

THE AMERICAN ARCHITECT



INTERIOR OF STA. MARIA LA BLANCA—TOLEDO

PUBLISHED WEDNESDAYS IN NEW YORK
FOUNDED EIGHTEEN HUNDRED SEVENTY SIX
VOLUME CXVI DECEMBER 3, 1919 NUMBER 2293



Erecting Homes in Winter

The above illustration shows the residence of William Mills, Cedar Rapids, Iowa, in course of construction. Designed by Architect William J. Brown. Stucco Contractor Charles R. Carpenter. Bishopric Stucco Board was used on this home.

DO NOT permit winter's interfering hand to halt your construction this year—apply Bishopric Stucco and Plaster Board to the studding or sheathing and proceed with the interior finishing.

Bishopric Board has in numerous instances especially in the severe cold of the Northwest stood exposed to the elements from fall to spring without disintegration or damage. In every instance the buildings have been ready for Stuccoing at the Architect's or Contractor's convenience.

If your clients are in urgent need of a place to live they can occupy a Bishopric Board walled home in considerable comfort until the spring Stuccoing. The insulating qualities of this Board are decidedly extraordinary—it keeps a home extremely warm and dry. Dampness cannot penetrate the Asphalt Mastic and fibre-board and the heavy wood strips are creosoted against exposure.

Warmth and comfort are increased when it is used on the interior instead of wood lath.

Bishopric Board's economy should influence contracts at this time. The saving on the average home is about 25%. This is a big point today!

But best of all Bishopric Board is a Stucco background you can be sure of. You can apply the Stucco next spring and know that the walls will remain permanently beautiful and crackless—monuments to your judgment.

Tell your clients they can go ahead with their construction and specify Bishopric Board!

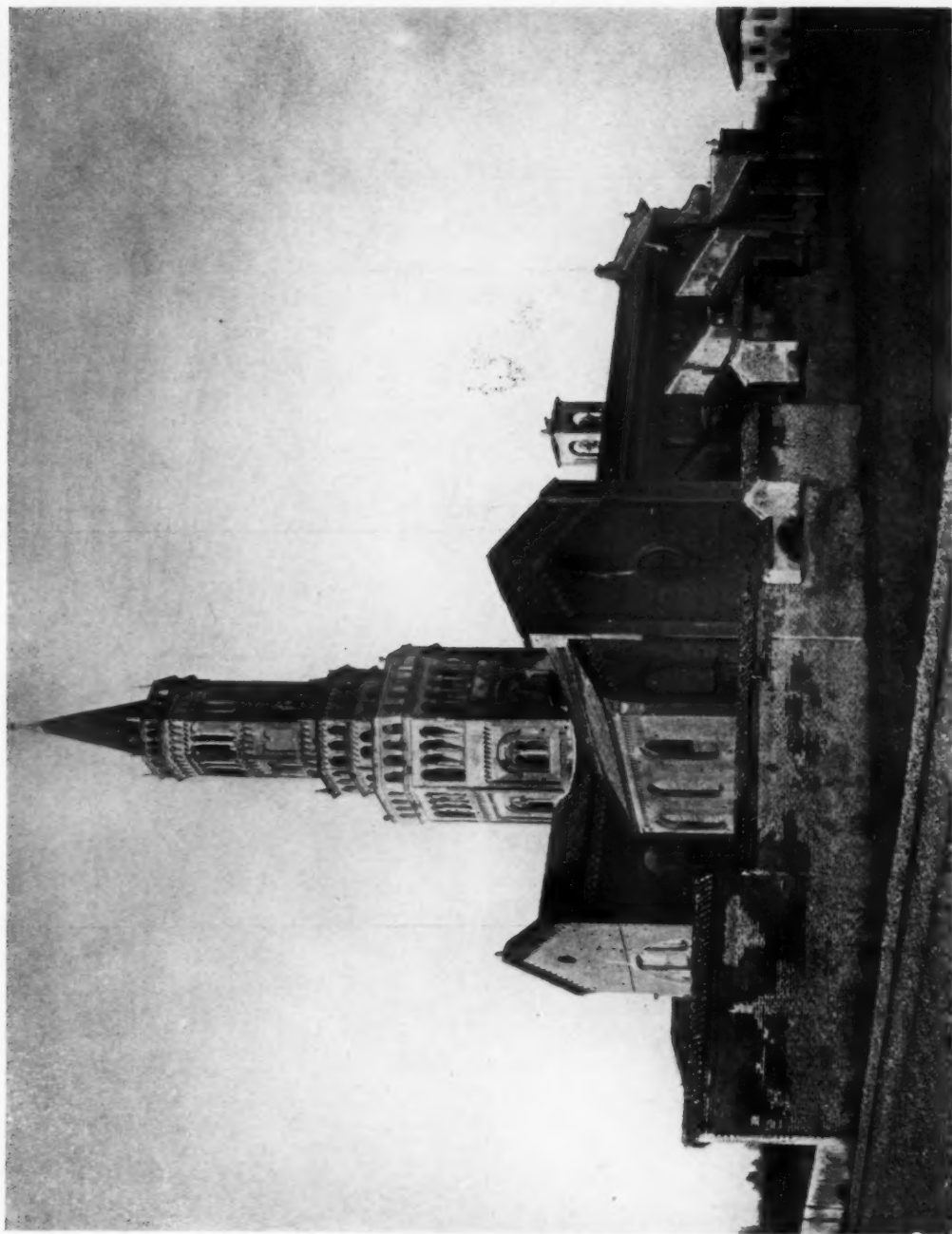


We are ready to give you every service in connection with winter construction on Bishopric Board. Write us and get our Booklet.

THE BISHOPRIC MANUFACTURING COMPANY
972 ESTE AVENUE

CINCINNATI, OHIO





A XIV CENTURY CHURCH, MILAN

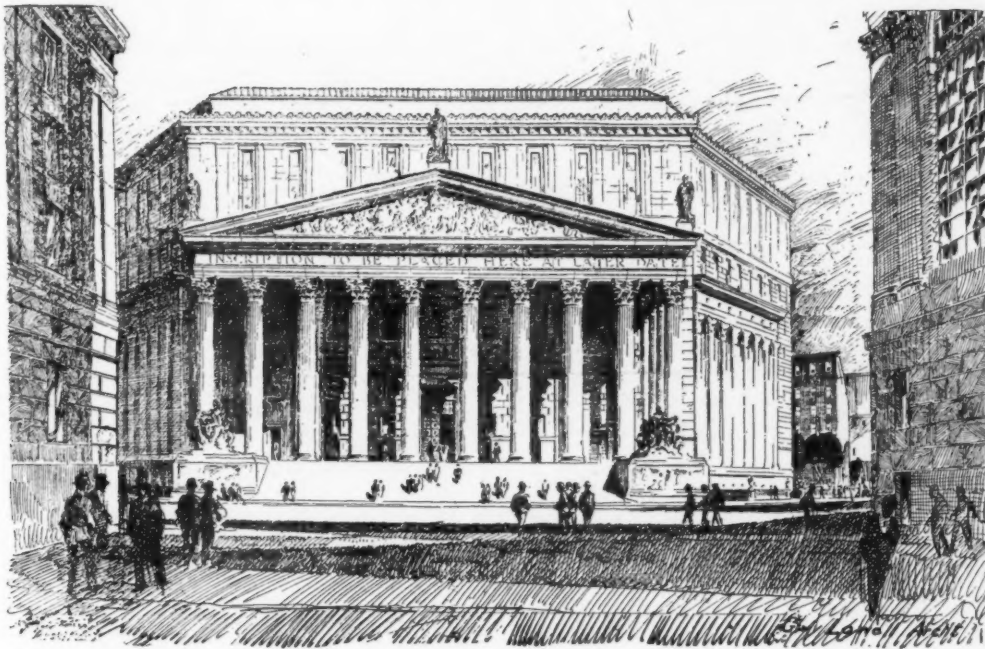
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VOL. CXVI

WEDNESDAY, DECEMBER 3, 1919

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PERSPECTIVE VIEW

The New York County Court House

GUY LOWELL, *Architect*

IN 1903 the New York State Legislature passed an act creating a Court House Board with authority to select a suitable site and construct a new court house for New York County to take the place of the old so-called Tweed Court House in City Hall Park, New York City. Between 1903 and 1912 six sites regarded by the Court House Board as entirely suitable were selected only to be disapproved and rejected by the municipal authorities. In 1912 the board selected the plot bounded by Leonard, Lafayette, Baxter and Park Streets, and the title to this property was vested in the city in August, 1913, at a cost of nearly \$6,244,000.

The Court House Board proceeded to prepare plans and specifications and study the questions that had to be determined in the erection of the new building. A competition was held for the selection of an architect. A jury of award passed upon the merits of the plans submitted by those in the competition and recommended that Mr. Guy Lowell be chosen as the architect. The jury's recommendation was accepted by the Court House Board in April, 1913.

Mr. Lowell prepared and submitted a plan for a circular court house, which aroused discussion among the Justices of the Supreme Court whose

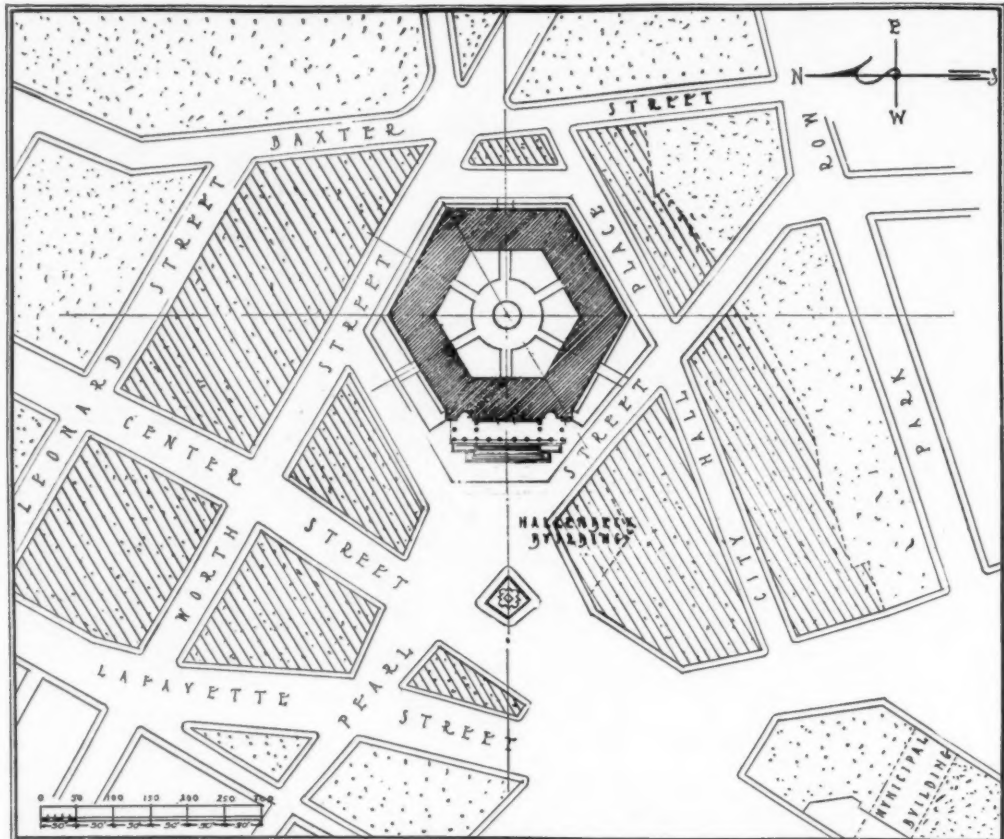
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approval was required under the act. After extended discussion and some revision the plan was approved by the Justices two years later.

In the meantime the Board of Estimate and Apportionment had discovered that the site already acquired at a cost of \$6,243,688.35 was impracticable for use because it would necessitate the construction of a portion of the new building over

the total cost of land acquired for the Court House site \$11,396,300.35. Subsequent costs, interest and loss of taxes make a total of fully \$15,310,000.

In December, 1919, State Architect Lewis F. Pilcher was authorized by the committee of the Board of Estimate and Apportionment to act in an advisory capacity, the former Court House Board having had a consulting architect for such purpose.



BLOCK PLAN

what is known as the "Collect Pond," requiring great expense for foundations, and that the subway under Center Street would cause constant vibration in the building. It was also found to be impracticable and improvident to have Center and Worth Streets run through the new Court House as had been planned. In order to avoid these conditions the Board of Estimate and Apportionment determined upon the purchase of additional land lying to the east of Park Street and extending to within less than one hundred feet of Park Row. Title to this additional property was vested in the City on May 6, 1915, at a cost of \$5,152,612, making

During the past summer Mr. Pilcher and Mr. Lowell were engaged in calculations and revisions incident to the work. It had been made clear that the projects for Federal and State buildings would not be permitted to delay the construction of the new County Court House.

It was found by Mr. Pilcher and Mr. Lowell that a new Court House adequate for all purposes of the administration of civil justice in the Supreme Court and City Court and Commissioner of Jurors, as required by the Court House Act, and constructed of the best and most suitable materials, could, without sacrificing the architectural beauty, be

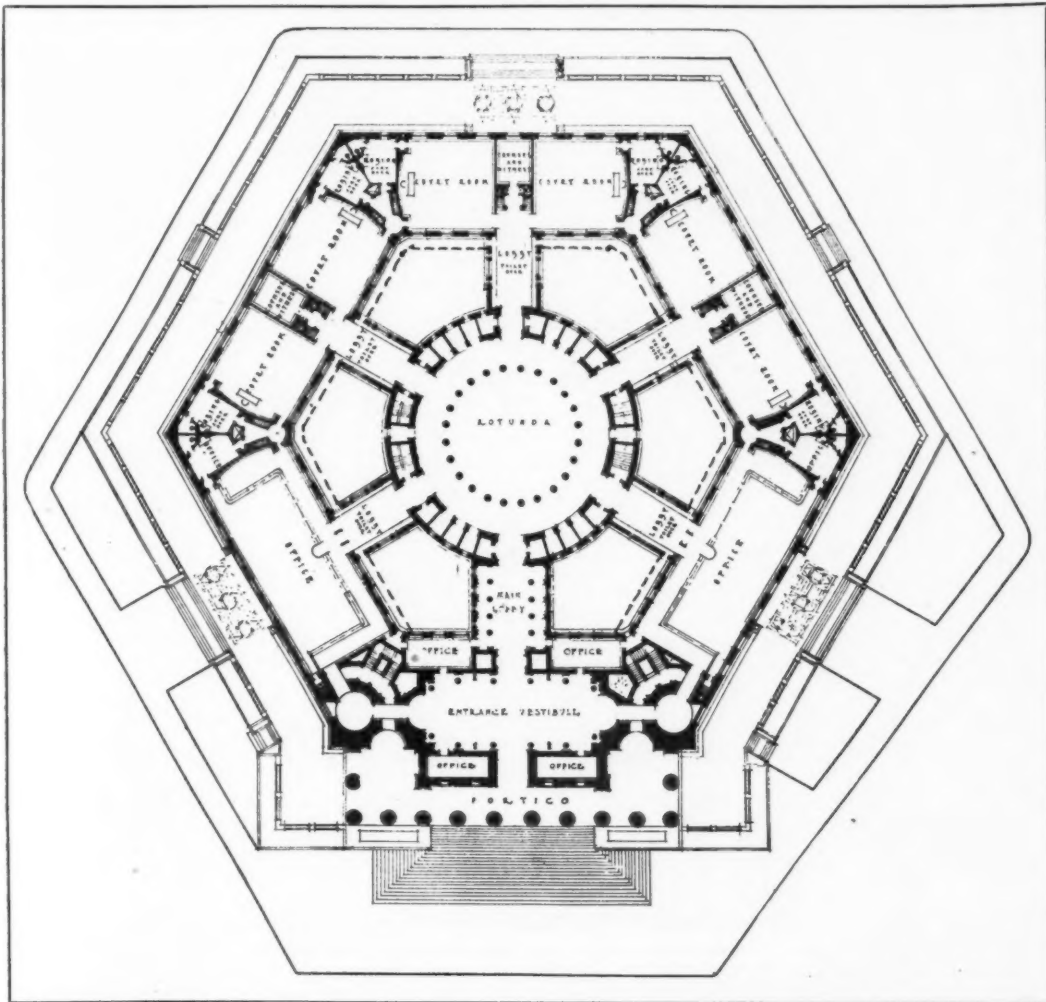
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completed at a cost not exceeding \$7,000,000. The estimated cost of the first plans submitted by Mr. Lowell was \$21,000,000.

Mr. Lowell was thereupon asked by Charles L. Craig, comptroller and chairman of the Court House Committee, to carry through the preparation of the new plans and form of contract with all possible urgency, so as to avoid delay and the possibility

The reduction in the cost of the building under existing prices from approximately \$21,000,000 to \$7,000,000, and the salvaging of approximately three-fourths of the real estate acquired has been accomplished without sacrificing or stinting in any respect the space required for judicial and clerical purposes.

In Comptroller Craig's report to the Board of



FIRST FLOOR PLAN

of advancing costs upsetting his calculations. The new plans, illustrated in this issue, are for a hexagonal instead of a circular building as had originally been presented by Mr. Lowell. It is so located on the land acquired that approximately 75 per cent of such land can be salvaged and made available for other purposes.

Estimate and Apportionment Mr. Lowell has furnished a summary description of the building provided for in the new plans. It follows:

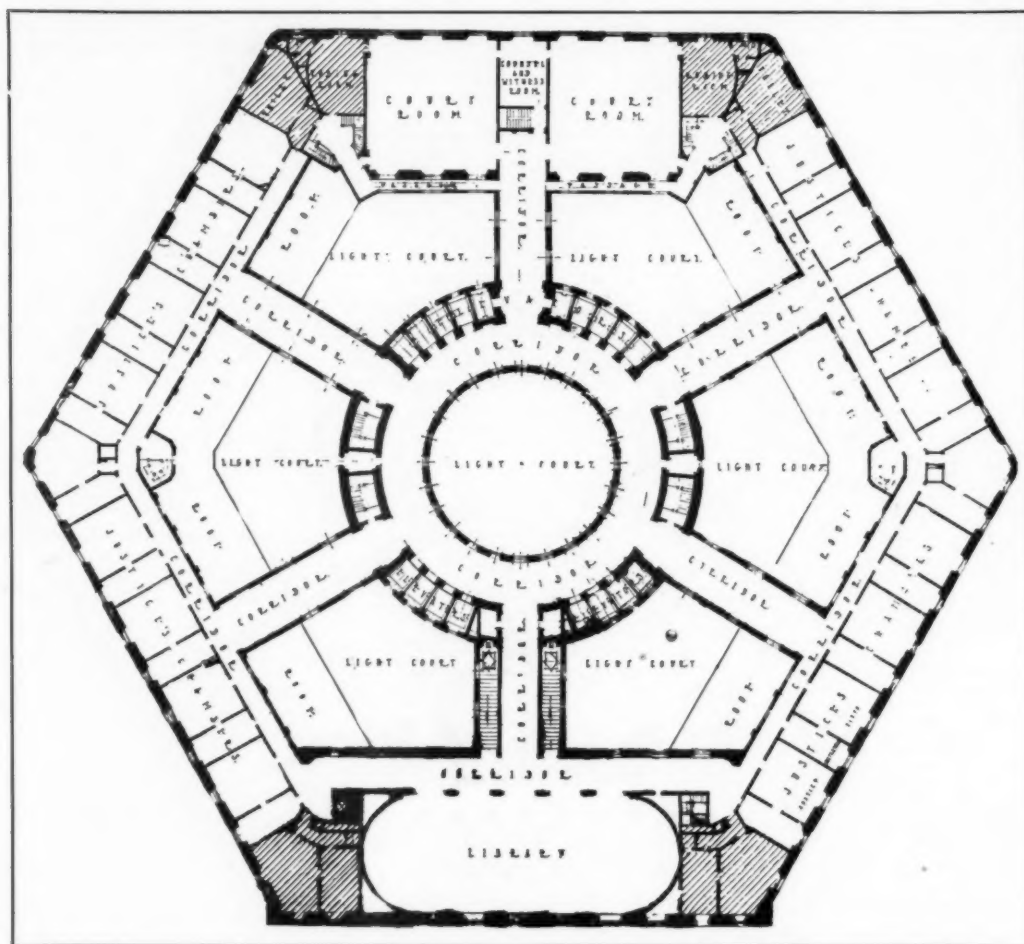
The new Court House will be built of the same excellent materials and will have the same carefully worked-out conveniences as the building originally planned and specified, but it is no longer

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circular; after the elimination of many features not now considered essential, it still preserves all the excellent qualities contained in the original plan, which was so admirably adapted to the needs of a great city.

The same quiet and accessibility are provided for the court rooms; privacy for the justices, ample facilities for the lawyers, and every convenience for

advantages of the original circular plan, still can be built at a price that the City can afford, and that can be built at once. The reduction in cost has been obtained by eliminating from the original program many of the features which were not absolutely essential, for according to the most modern ideas the building need no longer be what was considered so necessary in past generations—a Palace of Jus-



PLAN OF LIBRARY AND JUSTICES' CHAMBERS FLOOR

the public is arranged for; to an unusual degree there are adequate facilities for light and ventilation; and, finally, at a reasonable cost to the City, the scheme makes future extension possible. Above all, there will be a skillfully planned system of entrances and corridors to facilitate and expedite the going and coming of the public.

The plans prepared are for a building that, while ample and embodying all the carefully thought-out

tice. It is to be a fine, commodious, well-equipped building for the efficient and expeditious disposition of controversies that can only be settled by the courts. Though the size and, therefore, the cost of the building have been materially reduced, this has been done without sacrifice either in construction or materials.

The entire exterior, including the porch, will be of granite of a warm tone. A fine porch or portico

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will occupy the westerly, one of the six sides, giving character and dignity to the building. Behind its pediment will be placed the library stacks, and on the floors below these will be the record rooms, minor offices, toilets, etc., so that a dignified entrance is obtained without sacrifice of light in important rooms. The other five sides, occupied by the courts, depend for their architectural effect on careful composition—produced by the skillful balancing of void and wall space, so that there are no columns or architectural projections to shut off light from the court room windows.

One of the features of the original scheme about which architects and experts, both here and abroad, were most enthusiastic, was the grouping of the court rooms in units of two, each unit being complete in itself and entirely independent of the rest of the building, though closely connected with it; thus being as independent of, and shut off from the other courts, offices and public passageways as though each unit were housed in a separate wing; each court room has its own lawyers' and witnesses' consultation room, its jury room and toilet, and Justices' robing room with its toilet. From the vestibule which serves each unit a private passage runs parallel to the court room and leads to the vestibule serving the Justices' robing rooms and jury rooms. This enables the Justice to reach his room without passing through the court room. By means of this private corridor he can pass entirely around the building if he wishes to visit another court room or justice. He can also use this passage in going to and from his chambers which are in the upper floor, and which are reached by means of the Justices' private elevator. The jury rooms, one of which is provided for each court room, are also served by this corridor.

One of the greatest advantages of the plan is the quiet it insures each court room. The public going to the court rooms cross by the radially placed passages from the central elevator circle to the court room vestibules, which serve each unit of two court rooms. Only the portion of the public having business with the particular court room use this corridor or enter this vestibule, so that there is never the confusion caused by noisy crowds passing by the entrance door on their way to or from other parts. Furthermore, though each court room faces on the street and is lighted from it, the street windows need never be opened as natural ventilation is provided entirely from the windows on the inner court side. This court ventilation eliminates the noise from the street and also the dust, so troublesome when windows which face the street have to be opened. Each court room is lighted in the way which experts agree is ideal; that is, by large windows on one side, these being on the outside, and

has what experts also agree is necessary, windows high up on the opposite side, for natural ventilation. The air taken from the light courts is cleaner and the court acts as a great flue and so helps the circulation. There is no chance of the noise of one court room disturbing the proceedings in some other court room, as they never face each other on opposite sides of a light court. Beside the natural ventilation there is a complete system of artificial ventilation in connection with the heating. This is under thermostatic control, and each Judge, by pushing a button on his desk, can have the room just the temperature he wants it. The windows on the street will be double glazed entirely to deaden any noise coming from without. They are made especially large to give ample light—the proportion of window area to floor area is above the average. Finally, still further to insure quiet, each court room will have the floor covered with cork tiling.

Simplicity and directness of plan characterize the entire building. The public enters the ground floor from doorways on three sides, and if their business is with the courts, go to the central hall, about which are placed the elevators that lead to the various floors. There are also separate entrances for the Supreme Court Judges and for the City Court Judges, each with a private elevator which leads to his chambers on the fifth or sixth floors, or to each court room floor. On the ground floor is located the Bureau of Naturalization, the Commissioner of Jurors, the County Clerk's secondary offices, the Records Vaults, public toilets, convenience rooms, etc.

From the porch a colonnaded lobby on the first or main floor leads to the central rotunda. This is a spacious round hall, near which are grouped the Motion parts and some of the Trial Terms. The rotunda and the lobby are paved with marble and have limestone columns and dado. Around the rotunda are banked the elevators.

The second floor is entirely given over to the City Courts with separate corridors, connected by special elevators, with a separate entrance.

Above are more of the Supreme Court rooms, occupying the third and fourth floors. On these floors are located the library, stack rooms, etc. The fifth and sixth floors are lower and are set back from the inner court wall, leaving a space which can be used as a terrace and enlarging the upper part of the light courts. These floors contain the upper part of the Library, the Justices' Reading Room, Dining Room, Justices' Chambers, etc., and are reached by both public elevators and by the private elevator for the use of the Justices. Each Justice's chamber consists of a small vestibule, a secretary's room, and the chamber proper.

The building will have a steel frame, fireproofed

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with cement, reinforced concrete floor and roof construction throughout. The finish is substantial and dignified, of the same character as is usual in the best class of such buildings. The corridors will have marble floors and dados, plain plastered walls and panelled plaster ceilings. The offices will be simple, having concrete floors, probably finished with linoleum, and plain plaster walls and ceilings. This will also be the finish of the Justices' chambers. Aside from the entrance lobby and rotunda, the only places in the building where panelling will be

used will be the court rooms, and even here the decoration will be very restrained. The court room floors, as already noted, will be dark cork to render them noiseless, and the ceilings will be coffered to make them satisfactory acoustically.

The estimated cost of \$7,000,000 includes the completion of the building, except as to movable furniture, rugs, carpeting, etc., and special equipment, such as filing cases. It is intended to have the building complete for occupancy by the courts in the fall of 1921.

Zoning and Architectural Practice

ZONING makes many appeals, both to owners and non-owners of real estate. As it is an insurance against depreciation of values caused by a change in the character of new buildings constructed, or by change in the character of occupancies, the appeal is selfish but perfectly legitimate. This reasoning applies to every locality because a nuisance can depreciate a mercantile or manufacturing property as well as a residential one. A competent zoning plan also prevents certain developments that are not reasonably sure of success, such as those often promoted and exploited by real estate speculators. Zoning further provides protected and decent residential sections for workers, with adequate transportation to their places of employment, recreation and shopping. Such a zoning plan is just and equitable to all classes of citizens.

Zoning appeals to non-realty owners by satisfying their sense of orderliness and fitness. These citizens have every right to protection from nuisances, and to life and work in an attractive, healthy and well ordered community. The necessity for zoning as a surety against future loss and for social community welfare is generally recognized by all thinking persons.

Zoning is the paramount necessity of urban American communities. Notable progress is being made along these lines in all parts of the country. Illinois has recently passed an enactment enabling its cities to undertake this work. In Chicago plans are under way for the creation of a zoning ordinance which will be of tremendous importance to its citizens. Several large cities, notably New York and St. Louis, have such laws. The fundamental requirements of zoning laws are not generally understood and those with actual experience in such work are few in number. For this reason the personnel of committees or commissions created for the formation of zoning laws, is of supreme importance. All of the major interests, both ma-

terial and social, should be competently represented.

The physical elements of a city consist of buildings, streets, parks and public utilities such as sewers, water supply, lighting and transportation facilities. Of these improvements buildings out-value all of the others together by a very large percentage. These tremendous values, represented by buildings, are the handiwork of architects and are only possible of construction because of their abilities and efforts. Therefore the value of the architect to the community is apparent.

The practice of architecture requires a technical training unexcelled by any other profession. Its scope is necessarily broad and diversified in order to satisfy the demands of modern building construction. No other constructive human activity controls such great investment values.

The work of the architect is essentially that of measuring requirements and so planning as to satisfy them, a truly constructive effort.

The preparation of a zoning law requires a survey of the existing conditions, a vision of their future growth, a measurement and valuation of the component elements and a plan whereby the rights and equities of all may be conserved—all essentially the work of an architect. The work of the architect includes the housing of every human activity and as the building has a marked influence on the physical, mental, moral and spiritual condition of the population, he has an appreciation and understanding of those things which should control the formation of a zoning law.

The ability to carry a precinct or ward in an election must not be the criterion that governs the makeup of a zoning commission but rather the ability to render an adequate service to the community. It is possible in many walks of life men can be found well qualified for this work, but in none are there any persons more proficient than in the architectural profession.

ANCON HILL
654' ELEVATION AT TOP

LANCON HOSPITAL

GENERAL LAYOUT OF
DEVELOPMENT BY
THE UNITED STATES
GOVERNMENT 1954-59

SCALE IN FEET
0 100 200 300 400 500

SAMUEL M. HITT, ARCHITECT

TOWN OF ANCON

KEY

BUILDINGS

PATIENT WARD
NIGHT WARD
NIGHT NURSERY

LANDSCAPE

1. LANCON CHIEF
2. LANCON CHIEF'S OFFICE
3. PATHOLOGIST
4. ASSISTANT SURGEON
5. ASSISTANT SURGEON
6. CHIEF CLERK
7. DISPENSARY
8. X-RAY

CANAL ZONE
REPUBLIC OF PANAMA
CITY OF PANAMA

SAMUEL M. HITT, ARCHITECT



SUPERINTENDENT'S HOUSE

The Ancon Hospital

Ancon, Panama Canal Zone

By SAMUEL M. HITT, *Architect.*

SINCE the opening of the Panama Canal to traffic five years ago the Government has expended many millions in the development of the terminals and in municipal improvement. The buildings erected consist of dwellings and apartments for all classes, office buildings, schools, churches, clubs, a stadium, hotels and restaurants, hospitals, commissaries, fire, police and railroad stations, motor car and bus houses and garages, pier sheds and storehouses, a dry dock pump house, a laundry, refrigeration and cold storage plants, garbage incinerators, an abattoir, a meat cannery, dairy farm buildings, and buildings of Army posts and Submarine and Aviation bases, etc.

Most of the construction is of a permanent character, in re-inforced concrete or semi-concrete and hollow cement block curtain walls and partitions, cement stuccoed or lime plastered. Erected a year after the Congressional appropriations, and during the war period of advancing prices, it was necessary

to study the strictest economy and adornment was sparingly employed.

The project of probably the most architectural interest is the collection of buildings illustrated herewith of Ancon Hospital, which cost \$1,750,000. The group supplants the original French wooden hospital buildings on an irregular and restricted site crowding the base of a high hill and overlooking the City of Panama and the sea. The plan was adopted of isolating "Sections" or Ward units as far as possible, without departing too far from economy of central administration, and this idea, together with the irregularities of the site, fixed the story heights at from two to four.

Shelter from the tropical sun and rain is afforded during intercommunication between the sections by loggias and continuous porches of a total linear length on all floors of 6,800 feet that connect the different Wards, the Administration and Clinics building, and the Kitchen and Mess building under



GENERAL VIEW, SHOWING KITCHEN, MESS SECTION C AND LABORATORY
ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE
SAMUEL M. HITT, ARCHITECT

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one roof. This is especially convenient, in connection with the elevator service, for food transportation in heated food carts from the Central Kitchen to bed patients.

The entirely detached structures are the Power Plant and Shops, and, on lower levels, the Admitting and Dispensary building, the General Laboratory and Crematory, General Storehouse, Garage, Superintendent's dwelling, Nurses' House, and other quarters to be built.

The five different Ward groups, or "Sections," consist of two units each on each floor (except the Isolation Section), with the auxiliary rooms between—visiting room, ward dining-room, ward and

refrigeration, and on upper floors are dining rooms for convalescent patients and for the staff.

The Dispensary and Admitting building provides for consultation and examination, dressing and minor operations of out-patients, the out-patient dispensary and two dental suites.

The Laboratory is designed for research and the special study of tropical diseases, and contains the offices and specially equipped work rooms of the chemist, embalmer, photographer, bacteriologist, entomologist and pathologist. An enclosed passage communicates with the Crematory.

In the Nurses' House is a social hall and individual rooms and porch for seventy-two nurses.



LABORATORY AND CREMATORY
ANCON HOSPITAL, PANAMA CANAL ZONE

SAMUEL M. HITT, ARCHITECT

diet kitchens, cell, quiet room, doctor's and nurses' rooms, dressing-room, ward laboratory, toilets and baths, service, closets, elevator and stair. The flanking wards are designed for twenty-nine beds each, but one-third more are sometimes installed. Some of the wards are subdivided into obstetrical, nursery, and private rooms, etc. The Isolation Section is for the treatment of contagious diseases.

The central building of the hospital group is the Administration and Clinics building, containing the dispensary and drug manufacturing department, the surgical, medical, and eye and ear clinics, the operation suites and X-ray department and the administrative offices of the hospital. In the Kitchen and Mess building is done the baking, cooking and

All of these buildings are floored in yellow pine (the white ant of the tropics is destructive to oak), six inch square red ceramic tile or white tile or cement; all roofs are vitrified "Spanish" tile; concrete and plaster walls and ceilings are generally painted with a washable paint; porches and outside openings are copper screened against insects. The buildings are equipped with electric passenger and freight elevators, automatic dumbwaiters, fire protection, running hot, cold and ice water, steam, telephones, annunciators, direct and indirect lighting, and the latest in plumbing and hospital equipment throughout.

The hospital is designed for 660 beds but will accommodate 880 without inconvenience.

The Inter-Professional Conference

A TWO days' conference of professional men and women was held in Detroit, November 28th and 29th. The purpose of this inter-professional conference, the idea of which originated with a group of members of the Post-War Committee on Architectural Practice, was to bring the professions together in order to plan more effective relations with each other and to the social problems of the day and to form a permanent national conference of the professions.

The Committee on Organization includes Frederick L. Ackerman, architect; Felix Adler, educator; Charles A. Beard, head of Bureau of Municipal Research; Charles A. Boston, New York County Lawyers Association; Henry W. Hodge, consulting engineer; Robert D. Kohn, architect; Alexander Lambert, President of the American Medical Association; E. J. Mehren, Editor *Engineering News-Record*; and Calvin W. Rice, secretary American Society of Mechanical Engineers of New York City. N. Max Dunning, architect of Chicago; Thomas R. Kimball, President of the American Institute of Architects, Omaha; Arthur D. Little, President A. D. Little, Inc., chemists, Cambridge; Basil M. Manly, Director Scripps Economic Bureau, and Charles H. Whitaker, Editor *Journal of the A. I. A.*, Washington, D. C.; Milton B. Medary, Jr., architect, Philadelphia; George E. McKean, President Wayne County Medical Association, Detroit; Frank A. Waugh, Massachusetts College of Agriculture, Amherst, Mass.

The following topics were outlined for discussion at the conference:

A. Professional Organizations: Their Functions and Inter-relations.

- (1) The possibilities of co-operation between the professions for the common good.
- (2) Comparison of the ethical standards of the different professions; in how far are they socially minded; in how far self-regarding.
- (3) To what extent is the enforcement of professional standards desirable or practical?
- (4) What are the best types of professional organization?
- (5) Can they be made more democratic? Should they become professional guilds?

B. Relation of the Professions to the Public.

- (1) How can the idea of the obligation for public service be extended among the professions?
- (2) Can the enthusiasm of the war-time service to the Government be perpetuated to any appreciable degree?

(3) How can a better qualified technical service be secured to the Federal, State and Municipal Governments?

(4) How can public opinion be directed to the necessity for this service?

(5) To what extent do the professions now supply the quality and scope needed by all classes of society?

(6) How can the professional man get into right relations with all salary and wage earners who come under his direction?

(7) Can the professions represent the public interest in matters of labor adjustments?

C. Educational Obligations of the Professions.

(1) How can education for the professions be made more real as to the problems of the day?

(2) Are the men in professional practice in sufficiently close touch with the technical educational institutions?

(3) How can the average professional establishment be made more democratic, and so advance the education of masters and men?

(4) What can be done to spread, in the high schools and colleges, knowledge of the significance, ideals and functions of the several professions?

The conference opened with an attendance of over one hundred men and women, whose registration showed that interest in the movement stretched from California in the West to the Atlantic Coast in the East. Several national organizations sent delegates.

Mr. Robert D. Kohn, architect of New York, acting as Chairman, thus briefly explained the intent of the conference:

"The purpose of this conference is the formation of a permanent National Organization of the professions which will function principally through local inter-professional conferences organized in every important community.

"The effort of these local conferences will be to bring together men and women of the different professions to clarify, through comparison, their distinctive functions and common interests; to submit the standards and purposes of each to the corrective influence of the others; to co-operate in order to improve the nature of the service rendered by the professions to the public; to endeavor through reform of educational methods to raise the technical qualifications for the practice of professions and their sense of social obligation; to develop new types of professional organizations more democratic in that they embrace the entire body of those engaged in each profession.

"To further these and other forward-looking

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purposes, not as ends in themselves and with no idea of economic advantage to any individual or group, but solely as a means to the end that through this co-operative effort of men and women of the different professions a more worthy and effective service may be rendered to the public good."

That selfish interests are all too dominant and that the public's interests are sometimes given second rather than first consideration, was the confession of many of the professional men and women who responded on behalf of their professions to the opening remarks of Thomas R. Kimball of Omaha, President of the American Institute of Architects. Mr. Kimball's address is printed elsewhere in this issue. Dean Henry M. Bates of the University of Michigan Law School spoke for the legal profession; Dr. George E. McKean, President of the Wayne County Medical Association, for the doctors; Charles Whiting Baker, Chairman of Public Affairs Committee of Engineering Council, for the engineers; Miss Lena M. Phillips, Executive Secretary of the National Federation of Business and Professional Women's Clubs, for professional women, and Basil M. Manly and Charles H. Whitaker of Washington, D. C., for the economists and journalists. These speakers were followed by representatives of the American Library Association, the State Geologists' Association, Teachers' Association and Trained Nurses Organizations.

The dominating theme of the meeting was that the first obligation of the professional man is to the public, not to his client, and that his personal interest must come last.

The two days' proceedings closed with the formation of a permanent organization to be called the Inter-Professional Conference. The following declaration was adopted as the keynote of the organization:

"Its object shall be to discover how to liberate the professions from the domination of selfish interest, both within and without the professions, to devise ways and means of better utilizing the professional heritage of knowledge and skill for the benefit of society, and to create relations between the professions leading to this end."

Membership will be open to professional men and women. The organization of the conference was purposely left loose so that it might work without too much restriction the first year, and then be free to cast itself into whatever form experience dictates to be advisable. Power to manage the affairs of the body was vested in a general council, to consist, at the beginning, of 21 members. Dues were fixed at \$1 per year. A sustaining membership of \$10 was also established, while underwriting by

members, limited to a maximum of \$100, is also sought.

The first step in the working program will be the publication of the proceedings at Detroit. Effort will be made to organize local conferences which will be urged to act upon public questions such as housing and public health in which the co-operation of the professions is essential. When the next general conference is called, the findings of local conferences will be available as a guide to national organization.

The members of the general council so far chosen are F. L. Ackerman, Felix Adler, Robert D. Kohn, E. J. Mehren, Calvin W. Rice and Lena M. Phillips, all of New York, Thomas R. Kimball of Omaha, C. T. Chenery, Basil M. Manly and Charles H. Whitaker, Washington, D. C., Dr. W. G. Ebersole, Cleveland, Miss Paula Laddey, Newark, N. J., M. B. Medary, Jr., Philadelphia, W. W. Bishop and Miss D. M. Barnes, Ann Arbor, Mich.

The office of the conference is at 56 West 45th Street, New York City.

President Kimball's Address at the Conference

A DEFINITE, far-reaching, purposeful object is, I take it, the only possible excuse for suggesting further organizing a machinery-laden, overorganized, unhappy, perplexed, well-nigh discouraged humanity.

Essentials to such an object should be:

1. Undebatable justification of the object itself.
2. Common viewpoint from which to consider its problems.
3. A clear understanding as to who are rightly concerned with it, and an intelligence prognosis, which shall point out the obstacles that will be met, and that must be overcome, and
4. A simple program that promises a result.

I should concentrate the purposes of this gathering on the formation of the strongest, most effective, far-reaching organization that can be conceived.

As justifications of such an object, I offer:

1. The present dire necessity of mankind for some so far unevident defense against our present chaotic expectancy.
2. The all-too-apparent dominance of commercialism in most existing organizations.
3. The fact that the professional principle seems to offer the one so far unorganized social element, and at the same time, as I understand it, the one and only one that can hope to qualify as noncommercial.

(Continued on Page 695)



In order to supply our readers with material of current interest, the news and comment appearing in issues of THE AMERICAN ARCHITECT delayed by the printers' strike will be as of actual rather than stated date of publication.

The Inter-Professional Conference

AS a direct result of the efforts of the Post-War Committee of the American Institute of Architects, the Inter-Professional Conference held in Detroit late in November marks the value of this committee and indicates that its efforts are directed exactly along lines which will produce the most far-reaching results.

Every thoughtful man of the professional ranks has for a long time believed that there was a very urgent need for a better, a closer professional relation. But there have been many different minds as to just what this closer relation might be, and regrettably there has existed a selfish, personal attitude and one favoring something that might tangibly work to the benefit of the individual.

Fortunately the stronger and better balanced opinion has become a majority. Mr. Robert D. Kohn, the chairman of the conference, admirably outlined in his remarks at the opening of the conference what should be the real aim and purpose of these deliberations.

Mr. Kohn stated:

"The purpose of this conference is the formation of a permanent national organization of the professions which will function principally through local inter-professional conferences, organized in every important community. . . . To further these, and other forward-looking purposes not as ends in themselves, and with no idea of economic advantage to any individual or group, but solely as a means to an end that through this co-operative effort of men and women of the different professions, a more worthy and effective service may be rendered to the public good."

Just exactly all of that and nothing short of it should be the reasons for the closer relationship between the professions. And exactly that will effect the laudable purpose that it is desired to attain.

There will be no place for the man or woman who seeks first to learn just what there may be of personal advancement in such an organization before lending support. It must be all for one and one for all.

Undoubtedly the profession of architecture has

suffered more than any other from the cultivation of a spirit of aloofness, the setting up of a caste. This mental attitude toward other professions has resulted in misunderstanding, jealousy and lack of progress.

That the Post-War Committee has sensed this condition and so efficiently set out to correct it is added evidence of the wisdom that created it, and proof that it is entitled to and should completely receive the staunch support of every man who practices architecture. These things as set forth by Mr. Kohn are absolutely practical, and in their consummation will result in the most perfect up-building on a firm foundation that the profession of architecture has experienced.

Let us hope that we shall soon be diplomatically at peace. And when we are we shall have no use for the word war. The Post-War Committee could change its name to good purpose. It is now piloting the profession of architecture into calmer and safer waters; it is bringing it steadily to a snug harbor of safety. Why not the Steering Committee of the American Institute of Architects?

War Memorial in New York

THE fact that the Mayor's Committee in New York has ignored the proffered help of the Fine Arts Federation in the matter of the selection of a war memorial quite justifies Mr. Gutzon Borglum's demand that that Committee be dissolved.

In all the wrangling that has taken place, with the temporary arch in Madison Square as a storm center, it becomes apparent that the basis of the whole discord is pure professional jealousy. Just whether or not the citizens will calmly submit to a selection of a war memorial that is guided by "pull" and political influence remains to be seen, as does the question whether they will calmly acquiesce in the judgment of any body of men who are disposed to ignore the advice of the highest artistic organizations in this city.

If ever there was a time when the National

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Academy of Design and the National Sculpture Society might justify their existence, it is now. No one could with reason question the right of these two bodies to lead in the matter of war memorials. It would be greatly to the credit of these organizations if they would assume the right of advice and final decision that is lodged with them, and if they do not, we shall have an addition to the many occasions where they have failed not only to lead but even to show interest in matters that should properly engage all of their efforts.

If we end by selecting and erecting some atrocious memorial, born of political influence and completed in incompetency we should not blame its promoters. Their patriotism and zeal may not be questioned, even if their artistic perceptions are at fault. The blame will lie directly at the door of those art organizations who so lukewarmly press their right to be heard and who so timidly withdraw at the first breath of criticism of the purity of their motives.

Our Municipal Art Committee will see to it that the final designs are not all bad, but that very much to be commended committee will not originate the design and may merely do what it can to make the best of a bad bargain.

Labor Unrest Solved by Co-operation

THERE can be no doubt that the decrease in production that is bolstering the present high scale of prices is directly due to the steady increase of wages and the shortening of hours so insistently demanded by labor.

Protest among employers has been widespread, but instances where employers have taken their men into their confidence, shown them the exact situation, exactly how the submission to their demands would be really working against their own interests, have been few.

The Iron Age, editorially commenting in a recent issue on this lack of confidence between the worker and his employer, cites an example where this mutual confidence has led, as it naturally would, to the most beneficial ends.

It appears that in two instances, and in large shops each employing more than 1000 men, in one at least 90 per cent belonged to unions, while in the other not more than 10 per cent were union members. In one case the men demanded a 44-hour week with a substantial increase in wages; in the other it was decided to make a shorter week with an increase in wages, and this without any request from the men.

Commenting on these two conditions, *The Iron Age* states:

In both cases the men were called together in a mass meeting and the situation explained to them. In substance they were told that the change in hours and wages represented on its face an increase in the cost of the product, exclusive of material, of about 30 per cent; that the business was highly competitive, and that the product could not long stand a 30 per cent increase in cost, as a corresponding advance in selling price would mean loss of orders. In time the plant might be compelled to suspend operations, cut wages or lengthen the hours. The only alternative was that the men so perform their part as to produce as much finished work in the shorter week as they previously produced in the 55-hour week. If they did this the arrangement could be made permanent.

At the end of three months the general manager of the larger plant, when questioned as to the result of the experiment, said: "The men came through in splendid shape. I am entirely safe in saying that they are now doing as much in the eight hours as they formerly did in ten, if not more." In the other case definite figures are available. The producer-hours per unit of product since the shorter week took effect have decreased 26 per cent and are still going down.

It is proper to add that neither company put upon the men alone the solution of the problem of increased productiveness. The managers took it upon themselves to assist by every means possible to diminish wasted effort and eliminate idle time of both men and machines. The men, however, understood their purpose and co-operated rather than opposed their efforts, as is too often the case.

He who runs may read the moral in these two cases. The essence is that much of the trouble between workmen and employer arises from a lack of mutual understanding; distrust, the result of a lack of close acquaintance. Getting together always was and is to-day a good thing. More and better co-operation is the solution of 95 per cent of the present labor unrest.



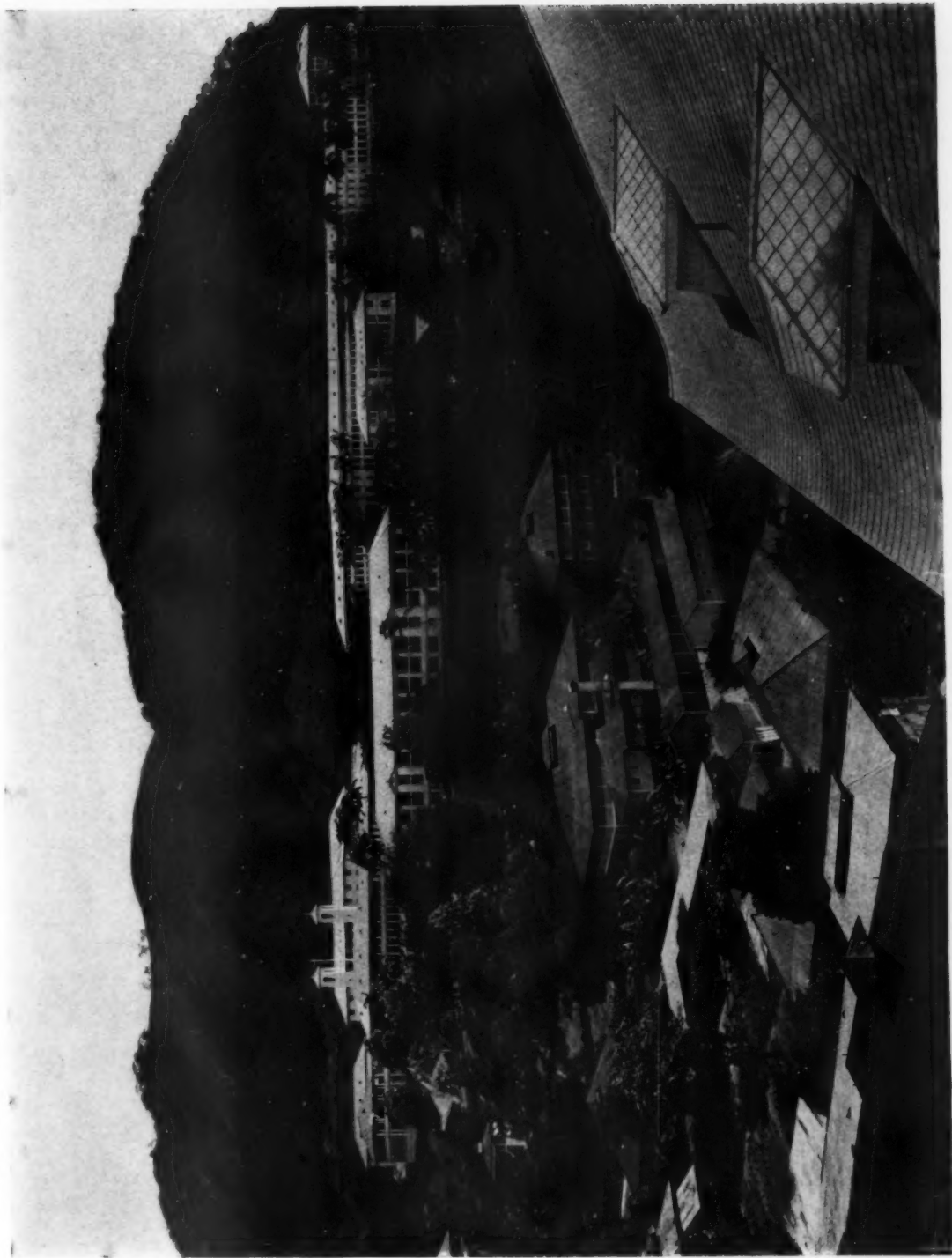


PLATE 186

ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE
SAMUEL M. HITT, ARCHITECT



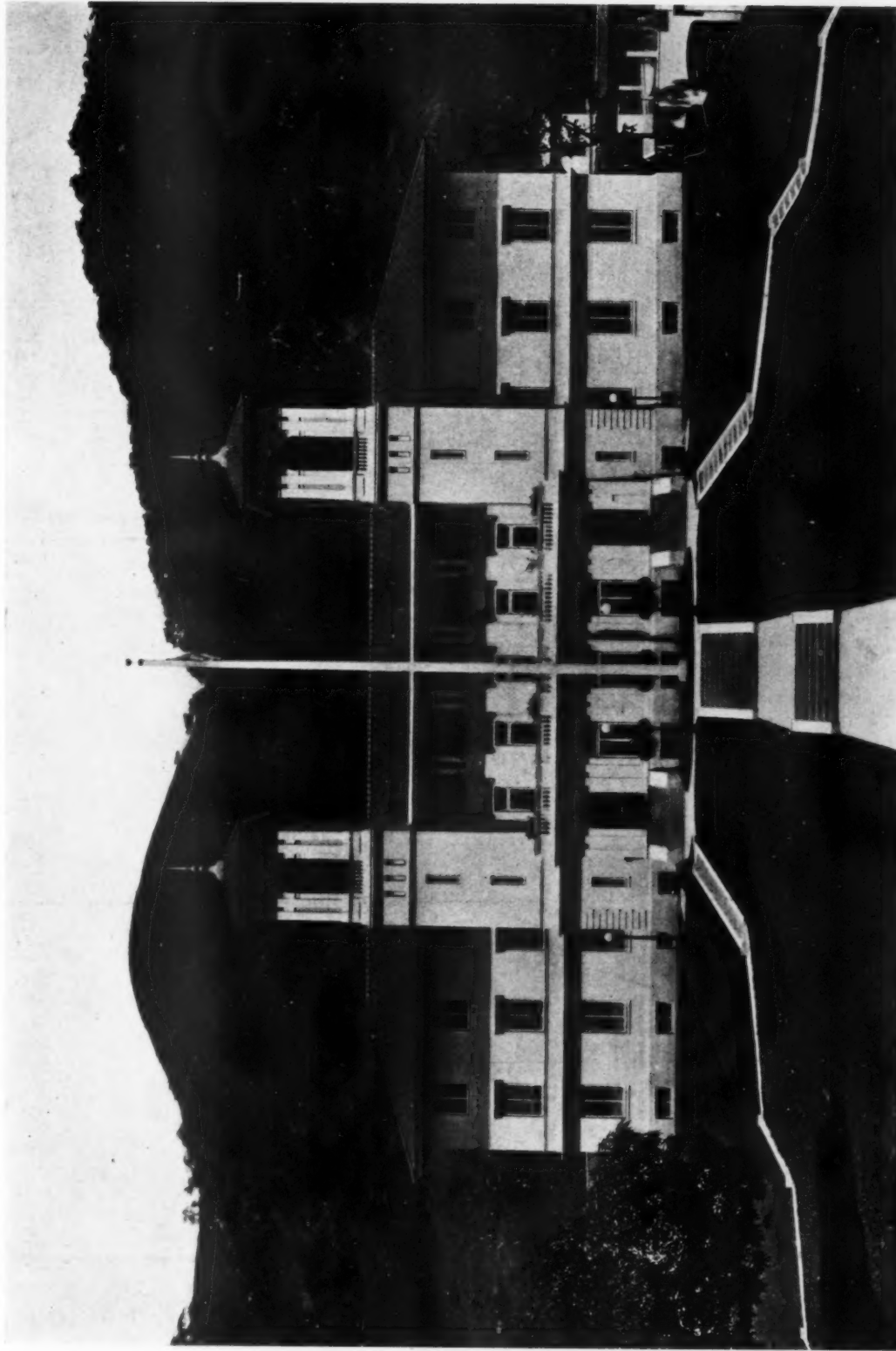


PLATE 187

MAIN BUILDING
ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE
SAMUEL M. HITT, ARCHITECT





GENERAL VIEW, SHOWING WARDS, ADMINISTRATION BUILDING, KITCHEN LOGGIAS, ETC.
ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE
SAMUEL M. HITT, ARCHITECT



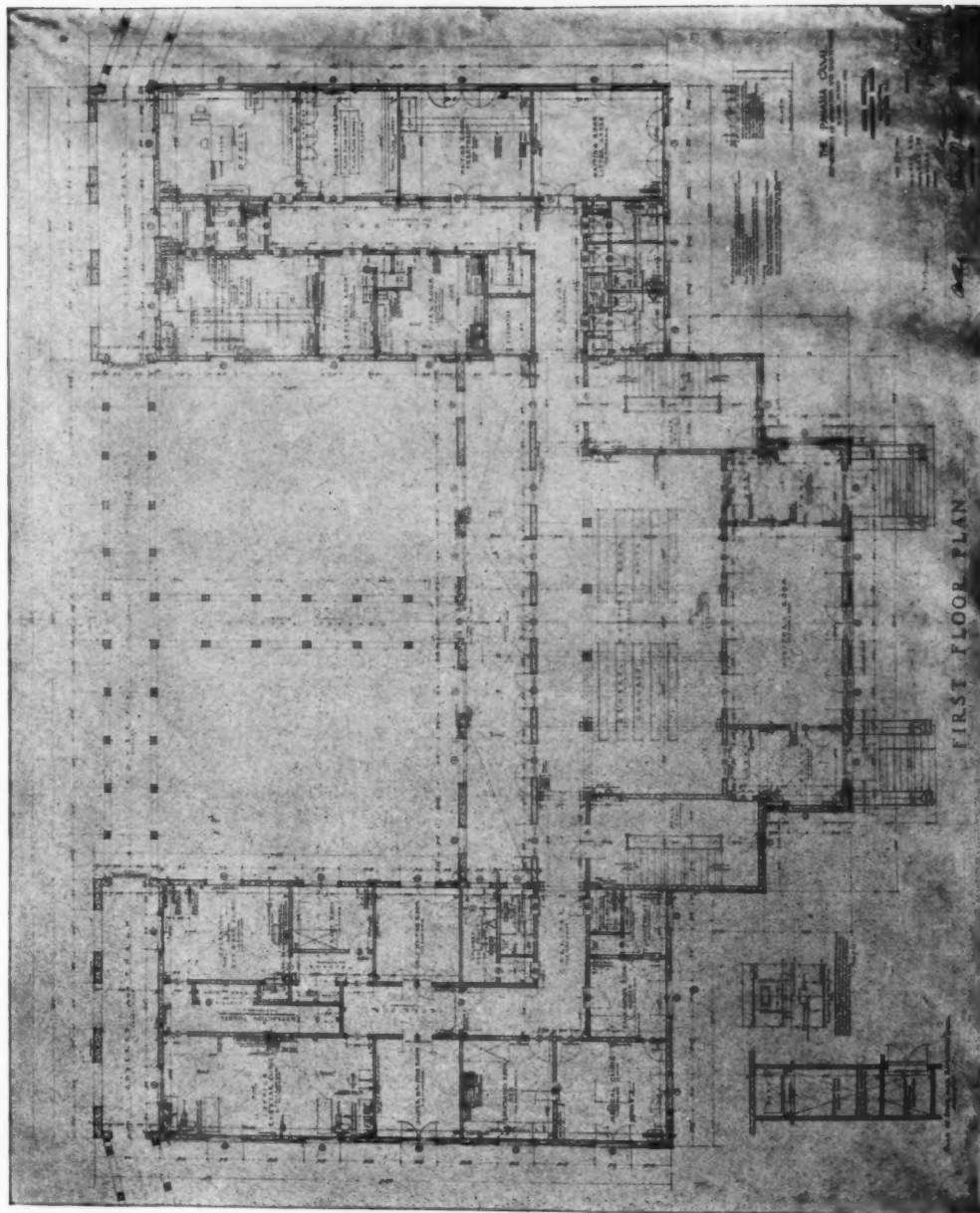
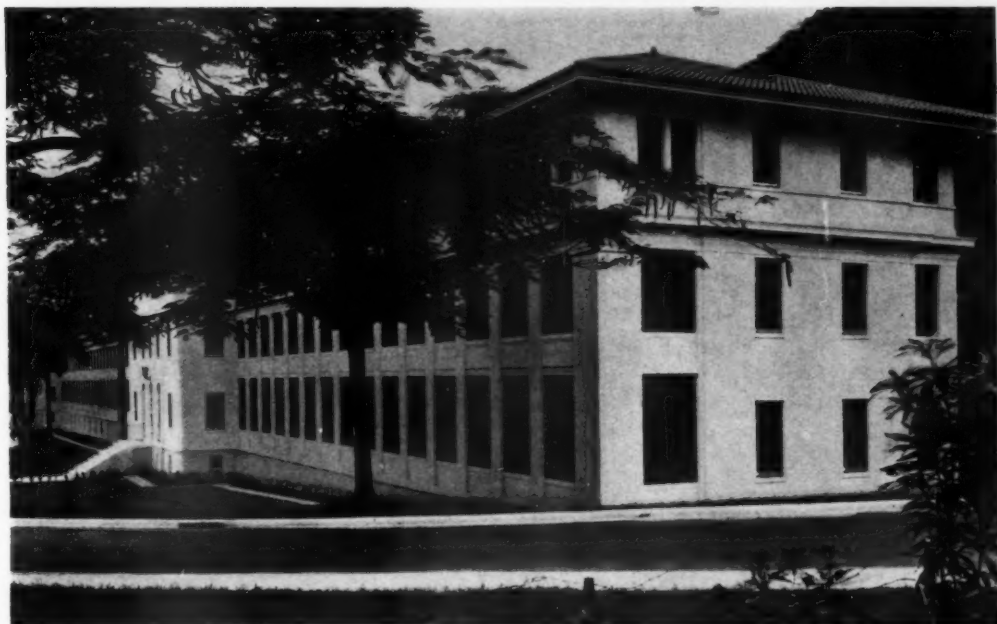


PLATE 189

ADMINISTRATION BUILDING
ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE
SAMUEL M. HITT, ARCHITECT





SECTION "D"

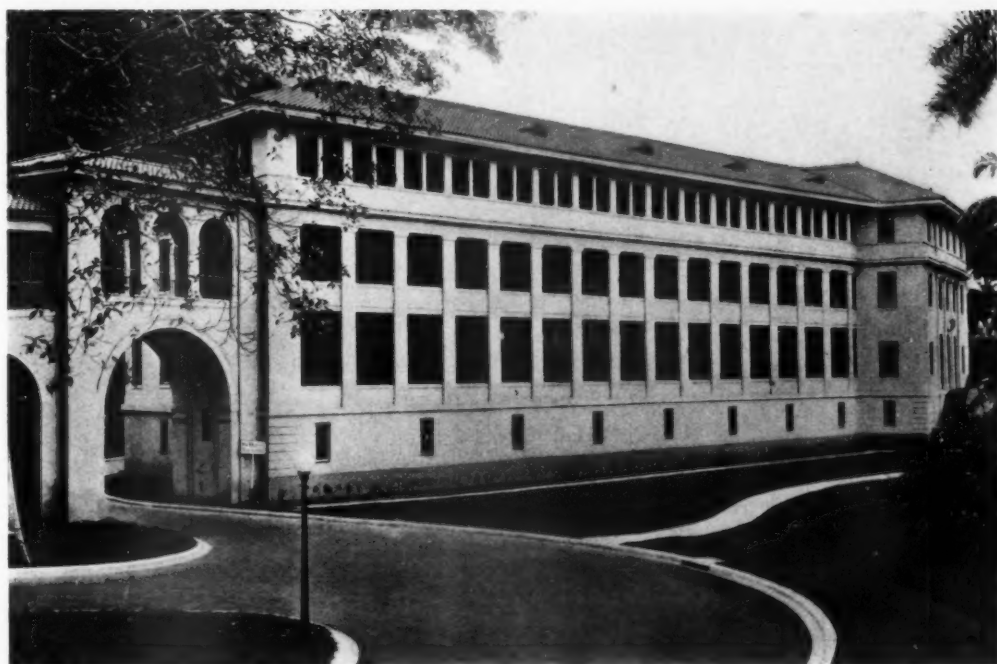


PLATE 190

SECTION "C"

ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE

SAMUEL M. HITT, ARCHITECT





PLATE 191

SECTION "B"



LOGGIA, SECTION "B"

ANCON HOSPITAL

ANCON

PANAMA CANAL ZONE

SAMUEL M. HITT, ARCHITECT



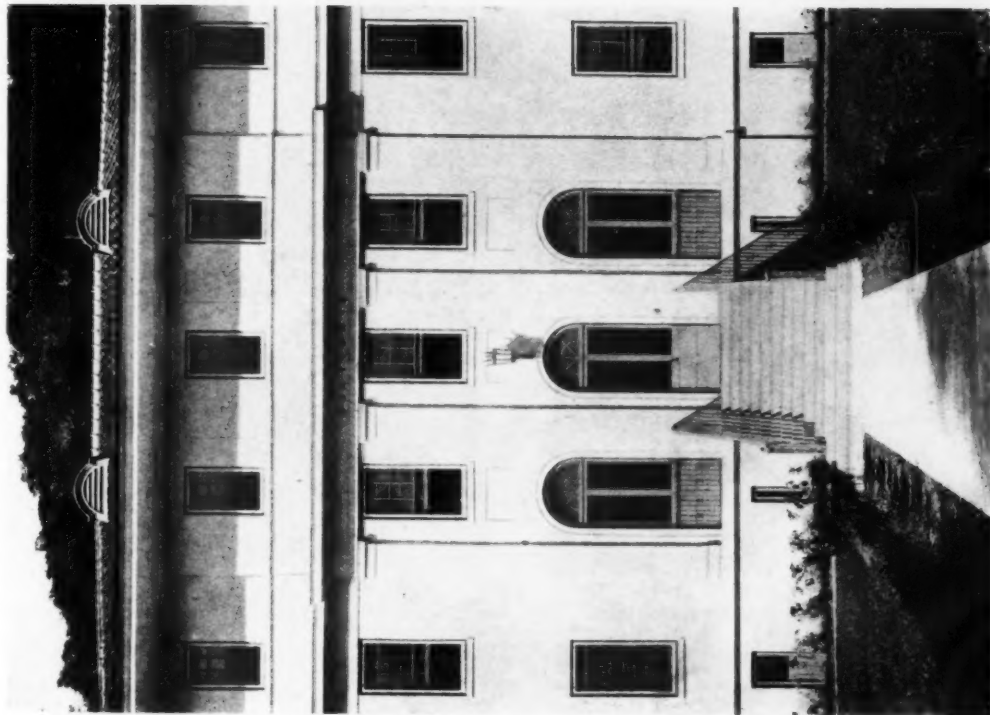


PLATE 192

TYPICAL WARD ENTRANCE

ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE

SAMUEL M. HITT, ARCHITECT



LOGGIA, SECTION "C"





TYPICAL WARD



PLATE 193

OBSTETRICAL WARD

ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE

SAMUEL M. HITT, ARCHITECT





ADMITTING OFFICE AND DISPENSARY

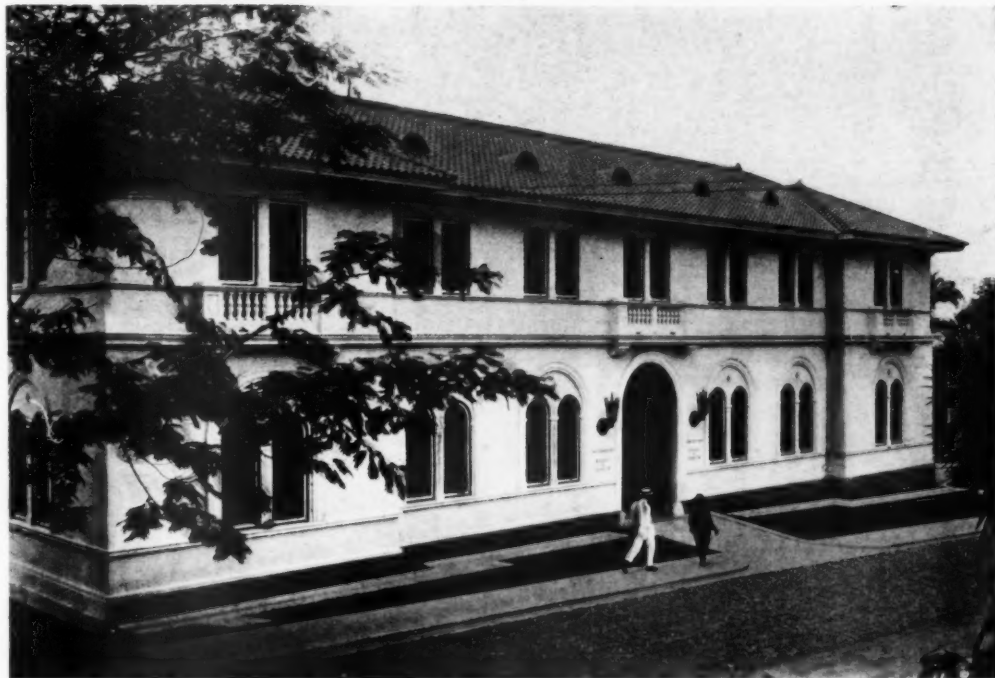


PLATE 194

LABORATORY

ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE

SAMUEL M. HITT, ARCHITECT





ISOLATION SECTION

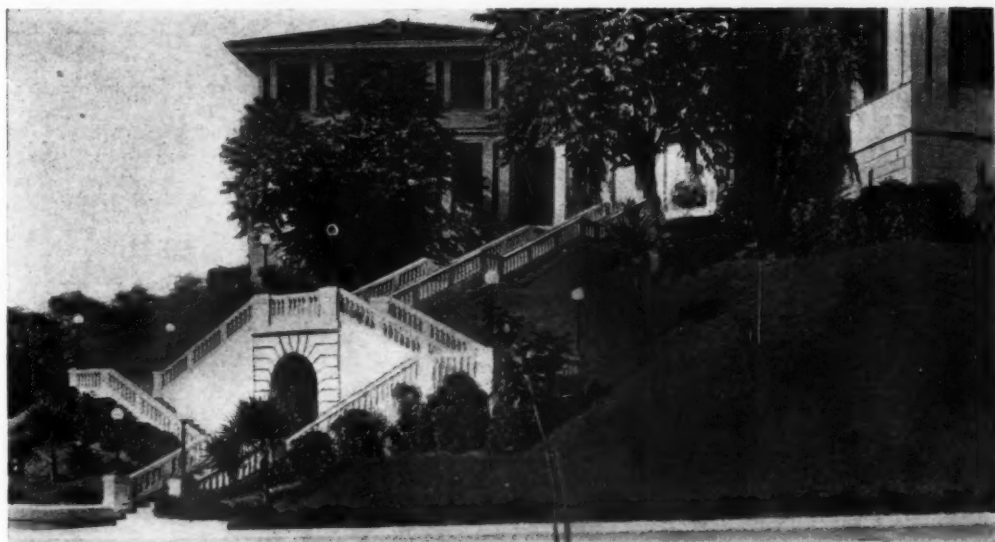


PLATE 195

STAIRCASE APPROACH TO MAIN GROUP
ANCON HOSPITAL, ANCON, PANAMA CANAL ZONE
SAMUEL M. HITT, ARCHITECT



President Kimball's Address at the Conference

(Continued from Page 692)

4. The present subservience of the professions.

5. Their meager contribution, except as the servile doers of the will of others—witness, the spectacle presented by the recent august conference called by the President of the United States, in his untiring effort to harmonize labor and capital, wherein the representatives of a great profession, unaccredited as such, however, retained by the contending interests, unmindful of that higher professional obligation, completely nullified each other's endeavors, endeavors which if combined for furthering the objects of the conference might have offered a solution of its problem, instead of a potent contribution to its failure.

Continuing in justification of organizing, I offer also the total failure of the so-called professions to overcome the baneful effect of jealousies inherent in the interrelation of all arts and sciences, and the failure to get their disciples past the bread-winning stage in time to contribute worthily to either art or science.

Should none of these reasons seem sufficient, I would justify this conference by the belief that most, if not all, of our professional ills can be cured by the *right sort* of an organization.

Our hope of accomplishment lies, I think, in a clear common understanding—a single thought language in which to discuss and clarify—for unless we can, in common, differentiate between unselfishness and greed, and distinguish professionalism from its counterfeits, our task is hopeless!

In considering who are rightly concerned in this matter, we should, I think, look first to those who see in professional life something more than the obligations of business and art, for every so-called profession will, I am sure, be found to have, and to cling to, its accepted prerogatives; and in each group that professes there will be found a very small percentage who practice what they profess.

Each art and science will be found almost hopelessly jealous of all kindred callings, and within each group individual jealousies will prove the order, not the exception. The finding of a common understanding of what a profession is will in itself be no easy task, while agreement of essential pro-

fessional qualifications will, I prophesy, go far to justify all the accusation embodied in what I have just said.

Let a clear and none too optimistic forecast lead us to approach our problem with appreciation of its difficulties. Let us make a great effort to be unselfish. Let each try to see with the other's eyes—and let us join in the hope that a common understanding and a clear way may be shown us.

In the matter of program for this meeting, I hesitate to lessen the range of possibilities by making even a single suggestion, yet I feel so strongly on certain points that I must offer some ideas at the risk of thereby proving my own disqualifying selfishness.

It seems to me that we should keep before us the creation of an instrument, big enough and broad enough to make known to the public the fundamental principle of professionalism and to secure for it recognition and acceptance. And to that end we should strive for qualifying standards far more human and far less technical than any so far advanced.

I should wipe out that time-honored distinction which for so many years has sought to limit the professions to the "cloth," law, medicine, army, and navy.

I would warn against trying to form any coalition of the recognized vocations through their representative organizations. I would seek to establish, instead, a single, fundamental qualification, based on unselfishness as opposed to commercialism. And on that as a foundation I would erect a standard calling for a skilled service wherein the common interest of all mankind is first considered, the client second, and self last. Under such a flag let us rally all who can and will practice according to that creed!

Let us try this in the belief that the object is worthy, the opportunity here—and to justify our abiding faith in mankind!

If in this work we can avoid all stereotyped philosophies and theories and look only to a practical way to gather and harness skilled brains and big hearts, wherever we find them joined, I venture the opinion that a defense will be found before which commercial greed will stand checked, and behind which life—human life—will at last find sanctuary.

Current News

Late Happenings and Comment in the Fields of Architecture and the Allied Arts

In order to supply our readers with material of current interest, the news and comment appearing in issues of THE AMERICAN ARCHITECT delayed by the printers' strike will be as of actual rather than stated date of publication.

Announce Prize-Winning Firm in Chicago Arena Competition

CHICAGO, Ill., December 1.—Plans drawn by Holabird & Roche have won the \$5,000 prize offered for the best design for the proposed Grant Park Stadium, in this city. In the competition six architects submitted drawings to the jury, composed of Martin A. Ryerson, vice-president of the Art Institute; J. Frank Foster, superintendent of the South Park System; A. A. Stagg, director of athletics at Chicago University; Richard E. Schmidt, and Pierce Anderson, architects.

Edward H. Bennett, Coolidge & Hodgdon, Zachary T. Davis, Jarvis Hunt, and Marshall & Fox, the other contestants, each will receive \$1,000 for their designs. D. H. Perkins, architectural adviser to the South Park Commissioners, drew up the program of the competition and attended to the other details in accordance with the competition rule of the American Institute of Architects.

The stadium is to be constructed of concrete and marble at a cost of approximately \$2,000,000, although as much as \$4,000,000 may be expended. The amphitheatre has been designed to seat 100,000 persons, and will, it is stated, be the largest in the world. The largest in America at present is the Yale Bowl, with a seating capacity of 60,000 and a forced seating capacity of some 10,000 greater.

The Chicago stadium is to be built on made land south of the new Field museum, with the open end facing the museum. The committee selecting plans decided in favor of an open end structure to accommodate military reviews and other events which necessitate a broad exit.

The structure will be shaped like the letter U, and will be built of concrete and marble. One end will be left open so the field may be used as a parade ground. The field will be 1200 ft. long and about 800 ft. wide. In the winter it may be flooded for skating. During the summer all sorts of athletic contests may be held. Parking space for automobiles will be provided south of the structure.

Albany Memorial Plans Ready to Submit to Committee

ALBANY, N. Y., Dec. 1.—Pursuant to the city ordinance signed by Mayor James R. Watt this week, Thomas L. Gleason, architect, has prepared a design for a soldiers' and sailors' memorial building, including a main floor and front elevation, that has already received the approval of hundreds of civic workers of Albany. The design will be among those submitted to the testimonial committee, created by the city ordinance to receive suggestions and drawings for a suitable memorial to the former service men, and to conduct public hearings in the matter.

Belgium Abandons "Cost-Plus" System as Too Costly

There has been considerable criticism in Belgium of the plan adopted by the Belgian railway administration in connection with repairs to roadbed and rolling stock, states Trade Commissioner C. E. Herring, Brussels. After the armistice, conditions were so unsatisfactory that the Government resorted to the method prevailing in America during the war, that is, the so-called "cost-plus" system, whereby contractors and manufacturers were guaranteed against loss and insured a stipulated profit by the Government. It is stated that the profits accruing to concerns in Belgium ranged from 10 to 20 per cent, and even more, according to nature of the work and according to whether they could utilize material already in their possession. This system proved so costly to the Government and so generally unsatisfactory to all concerned that it has now been definitely abandoned.

California Governor Names State Board of Architecture

Governor Stephens, Sacramento, Cal., has announced the following appointments:

State Board of Architecture—Northern district: J. R. Miller, Woodside, vice E. A. Mathews; Edward Glass, Fresno, vice William Curlett; John Donovan, Oakland, vice J. C. Newsom; Sylvain Schnaittacher, San Francisco, vice self; Clarence Ward, San Francisco, vice John Bakewell, Jr.

Building Materials Congress to Be Held in Norway

The Norwegian Association for Dwelling Improvements is planning to hold a building material congress, probably in January, 1920, at Christiania. At this meeting lectures and demonstrations on plans and methods will be given and in connection therewith will also be held an exhibit of building materials and home equipment. It is expected that nearly all the communes and building associations of Norway will send delegates to this meeting. The plans for the exposition of building materials are drawn on broad lines and provide the same rights and privileges to foreign firms that are granted to Norwegian exhibitors.

The announcement of the forthcoming congress is arousing much interest in building circles because nearly every city in Norway is facing a housing shortage. Therefore it is felt that the near future must provide a period of active construction to meet the pressing needs demanded by the present inadequate conditions.

Defective Construction Reported by Oregon Fire Marshal

PORTLAND, ORE., Nov. 29.—The urgent need of enforcing regulations directing the proper use of materials in building construction is again strikingly shown in the second annual report of the State Fire Marshal of Oregon, who gives the following as a record of defects found by the Oregon state inspectors during the year ending March, 1919: Defective wiring, 229; floors and walls unprotected from stoves, 191; defective pipes, stoves and flues, 125; found chimneys on brackets, 482; exposed and unprotected openings, 131.

The fact that 482 chimneys were found supported on brackets is an indication that a most primitive method of construction still exists and again emphasizes the fact that proper building regulations are most essential in all cities, large and small, for fire prevention.

Lawson Purdy Discusses Housing Problem

The impossibility of providing homes for the poorer class of workers in New York City, and the very great fire risk in such houses as are being renovated for their use, were revealed by Lawson Purdy, director of the Charity Organization Society of New York, in a recent interview on the housing situation. Mr. Purdy summarized the recent history of conditions here, and said that unless the outlying districts of Brooklyn and Queens are utilized for building, the situation will reach an exceedingly acute stage in the near future.

Alluding to conditions in the east side, Mr. Purdy said that when immigration was at its height before the entrance of this country into the war, there was a steady flow of foreigners into that section and out into the outlying districts of Greater New York. As immigration lessened, this current naturally slackened. Furthermore, when rents rose to a high price, the tide started the other way, and people who before had moved away from the center of Manhattan found that they could no longer afford a better sort of home, and were forced to return to the east side and similar sections of the city. A serious congestion has thus come about, and there is little prospect of its being relieved.

As a result of this retrogressive movement of population, contractors and builders have adopted the policy of altering and renovating old houses formerly occupied by single families, making them into so-called "non-house-keeping" apartments, one in the front and one in the rear of each floor. Thus, a four-story building which was never intended for more than two families, at the most, is now made to accommodate eight. By permitting only two families to have a cooking range the owners evade the restrictions of the tenement law, which rules that only a house with three or more stoves is a tenement. The greatest objection to this procedure is that a large proportion of such altered buildings are quite inadequately protected against fire and loss of life from it, beyond the reach of the restrictions of the tenement law. In addition, the sanitary arrangements which were formerly sufficient become altogether unsuitable for so many inhabitants.

The situation is aggravated, Mr. Purdy went on, by the position in which the builders now find themselves as regards the construction of new houses, more particularly those whose price will be within the reach of the poorer class of workers. With labor and materials costing twice

what they cost before, and with the ever-present danger that the erection of a building may be halted at any moment by a strike, contractors are afraid to undertake new ventures. "The popular talk of the evil of increased rents," Mr. Purdy said, "is nonsense. The problem is far more deeply rooted, and unless capital can be attracted to building investments and builders encouraged to erect new houses instead of renovating old and dangerous ones, the housing problem will become an even more menacing one. The public should be brought to realize this situation."

The remedy for these conditions, Mr. Purdy concluded, is hard to discover, but undoubtedly much may be done through the building of cheap apartment houses in the less densely populated parts of Brooklyn and Queens. Such buildings would, of course, come under the provisions of the zoning ordinance, and the congestion that exists in the lower part of Manhattan may be avoided there. The only other hope is that improved financial and industrial conditions in the country at large will ultimately make the construction of new houses for workers an attractive field for capital.

Halt Building Work on Federal Reserve Banks

WASHINGTON, D. C., Dec. 12.—Further building operations by the Federal Reserve Banks are to be suspended indefinitely, Senator Harding announces. He declared the Federal Reserve Board, from which comes authorization for construction work by the reserve banks, feels that the cost of building materials is too high to warrant "anything but the most urgent work."

Russian Reds Find Over 1000 Old Paintings and Sculptures

Art treasures valued at more than \$100,000,000, which belonged to Catherine II of Russia, who died in 1796, have been discovered by the Bolshevik commission charged with classifying the property of the late Czar Nicholas in the Winter palace and in the palace at Tsarskoe Selo.

The cases containing these treasures have never been opened since they were sent to Catherine from Rome. Included in the collection are more than 1000 paintings and sculptures by some of the greatest French and Italian masters, including Tiepolo, Roughi, Latour, Lancret and Fragonard.

Japanese Carving World's Largest Statue

It is reported from Japan that there is being carved there the largest statue in the world, says the *Philadelphia Record*. It is a recumbent effigy of Nichiren, a Japanese patron saint, cut from a natural granite rock on a hillside in the Island of Ushigakubi, or the "Cow's Head," in the inland sea of Seto.

This stone image, it appears, will be 240 feet long, 60 feet longer than the sleeping Buddha at Segu, Burba, and considerably larger than the Sphinx in Egypt.

Nichiren, whose name means "Lotus of the Sun," was a religious teacher who lived in the thirteenth century. At one time he was condemned to death, but the headman's sword, the Japanese say, "was unable to decapitate him."

Building in Denmark

There are at present three phases of Denmark's building difficulties—land, materials and money. The land question can probably be settled and also that of materials, but a general arrangement of the financial question must first be made. The cost of building has increased from 310 crowns per square meter (\$7.72 per square foot) to 720 crowns per square meter (\$17.93 per square foot). This is discouraging private initiative and corporations are now conducting one-third of the building enterprises in Copenhagen and the provincial cities. To help these building corporations during the war the government voted \$1,000,000. This was not sufficient, and by a law passed February 5, 1918, provision was made to finance these corporations and compensate them for some of the extra expenses of building. All in all the state and municipalities subsidize the building corporations to the extent of 60 per cent of the increased costs, which are 100 per cent, so that the houses cost the corporation 40 per cent more than before.

Mitchel Memorial in New York

The reservoir site in Central Park, useless since the opening of the Catskill water supply system, is being considered for a memorial to the late mayor and soldier, John Purroy Mitchel. Drawings for the proposed memorial have been made by Thomas Hastings, and have been presented to the Committee on City Plan of the Board of Estimate to be later referred to the Municipal Art Society for approval.

According to the plans of the committee, the proposed Mitchel Memorial would stand as one of the finest playgrounds in the world.

The area, a third of a mile long and 800 feet wide, is to be subdivided. There are to be promenades with a lagoon and wading pool in the center, and at one end a music stand and seating accommodations for the public would be placed.

In his letter to the City Plan Committee, Mr. Robert Adamson, chairman of the executive committee of the Mitchel Memorial Committee, says:

"The object of our committee is to develop this area so as to give it the widest possible usefulness to the people of the city and when completed to give this tract the name of the Mitchel Memorial Playground, as a tribute to the late mayor, a tribute similar to that paid to many distinguished citizens in the past in naming parks and recreation centers in their honor.

It is argued that the cost of filling the reservoir and making it conform to the general character of the landscape of Central Park would be prohibitive. Therefore, to treat the space within the reservoir walls as a playground seemed to the committee and the expert consulted by it to be both the most economical and effective method of treatment.

If the Memorial Committee's plan is adopted by the Board of Estimate the outside walls of the reservoir will be lowered about six feet and the rock and earth thus obtained used to elevate the lower bed of the reservoir about six feet. This will make the interior area more nearly on a level with the surrounding landscape.

In the center there will be a pool 1,400 feet long by 250 feet wide, the outline of which will be built of stone taken from the reservoir walls. The remaining interior area will be used for playgrounds, trees, shrubs, promenades and music stands. Wide roadways at Eighty-fifth Street, on the south, will connect the playground with the two sides of the park. At one end of the playground

a bronze statue of the late Mayor Mitchel will be placed.

The entire cost of the Mitchel Memorial playground is to be borne by the committee. A considerable part of the \$400,000 needed has already been subscribed. All the city is asked to do is to give the ground. The committee anticipates no difficulty in raising all the money needed by popular subscription as soon as the Board of Estimate shall have acted favorably upon the proposition.

The Housing Problem in Holland

In common with most other countries, Holland is suffering from a serious shortage of houses. The Government has taken the matter up and is making subsidies to municipalities to enable them to provide the needed houses. Dr. H. J. Romeijn, secretary of the State Housing Board, explains the present situation in an article published in *La Gazette de Hollande*:

"As a result of the rise of the rate of interest and of the prices of building materials, the exceptional case of the expenditure not being sufficiently covered by the rents became the rule," says Dr. Romeijn.

"The subsidy, disguised in the form of advances at a reduced interest, had meanwhile been replaced by an open, although temporary, subsidy combined with a higher rate of interest. . . . By the end of 1916 it was decided also to grant a subsidy to meet the extra cost of working as a result of the higher building expenses. This subsidy would not be permanent either, because only upon the return of normal circumstances would it be possible to determine in how far the expensive dwellings could compete with those to be built afterward. Such support is still being granted. . . . In order to relieve the burden on the communities the state usually takes over three-quarters of the deficit.

"The above measures have resulted in a considerable increase in the building of workmen's houses."

First Statue in the U. S.

The Jackson statue, in Lafayette Park, Washington, was the first equestrian statue unveiled in the United States, states an Ohio paper. The famous statue of George III, which the New York Patriots pulled down in 1776, was built before there was a United States. The Jackson statue was designed and erected by Clark Mills, a "self-made" sculptor who started life as a plasterer. He had never seen an equestrian statue before he started work on this one, and the appliances for modeling and casting were made by him. The metal in the group is made of cannon captured by Jackson from the British.

Art on Fifth Avenue in New York

In a recent number of *Art and Life*, Marion Wilcox has an article devoted to the art on Fifth Avenue accessible to the passer-by, and recalls the method that obtained in Rome about the time of the birth of Christ, when the utmost publicity was given to paintings and statues by placing them in porticos, along promenades and wherever public meetings customarily were held. Then came the era of privacy and closed doors, and not until after the French Revolution did art galleries and museums become genuinely public institutions. Now we are getting back to the Roman idea, and the author finds in Fifth Avenue, with its pictures and sculptures and tapestries and ceramics and bookbindings, all to be seen for the asking, and many without that formality, a veritable Pinacotheca.

Co-operate for City Planning and Zoning in Philadelphia

PHILADELPHIA, PA., Dec. 1.—Architects and engineers of Philadelphia have inaugurated a co-operative movement for city planning and zoning, and at a meeting held this week adopted an outline for a permanent organization. D. Knickerbacker Boyd, representing the Philadelphia Chapter of the American Institute of Architects, presided as chairman of the meeting.

Among those representing important organizations were J. Irwin Bright, Philadelphia Chapter, A.I.A.; L. M. Kenney, Engineers' Club; Andrew Wright Crawford, Art Jury and City Parks Association; James W. Follin, Bureau of Municipal Research; Powell Evans, Chamber of Commerce; Leslie W. Miller, Fairmount Park Art Association; J. N. McGarvey, Philadelphia Operative Builders' Association; E. S. McKaig, zoning commission; W. J. Wilson, Building Trades Council, A. F. of L.; A. S. Faught, Civil Service Reform Association; J. A. Steinmetz, Engineers' Club.

The new organization, which is to be known as the Philadelphia Planning Conference, adopted a resolution pledging support to the city administration in securing the prompt and efficient functioning by encouraging and stimulating interest on the part of the public in civic developments. It was decided to hold a public meeting as the first step in the presentation of the advantages to be derived

from the comprehensive planning of a city and its metropolitan area. Another reason was to co-ordinate the activities of all civic organizations working independently by creating a permanent federation. The conference constitutes a body at all times ready to co-operate with all existing agencies for the betterment of the city.

At the public meeting, which was called a "Conference on Comprehensive City Planning," with Joseph A. Steinmetz, President of the Engineers' Club, presiding, Edward M. Bassett, counsel for Zoning Committee, New York City, made the principal address. A message from the Mayor-Elect of Philadelphia, J. Hampton Moore, was read, in which he expressed the desire to be kept informed of the action of the conference.

Chicago Bank to Copy U. S. Treasury Building Plans

CHICAGO, ILL., Dec. 1.—The Treasury Building in Washington has been taken as a model for the base of the bank and office building which the North American Trust Company will erect.

The Treasury Building replica will be built of granite and will comprise about three and a half stories of the structure, which will have twenty-one stories if the City Council will amend the ordinance which limits buildings to a height of 200 feet.

Financial and Commercial Digest

As Affecting the Practice of Architecture

How the New York State Income Tax Affects Architects

EXPLANATION as to the application of the income tax law of New York, as affecting architects practicing the profession in this state, is given in a communication to THE AMERICAN ARCHITECT from Eugene M. Travis, State Comptroller. Tax statements must be filed at any of the district offices on or before March 20, 1920, and accompanied by the amount due for the tax.

An architect maintaining an office for himself other than his residence, can deduct from his gross income, his office rent, charges for telephone, light, heat and water, subscriptions to professional journals, dues to a professional society and the ordinary and necessary supplies for office and drafting force, including their salaries. Furniture, books, and equipment of a permanent character are not deductible as expenses, but are considered as capital investments, and subject only to a deduction for depreciation.

Contractors and builders are allowed deductions as business expenses of all the items so carried by them upon their books, if kept in the usual and accepted manner. Depreciation on tools and machinery should show on the books.

The tax is computed or reckoned on the taxable income, which is determined by deducting from net income, the

personal exemption allowed by law to a resident taxpayer. No personal exemption is given to a non-resident.

These personal exemptions are \$1,000 for a single man, or a married man, not living with his wife; or a married man living with his wife, each making a separate return and each taking one-half of the allowable exemption for man and wife; \$2,000 for a married man, living with his wife, or for a single man who is the head of a family. Further exemptions of \$200 for each dependent under eighteen years of age, and for each dependent, incapable of self-support, by reason of mental or physical disability, are also given.

The taxable income of the taxpayer having been determined, the next step is to reckon the tax. The income tax rates of the state are much lower than the Federal rate, and the law requires no surtax or extra profit tax. The rates are progressive or graduated, being one per centum on the first \$10,000 of taxable income, two per centum on the next \$40,000, and three per centum upon all amounts over \$50,000.

The Legislature of the State of New York, when enacting its income tax law, divided the income taxpayers into two general classes—residents and non-residents; a resident paying upon his entire net income derived from both within and without the state, and a non-resident only upon such income as he may receive from his personal services, or from property, or a business, trade or pro-

fession carried on within the state. An income taxpayer under the law may be a person, a trust or an estate, and further, each may be either resident or non-resident.

Partnerships, as such, are not taxpayers, the several partners each making his own return and including therein his distributive share of the profits, as an item of income, and each paying his tax. Partnerships are required to make an annual return, giving all items of gross income, and the deductions allowed by law,—also stating the names and addresses of the individual partners and the distributive share of each, whether distributed or not.

There are imposed upon all employers of the State certain duties as to withholding the tax on the personal service compensation of non-resident employees, receiving \$1,000 or more per year. The tax is to be withheld and the employer is made personally liable if he does not so withhold. For the purpose of this withholding, all employees are classed as non-residents unless the employee files with his employers a Certificate of Residence (Form 101), stating that he is a resident of the State of New York.

The employer, as a withholding agent, is further required on or before March 15, 1920, to file with the Comptroller a return, showing the amounts so deducted and withheld during the year 1919, paying them to the Comptroller. He must also file an information return giving the name and amounts of salaries of \$1,000 or more paid to each resident during the year 1919.

Another Middleman

In a city where a great deal of building is going on, the unions have struck against the "second mortgage broker." The Building Trades Council has decided to withdraw the workmen from every house whose construction involves a deal with one of these brokers.

The "second mortgage broker," explains a labor official, "is the middleman in the building trade. He is largely a by-product of the war. He is the man who arranges the loan to the man who is building, starts things going and then gets a rake-off from contractors and the people who supply the materials. He has nothing legitimately to do with the building, and is an entirely useless factor." The toleration of such middlemen, says this official, adds several hundred-dollars to the cost of a home.

There is undoubtedly merit in this criticism. The second-mortgage business in itself is an honest, legitimate business, and the men handling it say, almost without exception, that the middleman in question is unnecessary—anybody who wants and deserves a loan can get it by coming to them directly. The "mortgage broker" thrives by persuading the prospective builder that it requires special knowledge and influence, and thus is able to collect from him and from the dealers and contractors money which might far better go into the building.

This action by the building trades workers is pretty radical. It hardly looks like the best way to fight the evil. But if it accomplishes its professed purpose of making it easier and cheaper to erect homes it will win approval.

Paris Prize of the Society of Beaux-Arts Architects

The first preliminary competition of the 13th Paris Prize, open to all citizens of the United States under thirty-one (31) years of age on July 1, 1920, will be held on Jan. 10, 1920. For full particulars apply to Chairman, 126 East Seventy-fifth Street, New York City.

Contractors for Longer Day as Aid to Building Program

Efforts by building contractors to lengthen the working day because of the scarcity of building mechanics is being anticipated by officers of the building craft unions.

The eight-hour workday has been instituted in these trades for several years. Labor leaders guard jealously all attempts to return to a longer workday of nine or ten hours, but the delay of construction because of the lack of workmen has become a serious problem now and contractors show a desire to have their men work at least nine hours out of the twenty-four. For this they are entirely willing to pay the extra time and a half for the overtime.

But the unionists say they do not care to work longer at any price, their idea being that anything like universal overtime might eventually lead back to the longer workday without extra compensation.

Contractors say work must be carried on somehow and that the only way out they see under the present scarcity of man-power in the building trades is to lengthen the day. Many jobs in Toledo and vicinity, they say, must be rushed to that stage where they can be "closed in" for the winter, claiming that unless relief comes much damage may result to open and partially constructed building.

Modernizing Old Flats

The acute shortage of housing facilities has resulted in an extensive movement to modernize "old law" tenements, of which there are many thousand unoccupied in various sections of Greater New York. Almost similar changes and improvements are being made to a large number of old private dwellings of the brownstone front type, located on streets that were once fashionable. Altogether, it is estimated that by this process of modernizing old tenements and dwellings previously vacant or but partially occupied acceptable housing facilities have been provided for several hundred families, and the movement is hardly started as yet.

While general renovating and the installation of modern sanitary equipment are important factors in modernizing old houses, it seems that the providing of electricity for lighting and for household labor-saving devices is the first step. In order to show the effectiveness and possibilities of electricity in this modernizing process, arrangements have been made to include exhibits of equipment and methods especially designed for this purpose at the annual electrical exposition of lighting fixtures and other electrical devices. This is a different proposition in the class of buildings now being converted into modern apartments than it is in new houses or even those of comparatively recent construction.

Building Permits in Chicago

CHICAGO, ILL., Dec. 1.—The records of the building department of this city show that permits for the construction of buildings to cost \$90,000,000 have been issued thus far this year. Edward W. Nordlie, chief building inspector, estimates that, in spite of the high cost of materials and the building strike last summer, this year's permits will surpass in the value of buildings to be constructed those of 1916, when \$113,000,000 worth of permits were issued. The year 1916 was the record-breaker in building operations in the history of the department.

Department of Architectural Engineering

Swimming Pool of the West Point Military Academy

SOME few years ago a new gymnasium building of which Cram, Goodhue & Ferguson were the architects was erected at the West Point Military Academy. This building is easily distinguished from the other academy buildings, being built of light brick, in contrast with the gray stone façades of its neighbors.

Probably in no university in the United States is such a comprehensive course provided as that given at the West Point Academy, and the gymnasium is an important factor, since the physical condition of the student must be maintained at the highest standard in order that he may successfully withstand the rigor of the curriculum.

Included in the gymnasium building is a large swimming pool, holding approximately 170,000 gallons. The physical instruction given during the course, besides including fencing, boxing, etc., also embraces swimming. All students entering the academy who are unable to swim, and included in this group are at least 50 per cent of all entrants (coming largely from the middle western states) are formed into classes and given regular instruction. In addition to such routine instruction, the pool is also utilized at certain times by those desiring to indulge in swimming as a sport, both officers and their wives as well as students. Men are not permitted to use the pool during those periods reserved for the women.

No provision was made in the original installation of the swimming pool for purifying or sterilizing the water. The pool was emptied, scrubbed and

then refilled at short intervals, in order to keep the water in a condition not detrimental to the health of the users. However, this method was far from satisfactory, and in addition was very wasteful, necessitating the use of a large quantity of water each time the pool was emptied and refilled. As the water had to be heated, such a method of operation also required the use of an excessive quantity of coal, and rendered the pool useless during the frequent periods required to empty, clean and refill.

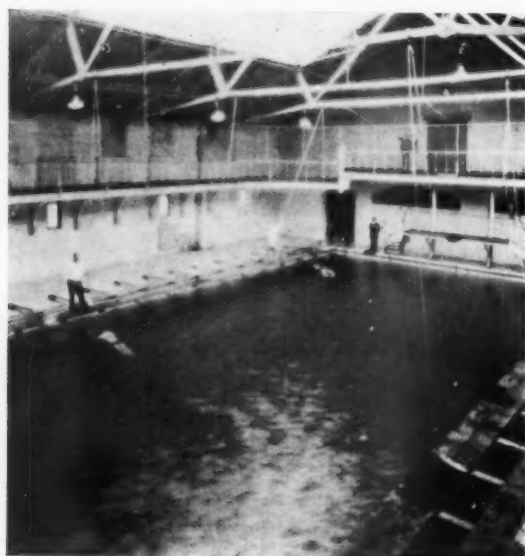
Recently the academy obtained an appropriation for the purpose of installing a system of water purification, which experience had shown was necessary.

The West Point medical division undertook an investigation of the various methods by which this end could be accomplished. These will not be gone into in detail here, having been described in an article entitled "The Swimming Pool" (in two parts), published in THE AMERICAN ARCHITECT, Sept. 18 and Oct. 2, 1918. The work of Wallace A. Manheimer, Ph.D., who had spent much time investigating the subject of water purification was consulted, and Dr. Manheimer was later communicated with. As a result of the investigation it was decided that sterilization by the process of injecting ozone into the water was the most efficient, and, so far as could be judged in advance, would give the most satisfactory results. Accordingly this type was adopted, and such a system has now been installed, having been but recently completed. The benefits derived entirely justify the expenditure.



GYMNASIUM BUILDING
U. S. MILITARY ACADEMY, WEST POINT, N. Y.
CRAM, GOODHUE & FERGUSON, ARCHITECTS.
THE SWIMMING POOL IS LOCATED BENEATH LARGE SKYLIGHT.

THE AMERICAN ARCHITECT



SWIMMING POOL—U. S. MILITARY ACADEMY
WEST POINT, NEW YORK.

After the system was placed in operation a series of bacteriological tests were conducted to determine its efficiency in maintaining the pool water free from bacteria. The results of these tests, in the making of which Dr. Manheimer co-operated with the West Point authorities, are set forth in his letter to Col. E. J. Timberlake, Quartermaster, West Point Military Academy, which follows:

Col. E. J. Timberlake,
Military Academy, West Point, N. Y.

Dear Sir—The test on the swimming pool, made on the third of September, proved to be satisfactory beyond my expectation. The bacterial counts at incubator temperature in nine samples taken were as follows:

27 per cc	14 per cc	18 per cc
27 per cc	23 per cc	3 per cc
17 per cc	4 per cc	11 per cc

These tests were made on samples taken from various parts of the swimming pool, so that fairly representative results could be obtained. In only one case was *Bacillus Coli* obtained from the implantation of 10 cc of water, or, in other words, one *Coli* per 10 cc of water.

The test on tap water, which was made as a control, gave us 10 bacteria per cc, with the absence of *B. Coli*.

You will see that the water in the swimming pool, after protracted use, is comparable in sanitary condition with that of drinking water. Your practice of maintaining the water for as long a period as

possible and emptying it only when sediment soils the pool's bottom, is the proper technique.

Trusting these facts will be of interest to you and thanking you for your kind co-operation, I am

Very truly yours,

(Signed) WALLACE A. MANHEIMER.
Research Laboratory, New York,
Department of Public Health.

An analysis of these figures proves the complete success of the system, which permits greater economy in the use of water and coal and a longer continuous use of the pool.

As during the past year certain changes have been made in this system of water purification, thereby causing improved operation, a study of the West Point installation, which is the most recent made, will be of interest.

The ozonator units each consist of six tubes mounted in an enclosing metal case. For pools having a capacity up to 100,000 gallons of water one unit is considered adequate. As the West Point pool has a capacity of 170,000 gallons, two such units were required. As shown in Fig. 1, these units are mounted on a stand constructed of angle iron. Each enclosing case is equipped with a hinged front section or door, having glass panels.

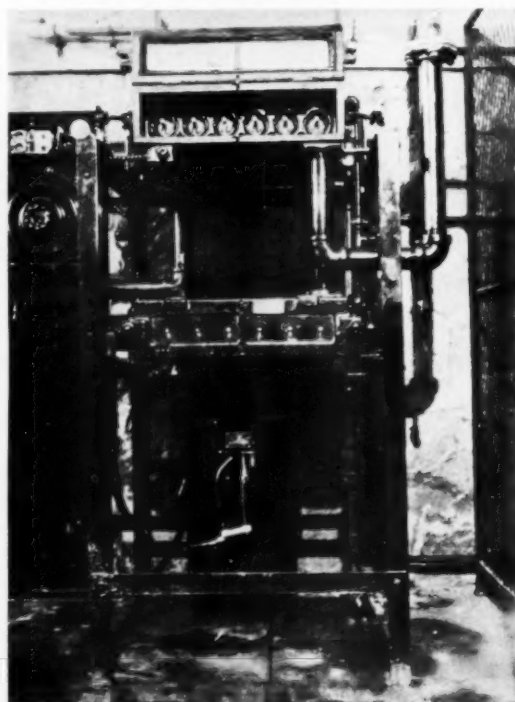


FIG. 1. OZONATOR UNITS.

GLASS FRONT OPEN IN UPPER UNIT AUTOMATICALLY SHUTS OFF CURRENT. DRYING CABINET TO THE LEFT WITH FIELD REGULATOR ABOVE.

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The units are so constructed that perfect insulation exists between the tubes and the metal enclosing case, therefore no danger exists during operation so long as the case is closed. An improved feature of the enclosing case, and one providing additional safety, is that the electric circuit is immediately broken upon the opening of the front, thus shutting off the electric current. Also the units cannot be operated unless the case is closed. The inner electrodes of these tubes are now constructed of aluminum instead of iron as formerly. Beneath the units is located a 750-watt transformer. In this installation it was necessary to use two transformers, since alternating current is brought to the building at 2500 volts, which upon entering the building is stepped down to 110 volts and then boosted up to 10,000 volts by the transformer shown in the illustration, before passing to the ozonator units. By the adoption of this method it was possible to use standard equipment throughout. To the left of the units is the drying cabinet, containing a series of seven drawers. The air enters through this cabinet, and any moisture present is absorbed by the calcium chloride contained in the drawers,

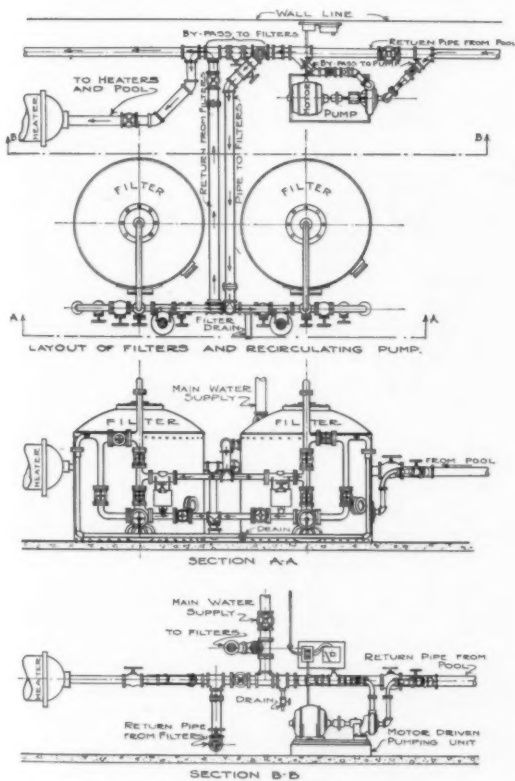


FIG. 2. ARRANGEMENT OF FILTERS,
WEST POINT SWIMMING POOL.

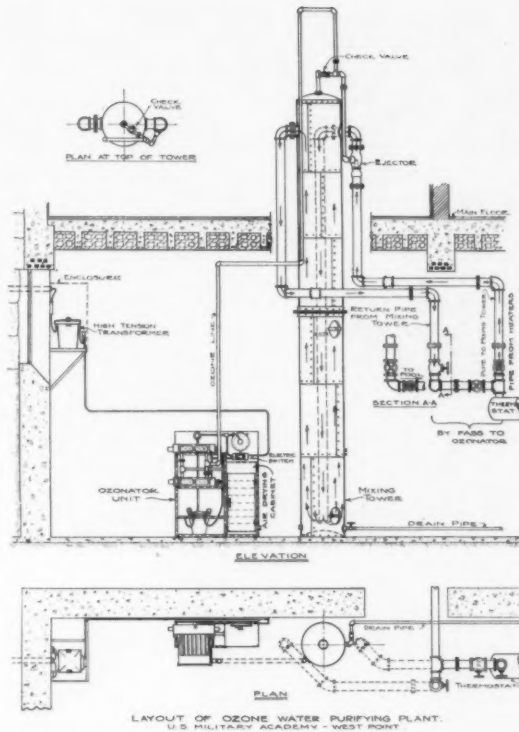


FIG. 3.

so that it is thoroughly dry before passing into the ozonator units. Above the cabinet is a rheostat or field regulator, a cut-out switch and indicator bulb. This latter is also a new feature, and shows immediately whether or not the apparatus is functioning. This is also indicated by the violet electric field formed between the inner and outer electrodes of the tubes.

It is necessary to clean the glass tubes and inner core about once a week, as well as to drain off accumulated water at the bottom of the drier.

After throwing on the main switch the rheostat is adjusted until a clear violet field is formed around the inner core, at which adjustment the units will operate to maximum efficiency.

As the West Point pool contained no filtration system, sand filters were installed at the same time that the ozonator units were placed. Both circulating pump, filters, heaters and ozonator equipment are all on by-passes of the main piping system. The arrangement for the filters is shown in Fig. 2. A centrifugal recirculating pump with a discharge of 120 gallons per minute operating at 1725 r. p. m. is driven by a 5-H.P. electric motor. As now operated the pump sends the water returning from the pool into the filters (and coagulating

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tanks), two in number, each 60 in. in diameter, designed to operate at 100 lbs. working pressure. The water, filtered of all coarse matter, but still containing bacteria, is returned to the main line, and then passes through the heaters. As the entrant temperature is above that of water from the outside main, less heat is required to bring this to the required temperature than would be the case in refilling the tank. After passing through the heaters the water enters the mixing tower (see Fig. 3), constructed of galvanized iron, 24 in. in diameter and 21 feet high, with a capacity of 480 gallons. Here the ozone from the electrical units is brought into contact with the water. A complete change of water occurs in this tank about once every four minutes, during which time the ozone is brought into intimate association with the water, purifying it by the destruction of the bacteria contained therein.

From the mixing tower the water is conveyed to the pool, entering through four inlets, three of which are 2½ in. in diameter, located at the bottom, and one, located at the top, is 2 in. in diameter. The latter and one of the bottom inlets are vertically over each other, as is shown in section B B of Fig. 4.

The only feature of the pool which is open to

criticism is the location of the outlet. This is placed to one side and approximately three-quarters the pool length from the inlet end. The pool is 9 ft. 6 in. deep at this point, 4 ft. deep at the inlet end and 7 ft. deep at the far end. The location of the drain made little difference so long as the water was not recirculated, its only function being to empty the pool. However, with the present recirculating and purifying system installed, it would operate to better advantage had the pool been designed with the drain located at the end farthest from the inlets. This, however, is not serious, and reference to the bacteriological tests shows that practically pure water is maintained throughout all parts of the pool. The system, so far as can be learned, is operating to the entire satisfaction of the West Point Academy authorities.

The realization by architects, when designing a swimming pool, that an efficient system of water purification will be necessary for its efficient operation would obviate the necessity of subsequent alterations, and would give satisfaction from the start. The additional expenditure is a wise investment and the client should be so advised.

The seriousness of the dangers that lurk in the contaminated water of many swimming pools is rapidly being called to the attention of the public

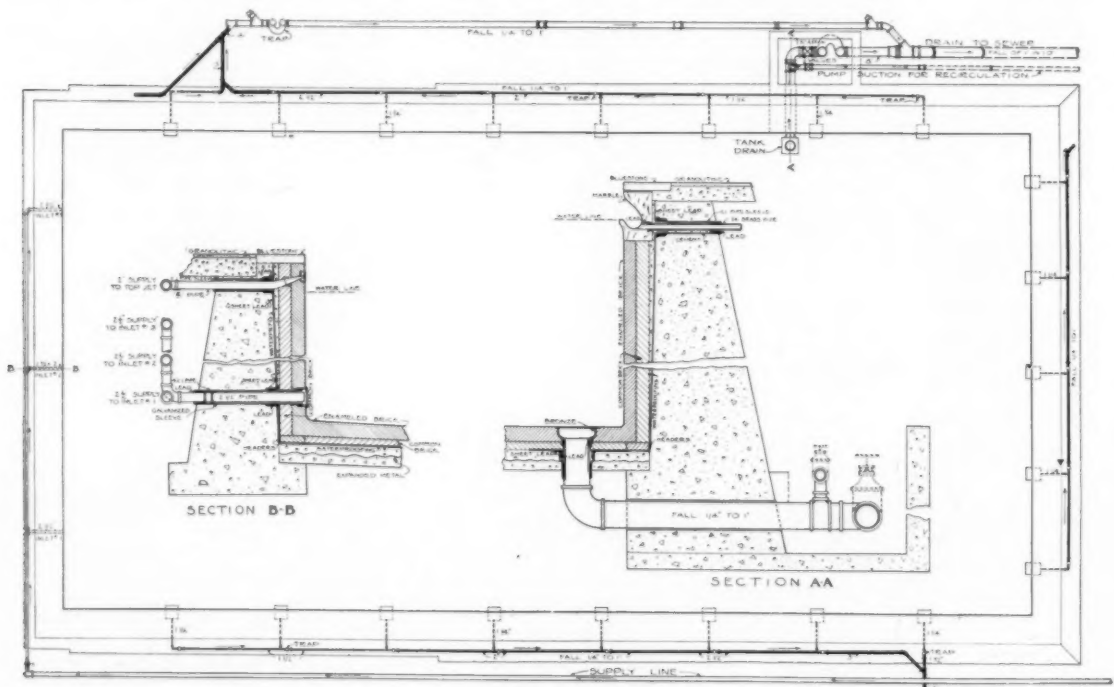
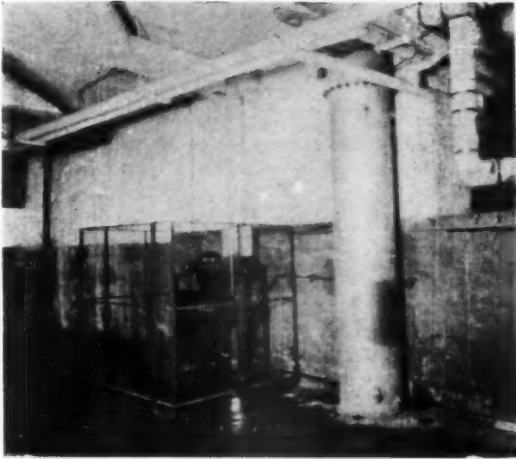


FIG. 4. PLAN AND SECTIONS OF SWIMMING POOL,
U. S. MILITARY ACADEMY, WEST POINT, N. Y.



OZONATOR UNITS IN WEST POINT GYMNASIUM
THESE ARE LOCATED IN BASEMENT AND ENCLOSED IN
WIRE CAGE. LOWER HALF OF MIXING TOWER IS
SHOWN TO THE RIGHT. UPPER PART EXTENDS INTO
MAIN STORY

authorities, and in some parts of the country the operation of such pools, as well as public bathing places, is being placed under municipal control.

For instance, the sanitary control of all swimming pools and public bath-houses in Florida, whether privately owned or municipally owned, is placed under the Florida State Board of Health by recent legislation (Florida laws, Chap. 7825, 1919). The law is based, in part, upon studies made by George W. Simons, Jr., chief sanitary engineer, State Board of Health, acting as chairman of the American Public Health Association's committee on swimming pool sanitation, but it is patterned after the law of California. Under the Florida statute no swimming pool, public bath-house, bathing or swimming place may be constructed, altered or operated without "an unrevoked permit" from the State Board of Health. Before such permit shall be granted, plans, specifications and full operating details must be filed with the board. Information must be given as to the source of water supply, its amount and quality, the proposed method of treating and heating the water and of providing for the cleanliness of bathers, the method of washing and storing bathing suits and towels, and any other data that the board may require. The board is authorized to inspect bathing and swimming places at any reasonable time, and in its discretion may publish the results of the inspections in its monthly bulletin. It may revoke or suspend permits for cause, and likewise may declare any bathing establishment a public nuisance, which nuisance may be abated or enjoined by either the State or local board of health.

An Important Feature in Plumbing Specifications

By J. J. COSGROVE, *Sanitary Engineer*

THE Sanitary Potters' Association by a recent resolution has declared that after April 1, 1920, they will make no more closets with projecting outlet horns.

The importance of this action and its relation to the architect in the preparation of plumbing specifications can only be understood by a careful consideration of the defects that have so long existed in the old style closet now to be discontinued.

Reference to the accompanying illustrations shows the changes the potters are making in closets. Practically all closets made at the present time have a waste outlet, "A," which extends about $\frac{3}{4}$ in. beyond the base of the closet. That has been the plumbers' salvation for time immemorial. It has been to the plumber what the grave is to the doctor; something to hide his poor work.

Owing to this projecting outlet the plumber could serenely set a closet in putty, feeling reasonably sure it would not leak water, although he never pretended it would prove air tight. As a matter of fact, every time a closet set in putty or with gasket is flushed the heaved up water forces a puff of drain air out around this joint.

But the air did not show, and the water was carried past the opening and sent on its downward way towards the sewer, so to all appearances it was a perfectly tight joint.

Now the projecting horn is to be eliminated, which means that if a new type closet with a short outlet is set in putty it might be tight while the putty is soft and plastic, but as soon as the oil dries out the joint will leak and water from the closet will flow out on the floor and through the ceiling.

Almost all the plumbing catalogues in the hands of the architects have been compiled for from ten to twelve years. At the time they were compiled the best the manufacturers had to offer was a putty joint and brass closet floor flange, so they were incorporated in the descriptions of the closets. Since that time, however, good, perfectly tight and permanently tight flexible metal-to-metal flanges have been developed and adopted by all closet manufacturers.

However, the demand for them was not large, for the very reason that they were not listed in the catalogues with the closets. The result was, every time a description of a closet was copied from a catalogue into a specification it specifically called for the insanitary putty joint, thus automatically preventing progress or improvement, for the plumber had to put in what the architect called for.

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All danger can be avoided, however, by incorporating a clause in all plumbing specifications to take care of the changed condition, until such time as it is taken care of by all the plumbing codes in the country. Any wording will do that will cover the subject, but the following provision from the Industrial Code of the State of New York would seem to fit the case better than anything else, and adopting it would go far towards a standard or uniform practice.

Rule 120. The connection between soil pipe and water-closet hereafter installed shall be made by means of a flexible, metal-to-metal closet floor flange. Putty, paste, gasket, slip-joint or rigid connections of any kind will not be permitted for water-closets or slop sinks.

A similar clause might well be adopted in every

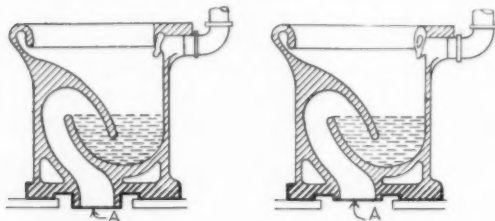


FIG. 1. THE OUTLET HORN "A" SHOWN IN FIG. 1, EXTENDS $\frac{3}{4}$ IN. BELOW THE FLOOR, WHILE IN FIG. 2, THERE IS NO PROJECTION BELOW THE FLOOR LEVEL.

plumbing code now in existence or hereafter adopted.

It is more than probable that the manufacturers of closets will follow up their lead by adopting a flange and putting one on every closet made, not alone because a closet is incomplete without a flange and cannot be considered first class or sanitary without a perfectly tight and permanently tight waste or soil connection, but because there is such a growing sentiment among plumbers, jobbers and health departments for them to do so that they will not dare go counter to this general feeling.

The responsibility for a poor closet floor connection unquestionably belongs to the potter, and he is beginning to realize he owes something in this respect not only to the architect and the plumber, but also to the public as well. In justice to the potters it is but right to say that they are prepared to put a good flange on every closet, and now that they understand that architects, builders and plumbers look to them for a good connection they are willing to supply it.

But until such time as the potters are actually putting a flange on every closet turned out, and the plumbing codes all prohibit the use of putty, paste, gasket, slip-joint and rigid connections of every kind, it will not be safe for the architects to omit the substance of Rule 120 from their plumbing specifications.

Henry W. Hodge Dead

PROMINENT STRUCTURAL ENGINEER SUCCUMBS TO HEART FAILURE. DESIGNED MANY NOTABLE BRIDGES AND LARGE BUILDINGS.

Henry W. Hodge, one of the most famous engineers of the present day, known throughout this country, Canada, Mexico, South America and Europe, died suddenly at his home in New York City. Heart failure was the cause.

Mr. Hodge was born in Washington, D. C., April 14, 1865. In 1885 he was graduated from Rensselaer Polytechnic Institute with the degree of Civil Engineer. For six years following his graduation he was with the Phoenix Bridge Co. as Assistant Chief Engineer on Bridge Construction. From 1891-1893 he held the position of Chief Engineer of the Union Iron Works, New York City, on the construction of steel frame buildings, later becoming associated with Alfred P. Boller as assistant on designs for bridges and foundations. His exceptional ability was soon recognized by Mr. Boller and in 1899 he became a member of the firm of Boller & Hodge (firm changed to Boller, Hodge & Baird in 1912), consulting engineers for bridges, elevated railways, pneumatic foundations, buildings and other engineering works.

This firm has acted as engineers for the United States Government, several State Governments, and many cities, as well as for numerous railways and other corporations.

Mr. Hodge was retained by the City of New York to report on the carrying capacity of the Queensborough bridge and was one of the Commissioners appointed by the Canadian Government to select designs for the Quebec bridge. He has been Consulting Engineer to the New York & New Jersey Bridge & Tunnel Commission since the formation of the Commission in 1907; and in 1919 was appointed a member of the Board of Consulting Engineers in connection with the North River Vehicular Tunnel. In 1916 he was appointed one of the Public Service Commissioners of the 1st District of New York.

In July, 1917, he was commissioned a Major in the U. S. Engineers, and sailed for France to take up engineering work for our armies. He was at first Construction Engineer on Docks and Storage Yards; was promoted to Lieutenant Colonel in October, 1917, and made Manager of Roads in charge of all highway construction and maintenance. He was promoted to Colonel in August, 1918, and made Assistant Chief Engineer, A. E. F., in charge of bridges.

In 1918 the Rensselaer Polytechnic Institute conferred on him the degree of Doctor of Engineering.

Rules Governing Storage and Use of Fuel Oils and Construction and Installation of Oil Burning Equipment

Adopted by the Board of Standards and Appeals, November 6, 1919
Effective in New York City, December 1, 1919

Rule 1. Definition. Flash Point and Specific Gravity.—The term "oil used for fuel purposes" under these rules includes any liquid or mobile mixture, substance or compound derived from or including petroleum.

All oil used for fuel purposes under these rules shall show a minimum flash point of not less than one hundred and seventy-five (175) degrees Fahrenheit, in an open cup tester, or if closed cup tester be used a minimum of not less than one hundred and fifty (150) degrees Fahrenheit, and its specific gravity shall be not less than .933 (29 degrees Baumé) at a temperature of sixty (60) degrees Fahrenheit; and must not be fed from the tank to the suction pump at a pre-heat temperature higher than its flash point.

Rule 2. Manner of Storage.—Oil to be used as fuel for commercial, heating and power purposes on the premises where stored shall be at all times contained in metal tanks with all openings or connections through the tops of the tanks, except a clean-out plug in the bottom; and, when located inside of a building, must at all times be placed in the cellar or lowest story of such building, and at east two (2) feet in a horizontal direction from any supporting portion of the structure, and if practicable shall be buried underneath the lowest floor or ground.

Rule 3. Location of Tanks—Existing Buildings.—No storage of fuel shall be permitted in a building of frame construction within the fire limits, or in buildings of hazardous occupancy as so defined by the fire commissioner.

If placed in buildings already erected, if not buried beneath the lowest floor or ground such tanks shall be placed in an enclosure the floor of which shall be at least three (3) feet below the surface of the cellar or lower story; or if by reason of water or foundation conditions, or if on rock bottom, the tank may be placed above the surface of the ground, but in any case subject to the conditions as hereinafter described under Rule 5.

Rule 4. Location of Tanks—New Buildings.—In buildings hereafter erected the bottom of the fuel service tanks shall be located in, or below the floor level of the cellar or lowest story as shall be determined by the Superintendent of Buildings under the provisions of Rule 2.

Rule 5. Enclosure of Tanks.—In either existing or new buildings such fuel oil service tanks shall be enclosed in an unpierced wall and floor of approved masonry or reinforced concrete, made oilproof and waterproof, and not less than twelve (12) inches in thickness; and also of sufficient thickness to properly support any lateral pressure, and to be of lateral dimensions at least one (1) foot greater on all sides than the outside dimensions of the tank. These walls are to be carried up to a height of at least one (1) foot above the tank, or the supply and feed connections thereto, and roofed over with reinforced concrete or its equivalent at least twelve (12) inches thick and capable of sustaining a live load of at least three hundred (300) pounds per square foot; and if not buried below the ground, placed so as to leave a clear and open space (except for pipe connections) of at least two (2) feet between such roof over the enclosure and the under side of the ceiling above. The roof of every enclosure shall contain a manhole with fireproof cover properly weighted, but not fastened, placed immediately above the supply and feed connections and the manhole in top of the tank.

Where found impractical to set the bottom of the tank three (3) feet below the floor of the cellar or lowest story, the tank shall rest on steel or masonry supports, and the bottom of the tank shall be at least one (1) foot above the floor of the enclosure, and the enclosure wall and floor as above specified shall be unpierced and the space below the horizontal center line of the tank and within the enclosure formed by the surrounding unpierced walls shall have a capacity of at least sixty (60) per cent of the capacity of the tank.

The space within the enclosure surrounding the tank shall be at all times vented to the air outside of the building by iron or other fireproof conduit at least two and one-half (2½) inches diameter, connecting the enclosure at a point just above the floor level, and which shall finish above the street surface with proper connection at that point to permit the Fire Department to flood the enclosure.

A separate similar vent without Fire Department connection shall enter the enclosure just below its ceiling.

Rule 6. Capacity of Tanks.—In existing new buildings of non-fireproof construction no fuel oil service tank containing over ten thousand two hundred (10,200) gallons, and in buildings of fireproof construction no tank containing over twenty thousand (20,000) gallons, shall be placed in any single portion of the cellar or lowest story unless such portion be separated from the rest of the cellar by walls of masonry or reinforced concrete with openings protected by automatic fireproof doors, with sills placed high enough above the cellar floor to contain capacity of tank located therein, in addition to the enclosure as already specified for the tank, and such portion be ventilated to the outer air. More than one such single tank may be installed if enclosed and separated as above.

When tanks are buried so that the top of the roof over the enclosure wall is level with the cellar floor, the capacity of any such tank may be increased by one hundred (100) per cent.

Rule 7. Service Tanks Located Outside of Buildings Within Fire Limits.—Within the fire limits, tanks to contain fuel oil for use on the premises, and of a capacity and at distances specified below, may be placed above ground outside of the building if such tank does not exceed (15) feet in height above the surface of the ground and if completely enclosed in the same manner as provided for in Rule 5.

Distance to Nearest Building in Feet Not Exceeding	Capacity in Gallons.
40	71,400
30	40,800
20	30,600
10	20,400
5	10,200

If such service tanks are entirely buried and roofed below the surface of the ground, the capacity in gallons may be increased by two hundred (200) per cent.

Rule 8. Outside General Storage Fuel Oil Tanks Located Above Ground Within the Fire Limits.—Such general storage tanks located within the fire limits shall not exceed twenty-five (25) feet in height, shall be built of metal, and shall be surrounded with a dike of unpierced masonry or reinforced concrete not less than four (4) feet in height, with a capacity of at least that of the tank to be protected. The walls and floor of such dikes must be continuous, and oilproof and waterproof, and must not be built within ten (10) feet of the walls of the tank. If tanks are placed in battery the dikes shall be rectangular in shape, and the dike wall separating them as well as the dike wall within one hundred (100) feet of any structure, shall be carried up as a fire stop to a height of four (4) feet above the head of the tank and coped with stone or concrete, and any openings in walls above the dike shall have automatic fireproof doors.

The capacity of any such single general storage tank within the fire limits shall not exceed one hundred thousand (100,000) gallons, and the gross capacity of storage shall not exceed the following tables:

To line of adjoining property or nearest building (feet).	Gallons.
75	100,000
100	150,000
150	250,000
200	500,000

Such general storage tanks may have extra fill and emptying connections as the Fire Commissioner may determine.

Rule 9. Outside General Storage Fuel Oil Tanks Located Outside the Fire Limits.—Such general storage tanks shall be protected by dikes and fire stops as provided under Rule 8, shall not exceed thirty-five (35) feet in height above the ground, and may be constructed either of metal or of concrete reinforced with steel in order to resist the oil pressure.

If built of concrete, the walls and floor of such tanks shall be continuous and shall be not less than eight (8) inches thick, mixed in the proportion of 1:1½:3 graded and mixed in accordance with the requirements of Chapter 5, Code of Ordinances. The walls shall be of sufficient thickness so that the tensile stress, disregarding the steel reinforcement, shall not exceed one hundred and fifty (150) pounds per square inch. The horizontal and vertical reinforcement shall be properly proportioned and placed to provide for expansion and shrinkage without leakage, and the stress in the steel shall not exceed ten thousand (10,000) pounds per square inch.

As soon as the concrete has hardened sufficiently to be self-sustaining, the forms shall be removed and all cavities filled with a one to one (1:1) mortar thoroughly rubbed in and all irregularities trowelled smooth.

The concrete shall harden at least twenty-eight (28) days before use, and the surface of the floor and the interior surface of the walls shall be protected by coating with a sodium silicate solution or other equally good protection to prevent oil coming in contact with the concrete.

The maximum gross capacity of any such single tank when situated outside the fire limits shall not exceed two hundred and fifty thousand (250,000) gallons, but the gross storage capacity may be double that specified in the tables under Rule 8; and when such tanks are placed at least two hundred and fifty (250) feet from the line of adjoining property or the nearest building, the gross capacity may be unlimited.

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Rule 10. Material and Construction of Tanks.—1. All fuel oil storage tanks within the fire limits shall be constructed of wrought iron, galvanized steel, basic open hearth or electric steel plates of gauge corresponding to the capacity as specified in the following tables:

TANKS PLACED UNDERGROUND

Capacity in Gallons.	Thickness of Material U. S. Gauge.
500	14
1,000	12
5,000	7
10,000	$\frac{3}{4}$ inch.
20,000	$\frac{5}{16}$ "
30,000	$\frac{3}{8}$ "

TANKS PLACED ABOVE GROUND (HORIZONTAL)

Maximum Diameter in feet	Thickness of Material U. S. Gauge
8	Heads 10
11	Shells $\frac{3}{4}$ inch.
	Heads $\frac{5}{8}$ "
	Shells $\frac{1}{4}$ inch.

TANKS PLACED ABOVE GROUND (VERTICAL)

Thickness of Material, U. S. Gauge							
Diameter Feet.	Top.	Top Ring.	2d Ring from Top.	3d Ring from Top.	4th Ring from Top.	5th Ring from Top.	6th Ring from Top.
40 & less	10	7	7	7	5	3	2
45	10	7	7	7	5	3	1
50	10	7	7	7	4	1	0
55	10	7	7	7	3	1	0
60	10	7	7	6	3	1	2-0
65	10	7	7	6	2	0	2-0
70	10	7	7	5	2	0	3-0
75	10	7	7	4	1	2-0	4-0
80	10	7	7	3	0	3-0	5-0

2. Tanks of greater capacity than above shall be proportionately heavier and of sufficient thickness to safely hold the contents.

3. All joints shall be riveted and caulked, brazed, welded, or made by some equally satisfactory process, and the tanks braced sufficiently to withstand all stresses due to transportation or use. All riveted joints shall have an efficiency of not less than sixty (60) per cent.

4. The top cover shall be of the same material as used in the construction of the tank, permanently secured to the tanks without other openings than provided for in these rules. A safety valve shall be installed on all tanks placed outside of buildings.

5. All outlets and inlets shall be through the top or cover of the tank, except for the clean-out plug as provided for under Rule 2, and in general storage tanks a water drain not exceeding one (1) inch diameter may be permitted.

6. All metal tanks shall be thoroughly coated on the outside with tar, asphaltum, or other suitable rust-resisting protection. When buried in soil impregnated with corrosive materials, steel tanks shall be entirely covered with a two-inch thickness of cement mortar or shall be of heavier metal in addition to being protected as specified.

7. All above ground storage tanks exceeding two hundred thousand (200,000) gallons capacity shall be provided with approved explosion hatches having a combined area of not less than one and one-half ($1\frac{1}{2}$) per cent of the roof area of the tank.

8. All tanks shall be tested and must withstand a pressure of not less than twenty-five (25) pounds per square inch shop test.

Rule 11. Vent and Fill Pipes.—1. Each fuel oil tank shall be provided with a separate steel vent pipe and a separate steel fill pipe of at least two (2) inches diameter placed in the top of the tank. The vents for enclosure around tank shall be as specified under Rule 3.

2. Vent pipes for fuel oil tanks located in the lower story or buried under buildings shall be run to a point outside the building above the street surface and at least twelve (12) feet above the fill pipe and shall terminate in a weatherproof hood or a gooseneck, protected with non-corrodable screens of not less than thirty by thirty (30 x 30) nickel mesh or equivalent. Such vent shall not be located within five (5) feet either vertically or horizontally of a window or other opening or an exterior stairway or fire escape.

3. The receiver terminal of fill pipes shall be located in a metal box or casting provided with means for locking and the delivery terminal shall be connected through the top of the tank at a point furthest remote from the vent.

Rule 12. Fuel Oil Feed Systems.—1. Systems fed by gravity or force systems between tank and pump shall not be permitted.

2. Pump suction feed systems only will be approved and anti-siphon system must be provided.

Rule 13. Pumps and Piping.—1. Feed pumps for fuel oils shall be of approved design, so arranged that dangerous pressures will not obtain in any part of the system and shall be located outside of enclosure walls around storage tanks, but so placed as to be accessible at all times, and provision shall also be made for remote control. They shall be installed in duplicate when directed by the Fire Commissioner and shall be provided with a by-pass to permit the draining of the oil for repairs.

A separate hand pump shall be provided for starting purposes.

2. Oil conveying pipes shall be carried above the tank outlet; if laid underground after leaving the tank to be carried in a separate

trench enclosed in fireproof or non-conducting material. They shall be of extra heavy standard wrought iron, steel or brass pipe with substantial fittings and not less than one-half ($\frac{1}{2}$) inch in size and if covered it shall be with asbestos or other approved fireproof material. Overflow pipes shall be at least one size larger than supply pipes and shall be carried back to the receiver terminal.

3. All connections shall be tight with well-fitted joints. Unions shall have at least one face made of brass with conically-faced seats.

4. Connections leading to outside tanks shall be laid below the frost line and shall not be located near or placed in same trench with piping other than steam lines for heating. All pipes leading to the surface of the ground shall be cased or jacketed to prevent loosening or breakage. Openings for pipes through outside walls below the ground level shall be securely cemented and made oil-tight.

5. Piping shall be run as directly as possible, without sags, and be properly supported to allow for expansion, contraction, jarring and vibration and draining.

6. Piping between any separated oil container or using parts of the equipment, should be laid as far as practicable outside of the building, underground, and inside piping in a trench with metal cover or protected by not less than three (3) inches of concrete.

7. Piping under pressure must be designed with a factor of safety of not less than six (6), and shall in every case be tested to a pressure of not less than one hundred and fifty (150) pounds after installation.

Rule 14. Controlling Valves.—1. In fuel oil piping systems, readily accessible shut-off valves shall be provided in the supply line of fuel oils as near to tank as practicable, on both sides of any strainer which may be installed in pipe lines, in the main line inside the building, at each oil consuming device, and a gate valve in the discharge and suction pipes near the pump. Provision shall be made to insure the cessation of oil supply from tank to the burner when the pump is not in work.

Rule 15. Heating.—1. All heating to reduce viscosity of fuel oils in storage tanks in any building shall be only by means of hot water coils and the oil shall not be heated above one hundred and forty (140) degrees Fahrenheit.

2. All outside pipes subject to freezing shall be protected with a heating line of steam or hot water.

Rule 16. Fuel Oil Burners.—1. Burners containing chambers which allow dangerous accumulation of gases or containing oil conveying pipe or parts subject to intense heat or stoppage from carbonization are prohibited.

2. Oil shall be supplied through orifices not larger than necessary to supply sufficient oil for maximum burning conditions when the controlling valves are wide open.

3. The mechanism shall be so designed that, where manual or automatic control is provided, operated at some distance from the burner, the flame cannot be extinguished except by closing the main shut-off valve in line to burner. Approved gas-pilot lights or equivalent will be acceptable.

4. A check valve of approved type shall be installed in each oil, steam and air line near the burner.

5. Smoke pipes shall be installed between the burners and chimney, and any dampers in smoke pipes shall not exceed eighty (80) per cent of the area of the pipe. Necessary regulation of draft shall be accomplished by dampers in the fire or ash pit doors.

6. Burners shall be installed with overflow attachment so arranged that surplus oil will drain by gravity from the burner into a substantially constructed reservoir. Such reservoir shall be constructed of brass, copper or galvanized iron plate not less than No. 18 U. S. gauge in thickness and shall be provided with a vent pipe with weatherproof hood leading outside the building.

7. The supply of oil and air or steam for atomizing shall be interlocked, so that if the steam or air should fail the oil will be automatically shut off.

Rule 17. Fuel Oil Fire Extinguishing Equipment.—1. Every tank with a capacity of over ten thousand (10,000) gallons shall be equipped with a system of steam pipes, blanketing gas or other approved system for use in case of fire, so arranged and installed as to adequately protect surrounding property.

2. When steam is used, the steam supply pipe shall not be less than one-half ($\frac{1}{2}$) inch in size, the boilers shall be conveniently located, and shall be controlled by valves outside the tank enclosure.

Rule 18. General Devices.—All devices used in connection, with oil-burning apparatus, such as indicators, gauges and burners, shall be of such character as to minimize leakage and exposure of oil, and shall be connected through substantial fittings. Devices which are subject to breakage and escape of oil shall be prohibited.

Thermometers with large clear reading scales, placed in approved thermometer wells with screwed top connections, shall be installed at convenient and prominent positions in the oil supply pipe lines between the service tank and the pumps and also between the pumps and the burner, to indicate the temperature of the oil.

Rule 19. Instruction Cards.—Cards giving complete instructions for the care and operation of the fuel oil system shall be permanently fixed near the apparatus.

Rule 20. Operation of Plant.—Such fuel oil-burning plants may be operated only by a licensed engineer or by a licensed operator who shall be a citizen of the United States, who can read and write the English language, and who is familiar with the practical working of such plant, as evidenced by the certificate of the Fire Commissioner.

Rule 21. Installation.—No installation of fuel oil plants shall be commenced until after the approval of plans by the Fire Commissioner, which plans shall be submitted to him for examination, together with the certificate of the Superintendent of Buildings that the proposed construction of the enclosure and the location of tanks is in accordance with the requirements of the Building Code and of these Rules.



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Late Quotations in Building Material Markets

(Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York and Chicago follow. The quotations set forth are placed before readers of THE AMERICAN ARCHITECT to afford an accurate review of market conditions rather than for use as a basis for actual purchase. They will not only provide knowledge of the exact state of the market as to items quoted, but will also present a basis to judge conditions as affecting correlating materials. Items marked (*) indicate an advance over last week, while those marked (†) record a decline. Other prices did not fluctuate during the week.)

(The following prices are current of January 1.)

BRICK		
	New York	Chicago
Common (Delivered at job in Borough of Manhattan only), per thousand.....	\$22.50*	\$17.00*
Face brick (delivered on job):		
Rough red	37.00	40.00
Smooth red	38.00	40.00
Rough buff	42.00	40.00
Smooth buff	42.00	40.00
Rough gray	45.00	42.00
Smooth gray	47.00	42.00
Colonials	26.00	30.00

BROKEN STONE		
	New York	Chicago
(Delivered on job):		
1½ in. per cu. yd.	\$3.25*	\$2.75*
¾ in. per cu. yd.	3.50*	2.75*

BUILDING PAPER		
	New York	Chicago
Rosin sized sheathing, 500 sq. ft. rolls, 36 in. wide:		
25 lbs. to roll	\$0.85	\$0.88
30 lbs. to roll	1.00	1.05
40 lbs. to roll	1.35	1.40
Deadening felt, 50 sq. yd. rolls, 36 in. wide:		
Per ton	85.00	105.00

BUILDING STONE		
	New York	Chicago
Indiana limestone, per cu. ft.	\$1.23	\$0.83
Kentucky limestone, per cu. ft.	1.35	...
Brier Hill sandstone, per cu. ft.	1.50	...
Gray Canyon sandstone, per cu. ft.	.95	...
Buff Wakeman, per cu. ft.	1.50	...
Buff Mountain, per cu. ft.	1.50	...
North River bluestone, per cu. ft.	1.05	...
Seam-face granite, per sq. ft.	1.00	...
South Dover marble (promiscuous mill block), per cu. ft.	2.25	...
White Vermont marble (sawed), New York, per cu. ft.	3.00	...

BURNED CLAY		
	New York	Chicago
(Delivered on job.)		
Block partition:		
3 in., per sq. ft.	\$0.13	\$0.10
4 in., per sq. ft.	.15	.11
Chimney tops:		
12 x 12 for 8 x 8 flues.....	3.50	2.25
Flue lining:		
4½ ft. x 13 ft., per lin. ft.	.24	.12
4½ x 8½, per lin. ft.	.18	.16
8½ x 8½, per ft.	.24	.16
8½ x 13, per ft.	.35	.20
13 x 13, per ft.	.60	.45
8½ x 18, per ft.	.95	.50
13 x 18, per ft.	.95	.75
18 x 18, per ft.	1.25	.85
Wall coping (double slant):		
8 in., per lin. ft.	.18	.18
12 in., per ft.	.33	.26
18 in., per ft.	.54	.30
Wall coping (single slant):		
8 in., per lin. ft.	.16	.14
12 in., per ft.	.26½	.22
18 in., per ft.	.54	.36
(Corners and angles four times the price of one foot of coping the same size.)		

HOLLOW TILE		
	New York	Chicago
(Delivered at job, in New York below 72nd St.)		
2 x 8 x 12 partitions, per 1,000 sq. ft.	\$70.15	\$90.10*
3 x 12 x 12 partitions, per 1,000 sq. ft.	102.00	90.10*
4 x 12 x 12 partitions, per 1,000 sq. ft.	114.75	96.00*
6 x 12 x 12 partitions, per 1,000 sq. ft.	153.00	132.00*
8 x 12 x 12 partitions, per 1,000 sq. ft.	...	180.00*
10 x 12 x 12 partitions, per 1,000 sq. ft.	...	222.00*
12 x 12 x 12 partitions, per 1,000 sq. ft.	...	230.00*
2 x 12 x 12 split furring, per 1,000 sq. ft.	63.75	55.00*

CHIMNEY TOPS		
	New York	Chicago
Revolving	40%	40%

CEMENT		
	New York	Chicago
Per bbl. in 15-cent bags (Rebate 60c. per bbl. for bags in New York), 15-cent bags in Chicago (Rebate 60c. per bbl.)	\$3.40*	\$3.10

CONDUCTOR PIPE		
	New York	Chicago
Galvanized steel	5 & 10 & 5%	...
Galvanized charcoal iron	44½%	...
Copper	40%	...
Elbows (all sizes to 6-in.)	...	...
Galvanized steel	70%	70%
Squares	60%	60%
Copper	30%	30%

COPPER SHEETS		
	New York	Chicago
At the mill, hot rolled, 16 oz., base-price, per lb. .28½c.† (From jobbers' warehouse add 2 to 3 cents.)	28½c.†	28½c.†

	New York	Chicago
Cold Rolled, per lb.	30c.†	30c.†
From stock in 100 lb. lots and over	32c.†	32c.†
For less than 100 lb. lots 2c. per lb. advance.		
Polished, 20 in. wide and under, 1c. per sq. ft. extra; over 20 in. wide, 2c. per sq. ft. extra. Planished, 1c. per sq. ft. more than polished.		

	New York	Chicago
Bottom, pits and flats, 1 oz. and heavier, per lb.	42c.†	42c.†
Tinning one side, per sq. ft.	.06c.	.06c.

CORNER BEAD		
	New York	Chicago
Per foot	.05	.05

EAVES TROUGH		
	New York	Chicago
(Discounts from list):		
Galvanized steel	60 & 6%	60 & 10%
Galvanized charcoal iron	50%	55½%
Copper	20%	40%
(Also note Conductor Pipe.)		

FIBER		
	New York	Chicago
Per bushel	.36	.30

FINISHED IRON AND STEEL		
	New York	Chicago
(Mill shipments.)		
Bar iron, refined grade	2.77c.	2.62c.
Bar iron, double refined	3.77c.	2.62c.
Soft steel bars	2.72c.	2.62c.
Shapes	2.77c.	2.65c.
Plates	2.77c.	2.65c.

GALVANIZED SHEETS		
	New York	Chicago
Nos. 12 and 14 gauge, per lb.	7.60c.	to 8.10c.
No. 16	7.75c.	to 8.25c.
Nos. 18 and 20	7.90c.	to 8.40c.
Nos. 22 and 24	8.05c.	to 8.55c.
No. 26	8.20c.	to 8.70c.
No. 27	8.35c.	to 8.85c.
No. 28	8.50c.	to 9.00c.
No. 30	9.00c.	to 9.50c.
(No. 28 and lighter, 36 in. wide, 20c. higher.)		

GLASS		
	New York	Chicago
Corrugated Roofing, Galvanized:		
2½ in. corrugations, per 100 lbs., over flat sheets	30.00c.	...

GLASS		
	New York	Chicago
(Discounts from manufacturers' price lists)		
Single strength, A quality, first three brackets	.79%*	77%
Single strength, B quality	.79%*	77%
Double Strength, A quality	.79%†	79%
Double strength, B quality	.81%†	81%
Plate—up to 5 sq. ft.	.83%†	80%
Plate—over 5 sq. ft.	.83%†	80%
Plate—up to 10 sq. ft.	...	80%
Plate—over 10 sq. ft.	...	80%
Polished plate glass (commercial run of thickness and quality) sizes to 5 sq. ft., inclusive	.78%*	...
Sizes over 5 sq. ft.	.78%*	...

GRAVEL		
	New York	Chicago
1½ in. (Borough of Manhattan only), per cu. yd.	\$2.75†	\$2.75*
¾ in. (Borough of Manhattan), per cu. yd.	2.75†	3.00*

GRIT		
	New York	Chicago
Delivered at job in Borough of Manhattan	\$2.25	\$2.00
Delivered in the Bronx	2.50	2.25

GYPSUM		
	New York	Chicago
Plaster Board:		
Delivered at job, Boroughs of Manhattan and Bronx.		
27 x 28 x ½	37c.	...
27 x 48 x ½	34c.	...
32 x 36 x ½	23c.*	20c.
32 x 36 x ¾	24c.*	21½c.*
32 x 36 x 1	26c.*	...

GYPSUM		
	New York	Chicago
Plaster Blocks:		
Delivered at job, Boroughs of Manhattan and Bronx.		
2 in. hollow, 12 x 30, per sq. ft.	.09c.*	...
2 in. solid, 12 x 30, per sq. ft.	.12c.*	.11c.*
3 in. hollow, 12 x 30, per sq. ft.	.12c.*	.11c.*
3 in. solid, 12 x 30, per sq. ft.	.15c.*	...
4 in. hollow, 12 x 30, per sq. ft.	.13c.*	.12c.*
5 in. hollow, 12 x 30, per sq. ft.	.14½c.*	...
6 in. hollow, 12 x 30, per sq. ft.	.18c.	.14c.*
8 in. hollow, 12 x 30, per sq. ft.	.22½c.*	...

LATH		
	New York	Chicago
Eastern spruce, per thousand	\$10.50*	\$14.00*
No. 1 white pine, per thousand	9.50*	8.00
No. 1 hemlock, per thousand	8.25*	7.00
No. 1 yellow pine, per thousand	9.00*	6.00

LEAD		
	New York	Chicago
American pig, per lb.	7 to 7½c.	6¼ to 6½c.
Bar, per lb.	9 to 10c.	6½ to 6¾c.

LIME		
	New York	Chicago
Common, 300 lb. bbls., per bbl.	\$3.50	\$1.50
Finishing, 300 lb. bbls., per bbl.	3.70	...
Common hydrated, in paper bags, per ton (rebate per bag, 20c.)	18.50	18.00
Common hydrated, in cloth bags, per ton (rebate per bag, 20c.)	26.50	24.00
Hydrated finishing lime, cloth bags (rebate for bags 20c.)	24.60	...
Hydrated finishing lime, in paper bags, per ton ..	24.60	...

LUMBER		
	New York	Chicago
(Retail prices per M., delivered.)		
Yellow pine, 2 x 4	\$72.50*	\$55.00
Yellow pine, 2 x 6	72.50*	55.00
Yellow pine, 4 x 4	77.50*	56.00
Yellow pine, 8 x 8	75.00	56.00
Yellow pine, 12 x 12	83.00	65.00
Yellow pine, No. 1 boards, 1 x 6	100.00	70.00
Yellow pine, No. 1 boards, 1 x 12	110.00	75.00
Yellow pine, B and better flooring (plain)	115.00*	98.00*
Yellow pine, B and better flooring (quarterd.) ..	150.00*	117.00*
North Carolina pine, flat flooring, No. 2 and better ..	115.00*	85.00
North Carolina pine, flat flooring, No. 3	100.00*	95.00
North Carolina pine, rift flooring	137.50*	110.00
Norway pine, 2 x 4	72.00	65.00
Norway pine, 2 x 12	85.00	76.00

DEPENDABILITY

In the building of the Panama Canal ATLAS Cement was used exclusively. Over 8,000,000 barrels were shipped and used—after government tests—*and not a single barrel rejected.* Just another concrete example of the dependability of ATLAS.

THE ATLAS PORTLAND CEMENT COMPANY

New York Boston Philadelphia Savannah
Chicago Dayton Minneapolis Des Moines St. Louis



ATLAS CEMENT

THE AMERICAN ARCHITECT

Late Building Material Prices

(Continued from page 708-A)

	New York	Chicago
Douglas fir, 6 x 6 to 12 x 12.....	\$75.00	\$67.50
Douglas fir, 12 x 12 to 14 x 14.....	85.00	78.00
Hemlock, 2 x 4.....	63.00	55.00
Hemlock, 2 x 12.....	65.00	58.00
Oak, quartered, 1 in., F. A. S.....	250.00	275.00*
Oak, plain, 1 in., F. A. S.....	200.00	200.00*
Oak flooring, 13/16, quartered (white).....	280.00*	275.00*
Oak flooring, 13/16, quartered (red).....	275.00	225.00
Oak flooring, 13/16, plain (white).....	205.00*	175.00
Oak flooring, 13 x 16, plain (red).....	210.00*	178.00
Maple, 1 in., F. A. S.....	125.00*	125.00*
Maple flooring, 13/16, clear.....	150.00	140.00
Maple flooring, 13/16, select.....	140.00	135.00
Maple flooring, 13/16, No. 1 factory.....	120.00*	100.00*
Basswood, 1 in., F. A. S.....	120.00	100.00
Sap gum, 1 in., F. A. S.....	320.00	315.00
Red gum, 1 in., F. A. S.....	125.00	115.00
Chestnut, 1 in., F. A. S.....	110.00	105.00
Poplar, 1 in., F. A. S.....	150.00	130.00
Birch, 1 in., F. A. S.....	125.00*	100.00*
Spruce, random, 2 in.....	70.00	65.00
Spruce, wide, 8 in.....	75.00	70.00
Spruce, 10 in.....	75.00	70.00
Spruce, 12 in.....	80.00*	70.00
Cypress, 1 in., F. A. S.....	120.00*	125.00*

METAL LATH

Under 100 sq. yd., per sq. yd.....	40c.	35c.
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MORTAR COLORS

Red, per lb.....	.05	.05
Brown, per lb.....	.05	.05
Buff, per lb.....	.05	.05
Chocolate, per lb.....	.05	.05
Black, per lb.....	.06	.05
Pompeian buff, per lb.....	.07	.07
Moss green, per lb.....	.07	.07
Colonial drab, per lb.....	.07	.07
French gray, per lb.....	.07	.07
Royal purple, per lb.....	.07	.07
Yellow, per lb.....	.07	.07

(These prices are for mortar colors in bbls. or kegs of more than 200 lbs. each. In kegs of less than 200 lbs. each add 1c. per lb. In 25 lb. cans add 2c. and 12 1/2 lb. cans add 2 1/2 c. per lb.)

NAILS

Wire nails and brass, miscellaneous.....	75%	75%
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OILS

Linseed (7 1/2 lbs.) city, raw.....	\$1.90†	\$2.05
Over 5-gal. lots.....	1.89†	
Linseed, boiled, advance, per gal.....	.01	.02
Out of town, American seed, at.....	1.90†	2.05
Calcutta.....	2.00	

PAINTS

Leads:		
American white, in oil, kegs; lots over 100 lbs.....	13c.	13c.
White, in oil, 25-lb. tin pails; add to keg price..	1/4c.	1/4c.
Red, bbl., 1/2 bbl. and kegs; lots over 100 lbs.....	13c.	14 1/2 c.*

Dry Colors:

Red Venetian, American, per 100 lbs.....	\$2.00 to \$4.50	\$2.00 to \$4.00
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Metallic Paints:

Brown, per ton.....	\$32.00 to \$36.00	\$32.00 to \$36.00
Red, per ton.....	35.00 to 40.00	35.00 to 40.00

Cast Iron:

6 in. and heavier.....	\$54.30	\$61.80*
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4 in.....

3 in.....

(and \$2.00* additional for Class A and gas pipe.)

(Discounts to jobbers for carload lots on the Pittsburgh

basing card; freight rates from Pittsburgh to New

York, and also from Pittsburgh to Chicago, in car-

loads, per 100 lbs., are 27c. An additional 5 per cent

discount is allowed to large jobbing interests over

those listed below.)

Wrought:

Steel:

Black, 1/4 to 3 in.....

Galv., 1/4 to 3 in.....

Iron:

Black, 1/4 to 1 1/2 in.....

Galv., 1/4 to 1 1/2 in.....

Steel:

Black, 2 1/2 to 6 in.....

Galv., 2 1/2 to 6 in.....

Iron:

Black, 2 1/2 to 6 in.....

Galv., 2 1/2 to 6 in.....

Steel:

Black, 1/4 to 3 in.....

Galv., 1/4 to 3 in.....

Iron:

Black, 1/4 to 1 1/2 in.....

Galv., 1/4 to 1 1/2 in.....

Steel:

Black, 2 to 6 in.....

Galv., 2 to 6 in.....

Iron:

Black, 1 1/4 to 6 in.....

Galv., 1 1/4 to 6 in.....

PIPE—VITRIFIED SEWER

(Standard pipe and fittings, F.O.B., carloads):

3 to 24 in.....	67%	67%
27 to 30 in.....	66%	66%

PLASTER

(Rebate for bags, 15c.)

Neat wall cement in 15-cent bags, per ton.....	\$22.30*	\$19.00
Finishing plaster.....	25.00*	19.00
Lath mortar, in cloth bags, per ton.....	16.00*	14.00*

	New York	Chicago
Brown mortar, in bags.....	16.00*	14.00
Finishing plaster, per bbl. (250 lbs.).....	3.80*	3.00
Finishing plaster, per bbl. (320 lb. bbl.).....	4.75*	5.00*

PUTTY

In bladders, per 100 lb.....	\$6.25	\$6.25
In 1-lb. tins, per 100 lb.....	6.75	6.75*
In 5-lb. tins, per 100 lb.....	6.25	6.25

RADIATION

New York reports a 45% discount on standard heights.

Chicago reports a 48.2% discount on standard heights.

REGISTERS

Cast iron semi-steel or steel, in black or white japan or electroplate and small faces and borders....	30%	30%
Wall frames.....	30%	30%
Large faced, 14 x 14 in. and larger.....	50%	50%
Base board registers.....	30%	30%
Base board intakes.....	30%	30%
White enameled goods.....	5%	5%
Solid brass or bronze goods, except grilles.....	net	net
Grilles in black and white japan or electroplate in cast iron, plain lattice design—smaller than 14 x 14 in.....	30%	30%
—Larger than 14 x 14 in.....	50%	50%

REINFORCING BARS

High carbon steel from mill.....	\$48.50	\$49.50
Medium steel from mill.....	48.50	49.50

ROOFING MATERIAL

Tarred Felt Paper:		
No. 1—25 lbs. to 100 sq. ft., per ton.....	\$62.00	\$75.00
No. 2—16 lbs. to 100 sq. ft., per ton.....	63.00	75.00
No. 3—12 lbs. to 100 sq. ft., per ton.....	64.00	75.00
Rosin sized sheathing, per ton.....	65.00	70.00
Corrugated roofing, galvanized, 2 1/2 in. corrugation, over flat sheets, 30c. per 100 lbs.....		
Rubber, 108 sq. ft. rolls, 32 in. wide, per roll:		

First Quality:

1 ply—35 lb. rolls.....

2 ply—45 lb. rolls.....

3 ply—55 lb. rolls.....

Second Quality:

1 ply—35 lb. rolls.....

2 ply—45 lb. rolls.....

3 ply—55 lb. rolls.....

ROBIN

Common to good, strained (wholesale), 80 lb. per gal.....	\$17.00†	
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SAND

Mason, per cu. yd.....	\$1.85 to \$2.25*	\$2.75*
Torpedo, per cu. yd.....	1.85 to 2.25*	2.75*
White sand, per cu. yd.....	4.50*	

SHINGLES

Red cedar, 6 to 2, clear, per thousand.....	\$10.00	\$6.50
Red cedar, 5 to 2, clear, per thousand.....	12.00	7.50
White cedar, extra star, A star, per thousand.....	11.00	7.00
Cypress, 6 x 18, No. 1 hearts per M.....	17.00	14.00
Cypress, 6 x 18, No. 1 prime per M.....	15.00	12.00

SLATE ROOFING

F.O.B. cars, Quarry Station

Best Bangor.....

No. 1 Bangor Ribbon.....

Pen Argyl.....

Peach Bottom.....

No. 1 Chapman.....

Vermont.....

No. 1 Sea Green.....

Unfading Green.....

Mottled Green Purple.....

Red.....

Maine:

Brownsville, U'f'g Black, No. 1.....

Slates felt, 30 lb. roll.....

Slates felt, 40 lb. roll.....

SPRITS TURPENTINE

Per gal. in machine bbl.....	\$1.59 to \$1.65†	\$1.73
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STONE SCREENINGS

Lime, per cu. yd.....	\$2.35	\$2.75*
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STRUCTURAL STEEL

Beams and channel, 3 to 15 in., per lb.....	2.72c.	3.47c.
Beams and channel, over 15 in., per lb.....	2.72c.	3.57c.
Angles.....	2.72c.	3.47c.
Zees.....	2.72c.	3.47c.
Tees.....	2.72c.	3.52c.
Steel bars, half extras, from mill.....	2.35c.	2.35c.

STUCCO

In cloth, per ton (white, mixed).....	\$22.50	\$19.50
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STUCCO BOARD

Medium weight stucco board, plain, per M sq. ft.....	\$42.50	\$45.00
Medium weight stucco board, creosoted, per M sq. ft.....	50.00	50.00
Heavy weight stucco board, plain, per M sq. ft.....	55.00	55.00
Heavy weight stucco board, creosoted, per M sq. ft.....	60.00	60.00
Medium weight stucco board, plain, narrow key, per M sq. ft.....	50.00	50.00
Medium weight stucco board, narrow key, creosoted, per M sq. ft.....	55.00	55.00
Insulating board, heavy felt background, per M sq. ft.....	50.00	50.00

SHEATHING BOARD

Heavy weight sheathing board, per M sq. ft.....	\$50.00	\$50.00
Medium weight sheathing board, per M sq. ft.....	46.00	45.00

Stucco or plaster board, sheathing board and insulating board are in rolls containing one sheet 25 ft. long and 4 ft. wide (100 sq. ft.)

WALL BOARD

Wall board, shipped any length, 4 ft. wide, per M. \$45.00	\$40.00	
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Packed flat in cars if ordered in less than car lots. Add \$5.00 per M ft. for crating.

ZINC SHEETS

Western slabs.....	8 1/2 to 9c.†	
Sheets, No. 9, base casks.....	12 1/2 c.*	
Open, per lb.....	13c.*	

