

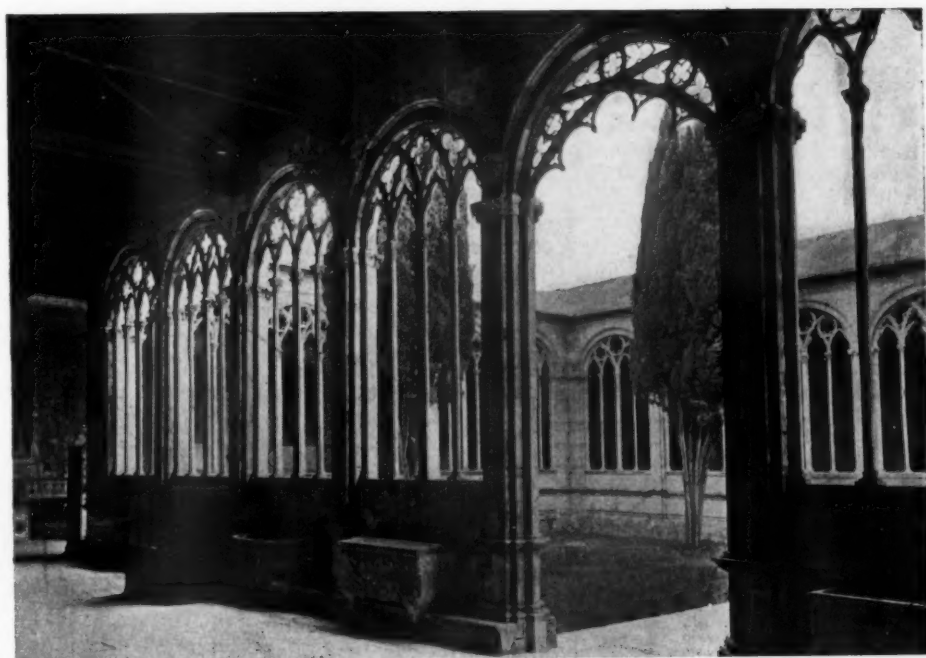
The AMERICAN ARCHITECT



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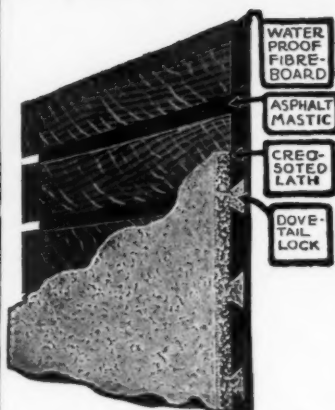
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INTERIOR OF THE CAMPO SANTO, PISA, ITALY

PUBLISHED WEDNESDAYS IN NEW YORK—FOUNDED 1876
VOLUME CXV FEBRUARY 26, 1919 NUMBER 2253

Entered as second class matter January 6, 1909, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Publication office, 243 West Thirty-ninth Street, New York, N. Y. Subscription price in the United States and Possessions, \$10.



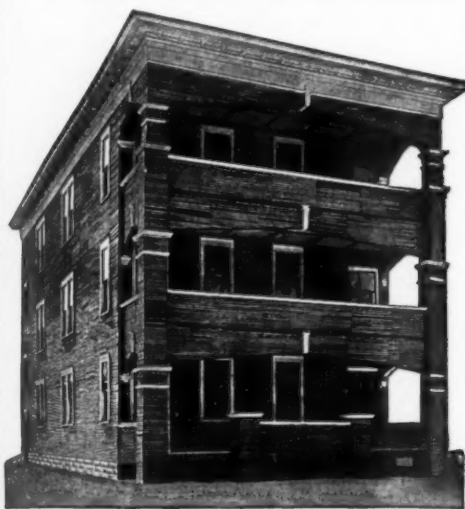
AMONG them are nationally known firms who do not compromise on doubtful construction; state architects; architects of schools, churches, clubs, public buildings, fine residences and popularly-priced homes.

The use of Bishopric Board for Stucco construction has increased 1000 per cent in six years. For these reasons: Wherever the right Stucco mixture has been applied to a Bishopric background the walls have remained rigidly intact—crackless, unsagging; there has been no rusting—no pulling away from the supports—because first, there is nothing in Bishopric Board to disintegrate; and second, it is nailed securely to studding or sheathing; it provides effective insulation; deadens sound; and often the saving it makes possible solves an economic problem for Architect and Builder.



The "lock-in-the-plaster" principle has made good in a big way. Architects have seen it hold Stucco with a bulldog grip through severe winter and hot summer. They have watched Bishopric Board stand all winter and be in perfect condition for Spring Stuccoing.

Stucco clings vise-tight to the dovetailed, heavy-wood strips which are creosoted against swelling, shrinking, warping, and weather change. These strips are imbedded, under terrific pressure, in a layer of tough Asphalt Mastic—a wonderful preservative and moisture-proof and fire-resisting. The heavy fibreboard backing is weather-proofed against heat and cold and it retards sound. Nailed as a unit to the building with joints broken every four feet for added rigidity, with the proper mixture of stucco applied to Bishopric Board how can the walls crack or crumble or the building be anything but comfortable, well-insulated, and sound free?



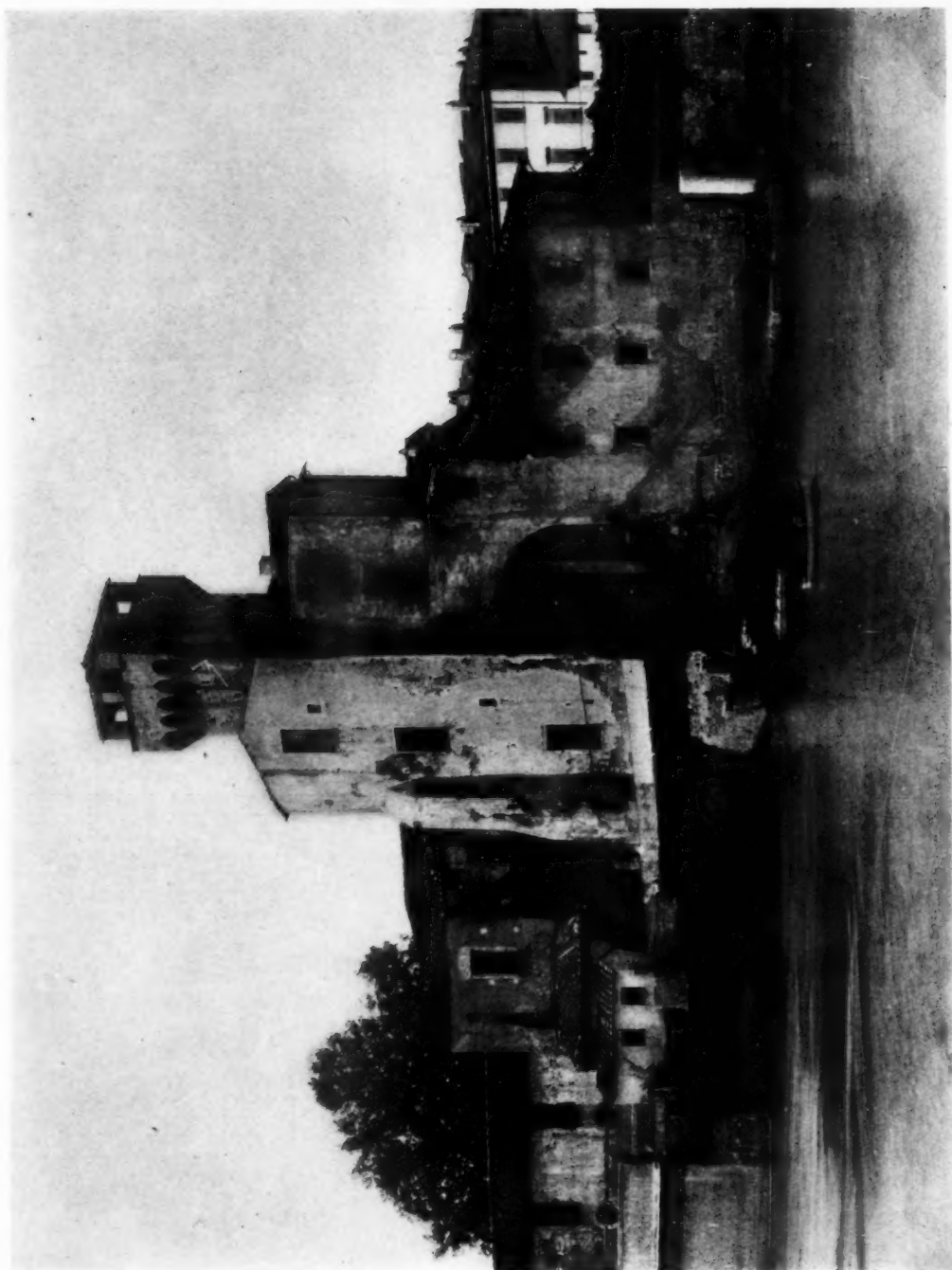
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Bishopric Sheathing saves about 40 per cent as compared with $\frac{3}{8}$ -inch wood sheathing. Makes a compact, damp-proof, sound-proof wall. No joints or knot holes. Ask about it.

Note the absolute rigidity of construction of this 3-family apartment house in Utica, N. Y., built for John J. Doyle. This building stood through the winter before being stuccoed. Bishopric Board was nailed direct to studding, no wood sheathing being used. Bishopric Board was also used on interior.

All Architects and Builders should have our book, "Built on the Wisdom of the Ages." It describes and details the use of Bishopric Board; illustrates homes and institutions on which it has been used; tells how to get perfect Stucco work. It contains reports of scientific tests and letters from engineers, architects, builders and home owners. Get it—and samples of Bishopric Board and Bishopric Sheathing.

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THE AMERICAN ARCHITECT

VOL. CXV

WEDNESDAY, FEBRUARY 26, 1919

NUMBER 2253

Does the Architect Function as He Should?

A Resume of the Program of the Post-War Committee on Architectural Practice of The American Institute of Architects

By ROBERT D. KOHN

[The preliminary draft of the program of the Post-War Committee, as quoted, summarized and discussed in this article by Mr. Kohn, was published in the January number of the *Journal of the American Institute of Architects*. Inasmuch, however, as the Post-War Committee is seeking the co-operation of the entire profession, including a majority who are not affiliated with the Institute, THE AMERICAN ARCHITECT is pleased to give the project the fullest publicity.—THE EDITORS.]

THE leaders in every trade and profession, the thinking men in education, in the law, in engineering and architecture, in the trade unions and in all the manifold industries of the country are giving consideration to the changes that will certainly take place in those industries and professions by reason of the war. There are, to be sure, a great many people who think that the United States is not to be materially affected nor radically changed as are the countries of Europe. Whether this be so or not, even if the direct effect of the war produces no marked changes here, it is certain that eventually the reflex of changed conditions in Europe is bound to require profound modifications in our industrial system. In addition to this, we are moving through a time of searching inquiry into the relation between industry and labor and between the various industries. It behooves the men in every vocation, therefore, not only to study the forces already rising to power before the war and more in evidence since the armistice, but also to inquire into the great question of their own relationship to others while there is still time to avoid even greater evils than those of the existing order of affairs.

It is interesting to note that the new spirit of the time has affected even the conservative religious leaders of the world. Mr. Ackerman recently illustrated this point at a meeting of Brooklyn architects by quoting from reports adopted by the Methodist Church of Canada at a general conference held at Hamilton (printed in full in the *New Republic* of February 8th). This he read in part as follows:

"The war has made more clearly manifest the moral perils inherent in the system of production

for profits. Condemnation of special individuals seems often unjust and always futile. The system rather than the individual calls for change."

* * * * *

"The triumph of democracy, the demand of the educated workers for human conditions of life, the deep condemnation this war has passed on the competitive struggle, the revelation of the superior efficiency of rational organization and co-operation, combine with the unfulfilled, the oft-forgotten but the undying ethics of Jesus, to demand nothing less than a transference of the whole economic life from a basis of competition and profits to one of co-operation and service."

* * * * *

"We declare all special privilege, not based on useful service to the community, to be a violation of justice, which is the foundation of democracy."

When a Church Association thus faces the questions of the day, is it not time that every profession inquire searchingly into its activities and relations to the public, taking nothing for granted, reviewing every one of its accepted standards? We cannot stand aside as if we were antiquarians always to live in the past. We must apply the test through our vocations.

The keynote of any such investigation must be the words "right relationship." As architects we should inquire whether or not we are in right relationship with the public—with those whom we would serve. Secondly, are we in right relationship with those with whom we would co-operate, with the other professions, the engineers, the craftsmen, the industries connected with building and the trade organizations; and thirdly, are we in right relation-

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ship to our fellow professionals and the younger architects who are studying to enter the profession?

Within a few weeks the newly organized Post War Committee on Architectural Practice will send out its preliminary program to every architect in the country, whether a member of an existing architectural organization or not. The committee is not a committee of the Institute. It was appointed by the directors of the Institute, but is expected to add to its membership from the profession at large, and has been directed to try to reach every architect of the country who is qualified to practice his profession. It hopes to get information from the individual and then to report back to the individual from time to time the results of its investigations, so that eventually the whole profession may be made aware of and may develop a guiding public opinion. We may in the end thus define the ways in which the profession should be advancing in order to achieve its highest purpose.

During the past few weeks messages have been received from all over the country indicating that the building fraternity generally considers the committee to have before it possibilities for the greatest good, and welcoming its appointment with enthusiasm. Already architectural organizations in a number of cities have held meetings to discuss the program.

What, then, is this program? In its details it will shortly be sent to many thousand members of the profession (others who are interested may secure copies on application). In general it starts with a declaration of purpose which the committee considers to be "to study and suggest improvements which will affect the conditions and increase the efficiency and adequacy of architectural practice throughout the United States. The desire is to make the study cover the whole country and to reach every qualified person practicing the profession of architecture, irrespective of whether or not that person be a member of one of the established professional organizations." It then goes on to say that "the experience of the war has bared the weakness of long established methods of performance until institutions of every kind, hitherto thought to be effective, have been found wanting. The conditions affecting the building arts at this time, therefore, not only suggest but demand that they be given the same searching analysis that is being given to every human activity."

After citing the three main divisions of the investigation which have already been referred to, the program proceeds to outline fourteen main topics on which the committee invites comment and suggestion. The point is clearly made that each of these subjects as stated is not intended to indicate an opinion held by the committee or to signify an

implied criticism of present methods. Persons interested in any branch of the building profession are urged to study the existing procedure with regard to each of these items and to express an opinion as to whether or not these are at present what they should be. The test of right relationship is to be applied to each. Is it what it should be? Should it be bettered? Can it be bettered? How are we to go about it? In considering each item (as far as humanly possible) self-interest is to be set aside, because of the conviction that eventually the best interest of the individual in any vocation will be attained through his rendering the greatest possible service to society as a whole through that vocation.

The subjects of investigation are to be presented under the three categories already referred to and will at the beginning include the following:

I. THE RELATIONSHIP OF THE ARCHITECT TO THE PUBLIC

a. Extension of the service that the architect may render: All the professions have been criticized for having worked primarily in the interest of one class to the neglect of others; for the rich or moderately wealthy, and to a lesser degree, or not at all, for the poor. We know that a large majority of all building work is carried on without the services of a competent architect. It is one of our most important problems to discover where lies the responsibility for this condition; with the architect's training and practice, or with the public? Has the architect laid too much stress on the æsthetic and too little on the business value of his functions? Has he kept in touch with the new developments in industrial methods, the ever-growing demand for better human relations within industry, the new desire for better ways of living, each one of which justifies and requires an environment which will further its development? Is the cost of the architect's service so great as to make it generally unavailable for the solution of such problems? Does the public consider the architects' service as a luxury mainly reserved for the wealthy? Granting that it is essential to attempt to secure a solution of every building problem that shall be æsthetically satisfactory, should not the architect none the less urge the importance of his knowledge of wise economy, adequate and practical planning, safety, and the most advanced building methods? Assuming that the profession as a whole will have acquired the knowledge that justifies these claims, what educational work can it undertake to make the public generally aware of them?

b. Responsibility of the Architect: A large proportion of building is carried on with borrowed funds. A reliable estimate of the cost of the com-

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pleted structure is necessary as a prerequisite in arranging any scheme for financing its cost. Individuals are entitled to know in advance, approximately, what obligations they are entering into. Too many architects have been slow in realizing how vital is a reliable preliminary estimate to the success of a building undertaking.

An architect's estimate, even though correct, carries with it no financial guarantee that protects the owners or lenders in the amount of money they may be called upon to spend. The architect's status as agent of the owner imposes upon the owner full financial responsibility for all errors of judgment or defects growing out of lack of experience or ability on the part of the architect, except in such remote cases where it can be proved that the architect had failed to exercise due diligence and care. The architect's status is said to be not clearly enough professional, in the lay mind, to make apparent the reasonableness of this relation.

How shall the architect supplement his work, if at all, so as to overcome these apparent deficiencies? Is it true that there is inherent danger in a financial guarantee given by a person or firm engaged to render both professional and commercial service, that in the performance of this service their judgment may be prejudiced as to the quality of workmanship and materials entering into the construction of a building by the possibility of a financial loss under their guarantee? Is there any other way out of the difficulty? As the English system of Quantity Surveys seems to afford an economical basis for estimates, would its general adoption help in the solution of this problem?

c. The Architect as a Citizen: The architect, it is said, does not understand or sympathize with the viewpoint of business, nor does business understand the professional ideals of the architect. The architect does not take sufficient interest in business, political, or civic organizations. His ability, through his peculiar training and experience, to render service in these fields is little understood. Other more aggressive interests are therefore more closely identified in the public mind with the building world. While the architect may render an excellent service to an individual client, is it not true that he has failed signally to render the equally necessary service for which his training has fitted him to the community in which he lives? Is there not conspicuous evidence of this in the formation of organizations which deal with matters lying well within the domain of architecture and yet which are promoted and financed by laymen? Architects have looked on these various usurpations of their functions without protest, with the result that they are quite generally excluded from participation in many plans for improvement and amelioration of living and other con-

ditions. What are the particular functions of government in which the architect can be of special service by reason of his technical knowledge? How can he make the public realize the importance of his aid in these particulars?

d. Percentage Remuneration: It is commonly said that the theory of charging for professional service on the basis of a percentage on the cost is unsound. While the cost of two buildings may be the same, the cost of rendering the architectural service for the two buildings would never be the same. A given percentage in one case might be too low and in another too high; further, the public cannot disabuse its mind of the notion that where a man's remuneration is based upon a percentage of cost, there will be a tendency, if not actually, to attempt to increase the cost, at least to refrain from making an effort to reduce it. Has the present practice a marked influence on the extent to which the architect's service is used? Are the substitutes satisfactory that have been suggested and are actually, to a certain extent, in practice (the cost plus fee system)? Is there any other practical suggestion?

e. Supervision of Construction: Architects are said to devote themselves too exclusively to the study and preparation of drawings, specifications, and contract documents, and to entrust the supervision of the works too largely to salaried employees. The owner's active interest is in the actual construction, not in the drawing. In watching the progress of the work he is thrown into closer contact with the contractor and the salaried employee, with the result that the value of the architect's service in connection with the actual construction seems unimportant to him. As the busy architect is already very heavily burdened, is there any practical solution of this difficulty? Would his position be better and his services more adequate if those to whom supervision of construction is entrusted were his associates or partners, rather than employees?

f. The Status of the Architect; art, profession or business? To the vast majority of people the construction of a building is distinctly a business undertaking, and the men they associate with the building business are the ones they have learned to identify with the actual operation. The public—including its governmental officials—does not associate the architect with the actual operation of building construction with the same understanding they give to engineering and construction companies. The elements of conception, study, and design are regarded as intangible and secondary things and are considered only in this light—if considered at all. Yet the architect is unwilling to diminish in any degree that part of his professional effort which makes for the æsthetic ideal. Need it

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be diminished in order to develop the business side of the profession? If he develops along the line of making his work of greater social service, will he not find the right ratio between art and efficiency?

g. Advertising: Without going into the controversial question of whether advertising of a certain kind is or is not proper for professional men, or dwelling on its potential abuses or advantages, the fact seems undeniable that of all the agencies interested in a building project, the architect's function is the least understood by the lay public.

Advertising seeks to accomplish a greater use or sale of any article or service. Such a result is attained in the business world by means of a liberal expenditure of money along recognized lines of publicity. The architect does not advertise. Between these two opposites, however, there must lie a fruitful field for study, to the end that architecture may be given a wider application and serve society in a fuller measure. It is a great pity that the architect has no way to make known to others who might need it the technical experience which he acquires in the execution of his work. Do we need to find some dignified form of publicity which would not be open to criticism as blatant and immodest? If the architect can help in so many ways to the solution of our social problem, is there a better way to make it known?

II. THE ARCHITECT'S RELATIONSHIP TO THOSE WITH WHOM HE WOULD CO-OPERATE

h. The Contractor's Function: Great changes have taken place, in recent years, in the status of the contractor in relation to building enterprises. In important work the contractor now, generally, sells his services on a professional basis. His remuneration is understood to be for the use of his organization and its knowledge of the building business. This changes the relation of the architect to the whole building procedure.

Some of the contractors have been quick to realize changed conditions and the desire of modern business to deal with one organization equipped to handle all phases of a building problem. There are, to be sure, some so-called "general contractors" who do nothing but trade on a name, have no technical knowledge of building, and live on the skill and credit of their sub-contractors. But there are also general contractors and construction companies which are composed of able men and which employ able designers and do all work from the making of drawings and specifications to the financing, building and furnishing of the structure. As against such a system, the average architectural organization dwindles in impressiveness. * The services of an

architect, where a really competent contractor is selected on the basis of "confidence," is not required in the same degree as in the older method, to watch the performance of the contractor or to safeguard the expenditures of the owner. Nor is he so frequently called upon to adjudicate disputes that may arise between the owner and the contractor over interpretations of the contract obligations. On the other hand, with incompetent so-called general contractors who sub-let everything and know nothing of building, the work and responsibility of the architect is greatly increased.

While the architect has been criticized for not giving reliable estimates backed by a responsible guarantee, the tendency in part of the contracting field is growing away from the giving of such guarantees by the contractor. The willingness of the public to accept unguaranteed estimates from a contractor while questioning the estimate from an architect, seems to indicate a far greater reliance is placed on the contractor's judgment as to the cost than in that of an architect. May it not be reasonable to assume that contractors, through their new conception, will do more to bring about an understanding of the professional viewpoint than architects have been able to do? Does this not also suggest a vital reason for establishing a closer co-operation and understanding between architects, consulting specialists, and contractors, and indicate a community of interest that has hitherto been unapparent?

Must not the architect encourage every valuable outside aid to efficiency and yet clarify his own function as an element in building production? Can the man who creates the design also be the director or manager of the whole procedure of building or shall he be primarily the designer?

i. The Need for a More Comprehensive Service: The modern tendency of business, accentuated by the experience of the war, is to deal with larger organizations with one responsible head rather than with the several contributing factors that go to make up an organization to produce a material result. It is said that the architect has done nothing to meet this demand, but that engineers have, to an extent, done so.

The war has brought the whole world face to face with a situation which demands that production be increased and that resources and facilities be developed to an extent far exceeding the pre-war volume. The architect is said to have done nothing to co-ordinate his work with the movement for efficiency in production. The experience of the Construction Division, the Emergency Fleet Housing Division, and the Housing Corporation have demonstrated the great advantage of intimate organized co-operation of all the factors in building

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production in meeting the exigencies of a war emergency.

Should there not be a closer co-operation between the engineers, the architects, and the construction men (the builders)? Should not all these qualities be integrated; should not all be present at each stage of the procedure? Does this point toward larger organizations in which men of varying qualifications co-operate figuratively as equals rather than the present plan whereby one man—the architect—employs others to work under his direction?

j. Organized Industry: The architect is said to have ignored or neglected his relationship to one great element of the building world: organized and unorganized labor. He is said to consider that skilled and unskilled labor is troublesome, unreliable and uninterested in good workmanship, in the advance of the art of building and in efficiency. Has the architect done anything to find out if there is another side to the question? Is the architect convinced that the average builder is so wise a guide to labor that no better condition of employment could be devised? Should not the architect as representative of the owner (the public) be a party to the agreements made between employers and employees in the building trades? Could he not co-operate in their relationship so as to place it on a higher plane, make it more human and tend toward better craftsmanship?

k. Standardization of Building Products: Although efforts have been made in the past toward standardization of building materials of minor importance, it is said that the high cost of building is due in a measure to the great variety and detail of materials demanded by architects' plans and specifications. Is this not a field for co-operation between "material men" and architects that offers a wide field of usefulness? This subject has been elsewhere discussed at length (in *THE AMERICAN ARCHITECT*) and need only be mentioned to suggest its potentialities of economy and efficiency.

III. THE RELATION OF THE ARCHITECT TO HIS FELLOW ARCHITECTS AND THE MEN PREPARING FOR THE PRACTICE OF THE PROFESSION

l. Architectural Societies: Only a small percentage of all the practicing architects of the country are members of any professional organization. There must be a reason for this aside from the proverbial indifference of the human species to matters not patently connected with getting along in the world. Our professional organizations have been accused of devoting too much time to discussions on the art of architecture. They are said to have occupied their energies in the past in prescribing the exact terms upon which an architect may seek or accept employment and have not taken into account

sufficiently the kind and quality of service the public demands and is willing to pay for, or the terms upon which the public is willing to engage such service under the ever changing economic conditions that govern all business operations.

Without expressing any opinion as to the justice of these accusations, can we not consider anew what kinds of organizations are needed in order that through association and conference between architects the practice of architecture may be advanced and the extent and value of the service it may render to society thus be increased? Is the cost of membership in existing societies prohibitive? Do we need regional organizations of architects distinct from or as an adjunct to a national organization? Shall we have organization for so-called business and technical purposes only with no attempt to enforce an ethical code? It has been said that we should have an organization of architects for the sole purpose of bettering the financial standing of the architect. Is there any such demand?

m. Competitions: The architectural profession is possibly suffering the consequences of having encouraged, or at least officially countenanced, a questionable method of selection—the competition. The efforts made to regulate its conduct and minimize its pernicious effects are merely superficial remedies applied to a condition that is fundamentally unsound. The selection of an architect by the comparison of his usually hastily prepared and inadequately considered drawings with those of others in the same boat, without any of them having the benefit of personal consultation or co-operation with the interests that are to use the building when built, puts a premium on deceit and meretriciousness, and confirms the all too common belief that architects are primarily picture makers and neglect the considerations of good construction within or approaching the approximate cost, and the management of all the business details attendant upon such an undertaking.

As part of this question, the methods by which architects are employed need study. There seem to be three ways by which they may solicit a commission: By the competition, as above described; by the social method of utilizing friends and acquaintances; and by the direct business method of soliciting employment, by making sketches gratis. Then, too, the schedule of professional charges has been supposed to be mandatory, or has been used by architects to indicate a compulsory fee to which they are bound, thus setting up an anomalous condition whereby the public is led to believe that all architects possess equal ability because they are entitled to equal payment.

The younger men have said that only through competitions can they hope to get a chance at im-

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portant work. Even if this is true, is it a desirable way? Does it lead to progress? Could not a better way be found to achieve this and the purposes generally subserved by competitions?

n. Education: Our architectural schools, in emphasizing with more or less success, the important features of design, science, and culture, have apparently neglected to train the students in practical business methods or practical building knowledge, with the result that a large proportion of graduate architects are utterly unprepared to render skilled service. Thus it would seem to be true that many young men gain their experience at the expense of their first clients. There is a large question as to whether the practical application of scholastic training can be taught in schools or whether it must be gained by a system of apprenticeship or responsible association with more experienced architects.

What can be done to make our schools more responsive to the practical needs of the world in which we live? Have not architectural schools been woefully at fault in neglecting to instruct their students in their obligations as citizens qualified to render a great and needed service in every community? What can we do to bring this viewpoint to the fore?

There is also a great problem before us in the frequently discussed question of new forms of architectural design appropriate to the new ways of living, the new ways of industrial production, and the new social forces everywhere in evidence. Does not this problem require an entirely new kind of training for the young student and continuous study

on the part of the practising architect to keep in touch with reality?

* * * * *

These, then, roughly stated, are the main items in the program of inquiry about to be issued by the committee. None of the paragraphs as printed are intended to state conclusions, nor indeed are any of the arguments advanced necessarily valid. They are merely outlined so as to provide a basis for helpful discussion. The committee will be glad to receive from anyone suggestions of topics to be added to the program, provided that these are pertinent to the purpose of the proposed investigation as outlined in the foreword. (Address Post-War Committee on Architectural Practice, the Octagon, Eighteenth Street and New York Avenue, N. W., Washington, D. C.).

* * * * *

A speaker said at a recent meeting in New York that he considered the program of this committee to be the most promising sign of vitality and progressive spirit ever seen in the building world of America. The writer believes that this is true and believes also that the outcome of the inquiry will in the course of the next few years prove to be helpful not only to the members of the profession, but what is more important, make the architect's service more worth while to the community in which he lives. In order to approach this desirable end it is necessary, however, that architects generally recognize the importance of the move and participate whole-heartedly in this effort at enlightenment of their profession and the public.



The Hotel Pennsylvania, New York

McKIM, MEAD & WHITE, Architects

This Last Addition to a Chain of Hotels Operated by the Statler Company, is Not Only the Largest Hotel Structure in New York City, But is Also the Commanding Feature of the New Civic Center Created by the Pennsylvania Terminal, opposite, and United States Post Office Building on Eighth Avenue, of which McKim, Mead & White were also the architects.

THE problem confronting the designers of the new Hotel Pennsylvania in New York City was to produce the largest hotel building in the world in the greatest hotel city and in so doing to translate into concrete expression the ideals and

Streets. It has 22 floors from street level to roof, inclusive, and three levels in the pent house.

The entire area is covered with solid building for four stories above the street level to the approximate height of the Pennsylvania Station opposite.



SOUTH, OR THIRTY-SECOND STREET FRONT

enthusiasm of the great railway system as owner and the Statler Company as lessee and operator.

The building has been erected on a plot of ground 200 x 400 feet, bounded on the west by Seventh Avenue, on the north and south by 33d and 32d

This solid base is faced with Indiana limestone and treated with an order of Roman Ionic pilasters with lightly rusticated walls between, and a story of plain ashlar. This treatment relates the building in design and scale with the station. In the center of

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the Seventh Avenue façade is a portico of six Ionic columns marking the main entrance. The building line has been set back fifteen feet on Seventh Avenue to assist in the scheme of producing a plaza in front of the station.

These lower floors contain most of the public rooms. On the street level are the main lobby, office, dining room, tea room, men's café, bar, main serving pantry and shops of various kinds with entrances from street and hotel and also the customary

hair dresser shop and the maitre d'hôtel's office. On the ballroom floor is a very complete and extensive entertaining area of great flexibility. This is divided into grand foyer and ballroom, two large parlors, banquet room and foyer, and three smaller dining rooms arranged en suite. All of the above have their necessary auxiliary spaces and in addition to having private elevator service from the ground floor are arranged for direct service from the large banquet kitchen. The arrangement permits of one



MAIN DINING ROOM

florist shop, telegraph office, public telephones and checking accommodations.

In a half story above the ground floor are housed the hotel executives' offices, baggage and parcel rooms, print shop and help's dining rooms. The baggage room is connected by a conveyor to the service driveway through the easterly end of the building, avoiding any reversal of direction of incoming or outgoing baggage.

On the mezzanine are the lounging and writing rooms and library and also a large exhibition space,

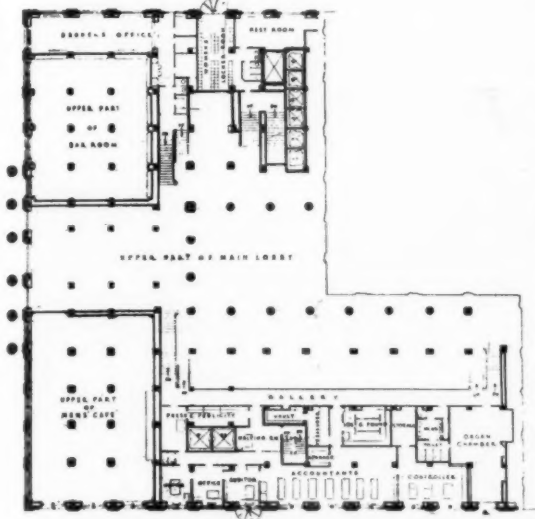
or two large or several smaller parties being accommodated at the same time. The second mezzanine, a part floor, and the entire second floor, are devoted to service bedrooms, storerooms, sewing and linen rooms, and the telephone exchange, which latter is the largest of its kind ever built.

Above this lower area the shape of the building has been dictated by the typical bedroom floor plan. After much study a plan of alternate wings with wide courts opening to the south was adopted. There are four bedroom wings each 54 feet wide

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over all, and three courts each 40 feet wide. The easterly court facing the Gimbel Building is 50 feet wide.

In general a wing consists of a central corridor



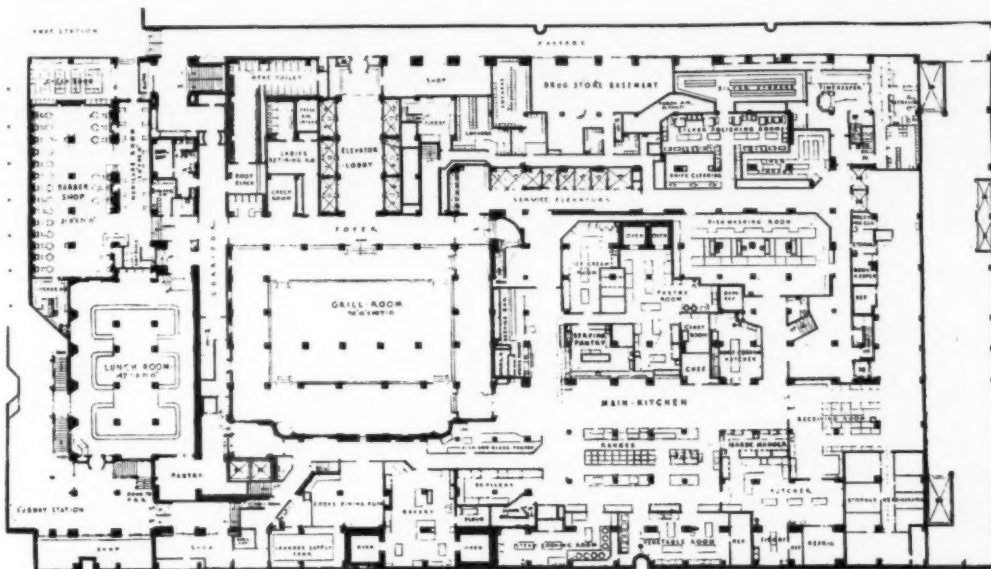
OFFICE MEZZANINE FLOOR PLAN

with bedrooms on each side, each bedroom having its own bath. The westerly or Seventh Avenue wing contains the larger rooms with some outside baths, the other wings having inside baths. There are seventeen bedroom floors, with an average of

125 rooms to the floor. Two of the floors have special sections composed of living and reception rooms, dining room, pantry and bedrooms arranged to allow from three to ten rooms to be thrown into one suite. Three of the upper floors in the easterly two wings are arranged with large size rooms with extra size closets. At the easterly end of the first bedroom floor are two complete Turkish baths, one for men and one for women. The women's department is entered by a direct stair from the second bedroom floor, which is to be reserved for women guests. Each of the Turkish baths has a large plunge and ample equipment of all other desirable features. All the water is to be sterilized by the violet ray system as well as by the regular filter system, and in addition will be constantly renewed.

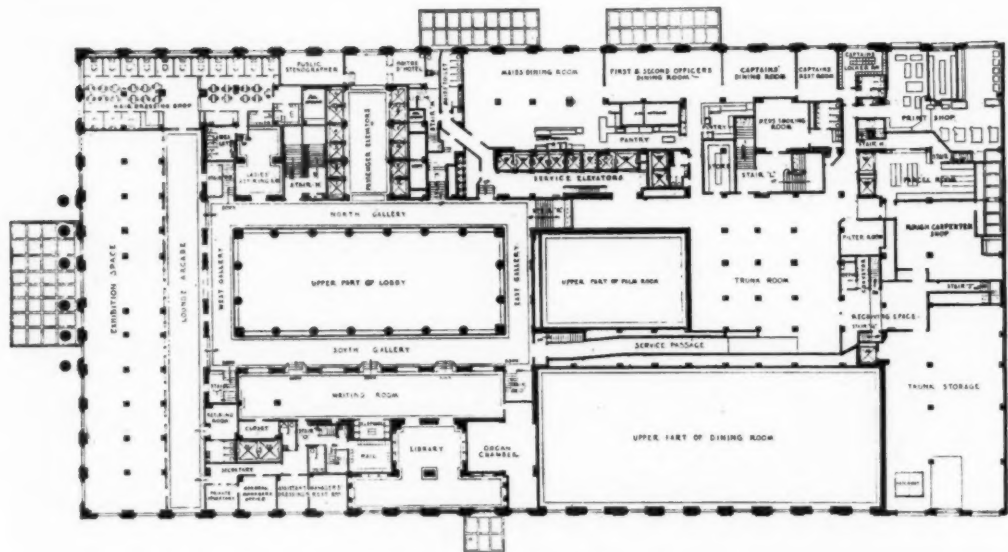
The bedroom stories are contained in a shaft faced with light brick of a warm gray or buff color, with a crowning feature consisting of a three-story order of pilasters with a main cornice of terra cotta. A structure on the Seventh Avenue wing roof contains the roof garden restaurant, on the floor above which is an extension of the elevator pent house. The second wing roof is left uncovered for use as an outdoor after-dinner lounging space accessible from the roof garden by a wide bridge across the first court.

The roofs of the two easterly wings are left open for future development and provision is made in the framing for connecting these roofs with bridges similar to that in the first court to provide for a complete scheme of circulation.

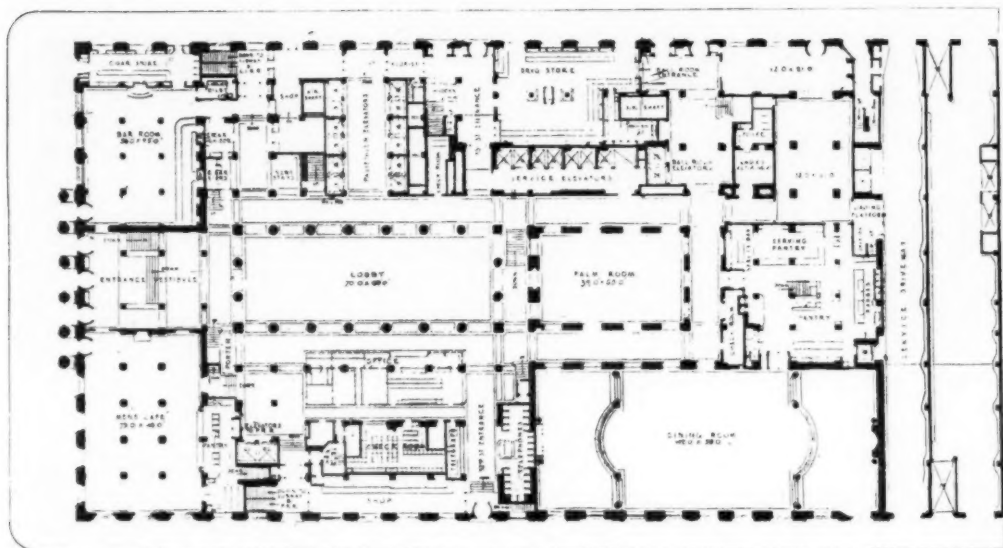


BASEMENT FLOOR PLAN

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FIRST MEZZANINE FLOOR PLAN



FIRST FLOOR PLAN

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The easterly 50 feet of the first floor area under the easterly court is occupied by two parallel drive-ways, a service drive for the hotel with its loading platforms, elevators to workshops above and storage rooms and kitchen below, and conveyor to baggage storage on the mezzanine over; and at the extreme east a service drive for the Gimbel store with elevators and loading platform to care for the store deliveries which are now crowding the 33d Street pavements.

lobby. A well-lighted underground passage under the 33d Street sidewalk will lead past the hotel to the concourse connecting the Hudson & Manhattan Railway and the Broadway subway and to Sixth Avenue.

The sub-basement mezzanine, a part floor, contains shops and service dining rooms and locker rooms. The sub-basement houses the house and guest laundries and extensive refrigerating, pumping and filtering plants and the machine rooms. The



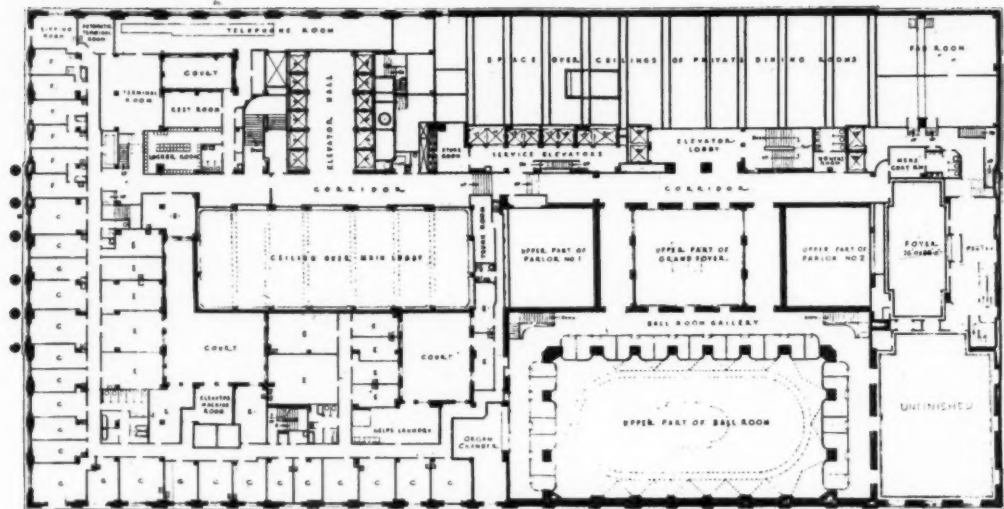
MAIN ENTRANCE LOBBY

There are three floor levels below the street. The basement contains main kitchen and auxiliaries, grill room, lunch room, barber shop and wash room. This floor has direct entrances from the platform of the 34th Street express station of the Seventh Avenue subway. At the 33d Street side of the hotel there is a wide passage under Seventh Avenue connecting directly with the Long Island Railroad station. At the 32d Street side is a similar passage for Pennsylvania Railroad passengers. The latter passage can also be reached by elevators from the hotel

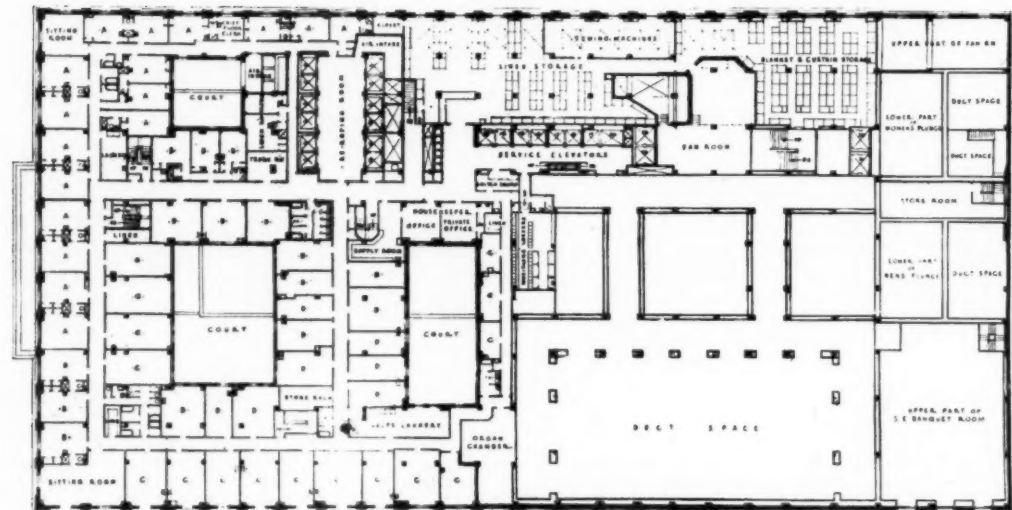
electric power and steam service is supplied by the Pennsylvania Station Power House.

The ground floor has been designed with a view to meeting the problems of circulation presented by the throngs of people which the great metropolitan hotels are called upon to handle, and to produce effect of spaciousness in scale with the magnitude of the structure, which will not be disassociated from the simple dignity of form and harmony of color which the American people demand in their own homes. The classic architecture of Italy has been

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SECOND MEZZANINE FLOOR PLAN



SECOND FLOOR PLAN

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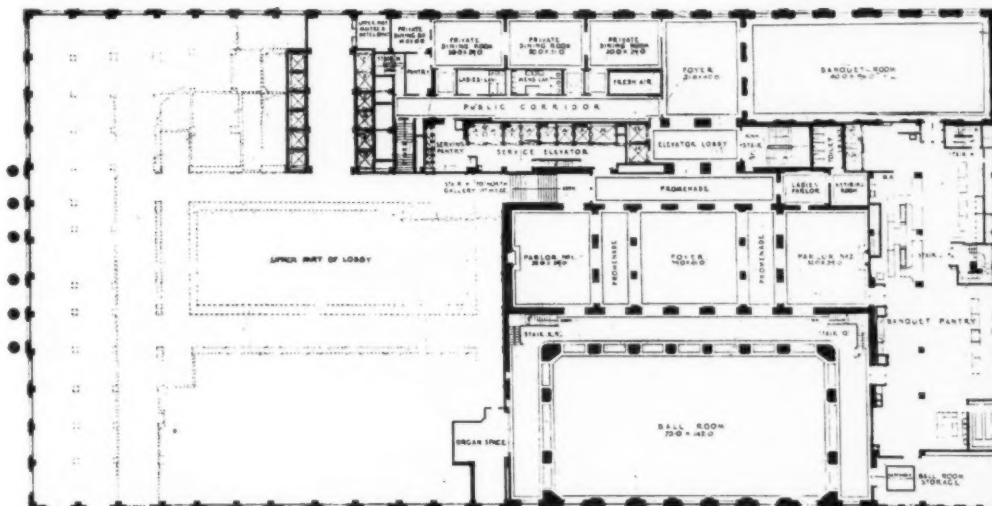
TYPICAL FLOOR PLAN

the inspiration for the decorative treatment for all the public rooms.

The architectural feature of the main lobby is a colonnade of Doric columns producing the effect of a great atrium in the Roman style. Above is a metal and translucent glass ceiling thirty-five feet from the floor, from which a glow of golden light descends. A mezzanine gallery forms a promenade

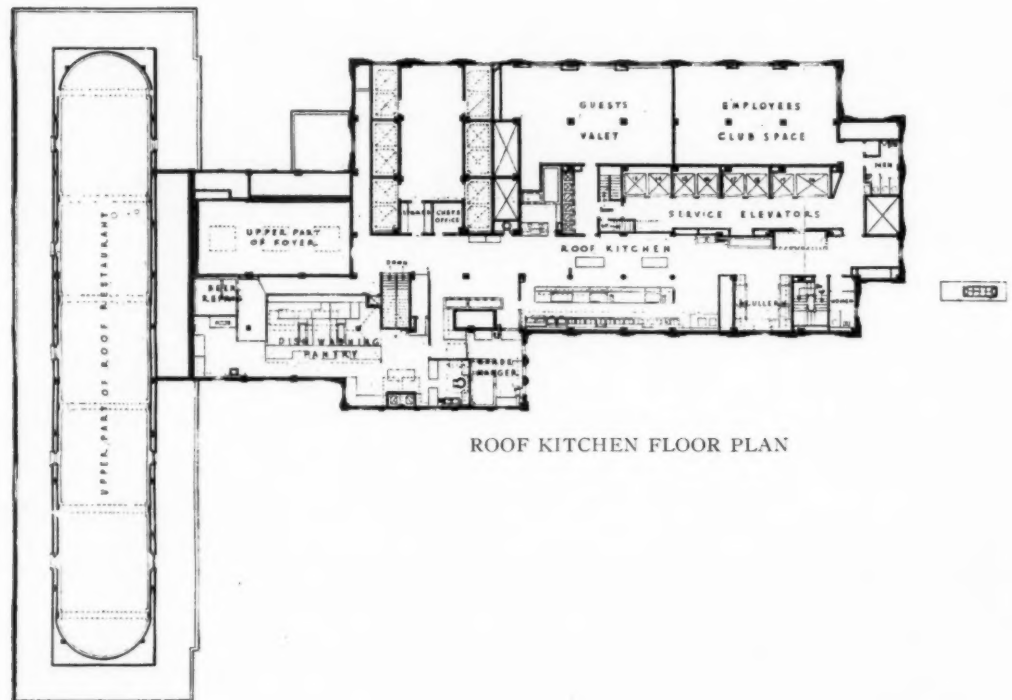
and lounging space entirely around the colonnade. On the ground floor there are two direct entrances each from 32d and 33d Streets to the lobby and a special entrance on the 33d Street side for the ballroom, with direct stair and elevators to the ballroom floor.

On the right of the main entrance, with a direct entrance from the street, is the men's café. It is

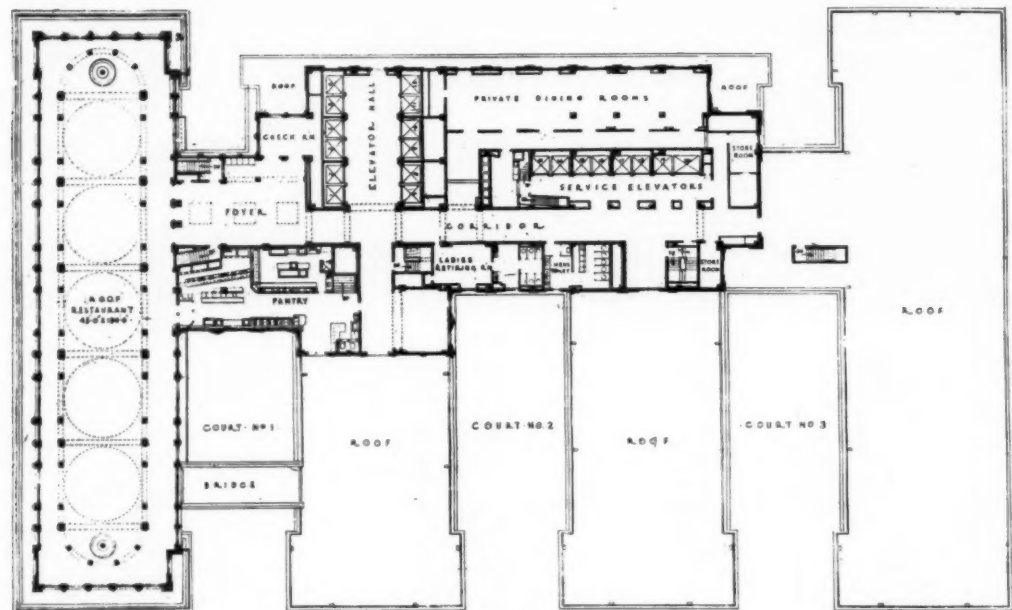


BALLROOM FLOOR PLAN

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ROOF KITCHEN FLOOR PLAN



MAIN ROOF PLAN

THE AMERICAN ARCHITECT

panelled to the ceiling in a natural finished chestnut. The floor is of imported quarry tiles. The lighting fixtures of pewter and brass are a development of the Georgian and Flemish chandeliers.

On the left of the main entrance is the bar. The stone walls, vaulted ceiling, leaded windows and mosaic tile floor give the atmosphere of Tuscany of the Early Renaissance or Quattrocento, where every hill town had its world-famous product of the fruitful vine.

opens the main restaurant. This vast room measures 60 x 140 feet and is over 20 feet in height. At each end is a terrace or dais raised above the floor level of the central portion so that those seated at the end tables may include the entire room in their field of vision. At the edge of each dais a light screen of four columns adds scale and architectural interest to the great space. The walls are of artificial limestone, with a base and window and door trims of terra cotta decorated with delicate Italian



GRILL ROOM

Opening from the east end of the main lobby is the tea room, the design of which suggests the Adam period of English decorative art, with a close relation to the Italian Renaissance rather than to the severer classic forms which the Scottish architects used as their inspiration. The walls present an alternate composition of arched openings with mural decorations in the tympanums and wall surfaces with magnificent mirror sconces.

A promenade which forms an extension of the aisles of the main lobby colonnade makes a complete circuit of the tea room, from the south arm of which

arabesque ornament. The beamed ceiling is richly decorated in the style of the Italian and French ceilings of Renaissance times, yet with colors so soft and harmonious that they increase the apparent height of the ceiling in spite of its enormous span.

Opening from the south colonnade of the mezzanine level is the writing room, which in turn opens to the library. The latter room is a study in the English Jacobean period, panelled in oak to the ceiling. The centerpieces in the modeled plaster ceiling are representations of the old printers' marks of the sixteenth century, which were used by the

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first masters of the printers' craft in Italy, France, Flanders, Germany and England.

From the mezzanine gallery of the main lobby a short flight of steps leads to the ballroom floor. A grand foyer, with its aisles and parlors on either side, opens into the ballroom. These rooms are carried out in the spirit of the Italian Renaissance as it is typified in the palaces of the sixteenth century.

The ballroom itself, on the south side of the building directly over the main dining room, is some 12 feet wider than the latter, and has a ceiling height of 30 feet. The gallery of boxes extends around three sides of the room. The vaulted ceiling is delicately modeled with Italian arabesque ornament decorated in color on an ivory toned ground in a manner suggestive of the fresco decorations of Raphael and Giovanni da Udine in the Vatican and the Villa Madama in Rome. Two great crystal and silk chandeliers are the main illuminating features.

The banquet room, on the north side of the same floor, is panelled in white oak to the ceiling, while its foyer—like the grand foyer—has walls of artificial stone.

The private dining rooms, which can be used singly or en suite, suggest in their decorative treatment the styles of the early Georgian period in England, which borrowed its motifs from the Palladian architecture of Italy.

The roof restaurant occupies the entire roof of the Seventh Avenue wing. From its many windows and from the open promenade outside, over the main cornice of the building, an uninterrupted view is possible of the entire city and its environs. The harbor and North River are in view from the Narrows to Hastings. This room has been designed on simple architectural lines conveying an impression of lightness and openness. A vaulted plaster ceiling is supported by a colonnade, forming a great central hall with aisles. The walls are of plaster above a tile wainscot, and the details are of the utmost simplicity with a view to forming a background for the changes in decorative scheme which will be made from season to season.

In the grill room in the basement the effect has been made to escape entirely from the dungeon-like quality of most below-grade rooms. The guest enters the grottoes and orangeries of an Italian villa garden, surrounded by warm and happy colors reminiscent of Mediterranean shores. The columns and wall arcades are executed in sgraffito, the etched plaster work of the Italian Renaissance, all of which has been executed in place by Italian artisans. The sgraffito is bound by terra cotta to structural lines and a base of the same material affords protection to the lower part of the wall. The tile floor has been made specially to harmonize in color with its surroundings.



The Long Case ("Grandfather") Clock

An interesting article, contributed to a recent issue of *The Architect* of London, refers to certain interesting collections in England of long case clocks. This dignified and well proportioned detail of furnishing has, it is believed, never received the consideration in this country to which it is entitled as an extremely useful and decorative item of interior furnishing. Replicas of foreign examples have been made in this country, but at a cost that makes them available only to the well-to-do.

The "veritable antique," routed from years of quiet rest in New England houses, has found lodgment in the homes of those fortunate enough to "pick them up" at bargains. Copies of these old clocks, with modern movements, are sold at prices as high and often higher than English replicas.

It has seemed that among the details of built-in furniture the tall clock might with good decorative results be included. There is a certain sense of companionship in the slow swinging pendulum of the tall clock and also in its rich, deep-toned gong that strikes every half hour.

In a "short chat," as the article is called, on the long case clock, *The Architect* states:

The long case or grandfather succeeds the brass lantern or bird cage clock about 1670, and at the same time replaces a mechanical instrument of metal by a piece of furniture made principally from wood. The long clock, in consequence, obtains a predominance and importance not possessed by its smaller predecessor. It must be remembered that at this period instruments of timekeeping were rare, and confined to the upper classes almost exclusively. The bulk of the English nation arose with the sun and went to bed with the dusk. Appetite regulated the hours of meals. The portable timekeeper was the pocket watch or the lantern—the true "bracket-clock," as a bracket for its support and to allow of the fall of the weights or the swing of a long pendulum was a logical necessity.

It is easy to understand the popularity of the long case clock. It was an important and decorative piece of furniture; it required no defacing of walls by the fixing of a bracket; it could be placed in any position, and, above all, it was a novelty.

It is a curious point with regard to furniture (and the same is probably true of many other things) that new types are always logical and fitted for the purpose for which they were made. It is only in the later stages of development that the decorative begins to override the utilitarian. Thus the early Stuart oak chairs are nearly always ideal, sturdy and comfortable. The Restoration chair is lighter, but

still constructional. The type degenerates with the later Jacobean period into the flimsy and badly designed Flemish models, with front legs doweled into seat frames and back crestings attached to the outer uprights by wooden pins. New life is introduced during the first years of the eighteenth century, and the evolution begins again to culminate in the Chinese and Rococo absurdities of Chippendale. This rhythm may be noticed, at more or less definite intervals, up to the present day. The early cabinets fulfill the cabinet function—to hold things; the early tables are rigid and were made to support weights. An apparent contradiction of this rule is the sideboard, which, at first, has neither cupboards nor drawers, yet in the hands of the Heppelwhite and Sheraton schools becomes a repository for wine, napery, cutlery and glass. This contradiction is more apparent than real, however. The sideboard is, as its name implies, a side-table; it changes at a later date to a combination of cupboard and chest of drawers, the functions of neither of which properly belong to it.

The development of decorative type with concomitant loss of utility and purpose is very evident when we trace the rise and decline of the grandfather or long case clocks from about 1670 (the dawn of the type) to 1800 or later. The function of a clock is, primarily, to show the time, and to do this in the most legible fashion. For this reason, a clockmaker does not put his dial at the bottom of the case, but many of the later makers did things nearly as bad. Dials 8 feet in the air, minute and hour hands identical but for a trifling difference in length, hour numerals of insignificant size and a general blurred type of dial are all characteristics of many of the late long case clocks. With the work of the renowned makers, such as Tompion, Knibb, East, Gould, Gretton and Quare—to name only six from a host—it is a pleasure to note how everything is subordinated to the one function of a clock—to show the time—without deteriorating in any way from its decorative value; in fact, the latter is cleverly enhanced by the obvious purpose of each detail. The early long case clocks are never assertive, therefore as furnishing pieces they never disturb a harmonious decorative scheme. The cases, although good, are usually plain, thereby not detracting from the focus point of the clock itself: the dial, where fine workmanship and choice detail was expended. Above all, these early clocks are refined; there is no hint of the vulgarly ornate.

Clock collecting is a fascinating pursuit. Although, broadly, these long cases can be resolved into certain types, yet in points of detail nearly every fine example is in a class by itself. Within the last seven or eight years only have they appreciated to anything like their proper value. Con-

sidering their original cost—the early examples were only made for the very wealthy—and the time and care lavished on their manufacture, it is only bare justice that they should have come into their own, and that the most individual craft which Eng-

land has known, one which reflects the pride and skill of the craftsman in the greatest degree, should be treasured and conserved by its cultured collection in these days of commercialism and machine-made production.

Recent Legal Decisions

EXTRA WORK—WARRANTY AS TO WATER-TIGHT WALLS

The ultimate guide in determining whether or not there can be a recovery for the extra cost of doing work under a contract is the contract itself. It is always a question of the intention of the parties, and it is this fact which makes it difficult to reconcile some of the cases. No two contracts are exactly alike, and a difference in the language may make inapplicable a decision under some other contract. It may be said, however, that if there are positive representations in a contract as to the conditions or character of the work amounting substantially to a warranty, there may be a recovery based upon such representations; and this may be true even though the contractor was required to make investigations and satisfy himself upon these matters. On the other hand, the representations may be such that it was clearly the intention of the parties that the contractor should rely upon his own investigations and examinations, and in such cases he cannot recover upon the representations. There may be representations and still the contractor will be denied a recovery because his bid was a gross bid for the entire work. *Lentilbron v. City of New York*, 102 App. Div. 548, 92 N. Y. Supp. 897. A recovery may be had where the representations are fraudulent even though the contractor is required by the contract to make independent investigations; but by far the greater bulk of the cases upon this subject fall under the head of work or material furnished outside of the contract. A recovery may be had in this line of cases where the work was to be carried to bedrock, for instance, and the contractor was made to carry it below that point; where there was an erroneous direction of an engineer which required extra work; where there were unauthorized changes in plans which required extra work; and generally where the contractor was required to do work which did not come within the scope of that called for by the contract.

In an action to foreclose a mechanic's lien by a subcontractor for masonwork, the plaintiff claimed that he found hardpan in the excavation to be done

under the contract, and that it was represented that the soil was made up of earth and gravel, and that there was sufficient gravel in the excavation and on the premises for use in making concrete, which was not the case. The owner claimed that the foundation walls of the building were not made water-tight as required by the contract, because of which he was entitled to damages.

The specifications provided that good gravel would be found in the excavation or on the premises, but further provided that if sufficient gravel was not found the subcontractor should furnish equally good gravel. He was required by the contract to make a careful examination of the premises and to note existing conditions; and he had ample opportunity to do so. The contract was for a gross sum. It was held that he could not recover for extra cost in excavating hardpan or for gravel purchased in connection with the performance of the contract.

The owner's claim was disallowed because, though the contract provided the walls should be water-tight, the specifications provided how the walls should be built and how the waterproofing should be done, and the subcontractor was required to build them in that manner. If they proved not to be water-tight it was no fault of his. An owner under a building contract cannot recover damages for failure to produce a given result where he has specified the manner in which the work shall be done to accomplish that result.—*Kuhs v. Flower City Tissue Mills Co.*, 171 N. Y. Supp. 688.

ARCHITECT'S APPROVAL OF MATERIALS.

ing contract required the contractor to remove from the premises, within 24 hours after receiving written notice from the architect, all materials condemned by him. This necessarily involved the use of materials which had the approval of the architect, and, when the words "approved brand of lime" were used, they necessarily meant approved by the architect, who had the power to condemn.—*Drummond v. Hughes (N. J.)* 104 Atl. 137.

THE AMERICAN ARCHITECT

THE AMERICAN ARCHITECT

Founded 1876

PUBLISHED EVERY WEDNESDAY BY

THE ARCHITECTURAL AND BUILDING
PRESS, INC.

No. 243 West Thirty-ninth Street, New York

E. J. ROSENCRANS, PRESIDENT AND TREASURER
WILLARD C. HOWE, VICE-PRESIDENT

WILLIAM H. CROCKER, Editor
ARTHUR T. NORTH, Engineering Editor

Subscriptions in the United States and Possessions,
Mexico and Cuba, TEN DOLLARS. Other Countries,
TWELVE DOLLARS.
SINGLE COPIES (Regular Issue) 25 CENTS

CHICAGO OFFICE, Mallery Building
PAGE A. ROBINSON, Western Manager
ST. LOUIS OFFICE, Wright Building
CLEVELAND OFFICE, Guardian Building
SAN FRANCISCO OFFICE, 320 Market Street

Owned by United Publishers Corporation—H. M. Swetland, President;
Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer;
A. C. Pearson, Secretary. Entered as second-class matter January
6, 1909, at the Post Office at New York, New York, under the Act of
March 3, 1879.

VOL. CXV FEBRUARY 26, 1919 No. 2253

Conserving an Architectural Opportunity

THE new Hotel Pennsylvania, fully described and illustrated in this issue, presents an opportunity to direct attention to an example of a very well carried forward conservation of an architectural opportunity. The growth of important centers in New York, and in fact in most of our large cities, has been as a rule marked by an utter disregard of the architectural proprieties. In too many cases no serious effort has been made to harmonize the architecture of the various groups of buildings, and the result has been just as it may be everywhere seen, an architectural hodge-podge, a jumble of conflicting styles, and faulty skylines.

The Hotel Pennsylvania stands directly across Seventh Avenue from the Pennsylvania Railway Terminal. The rare artistic excellence of this terminal, if past methods had been pursued, would have been seriously menaced by the placing of a towering structure in such close proximity. The architects of the hotel, McKim, Mead & White, have by rare good judgment and a highly developed artistic perception, added to what will undoubtedly become one of the greatest, if not the greatest civic

center in New York, a building that so thoroughly supplements the dominating structure as to set an example, not only to those in New York, but in every large city, of the importance of a carefully studied development of large areas. It is fortunate that this has happened. There has been much ink spilled in directing attention to the haphazard architectural development of large areas. A concrete example, so excellently carried forward, will do more than anything else to influence future operations of this kind.

THE addition of the Hotel Pennsylvania and the Hotel Commodore to the already large number of hotels in New York, an addition that totals almost five thousand rooms, does not, as has been conclusively proven since these hotels opened their doors, solve completely the question of accommodation for New York's immensely large transient population. It relieves in a certain sense what was a very serious shortage of hotel accommodations, but observation discloses the fact that both of these hotels are daily compelled to turn away applicants for rooms and that a similar condition exists in every hotel in the city. New York's transient population has been estimated at more than five hundred thousand. Whatever the figures may be cannot be accurately determined, but the fact remains the city's transient population is so rapidly increasing that we have not built hotels fast enough adequately to provide for it.

An Industrial Welfare Bill

SENATOR KENYON of Iowa has introduced a bill providing for the study of and a report to Congress on a plan that will enable every American worker to own his own home. This bill creates a commission of six members, which is directed to study existing methods in the United States of financing the building and buying of low-cost houses, and the effect of present methods on investing capital. The commission will also study the methods followed in other countries. The report is to be submitted to Congress by Jan. 1, 1920.

The idea is really an extension or application of the measures of the Farm Loan Act. This legislation should be approved. The passage of a well-prepared bill for the purposes set forth would materially aid the solution of a problem that lies at the roots of our national prosperity.

In the formation of the proposed commission the value of the service of architects should not be overlooked. In fact, many men in the profession who have been engaged in housing investigations by the Government are valuably equipped for

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work of this character, and it is to be hoped that the American Institute of Architects and the various State Societies will use every effort to secure a place on this commission for a representative of the profession of architecture.

Teaching History by Pictures

EVERY man in the A. E. F. in France who had opportunity to watch the work of the artists appointed by this Government to draw in black and white or paint in colors the vivid scenes of actual warfare became impressed with the value of work of this sort in teaching a history of the war. It may be some time before these drawings and pictures will be available for exhibition and reproduction. When they are they will supplement if not equal in value the well-written reports of many extraordinarily capable newspaper correspondents and equally capable men who have been detailed to the Military Intelligence Department.

When General Perry, a Civil War veteran, was recently appointed superintendent of the Indiana Soldiers' and Sailors' Monument, he set about the task of clearing away the mass of accumulated debris that encumbered the basement of the structure. It was discovered that this large space could be readily prepared and utilized for exhibition purposes. A collection of war pictures of early wars was already at hand, and when supplemented by those that will soon be available illustrating the recent war, there will be secured an exhibition of large historic value, and one whose educational possibilities are unlimited.

In this instance there is to be found a suggestion that might very well receive the close attention of all those who shall design and plan our future war memorials. Provision should be made for adequate space for well selected collections of war pictures. The interest in such an exhibition never palls, and as an aid to the visualization of just what war really is, there is no means yet found equally good.

An Architect President of the Royal Academy

THE architectural press of England is elated over the election of Sir Aston Webb, a past-president of the Royal Institute of British Architects, and an architect of wide reputation, to the presidency of the Royal Academy. In expressing its satisfaction over this event, *The Building News*, of London, declares that it was "certainly high time that architects should receive some more emphatic recognition that our art is not merely one of, but the chiefest among, those included in the Academy's title."

All of which is absolutely true, and for such very good reasons architects in this country may unite with their brethren of England in a deep sense of satisfaction over the election of Sir Aston.

In our own National Academy there is shown to be a very decided need for some more energetic and representative action than is at present to be found. As there are many distinguished architects members of the National Academy, it might be pertinent to inquire if their selection for important executive positions in that body would not materially quicken what is at present a very inactive organization, and at the same time accord a proper recognition to architecture.

The general feeling in the English press is that Sir Aston Webb's selection for this important office was due to the fact that in addition to his commanding position as an architect, he combined executive and administrative abilities in a high degree and that the brilliant story of his past record bears witness to persistence in the face of difficulties that converts obstacles into stepping stones.

The lesson to be learned by all this is that in any profession success can only be achieved by the absolute demonstration of a positive ability, and that in art a man to forge ahead must be something more than a dreamer—he must be an active and aggressive element in every phase of his professional work.





PLATE 63

HOTEL PENNSYLVANIA, SEVENTH AVENUE, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS

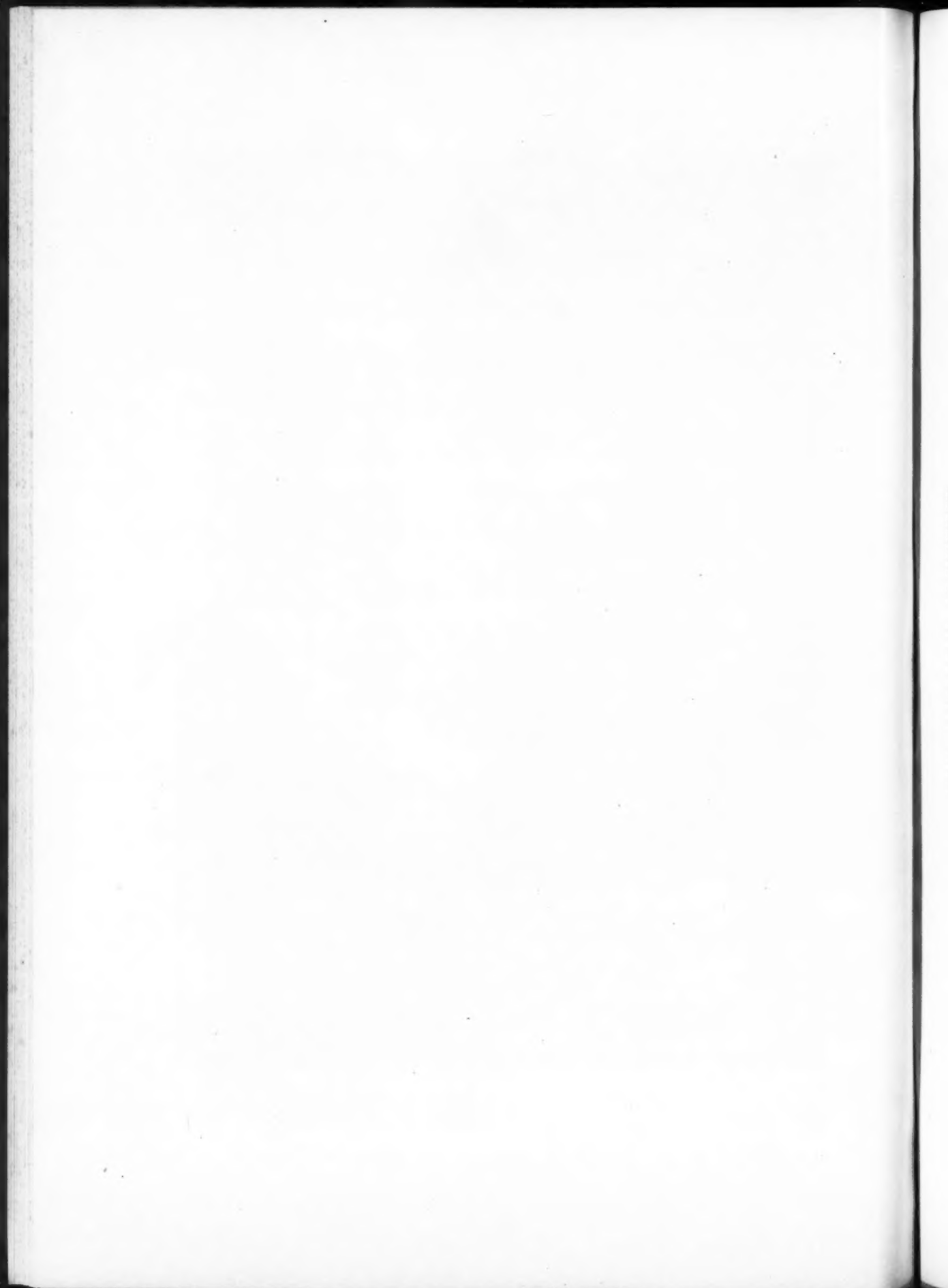




PLATE 64

MAIN ENTRANCE DETAIL

HOTEL PENNSYLVANIA, SEVENTH AVENUE, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS





PLATE 65

LOWER STORIES, THIRTY-SECOND STREET FACADE

HOTEL PENNSYLVANIA, SEVENTH AVENUE, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS

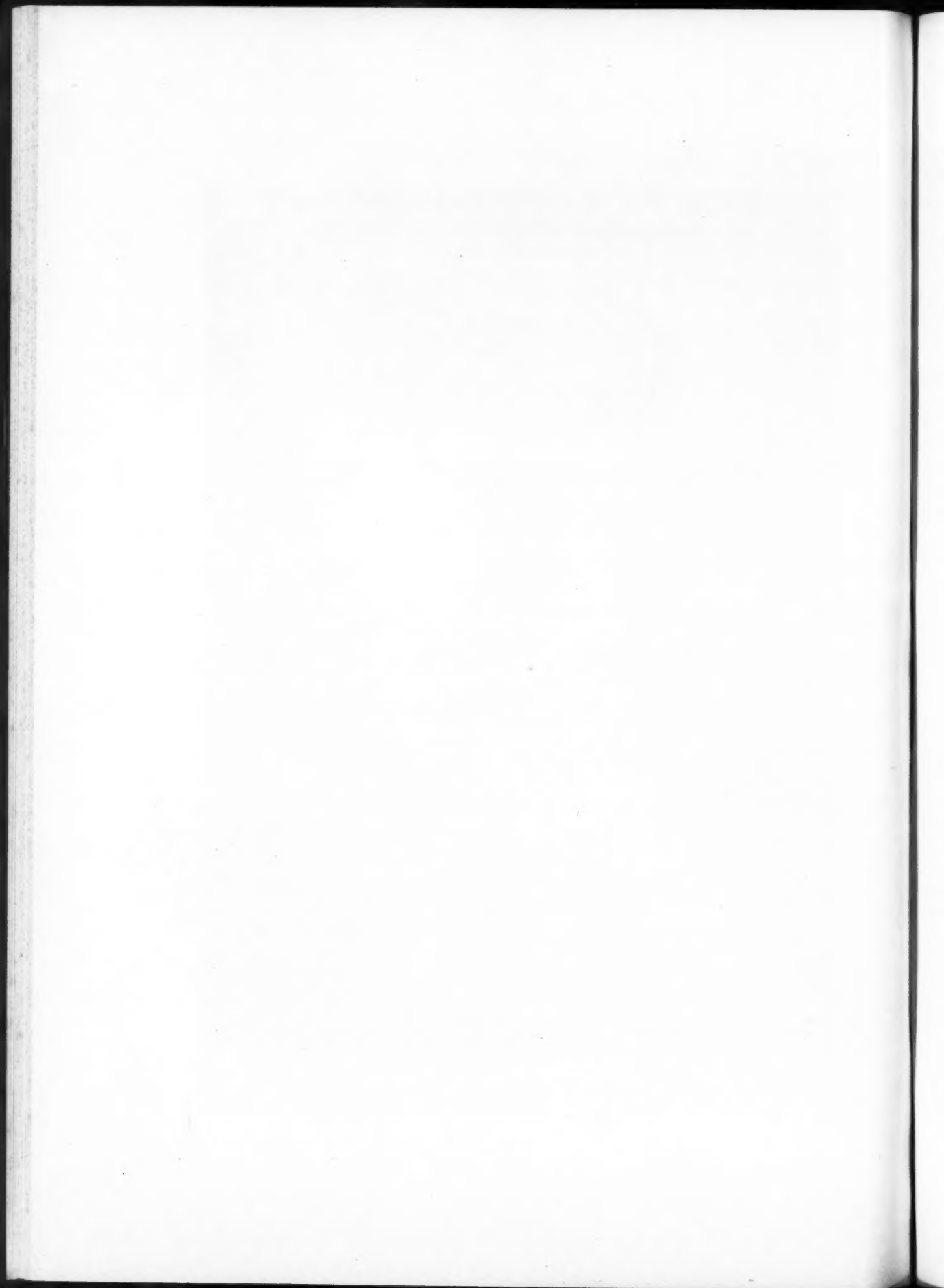




PLATE 66

THE LOBBY

HOTEL PENNSYLVANIA, SEVENTH AVENUE, NEW YORK

MCKIM, MEAD & WHITE, ARCHITECTS



PLATE 67

MAIN DINING ROOM

HOTEL PENNSYLVANIA, SEVENTH AVENUE, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS

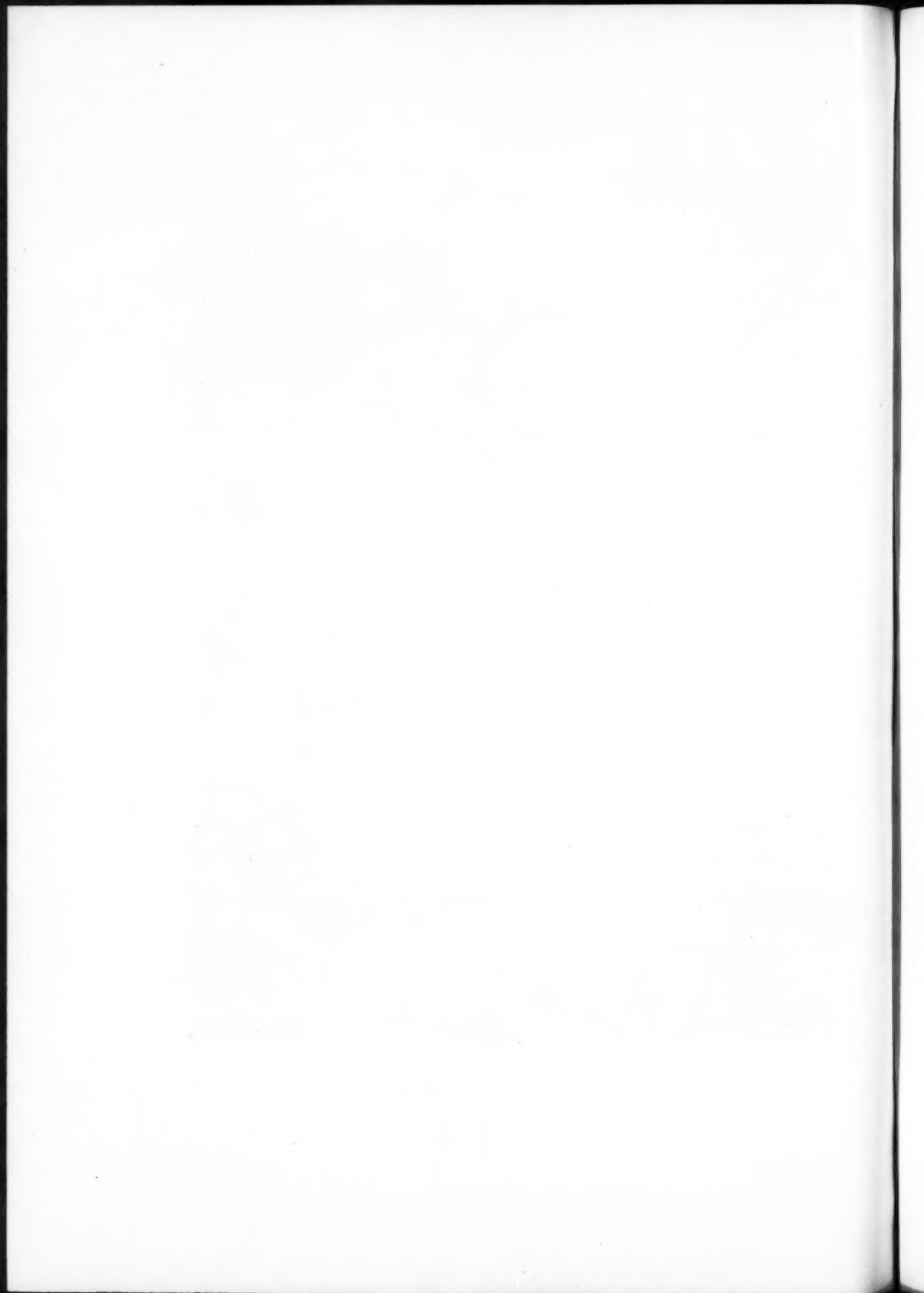


PLATE 68

TEA ROOM

HOTEL PENNSYLVANIA, SEVENTH AVENUE, NEW YORK

MCKIM, MEAD & WHITE, ARCHITECTS



Architectural Competitions

By THOMAS CRANE YOUNG

IF the architectural profession is ever to place itself on an equality with other established professions in standing and dignity before the public, it will be necessary to purge from itself some of its inherited practices and customs which serve no proper purpose in the conduct of the business of building under modern conditions. Probably the so-called Architectural Competition, whether of the illegitimate "wild cat" variety or as conducted by orthodox methods under the Code of the American Institute of Architects, has had greater effect in preventing a unity of effort in the professional ranks, and perhaps has done more to create an unfavorable public opinion than any other traditional custom.

It would seem quite ridiculous to request a dozen or so of lawyers to prepare a brief in a given case at law, or a like number of physicians to diagnose a disease and outline a course of treatment and then to submit the same for judgment to another practitioner, who might perhaps be no better qualified to decide on their respective merits than any of the contestants.

The actual cost of producing conventional competition drawings is very great and out of all proportion to their usefulness. The aggregate of expense in a single competition often reaches into tens of thousands of dollars and assumes enormous proportions when one considers the amount so spent annually by the entire profession. All this is pure waste for the many who lose and largely so for the few who win, as equally effective results might be obtained by less expensive methods. While in other professions and lines of business every effort is being made to eliminate unnecessary waste, architecture seems to be the only one which deliberately permits and encourages it.

The object of a competition, according to the Code, is the selection of an architect, not a plan. In theory each competitor is selected because of his proved ability to conduct the work should the choice fall on him. It should be unnecessary that the problem be worked out ten or twelve different ways in order to effect a final choice. It would save the futile effort of the unsuccessful and in view of the original selection, accomplish the purpose equally well were the final choice to be decided by lot.

Quite recently the practice has been defended by one high in the councils of the Institute as a regret-

table, though necessary, concession to the gambling spirit inherent in the human race. His designation of the practice is unquestionably correct, though why a dignified professional body should find it necessary to condone this or any other vice is difficult to understand. In most straight gambling games the chances of gain or loss are supposed to be equal, but in the competition game, even of the most orthodox variety, this proportion is seldom reached. Let us take, for example, one in which ten contestants are selected, presumably of equal standing and ability, the chance of success can only be as one to ten, and with a larger number of competitors the proportion must be correspondingly decreased. Nor are the stakes inconsiderable, for even in the respectable "paid" competition the individual cash investment often runs into thousands of dollars. As a sporting proposition, it is about on a level with shooting loaded dice, and, of course, as a conservative business venture it can have no standing at all. The feuds and rivalries so frequently engendered by competitions can only spread demoralization among architects and the business world can have but little respect for a "profession" where employment in a serious task may be determined by the issue of a game of chance.

A more serious matter is the effect of this unfortunate custom upon the young, for in them it encourages the idea that sudden fame and fortune may easily be attained through a brilliant architectural *tour de force* or stroke of genius as a substitute for the slower processes involving continuous study and work, which is usually the price of success in other walks of life.

Our system of education may be somewhat at fault, the schools having (unconsciously, no doubt) fostered a false idea of the purpose for training and the ends to be attained thereby. They have, as it were, cultivated an elaborate and ornate handwriting with too little regard for the thought to be expressed. Neither has the atelier system borrowed from France been more successful in the improvement of American architecture because it encourages imitation of French forms without adaptation to American conditions. Thus architectural "rendering," so expensive and so useless, has become the goal of effort for the student architect instead of the physical substance of the completed building which is the architectural idea expressed through the refractory medium of steel and brick or stone.

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These elaborate architectural drawings, often exhibiting wonderful workmanship, cost thousands of dollars but have no value as works of art, for they cannot be sold in any market for the price of a song. In contrast with this, the "artist" may take a dime's worth of paper and a pencil and, perhaps, produce a picture worth a substantial fortune. A better instance of misdirected energy than the former case presents could scarcely be devised.

Quite recently an eminent architect, in a public address, defended the Architectural Competition as a means of injecting a little excitement and zest into an otherwise hum-drum existence. One can scarcely think that any of the champions of the ancient Code who have yet spoken have been sincere or themselves shown a high degree of respect for their chosen calling or of the "high ideals" of which they prate so much.

Financial and Commercial Digest

As Affecting the Practice of Architecture

Amortization Committee is Named

The American Bankers' Association has announced that the following men have been appointed a committee on loans held by savings banks: James H. Manning, President of the National Savings Bank of Albany; Samuel H. Beach, President of the Rome Savings Bank, Rome, N. Y.; Edwin P. Maynard, President of the Brooklyn Trust Company; Russell S. Walker, President of the Dime Savings Bank of Brooklyn; C. H. Kelsey, President of the Bond and Mortgage Guarantee Company of New York, and Frederick H. Ecker, Treasurer of the Metropolitan Life Insurance Company.

Steel Price Lowering Looked For

Producers are beginning to admit that the cutting of prices in the iron market is necessary to liven the interest of buyers and that the maintaining of prices at too high a level in past weeks has effectually discouraged trading, the *Iron Age* states. Summarizing the situation it continues:

"The low total of the present inflow of emergency orders points to shutdowns here and there in two or three months' time. In the activity of such happenings, a rewriting of costs would be possible. Whether the trade conferences proposed by the Secretary of Commerce could before then develop understandings looking to establishing prices likely to attract depends largely on securing official sanction and the broad co-operation of the manufacturers and the steel workers.

Meanwhile the buying elements need to remember that the country is proceeding on the theory that it is no longer an isolated nation. Fixed iron

and steel export prices of England, its chief competitor for the world's markets, are anywhere up to 40 per cent higher than its own, and only relatively slight shifts in ocean freight charges will serve to throw the advantage to these shores. Foreign trade requires little concession, so long as England's costs do not come down."

Coal Production Decreases

According to the report of the United States Geological Survey a considerable decrease in the production of bituminous coal occurred during the last week in January, the output declining to the low level of 9,159,000 net tons. This production, which falls approximately three-quarters of a million net tons below the preceding week, and approximately 1,000,000 net tons below the corresponding week of last year, is at the rate of 475,000,000 net tons per annum, and is considerably below present consumption.

Many consumers are now using coal accumulated during last summer, and the present good weather enables certain consumers to await the outcome of the raising of the zone and price restrictions by the United States Fuel Administration before placing their orders. The daily production of bituminous coal during the past week, estimated at 1,526,000 net tons, is 19 per cent below the daily average for the coal year to date and 13 per cent behind the daily average for the same period of last year. The production of anthracite increased considerably during the week ending Jan. 25, and was slightly in excess of the average weekly production for the coal year to date.

Place Responsibility for Safe Building Construction

At the fifth annual meeting of the Building Officials' Conference, just held at Pittsburgh, the chief topic of discussion was the placing of responsibility for safe building construction and a proper compliance with laws and ordinances. Agreement that effort should be made to place that responsibility took the form of a resolution, which follows:

"That it is the sense of the Building Officials' Conference that for the better protection of the public against unsafe and illegal building construction suitable legislation should be enacted by which building operations shall be restricted to architects, engineers, builders, superintendents of construction or others who have by proper evidence shown their ability or capacity for undertaking such building operations, and on whom individual responsibility for the safe prosecution of the work and a compliance with the laws relating to buildings can be placed.

"It was further resolved, that the secretary of this organization be directed to furnish, at the request of any member, copies of this resolution for presentation to legislative bodies in support of such legislation."

A joint session of the Conference and the National Brick Manufacturers' Association met in Pittsburgh at the same time. The topic of discussion was brick work, and centered about papers presented by W. W. Pearse, superintendent of buildings, Toronto, Canada, on certain tests of bricks and brick piers, and by Edward Stotz, architect, of Pittsburgh, on brick work. Other interesting features of the meeting were a fire test on a concrete column made at the Bureau of Standards.

The present officers of the Conference were continued for another year: Rudolph P. Miller, New York City, chairman; James G. Houghton, inspector of buildings, Minneapolis, Minn., vice-chairman; Fred W. Lumis, superintendent of buildings, Springfield, Mass., secretary; Walter R. Forbush, public buildings commissioner, Newton, Mass.; George Rendigs, commissioner of buildings, Cincinnati, Ohio, members of the executive committee.

Atlantic City Architects Organize

The Society of Registered Architects of Atlantic City, N. J., has been organized for social and professional affiliation. Temporary officers have been elected as follows: William B. Riebenack, chairman, and Bertram Ireland, secretary.

Great Britain's Fuel Problem

A memorandum supplemental to the general report made by the commission sent abroad by Harry A. Garfield, Federal Fuel Administrator, sets forth the British Government's fuel problem as presented by the war.

In the first year of the war 191,170 British miners enlisted in the army, and in June, 1918, the total had risen to 285,000. On the latter date the net loss of mine labor had been reduced to 133,000 men through extraordinary efforts to return soldiers to the mines, but this program was interrupted early in 1918 by the necessity of returning 75,000 miners to the battle lines.

Where the United States was able to increase its coal production, Great Britain suffered a loss of approximately 185,000,000 tons mined, using the 1913 production figures as a basis for computation.

The report of the commission also shows that Italy, whose population as a whole was without coal for heating and in large part without gas for cooking, for many months of the war period, was the worst sufferer from fuel shortage among the allied nations. Switzerland now faces a severe shortage, but Belgium, it was found, should be able immediately to produce more coal than needed for its own consumption.

Good Roads and Merchandise Traffic

Among the many valuable lessons the war has taught is that our improved highways can be used to advantage for the transportation of merchandise by motor trucks, even for long distances.

During that period when our railroad lines were exclusively occupied in serving Government needs, it was demonstrated that freight communication could, in sections where the highways had been sufficiently improved, be economically maintained, and routes of service were set up that prevented what would otherwise have been real hardship.

Attention will not have to be directed to the necessity for a widespread good road movement in this country. Not good roads such as may be considered as fitting the ordinary motor pleasure traffic, but roads built to withstand the heaviest wear.

The traffic bureau of the Merchants' Association of New York has actively taken up this matter of motor routes for freight traffic, and it is proposed to start a movement that will bring into close relations both shippers and truck owners with a view to continuing a service that has demonstrated its efficiency.

Current News

Hotels Pennsylvania and Commodore Rentals Set New Mark

Hotel rents in New York rose to new heights in the leases affecting the Pennsylvania and Commodore hotels, reflecting graphically, says *Record and Guide*, the remarkable hotel development and expansion which has characterized the city's growth within recent years. Aside from the general interest which attaches to the opening of these two giant structures, as a result of their successful completion during war times, their architectural distinction and their concrete representation of the genius and enterprise of the American hotel business, special interest on the part of real estate men can be centered upon the huge rentals involved and the terms of the leases.

In the instances of both the Pennsylvania and Commodore, the exact rentals to be paid are not ascertainable because they depend upon the final cost of the completed structures. Both leases, however, call for the payment of large ground rentals.

The Pennsylvania Hotel lease, recorded last week, was made by the Pennsylvania Terminal Real Estate Company to Franklin J. Machette, who assigned it to the New York Hotel Statler Company. It runs for twenty-one years from thirty days after the completion of the building and calls for the payment of a ground rent of five per cent a year of \$4,000,000, which would be \$200,000 plus taxes and other charges. The lessee will pay in addition an annual rental of six per cent of the cost of construction of the building, less a deduction of \$250,000 the first year, \$175,000 the second year, and \$100,000 the third year; for each of the remaining eighteen years the lessee will pay \$200,000 a year ground rent and six per cent of the cost of the building plus one-eighteenth of the sum of \$525,000, this being the amount deducted from the rent as above.

Real estate men see in the lease clauses calling for rent payments based upon the cost of construction a reflection of the war-time building situation, when construction costs mounted almost daily and builders were liable to meet tremendous advances in material prices over night. As a result in a project of such magnitude, whenever the time of completion was uncertain and estimates of final building costs were impossible, it is not surprising that builders asked the lessees to share with them the risk of rising building costs; hence a rental based upon aggregate building cost rather than a fixed amount.

A similar arrangement was made in the case of the Hotel Commodore, where the lessee, the Bowman Hotel Corporation, will pay a ground rental of \$175,000 a year plus 91 per cent of the taxes plus six per cent per annum on the total cost of construction. There is an additional payment to be paid, consisting of two per cent more on the total cost of construction, according to the lease filed in the Register's office. The lease is for twenty-one years from June 1, 1916, with renewal privileges.

Cut Out Parks' Dead Trees

The Park Department of the City of New York is doing a good work in the concentrating of all its forces on the removal of a large amount of dead wood which had accumulated in the parks during the last few years. Already 3,000 dead trees have been removed, but not until a very careful examination was made of each individual one to ascertain whether the tree was beyond saving. Some of the wood will be distributed with the consent of the mayor to poor people through the Fuel Committee of the Mayor's Committee on National Defense.

New York's Hotel Resources Added to by 4,500 Rooms

Although a total of 4,500 rooms and as many baths have been added to New York City's hard-pressed hotel resources within the past month, adequate relief has not arrived to take care of the greatly increasing transient trade. It is still necessary in some instances for out-of-town guests to go to Brooklyn, Newark, and in some cases as far as Philadelphia, to get overnight accommodations. However, the Hotel Pennsylvania, just opened, which has 2200 rooms and 2200 baths, is the largest hotel in the world by 200 rooms and 200 baths. Second to it in size is the new Hotel Commodore, also just opened, which has a round 2000 rooms and an equal number of baths. The Hotel McAlpin has just opened its addition of 300 rooms, giving it a total of 1500 rooms.

There are twenty-seven floor levels from the lowest sub-basement to the top floor in the Hotel Pennsylvania. The hotel is set back several feet from the property line, increasing the width of Seventh Avenue until in this block it is slightly

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wider than Fifth Avenue. This valuable real estate was sacrificed to give a larger setting of open space for the hotel and the station for the sake of the architectural effect. The first four floors of the hotel are built in a style to harmonize with the massiveness and dignity of the great railroad building. On these floors are the offices, lobbies, dining rooms, cafés, galleries, and most of the public rooms. Above these floors the structure is cut into by four deep courts, which give light and air to all the rooms.

War Contract Adjustments Recommended

A statement given out by the Department of Labor showing the labor surplus in many industrial centers has increased rapidly in the last few weeks, urges that early action on legislation to adjust war contract controversies be taken. The cancellation of war contracts with no provision for an early financial adjustment of the investment in war machinery, materials and partly completed products, was blamed for plunging some concerns into a state bordering on stagnation.

The Department of Labor's investigation of ways and means to stimulate building and improvements and augment the absorption of labor industry disclosed these two important ways of getting results. The statement says:

"One—Legislation enabling the building and loan associations of the country to use their real estate mortgages for collateral in a system of federal home loan banks.

"Two—Legislation to authorize immediate adjustment and payment by the Government of reasonable claims growing out of the summary rescinding of war contracts.

"The former would permit home builders to avail themselves of almost two billion dollars in loans; the latter would provide much needed immediate capital for manufacturing."

Restoring the Orchards of France

With thousands of square miles utterly denuded of trees, the war demanding every foot of lumber available for military purposes, France now faces a serious condition, with one quarter of her trees gone and many orchards non-existent. A survey has shown that only 925,270 fruit trees, located in 125 nurseries, are available. Consequently, it is proposed to establish a central nursery, where trees from other nurseries will be stored, at Noisy-le-Roi.

Prisoners of war will be employed, until the peace treaty is signed, for labor purposes, and it is estimated that one hundred men can plant 30,000 trees within three months at minimum cost. Germany in 1915 planted 20,000,000 fruit trees.

The French Government has already placed at the disposal of the minister of the liberated districts 300,000,000 francs, but this money will be used to purchase trees for devastated districts only. The planting of 2,000,000 trees will cost about eight million francs. The American Red Cross has not only given \$10,000 but has aided in the actual labor of reconstruction in devastated districts.

The Boston *Transcript* in an editorial captioned "Transplanting Our Forests to France," comments on the fine sentiment in the gift of 3,000,000 pine seedlings that Pennsylvania is to send to France as a contribution toward the restoration of the war riddled forests. It continues:

"Now that our forest regiments are to be withdrawn as rapidly as transport facilities will permit it will be the handsome thing for the United States to do what it can toward aiding in the repair of the damage that was permitted in its interest. There will still remain a million or more acres in northern France from which the axes and the guns of the enemy stripped the once thrifty forests and in the restoration of which Germany and her henchmen should be made to toil. What France really would be glad to have from this country in this reclamation work is not seedling trees, however good, but seed. This country has just now closed its own doors against foreign-grown nursery stock of all kinds in fear of the pestilences that the plants may carry. It would not be strange, therefore, if France felt a similar reluctance to accept our trees, not in retaliation for our prohibition but because of a justifiable dread of the possible consequences."

Hospital Construction in the Future

Any consideration of hospital building projects must be based upon the new conditions that have followed in the wake of the war and not by comparison with buildings erected before the war. *Modern Hospital* traces how the expense of building hospitals is bound to be greater than in the past, as follows:

"Owing to the suppression by the Government of all private building during the war, a great amount of construction will be necessary, at practically any cost, as soon as the restrictions on building are removed, and this necessary construction will keep the cost of building high for many years. Investigations show that building to the value of over \$200,000,000 has been held up during the war in the cities of New York and Chicago alone. The total in the whole country reaches an enormous sum.

"The reconstruction work abroad will draw heavily upon our production of building materials and will further tend to keep prices high. It is thought by many well-informed authorities that

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these influences will remain for as much as ten years, and that a recession to pre-war prices may never be expected.

"No effort should be made to offset the higher costs by using cheap materials and finish, for a hospital, more than any other building, should be built well if for no other reason than to keep down the burden of maintenance charges, which will become larger and larger each year in a poorly constructed building. If a compromise is necessary, let it be in the size of the building rather than in its quality.

"In planning, constructing, and furnishing the hospital, do not emphasize too strongly all of the well-known 'sanitary' features, such as white wood-work, flush-panel doors, round corners, etc. Use these and all similar precautions where they count, as in the operating and other workrooms; but don't overdo it, and thereby eliminate all possible attractiveness from the patients' rooms and similar portions of the building. Someone has said that a hospital is a factory for making well people; that is not true. A hospital is, or should be, a home on a large scale, where the institutional atmosphere has been eliminated as far as possible. Surround your patients with things that are comfortable, attractive and beautiful, to the end that their thoughts may be directed away from their troubles. Risk the remote chance of a few lurking germs in pictures and books, and other things that are not smooth-faced, round-cornered and white, in order to gain the immense advantage of the greatly improved 'morale' which brings with it power of resistance to the progress of disease."

Organization Aids Business and Technical Workers

For the first time in the history of America's development employers have an opportunity of selecting from a large and varied list of highly educated and experienced men those individuals especially equipped to meet their particular requirements. The professional and special section of the U. S. Employment Service, a branch of the Department of Labor, has been organized for the benefit of employers in need of engineers, executives, men of college training and practical experience in business and technical fields now being released from the Government service.

Two zone offices, one in New York and the central zone at Chicago, have been opened as clearing houses where returning men are classified in accordance with their qualifications and where the requisitions of employers are matched against them. So complete is the system of classification and so diverse the qualifications of the thousands of

applicants that the most exacting requirements of an employer, as stated in his requisition, can be met in each detail. When the qualifications of a man and the specifications for a position are accurately matched, the man and employer are immediately placed in touch with each other by the professional and special section.

Art in Trades Shown in Museum Exhibition

An exhibition of unusual interest, the work of commercial firms or individuals who have found inspiration for their designs, colors, or decorations in objects from many parts of the museum, has been opened to the public at the Metropolitan Museum of Art. For many years the authorities have been endeavoring to prove that the wonderful collections on exhibit there were not only valuable for their æsthetic worth, for the high place that they held as objects of art, but that there was in them a practical value to meet the everyday needs of the people.

Visitors to the exhibition will see that it is conducted on a much larger scale than the two previous ones. Occupying two large galleries on the second floor, it is staged with all the care and skill given exhibitions of its own collections, and will astonish the public with its dignity, beauty and comprehensiveness.

The work of more than one hundred of the largest firms in the city and people working along the finest lines in art are represented, their efforts being classified under nineteen different heads. There are twenty-one exhibitors of furniture and seventeen of textiles. Other exhibitors come under the heads of decorative accessories, frames and mirrors, glass, gold and silversmiths' work, jewelry, laces, lamps, mantels, metal work, models, painted panels, photographs, pottery, rugs, mosaics, wall paper, and there is a large collection of designs and drawings.

Treasures of the museum which have been the inspiration for the finished products now shown are often strangely unrelated to them. The museum director tells how a twenty-century-old Athenian vessel suggested an effective shape for a modern cosmetic jar; a modern tapestry manufacturer found a design on an old Italian-painted picture frame; a design for a dress fabric was discovered in the armor collection; ecclesiastical vestments inspired a wall paper design, and old Chinese designs are reproduced charmingly on modern painted furniture.

The work is so entirely practical that the pieces

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shown were taken, many of them, from the show-rooms of shops, and some of them were already sold and were taken to the exhibition with the permission of the owner.

The museum has practical accessories for this laboratory work, study rooms where there are stored objects which may be of use to the workers or where may be taken objects from other parts of the museum for close observation. It has lantern slides and photograph and lending collections, and its docents and members of the staff are ready to give their assistance in bringing the designer and the museum collections into comfortable relationship. In addition, there is a field worker who knows a shop and workrooms as well as the museum, and whose business it is to introduce the workers to the museum and show them its possibilities. There has been a greatly increased demand upon the museum's resources by manufacturers and designers the last five months, and a large number of these for the first time saw and recognized the museum values as related to business.

Historic Salt Lake Residence to Be Razed

Amelia Palace, pretentious residence built by Brigham Young for Amelia Folsom Young, reputed "favorite wife" of the pioneer Mormon leader, is to be razed and upon the lot it now occupies will be erected a modern structure. Announcement to this effect has been made by J. T. Keith, architect for the owner of the property.

Amelia Palace was known for years as "Gardo House." It is said one of the workmen was responsible for the name, it being due to an Italian mansion which had that name. The mansion was planned and building commenced by Brigham Young in 1876, and during 1877 a portion was completed and occupied by Mrs. Amelia Folsom Young. Amelia Palace has been one of the historic places pointed out to tourists who visited Salt Lake City. It is just across the street from the famous Beehive and Lion houses, and the Eagle Gate, notable relics of the days of Brigham Young.

Easier Money Rates Noted in Federal Report

The Federal Reserve Board, in reviewing financial conditions for the past month, says as to public and private financing that in spite of the beginning of industrial demands at banks and the requirements of the last instalments of the Fourth Liberty loans,

there has been an increase of bank balances at financial centers.

"Easier rates for money," the review continues, "have accompanied this inward movement of funds, although the price paid for the longer term capital for industrial use has not been lowered, while rate for call loans and other prime commercial paper have fallen but slightly. The tendency, however, has been downward and may be taken as indicative of distinct recuperative power on the part of the financial community."

Personals

The Dwight P. Robinson Co., Inc., constructing and consulting engineers, have opened offices at 61 Broadway, New York City.

The state architect of New Jersey, Frances H. Bent, has moved his office from the State House to 142 West State Street, Trenton, N. J.

George Awsumb, formerly practicing architecture at 189 W. Madison Street, Chicago, has moved his offices to 104 S. Michigan Avenue, where he will resume his work.

W. F. Brooks, architect, Hartford, Conn., announces that he has succeeded to the architectural practice of Davis & Brooks. He will continue the offices at Lewis and Gold Streets.

Following his return from military service Herbert A. Willcox has opened offices for the practice of architecture at 205 Commerce Building, Miami, Oklahoma. Mr. Willcox desires to receive manufacturers' samples and catalogs.

Announcement has been made of the incorporation of Rossel Edward Mitchell & Co., Ltd., architects, engineers and town planners, with main offices at 604-8 Paul-Gale-Greenwood Building, Norfolk, Va. The officers of the new company are Rossel Edward Mitchell, president; Gilbert Stanley Underwood, vice-president, and Bernard Stebbins Alves, manager.

The firm of Wallis & Goodwillie, architects, 56 West Forty-fifth Street, New York City, has been dissolved by mutual agreement and Frank E. Wallis, senior member of the firm, has taken his son, Richard P. Wallis, into partnership. The firm will be known as Frank E. Wallis & Son, architects and engineers, and will be located at the same address.

Richard P. Wallis is a graduate of Massachusetts Institute of Technology, class of 1912, and has been engaged in engineering work in Albany, Cleveland, Minneapolis and in the U. S. War Department, Construction Division.

Late News from Architectural Fields

Vote to Support Tenement House Bill

Whole-hearted support of a bill now before the New York State Legislature introduced by Senator Dodge relative to remodeling three and four-family tenement houses was voted at the regular monthly meeting of the New York Society of Architects held at the Engineering Societies Building, 29 West Thirty-ninth Street, New York, Tuesday evening, Feb. 17. A delegate was appointed to represent the society at Albany on the matter.

The Committee on City Departments having reported favorably on the appointment of a Board of Appeals against rulings of the Tenement House Department, the membership voted unanimously in favor of such proposed board. It was also decided that the society become a member of the National Housing Association.

The question of the best means to be adopted to bring about a revival of building construction was discussed, arguments alternating between an advocacy of governmental intervention and individual initiative.

In the absence of the president and vice-president of the society, John P. Leo, of the board of directors, occupied the chair. He reminded the meeting that this country owed its wealth and advancement to individual enterprise, and that to allow a system of governmental paternalism to supersede individual thrift and private enterprise would be disastrous for the future of the United States.

Urge Award of Post Office Building Contracts

An effort to bring about the passage of legislation relative to the deficiency appropriation requested by the Treasury Department as necessary to permit the award of post office construction contracts is being made by the Indiana Limestone Quarrymen's Association. This organization at a meeting held last week telegraphed members of the Senate and House of Representatives the following resolution adopted at the meeting:

"At general membership meeting this association unanimously resolved that one of the most important pieces of legislation before the present Congress is the deficiency appropriation requested by the Treasury Department as necessary to permit award of post office construction contracts. These

new buildings were originally appropriated before the war period. Naturally today's conditions as to labor and other costs result in a range of bids exceeding the original appropriations. The Government urges that buildings be commenced everywhere in order to stabilize conditions, and Congress should make it possible for the authorities themselves to initiate this commendable movement. It is the one practical way of counteracting unrest and disturbance, while the price is cheap, considering everything that has been and is being done. We respectfully ask your whole-hearted effort to bring about passage of this deficiency legislation."

Northeast Building Shortage 50 Per Cent

Revised statistics on the building deficiency, issued this week by United States Department of Labor through the Division of Public Works and Construction Developments, indicate a shortage in building in the North Atlantic States in the sum of \$538,430,000.

This estimate is based on a study of building permits issued in the larger cities prior to and during the war. The estimated building deficiency by states is as follows:

Maine, \$8,300,000; New Hampshire, \$7,870,000; Vermont, \$4,960,000; Massachusetts, \$153,000,000; Rhode Island, \$8,000,000; New York, \$236,000,000; New Jersey, \$27,500,000; Pennsylvania, \$92,800,000; total, \$538,430,000.

The building deficiency in these states during 1917 and 1918 is approximately 50 per cent of the average of 1915 and 1916, indicating that the district is one year behind normal development in building projects. This in addition to the normal current demand for 1920.

Schilling Again Heads Michigan Architects

Edward A. Schilling of Detroit was re-elected president of the Michigan Society of Architects at the annual three days' convention of that body, just held at Lansing, Mich. A. E. Munger, Bay City, was named first vice-president; J. N. Churchill, Lansing, second vice-president; C. J. J. Barnes, Detroit, secretary, and Alvin E. Harley, Detroit, treasurer.

Department of Architectural Engineering

Swimming Pools for Public Schools

By C. E. DOBBIN

Architect, Deputy Superintendent of School Buildings, New York City

THE engineering problems of swimming-pool construction which a few years ago engaged the serious attention of architects, engineers and sanitary experts, may now be considered as having been solved. This does not imply that perfection has been attained, but the great number of well-constructed and excellently appointed pools scattered throughout the country are evidence of the fact that a high degree of proficiency has been reached.

Incidentally, there have been developed excellent plans of pools, together with their appurtenances—showers, dressing accommodations, toilet facilities, etc.—to meet the special needs of clubs, Turkish baths, Christian Associations and public baths.

But swimming as a part of the curriculum in public schools is of such recent origin that there seems to be no fixed, nor even commonly accepted, course of instruction for this activity. Instructors have usually been obliged to formulate their own methods, and those without previous experience in administering swimming pools have sometimes underestimated the magnitude of the problem in schools of considerable size.

The author believes that there is no justification for the existence of a pool in any public school unless the work is conducted with the degree of formality common in gymnasium work, and unless the instruction is sufficiently frequent to give it educational value. Desultory use of the pool, as in clubs, Turkish baths or associations, cannot be permitted. The various accessories must be so arranged that the squads into which the pupils must be divided as in gymnasium work can be conducted promptly through the various stages of undressing, body inspection, use of toilets, showers, swimming and dressing, without retracing steps or crossing other lines of travel.

In many instances pools are nearly completed before those in charge begin to consider how they are to be administered. In such cases it can hardly be

expected that the equipment will perfectly meet the requirements, however expert and faithful the architect.

Architectural planning, to be successful, must be predicated upon full and definite knowledge of the precise use for which the structure or feature is intended. Since this kind of knowledge regarding swimming pools is not yet available, no attempt can be made at this time to offer a full solution of the problem of swimming pool planning for schools.

The suggestions here presented are not therefore offered as standards applicable to all schools, but rather as a compilation of experiences and conclusions resulting from the planning of these facilities for large public schools in New York City, where intensive use is a matter of necessity. It is hoped that they will be of assistance to those who find themselves confronted with this problem for the first time, and also that they will direct the attention of school authorities to certain questions that must be considered and answered by them before any standards can be set up.

GENERAL ARRANGEMENT

Before the architect can begin to plan intelligently he must have definite instructions on the following points:

1. Is the pool to be used by boys, by girls or by both at different times?

The entire plan will be determined largely by this consideration. For girls, bathing suits and separate bathing and dressing compartments are necessary, while for boys these are not required. Some authorities claim that privacy in these respects is not only unnecessary but undesirable for boys. One pool may be used alternately by both sexes if the needed accessories are available. There are two ways of accomplishing this double use of the pool:

- (a) By having one set of showers, lockers and dressing compartments for alternate use by both, with separate toilets when possible.

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(b) By placing the accessories for boys on one side or end of the pool and those for girls on the opposite side, with folding partitions, by means of which either set of accessories may be disconnected from the pool. With this arrangement one sex may use its showers or prepare for the pool while the other sex is using the pool.

2. Does the school program call for intensive and continuous use of the pool? If so, is a class of 40 or 50 to be handled as a unit or divided into two or more squads?

The size of the squad will determine the number of dressing stalls and showers required. If the school program requires rapid operation, there should be as many showers and dressing stalls as there are pupils in the squad and two or three times as many clothing lockers. If rapidity is not essential, one-half the number of each may be sufficient.

It seems to be the consensus of opinion that the squad shall number about twenty, and that the period of instruction shall be twenty minutes. On this basis a school numbering 1800 can be given instruction once a week with one pool, if it is kept in constant use.

For such use of the pool there must be in attendance at all times a swimming instructor and also an assistant to supervise the preliminaries and the expeditious movement of the squads. It is doubtful whether one such set of instructors can conduct this work continuously.

The showers, dressing quarters and pool must be in one open room, and so arranged that those in charge may observe all that is going on from any position.

Personal cleanliness is imperative before entering the water. Entrance to the pool space for pupils should therefore be only through the showers or past the shower stalls, and exit from the pool only to the dressing space. Baffle gates at entrance and exit prevent passage in the wrong direction.

3. Are pupils of all grades to use the pool, or only those in the higher grades?

Water depths must be regulated accordingly, and

also the area of shallow water if the pool is intended for very small children.

There seems to be a difference of opinion as to the value of swimming instruction for pupils in the lowest grades. This is worthy of careful considera-

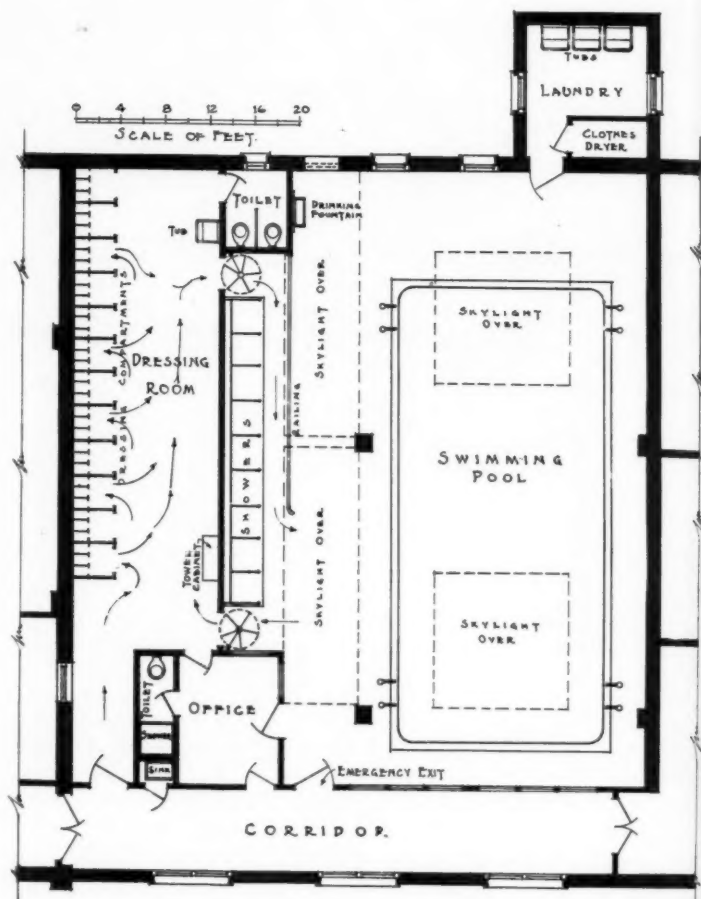


Fig. 1. Natatorium in Public School No. 32, The Bronx. Owing to lack of space only one small pool was possible. The arrangement, however, is such as to facilitate the rapid handling of squads. Note the lines of travel, also the excellent natural lighting by means of skylights. Each dressing stall contains three steel clothing lockers, which permits one squad to dress or undress, while another squad is using the showers, and a third squad is in the pool.

tion, for the problem is greatly simplified if the use of the pool is limited to the older pupils.

4. What provision is to be made for furnishing and laundering towels, and how are the bathing suits for girls to be cleaned, dried and stored?

If the program calls for intensive work it seems almost imperative that these articles be furnished and cared for by the school, as pupils cannot give them the necessary attention. For this there will

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be needed a small laundry equipped with tubs and a steam dryer. There must also be suitable receptacles, placed at the proper points, for collecting and dispensing the towels and suits.

CONSTRUCTION

It is scarcely necessary to emphasize the importance of sanitary construction throughout, but it is equally essential that the whole effect be spotless and pleasing. Nothing is more distasteful than the thought of entering a bath that shows any lack of cleanliness, and particularly one that is used by great numbers. This must be kept in mind in the

be of sufficient thickness, so that the total weight, exclusive of the water to be contained in the pool, be not less than the weight of the water displaced. Otherwise, with a high ground water level, the emptying of the pool may cause the floor to be forced up or the entire structure to be lifted from its bed. Such problems require special study by experts.

The following construction has been found both economical and satisfactory:

Outer Shell.—Concrete with reinforcing bars of steel properly designed and placed is by far the best method of construction, insuring as it does a

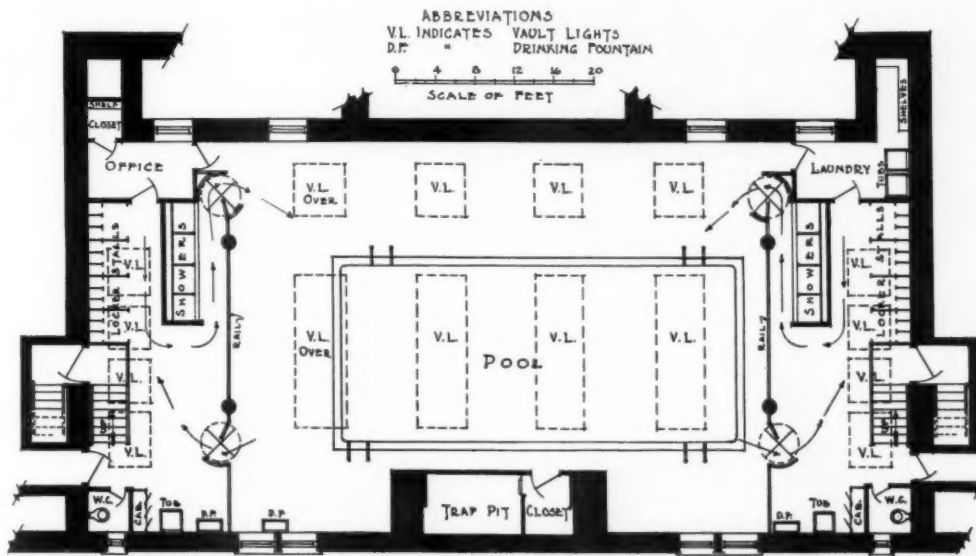


Fig. 2. Natatorium under the paved court yard of Public School No. 66, Borough of Brooklyn. Another pool in a very limited space, yet capable of intensive use by reason of the carefully planned lines of travel. By the substitution of folding partitions in place of the railings at the ends of the pool room, either set of showers and dressing quarters could be disconnected from the pool for independent use.

selection of materials and colors. Cement and other materials that absorb oils and dirt must be avoided. The predominant colors should be white or very pale tints. An abundance of natural light, *sunlight*, if possible, and an ample supply of pure, fresh, tempered air are indispensable.

The pool should consist of an outer shell, designed to withstand the necessary water pressure from within, and possibly from without; an inner shell to which the finish is applied, or which in itself provides the finished surface; and waterproofing, either as a membrane between the two shells or integral in the outer one.

In the event of there being ground water present at any or all times at the location of a proposed pool, care must be taken that the walls and floors

unity throughout the entire fabric with a minimum quantity of material.

Under ordinary conditions this outer shell can be made sufficiently water tight by careful mixing of the concrete, or by adding integral waterproofing to the mixture; but when there is water pressure from without, or when the pool is located on an upper floor of the building, the membrane system of waterproofing should be used.

Wall ties built into this concrete with ends turned up against the inner forms serve to bond the inner wall to the outer shell. Pipes passing through the outer wall are made water tight by means of flange connections, gaskets and lock nuts.

Inner Shell.—The floors and walls may be lined with ceramic tiling with the life rail and cove base

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formed of the same material. This material is impervious and easily cleaned, but the great number of cement joints are a detriment. White glazed brick is excellent for this purpose, particularly the English size, which presents fewer joints than the ordinary size. Glazed terra cotta is an equally

21 ft. in width, as the side rails should be within easy reach.

Depth of water depends on the use of the pool. For adults the shallow end may be about 4 ft., for children about 3 ft. If high diving is to be indulged in, the deepest water should be at least 9 ft.; but

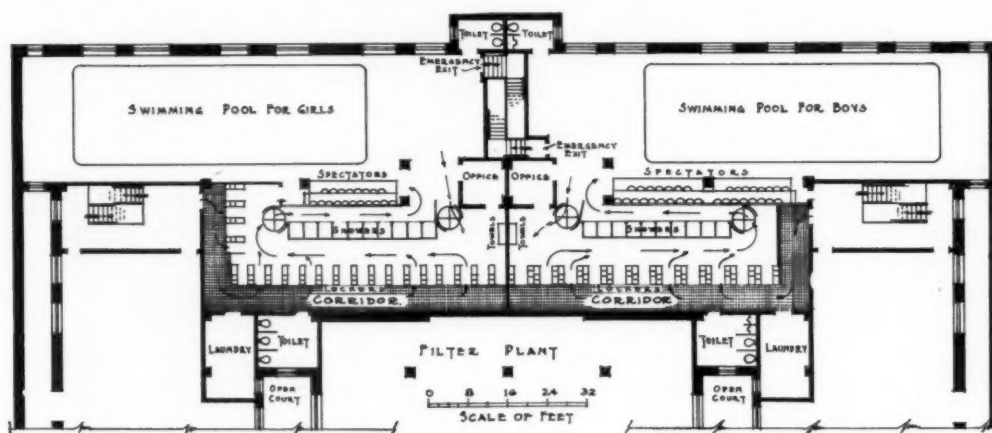


Fig. 3. Double natatorium for a proposed elementary school in New York City. The clothing lockers are so grouped so as to form dressing stalls. In Fig. 4 this is shown more clearly. By this arrangement it is possible to keep shoes with their attendant street dirt away from all portions of the floor likely to become wet, a matter of great importance to the cleanliness of the pool. The wearing of shoes should be confined to the space marked "corridor." Seats for spectators have been provided on raised steps. Note the toilet facilities. The toilets opening on the corridors are for compulsory use before entering the pool, while those opening on the pool room are for emergency use while bathing.

good material, and if the blocks are about 4 x 12 in. on the face, the number of joints is still further reduced. White glazed tile is sometimes used, but it is rather fragile and requires special care in laying. It should not be "battered on" in the usual manner, as voids behind the tiles would fill with water, and this, being under pressure, would force off the tiling when the pool was quickly emptied.

Several lines of dark colored tiles or bricks should extend lengthwise on the floor of the pool, the outer lines being placed 3 ft. from the side wall to assist swimmers in maintaining straight courses when under water. There should be two similar lines across the pool, placed 3 ft. from the ends, to warn contestants of their approach to the walls.

Pools for racing should, if possible, be 75 ft. or more in length and 21 ft. or more in width. When racing is not an important consideration, the length may be 60 ft., 45 ft., or even less. In any event the length should be a multiple of 3 ft., as racing distances are measured in yards.

Pools for children should not be more than 20 or

if only the low spring board is to be used this may be reduced to 6 ft. 6 in.

One of the problems in pool design is the adjustment of water depths where the pool is to be used by both adults and children. If the pool is less than 60 ft. in length, there is a real difficulty because of an even incline of the floor from the shallow end to the deepest point (which should be 10 ft. from the deeper end of the pool) because too steep for safety. The best way to avoid this is to incline the floor about one foot from the shallow end to the middle and from there pitch it as sharply as may be necessary to the deepest water, placing a removable barrier across the middle to prevent inexperienced bathers from going beyond their depth. This barrier will be described later under "Safeguards."

The words "DEEP WATER" should be moulded in the life rail at the deep end, "SHALLOW WATER" at the shallow end and the actual depths in ft., as "4 FEET," "5 FEET," etc., at the proper locations along both sides.

Depth is measured from a line 3 in. below the



Fig. 4a. Perspective sketch of the lockers shown in plan in Fig. 4.

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overflow gutter or life rail, as the water is reduced to about this level by surging and splashing when the pool is in use.

Combination Life Rail and Overflow Gutter.—Whatever the construction of the pool, there should

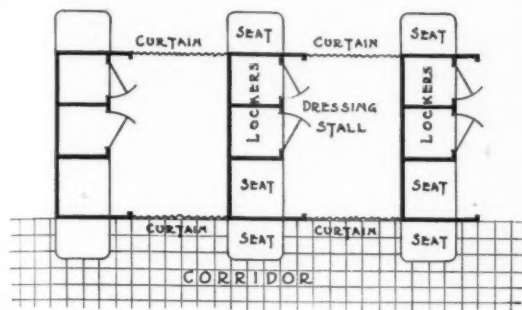


Fig. 4. Metal clothing lockers, so arranged as to form dressing stalls. Shoes should be removed in the corridor and immediately placed in the locker without touching the floor of the dressing stall. After dressing has been completed, except as to shoes, they should be taken from the locker and put on in the corridor space.

be a continuous overflow gutter around all sides, with drainage outlets about 20 ft. apart. Floating impurities are washed into the gutter by the surging of the water. The lip of the gutter is so shaped as to form a good hand grip, thus providing a continuous life rail about the whole pool.

The top surface of the life rail member, which forms the floor at the edge of the pool, should be roughened to prevent slipping. If of terra cotta, this may be best accomplished by applying the glaze over a light sprinkling of sand, which will render it both non-slippery and non-absorbent. Care must be taken that the sand be of the proper size and quantity and that it be covered with a full glaze so as to avoid all possibility of injury to bare feet. This method when properly applied produces a surface of the required roughness, but which nevertheless is non-absorbent and easily cleaned. When the life rail is of tile or mosaic, non-slip tiles may be used for the top surface.

Ladders.—Any form of steps or ladders placed within the pool or in recesses in the walls of same, is objectionable. The sides of the pool must be free from obstructions and entanglements.

The most satisfactory ladder is of terra cotta units built into the wall, so formed as to provide a good foothold and at the same time a good handhold. Above each ladder there is a double pipe hand rail, which, however, does not project over the edge of the pool. Four such ladders are placed, two on each side of the pool, near the ends. No ladders occur on the ends of the pool as the recesses interfere with racing contestants, who in making the turns, push against the end walls with the feet.

Single ladder units, placed at several points along the sides of the pool about 4 ft. below the life rail, serve as foot rests.

Floor of Pool Room.—Ceramic tiling is one of the most satisfactory materials for this purpose as it is impervious, non-slippery and easily cleaned. Marble mosaic and terrazzo are somewhat more slippery and more absorbent. Cement is probably the cheapest available material. It can be made impervious by the introduction of a "hardener" in the mix, but the color and appearance are not pleasing.

The floor should be sloped away from the pool and floor drains provided at points remote from the lines of travel.

Walls and Ceilings.—The walls, or at least the lower portion forming a wainscot should be of white glazed tile or ceramic tile. If the room is

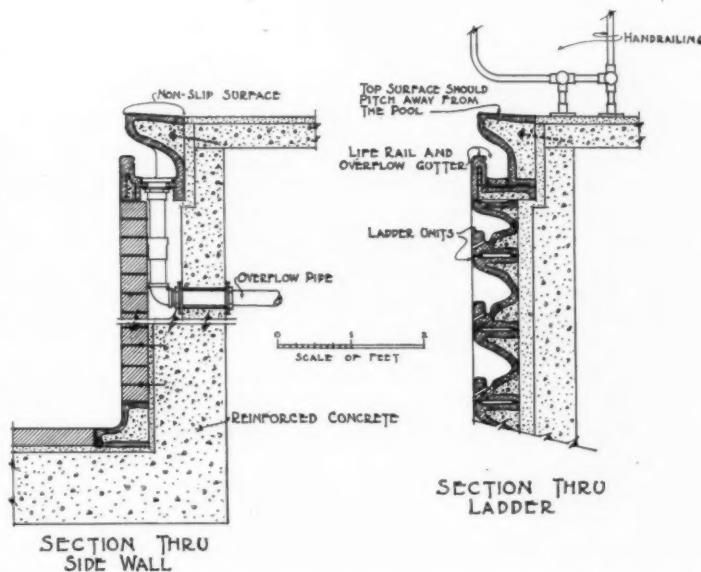


Fig. 5a. Details of the swimming pool shown in Fig. 5.

small and low, it may be advisable to use ceramic tile for the ceiling as plaster is softened by the vapor; but if the room is large and airy, painted plaster will prove satisfactory.

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Shower Stalls.—One of the best materials for these is enameled pressed steel. White marble discolors in time and colored marbles do not harmonize with the other appointments. The partitions

laundry fitted with porcelain tubs, wringers, and a small steam dryer; a porcelain tub and wringer convenient to the dressing quarters and a store closet for cleaning implements and other paraphernalia.

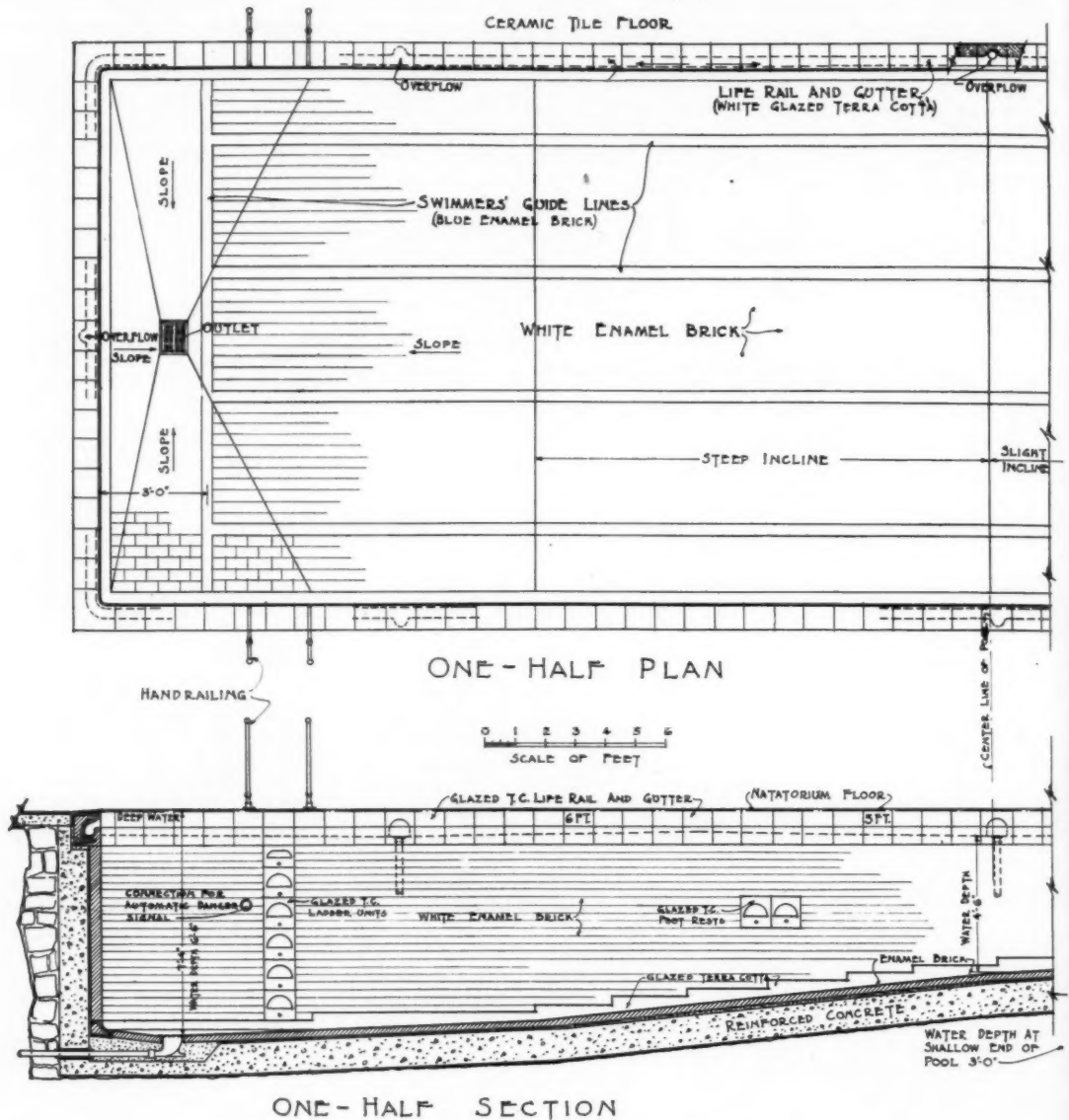


Fig. 5. Half plan and longitudinal section of a typical swimming pool.

should be supported on legs 12 to 18 in. high to facilitate cleaning. In order to insure easy supervision, the tops of the stalls should be low enough to expose the heads of the occupants.

Lockers should be of steel with legs.

Other Accessories.—There should be a small

SAFEGUARDS

There are at present in every swimming pool, potential possibilities for accidents of the most serious and distressing nature. When the pool is used by small children, these dangers assume such proportions as to place a heavy responsibility upon de-

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signer and administrator. It is imperative therefore that all the appointments be made as fool-proof as is humanly possible.

Long experience in schoolhouse construction and maintenance is likely to instill a due sense of responsibility for the safety of the pupils, and Mr. C. B. J. Snyder, Architect of the Public School Buildings in New York City, is one of those in

schools, a large curtain which drops automatically across the deep end as soon as the water is lowered to a certain level. On this curtain there is the inscription in large letters: "*DANGER—LOW WATER.*"

The crank used to raise the curtain is detachable and is kept in the attendant's locker so that the curtain cannot be raised by any unauthorized person.

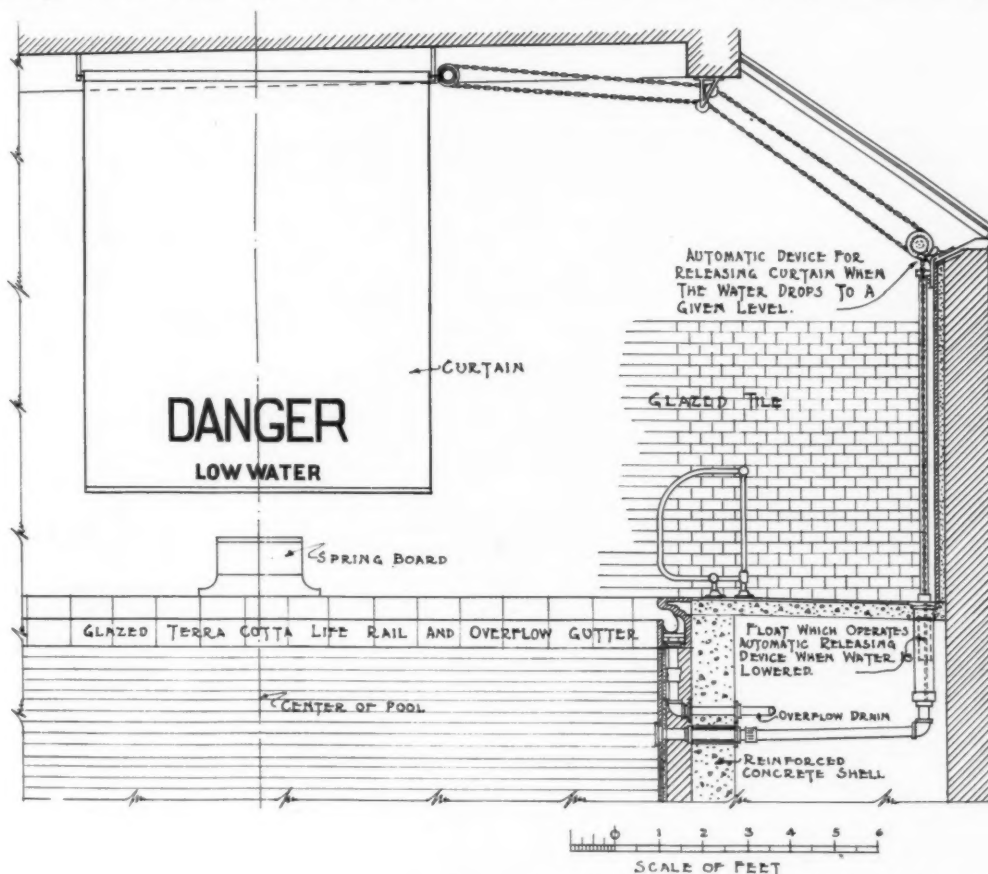


Fig. 6. Automatic danger signal, developed from the suggestion of C. B. J. Snyder, Architect of the Public School Buildings in New York City, to give warning when the water in the pool recedes to a level below which diving is unsafe. The curtain bearing the danger sign, drops of its own weight when released by the automatic device which is put in operation by the lowering of the water level. It cannot be returned to position until the water level has been raised above the danger point, and then only by an authorized attendant.

whom this attribute is ever present. Particular mention should be made of two excellent safety devices that have been developed for the pools in New York schools, from suggestions made by him.

Danger Signal.—It is not uncommon for persons to dive into empty pools, owing to the difficulty of detecting by sight whether the water is actually there. To avoid such an unfortunate occurrence, there has been devised for pools in New York City

This device has been developed to the point where the curtain cannot be lifted until the pool has risen to a safe level, but this need only be applied in exceptional cases.

Barrier Between Deep and Shallow Water.—Protection for the smaller children or those who do not swim, is essential; but the usual method of putting a so-called life-rope across the pool to prevent them from getting into deep water, only increases the

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danger which it is intended to avert. Such a rope to be of value should be just above the surface of the water and sufficiently taut to properly support the weight of two or three children. Even if the practical difficulties of affording proper fastening are overcome, there remains the lack of protection beneath the rope. The buoyancy of the water tends to make the foothold insecure, and there is nothing to prevent the body from slipping under the rope even though the hands are grasping it. The sensation produced upon one not accustomed to deep water is unpleasant and perhaps terrifying.

Water depth is sometimes adjusted to the smaller children through the lowering of the water level; but this does not work out well in actual use, as it prevents the proper and legitimate use of the life rail and gutter, which is so essential to the safe use and cleanliness of a pool. A secondary overflow gutter may be placed below the usual one, for use when shallow water is desired, but this introduces an objectionable recess in the otherwise unbroken wall surface and adds a considerable item of expense.

Alternate lowering and raising of the water level



Fig. 7. General view of the pool and natatorium facilities in Public School No. 66, Borough of Brooklyn. The plan of this pool is shown in Fig. 2. Note the guide lines on the floor of the pool, also the generous register openings for fresh air supply and ventilation.

Both protection and flexibility as to depths of water may be best obtained by means of a boom resting on the water and extending all the way across. This should consist of a 4-inch round stick of a light, buoyant wood, to which three or more coats of good white lead paint have been applied. The ends are supported in place either by ropes carried up over the edge of the pool and secured to suitable weighted stanchions, or by stirrups of suitable design resting on the life rail.

From the boom a sheet of striped canvas is suspended, with the lower edge held in place upon the floor of the pool by means of a galvanized iron rod or pipe let into the hem or through loops. The striped canvas not only indicates plainly the limit of safe depth, but also serves as a barrier to prevent accidental overstepping of the bounds.

involves unnecessary administrative attention. Orders must be given to the engineer whenever a change of level is desired and time must be lost while the change is being made. When the level is raised, a large volume of water must be drawn from the mains and heated to the desired temperature within a short space of time. This requires a larger heater, more water and more fuel than would otherwise be necessary.

SANITATION

For many years the only known method of purifying the water in swimming pools was by emptying and refilling and there was no assurance of purity except immediately after refilling. Water from most city mains, although pure enough to be safe for drinking purposes, contained enough sedi-

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ment to make it uninviting. Unless such pools were constantly emptied and refilled, the danger of infection from disease germs rendered them a positive menace to health.

There was thus created in the minds of the people, both lay and professional, a prejudice against the use of swimming pools, except by lim-

the same water continuously without any danger of infection, the small quantity of water lost through the overflow gutter being replaced by water from the mains.

Toilet accommodations should be provided convenient to the dressing quarters and their use insisted upon before entering the water. There should



Fig. 8. A close-in view of the showers shown in Fig. 7, also showing a partial view of the locker stalls in rear of same.

ited numbers, or when there was a practically unlimited and constant supply of fresh water.

Recently, however, there have been developed methods of re-purifying so positive as to eliminate this danger, where proper precautions have been taken for the health and cleanliness of those using the pool. At the same time, the attractiveness has been greatly enhanced by the crystal clearness of the water.

Pumps are provided of sufficient capacity to recirculate the entire volume of water at least once during the working day, and at the same time pass it through mechanical filters and re-heaters. Before its return to the pool it is sterilized by the automatic injection of the proper quantity of hypochlorite or ozone. By this method it becomes possible to use

also be other toilets adjacent to the pool for emergency use while bathing.

Cost

The initial cost of pools and appurtenances of the kind described, is not such as to prohibit their use in public schools.

Prior to the war a 60-foot pool, together with its appurtenances, could be secured for about \$10,000. The provision of additional space for the pool adds also to the cost of the building. The chief item of expense, however, is for maintenance and administration and this fact is sometimes lost sight of, when the requirements for a new building are under discussion.

Swimming instruction, when developed to the

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limit of its possibilities, provides much more than a pleasant, healthful exercise. To a greater degree than most courses of study, it can be made to extend its benefits beyond the individual pupil and to exert a powerful influence on the health, mental attitude and morals of the community.

"Cleanliness is next to Godliness," is more than a trite expression, it is an indisputable and well recognized fact. Where personal cleanliness is at a discount, one cannot expect to find clean homes, clean streets or clean morals. A great uplifting force would be brought to bear on such a community if all the schools were provided with well equipped pools; if all the school children were taught by competent instructors, not only swimming but cleanliness; and if these advantages were also made available for adults when not in use for school purposes.

A prominent New York physician has assured the

author that these incidental benefits arising from the proper use of pool facilities constitute the strongest possible arguments in their favor. To secure them it is absolutely essential that both the architectural plan and the administrative program be conceived and executed along correct lines.

ACKNOWLEDGMENTS

Mention has been made of certain devices that have been developed from suggestions made by Mr. C. B. J. Snyder, Architect of the Public Schools in New York City. Grateful acknowledgement is also made of many other helpful suggestions from the same source, in connection with the planning of pools for the New York schools and the preparation of this article. Information has been drawn from many other sources, and to all of these the author wishes to give full credit.



CARVED REREDOS—TUDOR PERIOD

Industrial Information

In this Department there is published each week information as to the development of materials and methods, derived from reliable sources.

Waterproofing Methods and Materials

To make a structure proof against injury from water is but one way of taking the obvious precautions that will assure its long continued usefulness. That this is an important subject to the architect and engineer is borne home in a valuable booklet prepared by the General Fireproofing Company, Youngstown, Ohio. The adequate waterproofing of a building is as much dependent upon proper methods of application as upon quality of materials. This handbook is accordingly offered both as a description of a very complete line of materials and as a guide to their correct use. The methods of application recommended are based on successfully used specifications and cover almost every conceivable waterproofing problem. A valuable feature of this book is a specification guide which gives in four parallel columns typical problems and conditions, methods for meeting them, materials best for the purpose, and finally a cross reference to the page giving complete specifications for the work. These are of very distinct value, for from each page may be obtained information of the most pointed importance and interest in dealing with this subject. Diagrams and other illustrations are interspersed throughout.

There are two general methods of waterproofing: integral, by which is meant the incorporation of a waterproofing material into the mortar or concrete during the process of mixing; and membrane, which is a surface treatment over a completed structure. The uses of each are fully developed in what is a book of considerable reference value. Included in the exposition are methods of acidproofing, floor coating, steel coating, concrete hardening, brick and cement coating, and many other specialties, accurate knowledge of which will be of benefit to the architect.

Sanitary Window Shades

With several good features to commend it, Draper's Sanitary Roller Shade is widely used in schools and office buildings. It is manufactured by the Luther O. Draper Shade Co., Spiceland, Ind., and its advantages are enumerated as follows:

The materials and construction are of the best,

so that operation is simple and quick and accompanied with so little resistance that little can wear out even with constant use. It can be raised at the bottom and lowered at the top at the same time. This is particularly an asset in ventilation. Most windows may be lowered from the top and if the shade cannot, either the passage of air is obstructed or the shade flaps in a manner which injures it and is very annoying. Further details may be had on request from the makers.

Deming Pumps

Unless it flows by gravity, water must be pumped either by hand, windmill, electricity, gas, steam or other power. A very readable booklet called "A Generation of Progress" has been prepared by the Deming Co. of Salem, Ohio, showing graphically the wide application of the Deming product for every purpose where water is to be transported from one place to another. In large variety, for the house, the farm, the factory, for general water supply, boiler feeding, fire protection, drinking purposes, Deming pumps have been used with successful results.

An interesting insight into the value of pumps in carrying on modern progress, whether in the mountains, the desert, or the mines, is presented in this booklet. In addition is given practical information on pump facts which the many-sided architect will be glad to review.

Drying Clothes

Whether we like to admit it or not, we are all closely related to the washerwoman and bound up in her affairs. "Clothes and the man," one of the long-favored debating society topics, is given a new angle in the discussion of scientific clothes dryers, an angle in which the emphasis is on scientific dryers, and not on scientific clothes.

A Cleveland concern, the Scientific Heater Co., 1065-1125 East 152d Street, that city, has prepared a manual for salesmen to show just in what respects the Scientific Clothes Dryer which it manufactures is an accessory worthy of a place in every household. This manual has a two-fold appeal—to the seller and through him to the buyer. Since

the architect may in this instance be the one or the other, the book has interest.

The makers have summarized very concisely and comprehensively the advantages resulting from the installation of their Scientific Clothes Dryer. First, wash day is made independent of the weather. The thing further eliminates tearing of fabrics caused by clamping with clothes pins, by flapping in the wind, and by folding frozen clothes. It avoids soot spots, dust and other outdoor dirt. It does away with the discomforts of cold winds and hot sun, and reduces the chances of colds, rheumatism and other ills. It eliminates the useless backbreaking labor of handling heavy clothes baskets and pinning clothes on the line. It takes the place of all the unsightly clothes lines. It, finally, shortens the process of drying, and reduces the time required for completing the week's laundry.

Hendricks' Register a Voluminous Work

The twenty-seventh annual edition of Hendricks' Commercial Register of the United States for buyers and sellers, with which has been incorporated "The Assistant Buyer," has just made its appearance in the trade. It is especially devoted to the interests of the architectural, contracting, electrical, engineering, hardware, iron, mechanical, mill, mining, quarrying, chemical, railroad, steel, and kindred industries. Products are listed from the raw material to the finished product, with the concerns handling them from the producer to the consumer, corrected and revised up to the latest possible moment. The volume contains 2384 pages. It may be obtained from the publishers at 2 West Thirteenth Street, New York, for the sum of \$10.

Permanence the Unwritten Law of Church Building

Some of the greatest triumphs of the world's master builders have been achieved in the creation of religious edifices. Century-old structures of transcending beauty attest how limitless are the possibilities of genius when inspired by religious fervor.

That time has but added to the beauty of Europe's wondrous cathedrals—so truly "poems in stone"—is due to the fact that in their construction only materials offering the greatest resistance to the action of time and weather were employed.

Down through the years this same fundamental principle has obtained and in the church construction of today endurance is a deciding factor in the selection of the building materials.

That metal lath is now universally recognized as meeting every construction requirement, both as to permanence and fire resistance, is proven by the increasingly large number of churches and other public buildings in which it is now specified.—*From Expanded Metal Construction, Published by the Northwestern Expanded Metal Co., 37 West Van Buren Street, Chicago.*

Personal

Zenas W. Carter, chairman of the War Service Committee on Metal Lath, with offices in the Woodward Building, Washington, D. C., has resigned to become managing executive of the Material Handling Machinery Manufacturers. He will take up his new duties on March 1, with headquarters in New York City. Before entering the War Service Committee, Mr. Carter was secretary of the Associated Metal Lath Manufacturers.

