

THE AMERICAN ARCHITECT

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War and Industrial Housing

By HENRY ATTERBURY SMITH

WAR has not brought new housing problems, as many who have but lately thought about the matter seem to believe. It has merely made the problems more acute in certain places. It has introduced specific phases of the housing problem where they never were before, and brought a pressure for human habitations in many localities where the usual yearly increment in housing was enough to take care of the loss of old buildings and the additional housing necessary for the new families coming to town.

War has made many of us think more fundamentally and read more widely, and if we observe closely and think correctly, this great strain may bring about changes for the better that will become permanent. Let us not deceive ourselves into thinking that housing conditions have suddenly become bad; but rather let us realize that merely our consciences have been awakened to the conditions that have been prevalent for generations. A most enlightening book to read just now is "The Town Laborer" (1760 to 1832) by Hammond, published this year in London. This is interesting reading and will give the suddenly awakened housing "expert" a realization of his task and the probable time it will take to solve it.

Improvements in housing evidently move slowly. Only such agencies as the Charitable Societies and the Housing Associations delude themselves into thinking that great strides are being made. Let the reader correspond with Dr. Darlington, health advisor of the steel industries, to be apprised of this fact. Dr. Darlington is doing all he can in the immense industries he advises, and yet it is pitiful to observe here, as well as generally, the indifference and ignorance of others who will not or do not act in co-operation.

War has undoubtedly drawn great masses of people to certain towns—Bridgeport, Bayonne or Akron, for example—but previous to the war the problem was becoming very acute in such places as Detroit and Flint. Women's entry into the indus-

tries has changed the problems in some towns, but it has not created new problems at all. All the problems are "as old as the hills"; they all have been acute somewhere all the time, and now, fortunately, attention is being given to them; not much attention perhaps, but a little.

This being an architectural journal, it will be fitting to speak about design and type. When most people speak about housing, they have merely in mind some sort of a cottage or house similar to what they have lived in or visited. Housing means to them something with four walls, a roof, a garden, perhaps a well, surely a furnace, usually a cellar, and perhaps a bath. The great mass of our population, no matter what their wages, cannot live in a house of this kind, in spite of how much we, who do not pay the bill, may talk about it and hope for it. In such houses now existing, you will frequently find a family and a few boarders, or you will find several families where but one was intended. I say the great mass; I am not talking about the foreman, the superintendent, or the boss. They have not the impossible problem; they will find a house or the industry or some one will build a \$4,000 or \$5,000 or perhaps an \$8,000 house for them. They do not crowd together or take in boarders; they wash and keep clean. They are the ones who generally get housed, but there is not sufficient ingenuity and knowledge floating about for architects or engineers to suggest some means of housing the lower strata.

War is teaching us economy in America; it may teach us efficiency. We have been reckless spendthrifts, but suddenly we are pulled up short and are learning our lesson well, and we are searching for better methods—necessity is the mother of invention; sometimes necessity brings to the front a former invention.

The answer to our present housing shortage is the "Economic Open Stair Dwellings," introduced in its perfect form in 1900, but built more or less imperfectly ever since. We have had several open

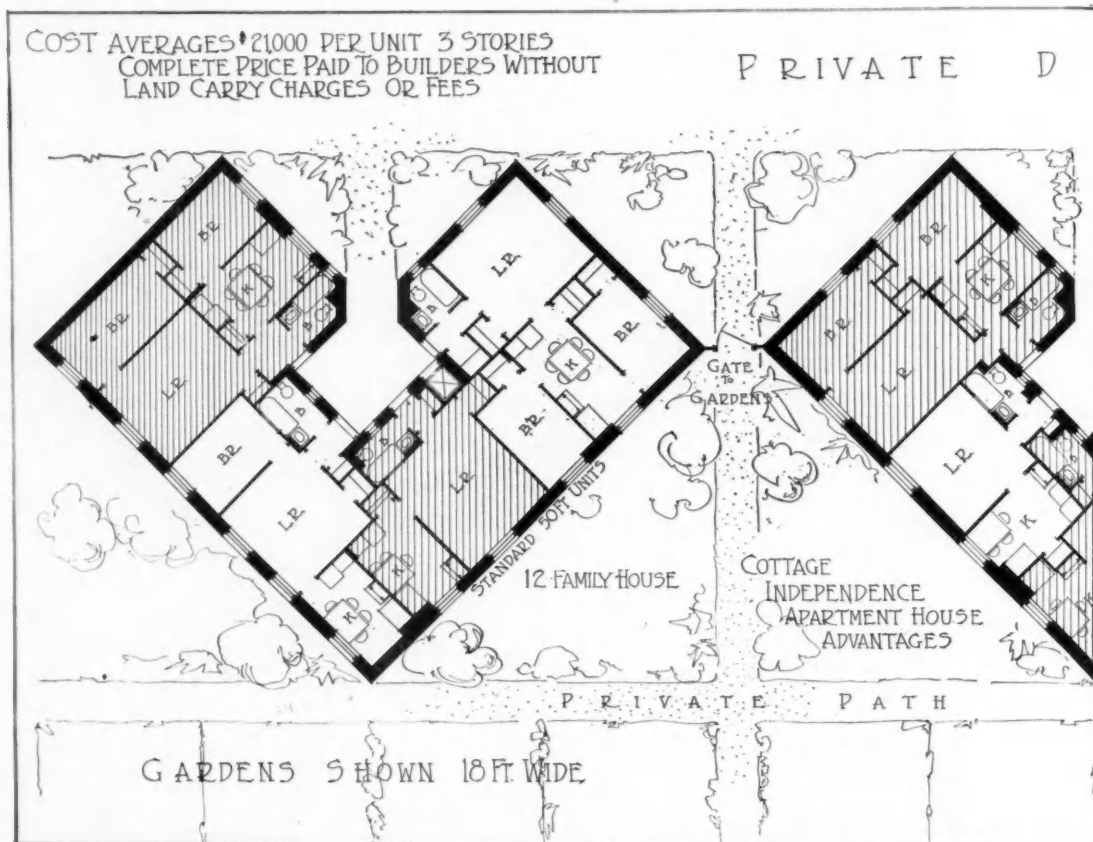
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stair dwellings, but an *economic* one has not been yet erected in the East.

An economic open stair dwelling is best described by illustrations. On each of these plans those who have studied any other multi-family house will find that there is no other as economically arranged. There are no halls; all the space is used for rooms and closets. And those who are interested in health and morals will observe that this

caused higher wages and many young girls have been tempted away from their homes out in the country and have come to town. They have left all their home influences and have shifted their life to the factory town, coming with merely a hand satchel. Almost half the employees are girls. Where do they live? In improvised hotels. Do these girls like it? No, they surely do not. It has been the experience of everybody that interviews



FLOOR PLANS, MULTI-FAMILY HOUSES

type serves them best. Although a multi-family house, there are no interior stairs or passages; there are no dark parts at all. Each occupant enters his suite of rooms right from the open fresh air.

Now, who wants such a thing except in crowded New York or Chicago? The answer is, everybody wants such a thing who cannot afford to live independently without a boarder or another family, in a private house. Take, for instance, the industrial locality of the Naugatuck Valley in Connecticut. Here, many women have always worked in the rubber industries. Now the demand for labor has

them by the hundreds, as I have done, that they have sought in vain little housekeeping suites where two or three can club together and live more as they did at home. The plan here illustrated is just what they want. Some will take two rooms and a bath; some three or four.

How about the young men in town; where do they live? They shift for themselves. The great mass of people are boarding. Why? Because it is so expensive to get married. If more economic open stair dwellings were provided there would be a greater tendency to start housekeeping. These

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little suites, two rooms and bath, can be rented at a profit to the owner, at \$3 per week, even in the present high cost of labor and material. The employer wants to hold his employees; he does not in some instances care so much whether they are comfortable or not, but he really would like to keep them from floating about. A good way is to anchor them by making them comfortable. Why does he not try that? He has never thought deeply

apartments morally pure with groups of young men in some and girls in others? Well, how do you keep your hotels and present makeshifts pure? The answer is in the spirit in which it is done and the character of the management. Some very unanswerable questions were put to me in 1911 and 1912 when we were erecting the John Jay dwellings on East Seventy-seventh Street, New York City. Now all these questions have answered themselves, and

R I V E

WILLIAM P MILLER
ARCHITECT
NEW YORK



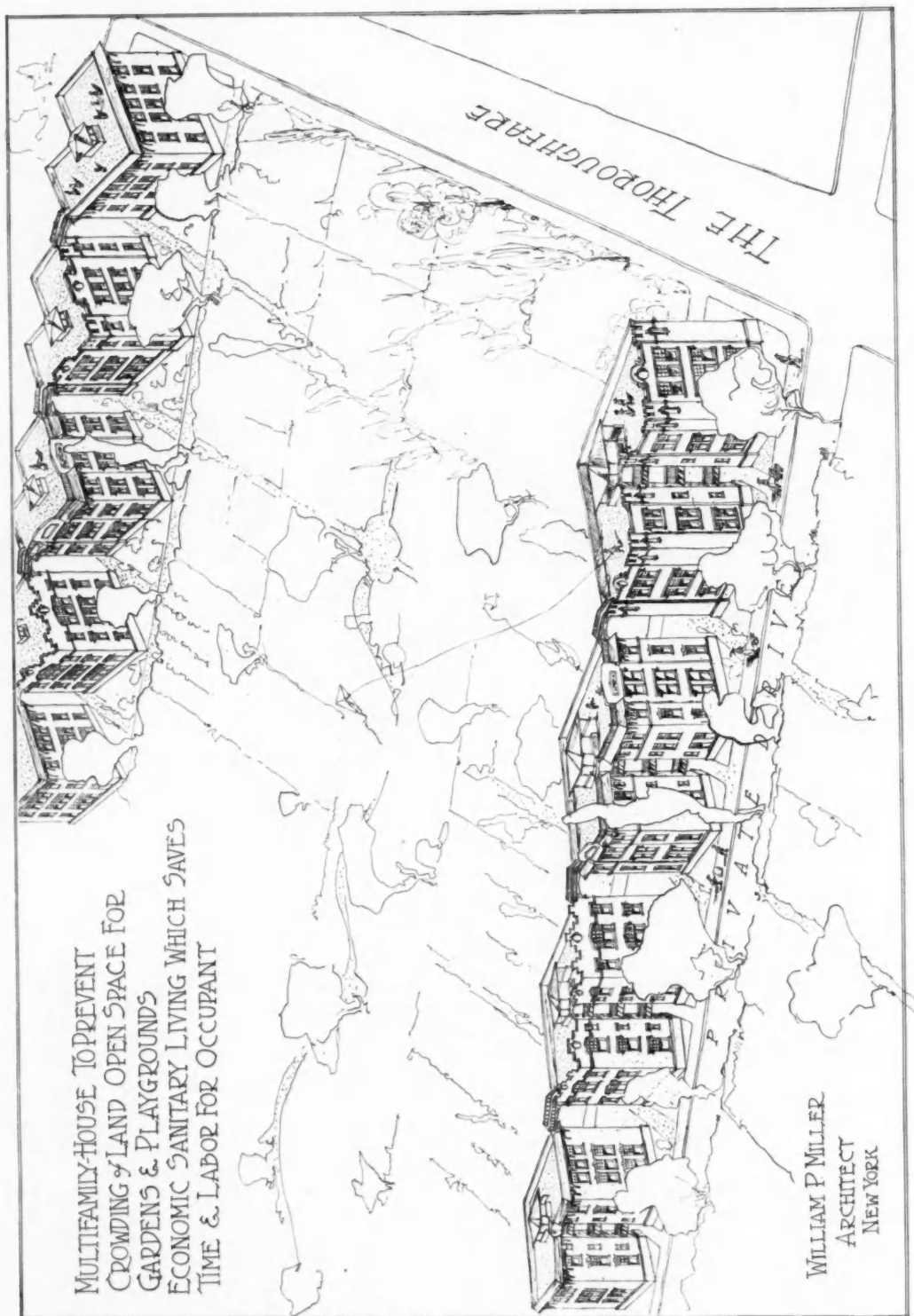
FLOOR PLANS, MULTI-FAMILY HOUSES

about an economic open stair dwelling. He has built many houses at the rate of \$4,000 or \$5,000 per family or more, and his cash is exhausted or he believes that he has done enough, and that it is time for someone else to follow his example. What do these economic open stair dwellings cost? From \$1,100 to \$2,000 per family, and so the money goes twice or four times as far.

How does the writer know so much about it? He has done nothing else but study and try, and try again, and study out this one matter and its relation to the employer of labor. How can you keep such

it is interesting to note that with 281 families there are 19 nationalities, and 52 apartments are rented to groups of girls who prefer to keep house in the little suites than to be in boarding houses and hotels or to crowd in unsuitable places with other families.

Can the industrial town do the same? Would you suggest such a thing where land is cheap? Would people live in such things in the country? These are a few of the questions put to me weekly. The answers I make do not seem to take root, or we would see these profit-producing, health-promoting types springing up all over, instead of the expen-



MULTIFAMILY-HOUSE TO PREVENT
CROWDING & LAND OPEN SPACE FOR
GARDENS & PLAYGROUNDS
ECONOMIC SANITARY LIVING WHICH SAVES
TIME & LABOR FOR OCCUPANT

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ARCHITECT
NEW YORK

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sive, loss-producing, boarder-crowded, individual house or terrace type so prevalent.

Some of the best citizens of our land controlling big industries are "winking" at boarding and overcrowding. They think it is a temporary condition. Let them read the history of housing and they will learn that it is not so. They should not encourage boarding or overcrowding. They should hit up their own energies to induce types that men can afford to live in, no matter how low their wages; types that will induce people to marry and live in their own nest, no matter how small it may be, rather than postpone marrying for years, perhaps forever, waiting for enough income to warrant a house.

Two of the best industries in Chester, Pa., and Akron, Ohio, among others, were encouraging boarding in houses that had been erected as models for individual dwellings. In the former place, a foreman of the works in charge of a little English-planned town stated that their houses were only rented to families having four grown-up daughters. Well, suppose some one has not just this blend? Then they will have to get them, was the answer. Each individual little cottage had to provide, besides the head of the house, four adult girls in the factory.

What is the main drawback to the economic open stair dwellings? Why does it not take quicker? These are questions I ask myself a great deal more often than such queries are put to me. The reason is this: While it is true that it takes much less money per family, yet it means that a large amount of money must be available all at one time. When one starts to erect one of these buildings, he must be prepared to make a good scientific layout. He must lay aside \$1,500 to \$2,000 per family all at once. If this is in terms of say 200 families, this

is a good deal of money. He can usually borrow one-half of this on mortgage to advantage, but still it is a big layout all at once. Whereas, with the cottage scheme, or even with the Philadelphia terrace type scheme, he can try a few, four or five or ten at a time, with almost the same economy as if 100 houses were built.

In closing, let me say that no housing scheme that is more than two rooms deep should ever be accepted by any one considering housing. That is, there must be no interior room, no alcove makeshift. Each room must have one whole wall surface to the outer air. There must be no placing a third room in front of a part of a room, thus creating pockets. If a proposition cannot provide a scheme only two rooms deep, it should be discarded; it will not stand the test of time.

In a subsequent article I will present an adaptation of the Philadelphia terrace type upon a scientific co-operative basis, with a central heating plant, a scheme that eliminates the necessity of the street entirely. As far as I know, these two types are the only solutions to our housing problems. The majority of so-called housing experts and town planners are

"fussing" over this type of individual house or that type of terrace house. The whole discussion that took place at the National Housing Association which met at Providence last year was in my opinion about one or two centuries behind the times. The industrial town planner should commence with the home and not with the street. Maybe we will find that we don't want the street.

This is the first of a series of authoritative articles on Industrial Housing as affected by war conditions. The second article, by Mr. Smith, will appear in an early issue.
(To be continued)



A Few of the Reasons Why the High Cost of Labor Does Not Necessarily Mean an Increased Cost of Building

Twenty-five years ago when the hod carrier worked ten to eleven hours a day for \$1.25, laboriously carrying the hod up ladder after ladder, a fair measure for a day's work was the handling by him of about 1500 to 2000 bricks. To-day with hod carriers working eight hours a day, receiving a minimum wage of \$5, a quick-running construction hoist, to say nothing of the modern mortar mixing machine which eliminates a large part of the cost and increases the quality of the mortar, is substituted for the unconquerable and painful slowness of the ladder. Thus it comes about that the present-day laborer in eight hours handles ten to twelve thousand bricks for \$5, plus the cost of operating the hoist, as against the old ten-hour day at \$1.25, handling a maximum of 2000 bricks, plus the cost of the ladders and the loss of time. The loss of time is a serious item and is the basic principle of discount and interest.

The same thing applies to the cost of nearly every other economic element in building construction. The concrete mixing machine not only with mechanical precision insures a perfect mixture, but does it much more rapidly and at less cost than the old unreliable and expensive method of mixing concrete by hand.

The pneumatic drill or hammer drives rivets with accuracy and safety at one-tenth the cost of the former slow, cumbersome, unsafe and expensive method of the hand-driving of rivets, of bolting together the different structural members of a steel frame that have to be assembled in the field. The pneumatic drill and other mechanical tools cut, carve and fashion three to four times more in cubic feet of stone work than was formerly accomplished by hand with artisans receiving less wages and working longer hours. The sandpapering machine, the floor polisher, the portable sawmill and hundreds of other devices used in building are all tributary not only to rapidity in construction but to economy in cost. This more than equalizes the higher wages and shorter hours of labor now prevailing.

Therefore, if under old methods a building such

as the Mills Building in San Francisco, or any other modern office building, cost at that time as much or more than identical buildings would cost to-day, would it not be safe to assume that such buildings will not cost more in the future with even higher wages and shorter hours, owing to still further improvements in methods? One safe and reliable prophecy is that present-day costs will never be less.

Of course, labor-saving devices disturb the economic world, the purchasing power of the dollar is ever changing, but business acumen is always rewarded when it recognizes and meets the conditions of the moment.

Willis Polk.

Apartment Studio Building, No. 200 West 57th Street

CASS GILBERT, ARCHITECT

The building is fireproof throughout, exterior finished with rough cream colored face brick and terra cotta. Terra cotta at main entrance is treated in polychrome color. The building is occupied by stores on the first floor, business offices on the second and partly on the third floor. The balance of the third and other floors are subdivided into the usual housekeeping apartments, studios in combination with living rooms (provided for housekeeping purposes), and working studios with only sleeping accommodations and kitchenettes.

The combination of these functions had developed a very interesting, unusual and rather complicated problem.

Special attention is called to the center studios on the Fifty-seventh Street front, which interlock with the studios east and west of same. By this method it has been possible to provide the maximum frontage for these studios. The interlocking system reduces the studios at what might be called the mezzanine floor level providing at the same time additional sleeping rooms and bathrooms at such points.

The two corner studios combined with the living quarters are in the form of a duplex apartment. The other apartments are of the simplex style, i. e., with living, sleeping and housekeeping quarters on one floor.

Construction started Sept. 26, 1916, and building finished ready for occupancy Oct. 1, 1917.

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A National Organization

IN the department of Criticism and Comment in this issue there are printed communications from men who are, or have been, prominently identified with the activities of the American Institute of Architects. These letters are in comment on the editorial, "A National Organization," which appeared in THE AMERICAN ARCHITECT, issue of Dec. 12. We commend the very lively interest shown by Mr. Pond and by Mr. Taylor. Their attitude toward the Institute and their prompt willingness to defend it when they assume it has been attacked is worthy of emulation by every Institute member.

In both of these letters there is to be noted a certain misapprehension as to the purpose of the editorial criticized. There was no intention expressed, nor covertly implied, that it might be well to disrupt or eliminate the Institute as the governing body of the profession of architecture. The work that has been carried forward by the Institute as a body, supplemented by individual efforts of many of its members, has at all times been thoroughly recognized by this journal. Its pages during the past ten years will support this assertion.

However friendly the feeling toward the Institute may be by those in charge of the editorial conduct of THE AMERICAN ARCHITECT, they feel compelled to recognize certain apparent conditions.

Every man who has kept in touch with the practice of architecture during the past ten years will, if honest with himself, acknowledge that something is wrong, and that the profession has lost prestige, not only in its relation to the Government, but, which is more vital, to the general public. These are facts easily demonstrated, and are therefore opposed to Mr. Pond's contention that the Institute is a representative body.

We take no exception to Mr. Pond's assertion that the Institute is founded on the highest ideals and standards. The simple possession of these admirable qualities does not imply that the results achieved are of equal merit. We may proclaim our virtues and good intentions from the very house tops, but to give weight to our utterances we must square them with performances.

The suggestions set forth in the editorial criticized by Mr. Pond and Mr. Taylor, as to the reorganization of the Institute, were suggestions and nothing more. And, as suggestions, they represent the composite views, expressed in many letters received by the editors of this journal, and stated to them in numerous conversations. They were not intended to be taken as the one and only cure for present evils. The purpose was to present a basis for discussion. If a better means can be evolved, one that will serve the ends desired, it will receive the unqualified support of THE AMERICAN ARCHITECT.

Keeping Up With the Times

COMPARISONS are only "odious" to men who are fixed in one certain rut; who are obsessed with mental laziness and therefore regard with disfavor any effort to devise new ways, new and better substitutions for older methods.

Conservatism is the reason often urged for adherence to old customs. The common use of this much abused word has unfortunately resulted in impairing a certain respect for the adherence to old and often obsolete methods. Our entrance into this war, and all the many questions involved in our preparations for it, have served to upset well born traditions of procedure. The profession of architecture, that for decades has followed placidly the course of usual practice, conservatively specifying the same thing for the same purpose, now finds that the office-worn specifications are rapidly becoming obsolete, and that the usual, everyday methods must be altered to meet conditions that are every day changing. Every vital factor affecting our daily lives has changed to a greater or less degree. It will be interesting to cite examples:

Clothing costs more and yields less service.

Food costs more and goes no farther.

All forms of transportation cost more.

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In none of these instances of advanced costs do we find compensation in greater value.

A statement of advanced costs might be continued to cover almost every item we consume or use. The one item, all things considered, that really does not cost more, and as a matter of fact may even cost less, is that of building.

All reasoning is by comparison. While unthinking men may say to us that building material does cost more, and that the scale of prices is to-day from 30 to 60 per cent greater than two years ago, a statement with which we shall, of course, agree, it must be borne in mind that the rents now ruling are proportionately greater than the advance in materials, so that buildings erected to-day will return a larger proportionate profit than at any time for years past. In like manner the industrial building will earn a greater income proportionate to its cost than ever before.

Architects should know these things, should be so intimately acquainted with the many phases of the present building situation as to be able to impress these facts on their clients and by actual demonstration, show the wisdom of proceeding with building projects, halted either by reason of excessive caution or lack of knowledge of present conditions. Not only can the usual type of building be erected now at a relatively small advance in material costs, but, what at the present moment is of far greater importance, architects can build for clients a structure that will serve every essential purpose at an expenditure in many cases far below the cost of the building as originally designed.

This war has taught many lessons, but none greater than the fallacy of the popular belief that there is but one way of reaching a certain end. A good design with its accompanying well considered plan may be executed in many ways, of many different materials and, as has been proven within the past year, at less cost.

Just now it would seem to be a good time to cast aside a large part of that ultra conservatism which most architects have practised. To a great many men, specialization in practice has also meant specialization in material. Long habit in the specification or use of certain materials has served to cause some architects to ignore those other materials that are equally well adapted to their purpose, and are in some instances better.

This war will have compensations if it serves to awaken the dreamers to the fact that there are other methods, some better, some as good and even cheaper than those that in the past have been monotonously set forth with each job in certain machine-made specifications, honored because of their long years of service as short cuts to completion. Every

project that confronts architects to-day must be approached with an open mind, one divested of prejudice, and he must realize the necessity for saving every possible dollar—the dollar which in more normal times he squandered on old, time-worn methods without the danger of arousing his clients' protests. The client could then arrive at no reasoning by comparison, for was not his architect simply following custom? And custom was the only rule by which he could gage his architect's ability.

But unfortunately for the "as usual" architect, and fortunately for the prospective client, there are men alive to present conditions who have, for example, taken a million-dollar building, designed in a certain material now unavailable, built it for \$750,000 in another, equally serviceable and available, and won the lasting friendship of a grateful client. It is said that "money talks," but in a case like this, and there have been many such cases, money actually shouts.

The lessons that will be brought home to every thoughtful architect when he finds that there are equally good, available substitutes for those materials now unavailable, will also suggest other means of effecting a saving in costs without impairment of efficiency.

For example, the custom of letting the contract to the lowest bidder is, of course, putting the whole question of economy up to the contractor. The contractor is naturally primarily interested in saving money for himself. Could not an architect by closer scrutiny of the bids, as affecting the major materials, save for his clients? What is the cost of a building? Is it what it cost the contractor to build or what it cost the client? Of course, the answer is obvious.

Just at this time the service that the right sort of architect may give to his client can be made more valuable than ever before. This service will consist first in the presentation of the proper arguments showing that now is the right time to build, and then, with authority to proceed, bringing every atom of skill in the planning of the structure and in the choice of materials that will result in the greatest possible percentage of income.

Let it not be assumed that there is any disposition to ignore the esthetics or to accent the purely material factors over those of "architecture." Much of the uncertainty that now confronts the practise of architecture is due to too close pursuit of the shadow, and a too small regard for the substance. The fact cannot be "blinked" that the gradual elimination of architects from certain classes of work is due to their insistence that the esthetics are of greater importance than the utilitarian and income-bearing aspects of the problem.



PLATE 17

200 WEST 57TH STREET BUILDING, NEW YORK

CASS GILBERT, ARCHITECT



DETAIL OF UPPER STORIES

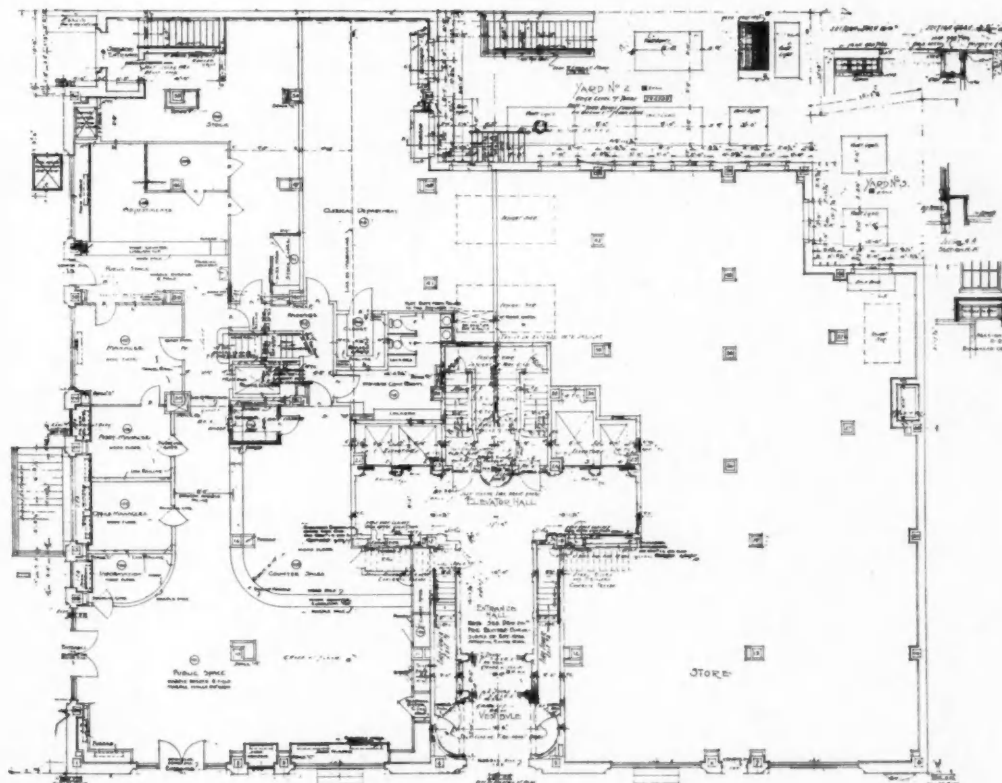


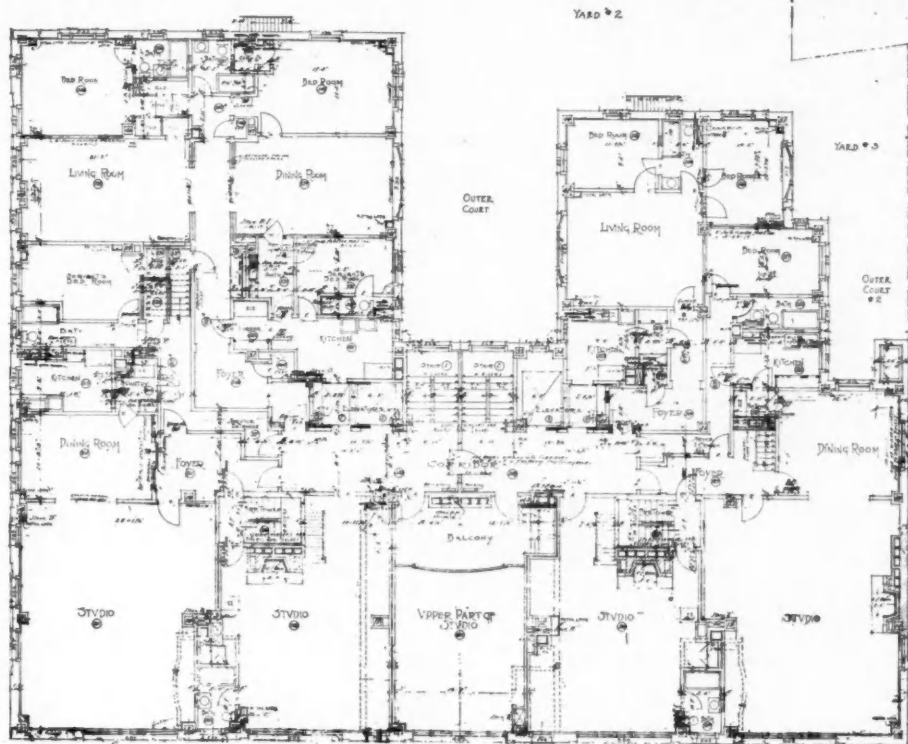
PLATE 18

FIRST FLOOR PLAN

200 WEST 57TH STREET BUILDING, NEW YORK
CASS GILBERT, ARCHITECT

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PLAN OF 3RD, 5TH, 7TH, 9TH AND 11TH FLOORS

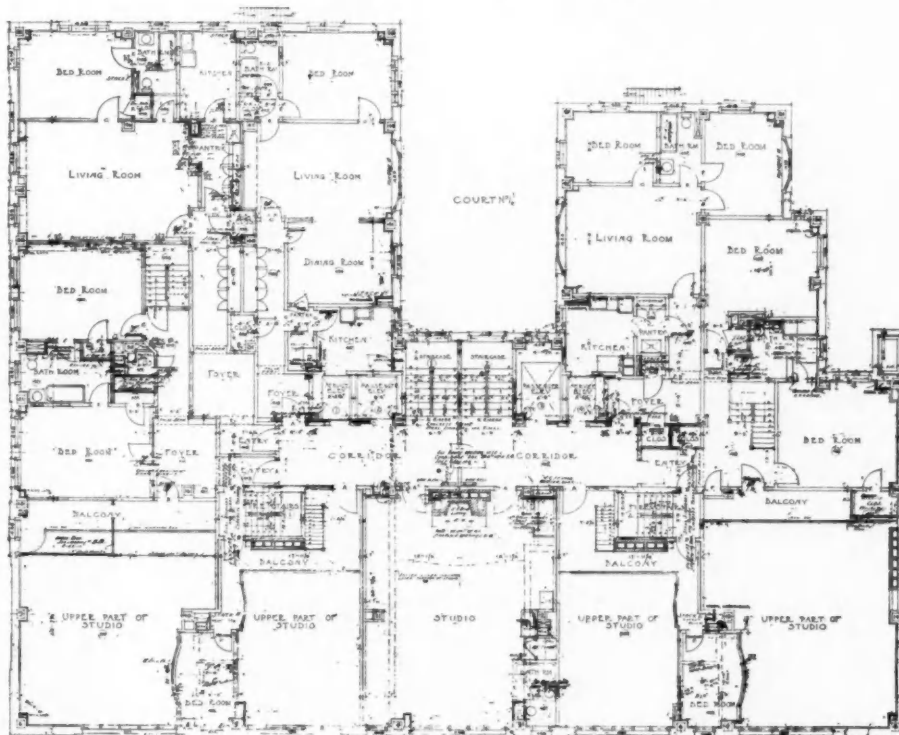
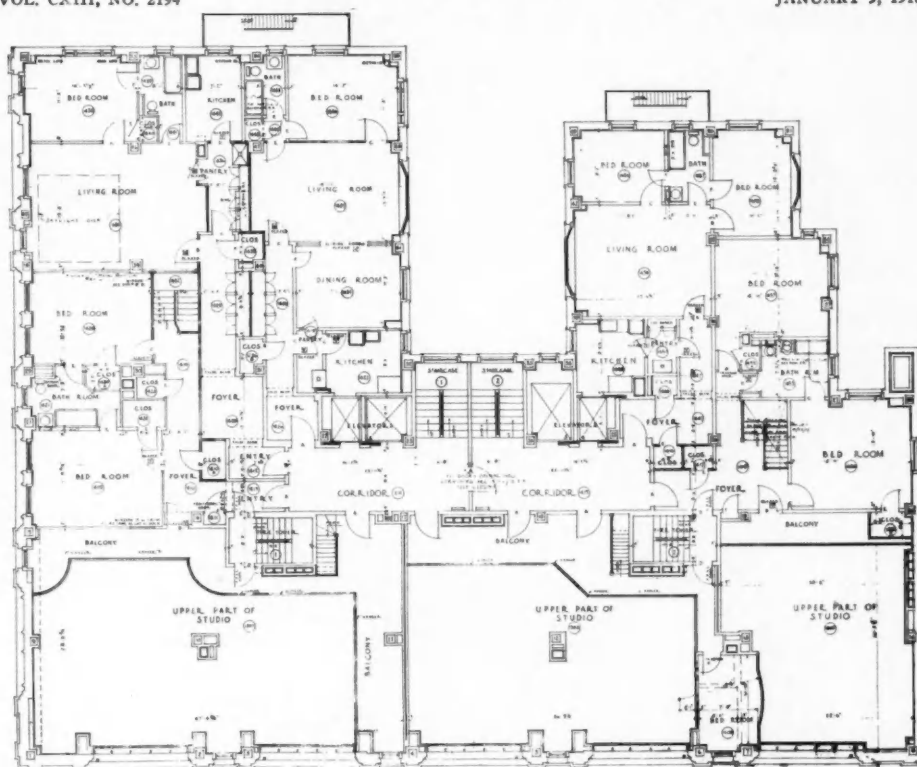


PLATE 19

PLAN OF 4TH, 6TH, 8TH, 10TH AND 12TH FLOORS

200 WEST 57TH STREET BUILDING, NEW YORK
CASS GILBERT, ARCHITECT



PLAN OF 14TH FLOOR

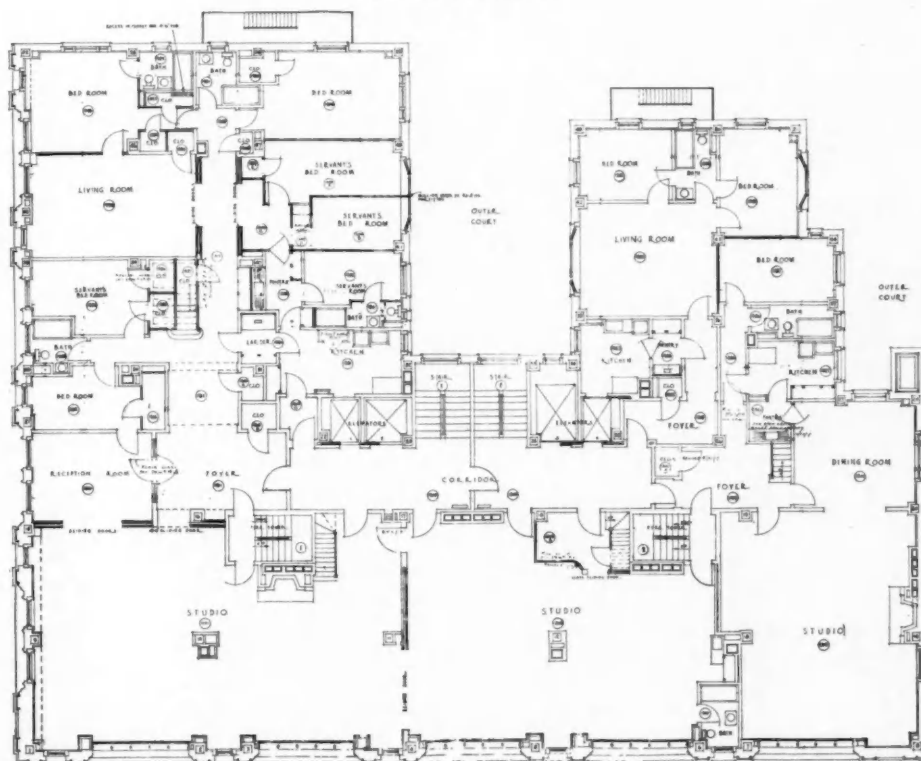


PLATE 20

PLAN OF 13TH FLOOR

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CASS GILBERT, ARCHITECT

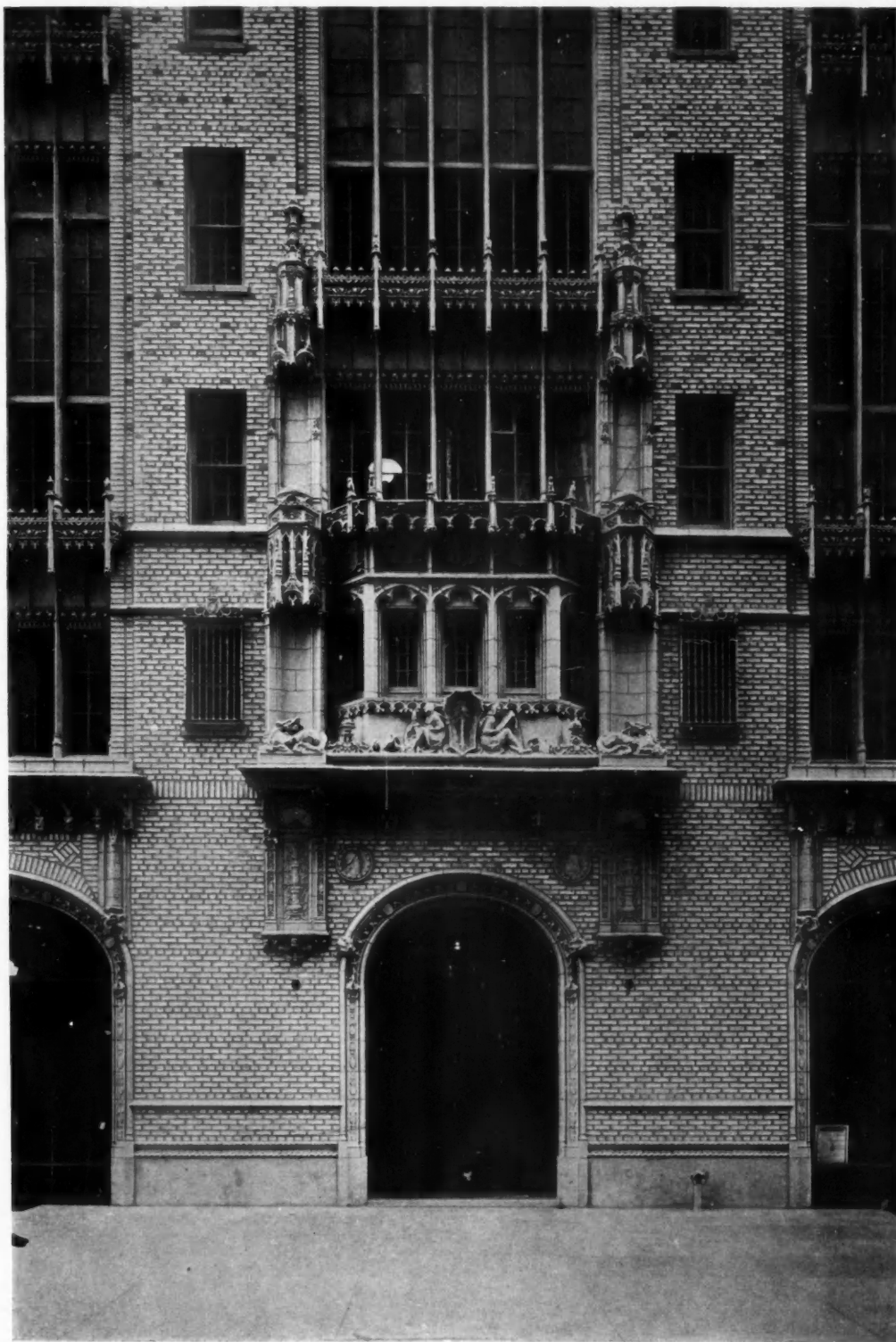


PLATE 21

CENTRAL DETAIL, LOWER STORIES, 57TH STREET FACADE

200 WEST 57TH STREET BUILDING, NEW YORK

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PLATE 22

DETAIL OF PRINCIPAL ENTRANCE

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PLATE 23

DETAIL OF SERVICE ENTRANCE

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PLATE 24

EXTERIOR DETAIL

200 WEST 57TH STREET BUILDING, NEW YORK

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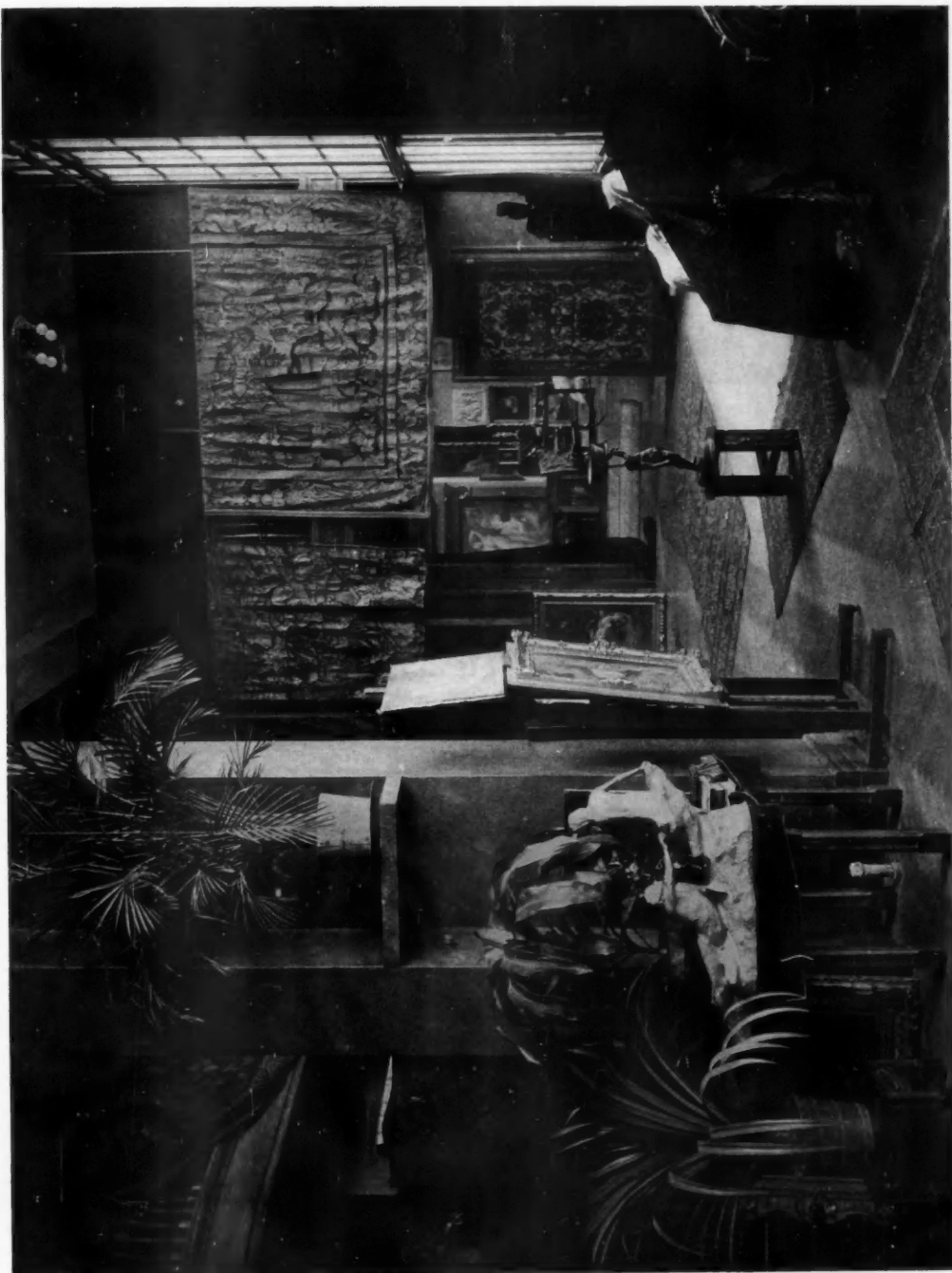


PLATE 25

STUDIO INTERIOR

200 WEST 57TH STREET BUILDING, NEW YORK

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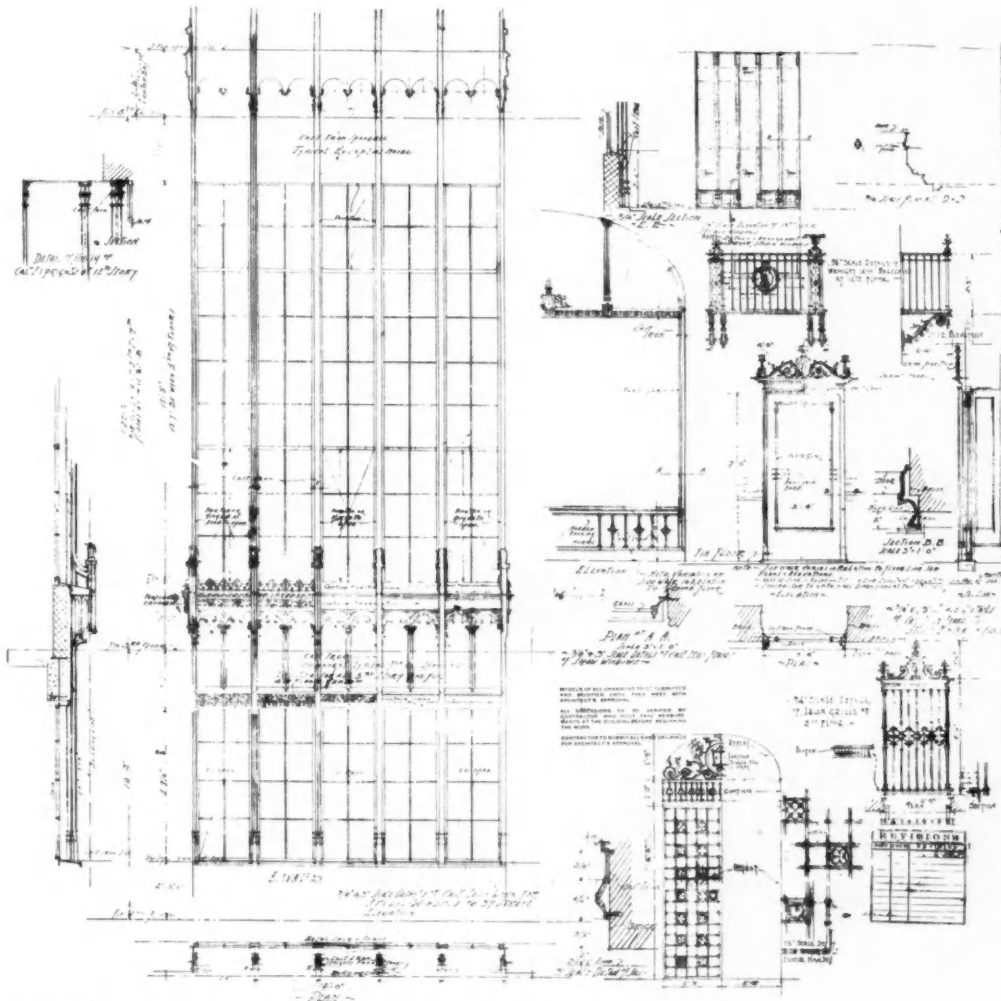
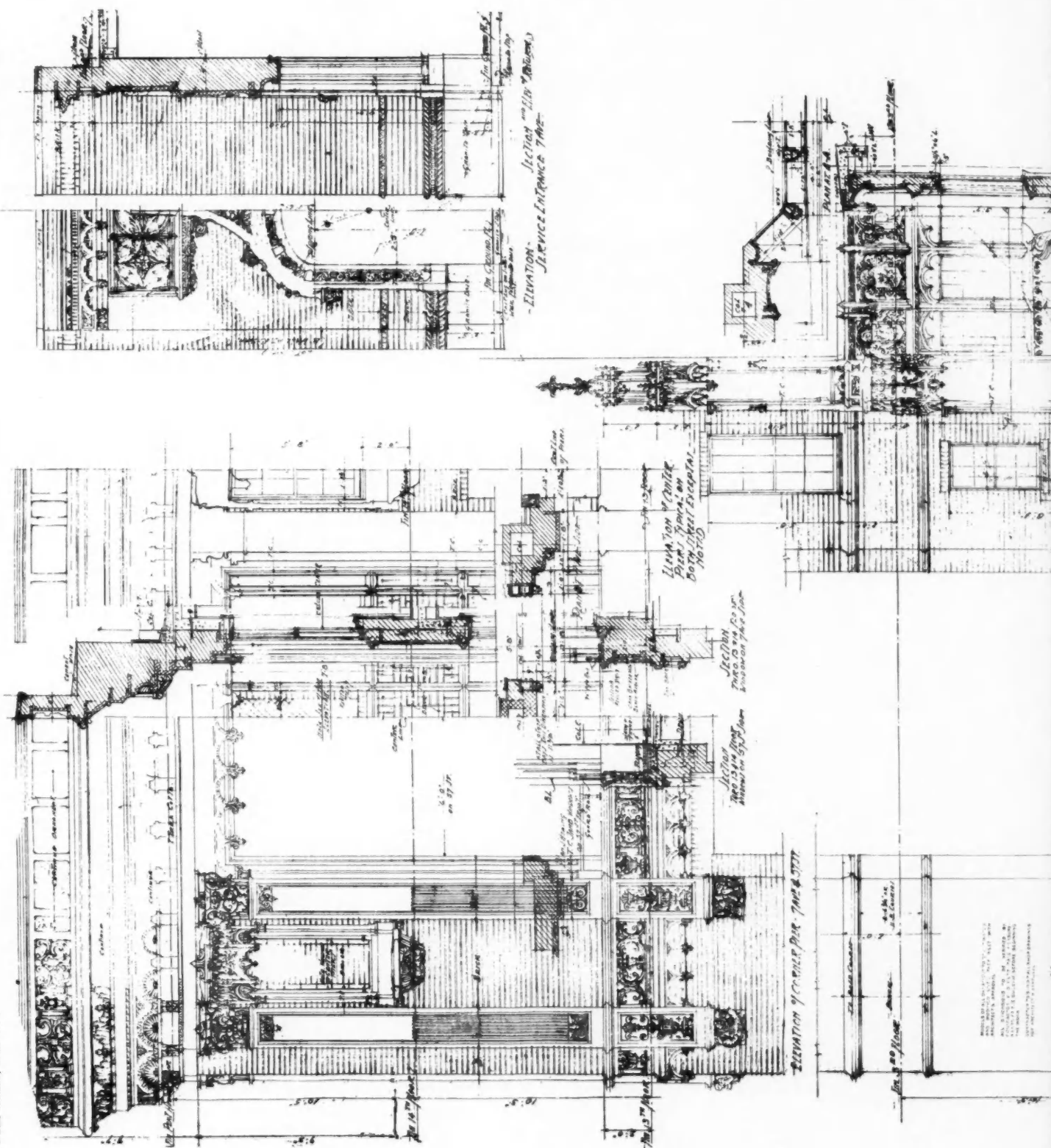


PLATE 26

DETAILS OF IRON WORK

200 WEST 57TH STREET BUILDING, NEW YORK

CASS GILBERT, ARCHITECT





STUDIO INTERIOR
200 WEST 57TH STREET BUILDING, NEW YORK
CASS GILBERT, ARCHITECT

Criticism and Comment

A National Organization

Editors THE AMERICAN ARCHITECT:

I respond to your request for a criticism of the editorial in your issue of December 12 but I would comment with greater clarity and deeper satisfaction to myself if I could be certain of the motive which prompted the writing. It is not sufficient to say that it was prompted by the rambling remarks of the President of the Michigan State Society while he was casting about for something to say to his hosts at the recent annual dinner of the Illinois Society of Architects. His remarks, I am led to believe, came out of an absolutely blank experience with national organizations for Architectural advancement, and have already received all the attention they merit. THE AMERICAN ARCHITECT evidently has something else in mind which has not been made clear to its readers—at least which has not been made clear to me; but ignoring that point I will take the editorial at its face value.

I am speaking now as one of that small minority which is the Institute. Feeling in my early professional life as did, and do, so many others, that I was altogether sufficient unto myself, I studiously withheld myself from connection with the Institute and only joined when I began to realize that, in spite of my aloofness and self-sufficiency, the Institute was doing me a great personal service and giving me a professional standing, while I was giving it nothing in return. Therefore, I joined the Institute, not because it was a "governing body" but because it held high ideals and was seeking to maintain high standards, sometimes at the personal sacrifice of its individual members. The Institute may not be a "representative body" to you but I joined it because to me it represented the best in the profession, and I immediately proceeded to give it the best that was in me to make amends for my previous remissness. It is barely possible that some of the "great majority" do not join the Institute because they wish to gain everything and to give nothing.

You say it "seems unnecessary to attempt to explain the reasons for the present lukewarmness of the profession toward the American Institute of Architects." It seems to me quite necessary; and fairness and ethics would demand that one who is endeavoring to destroy an established and valuable institution and build up another in its place should give such explanation if he can. Your editorial

quibbles with the definition of "representative" and "national." Anything that represents the best is "representative" enough for me, and an Institution which maintains Chapters—forty in number—scattered throughout the Union would seem to be sufficiently "national." You advocate an organization which shall comprehend every licensed architect in every State of the Union and in the same breath say that the "American Institute of Architects has become a more or less unwieldy body." Will a body five times the dimensions in bulk (not necessarily in mind and soul) be any less unwieldy?

It is the experience in Illinois that it is difficult, if not quite impossible, to get the Architects of the State together, even in annual convention, in such numbers and in such spirit as to make the attempt worth while; and the architectural society in Illinois through which this attempt is made by a few enthusiastic individuals is state-wide and admits to its fold any architect of moral standing who is licensed to practice in the State. The Illinois Chapter of the Institute holds monthly meetings and keeps in touch with local and national affairs. May not Illinois be considered typical? And on this showing is not the Institute through its Chapters quite as efficient as a national organization of unwieldy "State" societies would be? If the editor of THE AMERICAN ARCHITECT will cast his eye over fairly recent history he will realize that on more than one occasion the Institute has made its voice heard and its influence felt throughout the land to the remotest corners of the society. The editor of THE AMERICAN ARCHITECT in his zeal and haste for laying a foundation upon which to build a "representative organization" has chosen rather unstable ground. It will be very difficult to prove or even to show that the "higher development of architecture" has ever depended or ever can depend on laws. The advance in architecture has come from the changed and developing attitude on the part of professionals and laity. There is no license or registration law in Pennsylvania, yet the development of taste and its expression in that State in the last twenty-five years has been remarkable. Architectural practice in Massachusetts, unaffected by law, is not so immeasurably inferior to that in New Jersey where architects are licensed; architecture in the "free States" bordering on Illinois, where architects for many years have been licensed, has kept well abreast that of the self-deluding suckers. The fact is that the growing demands on the profession have attracted to it men of higher attainments and have discouraged men of lesser caliber.

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Laws have never developed the practice of either science or art.

The editorial reference to the Bar Association and its powers is misleading. The Bar Association does not punish offenders, the infliction of penalty rests entirely with the courts, the Bar Association or its Board acting only as prosecutors. The American Institute of Architects has never wished to stand in the light of a supreme inflictor of punishment. It has sought to attract to itself high-minded individuals who of their own volition would obey its just mandates. It is rather to the credit of the Institute than otherwise that it has not always meted out the full measure of its penalties to its weak members; and some have taken advantage of this leniency to use the Institute as a cloak for their unethical practices.

IRVING K. POND.

Architecture as a Profession

The following communication from a subscriber is in comment on the article by William Roger Greeley on "Architecture as a Profession," printed in issue of Dec. 12:

Editors THE AMERICAN ARCHITECT:

"Professional men are of a different nature"—the young aspirant almost wishes he were a business man that he might rise up in righteous rage against any such arbitrary separation of the sheep from the goats. He has always believed that all genius, artistic or business—is based on the power to analyze, organize and then idealize. What is business organization but order? What is art but order? Does not achievement in either come from the power to select the dominant, emphasize the essential and subordinate the non-essential with enthusiasm, courage and ideals, whether in writing a book, painting a picture, or making suspender buttons? Mr. Greeley quite freely recognized this. He praises the architecture of our engineers—those who up-to-date have laid more emphasis on "order" than the red-neck-tied, Vandyke-bearded "artistic architects" who have pursued their lazy, untidy, easiest way—and called themselves individualistic. The young aspirant rises respectfully in defense of order and organization.

Likewise, at the risk of being trite, he rises less respectfully in defense of the schools.

Just as a writer's only means of co-ordinating the mass of heterogeneous ideas which come flocking to his imagination is to write them down, so an architect's only method of explaining a conception to *himself* is the ability to draw or model. Moreover we submit that a "should be picture-maker"-genius will be an architect-genius if he is a genius at all—and architecture is the gainer.

The young aspirant refuses to be drawn into the

perennial argument on the next point. However, with his tongue in his cheek, he asks whether the peristyle of the Parthenon was really of more "practical" value than an order on a modern bank, or whether the "tepidarium" of a Roman bath would not have been more "tepid" if a little less lofty. Who shall say that the Roman bath motif is not infinitely better adapted to the impressive concourse of a railroad terminal than to its original use?

The young aspirant experiences a great joy when he can get two persons—lay or professional—to agree as to what constitutes a sincere use of a form. Only let us not cease to learn our architectural alphabet simply because some of the scholars have difficulty in spelling.

We confess we wonder at Mr. Greeley's motive for addressing us at all. Does he want us to become good butcher boys and let architecture languish unassisted by our genius? Or does he simply enjoy revelling in our discomfiture—when we discover that we are on the threshold of a great profession—with our method of preparation all wrong; the profession and its work all wrong; and the profession's representative organization as dead as Marley's ghost? He bids us keep our faith in idealism, vision, courage. This is "old stuff." We have heard little else in the schools which he scorns. But courage and enthusiasm for what? Surely not enthusiasm for iconoclasm. Let us say, rather, enthusiasm for history, tradition and order; faith in the profession and its standing in the community, and courage and enthusiasm in attacking the problems which confront the Institute and its oft-repeated ideals.

DANA SOMES.

Editors THE AMERICAN ARCHITECT:

I cannot see how it can be claimed that the American Institute of Architects is not truly representative of the profession.

It certainly has a membership composed of the best in the country, and is officered by leaders who have done an immense amount of patriotic, self-sacrificing labor.

How the purposes of the Institute could be improved I do not see—what higher or better ethical principles advanced.

All that has been accomplished thus far for the educational improvement of the profession and public must be credited largely to the Institute.

That there is great need of more of this is unquestioned. I believe that with such an organization already in working order it will not be wise to promote any other organization in addition to or outside of it.

Dividing energy and multiplying organization I do not think will make it any easier or more effective.

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tive than to build up what is at the work already.

It appears to me that a careful diagnosis of the situation is the first thing to do, and then modify, reform, enlarge, as is found necessary and possible.

I do not believe that there is any better talent for the work outside of the Institute, or any that can be expected to take hold and do better.

Possibly a rut has been formed, and effort has lagged, but it does not follow that abandonment is in order.

"The best thing to be done is the first thing that can be done." This, I believe, should be by and through the American Institute of Architects. Any who are on the outside that can and will suggest any measures calculated to help the cause certainly should speak up.

I am sure a discussion of this question is appropriate, and will be welcomed by every one who wishes better things.

EUGENE H. TAYLOR,
Secretary Iowa Chapter.

An Appreciative Subscriber

Editors THE AMERICAN ARCHITECT:

Let me congratulate you on the improved appearance of *THE AMERICAN ARCHITECT*. I am not certain that I should not subscribe to two copies instead of one, as I find the copy that now reaches me of such great interest that it generally remains on my library table and my office men complain that they are deprived of it.

DWIGHT J. BAUM.

Editors THE AMERICAN ARCHITECT:

The undersigned has read with much interest the suggestive editorial in your issue of December 12th, and would commend the practical and progressive ideas advanced.

The agitation of the principle or methods of more effective organization, to such extent as to provoke sincere constructive discussion, cannot but be of vital benefit to the present measurably dormant profession.

W. G. MALCOMSON.

Editors THE AMERICAN ARCHITECT:

I certainly endorse the suggestion made in your editorial of December 12th.

The architectural profession outside of the Institute looks upon it as a sort of an ornamental institution that concerns itself largely with the question of fixing rates.

If an organization could be effected along the lines you suggest, many more men could be interested, and interested in a more active and effective way. It is difficult to see how any architectural organization can ever be a very influential body until they have at least a very large majority of the practitioners enlisted as members.

You use the legal profession as an illustration, and would call your attention to the fact that there are practically no lawyers who are not members of the Bar Association. Undoubtedly that is one of the reasons why their organization is so effective.

W. G. ECKLES.



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Competition for California State Capitol Extension

The program for selecting an architect to design the \$3,000,000 State Capitol Extension Buildings has been set in motion, under the competitive plan, and the Sacramento State Building Commission has advertised the competition in the leading architectural journals of the country.

This announcement is made by George B. McDougall, State Architect, who is supervising the details of the contest.

According to the program, the papers covering the contest will be distributed by Dec. 1, and all drawings submitted must be in the hands of the commissioners by June 1, 1918. The second stage in the process of elimination wherein eight architects will participate is expected to be disposed of by Sept. 15, 1918, with the jury making the award.

California Seeks State House Plans

The Board of Control of the State of California announces to all architects who are citizens of the United States:

That a competition has been instituted for the selection of an architect to design and supervise the construction of State buildings to be located in the city of Sacramento, Cal., for the construction, equipment and furnishing of which the people of the State of California have voted \$3,000,000 in bonds, the site having been donated by the city of Sacramento.

Under the law, the State architect shall act as architectural adviser in connection with the competition.

This competition will be conducted in two stages.

The first stage is open to all architects, citizens of the United States who have had the necessary experience, subject to the conditions prescribed in the program of the competition.

The second stage will be open to eight architects selected by the jury from those competing in the first stage.

No competitor shall receive any remuneration unless chosen by the jury and submitting drawings in the second stage.

The program for this competition is approved by the San Francisco sub-committee on competitions of the American Institute of Architects.

Architects desiring to compete must file with George B. McDougall, State Architect, Forum Building, Sacramento, Cal., a written request for a copy of the program. On December 15, 1917, copies will be mailed simultaneously to all architects

from whom written requests for same have been received. Copies will be mailed to architects making written requests for same after December 15, 1917, at the time of the receipt of such later requests.

Committee of Illinois Society of Architects Guests of Iowa Men

The following account of the recent visit of the Committee on Public Action, Illinois Society of Architects, is clipped from the Davenport, Ia., *Times*:

"Visiting members of the Committee on Public Action of the Illinois Society of Architects were guests at a dinner held last night in their honor in the new 'brick' room at the Rock Island Club. They were entertained by the 'Tri-City Architects' Association after the meeting of the committee. O. Cervin, president of the association, presided at the meeting, and Stafford Fox Thomas, president of the Illinois Society of Architects, brought greetings from the Chicago architects. P. R. Burrows of Davenport represented the Iowa architects as president of the Iowa chapter of the American Institute of Architects.

"Members of the visiting committee were taken on a tour of the tri-cities and the Rock Island arsenal in the afternoon.

"Captain Whitsitt spoke of the architects' responsibility toward the war. The general discussion, presided over by Olof Cervin of Rock Island, following the meeting of the committee, brought out many vital points for the practice of architecture. The committee was especially pleased at the spirit of harmony and good fellowship which rests among the tri-city architects as indicated by their organization. Peoria architects have already taken steps of organization patterned after the tri-city association."

Theater Regulations

Some interpretations of provisions of the building code, applying to theaters, that may be of general interest, were recently made by the Board of Appeals.

In the consideration of some alterations affecting the exit facilities of the auditorium above the Century Theater, it was contended that such auditorium is a roof garden within the meaning of Article 25, Building Code, and that Section 536, Building Code, exempted such auditorium from the provisions of Article 25 relating to exit facilities. In the discussion it became clear that the members of the board

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do not consider the term "roof garden" applicable to an auditorium over another auditorium, if the former is covered over with a substantial roof construction and inclosed on all sides. The board held that the provisions of Article 25 applied to such an auditorium and even to a roof garden, inasmuch as Section 520 indicates that the article is to apply to places of public entertainment of any kind as well as to theaters.

In granting an appeal in connection with a new theater, it was held that, under the provisions of Section 70, Building Code, a building constructed separately, although connected with a theater by door openings equipped with fire doors, is a separate building. If such part of the building which is used in connection with the theater is constructed fireproof and wholly separated from the rest of the building by fireproof construction, the rest of the building, when used for business purposes, may be of non-fireproof construction if the entire building does not exceed in height and area the limits fixed by the Building Code for non-fireproof business buildings.

In the latter case it was also held that the provisions of Section 523, Building Code, prohibiting dressing rooms from being placed below the street level, does not prevent them from being located partly below the street level. The ceilings must be, however, sufficiently above the grade level so that ample direct exterior ventilation to the street or to courts of required dimensions is obtained by means of windows of suitable size.

Pittsburgh Builders' Convention

The National Association of Builders' Exchanges will be held in Pittsburgh February 5-7. A preliminary meeting, which was attended by representative contractors, builders' supply dealers and architects was recently held in Pittsburgh.

New York State Memorial Building

Erection of the new State office building, to cost \$2,500,000, on a site just west of the capitol at Albany, will be commenced in the spring of 1919, the State Trustees of Public Buildings have decided. The structure will be eight stories in height and will be built of marble quarried in New York State. The coming Legislature will be asked to appropriate \$25,000 to prepare the final plans.

The building will be a tribute to New York's fighting men now in service. A marble arch, 40 ft. high, will be constructed, and subways will connect the proposed building with the Capitol.

Consider Change in Washington State Capitol Buildings

The Municipal League of Seattle, Wash., recently adopted resolutions requesting that the Governor appoint an expert commission of three architects of recognized standing, not residents of the State of Washington, to render a report on the proposed change in the group plan for the Capitol buildings at Olympia. The committee decided that the expenses of the commission should be paid out of the State Capitol funds.

Montana State Board

F. F. Willson of Bozeman was named by Governor Samuel V. Stewart of Montana to fill the vacancy on the State Board of Architectural Examiners caused by the resignation of C. C. Oehme of Billings.

Large Exposition Hall Planned for Toledo

Plans to build in Toledo the largest exposition building in the United States were announced at the close of the National Farmers' Exposition. H. V. Buelow, originator and owner of the exposition, is sponsor of the project, and will direct the organization of the building company. The proposed building will cost at least \$1,000,000 and will cover two city blocks near the business center of Toledo. The structure as planned will be the permanent quarters of the farmers' exposition, and will be available for auto shows, conventions and all sorts of public meetings.

Memorial Park Improvements

State Architect C. H. Chandler of Topeka, Kansas, has approved the plans for the restoration of the John Brown Memorial Park with the funds appropriated by the 1917 legislature. Restorations will be made to the John Brown cabin.

Portland Architectural Club

The Portland Architectural Club, associated with the School of Architecture and Allied Arts of the University of Oregon, held an exhibition of architecture in the north gallery of the Central Library, December 7 to 21. The exhibit included the work of Portland architects, and also of student work of the School of Architecture of the State University.

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A Test of Welded Joints

A series of tests of the strength of oxyacetylene welded joints in mild steel plates has been completed by the Engineering Experiment Station of the University of Illinois. Tests were made in the laboratories of the station at Urbana under three conditions of loading: (a) static load in tension (in a testing machine), (b) repeated load (bending), and (c) impact in tension (in a drop testing machine).

For joints made with no subsequent treatment after welding, the joint efficiency for static tension was found to be about 100 per cent for plates one-half inch in thickness or less, and to decrease for thicker plates. For static tension tests, the efficiency of the material in the joints welded with no subsequent treatment was found to be not greater than 75 per cent. The joints were strengthened by working the metal after welding and were weakened by annealing at 800 deg. C. For static tests and for repeated stress tests, the joint efficiency sometimes reaches 100 per cent; the efficiency of the material in the joint is always less. This indicates the necessity of building up the weld to a thickness greater than that of the plate. The impact tests show that oxyacetylene welded joints are decidedly weaker under shock than is the original material; for joints welded with no subsequent treatment, the strength under impact seems to be about half that of the material.

In general, the test results tend to increase confidence in the static strength and in the strength under repeated stress of carefully made oxyacetylene welded joints in mild steel plates.

The results of these tests have been published as Bulletin No. 98 of the Engineering Experiment Station, copies of which may be obtained without cost by addressing C. R. Richards, Director, Urbana, Ill.

Annual Report of Director of National Bureau of Standards

Scientific work of unusual volume and interest is described in the annual report of the Director of the Bureau of Standards, just issued. Since the war began, all branches of this scientific bureau have been conducting researches on technical problems of military application. The regular work, however, has not been overlooked. In fact, the variety and importance of the results obtained in its scientific and technical researches during the year are of unusual interest.

The Bureau's technologic work comprises a wide range of researches into the special technologies of the metals, cement, clay, clay products, lime, stucco,

paints, roofing materials, and miscellaneous materials, such as paper, textiles, rubber, leather, glass, and the like. The results are published by the Bureau in a series of about twenty technologic papers issued during the year.

The regular growth of the Bureau and its special expansion on account of war work has resulted in the construction of several new laboratories and an increase in the staff of about 60 per cent.

To all interested in the applications of science to industry and to warfare, the annual report of the Bureau of Standards will be of particular interest.

Great Shipyard Being Built

On Hog Island, near Philadelphia, is being built for government use, the largest shipyard in the world. Ten thousand men are now at work on this huge undertaking. The first keel will be laid down in January. There will be fifty ways, side by side, extending over a mile along the Delaware River, where fifty government ships will be built simultaneously by over 30,000 workmen.

The American International Shipbuilding Corporation, as agents for the Emergency Fleet Corporation, has orders for 120 ships, at a total of 935,000 tons. It is expected that delivery of completed vessels from the Hog Island yard will begin next fall.

One of the most difficult tasks is the securing of workmen. It is estimated that there are about 50,000 trained shipbuilders in this country, and that between 150,000 and 200,000 will be necessary to carry out the government's enormous shipbuilding program.

Architectural Society Holds Annual Election

At the annual election of officers of the Washington State Society of Architects, Tuesday, in Seattle, Wash., A. Warren Gould was re-elected president; H. H. James, vice-president, and J. L. McCauley, treasurer, with whose office that of secretary has been combined. H. Ryan was elected second vice-president. The trustees are A. Warren Gould, J. L. McCauley, J. A. Zittel, F. H. Fowler, and R. Hamilton Rowe.

Architects Join Aviation Corps

Walter MacGregor and Harvey H. Warwick, Architects, and partners in the firm of MacGregor & Warwick, have closed their office in St. Cloud, Minn., for the period of the war, both men having enlisted in the aviation corps.

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Notice

The present congested condition of the railroads is causing considerable delay in the delivery of all second-class mail matter. Subscribers who fail to receive THE AMERICAN ARCHITECT with customary regularity are asked to take the present conditions into consideration before making complaint. THE AMERICAN ARCHITECT is mailed each week with usual promptness.

150,000 War-Wrecked Buildings

This will give you some idea of the war's destructive powers: More than 50,000 buildings have been demolished in France and more than 100,000 more or less damaged by bombardments and incendiary fires during the war. Sixty-three buildings classed as historical monuments have been destroyed.

Architectural Club Reception

The Architectural Club of Pittsburgh recently gave a farewell dinner to the following ten of its members who have enlisted in the government service, and who will shortly leave for encampments: Capt. William B. Chalfant, Capt. Harvey A. Schwab, First Lieut. Thomas R. Critchlow, Second Lieut. Edward Grump, Jr., Second Lieut. Brandon Smith, Sergt. Emmett L. Hatcher, J. Byers Hoys, Thomas J. Roguerre, and Meredith Jones.

Builders' Convention

Detroit Builders' and Traders' Exchange will send a delegation to Flint, Mich. on Jan. 23, to represent the exchange at the convention of the Associated Builders' Exchanges of Michigan. This is expected to be an important gathering for Michigan builders and contractors. The convention of the national association will take place in Pittsburgh in February.

Shipment of Building Supplies to Halifax

Building material was very promptly sent to Halifax after the recent disaster, Boston and New York vieing with each other in the distributing of supplies. "Two days after the explosion there went out of Boston window glass, roofing materials, nails, lumber, plaster blocks, terra cotta, fireproofing material and corrugated iron in quantities that gave outward evidence that there was no such thing as

a basic building material shortage." Montreal and Winnipeg also furnished many necessities in the building line.

House Numbers in the Rear

The suggestion has been made that time could be saved and many mistakes and annoyances avoided by placing house numbers at the back of buildings, as well as at the front. Grocery and department stores would appreciate the hastening of their deliveries, and the cost of the improvement would be inconsiderable.

Ohio Architects' Club to Abandon Quarters

The Cincinnati Architectural Club decided, at its annual dinner and election recently, to abandon the use of its club rooms. Four of the members are now in service and several more will be called. The society decided however to continue its Beaux Arts activities. Officers elected for the year are: William B. Ward, president; Augustus Lindner, vice president; Frank Brinkman, secretary, and John Postler, treasurer.

Postmaster General Burleson on Post Office Buildings

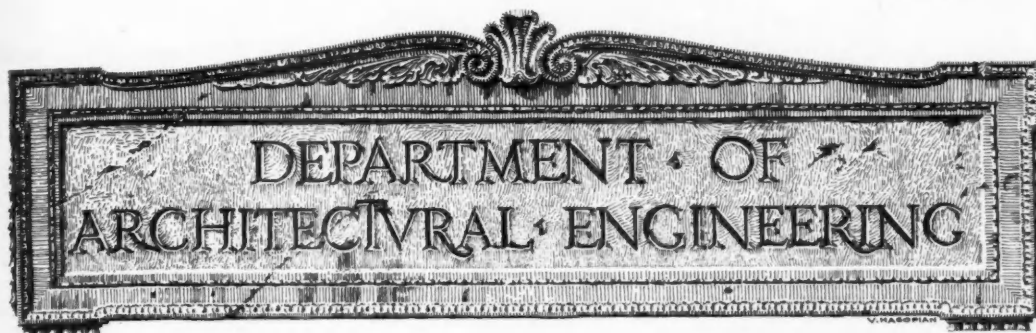
Postmaster General A. S. Burleson is strongly in favor of a change in the system of erecting public buildings. In his annual report he again expresses the opinion that the Government is not justified in erecting a building for a post office alone unless the rental amounts to \$1,000 and then only when the gross postal receipts are \$15,000, which means a population of 5000.

Personal

Charles A. Wright and E. C. Morgan, architects, having formed a partnership, will open their offices in the Indian Building, corner of Fourth and Gold Streets, Albuquerque, N. M.

M. E. Starkweather, architect, of 46 North Stone Avenue, Tucson, Ariz., will join the Twenty-third Regiment, Engineers, at Camp Meade.

Harold A. Hayden, architect, of Hartford, Conn., has been promoted to the post of sergeant at Camp Devens. He is now in Battery F, Field Artillery.



Architectural Treatment of Piedmont Park Bridge, Atlanta*

By ALBERT M. WOLF, *Asso. M. Am. Soc. C. E.*

PIEDMONT PARK, separating the sections of the city known as North Atlanta and Druid Hill, is one of the most beautiful of Atlanta's parks, and when it was decided to construct a bridge in the park for a boulevard, connecting the two sections, every effort was made to design a structure which would harmonize with the surroundings in its lines as well as in color effect. In spite of the fact that the bridging of the tracks of the Southern Railway complicated the problem

somewhat, the accompanying view of the completed structure shows how well the designer succeeded in obtaining the desired effect. To do this, a rather unusual use of bridge building materials was made. The abutments and bridge proper are constructed of reinforced concrete, finished with smooth surfaces, the materials being selected to give a dark gray color; the bridge railings are of red brick, laid in pilasters and panels, capped with rounded white cement copings; bright color mosaic tile are inlaid in the arch ring and piers; cast iron was used for the modillions at top of piers; the rail-

*Reprinted from *Concrete*, by permission of the editors and the author.



PIEDMONT PARK BOULEVARD BRIDGE, ATLANTA, GA.

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WEST APPROACH, PIEDMONT PARK BOULEVARD

ing on the approaches and the flower boxes on the arch pier pedestals are of creosoted lumber, and the portals at each approach are of stone with mosaic tile panels and are topped with white cement flower boxes.

The bridge, built in 1916, has a total length of 625', including the approaches, and consists of one 65' clear span arch, one 36' 6" girder span over the drive on the west side, three 36' 6" girder spans on the east side, over the Southern Railway tracks, and two earth fill approaches. The bridge and its approaches have 24' roadways and two sidewalks, each having a clear width of 7'. The arch span has a clearance of about 35' above the creek, while the minimum clearance of girder spans of tracks is 22'.

The west, or park approach, is about 200' long and accommodates a double roadway, with landscape features, while the east approach is about 290' long and connects the bridge proper to the North Boulevard resident park.

For the park approaches the roadway from bridge flares into the old park drive, giving space for a large triangular flower plot at the intersection. Here a special feature, interwoven with sentiment, was formed by utilizing in the stone portals, lamp pedestals and curbs, the granite blocks used in Atlanta's first street pavement, laid in 1882, and by using for lighting standards a few lamp posts which served in the first street lighting system, about 1855.

DETAILS OF DESIGN

The bridge is designed for a live load consisting of a 15-ton road roller for the roadways and 100 lb. per square foot for sidewalks, with unit stresses as allowed in the Joint Committee report of 1913.

Concrete of a 1:2:4 mixture, with coarse aggregate ranging from $\frac{1}{4}$ " to 1", was used in all parts of the structure, except in the two arch piers, where a 1:2½:5 mixture was used in footing courses. All reinforcement used

was of medium steel, and where members were continuous, as floor slabs, stringers, floor beams, sidewalk brackets, etc., the chord bars were spliced over the supports by lapping the bars for a distance of 40 diameters.

Girder Spans—As will be noted from Fig. 3, the east abutment and the two intermediate bents supporting the three beam and girder spans at the east end are set on a skew of 76° 20', to accommodate the present track of the Southern Railway, and the four additional future tracks. It was the presence of these tracks that made necessary the use of beam and girder construction for part of the bridge,

in order to get the necessary headroom. The other piers and abutment are framed square with the axis of the bridge.

Abutments—The abutments, as shown in the details (Fig. 4), are the counterfort type of reinforced concrete, with counterforts about 6' o. c. The east abutment is 31' 9" high over all, while the one at the west end is about 8' less in height. The abutments are rather unusual, owing to the fact that the concrete sections are much thinner than are ordinarily used for work of this character, and are therefore examples of a most economical use of concrete and steel. The face walls are only 7½" thick, the counterforts 10" and the footings 10½" for the higher abutment, and 9½" for the lower. The bridge seats of the abutments support the ends of the floor stringers on cast iron plates to allow for expansion and contraction movement. The wing walls of the abutments are of the reinforced cantilever retaining wall type, with a top thickness of 7", a face batter of $\frac{1}{4}$ " in 12" and a back batter of $\frac{1}{2}$ " to the foot, and base widths varying from 3' 8" for a 4' height of wall to 10' 11½" for a 32' wall.



CONSTRUCTION VIEW, SHOWING ARCH SPAN DECK FALSEWORK

Fig. 1. The axial distribution of the temperature field in the case of a temperature difference of 6° between the ends of the rod. The temperature field is shown in the case of a temperature difference of 6° between the ends of the rod. The temperature field is shown in the case of a temperature difference of 6° between the ends of the rod.

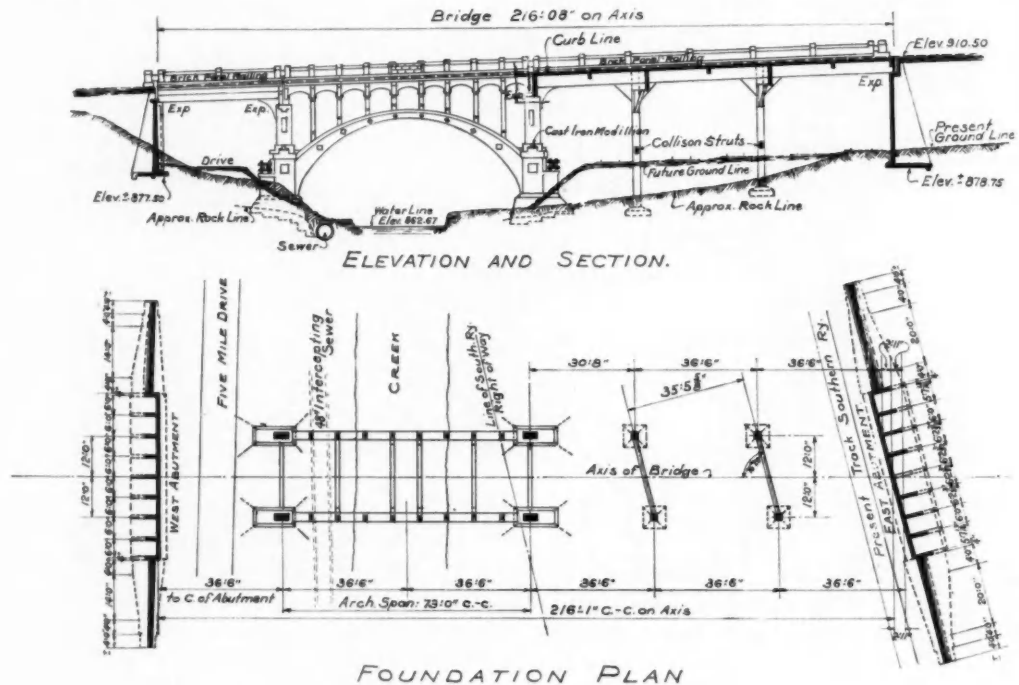
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the posts. The cantilever ends of floor beams are curved on the underside to add to their appearance. The stringers are reinforced with bent bars and stirrups, and the floor beams, as shown in Fig. 5, which gives details of a typical bent. A transverse strut connects the stringers at about mid-span. The roadway slab is 7 in. thick and sloped from the center toward the gutters to give desired crown to roadway, which consists of 2 in. of asphaltic concrete. The slab reinforcement is of $\frac{1}{2}$ -in. square bars $5\frac{1}{2}$ in. o. c. in the bottom and in the top

as shown in Fig. 6. To add to the appearance of the arch rib a plain projecting mold was formed at the top and mosaic tile inlaid at intervals on the showing face. The ribs are reinforced with four $1\frac{1}{8}$ -in. square bars in the top and bottom planes, tied together with $\frac{1}{2}$ -in. ties 18 in. o. c.

The arch rib abutments are pedestals of plain concrete, resting on solid rock, the face of which was serrated to prevent sliding of pedestals. The pedestals at each abutment are connected at the top by reinforced struts. To support the end of the



over stringers with longitudinal bars, $\frac{3}{8}$ -in. rounds, acting as supports and spacers.

A curb 4 in. high is formed at the sidewalk, which is 6 in. thick, with a 1-in. depression between curb and railing base, in which is laid a special granolithic finish, stained with lampblack, to do away with the customary glare from concrete walks. The sidewalk slab is reinforced similarly to that of the roadway, with $\frac{3}{8}$ -in. square bars $7\frac{1}{2}$ in. o. c.

Arch Spans.—The arch span is the three-centered type, with a rise of about 23 ft., and composed of two reinforced concrete ribs 24 ft. o. c. tied together and braced at alternate spandrel columns with reinforced struts 12 in. by 16 in. deep for those adjacent to crown and 14 in. deep for others. The arch ribs are 2 ft. 6 in. wide and 2 ft. 11 in. deep at the crown, increasing in depth toward the springing,

deck construction over the arch and that of the beam and girder spans a reinforced concrete pier is built up on each pedestal and connected by a transverse arched portal just above the haunch of arch ribs, and by a floor beam at the top on the side toward abutments, into which the floor stringers frame. These piers have a belt course of inset tile panels and a cast-iron modillion at the portal level to add to the architectural effect.

The deck over the arch span is supported by spandrel columns 12 in. by 14 in. in section, spaced 8 ft. o. c., resting on the arch ribs and carrying the transverse floor beams into which five lines of stringers frame, the floor beams cantilevering out 8 ft. 3 in. from the center line of posts to carry the outer strut or sidewalk curb. The stringers under roadway curbs are curved at the underside for

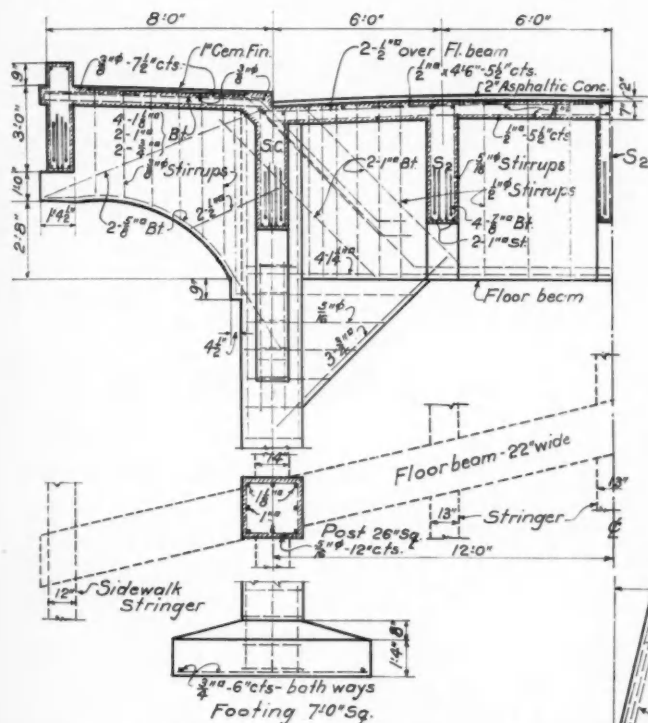
THE AMERICAN ARCHITECT

better appearance. The roadway slab, 7¾ in. thick, is reinforced longitudinally between floor beams with ½-in. square bars 5 in. o. c. in the bottom and in the top over floor beams, the latter bars being but 5 ft. long. The sidewalk slab is 6 in. thick, similarly reinforced, and with recess provided for sidewalk finish, as in the girder spans.

Railings.—At the crown the floor beams on either side project out somewhat farther than at other points, to carry the slab in the refuge nook or balcony formed by a curved wall of white concrete

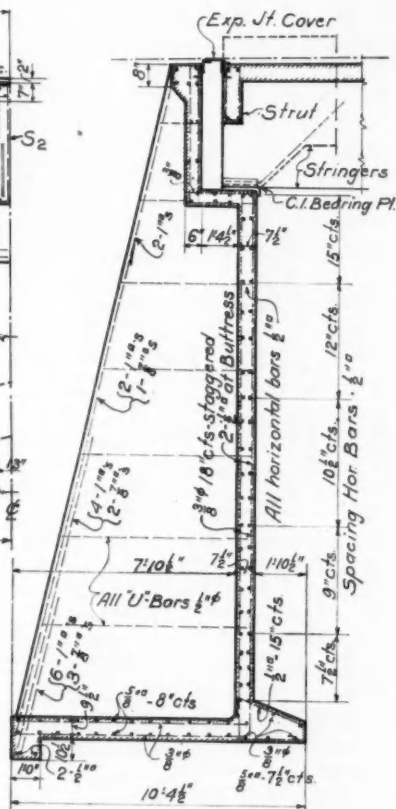
white sand, with a small amount of cement. Holes about 2 in. in diameter were provided for anchor bars in the railing, and extend about 4 in. into coping. The coping itself was reinforced with four $\frac{1}{4}$ -in. diameter bars longitudinally.

The brick was laid with 1/2-in. joints kept back about 1/4 in. from the face. To anchor the railings to the bridge, 1/2-in. square vertical bars were set in the base of pilasters and spaces between panels of such length as to extend 4 in. into coping. Around these bars No. 6 wire was wrapped and laid



DETAILS OF BEAM AND GIRDER SPANS

block. The railings elsewhere over the entire bridge are of brick, set on the concrete base formed for them by the outer or sidewalk stringer, and capped by rounded white concrete copings. Over the arch, pilasters are formed in the railings at each span-drel column, and the railing between paneled; for girder spans, pilasters are formed in railings at ends and mid-span only. The copings and blocks in the balcony railing were made of 1:2:4 concrete, with white sand and stone of $\frac{1}{4}$ in. to $\frac{1}{2}$ in. To make the concrete as white as possible, a small amount of lime was added to the mixture, in which Atlas white cement was used. The units were finished perfectly smooth and set in the same mortar as used for brickwork, which was of lime and



DETAILS OF WEST ABUTMENT

between every second course. Standard wire brick anchors were used in laying up the pilasters.

CONSTRUCTION

The arch span was built on timber falsework. The specifications required that the supports for arch centers be made as secure and solid as practicable, and that the centers be constructed so as to avoid excessive deflections from changes of loading during construction, with wedges or sand boxes provided for lining up and lowering centers.

THE AMERICAN ARCHITECT

The finish of the exposed concrete of the bridge proper was specified to be the natural surface, free from marks or voids, and perfectly clean; and the contractor was cautioned that careful attention be given to the work to arrive at the best results, since the plastering of finished surfaces would not be allowed.

COST

The bridge was built jointly at a cost of \$28,904.75, including approaches, by the city of Atlanta, 21.3 per cent; the county of Fulton, 26.8 per cent; the Southern Railway, 17.3 per cent; the North Boulevard Park Corporation 34.6 per cent. The work of the bridge proper and both earth-fill approaches was executed under contract at a cost of \$24,450, by Case & Cothran, contractors, Atlanta, Ga., under supervision of the city. The paving and other work on the approaches was done by the city forces.

Computations, estimates, drawings and specifications were prepared in the office of the Chief of Construction, Department of Bridges and Estimates, by C. E. Kauffman, engineer, to whom the author is indebted for plans, photographs and data used in this article.

Coal Conservation

The waste of coal through spontaneous combustion when stored in piles is not only a serious loss but often an annoyance. At a recent meeting of the Cleveland Engineering Society, Mr. Willard Beahan of that city discussed the subject.

An 80,000-ton pile of coal, near the center of Springfield, Ohio, had a bottom of soft lump coal with a top of mine-run coal. Spontaneous combustion resulted, and after trying to stop the fire with water it became necessary to remove the unburned coal with steam shovels and then quench the fire with water. Located as it was, this smoldering fire became a public nuisance and its abatement a necessity.

Removal by the steam shovel is about the only effective method of handling such a situation and is an expensive proposition.

In the bituminous coal sections these piles are of mine-run coal and of different mines, which makes combustion more liable to occur. For lump coal Mr. Beahan states that a pile more than 18 feet high is quite sure to cause trouble. The only effective way to guard against fire is to drive 4 to 6-inch pipes down near the bottom of the pile. The

bottom of the pipes are plugged and the pipes freely perforated for a considerable distance from the bottom. Or smaller pipes are driven into the pile with the bottom open. The object of these pipes is to allow the heated air to escape and keep the temperature of the interior of the pile at a low point.

A thermometer is lowered into the pipes at intervals and the temperature noted. When the temperature reaches 150 degrees Fahr. the danger point is reached and the pile is opened up and water applied until the temperature is reduced.

Proportions of Gutters and Downspout

Experience has demonstrated that each square inch of downspout cross-section will care for 160 square feet of roof surface. On this basis the area served by downspouts will be as follows:

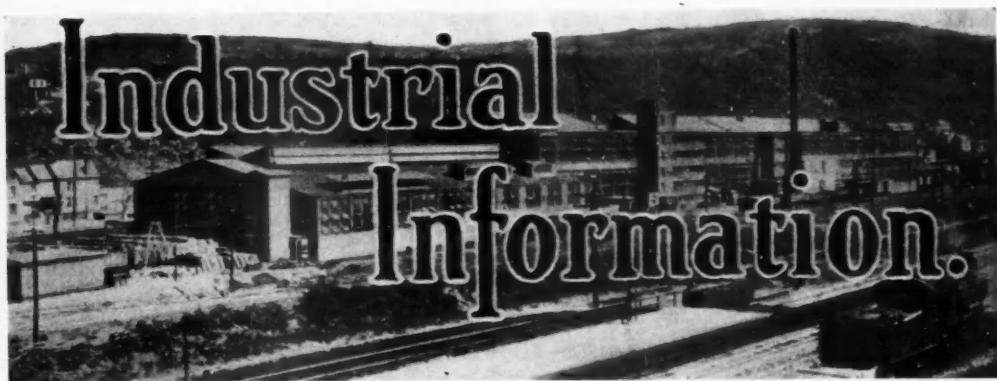
- 3-inch diameter for 1130 square feet
- 4-inch diameter for 2000 square feet
- 5-inch diameter for 3100 square feet
- 6-inch diameter for 4500 square feet

It is not advisable to use a downspout of less than 3-inch diameter, owing to the liability of becoming clogged, even though the head is protected with a wire basket. In order not to have excessive heights to saddles or pitch to gutters the downspouts should not be more than 50 feet apart.

Owing to the slower travel of the water in the gutter the area is increased over that of the downspout which it serves. The width of the gutter is generally about one and a half times the diameter of the downspout, but should never be less than 4 inches wide. The depth of the gutter should be at least one-half the width where flat-bottomed or three-quarters the width where round-bottomed. These are minimum dimensions, but can be increased for architectural effect. On this basis we have:

- 3-inch downspout, $4\frac{1}{2} \times 2\frac{1}{4}$ or $3\frac{1}{2}$ -inch gutter
- 4-inch downspout, 6×3 or $4\frac{1}{2}$ -inch gutter
- 5-inch downspout, $7\frac{1}{2} \times 3\frac{3}{4}$ or $5\frac{1}{2}$ -inch gutter
- 6-inch downspout, $9 \times 4\frac{1}{2}$ or $6\frac{3}{4}$ -inch gutter

Additional gutter capacity may be required on a roof with an excessively steep pitch for the reason that the water will travel much faster on such a roof than one of ordinary pitch. The range of pitch for the gutter varies from 1-16 to $\frac{1}{8}$ inch per foot of run.



Steel Window Sashes and Doors

The William Bayley Company, Springfield, Ohio, with branch offices in principal cities, specializes in the manufacture of steel window sashes, steel doors and partitions. In several booklets issued by this firm testimonials are given by representatives of firms who have installed these products, while many illustrations reveal the great advances made in recent years in factory lighting and construction.

"Diffuselite" Blinds

The J. G. Wilson Corporation, 8 West Fortieth Street, New York City, claims that their "Diffuselite" blinds mark an advance in mechanism and construction over the formerly used Venetian blind. In a series of bulletins issued by this company the statement is made that "Diffuselite" blinds are readily installed, do not easily get out of order, do not block air and light, and are comparatively inexpensive.

The attempt to find a method of painting blinds which would partially absorb and diffuse the rays of light resulted in the manufacture also by this corporation of their own special makes of white and green colors. Their claims would seem to deserve investigation.

Cement Coatings

In an attempt to overcome certain difficulties attending cement construction the firm of Wadsworth, Howland and Company, Inc., Boston, Mass., have brought forward a new product.

The use of concrete they claim has been subject to two serious drawbacks—a tendency to absorb moisture, and an unattractive, monotonous color. Experiments have convinced this firm that the only solution of the problem is through the use of a

waterproof coating, which not only does away with the difficulties named, but also serves to prevent the cement from disintegrating. Sixteen years' use of the "Bay State Brick and Cement Coating" has attested its merits, its manufacturers claim. In a booklet issued by this company detailed information is given in regard to their product, and also a list of buildings where it has been used with apparent satisfaction.

Wadsworth, Howland and Company manufacture also a cement floor coating and two grades of enamel finishes. They claim that their Bay State Brick and Cement Coating is the only permanent coating or paint which bears the National Board of Fire Underwriters' label.

"Ribplex"

Among the expanded metal products widely used in building construction is "Ribplex," manufactured by the Berger Manufacturing Company, Canton, Ohio. This company, in putting forward the reasons for its use, claims that it is equally well adapted for roofs, floors, walls and partitions.

"Ribplex" is constructed with ribs, furnished to supply centering and reinforcement. By means of the network of strands between the supporting ribs a bond is formed, the ribs giving additional strength. For floors and roofs "Ribplex" is simply fastened to the framework by means of clips. It is claimed that "Ribplex" simplifies construction, cuts down weight, and saves concrete, time and money.

"Willow" Rugs and Carpets

W. & J. Sloane, Fifth Avenue, New York, with offices in principal cities, call attention in a recent booklet to their "Willow" grass rugs and carpets. These illustrations show a variety in design, as well

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as much beauty of color. The wide adaptability of this form of floor covering, especially in country and suburban houses, affords architects an artistic and economical adjunct to many phases of interior decorations. The illustrated booklet, to be had on application, will offer numerous valuable suggestions.

Lead Paints

The National Lead Company, with offices in principal cities, in their recent booklet give information in regard to paint, and particularly their line of paint. The uses of red and white lead, the question of "thinners" in the manufacture of good paint, and the reflecting power of different shades of color are subjects that are dealt with, while many interesting details are given as to their "Dutch Boy" products.

Vacuum Cleaning Systems

The adaptation of the principle involved in vacuum cleaning has brought about the introduction of cleaning by vacuum methods on a large scale. In the Multi-stage Turbine System, developed by the Spencer Turbine Cleaner Company, Hartford, Conn., the principles used in the manufacture of hydraulic and pneumatic pumps were utilized. The result appears to be a machine both simple and durable. The many buildings where this system has been installed would seem to prove the value of this system.

"Tilecraft"

In their December bulletin many interesting suggestions as to the use of tile construction are put forward by the Associated Tile Manufacturers of Beaver Falls, Pa. Short articles have been contributed by men representing firms who specialize in the production of tile, while attention is called elsewhere in the bulletin to the cash prizes offered by this company for photographs of tile work. A list is given of the various firms producing faience, porcelain and tile, who are also members of the Associated Tile Manufacturing Company.

Asphalt "Strip" Shingles

The Flintkote Company, with offices and factories in principal cities, claim that by the use of their roofing products many advantages over former materials can be gained. One of their strip shingles is to take the place of four shingles of ordinary size,

while the fact that they are fire-resisting, do not require painting, that their color is permanent, and that their cost is not excessive, are the arguments presented for their installation.

These strip shingles can be laid over old wooden shingles (always provided that the old shingles are securely fastened) or can be used as siding. This firm also manufactures "wide space shingles" and "slate-surfaced shingles." The products of the Flintkote Company bear the label of the Underwriters' Laboratories.

Proper Treatment of Wall Surfaces

In a paper read by E. A. Munns of the E. A. Munns Kalsomine Company, Brooklyn, N. Y., at a meeting of the New Jersey State Association of Master Painters and Decorators, many interesting statements were made as to the treatment of wall surfaces. Problems in regard to "diseased" and wet walls were particularly dealt with, while stress was laid upon the necessity of perfection in wall foundation. Mr. Munns remarked that the hard finish wall gives the most trouble in the attempt to obtain a perfect, durable finish.

Electric Energy Savers

The Esterline Company, of Indianapolis, Ind., specializes in making electrical surveys of industrial plants. They claim that by means of their system production can be increased, waste stopped, and money saved. Where the Esterline Graphic Meters are kept constantly in use it is said that many unfavorable conditions can be corrected, before they cause trouble, while repairs are reduced. Booklets issued by this company will be mailed on request.

Automatic Carriers

Among the many time and labor saving devices that work for greater efficiency in business are automatic conveying systems. The Lamson Company of Boston, Mass., with offices in principal cities, specialize along this line, and claim that their products are useful in business of almost every kind. A classified list is given, in their recent bulletin, of buildings where the Lamson Conveying Systems have been installed.

Catalogs giving more detailed information will be furnished on request. One of these, for instance, "Conveying by Gravity," deals with the question of the automatic carrying of materials in factories, warehouses and industrial plants.



Henry C. Smith, Architect, San Francisco

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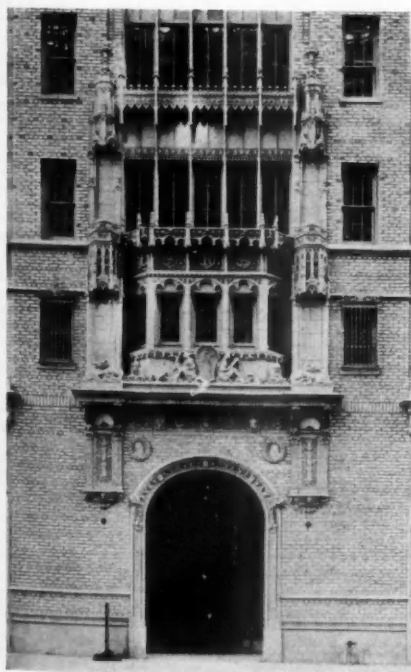
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BUILDING NEWS

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

CALIFORNIA

GRASS VALLEY (NEVADA COUNTY).—Plans have been prepared for the new City Hall to be erected at the corner of Main and Stewart Streets. Cost, \$20,000.

LOS ANGELES, CAL.—Bids will be received by the Board of Education of Los Angeles for the erection of two bungalows on the Selma Avenue school site. Plans and specifications can be seen at the office of secretary of said board, 730 Security Building, Los Angeles.

Bids will be received by the Board of Education of Los Angeles for the construction of an open-air bungalow, to be built on the Seventh Street school site. Plans are on file with secretary of said board.

SACRAMENTO, CAL.—Among the new structures planned for Sacramento are the Chamber of Commerce Building, to cost \$75,000, and the Remick Company Building, to cost \$100,000. The new Mull apartment house will involve an expenditure of \$200,000.

A structure to be known as the Henderson Bank and office building is soon to be erected at a cost of \$275,000. Plans are being prepared.

Plans are being made for the enlargement of the Libby, McNeil and Libby plant. Cost, \$140,000.

The Commercial Cars Construction Company intends to erect a \$400,000 building. Plans are being prepared. The Weinstock-Lubin Company plans to build a new department store at a cost of \$750,000.

SAN DIEGO, CAL.—George C. Rew intends to build a \$25,000 residence on Ocean Boulevard, Coronado. Plans are being prepared by Elmer Grey, Architect, Wright and Callender Building, Los Angeles, Cal.

Plans have been prepared for the new Mercy Hospital, to replace the St. Joseph's sanitarium. The building and equipment will cost \$100,000.

Additions will be made to five of the buildings at Camp Kearny. Plans are being prepared.

VISALIA, CAL.—St. Mary's Catholic Church here intends to erect a parochial school, the building to cost \$8,500. It is expected that a sister's hospital will also soon be erected.

CONNECTICUT

NEW HAVEN, CONN.—Sealed proposals will be received at the office of the Board of Education, City Hall, 169 Church Street, until Jan. 18, for the erection of a new Commercial High School building, to be erected on York Square. Plans and specifications may be obtained at the office of Brown & Von Beren, Architects, 185 Church Street, New Haven.

DELAWARE

MILFORD, DEL.—Leon Wilde Crawford, Architect, Odd Fellows Hall Building, Wilmington, has prepared plans for a two-story armory building of brick and stone construction. Bids are desired.

ILLINOIS

CHAMPAIGN, ILL.—New buildings to cost \$150,000 are to be erected by the Y. M. C. A. here. The structures will include officers' clubrooms and other rooms for enlisted men. New buildings, to cost \$50,000, are also planned for the Great Lakes Naval Training Station.

CHICAGO, ILL.—The Chicago Surface Lines will erect several buildings, including a power house on Clark Street and Schreiber Avenue. H. B. Fleming, Ch. Engr.

MAINE

ROCKLAND, ME.—The Rockland Building Association intends to erect a factory to be occupied by Salyer & Company. Plans for the structure are being prepared.

MARYLAND

BALTIMORE, MD.—Estimates are invited by the Penn-Mary Steel Company for two buildings at Sparrows Point, both to be of brick and concrete construction.

The Government has purchased a large tract of land here, known as the Mueller property, and will erect a number of shops, dwellings and barracks.

Frank O. Singer, Jr., will build a number of dwellings on Chauncey Avenue. Plans are being prepared.

WESTERNPORT, MD.—O. H. Bruce, Town Clerk, is receiving bids to erect a public building. Plans and specifications can be seen at office of John P. Miller, Mayor.

MASSACHUSETTS

NEW BEDFORD, MASS.—The Union Street Railway Company is having plans prepared for a brick and reinforced concrete power plant.

SPRINGFIELD, MASS.—The plant of the MacKinnon Steel Company, Ltd., is to be moved from Sherbrooke to Holyoke, Mass.; B. C. Root, engineer.

MICHIGAN

DETROIT, MICH.—The directors of the B. Book Estate will erect, at the corner of Grand River Avenue and Washington Boulevard, an office building thirty-three stories in height. Plans are being prepared.

An office building, twenty-two stories in height, will be erected at the corner of West Fort and Shelby Streets. James Conzens is the owner of the property.

Two new structures will be built on Woodward Avenue, a mercantile building for R. H. Fyfe & Company, and another for the E. J. Hickey Company.

The Young Women's Christian Association intends to erect a new central building at Witherell Street and East Adams Avenue. Plans are being prepared.

TRAVERSE CITY, MICH.—A new Y. M. C. A. building is to be erected here. Plans are being prepared.

MISSOURI

ST. LOUIS, MO.—The Laclede Gas Light Company will build a general storehouse, garage and motor repair shop on Forest Park Boulevard, near Vandeventer Avenue. The structure will cost \$400,000.

The Dock Street Terminal Realty Company announces that they will let contracts soon for the erection of a \$3,000,000 warehouse, grain elevator and storage house.

The Brothers of Mary, of Dayton, Ohio, will erect in St. Louis a home for members and a training school for teachers at the corner of Denny and Big Bend Roads. Cost, \$250,000.

MONTANA

GREAT FALLS, MONT.—A branch of the Advance-Rumely Company of La Porte, Ind., will be established here, their warehouses to be built on Second Street, near Third Avenue. Plans are being prepared by George H. Shanley, Architect, Great Falls.

The Montana Power Company plans to build a substation here at a cost of \$150,000. J. R. Hobbins, Mgr.

HOT SPRINGS, MONT.—C. Smith and F. E. Campbell intend to build a power plant here. Plans are being prepared.

NEW JERSEY

BRIDGETON, N. J.—A new garage is to be built on South Laurel Street, the property being owned by the Bridgeton National Bank. Plans are being prepared.

NEW YORK

ALBANY, N. Y.—Sealed proposals will be received at the office of the Board of Contract and Supply until January 21 for alterations to the contagious disease hospital. Drawings and specifications may be seen at the office of Fuller and Robinson Company, Architects, 95 State Street.

The State Hospital Development Commission recommends the demolition of the old main building of the Brooklyn State Hospital, on Clarkson Street, Flatbush, and the construction of a new institution at Creedmoor,

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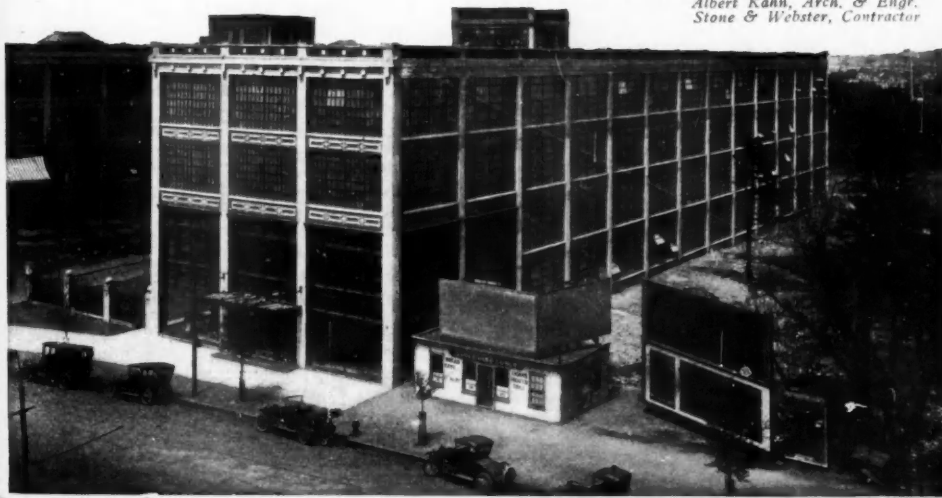
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Queens. Extension also of the State Hospitals for the Insane at Kings Park and Central Islip is advised.

BROOKLYN, N. Y.—Kallich & Lubroth, Architects, 215 Montague Street, have prepared plans for a frame dwelling and garage, the total cost to be \$10,000. The same architects will build at Bay Twenty-sixth Street, near Benson Avenue, a similar dwelling and garage to cost \$40,000.

B. Leiortas and A. Gaimese will build eighteen two-story brick dwellings on Mermaid Avenue, near West Thirty-seventh Street, Brooklyn.

The National Aniline & Chemical Company will make an extension to the factory building on Ditmas Avenue, at the corner of East Eighty-fifth Street. Cost, \$5,000.

Charles H. Richter, Architect, 68 Broad Street, New York City, has prepared plans for an extension to the factory building on Carroll Street, near Van Brunt Street, Brooklyn. The alterations will cost \$5,000.

Extension to cost \$6,000 will be made to the garage at Church Avenue, near Bedford Avenue; owner, H. W. Bischoff. Benjamin Driesler, Architect, 153 Remsen Street, Brooklyn, has prepared plans.

The Robray Building Corporation will erect, at a cost of \$19,500, a two-story frame dwelling at Forty-seventh Street, near Sixteenth Avenue. S. Millman, Architect, 1780 Pitkin Avenue, Brooklyn, has prepared plans.

S. Millman, Architect, 1780 Pitkin Avenue, Brooklyn, will also build two two-story dwellings, to cost \$11,000, at East Twelfth Street, near Avenue R.

Three frame dwellings, to cost \$12,000, will be built at East Eighth Street, near Avenue I. G. V. and D. M. McPherson, 4703 Bay Parkway, are the owners of the property.

The Charles Goell Construction Company, having acquired a plot on Carroll Street, between Kingston and Albany Avenues, will build nine dwellings, with garages, on the property.

A four-story brick tenement building, to cost \$30,000, will be erected at Saratoga and Livonia avenues. Cohn Brothers, Architects, 363 Stone Avenue, have prepared plans.

The Estates Club Realty Corporation recently purchased land at Great Neck and will erect a \$250,000 clubhouse on the property. The building will be used by the reorganized Golf, Country and Marine Club.

Plans have been filed by the E. W. Bliss Company for a new munition factory to be built on Fifty-third Street, near First Avenue, South Brooklyn. The structure will cost about \$1,400,000.

Extensive alterations will be made to the building at 17 Hanson Place, Brooklyn. The property is owned by Mary M. and Frank W. Sugden.

At a cost of \$25,000 a one-story brick garage will be built on Moffat Street, near Hamburg Avenue. Walter B. Wills, Architect, 1181 Myrtle Avenue, Brooklyn, has prepared plans.

Harry J. Sprung, Architect, 44 Court Street, Brooklyn, has made plans for two two-story brick dwellings to be built on West Twenty-eighth Street, near Mermaid Avenue. Cost, \$9,000.

A one-story brick garage, to cost \$10,000, will be built on Seventh Avenue, near Fiftieth Street, Brooklyn. Plans have been prepared by Frederic W. Eisenla, Architect, 186 Remsen Street.

The Eastern Flexible Conduit Company intends to enlarge its plant. Plans are being prepared.

L. Leavitt, 454 Driggs Avenue, has had plans prepared for a three-story varnish factory. Approximate cost, \$70,000.

N. Schwarstein, Manhattan Beach, intends to build a one-story garage. Cost, \$50,000. W. T. McCarthy, Architect, 16 Court Street, Brooklyn, has prepared plans.

H. J. Nurick, Architect, 830 Putnam Avenue, Brooklyn, has prepared plans for a one-story garage, the structure to cost about \$30,000.

BUFFALO, N. Y.—The Buffalo Union Furnace Company, Katherine Street, has had plans prepared for alterations and additions to its power house. Cost \$14,000.

The Donner Steel Company, 475 Abbott Road, intends to build an addition to its power house. Plans are being prepared.

CANASERAGA, N. Y.—The Canaseraga Heat, Light & Power Company, Inc., has petitioned the Public Service Commission for permission to build and operate an electric lighting plant.

NEW YORK CITY.—The New York Edison Company, 666 First Avenue, is having plans prepared by G. F. Kiess, architect, 30 East Fifth Street, for a one-story brick addition to its transformer station at Park Avenue and 129th Street. Cost \$15,000.

Revised plans by Louis E. Jallade, Architect, 37 Liberty Street, for the new structure for the Y. M. C. A., to be located at Lenox Avenue and 124th Street, call for an eight-story building, which will cost approximately \$300,000.

Maynicke & Franke, Architects, 25 East 26th Street, have completed preliminary plans for an eight-story brick and concrete factory building, which will occupy an entire block front on Eleventh Avenue. The structure will cost about \$2,500,000.

A one-story brick garage to cost \$15,000 will be built on Washington Avenue, near 182d Street. James J. F. Gavigan, Architect, Grand Central Terminal, has prepared plans.

Anton Pirner, Architect, 2069 Westchester Avenue, has prepared plans for two frame dwellings, to be built at the corner of St. Lawrence and Randall Avenues. Cost \$8,000.

Thomas W. Lamb, Architect, 644 Eighth Avenue, has prepared plans for a motion picture studio to be built on Amsterdam Avenue, near 190th Street. Cost, \$40,000.

Alterations will be made, at a cost of \$6,000, to the building at 307-311 East 115th Street. J. A. Mulligan, Architect, 1474 Shakespeare Avenue, has prepared plans.

The New York Contracting & Trucking Company will make alterations to a building at 513-521 East Seventeenth Street. C. B. Meyers, Architect, 1 Union Square West, has prepared plans for these improvements, which will cost \$7,000.

Newman Harris, Architect, 280 Madison Avenue, will make alterations to the building at 547-551 West Thirty-eighth Street. Cost, \$12,000.

Alterations to cost \$22,000 will be made to a building owned by the Estate of John U. Brookman, 88 Wall Street. Plans have been prepared by A. S. Hedman, Architect, 371 Fulton Street, Brooklyn.

The church building at 228-30 East Eighty-fifth Street is to be razed, and a two-story brick and stone garage erected upon the site. The new building will cost \$35,000, and is being planned by Shampan & Shampan, Architects, 772 Broadway, Brooklyn.

Alterations will be made to the building on 177th Street, near the N. Y., B. & W. Railroad, owned by the Estate of W. W. Astor, 23 West 26th Street. The improvements will cost \$10,000. Plans have been prepared by Kenneth M. Murchison, Architect, 101 Park Avenue.

The Bible Teachers' Training School, at the corner of Lexington Avenue and Forty-ninth Street, has acquired the two three-story dwellings at 137 and 141 East Forty-ninth Street. An addition to the school will eventually be erected on Fiftieth Street.

The Warner Hudnut Corporation, 113 West Eighteenth Street, intends to build a one-story express transfer station from plans prepared by A. W. Place, Architect, Freeport, L. I. Cost, \$15,000.

A storage building will be erected at 182-184 Front Street by W. J. Matheson. Cost, \$5,000. Mann & MacNeille, Architects, 70 East 45th Street, have prepared plans.

G. J. Casazza, Architect, 1133 Broadway, has prepared plans for a store and loft building, to be erected at 537 Broome Street. Cost, \$12,000.

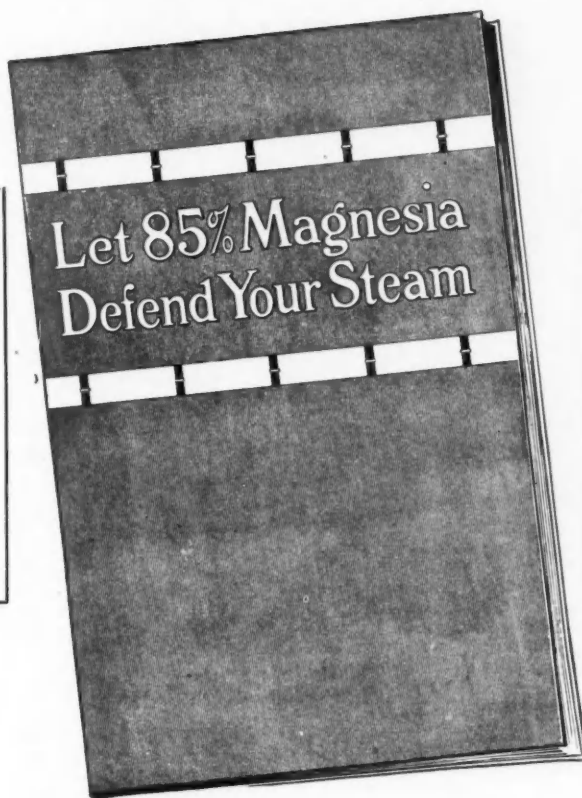
The Etagloc Holding Company will build a store and loft building from plans prepared by Henry Regelman, Architect, 133 East Seventh Street. Cost, \$5,000.

J. Chatillon & Sons, 85 Cliff Street, intend to make an addition to their building. Plans are being prepared.

A three-story garage is to be built for the Ess Eff Realty Company, S. L. Frank, president. Plans have been prepared by J. A. Hamilton, Architect, 32 Broadway.

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H. L. Morris, 32 Liberty Street, has had plans prepared for a two-story brick garage, to be built on Alexander Avenue. Cost, \$25,000.

SCHENECTADY, N. Y.—The Union Street Baptist Church plans to erect a new building on its present lot; Rev. W. Roy Timeson, pastor.

NORTH CAROLINA

ASHEVILLE, N. C.—The Board of Commissioners of Buncombe County intend to erect a Children's Home. Plans are being prepared.

NORTH DAKOTA

CRARY, N. D.—J. W. Ebert has been granted a franchise for the erection of an electric-lighting plant. Plans are being prepared.

OHIO

ALLIANCE, OHIO.—Plans for a \$5,000,000 ordnance plant to consist of nine buildings have been prepared by the Morgan Engineering Company.

BELLEFONTAINE, OHIO.—The Cleveland, Cincinnati, Chicago and St. Louis Railroad plans extensive additions to its repair shop here. C. A. Paquette, Cincinnati, chief engineer.

CLEVELAND, OHIO.—The Standard Brewing Company, 5801 Train Avenue, plans to remodel its boiler house. Cost \$12,000.

The Bishop-Babcock-Becker Company and the Lennox Chemical Company have purchased land on the Bliss road section of Euclid. Erection of two plants is being contemplated.

F. J. Vichek, E. A. Neckas and others, having organized a company, intend to build a three-story factory at Quincy Avenue and Woodhill Road. Plans are being prepared.

A. M. Allen Company, Architects, 301 Euclid Building, are preparing plans for a two-story office building. Cost, \$325,000.

The Physicians and Surgeons Exchange Company are having plans prepared by Allen & Osborne Company, Architects, 700 Rose Building, for a sixteen-story office building, the structure to cost \$1,000,000.

COLUMBUS, OHIO.—An appropriation of \$18,000 has been made for a school building to be erected in Harrison Township, Champaign County. Plans are being prepared.

A five-story addition will be made to the courthouse, the improvements to cost between \$111,000 and \$137,000. Address the Franklin Company.

IRONTON, OHIO.—Additions are to be made to the C. & O. Railroad depot and freight house at Ashland. Plans are being prepared.

LIMA, OHIO.—The Lima Rivet & Forgings Company intends to erect a new plant between Robb and O'Connor Avenues. Approximate cost, \$30,000.

PAINESVILLE, OHIO.—A school building, to cost about \$50,000, is soon to be erected by St. Mary's Church. Plans have been prepared by Charles R. Greco, 729 Guardian Building, Boston, Mass.

TOLEDO, OHIO.—The Sylvania Golf Club is having plans prepared for a new building, the structure to cost about \$50,000. H. W. Wachter, trustee.

The Pronovost Torsion-Spring Wheel Company intends to erect a manufacturing plant between Dorr and Bancroft Streets. Plans are being prepared.

WEST LIBERTY, OHIO.—The Board of Education of Logan County will receive bids for a two-story brick and concrete school building, to be erected in Monroe Township. Cost, \$45,000. E. H. Rickett, Architect, 274 East Twelfth Avenue, Columbus, has prepared plans.

WOOSTER, OHIO.—The People's Savings and Loan Company are having plans prepared by Henry & Murphy, Architects, 523 Second National Bank Building, Akron, for a five-story bank and office building. Approximate cost, \$70,000.

ZANESVILLE, OHIO.—Plans have been prepared by C. D. McLane, Architect, 301 Robinson Building, Rock Island, Ill., and A. A. Hanson, Associate Architect, 313-320 People's Bank Building, Zanesville, for a new building for the Y. M. C. A. Cost, \$200,000.

OKLAHOMA

BARTLESVILLE, OKLA.—The city is preparing plans for an auditorium to cost approximately \$6,000. Address the Mayor.

BIGHEART, OKLA.—The Board of Commissioners are preparing plans for a City Hall. T. E. Gibbons, president.

BRISTOW, OKLA.—The Order of Odd Fellows will build a two-story convention hall. Plans are being prepared.

ELK CITY, OKLA.—Massey & Yoder intend to erect a theater here at a cost of \$20,000.

MIAMI, OKLA.—A jail to cost \$50,000 is to be built by Ottawa County. J. A. Walker, County Clerk.

SULPHUR, OKLA.—The Sulphur Chamber of Commerce intends to build a convention hall. Plans are being prepared.

OREGON

ASTORIA, ORE.—The Pacific Power & Light Company, Spalding Building, Portland, has petitioned the City Council for permission to build a substation on Taylor Avenue. J. C. Martin, Engr.

PENNSYLVANIA

BRIDGEPORT, PA.—The Philadelphia & Reading Railway, Reading Terminal, Philadelphia, plans to build a one-story engine and power house here. S. T. Wagner, Ch. Engr.

ERIE, PA.—A new workhouse is to be erected at Corry, Erie County. Seven counties will co-operate in meeting the cost of the institution.

HARRISBURG, PA.—Although the school building program, involving an expenditure of \$1,250,000, has been deferred in part until after the war, two of the proposed buildings will be completed at a cost of \$250,000.

PHILADELPHIA, PA.—E. Allen Wilson, Architect, 1208 Chestnut Street, is preparing plans for alterations and additions to a dwelling owned by the Model Company.

Plans are being prepared by P. H. Johnson, Architect, Land Title Building, for a branch of the Free Library of Philadelphia, to be built on Fifty-first Street, near Chester Avenue. The structure will cost approximately \$50,000.

J. Ethan Fieldstein, Architect, Hale Building, is preparing plans for a service building of brick and steel construction to be erected on North Broad Street.

Revised plans are being made for alterations to the store and apartment house building at 3535 North Seventeenth Street. Bids are being requested by William H. Wooters, Architect, 816 Alleghany Avenue.

A three-story building, of brick and stone construction, is to be erected at Fifty-sixth Street and Chester Avenue. Charles W. Bolton & Son, Architects, Witherpoon Building, are asking bids.

Henon and Boyle, Architects, Fuller Building, are preparing plans for an automobile service building. Bids will soon be requested.

Paul A. Davis, 3d, Architect, 1713 Sansome Street, has been commissioned by the Ninth National Bank to design the new addition to their building at the corner of Front and Norris streets.

Bids are requested for stores and apartment houses to be erected in West Philadelphia according to plans prepared by Charles W. Bolton & Son, Architects, Witherpoon Building.

Revised plans have been prepared for alterations to the building at 1728 South Broad Street occupied by the Augustine Social and Beneficial Association.

George S. Idell, Architect, 34 South Sixteenth Street, is preparing plans for a dwelling, of brick construction, to be erected at Chestnut Hill, Pa.

Thirty two-story dwellings are to be built in West Philadelphia, according to plans being prepared by Mahlon H. Dickinson, Architect, Empire Building.

Druckemiller & Williams, Architects, Land Title Building, have prepared plans for a dwelling to be built at Chestnut Hill. Bids are asked.

Alterations and additions are to be made to the building owned by H. Fleigelman, at Second and Market streets. Frank E. Hahn, Architect, 1112 Chestnut Street, is completing plans.



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This test, so much more severe than actual service could produce, speaks volumes for the fire-resisting qualities of this construction.

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Carl P. Berger, Architect, S. Penn Square Building, is completing plans for alterations to the building at 219 South Broad Street.

Eight two-story dwellings, of brick and stone construction, are to be built at Walnut Lane and McCullum street by John F. Conlin. Bids are asked.

Additions are to be made to the building at Eleventh and Filbert streets now occupied by the Bell Telephone Company. Plans are being prepared.

Niles-Bement, Pond & Company are having plans prepared by Harris & Richards, Architects, Drexel Building, for a two-story factory building to be erected at Newark Meadows, N. J.

Henon & Boyle, Architects, Fuller Building, are preparing plans for a structure to be erected at 124 South Thirteenth Street.

Paul A. Davis, 3d, Architect, 1713 Sansome Street, is preparing plans for a residence to be erected at Cedar-town, Ga., for Charles Adamson.

Duhring, Opie & Ziegler, Architects, Bailey Building, are preparing plans for improvements to residences at Chestnut Hill, Pa.

The Nass Estate has commissioned Andrew J. Sauer & Company, Architects, 112 Chestnut Street, to prepare plans for a one-story brick garage, to be built at Twelfth and Vine Streets.

Samuel T. Wagner, engineer, is asking for bids on plans for a power house and signal tower to be erected at Skillman, N. J., for the Philadelphia and Reading Railway Company.

PITTSBURGH, PA.—John N. Straub will build a six-story apartment house at 735 Highland Avenue, at a cost of about \$150,000. Plans are being prepared.

The Happerbstaill Forge & Knife Company, Forty-seventh and Hatfield Streets, plans an addition to its factory. Approximate cost, \$40,000.

READING, PA.—The Berks Engineering Company, Seventh and Chestnut Streets, intends to make additions to its machine shop. Plans are being prepared.

SCRANTON, PA.—A factory building is to be erected at the corner of Adams Avenue and Mulberry Street. A company, headed, it is said, by Philadelphia capital, will also occupy and improve one of the buildings formerly owned by the Scranton Axle & Spring Company.

SHARON, PA.—The Standard Car Construction Company of Pittsburgh intends to make additions to its plant here.

TENNESSEE

COAL CREEK, TENN.—The Black Diamond Coal Company, 707 Empire Building, Knoxville, intends to install a new power plant at its mines here. Plans are being prepared.

FOUNTAIN CITY, TENN.—The city intends installing an electric lighting system. Plans are being prepared.

TEXAS

AUSTIN, TEX.—Bids will be received, until January 14, by A. C. Goeth, President State Normal School Board of Regents, Austin, Tex., for the erection of reinforced concrete buildings for the Southwest Texas State Normal School at San Marcos, Texas, and the San Houston State Normal school at Huntsville, Tex. Plans may be seen at the office of Endress and Watkin, Architects, Littlefield Building, Austin, Tex.

DALLAS, TEX.—The Central State Bank will remodel its building. Plans are being prepared.

SAN ANTONIO, TEX.—John Anthony, manager, will expend \$20,000 in remodeling and enlarging a café. Plans have been prepared.

VERNON, TEX.—Madorie & Field, Architects, 500 K. and K. Building, Wichita Falls, Tex., have prepared plans for a clubhouse to be built at Condon Springs. Cost, \$12,000.

VIRGINIA

ALEXANDRIA, VA.—The American Shipbuilding Company, 1249 Kenyon Street, N. W., Washington, D. C., has purchased a site here and will erect a plant.

NORFOLK, VA.—The Seaboard Ice & Cold Storage Company plans to build a seven-story factory on Division Street. L. Fenerstein, president.

ST. PAUL, VA.—The Clinch Valley Chemical Extract Company intend to build a factory for their by-products. Plans are being prepared.

WASHINGTON

SEATTLE, WASH.—Kreilshheimer Brothers intend to erect a hotel on Utah Street, between Lander and Forest Streets. Plans are being prepared.

Plans are being prepared by Harlan Thomas, Architect, Arcade Building, for an enlargement of the store now occupied by the Rhodes Company. The improvements will cost approximately \$50,000.

TACOMA, WASH.—Two lots on Broadway have been bought by Dr. James A. La Gasa and Dr. J. B. Mc-Nerthney, of Everett, Wash. The purchasers of this property intend to erect a building suitable for a garage and auto sale purposes.

WEST VIRGINIA

CLUTE, W. VA.—The Hawley Coal Company plans to build a power plant at its works here. W. F. Hawley, Bluefield, Pres.

ST. MARYS, W. VA.—St. Marys Light & Power Company is having plans prepared by R. H. Adair, Architect, 501½ Juliana Street, Parkersburg, for a new one-story electric-lighting plant.

WHEELING, W. VA.—Bids will be received until January 15 by the Board of Education of Moundsville, Marshall County, W. Va., for the erection of a high school and grade school building. Plans can be seen at the office of Charles W. Bates, Architect, National Bank Building, Wheeling, W. Va.

WISCONSIN

CHIPPEWA FALLS, WIS.—A new school building is being planned to replace the present Chestnut Street school; G. O. Banting, superintendent.

FIRE LOSSES

Reports of fires published in this department include only cases in which the magnitude of losses sustained and the surrounding circumstances indicate the probability of restoration or reconstruction.

AYER, MASS.—The barracks of Company C of the 303d Infantry Regiment at Camp Devens was destroyed in the fire of Jan. 1.

BROOKLYN, N. Y.—Seven dwellings on Fort Hamilton Parkway were destroyed on Jan. 1 by a fire. The damage is reported at \$30,000. The buildings were owned by Charles E. Burr of 1123 Broadway, Manhattan.

A fire at 162 Third Avenue, Brooklyn, caused damages to the building which will represent a loss of \$7,000. This building was owned by Joseph Horowitz, Clinton Avenue, Bronx.

CATSKILL, N. Y.—An entire block of buildings was destroyed here in the recent fire. The loss is estimated at more than \$150,000.

CHARLOTTE, N. C.—On the first day of January the local plant of the Buckeye Cotton Oil Company was destroyed by fire, the loss being estimated at several hundred thousand dollars.

HARRISBURG, PA.—A fire has damaged the plant of the Harrisburg Pipe and Pipe Bending Company to the extent of several hundred thousand dollars. The company is advertising for those in building trades, and plans reconstruction at once.

JAMESTOWN, N. Y.—A fire on the second day of January destroyed the factory of the Curtiss Machine Company. The loss is \$50,000.

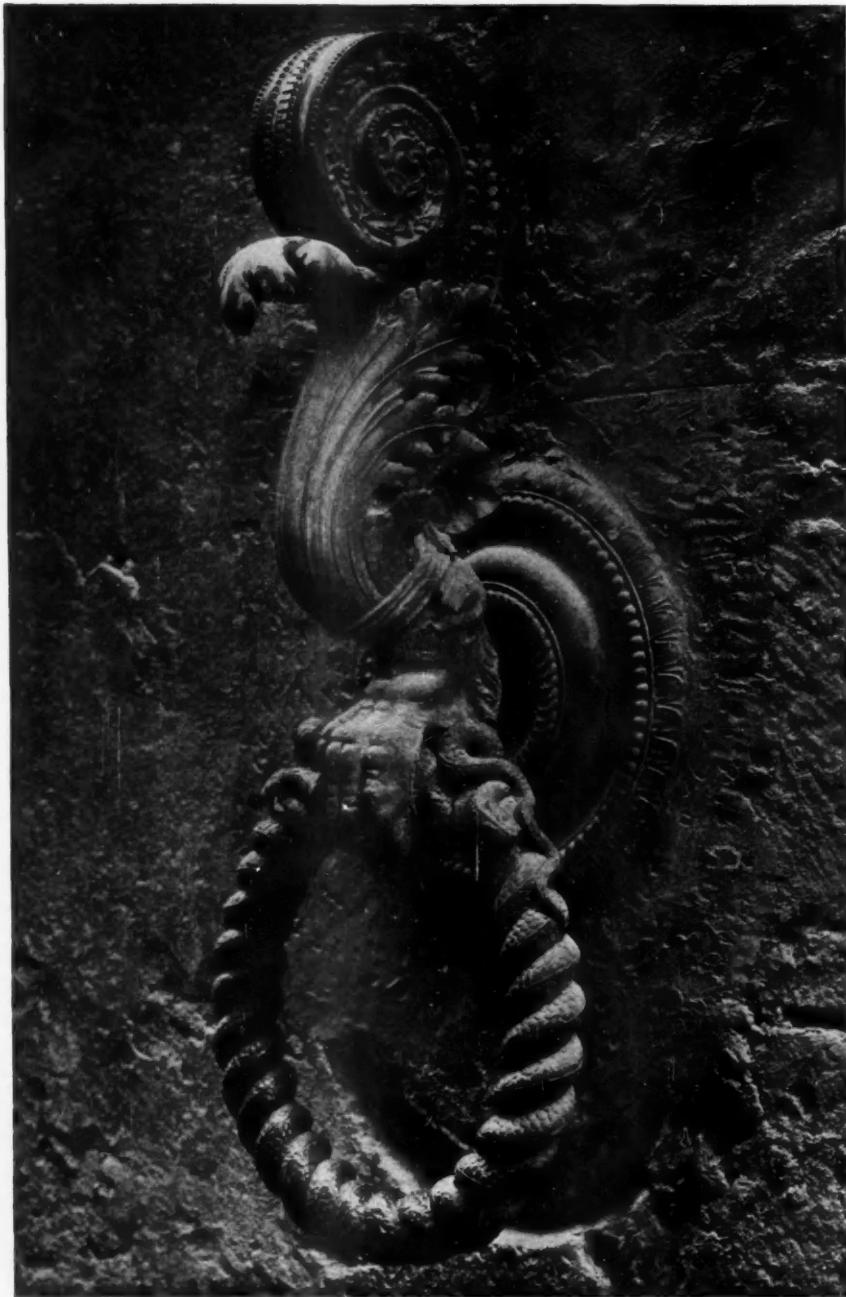
NORFOLK, VA.—Almost two blocks in the business section of Norfolk were destroyed in the fire of Jan. 1. Several buildings, including the Monticello Hotel, are in ruins. The loss is estimated at more than \$2,000,000.

NORTH EAST, PA.—The Blane-Mackay-Lee Company plan to rebuild their lumber mill recently destroyed by fire. The loss was estimated at about \$100,000.

PITTSBURGH, PA.—Thompson & Company intend to rebuild their storage house recently destroyed by fire. Loss, \$50,000.

WILKES-BARRE, PA.—The recent fire at one of the collieries of the Lehigh Valley Coal Company resulted in a loss of \$200,000.

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THE AMERICAN ARCHITECT