the truth as regards the action of the trades unions, were no doubt convincing to the *Herald* readers. But failure to recognize that the trades unions were acting in accordance with the practice of those engaged in business traffic rendered the editorials of very dubious value.

For attention was focused upon an attitude, a type of action within a sector of the industrial front; it carried the implication that the general condition of mal-adjustment in the whole industrial field was due to these particular acts on the part of labor. It was completely ignored that this attitude toward production was nothing but the characteristic attitude—the typical action which controls the entire modern industrial world. *Restriction of output is not only characteristic but necessary, and therefore blameless under a system of production for a profit and of competition in terms of price.*

¹ See “The Philosophy of the Restriction of Output,” by Leon Ardzrooni, in *Annals of American Academy of Political and Social Science* for September 1920.

So that we are confronted with a larger problem than that of making a few adjustments in the practices of material men, contractors and workers. For under the regime of money and price economy the philosophy of the restriction of output gathers force while the common welfare falls by degrees into a more precarious state.

Individually we may choose to cooperate and to render a service; and we may act together in small groups. But under the rule of money and price economy, hardship falls thick and fast upon those who produce so efficiently as to cause prices to fall. So also with labor when it works so efficiently as to work itself out of a job and into the category of surplus labor. Under the conditions imposed by the competitive system one is unwise, indeed, to adopt for his own guidance another philosophy than that of the restriction of output. True, it is a selfish philosophy; it leaves the interest of the common welfare completely on one side—leaves it constantly in a slightly more precarious position as the two opposing forces in the struggle for position perfect their technique and attempt to gain their ends.

It is not merely what to do with the building industry; it is what to do with industry. It is more: It is what to do with the philosophy of the restriction of output under guidance of which we all go to our work.

FREDERICK L. ACKERMAN.

N. Y. State Association

AT THE annual meeting held in Albany on February 28, the chief topic of discussion was the proposed amendments to the Registration Law, which the Association approved. These relate chiefly to an annual renewal of the registration certificate as a means of keeping a more accurate record of the profession. The following officers were elected: President, Leon Stern, Rochester; First Vice President, Robert D. Kohn; Second Vice President, Riley Gordon, N. Y. City; Third Vice President, Edward W. Loth, Troy; Secretary, Walter G. Frank, Utica; Treasurer, H. W. Greene, Watertown. Directors, F. L. Ackerman, William Bannister, New York City; Thomas W. Gleason, Albany; Harry Tiffany, Binghamton; Ornan H. Waltz, Ithaca.

Obituary

²Frederick A. Russell.

Elected to the Institute in 1901; to Fellowship in 1915.
Died at Pittsburgh, Pa., February 25, 1921.

²Charles Bickel.

Elected to the Institute in 1899.
Died at Pittsburgh, Pa., February 1, 1921.

²Clarence E. Richards.

Elected to the Institute in 1899.
Died at Columbus, Ohio, February 25, 1921.

³Further notices later.

Tax Exemption and Housing

New York City boldly challenges our present financial system by passing an ordinance exempting dwellings from taxation for a period of ten years. Exemptions are calculated on the basis of 1,000 dollars a room, with a maximum of 5,000 for a family. The principle is not wholly new, yet it has never been tried for the primary purpose of encouraging building. It is computed that in the case of a house costing 5,000 dollars, the taxes avoided in ten years would amount to 1,425 dollars, or about 10 dollars a month during that period. The same would hold true of a twenty family apartment house costing 100,000 dollars, the saving in taxes declining proportionately as the cost of building rises. Those who favor the exemption believe that it will encourage the renewal of small house building and home owning. They base their belief on the fact that the exemption offers the greatest inducement to build on cheap land, and this can only be had in the outlying boroughs. But as the owners of this land are already preparing to raise the price, some of the saving will be lost before building is begun, and it remains to be seen how much of it can be saved in the long run. Likewise, there are ample grounds for wondering whether all of the saving will be made available to tenants who cannot buy land and build.

There is some belief at the present time that house building will be much stimulated. It is claimed by the promoters of the law that building materials are now at bottom prices, that loans can be had with the tax exemption as a basis, and that all is well with housing in New York City. But no man in his senses can believe that the way to get adequate housing is to subvention or subsidize it at the expense of the rest of the citizens. The increased service required from the city, as its area is expanded, its traffic increased, its schools more and more crowded, its public services more heavily drawn upon, must be paid for out of taxation levied on somebody. Exemption means that certain fortunate citizens may live in New York City, free, for ten years, while their neighbors pay the cost of providing them with the conveniences and amenities of city life—or else it means that owners and landlords, taking advantage of the situation, may cheat both tenants and the city.

The present situation will make it difficult to determine just what degree of success or failure may be attributable to tax exemption. There is a shortage of money for building loans, or, to put it perhaps more truthfully, there is a persistent unwillingness on the part of lenders to believe that the cost of building will abate. Thus the proportion of money offered in loans is much less than usual, for the amount is based on prewar costs. Likewise it is equally true that the rent restrictions are acting as a deterrent. It is true that the present law is not applicable to new buildings, but there is a fear that it may be made to apply to them, or that there may be some other form of interference, and thus there are many who say that they are permanently through with speculative building.

It should be remarked in passing that the decision of the Courts upholding the rent laws was accompanied by one of the most remarkable statements ever handed down from the bench. In effect, it declared that the rights of private

property must stand aside in the face of a public emergency so serious as the housing crisis. The owners group announce that the legal battle will be carried to the United States Supreme Court, and it may well be that the delay in obtaining a final decision on a question which manifestly affects our whole structure of business will act as a deterrent to house building.

It seems not too much to hope, however, that the experiment in New York may have an educational value far outweighing any immediate gains or losses. True, we do not learn easily, but the decision of the court to which allusion has been made is one that will not rest easy in any grave that may be dug for it.

C. H. W.

Before the Coffee and Cigars

A rather oppressive lull in the talk was broken by the hostess who inquired if anyone had read the story of the building of the Taj Mahal, in the *March Atlantic*. She thought it very lovely, and such a tribute to architecture! It was the doctor's wife who echoed her sentiments: "It is a beautiful story, beautifully told. You just thrill with the tale of that imperishable translation of a great love into a piece of architecture at which the whole world marvels. But what a curious way the *Atlantic* has? It lifts you up to a pinnacle of ecstasy with such an article as that, and then, again dealing with architecture, it dashes you down into the hopeless chasm of modern machine building. A man named Brigham has an article on housing in the same number, and it is about the dreariest thing you ever did read. It is as coldly calculating as a board of directors. It talks about houses just as Piranesi pictured prisons. You get the impression that this man Brigham has been running a soup kitchen, or dispensing cast-off clothing, and that now he has turned his attention to houses. You never could possibly surmise that architecture had the least possible relation to a house—or, to what is really important in the question—a home. You simply feel after reading such an article, that the *Atlantic* is easily duped when it strays from its field."

"Agreed," responded the architect. "It's even worse than that, for the article is full of economic falsities, legalistic platitudes, and apparently ignores the fact that in the last fifty years many nations have exhausted all of his senile ideas. But is it possible that anyone reads the *Atlantic* for information?"

There were no defenders, but the lawyer looked a little peeved over the word legalistic. "It's all very well," said he, "to wish to relate architecture to the building of houses, but every lady cannot have a Taj Mahal for her nest of love. I get a little bit fed up with this fine art stuff, you know. It's all right in its place. I don't say it isn't. But just the same it can be overdone in talking about houses."

"Check, and amen, if you will," said the "doctor, but in the last forty years of my practice I have seen American housing conditions go from bad to worse. How are they to be changed by applying more of the same system that has brought them where they are? That is what bothers me."

B.

NEWS NOTES

News Notes

THE LIST of awards to students in American schools of architecture, whose work was exhibited at the Pan-American Congress in Montevideo, last year, has been received and is as follows:

GOLD MEDAL.—C. Harold Van Buskirk, Univ. of Pa.; E. Stonffer, Univ. of Ill.; Walter Wilson, Columbia; Arnold B. Berg, Univ. of Mich.; R. M. Kennedy, Cornell.

SILVER MEDAL.—Ben Shafiro, H. Roulem, Univ. of Ill.; L. C. Licht and W. H. Livingston, Univ. of Pa.; Lessing Williams, Joseph Levy, R. S. Twitchell, Columbia; C. W. Attwood, W. L. Rindge, Univ. of Mich.; R. Bailey, C. M. Castillo, R. W. Cheeseman, H. S. Churchill, E. J. Trutham, Cornell.

FIRST MENTIONS.—Frederick A. Chapman, H. P. Barney, P. Chu, and Harry Sternfeld, Univ. of Pa.

DIPLOMAS OF MERIT.—C. E. Levy, and Y. C. Lu, Cornell; H. J. Burke, Peter Binger, Helen M. Gail, Allen Terrell, and C. H. Trofast-Gillette, Columbia; H. L. Parr, L. L. Huntington, and D. A. Sondal, Univ. of Ill.; Fred A. Brinkman, Paul O. Davis, Ralph S. Gerganoff, Herbert D. Schmitz, and Gilbert S. Underwood, Univ. of Mich.

THE JOURNAL benefits from and is encouraged by appreciations and criticisms. One of these, received from the representative of one of the largest purveyors of building materials in the United States, is particularly gratifying, not only to us but to the officers and members of the Institute. Therefore we print it:

"I wish to tell you how much I appreciate the monthly visits of THE JOURNAL. I find much in each issue to help me in my work which is largely educational. I am heartily in sympathy with the work of the Institute, and especially with its recent efforts to create and establish a better understanding and closer bond of sympathy between employer and employed. My work is largely with architects, many of whom are not members of the Institute, and I take occasion when the opportunity presents itself, to speak a good word for your society."

LEST WE become too elated, however, the *Charette* published by the Pittsburgh Architectural Club, says: "This month we think of the contents of THE JOURNAL for February about the same as we did of the cover page last month. (That was very, very ill, as we remember quite well. Ed.) The advertisements are increasing, so perhaps better material will accrue from business prosperity. As it is the magazine deals only with current events, facts, figures and structural service. The beautiful in architecture is hibernating this month. The frontispiece, a photo of a bit of Columbia University, is the worst we ever saw."

SPEAKING at the Convention of the Association of General Contractors, Mr. John Lawrence Mauran, Past President of the Institute, predicted the approach of a new era, in which there would be "friendly conference between the expert builder and the expert architect for the benefit of the owner and the public—architect and builder to be on an equal footing and to render for a fee a truly professional service."

COURAGEOUSLY refusing to lend support to the suppression of public opinion contrary to the taste of the

general palate, Mr. Louis S. De Lone, President of the Builder's Guide of Philadelphia, published the valuation of the conference of the Philadelphia Chamber of Commerce on the Building Industry, as prepared by John Irwin Bright, in which he plainly pointed out the futility of trying to examine the building industry through a telescope directed at the workman and his wages. We are informed that no other Philadelphia journal would lend any space to Mr. Bright's exposition of the fundamental economic facts that underlie the present situation, especially in relation to housing.

ANNOUNCEMENT has been made by the Secretary that Mr. Julian Clarence Levi, Secretary of the Committee on Foreign Co-operation, is proceeding to Paris and will there supervise the hanging of the exhibition of American architecture which will form a part of this year's Salon. Mr. Levi will carry a cordial message from the Institute to our confreres in France.

AFFILIATION with engineering societies was considered very carefully at the March meeting of the Baltimore Chapter, which finally voted not to join with the new Engineer's Club, but rather to appoint a special committee which should canvass methods of co-operation such as would leave the Chapter free of entanglements where questions of public interest were at stake. A good-sized minority, however, felt that the proposed affiliation would thoroughly dissipate any charges of aloofness.

REPORTING adversely, the Committee on Competitions of the Baltimore Chapter was sustained by the Chapter, which thereby records itself against any change in the present Competition Code.

IN THIS issue of THE JOURNAL there are reproduced more stage settings designed by members of the Institute. These were held out of the last issue in order to make room for the drawings shown in the Le Brun Scholarship Award, since that event was thought to possess an interest which warranted the immediate use of our pages. On the other hand, we rather regretted having to break the whole presentation of settings, and we hope that our unselfishness, together with the merit of the illustrations, will be a satisfactory amend.

REGISTRATION legislation is being considered by the Iowa Chapter which has appointed a Committee of three, Messrs. Wetherell, Boyd, and Vorse, to confer further with engineers.

SALFORD, England, has accepted the tender of the Building Guild of Manchester for constructing 184 houses at the price of 184,560 Pounds. This is one of the largest contracts ever awarded to the Guilds.

MEMBERSHIP in the Institute does lag for want of initiative, if we may so reason from the activity of the membership committee of the New York Chapter. Mr. John Van Pelt, its Chairman, reported at the March meeting of the Chapter that ninety-seven new members seemed likely to result from the applications filed in the territory of the New York Chapter, although it was hoped to complete the century before the Convention. From all accounts it seems quite possible that the Secretary's report in May will reveal a growth in Institute membership not far from 500, during the last year.

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ANNOUNCEMENT is made by Dr. Addison, Minister of Health, that 20 housing contracts are now being carried out under the Guild system. It is also reported that great progress has been made at Walthamstow where the London Guild is to build 400 houses. The first brick was laid early in December and 56 houses are now in various stages of completion. Mr. Tufton, the works manager, elected by the workers, says that many men prefer the Guild idea of six days pay, rain or shine, to the old system of a higher rate of pay but with no provision for lost time.

WESTMINSTER ABBEY was the subject of a lecture recently given by Professor W. R. Lethaby at Manchester University, who said, "Nowadays, we call the Abbey "Gothic," but its builders did not call it anything at all. They just built in the customary way—"in the way that a cook makes an apple pudding." The builders went on seeing how it would come out. At the same time the mason's art was developing, and this in time, by its own redundancy, choked the craft of building. It became a sort of disease, and had brought the decay of what we called Gothic architecture.

"In the old days," he said, "there was no difference between architecture and building, none between the architect and the builder, and very little between master and man. A piece of Gothic architecture was by them just called 'work.'" The mysterious ornaments they had used could still be seen today in the art of a wagon builder, or on gypsy caravans—it was customary with the masons of Westminster, as with some moderns, to do "something for fun," and the frills that worried us now were that something.

And so he asked builders of today to think of cathedrals in a different light—not as Gothic architecture but as a piece of building, as a development of workmanship which had grown out of the mason's art. We, today, must find some way of beginning the art again from within, for we had the responsibility of planning for the next 500 or 1,000 years ahead. We wanted a thousand times more ambition put into the art of building—it was not a question of this man's villa or that man's cottage, but of making Manchester sweet from end to end.

CITY PLANNING students in the United States will be interested to know that in the competition for the re-planning of the city of Lille, France, the first prize was won by Monsieur Jacques Greber, associated with Cordonnier fils. Monsieur Greber will be remembered as the French architect who is so largely responsible for the exhibit of American architecture which will be a part of the Paris Salon of 1921.

ADVICE to prospective builders as to how and why an architect should be chosen is excellently set forth in a small circular issued by the Idaho Society of Architects and based on that published for some time by the Iowa Chapter of the Institute. It has the great merit of not seeking to deceive anyone into the belief that any architect is worth his fee. Rather does it emphasize the fact that when a competent man has been chosen, the fee is quite likely to be fair and a good investment.

BULLETINS about Housing multiply with astonishing rapidity. The best one that has ever come to the attention

of THE JOURNAL is that issued by the Extension Division of Indiana University. It was prepared apparently for the High School Discussion League, by Adela K. Bittner. Within thirty-two pages she has compressed more information than can be found in thirty-two ordinary bulletins.

SCHOOLS naturally come in for discussion in the subject of education, and the Executive Committee of the National Committee for Chamber of Commerce cooperation with Public Schools, of which Mr. George D. Strayer of Teacher's College of Columbia University is Chairman, has tabulated data of astonishing and even horrible interest. "Only 5 per cent of the school buildings are of what is called fire-proof construction. At least 25 per cent of the two poorest types are of more than two stories and without fire escapes. Thirty per cent of these two types have no fire extinguishers, and less than 10 per cent have automatic sprinklers, with only 11 per cent having automatic fire alarms." The *New York World*, commenting on the report, announces that pupils are herded in fire traps and that tens of thousands of pupils in 429 cities are on half time because of lack of building. On the subject of playgrounds the report states that only one half of the 3,600,000 children covered in the study have playground space of 6 by 6 feet per pupil, while the rest have no space at all. It is not a very good commentary on our boasted progress.

LEGISLATIVE work has largely occupied the attention of the Connecticut Chapter, which at present finds itself confronted with two conflicting statutes, one providing that an appropriation shall have been made before any competition takes place, while the other insists that before the State shall appropriate money, plans, specifications, and bids shall have been received. The Chapter has prepared what appears to be an excellent bill, providing for a suitable type of competition and also making possible, under certain conditions, for the direct appointment of an architect by the Board in charge of the project.

ALEXANDER B. Trowbridge and Frederick Lee Ackerman announce that the partnership of Trowbridge and Ackerman, Architects, has been dissolved. Mr. Ackerman will complete the unfinished work of the firm, and will continue the general practice of architecture at 25 West 44th St., N. Y. under the name of Frederick Lee Ackerman, Architect. Mr. Trowbridge will continue his services as consulting architect to the Federal Reserve Board, Washington, D. C., and to the Federal Reserve Bank of New York, with offices at 120 Broadway, New York. At the expiration of this engagement, he will open new offices for a specialized practice as consulting architect.

THE EIGHTH annual meeting of the Association of Collegiate Schools of Architecture will be held at Washington, May 9, 10, 11.

THE JOURNAL desires to make its columns valuable as a medium for an exchange of thought on all matters relating to the profession of architecture. All such expressions, whether in editorials, or otherwise, must obviously be accepted as expressions of individual opinion. Contributions are invited, all articles to be signed by the name or initials of the writer in acknowledgement of their source and the writer's responsibility.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Committee Activities

A New Departure in Standard Specifications.

(9)—The specification writer labors under the handicap of a limited knowledge of the technique surrounding the production, and to a lesser degree the technique of utilization of many of the products which go into the construction of buildings in connection with which he functions. He knows a little about a great many of the things he has to use in translating design into concrete actuality. This limitation of technical knowledge has produced profits for the manufacturer and purveyor of cheap and shoddy materials, since it cleared the field for the competitive sale of products that were not competitive judged from the standpoint of service value.

Because ignorance on the part of the consumer results in profits to the producer, the short-view policy of many manufacturers has been to withhold from the architect and his specification writer that information about the product which is essential to wise selection in the interest of ultimate economy.

This policy, it is now being discovered, is reacting to the disadvantage of whole industries. Failures of individual products are, by reason of this same limited knowledge, viewed as characteristic of whole classes of products. To be more specific, the failures of low grade and defective architectural terra cotta have riveted in the minds of many the assumption that all terra cotta is a cheap and shoddy material to be used as an economy effecting substitute, and only when necessity demands.

We architects have known really very little about the technique of manufacture and of setting terra cotta. The terra cotta industry, as now completely represented in the National Terra Cotta Society, has decided to take the architect into its confidence, give him the information he must have in order to discriminate between good and poor material and between good and poor setting. In its legitimate field of usefulness as a material for the translation of certain periods or styles in architectural design, and not as a cheap substitute, good architectural terra cotta has an undeniable claim to recognition.

Some months ago, the Committee on Structural Service was requested by the National Terra Cotta Society to cooperate in the preparation of a standard specification for architectural terra cotta. After an extended discussion of the problem and the factors involved, in the course of which the Society's Executive Secretary and the members of its Specifications Committee disclosed with the utmost frankness the difficulties confronting their industry as a whole, which they claimed arose from the lack of standards, the lack of an industry policy and the lack of knowledge on the part of those to whom or through whom the industry sold its product, the Committee on Structural Service,

through its Chairman, suggested to the Society that a document be prepared which should consist of four parts; 1. A full and complete standard specification for the manufacture and setting of architectural terra cotta; 2. A short form specification based upon the standard which architects might embody in their general specifications; 3. A glossary of terms or standard nomenclature; 4, and most important, a discussion on the technique of manufacture and setting. This discussion, it was proposed, should develop thoroughly and completely the whole process of manufacture, the causes of defects, a description of the characteristics of good terra cotta and how they are secured. With respect to setting, the discussion should develop good practice and point to bad practice which results in failures. The importance of supervision should be emphasized. The reason for this emphasis lies in the fact that the material is usually set, not by the manufacturer but by a contractor who is generally moved by a desire to make the setting cost him as little as possible.

The suggestion was enthusiastically accepted by the Society at its convention in New York on Feb. 7 and 8 last, and the first draft of this four part document is now in type. It will become the basis of the joint work of the two Committees.

Since before the war the National Terra Cotta Society has maintained two fellowships at the U. S. Bureau of Standards. A vast amount of research work has been accomplished. The assistance of the men holding these fellowships and the exact knowledge of the material which they can contribute to the coming discussions will be of the greatest value. The Committee feels that the architectural profession may look forward to the production of a new and most useful document traveling under the title of "standard specification."

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Portland Cement Stucco. (21e1)—The following is an authorized reprint of the Standard Recommended Practice for Portland Cement Stucco, from the copyrighted Proceedings, Vol. XVI, 1920, of the American Concrete Institute. The Portland Cement Association has reprinted this specification, in a booklet entitled "Recommended Practice for Portland Cement Stucco."

General Requirements. 1. *Design.*—Whenever the design of the structure permits, an overhanging roof or similar projection is recommended to afford protection to the stucco. Stuccoed copings, cornices and other exposed horizontal surfaces should be avoided whenever possible. All exposed stuccoed surfaces should shed water quickly, and whenever departure from the vertical is necessary, as at water tables, belt courses, and the like, the greatest possible slope should be detailed. Stucco should not be run to the ground whenever other treatment is possible. Should the design of the structure require this treatment, the backing should be of tile, brick, stone, or concrete, providing good mechanical bond for the stucco, and should be thoroughly cleaned before plastering. Unless special care is taken to thoroughly clean the base and each plaster coat from dirt and splash before the succeeding coat is applied, failure of the stucco may be expected.

2. *Flashing.*—Suitable flashing should be provided over all door and window openings wherever projecting wood trim occurs. Wall copings, cornices, rails, chimney caps, etc., should be built of concrete, stone, terra cotta, or metal with ample overhanging drip groove or lip, and water-tight joints. If copings are set in blocks with mortar joints, continuous flashing should extend across the wall below the coping and project beyond and form an inconspicuous lip over the upper edge of the stucco. Continuous flashing with similar projecting lip should be provided under brick sills. This flashing should be so installed as to insure absolute protection against interior leakage. Cornices set with mortar joint should be provided with flashing over the top. Sills should project well from the face of the stucco and be provided with drip grooves or flashing as described above for brick sills. Sills should also be provided with stools or jamb seats to insure wash of water over the face and not over the ends. Special attention should be given to the design of gutters and down spouts at returns of porch roofs where overflow will result in discoloration and cracking. A 2-inch strip should be provided at the intersection of walls and sloping roofs and flashing extended up and over it, the stucco being brought down to the top of the strip.

3. *Preparation of Original Surface.*—All roof gutters should be fixed, and downspout hangers and all other fixed supports should be put in place before the plastering is done, in order to avoid breaks in the stucco.

Metal lath and wood lath should be stopped not less than 6 inches above grade to be free from ground moisture.

All *trim* should be placed in such manner that it will show its proper projection in relation to the finished stucco surface, particularly in overcoating.

Masonry Walls. 4. *Tile.*—Tile for exterior walls should preferably be not less than 8 inches thick, and should be hard-burned, with dovetail or heavy ragged scoring. Tile should be set in cement mortar composed of one part cement, not more than one-fifth part hydrated lime and three parts sand, by volume. The blocks should not vary more than $\frac{1}{2}$ inch in total thickness and should be set with exterior faces in line. Joints should not be raked, but mortar should be cut back to surface. Neither wire mesh nor waterproofing of any type should be applied to tile walls before plastering. The surface of the tile should be brushed free from all dirt, dust and loose particles, and

should be wetted to such a degree that water will not be rapidly absorbed from the plaster, but not to such a degree that water will remain standing on the surface when the plaster is applied.

5. *Brick.*—Surface brick should be rough, hard-burned, commonly known as arch brick. Brick should be set in cement mortar with joints not less than $\frac{3}{8}$ inch thick, and the mortar should be raked out for at least $\frac{1}{2}$ inch from the face. The surface of the brick should be brushed free from all dust, dirt and loose particles, and should be wetted to such a degree that water will not be rapidly absorbed from the plaster, but not to such a degree that water will remain standing on the surface when the plaster is applied.

Old brick walls which are to be overcoated should have all loose, friable, or soft mortar removed from joints, and all dirt and foreign matter should be removed by hacking, wire brushing or other effective means. Surfaces that have been painted or waterproofed should be lathed with metal lath before overcoating.

6. *Concrete.*—Monolithic concrete walls should preferably be rough and of coarse texture, rather than smooth and dense, for the application of stucco. Walls of this type should be cleaned and roughened, if necessary, by hacking, wire brushing, or other effective means. The surface of the concrete should be brushed free from all dust, dirt, and loose particles, and should be wetted to such a degree that water will not be rapidly absorbed from the plaster, but not to such a degree that water will remain standing on the surface when the plaster is applied.

7. *Concrete Block.*—Concrete block for stucco walls should be rough and of coarse texture, but not weak or friable. Block should be set with cement mortar joints, which should be raked out or cut back even with surface. Before applying the stucco the surface should be brushed free from all dust, dirt, and loose particles, and should be wetted to such a degree that water will not be rapidly absorbed from the plaster, but not to such a degree that water will remain standing on the surface when the plaster is applied.

Frame Walls. 8. *Framing.*—Studs spaced not to exceed 16 inch centers should be run from foundation to rafters without any intervening horizontal members. The studs should be tied together just below the floor joists with 1 x 6 inch boards which should be let into the studs on their inner side, so as to be flush and securely nailed to them. These boards will also act as sills for the floor joists, which, in addition, should be securely spiked to the side of the studs.

9. *Bracing.*—The corners of each wall should be braced diagonally with 1 x 6 inch boards let into the studs on their inner side, and securely nailed to them.

In back-plastered construction in which sheathing is omitted, at least once midway in each story height, the studs should be braced horizontally with 2 x 3 inch bridging set one inch back of the face of the studs. This assumes that the studs are 2 x 4 inches. Larger sizes would require correspondingly larger bridging.

In sheathed construction no bridging is necessary.

10. *Sheathing.*—In back-plastered construction the lath should be fastened direct to the studding and back-plastered, and no sheathing is used.

STRUCTURAL SERVICE DEPARTMENT

In sheathed construction the sheathing boards should be not less than 6 inches nor more than 8 inches wide, dressed on one or both sides to a uniform thickness of 13/16 inch. They should be laid horizontally across the wall studs and fastened with not less than two 8d nails at each stud.

11. *Inside Waterproofing.*—In back-plastered construction no waterproofing is necessary.

In sheathed construction, over the sheathing boards should be laid horizontal layers, beginning at the bottom, a substantial paper, well impregnated with tar or asphalt. The bottom strip should lap over the baseboard at the bottom of the wall, and each strip should lap the one below at least 2 inches. The paper should lap the flashings at all openings.

12. *Furring.*—Metal Lath. When furring forms an integral part of the metal lath to be used, then separate furring as described in this paragraph is omitted.

In *back-plastered construction* galvanized or painted 3/8 inch crimped furring, not lighter than 22-gage or other shape giving equal results, should be fastened direct to the studding, using 1 1/4 inch x 14-gage staples spaced 12 inches apart.

In *sheathed construction* galvanized or painted 3/8 inch crimped furring not lighter than 22-gage, or other shape giving equal results, should be fastened over the sheathing paper and directly along the line of the studs, using 1 1/4 inch x 14-gage staples spaced 12 inches apart. The same depth of furring should be adhered to around curved surfaces, and furring should be placed not less than 1 1/2 inches not more than 4 inches on each side of and above and below all openings.

Wood Lath.—Furring 1 x 2 inches should be laid vertically 12 inches on centers over the sheathing paper and nailed every 8 inches with 6d nails.

13. *Lath.*—Metal lath should be galvanized or painted expanded lath weighing not less than 3.4 lbs. per square yard.

Wire lath should be galvanized or painted woven wire lath, not lighter than 19-gage, 2 1/2 meshes to the inch, with stiffeners at 8 inch centers.

Wood lath should be standard quality, narrow plaster lath 4 feet long and not less than 3/8 inch thick.

14. *Application of Lath.*—Metal Lath. Lath should be placed horizontally, driving galvanized staples 1 1/4 inch by 14-gage not more than 8 inches apart over the furring or stiffeners. Vertical laps should occur at supports and should be fastened with staples not more than 4 inches apart. Horizontal joints should be locked or butted and tightly laced with 18-gage galvanized wire.

Wood Lath.—Lath should be placed horizontally on the furring with 1/2 inch openings between them. Joints should be broken every twelfth lath. Each lath should be nailed at each furring with 4d nails.

15. *Corners.*—Metal Lath. The sheets of metal lath should be folded around the corners a distance of at least 3 inches and stapled down, as applied. The use of corner bead is not recommended.

Wood Lath.—At all corners a 6 inch strip of galvanized

or painted metal lath should be firmly stapled over the lath with 1 1/4 inch x 14-gage galvanized staples.

16. *Spraying.*—Before applying the first coat of plaster, wood lath should be thoroughly wetted, but water should not remain standing on the surface of the lath when the plaster is applied.

17. *Insulation.*—The air space in back-plastered walls may be divided by applying building paper, quilting, felt, or other suitable insulating material between the studs, and fastening it to the studs and bridging by nailing wood strips over folded edges of the material. This insulation should be so fastened as to leave about 1 inch air space between it and the stucco. Care should be taken to keep the insulating material clear of the stucco, and to make tight joints against the wood framing at the top and bottom of the space and against the bridging.

18. *Overcoating.*—Old frame walls which are to be overcoated should be made structurally sound in every respect, and, as far as possible, the general conditions on pages 1 and 2 should be observed; otherwise the recommended practice for frame structures obtains.

19. *Cement.*—The cement should meet the requirements of the standard specifications for Portland cement of the American Society for Testing Materials, and adopted by this Institute. (Standard No. 1.)

20. *Fine Aggregate.*—Fine aggregate should consist of sand, or screenings from crushed stone or crushed pebbles, graded from fine to coarse, passing when dry a No. 8 screen. Fine aggregate should preferably be of silicious materials, clean, coarse, and free from loam, vegetable, or other deleterious matter.

21. *Hydrated Lime.*—Hydrated lime should meet the requirements of the standard specifications for hydrated lime of the American Society for Testing Materials.

22. *Hair or Fiber.*—There should be used only first quality long hair, free from foreign matter, or a long fiber well combed out.

23. *Coloring Matter.*—Only mineral colors should be used which are not affected by lime, Portland cement, or other ingredients of the mortar, or the weather.

24. *Water.*—Water should be clean, free from oil, acid, strong alkali or vegetable matter.

Preparation of Mortar. 25. *Mixing.*—The ingredients of the mortar should be mixed until thoroughly distributed and the mass is uniform in color and homogeneous. The quantity of water necessary for the desired consistency should be determined by trial, and thereafter measured in proper proportion.

Machine Mixing.—The mortar should preferably be mixed in a suitable mortar-mixing machine of the rotating drum type. The period of machine mixing should be not less than 5 minutes after all the ingredients are introduced into the mixer.

Hand Mixing.—The mixing should be done in a water-tight mortar box, and the ingredients should be mixed dry until the mass is uniform in color and homogeneous. The proper amount of water should then be added and the mixing continued until the consistency is uniform.

26. *Measuring Proportions.*—Methods of measurement of the proportions of water should be used which will secure separate uniform measurements at all times. All proportions stated should be by volume. A bag of cement (94 lbs. net) may be assumed to contain 1 cubic foot; 40 lbs. may be assumed as the weight of 1 cubic foot of hydrated lime. Hydrated lime should be measured dry, and should not be measured nor added to the mortar in the form of putty.

27. *Retempering.*—Mortar which has begun to stiffen or take on its initial set should not be used.

28. *Consistency.*—Only sufficient water should be used to produce a good workable consistency. The less water the better the quality of the mortar, within working limits.

29. *Mortar.*—All coats should contain not less than 3 cubic feet of fine aggregate to 1 sack of Portland cement. If hydrated lime is used it should not be in excess of one-fifth of the volume of cement. Hair or fiber should be used in the scratch coat only on wood lath, on metal or wire lath that is to be back-plastered, or on metal or wire lath which is applied over sheathing and is separated therefrom by furring deeper than $\frac{3}{8}$ inch.

30. *Application.*—The plastering should be carried on continually in one general direction without allowing the plaster to dry at the edge. If it is impossible to work the full width of the wall at one time, the joining should be at some natural division of the surface, such as a window or door.

The *first coat* should thoroughly cover the base on which it is applied and be well troweled to insure the best obtainable bond. Before the coat has set it should be heavily cross-scratched with a saw-toothed metal paddle or other suitable device to provide a strong mechanical key.

The *second coat* should be applied whenever possible on the day following the application of the scratch coat. The first coat should be dampened if necessary, but not saturated, before the second coat is applied. The second should be brought to a true and even surface by screeding at intervals not exceeding 5 feet, and by constant use of straightening rod. When the second coat has stiffened sufficiently, it should be dry floated with a wood float and lightly and evenly cross-scratched to form a good mechanical bond for the finish coat. The day following the application of the second coat, and for not less than three days thereafter, the coat should be sprayed or wetted at frequent intervals and kept from drying out.

In back-plastered construction the backing coat should preferably be applied directly following the completion of the brown coat. The keys of the scratch coat should first be thoroughly dampened, and the backing coat then well troweled on to insure filling the spaces between the keys and thoroughly covering the back of the lath. The backing coat should provide a total thickness of plaster back of the lath of $\frac{5}{8}$ inch or $\frac{3}{4}$ inch, and should finish about $\frac{1}{4}$ inch back of the face of the studs.

The finish coat should be applied not less than a week after the application of the second coat. Methods of application will hereinafter be described under "finish."

31. *Two-Coat Work.*—Whenever two-coat work is required, the first coat should preferably be "doubled"

that is, as soon as the first coat is stiff enough it should be followed by a second application of mortar and this should then be treated as described for the second coat under paragraph 30. The finish should be applied not less than a week after the application of the first coat

32. *Drying Out.*—The finish coat should not be permitted to dry out rapidly, and adequate precaution should be taken, either by sprinkling frequently after the mortar is set hard enough to permit it, or by hanging wet burlap or similar material over the surface.

33. *Freezing.*—Stucco should not be applied when the temperature is below 32 degrees F., nor under any conditions such that ice or frost may form on the surface of the wall.

Finish. 34. *Stippled.*—The finishing coat should be troweled smooth with a metal trowel with as little rubbing as possible, and then should be lightly patted with a brush of broom straw to give an even, stippled surface.

35. *Sand Floated.*—The finishing coat, after being brought to a smooth, even surface, should be rubbed with a circular motion of a wood float with the addition of a little sand to slightly roughen the surface. This floating should be done when the mortar has partly hardened.

36. *Sand Sprayed.*—After the finishing coat has been brought to an even surface, it should be sprayed by means of a wide, long-fiber brush—a whisk brook does very well—dipped into a creamy mixture of one part of cement to two or three parts sand, mixed fresh at least every 30 minutes, and kept well stirred. This coating should be thrown forcibly against the surface to be finished. This treatment should be applied while the finishing coat is still moist and before it has attained its early hardening—that is, within 3 to 5 hours. To obtain lighter shades add hydrated lime not to exceed 10% of the weight of the cement.

37. *Rough-Cast or Spatter Dash.*—After the finishing coat has been brought to a smooth, even surface with a wooden float and before finally hardened, it should be uniformly coated with a mixture of one sack of cement to 3 cubic feet of fine aggregate thrown forcibly against it to produce a rough surface of uniform texture when viewed from a distance of 20 feet. Special care should be taken to prevent the rapid drying out of this finish by thorough wetting down at intervals after stucco has hardened sufficiently to prevent injury.

38. *Applied Aggregate.*—After the finishing coat has been brought to a smooth, even surface, and before it has begun to harden, clean round pebbles, or other material as selected, not smaller than $\frac{1}{4}$ inch or larger than $\frac{3}{4}$ inch and previously wetted, should be thrown forcibly against the wall so as to embed themselves in the fresh mortar. They should be distributed uniformly over the mortar with a clean wood trowel, but no rubbing of the surface should be done after the pebbles are embedded.

39. *Exposed Aggregate.*—The finishing coat should be composed of an approved, selected coarse sand, crushed marble, or granite or other special material, in the proportion given for finishing coats, and within 24 hours after being applied and troweled to an even surface should be scrubbed with a stiff brush and water. In case stucco is

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too hard, a solution of one part hydrochloric acid in four parts of water by volume can be used in place of water. After the aggregate particles have been uniformly exposed by scrubbing, particular care should be taken to remove all traces of the acid by thorough spraying with water from a hose.

40. *Mortar Colors*.—When it is required that any of the above finishes should be made with colored mortar not more than 10% of the weight of Portland cement should be added to the mortar in the form of finely ground mineral coloring matter.

A predetermined weight of color should be added dry to each batch of dry fine aggregate before the cement is added. The color and fine aggregate should be mixed together and then the cement mixed in. The whole should be then thoroughly mixed dry by shoveling from one pile to another through a ¼-inch mesh wire screen until the entire batch is of uniform color. Water should then be added to bring the mortar to a proper plastering consistency.

Specifications for Paint.—(Prepared by the U. S. Interdepartmental Committee on Paint Specification Standardization. See November 1920 JOURNAL. In addition to the following specifications the circulars include the specifications for Sampling, Laboratory Examination, Analysis and Reagents.)

Specifications for Green Paint—Semipaste and Ready mixed. (25a).—(Circular No. 97 by The Bureau of Standards).

General.—The paint contemplated by this specification is a chrome green paint, and it may be ordered either in form of semipaste pigment ground in linseed oil or as readymixed paint. The basis of purchase may be either net weight or volume (231 cubic inches to the gallon.)

(a) *Pigment.*—The pigment in both semipaste and ready-mixed paints should be a chrome green containing about 23 per cent of color (sum of lead chromate and insoluble Prussian blue) about 10 per cent of magnesium silicate, aluminum silicate, or similar siliceous material and about 67 per cent of barium sulphate. It should be made by precipitating the color on the proper base rather than by mixing the individual materials. It must yield on analysis:

	Maximum Per cent.	Minimum Per cent.
Color (total lead chromate and insoluble Prussian blue) . . . . .	. . . . .	20
Lead compounds other than lead chromate calculated as PbSO ₄ . . . . .	.5	. . . . .
Material soluble in water, including soluble Prussian blue	0.2	. . . . .
Acid-soluble or water-soluble calcium in any form, calculated as CaO	0.5	. . . . .
Material other than color and barium sulphate	15.	. . . . .
The remainder must be barium sulphate		

(b) *Liquid.*—The liquid in semipaste paint shall be entirely pure raw or refined linseed oil; in ready-mixed paint it shall contain not less than 90 per cent pure raw linseed oil, the balance to be combined dryer and thinner. The thinner shall be turpentine, volatile mineral spirits, or a mixture thereof.

(c) *Semipaste.*—Semipaste paint shall be made by thoroughly grinding the pigment with pure raw or refined linseed oil.

The semipaste as received and three months thereafter shall be not caked in the container and shall break up readily in linseed

oil to form a smooth paint of brushing consistency. It shall mix readily with linseed oil, turpentine, or volatile mineral spirits, or any combination of these substances, in all proportions, without curdling. The color and hiding power when specified shall be equal to that of a sample mutually agreed upon by buyer and seller. The weight per gallon shall be not less than 16 lbs. The paste shall consist of:

	Maximum Per cent.	Minimum Per cent.
Pigment	72.0	68
Linseed oil	32.0	28
Moisture and other volatile matter	0.7	. . . . .
Coarse particles and "skins" (total residue retained on No. 200 screen based on pigment) ¹	0.5	. . . . .

¹ The No. 200 screen is the same as the screen formerly known as 200 mesh.

(d) *Ready-Mixed Paint.*—Ready-mixed paint shall be well ground, shall not settle badly or cake in the container, shall be readily broken up with a paddle to a smooth uniform paint of good brushing consistency, and shall dry within 18 hours to a full oil gloss, without streaking, running, or sagging. The color and hiding power when specified shall be equal to those of a sample mutually agreed upon by buyer and seller. The weight per gallon shall be not less than 12 pounds. The paint shall consist of:

	Maximum Per cent.	Minimum Per cent.
Pigment	55.0	50
Liquid (containing at least 90 per cent linseed oil)	50.0	45
Water	0.5	. . . . .
Coarse particles and "skins" (total residue retained on No. 200 screen based on pigment)	0.5	. . . . .

Specifications for Composite Thinner for Thinning Semipaste Paints when the Use of Straight Linseed Oil is not Justified. (25a)—(Circular of the Bureau of Standards No. 102.)

General.—This specification covers a composite thinner which contains in one liquid drying oil, drier, and volatile thinner. Such preparations are sometime called "Thinning Mixtures for Paint," and are also offered under a variety of trade names, such as "Japan Oil," "Paint Oil," "Linseed Oil Substitute," etc. The last name should however, not be used, for while such materials may have decided merit they are not substitutes for linseed oil.

The composite thinner must meet the following requirements:

Appearance.—Shall be clear and free from suspended matter and sediment.

Color.—Not darker than a solution of 6 g of potassium dichromate in 100 cc. pure sulphuric acid of specific gravity 1.84.

Odor.—Not offensive, either in bulk or in its subsequent use in paint mixtures.

Mixing with Linseed Oil.—When mixed in any proportion with pure raw linseed oil meeting the specifications of B. S. Circular 82, the resulting mixture shall be clear and shall show no separation or precipitation on standing 18 hours.

Drying.—When flowed on glass, the composite thinner shall set to touch in not more than 4 hours and dry hard in not more than 6 hours. When mixed with an equal volume of pure raw linseed oil, the resulting mixture when flowed on glass shall set to touch in not more than 6 hours and dry hard in not more than 8 hours.

Toughness.—The film on glass after baking for 6 hours at 105 to 110 degrees C (221 to 230 degrees F) shall be glossy, tough, and elastic.

Nonvolatile Matter.—Not less than 50 per cent by weight.

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Acid Number.—Not more than 12, calculated to basis of non-volatile matter.

Specifications for Spar Varnish. (25a)—(Circular of the Bureau of Standards No. 103.)

General.—The varnish shall be the best long oil varnish. It must be resistant to air, light, and water. The manufacturer is given wide latitude in the selection of raw materials and processes of manufacture, so that he may produce a varnish of the highest quality. It must meet the following requirements:

Appearance.—Clear and transparent.

Color.—Not darker than a solution of 6 g of potassium dichromate in 100 cc. of pure sulphuric acid, specific gravity 1.84.

Flash Point (Closed-Cup).—Not below 30 degrees C (85 degrees F).

Nonvolatile Matter.—Not less than 40 per cent by weight.

Set to touch.—In not more than 5 hours.

Dry Hard and Tough.—In not more than 24 hours.

Toughness.—Film on metal must stand rapid bending over a rod 3 mm. (1/8 in.) in diameter.

Working Properties.—Varnish must have good brushing, flowing, covering, and leveling properties.

Water Resistance.—Dried film must withstand cold water for 18 hours and boiling water for 20 minutes without whitening or dulling.

Durability.—The purchaser reserves the right to require that the durability of deliveries must be equal to a brand or sample mutually agreed upon by buyer and seller.

NOTE.—When durability tests are required, such tests will be made on each sample; but in cases where the testing laboratory has previous data on the same brand of varnish, acceptance or rejection of a given sample may be provisionally based on the last completed test of the brand of varnish in question.

Specifications for Asphalt Varnish. (25a)—(Circular of the Bureau of Standards No. 104.)

General.—This varnish shall be composed of a high grade of asphalt fluxed and blended with properly treated drying oil and thinned to the proper consistency with a volatile solvent. It must be resistant to air, light, lubricating oil, water, and mineral acids of the concentration hereinafter specified, and must meet the following requirements:

Appearance.—Smooth and homogeneous; no livering or stringiness.

Color.—Jet black.

Flash Point (Closed-Cup).—Not below 30 degrees C. (86 degrees F.)

Action with Linseed Oil.—Varnish must mix freely to a homogeneous mixture with an equal volume of raw linseed oil.

Insoluble In Carbon Bisulphide.—Not more than 1 per cent.

Nonvolatile Matter.—Not less than 40 per cent by weight.

Fatty Matter.—Not less than 20 per cent of the nonvolatile. Must be liquid and not show any rosin by the Liebermann-Storch test.

Set to Touch.—Within 5 hours.

Dry Hard and Tough.—Within 24 hours.

Toughness.—Film on metal must withstand rapid bending over a rod 3 mm. (1/8 in.) in diameter.

Working Properties.—Varnish must have good brushing, flowing, covering and leveling properties.

Resistance to Water.—Dried film must withstand cold water for 18 hours.

Resistance to Oil.—Dried film must withstand lubricating oil for 6 hours.

Resistance to Mineral Acids.—Dried film must withstand action of the following acids for 6 hours; Sulphuric acid, specific gravity 1.3 (about 40 per cent). Nitric acid, specific gravity 1.22 (about 35 per cent). Hydrochloric acid, specific gravity 1.09 (about 18 per cent).

Specifications for Liquid Paint Drier. (25a)—(Circular of the Bureau of Standards No. 105.)

General.—This specification applies both to straight oil drier—that is, material free from resins or “gums”—and to Japan drier; that is, material containing varnish “gums.”

The drier shall be composed of lead, manganese, or cobalt, or a mixture of any of these elements combined with a suitable fatty oil, with or without resins or “gums,” and mineral spirits or turpentine, or a mixture of these solvents. It shall be free from sediment and suspended matter. The drier when flowed on metal and baked for 2 hours at 100 degrees C. (212 degrees F.), shall leave an elastic film. The flash point shall be not lower than 30 degrees C. (85 degrees F.) when tested in a closed-cup tester. It shall mix with pure raw linseed oil in the proportion of 1 volume of drier to 19 volumes of oil without curdling, and the resulting mixture when flowed on glass shall dry in not more than 18 hours. When mixed with pure raw linseed oil in the proportion of 1 volume of drier to 8 volumes of oil, the resulting mixture shall be no darker than a solution of 6 g. of potassium dichromate in 100 cc. of pure sulphuric acid of specific gravity 1.84.”

Strength of Southern Pine and Douglas Fir. (19a)—(Technical Notes No. 119 Forest Products Laboratory, Madison, Wis.)

Tests made at the United States Forest Products Laboratory show that there is little difference between the strength of the southern pines and that of Douglas Fir from the Pacific Northwest. True longleaf yellow pine averages heavier, stronger, and tougher than Douglas fir. True shortleaf pine averages heavier and tougher than the fir, but is about equal to it in strength as a beam or post. Loblolly pine, though averaging heavier than the fir, is somewhat weaker. The difference in strength between any of these pines and Douglas fir, however, is not so great but that low density pieces of the one species are weaker than the average for the other species.

As far as strength properties are concerned, the choice between any two lots of southern pine and Douglas fir will depend upon the grade and density of the timber composing each lot. The Rocky Mountain type of Douglas fir averages considerably weaker than the Pacific Coast type.

Refrigeration Machines. (32a)—(Causes and Prevention of the Formation of Non-Condensable Gases in Ammonia Absorption Refrigeration Machines. Bureau of Standards Technologic Paper No. 180.) In the experiments conducted at the Bureau of Standards the conditions existing during the operation of an ammonia absorption refrigeration machine were duplicated. It was found that the presence of the non-condensable gases that cause so much trouble in the operation of these plants is due to either of the following causes: (1) leaks of air into the system, and (2) the corrosive action of the aqua ammonia on the metal of the plant.

If the foul gas is mainly nitrogen, the gas is derived from the air that is leaking into the system. The oxygen originally present in the air is quickly used up when the plant is operated and so will be present in only a very small percentage of its original amount. On the other hand, if the foul gas is hydrogen, the cause is corrosion by the ammoniacal liquor. Pure aqua ammonia will not cause gas formation but if salts of such weak acids as acetic or carbonic acid are present in the aqua, the corrosive action will continue during the life of the charge. If the gas in the plant contains both nitrogen and hydrogen, both causes are present.

The corrosive action of impure aqua may be completely stopped by the addition of either sodium or potassium dichromate to the aqua in the plant.

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Nine Old Houses on Long Island
G. H. VAN ANDA

The Spanish Linear City
EDITH ELMER WOOD

Progress of the English Building Guilds
G. D. H. COLE

Rights to Practice—Senior and Junior
WILLIAM P. BANNISTER

Labor and Housing
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The Baltimore Shot Tower
LAURENCE HALL FOWLER

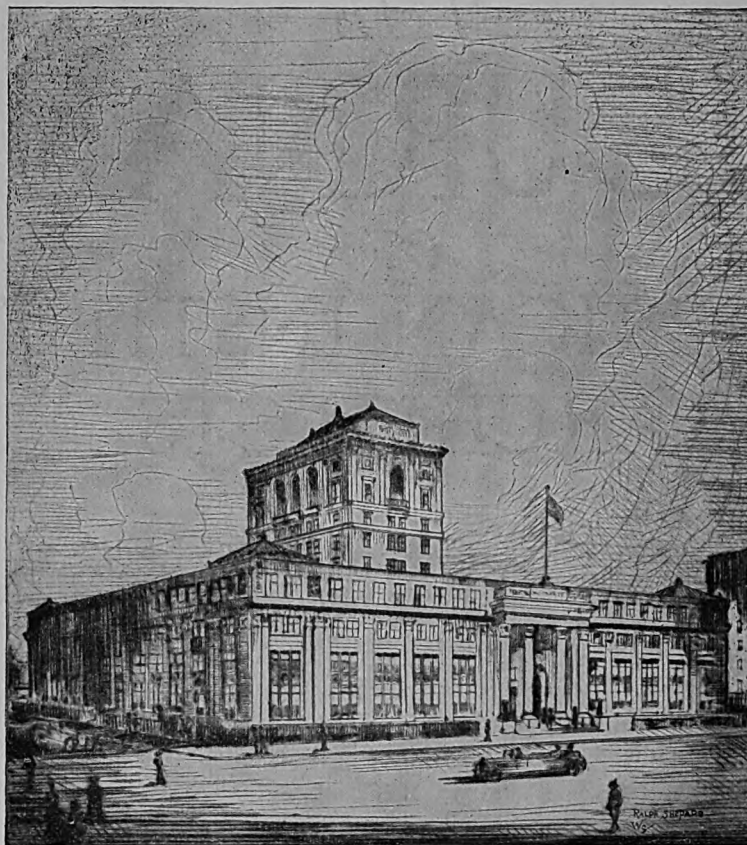
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H. H. Government invite competitive designs for the new buildings of Qasr el 'Aini Hospital and School at Cairo, with accommodation for 1,225 beds. The competition will be conducted in two stages, the *first* of which (preliminary) is open to all architects; the *second* (final) will be restricted to twelve architects, six of whom will be selected by the assessor from those submitting the most meritorious designs in the preliminary competition, and six others nominated by H. H. Government with the advice of the assessor, Mr. John W. Simpson, President of the Royal Institute of British Architects, whose judgment will be final and binding. All applications for particulars of the competition should be addressed to H. E. THE MINISTER OF PUBLIC WORKS, Cairo, Egypt, or to THE SECRETARY, Royal Institute of British Architects, 9, Conduit Street, London, W.1.

Such applications must be accompanied by a cheque or draft for three Egyptian pounds (or its equivalent in sterling), which sum will be returned to all applicants who submit a *bona fide* design, or who return the particulars in good condition within one month from the date of their application. Designs in the preliminary competition must be lodged not later than October 31, 1921.

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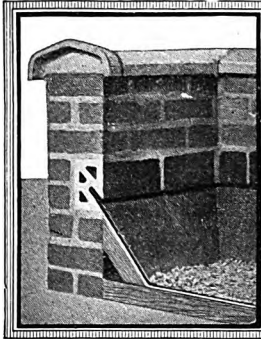
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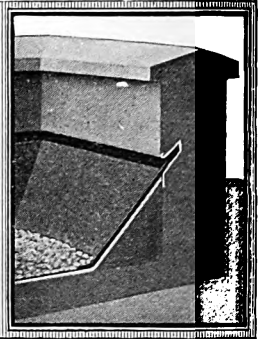
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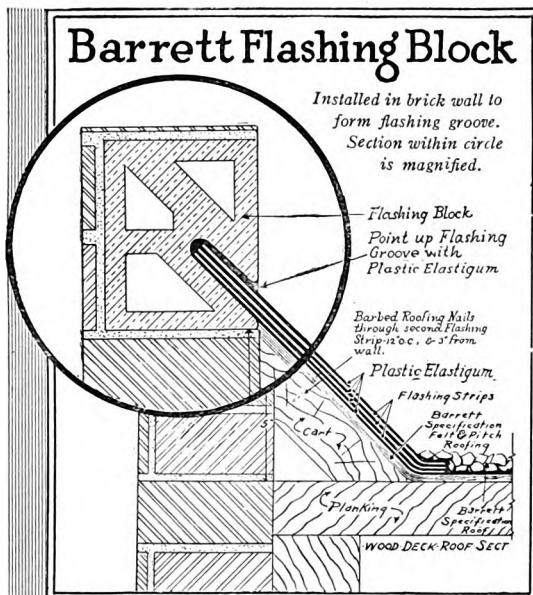
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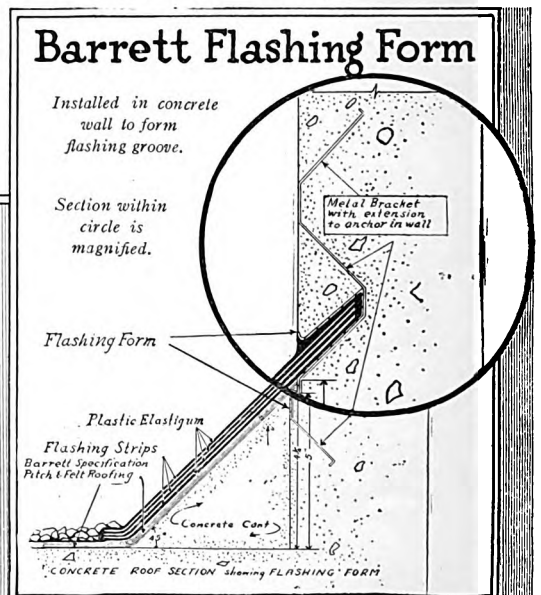


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THE MALCOLM HOUSE—Jerico, Long Island.
After a photograph by G. H. Van Anda.

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Shadows and Straws

IN ADDRESSING to THE JOURNAL his letter concerning housing and the labor factor, Mr. Atterbury expresses the hope that it may lead to a discussion and invite editorial comment. Let us hope that his hope may be justified. To some extent, other writers in this issue offer some comment. Mr. William Stanley Parker emphasizes the underlying fault, as he sees it, and Mr. Sullivan W. Jones presents a very striking proposal, backed up by the experiences of one branch of the building industry. Likewise, it is very true that the Congress of the Building Industry was set in motion precisely for the purpose of getting at the fundamental causes of a situation which, while appearing to be new, is in reality fairly old. Today its acuteness makes it appear as a more insistent challenge than ever before.

It is fairly easy to indict any branch of the building industry, but it is of little use to proceed in that manner. Trying to fix the blame on any group does not provoke an agreeable background. It does not help to set the stage in that orderly manner which is necessary. An impartial discussion is not stimulated by a previous inflammation of minds. The method pursued by the electrical industry, for that reason, invites consideration. So does Mr. Cole's article.

The assertion is ventured that we can never get far until we are willing to examine all industry, for each branch of it reacts upon every other branch. Likewise, agriculture must not be excluded, for, as Mr. Alger pointed out in a recent number of the *Atlantic*, some way must be found to prevent farmers and the producers of food from conspiring to raise prices. It is plain to be seen, is it not, that if food producers can so conspire, food must rise in price, and the workman's real wage be correspondingly reduced? But this happens everywhere. Conspiring to raise prices, or sabotage, as it is commonly called, is a terrible factor. It is present throughout business and commerce. Generally speaking, the discovery of this destructive germ has served to inform us of the gulf between financial business for profit and production for satisfying the needs of men. It is beginning to be seen that the laws of financial business determine the production of all things. But it

does no good then to excoriate those who conduct our financial business. They do not understand the real laws which control them. And as Mr. Ackerman has pointed out, it is of no use for men in any calling to increase production, unless they can control price. Otherwise, increased production means a fall in prices, and as this is not measured as a public benefit to the consumer but as a financial loss to the producer, it will not do. In other words, how can we find some way of utilizing our productive plant, capable of supplying all the needs of man? Technically and technologically, we know how. Financially, we do not. Which brings us to the heart of the problem.

It is idle to throw stones at anybody. Rather will it be better to adopt a purely professional and scientific attitude and proceed to an examination of the system that we are trying to operate. Perhaps a better one could be discovered—one which would improve the lot of human beings by making a pleasant job of production, and by making production yield the benefits of which it is easily capable, once it is harnessed and driven by the right motive.

IT IS SAID that the western mind can never grasp with complete understanding the art of India. If this statement is true, it immediately challenges the theory of the universality of art. But a confusion at once arises over the meaning of words. The long-sought definition of art is immediately called into demand. What do we mean by art?

Through this obstacle there may be no way of penetration. Possibly, however, to use a figure of speech, there may be a way around. Havell, in his "Handbook of Indian Art,"¹ offers a suggestion which seems wholly in line with the doctrine that art is universal. In his preface, he says these things:

"In the architectural section, I have aimed at giving such an explanation as will enable the reader to perceive the intention of the builder, and correlate stupa, temple, monastery, palace, mosque, and tomb with the thought and life of the period to which they belong, rather than to classify them in a dry academic manner which makes the builder's intention as unintelligible as the historian's explanation. Only when the craftsman's idea is realized will Indian architecture become a subject of living interest, an

¹ "A History of Indian Art." By E. B. Havell. (E. P. Dutton Co.)

open book in which the thought and life of India are written from Vedic times down to the present day. The architecture of India will not then appear as a bewildering museum of marvels belonging to a bygone age, but as a still living tradition of practical craftsmanship constantly readapting itself to the spiritual and material needs of the age, and bearing witness to the wonderful constructive work of our Aryan predecessors, who, three thousand years ago, occupying the same position in the East as their successors do to-day, laid the whole foundation of Indian civilization upon which we are attempting to build. The spirit of the ancient Aryan empire-builders will be our best guide in this great task."

In this method of dealing with art in terms of spiritual and material needs, rather than by the dry and sterile process of cataloguing and classifying, there may perhaps be found an idea before which obstacles and the need for definitions will be dissolved into nothingness. Whether it will profit or not, in these days of bewilderment, it will certainly be intensely interesting to turn back to the heyday of the Indian craftsman, for here, we are at once impressed with the spiritual factor and the dominating part it played in Indian art. "At Ellora," says Mr. Havell, "the stupa house is especially interesting from being dedicated to Visvakarma, the Architect of the Gods, who was the patron saint of the master-builder. This great Assembly-hall, therefore, may have been at one time the Guild-hall of the masons who for many generations were employed in making the rock-cut shelters for the devotees of many sects, as well as many temples for the crowds of pilgrims, including the amazing Kailasa, Siva's Himalayan paradise, where the Ganges has its source."

"The organization of handicraftsmen into cooperative societies or guilds was known even before Asoka's time. (Third century B. C.). Like the village communities, these craft-guilds regulated their own affairs without much interference from the royal courts of law. It is extremely likely that the Sangha of the masons working at Ellora had its own Assembly-hall, for the king's craftsmen, like the king himself, performed priestly functions, and as temple architects designed the dwelling-places of the gods. The great temples had their own hereditary craftsmen, who served as architects for the village communities, a custom which has helped to keep alive the traditions of Indian craftsmanship even to the present day. . . . The design of the Kailasa at Ellora remained for all time the perfect model of a Sivalaya—the temple craftsman's vision of Siva's wondrous palace in His Himalayan glacier, which no mortal can ever reach, where in his Yogi's cell the Lord of the Universe, the Great Magician, controls the cosmic forces by the power of thought; the holy rivers, creating life in the world below, enshrined in His matted locks; Parvati, His other Self—the Universal Mother, watching by His side."

It is not a far cry from the spiritual significance of such concepts, where the life that had been and the life that was to be, guided the workman in his task of interpreting the life that was, to other civilizations, other

religions, and the lives of other craftsmen. Is it not by these analogies that we are to discover both the definition and the universality of art?

The great universities of India were schools of religious craftsmanship. It was upon artist and craftsman that the True Law was founded and by them interpreted. The master-builder, achieving his vocation and fulfilling his functions, traveled on long journeys. Islam, whose war-lords butchered both Brahman and Buddhist monks wholesale, spared the lives of the Indian craftsmen. Mahmud of Ghazni, amazed at the magnificence of the temples he looted, carried home thousands of skilled craftsmen to build for him. He even set up a craftsman's slave-market, a method of recruiting for public work which was followed by other Musalman monarchs. And so, whether willing or enslaved, Indian craftsmanship wove its traditions into the architecture of other lands.

"The Hindu builder threw his old structural formulas into the melting-pot, says Havell, in speaking of their transplantation to Islam, "and reshaped them himself, with astonishing constructive skill, in new forms of such fantasy and variety that the European critic, accustomed to the archaeological rules of the Renaissance, and generally profoundly ignorant of Indian history, finds it difficult to follow them: for while the Renaissance tied down the European master-builder to narrower constructive limits than the Gothic, the changes in craft traditions made by the Mohammedan conquest of India gave the Indian master-builder a new and much wider field for his invention and skill. Especially in the Mogul period the dilettante began to exercise considerable influence upon the design of buildings, but not to the same extent as in Renaissance architecture in Europe. At the beginning of Renaissance architecture the amateur archaeologist was admitted into the fraternity of masons, and after a time had so much influence upon building traditions that craftsmanship and design were divorced from each other, with disastrous results, both economic and artistic. The fragments of Greek and Roman building were drawn, measured minutely, written about in countless volumes, and made the models of a correct taste which every builder was bound to accept. The literary amateur who knew his books became the master-builder, and the master-builder, whose creative mind had led the van of civilization, became a more or less illiterate artisan, whose vocation it was to shape a set of paper patterns to a practical form and supply the technical knowledge which the architect lacked."

Few will deny, it is believed, that not only in a discussion of art and architecture but in any effort to understand the building industry as a modern process in which the hand of financial business at present dominates both the brain of the technician and the hand of the craftsman, there is in this tale of evolution, as recited by Havell, more than is usually dreamt of in the philosophies of amateur critics and economists:

"The Hindu artist was both a court chronicler and a religious teacher. Vaishnava and Saiva legends, in which the gods descended to earth, lived the life of the people, and performed wondrous miracles, were their favorite themes, treated with all the reverence of the earnest devotee. But though the Hindu painter imbues such subjects with a sensitiveness and artistic charm which are peculiarly his own, the appeal which he makes to the Indian mind is not purely esthetic. His is no art for art's

RIGHTS TO PRACTICE—SENIOR AND JUNIOR

sake: for the Hindu draws no distinctions between what is sacred and what is profane. The deepest mysteries are clothed by him in the most familiar garb. So in the intimate scenes of ordinary life he constantly brings before the spectator the esoteric teaching of his religious cult, knowing that the mysticism of the picture will find a ready response even from the unlettered peasant. That which seems to the modern Western onlooker to be strange and unreal, often indeed gross, is to the Hindu mystic quite natural and obviously true. We are often reminded of the ancient Chandra cult and of India's name as the Land of the Moon by the frequent choice of night scenes—women praying at Siva's shrine under the crescent moon; Radha seeking her beloved Krishna in the dark forest at midnight; two lovers riding by torchlight through a mountain pass; hunting by lamplight on the banks of a moonlit river; pilgrims sitting round a camp fire listening to the tales of a village Kathak.

"It was not from want of culture or of technical ability that the ancient Aryans did not commit their sacred literature to writing, and built no permanent structures for their sacrificial rites. It was that they feared the abuse of the magic power of the *mautram* which would arise if the sacred mysteries were revealed to the vulgar; the efficacy of the sacrifice would be impaired if the uninitiated took part in it, or if the 'impure' craftsman assisted in the preparations. The construction of their fire-altars was an exact science involving all the knowledge of geometry possessed by the ancient world; an error of calculation or in the ritual prescribed might bring dire disaster upon the sacrificer. Therefore the Aryan craftsmen who planned the altars, built the tabernacles of the fire-spirit, and cut and carved the posts of the sacred trees, were a special class ranking with Brahmins. They were in the king's service, protected by special laws, and took a leading part in the construction work involved in the sacrificial rites. . . . They were the town-planners and architects of the Aryan commun-

ity. Like the Brahmins, they were spiritual teachers, and as such it was held to be disgraceful for them to build houses for gain."

To us, these thousands of years after, who deal with earth and fire and water as matters of fact, there might, perhaps, come questions about art, and life, and even about business and industry. In the Rig-Veda we learn of those early investigations, where reverence was the light by which they traveled, whence heat was evolved as the primal element of life. What wonder, then, that the source of heat should be worshipped, and that the rising of the sun should be a festival. Why not? It is still the most glorious of events, and the most forgotten. We have no time for these things—but for what have we time? We have constructed a mechanism that literally has enslaved us. We dare not think that it might stop. Into the running of it goes all our time, energy, our very hope. Mysticism, reverence, the powers of contemplation—all are gone, except for the faint traces that survive with difficulty. Yet the relation of this Mechanistic Thing to the passing of craftsmanship and the decay of art, is never questioned. Stolidly and even grimly, we set ourselves to find the answer in some terms of figures. Alas—the quantitative term is the only one in which we can make measurements. Yet Life has not fooled us—it is we who have fooled ourselves. C. H. W.

Rights to Practice—Senior and Junior

By WILLIAM P. BANNISTER.

IT MAY be fairly stated that the experience of members of registration boards indicates that the average architect is interested in registration laws to the extent that he "wants one of those certificates" which enable him to pursue his occupation anywhere and everywhere without disturbance or hindrance by law. He approves of the law in a general way from that instant when he receives his certificate. He approves of any effort by registration boards which may make it possible for him to get a certificate in any other State than his own with the least disturbance of his activities. He is determined to block any effort to reduce the minimum requirements of the law under which he received his registration. He is not particularly interested in the questions such as the right of a foreigner to recognition by law; of annual fees and annual registration renewal; of joint boards of architects and engineers; the registration of schools of architecture; the right of corporations to practice a profession, except to the extent that it interferes with his practice. The existing boards of examiners are called upon to protect the proper interests of the interested and the uninterested. These boards in joint session seek to give expression to the sentiment and findings of the class of men which constitutes the American Institute of Architects and many others outside of the Institute who are not in the great uninterested class and who earnestly desire to see the prac-

tice of architecture a truly learned profession, bringing together the reasonably exact science of construction, and the artistic expression of purpose. Always having in mind the true spirit of the profession, The National Council of Architectural Registration Boards has issued a Circular of Advice No. 2, which deals with examinations for those seeking to begin the practice of architecture, and those who desire certificates of competency in States where architecture is deemed to be one of the learned professions by legislative declaration in form of law. The general principle is clearly stated in the "Circular" under the following headings:

PREAMBLE: There are two general classes of men to be examined, as follows: 1st. Those who have never been engaged in the independent practice of architecture as a profession or who have only been engaged in such practice for a short period of time. 2nd. Those who have had long years of independent professional practice.

GENERAL COMMENT.—A system of examination particularly suited to the capabilities of the first class would almost certainly be unfair to members of the second class. For illustration, the same individual at the age of twenty-five or thirty years might pass the recommended standard written examination with eminent distinction and fail utterly on the same examination ten years later.

EXPERIENCE ADDS TO QUALIFICATIONS.—Now, it could hardly be argued that with adequate preparation for entrance to the pro-

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profession and ten years' extended practical experience a man would be less qualified to practice his profession after these years of experience than he was at the beginning.

CONTINUOUS PRACTICE AN IMPORTANT CONSIDERATION.—On the other hand, if, after adequate preparation and a creditable passing of examination for entrance to the profession, an architect should abandon practice for ten years and engage in other lines of endeavor, he might be very much less qualified for practice after this period than at the beginning.

BASIS OF EXAMINATION OF SENIOR CLASSIFICATION.—It, therefore, seems evident that the examination of men of extended experience in practice should be based on attainment in practice rather than on academic subjects.

RECOMMENDATION TO EXAMINATION BOARDS.—In view of the foregoing observations, it is suggested that all architectural boards and examining committees, where they have the legal authority to do so, should subdivide the candidates for architectural examination into two general classes; and that in all cases where they do not have the legal authority to make such division, they seek such authority through amending legislation of the Architectural Act or Law under which they operate.

DISTINCTION BETWEEN CLASSES.—Without any very scientific reason for exact, arbitrary division, observation seems to indicate that the line of demarkation should be drawn between:

JUNIOR CLASS.—Those having less than ten years' proved architectural practice as a principal or one of a group of principals in charge of an architect's office, and that all falling under this group should be required to take a written and delineation test, supplemented by a verbal quiz at the discretion of the examining committee, which shall embrace the subjects and time requirements set forth in the Standard N. C. A. R. outline for such examination.

SENIOR CLASS.—Those having ten or more years' proved architectural practice as a principal or one of a group of principals in charge of an architect's office engaged in the practice of architecture as a profession. The examination of the latter class to be by exhibits of sketches, working drawings, details, and specifications prepared under the personal supervision of the applicant, supplemented by a verbal quiz as to the reasons for methods used, procedure shown, and evidence of authorship; these to be supplemented by proof of honorable practice, photographs of executed work, or any or all of these, which in the judgment of the examining committee are necessary to determine the applicant's qualifications as an architect. Which qualifications in the opinion of the examiners shall be equivalent to or superior in relative value to the requirements set forth for applicants having had less than ten years' experience.

The Circular of Advice then deals at length with the qualifications required for competent practice (and it must be noted that the standards must be set by these boards, as a legal requirement), both from the point of academic and technical training. An outline is also given of essential principles and rules which should govern in examinations intended to meet all the minimum requirements of all the States having laws regulating the practice of architecture.

Registration laws may be fairly said to represent the opinions of architects practicing in the State by which the law is enacted; if they do not, it is because the fundamental law of the State does not cover the recognition of the learned professions. It has been held by the courts that such professions "are not a business open to all persons but a right limited to those with special qualifications as-

certained and certified after a course of study and examination by a State board appointed for that purpose." Under this general principle the State examines the applicant in courses of preliminary or academic subjects through its Department of Education, and the Board of Architects examines in technical subjects related to the profession. In some States there does not exist a Department of Education, so the ascertainment of academic training rests with the Architects Board. It can hardly be expected that a State considering "education as a function of the State" will accept academic education as ascertained by a board of architects as "equal" to that which such a State demands. In many of the learned professions such as medicine, pharmacy, and law, efforts have been made to harmonize the requirements as to education that general practice may not be interfered with because of geographical boundary lines, these efforts thus far have not been entirely successful.

In the Circular of Advice the National Council makes a laudable endeavor to call attention to and meet fairly the question of education. It presents its Circular of Advice to the States and not to the individual. It urges the States to agree not only as to the essentials for the education of the architect, but to lead to a balance between the "Junior" and "Senior" classes. The quotations from the Circular of Advice clearly state a problem before the architectural examination boards. If education in every State was a function of the State it would be simply a question of legislative action to adjust the differences, but unfortunately this not being the case, the condition becomes a cause of confusion in every effort to transfer the right to practice a profession from one State to another.

The technical preliminary education is more or less equalized through the coming together of the minds of the professors engaged in teaching architecture in the colleges and universities. Boards of examiners can well agree as to minimum standards, having before them the standards established in the best recognized schools of architecture and with the American Institute of Architects as a consultant.

The question of the "Senior" is but a passing one, but it must be met by the passing "Seniors" who constitute the boards; the Circular suggests a compromise which is fair to the "Seniors" but which lacks that theory of exact equality which never prevails; the senior will soon disappear.

The Circular suggests certain forms of examination as being particularly applicable to the two classes and while the boards know that these or any examinations can hardly be considered a real test of an applicant's intelligence, still the time has not arrived when public confidence will permit of opinion having the force of law; so examinations seem to be a fixed rule for the present; those suggested by the Circular appear to be well thought out. The suggestions in the Circular may be accepted as tentative and it would be well if the "interested" would give of their best thought and criticism. Copies of the Circular in full are obtainable from Mr. Emery Stanford Hall, No. 64 E. Van Buren Street, Chicago, Ill.

A Strikeless Building Industry

By SULLIVAN W. JONES.

On Being Hostile

The trades comprising the building industry, and the industry as a whole, present an impressive spectacle of the destructive power of blind selfishness and lack of vision. If we tried to find proof of how difficult it is for us to break the grip of tradition upon us, or how reluctant men are to throw off the yoke of inherited habits of mind, we need look no further than the building industry. It has come down to us with a record of bitter strife and periodic open hostility between the two principal factions, each organized for power and to employ with maximum effect the mutually destructive weapons of the strike and the lock-out. Whether organized wage-earners or organized employers are, or have been the aggressors, matters little; both suffer equally and to no end, for sooner or later they must patch up their difficulties and go on, because they are each indispensable to the other and their economic interests under the present system are inseparably interwoven.

Organization in the modern building industry has always occurred in response to the economic need of the largest number; that is, need for collective action in support of or in furthering common economic interests. That is equally true of all industries. In those industries where the economic status of either employers or wage earners has been most insecure, there invariably, we find organization reaching the highest stage of development and becoming most effective in preserving a balance of power between the employer and employee.

Trades unionism in the United States appeared coincidentally with, and as a result of the separation of the employing and laboring functions. Unions did not originate in any theory of organization or social ideas, but as a reaction to the employers' attempt to take advantage of the breakdown of the old legal regulation of apprenticeship and the persistent effort by employers to lower the wage and increase the hours of work by introducing the competition of inferior craftsmen who had not passed through the customary apprenticeship training. It was at the close of the Eighteenth Century, Hoxie says in his *History of Trades Unionism in the United States*, "that there began the struggle between employers and wage-earners which forced the latter to combine."

The unions sought to regulate wages, hours, conditions of work, apprenticeship, and to control competitive labor in the skilled crafts. But these objects were not preconceived. Hoxie records the fact that "the functions of these early unions were not wholly opportunist and retaliatory." But in the past all union programs with a base other than economic, have failed and caused a reaction to economic means as the most effective instrument for action and as the strongest adhesive in organized effort. Thus the trade union movement in the United States has come down to the present day with the futile policy of contending principally for wages, hours and conditions. Insecurity of employment has always been an outstanding characteristic of the building industry, and in this condi-

tion we find the reason for the early appearance in it of trades unions organizations, the reason why the industry is so thoroughly organized at the present time, and, I think also, one reason why it will remain an organized industry for some time to come.

The building industry has always been organized by trades or crafts. These trades or crafts organizations were at first purely local. But they grew and spread, and finally became national or international as transportation and communication facilities increased and broadened the competitive area. The wage earners, as a rule, organized first and the employers met the situation thus created by organizing themselves into trades groups. These local trades organizations initiated the practice of establishing the wage for specified periods through collective bargaining, but the bargain was always made as between two factions, whose economic interests were regarded as irconcilable, negotiating an armistice.

Fighting

The next step was the affiliation of building trades unions in the larger cities, forming, "Central Federated Unions," or "Building Trades Councils." When the local unions thus mutualized their issues, the employers' trades associations organized themselves into local "Building Trades Employers Associations." The purpose and function of the unions have not materially changed through one hundred years of growth. At the beginning of the twentieth century, their policies were still opportunist and retaliatory and they still functioned as instruments for safeguarding and furthering the economic interests of their members. Their development has consisted in the accumulation of power to combat the continuously increasing effort of employers to break the wage or hold it down, or to increase the output per capita in order to meet competition of growing intensity. Whenever the unions increased their strength and accumulated sufficient power to dominate the situation, the employers followed suit very promptly. When the demand for workers equalled or exceeded the supply the unions were on top and precipitated trouble. When there were more men than jobs the employers had the upper hand, and again there was trouble, sometimes precipitated by the employers, and sometimes by the wage earners through attempts to curtail production and thus spread out employment. One reason for the affiliation of local employers associations was the need of establishing and maintaining some reasonable relationship between the wages paid in the different trades; that is, to prevent one union more powerful than another from securing a large increase in its wage, and thus creating a feeling of dissatisfaction in other trades; for this dissatisfaction has invariably expressed itself in demands by other unions for similar increases. Disputes between unions over the jurisdiction of work, has also constituted a contributing cause of local disturbances, but this cause has now been removed by the creation of a National Board of Jurisdictional Awards.

Truce

In the Fall of 1916 a small group of electrical contractors became convinced of the necessity of abandoning in their relations with their employees, the philosophy of power and struggle. Forthwith they proceeded to "sell" themselves and their new philosophy of *Industry Solidarity and Industry Cooperation* dedicated to service, to the International Brotherhood of Electrical Workers. In 1920, this effort resulted in the creation of the National Council on Industrial Relations by the International Brotherhood of Electrical Workers and the National Association of Electrical Contractors and Dealers. This Council is composed of five labor representatives and five representatives of the employers. The two national bodies adopted concurrently a "Declaration of Principles", with the following preamble: "The vital interests of the Public and of Employee and Employer in industry are inseparably bound together. All will benefit by a continuous peaceful operation of the industrial process and the devotion of the means of production to the common good".

One naturally jumps to the conclusion that such a council differs little in its function from other similar bodies that have been created in other industries for the purpose of adjudicating disputes. The Council for the Electrical Construction Industry is not a supreme court, but a grand jury which finds indictments and reports the facts to the supreme court of public opinion. But the Council's principle function is that of study and research to the end that it "may discover and remove the causes of friction and dispute."

The Detroit Decision

In February 1921, performing its function as mediator, the Council handed down a decision in a wage dispute in Detroit. This decision contains some passages which indicate very clearly the kind of thinking the Council is doing and the direction of its study and inquiries. The union shop members of the Electrical Contractors Association of Detroit were employing union mechanics under an agreement fixing the wage scale for journeyman at \$1.25 per hour. The agreement, under its provisions, could be terminated at the expiration of a ninety days' notice by either party. The employers served a written notice on Local No. 58 of the I. B. E. W. which terminated the said agreement on January 21, 1921. Following this notice, announcement was made by the employers that the wage for journeymen on an after January 24 would be \$1.00 per hour. The union refused to accept this reduction. Negotiations followed which failed to produce a settlement. The employers contended for the justice and necessity of the proposed reduction of the wage scale on the grounds that:

1. The open shop contractors with whom the union shop contractors were in competition were paying a wage of \$.90 per hour or less, which placed the union shop employers paying a wage of \$1.25 at a serious disadvantage in securing work.
2. That the decline in the living costs in Detroit justified the proposed reduction.

Wage Scales and Human Lives

In its decision the Council declared that it did not believe a reduction in the union scale would affect competition as between the union and open shop employers. "History shows that there is a more or less constant differential between union wage scales and wages paid by open shop employers except when the demand for workers exceeds the supply. The Council is fully convinced that the only satisfactory way in which the competition of the open shop employer can be successfully met is by improving the productive efficiency of the union mechanic. The situation in Detroit lays a clear responsibility upon the union mechanics to make a conscientious and sustained effort to deliver a much larger measure of service for their wage than that which the evidence conclusively establishes they have been rendering in the past. Indeed, the life of the Union and the maintenance of living standards which it has secured depend upon the delivery of this larger measure of service by its members."

The Council then proceeds to state that at the outset it is confronted with the necessity of answering a primary question which is common to all wage disputes, namely, what is a fair wage? "An attempt to answer this question raises another, even more fundamental; one which compels a searching examination of the very basis upon which the whole building industry operates. This second question is the one of security of employment and must measurably influence any answer to the first question, for, after all, what a man earns per hour is of no consequence compared with the number of hours per year he works at the hour rate. The worker's annual income is the thing that concerns him most vitally and is, therefore, of first importance to his employer and to the industry. In discussing the causes of the wage earner's economic insecurity and the uncertainty as to his annual income, the Council states that an inquiry into the root causes of those violent fluctuations, existing in even more normal times than these, in the individual building trades employer's demand for workers, and the resultant periodic unemployment, is imperative."

The Peak Scramble

"The method of competing on price by which the employer sells his services, the services of his executive staff, and sells short the services of those whom he must later employ, is necessarily involved in such an inquiry. This competitive method at once makes the volume of future work highly speculative, and the control of that volume difficult in the extreme, if not impossible. If pursued still further, the inquiry brings to light the fact that the whole industry is operating on what might be termed the peak load basis. That is to say, every step in the process, from the mining of the ore or the felling of trees, to the fabrication of manufactured products into the finished building, is organized, equipped, and manned executive to meet a peak or maximum demand which is reached only occasionally and for brief periods. Every one is striving to create and maintain a profitable demand for services that will call for peak production. This condition results in chaos and incalculable waste, all of which is and must be a charge on the cost of construction, compared to which any alleged inflation of the wages paid for work performed

A STRIKELESS BUILDING INDUSTRY

is trivial. One large item of this waste is total of wages lost by reason of unemployment and the super-cost of production due to the worker's inefficiency because of the insecurity of his employment and the consequent loss of interest in his work."

"Until the demand factor in the building industry as a whole is equalized, until the peaks and valleys in the load curve are ironed out, neither electrical construction nor any other trade can be placed on that stable basis which alone will insure security of employment and maximum effort by the wage earners. The Council is forced reluctantly to admit its inability to formulate a workable principle that will provide security of employment for the wage earner. Its reluctance in making this admission is due to a deep conviction that insecurity of employment is one of the principle causes contributing to the general unrest of which the Detroit dispute, the evidence shows, is in large part an expression."

Hours, Days, Weeks, Years

"The importance of security of employment as a stabilizing factor in industrial relations arises from the fact that it has a profound effect upon the wage earner's attitude of mind toward his work. By contrast with it the wage is relatively unimportant, for the worker's interest in his job and therefore his productive efficiency is stimulated far more by the sense of economic security than by the amount in the pay envelope at the end of the week when there is no certainty that it may be depended upon for any fixed period."

"A direct obligation rests on the industry which employs a wage earner to offer him the opportunity to work for such wages and for such periods as will furnish him and the dependent members of his family food, clothing, and shelter. These he must have for himself and his dependents, whether he is employed or not. If he has no opportunity to provide them, the community must, and he and his dependents become public charges. But industry owes more than a bare subsistence to its workers. We need not discuss this obligation from the standpoint of morals or ethics. Self interest would seem to demand of an industry that it satisfy those needs of the worker which contribute to a right mental attitude, as well as his material needs, for out of the satisfaction of the former grows undivided interest in the job, loyalty to the work, unreserved application of energy and good will, all of which constitute the basis of industrial morale."

The Fair Wage

The Council then proceeds to define a fair wage. A fair wage, in the opinion of the Council, is one which, upon an assumption based on statistics as to the duration of employment, will satisfy as nearly as possible all of the worker's needs. The adequacy of the wage to satisfy all of the worker's needs is regulated by the cost of living and will vary with the fluctuating purchasing power of the dollar.

Upon this principle of relating the wage to the cost of living, the Council took the average of the wages paid to electrical workers in 1914 in the cities of Chicago, Cleveland, Detroit and Cincinnati, this average to be used as the

basis for computing a present fair wage. The Council also took the wholesale price index number published by the Bureau of Labor Statistics of the U. S. Dept. of Labor for 1914 as indicating the purchasing value of the dollar. The year 1914 was selected as a base year for both wage and index number for two reasons: first, because it was the last normal year before the war and, second, it was a relatively peaceful year in industry, both of which facts would seem to warrant the conclusion that the relation then existing between wages and the cost of living was reasonably satisfactory to both wage earners and employers. But the Council states emphatically in connection with this observation that it does not pass judgment on the sufficiency or fairness of the wage paid in 1914. The Council then computed the average wholesale price index number for the twelve months ending November 30, 1920, the November index number being the last available, and increased the wage from the average of 1914 in the same ratio as established by the increase in the index number. The result was that the wage for 1921 was fixed at \$9.94 per day of 8 hours, which the Council increased to \$10.00, which was the wage prevailing prior to January 21, 1921. The Council decided that this wage should continue until July 1, 1921.

The Council closed its decision with the following paragraph:

"It is the hope of the Council that if changed conditions seem to require an adjustment of the wage on July 1st, the parties will effect that adjustment by the method employed in reaching this decision." There was no strike and no lock-out and if the principle and formula employed by the Council in effecting this adjustment is again employed there will be no future strikes or lock-outs. After the decision was handed down an amazing thing happened. The local union voluntarily offered to accept a reduction in the wage scale.

The Losses Men Pay

The New York State Industrial Commission, in its October 1920 Bulletin says that during the year ending June 30, 1920, there were 10,608,483 days of work lost in New York State by reason of strikes and lock-outs. At a low daily average wage this means a loss of approximately \$50 million directly to the industries involved and ultimately to society as a whole. Has any one attempted to compute the dollar loss in unpaid wages, strike benefits paid by the unions, in the non-productivity of contractors and to the public as the result of the Boston strike or lock-out. The international officers of the Brotherhood of Electrical Workers say that strikes and lock-outs result in a dead money loss, and that common business sense dictates the discard of both strikes and lock-outs as a means of adjusting differences between employers and employees.

Fault

While the Detroit dispute is the only one in which the Council has handed down a formal written decision, it has adjusted many other difficulties all of which easily might have resulted in interruptions of work. It has been publicly stated by one of the international officers of the Union that nearly all of the cases dealt with by the Council have been submitted in the form of employer complaints, and in all cases but one the complaint had merit. It is a

highly significant event when a high union official states that in all but one of a large number of disagreements between employers and wage earners, the condition called for correction by the local union.

The Council is in reality the instrument for national joint leadership in an industry united about the interests common to both employers and wage earners. It is only a matter of time when industrial unity and joint leadership will become the prevailing local condition also. What that means will be clearly grasped when it is understood that many local disturbances are the results of local union and employer association politics played for the benefit of powerful individuals.

Knavery

It may be claimed that such an arrangement will result in further exploitation of a helpless public. I would agree to that possibility or probability were it not for certain fundamental differences between the spirit and purpose of this movement toward a strikeless industry and those which in the past have resulted in the erection of "stone walls" about local centers of building activity, when local unions and local employers have adopted the policy of "you scratch my back and I'll scratch yours." These local understandings have been purely local. The International Brotherhood of Electrical Workers has "laws" which can be applied to correcting such local conditions. But any one who is familiar with the inside workings of union organization will understand the difficulties confronting the international officers in correcting local conditions through invoking such laws, because of the failure of local employers to cooperate. It is my deep conviction that the "rottenness" in local union conditions cannot be eradicated without the active and interested cooperation of local employers. Local union graft has almost become an institution because the local union officials have been able to work with local employer fools or knaves. Again, it is no more than a willing conspiracy.

Breaking Some Fetters

It is a relatively simple matter for the electrical industry, if it adopts and puts into universal practice the principle laid down by the Council in adjusting the Detroit dispute for the automatic adjustment of wages for this industry to realize a no-strike and no-lock-out condition. But several preliminary steps must be taken before such an ideal condition can become permanent and national in scope. The local unions must break their affiliations with local Building Trades Councils and thus free themselves from the obligation to go out on sympathetic strike. The local electrical employers associations must dissolve their affiliations with Building Trades Employers Associations in order to escape the necessity of being parties to organized lock-outs. The Electrical Contractors Association in New York, or more precisely, the individual members withdrew from the

Building Trades Employers Association last May. The necessity of breaking these local affiliations would, of course, be removed if all of the affiliated trades adopted the policy and principle which seems to be in a fair way of adoption by the whole of the electrical construction industry. The failure of the other building trades to organize upon such a basis, calls for a third preliminary step, namely, the separate and direct contract for electrical work. The necessity for separating the electrical work from the general contract arises from the fact that in all local building trades employers associations the general contractor members show a marked preference in awarding sub-contracts to those sub-contractors who are affiliated with them and support them in their struggles with the wage earners. In every case where a sub-trade association has withdrawn such support from the general contractors, the latter have endeavored to create new sub-contractors who would work with them and support them in their destructive policies.

Separate Contracts

If the architect and engineer really want a strikeless building industry, the way to make it a possibility is to aid the electrical trade in its present fight by adopting the practice of letting electrical contracts separately to contractors who can guarantee continuous operation and the full cooperation of the organized workers, and gradually spreading this practice out to cover each trade which adopts the no-strike and no-lock-out policy until such time as all of the trades are upon that basis. When that time arrives we shall have new local affiliations on both trades unions and employers—probably a single organization including both employers and wage earners in all of the trades and actuated by motives very different from those which have largely contributed toward bringing the building industry into its present chaotic condition. The principle of direct letting of contracts, instead of subletting, was approved at the December 1913, Convention of the American Institute of Architects.

Onward

The electrical construction industry offers a program for solving the "labor problem" involved in the work of erecting buildings. But that industry and the whole building industry will not, by adopting this program, remove all possibility of interruption of work. Those branches of the industry which produce materials must also produce continuously. There are other problems, too, just as fundamental, that must ultimately be solved before the building industry will operate with minimum friction in meeting the needs of men; they are the problems of the proper use of credit and of land, for these two factors vitally affect all building operations and are basically responsible perhaps, for the so-called industrial conditions with which we are now trying to deal.



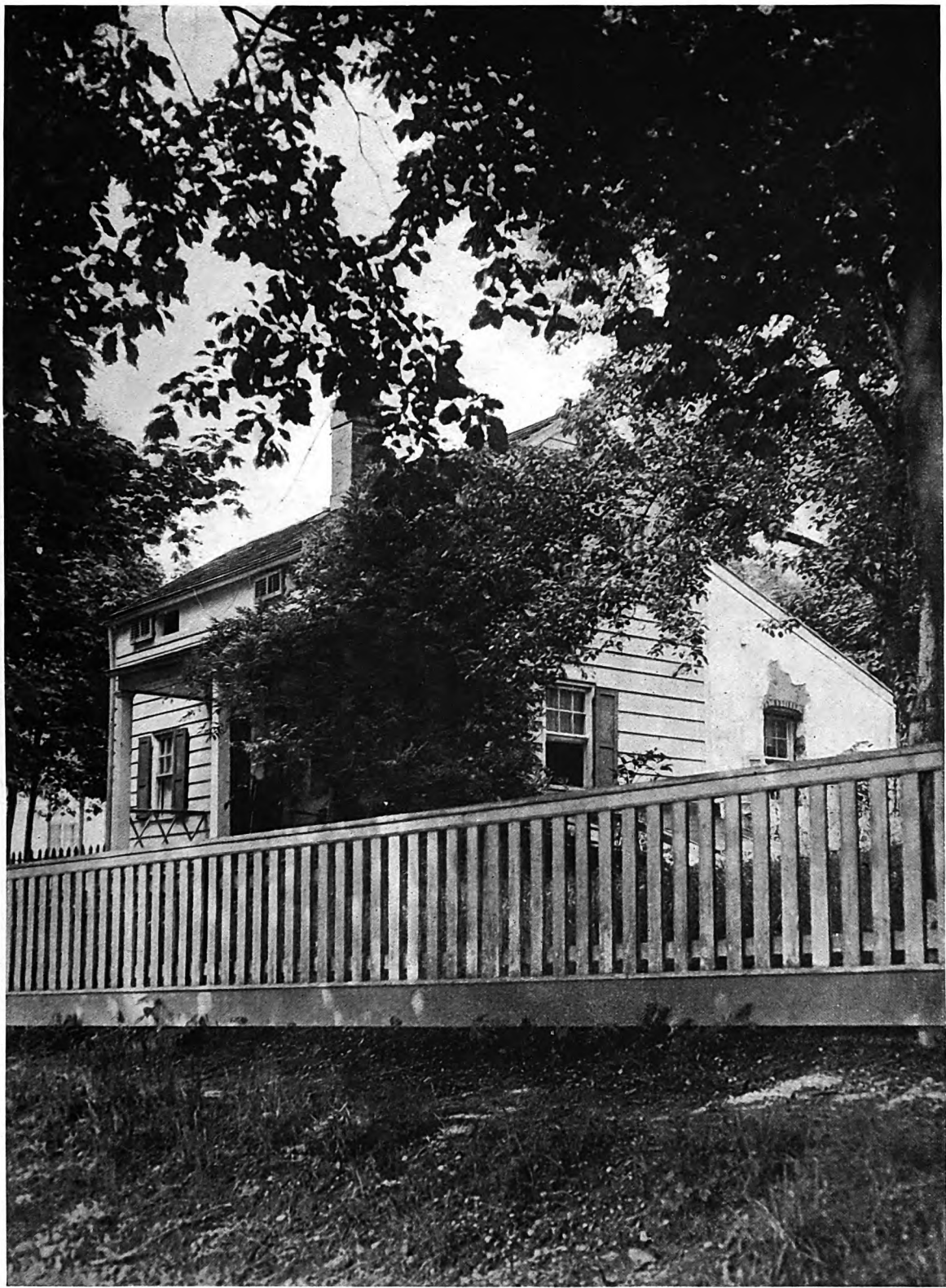
AT LOCUST VALLEY.

Nine Illustrations of Old Houses on Long Island, New York
(Including frontispiece)

After photographs by
G. H. Van Anda.



THE MALCOLM HOUSE—Jerico.



AT HUNTINGTON.



AT HICKSVILLE.



SHADED PATH—SPANISH LINEAR CITY, MADRID

The Spanish Linear City

By EDITH ELMER WOOD

THE linear city idea has cropped up, independently no doubt, and with local modifications, in various parts of the world. It was advocated in England by Captain J. W. Petavel in his "Coming Triumph of Christianity" in 1911. It figures in the prize-winning paper by Milo Hastings published in the June, 1919, number of *THE JOURNAL* of the American Institute of Architects. Mr. Hastings says he first published the essential idea in 1909. He calls attention to what it has in common with Edgar Chambless's continuous-house idea as set forth in *Roadtown* (1910).

It is the merest justice to point out that undoubted priority belongs to Don Arturo Soria y Mata (now deceased) of Madrid, who developed the idea in a series of articles in *El Progreso* of that city in 1882 and 1883. Moreover Señor Soria's idea did not remain in the realms of theory, but has been embodied in an actual suburb of Madrid. The stock company which was to carry out the project was incorporated in 1894. The dates leave no doubt of the priority in time of the Spanish linear city, both as to its announcement and its realization, as com-

pared with the English garden city. Ebenezer Howard published his famous book in 1898, and First Garden City was incorporated in 1903.

Señor Hilarión González del Castillo, an enthusiastic champion of the linear city, claims for it also an essential superiority over the English garden city of Howard. To the present writer it does not seem that he has proved his case. It will be convenient to consider briefly:

1. The theoretical linear city of Señor Soria.
2. The actual Ciudad Lineal built by the Compañía Madrileña de Urbanización.
3. The theoretical city which Señor del Castillo is now advocating, which he calls the Linear Garden City.

The Theoretical Linear City of Señor Soria

It is most unlikely that Mr. Howard ever saw or heard of Señor Soria's articles before the publication of "Garden Cities of Tomorrow." Yet much in their mental approach and in their social philosophy is similar. Both authors were oppressed by the evils of city congestion, lack of

sunlight and fresh air, resulting in high death rates. Both saw in slum conditions a crime against childhood and against civilization. Both recognized that the stream of migration would nevertheless continue to flow from the country to the city unless some way was found of curing the loneliness, the barrenness, the monotony of country life. Both said in effect: It is necessary to bring the city to the country and the country to the city—to combine their advantages and get rid of their disadvantages.

▼ Señor Soria pointed out that it was easier and cheaper to build a new city than to make over an old one. He made a strong plea for scientific town planning as against haphazard building. He said a house has a plan and the universe has a plan. A community needs one too. He maintained that transportation is the key problem of modern cities and that the quickest and most economical transportation for all its inhabitants would be furnished if a city were built on both sides of a single street through which passed a trolley line. A similar economy would be effected in water mains, sewers, telephone and electric light wires. He also suggested the possibility of heat from a central plant and pneumatic tubes for mail and parcel delivery.

He insisted that there should be no tenement houses or apartments, no attached or row houses in his city. Every dwelling was to be detached and stand in its own garden. He was not planning a workingman's suburb, but a community where all economic classes should be found—rich, poor, and those between—another point in common with Letchworth. Unlike Letchworth, the lots were to be sold, but with perpetual restrictions as to building line and the area of the lot that could be built on, which was not to exceed 20 per cent.

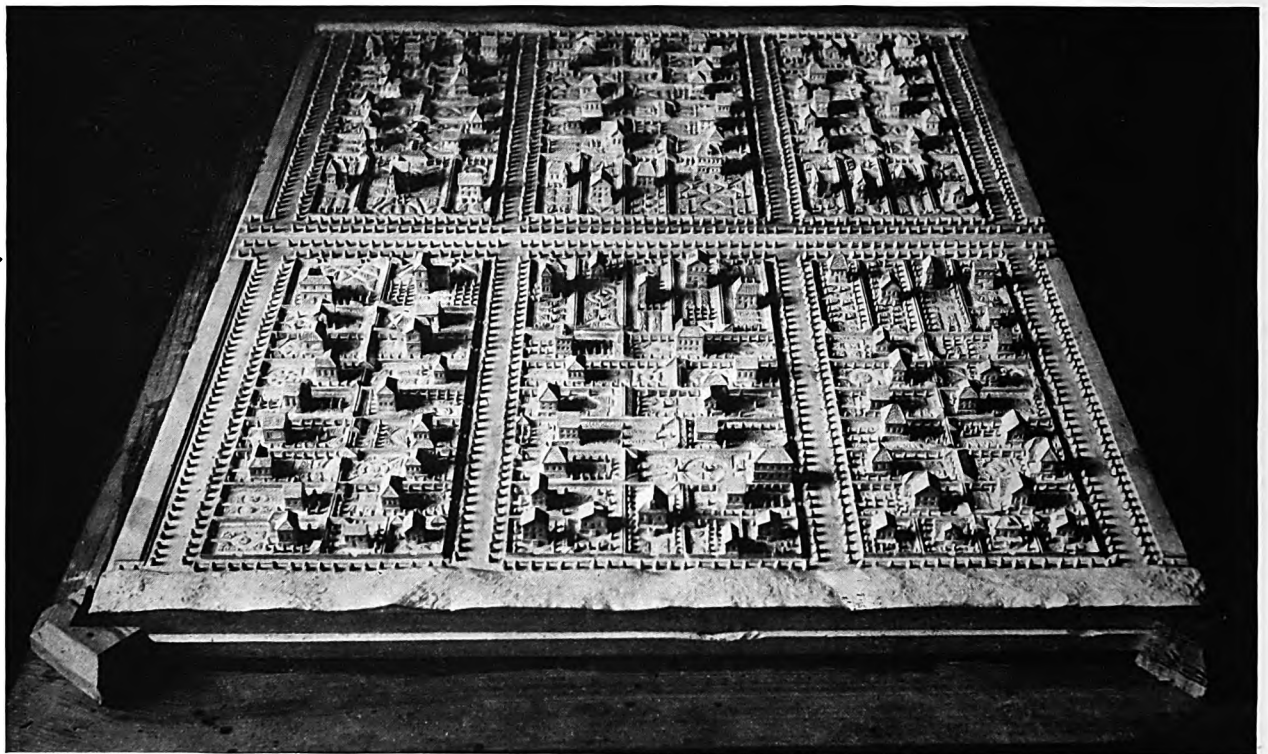
It is on this large amount of open space and on the insistence upon detached dwellings that Señor del Castillo based much of his early claim for the superiority of the Soria idea. But it will be readily seen that there is no essential connection between a linear city and detached houses or 80 per cent of lots unbuilt on, any more than between the English garden city idea and the precise formula of twelve families to the acre. It is clearly a question, in any particular development, of balancing economic conditions against the ideally desirable. How far shall we lower standards to let in the man at the bottom of the economic scale? Most of us will agree that detached houses are better than row houses. But it is morally certain that the cost of a house and lot at Ciudad Lineal puts them beyond the reach of the unskilled wage earner. And it is to be observed that Señor del Castillo himself has dropped his insistence on detached houses and 80 per cent of lots unbuilt on in his last project for a Belgian linear city.¹

Señor Soria hardly conceived his linear city as an urban entity, for he imagined it indefinitely prolongable—from Cadiz to St. Petersburg, he said, or from Brussels to Peking. He prophesied a day when Spain would be a network of linear cities, the triangular hinterland given over to farming, but the farmers living on the lines of urbanization.

The Ciudad Lineal of Madrid

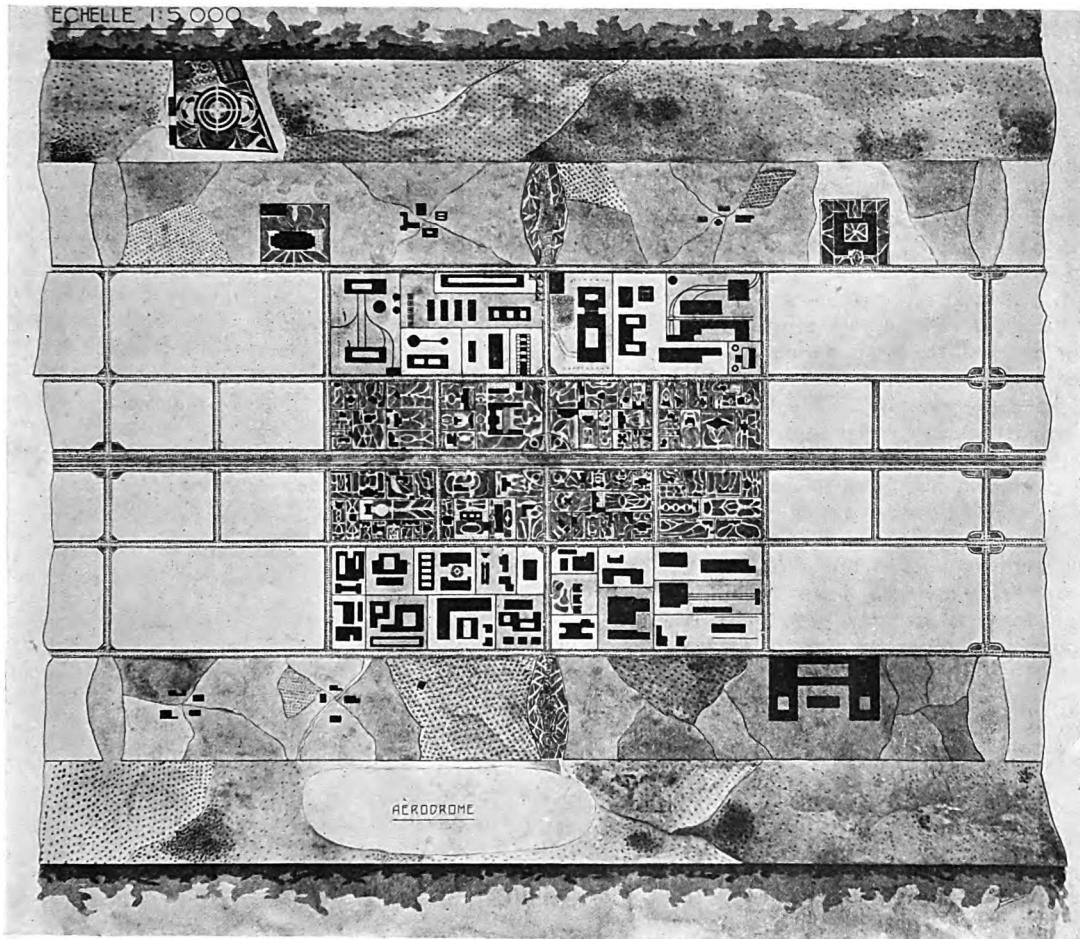
The writings and speeches of Señor Soria inspired a few enthusiasts to incorporate the *Compañía Madrileña de Urbanización*, on March 3, 1894, as a stock company with an authorized capital of two and a half million pesetas

¹ *Projet de Cité Linéaire Belge*, 1919.



SECTION IN RELIEF—SPANISH LINEAR CITY, MADRID

THE SPANISH LINEAR CITY



SECTION—BELGIAN LINEAR CITY—SHOWING AGRICULTURAL BELT

(a little short of \$500,000 at normal rates of exchange). This has been gradually increased to twenty-eight million pesetas. The shares are of 500 pesetas each (roughly \$100). The subscribers of the first 500 shares elected the officers and governing board and made Señor Soria the active director of the enterprise.

The plan was to construct a circular linear city around Madrid, about 50 kilometers in length when complete, at a distance from the capital of 7 or 8 kilometers (4.5 to 5 miles). A little over one-tenth of this (5200 meters) has been completed and another section of 8 kilometers started. Lack of adequate funds has hampered the company from the start. Obstacles of inertia, skepticism, and active hostility had to be overcome. To secure the land for the first section of 5200 meters, running from the Aragon road near Pueblo Nuevo to the Pine Grove of Chamartin, it was necessary to purchase from more than 100 owners! Money borrowed by the company had at first to pay 10 per cent interest, only gradually reduced to 9, 8 and 7. The stock is said by the company to pay 8 per cent, but when it began to pay such dividends, or whether they have been continuous, is not stated. The first 1500 shares of stock subscribed to, each carried a building lot as a bonus. At the time of the publication of an elaborate illustrated book¹

¹ Datos acerca de la Ciudad Lineal, 1911, 86 pp.

by the company in 1911, 680 dwellings had been erected, housing a winter population of 4000, with considerably more in summer.

One of the big achievements of the company is the setting out of more than 80,000 trees. Only those who know the arid, treeless plain which surrounds Madrid can fully realize the blessing conferred by such a bower of green.

The Compañía Madrileña de Urbanización by no means confines itself to laying out its town and selling lots. In 1911 it had built and was operating 49 kilometers of trolley line and had 17 more under construction. (Señor del Castillo believes in this policy and considers it a great mistake to abandon valuable franchises to outsiders.) It installed and administers a water system (Señor del Castillo feels that in order to encourage the free use of water, it should be supplied at cost or below, the company recouping itself through the trolley line.) It furnishes electricity, both for light and power. It contracts for and builds the houses to be erected in Ciudad Lineal and also accepts building contracts in Madrid. It manufactures its own brick and tiles from clay obtained in its grading operations. It has a printing press and issues a bulletin three times a month. It operates stores. It has a nursery from which it supplies trees and shrubs. It has an employment agency which undertakes to furnish residents of the

Ciudad Lineal with servants. It has a savings bank with deposits of over 14,000,000 pesetas. And, finally, it has built an amusement park containing an open air theater and concert hall, restaurant, merry-go-round, foot-ball field, and numerous other attractions, not only for the recreation of the residents, but to draw people out from Madrid during the heated season.

Whether it is wise or safe for a housing company to undertake so many and diverse forms of business, is open to serious question. It is contrary to British and American practice, but it is always possible that our practice has been short-sighted. It raises the question (as does the 8 per cent dividend the company has undertaken to pay) as to the status of the organization, or rather it would seem to class the undertaking definitely as a money-making venture rather than as one for civic improvement. This may be the reason why, in spite of much urging, the Spanish government has failed to declare it "de utilidad publico," (of public utility—in the British, not the American sense) conferring on it the right of expropriating land and various other privileges. British housing companies, in order to qualify as public utility societies and receive government loans at low rates of interest, have to limit their dividends to 5 per cent, the German societies to 4 per cent.

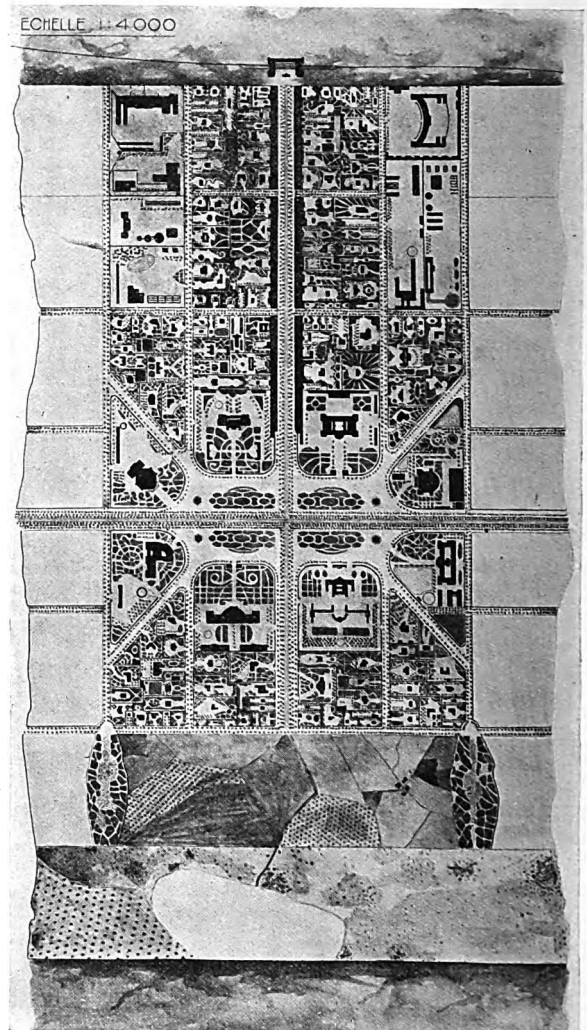
There are other points which indicate how far the projectors of Ciudad Lineal are from conceiving of it as a philanthropy. They sell their lots and build houses, either for cash or on a twenty-year payment plan. The latter involves a cash payment of 20 per cent and the rest in equal monthly instalments. The interest rate on unpaid balances in the case of land is not stated. In the case of houses, it is called "rent" and calculated at the rate of 9 per cent, which is cheap if the company pays taxes, insurance and repairs, and dear if the purchaser does it. Title does not pass till payments are completed. A discount of 10 per cent is allowed for cash payments. So far, so good. But note that in case of arrears, the land—and all previous payments—is forfeited after three months (six months in case of the death of the purchaser), and the house after only *fifteen days*. Probably, in practice, this last clause is not enforced in all its severity, but its mere existence is rather appalling. Another point which gives a shock to American preconceived ideas is the absence of sewers. The company advises the home builder to construct two cesspools in his back yard about 60 feet deep, and optimistically states that they will not need to bother about sewers for a hundred years.

The Ciudad Lineal has modified Señor Soria's rigidly one-street idea to the extent of developing one block on each side of the central avenue. This involves short transverse streets and longitudinal boundary streets. By requiring that houses on the main avenue shall have a minimum of three lots and on the transverse streets of two lots, while on the boundary streets a single lot may be built on, workingmen's houses tend automatically to seek the boundary streets and middle-class houses the cross streets, while the houses of the wealthy adorn the principal thoroughfare. All the lots are of standard size, containing 400 square meters, or roughly, our familiar 50 ft. by 100 ft. site.

The company published in 1911 a series of elevations, floor plans and cost estimates of nineteen types of dwellings

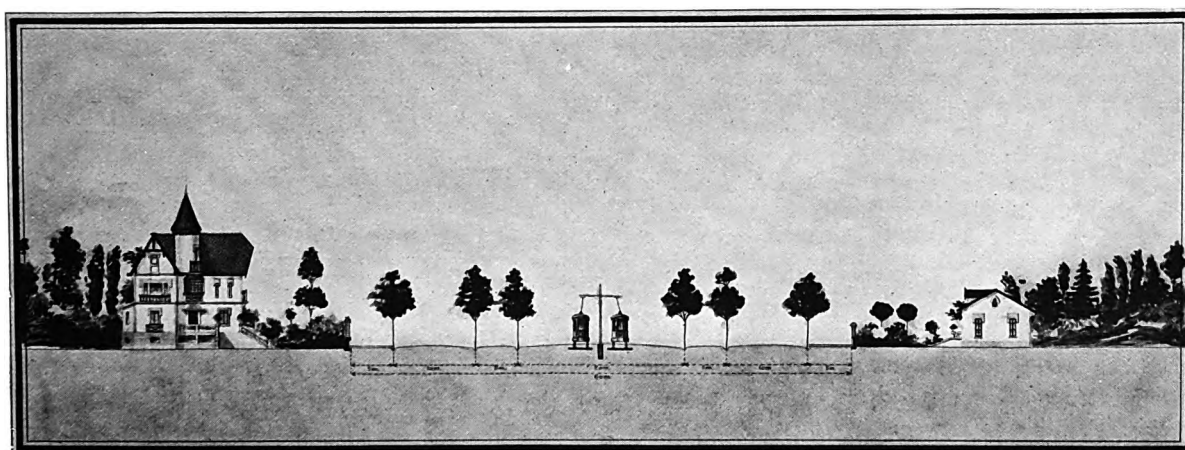
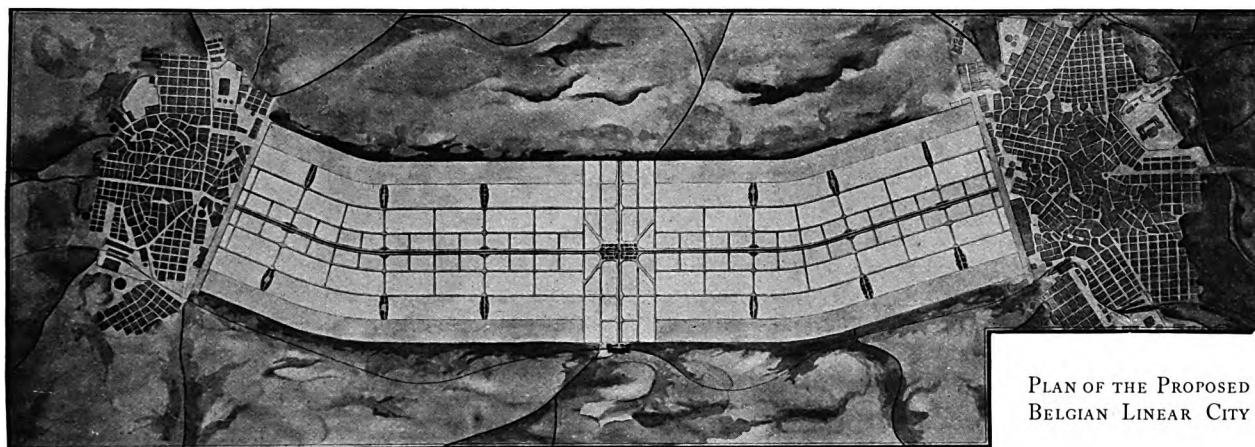
ranging from a workingman's four-room cottage without bath, costing about \$700, to a two-story, basement and attic villa with ten rooms, bath, terrace and sun parlor for about \$12,000. Attractive middle class houses of from 7 to 9 rooms and bath were obtainable for from \$2,000 to \$3,000. The writer has been unable to obtain information as to present day prices. A very good point is the price per cubic meter given for each type of house, whereby the purchaser may calculate the cost of changes he wishes to make in the sizes of rooms from those given in the plan. An example of the varying emphasis in different countries is furnished by the plans for workingmen's houses, which, in the case of the cheapest one referred to above, called for brick walls twelve inches thick, and in the case of all other types (\$800 and up) for walls *eighteen* inches thick, although they had no baths, nor even, apparently, running water inside the house.¹

¹ We should not forget, however, that we have a great deal of housing for working people in the United States, considered "model" by those responsible for it, which contains no bath, and some which is without running water. Nor should the statement be omitted that both Señor Soria and Señor del Castillo in their writings advocate the standard of a bath in every house.



CIVIC CENTER—BELGIAN LINEAR CITY

THE SPANISH LINEAR CITY



STREET ELEVATION—BELGIAN LINEAR CITY

It is stated that the death-rate in Ciudad Lineal is much lower than in Madrid and the children much healthier. One can well believe it. But it is to be regretted that no supporting statistics appear to be available, and that no such comparative study has been undertaken of the physical development of children as in the case of Liverpool and Port Sunlight or Birmingham and Bournemouth. Señor Soria gave the death-rate in Madrid in 1894 as 40 per 1000. So there was ample room for improvement. The dark-room evil is especially prevalent in Madrid and is not limited to the houses of the poor. To sum up: The Compañía Madrileña de Urbanización, whether wise in all its policies or not, has created the most beautiful suburb of Madrid and made a real contribution to the cause of better health and better housing in Spain.

The Linear Garden City Advocated by Don Hilarión González del Castillo

It is interesting to note that Señor del Castillo, who in 1913 was arguing for the all around superiority of the Spanish linear city to the English garden city,¹ had,

¹ See the pamphlet report, *La Cité Linéaire* which Señor del Castillo prepared for the Compañía Madrileña de Urbanización to present to the 1er Congrès International de l'Art de Construire Villes et Organization de la Vie Municipale, at Ghent in 1913 (French translation by M. Georges Benoit-Lévy). See also his Spanish pamphlet published during the same year, *Ciudades Jardines y Ciudades Lineales*.

by 1919, in his *Projet de Cité Linéaire Belge* already alluded to, prepared for the Reconstruction Exposition at Brussels, considerably modified his views in the direction of the garden city. He retains, of course, the fundamental idea of a central axial avenue with its trolley line. But he has broadened his territory till it contains two other longitudinal avenues on each side, or five in all. He has also established zones. His central, or urban, zone is not confined to residences, but it excludes factories. These are to be found in the industrial belt at each side, between Avenues A and B. Workingmen's homes he pictures in the industrial belt at the very door of the factory. Beyond Avenue B on each side is an agricultural belt for dairy farms and market gardens, which must be kept as such in perpetuity (the English idea again), and beyond that is a forest belt. This latter is drawn also across the two ends to make it really an urban entity and not just a built-up road. With this object in mind, and also to take away the reproach of monotony, he has placed a forum or civic center in the middle of his city. He places the maximum number of inhabitants at 60,000, where the city is 10 kilometers long and 2340 meters in width.

He considers the best agency for carrying out such a project a private company with commercial gain as its main object, but with high ideals of public usefulness.

He feels, however, that it should receive government encouragement, at least in the form of franchises and the right of expropriation. There is a project on foot in Chile for linear farm colonies. Señor del Castillo is at work on plans for a linear garden city in Argentina. He wants to see the idea tried out in the United States, having more faith than we deserve, perhaps, in the vision and initiative of Americans.

The writer is indebted to Señor del Castillo for the facts contained in this article, although the conclusions drawn are her own. She takes this opportunity of expressing her obligation to him as well as her complete concurrence in his ideal and that of Señor Soria: "To every family a house, and to every house a garden."

From France

As life is renewed on every hand in France, committees are formed both in the great cities and in the smallest villages for the purpose of erecting monuments to the dead of the Great War. Considerable sums have been raised. Competitions are organized for the cities of Hyères, Oloron, Laval, le Havre, Alger and Lyons. The competitions of le Havre and Alger are about to be decided. That of Lyons has just been judged. First places were won by Tony-Garnier, Robert Giroud and Roux-Spitz, who will collaborate to work out a definite project, the first competition being held merely to obtain ideas on the character and importance of the monument and especially on the question of site.

The allied nations also have their monuments. There have been, it seems, great projects prepared by Canada in honour of her heroes fallen on Vimy crest, another also to commemorate the battles which took place during a month on the plateau of Notre Dame de Lorette. The site is marvellous, overlooking the whole plain between Lens and Arras. I would see there a magnificent Campo Santo, whose portico, sheltering the memorial stones, should also enclose a votive chapel for pilgrims. The Americans are planning a monument in memory of their terrible struggle in Belleau Wood. A great competition recently held will give Dormans a memorial of the Victory of the Marne. The choice of its site was entrusted to Marshal Foch. At the close of the competition the prize was awarded to the architects Gras and Rousselot. Magnificent designs were submitted, including a very curious one by Bigot.

The Carnegie endowment has just given a very considerable sum toward restoring the library of Reims, which was one of the most precious and most important ones in France. It contained 130,000 volumes, one third of which were saved, owing to the persistent courage of certain citizens, notably of M. Loriguet, the custodian. They were thus enabled to rescue the manuscripts, the rare books, the emblazoned bindings, all the treasures. In the words of M. Pol Neveux, "the heart of the library is intact."

The United States has very generously come to our aid.

On the suggestion of Mr. Nicholas Murray Butler, president of Columbia University, and of Mr. Elihu Root, who have both so often shown their sympathy for France, the Carnegie endowment has presented the city of Reims the sum of \$200,000, which will allow of constructing a practical library to house 350,000 volumes. What finer mark of friendship could America show us?

Close by the martyred cathedral will arise the new library, whose plans have been entrusted to an architect of Reims, M. Max Sainsaulieu. The vestibule will have a monumental character, and they say will be adorned with some admirable fragments of statuary of Reims dating from the 13th century. The tapestries which form part of the city treasure will serve as mural decoration. The work will be carried on rapidly, and it is hoped that in 1921 Mr. Butler may be able to come himself to lay the first stone of the monument, whereof he is somewhat the spiritual father, and for which fervent thanks are due to the administrators of the Carnegie fund.

The Federation of French Architectural Societies has just organized its bureau, whose president is M. Cordonnier. The Federation is the league of all affiliated societies, particularly the Central Society (the "Société des Architectes diplômés"), and the Society of Architects of the Provinces. We know what efforts have been made by the American Institute, and especially by Mr. Whitaker, to have the national federations, English, French and American, gathered together to unite their organizations and defend our professional interests. The cohesion of all these great societies should improve the position of architects, better explain their rôle to the public and interest the latter in the present important work of reconstruction and development of cities. "Urbanism," a modern science, and the studies which it proposes at this time, so interesting from the social view-point, might gain much by it.

On Wednesday, the 28th of January, in the Place de l'Etoile, we attended the burial of the Unknown Soldier under the Arc de Triomphe. That impressive and simple scene was staged in the magnificent setting of the monument veiled in a thin blue mist. All divisions of the army were represented, and formed around the Arc as it were a wreath of myosotis. That symbolic tint ("forget-me-not") of horizon blue revealed itself through the haze and melted into the shadow; a faint sun-ray scarcely pierced the clouds.

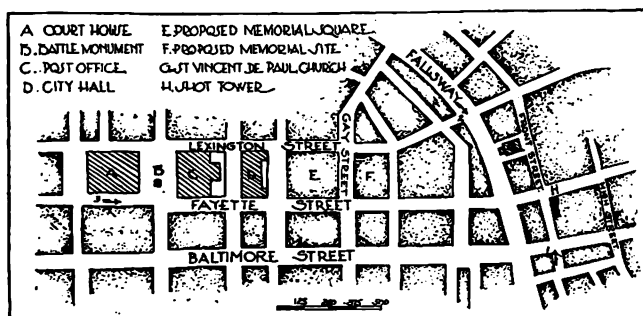
The scene deserved to be painted by a Raffet, and recalled to me the "nocturnal reviews" in the great lithograph that appeared some years ago in THE JOURNAL. The monument is nothing more than a great rectangular block of granite; it is placed under the arch on the side toward the Champs Elysées. Throngs filed silently for several days past that tomb at once so modest and so imposing; the humblest citizens came to drop their little bouquet of violets in homage to that unnamed hero, the simple soldier who deserved so well of his country. Our journals report General Pershing's proposal that the United States shall also have their tomb of an unknown hero built in the National Cemetery at Arlington.

JEAN PAUL ALAUX

THE SHOT TOWER IN BALTIMORE

The Shot Tower in Baltimore

THE threatened destruction of the Shot Tower in Baltimore has brought forth vigorous protests from various societies and individuals interested in preserving the distinctive features of that city. The municipal authorities have responded to this expression of public sentiment by introducing an ordinance in the City Council empowering the city to acquire the tower and adjacent property. It is proposed to preserve this structure as a public monument, perhaps using the building at the side as a civic museum, and developing about it a small park or playground, much needed in this neighborhood.



At one time there were in Baltimore at least three shot towers. The oldest, known as the Baltimore Shot Tower, stood on the west side of Gay Street, north of Fayette. It was built in 1823, by one Jacob Wolfe, to a height variously given as 160 and 187 feet. This tower was taken down in January 1845. Another stood on Eutaw Street near Camden, but there seem to be no data for determining either its date of erection, or its dimensions, although we know that it was pulled down in 1851. The existing shot tower, claimed to be within a few feet of the highest ever built, stands on the corner of Fayette and Front Streets. The corner-stone was laid on the second of June 1828 by Charles Carroll of Carrollton, the last surviving signer of the Declaration of Independence. It was built for the Phoenix Company by the Jacob Wolfe who five years before had shown his skill as a tower builder on Gay Street.

The stone foundation walls are said to rest on rock seventeen feet below grade and to be ten feet wide at the base and six feet at the top. The weight at the base has been estimated at six and one half tons a square foot. The circular brick wall, which has an incline of about one half inch to the foot, starts at the grade with a base of several projecting courses. It is four feet six inches thick for a height of about fifty feet, then it drops off four inches at each story until it reaches the top with a thickness of twenty-one inches. The whole is crowned with an eighteen inch thick parapet wall, making the summit of the tower two hundred and thirty four feet above the ground.

These walls were built from the inside, that is without exterior scaffolding, about 1,100,000 brick having been used in the work. They are a hand made, wood burned, sand brick of uniform size and color, laid four courses to $10\frac{1}{2}$ inches, one course of headers to every three of



THE BALTIMORE SHOT TOWER AND ITS PLACE IN THE PERSPECTIVE

stretchers. The brick measures $8 \frac{1}{8}'' \times 2 \frac{1}{8}'' \times 4''$. The joints have been slightly raked out by the action of the weather, but, except for a few re-pointed spots near the base, the surface, which has taken on a deep red tone, has apparently never been touched.

The firm that furnished this brick was founded in 1818 and is still in existence, the present members being the fourth generation of brickmakers. At one time their brick was in great demand throughout the country because of its uniform size and cherry red color, having been shipped to such distance points as San Francisco and New Orleans, and the Cornelius Vanderbilt house is an example of its use in New York City.

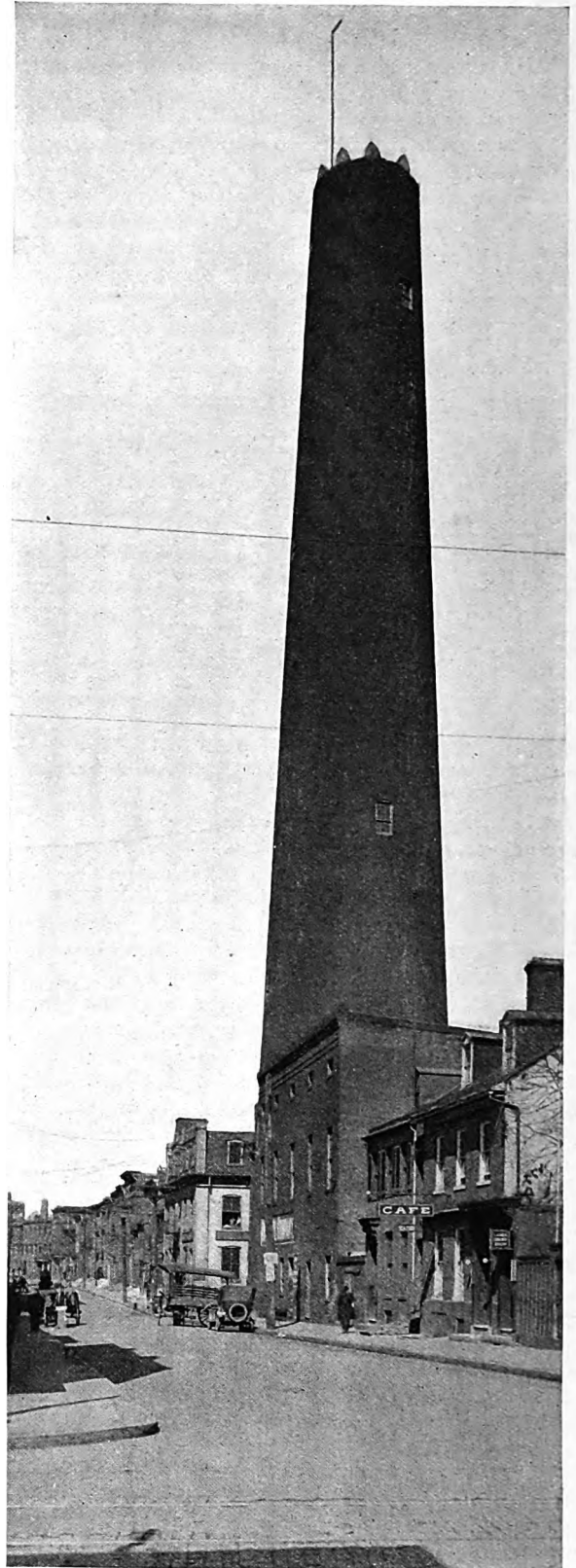
The interior of the Shot Tower was divided into stories by wooden platforms supported on heavy wood girders built into the walls. A stairway following the interior face of the wall connected these platforms, in the center of each of which was a hatchway, leaving the middle of the tower open from top to bottom for dropping the lead. This interior was destroyed by fire in 1878.

The Merchants Shot Company, a successor to the Phoenix Company, modestly claimed to make the most perfect Drop Shot in the world, because the firm foundation and general substantial character of its tower secured it against vibration, an essential feature for the perfection of shot, and that even in the heaviest gales the maximum vibration did not exceed four inches. The following is quoted from this company's advertisement for the year 1873: "Having all the new and most approved machinery for the manufacture of Drop and Mould Shot and Bar Lead, the quality of our manufactured articles in sizes, style and finish is not excelled in the world."

The method of making shot in the Baltimore tower has been described as follows: The lead was hoisted to the various levels called dropping stations by an endless chain. At each station was a brick furnace over which the lead was melted in wide, flat kettles. It was alloyed, principally with arsenic, and ready for dropping. A perforated basin, about twelve inches in diameter, was suspended over the hatchway by a holder attached to one of the hatchway posts, the size of the perforations corresponding to the size of shot desired.

The molten lead was dipped out of the kettles by long handled ladles and poured into the basins. The descending streams of metal separated into exactly spherical globules, which were cooled in passing through the air and finally fell into a tank of water at the bottom. The largest shot was dropped from the greatest elevation, the small shot from the middle floor. From the tank the shot was ladled into a dryer and then into a rapidly revolving cask where black lead was added. The swift rotary motion soon produced a high polished shot, which was next taken into the finishing room, adjoining the tower, where it was rolled down an incline to separate the perfect from the imperfect, the former running freely down the incline, while the latter hesitated and was lost, remelted and given another chance. The good shot was passed to the sifting case which contained a series of sieves of different sizes, the largest at the top. As the shot descended each sieve received that suited to its size. The assorted shot was then put into boxes, or tubes, weighted into bags of twenty five pounds each, and was ready for shipment.

LAURENCE HALL FOWLER.



THE BALTIMORE SHOT TOWER

The Progress of the Building Guilds in Great Britain

By G. D. H. COLE

WORK under Guild conditions is now in progress on about seventeen important housing contracts for public authorities in various parts of England and Wales and, in addition, the Building Guilds are making a beginning in the sphere of housing and interior finish work for private purchasers. Thus, the great experiment in industrial self-government which was launched by the building workers in Manchester little more than a year ago, has already become an important practical force in the world of industry. The path of its development has been by no means smooth and, as the Guilds advance, the difficulties in their way become constantly greater; more and more opposition is aroused and although the movement continues to spread like wild-fire amongst the building trade workers and is attracting more and more attention on the part of workers in other industries, every advance which takes place in these spheres has the effect of stimulating an intensified opposition.

Guild Costs

As I write, the first authentic figures dealing with the cost of building under Guild conditions, have just been published. These relate to the first houses actually completely on the site at Bentley in Yorkshire, a mining area, in which the Local Guild Committee has undertaken an important contract for the Urban District Council. The certified figures for the first two houses completed, show that the total cost works out at just under £1,520 or £760 per house. These figures include the whole cost of production, materials, wages, carriage and carting charges and every supplementary charge. They include also the 5% establishment charge, recognized in the contract between the Guild and the local authority, and the special allocation of £40 a house agreed to by the Ministry of Health for the purpose of enabling the Guild, in accordance with its principle of industrial maintenance, to afford continuous full-time pay, irrespective of weather conditions and casual unemployment, to all workers employed on Guild work. Of this £1,520, £457 represents the ordinary wage charge and another £80, the charge for continuous pay. Carriage and carting are a very small element and almost the whole of the remaining charge is for materials. It is not possible to give similar itemized accounts for work done by private contractors in the same area; but it is known that, on the two houses with which this account deals, the saving to the local government authorities by employing the Guild rather than a private contractor amounts to something over £400, or rather over 20 per cent. This comparison is

based on the actual prices charged by private contractors for the erection of exactly similar houses in the same district.

Thus, the first authentic figures go far towards substantiating the contention of the Building Guild leaders that they will be able, by bringing a new motive of public service into play, to achieve not only better conditions for the workers employed, but also a big reduction to the public in the cost of the houses which are being erected for it. Figures for other areas have, at present, come to hand only in a provisional form; but no figure that has yet been produced shows a saving of less than £150 per house when Guild building is compared with work undertaken by private contractors. Guild figures for South Wales, where a great deal of Guild work is in progress, are now in preparation and it is known that these will show a saving of something like the same amount as that which is shown in the Yorkshire case which I have quoted above.

The Government Embargo

The publication of these figures and of the others which will shortly follow them, should serve to bring to a head the struggle which has for some time been proceeding between the Building Guilds on the one side and the Ministry of Health and the employers' organizations behind it, on the other. A long time back the Ministry of Health announced that it was only prepared to endorse Guild contracts on a strictly experimental basis and that it would, for the present, limit the number of Guild contracts over the whole country to twenty. These twenty contracts are all filled up and the result has been, that in at least a hundred areas, the Guild workers are all ready to get to work but can receive no contracts because of the embargo which has been placed upon them by the Ministry of Health. Local authorities in many of these areas would willingly accept the Guild tenders, which have in practically all cases been considerably lower than the tenders submitted by private contractors, but the responsible local government officers and committees have been told that it is useless for them even to consider Guild tenders because the Ministry of Health will not be prepared to endorse them even if they are accepted by the local authorities.

This position by itself would be bad enough, for it means that the greatest experiment of modern times in the organization of industry on a basis of public service and economic self-government without any intervention of private profit, is being deliberately stifled by the opposition of the Government, which is carrying out, in

this matter, the will of the organized building trade employers. But the position is far worse than this; for not only does the Ministry of Health refuse at present to endorse further contracts, it has also intimated that, even if it does agree at a later stage to a further extension of the Guild movement, it will demand a new revision of the present terms of contract, which were agreed to by it last year, on the ground that these represent a "preferential treatment" of the Guilds in comparison with the terms accorded to the private contractor. This contention is based on the special allocation of £40 per house, for the purpose of providing continuous pay for the Guild workers, which is included in all the present contracts. The employers contend that this is "preferential treatment," on the ground that they are not allowed, over and above their contract prices, to add a similar sum in order to afford this continuous pay to their workers. This argument is sufficiently ridiculous for two reasons. In the first place, the employers have most vehemently asserted that they are not prepared on any consideration to accept the principle of "continuous pay," and it is surely ridiculous for them to protest that they are not granted a concession which they do not want. In the second place, even if it were supposed that they were prepared to grant continuous pay to their workers, their contention would amount to demanding that, over and above their profits, which are believed to be none too small, they should be allowed to make a special charge, at the consumers' expense, for the granting of this continuous pay.

Profit

The Guilds, on the other hand, refuse to work for profit. If they can build for less than their estimate, this means not so much more into their own pockets, but an equivalent reduction in the charge actually made to the person or authority for which the houses are being built. But, while the Guilds waive and repudiate all claim to profit, they insist that the worker who works without profit must have the measure of security which is represented by the concession of continuous pay. This, they say, is a legitimate part of the cost of production and as such they claim the right to charge it. If under these conditions when this charge has been met, the Guild prices, as in the instances quoted above, work out at far less than the prices charged by the private contractors, which include their profits, then surely it is ridiculous to claim that the Guilds, which are building for less than the private contractors, are receiving preferential treatment, if their contracts are considered and accepted.

The present attitude of the Ministry of Health is undoubtedly due directly to that of the building trade employers. When the Guilds were first launched, the employers were quite certain that they were purely a

wild-cat scheme and that, if they were let alone, they would soon collapse of their own inherent absurdity. They, therefore, used no strenuous efforts to prevent the early development of the Guilds; but as soon as they realized that the Guilds meant business and that they were actually producing at a considerably lower cost, than the private employer was prepared to emulate, all his forces of opposition were aroused. Mr. Stephen Easton, ex-president of the National Federation of Building Trades Employers, occupied at that time an important position as Housing Adviser at the Ministry of Health. He resigned this position as a protest against the "preferential treatment" accorded to the Guilds. At once the Ministry of Health, obedient as usual to the will of the big employers, came to heel and issued its repudiation of the principle of continuous pay, to which it had itself agreed only a few months before. Since then, matters have dragged on and the development of the Guilds has been restricted; but the Ministry of Health was compelled to withdraw from its attempt to repudiate its own agreement that it would endorse Guild contracts up to the number of twenty. Work on these twenty contracts is therefore proceeding and the results should be sufficient to enable the Guilds to give a convincing demonstration of the superiority of the new economic system which they represent.

Craftsmanship

It is interesting to note the reaction which the undoubted success of the Building Guilds, in the work on which they are engaged, in securing from the operatives a more willing response and a higher level of craftsmanship is producing in business circles. Mr. Stephen Easton recently addressed, on this question, a meeting of the Master Builders in the Manchester area. He said that "one thing which the Guilds had demonstrated was that many workmen (in contract work) were doing less than a half-day's work for a full day's wage. It was boasted that on Guild work a man would lay seven hundred to eight hundred bricks a day. On the other housing schemes the amount laid was less than half of that and it was indeed a standing disgrace to the Nation and to the trade concerned. They must do all in their power to eradicate this evil."—(*Manchester Guardian report.*)

This observation reveals the extent to which the master builders fail to understand the arguments on which Guildsmen base their contentions in favor of the superiority of the Guild system, that is, industrial self-government over the present economic order. Guildsmen always contend that, if two conditions were satisfied, that is, if the worker knew that he was working directly for the service of the public and not for private profit and if, further, the responsibility for organizing his industry as a public service were thrown directly upon him by the adoption of the principle of self-gov-

THE ENGLISH BUILDING GUILDS

ernment, the result would be to bring a new motive into play and to secure work greatly superior both in quantity and in quality to that which is done under the existing system. This argument has been scoffed at by the employers, who have said that self-government would merely mean more slacking on the part of the workers. But, in fact, the progress on the Guild contracts have so far abundantly confirmed the correctness of the Guildsmen's contentions. This is beginning to be admitted; but the moral which the employers now draw is, not that it is urgently necessary to use to the full, this new motive of public service which is so manifestly lacking in the ordinary working of private enterprise, but that the building workers are "slackers" because they will not produce, under conditions of private enterprise, the same amount and quality of work as they will produce under the quite different conditions of Guild service.

The Public as Arbiter

It will be the public which will ultimately decide the issue between these rival contentions. If it can be shown to the public that the adoption of the Guild method means cheaper and better production and that workmen will work for the Guilds as they cannot be persuaded to work for the private profit of the building employers, then I think, the public will insist that the Government, instead of restricting and hampering as far as it possibly can the development of the Guild movement, shall use every effort to secure the widest adoption of Guild methods in public housing work. It will, of course, not be easy, in face of the strength of the opposition, to secure adequate publicity, even if the most startling facts showing the superiority of the Guild movement are brought forward; but, if the facts can be brought home to the public, there is little doubt what its answer will be. For what the British public wants is houses, well built, at such a cost of construction as will enable them to be let at reasonable rents. If the Guilds can supply this need and the private contractor cannot, Guildsmen will have the strongest of all possible arguments with which to prove to the public the soundness of their contention, which it will be no longer possible to dismiss as a visionary and impracticable dream, in face of the actual achievement secured by the Building Guilds.

Dilution

Side by side with this struggle, which is centered around the development of the Building Guild movement, another struggle closely related to it has been developing in the building industry generally. The Government has now pledged its full assistance to the employers in introducing a general system of dilution throughout the industry. Under the system it is proposed that ex-service men shall be employed on build-

ing work at considerably less than trades union rates of wages. The employers have accepted the scheme and are expected to make an attempt to put it into force almost immediately. It will undoubtedly be resisted with the whole force of the building trades unions and a general stoppage of the building industry may be the result. This stoppage, however, is not likely to effect the progress of work on the Guild contracts and it may thus afford a further opportunity for the Guilds to demonstrate their superiority from the point of view of serving the public. There is, however, considerable suspicion in British labour circles that the dispute about dilution is being deliberately fostered with a view to the breaking up of the power of the building trades unions; for the employers are believed to hold that, if they can beat the unions to their knees, it will not be difficult for them to liquidate the menace of the Guilds and to maintain the embargo on Guild work which they have compelled the Ministry of Health to interpose. It is an interesting struggle and it has the advantage over most industrial struggles in that it is really about something important. For the point at issue is really nothing less than the relative advantages of forms of production for profit on the one hand, and of the Guild system of production at cost price for public service under conditions of full industrial self-government, on the other. It would take a bold man to prophesy which will be victorious.

The English Building Guilds

A COMMENT—By WILLIAM STANLEY PARKER

IN MR. TEAD'S most interesting analysis of the origin and operation of the Building Trades Guilds, on page 36 of the February 1921 JOURNAL, he writes as follows: "The difference between this form of contract and the usual 'cost-plus' contract is important, however, for the ten per cent added is in this case added to material and manual labor costs in order to cover administrative costs. No profit is expected or calculated for. Under American cost-plus contracts, of course, the ten per cent would be the per cent of profit over and above all costs."

I believe this to be to a certain extent in error and also misleading, and to contain a point that is significant to the consideration of the whole question of the guilds. In the "American cost-plus contracts" as most of us know them, the percentage added, be it 10% or otherwise, and it is frequently less, covers generally two items, the "main office overhead" and the "profit." We are all aware that in many war contracts the "main office overhead" was practically eliminated as all the work was done at the field office and the percentage in that case was all "profit."

But what does this word "profit" as so used mean? Mr. Tead says, as quoted above, that "No profit is expected or calculated for." But everybody connected with the work is paid for his services, so why should there be any other "profit"?

In work done by a general contractor under our usual system, the individual or members of the firm get no

enumeration except out of this frequently execrated "profit." Their salary, remuneration, whatever you wish to call it, is speculative. It depends on their ability to get enough contracts to keep their "overhead" elements busy; on their ability to direct the general policies and the detailed organization and administration of these contracts with economy and despatch; upon the net result of the accuracy and errors of their subordinates in estimating the work, and carrying it through; upon unexpected increases in freight rates, or labor, or other expenses, which they may be unable to pass on to the owner under the terms of their contract.

As a net result of these and other elements there is left over at the end of the operation a certain sum referred to as profit but which is nothing more nor less than the salary of the individual or individuals who form the contracting party. Frequently it is less than nothing and is then taken out of their general reserve of capital, accumulated as a background, an expansion joint to cover these emergencies in their business.

There is a desire on the part of labor to eliminate the so-called "profits" along the line and so reduce the cost of building. They desire to eliminate the general contractor, but do they? It seems to me it is a question of a rose under another name. The general contractor is the coordinator of the various elements and agencies involved in a building contract. This force they do not eliminate even in the guilds.

Mr. Tead states (page 35) that, "there is no disposition to ignore the value or the relative scarcity of organizing and directing ability; but the policy is nevertheless to induce managerial and technical workers who are sufficiently interested in getting the guild idea into action to "volunteer for service" and take somewhat less in salary than they might command in the open market." Here would seem to be the element of saving, which is not the elimination of profit, but the getting of service at bargain rates, always legitimate and desirable if it can be done without getting a bargain-quality of service at the same time.

In the case of the guild there appears to be a general directing body called the district guild committee, which is elected as described in Mr. Tead's article and becomes the "corporate entity" known as the "Guild of Builders, Ltd." It appears that this guild committee is the legal entity which transacts the business and is "authorized to carry on the work of Builders, Decorators and General Contractors."

It is not specifically stated, but, in view of the magnitude of the work, I am led to assume that the men delegated to act as this committee, for a term of one year at a time, give their entire time to the work. I assume therefore, that they are given some adequate salary for this service. If so, (and I cannot imagine such a board being an unpaid board working merely in spare hours after their various day's work was done) then we have here in this board of twenty to thirty members, the group of general administrators that take the place, the duties and the remuneration which the General Contractor himself takes under the usual American system. Under them there is a Secretary who has major executive responsibility and salaried superintendents and managers who have "large scope on the actual construction operations."

I see here all the normal and necessary elements of a General Contractor's organization, all properly remunerated for their services, those in major control, however, taking a more modest remuneration than they might succeed in getting if they went "on their own."

I feel, therefore, and have endeavored to show by the above analysis, that it is erroneous to intimate that the guild idea involves a fundamental economy through the elimination of "profit." It seems to me it involves an element of cost for a large and rather complicated organization that may well prove to more than offset the saving in the salaries of the major executives.

The guild idea doesn't eliminate the General Contractor or his profit. It simply, or perhaps rather complicatedly, substitutes a cooperating group for an individual or a firm. A great opportunity however lies in the guild idea, to bring back to the worker an interest in his work, which shall make him a fully productive factor, and make him reject the rules built up by his own organizations wherever those rules are unjust, artificial and selfishly conceived, and so develop the whole group of building mechanics as a single, harmonious cooperative group, working for their own best interests through the best interests of their industry, rather than a group of warring bodies each intent only on getting his own pound of flesh from the body of his own industry, regardless of the effect on the health of that industry.

There lies one of the great needs of the building industry in this country, which must be met some way or other.

Correspondence

Labor and the Housing Problem

"And a man's foes shall be they of his own household."

TO THE EDITOR OF THE JOURNAL:

In the interest of the laboring man and mechanic as bearing vitally on the problem of their housing I want to call public attention to certain obvious but apparently forgotten facts:

The present so-called housing problem consists in the impossibility today of producing houses in which the really poor man can afford to live. By far the greatest item of cost in the production of such housing is the cost of the labor supplied by the poor man himself. By far the largest consumer of this housing is the same laboring man. Consequently it is to the advantage of the so-called labor class above all others to reduce this labor item provided that in so doing it gets more and not less housing for a day's work. This means that it is to its own selfish interest, quite aside from that of the general public, that its productivity be unhampered; that there be in its own case no restraint of trade.

Yet the various housing investigations so far have almost wholly ignored the question of whether labor cost in house production is reasonable or unreasonable, and under what conditions and to what extent it is contributing to present results. Almost every agency contributing to home building is being scrutinized and attacked. And just so far as this results in the elimination of graft and other restrictions on the production of cheap housing it is helpful. As a matter of fact, however, the remedies suggested are mostly designed to stimulate production in spite of excessive costs instead of reducing them.

But more houses at prices which the poor man cannot afford is no solution of the housing problem, and to stimulate building on the basis of such inflated prices merely perpetuates and increases a waste of labor and material which will sooner or later come home

INSTITUTE BUSINESS

to roost. In short, it is discouraging to those who have followed the current investigations of this subject in the hope of seeing it thoroughly and fearlessly examined to find the search-light thrown continually on every section of the field except that which constitutes the greatest single element of cost—labor.

Of all the items that go to make up the price of the workingman's home—land, building-labor and material, taxes, interest and profits—by far the largest is the cost of labor—the thing he supplies himself. It is over two-thirds of the cost of the house itself. It is four or five times the cost of the land, and many more times the cost chargeable to taxes, interest, profits of employers and owners—even with graft included. The writer holds no brief for the material men, distributors or builders. The Employers' attitude of acquiescence, to put it conservatively, with respect to the "Unholy Alliances" long suspected by those familiar with building conditions, has been none too honorable. Nor is there any defense for the boosting of material prices by the annihilation of competition. In fact, the evidence of graft already presented to the Lockwood Committee indicates pretty clearly that every element connected with the building industry ought to be investigated. "Everybody's doing us," apparently.

In fairness to the labor unions it should be remembered that many devices were adopted in self defense against gross abuse by unprincipled employers. Some are probably due to a narrow or ignorant conception of economics—both financial and social. But that they exist in almost every trade involved in the production of housing, to the detriment of economy in both labor and material and at enormous cost to the public, is so generally claimed by those actually dealing with building operations as to justify an inquiry. And, rightly or wrongly, there is a rather widespread public impression that labor has not been giving a fair return for its wage, and that the union policy in general discourages individual enthusiasm and output—aims, in fact, to make two jobs necessary where one was before. It is not many years since a brick mason laid from 1500 to 2000 brick a day. It is scarcely half that at present—at double the wages. Is this because or in spite of the labor unions? Does the closed shop mean that this will be further reduced to 300 or 400 as it is England today?

Thanks to the present investigations we can now guess roughly at the cost of graft and "Unholy Alliances," but how much does the public—and principally labor itself—pay for the waste of time and material enforced by the arbitrary regulation which actually governs all closed shop operations in building? In the case of the railways, when a union rule requires six men of three or four different trades instead of one boy to change a nozzle tip on the front of a locomotive, it is brought into court before the Labor Board and has nation-wide publicity. But when the plasterers' union rules that ornamental cornices must be run on the job instead of cast in the shop at one-half the price; when the painters' union working only five days a week compels an employer to use a nine-dollar a-day man for scraping off old wall paper, such performances merely add a few dollars to somebody's rent. The public is none the wiser except that it soon begins to feel the claws of the so-called "Housing Problem."

In the building industry, widely scattered and without responsibility to the public for its costs, the taxes due to such labor inefficiency are seen, if at all, as comparatively small individual items. Yet in the mass, while perhaps less than the expenditure of the railroads, our building figures run into the billions and the cost of the waste enforced by such regulations undoubtedly mounts into appalling figures. If such rules are right, then organized labor should welcome an opportunity to justify them before the public whose support is so vitally necessary. On the other hand, if they are wrong, their elimination will benefit no one more than the workingman himself. He is the largest single consumer of housing today, and it is for his own good that the productivity of his labor should be freed of all restrictions whether imposed by the union or the employer.

What the situation cries for is a Trades Union Reformation. We

should have membership on the basis of efficiency like the old Guilds. We should substitute levelling up for levelling down, and in place of the slogan "An injury to one is the concern of all," we should have "The benefit of all is the concern of each one." And why should our unions restrict the mechanic's scope so uneconomically? Why should a stone mason be forbidden to lay brick, or apply plaster? Or a plumber to fit steam pipes? Why must ordinary stone be handled by marble setters when it happens to be used inside the shell of a building? It would seem as if the scope of a man's usefulness should be limited only by his capacity—not by the label on his union card. And just in proportion as his adaptability increases will his risk of unemployment decrease—not to mention the cost of his housing.

How to induce such a transformation from within—such a radical change of spirit in the worker and his organizations—is our greatest domestic problem today. And to that end no finer service could be rendered to the country—and to its workmen above all others—than a campaign of education based on an unprejudiced survey by the proper body of the conditions governing labor's productivity as it concerns the third largest item in the poor man's living cost—his housing. Although largely obscured by the complex system of modern production, the situation is fundamentally unchanged since the pioneer built his own cabin. Today, as always, the workingman builds his own house. Labor sets the price of its own home.

And the truth is that in the present so-called "housing hold-up"—in which the capitalistic owner is usually pictured as the object of attack—it is really the laboring man's own pocket that is being successfully picked. And the problem is to clearly demonstrate who is doing it. The question I believe is fundamentally an educational one. What competent group or agency is there, enjoying the confidence of the worker, the employer and the public, that will undertake the labor, responsibility and cost of such a public service?

GROSVENOR ATTERBURY.

Institute Business Jurisdictional Disputes

TO THE MEMBERS OF THE INSTITUTE:

Your attention is called to the following letter which is transmitted to you herewith, as requested therein.

WILLIAM STANLEY PARKER, *Secretary*.

AMERICAN INSTITUTE OF ARCHITECTS,

The Octagon House, Washington, D. C.

Pursuant to the instructions of the National Board for Jurisdictional Awards in the Building Industry, you are herewith advised of the adoption of the following preamble and resolution:

Whereas, At a conference held March 8, 1921, at Washington, D. C., between the National Board for Jurisdictional Awards and the Presidents of the International organizations of the Building Trades, the consensus of opinion with but one exception was that the Board should continue to function and its decisions lived up to in every respect, therefore be it

Resolved, That all affiliated organizations signatory and parties to the National Board for Jurisdictional Awards be directed to rigidly adhere to its decisions as and when made and that work proceed on all building construction in accordance therewith, irrespective of the attitude of any employer or employee or of their respective trade organizations.

Your organization is requested to transmit a copy of the foregoing resolution to your associated membership.

Very truly yours,

(Sgd) WM. J. SPENCER, *Executive Secretary*.

New Chapters.

Announcement is made of the organization of five new Chapters, Arkansas, Florida, Kansas, Montana, and Utah.

Entomology and Architecture

In connection with the restoration of Westminster Hall, London, there have been developed many interesting experiences, not the least of which is the subject of the following article in the *London Times*:

"The science of entomology has been called in to protect one of our noblest buildings. Westminster Hall, the splendid scene of many great events in our history, has been brought to the verge of destruction by a small beetle. It was built by William Rufus in the eleventh century, has a length of 290 feet, a width of 68 feet, and is 90 feet in height. Its massive buttressed walls seem to have been designed to carry a stone roof, but the first roof was of oak beams. These did not stretch the whole span but were supported by columns arranged to form aisles. Richard II made many alterations, completed in 1399, and replaced the first roof by carved oak arches stretching the whole span. These have ripened to a rich golden colour and form the greatest glory of the Hall. Repairs were made from time to time, but it is an odd fact that the inserted newer pieces of oak, whether from some ill-judged attempt to 'tone' them or from some difference in quality, have turned black.

"Sir Charles Barry, architect of the House of Commons, examined the roof in the last century, found it defective, but appears not to have grasped the principle of construction or the extent of the damage, and merely added some unsatisfactory reinforcements of wood and metal. In 1911 it came under the charge of the Office of Works, as a result of the Ancient Monuments Act. A full examination made by Sir Frank Baines, the official architect, disclosed an appalling condition.

"It was only by a miracle that the roof had not fallen in; a catastrophe might happen at any moment. There was no dry-rot, but the ravages of the deathwatch beetle (*Xestobium tessellatum*), a little creature whose love-call has won for it its popular name, had turned the solid oak into a structure as spongy and friable as pumice stone. Many of the arches were feet out of alignment; joints were eaten through. Drastic steps had to be taken. Readers of the *The Times* will remember the bitter controversy over the course to be adopted. The final decision was to retain the beautiful old carving, replacing it only where absolutely necessary, but to use it only as a mask concealing from the eye a new skeleton of steel which carried all the weight.

"This was denounced by many as an architectural crime, a flagrant æsthetic dishonesty. But from the engineering point of view it was practical, and those who have had the pleasure of inspecting the portion already finished must agree that the old beauty has been preserved. But there was a further difficulty. The beetle, the real angel of destruction was still present. The edible parts had been eaten away in much of the oak, but there were still occasional live adults and many grubs. These might complete the work of destruction on the old wood, attack the new, and destroy all the remaining tracery. And so, in 1913, a scientific committee, containing architects, chemists, and entomologists, began to sit.

"Many suggestions were considered. It was proposed, for instance, to seal the building and fill it with chloroform

vapour. But it was doubtful if the poisonous vapour would penetrate the wood in any reasonable time, and uncertain if it would destroy eggs and chrysalides. And even if it were effective against the insects, it might have unpleasant effects on the town. The liberation of over a million cubic feet of a slowly dispersing poisonous gas was not an attractive idea. The application by spraying or painting of naphthaline dissolved in carbon tetrachloride was admitted to be destructive to the beetles, but would liberate an evil-smelling and highly inflammable vapour. Other proposals had to be rejected for similar reasons, and the committee dissolved without having reached a conclusion.

"One of the members of the Committee, Mr. H. M. Lefroy, formerly Government entomologist to the Government of India, and then professor of the subject at the Imperial College of Science, resolved, almost as a forlorn hope, to try to work out the problem with his pupils, and to find an answer that would fulfil the rigid conditions. The substance would have to destroy the insects and yet be non-poisonous, non-inflammable, and have the least possible odour. Its effects would have to be relatively permanent. The risk of introducing rot by the use of an aqueous solution would have to be avoided, and the golden colour of the wood left unspoiled.

"The first step was to investigate the life history of the insect, in the hope of finding some weak link in the chain which could most easily be broken. 'Wild' beetles were found to live on oak and willow trees, and a fortunate chance discovered a stock of material for study. The adults can fly, but are very sluggish; it seemed probable that the pest had reached the roof as chrysalides or grubs in the old wood or in repairs. They themselves do not tunnel, but creep into chinks, especially where joints do not fit tightly. There they lay the eggs, and the grubs, as soon as they are hatched, begin to tunnel along the grain of the wood, eating out the softer parts. When they are ready to pupate they carry a tunnel until it is separated from the surface, only by the thinnest film, often not much more than the patina of London smoke. There the motionless chrysalis rests, the metamorphosis is gone through, and ultimately the beetle emerges. It has then to break through to the surface, an easy task in fresh wood, but so difficult in old wood that many dead beetles were found just below the surface. A substance that would form a permanent repulsive film would keep any adult beetles from wandering into the crevices suitable for egg laying and, repelling the boring grubs from the surface, would force them to pupate so deep in the wood that the beetles could not break out.

"After many trials, cedar wood oil, in quantities so small that it was innocuous to the human nostril, was found extremely distasteful to beetles and grubs. Solid paraffin suggested itself as a medium almost indestructible when exposed to London air and smoke, and in a thin layer so transparent as not to obscure the colour of the surface to which it was applied. The liquid known as di-chloro-benzene provided a solvent which gave penetrating power, and was almost absolutely unflammable and non-poisonous as a vapour. The formula was 92 per cent. of the solvent, 3 per cent. of soap, 3 per cent. of paraffin wax, and 2 per cent. of cedar wood oil. This is sprayed on every

A NOBLE STAIRCASE

surface as it is exposed, on every separated piece of wood, old or new, and again on the finished surface when the reassembling has been done and the steel fitted in. The di-chlorobenzine slowly evaporates, leaving behind a transparent film of wax impregnated with the oil. The newly treated wood undoubtedly has an odour, and the atmosphere of the Hall recalls that of the 'doping' room of an aeroplane factory. But the wood that has been treated for some time gives off no appreciable scent, and has lost none of its golden colour. The work has been in progress for several years, and so far the treatment seems to be completely effective."

A Noble Staircase

Just as there are pools in some Highland rivers that the gamekeeper keeps to himself and never tells the Castle or speaks of them at the village inn, so in London there are quiet, secret places that your true Londoner hugs to himself, and, even if he be a writing-man, restrains his pen lest the dealers swoop down with their lures and drags to catch their treasures, or the curious public come in hordes and the owners make the place inaccessible. Such a place is that strange, large, gloomy house, No. 35 Lincoln's Inn Fields, that turns a false face upon that almost deserted pleasance. It is a four-storeyed building, and the trained eye can easily see its early eighteenth-century character. But the windows have frames of an eccentric Victorian pattern, and superficially the mansion seems of little interest. The height of the first storey, with its central window draped, as it were, in a long periwig, suggests other things. You go through a wide, domed passage into a darkened hall, whence rises (next week, alas! we shall write "rose") the most astonishing staircase in London—if Wren's great circular staircase in St. Paul's is excepted. It is of the same character—an open staircase in a great well, with the stairs supported only at their jointing in the wall and their pressure on one another, there being no central newel or support of any kind. Is there anything more graceful in England than the beautiful (almost unknown) stair in St. Paul's, with its delicate leaf-like curves and its mystery of lighting? The stair in Lincoln's Inn is almost as graceful, with a steeper wave of its four flights. It is like a fine Piranesi drawing, with its apparent defiances of the laws of gravity and its strange accidents of lighting from the top dome and from lights through doors left open on the landings. The ironwork is worthy of it. It is believed to be the production of a London smith in the early eighteenth century who was an admirer of the great Tijou, the French smith who made the ironwork of St. Paul's and Hampton Court. Perhaps it was the work of Huntingdon Shaw, who assisted Tijou. The balustrading of the first flight and landing is of the lyre pattern, embellished with acanthus leaves in repoussé work. It is now being carefully taken to pieces for presentation to the Victoria and Albert Museum. For the old house is being dismembered, and London will be the poorer by the disappearance of this enchanting staircase. The house has been bought by the College of Estate Management, who have generously presented the ironwork of the lower part to the Museum. The old fireplaces, with their carved heads and curious

embellishments, are going to dealers' shops; and, although the shell will remain, the formal spirit and beauty of the early eighteenth century, of the pot-pourri elegance of Gay's "Beggar's Opera," and of Kent's architecture and of Hogarth's show-cards, will vanish suddenly and violently like the lives of the men who died on the scaffold outside in Lincoln's Inn Fields.

There are strange things in the old house. In the back rooms, which are not more spacious than the ordinary London drawingroom, there are on two floors noble open screens composed on tall fluted Ionic columns supporting three arches like a triptych in a Hogarth or Highmore picture. The doors in the big rooms are impressive structures, with columns and pediments and cushion mouldings; and the lighting is curious, broken with these stately screens and with the eccentric window-frames. There is something formal and gloomy and periwigged about the whole building, with its lofty rooms and its great mysterious curtseying staircase. When I first visited it, many years ago, an old clerk there, who darted out of one of the doors of the secret-looking lawyers' offices that opened on the landing as an old pike might dart out of a recess in a quiet, deep pool, developed almost human qualities and supported with some heat his view that it was Wren himself who designed that staircase before he completed the great staircase in St. Paul's, just as he tried his 'prentice dome at St. Stephen's, Walbrook, before tackling the great dome of St. Paul's. But every detail of this house spoke of the reign of Queen Anne. It could not have been there when Peyps came to see his patron, Lord Sandwich, on the other side of the square, or when he came—often more furtively—to the Duke's Theatre, which was on the site of the Royal College of Surgeons, that is almost next door.

How quickly now the whole of this strange, dusty seigniorial precinct is changing character since the new street of Kingsway was thrust through Clare Market and the partly chartered hinterland that lay between Clare Market and Holborn. It acted as a sort of delayed-action mine, exploding piece by piece, and destroying the whole formation of the district. The Sardinian Embassy Chapel, with its triple galleries and its memories of the Gordon rioters, has gone, with its old dark archway below it, and only one of Inigo Jones's houses still remains. The south side is changing steadily, but enough remains in the square to last our time and to whisper the secrets of an age that did not know very much about humanity or government, but knew something about dignity, and thought beauty was a reasonable preoccupation for a man of quality.

J. B. in the *Manchester Guardian*.

The Draftsmen and The Architect

It is interesting to find that *The Architect* (London) of February 11, 1921, devotes a great amount of space to a discussion of the lack of wisdom manifested by those draftsmen who had just organized an Assistants' Union in London. The complaint of the writer includes exactly the same items I have heard voiced at meetings of architects in this country when discussing the creation of draftsmen's unions here.

In *The Architect* we read that "every assistant worth his salt looks forward to establishing himself at a later stage in independent practice." It appears further that it is absurd to consider draftsmen as anything except architects in the making. The writer of the article finds fault with the demand made by the draftsmen's union for higher pay since "the vast majority of architects after years of study still have an insufficiency of work and have total earnings under a thousand pounds a year"; while the cost of building has greatly enhanced and hence the architects' fees are larger, he thinks that the amount of building has been greatly reduced and hence the total income of the architect is still small, and he is certain that the architects can not possibly charge more than they do for their work.

Seemingly, in parenthesis, the writer says that despite the grumbling he really thinks the architect is usually paid a reasonable amount for what he does! Then getting down to the question of salaries, he asks whether an architect who has an income of something under £1000 can possibly pay an assistant salaries of £300 or £400; as for the threat made by architects' assistants that if they can not get more money from the architect, they will join the builders' guilds, the writer merely indicates that they will be jumping from the frying pan into the fire.

Elsewhere in the same issue, someone, possibly an editorial writer, sums up his survey of the situation by a series of axioms, a number of which are really amusing, as for instance: "The majority of practising architects are not wholly incapable of doing what work they have themselves." "The amount of work each architect obtains is usually determined by circumstances which he is seldom able to control." "If the average architect has fewer commissions he is in a better position to do the work involved in carrying them out for himself." "The public will not pay higher fees." This critic ends by saying "it is clear that the formation of a union demanding minimum salaries is likely to be detrimental to the assistants' interests, as it will decrease, and not increase, opportunities and openings, and while it is unnecessary for the best men, it is positively harmful to the interests of those who fall below that standard."

It would seem, to an American, that the situation in England, which is indicated by these articles, shows that the majority of the profession there is just about as unprogressive if not reactionary as it is here. If we wonder that the architect in America has pattered around in an uneconomic and unbusinesslike way trying ineffectively to get a fair living out of a profession which seems but little in demand, we may take a kind of sour comfort out of the fact that the men in England are no better off.

To the present writer it seems that the answer is something quite other than for us to growl at the draftsmen's unions and to complain about our lot. Perhaps, if we looked around a bit, we would discover that architects are themselves too much the employees of their clients and not at all the masters that they like to think themselves; to get out of this hole the architect must realize that he is really only one functioning part of the building industry; he must make that part more valuable and more in demand, and he can only do this by cooperating with every other element in the industry of which he is a part. R. D. K.

From Our Book Shelf

A Saint and His Shrine

SANTIAGO—St. Jago—patron saint of Spain—it is to his shrine that the Way¹ conducts us, as it has conducted pilgrims unnumbered from the ninth century down.

The three solid little volumes, issued under the auspices of the Hispanic Society of America, represent truly a labor of love; in every line one feels the enthusiasm of the author for her subject, and for the prodigious research and wearying pilgrimage involved. She paints a picture largely of ecclesiastical Spain, with sidelights of secular Spain and much of historical Spain; also, and with special intent, a great deal of architectural Spain, as shown in its religious monuments. Her avowed purpose was "to discover and record the evidence of Spain's debt in architecture to other countries, France in particular, during the Middle Age."

So, naturally, the book strikes a serious note, quite different from the lightsome "Travels" of Gautier, and yet relieved of austerity by the play of the author's fancy and sentiment. One must allow much sentiment in approaching Spain with pen or pencil. Gautier, it may be recalled, claimed this for himself, while gayly announcing at the outset that he expected the "country of his dreams" to fade before him as he crossed the frontier. And then he launched that well-known quip of his whimsical friend Heine: "How will you write about Spain after you have been there?"

Miss King would seem to have most thoroughly "been there"—at least in those parts that relate to her chosen theme; and it has not lessened her power to write of it with a fervor and absorption quite amazing in one who does not write from the viewpoint of a devotee. Diligently presenting architectural details of the religious structures along her path, she also revels in the chronicles and fables that swarm around them. Indeed, if a reviewer sought to be ultra-critical, he might hint at some over-indulgence in side issues—as for instance a thirty-page account of certain jousts in the year 1434. Or he might look askance at the somewhat mannered style favored by the author—"period" style, to use a costumer's phrase—producing an effect that a Frenchman would call *voulu*, or *cherché*. Whereas it really comes quite naturally to this writer, no doubt fostered by much browsing in ancient fields, and fits well the subject. With this in mind, we accept Shakespearean spellings and revivals of obsolete words, and a wilfulness of diction often very winning, which recalls, not unsuitably, the "Pilgrim's Progress," and even the language of early chronicles.

One might venture to wonder why, in so antequely Spanish a vein, the native and prettier spelling of "Compostela" should not be adhered to. And one may not feel that "hugeous" is an improvement on "huge," especially in this day when economy of all kinds is indicated—as the doctors say. Yet these are trifling questions, to which the author doubtless has her answer.

So many critics there are like the eager scribe in de Musset's verse, (*Ah, que c'est doux de tout déprécier!*) and one can sometimes sympathize with their zeal. But in "The Way of St. James." By Georgiana Goddard King, M. A.

FROM OUR BOOK SHELF

this case, even the ferocious "Durand" should be abashed by the earnestness, the felicity of expression, the charm of description, wherewith the author evokes a background for the more scholastic features of her work. To color she is most sensitive; it affects her like music. A paragraph describing vestments in a procession—"a kind of scarlet pink, like the sound of flutes and bassoons and hautboys, that one could not have enough of"—reminds of Huneker. The pictorial faculty is hers, in high degree. She sketches in fewest words the most finished and vivid of little pictures, with color, motion, scent; as in a delightful study of an evening promenade on the Paseo at Pampeluna, "glowing, moving, scented, murmurous, like a syringa bush on a night of fireflies." These graceful wayside sketches and the narrative thread running through the book are so blended with its grave architectural purpose as to give it attraction for both layman and professional reader. The author-pilgrim has an eye that loses nothing, from the "shadowy majesty" of great churches with all their structural mysteries, down to such ecclesiastical bric-à-brac as a lectern-eagle devised to "turn and bow at the Gospel."

Nor has she omitted the prosaic but useful data in the shape of itineraries, various ways to reach the great saint's resting-place, wherewith the book closes. In its outer dress it is modest, clear of type and pleasing, and marred by very few and immaterial errata, which scarcely any book escapes.

Quite apart from the architectural interest of Miss King's records along the Way of St. James, we should welcome the glimpses she offers of a country which is so slightly known to the average traveler, in comparison with the rest of Europe—a country so rich in its treasure of history and romance, literature and art, and in a sovereign who calmly, through these uncertain days, upholds with his gracious personality all that is finest and most distinguished in its tradition.

A. L. M. K.

Houses, Churches, Crosses, and Gates.

Volume X of the Christian Revolution Series,¹ is one of those intense essays akin to several which have come out of England recently, from Lethaby, Clutton-Brock, Wyndham Lewis, and others. It is an essay on economics or architecture or both, depending on who reads it and how he approaches it. It is virile and interesting as either or both!

The Introduction states the theme:

"Architecture is man's story in stone. He has employed other means for telling that story, but none so intelligible, so permanent, so pitilessly accurate as his buildings."

"Today man turns his eyes not on buildings, but books. This is the age of writing; we are all, so to speak, experts at it."

"But in the Middle Ages (for instance) exactly the opposite was the case. Men couldn't read books, but they could read buildings."

¹"Man and His Buildings." By T. S. Atlee. A. R. I. B. A. The Swarthmore Press, Ltd., London.

²"Old Crosses and Lych Gates." By Aymer Vallance. B. T. Batsford, Ltd., London. Chas. Scribner's Sons, New York.

³"The Churches of Belgium." An Architectural Outline by Wilfrid Randolph. George Routledge & Sons, Ltd., London. E. P. Dutton & Co., New York.

"What does it matter if men do not express themselves through brick and stone today, but through books instead? So long as they do express themselves, does it matter how?"

"It does matter, because while we can put away books, hide them, at any rate refrain from reading unless we like, we can not get away from buildings. They stand there about our path and about our bed and they will poison or sweeten all our ways."

This theme is followed through chapters on "Egypt and Greece: Darkness and Daylight," "Rome and Byzantium: Frost and Thaw," "Gothic: Adventure and Exultation," "Classic Revival: Playtime and Pedantry." Interwoven are the economic and political side-lights involved. The chapter next to the last, "The Present, Chaos" is a scathing arraignment of present conditions, architectural, political and economic. The last chapter, "The Future, Revolution," is a fervent sermon on the theme that "our only hope lies in the knowledge that God is Love, Love as revealed in the life and teaching of Jesus Christ."

Such is the varied fabric of this little book and its real lesson seems to be that all the woe of the building industry today is caused by man's wandering from certain traditions of old, and the only hope lies in a revival, in spirit at least, of some of these traditions, such as the Guild movement is attempting in England today.

"For this reason ben Crosses by ye waye, that whan folke passynge see the Crosse, they sholde thynke on Hym that deyed on the Crosse, and worshypp Hym above all thynges."

Such is the quaintly stated *raison d'être* of the public cross, and gathered in this volume² are 237 illustrations of crosses in England and Wales, representing every type, classified according to anatomical form and structure thus: "Monolith Crosses," "Shaft on Steps Type," "Spire Shaped or Eleanor Crosses," "Preaching Crosses," and "Market Crosses." The history of these quaint monuments and shrines, and their evolution through these various forms are carefully and readably told in the text. In addition, there is a chapter on Lych Gates.

Although this book would probably interest the layman, especially the lay traveler, to the architect it is a perfect joy. The make-up and typography are good, the illustrations excellent, and the whole volume recalls the charm of the English country-side. Mr. Vallance has indeed given us a worth-while book.

The chief interest of Mr. Randolph's little book³ would seem to be in its eighty excellent illustrations, which indeed, furnish a tabloid travelogue of Belgian churches. The text is very reminiscent of guide book material with a strong architectural flavor, too strong for the layman, too superficial for the architect except, perhaps, as a memory stimulant. We need not quarrel with the text, however, for the illustrations sufficiently justify the book.

B. J. L.

Errata

In the last issue, the stage setting of "Iphigenia in Tauris" was credited to Howard Greenley. This setting was designed by J. Monroe Hewlett.

New Members Elected

ALABAMA: Ernest Dwight Ryerson, *Mobile*. BOSTON: William Power Blodget. CLEVELAND: J. F. Bliss, Harold Cooper, J. Adam Fichter, William B. Helmkamp, Robert J. Kraus, Edwin D. Wagner, *Akron*; Charles E. Firestone, *Canton*; Alonzo H. Gentry, George R. Harris, Charles V. Merrick, Frank W. Reynolds, Henry P. Whitworth, *Cleveland*; Merton G. Kingsley, *Lakewood*. CONNECTICUT: Fred H. Beckwith, *Bridgeport*. FLORIDA: B. Clayton Bonfoey, *Tampa*; Martin L. Hampton, Henry LaPointe, *Miami*. ILLINOIS: Frank O. De Money, John A. Holabird, *Chicago*. IOWA: William Jay Brown, *Cedar Rapids*; William Beuttler, *Sioux City*; Clinton P. Shockley, *Waterloo*. KANSAS CITY: Clifford H. Johnson, *Sedalia*. KANSAS STATE: Theo. M. Gerow, Arthur R. Mann, *Hutchinson*; Walter Earl Gloyer, *Topeka*; Lorentz Schmidt, *Wichita*. MICHIGAN: Richard H. Marr, *Detroit*. MINNESOTA: Ronald Greene, *Duluth*. MONTANA: George Hollis Carsley, *Helena*. NEW YORK: Lewis Colt Albro, Walter F. Anderson, August B. Anderson, Roderic Barbour Barnes, Abram Bastow, William Harman Beers, Charles Eliot Birge, Ben C. Bloch, John T. Boyd, Jr., Albert Buchman, James L. Burley, Frank Arnold Colby, Murray Pichot Corse, Richard H. Dana, Jr., Ludwig W. Eisinger, Thomas Harlan Ellett, Alfred Fellheimer, Charles E. Fetherston, Albert Edward Flanagan, Leigh Hill French, Jr., Fred George Frost, Otto Gaertner, Julius F. Gayler, Charles H. Gillespie, Leon N. Gillette, Philip L. Goodwin, Howard Greenley, Julius Gregory, Eric Gugler, Talbot F. Hamlin, Walter Hesse, Harry C. Ingalls, C. Aubrey Jackson, Ely Jacques Kahn, Francis Keally, Waldo S. Kellogg, LeRoy E. Kern, George S. Koyle, Charles Philip Krieg, Hermon R. Lake, William F. Lamb, Otto Fred Langmann, Edward C. Mellon, Daniel D. Merrill, George E. Merrill, Edgar J. Moeller, John Miller Montfort, H. P. Alan Montgomery, William Edgar Moran, Richard K. Mosley, Norman G. Nims, Philip J. Rucker, Pliny Rogers, William J. Rogers, Sidney F. Ross, Henry Palmer Sabin, Joseph T. Sibley, John F. Staub, Andrew J. Thomas, John Ambrose Thompson, Richard A. Tissington, Iwahiko Tsumanuma, Ernest Alan Van Vleck, William Sydney Wagner, A. Stewart Walker, W. Leslie Walker, John P. Walther, Leroy Pierpont Ward, Harold D. Way, Louis S. Weeks, John C. Westervelt, Harry Keith White, Walter Robb Wilder, *New York City*; Gerald A. Holmes, *Bronxville*; Chester H. Kirk, *Helena, Mont*; Fitch H. Haskell, *Pasadena, Calif.*; Sigmund A. Guttenberg, *Mount Vernon*; Oscar V. Vatet, *Pleasantville*; G. Howard Chamberlain, *Yonkers*. NEBRASKA: Jesse B. Miller, *Lincoln*. NEW JERSEY: August J. Rahm, *Clifton*; W. Frank Bower, Sheldon E. Townley, Hobart A. Walker, *East Orange*; C. Godfrey Poggi, *Elizabeth*; Robert Burns Morrison, *Jersey City*; Jules Verner, *Linden*; William Edgar Bloodgood, Dudley S. van Antwerp, *Montclair*; Richard W. Erler, Robert M. Mordin, Fred A. Phelps, *Newark*; Peter de Gelleke, Jr., *New York City*; John F. Kelly, *Passaic*; Frank A. Cutler, John C. Van Vlandren, *Paterson*; Charles H. Darsh, *Westfield*. NORTH CAROLINA: F. A. Weston, *Greensboro*; James F. Gause, *Wilmington*. PHILADELPHIA: Robert E. Ochs, *Allentown*; F. Ferdinand Durang,

Livingston Smith, *Philadelphia*; Roscoe Cook Tindall, *Wilmington, Del.*; Lingle Douglas Lance, *Wyomissing*. SOUTHERN CALIFORNIA: Gordon B. Kaufman, *Pasadena*; Harold C. Chambers, Harold S. Johnson, Clarence E. Noerenberg, Charles F. Plummer, William Richards, Julian T. Zeller, *Los Angeles*. WASHINGTON, D. C.: Harry Peale. WISCONSIN: Gustave A. Dick, *Milwaukee*.

News Notes

SUGGESTIONS for increasing the income of the Institute by levying against members an assessment based upon the amount of work passing through their office during the yearly period have been published in THE JOURNAL. Very likely the idea may be discussed at the coming Convention. In the meantime the Washington State Chapter has considered the idea of a variable apportionment of dues. These to be fixed at a minimum and the members are to be charged \$1 for each \$10,000 of work handled in their offices during the year. A committee has been appointed to canvas the membership as to the feasibility of the plan.

NEW YORK CHAPTER has become an Associate Member of the National Council of Registration Boards.

DESPATCHES from Paris indicate that the work of repairing the ruined Cathedral of Rheims has brought to light the buried remains of ancient churches which formerly stood on the same site. Under the pavement of the choir, which was shattered by German shells, have been found the old foundations of the Cathedral of St. Hincmar, which was destroyed by fire in the ninth century. Beneath these ruins workmen came upon traces of the first church to stand on this hallowed ground, the Church of St. Remi, built in the fifth century.

Under the broken high altar was discovered a hoard of 250 pieces of ancient silver and near this a sealed up and long forgotten well. From the bottom of this well a worn lead pipe leads the water away into the earth and it is thought that this originally connected with the long lost baptismal font where Clovis was received into the Church.

JAPANESE cities, confronted with an acute shortage of houses, according to the *Quinzaine Urbaine*, find it difficult to deal with the question because of the shortage of land. The Municipal Council of Tokio has proposed the use of land to the extent of one tenth of the holdings of the nobility as well as of the large holdings exceeding 10,000 tsubo (about 75 acres). From the most recent computations available the *Quinzaine* states that there are twenty families in Tokio owning more than 750 acres. Thus, if the one tenth levy were carried through, it is estimated that 2250 acres of land might be made available, on which might be built 20,000 two-story houses.

CHANGING the Institute's regulations on competitions has formally been opposed by the St. Louis Chapter, and the Rhode Island Chapter has voted not to approve the Boston Chapter's proposed amendment.

ALBERT L. HARRIS, a member of the Institute, has been appointed to the office of Municipal Architect in Washington, D. C., succeeding Mr. Snowden Ashford who resigned after a long period of service.

OBITUARY

Obituary

Wilfred E. Mansur.

Elected to the Institute in 1901.
Died at Bangor, Maine, February 27, 1921.

Frederick Bauman.

Elected to the Institute in 1884; to Fellowship in 1889.
Died at Chicago, Illinois, March 18, 1921.

Charles Bickel

Mr. Bickel, whose death was recorded in the April JOURNAL, was born in Columbus, Ohio, in 1854. After receiving his early education, he went to Germany where he pursued his architectural studies, returning to this country where for a brief time he was in practice in Philadelphia. He opened offices in Pittsburgh about 44 years ago and was in continuous practice there until his death.

Frederick A. Russell

Fortunate was Pittsburgh when Frederick Russell, who had been sent here from the office of H. H. Richardson, in Boston, in connection with the building of the Court House, decided to cast his lot in this community. To the readers of "The Charette" it is not necessary to review the professional career of this self-sacrificing, public-spirited architect whose unexpected death has taken from us a respected and honored member of our profession.

Mr. Russell's active interest in the Pittsburgh Architectural Club and the American Institute of Architects brought him into personal contact with most of the architects and draftsmen of the community. To know him was to respect him for his unfeigned interest in all matters pertaining to the advancement of the cause of Architecture and for his sympathetic understanding when his counsel was sought on questions of professional practice.

His interest in civic affairs was well known. At the sacrifice of his personal interests he has devoted many hours of gratuitous public service, finding his reward in the satisfaction of having contributed to the advancement of the public welfare.

To those who were so fortunate as to know him intimately was revealed a personal nature which was both a delight and an inspiration. In the presence of sympathetic companions he would relate in his charming manner incidents of his summer vacations at Nantucket; would display with pride his license to operate a motor yacht in the surrounding waters, or would describe with rare enthusiasm some charming New England house or garden that he had visited.

These are only casual incidents of a long acquaintance with Mr. Russell, but they serve to illustrate the qualities that endeared him to his associates who will remember him not only as a capable and public-spirited architect, but as a charming companion, a true friend, and always a gentleman.—From *The Charette*, Pittsburgh.

Clarence E. Richards.

Mr. Richards, whose death was mentioned in our last issue, was born in Jackson, Michigan, February 22, 1865. On the paternal side Mr. Richards comes of a family of

pioneers. His great, great grandfather was a pioneer of Massachusetts, his great grandfather a pioneer of western New York, and his grandfather a pioneer of the State of Michigan, moving there in 1831. His father was a pioneer settler of Kansas, moving there in 1870.

In El Dorado, Kansas, he attended the village schools and later the teachers' normal school, and during the years of 1883 and 1886 taught in the country schools of Butler County, Kansas. In 1886 and 1888 he was employed as an assistant engineer in charge of buildings and bridges for one of the branches of the Missouri Pacific Railroad which was then being built through that section of the country.

Mr. Richards went to Ohio in the fall of 1888, and in 1889 he entered the office of Edward Anderson, one of the older architects of Cincinnati, working as a draftsman and superintendent. In 1891 he went to Newark, Ohio, going into business with his brother, who was an engineer, under the firm name of Richards Brothers, Architects. He remained there two years after which he went to Columbus as Superintendent of Construction for the firm of Yost & Packard, Architects. He served in this capacity six years, and in 1898 organized the firm of Richards, McCarty & Bulford, Architects, at the head of which he remained until his death. This partnership has been longer in the practice of the profession, without a change of name or personnel in its organization, than any other firm in the State.

During the period of over 20 years that Mr. Richards was engaged in the practice of architecture in Columbus, his firm became well known throughout the central west, having been connected with many of the largest building projects throughout the States in which it practiced. Among other buildings are the Ohio National Bank, the Citizens Trust & Savings Bank, the Athletic Club of Columbus, the new Ohio Penitentiary at London, Ohio, the largest institution of this kind in the country, and many office buildings, hotels and public institutions throughout the States of Ohio, Kentucky, Indiana, Kansas, Texas and Iowa.

Mr. Richards was active in the interests of the Ohio State Association of Architects and was a member of the Committee on Prison Architecture of the American Prison Congress. He served as President and Secretary of the Columbus Chapter of the American Institute of Architects.

Some of the more important works of Mr. Richards' firm in addition to those mentioned above were the Knoxville Banking & Trust Co., Knoxville, Tenn.; The Phoenix Hotel at Lexington, Ky.; the Kemp Hotel at Wichita Falls, Texas; the Hardin County Court House at Kenton, Ohio; and the Beacon Building, Lassen Hotel, Wesley Hospital and First National Bank at Wichita, Kansas.—*Communicated.*

THE JOURNAL desires to make its columns valuable as a medium for an exchange of thought on all matters relating to the profession of architecture. All such expressions, whether in editorials, or otherwise, must obviously be accepted as expressions of individual opinion. Contributions are invited, all articles to be signed by the name or initials of the writer in acknowledgement of their source and the writer's responsibility.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Abstracts

Lawns. (38ex)—(U. S. Department of Agriculture Circular No. 49 Making and Maintaining a Lawn.) Since the development of a satisfactory lawn depends to a large degree on the foundation upon which it has been started and a really good lawn rarely results from a poor beginning, the following quotations from the above circular are of interest.

Soil and Soil Preparation.—"A suitable soil is the first consideration in lawn making. Especially is this true where the climate is unfavorable to the best growth of the turf-forming grasses. There are few soils that can not be improved by treatment, and in the case of most soils much treatment is necessary. Good drainage, good texture, and good preparation are essential considerations. Good drainage should be secured before further preparation is made. In very few cases is tiling necessary for the ordinary lawn, but for an extensive low-lying area or for areas where thorough surface drainage is impracticable tile properly laid will result in much improvement."

"A deep loamy soil is easily made suitable for lawn purposes, since it already possesses a good texture. If lacking in fertility it can be enriched by the addition of barnyard manure or, if this is not available, an application of 20 pounds of bone meal for an area of a thousand square feet may be substituted. In either case the material should be well incorporated with the soil. Stiff clay soils require both sand and vegetable matter before they are really suitable for the production of a good turf. There is little danger of using too much of either of these materials. A quantity of sand equivalent to a surface layer of 1 inch in depth if worked into the clay produces a permanent improvement in its texture. Even a smaller quantity is helpful, while much more can be used advantageously. On the average-sized lawn it is entirely feasible to use sand for the purpose of improving stiff clay soils. It is also both practicable and desirable to use clay for improving light sandy soils. Decayed vegetable matter, or humus, as it is called, lightens the texture of clay soils, increases their water-holding capacity, and improves their drainage; it also improves sandy soils by making them more cohesive and more retentive of moisture. Thoroughly rotted and comminuted barnyard manure, good compost, or mushroom soil are all suitable forms of humus for the lawn. One-half a ton to a thousand square feet ordinarily is sufficient. This should be thoroughly mixed with the soil. Organic matter can be supplied to the soil intended for a lawn much more successfully and usually more cheaply in the form of manure or compost than by means of green crops turned under."

"Lime in some form improves most soils for bluegrass and white clover, and unless soils are already well supplied with lime it should be added at the rate of not less than 100 pounds per thousand square feet. The application should be made considerably in advance of seeding time. Applications of lime are of very doubtful value for the bent-grasses or the fescues unless the soils are very acid or contain large quantities of poorly rotted organic matter."

"Preliminary preparation, by which is meant the thorough stirring of the surface foot of soil, should begin several weeks prior to seeding to allow sufficient time for the ground to become thoroughly settled and for the weed seeds to germinate."

Seed and Seeding.—"There are several species of turf-forming grasses that can be used for lawn making in this country, but for the northern part of the United States Kentucky blue-grass is, generally speaking, the most desirable. For the best results it is commonly used in mixtures with other grasses. The mixture contained in the accompanying package has been thoroughly tested and is thought to be quite as satisfactory for general lawn making as any mixture that can be used. It is composed by weight approximately as follows:

17 parts of Kentucky bluegrass.
4 parts of re-cleaned redtop.
3 parts of perennial rye-grass.
1 part of white clover.

A slight modification of these proportions makes no material difference in the appearance or success of the lawn. A mistake which is commonly made in starting a lawn is that of using too little seed. A thick stand of grass is essential at the beginning, and in order to be certain of securing it seed of the above mixture should be sown at the rate of not less than 4 or 5 pounds to a thousand square feet."

"Except perhaps in the northern tier of States and in New England, early-autumn seeding is much more satisfactory than spring seeding. South of New York and all the New England States spring seeding should rarely if ever, be practiced. Young grass does not stool well in the spring and summer and is not sufficiently aggressive to combat crab-grass and other summer annual weeds. In most of the area south of the New England States and north of the Potomac and Ohio Rivers the best time for seeding lawns is during the first weeks of September."

"After the preliminary preparation, which involves the thorough working of the soil by some means, the surface of the area to be seeded should be thoroughly fined with a rake or similar implement and bone meal should be applied at the rate of about 20 pounds to a thousand square feet. The bone meal is of much benefit to the young grass, since it assists it in making sufficient growth to pass the first winter in good condition. The main point to be observed in seeding is to sow the seed evenly and to cover uniformly but lightly. The covering can be done on a small area with an ordinary garden rake or on a large area with a weeder. Light rolling after covering is frequently beneficial."

Shady Lawns.—"To produce a good lawn in shade, especially in dense shade under trees and shrubs, is a very difficult matter. The grasses contained in the accompanying mixture are not particularly shade-loving grasses, but they can be made to thrive reasonably well in shade if given proper treatment."

"By thorough watering and the liberal use of fertilizers and lime the evil effect of shade can in many cases be largely overcome."

"Probably the best shady lawn grass that is readily available commercially is red fescue. This appears on the market at the present time under the name of Chewing's fescue. It requires essentially the same culture as outlined for the accompanying mixture, except that it is apparently not benefited by lime."

In addition to the foregoing the circular discusses the repair of lawns and general lawn management including fertilizing, sanding, mowing and rolling, watering and eradication of weeds.

STRUCTURAL SERVICE DEPARTMENT

Wood Used in House Construction. (19) (Prepared for the Structural Service Department by Arthur Koehler, Wood Technologist, Forest Products Laboratory, U. S. Forest Service).—Woods which a few decades ago did not have a market value are now in demand. A careful survey of all the kinds of wood used in building construction would very likely include all native species of trees, which have a trunk large enough to cut into boards. (For a more detailed discussion see the chapter on "Wood" in the U. S. Bureau of Standards Circular No. 70, "Materials for the Household," by Arthur Koehler.)

Shingles.—Rot resistance to a high degree is demanded. Cedar, cypress, and redwood give excellent results although white pine shingles have been known to last many years. Redwood shingles discolor the rain water, and cedars give it a disagreeable taste, but after several rains bleaching ceases and the shingles no longer impart objectionable properties.

Laths.—The chief requirement for laths is softness and freedom from warping. Coniferous woods are chiefly used but many species contribute to the supply, including the softer hardwoods.

Siding and Exterior Trim.—Freedom from warping and checking and easy nailing with little splitting, together with fair durability, are the properties most desirable. Some woods with low resistance to decay, such as cottonwood, basswood, gum, buckeye, and spruce, are also used; but care must be taken to keep the wood well painted and fairly dry to prevent rapid decay.

Porch Columns.—Lumber for built-up columns should be thoroughly kiln-dried. Solid columns, if they contain pith or center of tree should be bored. Small solid col-

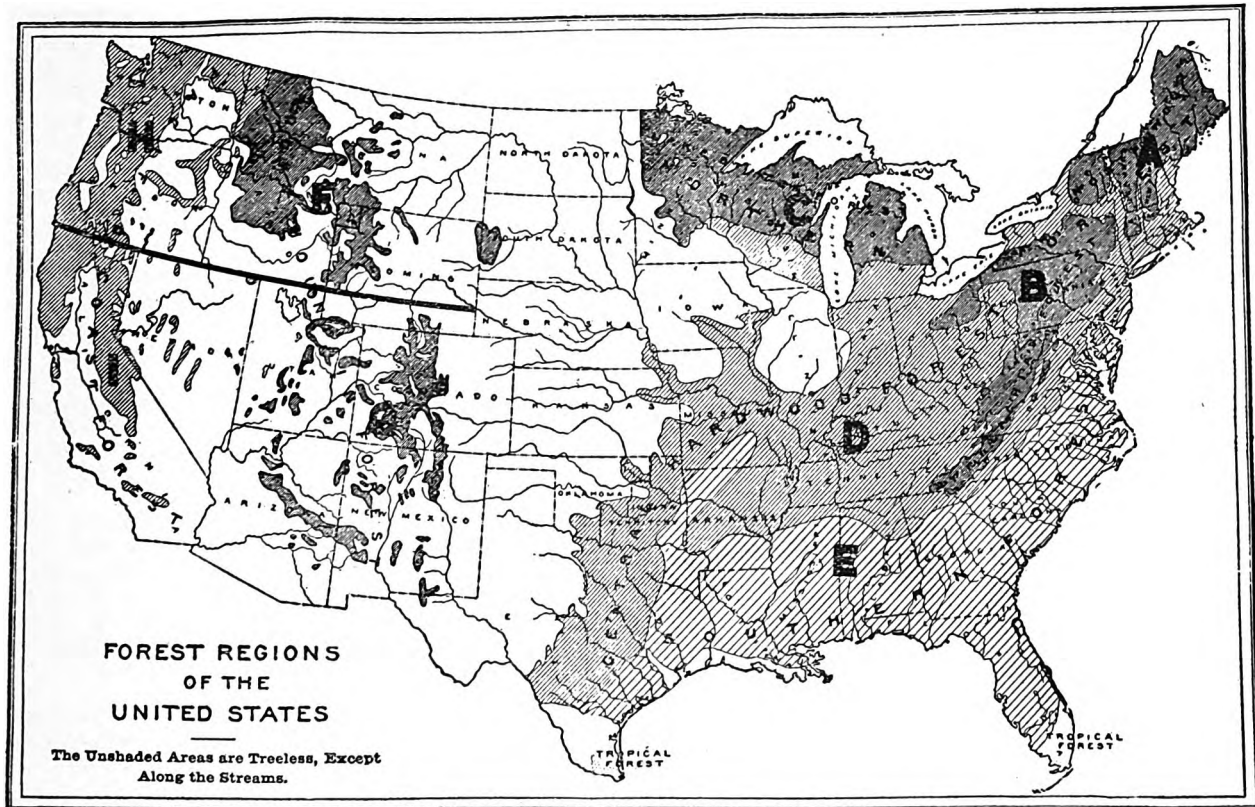
umns should be made of heartwood but should not contain the pith.

Flooring.—Hardness, even wearing, and freedom from slivers are the chief requirements. The hardwoods as a class fulfill these requirements better than the softwoods. The soft woods as a rule are cheaper. White pine and spruce are occasionally used, but are not recommended when subject to considerable wear. Maple is hard, smooth and of compact structure. It absorbs liquids slowly. These qualities, combined with its light color, make it admirable for kitchen floors. Edge grain flooring, especially softwood flooring, wears more evenly, slivers less, and shrinks or swells less than flat grain flooring. (For a more detailed discussion of wood flooring, see the S. S. D. Feb. and March 1919 JOURNAL.)

Window and Door Frames.—A moderate amount of durability is desirable. The hidden parts and sills are especially subject to decay. Hardwoods are more liable to warp under changes in moisture conditions and, in general, are not so desirable as softwoods.

Doors.—Softwoods, as a rule, are more desirable than hardwoods for solid doors and cores of veneered doors. They are less liable to warp, are lighter, and are less subject to shrinking and swelling. Some of the lighter hardwoods, however, such as chestnut and yellow poplar, would also make serviceable cores or solid doors.

Sash and Blinds.—Highly durable woods that work easily and will not shrink and warp a great deal when exposed to the weather are required. Yellow pine sapwood has been known to rot out in a few years. White pine heartwood is one of the best woods for this purpose. While soft maple, birch, basswood, and buckeye are used because of



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their uniform texture and easy-working qualities, they are not durable and should be well painted whenever used for sash and blinds.

Interior Finish.—Nearly all commercial woods are used for interior finish. Resistance to decay need not generally be considered, for all interior finish is supposed to have so low a moisture content that decay-producing organisms can not thrive in it. Some of the hardwoods, especially those that are usually cross-grained, such as sycamore, cotton gum, and red gum, are liable to warp if not properly dried previously, but when properly dried they make excellent finishing material.

Woods Commonly Used In House Construction.—The letters after each species in the following tables refer to the letters in the accompanying map, and indicate the part of the country in which the species is principally cut.

Gypsum. (3h)—(*U. S. Geological Survey. Bulletin 697. "Gypsum Deposits of the United States." 326 pages. 6" x 9". Illustrated.*) This bulletin is devoted in the main to detailed descriptions of the gypsum deposits in various sections of the country. It contains, however, a technical discussion of this material which is abstracted below.

Species.	House sills.	Beams and girders.	Posts.	Joists.	Studding.	Rafters.	Sheathing roofboard subfloor.	Shingles and shakes.	Lath.	Siding.	Exterior trim.	Porch columns.	Flooring.	Outside door window frames.	Doors.	Sash and blinds.	Interior finish.
Southern yellow pine (E).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Western yellow pine (F, G, H, I).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Norway pine (A, C).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Eastern white pine (A, C).....					x	x	x	x	x	x	x	x		x	x	x	x
Western white pine (F, H, I).....					x	x	x	x	x	x	x	x		x	x	x	x
Sugar pine (I).....	x	x		x	x	x	x	x	x	x	x	x		x	x	x	x
Douglas fir (F, G, H, I).....	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Eastern larch or tamarack (A, C).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Western larch (F, H).....	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Eastern hemlock (A, B, C).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Western hemlock (M).....	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Redwood (I).....	x	x	x	x	x	x	x	x		x	x	x		x	x	x	x
Cypress (E).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Western red cedar (H).....			x				x	x		x	x	x		x	x	x	x
Northern white cedar (A, B, C).....			x				x	x		x	x	x				x	x
Eastern spruces (A, B, C).....	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Western spruces (F, G, H).....				x	x	x	x		x	x	x	x	x	x	x	x	x
Balsam fir (A, B, C).....							x	x							x		x
Western true fir (not Douglas fir) (F, G, H, I).....				x	x	x	x		x	x	x	x		x	x		x
White oak group (A, B, C, D, E).....	x	x	x	x	x	x	x					x	x	x	x		x
Red oak group (A, B, C, D, E).....	x	x	x	x	x	x	x					x	x	x	x		x
Hard maple (A, B, C, D, E).....							x								x		x
Soft maple (A, B, C, D, E).....							x								x		x
Oregon maple (H, I).....													x		x		x
Red gum (B, D, E).....							x								x		x
Birch (A, B, C, D, E).....							x				x	x			x		x
Beech (A, B, C, D, E).....				x	x	x	x						x		x		x
Chestnut (B, D).....	x	x	x	x	x	x	x	x		x	x	x	x	x	x		x
Elm (A, B, C, D, E).....					x	x	x							x			x
Ash (A, B, C, D, E).....							x						x	x	x		x
Yellow poplar (B, D, E).....							x			x	x	x		x	x	x	x
Basswood (A, B, C, D, E).....							x			x					x	x	x
Cottonwood (A, B, C, D, E, F, H, I).....							x			x					x		x
Cotton gum (tupelo) (E).....							x			x		x			x		x
Buckeye (D).....										x	x	x			x	x	x
Black walnut (B, D, E).....													x		x		x
Butternut (A, B, D).....															x		x
Sycamore (B, D, E).....					x	x	x						x		x		x
Cherry (A, B, C, D, E).....													x		x		x
Mahogany (imported).....															x		x

STRUCTURAL SERVICE DEPARTMENT

The value of gypsum for certain purposes has been known for so long that the date of its discovery is unrecorded. The ancient Assyrians used alabaster (a form of gypsum) for sculpture and the Egyptians 4000 years ago made plaster from calcined gypsum, the same as the plaster of Paris of the present time. Calcined gypsum, however, has had no extensive use until within the past half century, although for several centuries it has been utilized for plaster and for making casts.

Chemical and Physical Properties.—Gypsum is a hydrous calcium sulphate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$). Pure gypsum is seldom found in nature, for nearly all gypsum deposits contain oxides of iron and aluminum, carbonates of calcium and magnesium, and other impurities.

Varieties.—Gypsum occurs as rock gypsum, gypsite, selenite, and satin spar. Rock gypsum or massive gypsum, the form in which the mineral is most commonly found, is the form that is of the greatest economic value. Gypsite, or earthy gypsum, is soft, incoherent impure gypsum formed at the surface by the evaporation of gypsiferous water. Few deposits of gypsite are over 20 feet thick, and the largest cover only a few acres. Selenite is a variety of gypsum which occurs in distinct crystals or in broad folia. Satin spar is a crystalline variety of gypsum made up of needle-like fibers. It is nowhere sufficiently abundant to be commercially valuable.

Mining.—The variety of gypsum commonly used is massive or rock gypsum, which is mined where it occurs in beds several feet thick. Rock gypsum is drilled and shot down with powder, broken into lumps that can be lifted by one man, and loaded into tram cars for delivery to the crusher. At a number of places in the Western States gypsite or gypsum earth is used instead of rock gypsum. This soft pulverulent material is dug by hand, with horse scrapers, or with gasoline shovel, and hauled to the mill by wagon or tram.

Gypsite is dumped into storage bins and sent to the kettles without further treatment, grinding being unnecessary. Rock gypsum is broken in a jaw crusher or nipper, from which it falls into a gyratory crusher. When reduced to pieces the size of coarse corn, it is carried by belt conveyor to a dryer, a large rotating cylinder, slightly inclined from the horizontal. The dry rock is then pulverized in burr, emery, or roller mills or in disintegrators and elevated to storage bins in the top of the building.

In nearly all gypsum mills the pulverized rock is calcined in kettles. The gypsum, whether ground rock gypsum or gypsite, is fed slowly into the kettle, which is heated to 212 degrees F. The temperature is raised gradually and the heat drives off the water of crystallization of the gypsum in the form of steam. The steam passing through the material floats it up and gives it the appearance of boiling. This stage is reached at 230 degrees F. At about 10 degrees higher the mass settles down, and if "first settle plaster" is desired, the contents of the kettle are drawn off at once through a gate near the bottom. For "second settle plaster" the temperature is raised, and at 270 degrees F. the mass begins to boil violently again. At a temperature of about 350 degrees F. the material is discharged through a gate into a fireproof bin or on to a floor, where it cools.

In some very large and modern plants, calcining is done in a rotary kiln, and the plaster goes direct from the kiln to a cooling bin.

Calcined plaster is screened or bolted, and the oversize is reground in burr mills or pulverizers of other types. After screening and regrinding, the material is elevated to storage bins in the upper part of the mill over the mixing machines.

Mixing.—If pure material has been used this calcined gypsum or plaster of Paris will consist of calcium sulphate plus a residue of about one-fourth of the water in the gypsum. Plaster of Paris when mixed with water will set or harden. This is the principal characteristic from which gypsum derives its economic importance. Pure plaster of Paris of normal fineness (80 per cent passing 100 mesh) starts to set in about 6 minutes. Therefore in preparing gypsum plaster for the market for most uses a retarder must be added. The retarder commonly used in the United States is composed of hair, caustic soda, and lime. This retarder, together with other materials, such as sand and wood fiber, which may be added to the plaster for various purposes, is usually mixed with the plaster at the mill.

Uses of Uncalcined Gypsum.—The bulk of this material is used as retarder for Portland cement. The next largest use of raw gypsum and one of the earliest in this country is as land plaster or fertilizer. Raw ground gypsum is used in making the common blackboard crayon, as base for paints, as a filler for cotton and in nearly all the finer grades of paper, and as a base for mixing with Paris green or other insecticides.

Uses of Calcined Gypsum.—The principal use of calcined gypsum, amounting to about a million and a half tons annually, is as wall plaster. All gypsum wall plasters have other materials added to the calcined gypsum either before sacking or just before wetting for use. These plasters, of which there are many brands, commonly known as hard wall plaster, may be grouped in four classes: Cement plaster—calcined gypsum, retarder, with or without hair. Wood fiber plaster, calcined gypsum, retarder, wood fiber. Prepared plaster—calcined gypsum, retarder, sand, hair or wood fiber. Finishing plaster, calcined gypsum, with or without retarder, with or without hydrated lime.

Because it is a poor conductor of heat and cold, gypsum plaster is used as an insulating medium in cold-storage buildings, around steel frames of buildings, and as a covering for heating plants and water pipes.⁽¹⁾

Gypsum plaster boards are of various types, mainly consisting of gypsum plaster mixed with fibrous binding material to give strength and toughness for effective nailing. A type of plaster board in common use consists of four alternate layers of paper or felt with three intermediate layers of gypsum. Other boards contain but two layers of felt with a gypsum layer between. In order to meet the joist and stud spacing of standard construction, plaster boards are usually 32 by 36 inches (8 square feet) and are made one-fourth, three-eighths, and one-half inch in thickness. The fibrous binding material forming the outside surface of the plaster boards is an excellent bonding surface for gypsum plaster. In fireproof construction the plaster boards are fastened to metal studs or hangers by metal clips. Plaster boards are used for deadening sound

by being laid between rough and finished floors; as sheathing boards by being nailed to the studding and behind the clapboards; as outside sheathing, which is waterproofed before application of outside stucco covering; as insulation and fire resistance under wood shingles, in air-ducts, and in dumb-waiter shafts.⁽²⁾

Gypsum floor screeds are used as a nailing sleeper for floors. They are 2 by 3 inches and 8 feet long and weigh 2 pounds per linear foot.

Gypsum tile is made for partitions, floors, roofs and furring. Partition tile, solid or hollow, is 12 by 30 inches wide and 2 to 8 inches thick. These tiles laid with gypsum plaster, are light in weight, can be laid very rapidly, can be cut with a handsaw, and, when plastered with gypsum, make partitions of high heat-resistive value.⁽³⁾

Gypsum floor tile is a hollow box or dome of reinforced gypsum plaster, used as a filler between concrete joist construction. These tiles are 19 inches wide and 24 inches long, 7, 9, 11, and 13 inches high, and weigh 24, 27, 30 and 33 pounds per linear foot respectively; they afford a saving in dead weight of construction and provide a smooth, all-gypsum ceiling to plaster upon.

Gypsum roof tile is made 24 and 30 inches long, 12 inches wide, and 3 inches thick and is laid between supporting subpurlin T irons. Larger gypsum roof tile, reinforced and made of especially hard gypsum, are made to span 4 feet and are laid upon the main roof purlins. In 1916 a long-span beam in T and I section and as much as 10 feet in length was introduced and used. In 1917 an improved long-span gypsum tile with channel section was introduced, and is being used on roofs of large area. The tile are made with reinforcing metal fabric on the broad face and reinforcing rods looped at the ends embedded in the sides. The tile are 15 to 22 inches wide, 6 to 10 feet long, 4 to 7 inches thick, and weigh 16 to 20 pounds per square foot. They require less supporting steel than concrete roof decks and are quickly put in place at a low cost of erection. Common practice is to mold 6 foot tile at the mill, and to mold longer tile where the building is to be erected. For field molding, however, an order of at least 50,000 square feet may be required.

Another type of gypsum roof deck is that which is cast in place, in the same manner as concrete. A roof cast in place is best poured in strips about 3 feet wide. One side of the strip must be bulkheaded and to the proper height, so that a screed moved along it will true the gypsum to the proper surface. Metal reinforcing rods may be placed in each T-beam stem and a 3-foot strip of wire mesh over the top. The finished deck is monolithic and can be covered with any type of roofing. The low heat conductivity of gypsum is an especially valuable quality in a roof deck. Slate or any other roof covering can be nailed or otherwise secured to the smooth decks of gypsum roof tile.⁽⁴⁾

Gypsum furring tile are of the same character and general dimensions as the partition tile, are hollow or solid, and are 2 inches thick. They are fastened to the wall by nailing and are used for sound absorption and sound-

proofing, fire protection, insulation from heat or cold, and damp proofing.⁽⁶⁾

EDITORS NOTE.—Mr. Virgil G. Marani, Chief Engineer for the Gypsum Industries Association has reviewed the foregoing abstract and has suggested the following paragraphs in order to further amplify and explain some of the statements made:

(1) Rehydrated calcined gypsum whether in the form of plaster upon wall or ceiling surfaces or as structural materials such as tile for partitions, roof tile, fire proofing tile, plaster or wall boards possesses a very appreciable degree of resistance against the action of fire. This is due to the liberation of the water of hydration which is in the gypsum in crystalline form to the extent of about 20% by weight.

(2) To meet specific demands plaster boards $\frac{1}{2}$ to 1 inch in thickness are manufactured and are extensively used for fire protection purposes in basements, garage buildings and the like; these boards consist of an intimate mixture of rehydrated calcined gypsum and fibrous material, but no paper or felt. These boards are called plaster boards because they are often used as a base for plaster, although where refined work is not specified the plaster is omitted. Much confusion has resulted from a lack of appreciation of the difference between plaster and wall boards. Committee C-11 of the American Society for Testing Materials has adopted the following definition for gypsum wall boards. "Gypsum wall boards are attached to structural supporting members and constitute finished wall, ceiling and partition surfaces in the interior of buildings, and are susceptible to further decorative treatment." These boards are quite similar to the plaster boards with the exception that the standard thickness is $\frac{3}{8}$ inch, the width 32 and 48 inches, and the length up to 10 feet. These dimensions are necessary in order to make possible panelled effects with a minimum of vertical joints and in many cases no horizontal joints. The paper surfacing is of a different character than for plaster board since it is intended to be used as delivered or to receive paint or other decorations; but never to be plastered upon.

(3) Furring tile is of the same general dimensions as partition tile, but $1\frac{1}{2}$ " in thickness viz; a 3" thick hollow partition tile split in two along its greatest dimension, hence the term "1- $\frac{1}{2}$ " inch split furring."

(4) The term "reinforced gypsum" applies to two distinct types of construction, one in which the reinforcement employed and the gypsum are designed to act together in a manner exactly similar to reinforced concrete designs, and the other in which the reinforcement employed is of such nature as to depend upon support by being secured to the structural members, the gypsum acting solely as a filler or distributor, but taking no part in assisting the reinforcement to develop its tensile value; this latter system is often termed the "Suspension System." The suspension system is applied in the construction of gypsum floors as well as roofs. Both systems are "pre-cast," viz: cast at the mill and shipped to the job or else are "poured-in-place," viz: cast in place on the job, but in the case of the suspension system, when they are "pre-cast," viz: cast at the mill; provision is made to secure the reinforcement to the structural members when these units are erected in place. This is done by protruding the reinforcement or providing other special features to meet this end.

(5) Gypsum in any form should not be regarded as possessing damp-proofing properties. The use of gypsum furring tile upon the inside surface of outside walls, because of its insulation value, prevents condensation and in this respect only can be considered as preventing damp conditions.

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Shadows and Straws

THIS YEAR, the Annual Convention of the Institute happened to fall with a distinct clash, so far as our schedule with the printer is concerned, and extensive comment will have to be delayed until our next issue. We publish elsewhere a resumé of the Board's Report, and inasmuch as its recommendations were pretty thoroughly accepted, that, in a sense, may be accepted as the brief story of the work of the delegates. President Kendall, in his opening address, indicated what was certainly the most significant factor in Institute affairs at the present time, and that is the extraordinary growth in membership during 1920, of which we shall have more to say later on. Taking up affairs in general, however, President Kendall said, among other things:

"We are facing a future for the profession, whose opportunities are almost unlimited. The country faces a need for buildings, unprecedented in amount. Housing and business make demands such as we have never known before and will not see again, unless, which God prevent, another World War shall again paralyze all beneficial enterprise.

"Grateful communities all over the land desire to honor their dead and commemorate the service of those who dared all and returned. All that art can command, that skill can combine, that good design and inspiration can produce, is demanded for these symbols of gratitude. Who shall produce them if we do not?

"I know of a combination of stone cutters, such as years ago would have been ready to furnish volunteers, carved at parade rest, full life size, in unlimited numbers, which in these days turns to the Institute and organizes a well conducted, properly paid competition (if any competition can be called well paid) in order to set up in their city a dignified and artistic monument to the soldiers of that place. Commissions charged with erecting great memorials, costing millions, write to ask the Institute to advise them how to select suitably qualified men to design and supervise their buildings.

"We have heard much in late days of the encroachments of the Engineer upon the fields of the Architect and we also hear much of the strangling effect of effi-

ciency upon true art. I recently saw efficiency represented in a pageant as seated upon the shoulders of architecture with a strangle hold like an old man of the sea; the whole staggering upon limbs scarcely able to bear the load.

"I am, personally, perhaps, more inclined to the practical than to the artistic; but I have all my life cherished an ardent admiration for the men who can see visions and dream dreams; whose minds conceive beauty and whose nerves tingle at discords; to whose feelings proportion and symmetry are essential. To them I pay all homage. Without their vision and courage, our art would be tame and commonplace indeed; but today we are learning that inspiration alone is not enough to ensure a satisfactory result. The conception must have foundations; its airy pinnacles must be firmly fixed to the main mass; its vaulted halls and panelled walls must be conveniently and economically arranged. Our friends, the Engineers, have given the bulk of their study to practical affairs, to convenience and utility, to accurate calculations of cost and construction. Sometimes, alas! we have ignored these items in our study of domes and spires. When we do we must expect the engineer to win against us; for the business man prefers a homely thing, which he can use, to a beautiful one, which cannot serve its purpose. If we do our duty and avail ourselves of our opportunities, I do not fear the competition of the Engineer, or of any other man, contractor or promoter, and I do not think you need do so.

"You will perhaps say, what has this to do with the ideals and brilliant possibilities you spoke of a few minutes ago? This: (and I here wish to acknowledge my indebtedness to Mr. George C. Mason's record of early American Architects as a professional body). The Association of American Architects had its beginnings in a gathering of a few Architects, under the title of the "American Institute of Architects," which held its first Convention in Philadelphia, in 1837, the year in which, it may be remembered, the Institute of British Architects was founded.

"It reorganized as the American Institute of Architects and was chartered in New York. Many of the

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founders became eminent in the history of the profession. From that day to this, the objects of the Institute have been as stated in the charter: 'To organize and unite in fellowship the Architects of the United States of America and to combine their efforts so as to promote the artistic, scientific, and practical efficiency of the profession.' Our friend efficiency was alive even then you see.

"Has it done so? I maintain that it has. The ethical standards of the profession, I almost said 'moral,' have been steadily held before us, almost too steadily we have sometimes thought, until today, whether we practice them or not, and I believe we almost always do, we know the right thing and generally we do it and I am certain that if we do occasionally err, the feeling of shame takes the satisfaction out of any profit we may gain.

"The Institute has steadily held that the good of the whole was far greater than the gain of any one individual and has consistently urged that we relate our actions to that high principle. Its interest in the men of the future has never wavered. Its earliest officers were men of vision and they opened their offices for the training of students, when there was no other door open to the would-be architect than that through this experience in the office of a qualified chief.

"In such an office was trained Wm. R. Ware, the founder of the first Architectural School in America at Technology, in Boston, and later that at Columbia. Since his day many of his students have been teachers and organizers in other schools of architecture. These men and their successors have been active and honored members of the Institute and we today join hands with them in their work of training the architects of the future. We discuss with them their courses of study, and they even allow us, occasionally, to speak to their students. Our cooperation is hearty and appreciative.

"Our interest is vital and efficient in our Chapters and in our individual membership. Our men of high scholastic training have organized Ateliers, taught classes, given free service, advice, and criticism, to students and draftsmen, and aided in developing a trained, artistic, and efficient body of draftsmen, embryo architects, many of whom are today practicing their profession with honor and success.

"We have, by showing our good work, by upholding high standards of design, by the examples presented to the public of worthy art, and by timely criticism of poor work, raised the public appreciation of good things and quickened the ability to detect and reject the bad.

"We claim a large part in this, yet not all is due to the Institute. All honor to the worthy men who by themselves or in other groups have striven for high ideals, have worked to elevate public taste, and correct immoral conditions. We envy them, we desire their fellowship and their help in our own problems and to

help them in theirs. We therefore again, as in the past, extend to them an invitation to membership in the Institute and to the fellowship which such membership will bring.

"We believe that in the future such association will strengthen every man's hand for his task and that many who practically live up to the standards of the Institute and sympathize with its aims, would help our work and strengthen their own standing, if they joined our ranks.

"Believing this, an active campaign has been carried on this year, under the direction of a National Chairman, Mr. A. P. Clark, assisted by our efficient Octagon staff, and handled as to its local work by splendid committees from the Chapters, to increase our membership and extend our influence. Nearly seven hundred names have been added to our roll, an addition of more than 33 per cent to our membership.

"We welcome these new members, we are proud and gratified to have them with us, and we hope for a still further increase in the future. With from ten to fifteen thousand persons claiming to be architects in the country, we must have a larger membership if we are to be a truly representative body.

"Our standards, our ideals, are today the recognized standards for the profession and we ought to be able to enroll those who believe as we do in our fellowship.

"It is fitting that I acknowledge here the splendid service of our membership committees in the several Chapters and the efficient prosecution of the work by the Executive Secretary.

"But what of these new men? Their good impressions of us will wane and fade if we rest content with having placed their names on our roll of membership. So strong a body of men should command recognition and I hope that Chapters will be at pains to recognize their ability and qualifications, to give them place and privilege as opportunity may offer, and to imbue them thoroughly with loyalty and affection for the Chapter and the Institute.

"May I here lay emphasis upon the vital fact that the Chapters are the Institute; that *there* is exhibited the Institute spirit, that *there* most of us become acquainted with the ideals and the realities of what a member in the Institute is and that as we act and are, will the conception, true, or false, be formed.

"Let us not hear again the query, 'Why can a member older than I, more prominent in the Institute, do with impunity, things which mean discipline if done by me?' It ought not to be possible for such a statement to be made.

"Gentlemen, I started to set before you high ideals. I begin to realize how futile is such an endeavor. You already have them. You are doubtless living up to them more perfectly than I. I can only say, inadequately and imperfectly, I believe in them, I try to practice them, I pray you go and do likewise."

City Planning and City Building

By THOMAS ADAMS*

*"Meanwhile at social industry's command
How quick, how vast the increase! From the germ
Of some poor hamlet, rapidly produced*

*Here a huge town, continuous and compact
Hiding the face of earth for leagues."
Wordsworth.*

Object of Planning to Promote Social Industry and Life.

As the poet says, it is social industry that commands the city into being. There may, however, be two forms of social industry—namely, that which is productive and that which, like forms of land speculation, is parasitically feeding on what is productive. It is the success of productive forms of social industry that should be the chief aim of the persons who plan or build the city. But going a little deeper we discover that this success is dependent primarily on the growth and efficiency of the human units that compose society. Thus the most fundamental problems to be dealt with in the city are to develop the citizen and the productive industries in which he labours.

In developing the citizen there are necessities for existence and necessities for efficiency which, together, may be said to constitute necessities for life.

Necessities for existence are food, clothing and shelter and those for efficiency are education, recreation and agreeable environment for the home.

Whatever forms a barrier to the achievement of these things is bad for the city even if it seem to be normal or represent a customary tendency. Failure in city building during the industrial age has risen from lack of recognition of the fundamental character of these necessities and from the false assumption of those who have carried on parasitical forms of industry. Success in future city building will depend on planning to promote life and efficient organization of the right kinds of industry. This should be the aim of our zoning as well as of our city planning. Were it so there would be no need for objection to the advocacy of city planning as a business proposition.

City Building.

We are told in the *Diversions of Purley* that the Anglo-Saxon word *Byldan* means to confirm, to establish, to make firm and sure and fast, to consolidate, to strengthen, and is applicable to all other things as well as to dwelling houses. The architect who possesses the broad social outlook and visualizes the city as a whole and not as a series of segregated units of building will appreciate his responsibility as a city-builder and see that he falls short of that responsibility so long as he is merely a building designer.

The city planner and the zoner—terms not necessarily synonymous—whether they be architects or engineers, must be city builders in the real sense if they have an adequate conception of their duty to society. But

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the making of the city—firm, sure and fast—its consolidation and strengthening must not only relate to other physical structures as well as dwellings, but to the object of developing life and industry. The zoner who attracts jobs by pleading his case on the basis of the value of zoning as a stabilizer of real estate values may be anti-social. He need not be if he interprets the improvement of conditions and the establishment of values as merely confirming or consolidating what is good in construction and use, or of merely avoiding waste; but he certainly will be if he seek to confirm speculative land values merely for the sake of those who enjoy the profit of them. When we can get land values based on use—and let it be emphasized—on productive use, then let us make them firm and sure and fast by zoning. The city builder in his economics, as well as in his art, must seek to build as an expression of life and as a means of developing life and the industries that sustain life.

Land Speculation and City Building.

When, for instance, we talk of stabilizing land values by zoning we shall have to be careful that they are real values based on productive use of land—and not speculative values which are a tax on productive use.

The Milwaukee Housing Commission, which reported in April, 1918, placed the "elimination of speculative land values in some residential districts" as the first object in solving the housing problem in that city. Next to that object came the recommendation in favour of zoning to "safeguard residential districts." The order in which these two things are put forward to solve the housing problem indicates that the Milwaukee Commission did not look upon zoning as a means of stabilizing excessive land values. Zoning was proposed as a safeguard of amenities, subject to speculative values having been first eliminated. Third in order came general city planning and then elimination of waste, encouragement of ownership, government aid and advice, and education.

It is doubtful if any Housing Commission has approached the problem and dealt so ably with its fundamental causes as that of Milwaukee. The Commission did not show any compromising attitude in referring to land speculation. "The unearned increment of the land value," it stated, "is held to be one of the chief causes of city slums." It was suggested that the Government should check these values, or give powers to municipalities to own large tracts of land for that purpose. As a result of the Commission's report the Wisconsin Legislature gave power to municipalities to acquire land and develop it for residential use.

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It is in the substitution of the false for the real that the greatest indictment can be made against speculative land values—and the real estate interests are beginning to recognize this. When high land values are based on intensive use—assuming that it is also good use—and is not spoon fed by public expenditures on improvements there may be true and sound values. It is where they are based on gambling on futures and are bolstered up by contributions from the public purse without being adequately taxed that they are injurious—because they exist by feeding on productive industry.

The disaffection of the industrial labourer is wrongly assumed to be mere resentment against high cost of living—including cost of land and shelter—and low wages. It is in modern times much more than that, it is intellectual and spiritual dissatisfaction with the falsities that permeate our social system. Hard conditions are bearable if they are not based on social injustices and unsound economics. As one sociological student puts it, the struggle of the labourers, who constitute 75 per cent of our citizenship, is not the struggle of the “have nots” as against the “haves” but a blind groping to re-establish the human end of society over the mechanical and commercial.

From an economic standpoint we have seen how successful land speculation has been in destroying the security of investment of capital in building. Real estate values have been “boosted” until they have grown beyond the revenue producing capacity of land for the purpose for which it can be used. This is one of the main causes of shortage of dwellings, for capital was being driven away from building before the war because of lack of security promoted by speculation. Thus we have a system which lives by taxing industry, art and life and then drives away the capital needed to maintain these things.

An interesting comparison may be made between the success of the city planning law in reducing excessive land values in England and the increment tax law to tax land values introduced by Mr. Lloyd George. Both the Town Planning Act and the Finance Bill, which introduced the increment tax, were passed in 1899. The first had for its object the proper regulation of the use and development of land; the second to secure by taxation for the community the increased values of the land due to the efforts and expenditure of the community. The first has succeeded, not in adequate measure it is true, but it has succeeded in the objects for which it was introduced and also in solving the problem which the increment tax was designed to solve, in a fair and judicious way and without confiscation. On the other hand the increment tax has failed and has now been abandoned. Thus the Town Planning Act, as operated in England, in regard to the improvement of economic conditions and land control has succeeded while the more direct method of taxation has failed.

Where Goes City Planning?

Mr. Ackerman, in his articles on city planning, suggests that it is a weakness of zoning, in that one of its defenses consists in stabilizing property values. But a well designed house and the grouping of a number of dwellings with proper regard to their surroundings has the same effect. There is nothing inherently wrong with the idea of stabilizing values, so long as it does not consist of stabilizing the values of the speculator as opposed to those that constitute real or public values. The highest benefit to be obtained from art is in getting rid of the losses that accrue from lack of art or from false art.

All Mr. Ackerman says is true as to the many divergent aims within the town planning movement, but I take issue with him when he says that as a whole it seeks to accomplish its aim through the administration of palliatives. There are forms of city planning to which this criticism can be applied with truth. But those who wish to broaden and deepen its aims and spirit should cooperate for that purpose and not be content with destructive criticism. It is asking too much of the city planner that he should combine high political qualities and seek to attain political power to enable him to build the city. His only chance of success in that case would be to give up city planning and become a politician. The city planner is not to blame for the capitalistic system while the power to correct both rests with the people and their political institutions. It is for statesmen and the people who place them in power to adjust the underlying standards and principles so that the order, arrangement and art of the city planner will operate to the fullest advantage.

City planners will gain much if they take to heart Mr. Ackerman's indictment that the movement is based too much on considerations of expediency, and his criticism of the attempts of city planners to formulate fundamental principles is just. If brought to the test the city planner would have to say that he was powerless to deal with fundamental principles.

I can see no reason, however, why the city planner should not try to crystallize the best of the present conditions for fear the worst may happen. There is surely much in the present conditions that is worth preserving in comparison with what is worst in these conditions. It has to be borne in mind that zoning, as applied in American cities, has largely to do with the areas already built upon. This raises the point that different methods are necessary to deal with built upon areas that have undeveloped areas. In other words, a more constructive policy, with less regard to “normal tendencies” and existing conditions can be carried out in new territory. We must remember that zoning is not a first step in city planning. Its proper order is as a third step. First should come the survey and topographical map, next the general plan of the city and last, the zoning scheme to fit in with the general plan.

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This is the order that has taken place at Baltimore. Baltimore has an excellent topographical map on a scale of 200 feet to an inch. Following the making of this map the city had a general plan prepared in 1918. Now it is proceeding to develop a zoning scheme. This is the proper and logical order.

As already argued, city planning cannot be the agency for instituting the reform of the political basis of city development which is responsible for the underlying causes. It may and should be a form of education to show what these causes are. City planning is defective if it is not being directed to control the development of land, which control is incidental to its ownership, and I agree that this is of fundamental importance. It is also true that sufficient thought has not been given by many to the relation of the urban centre to its supporting agricultural community. This is the ground for a good deal of the reasoning underlying the advocacy of regional planning. But again, it must not be overlooked that much city planning, particularly that part of it called "zoning" has for its limited aim the making of the best of established conditions that cannot be got rid of, and not of creating something new.

The working out of a scheme to improve economic institutions in the city may be interesting to the city planner and he should be prepared to contribute his part in securing proper readjustment although not the responsible member of the community to promote the changes that involve political action. There must always be a limitation to the power of technical methods of producing a change in material environment so long as the political power is not in the same hands as the technical skill. That the city planner should be less emphatic about what is expedient and more emphatic about what is right and within the domain of art goes without saying. But city planning may accomplish much of material value, even with economic conditions as they are, if it be used as a means of educating the citizens to an appreciation of the present false economic standards and the main objects of city building.

Class Segregation by Zoning.

In the creation of these zones there cannot, of course, be any permanency if they are going to result in the

segregation of classes. There is enough tendency to class distinction already without being stimulated by zoning. The only sound system of dividing residential zones is that which is obtained by controlling the degree of area occupied by buildings and limiting their height. It should, however, be as easy to build a small house in the zone which is restricted to the greatest degree as well as in the zone which permits the highest percentage of lot to be occupied—subject to some form of architectural control.

There is a connection between what is most useful and practical and what is most artistic and beneficial to the community, and we can emphasize too much the distinction between the useful and the beautiful. The subdivision of land in cities involves the working out of social and economic technique of the planning of the land for the benefit of the community. It is doubtful, however, whether it is practicable to approach what is wanted by a method which involves the gaining of control over economic institutions. We need not fear that the city planning movement is headed towards furthering the development of the autocratic state. The right way to deal with the autocratic state is to strengthen the political basis of the democratic state. If city planning gives people better homes and more security in their investments in building it will help to strengthen democracy.

The need for the control of land, the linking up of the urban centre with the agricultural district, the control of natural resources, the prevention of speculation, a wider outlook on the social aspects of city planning, the need for a scientific basis for surveys and plans, all mean that more emphasis must be given to regional planning and development which has grown out of the city planning movement, as a means of building our cities.

The solution of the problems of the big cities is largely to be found in the redistribution of industry, the development of localised community life and the substitution of small towns and garden cities for the huge aggregations of New York, Montreal and London. After all it comes back to this, that the garden city movement suggests the principles of sound and scientific development.

The Science of Planning

Excerpts from the Convention Discussions on Community Planning and Heights of Buildings

MR. MEDARY (Philadelphia): It is a curious thing that all communities have a basic plan politically,—that is, their constitution, their charter, or whatever the basic form may be. It is the legal or political expression of the social order in that particular community. Without it we would have what we call anarchy. There is no community that has not some sort of a constitution, some sort of a plan for its political and social order; the absence of it is, as I say, anarchy. There is scarcely a community, however, that has any basis or any plan for its physical development. The absence of that is also anarchy, and

explains why our cities are developed without thought as to their use, the areas covered, the heights of buildings, or to the planning of streets and arteries—the means of circulation by which a city lives.

MR. BRIGHT (Philadelphia): The causes of congestion must be examined before we try to solve them. Concentration of wealth is one of the causes of congestion; there is no doubt about that; but it is caused because we have a *laissez faire* policy in our cities. Industry now requires that factories should come there and offices be built, but it is entirely conceivable that the same economic system

could exist under conditions where there would be no crowding. I should therefore reject the concentration of wealth as a major cause of congestion.

The rent question, however, is an entirely different thing. That, to my mind, is the one great cause of congestion, and until we consent to look upon that seriously, to study it, and to find out what can be done about it, there is absolutely no use in going into these questions; we shall not get anywhere. The appropriation and treatment of the site value as a speculative thing for private profit is the cause of congestion because it requires an increase in the value placed upon the site. The only way to increase site value is to call in more people, in other words, to increase the intensity of use If a piece of property is rented for \$100,000 one year and the population increases next year, the land owner asks more money because he says it is worth more. He has produced nothing, yet the land user has to pay more money. He must earn it by production, and to production the cost must be added. . . .

MR. PFEIFFER: The first thing to do—and I am speaking now of our small communities such as are in their first stages of growth—and they deserve consideration—the first thing where we may be successful in showing our communities that we may be of service, is to oppose the custom that has long prevailed, of absolute license—of unbridled license on the part of the real estate speculator who is permitted to pick up a few acres, or a few hundred lots, subdivide them, make the streets as narrow as possible, the lots as small as it is possible to make them, leaving out all considerations except that of getting as many lots as possible out of that acre. Such methods may be corrected by regulations which will permit the community to deny acceptance of any subdivision not laid out in accordance with certain reservations for the width of streets. With that as a beginning, there will have been accomplished something that will open the eyes of our fellow citizens, and afterwards they will be more convinced of the value of planning services.

Mr. Bright has operated at Coconut Grove, Florida, for about a year, in a community that contains not more than 1500 inhabitants, I imagine, and yet he has accomplished something that is indeed wonderful in comparison with the size of the community. If his efforts in that field should not be successful to the extent that his dreams may not be completely realized in the immediate future, he has at least created a public demand in that small community for the betterment of its physical conditions and for its beautification. He has started the minds of the people on those questions. Sooner or later the facts will be realized, and architects collectively will then be able to create more beautiful surroundings.

MR. GRAY (Connecticut): In consideration of the fact that probably a rather limited number of the group here has given any serious study to city planning, it seems to me a little unfortunate that Mr. Bright did not point out to his audience that many of the pronouncements which he made with great emphasis relate to ideas which are strictly his own and are not, generally speaking, held by others who are doing city planning. What merit they have should go to him.

But it seems to me that it is rather risky to start in the extreme details of research before an audience which is not

composed of specialists. I refer particularly to Mr. Bright's statement that it is useless to attempt anything under the existing land conditions. That is a purely political question, like all questions of taxation; it is comparable to the question of railroad ownership by the federal government or by private organizations, or to the question of high or low tariff duties. It has not any direct bearing on city planning from the planner's point of view. It is a condition, an obstacle, which we have to contend with; it is an existing situation; it will take generations, or at least one, to change it. Mr. Bright says that in the meantime it is impossible to do anything and that it is no use trying. He obviously does not mean that because we have all seen his admirable work at Coconut Grove. That is the sort of thing that is going on all over the country, not only in the small but in the large places. City planning does not consist in taking an absolutely clean sheet of paper and starting out as though there were no cities, and then producing a brochure. . . . City planning consists of a process absolutely analogous to the process which the architect has so often to undertake—alterations and additions—the only two classifications under which city planning is done, generally speaking. It takes years to accomplish any big thing in city planning. Results must be measured not by years but by decades. We plan not for the past but for the future. The question is always asked, whenever any particular city problem is raised for discussion: "Why did not the people of a generation or two ago foresee these things?" That is not the question for us to ask. What we must inquire is: "What are we doing to foresee conditions which our children will have to meet?"

MR. MEDARY: Mr. Bright referred to the land question, and his remarks have been challenged by one or two speakers. Now the land question does affect city planning to the extent that Zoning is more or less the direct result of the fact that land has to be patrolled in some way and its use beyond a certain intensity prevented. The value of an acre of land in the country is established by what it will produce in the way of crops; its value, as at present computed, is the capitalized return on the sale of those crops. A natural law, however, prevents overcrowding for if crops are planted too close, and air and light are shut off, you get a crop that cannot be sold. The economic return takes care of overcrowding. But that is not true of the city. There it has been discovered that where a citizen has a little air and light and some trees and sunshine, somebody will find that two houses can be built where there was but one. Then it is found that four and six can be put there, and then when the ground has all been covered, we can go up in the air indefinitely. And the cost price rises as you go up. The lower floors cost more than the upper ones. Then elevators are provided, and then the city is asked to provide new sewers, new water mains, new streets, and on the people is placed the cost of new transit systems and their maintenance. That process goes on and on until it becomes an impossible situation in our business and commercial districts, and a still more impossible one in the residential centers to which the very low wage class are condemned. The value and use of land becomes a community problem, which is not true in the country, because there the immediate effect of wrong use is felt by the user himself. The intensive use of land in the

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city is a community problem because the reaction is against the whole community and not against the land owner. It is the duty of the community to interfere and say: "You may develop this land as far as is reasonable."

The Zoning laws are, I believe, the most advanced type of legislation we have by which to control the situation. They are working splendidly, and are accepted throughout the country enthusiastically as laws which say that you may only build stores in such and such areas, or to only such a height in others, or that land may only be devoted to certain uses in others. I think that that is as far as Mr. Bright, or the Committee on Community Planning, intended to bring the land question.

MR. BRIGHT: What I really did mean to say was that you cannot do anything at all towards curing congestion if you do not study the land question first. I am perfectly willing to take all the responsibility for that opinion which Mr. Gray chooses to put upon my shoulders. I am trying to devise some scheme by which congestion can be made a little more bearable while we are waiting for the final result. But unless we realize there is a cause—and I am convinced that the land question is a real cause—we cannot finally arrive at the ideal solution which I believe is typical of the architect's mind. And I accept that not as a reproach, but as an honor. I see no reason why we should not hold the standard as high as we can, and say that "This is the ideal thing."

MR. GRAY: What I intended to say was not that the land question as stated by Mr. Bright had nothing to do with the general problem of the development of cities, for it has,—as has the question of railroad rates, tariffs, and such things as those which have to do with the prices of materials. They are all inter-related. The point of view to which I wish to take exception is that nothing can be done until we get this question solved. That point of view is an exaggeration which is rather unfortunate.

MR. BORING (New York City): The Zoning Commission in New York was compelled to admit those preposterous heights of buildings because of the enormous value placed upon the land. That value existed solely because the possibility of getting income out of it had been exhausted (without preposterous heights); yet there was no limit; it was impossible to set a limit that would take away the earning capacity of the property. That is the whole story which means in Detroit maybe a 33 story building and these enormous buildings in New York City. It does not mean this in the smaller communities, which is why they must recognize that if this process goes on,—if buildings may go higher and higher,—if land may be covered more and more densely,—then they, in turn, will face the same problems that New York and Detroit are now facing. It is the obligation of the men at this Convention—of every Architect in his own community—to make clear those facts just as a physician is obligated to make clear those facts known to him as affecting the health of his community. Our obligation is just as great as the obligation of the physician."

MR. CORBETT (Brooklyn): A delegate said to me this morning, "I understand you are going to tell us how to plan high buildings. Now, that is not really necessary. We all know how to plan high buildings—I wish you would

tell us how to get high buildings to plan." I do not propose to tell you how to plan high buildings, and I do not see how I can tell you how to get high buildings to plan because all those I know about I am planning myself.

I was somewhat worried when I was given the title of this discussion, "Planning High Buildings for Narrow Streets," I was afraid it might be turned into a question—"What shall be done to the architect who plans high buildings on narrow streets?" I was afraid I might be sentenced to a life of hard labor in the lower story of one of those high buildings, where sunshine never by any chance penetrates and there is no such thing as natural light.

Architecture, we are told, is an expression always of the people of any given period. I sometimes wonder if our present New York architecture is an expression of the New York people. Certainly, as you come up the Bay, especially as you come in a steamer from the other side, and get your first view of New York, it is an impressive and imposing sight. I think that probably the American people are an impressive and imposing people. But as you get farther up the river and get a side view of New York, there seems to be a certain amount of jazz in the outline, and I am afraid that if you get a side view of the New York people you find the same amount of jazz. Perhaps the most characteristic feature of the American people is given in that old fashioned expression of "putting up a bold front." We, as architects, do a great deal of that. We put up bold fronts. We do not put up sides and backs and tops to go along with those bold fronts. A foreign architect whom I asked once to give me an opinion of his visit to New York as concisely as he could, said, "Streets without end. Fronts without sides. Signs. Pent-houses and tanks."

Now, carrying this idea further, of architecture as an expression of a people, I think that our present architecture is a very clear cut expression of our present democracy. It is a democracy in which there is so much freedom that every man is free to do exactly as he pleases, without the slightest regard to his neighbors; and the conditions under that form of democracy have been carried to such an extent in New York City that we have been obliged to create a law making it impossible for that kind of thing to continue.

But before discussing the new law in New York, and the changes it has brought about, I would like to call your attention to the law in the city of London, with which I have had some contact and conflict in the last few years. There the law was not brought about in such a systematic and thoroughly studied manner as the New York law. Queen Victoria happened to look out of her bedroom window one morning and across the trees of St. James Park she saw something, architecturally extremely ugly, rising above those trees. She made an investigation at once, called in her ministers, and had a law passed limiting all buildings in the future in London to eighty feet in height to the cornice line, with two stories and a roof, and a sort of mansard. The particular building which drew out this law still stands, with its excessive height of twelve stories. Just imagine—twelve entire stories! But it is exceedingly ugly, and even Queen Victoria, whose taste was not marvelous, found that it was impossible for her to stand it. This is the only example that I know where

humanity has directly benefited through a piece of perfectly ugly architecture.

The general principles on which the New York law is based are to stabilize and confirm property values, to relieve the rapidly increasing congestion in the streets and in the transit lines, and provide for a reasonable amount of light and air in the buildings and in the streets, and in general to make the business of the city more efficient and the life of the city more healthful, convenient and agreeable. This law has been in operation since July 27, 1915, and judging from what it proposes to do, I do not want you all to move to New York on the theory that the millenium has arrived, because while the law is in operation, it has not yet quite resulted in making the city very much more convenient, beautiful or agreeable, but it has done, or is doing rather, a very great work.

MR. CORBETT: The New York law on the height of buildings is related very closely to the zoning system which prescribes the use to which buildings may be put. The height law varies in different parts of the city, but the law, in principle, is simply this, that on any given street the building line on a principal front may go to a height which is factored on the width of the street. Then a line drawn from the middle of the street through the cornice line so established goes on indefinitely, and a building continuing above that height must remain back of that line. (Mr. Corbett also explained the regulations concerning dormers, which are rather intricate, and further alluded to the provision for towers of indefinite height, provided they do not cover over 25% of the lot.)

MR. GRAY: The increase in valuation of properties resulting from these protective measures is marked. Legally they are restrictions, but as a matter of fact, they are protective measures designed to prevent individual properties from being ruined by undesirable structures adjoining them. As they do increase land value and consequently taxes, a problem is presented. There are about 29 cities and towns in the United States which have zoning ordinances. It is desirable to proceed by getting a State Enabling Act. Where cities have the necessary power it may be done under police regulations. Zoning has been thoroughly sifted out in all the Courts so that there is no question of its legality; it involves no condemnation proceedings, and is a very simple matter to get established.

MR. FENNER: As a member of the Commission which studied the problem in New York for three years, leading up to the passage of the law, I would not like to have this meeting get the impression that the law and its results are ideal. The heights permitted are far too great to be ideal. We had to meet as well as possible a condition which existed. To smaller cities which now may be discussing zoning and height restrictions, I wish to say—do not permit your restrictions to allow what happened in New York before it passed its zoning law.

WALTER E. LENTZ: In connection with the Detroit Zoning Law we have been confronted with one condition. The center of our city has a great many tracts of land not built upon. In trying to get the owners of these particular lots to assist us in the zoning movement we found they were forced, in many cases to build 32 or 33 stories in order to get sufficient rental to make a building profitable. In

several cases such heights sacrificed so much space for elevators and exits that we lost more space than we gained. Thus an owner of one of these lots with a three or four story building, having a long life of usefulness, would be taxed \$30,000 a year from his income. To get that income he had to build 30 stories. In doing that he took away light and air from the adjoining building. Thus these owners of small lots with small buildings were very much against a zoning ordinance unless their taxes and land values were reduced. Will Mr. Corbett tell us how we can get an Enabling Act that would permit a reduction of taxes? In some places we are already in very bad shape.

MR. CORBETT: In my capacity as architect I have been asked by my clients a good many serious questions. I do not think I ever had one that quite stumped me like this. But it seems to me that under conditions of that kind, in zoning a city so that land values are raised and an extra height of building permitted, the situation might be treated by having the city relieve the owners from taxation in those particular sections. I do not see any other possibility.

MR. COOLIDGE (Boston): Mr. Fenner's statement that the New York law was not all they would like but was the best they could get, moves me to point out that one of the dangers in zoning legislation is that of overlooking the street capacity to which the legislation should apply. I feel pretty sure that in considering the limits of height for New York the danger of overtaxing the street capacity was a vital factor. In Boston where we have long had a limit of 125 feet or 2½ times the width of a street less than 50 feet wide, we are quite convinced that if our downtown sections today were solidly built up to the height limit, our street capacity would be entirely inadequate to take care of the traffic thereby created; and in other cities I have noticed that with the great increase in parking space required or desired for automobiles, the street capacity is actually less than it was when buildings were lower. Therefore, in dealing with the problem of zoning I think it is quite important to establish some ratio between the amount of occupation per acre for buildings, especially in the business section which is compatible with the area allowed for streets and sidewalks.

MR. LITCHFIELD (New York City): The Building Code Commission, in New York City, (antecedent to the zoning commission) set forth a principle which may be worth while stating. The Commission said that instead of setting a flat limit of height which was the advanced legislation suggested at that time, the proper procedure was to set a limit of volume, and really, that is the thing for all zoning commissions to bear in mind; they should determine the volume of the building that should go on a lot in any section. The Building Code Commission stated, for example, that there should be no building in certain sections of New York the volume of which should exceed 174 times the area of the lot. There is no objection to height of buildings *per se*. The objection to the high building has been that it has robbed the light from the street and from its neighbors and has overtaxed the transportation and sewer facilities of the street. If the principle be borne in mind that one factor is appropriate for one section and another factor for another section, it will be more practicable to work out an ideal law.

The Literature of Architecture¹

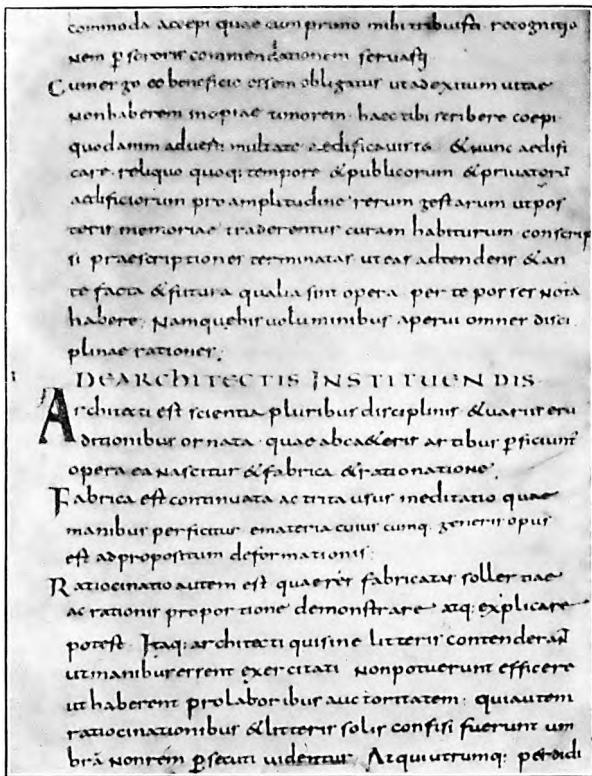
By RUDOLF DIRCKS

IN TAKING a general survey of architectural literature, we find that the earliest and most important books were published in Italy, that France some years later caught the impetus of the Italian Renaissance, and that England, although it had an idiosyncratic literature, provided, for the most part, until the eighteenth century only a faint echo of the publications of Italy and France. It was not indeed until the appearance of the publications of the Society of Dilettanti that it assumed more than an insular importance, a position which it has since maintained. The most important authors on architecture, in the early days and since, were the most important architects. Architectural biography, I think, provides scarcely an instance in which the chief Italian architects of the Renaissance did not write on architecture or seek some form of literary expression, although their works may not always have been printed or may have been lost. Brunelleschi (said to be the earliest authority on the science of perspective) and Bramante are cases in point. There are bibliographical gaps in the Institute Library as in all libraries, some serious, which it is hoped may be filled in time; but, taking the Library as a whole, its contents usually correspond adequately to the bibliographical lists published in the various histories of architecture.

The ten books of Vitruvius gave the first impetus to modern architectural literature, even before their appearance in printed form. He, as a writer, suggested an attitude and outlook towards the art of architecture that influenced all the early writers, Italian, French and English. The Library possesses one of the most complete collections in existence of the various editions of Vitruvius. The first edition was published in Rome in 1486, about forty years after the invention of printing in movable type, and the rapidity with which it was followed by later editions indicates not only the popularity of the author but the universal interest that was taken in architecture. Ten years later the work was reprinted in Florence, followed by editions in 1513 and 1522. In 1511 the Giocondo edition, the first to contain illustrations, was published in Venice and further

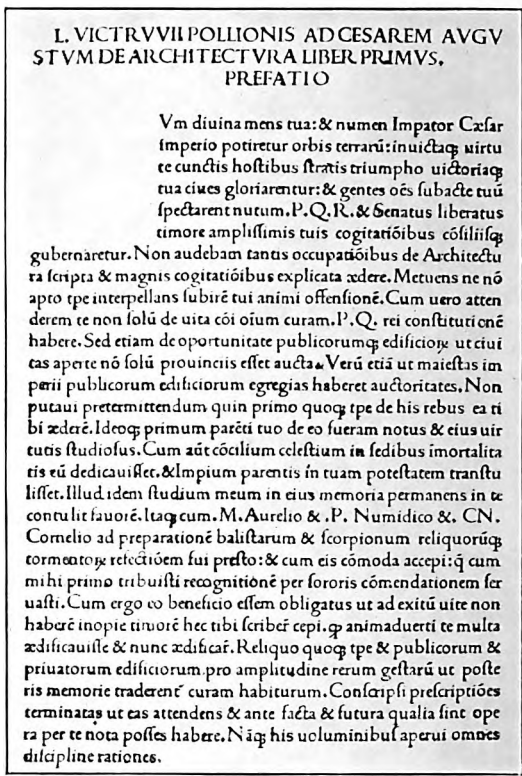
editions were published at Strasbourg, Lyons and in Paris before the middle of the sixteenth century. These editions were in Latin. The first Italian translation by Cesare Cesariano was published at Como in 1521, and again at Venice in 1524 and 1535, and again at Perugia in 1536. The first German translation appeared at Nuremberg in 1548, the first Spanish edition was published at Alcalá in 1582, the first French translation by Jean Martin in Paris in 1547, and the first English translation, by William Newton, in London in 1771 and 1791, in two parts. An earlier abridged translation by Joseph Moxon, from the famous French edition of Perrault, was published in 1692 and ran through various editions, but was very inadequate. Numerous later English translations have appeared since Newton's time, the most familiar to students being Gwilt's, published in 1826. The Institute collection contains copies of all the first editions that I have mentioned, with many of them in their original bindings. There have been many charges of forgeries in literature, some of which have been justified (Alberti himself provided an amusing example as a young man in a fable entitled "Philodoxios," which he attributed to Lepidus, a comic Latin poet), and the *Libri decem* have not escaped the charge, although it has never, I think, been made by architects. The discussion first begun in 1829, in a correspondence between a German philologist, named Schultz, and Goethe. The Institute published in 1896 a translation of a treatise, without undertaking any responsibility for the opinions of its author, Professor Ussing, of Copenhagen, who assumes *De architectura libri decem* to have been the work of an unscrupulous impostor and literary hack of the tenth century. In 1902, however, M. Victor Mortet contributed to the *Revue Archéologique* a Paper entitled *Recherches critiques sur Vitruve et son Œuvre*, in which he takes the other side. Professor Aitchison once stated that Vitruvius was the handbook of the Middle Ages. In the British Museum there are six manuscript copies of Vitruvius, belonging to the ninth century and later, and there are two others in England, one in the Bodleian and the other in the Library of St. John's College at Oxford. Although it is a little apart from my paper, I cannot refrain from reproducing an interesting page from the ninth century manuscript. I also give an additional illustration of the binding of the first German edition, printed at Nuremberg in 1548, in untouched vellum on wood boards, with original thong and brass clasps and laced thong head bands.

¹The subject matter of this article is the collection in the Library of the Royal Institute of British Architects, before which body Mr. Dircks, its librarian, presented the original paper. The Library in question consists of some 19,000 volumes, over 3,000 pamphlets, a few original manuscripts, and many thousands of drawings, engravings and photographs. References to the "Library" are of course to that of the R. I. B. A.



A PAGE (REDUCED) FROM IXTH CENTURY MANUSCRIPT OF VITRUVIUS. (British Museum.—Harleian MS. No. 2767.)

Vitruvius in the first of his ten books draws up the qualifications essential to a good architect, which must seem ideally unattainable to any modern architectural student. If, indeed, the universal qualities which Vitruvius demands have been possessed by any man they were possessed by Leone Battista Alberti, one of the choicest spirits produced by the humanist movement in Italy, and one of the earliest architects of the Italian Renaissance. Alberti's ordered life was a romance of learning and artistic creation. He wrote as a specialist in many subjects, but only two of his smaller works were published during his lifetime. His most important work, and the most interesting to architects, is his *Opus proestantissimum de Re Aedificatoria*, in ten books, published in Florence a year earlier (1485) than Vitruvius's work was published in Rome. The copy of this edition in the Institute Library is supposed to have formed part of the library of Lord Burlington, and was later in the library of the Duke of Devonshire. A Latin edition was published in Paris in 1512 (the Institute copy was presented by M. Charles Texier), and a French translation by Jean Martin was also published in Paris in 1553, under the title *L'art de bien bastir*. A modern author suggested a few years ago that if this translation had not been published the archi-



REDUCED FACSIMILE OF THE FIRST PAGE OF THE "EDITIO PRINCEPS" (1486) OF VITRUVIUS, with the initial letter omitted. (R.I.B.A. Collection.)

tectonic revolution in France might not have occurred—a somewhat high-flown suggestion. Italian translations were published in Florence in 1550 and 1565, by C. Bartoli. There is here illustrated an engraving of Alberti from this edition (see page 205)—and it was from this translation that Leoni provided the English version, published in 1726, in three volumes, with Italian and English text in parallel columns. The Library possesses copies of these editions as well as others that were published in Venice and Bologna. According to a French student of Alberti's work, M. Poppelin, it is doubtful whether Alberti intended publishing explanatory plates in his book on architecture, a gap that was filled by Bartoli in his Italian translation. Alberti's literary activity extended beyond science and art to philosophy and the arts of poetry and sentiment. An interesting example of his lighter mood in literature is to be discovered in *Hecatomphila*, a duodecimo published in 1534, in italicised type, with no place or printer's name (but probably from the Venetian press), in which Alberti discourses as an expert on the art of love. A reproduction (reduced) of the title-page is given on page 205. This little book is written in the form of a prologue to a play and ends as the play is supposed to begin.

Alberti was the first of a line of distinguished

THE LITERATURE OF ARCHITECTURE

Italian architects who wrote upon architecture, the most celebrated being Sebastiano Serlio, Barozzi da Vignola, Vincenzo Scamozzi and Andrea Palladio, whose works, both in architecture and literature, had a dominating influence on European architecture and upon architectural theory. The works of these Italian authors as well as many others of lesser prominence are adequately represented in the Institute Library. Serlio, who was born at Bologna in 1475, just before the death of Alberti, has an especial interest for English students, as a translation out of Italian into Dutch and out of Dutch into English (in the latter respect like Miles Coverdale's Bible), by Robert Peake, was published in London in 1611 and was the earliest connected work on architecture which appeared in the English language. Peake's translation was dedicated to "the High and Mighty Prince Henry, Prince of Wales," and is, I believe, the only English translation of Serlio. The Institute Library possesses one complete copy of this work and a second copy with the first book omitted. So far as the Italian editions are concerned, the Library is indebted to Mr. Max Clarke for the very rare volume on the Five Orders, *Regole Generali di Architettura sopra le cinque maniere degli edifici*, published in Venice by Francesco Marcolini Da Forli, in 1537, which, so far as is known, was the first book published by Serlio. The Library also possesses Venetian editions of his completed work of 1551, 1566, 1584 (7 books), 1619 (the 7 books), 1663 (5 books). The last edition contains a copy of Serlio's portrait.

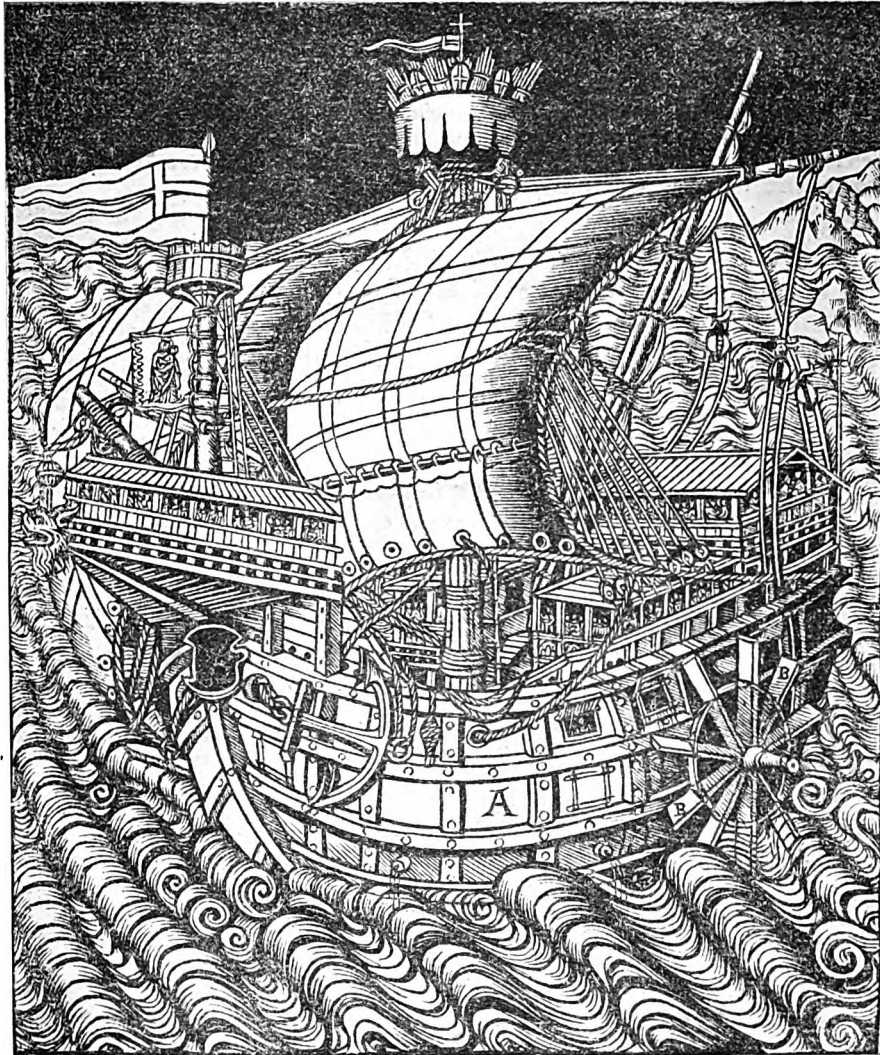
On the ground of association, the Institute Library is probably happiest in the possession of the quarto edition of 1619, which contains a note in the handwriting of Sir James Thornhill (the painter associated with the decoration of St. Paul's Cathedral and Greenwich Hospital) as follows: "This was Inigo Jones's Book, afterwards Mr. Webb's [name rather blotted], then Mr. Churchill's, then Sir J. Thornhill's." The Mr. Webb was no doubt John Webb, Inigo Jones's relative or son-in-law; there was a Mr. Churchill, I believe, associated with Wren at Greenwich Hospital. In other handwriting there is the signature of Rd. Williamson, and again, underneath, "This book is the property of P. Nicholson 1813," who was no doubt the compiler of the *Dictionary of Architecture* and the prolific author of other works connected with building at the end of the eighteenth and beginning of the nineteenth centuries. The second and last time that Jones visited Italy was between the years 1613-1614, so that, as this copy of Serlio was not printed until 1619, it must have come into his hands after his return. The book contains numerous marginal notes (unfortunately too closely shaved by some careless binder), but I am unable to identify the careful handwriting with Inigo



ORIGINAL BINDING OF FIRST GERMAN EDITION OF VITRUVIUS. (Nuremberg, 1548.) R.I.B.A. Collection.

Jones's more impulsive penmanship: it possesses more, perhaps, the character of John Webb's.

Serlio was well known in France, where he died, both as an architect and author, but it was an Italian architect, Barozzi da Vignola, born some thirty years later, whose book, *Regola delli cinque ordini d'Architettura*, became the standard text book of French students and architects. His other book was *Le due Regole della prospettiva pratica*. His works are represented in the Library by various Italian editions which contain the additional plates of doorways by Michel Angelo. Bound with the Roman edition of 1617 with the engravings by Francesco Villamena is the *Libro d'Antonio Labacco appartenente a l'architettura nel qual si figurano alcune notabili Antiquita di Roma*, containing 36 plates, including title page and a page of text. Labacco, who was a pupil of San Gallo, lived in Rome for forty years, and these plates are from the third edition of a work published in 1557. We have also various French editions of Vignola, including that of D'Aviler, who accompanied Desgodetz to Rome in 1614 and was with him captured by Algerian pirates on the way. Two English editions appeared within a few years of each other. The first was by John Leeke, "Hydrographer to the King's Most Excellent Majesty," who printed and sold mathematical instruments and maps at the Signe of the Atlas, in Russell Street. "The dark and im-



FROM A WOODCUT IN THE CESARIANO VITRUVIUS (COMO, 1521.)
Showing a device for measuring distances traveled by sea. (R.I.B.A. Collection.)

proper directions" which Joseph Moxon found in Leeké's work induced him to undertake a fresh, and certainly a more idiomatic and lucid, translation, which was published in small octavo in 1655 with the title *Vignola or the Compleat Architect*, and ran through numerous editions. Joseph Moxon also published in 1670 a work on perspective, stating that he was induced to do so because the translation of Serlio, published in 1611, contained the only information in English on the subject. Moxon's work is also valuable on account of the engravings by William Faithorne, the elder (1616-1691), which are now rare. It is a little curious that Moxon, who was familiar with Vignola's writings, does not refer to his treatise on the same subject which was published in Rome in 1583.

As we have seen, the writings of Serlio and Vignola were not unknown to English readers in the seven-

teenth century, but it was a famous contemporary of Vignola, Palladio, whose influence, largely due to the enthusiasm of Lord Burlington, became the most authoritative in this country. The Library has the first edition of Palladio's *Quattro Libri dell' Architettura*, published ten years before his death in Venice, 1570, which contains the autograph of Lord Burlington on the title page, and no doubt formed part of his library. The Library also possesses a reprint of this work published at Venice in 1601, and also the 1616 edition. Palladio published two other books, *L'Antichità di Roma*, in Venice, 1534, of which we have the edition in Latin and Italian, with notes by C. Fairfax, published at Oxford in 1709, and the *Commentari di C. Giulio Cesare con le figure in rame degli alloggiamenti, de' fatti d'arme, etc.*, 4 to., Rome, 1618, the second edition, with illustrations showing the disposition of armed forces. Numerous trans-



LEONE BATTISTA ALBERTI.
(R.I.B.A. Collection.)

lations of Palladio's four books began to appear in the seventeenth century. The earliest, and then only the first book, which ran through at least twelve editions, was made by Richards, and published in 1633. The 7th edition, which is the earliest in the Library, was printed for H. Tracy at the Three Bibles, on London Bridge (1708), and contains an illustration of "the new model of St. Paul's in London, as it is to be built," and subsequent editions contain illustrations of the Cathedral "as it is now rebuilt." Leoni, the protégé of Lord Burlington, Isaac Ware, and Edward Hoppus were later responsible for translations. Leoni's handsome edition was published in 1715 in English, French and Italian, with copper plates engraved by Bernard Picart, a well-known French engraver who had settled at Amsterdam. There is a well-known copy of Palladio in Worcester College Library, Oxford, containing marginal notes by Inigo Jones. Leoni copied these notes, which he intended to incorporate in the first edition of his translation, but they did not appear until the third edition in 1742. Palladio, like his predecessors, Alberti, Serlio and Vignola, visited Rome—the quarry of all the great architects of the Renaissance—where he measured and drew the famous buildings of antiquity, the Roman Baths. These drawings after his death remained buried and forgotten in a house at Masera, near Asolo, which he designed for Monsignore Daniello Barbaro, where Lord Burlington discovered them.

Lord Burlington published in London, in 1730, for private circulation, a selection from the drawings of the Baths, with the Italian title, *Fabbriche Antiche disegnate da Andrea Palladio e date in luce da R. Conte di Burlington*, containing sixteen double and eight single plates, a rare volume, of which the Library possesses a copy. In his introduction to the

volume Lord Burlington foreshadows the publication of a further volume of Palladio's drawings, an intention which, however, was never carried into effect. Ottavio Bertotti Scamozzi published in Vicenza, in 1785, a book on the Baths of Rome, largely founded on Lord Burlington's publication. Charles Cameron, who "measured many of the buildings on the spot," republished the drawings again, with many additions, in 1772, second edition 1775, which we have. Scamozzi in 1776-83 published at Vicenza four folio volumes dealing with Palladio's own buildings, and a second edition was published in French in 1786, and a second Italian edition in 1796; both the latter copies are in the Library. Palladian bibliography is extensive, and forms one of the most important chapters in histories dealing with the Italian Renaissance and later architecture.

The fourth great protagonist of the Italian Renaissance and authority on the orders and principles of architecture, Vincenzo Scamozzi, published two books, the first at Venice in 1583, *Discorsi sopra l'Antichità di Roma*, with forty copperplate engravings by Battista Pittoni, a brother Vicentino; the second, *Dell' idea della Architettura universale*, published thirty-two years later (fo. Venice, 1615), is a voluminous work, containing, in two volumes, 722 pages, without including the pages of a copious and



TITLE-PAGE OF ALBERTI'S "HECATOMPHILA" (1534 Edition) (R.I.B.A. Collection.)



FIRST EDITION OF PALLADIO'S "I QUATTRO LIBRI DELL'ARCHITETTURA," WITH LORD BURLINGTON'S SIGNATURE. (R.I.B.A. Collection.)

useful index. The first editions of both these works are on the Library shelves. As in the case of his predecessors, translations of his works appeared in other countries, although not very speedily. A much abridged English translation, made from the Dutch, was published in London in 1669 under the title of *The Mirrour of Architecture or the Ground-Rules of the Art of Building exactly laid down by Vincent Scamozzi Mr. Builder of Venice*; an abridged translation also appeared at Nuremberg in 1678. D'Aviler was responsible for a French translation published in 1685.

The works of other Italian writers during the Renaissance are represented in the Institute collection, but with Scamozzi we come to the end of a definite period. We have later the cosmopolitan architects of the members of the Galli Bibiena family, who built theatres, devised stage scenery, and organised the festivals for court celebrations, chiefly in Austria, and wrote books. The authorship of the books of the various members of the family (there were five altogether) presents something of the same bibliographical difficulty as the earlier family of the Du

Cerceau, in France; it is, at any rate, a little confusing. In the Drummond Stewart collection of drawings we possess original examples of the brilliant draughtsmanship of two members of this family—Ferdinand and his son, Guiseppe.

With the works of Piranesi we arrive at a culminating point of architectural draughtsmanship. The seventeen volumes possessed by the Institute, including the famous *Carceri* volume, form a fairly complete set of his engravings, and are stated by Mr. A. M. Hind, the authority on the various states of the plates, to form a good set. Piranesi, although he never visited England, was, as we know, intimately associated with Robert Adam (to whom he dedicated the 1762 edition of his *Campo Marzio dell'Antica Roma*) and a friend of George Dance, Robert Mylne, and other English and Scottish architects of the eighteenth century, who, no doubt, influenced by the Early Italians, sought and found in Rome the foundation of their architectural education and inspiration. The Institute possesses an interesting testimony to the close and friendly relations existing between Piranesi and Robert Adam and Robert Mylne—directly, in a letter from Piranesi to Robert Mylne, and indirectly in a business letter from Robert Adam to his bankers and agents, James and Clerk, of London. Piranesi's letter, consisting of three closely written folio pages, is far the more interesting and was written on the 11th November 1760, when his *Della Magnificenza ed Architettura de Romani* was on the point of publication, but was being delayed by the Pope—to whom the book was dedicated—"from whose sovereign beneficence," he states in the letter, "I have received a present of 1,000 Roman scudi." In the letter, which touches more matters of interest than I can possibly refer to, Piranesi deplores the inaccuracy of Desgodetz; he informs Mylne "that the statues and marble reliefs are being executed at the Trevi Fountain, and that the monks of S. Croce have caused the Amphitheatrum Castrense to be excavated in order to render the site better suited for agriculture." It is generally known that Piranesi engraved some plates for the *Works in Architecture* by Robert and James Adam (four plates of sections and details of Sion House in part iv. of the second volume), "the largest," according to the authors, "he has ever attempted in regular architecture;" but it is not so well known that he engraved for Robert Mylne a view of two arches of Blackfriars Bridge (now replaced), which was published in 1766, and of which two copies are preserved in the Institute collection.

While I am speaking of Italian authors I should like to refer to the original drawings of Italian architecture (but not by an Italian) a recent gift, for which the Institute is indebted to Mr. St. Clair

THE LITERATURE OF ARCHITECTURE

Baddeley. When Peter Paul Rubens visited Italy between the years 1600 and 1608 he, according to his biographer, Dr. Waagen, remained longer at Genoa than any other part of Italy, and "as an occupation of secondary importance he took sketches of the most interesting palaces which were afterwards published (Antwerp 1613-1622) in two folio volumes of engravings, *Palazzi di Genova*." Mr. Baddeley's present comprises 120 of the 139 original drawings made for the book supplemented by sixteen copperplate engravings of the drawings which are missing, all bound together in one folio volume. The title-page of the published work states that the drawings were "*raccolti e designati da P.P.R.*," and in the preface Rubens says, "In this little work I give the plans, elevations and façades and two sections of certain palaces which I collected at Genoa, not without trouble and expense, although I had the good fortune to be able to avail myself to some extent of the work of another." The engravings are ascribed to Nicholas Ryckmans, the Flemish engraver, whose signature is on the first plate; but the ascription of the authorship of the drawings to

Rubens himself is problematical, although notes on many of the drawings bear a close resemblance to his handwriting. Although Rubens was accused by later authorities of inaccuracy, and was inaccurate, in these drawings, this does not diminish interest in the collection or the pleasure in its possession.

Since the beginning of the nineteenth century the volume of literature on the architecture of the Italian Renaissance has been considerable and is well known to all students. During the last thirty or forty years photography has replaced engraving, with which art the literature of architecture had been so closely associated since the invention of printing. If this and "process-block" substitution have increased the illustrative value of books it has certainly lessened their artistic interest.

Before dealing more generally with the early French books in the Library, I should like to refer for a moment to the sketch book of Villard de Honnecourt, of which a facsimile copy was published in Paris in 1858, under the direction of MM. Lassus and Darcel. The original, formerly in the Abbey of Saint-Germain-des-Près. is now in the Bibliothèque



PORTION OF A DRAWING OF THE OLYMPIC THEATRE, VICENZA.
Palladio Series, Burlington-Devonshire Collection. (R.I.B.A. Collection.)

Nationale. Although the volume is confined to sketches with marginal notes, it is, as a whole, a document of a most personal and intimate kind and throws considerable light on the manner of life and thought of a Gothic architect of the early part of the thirteenth century. The author was born at Honnecourt, on the Scheldt, near Cambrai. He was probably the architect of the choir of Cambrai Cathedral, now destroyed. He visited Laon, Chartres, Lausanne and Rheims (the last named during the building of the cathedral). He then visited Hungary, in the capacity, it is supposed, of a master mason. He worked in collaboration with Pierre de Corbie, a mediæval architect, whose name has not been lost. His sketches show his skill as an artist, and indicate a variety of interest that recalls Leonardo da Vinci, but invested with Gothic spirit and feeling. The second page of the sketch book contains the following dedication:

"Villard de Honnecourt salutes you, and prays all those who work in the various kind of work contained in this book to pray for his soul, and to remember him; for in this book one may find great assistance in learning the principles of masonry and construction in carpentry. You will also find in it the method of drawing the figure as geometry commends and enjoins." It is perhaps a far cry from Villard de Honnecourt to Wm. Burges; but the Institute possesses a sketch book of Wm. Burges in which the drawings, also made on vellum, suggest the influence both in form and matter of the earlier book with which Burges was quite familiar.

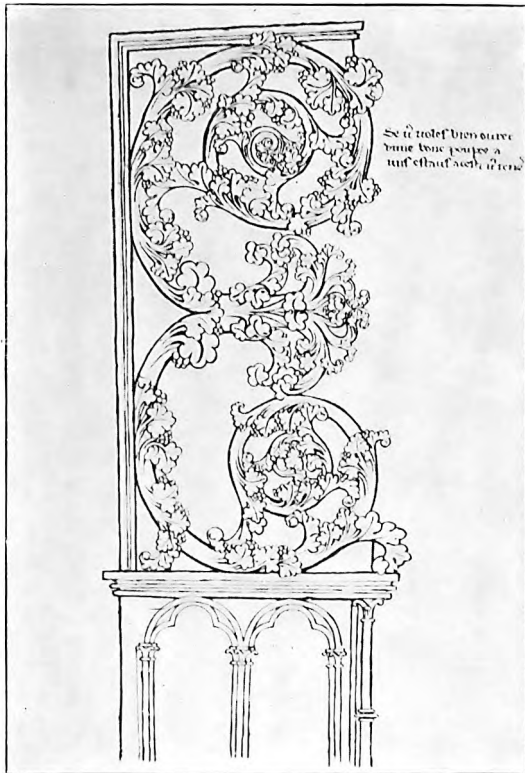
Architectural literature, after the invention of printing, followed pretty much the same course in France as it did in Italy, but not until some half a century later. Philibert de l'Orme's *Nouvelles Inventions pour bien bastir, et à petits Fraiz*, was published in 1561, and Jean Bullant's *Reigles generale d'architecture des cinq manieres de colonnes* was published three years later. It may, however, be taken for granted that the works of Vitruvius, Alberti and the Italian writers of the early days of the Renaissance, were well known to French students. The Library contains an extensive collection of the French authors from the time of De l'Orme to the present day. The works of Jean Bullant, one of the earliest architects of the French Renaissance, are not, however, represented in the collection. Perhaps my mentioning the omission may induce some lucky possessor of his book on the Five Orders to despoil himself in the interests of a larger public. I regret also that we have only in facsimile the complete edition of the books of Jacques François Blondel, although we have an imperfect copy of the original edition. Three great contemporaries, Bullant, De l'Orme and J. A. Du Cerceau, are identified with the early architectural literature of France. In

France, although in the following century, De l'Orme occupied pretty much the same position as Alberti in Italy. Both men were possessed by a vast intellectual energy and capacity for hard work; but De l'Orme had not Alberti's abundant versatility. He was the author of two books; and in something of the same manner in which Voltaire referred to Shakespeare, at a later time, he gave credit to himself for having introduced into France a better method of construction than the barbarous Gothic—*telle façon barbare*. He states in an epistle to the readers in his *Nouvelles Inventions pour bien bastir* that he began, at the age of fifteen, what we would now call the practice of architecture—*les œuvres que j'ay commandé et ordonné faire depuis l'age de quinze ans*, and that he had visited various countries. It appears that in his young manhood he spent four years in Rome. The book contains a dedication to Charles IX. and is a specimen of the flamboyant dedications in which authors indulged until the eighteenth century. In this dedication he supplicates the Omnipotent "to endow the monarch with the wisdom of Solomon, the magnanimity of Charlemagne, the dexterity of Cæsar, the strength of Samson, the knowledge of Plato, the eloquence of Cicero, the prudence of Aaron, the constancy of Socrates, and the happiness of Augustus." There are numerous plates in the book illustrating his discoveries in the science of construction. De l'Orme's second work was *Le premier Tome de l'Architecture*, published in 1567, consisting of nine books, amply illustrated with wood-cuts. The Institute copy bears the date of a year later. In Worcester College Library there is a copy of this edition containing the autograph of Inigo Jones. We have also the 1648 edition of his complete works, published at Rouen, which contains a portrait of the author.

Just as De l'Orme devoted himself largely to the exposition of architectural construction and the practical side of building, his contemporary, Jacques Androuet du Cerceau, the most famous member of a distinguished family of artists, devoted himself more to the study of design and to illustration. There is some conflict of opinion as to whether Du Cerceau was an architect, whether, indeed, he was more than a draughtsman and an illustrator of architecture. De Geymüller and Sir Reginald Blomfield are exponents of the opposing views. The same uncertainty seems to exist in regard to his visit to Rome, although it is generally presumed that he was there about the same time as De l'Orme—that is, somewhere between the years 1531 and 1534; but whether Du Cerceau was an architect or not scarcely, if at all, diminishes his value to the student. His great qualifications as an architectural draughtsman and engraver are expressed in *Des plus excellents bastiments de France* which provides an invaluable record of contemporary

Ilmo Sig. lo Sig. lo D. n. C. n. O. n. o.

La riveritissima lettera di V. S. M. in data del 7. dello scorso Settembre
mi ricorre non solo, ch' Ella non si è punto dimenticata della nostra scambievolmente amicizia, ma
che quest'ardore per esser eterna, imperocchè in questi tempi, ne quali l'abulazione sostiene le
vie della cordialità, ho da V. S. una riprova confermata della sua propensione verso di me.
Non è poca cosa, a vero dire, ch' Ella di suo proprio moto, e da un paese così lontano, che è in
sua, se a potermene più il rivederai, m'abbia primieramente fatto sapere per altri miei
La notizia di sua salute, e della memoria, ch' Ella di me conserva; e che potrei, alla
vista d'una mia lettera, abbia aggiunto una risposta così compita. Ella si lamenta,
che le prove della sua amicizia consistono in parte dell'istituto di fatti; ma le parole
hanno fatto il peso per altro, quando Ella, per aver de fatti a suo favore, è qui
per così dire, a mendicare le occasioni. Voglio inferire, che V. S. si è studiato
verrà il minimo impulso, che Milord Morton, Sugg. Mo. eruditissimo, com' Ella dice,
abbia, per mezzo d'un superiore Inglese, chiamato il Sig. Falbott, di lei amico
mandato ordine a Roma di comprare un corpo di 1000 le mie opere. Questo è
molto; e spiacemi sommamente di doverle dire, che il Sig. Falbott è
futuro a Napoli, e proprio da gravissimi malanni, che comunemente si dice, che



CARVING OF A CHURCH STALL FROM VILLARD DE HONNECOURT, from Lassus and Darcel. (R.I.B.A. Collection.)

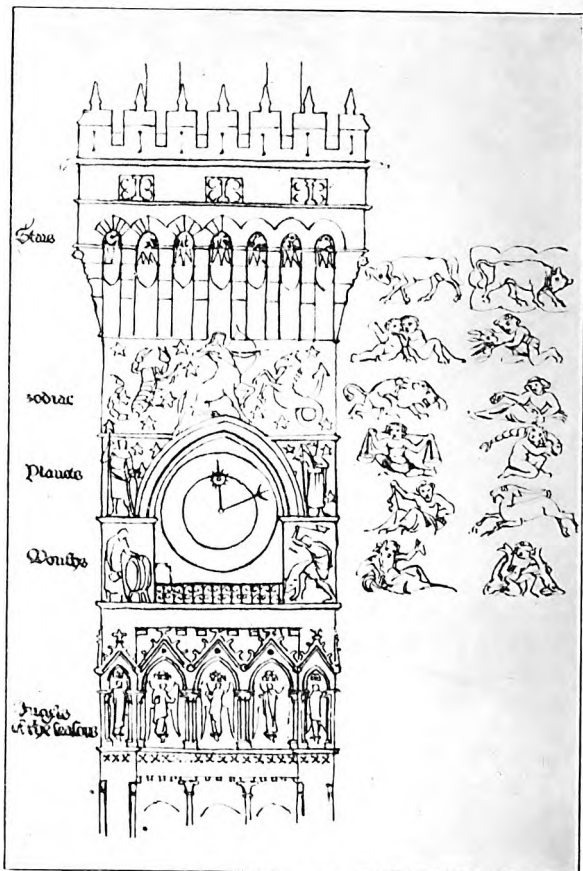
building of the sixteenth century. This work was published in two volumes, of which the Library possesses the first edition of the first volume, published in 1576, bound together with the 1607 edition of the second volume (originally published in 1579), as well as the 1611 and 1615 editions of his *Livre d'Architecture*, and the first edition of his *Livre des Edifices Antiques des Romains*, published in 1584. Mr. W. H. Ward, the author of *Architecture of the Renaissance in France*, published a few years ago reproductions in photogravure of a series of Du Cerceau's drawings which are preserved in the British Museum.

Apart from the gaps I have mentioned, the Institute collection of French works is representative and generally complete. It includes the first edition (1623) of Pierre Le Muet's *Manière de bien bastir pour toutes sortes de personnes*, of which an English translation was published in 1670 under the title of *The Art of Fair Building*; Mathurin Jousse's *Le Secret d'Architecture* (1642) and Perrault's *Ordonnance des cinq Espèces de colonnes selon la methode des Anciens* (1683 edition). The last work, which was translated into English by John James of Greenwich (the architect of St. George's, Hanover Square) in 1707, contains the charming vignettes by John Sturt. Perrault's greatest literary achievement was,



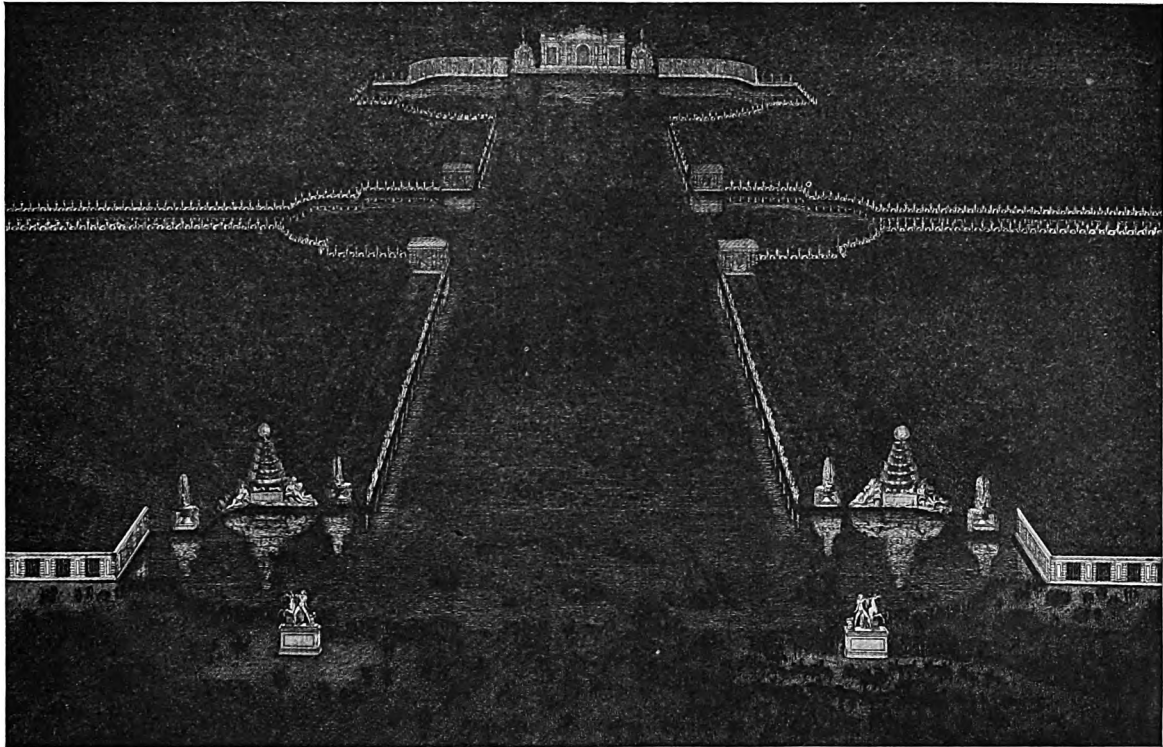
PHILIBERT DE L'ORME. (R.I.B.A. Collection.)

perhaps, his translation of Vitruvius, with a scholarly commentary, published in 1673. The first and three later editions are in the Library.



A SKETCH FROM WM. BURGESS' SKETCH BOOK, showing a design for the Tower of the New Law Courts. (R.I.B.A. Collection.)

THE LITERATURE OF ARCHITECTURE

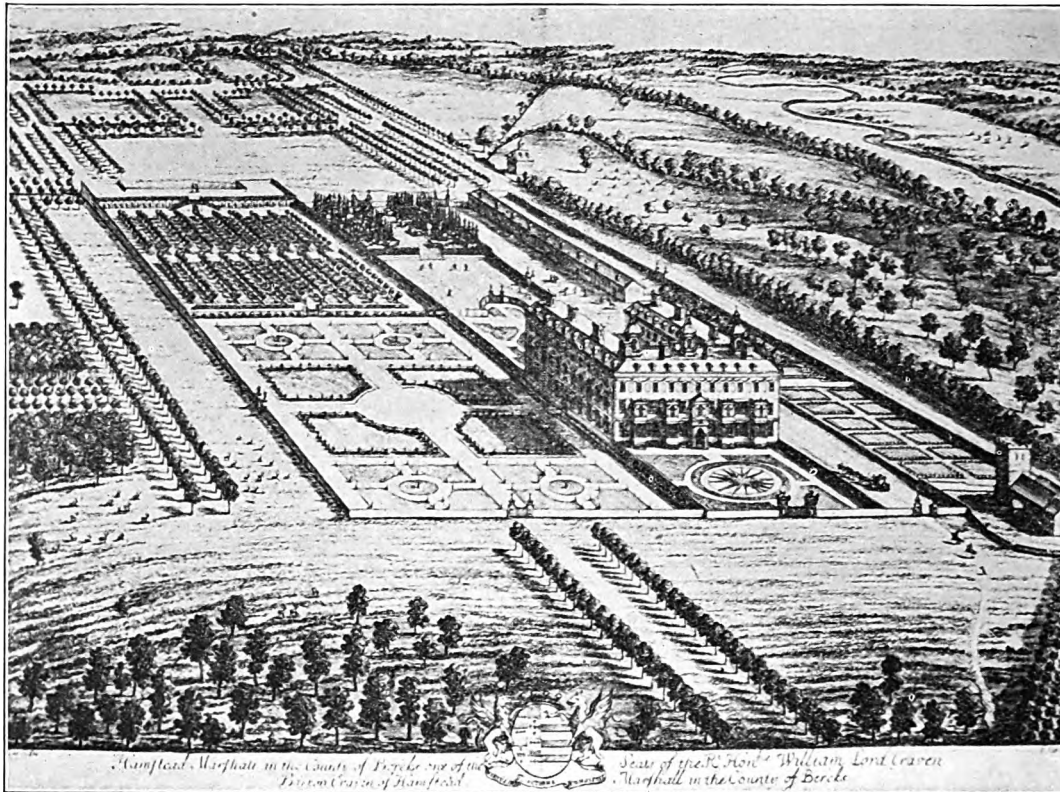


ILLUMINATED DISPLAY AT VERSAILLES, May 12, 1664, by J. Le Pautre. From the *Cabinet du Roi* Series. (R.I.B.A. Collection.)

The engravings of Jean Marot and his son Daniel have become very rare, and the order and time of their publication, even with Destailleur to consult, is a difficult matter to disentangle. The Institute possesses two copies of the edition known as "Le Grand Marot,"—one forming part of the Fergusson bequest, and the other bought at the sale of Lord Bessborough's collection in 1884, but neither copy with a title page. The Bessborough copy contains 220 plates and the Fergusson copy 156 plates. The Institute copy of "Le Petit Marot," *Recueil des Plans Profils et Elevations des plusieurs Palais, Chateaux, Eglises, Sepultures grottes et Hostels bâtis en Paris et aux environs avec beaucoup de magnificence par les meilleurs architectes du Royaume*, a small quarto volume, is probably the 1670 edition of this rare work, containing 122 plates without the title page. Daniel Marot, who collaborated with his father and Jean Le Pautre in the production of engravings, was obliged to leave France owing to the religious persecutions which followed the Edict of Nantes (22nd October 1685), and settled in Holland, where he carried on his work as a decorator and architect. He accompanied William of Orange to England in 1688 and bore the title of *Architecte du Roi*. A reminiscence of his visit to England is to be found in his *Œuvres du sieur D. Marot, contenant plusieurs Pensées utiles aux Architectes, Peintres,*

Sculpteurs, Orfevres, Jardiniers et autres (fo. Amsterdam, 1712) (of which we only possess a reproduction published at Berlin in 1892), which contains the plan of a garden bearing the inscription *Parterre d'Ampton Court*; but, I believe, there is no record to indicate that Marot was associated with the planning of the garden at Hampton Court. The book also contains designs for a royal carriage for the King of England made at The Hague in 1698, not unlike the ornate equipage which is still used by the present King and Queen on State occasions. Whatever may be the prevailing opinion of the taste of the style Louis XIV, Destailleur regards Daniel Marot as one of its most typical exponents. His versatility in the invention of ornate design was certainly remarkable.

The works of the two brothers Jean and Antoine Le Pautre are represented in the Library—the first, the celebrated draughtsman and engraver, the second, "*Architecte du Roi*," his slightly younger brother. The Institute does not, unfortunately, possess a copy of the published volume of this most notable artist and designer of the Louis XIV period. The selection of his work, published by Decloux and Doury in 1850, *Collection des plus Belles Compositions*, by Jean Le Pautre, is not very satisfactory. His engravings are, however, to be found in numerous other works. We find them in Desgodetz's *Les*



ENGRAVING OF LORD CRAVEN'S HOUSE AT HAMPSTEAD MARSHALL, BERKSHIRE, designed by Sir Balthazar Gerbier, from Knyff & Kips' "Nouveau Theatre de la Grande Bretagne," 1708. (R.I.B.A. Collection.)

Edifices Antiques de Rome (fo. Paris 1682), and in the remarkable series of engravings known as the *Cabinet du Roi* collection. Le Pautre's versatility in design was so admired that French architects, towards the end of the eighteenth century, recommended the study of his work to their pupils *afin de réchauffer l'imagination*, and probably do so today. The Institute's fine collection of the *Cabinet du Roi* series of engravings, contained in twenty-two large folio volumes, is one of its most valuable possessions, and marks a brilliant epoch in the history of the art of French engraving. This splendid series of engravings originated in the King's desire to present to his brother monarchs and other distinguished persons a record of his achievements, and those of his predecessors, as a collector of works of art, as a builder, as a conqueror in battle as well as of the great ceremonial occasions at Versailles and elsewhere. It is especially interesting to architects on account of the engravings of the buildings of Versailles, and other royal buildings, by Le Pautre, Israel de Silvestre, J. Marot and other great engravers of the time. The engravings are interesting as a record of the art of engraving at one of its greatest periods by its most eminent exponents including, besides those I have named, the work of Gérard Audran, Edelinck, Baudouins and others.

As we have seen, most of the architects, both Italian and French, of the Renaissance visited Rome and made drawings from the ancient buildings; but it is to Antoine Desgodetz that the credit of the publication of the most detailed scale drawings of ancient Rome is due. In his *Les Edifices Antiques de Rome*, published in Paris in 1682 (when the author was only twenty-nine), inaccurate as Piranesi's and later observations proved many of the drawings to be, we have the precursor of the great architectural literature on classic architecture which in the following century began to appear in England. The Library copy of the first edition of Desgodetz's book came originally from the library of James Stuart ("Athenian Stuart") and contains marginal notes and emendations in French in his handwriting. The Library also contains a folio volume in manuscript, consisting of 313 pages, entitled *Cours de Architecture, dicté par M. Desgodetz, Architecte du Roi*, being no doubt the lectures which he delivered as Professor of the French Royal Academy of Architecture, a position which he occupied from 1719 to 1728. The manuscript was presented to Professor Donaldson in 1842 by M. Guenepin, a French architect of some note in the early part of the nineteenth century.

(To be continued.)



(Courtesy of Goldwyn)

ARTIFICIAL LINES USED TO MISLEAD THE EYE

The Cabinet of Dr. Caligari*

By BEN J. LUBSCHEZ

THE fact that we see with two eyes and photograph with only one has caused a deficiency in the illusion of the motion picture since its very beginning. The same defect was seen in still photography early in its development and resulted in the wide popularity of the stereoscope some years ago. In stereoscopic photography two pictures are taken simultaneously with two lenses set apart—the normal distance between the eyes. The finished pictures are then viewed through a pair of magnifying lenses set the same distance apart in the stereoscope. Stereoscopic pictures have relief and depth and distance and a minimum of distortion. They give the observer an excellent illusion of space and cure the defects so pronounced in the ordinary photograph and motion picture. It seems that the adoption of the stereoscopic idea to the motion picture would do away with the defects now so obvious. In fact, Dr. Coleman Sellers, one of the pioneer inventors in the evolution of the motion picture, recognized this fact and in his Kinematoscope, patented in 1861, he used a series of

*Picture released in America by the Goldwyn Picture Corporation.

stereoscopic photographs and viewed them through a stereoscopic eye-piece. Whether or not the future will bring forth some form of stereoscopic projector and camera for motion pictures, remains to be seen. Meanwhile experiments in entirely different directions are being carried on. Of these experiments, one of the latest and most interesting is the new film recently shown at the Capitol Theatre in New York by Mr. S. L. Rothapfel, "The Cabinet of Dr. Caligari."

At least four distinct artifices are used in the Caligari film in the attempt to gain depth, relief and the feeling of three dimensional space on the two-dimensional screen. In the order of their importance, these are: exaggeration of gradation and contrast in lighting; exaggeration of perspective; distortion in perspective; maladjustment of scale. These are all used more or less interdependently.

The subtle apportionment of light and shade, the telling disposition of black and white, are masterly. The effect of depth is often augmented by the simple expedient of a rapid gradation from highlight in the

foreground to black in the background where the normal range would be from white to a half, or perhaps even quarter-tone of gray. The black is usually intensified by being pierced with a small spot of intense light. Again, there is the use of an entirely artificial pattern of light and shade such as in the prison scene and on the ground of the asylum court—pattern employed for the purpose of leading the vision away from the plane of the picture and into the third dimension. In the same manner are employed not patterns of light and shade, but of artificial lines, which on analysis seem to have no function except to mislead the eye. On the whole the use of light and shade and pattern contributes most to the ultimate illusion of this picture and deserves careful and painstaking study.

Exaggeration of perspective is an old device and was used by the architects of the Middle Ages and the Renaissance, who spaced their columns closer together, narrowed their naves and inclined their ceilings and floors slightly in order to make the distances apparently greater than they actually were. Exaggeration of perspective simply means the intensification of perspective effect, such as abnormal diminution of distant lines. As perspective diminution is in proportion to distance from the eye, when diminution is abnormally increased the eye is

naturally fooled into assuming that the object so diminished in apparent size, is farther away than it really is. This device is used a great deal, and effectively, in the Caligari picture.

Distortion, both plain and in perspective, is a dangerous iconoclasm and a favorite of the cubists and other disciples of neo-art. It is entirely different from exaggeration. The objects represented in distorted perspective look as if they had been deformed by partial melting or by pulling and twisting or as they might appear in a curved mirror. Distortion is used abundantly in the settings of this picture. In the writer's opinion the all-important object of the settings, enhancing the illusion of the third dimension is not furthered in the least by this device of distortion. What does come about, however, is an utter lack of harmony between the normal, human actors and their abnormal distorted field action. There is one possible justification for this weird distortion and that is its possible harmony with the weirdness of the story of the picture.

There is considerable discrepancy in scales when we consider the actors in relation to their surroundings. The settings are much smaller in scale than the people. This was probably done to further the illusion of the third dimension by exaggerated perspective due to the comparatively smaller scale



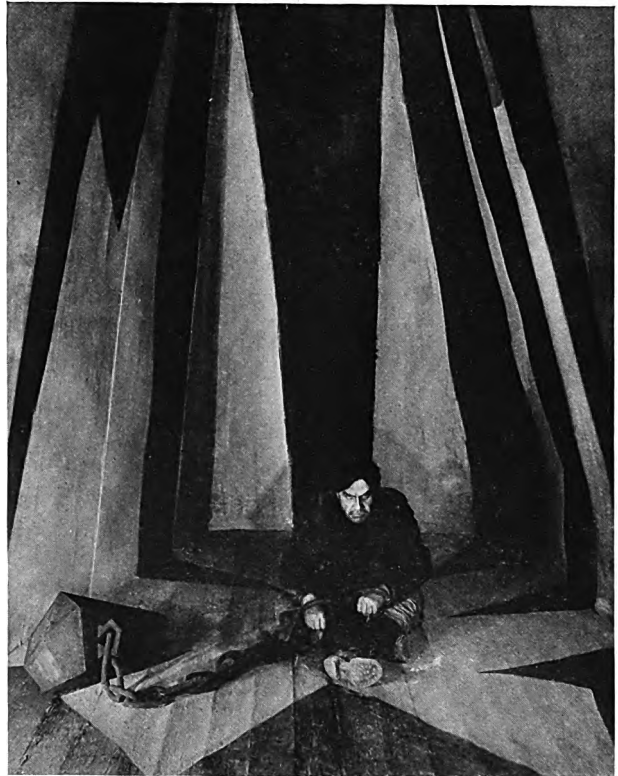
DISTORTED PERSPECTIVE BUT EFFECTIVE LIGHTING

Courtesy of Goldwyn



(Courtesy of Goldwyn)

EXAGGERATED AND DISTORTED PERSPECTIVE—DISCORDANT SCALES



(Courtesy of Goldwyn)

THE PRISON SCENE—ONE OF THE SIMPLEST AND MOST EFFECTIVE



(Courtesy of Goldwyn)

RAPID GRADATION FROM WHITE TO BLACK GIVING AN ILLUSION OF GREAT DEPTH

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of the settings. The result is hardly happy, causes considerable discord, and at times, as in the Fair scenes, becomes unpleasantly obtrusive.

The gestures and movements of the performers are usually attuned to the lines of the settings, as is proper. Particularly noteworthy are the exits and entrances of the characters. With the distinctness in form and intensity of lighting varied in proportion to the performer's distance from the foreground, these exits and entrances lend much to the effect of depth and relief.

Many details of the production are best slighted. The occasional crude primitive "fish-scale" patterns of the backgrounds, the childish models of the town of Holstenwall, are better ignored.

Grotesque, weird and gruesome as "The Cabinet of Dr. Caligari" is, we can not ignore some of its tremendous lessons for the producer of motion pictures or for any designer who represents three

dimensions in two. Especially significant are the uses of light and shade, the wonderful gradations and contrasts, full of motion and so different from the common "chalk and soot." Suggestive to the director should be the rhythmic appearance and leaving of the various performers in contrast to the often abrupt ones with which we are familiar.

There is much to be thankful for and to be learned from "The Cabinet of Dr. Caligari." A careful study of this picture may lead to considerable progress if the reasoning behind the unusual devices employed is analyzed and applied, but meaningless fantasy, grotesqueness, even chaos and retrogression lurk in the background of a blind and thoughtless adaptation. We would be much more thankful if its novelties were given us in a vehicle more convincing and less harrowing, although it is quite natural that such early experiments in the unconventional should be made in conjunction with stories equally so.



DISTORTED AND EXAGGERATED PERSPECTIVE AND DISCORD

(Courtesy of Goldwyn)

Fifty-fourth Annual Convention

The business routine of the convention followed closely the sequential order laid down in the Board's report, a copy of which was provided for the use of each delegate, greatly facilitating discussion. In the brief account it is possible to make at this moment we can hardly do more than record final actions. We must, however, make mention of one ceremony which is new to conventions and that was the presentation by the President of the Charters issued to the new Chapters of Utah, Kansas, Indiana, Arkansas, Florida, and Montana. The event was a gracious prelude to the order of the day.

Fellowship.

The report to the Board of the Special Committee on Fellowship suggested a revised method for making awards if the practice is continued, but raised strong question of the desirability of continuing it. The majority of the Committee favored abolishment of the Fellowship distinction, but the Board expressed the opinion that objections to its continuance were largely due to unsatisfactory methods of administration, which can be cured or at least sufficiently improved to warrant the perpetuation of the grade of Fellows, which the Board also believes to be desirable. The Board recommended that the question be referred to the Jury of Fellows (those members of the Board who are Fellows), for immediate consideration of the Special Committee's report. The matter was so left by the Convention.

Canons of Ethics.

The Board's recommendations were as follows: (1) That in Canon No. 9, in the phrase "unless the Architect previously employed neglects to press his claim legally," the word "legally" be stricken out, since it is a limitation that makes it difficult under certain conditions to determine appropriate action and tends to permit an unfair delay in the owner's work; (2) That the following paragraph be added to Section 16 of the Circular of Advice: "When an Architect is asked to make alterations of, or additions to a building designed by another, he should bear in mind the artistic rights of the Author. When practicable the new design should be submitted to the original designer as a professional courtesy, which will at least invite an opinion upon the proposed changes." The above recommendations were adopted and several other suggested amendments were referred to the Board with power.

Small House Service Bureau.

The Board recommended that the convention approve the formation and proposed operation of The Architect's Small House Service Bureau of the United States, Inc., encourage it to carry on its program with all dispatch and energy, and direct the Board to follow its work in detail and take such part in the management and control of the Bureau as may be deemed advisable. The work of the Small House Service Bureau has been described in detail in the pages of THE JOURNAL. The discussion on the floor of the convention was long and indicated considerable opposition, based, it would appear, upon the belief that

the Bureau as it is or as it might be expanded under its charter would considerably affect private practice. The Board's recommendations were sustained, however, although not by a great margin.

Structural Service.

The Board expressed itself in favor of reinforcing the valuable work of the Structural Service Committee and the related department of THE JOURNAL. It suggested making it possible for the Structural Service Committee to approve all advertising in THE JOURNAL, as a means of adding further reliability, such approval to be indicated by a distinguishing mark or symbol as a part of the advertisement. The discussion indicated that the members feared that such approval and such symbol, applied to advertisements, might be construed as an approval by the Institute of building materials or devices, and the matter was left to the Board with power. (NOTE:—It should be pointed out however, that the intention of the Committee was to use a symbol of some kind merely to inform the reader that the statements made in the advertisement were believed to be true. Manifestly, that is as far as the Committee can go, but the idea is a part of the principle governing advertising in THE JOURNAL, which is to make the advertising section more and more reliably informative and dependable,—a rule laid down by the Committee on Publications at the very beginning of THE JOURNAL, and one which is doubtless responsible for a growth in advertising volume not equalled by any other publication in the field.)

Registration.

The convention acquiesced in the Board's recommendations, which were: that separate registration laws for Architects and Engineers are desirable wherever possible and that Joint Laws when resorted to shall adequately safeguard independent control on the part of each profession.

Jurisdictional Awards.

The Board's request that the convention reaffirm its support of the principle underlying the work of the National Board of Jurisdictional Awards was acceded to by the convention.

Competitions.

The convention decided that no changes should be made in the present Code.

Disciplinary Procedure.

Some changes were ordered in respect to the standard form of Chapter By-laws, relating to the suspension of an Institute member and the Rules of Procedure of the Committee on Practice were slightly modified.

Summary.

Resolutions were adopted supporting the proposed Department of Public Works, Forest Conservation, continuing the initiation fee of new members at Five Dollars, keeping the annual dues at Twenty Dollars, urging sup-

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port for the Congress of the Building Industry, and creating a standing Conference Board on State Societies.

Gold Medal.

The Board recommended to the convention that the Gold Medal of the Institute be awarded to Monsieur Victor Laoux, teacher of many American students of Architecture, for thirty years the head of his Atalier, a brilliant Architect as well as educator, and now President of the Société des Artistes Français. His election was unanimous.

Architectural Exhibitions.

The catalogue of the exhibition records six hundred and fifty-nine items sent by twenty-five Chapters. The medals awarded were as follows: in the *Industrial* field, to George C. Nimmons and Co., Chicago, for the buildings of Sears, Roebuck and Co. *Ecclesiastical*, to Bertram G. Goodhue, New York City, for the Reredos of St. Thomas' Church. *Public Buildings*, to Howard Dwight Smith, Columbus-Ohio, for the Ohio Stadium, Ohio State University. *Collegiate*, to Charles Z. Klauder, Philadelphia, for the Princeton dormitory group. *Residential*, to Reginald D. Johnson, Pasadena, Calif., for the Paxton Residence, Pasadena.

Officers Elected.

Henry H. Kendall, Boston, President. William B. Faville, San Francisco, First Vice President. Robert D. Kohn, New York City, Second Vice President. William Stanley Parker, Boston, Secretary. D. Everett Waid, New York City, Treasurer. Charles A. Favrot, New Orleans; L. P. Wheat, Jr., Washington, D. C., and George Edwin Bergstrom, Los Angeles, Directors for three years.

Building

In the public lecture arranged by the Architects' Welcome Club at the recent building exposition in London, Mr. Raymond Unwin, a distinguished architect justly reputed for his work in town planning said:

"So long as people do not care for beauty, do not take pleasure in it, so long as they will sacrifice the beauty in their buildings and surroundings to the latest hat from Paris, the houses in Park Lane, or other similar gratifications of the desire for personal display or advertisement of their inclusion in the ranks of the wealthy, so long, in fact, as people generally are so uncultured as to derive their pleasure solely from material possessions and the momentary gratifications after which so many strive and for which they spend their labour and their substance, no efforts of architects and builders, much less of any committee of taste, will be able to recover for us the beauty which has been sacrificed to our modern materialism.

"I suggest that all sections of the building industry, whether called architects, contractors, or operatives, may and should take part in a continuous propaganda to bring home to the citizens of this country that, if it is worth while to build at all, it is amply worth while to build beautifully; that this is a duty which we owe to our fellow men to the many generations who may have to look upon our building, and that is a duty which we owe to our own self-respect. We can not but deny that the building industry today is not in a happy condition.

"I suggest that we have all been far too much engrossed with that aspect of the industry which concerns the division of the profits and the controls, and have consequently neglected the vital importance of the industry as a craft. In the long run, is it not likely that better conditions can only be secured when all those engaged in the industry have the fullest opportunity to help in securing good building and the fullest share of satisfaction in the pleasure which all may derive from beautiful building?"

In a recent address, Professor Felix Adler said:

"It is often said that the time has come when the human factor in industry must receive greater consideration. By this is generally meant that the wage-earner ought to be treated as a human being, and not as a mere factor in the production of wealth. But the same applies to the employer. It is of utmost importance that he too should regard himself not merely as a factor in the acquisition of wealth but as human in the fullest sense of the word. Many men act humanly outside of business. Almost all business men are even to a certain extent idealists, namely, in their relations to the members of their family, in their friendships, in their philanthropies; but, strange to say, in their daily business they consent to be ranked as materialists. They even assume that the service view in business is impossible, and that only the materialistic view of it is practicable. . . . The employer as well as the employee must be honored as a human factor. This is the first proposition which we lay down as essential.

In the next place, we affirm that the evils which are inherent in the present economic system, and which are more and more eclipsing its incidental advantages, are all traceable to a false motive as their ultimate root. The motive is commonly expressed in the phrase: I am in business to make money, that is, to render a social service for the sake of the pecuniary gain to be derived from it. That commerce and industry are forms of social service no one can deny.

This false motive we reject for the following reasons: First, because the subordination of service to gain is an inversion of the right moral order. The right moral order requires that the lower aim be subordinated to the higher,—and not the higher aim pursued because the lower desires can thereby be satisfied. The use of that which is noble for the sake of what is ignoble is called in extreme cases prostitution. Some such prostitution of service to money gain is the blight on the business world today. There must be a new spirit, and a new spirit means a new motive. The motive must be service for the sake of service, and material possessions as abundant as need be (but no farther), to the end that the service may be performed in the best possible way. . . .

"Nobody today is so near the brute as to be willing to acknowledge that he subordinates the highest purposes of life to the lowest physical satisfaction—for instance, that he lives in order to eat. The time may be expected to come when those who say that they serve in order to make money will be subject to a similar imputation, different in degree no doubt, but not in kind, and avarice will be ranked with gluttony . . .

"If the tree is to be judged by its fruits, the pecuniary gain motive in carrying on the work of the world is con-

NEW MEMBERS ELECTED

demned. It is in its very nature inhumane because it makes that an end which should be a means; and from the practical point of view it is ruinous, as the condition of the world today shows.

It is often maintained, however, that in spite of the evils enumerated enterprise and initiative have been stimulated, and that the excess wealth accumulated by the few, since it is necessarily in large part reinvested, provides employment for labor, and thus is beneficial to all. In this argument it is overlooked that, with money making as a motive, the tendency always is to reduce wages to the lowest feasible minimum, and that the consequent low standard of living among laborers is directly responsible for removing the prudential restraints that check the inordinate increase of population. The number of mouths to be fed increases out of all proportion. Especially in the great industrial and commercial centers the human species swarms. But the share of the greater number, even in the material benefits of so-called progress, is but little enlarged, while their actual condition, in particular the housing condition, becomes frightfully deteriorated. As for initiative and enterprise, those qualities which constitute the chief claim on behalf of the present system, their value is indeed indisputable, but it must be remarked that the amount of initiative and enterprise at present available in society is far too limited, and that it would be greatly increased to the permanent advantage of the human race if the initiative and enterprise which are latent in the great multitude of mankind, and which remain unused for lack of opportunity, were given a chance. It is a libel upon the business man to suppose that only the prospect of material riches can induce him to exercise the executive and organizing ability which is his peculiar gift. A talent slumbering in a man cries for exercise. The man who can do things is only too happy when the chance is given him to exert his powers. Work itself, when carried on under right conditions, affords the greatest satisfaction. The example of the scientists and professional men already quoted proves the point. The business man ought not to demean himself by declaring that he is baked of meaner clay than they."

The first duty of every ethically-minded man in business is to examine the prevailing motive, with a view to arriving at the truth about it, not yet inquiring whether any other motive is feasible or not, but first deciding whether this particular motive is to be sanctioned, or in principle condemned. But what then? Suppose that in principle it is condemned? We are living, the business man will say, under a system which is not for of our making. Shall we withdraw from it; shall we cede our places to others, less scrupulous perhaps than we are? Moreover, we are established in business. We cannot run our business at a loss. For the support of our families, for the education of our children, we depend on it. Must business men then continue to act on a motive which they have decided to be wrong, making all the money they can, and despise themselves for so doing? Is there no way for an ethically-minded business man to remain in business and at the same time retain his self-respect? This is the crucial question. Is it a question that seemingly does not disturb those who believe in some cure-all, or in some utopian system which can in the near future replace the present

system, but it does profoundly agitate those who believe that progress towards the better system must be educational and gradual. To be in the grip of a system confessedly bad at the root, to see no way of prompt escape from that system, and yet to affirm one's moral nature while workin g in it, to retain's one's self-respect, that is the problem for ethically minded men who are engaged in business.

New Members Elected

As of April 28, 1921.

ALABAMA: Fred William Clarke, Philip S. Mewhinney, *Birmingham*. ARKANSAS: Thomas Harding, Charles S. Watts, *Little Rock*. BALTIMORE: Charles M. Anderson. BOSTON: Francis V. Bulfinch, Lester S. Couch, Alexander M. Emerson, William Roger Greeley, Charles N. Read, Dana Somes, Frank A. Stearns, Fred. Whitcomb, Wead, *Boston*; Henry R. Shepley, *Jamaica Plain*; Allan E. Boone, *Winchester*. BROOKLYN: J. Sarsfield Kennedy, George Francis Kiess, *Brooklyn*; Joseph William Geddes, *Cedarhurst*; E. G. W. Dietrich, *Hempstead*; W. M. Halley, *New York City*; Dwight Ripley Collin, *Syracuse*; Alfred F. Evans, *Waterbury, Conn.* BUFFALO: Harold Jewett Cook, Ernest Crimi, Robert C. Fayfield, Henry A. Fruauff, Edward B. Green, Jr., Albert Hart Hopkins, Chauncey F. Hudson, Karl G. Schmill, Olaf William Shelgren, Frank A. Spangenberg, Henry L. Spann, W. Henry Zawadzki, *Buffalo*; Will Alban Cannon, Norton Kirkpatrick, Simon Larke, *Niagara Falls*. CENTRAL NEW YORK: John W. Vickery, *Rochester*. CINCINNATI: George Barkman, Fred G. Mueller, *Hamilton*. CLEVELAND: Leroy W. Henry, Milton E. Murphy, *Akron*; Rudolph Stanley Brown, James A. Reese, Robert M. Wright, *Cleveland*. COLORADO: T. D. Hetherington, *Colorado Springs*, Frank W. Frewen, Jr.; Robert K. Fuller, Glen W. Huntington, Willis A. Marean, Albert J. Norton, Richard Phillips, Lester E. Varian, Thiemann R. Wieger, *Denver*. COLUMBUS: J. Upton Gribben, Harry C. Holbrook. CONNECTICUT: Dudley St. Calir Donnelly, *New London*. FLORIDA: Roy A. Benjamin, E. A. Ehmann, Mellen C. Greeley, V. Earl Mark, Lee Roy Sheftall, James R. Walsh, *Jacksonville*; Walter C. De Garmo, *Miami*; Murry S. King, *Orlando*; Louis Albert Fort, *Tampa*. ILLINOIS: Alfred S. Alschuler, John Wellborn Root, Chester H. Walcott, *Chicago*. IOWA: Robert M. Bailie, Clinton H. Cowgill, *Ames*; Herbert B. Rugh, *Cedar Rapids*; E. E. Green, *Clinton*; Clarence L. Yule, *Creston*; Edgar L. Barber, *Denison*; Byron B. Boyd, Charles W. De Jarnette, Earl E. Jones, Karl K. Keffer, Roy W. Leibsle, Herbert J. Moore, Norman T. Vorse, *Des Moines*; Guy A. Carpenter, *Fairfield*; Harry E. Reimer, *Marshalltown*; E. O. Broaten, *Mason City*. KENTUCKY: J. J. Gaffney, Frederic, L. Morgan, Ossian P. Ward, *Louisville*; C. W. Kimberlin, *Owensboro*. MICHIGAN: George B. Hammond, *Detroit*. MINNESOTA: William C. Agnew, Jr., *Duluth*; Jefferson M. Hamilton, Rhodes Robertson, J. V. Vanderbelt, *Minneapolis*; H. E. Waldron, *Rapid City*, S. D. NEBRASKA: James T. Allan, F. W. Krelle, Mark M. Levings, Earl William Porter, Ernest F. Schriber, Louis W. Smetana, Fred S. Stott, *Omaha*. NEW JERSEY: Vivian B. Smith, Howard A. Stout, S. Hudson Vaughn, *Atlantic City*;

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Lynn G. Lockward, *Caldwell*; Dale Truscott, *Camden*; William F. Staab, *Glen Ridge*; Victor H. Strombach, *Irvington*; William Henry Wolfe, *Jersey City*; William A. Tilton, *Keyport*; George W. Backoff, J. Fred Cook, Ernest H. Fougner, T. Cecil Hughes, George E. Jones, Paul Mertens, Robert L. Pryor, Marshall N. Shoemaker, *Newark*; Alexander Merchant, *New Brunswick*; Frank F. Ward, *New York City*; Charles B. Waterhouse, *Passaic*; Joseph D. Lugosch, *Town of Union*; Leon Whittaker Slack, *Trenton*. NEW YORK: Adolph H. Knappe, *Ardley*; Le Roy Barton, Harold W. Beder, Frederick A. Burdett, H. Errol Coffin, William D. Foster, John A. Gurd, Bernard Herzbrun, Milton McGuire, Thomas M. Newton, Oliver Reagan, Harold W. Vassar, Steward Wagner, Ralph T. Walker, Lewis Edgar Welsh, Harry St. Clair Zogbaum, *New York City*. NORTH CAROLINA: Raleigh Hames Hughes, *Greensboro*. OREGON: Frederick S. Allyn, Ormond R. Bean, *Portland*; PHILADELPHIA: William Macy Stanton, *Landsdowne*; Clark Wright Evans, Harry Parker, *Philadelphia*; Harry Maurer, Fred H. Muhlenberg, *Reading*. PITTSBURGH: J. Howard Hicks, Clement S. Kirby, Frank A. Shutts, *Erie*; Wilbur A. Meanor, *Huntington, W. Va.*; John P. Brennan, W. Y. Cocken, Jr., Kenneth R. Crumpton, Douglas D. Ellington, Erle E. Estep, Harry Summers Estep, Richard K. Fleming, Jr., William H. Harrold, Sidney F. Heckert, Jr., William P. Hutchins, William H. King, Jr., William H. Kirchenbower, Thomas William Ludlow, Thomas Pringle, David Newland, Russell S. Simpson, Rufus Dean Wood, *Pittsburgh*; Roy L. Hoffman, *Wilkinsburg*. RHODE ISLAND: Roger Gilman, Thomas S. McLaughlin, William Howard Walker, William Russell Walker, *Providence*. SOUTHERN CALIFORNIA: William M. Clarke, Edgar Harris Cline, Frederick John Soper, *Los Angeles*; Louis J. Gill, *San Diego*. SOUTHERN PENNSYLVANIA: Fred G. Dempwolf, *York*. TENNESSEE: Edward Lee Harrison, *Memphis*; C. K. Colley, Eli Melvin Tisdale, *Nashville*. TEXAS: Edwin B. La Roche, *College Station*; Ralph Bryan, Clarence G. Bulger, James B. Cheek, Eugene Elma Davis, Roscoe E. De Witt, Marion F. Fooshee, Clyde H. Griesenbeck, Bertram C. Hill, Otto H. Lang, Mark Lemmon, William E. Love, J. E. Overbeck, Fonzie E. Robertson, Frank O. Witchell, F. J. Woerner, *Dallas*; George C. Burnett, *El Paso*; Birdsall P. Briscoe, Sam H. Dixon, Jr., W. Scott Dunne, Louis Glover, Richard B. Gottlieb, H. Jordan MacKenzie, John McLeland, Milton R. Scholl, Maurice J. Sullivan, *Houston*; Herbert Stanley Green, Harvey L. Page, Carl V. Seutter, *San Antonio*; E. McIver Ross, *Waco*. VIRGINIA: Clifford W. Isbell, *Petersburg*. WASHINGTON, D. C.: William O. Sparklin, John J. Zink. WASHINGTON STATE: W. G. Brust, Edwin J. Ivey, Herman A. Moldenhour, Fred B. Stephen, *Seattle*. Total, 220.

As of May 7, 1921.

ALABAMA: Brook B. Burnham, *Birmingham*. ARKANSAS: Harry Wanger, *Little Rock*. BOSTON: Lewis Howard Bacon, George H. Burr, Edwards J. Gale, Harold Symmes Graves, James H. MacNaughton, George D. Marlowe, James E. McLaughlin, Frank J. Robinson, Chandler Stearns, Harold Damrell Walker, *Boston*;

Charles V. Hull, *Dorchester*; Wendell T. Phillips, *Milford*. BROOKLYN: George W. Conable, Clement V. Tillion, Philip G. Tillion, *New York City*. BUFFALO: James Walker. CINCINNATI: John S. Adkins, Anthony Kunz, Walter H. Lee, Howard McClorey, Bernard F. Steinkamp. CLEVELAND: George Fox, James M. Hamilton. ILLINOIS: William H. Furst, Clarence Hatzfield, Howard Putnam Sturges, *Chicago*. KANSAS: LaForce Bailey, *Lawrence*. NEW JERSEY: Sherley W. Morgan, *Princeton*. NEW YORK: Theobald H. Engelhardt, *Brooklyn*; Frank E. Vitolo, *New York City*. PHILADELPHIA: H. Rex Stackhouse, Edwin Yeo. PITTSBURGH: Armin Schotte, *Erie*. SOUTHERN CALIFORNIA: William Barber, Donald B. Parkinson, Edwin G. Thorne, *Los Angeles*; J. A. Larralde, *San Gabriel*. TEXAS: Henry Norton June, Joseph Mitchell Kellogg, *College Station*. WASHINGTON, D. C.: Elliott Woods. WISCONSIN: Charles O. Chromaster, Alexander C. Guth, Paul Marzillier, *Milwaukee*. Total 46.

News Notes

IT HAS been decided to form a guild in England for the furniture industry, along the lines of the Building Guilds. The idea took shape in Manchester something over a year ago, and at a recent mass meeting of furniture workers, the decision to establish the Guild was unanimously affirmed. Mr. S. G. Hobson, Secretary of the Manchester Building Guild, said that there were numerous points of contact between the building and furnishing industries, and that close cooperation with the Building Guilds ought to be possible. There were, he said, some 250,000 young couples in Great Britain waiting for houses, and when they got them they would require furniture, which means many millions of pounds worth. He believed that in spite of the opposition, there would be no difficulty in gaining access to the necessary raw materials.

SIR ALFRED MOND, Minister of Health, England, has stated that he regarded the Guild system as a most interesting experiment, and that he had given instructions for a very careful study of what had been done. If it was found that the Guild system justified itself, it would meet with no opposition on his part.

WOMEN in Japan have, for the first time in history, been admitted to the Tokio Art Academy, while in the Imperial University they are now admitted on equal terms with men. Waseda University has also opened its doors to them, and their struggle to remove that discrimination which has hitherto prevented all Japanese women from receiving higher education seems to be making strong headway.

RESIGNING from his position as Director of Federal Capital of Canberra, in Australia, Mr. Walter Burley Griffin, who won the competition for the new Capital of the Southern Seas, has apparently been supported by his professional brethren in the Colony. *Architecture*, the publication of the Australian Institute of Architects, remarks editorially upon his action and expresses the opinion that "he could not do otherwise and retain his self-respect." We expect to publish a complete statement by Mr. Griffin in the very near future.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations.

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL jointly to give in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus afford architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.

Canvas. (28f)—(U. S. Department of Agriculture, *Farmers Bulletin No. 1157 "Waterproofing and Mildew-proofing of Cotton Duck,"* by H. P. Holman, *Assistant Chemist*, B. S. Levine, *Mycologist*, and T. D. Farrell, *Junior Chemist*.)

Classification and Grades.—Cotton duck, otherwise known as canvas, is classed as either "numbered duck" or "ounce duck."

"Numbered ducks" are made of multiple-ply yarns in both the warp and filling directions. The numbers run down, and the weights up, from 12 to 0 (or more ciphers), with a difference in weight between the consecutive numbers of 1 ounce per linear yard 22 inches wide. The canvas can be bought in widths of from 22 to 144 inches. Number 12 duck, which is the lightest of this class, weighs 7 ounces per linear yard 22 inches wide, or about 11.5 ounces per square yard. Number 00 duck, the heaviest commonly used, weighs 20 ounces per linear yard 22 inches wide, or about 32.7 ounces per square yard.

"Ounce ducks" are usually from 28-½ to 30 inches wide and weigh from 6 to 15 ounces per linear yard. There are three grades or qualities of ounce ducks:

(1) *United States standard Army duck.*—This is the best grade of light and medium-weight duck on the market. It is made of multiple-ply yarns both in the warp and filling directions, and is not bleached, loaded, or sized.

(2) *Double-filled duck.*—The warp consists of single-ply yarns and the filling of multiple-ply yarns.

(3) *Single-filled duck.*—Both the warp and filling are made of single-ply yarns. This is the cheapest and poorest grade of duck on the market.

In both the double-filled and single-filled ducks the filling yarns are much heavier than the warp yarns. In order to make a canvas of more uniform appearance, therefore, the warp yarns are usually woven in pairs, resulting in a loosely woven duck which has little water resistance and cannot be as thoroughly waterproofed as the multiple-ply ducks.

Double-filled and single-filled ducks are the kinds most commonly used for awnings. As a rule they have been bleached and are also usually heavily sized to give weight to the material. Moreover, the sizing used in weaving

these ducks with single-ply warp adds temporary weight to the fabric, which is soon lost on weathering, and increases its water-absorption and susceptibility to mildew. For these reasons, such ducks are not recommended for out-of-door use.

The ply of the yarns can be determined by untwisting them and counting the number of small threads into which they separate. To ascertain the closeness of the weave, the duck may be unraveled on two adjacent sides and the number of ends of yarn in a measured inch on each side counted. Warp threads run in the long direction of the goods; filling threads run across the goods.

Dyes.—General observation has shown that cotton duck which has been dyed a khaki color with mineral dyes is more water resistant than the white untreated duck. It is also quite mildew resistant and remains so for a long time if the dyeing process has been properly conducted.

Unless the canvas is to be subjected to a proofing treatment, it is recommended that only mineral-dyed khaki canvas be bought for severe service. A khaki color may be obtained also by the use of organic dyes, but the mineral dyed fabric is much to be preferred. The following very simple test will suffice to determine whether the fabric has been dyed with organic dyes or with mineral dyes: Burn a piece of the duck until no carbon is left in the ash. If mineral dyes have been employed, an appreciable amount of ash, colored from buff to dark brown, will be present, whereas if organic dyes have been used, only a small amount of a white to gray ash will remain.

Deterioration and Its Causes.—The deterioration of cotton duck is due to a number of causes, the chief one being mildew, which usually appears when the canvas remains damp for several days in warm weather. Canvas may be injured also by bacterial action, which produces no marked change in the color but weakens the entire fabric. This occurs when the canvas has lain for some time in contact with the ground or a damp floor. In addition, canvas may be weakened by the chemical action of materials in it or by the action of air and moisture alone under the influence of sunlight.

Cotton duck, or canvas, which has been given no special treatment sheds water to some extent as long as it does not mildew, especially if it is closely woven and shows but few pinholes when held up to the light. Its water resistance in the untreated condition is sufficient for awnings, pavilions, tents or other uses where the fabric is not in a horizontal position and where it is not in contact with objects beneath it. Untreated canvas does not owe its serviceability for such purposes to the fact that it does not become wet. Except in the case of new and unbleached fabrics, where the natural oils and waxy substances of raw cotton fiber as well as oils applied to the yarn during spinning and weaving are still present, cotton fabrics have

high water absorption, and canvas used for any of the purposes mentioned will be found to be soaked with water after a rain.

Where the wet canvas remains exposed to the light and air so that it can dry in a reasonably short time, there is little necessity for treatment to prevent mildew. In humid climates or seasons, or under conditions of service where the canvas remains wet or moist for several days at a time, however, treatments which will decrease the rate of water absorption, at the same time decreasing the susceptibility to mildew, should be applied. Another reason for applying waterproofing treatments is that untreated canvas brought in contact, especially moving contact, with objects beneath it does not shed water satisfactorily.

Treatments to Prolong Serviceability.—Proper treatments increase the usefulness and more than double the period of serviceability of white canvas. Treated canvas and commercial preparations for treating canvas may sometimes be obtained from tent and awning dealers, but should never be purchased without some satisfactory evidence of the merit of such treatments.

The most common of the several existing types of waterproofing processes are: (1) Those in which the water resistance is due to insoluble metallic soaps or other insoluble metallic compounds, as, for example, aluminum soap, acetate of aluminum, mineral khaki, and cuprammonium treatments; (2) those depending upon the use of paraffin or mixed waxes; (3) Those depending upon the use of bituminous materials, such as asphaltum or tar; (4) those depending upon the use of linseed oil or other drying oils; (5) those where combinations of the processes of types 1, 2, 3, and 4 are used.

By some treatments, such as the cuprammonium, substances which are poisonous to mildew growth are left on the canvas. Practically complete mildew resistance may be obtained by means of the cuprammonium treatment, but this treatment and many others are not adapted to home application. Mildew resistance can be secured best in home treatments by the application of materials which are effective waterproofing agents but contain no food for the mildew organisms, or by the incorporation in the waterproofing materials of fungicides which retard decidedly the development of mildew growth. Some waterproofing treatments, particularly those in which raw drying oils or semidrying oils, such as linseed and cottonseed, are used, should be avoided, as they cause a deterioration in the strength of the fabric and also render the treated canvas liable to spontaneous combustion. It is advisable also to avoid treatments with hard paraffin wax, as they give canvas undesirable physical properties which seem to make it more, rather than less, susceptible to the action of mildew.

Formulas.—After thorough tests, both in the laboratory and in the field, the department has found that the following formulas, which have been developed in the course of its investigations, are very satisfactory for increasing the serviceability of cotton duck. These formulas are designed solely for use in waterproofing and mildewproofing treatments. While the department believes that the formulas here given do not infringe on any existing patents or pending applications for patents, it can assume no responsibility in the matter.

FORMULA 1.

	Pounds.
Amorphous mineral wax or crude petrolatum.....	7½
Yellow beeswax.....	1
Refined Bermudez Lake asphalt.....	1½
Solvent: 3 gallons gasoline and 2 gallons kerosene.	

FORMULA 2.

	Pounds.
Petroleum asphalt (medium hard) or Bermudez asphalt.....	6
Neutral or extracted wool grease.....	2½
Lead oleate, technical.....	1½
Solvent: 3 gallons gasoline and 2 gallons kerosene.	

FORMULA 3.

	Pounds.
Amorphous mineral wax or crude petrolatum.....	8½
Yellow beeswax.....	1½
Solvent: 3 gallons gasoline and 2 gallons kerosene.	

FORMULA 4.

	Pounds.
Amorphous mineral wax or crude petrolatum....	6½
Yellow beeswax.....	1½
Lead oleate, technical.....	2
Solvent: 3 gallons gasoline and 2 gallons kerosene.	

Applications of mixtures made by formulas 1 and 2 give the canvas a dark brownish color, while those made according to formulas 3 and 4 give it a light buff to khaki color. The first two are preferable for all purposes where a dark color is not objectionable.

The amorphous wax referred to in the formulas is a soft grease-like mineral "wax" obtained as a by-product in refining chilled cylinder-oil stocks by means of centrifugal machines, and is very similar to dark petrolatum, except that it is more viscous and has a higher melting point. The substitution for it of dark or amber petrolatum will not materially change the results. Lead oleate is an insoluble metallic soap, which is added to insure waterproofness as well as mildewproofness. The kerosene is added not only to decrease the cost, but to reduce the volatility of the solvent, thus making the mixture spread better. All of these materials may be purchased, but not always from local dealers. Amorphous mineral wax or crude petrolatum (sometimes called petroleum grease) may be secured from dealers in oils and greases. The asphalts are obtainable from dealers in roofing materials. At present it probably is impossible to buy the wool grease from local dealers. This material, as well as amorphous mineral wax, may be ordered from wholesale dealers in oils and greases or tanners' supplies, through hardware stores, or through dealers in agricultural supplies and implements. Lead oleate, which also is not sold by small dealers, must be ordered from manufacturers of chemicals through local druggists or paint dealers, who will also supply beeswax.

Mixing the Materials.—Weigh out the solid materials in proper proportions, place them in a kettle or can, and melt slowly and carefully at as low a temperature as possible, with constant stirring. When the mixture has completely melted, remove to a safe distance from the fire, and pour it slowly, with constant stirring, into the proper quantity of solvent (a mixture of 3 parts by volume of gasoline and 2 parts by volume of kerosene), using 5 gallons of this solvent to 10 pounds of the mixture. This

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should be done with free ventilation, preferably out of doors.

In the preparation of mixtures by formulas 1 and 2 there is sometimes a separation of asphalt that does not mix uniformly with the solution upon stirring or shaking. In such cases allow the mixture to stand a day or so, with occasional stirring, before applying it to the canvas. In other cases where the material settles to the bottom of the container or thickens it will be necessary to warm the mixture just before applying it to the canvas. This must be done in the open air by placing the open container in a tub or can of hot water. Be sure that the container is open, and NEVER PLACE IT OVER OR NEAR A FLAME.

Application.—The mixture must be thoroughly stirred before and during application, in order to keep the undissolved material in suspension. These preparations may be applied to the canvas by means of a paint brush or by spraying. Once the canvas is fixed in position, no more time is required to treat it than is necessary to apply a first coat of paint to a rough board siding having the same area. Much time may be saved in treating large paulins and standing tents by applying the material with a spray pump, with which a pressure of at least 50 pounds is developed. Some loss of material, however, results from this method.

The experience of the department has been that one coat applied to one side of the canvas usually is sufficient. When one coat is applied to one side, using the strength of solution as given in the formulas, there will be an increase in weight of from $3\frac{1}{2}$ to $4\frac{1}{2}$ ounces per square yard. Ten pounds of the material and 5 gallons of the solvent will treat about 40 square yards of canvas.

Pipeless Furnaces. (30b1)—(*U. S. Dept. of Agriculture. Farmers Bulletin No. 1174 "One-Register Furnaces" by A. M. Daniels, Asst. Mechanical Engineer. Twelve pages, size 6" x 9"*) This bulletin discusses the principles, advantages and disadvantages of one-register (pipeless) furnaces.

Construction of the Furnace.—This type furnace consists essentially of a heater with a single register located directly above. The register has two parts, the center portion through which warm air passes upward and the outer portion which conducts the cooler air downward between the outer and the inner casing to the base of the furnace.

Circulation of Air.—The heated air from the central part of the register rises to the ceiling and diffuses through the rooms that open into the room or hall in which the register is located, provided door openings extend well up to the ceiling and no hangings interrupt the circulation. If there is an open stairway, part of the heat will circulate to the upper hall and enter rooms that open into it. A register placed in the ceiling of a downstairs room under some conditions may offer greater assurance of heating the room directly above. Not infrequently, however, they may act as cold-air returns. The result depends upon the arrangement of the stairways and rooms.

The colder air at the floor is drawn back through sides of the register. Since all the air circulates through one register a concentration must occur at this part of the system. This is sometimes noticeable to one sitting near the register by a circulation of cooler air around the feet; if very uncomfortable, the principal contributing cause may be air from without that flows to the register from under an outside door or opening in line with the register. The room in which the register is located does not, as a rule, receive too much heat. Provided the arrangement of the house is suitable for a one-register furnace installation, the warm

air diffuses quite evenly and the temperature will seldom vary more than a few degrees at different points at the same level.

Factors Affecting Its Suitability.—It is impossible to describe definitely the conditions under which the installation of a one-pipe furnace should be recommended. There are a number of variable factors. The arrangement of the rooms is very important; there must always be an unobstructed passage for the air from room to room. Nothing must interfere with the air circulation nor divert it from any room that is to be heated. There are perhaps thousands of instances where this system of heating is in operation with complete satisfaction. These cases, however, do not include houses in which one or more rooms are shut off from the others, nor are they often found in one-story houses where the grouping of the rooms is long rather than square; or in two story houses of more than 8 or 10 rooms where the dimensions of the house exceed a length of about 40 feet and a width of about 30 feet. Some manufacturers do not advise trying to heat over 1,500 square feet of floor space on one floor.

While there may be houses of exceptionally large size in which a one-register furnace is giving satisfactory service, the fact should be regarded as the exception rather than the rule. The requirements of families using a heating system may differ widely. What might be regarded as a satisfactory and efficient single-register furnace by one family, by another family might be considered quite the contrary.

Many families prefer cool bed rooms, and an apparatus that warms these rooms to a temperature above 50 or 60 degrees F. is not required. On the other hand some families require warmer sleeping rooms. In cold winter weather too much reliance probably should not be placed in a one-register installation if a temperature of 70 degrees and upward is required in second story rooms or any rooms that are detached or distant from the main room in which the register is placed.

One of the essential requirements of the system is to install the furnace approximately under the center of the first-floor. This system does not provide ventilation, since it recirculates the air and depends on the opening of doors and windows and on infiltration for its supply of fresh air. By some the draft of cooler air, at the floor near the register, is considered a drawback to the system.

Means of Heating a Detached Room.—Since the success of this system depends on the transfer of heat from room to room through the doorways, it is clear that the closing of the door of any room other than the one in which the register is located will cut off the supply of heat to that room. If, therefore, the room is one the door to which it is necessary to keep closed, such as the bath room, it may be necessary to provide other means of maintaining the desired temperature. To remedy this partially, transoms may be provided over the doors, but an opening should also be left at the bottom of the door. Sometimes these rooms are heated by a hot water radiator connected with the range boiler and some times by a register connected by a separate warm air duct to the furnace.

Advantages of the One-Register Furnace.—It is comparatively simple to install. The price is moderate. It presents a means of heating many old houses in which the installation of a first-class pipe heater would be too expensive to justify consideration.

The cost of operation in nearly all instances is less than that of a warm-air pipe furnace. The cause of this slight difference in its favor is its more perfect insulation in the cellar. The down-flowing current of cooled air absorbs the heat given off by the jacket of the heating chamber and carries it down and up again through the warm-air chamber and thence into the rooms above whereas in the ordinary type of warm-air heater the heat radiated by the casing of the heating chamber is dissipated in the cellar unless the heater is covered with insulation. Also, the circulation of air over the heated castings is much more rapid, as the discharge is directly upward without the resistance due to friction in pipes.

There is no doubt that, for conditions to which it is suited, the

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one-register furnace system is both efficient and satisfactory, but to secure an effective installation it is sometimes necessary to sacrifice architectural or decorative effects which generally are regarded as desirable.

Tiles. (23)—The Associated Tile Manufacturers have very recently published a 24 page, 8½" x 11" illustrated booklet entitled "Tiles—Basic Information." This publication is not a sales argument for tile but is devoted entirely to technical data, kinds, sizes and grades of ceramic mosaic, vitreous and semi-vitreous tiles, paving tiles, inlaid and quarry tiles, glazed tiles, enamels, plastic tiles and faience. The data is conveniently arranged for reference and booklet should prove to be a valuable addition to the architect's technical file.

Stucco Designs in the Small House Competition. (21c)—The American Concrete Institute in the "Standard Recommended Practice for Portland Cement Stucco" calls attention to the fact that successful stucco work depends in a large measure upon suitable design of the structure for stucco. Recommendations, among others, are made to the effect that:

1. Stucco should not be run down to the ground without a solid impervious base course.

2. A proper overhang and drip should be provided for all window sills and other horizontal woodwork, and some stop should be provided at the ends to avoid the concentration of water over the end of the sill.

3. Eaves and cornices should have a generous overhang.

4. There should be no horizontal surfaces of stucco on which water can collect.

5. Some impervious chimney cap should be provided avoiding unprotected stucco at the top of the chimney.

In the small house competition of the Own Your Home exposition there were submitted 378 designs for stucco houses. A critical analysis of all the designs was made by a committee of architects and from their report it would appear that a large proportion of the competitors either were unfamiliar with the foregoing recommendations or underestimated their importance. It is interesting to note that the first point was violated 183 times, the second 63 times, the third 100 times, the fourth 34 times and the fifth 120 times.

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Agenda for Architects

Memoranda of Procedure and Progress

*A sequential arrangement of
those administrative acts to
be performed by the
architect under the
usual conditions
of practice
and pro-
cedure.*

Commission No. _____

Kind of Building _____

Location of Building _____

Owner of Building _____

Date _____

Architects:

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PRESS OF THE AMERICAN INSTITUTE OF ARCHITECTS
THE OCTAGON HOUSE
WASHINGTON, D. C.

Foreword

THE following pages are reprinted from "The Handbook of Professional Practice," which is published by the Press of the American Institute of Architects, Inc., The Octagon House, Washington, D. C. Price in the United States, \$5.00; elsewhere, \$5.50.

The Handbook of Architectural Practice

The "Handbook" is a very extensive compilation of the methods of architectural practice prevailing in the best offices in the United States. It is the result of a complete study of all the various contractual relations entering into architectural practice, together with suggested printed forms for office use, and many directions and observations as to the various steps to be taken, the mistakes to be avoided, the prevention of errors through forgetfulness, and in general, all the wisdom gathered by successful architects in long years of practice. It was begun by the late Frank Miles Day, one-time President of the American Institute of Architects and was practically completed at his death.

The Agenda

The Agenda, printed separately, makes an indispensable document for every architect's office. It may be used either by itself, or in combination with any prevailing system. But it will be noted that here, for the first time, have been arranged in sequential occurrence, all the usual steps that require to be taken between the first consultation with the owner and the final completion and delivery of the finished work.

Prices

The price of the Agenda, printed on bond paper for use with pen and ink or typewriter is as follows:

- Single copies 40 cents each.
- 10 copies 35 cents each.
- 25 copies 30 cents each.
- 50 copies 25 cents each.

Order from the Press of the American Institute of Architects, The Octagon House, Washington, D. C.

Agenda for Architects

Memoranda of Procedure and Progress

These memoranda state, in the order of their occurrence, such administrative acts as the Architect has usually to perform, and they provide a way of recording the performance of them by means of dates placed opposite the several items. They therefore suggest an orderly method that should enable the Architect to dispose of such administrative detail with ease and certainty. It is not to be supposed that this method will commend itself to all Architects. Most of them have their own systems from which they obtain good results; but it is hardly likely that a study of the method will be without influence on existing systems or that its adoption will prevent the Architect from including in it details of his own.

On the Use of the Agenda as Part of a Journal of the Work

Every architect, whether he recognizes it or not, keeps something equivalent to a diary of each piece of work that is passing through his office. Sometimes this record is scarcely more than a few scattered notes; generally it has to be sought in the files; sometimes it is kept as a Minute Book. As such, it serves as a record of items that, having no specific place in the ordinary filing system, are either mislaid or never committed to paper.

If the Agenda, which for that purpose are published separately from this Handbook, be placed in a loose-leaf cover, and if a date or note be entered opposite each item, such a record will form a valuable part of the Minute Book. Especially is this true of the ruled sheets facing Sections VI, VII, VIII, and IX, not because precise dates are of great value, but because when there are a number of contracts to be let, the sundry steps in preparation for letting, in letting and subsequent to letting them, are visually presented by such a diagram, dates, or symbols set at their appointed places, clearly indicating the progress made with regard to each contract.

If to the Agenda there be added, from time to time, leaves bearing any items not covered in the Mem-

oranda or by the files, many things will be at hand which might otherwise be found with difficulty. For example, unless the Architect keep it, there is usually no record of a meeting between him and the Owner. Even in the case of a building committee, the minutes are usually scanty and untechnical. It is therefore good practice for the Architect to keep minutes of all such meetings, filing one copy in the Minute Book and sending another to the Owner.

When the work is let under one or a few contracts, the documents relating to it may be included in the loose-leaf cover which would then contain, for example, a copy of the Agreement between Contractor and Owner, a copy of each order for extra or omission, each application, each certificate of payment, etc. Each class of documents will, of course, be separated from the others by suitable index sheets. Where the documents are many, they will naturally be kept in files.

If items be set down in the Memoranda opposite the line representing the time at which action should be taken, the memoranda will then serve as a docket or list of matters needing future attention.

The Memoranda might have been fewer had it been possible to assume that all Architects had but a small practice, but to have value they had to be written on a larger assumption. The course indicated by them has, however, in one way or another to be followed as each piece of work takes its way through the Architect's office.

It is not to be supposed that any one will attempt to follow the Agenda from end to end. Many of them will be seen at a glance to have no bearing on the case in hand, but if once in a while the next step is made plain, a fortunate wording suggested, a sound method established or a mistake averted, their use will have been justified.

In using the Agenda, tact and discretion must be presupposed, for without those qualities, consciously or subconsciously present, no Architect goes far without a fall.

MEMORANDA OF PROCEDURE*

SECTION I

Preliminary Considerations

Record of Action Taken

Partnership.—See Chapter 41, "Partnership Agreements."

Tendering Services.—See Appendix B.

Cases in which employment should not be accepted. See Appendix B.

Employment.—In discussing the terms of an agreement, bear in mind Chapter 3, "Methods under which Architects are paid for their Services," and remember that the Schedule of Charges, Appendix D., may be found of use.

Expenditures.—Keep an account of any expenditures. See Chapter 13, "Cost Accounting."

SECTION II

Agreement Between the Owner and the Architect

Discussion.—For a general discussion of this subject, see Chapters 3 and 4.

Form of Agreement.—Prepare the Agreement, using one or the other of the Standard Forms, Appendices E and F. See Chapter 4. For notes on dates, on names or titles of the contracting parties, on signatures, on witnesses and seals, see Chapter 30.

Date of Execution of Agreement.

Date of Delivery to Owner.

Retain a signed copy in a place of safety.

Make a copy for use in the office.

SECTION III

Preliminary Sketches

(See Chapter 17, "Preliminary Studies and Models")

Handbook.—If the Owner has not already been furnished with a copy of the Handbook, consider whether it would be wise to send him one so that he

*Reference to "Chapters" and "Appendices" relate to the "Handbook of Architectural Practice," as described on page 2 of this Agenda.

may the more intelligently cooperate with the Architect.

Record.—Make a record in the Minute Book of any interviews with, or instructions received, from the Owner and of the dates of submission of the several sets of preliminary sketches, etc. It should contain a record of everything of importance that has been suggested by the Owner or the Architect, and agreed on, postponed or disapproved, including matters of design and construction as well as cost. It should be in as simple and short a form as possible, and a copy sent to the client as soon as may be after the interview, with a request to notify the Architect promptly if it does not cover satisfactorily the matters discussed.

Architect's Survey.—If the work consists of alterations or additions, have a suitable survey made. See Chapter 16.

Owner's Survey.—Request the Owner in writing to furnish, as per his agreement, the "complete and accurate survey of the building-site, giving the grades and lines of streets, pavement and adjoining properties; the rights, restrictions, easements, boundaries and contours of the building-site and full information as to sewer, water, gas and electrical service."

Impress upon the Owner the great importance of absolute accuracy and completeness in this matter. See Chapter 15, "Survey and Information."

Advise the Owner as to the selection of a Surveyor.

Instruct the Surveyor as to the contour interval and all information desired. See Chapter 15 for check-list.

Date for receiving the survey and information.

If the Architect has to pay for the survey or information, charge the Owner's account with the cost.

Building Laws.—Procure and study the laws and regulations controlling planning and construction at the place of building. If not positive that the preliminary sketches comply, as far as such sketches may, with the laws, submit them for tentative approval to the proper authority. Be sure, however, that the Owner does not object to such submission on account of a premature disclosure of his intention to build. See Chapter 40.

Titles, Numbers, etc.—Give the sketches a title, number or letter, and date them so that each set may be distinguished from the others and so that the order in which they were made may be apparent.

Keep copies of all sketches sent to Owner. If sketches are sent by mail, register same.

DETAILS OF OWNER'S SURVEY

Water Main—

Location: _____

Size: _____

Pressure: _____

Sewer—

Location: _____

Size: _____

Depth: _____

Separate surface water: _____

Electric Current—

Location: _____

D. C. or A. C.: _____

Cycles: _____

Voltage: _____

Telephone—

Location: _____

Underground: _____

Above ground: _____

Gas Main—

Location: _____

Size: _____

Plainly figure the sizes of rooms upon the sketch plans, since the Owner is not usually expert in scaling them.

Set down the cubage of the building upon each set of sketches so that it will be conveniently at hand if needed in conference.

Models.—Consider the advisability of making a model. See Chapter 17.

Account of Costs.—Keep an account of all costs. See Chapter 13, "Cost Accounting."

Time for Preparation.—See that the Owner is informed, in accordance with article 2 of Appendix B, of the importance of sufficient time for the preparation of drawings and specifications.

Estimates.—Make preliminary estimates. On their importance, method of making them, their conditional character, see Chapter 18, "Preliminary Estimates."

Minutes.—In the minutes of any conference with the Owner, keep a careful record of any statements made to him as to the probable cost of the work or cost per cubic foot.

Approval.—Date of approval of the final set of preliminary sketches. See Chapter 19, "The Acceptance of Sketches," etc.

Charge the Owner's Account with Services to Date.—See Chapter 14.

Bill for Services.—Send a bill for the installment of the Architect's fee due upon the completion of the preliminary sketches and for any reimbursements due under the Agreement, or otherwise.

Registration.—If the building is to be erected in a place where registration or local license is required, take the proper steps. See Chapter 40.

SECTION IV

Working Drawings and Specifications

(See Chapters 20 and 21 on the subject in general)

Date of Ordering working drawings and specifications.

Time for Preparation.—If the Owner, by insisting on undue haste in the preparation of drawings and specifications, is impairing their thoroughness, it is the Architect's duty to impress upon him the im-

portance of sufficient time. See Appendix B, Article 2.

Date of Beginning working drawings and specifications.

Survey.—If the Owner has not yet furnished, as per the Agreement between Owner and Architect, the survey and information there described, urge him again to furnish it. See Chapter 15. If the Architect has to pay for the survey, charge the Owner's account with the cost.

Borings and Test-Pits.—If boring or test-pit have not yet been made but are needed, ask the Owner's authority to have them made in accordance with the Agreement between Owner and Architect, or with Article 10 of the Schedule of Charges, Appendix D.

Engineers.—Select any engineers whose fees are to be reimbursed by the Owner. If deemed necessary, notify the Owner of their names and of their terms of payment and secure his approval before making an appointment.

Appoint such engineers.

Appoint any engineers or experts needed, other than whose fees are reimbursed by the Owner.

Enter the names of the engineers in the "Directory of those connected with the Work."

Method of Letting Contracts.—Confer with the Owner as to methods. See Chapters 22, 23, 24 and 25.

The Number of Contracts to be Let.—Ascertain whether bids on plumbing, heating, electrical work, etc., must be procured separately, as for public work in certain states. See Chapter 24.

Consider whether the Owner's interest will be better served by letting the entire work under one contract or by letting parts of it separately. Advise him on this subject and obtain his instruction. See Chapter 24.

Quantity System.—Consider whether the Owner's interests will be served by adopting the method of Quantity System. See Chapter 26.

Use of the Standard Documents.—The use of the Handbook presupposes the use of the Institute's Standard Forms of Agreement and General Conditions of the Contract. As the construction of those documents should be clearly understood, read Chapter 31.

General Conditions.—Make any needed additions to the standard "General Conditions of the Contract," bearing in mind that changes in the printed text are better made by adding a written article than by pen corrections to that text. See Chapter 31.

See that the title of the General Conditions is identical with that of the Specifications and Drawings.

See that the lien clause, Article 29, is in accordance with the laws of the place of building, and that it gives the Owner all the protection afforded by law. See Chapter 40.

See that all provisions for arbitration (Article 45) are in accordance with the law of the place of building. See Chapter 31, Article 45.

If any laws or ordinances relating to non-employment of aliens, length of day's work, minimum wage, etc., ought to be recited, add them to the General Conditions. See Chapter 25.

Note that the General Conditions do not cover any of the subjects named in the list given in Chapter 21.

Add to the General Conditions, when needed, the "Standard Index of Electric Outlets," Appendix H.

Prefix a copy of the General Conditions to each copy of the Specifications. Do not depend on any short cut, such as a statement that "The General Conditions of the American Institute of Architects govern the work."

Specifications.—See Chapter 21, "Specifications." See that the title of the Specifications, if they bear one apart from that of the General Conditions, is identical with that of the General Conditions and Drawings. See that all cash allowances are clearly stated and, by cross reference, covered by Article 23 of the General Conditions.

If the Architect is not to furnish free all copies of working drawings, details, and specifications reasonably necessary for the work, as in Article 4 of the General Conditions, name a cash allowance to be made by the Contractor for those not so furnished.

The General Conditions do not contain any reference to sundry matters named in Chapter 21. Provision as to some of them may, if needed, be added to the General Conditions; but most of them are better treated in the Specifications for the trade to which they naturally belong.

Constantly bear in mind the laws and regulations controlling planning and construction at the place of building. See Chapter 40.

Working Drawings.—See that the drawings bear titles as described in Chapter 10.

See that a record of the drawings and of the distribution of prints is kept as described in Chapter 10, "A Record of Drawings and of the Distribution of Prints."

Indicate all electric outlets, etc., on drawings in accordance with the "Standard Index of Electric Outlets," for which see Appendix H.

Bear in mind that many subjects may be presented more clearly by schedules than they can be by drawings and specifications alone. See Chapter 20.

Extra Services and Special Cases.—As the work proceeds, note the cost of any changes in working drawings and specifications, ordered by the Owner, if coming under the heading of “Extra Services and Special Cases” of the Agreement between Owner and Architect.

Date of Completion of Working Drawings and Specifications.

SECTION V

On Completion of Working Drawings and Specifications

Submission to Owner.—Send a complete set of working drawings, general conditions, and specifications to the Owner. Urge him to study them thoroughly as per Chapter 7.

Notify the Owner in writing of anything needed for the completion of the work, but not covered by the contracts. The record of such notification is likely to be a very present help in time of need.

Date of Owner's Approval of working drawings and specifications.

Charge the Owner's Account with Services to Date.—See Chapter 14.

Bill for Services.—Send the Owner a bill for the payment due at this time for fee, reimbursements, extra services, etc., unless it be deemed wiser to await receipt of proposals before sending the bill.

Submission to Building Inspectors.—If the legal authorities in control of building operations will, at this stage, give an approval or tentative approval to the plans and specifications, it is well to submit a complete set to them. Such submission, since it permits any necessary changes to be made before or during bidding, may avoid the tension resulting from an insistence upon changes after proposals are received.

Date of Approval by such authorities.

Ascertain (a) whether the form of Agreement and the General Conditions are to be submitted to the Owner's counsel. If so, secure his approval before asking for proposals; otherwise changes involving delay may have to be made in those forms.

(b) Whether advertisement for bids is necessary. If so, have the advertisements written and inserted by the Owner's counsel.

(c) Whether the law requires, or the Owner desires, a Bond of Suretyship. See Chapter 32, "Bonds of Suretyship."

(d) For work which is to be paid for by public funds, a bond or bonds are usually required. In such cases, the Owner should furnish, through his counsel, the form or forms to be used as well as all other necessary information.

(e) Whether a public opening of bids is necessary or advisable.

(f) Whether the Owner requires the bids to be addressed to himself and insists on opening them or whether, as is usually the case, he desires them to be addressed to and opened by the Architect.

(g) Whether, if public advertisement for bids is not necessary, the Owner leaves the list of bidders to the Architect. If not necessary, offer suggestions and secure the Owner's approval of a list of bidders.

On the importance of inviting none but honest and competent bidders, see Chapter 22, "Competitive Bidding."

List of Bidders.—Enter in the Minute Book list approved by the Owner.

Prepare (a) Instructions to Bidders. For a typical form, see Chapter 28.

(b) Invitation to bid. For a typical form, see Chapter 27.

(c) Form of Proposal. For a typical form, see Chapter 29.

SECTION VI

During the Time of Bidding

Date of Mailing the invitations, instructions and blank forms of proposal.

Date of Issuing drawings and specifications.

Take Receipts for all drawings and specifications as issued. See Chapter 10, "Record of Drawings, etc."

During the Time of Bidding, see to it that no verbal instructions are given to any bidder. All communications must take the form of bulletins, one copy of each being sent simultaneously to each bidder. See Chapter 28 for typical form.

SECTION VII

Proposals

Record of Action Taken

Proposals Received.

Proposals Scheduled.

Submit proposals and copy of schedule to Owner.

Examine lists of subcontractors with great care, since they throw much light on the relative merits of the bids. See Chapters 22 and 24.

Advise the Client as to the award of the contract. "In advising . . . that the award be made only to contractors who are reliable and competent the Architect protects the interests of his client." Appendix B, Article 6.

Watch date of expiration of validity of proposals and keep Owner informed.

Give the successful bidder notice as soon as the Owner makes an award. See Section IX, "Notifications."

SECTION VIII

Agreement Between Owner and Contractor

Form of Agreement.—The use of the Handbook presupposes the use of one of the Institute's Standard Forms of Agreement between Contractor and Owner. Appendices J and O.

Names, Witnesses, Signatures, etc.—Consult Chapter 30, with regard to the best forms for names of the contracting parties, signatures, witnesses, seals, authority to execute a contract, etc.

Special Clauses.—Include in the long blank any clauses special to the Agreement in hand; *e. g.*, when the Agreement is to be filed with a public official to insure waiver of lien, see that it includes the necessary special clause.

Signing Drawings, etc.—The Drawings, General Conditions, Specifications, and Addenda, if any, should be signed by both Owner and Contractor. Each is, of course, entitled to a signed copy for his records. Generally, however, but one copy of the

SECTION IX

Immediately after the Execution of the Agreement Between Contractor and Owner

Record of Action Taken

Filing of Agreements.—File, if necessary, an original signed copy of the Agreement, with the proper public official, and if the law so require, file the General Conditions, Specifications and Contract Drawings.

Charge the Owner's account with the cost of filing.

Bill for Architect's Services.—Send the Owner a bill for the instalment of the Architect's fee, due on completing working drawings and specifications and for reimbursements, special services, etc., if such a bill has not already been sent.

Bond of Suretyship.—For a discussion of the subject, see Chapter 32.

(a) If a bond of suretyship is to be furnished under the Contract, send the Contractor a copy of the Agreement for use of the Surety.

(b) Ask the Contractor for the name of his proposed Surety.

(c) Submit the name of the Surety to the Owner for approval.

(d) If the Surety is satisfactory to the Owner, so inform the Contractor and ask for the bond, stating that it must be in the "Standard Form of Bond issued by the American Institute of Architects," Appendix L.

(e) Date on which the bond was received from Contractor.

(f) See that the signature of the Contractor, or Surety, if either be a corporation, is accompanied by a certificate of authority to sign as explained in the case of agreements in Chapter 30.

(g) File the bond in the Architect's office unless the Owner wishes to keep it in his own files.

(h) If no bond is furnished under the contract, see that the Owner understands that even so he may, under Article 22 of the General Conditions, require one at any time as an extra to the contract. If he does, go through the regular procedure as above and issue a formal order for the amount of the extra.

Record Copy of Documents.—Prepare for preservation in the Architect's office a "Record Copy" of the General Conditions and Specifications, prefixing thereto a copy of the Invitation to bid, Instructions to Bidders, the accepted Form of Proposal and a copy of the Agreement, and include therewith a copy of each bulletin and any amendments to the General Conditions.

Correct Documents.—Either correct all drawings, specifications, etc., so that they are in accord with the Record Copy or mark them “Void.”

Issue and Collect Drawings.—Issue to the Contractor the necessary copies of properly corrected drawings and specifications. Provide him, in addition to his own drawings and specifications, with a copy of all others that may have a bearing on his work—lest he plead ignorance in extenuation of errors.

See that all bidders, except the successful one, return all drawings and specifications.

Notifications.—(a) Notify the unsuccessful bidders of the letting of the contract.

(b) Notify all those with whom the Owner already has direct contracts of the letting of this one and of the work covered by it.

(c) Notify the new Contractor of the names of those with whom the Owner already has direct contracts and of the work covered by each such contract.

(d) Notify the Owner as to insurance of sundry kinds. See Chapter 33.

(e) Notify the Contractor of the importance of entire familiarity with the contract documents. See typical letter in Chapter 33.

(f) Notify the Contractor to furnish any samples that are to be provided under Article 8 of the General Conditions or otherwise. Constantly follow up samples to be sure that no delay is caused by failure to have them ready when needed.

(g) Notify the Contractor of his duties under the General Conditions, Article 5, as to Shop Drawings, and urge prompt delivery of such drawings. Follow up shop drawings to be sure that no delay occurs through lateness of delivery. See Chapter 36.

Schedules.—(a) Require the Contractor to furnish, in accordance with Article 26 of the General Conditions, “A Schedule of Values of the Various Parts of the Work,” aggregating the total sum of the contract, divided so as to facilitate payments to sub-contractors, in accordance with Article 44 (e). See Chapter 35.

(b) Provide the Contractor with the form on which to make out the Schedule. See Chapter 35, also Exhibit No. 23, Chapter 38.

(c) Date on which the Schedule was received from the Contractor.

(d) Examine the Schedule, making sure that not too great a value is attributed to the early parts of the work, and bear in mind that the Contractor must, if required, support his statement “by evidence as to its correctness.” See Chapter 35.

Submit the Schedule to the Clerk of the Works. See Chapter 36.

(e) If a schedule fixing dates for detail drawings is to be made under the General Conditions, Article 3, paragraph 2, first sentence, prepare it in conference with the Contractor. See Chapter 34.

(f) If schedules fixing dates for shop drawings and for the progress of the work are to be made under the the General Conditions, Article 3, paragraph 2, second sentence, prepare them in consultation with the Contractor. See Chapter 34.

Clerk of the Works.—(a) See Chapter 36. In cases where it is desirable that there should be a Clerk of the Works, if the Owner has not already agreed to employ one, inform him of the reasons for such employment, and secure his consent to the employment of one.

(b) Inform the Owner of the qualifications and salaries of candidates.

(c) Prepare a letter for the Owner's signature, appointing a Clerk of the Works, naming his salary and stipulating for the reimbursement of his traveling and minor expenses.

(d) Date of appointment of the Clerk of the Works. Enter his name in the "Directory of Those Connected with the Work."

(e) Issue to the Clerk of the Works a copy of all the contract documents, including all bulletins and addenda forming a part of the contract.

(f) If any general instructions as to his duties are to be issued to the Clerk of the Works, issue them in writing.

(g) Supply the Clerk of the Works with blank forms for his reports and with envelopes for them.

Experts for Testing Materials.—Appoint experts for testing cement, steel, and other materials.

Enter the names and dates in the "Directory of Those Connected with the Work."

Ascertain, in case the Owner is a corporation, (a) the name and address of the person legally authorized to sign orders for changes in the amount of the contract and enter his name and address in the "Directory."

(b) The name and address of the person to whom notification of issuance of certificates of payment should be sent. Enter them in the "Directory."

Status of Architect.—Bear in mind that upon the letting of a contract, the status of the Architect changes. See Appendix B, Article 1.

SECTION X.

Detail Drawings

Record of Action Taken

Distribution.—Whether there be one or several direct contractors, care must be taken to see that each is furnished with all copies of drawings necessary for the proper conduct of his work, *e. g.*, for his office, for the foreman and for his subcontractors. When there is a Clerk of the Works, see that he receives a copy of each drawing. See Chapter 10.

Schedules.—Schedules may frequently be employed in place of detail drawings. See Chapter 20.

Bill for Services.—On completing the detail drawings, send the Owner a bill for them and any reimbursements that have fallen due. Of that part of his fee earned by the Architect during the construction of the work, one-half is usually ascribed to the detail drawings and one-half to administration and supervision. Therefore, if no earlier payment has been made on account of progress on the detail drawings, it is proper on their completion to send a bill to the Owner for the half in question.

SECTION XI

During the Construction of the Work

Changes in the Contract Sum.—For information on Changes in the amount of the contract and for a form of order, see Chapter 37.

Applications.—For information on applications for payment and a form of application, see Chapter 38.

Certificates.—For information on certificates of payment and a form thereof, see Chapter 39.

Information of Clerk of Works.—Send to the Clerk of the Works, a copy of every order for a change in the contract sum, and copies of all other orders, letters, etc., bearing on the discharge of his duties.

SECTION XII

On the Completion of the Work

Owner's Set of Drawings.—Provide the Owner with a set of drawings for his files. If he desires them brought into exact and detailed accord with the work as executed, inform him that you will keep an account

of the cost of doing so and will charge his account with that amount. *Secure copies of all guarantees called for.*

File for Future Reference the signed contract set of drawings, the "Record Copy" including the shop drawing and schedules as per Chapter 10, the Minute Book, the correspondence both incoming and outgoing, as well as all linen tracings and a copy of each detail drawing.

Final Statement.—Fill out the final statement on the opposite page and file it either as a part of the "Record Copy" or in a separate book kept for such statements. Observe that the method of dividing the Architect's costs and calculating overhead corresponds with that in Chapter 13.

RECORD OF PROGRESS

Final Statement

Owner's name _____

Kind and location of building _____

Date of completion of building _____

Total of final contract sums _____

Total of original contract sums _____

Amount of increase _____

Percentage of increase _____

Final total of contracts not including equipment _____

Final total of contracts for all non-movable equipment _____

Architect's fees _____

Engineer's fees _____

Traveling or other expenses reimbursed by client _____

Salary of Clerk of the Works _____

Total cost of the work _____

Total cubage of the work on completion _____ cu. ft.

Total cost per cubic foot _____ cts.

Architect's Financial Results

Total fee (not reimbursements) received by Architect _____

Costs paid by Architect:

 Drafting _____

 Specification writing _____

 Supervision _____

 Overhead taken as per cent of the above
 total _____

 Any costs not included in the above _____

 Losses, if any, due to this work _____

Total cost to Architect _____

Net profit to Architect _____

Percentage of profit to total fee _____

A Directory of Those Connected With the Work

Names and Addresses of Owner, Engineers, etc.

Name and address
or official title
of the Owner

Kind or name of building
and its location

Agent or other
Representative of
Owner, if a corporation

Orders for extras
to be signed by

Copies of certificates
to be sent to

Architect's bills to
be sent to

Name and address
of Owner's counsel

Name and address
of Owner's Surveyor

Name and address
of Engineers:

Structural

Heating

Electrical

Sanitary

Name and address of
experts for testing:

Cement

Steel

Other Materials

Name and address of
the Clerk of the Works

A Directory of Those Connected with the Work

Names and Addresses of Contractors and Subcontractors

CHRONOLOGICAL RECORD OF PRINCIPAL TRANSACTIONS

Agreement with Owner dated	_____
Survey received from Owner	_____
Preliminary sketches first submitted	_____
Preliminary sketches approved	_____
Working drawings ordered	_____
Working drawings started	_____
Report on borings or test pits received	_____
Engineers appointed	_____
Working drawings and specifications completed	_____
Working drawings and specifications sent Owner	_____
Notified Owner of items not covered by contracts	_____
Drawings and Specifications approved by Owner	_____
Drawings and Specifications approved by Authorities	_____
Bids advertised for	_____
Invitations to bid mailed	_____
Drawings and Specifications issued for bidding	_____
Proposals received	_____
Proposals scheduled	_____
Proposals submitted to Owner	_____
Successful bidder notified	_____
Date of execution of contract	_____
Date of delivery of copy to contractor	_____
Date of delivery of copy to Owner	_____
Date of signature of Drawings and Specifications by Contractor	_____
Date of signature of Drawings and Specifications by Owner	_____
Date of filing of documents with Authorities	_____
Schedule of values received from Contractor	_____
Schedule of dates for progress of Drawings agreed upon	_____
Schedule of Dates for progress of Work agreed upon	_____
Clerk of the Works appointed	_____
Appointment of testing experts	_____

H



THE AMERICAN INSTITUTE OF ARCHITECTS

THE OCTAGON HOUSE, WASHINGTON, D. C.

OFFICERS

President	HENRY H. KENDALL, Boston, Mass.
First Vice-President	CHARLES A. FAVROT, New Orleans, La.
Second Vice-President	WM. B. FAVILLE, San Francisco, Calif.
Secretary	WM. STANLEY PARKER, Boston, Mass.
Treasurer	D. EVERETT WAID, New York, N. Y.

BOARD OF DIRECTORS

For One Year (1920-21)		For Two Years (1920-22)	
EDWARD W. DONN, JR., 808 17th St., Washington, D. C.	ROBERT D. KOHN, 56 West Forty-fifth St., New York, N. Y.	EDWIN H. HEWITT, 716 Fourth Ave., Minneapolis, Minn.	WILLIAM B. ITTNER, Board of Education Bldg., St. Louis, Mo.
RICHARD E. SCHMIDT, 104 South Michigan Ave., Chicago, Ill.		ERNEST J. RUSSELL, Chemical Building, St. Louis, Mo.	
For Three Years (1920-23)			
CHARLES H. ALDEN, 400 Boston Block, Seattle, Wash.		N. MAX DUNNING, 1210 Kimball Bldg., Chicago, Ill.	
ABRAM GARFIELD, Garfield Bldg., Cleveland, Ohio.			

Minutes

MEETING OF THE EXECUTIVE COMMITTEE HELD IN NEW YORK CITY MARCH 5, 1921.

Members Present. The meeting was called to order, by President Kendall at the office of Mr. Robert D. Kohn, 9.45 A. M., on March 5, 1921. Others present were the Secretary, Mr. William Stanley Parker, Robert D. Kohn, and Mr. E. J. Russell; also Mr. C. H. Whitaker, Editor of THE JOURNAL and Mr. E. C. Kemper, Executive Secretary.

Minutes Corrected and Approved. The Minutes of the meeting of the Board of Directors held in St. Louis on November 19-20, 1920, were presented. A reading was dispensed with and the Minutes were approved with the following corrections: On page 5, under Education Fund, the impression given that the Fund is to be administered in connection with the American Academy in Rome should be corrected. The object of the Fund is set forth in the letter on behalf of the donor, which follows:

November 19, 1920.

"The President and Board of Directors of the American Institute of Architects:

"The undersigned is privileged to say that a friend of the profession desires through the Institute to make a contribution to architecture. His wish is to add some encouragement to young architects in pursuing the long and arduous training necessary to prepare them for successful practice. The donor proposes to give to the Institute in installments a sum amounting to \$25,000 which shall be known as an Education Fund, the income of which shall be used at the will of the Institute for the benefit of the profession of architecture. The giver suggests that the Board of

Directors at its present meeting appoint a committee which shall, under the direction of the Board and in cooperation with the American School at Rome, establish and administer one or more traveling scholarships for which \$1,500 per year will be made immediately available. A condition of the gift is that when once the use of the income of the foundation is determined such use can be changed in future only by a two-third vote of the delegates at two successive annual conventions.

"The donor desires for the present to be nameless.
"Very truly yours, (Signed) D. E. WAID."

With reference to this subject, the President reported that after conference with Mr. Waid it has been decided to place the administration of the Fund in the hands of the Institute Committee on Education, under the general direction of the Board.

Western trip of President Kendall and Mr. Kohn. The President reported that he had complied with the instructions of the Committee to visit the Western Chapters and that he had included Minnesota, Washington State, Oregon, San Francisco, Southern California, Texas, Kentucky, Cincinnati, and Louisiana.

From one to four meetings were held in each place; one with the Chapter and others with interested bodies, Chambers of Commerce, Associated General Contractors, Architectural Clubs, and in several places with students in the State Universities.

Addresses were made by the President, and Directors Kohn and Russell, who participated in the visitation.

NOTE: There have been omitted from this record a number of items concerning disciplinary matters, status cases of individual members, and subjects of a privileged character.

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Twenty-seven or eight addresses were made emphasizing the position of the Institute, the position of the Architect, and the value to him of membership in the National Society. These were well received and special talks upon Institute activities by the directors enlisted support and cooperation thereto.

The Chapters responded to the appeal of the National Officers and it is believed that a new bond of interest and loyalty has been formed.

Various disputed questions were discussed and progress is reported. The President recommends that a visitation of this nature be made a part of the duty of all future Presidents.

Jurisdictional Awards. At the November Board meeting the resolution of the Southern California Chapter with regard to the decisions of the Board of Jurisdictional Awards, was considered. The action taken was to advise the Chapter that the whole question of the responsibility of the architect, with regard to these decisions, has been referred to the Institute's representative on the Jurisdictional Board with a request that in conference with other members of that Board he attempt to clear up the situation.

President Kendall, who conferred with the Southern California Chapter during his visit there, reported that at a special meeting attended by representatives of the Chapter, and the President, there was a frank discussion of the whole situation. It was pointed out to the Members of the Chapter that their objections had been formally referred to the Institute's representative on the Jurisdictional Board for the purpose of seeing to what extent those objections could be met; that the action of the Institute was taken by an Institute Convention, that it was legally binding on the entire membership, and that its non-enforcement in any locality would be equivalent to an abandonment of the whole scheme.

The reply of the Chapter was that it did not desire the Institute to withdraw from participation in the work of the Jurisdictional Board, but it did object to the severity of the penalty so far as the architects are concerned.

Mr. Russell then reported in detail concerning the work of the Jurisdictional Board, the enforcement of its decisions with respect to the memberships of the various constituent bodies and the great difficulty of securing an exemption for the architects under the general rule requiring suspension for violations of decisions. This rule is the teeth of the whole program and is most necessary in dealing with the memberships of the constituent bodies. However, he promised to do his utmost to meet the Southern California position and to report fully at the May meeting of the Board of Directors.

Kansas and Montana Chapters. The Secretary presented applications for Chapter charters by Kansas and Montana groups of architects, and he was instructed to issue such charters subject to certain minor changes in the proposed Constitution and By-laws submitted.

Convention Circulars. The Secretary reported that a Convention Circular of Information was sent to the entire membership on February 8, calling attention to the important matters which will come before the Convention for discussion. This Circular contained a full description of the proposed plan of Regional Representation which the

chapters were requested to follow. It is proposed to transmit a second Circular on or about April 7, with later Convention information, nominations of officers, amendments, and similar matters.

Convention Matters-Report of Chairman. The report of the Chairman of the Convention Committee, Mr. L. P. Wheat, was submitted, stating in effect that the National Museum has been secured for both the Convention and the Exhibition, that the preliminary work of the Committee has been completed, and suggesting that the Raleigh Hotel be made the hotel headquarters.

Resolved, that the report be accepted and that the Raleigh Hotel be approved as hotel headquarters.

Report of Chairman of Exhibition Committee. A report was submitted on behalf of Mr. A. L. Harris, Chairman of the Exhibition Committee, as follows: It was found impossible to secure the hemicycle of the Corcoran Art Gallery for the exhibition. Therefore, the foyer on the first floor of the National Museum was secured. This offers somewhat more space than last year and seems entirely suitable for exhibition purposes. Complete information concerning the exhibition has been sent to the Chapters of the Institute in a letter of March 2, together with quantities of circulars of information for exhibitors.

The Secretary reported the donation of a prize of \$500 by Mr. D. Everett Waid, to be used in making awards at the Second National Architectural Exhibition. It was the sense of members present that these awards should take the form of gold medals from the die of the school medal of the Institute and should be for general excellence in the following classes: Ecclesiastical; Domestic (Multiple or Single Dwellings); Institutional; Commercial (Including Hotels); Public; and Industrial. An estimate from the Medallion Art Company for making the medals was approved, and referred to Mr. Kohn for a slight modification in the design of the medal.

Resolved, that the Executive Committee recommends that the Board, in its Convention Report, express appreciation of Mr. Waid's gift.

Resolved, that the President be requested to appoint a Jury of five members to make the awards at the earliest possible moment after the opening of the Exhibition

Resolved, that the report of the Exhibition Committee be accepted.

Invitation to Mr. Hoover to speak at Convention. The following resolution, on motion of Mr. Russell was adopted:

Since the Institute has appointed a Committee to Co-operate with the Engineers, and as this Committee's report is to be considered at the Convention in May, and since Mr. Hoover is now President of the American Engineering Council, be it

Resolved, that the American Institute of Architects formally invite Mr. Hoover to attend the Convention, and that Mr. Russell be requested to extend this invitation for the Convention session occurring on the evening of May 12.

The President was requested to send to Mr. Hoover a formal invitation supplementing Mr. Russell's personal one.

Convention Program. The report of the Special Committee on Convention Procedure, Mr. Abram Garfield, Chairman, was considered in connection with the character of the program for the Convention, also a letter of Feb-

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ruary 24 from Mr. F. E. Davidson who suggested subjects for discussion, and that the report of the Board of Directors be distributed to the delegates on the morning of the opening session.

Resolved, that the report of the special committee be accepted and the Committee be discharged with thanks.

It was the sense of the meeting that in view of the experience of many pre-Convention Board meetings it would not be feasible to put the Board's Report into type as suggested, and that even if this could be done there would be no great saving of time, and there were strong reasons against omitting the reading of the report, which was the one opportunity available for placing the Board's acts, and policies before the delegates as a body.

Resolved, that the Convention program be arranged approximately as follows, subject to revision, if necessary, by the Secretary and the Chairman of the Convention Committee:

May 11: Morning Session—President's Address; Board's Report; Treasurer's Report.

Afternoon Session: Business arising from the Board's Report.

Evening Session: Architectural Education.

May 12: Morning Session—Board's Report; and business arising therefrom. Nominations.

Afternoon Session: Continuation of morning program from 2 to 3; 3 P. M. opening of parallel session devoted to aesthetic subjects, the main session taking up other items of business or professional subjects before the Convention.

Evening Session: Exhibition Opening at 8 P. M.; Public Conferences in Auditorium at 8.30 P. M., with addresses by Government Officials, and others, devoted to Government Architecture, proposed Department of Public Works and similar matters.

May 13: Morning Session—Board's Report and business arising therefrom. Report of elections. New business.

Afternoon Session: Aesthetic subjects.

Evening Session: Informal dinner.

Proposed Trust Agreement between Institute and Small House Bureau. A communication of December 21, was read from Mr. Edwin H. Brown, Chairman of the Small House Committee. It proposed the organization of a Corporation under the laws of the State of Minnesota and bearing the name of the Architect's Small House Bureau of the United States, Inc., or similar title. This trust agreement provided, among other things, as follows:

"The agreement under which the stock is trustee should also require that, whenever the American Institute of Architects saw fit to and did nominate persons to act as directors of said corporation, the trustees with whom the stock is trustee should, at the annual meeting of the stockholders, elect the persons so nominated by the American Institute of Architects, up to such number as would constitute a majority of the Board of Directors, or such less number as might be nominated by the American Institute of Architects."

This proposed arrangement has been submitted to Institute Counsel who is of the opinion that on the understanding that the American Institute of Architects is to own no stock and to assume no responsibility for the execution of the plan, until such time as Directors of the Institute take formal action to that effect, there is no objection from the Institute's point of view.

No final action was taken.

A letter was then read from Mr. Brown requesting a pre-Convention meeting of delegates on May 10, in Washington, for the purpose of discussing the work of the Small House Bureau and its expansion throughout the United States.

The Secretary presented a formal protest of December 30, 1920, from the Secretary of the New Jersey Chapter in which the Chapter objected to the Small House design competition conducted by Institute members in Chicago, which gave the impression that the Institute, or the Illinois Chapter, was one of the principals to the competition.

The reply of Mr. Henry K. Holsman, Architectural Advisor, to the objection of the Chapter, was submitted.

The New Jersey Chapter also formally objected to the continuance of the work of the Small House Bureau on the ground that it interferes with the practice of the architect who does small house work exclusively. The Chapter requested a reconsideration, suggesting that attempts to educate the public in the proper planning or designing of small houses be conducted by the Institute and its various Chapters through exhibitions or competitions held in various parts of the country in which the Institute, or its Chapters, shall be the principals, and in which no commercial element shall present itself.

Resolved, that the Executive Committee is of the opinion that the protest of the New Jersey Chapter is due to a misunderstanding of the purpose and program of the Small House Bureau. This position is based on the reports of members of the Committee who have made a personal investigation of the program.

Paris Exhibition. The Chairman of the Committee on Foreign Building Cooperation, Mr. Charles Butler, reported the assembling of American exhibits, which are to be shown in Paris. The Committee has secured a fairly representative collection of American work and is in funds to the extent of \$2,100. It does not desire to appeal to the French architects for additional funds if it should prove that such are required. The Committee, therefore, requested some assurance from the Institute on this point.

The Executive Committee was of the opinion that Mr. Butler's Committee should go ahead with its program as economically as possible and then take up with the Institute the matter of a deficit, should one be incurred.

Consideration was given to showing the exhibits in this country when they are returned from Paris and several suggestions for accomplishing this were made to the Chairman, whose report was accepted with thanks.

Proposed Use of Reserve Fund. At the request of the Treasurer, particular attention was called to the item of \$2,905 carried on the 1921 budget as a loan from the Reserve Fund. This item represents the excess of estimated expenditures over estimated income, for the year 1921. It may not be necessary to make the loan, but the official endorsement of the Executive Committee should be given in order that the required notice may be sent out thirty days in advance of the Convention.

Resolved, that the notice be given in the next Convention circular.

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Presentation of Craftsmanship Medal to Henry C. Mercer. The Craftsmanship Medal awarded to Mr. Mercer by the Convention of 1916, was not presented to him at the succeeding Convention which he was unable to attend.

Resolved, that Mr. Mercer be invited to attend the Fifty-fourth Convention to receive the medal in person and, if he cannot do so, it shall be transmitted to him by the President of the Institute.

Distribution of Regional and Chapter Territory Map. The Executive Secretary requested authority to print, and distribute to the members outline map showing the Regional Districts and Chapter Territories of the Institute. A sketch of the proposed map was submitted on which the five prospective new Chapters were indicated. It was directed that a large map showing Regional Districts and Chapters be prepared for the Convention, and that the small map be distributed after the Convention, upon completion of the organization of the pending new Chapters.

Proposed Legislation Concerning Housing. Copies of Senate Bills Nos. 4721 and 4741 were presented, also copy of H. R. 14855; also letter of January 25 sent by the President of the Illinois Chapter to the President of the Chamber of Commerce of the United States with regard to the Calder bills; also letter of November 11 from the President of the Illinois Chapter to the Senate Committee on Reconstruction and Production; also letter of February 10, 1921, from Mr. John Irwin Bright to Senator Calder.

The Institute Committee on Community Planning has given particular attention to H. R. 14855, which proposes the use of postal savings for financing home building, and members of the Committee are transmitting their suggestions to Representative Kelly, the author of the bill. It was directed that these communications and reports be placed before the Board for use in preparing recommendations of the Board's Report.

Basic Building Code. The Secretary reported that a recent conference with the Director of the Bureau of Standards, with regard to the preparation of the Basic Building Code, has shown that the Bureau will gladly undertake the work if and when the necessary money is appropriated by Congress. In that event, the Code would be prepared under the guidance of the Bureau, with the cooperation of the many national technical organizations concerned.

Resolved, that the Executive Committee recommends to the Board of Directors that it propose to the Convention a resolution requesting the Secretary of the Department of Commerce to take affirmative action toward securing authority and funds for the preparation of a national basic building code.

Proposed Changes in the Competition Code. The Secretary reported that the proposed changes in the Competition Code to permit the employment of two or more architects under certain conditions when the architects are fully remunerated, as proposed by the Boston Chapter, were referred to the Chapters for consideration in October, 1920. Communications from the following Chapters were submitted: Brooklyn, Cleveland, Connecticut, Iowa, New York, North Carolina, Oregon, Rhode Island, San Francisco, South Carolina, Virginia and Washington State.

Resolved, that the Executive Committee is of the opinion that the returns from the Chapters are not numerically sufficient to show the sentiment of the Institute membership; and that the communications received be transmitted to the pre-Convention Board meeting with this resolution.

Proposed Changes in the Schedule of Charges. The Secretary reported that the changes proposed in the Schedule of Charges by the Illinois and Cleveland Chapters were referred to the Chapters for consideration in October, 1920. (Convention order page 92 of the Proceedings.) The proposal of the Cleveland Chapter that the suggested minimum rate be increased to 8% has, in effect, been withdrawn by the Chapter which recommends that owing to unsettled conditions there should be no change in the present schedule. Recommendations and resolutions with regard to the above mentioned and other proposed changes in the Schedule of Charges were then submitted, without reading, from the following Chapters: Cleveland, Connecticut, Baltimore, Illinois, Iowa, San Francisco and Washington, D. C., and Wisconsin.

Resolved, that these communications be referred to the Secretary, who is also Chairman of the Committee on Contracts, for reference to his committee, whose conclusions will be reported to the May Board meeting for action.

Proposed Changes in the Circular of Advice. The Secretary presented resolutions of the Illinois Chapter proposing changes in the Circular of Advice Relative to the Principles of Professional Practice. There is also pending an amendment to Section 16, concerning consultation with the original architect when alterations are contemplated, as approved by the November Board.

Resolved, that the various proposed changes be referred to the Secretary for submission to the pre-Convention Board for recommendation by the Board to the Conventions.

Proposed Amendments to the Canons of Ethics. As directed by the November Board, the Secretary presented an amendment to cover a case wherein the first architect, who has been dismissed, declines or fails to take action, or to prosecute his claim, and thereby prevents another architect from undertaking the work without violating Canon 9, of the Canons of Ethics. The effect of this amendment is to omit, from the present wording, the word "legally." The Secretary was instructed to include this amendment in the next Convention Circular.

Resolutions relative to changes in the Canons of Ethics were also considered, as received from the Illinois Chapter. It was directed that these resolutions be referred to the Board at the Pre-Convention meeting.

Report on Proposed Circular Concerning Distribution of Quantity Survey Material. This document was referred to the Committee on Contracts, in care of Mr. Richard E. Schmidt, for report to the Executive Committee. The Secretary reported for Mr. Schmidt to the effect that so far the joint committee, composed of architects, engineers and contractors, have been unable to agree in full upon the principles involved.

Resolved, that the matter be left in the hands of Mr. Schmidt for further report.

Circular of Information and Suggestion to Those Interested in Building Operations. This Circular was referred to the Executive Committee for modification and issuance, after

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approval in principle by the Board at the November meeting. With reference to the title, it has been suggested that a shorter one would be more valuable, such as "The Functions of the Architect," or "Architectural Service," or "The Employment of an Architect."

Resolved, that the draft of Circular be referred to Mr. John Lawrence Mauran, with the request that he undertake the revision of the document for submission to the May Board meeting.

Draftsmen's Unions. The Secretary reported that in September, 1920, the matter of Draftsmen's Unions, and its discussion at the Fifty-third Convention, were particularly called to the attention of Institute Chapters. The importance of the subject was emphasized, action was urged, and reports requested. Responses have been received from but five Chapters: Boston, Illinois, Iowa, New Jersey and Philadelphia.

Resolved, that it be recommended to the Board that this lack of interest be reported to the Convention with a statement from the Board that under the circumstances it has no recommendations other than to reiterate the position of the Board set forth in the Secretary's letter of September 20, 1920, which pointed out the advantages of cooperation with the draftsmen and urged the establishment of close cooperation between the Chapters and the students, draftsmen, and other allied groups in their territories.

Distribution of Ethical Documents. With reference to printing the Ethical Documents of the Institute in monograph form, it was

Resolved, that the Secretary be authorized to reprint the present monograph of Ethical Documents, including all amendments made by the Fifty-fourth Convention, and to distribute the same free of charge to the Institute membership. Jurisdictional Awards should be omitted.

It was also directed that the Ethical Documents be furnished complimentary in desired quantities to architectural departments of recognized schools, on request of department heads.

Resolved, that in reprinting the Ethical Documents the type and general arrangement used in the Constitution and By-laws of the Institute should be followed. The documents to be reset are The Judiciary Rules; the Circular of Advice on Competitions; the Canons of Ethics; and the Schedule of Charges.

Improvement of Farm Buildings. Farmers' Bulletin No. 1087, issued by the Department of Agriculture, entitled "Beautifying the Farmstead" was considered and found to contain information and advice, well prepared, which, if followed, would bring about great improvement in the average unsightly farmstead now characteristic of the United States.

Resolved, that an endorsement of Farmers' Bulletin, No. 1087, be transmitted to the national agricultural societies of the leading farm publications, with the suggestion that there is urgent need for improvement in the architecture of farm buildings, and that in bringing about such improvements Farmers' Bulletin No. 1087 might be used to great advantage.

Further Resolved, that the Executive Committee request the Chapters of the Institute, which will be furnished with copies of Farmers' Bulletin, No. 1087, give publicity to

the same in their respective territories, and render every possible service to their rural communities in bettering present conditions.

Joint Registration Law for Architects and Engineers. The report of the Special Committee on Cooperation with the Engineers, as submitted to the November Board, was re-submitted; also a resolution of the Illinois Chapter concerning the subject generally, and the National Council of Architectural Registration Boards specifically. Mr. Russell spoke concerning the general recommendations of his report and his belief that it was most essential for the Institute to cooperate with the Engineers in the passage of joint registration laws.

Resolved, that this matter be left for action by the Board of Directors.

Citizenship as Essential for Institute Membership. The following resolution was presented from the Iowa Chapter: "Whereas, patriotism is the first duty of every citizen, and without citizenship there can be no true patriotism, *Be it Resolved*, that the Iowa Chapter urge upon the Directors of the A. I. A., that the constitution of the A. I. A. be amended to require citizenship in the United States as the first essential of membership in the A. I. A." The By-laws now require residence, not citizenship. The effect of such an amendment upon reciprocal relation with Canadian Societies was also discussed.

Resolved, that the resolution be referred to the Board with a recommendation that the proposed amendment should not be adopted.

State Societies. The report of the Committee on State Societies, Mr. N. Max Dunning, Chairman, was presented.

The recommendations of the Committee were as follows:

(a) That as a general policy State Societies shall be invited to send delegates to the Conventions of the Institute. These delegates to have the right of the floor on all subjects except those effecting Institute policy, but not to have the right to vote.

(b) That the Institute shall create a Standing Conference Board on State Societies, charged with the following duties:

1. To keep informed as to the officers and membership of State Societies.

2. To request parliamentary action by State Societies on questions of importance (not of Institute policy) submitted to the Chapters, and to receive and file with the Secretary the result of such action.

3. To meet with delegates from State Societies either at the Convention or at specially arranged conferences at which delegates shall have full parliamentary privilege, and to report to the Convention for action any Resolutions, Recommendations, or Motions adopted at such meetings.

4. To receive communications from State Societies where cooperative activity is thought to be desirable and to present a recommendation to the Board or Executive Committee for action.

5. To solicit the support of State Societies where they can be helpful to the Institute.

6. To assist newly formed Societies in the preparation of their Constitution and By-laws.

7. To assist Societies in their efforts to secure the passage of Registration Laws.

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Resolved, that the report be received and that the Secretary be requested to prepare a section for the Board's report to the Convention, which shall recommend the continuance of the present Institute policy of inviting the State Societies to send representatives to Institute Conventions, and of distributing to them the Convention Proceedings. The Executive Committee further recommends to the Board that the remainder of the report be referred to the incoming Committee on State Societies.

Report of Committee on Cooperation with Commission of Fine Arts. Report of Mr. E. W. Donn, the Chairman of the Committee on Cooperation with the Commission of Fine Arts, was read, summarized as follows:

The Committee has had no specific duties other than to keep in touch with the Chairman of the Fine Arts Commission. There is opportunity for great service through such cooperation, and it is recommended that the Committee be continued.

Through the efforts of the Committee some representative exhibits of Washington, including the L'Enfant Plan of the City and the McKim-Burnham Plan, have been secured for the Paris exhibition now being collected by Mr. Butler's Committee.

Resolved, that the report be accepted and that it be recommended to the Board that this Committee be continued.

Magazine Criticisms of the Architect. Attention was called to articles published in recent issues of the *Atlantic Monthly* and the *Outlook* with reference to the housing situation in the United States, the latter containing paragraphs reflecting unfavorably on the architectural profession. Correspondence with regard to the article in the *Outlook* was referred to the President, who was requested to communicate with the Editor with a view to the publication of a more correct statement.

It is understood that Mr. Bright will make reply to the statements contained in the *Atlantic Monthly*.

Congress of the Building Industry. Mr. Kohn reported briefly concerning the further development of the Congress of the Building Industry. Great interest has been shown and local organizations are in operation in Boston, New York, Omaha, Minneapolis, Seattle, Portland, San Francisco, Los Angeles and New Orleans. Plans for establishing functioning groups are under way in Dallas and St. Louis.

Reciprocal Relations with Canadian Societies. As directed by the November Board, the various Canadian Architectural Societies have been written to with regard to reciprocal membership relations. Replies received indicate that members of the American Institute of Architects are now eligible for membership in the Province of Quebec Association of Architects, and in the Saskatchewan Association of Architects. Other Societies promise to act upon the suggestion in the future. A letter from the Ontario Association of Architects pointed out that membership in the Canadian Societies was equivalent to registration to practice in Canada; but Canadian membership in the Institute would not confer the same privilege.

Resolved, that the matter be laid on the table.

Report of Committee on Fellowships and Honorary Members. A report of February 21, was submitted from

Mr. Willcox, Chairman of the Committee on Fellowships and Honorary Members, which discussed the investigations of the Committee and proposed a referendum to the Institute membership to be stated as follows:

"Query: Considering inherent difficulties in the way of making a logical and just selection of Fellows, and the dissatisfaction which has arisen in the past in connection with selections made, will you state your views, as follows:

"From an academic standpoint, and without considering at this time the method of accomplishing either object, is the welfare of the Institute and the profession of architecture in this country to be further advanced by (1) Continuing the Fellowship grade? (2) Discontinuing the Fellowship grade?"

The Committee has taken no action with respect to the Honorary Membership selection.

It was the opinion of the Executive Committee that such a referendum be submitted, and that it should have a foreword explaining the situation, and the conditions, which brought about the appointment of the Committee on Fellowships. The referendum should be sent out through the Office of the Secretary and the Secretary was requested to prepare the foreword.

Report of Historian. The report of the Institute Historian, Mr. Fiske Kimball, was presented. It stated briefly that through the assistance of Mr. Waid an examination had been made of Institute papers and documents left by Mr. A. J. Bloor, former Secretary of the Institute. A large number of valuable documents were found, and through the kindness of Messrs. E. J. Darrell and Alfred Bloor Cooke these papers were made a gift to the Institute. There has not been opportunity to digest this record completely, and the work is now in progress.

Resolved, that the report be accepted as one of progress.

Cooperation with City Planning Institute. The Chairman of the Committee on Community Planning, Mr. Bright, was requested in November to cooperate with the Institute of City Planning, with particular reference to the session at its next conference, which is to be devoted to the aesthetic side of City Planning. Mr. Clarence S. Stein, member of the Community Planning Committee, attended a meeting of the Directors of the Institute of City Planning, and reported to the Executive Committee on the situation.

Resolved, that the matter of cooperation with the City Planning Institute be left in the hands of Mr. Bright, Chairman of the Community Planning Committee and Messrs. Stein, Ackerman and Kohn, New York, members of the Committee.

Invitation of American Academy of Political and Social Science. A request was presented from the Secretary of the American Academy of Political and Social Science, requesting that the Institute name three delegates to its meeting in Philadelphia on May 13, and 14.

Resolved, that the Secretary be instructed to make acknowledgement, advising why the Institute cannot participate.

Members Elected. (See list on page 7.)

Proposed Joint Code of Ethics for Architects and Engineers. A request of December 6, 1920, was presented, through Mr. Horace Wells Sellers, former Chairman of the Judiciary Committee, from Mr. A. G. Christie, Chairman

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of the Code of Ethics Committee of the American Society of Mechanical Engineers. It recommended action on the part of the various Engineering Societies and the American Institute of Architects in the preparation of a joint Code of Ethics to govern both engineers and architects. A report of the Engineers' Committee accompanied the communication.

The Secretary was requested to reply, conveying the sense of the Executive Committee to the effect that the Institute does not consider a joint code feasible, but that it was willing to cooperate in any possible way with the Engineers in drafting their own code.

Proposed Change in Chapter Disciplinary Procedure. As requested by the November Board, the Secretary submitted draft of amendment to Standard Chapter By-laws, as follows:

Resolved, that in the Standard Form of Chapter By-laws, Article IV, Section 4, Discipline, second paragraph, the words "suspension of," occurring twice, be deleted in order to permit suspension of a member by action of the Executive Committee of the Chapter, and

Resolved, further that this resolution be sent by the Secretary to all Chapters with a brief statement of the reasons therefor, and with a request, on behalf of the Convention, that the Chapter By-laws be amended accordingly as soon as practicable, so that the permitted procedure would be the same in all Chapters."

Resolved, that this resolution be approved in principle, and submitted to the membership for approval thirty days in advance of the convention.

Proposed Amendment to Institute Disciplinary Rules. The Chairman of the Committee on Practice has recommended an amendment to Rule 1, of the Disciplinary Rules, by striking out "also a complete file of the evidence in the case" and substituting "also a complete file of the evidence of the case as transmitted to the Judiciary Committee." A letter of February 28, from Institute Counsel approving this amendment was submitted.

Resolved, that the amendment be approved and submitted to the Convention in the Board's report for Convention approval.

The meeting adjourned at 6:30 P. M.

*New Members Elected

BALTIMORE: Wm. Gordon Beecher, Herbert G. Crisp, James R. Edmunds, Jr., William H. Emory, Jr., D. K. Este Fisher, Jr., Henry Powell Hopkins, Herbert G. Jory, Wm D. Lamdin, Addison F. Worthington, Elk Ridge.
BOSTON: Wm. B. Coffin, Warren Caldwell Hill, Albert Stearns Kendall, Alex. Francis Law, Jens Fred Larson, Hanover, N. H.; Ernest M. Parsons, Henry C. Robbins, Sidney T. Strickland, William Hart Taylor.
CENTRAL NEW YORK: Walter Henry Cassebeer, Rochester; George Bain Cummings, Binghamton; Webster C. Moulton, Syracuse.
CLEVELAND: Frank W. Billman, Akron, Ohio; Julius Boenisch, Akron; Harry A. Brooker, Akron; Chas. Cecil Colman, Albert Houghton Good, Akron; John H. Graham, Frank M. Griffith, Reynold H. Hinsdale, John Kalsch, William Koehl, Frank W. Lear, Olmsted

*NOTE. Members have their offices in the city after which the Chapter is named, unless otherwise specified.

Falls, Ohio; Wm. Robert Powell, Philip L. Small, Claude Stedman, John F. Suppes, Akron, Ohio; Armen Tashjian, Henry A. Walsh, Jos. Lewis Weinberg.
COLORADO: Harold W. Burton, Salt Lake City; Lewis Telle Cannon, Salt Lake City; Georgius Young Cannon, Salt Lake City; Clifford P. Evans, Salt Lake City; John Fetzer, Salt Lake City; John F. G. Gunther, Salt Lake City; Leslie Hodgson, Ogden, Utah; Myrl McClenahan, Ogden, Utah; Miles E. Miller, Salt Lake City; Eber F. Piers, Ogden, Utah; Hyrum Pope, Salt Lake City; Daniel Spani, Rock Springs, Wyo.; A. O. Treganza, Salt Lake City; Walter E. Ware, Salt Lake City, Taylor Woolley, Salt Lake City.
CONNECTICUT: Chas. W. Walker, Jr., Bridgeport.
GEORGIA: Franklin Oliver Adams, Jr., Tampa, Fla.; Flippen David Burge, Atlanta, John C. Dennis, Macon; C. E. Frazier, Atlanta.
ILLINOIS: George W. Allen, LaPorte, Ind.; Byron DeWitt Day, Terre Haute, Ind.; John W. Gaddis, Vincennes, Ind.; Henry Raeder, Chicago; Wm. Earl Russ, Indianapolis.
KANSAS CITY: Arthur Ward Archer, Walter A. Besecke, Elmer Boillot, Robert Boller, Walter Boschen, Arthur Buckley, Roy E. Crans, Galen VanRenselaer Gloyd, Arthur R. Hardy, Alfred W. Hertz, Arthur D. James, Frederic E. McIlvain, Ramon Schumacher, Leslie B. Simpson, Percy K. Simpson, Carthage, Mo.; J. G. Sunderland, G. H. Thomas Washburn, Eastland, Tex.; Norman Lee Wilkinson.
LOUISIANA: Morgan Dudley Hite, New Orleans; Solis Seiferth, New Orleans.
MICHIGAN: George J. Haas, Detroit; Jesse F. Hirschman, Detroit; Louis Kahn, Detroit; W. G. Malcolmson, Detroit; F. Gordon Pickell, Detroit.
MINNESOTA: F. C. Boerner, Minneapolis; Clarence J. Brown, Minneapolis; Victor Cordella, Minneapolis; E. B. Croft, Minneapolis; C. H. Johnston, Jr., St. Paul; Robert Taylor Jones, Minneapolis; Wm. R. Plew, Bozeman, Mont.; Geo. H. Shanley, Great Falls, Mont.; Stanley A. Smith, Fargo, N. Dak.; Henry Tusler, Minneapolis; Guy E. Wiley, St. Paul.
NORTH CAROLINA: James W. Hopper, Leakesville, N. C.; Harold Macklin, Winston-Salem; Wm. H. Peeps, Charlotte, N. C.
OREGON: Frank H. Paradise, Jr., Pocatello, Idaho; Wm. L. Smith, Portland.
PHILADELPHIA: Andrew Chas. Borzner, Miles B. Dechant, Reading; Victor Eberhard, Herbert Furman Everett, Allentown; Frank E. Hahn, George Howe, Lewis S. Jacoby, Allentown; Walter T. Karcher, Robert Lange, Allentown; Ephriam M. Pickin, Allentown; LeRoy B. Rothschild, Wallace E. Ruhe, Allentown; Calvin James Young, Reading.
PITTSBURGH: Harry S. Bair, Edw. Wm. Bartberger, Paul A. Bartholemew, Ernest Wilson Boyer, Press C. Dowler, Frank M. Duke, John B. Elliott, Howard K. Jones, Chas. J. Palmgreen, Versailles, Pa.; Geo. H. Schwan, W. F. Struthers, Edward J. Weber, Lawrence Wolfe, Ben Avon, Pa.
RHODE ISLAND: Gorham Henshaw, Providence.
SAN FRANCISCO: Jas. T. Narbett, Richmond, Calif.
SOUTH CAROLINA: J. Frank Collins, Spartansburg, Fred R. Deal, Sumter, S. C.; A. D. Gilchrist, Rock Hill, S. C.; James Calvin Hemphill, Greenwood, S. C.; Robert Stoddard LaFaye, Columbia, J. D. Newcomer, Charleston, S. C.
SOUTHERN PENNSYLVANIA: Melvern R. Evans, Lancaster.
ST. LOUIS: John Parks Almand, Little Rock, Ark.; Frank M. Blaisdell, Little Rock, Ark.; Lawson L. Delony, Little Rock, Ark.; Frank J. Ginocchio, Jr., Little Rock, Ark.; Fred J. Halsey, Texarkana, Ark.; Theo M. Sanders, Little Rock, Ark.; Eugene Chas. Seibert, Texarkana, Ark.;

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Mitchell Selligman, Pine Bluff, Ark.; Geo. W. Spearl, Bayard Witt, Texarkana, Ark.; Geo. H. Wittenberg, Little Rock, Ark.; Henry Wright, Clayton, St. Louis Co., Ark. TENNESSEE: R. A. Heavnet, Jackson, Wm. Hatfield Sears, Chattanooga. TEXAS: Lamar Q. Cato, Houston; Joseph Finger, Houston. VIRGINIA: Otis K. Asbury, Richmond; Randolph M. Browne, Norfolk.

WASHINGTON, D. C.: Robert F. Beresford, Edward Burton Corning, O. Harvey Miller, Wm. Partridge, Horace W. Peaslee, Marshall J. Smith, Fred W. Southworth, Charles H. Stratton, Harry C. Wilkinson. WASHINGTON STATE: Kirtland Cutter, Spokane. WISCONSIN: Leigh Hunt, Milwaukee; Arthur Peabody, Madison; Perce G. Schley, Milwaukee. Total 171.

Pre-Convention Resolutions of the Illinois Chapter

For some time the Illinois Chapter has had a Pre-Convention Committee at work studying such questions as were thought desirable to lay before the Convention, and this study has crystallized in the form of a series of resolutions which have been laid before the Board of Directors of the Institute with a request that copies of them be sent to those committees interested. The resolutions are of such length as to preclude publication in these pages, especially as they were received just before going to press, for they very evidently represent a good deal of careful study.

It is proposed to change the title of the Model Registration Law to "Model Form of Law for the Registration of Architects in States Having a Comprehensive Building Code," and to amend Section 21, providing that the "high school" course shall be approved by the Governing Department and not by the Institute. Also to lessen the period of experience in an office from three to two years, (Sec. 22 a). There are other minor changes, and it is suggested that the amount of the bond, specified in Section 24, shall be \$1,000.

Another resolution favors the early adoption by all states of a simple, direct, and comprehensive state building code, and instructs the Board of Directors to assist in that work. It is proposed to delete the Schedule of Charges of all unnecessary verbiage and of all phrases calculated to show, "on the part of the architect a lack of confidence in the integrity and fair dealing of the client," and to cause to be prepared two documents, one to be called the "Code of Professional Practice," and the other the "Schedule of Recommended Minimum Professional Charges," both documents to bear the designation of the Institute. The amendments to the Schedule of Charges are as follows:

Section 5 to be amended to read as follows: "The Architect when rendering services indicated in Articles 1 and 2 without the executive services referred to in Article 12; when conditions justify; is to be reimbursed the cost of transportation and living incurred by him and his assistants while traveling in discharge of duties connected with the work. Under ordinary circumstances the services required in the design of heating, ventilating, mechanical, structural and electrical problems, and similar services, are a part of the Architect's services and are included in the Architect's charges; but when special engineering or other problems of an unusual nature are involved or consultation services are necessary or desirable, the basic rate should be increased to include the cost of such special services. When special consulting services are required by the owner, the architect shall either be reimbursed by the owner for the cost of such services, or the owner may with the knowledge and consent of the Architect arrange for such services directly."

Section 6 to be amended to omit the last sentence of the paragraph. Section 7 to be amended by adding the phrase "or other casualty" after the word "fire" in the tenth line of this Section.

Section 8 to be amended by omitting the phrase "on account of it" after the word "rendered" in the sixth line of said Section.

Section 9 to be amended by adding a new fourth paragraph between the present third and fourth paragraphs to read as follows:

"During the preparation of the preliminary studies and of the specifications and general working drawings it is proper that payments on account be made at monthly or other intervals, in proportion to the progress of the Architect's service and so as to aggregate in each period not more than the sums prescribed above."

The last paragraph of Section 9 to be amended to include the phrase "the use of old materials" before the word "penalty" in the second line of said paragraph.

That a new section to be known as Section 12 shall be added after Section 11 of the existing document, said Section 12 to read as follows: "The Architect may also include in the services to be performed the execution of work as a building construction manager on a known fee or percentage basis for which an extra charge of 4% to 6% is equitable, but not as a contractor on a lump sum basis."

Section 12 of the existing document to be renumbered Section 13; that Section 13 of the existing document to be renumbered Section 14."

The National Council of Registration Boards is approved, in another resolution, with the recommendation that architectural standards should be lifted as high as those pertaining to any other professional body, and should also be made a part of the educational administration rather than placed under the policing department.

The moot question of advertising again appears, for it is recommended that the present paragraphs in the Circular of Advice be changed to read: "Publicity of the standards, aims and progress of the profession, both in general and as exemplified by individual achievement, is essential. The Institute relies upon its members to keep whatever advertising they may do within the bounds of truth and good taste, and of such character as maintain the high ideals of the Institute." Article 13 of the Circular of Advice also to be amended as follows: "The placing of the architect's name on a building during construction serves a legitimate purpose for public information."

The competition plan put forth by the Boston Chapter is approved; the present condition of the building industry is suggested as a topic for the convention; the independence of architectural schools is deemed to be vital to the best interests of the schools, wherever they are, how influenced or dominated by engineering departments; draftsmen should be helped in their work and their study by sympathetic co-operation on the part of their employers, and a final resolution calls for instructing the officers of the Institute "to proceed immediately with the formulation of a plan which may be properly called 'National Publicity of the Architectural Profession,' and that such plan shall in reality have as its aim the acquainting of the public with the advisability of securing trained architectural service in connection with all building projects."

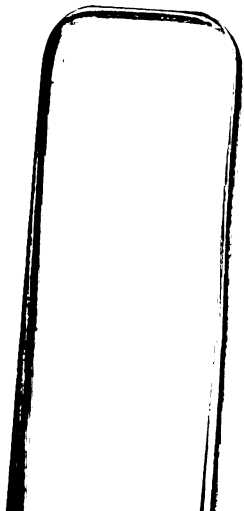
It seems rather a pity that more Chapters have not been as hard at work as that in Illinois, for manifestly only a great good can come from the study and discussion of these questions, and only by such a method can delegates to the Convention cast their vote in the best interests of the profession at large.

C. H. W.

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