

The AMERICAN ARCHITECT

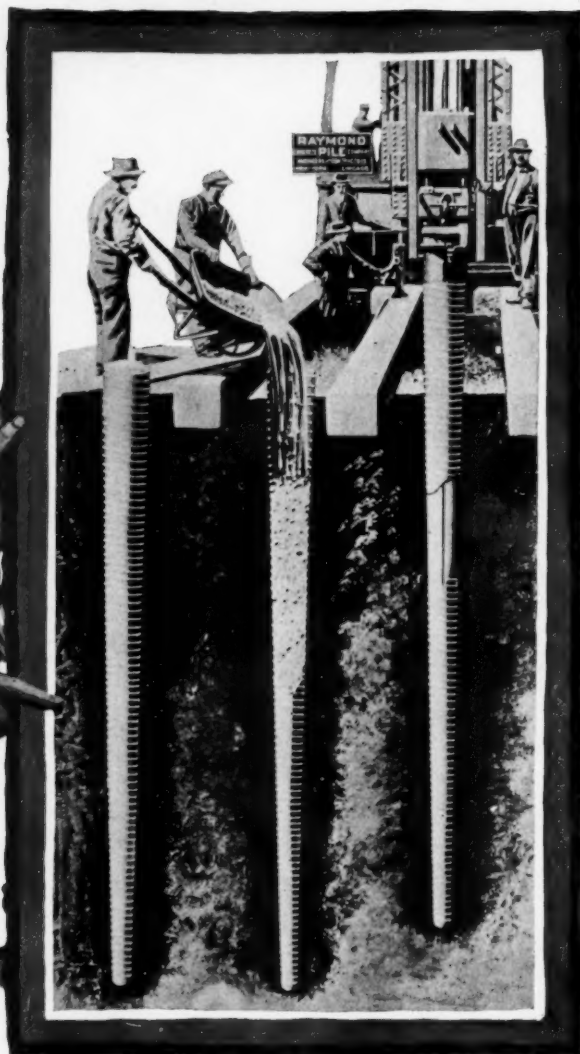
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VOL. CXV

WEDNESDAY, MARCH 5, 1919

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Architecture After the War

III. Efficiency

By C. H. BLACKALL, F. A. I. A.

IF there is one word I detest it is *efficiency*, for it has been worked to death during the past few years and has come to indicate pretty nearly the elimination of everything that makes architecture worth while and a substitution therefor of a classified, indexed, mechanical something which has been imposed upon architecture and called practical when it is really the essence of impracticability if we consider the true results which we know are such as will endure. But there is no other one word which expresses just the thought I have in mind, namely, the process of correlating the forces which, when properly united, will produce true architecture. Efficiency in its proper sense does not mean an engineering structure, nor does it mean a fantastic dream of a genius, nor the plodding evolution of a business man, but it means just that balance of art, business and science toward which we are all really working.

For the purpose of this paper, in developing and carrying out this efficiency, we need consider only three relations of the architect: First, his relations to the owner, the one who makes it possible for him to build; second, his relations to the contractor, who makes it possible for his ideals to be realized; and third, his relations to the public, from whom he must draw his inspirations. It is the failure to properly recognize and consistently and fairly carry out all these relations that is due a considerable measure of the failure and loss of prestige which the architectural profession has suffered during the war, and it is the proper recognition and application of these relations which will go a long way toward reinstating the architect in the position which he would most wish to occupy.

The relation of the architect to the owner is primarily and fundamentally that of a business man, except that not having a commodity for sale he can sell only his brains and the results of his experiences. It is wholly a matter of service, and, assuming that the architect's organization is properly

balanced, without taking up the question of how the work is divided among the individual members of the organization, there are a few things which must be insisted upon from the very start if we propose to give our client a square deal. When we have a building to do we should know our job thoroughly, not having a general, hazy idea that it will look so and so, or that it will involve such and such problems of construction, or that the book-keeping may be worked out in a particular line, but we must know the details of what is set before us so thoroughly that we cannot be caught tripping by an inquisitive builder or make mistakes which an indignant agent or owner may call upon us to rectify. If it is an office building we should know everything that is to be known about office buildings. If it is a church we should know just what kind of church is wanted in that particular place and not try to impose a ritualistic design on a Methodist Meetinghouse, nor a pagan temple on a lot which admits only of perpendicular treatment. We should know the details down to the last screw and bolt; know what is the best thing to do and what has been done in other cases. This is not an impossible condition, given the right organization; and when we do not know a thing we should go to work and dig it out at once. There ought to be no such thing as a specialist in architecture. Every problem should be treated as calling for the utmost architectural care in the initial steps as well as in the final elaboration of beautiful design, and it is not enough to toss off some sketches, but even from the very first an architectural job should be treated as something that must be mastered in advance; the program must be worked out so we know what we are doing and have a thorough reason for what we do. It may be stated as a general condition that few men are ever able to do their best all the time. Some of us can put on a spurt in one direction. Many of us can keep on a low level indefinitely, but the ideal organization which is to

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be of the most service to its clients is one which does its best all the time, which is always up to concert pitch, which does not admit such a thing as lack of preparation or specific knowledge, and which is always ready to deliver the goods it is paid for. I repeat this is not an impossible condition for a group, however much an individual architect might fail therein, and the great motto which ought to be over the door of every architect's office is, "Whatsoever thy hand findeth to do, that do with thy might," and one might add for a postscript, "Do it now." There is hardly any one attitude which will do more than this to restore the status of the architectural profession. Do it right and do it now. This really sums up the gist of the architect's relation to the client.

The relation to the builder is considerably more uncertain. Are we paid to help the owner beat the builder, force him to an impossible contract, incite him thereby to scamp work, or are we to play safe with the builder, whom we want to use many times, and help him out when he gets in a tight hole, "co-operate with the builder," as one general contractor has expressed it? Are we to consider ourselves the owner's agent in dealing with the contractor, or are we to take the point of view that we are an arbitrator between the two? Are we to encourage the master builder at the expense of the subcontractor, or develop the subcontractor at the expense of the builder? These are pretty vital questions, and they will not be answered in this generation. The owner hires us as his representative. The builder trusts us to a square deal. That much we know anyway, and I believe, speaking from personal experience, that the architect's function is neither as arbitrator nor agent, but that he should take a position that he is the virtual builder of the structure; that it is his job to see that the contract is carried out as an entity and in a proper manner, and that the co-operation which is so essential in the architect's own organization is fostered, developed and maintained in the organization of the builder. It is not enough to let a contract to a general contractor and then sit back and see him race to a finish. We must stand over that contract with even more care and foresight than the builder is called upon to exercise. We have more at stake than the builder, and his interests as well as our own are so involved in having the building carried out right from every standpoint that we cannot afford to leave such carrying out for one moment in the hands of anyone but ourselves. We must not allow a clerk of the works to come between us and the owner. We must not allow a foreman, however clever, to come between us and the actual workers, and we must

even guard us from ourselves, that in our perfectly natural desire to do things right and truly we do not overstep our rights and either ask more from the contractors than they ought to give, or take less than we know should be required. We must make the building and the builder right. Never for a moment lend ourselves to any emergency, artistic, business or structural, which would detract from doing the thing just right, but at the same time we must give the builder and all his associates and subordinates the very thing we should promise the owner, namely, first, last and always a square deal.

If we question what constitutes a square deal and try to decide in advance for every case that might arise, we would get nowhere; but we do not have to decide all questions in advance, and there are very few times when we do not know what constitutes a square deal to a contractor. It is the suppositional cases, the cases which never arise, or which may never come before us, which cause us to doubt, but I think every architect in practice knows perfectly well when he is not giving a builder a square deal, and if he lends himself to that kind of business transaction he has nobody but himself to blame if he gets a bad reputation. Carelessness, oversight and haste may land someone sometime in an equivocal position, but some of the procedures fundamentally essential to keeping the relations clear between the architect and the builder are, first, never trust to memory or to hearsay; second, never to give indefinite instructions or even instructions which are not based upon a specification or a document; and, third, never put off until to-morrow what ought to be done to-day. Remember all the time that the architect really owes more to the builder than the builder does to the architect; that the builder should be our best business friend and our best recommendation; that he is really doing a part of our work, and we owe it to ourselves and to him to recognize that he is a part of us, and not an opponent or competitor.

The architect's relation to the public is very easily lost sight of. We work for our individual clients and with our builders. We must not lose sight of the fact that we are able to practice our calling because of the attitude of the general public toward us. The best architect in the world, if unsupported by local, public appreciation and sympathy, would have but a sorry success. There never was a work of art yet built without its public. We must not be intolerant of the man in the street who passes our work by and puts forth an offhand criticism which we may resent but which may be altogether salutary for us and for our pride.

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We indeed build for our employers, but we draw our inspirations in last analysis from the consensus of opinion of the great public who sits in cold, impartial judgment upon our product. We must give the public what it wants. Of course there is room for a great variety in methods and means and some phases of the results, but we have only to compare the architecture of different cities in different parts of the country, for instance, to appreciate that architecture is not a transplanted, exotic production but must be indigenous. The function of the architect to the public is, therefore, to a very definite degree to study his public, to see what the trend of public thought is, keeping not so far ahead of public thought that he will be a mere crank, nor so far behind that he will be a fossil. Let him make his work as it truly should be, typical of his times, his country and his local audience. This point ought to be very strongly insisted upon. A recognition of this local influence was largely responsible for the individuality of the Italian work during the early renaissance. It is the recognition of this which contributes unquestionably to the success of such structures as the Woolworth Building in New York, or the Temple of the Scottish Rites in Washington. And with our service

to those who pay our bills we must include service to the public which tolerates, judges and approves or casts us out. We have done all too little of this in the last few years. We have been too prone to tell people what they should accept as good, and then find fault if they do not take our say so; but the war has shaken some of that out of us, and I believe the near future will show a closer approach to the ideal conditions of the great building periods of the past when architecture was truly a reflection of the sentiment, the growth, the history, the aspirations, the successes and the failures of the civic and national life.

And, finally, we must be proud of our three-sided profession, so proud that we set it above everything else on earth and give our life and our strength days, nights and Sundays, if necessary, to make it the very biggest thing on earth. Our calling is one which awakens the imagination and arouses enthusiasm if we will but open our minds to its possibilities and its whole meaning. We need imagination in our business, we need enthusiasm in our art, and, above all, we need firm convictions and high ideals which will lead us to be worthy of the great opportunities which we believe are coming.

An American Architect in France

A Communication from LIEUTENANT ALFRED P. SHAW, H. Q. Air Service

Illustrated by Sketches by the Author

THIS leaves me in Tours, my "station" for almost a year, although I have been absent from it as much as I have been present. When I left the front I had the very natural feeling that I'd never miss it, but I was wrong. Here in our S. O. S. Headquarters the streets of the town are heavily sprinkled with khaki (the U. S. A. kind), the amount of khaki being directly proportionate to the hour of the evening, as the French population has a way of staying indoors after dinner. (Is this a war-time habit or not?)

The Americans are in general more efficient "promenaders" and sightseers by day as well as by night, and take advantage of the opportunities to study, among other things, the beauties of French architecture. On Sundays up and down the spiral stone staircase, which leads to the top of the cathedral towers here, there is a constant procession of doughboys, with and without W. A. A. C.'s, or "mademoiselles"; the chateaux of the Loire were never so much visited by Americans, and many an

overseas cap has slipped off backward while its owner admired a gargoyle or a cornice. There is now at Loches an old guide and caretaker who has interested himself in researches and excavations at the old "donjon," in recognition for which service he has received the ribbon of the "Academie Française." You may have seen him yourself; he has been there a long time, and is most interesting and dramatic. In the dark dungeons of the old "Chateau fort" he turns down his lamp to a mere flicker, and after slamming a tremendous wooden door, solemnly explains: "*Chene mes amis, cinq centimeters d'epaisseur!*" or, clutching at an iron grating, shakes it and cries, "*Fer solide. Impossible de sortir! C'etait terrible, mes amis, terrible!*" He so impressed us with the genius of Louis XI. for cruelty that our chauffeur, who used to haul up shells to the artillery on the French front, was heard to remark that he hoped "the old guy wouldn't lose his way out." He didn't, fortunately.

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In getting around from place to place we have found ourselves stopping over night in towns which are miniature paradises for architects or archeologists. At Sancerre, where my "side kick" managed to clamp onto an American Army dentist long enough to cure his aching jaw, we could sit out on the old ramparts and see a whole department below us. The town, after the fashion of feudal days, is built on a good-sized hill, and if one could hang a swing from a tree on the neighboring slope, put

the properly attired boy in it, give him a push across the picture and look at Sancerre behind such a foreground, there would be no difficulty

in realizing that Maxfield Parrish was the municipal architect. We happened in there during the hottest days of the summer and expected to have cool nights, soft moon, gentle breezes and all that business, but instead the cool air manufactured in the valley stayed there and sent us only the accumulated warmth of noonday to remain at our higher strata. Every available billet for miles was taken by the division which had just moved in, and it took two days to get beds for the three of us. Just the other side of Clamecy, where our 3rd Corps School was located, and quite off the beaten path, is the splendid old abbey of Vezelay; we were obliged one day to climb over the hill on which it lies, and, passing at its very gate, could not resist an inspection. For once I was glad of my ignorance, as Vezelay was like a bolt from the blue. I had forgotten even the name of the place, and to step, without warning, from the burning, dusty heat of midsummer into the vast, cool, dignified nave of the abbey church and feast my eyes on the beauties of its vaulting, the mellow tones of the masonry, the delicacies of the carving in capitals and tympana was reward enough for former hardships. The abbey and the town around it, like Sancerre, cut up into the sky and seemed to be sitting there that day, baking in the sun, left alone by the world and

perfectly contented. What is now hardly more than a village was once a town of 10,000 people, and it was here that Philippe Auguste and Richard the Lion Hearted met to make plans for their crusade.

For a short while we worked out from Auxerre, which, in spite of its location, had at that time only an occasional American.



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At the hotel we nearly passed out with joy upon being shown to the comforts and luxuries of the bridal suite, which included a bath, where the "chaude" on the faucets meant something. From the top of the same establishment there is a fine view of the rich red tile roofs of the town, the two very similar and perfectly beautiful late Gothic towers of the Cathedral and St. Pierre rising about the sea of roofs and chimneys, and behind the whole the ring of cool green hills.

My duties as a member of a division which had

tion to the French of the meaning of and the energy behind the U. S. A. To see a whole railway carriage full of French officers and civilians flock to the windows as we pass alongside one of our vast depots and to watch them bob their heads up and down as only the Frenchman does in exclaiming, "Incroyable!" is a stimulus for the sleepiest kind of national pride. One old commandant seemed to think that if he could conduct the German General Staff on a tour, including a few large American depots, that they would return sadder



THE CATHEDRAL OF ST. ETIENNE, AUXERRE

activities in every corner of France, namely, helping to locate sites for air service projects and then getting them built, have given me disgracefully excellent opportunities to see things; sometimes where an American uniform creates a surprise, and at others in those places where the American invasion has been complete. You have heard much already of the work of Americans as engineers in France, and it is invigorating to see their marvelous desire and ability to accomplish their tasks—whether it be at Buzancy or Bordeaux—and the feeling of satisfaction for simply having done it.

One of the good results of the war is the revela-

but wiser. (The same result was very likely obtained by proxy.)

It goes without saying that there are no fine æsthetic qualities embodied in the designs of these A. E. F. projects. But the spectacle of a vast storage depot or of a great prairie manicured into a flying field by draining, scraping—sometimes ploughing—and rolling it, with rows of barracks and the gaping holes of the hangar entrances at the fringes, and planes taxiing around, taking off and landing in all directions—all this is not without its charm. We have seen these airdromes grow out of fields which since the days of the Gauls have been

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producing the fruits of the farmers' toil, and we realize that we are watching and assistant at the solution of a new architectural problem which is bound to equal if not surpass that of the railroad station in importance. The Wrights will be as much to blame for the crimes committed against architecture in the designs of airdromes as is the inventor of the locomotive for those in railroad stations. It is easy to picture every large city with one or more municipal airdromes, not only showing conspicuously from the air, but having

and an architectural student in 1999 will only have to press a button in the library in order to have laid upon his desk Woodrow Pershing Clemenceau's Treatise on "Early American Airdromes" (illustrated, 8vo. photographs from 10,000 feet).

By a coincidence I left, on my first leave in six-



THE CHATEAU LOUNES

its own particular "merk," made by the placing of buildings or by designs in the turf, so that a pilot could orient himself by simply memorizing or referring to these marks. Up to date most of our airdromes in France have been the products of military necessity and are intentionally free from any sense of show or beauty of design. We are bound, however, to have some real "swank" ones very soon,



TOURS

teen months, on the day of the signing of the armistice. Marshal Foch said that he thought he could keep things going for a while and for me to get away for a bit of rest. So I did. Paris was wild with delight, whether the cause was my arrival or the signing of the armistice I cannot say, but the most extreme press dispatches were mere echoes of the joy of the boulevards. The enthusiasm of the moment has quieted down, and we are all sitting with our ears cocked for the communiques from the Peace Conference.

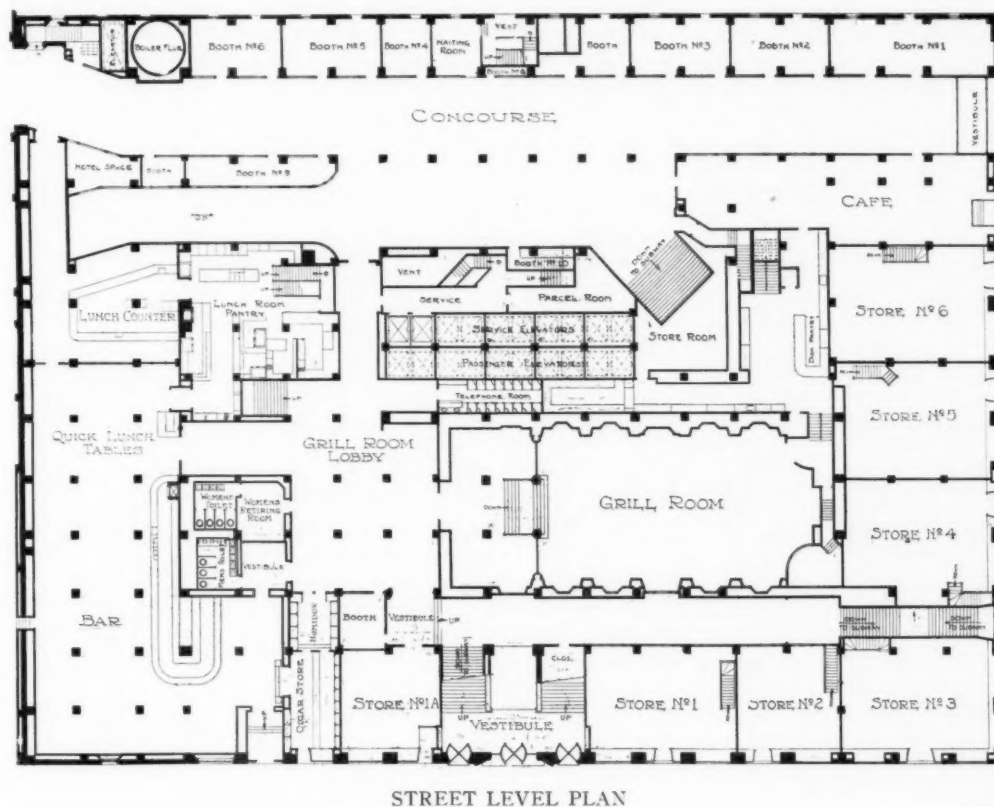
Keep your eyes open for bargains in tweed suits with open collars and long trousers—I've never been as proud of my clothes in my life as I am of my uniform, but—I have been more comfortable in others.

The Commodore—A New Hotel on Pershing Square New York

WARREN & WETMORE, *Architects*

NEW YORK'S hotel famine, while not entirely relieved, has been largely checked by the simultaneous opening of two hotels, each greater in size than any others in this country. The Commodore, on Pershing Square and adjoining the Grand Central Station, adds a very important architectural feature to a location that is

area of the plot occupied is 275 x 208 feet, equivalent to a square block. The building rises twenty-six stories above the sidewalk level, with five stories below the street. Part of the structure stands over the subway extension which curves at this point from Park Avenue and under Pershing Square to Lexington Avenue.



bound to become one of New York's busiest civic centers. The completion of the Park Avenue extension to connect by a well designed viaduct with the terminal, and the laying out of the adjacent grounds, to be known as Pershing Square, will create an architectural feature that will become one of the most attractive parts of this city.

The Commodore, designed by Warren & Wetmore, stands on the northwest corner of Forty-second Street and Lexington Avenue. The ground

The building, in addition to the many rooms usual to the social, executive and administrative necessities of the modern hotel, all shown on the accompanying plans, contains 2000 outside guests' rooms. There is a bathroom with each guest room.

The lobby of the hotel, claimed to cover the largest floor space of any similar room in the world, has been treated with originality and presents the aspect of an Italian courtyard or garden. This creates an atmosphere of intimacy with the foyer,

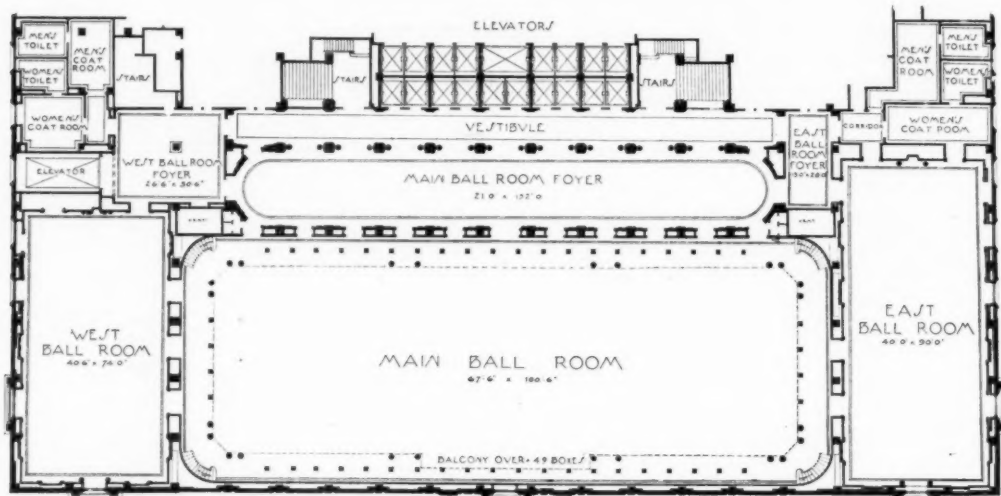
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and the result has been admirably achieved by means of a low ceiling of translucent white glass, all supported by beams decoratively treated. Here the walls are of rough plaster, above a wainscoting of soft Italian stone, the panelling on the walls is set with blue Italian tiling.

The garden effect is further carried out by the introduction of many large vases on the floor and

smaller dining rooms and the men's café on the same level, and by two short runs of steps the street level bar and the lunch rooms. The grand ball room is unusually large. It is 180 feet long by 78 feet wide, with a gallery completely encircling the room and divided into fifty-six boxes.

The ventilation of this room is on the level with the boxes, while the vents are in the ceiling. The



BALLROOM FLOOR PLAN

decorated boxes along the gallery railing, containing palms and other green plants. The mezzanine floor serves as a lounge, from which there is access to many well-appointed writing rooms.

The arrangement of the lobby provides opposite sides for men and women. At the right of main entrance are located the public rooms for men, the main offices, café and other utilities, while at the left are grouped the women's rooms, florist stands and other conveniences.

An unusual feature in the location of the kitchen is that four rooms are directly served from one kitchen. This kitchen is above the street level and is daylighted. It serves the main dining room, the

lighting is by an indirect system. The decorative scheme is made up of an admirable arrangement of orchid purple, white and gold, with a base of emerald green.

The foyer extends the entire length of the ball room, while the entrance is in Depew Place above the Forty-second Street level, obviating the necessity for guests passing through the main hotel lobby.

Owing to the elevated railway tracks along Forty-second Street, soon to be removed, it is not possible to secure satisfactory exterior photographs of the Commodore, as there is no location for a camera that will avoid the interposition of the elevated tracks.

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Program of the Post-War Committee

THE preliminary program of the Post-War Committee as outlined in a résumé prepared by Mr. Robert D. Kohn and printed in our issue of Feb. 26, presents a comprehensive study of existing conditions in the field of architectural practice and certain axiomatic conclusions of which a profession-wide criticism is asked.

It is urgently desirable that an objective so very commendable, one that will favorably affect in its ultimate conclusions every architect irrespective of affiliation, should receive the whole-hearted co-operation of the entire profession.

When the last word of counsel and advice has been received and digested, the work before this committee will be the task of putting into concrete form such measures as will secure every desirable end. This whole matter can only be regarded with enthusiasm and satisfaction, but it may be well to add that any plan, however admirably conceived, has no value unless it is relentlessly pushed to a practical conclusion. It will require an unselfish giving of much valuable time by many men, and as for this reason it may become handicapped, it would seem wise for the profession to provide a fund that would enable the committee freely to employ the clerical labor that will undoubtedly be required.

As the committee is not one purely of the Insti-

tute but of the profession as a whole, the matter becomes one of interest to every man who practices architecture or whose work is dependent on architects for support. Such a fund could be readily raised and would put the whole matter on a basis of such practical method as greatly to aid in its successful outcome.

The whole question involved in this proposed reorganization of the profession is one of right relationship—architects, one to another, to their clients, to the contractor, to labor and to the world at large. Most of the things about which complaint has been made in the past have been caused by a lack of proper relation such as other professions hold toward their field and toward the world. This brings up many questions: ethics, the true function of the architect, the exact relation of the architect's work to the arts and to commercial activity. The architect's relation in the past, or what he has incorrectly supposed to be his relation toward his work, cannot today be taken as a starting point from which to plot a diagram of his newer tasks. We have in two years entirely rewritten the laws regulating not only our professional but also our daily lives. We shall have to take as our rule and guide the conditions that surround us, and so govern our rebuilding as to have for the newer structure we shall erect, a firm foundation.

That the proposed program largely works toward this end is its greatest strength.

It would have been inconceivable three years ago that any proposal to regulate the practice of architecture could have been so drastic in its provisions and so radical in its recommendations. If, during the convention held three years ago, a member of the Institute had asked if it was not necessary for architects to become better known as business men and not entirely as artists, he would not have been taken seriously. Yet this program proposes to discuss and finally declare just exactly whether the practice of architecture is an art or a business.

It is a source of satisfaction to learn that the main points of this well-prepared program are in their essence identical with the very reforms which THE AMERICAN ARCHITECT has proposed during the past eighteen months.

THE AMERICAN ARCHITECT, in holding out for a better interpretation of relationship, early advanced the opinion that architecture while always an art was equally a business. It has been adversely criticized for what it was charged was a deliberate attempt to deprive the practice of architecture of its high dignities. Its retort was that the assumption of these dignities, often without due qualifications, was the main reason why architects did not receive recognition.

The program of the Post-War Committee, while

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merely referring to this phase of relationship, asks that a very full expression of opinion be made. It is safe to assume that there will be a large sentiment endorsing the contention made in these pages and set forth in its declaration as to what constitutes the real practice of architecture.

The work is but begun and the road is long and beset with many difficulties. Every man who practices architecture should give his earnest support to the Post-War Committee which in its present attitude is the most democratic and therefore the most American that has ever been shown by the profession of architecture.

State Societies

ARCHITECTS will generally agree with the statement made by Irving K. Pond, past president of the American Institute of Architects, in a letter addressed to *THE AMERICAN ARCHITECT*, and printed in the issue of February 5.

Writing on the subject of the formation of State Societies of Architects in all of the States, and more particularly in those where licensing laws are now in force, Mr. Pond stated:

"As one of the paths toward the higher plane, I regard State societies of professional bodies; and as ministering to the general unification of ideals I welcome an affiliation of such societies.

"But to be specific, when all has been accomplished in the way of forming and amalgamating State societies of architects there will always be an idealism a little in advance; there will always be a need of the leader, the one to whom all must look for the expression and interpretation of the finer professionalism. The American Institute of

Architects holds that place to-day, and will continue to hold it if it does not yield to clamor from without and debasing elements within. An amalgamation of State societies has its place and the Institute has its, and the place of the Institute is that of professional leadership which can be abandoned only at the expense of the highest good."

The American Institute of Architects, as the ranking national organization, and the various State societies, each working for the common good in their respective States, would correspond to our Congress and its two legislative subdivisions. There is every reason to believe that an organization of this sort would not only represent the entire profession of architecture, but in the striving to secure the most desirable results, show to all the world the true meaning of the practice of architecture.

The initiative in this matter will largely rest with the State societies, and it would seem logical to expect those already organized to exert by well-conducted propaganda an influence on the men practicing in States where no society now exists and at once to set about the necessary preliminaries looking to a State organization.

In the federation of such societies—and why not as an initial movement to federate those already in existence—we would have in this country two working bodies whose influence for good and whose opportunities for performance would be the liveliest factor in architectural organization.

The Institute, in the work outlined in its admirable post-war program, will be so busily engaged in carrying it forward to successful conclusion that the matter of the further organization of State societies and their ultimate federation can well be assumed by the State societies without calling on the Institute to interrupt the work now in hand.



Criticism and Comment

A Leadership in Art

AN INTERESTING COMMUNICATION FROM THE VICE-PRESIDENT OF THE NATIONAL ACADEMY OF DESIGN.

The Editors, THE AMERICAN ARCHITECT:

I have read with interest the editorial in *THE AMERICAN ARCHITECT* for January 29, entitled "A Leadership in Art Needed," and I feel that the inquiry made in it, as to what are the relations of the National Academy of Design toward the matter of memorials and other questions which refer to art, deserves answer.

The article is somewhat of an arraignment of the Academy for inaction and indifference. It states that the "silence between its recurrent picture shows is profound"; that "when we were at war, the Academy as *the* Academy was not in evidence." It expresses the fear that apathy exists in the Academy "that needs the spur of sharp but well-meant criticism to awaken this organization to a full sense of its responsibilities and the great opportunities which are presented for a useful activity." It is not so much, however, against the Academicians themselves, whose services are generously acknowledged, as against the Academy as an institution that the criticism is directed.

As an officer of the Academy, permit me to thank you for the concern felt and the advice offered, especially for the suggestion that "its officers might become more actively identified with national movements in art" and "that its councils might discuss important art matters, etc."

With you I deeply regret the fact that the voice of the Academy is not louder. I acknowledge that its activities beyond its exhibitions are not so much in the limelight as should be those of a body enjoying its inheritance; and that this fact certainly justifies inquiry if not criticism. But however non-apparent it may be, the fact remains that a vast amount of good work has been accomplished for which the Academy should receive credit. It has not been blazoned forth because of existing conditions confronting the Academy and against which it has long contended. It has felt it could accomplish the most good for art by co-operation with the other art organizations, and it has consistently followed this policy even in the recent war work, where, through its officers, it has taken its part in organizing and directing the work of the Division of Pictorial Publicity and of the Art Advisory

Committee of the Liberty Loan Committee. Furthermore, at the present moment it is actively at work in co-operation with the Architectural League and a group of manufacturers in establishing student workrooms for practical industrial art study.

Of course, its New York exhibitions *are* its main performances, although the importance of its schools for drawing and painting, where instruction is given to over three hundred pupils annually, should not be overlooked. It has also furnished from forty to sixty per cent of the annual and special exhibitions in other large centers. But in addition to its exhibitions, important civic and national questions have crowded upon the Academy which it has not ignored. It has, on the contrary, devised efficient methods of dealing with them. Take civic art questions for example. In 1895 the Academy and the Society of American Artists—now happily united—led in the creation of the Fine Arts Federation of New York, a body devoting itself exclusively to such questions. Other organizations were asked to co-operate in order to avail of all the best talent in the city whether in or out of the Academy. Thirty of its present members are and six of its seven presidents have been Academicians. The standing committees of this Federation have dealt with innumerable questions from lamp-posts to Soldiers' and Sailors' Monuments, and on these committees the Academy has always placed its most qualified representatives. The debt which New York owes to this organization is largely a debt to the Academy, though its actions are not proclaimed directly from its council room.

Again, your editorial speaks of the Art Commissions of cities and holds them up as models for the Academy. It asks, "Why not a bureau of the Academy equally advantageous to the community?" But, I ask, would any of these art commissions be in existence to-day if it were not for the Academy? Certainly the first one—the Art Commission of New York City—owes its origin to the Academy, acting again through the Federation; and as to the source of its power for artistic effort and judgment, will you kindly look at its personnel—even its lay-members are nominated by the Federation. The example has been followed in other cities. A grand achievement—largely brought about by the Academy.

It played its part also in the conception of a United States Art Commission to be located at Washington and to deal with national questions related to the fine arts, as it did last November with

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the question of what monument of Lincoln should be presented to London. The National Academy in this case furnished from its council room the data clarifying the situation. This National Commission owes its existence to much the same source and has drawn its professional members almost entirely from the ranks of the Academy.

And now let me tell you that the movement on which we must count for better memorials is well in the hands of Academicians. It was initiated by eight members of the Academy, assisted by a few others, including three laymen. These again found it better to operate, not directly, but through the organization having the most widespread membership, viz.: the American Federation of Arts. Even the Fine Arts Federation of New York, which immediately took up the question, agreed to this. In this decision you will see the kernel of the whole matter.

Your comparison of our problem with that of France, to the detriment of the Academy, takes no account of the difference in the situations. In France, Paris is the center of all radiation. New York does not hold the same relation to this country. A National Art Commission should be located at Washington. This was a necessity, and the Academy has lent all its efforts to its establishment and effectiveness. In France the Government stands behind art—acknowledging its worth as an enormous national asset. We are not so enlightened here, where art must take care of itself. The burden on the Academy is therefore a heavy one. We are still in the stage where American art patrons prefer to build up museums of past art—indispensable in their way. Until American patrons begin to stand behind the living art of their own nation, so long will the Academy be kept out of its own.

The National Academy will have to continue in this course for the present and do all the good it can by the means which it has provided and which are the best now at its disposal. The great thing is not publicity, it is accomplishment. And if journalists would inform themselves and would offer help instead of criticism the results would be more easily achieved.

The Academy looks forward to the day when its position as the source of sound effort throughout the nation will be more easily understood and acknowledged. That day will come when the Academy is properly housed in a building adequate to its own needs and to the needs of all other forces for good art in this city. The National Academy Association has been organized to erect such a building and to manage it. It would be the center of all current art activity. It would be known as the National Academy Building, and not only would it enable the Academy to make its exhibitions cover

every branch of art and welcome all artistic design but it would centralize all the scattered forces that make their appeal to the country, enormously increasing their influence and the prestige of the National Academy itself. The questions of site and financial support have thus far prevented the consummation of this ideal.

In saying what I have about the work accomplished and under way by the Academy I do not wish to underestimate the share done by others associated with it. That is one reason why the Academy has not proclaimed results more loudly. It believes that actions speak louder than words, and let me, in closing, call your attention to a list of only a few of the artists who, in our own day, have stood for good art in this community, serving as representatives of the Academy in the channels pointed out above: Francis D. Millet, John LaFarge, Chas. F. McKim, Augustus St. Gaudens, John W. Alexander, John M. Carrere, Herbert Adams, Edwin H. Blashfield, Kenyon Cox, Frederick Dielman, Daniel Chester French, Francis C. Jones, Thomas Hastings, Douglas Volk, H. W. Watrous, and a host of others. These have lifted art in the community, working for the public good. Of course there are many members whose work lies in the studio and not in the forum, but the Academy has not been lacking in men willing to sacrifice time and energy outside of the studio. I wonder whether any other profession gives itself so ungrudgingly and without compensation in public sacrifice. The lament goes up from many studios—Oh, for time to work; and the pleasantries go around, "The American Artist does not work, he serves on Committees."

HOWARD RUSSELL BUTLER,
Vice-President National Academy of Design.

The Quantity System

The Editors, THE AMERICAN ARCHITECT:

The quantity system as a means of eliminating the factor of doubt in the predetermination of cost seems to me entirely without merit. In the affairs of the contractor and the owner there will continue to exist a gamble on the final outcome. And this whether the contract sum be arrived at by the contractor through the exercise of his own skill or by calculations based upon a bill of quantities furnished by one called a quantity surveyor, who claims to know better than the contractor how to prepare such a schedule.

Mr. Wm. Graves Smith, in his letter appearing in your January 29 issue, asks what it is that obliges a contractor to become a gambler. An-

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swered in the same sense as propounded, the answer to this query is: Nothing at all, provided he understands his business. Answered in another sense, however, it seems proper to remind Mr. Smith that nothing does or can prevent the contractor being a gambler. If he does not play the game a winner he should, and generally does, return to the ranks of the journeyman, where he more properly belongs.

We all gamble who are ambitious and seek to better our condition. We always will until we have individually outlived our usefulness. Life without the speculative factor does not, in the nature of the case, look attractive to red-blooded men living under conditions peculiar to democracies.

Mr. Smith evidently thinks that the only element of gambling in contracting is that associated with the taking off of quantities, and in this I do not agree with him. His conclusion that if competition be put on the basis of constructive ability and management the contractor will cease to be a gambler (the natural inference being that the general adoption of the quantity system would bring about that condition) seems wholly unjustified by facts. Quality is not measured by quantity and cannot be fixed by mere listing.

FRANCIS W. GRANT.

Seattle Washington.

The Editors, THE AMERICAN ARCHITECT:

The engineering articles published in AMERICAN ARCHITECT have been read with interest, as our firm is endeavoring to keep up with the latest developments along the line of scientific construction and equipment of buildings.

In this connection, I cannot refrain from commenting upon the published letter in issue of Dec. 4, 1918, entitled, "Skin Specialists," in which it is charged that architects are in general ignorant of engineering and devoid of interest in the structural necessities of the buildings they design. The writer must be very unfortunate in his acquaintance among those who claim to be architects, to have arrived at such conclusions. In fact, it would seem that his acquaintances are not architects at all.

An architect must approach his building problem with an all around comprehension of its needs, and while he is modelling the exterior he must also be arranging consciously or sub-consciously the skeleton of its inner construction and utilities. He may be expressing himself in advance structurally without calculation of weights or stability just as a writer expresses himself grammatically, without diagramming his sentences, because like the writer, he has been trained in structure until his natural artistic

expression is necessarily correct in structure. No man is entitled to the name of architect who does not work in this way and the writer is not acquainted with any architects who work any other way.

The "Skin Specialists" described in the letter referred to must be examples of training in which too much emphasis is placed upon specialization. There is enough tendency toward specializing in the business of architecture. The term should not be carried into the education of the architect.

HOLMES & FLINN,

Chicago.

The Editors, THE AMERICAN ARCHITECT:

In your issue of Jan. 22, 1919, there is a reference to some comments by William C. Hays of San Francisco in *The Architect and Engineer of California*, on the recent competition for some State buildings in Sacramento, Cal. I have not seen the original article, but it seems to me that your abstract is somewhat misleading.

In the first part reference is made to "well-warranted criticism of the Institute code," and the balance of the article proceeds to point out various unsatisfactory features of the competition, because, in the instances complained of, the spirit of the code was violated. It seems scarcely necessary to suggest that a competition code cannot be held responsible for unsatisfactory conditions arising from a failure to follow the letter or spirit of the code.

The only specific criticism of the code I observe is in the fourth paragraph, which says, "In the 'open' form the code contains a very serious fault in that this 'evidence of education and experience' shall be offered by all competitors *after* incurring the expense of the preliminary stage." I do not understand the point in this comment. The first stage in an open competition as contemplated by the code is merely for the qualification of competitors in the second stage, and the latter is the real competition. In almost any conceivable circumstances the submission of evidence of education and experience fills every requirement for qualification, and where, for any extraordinary reason, drawings are found necessary they should be of the "slightest nature," as the code plainly states, and the evidence accompanies them. The obvious intent of the code in respect to the first stage is to limit to the minimum the burden of labor and expense required of the architects desiring to qualify for the final competition.

The extravagant and burdensome requirements of the first stage of the Sacramento competition seem to me to have been wholly unnecessary, although unfortunately the response of the profession appears to have justified the demands of those

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in charge of the competition, if it be true that sixty-five competitors submitted designs. Why should not the commissioners have asked for whatever they thought they wanted when so many architects proved themselves willing to undertake such an excessive amount of work and expense merely for a chance to compete further? I quite agree with Mr. Hays's comment in this regard.

The code no doubt has its defects, but I cannot see that any have been developed by this competition. No code will work by itself or without the intelligent and sympathetic co-operation of the architects themselves. The Sacramento program was approved by the San Francisco sub-committee, although this committee had power under the code to refuse approval. None of the architects who

were in touch with the situation during the time the program was under consideration appealed from the approval of the local sub-committee to the Institute Committee on Competitions, as they were warranted in doing within a reasonable time after the program was issued. If they had made such an appeal, it is quite possible that the profession would have been saved many thousands of dollars. When members of the Institute do not insist that the spirit of the code be carried out in competitive programs, or fail to avail themselves of the remedy it provides in cases where that spirit is violated, a situation is created, it seems to me, that reflects elsewhere than upon the code.

JOHN HALL RANKIN.

Philadelphia, Pa.

Recent Legal Decisions

STATEMENTS IN STOP NOTICE TO OWNER

Prior to its amendment in 1910, under the New Jersey Mechanic's Lien Law, section 3, the failure of a materialman to state in his stop notice with absolute accuracy the amount of the debt due to him was fatal to his right to recover under that section. And this was true even where the variation between the amount actually due and that claimed was slight, and had resulted from an honest mistake. To relieve to some extent the burden resting upon the materialman, the amendment provided that he should specify in the stop notice the amount due to him "as nearly as possible." But it is held that, in order to take advantage of the statute, when it appears that the amount specified in the stop notice is in excess of the amount actually due, the burden rests upon the materialman to show that the excessive claim was not the result of carelessness, and that the mistake had been made notwithstanding the fact that he had used every reasonable effort to ascertain with exactness the amount which he was entitled to impound in the hands of the owner.—*Tuttle v Cadwell*, *New Jersey Supreme Court*, 105 *Atl.* 11.

MATERIALS FURNISHED SUBCONTRACTORS ON PUBLIC WORKS

A statute was passed by the Legislature of Washington in 1915 providing that those furnishing materials to subcontractors for public work should give written notice thereof to the principal contractor within ten days of commencing to deliver the materials as a precedent to suit against the con-

tractor or his surety. A company who delivered gravel to a subcontractor for county work failed to give this notice, relying solely upon the notice and claim which it filed with the county auditor within thirty days after the completion and acceptance of the work. Under the contract the county retained a reserve fund. It was held that the materialman was not entitled to participate in this reserve fund. Prior to the enactment of this statute, the creditors of a subcontractor were without recourse against either the property or bond of the principal contractor, and the only creditors who could participate in the reserve fund, which was considered a trust fund, were those of the principal contractor. The effect of the act was that the creditors of a subcontractor, on complying with the conditions therein stated, might become creditors of the principal contractor and recover on his bond, and consequently from the trust fund. But to have this effect, they must qualify themselves by complying with the statute.—*Denham v Pioneer Sand & Gravel Co.*, *Washington Supreme Court*, 176 *Pac.* 333.

SURETY BONDS—EXISTING DEFAULT

While there is some lack of uniformity in the cases in different jurisdictions, the rule seems to be that, where the principal is in default and the surety executed the bond in ignorance thereof, he will not be bound, where knowledge of such default was withheld from him by the obligee; but where the surety has knowledge of it, he will be bound.—*Park Paving Co. v Kraft*, *Pennsylvania Supreme Court*, 105 *Atl.* 39.



PLATE 69

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK

WARREN & WETMORE, ARCHITECTS

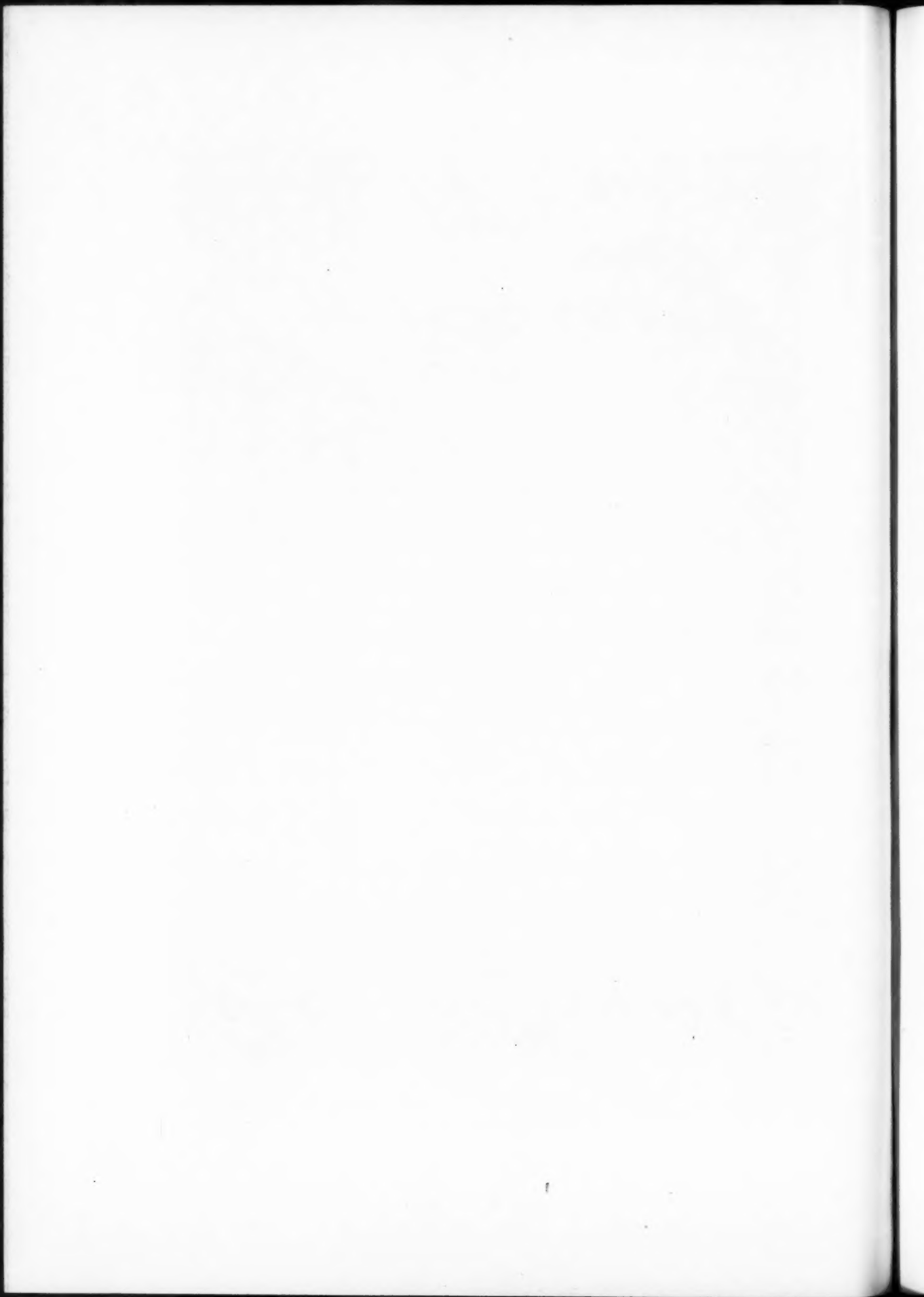




PLATE 70

LOBBY

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK

WARREN & WETMORE, ARCHITECTS

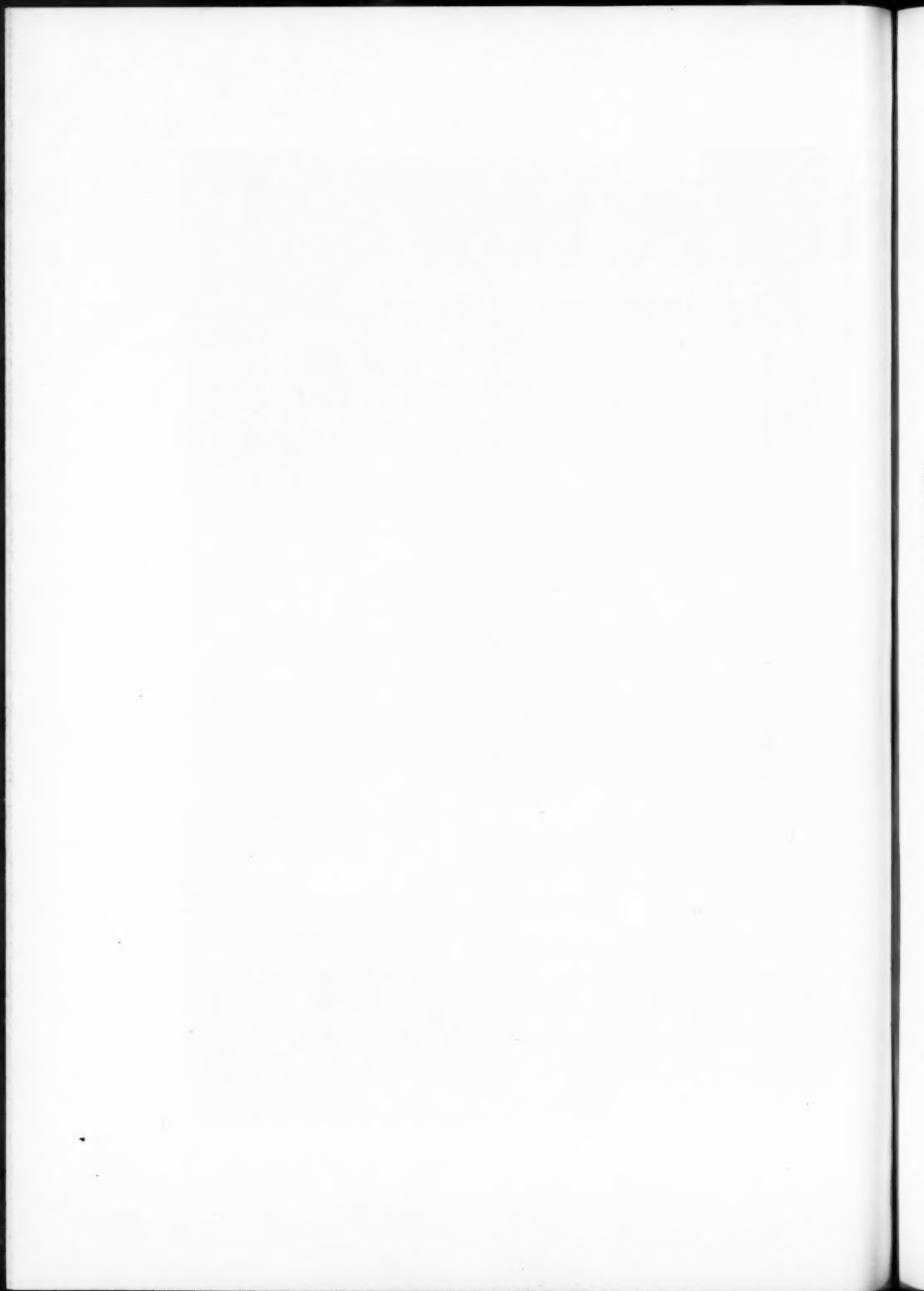




PLATE 71

MAIN DINING ROOM

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK

WARREN & WETMORE, ARCHITECTS

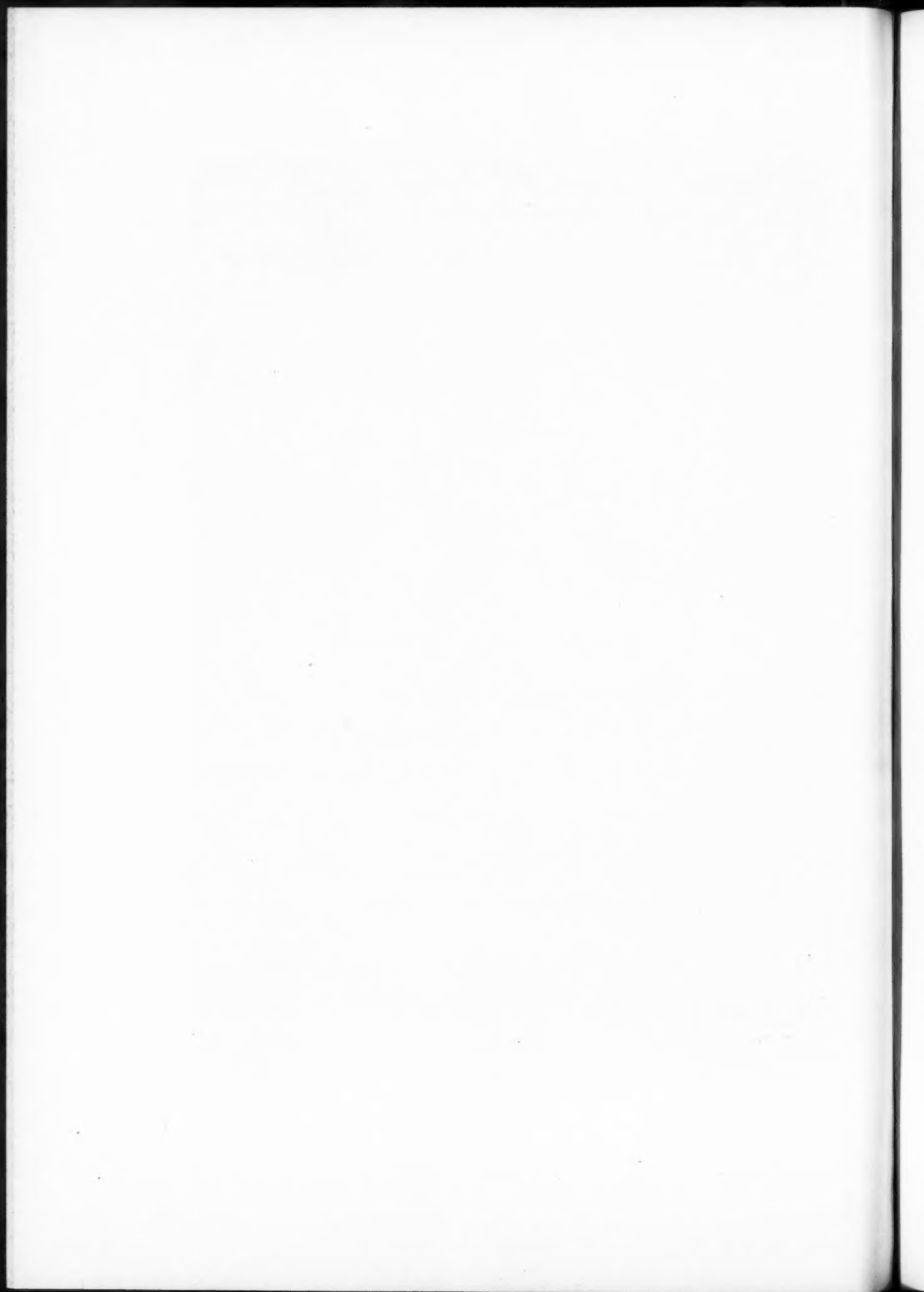
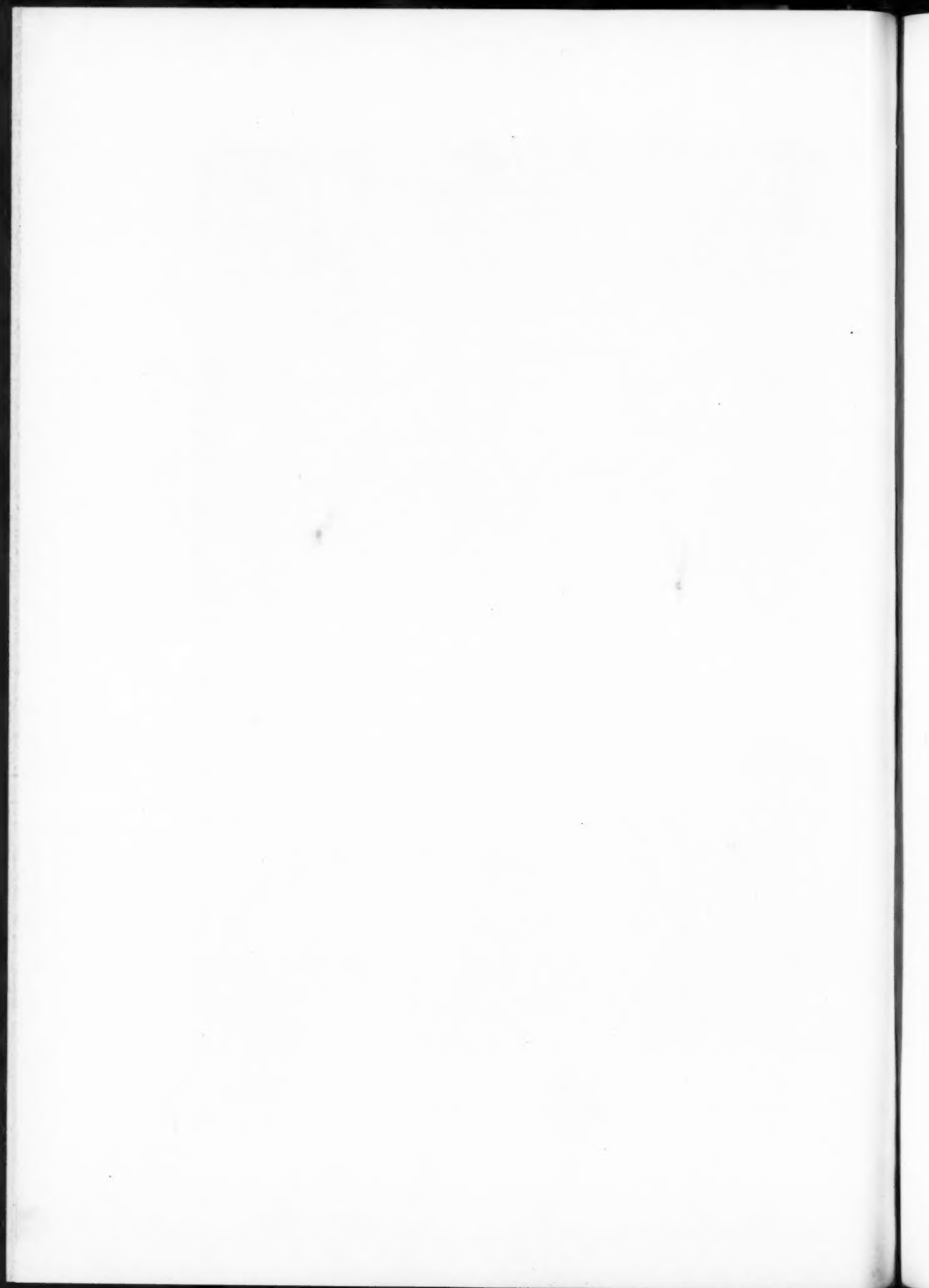


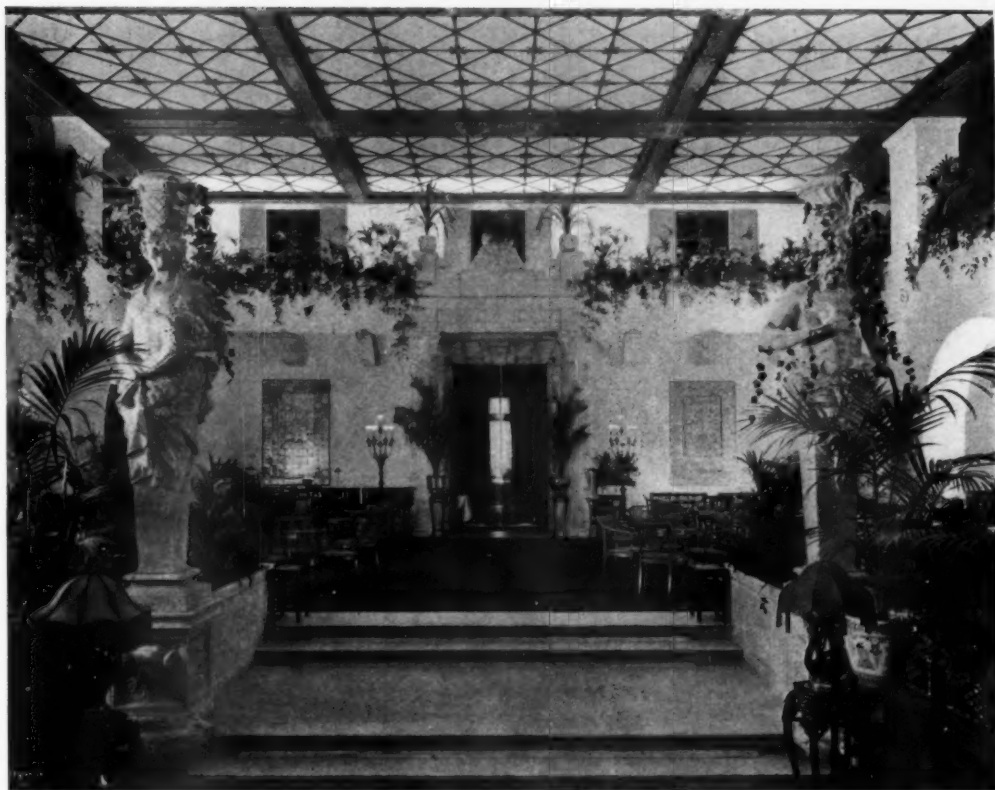


PLATE 72

THE GRILL

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK
WARREN & WETMORE, ARCHITECTS





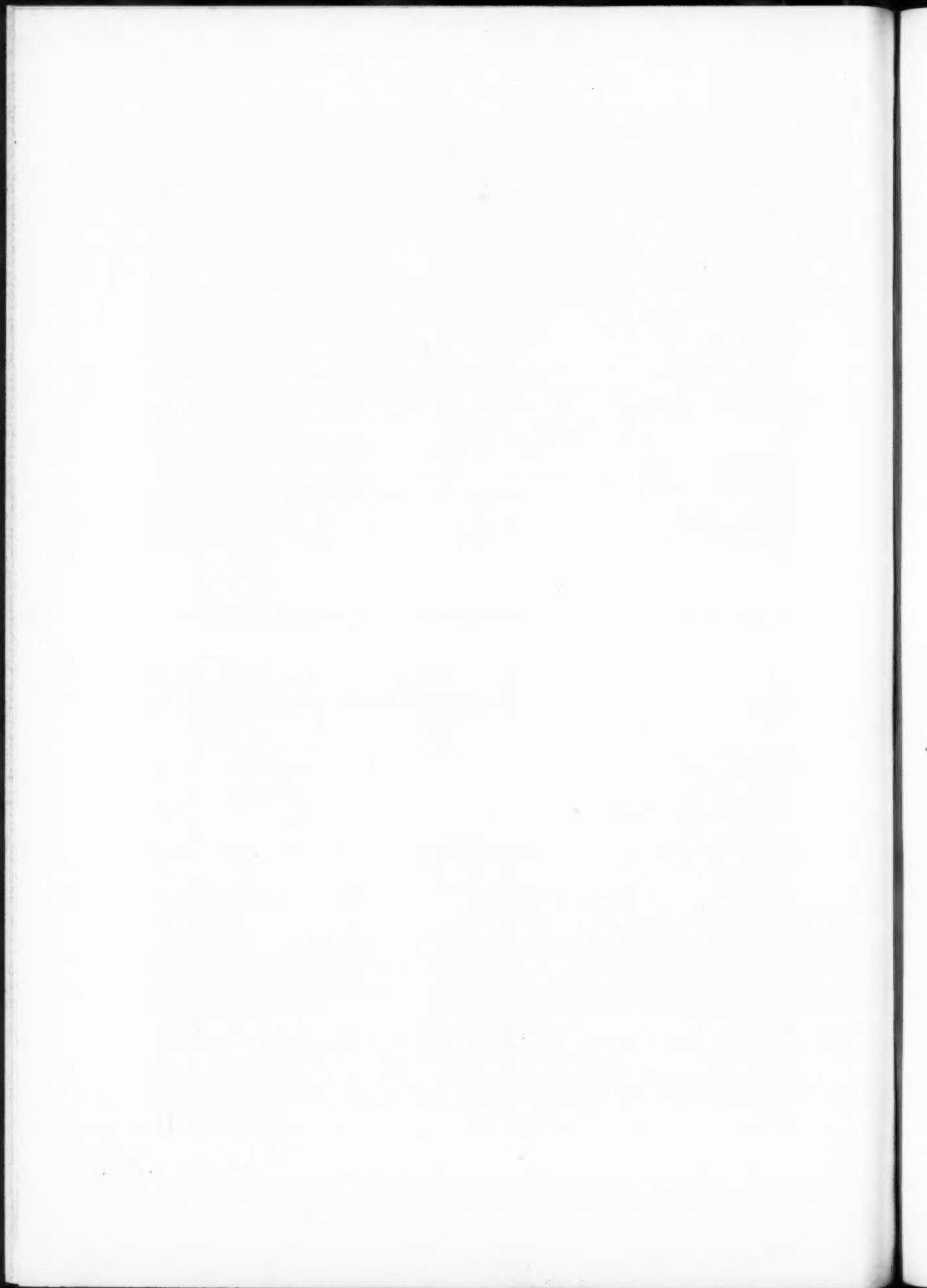
ENTRANCE TO MAIN DINING ROOM FROM LOBBY



PLATE 73

MEN'S LOUNGE

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK
WARREN & WETMORE, ARCHITECTS





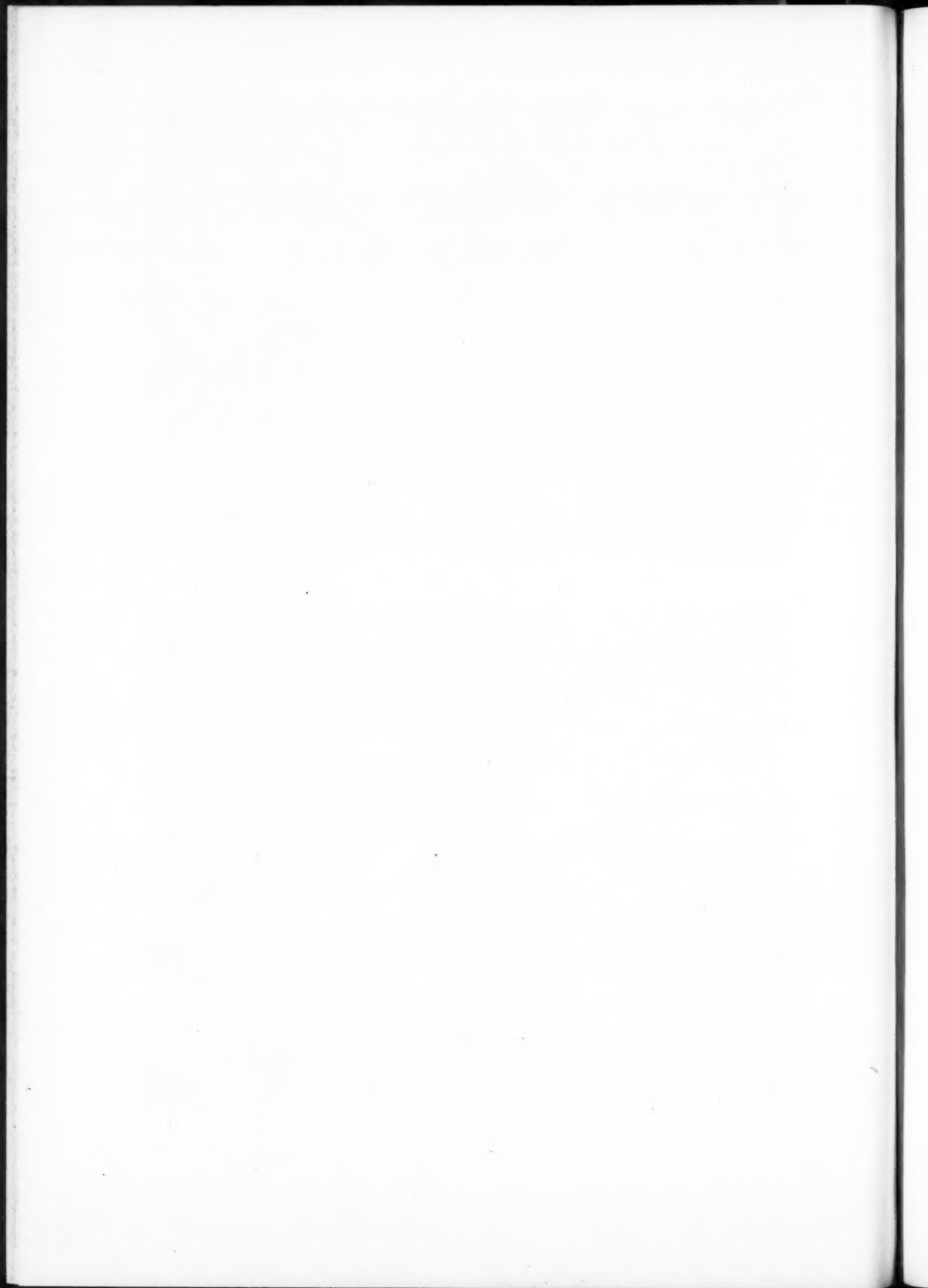
BALL ROOM

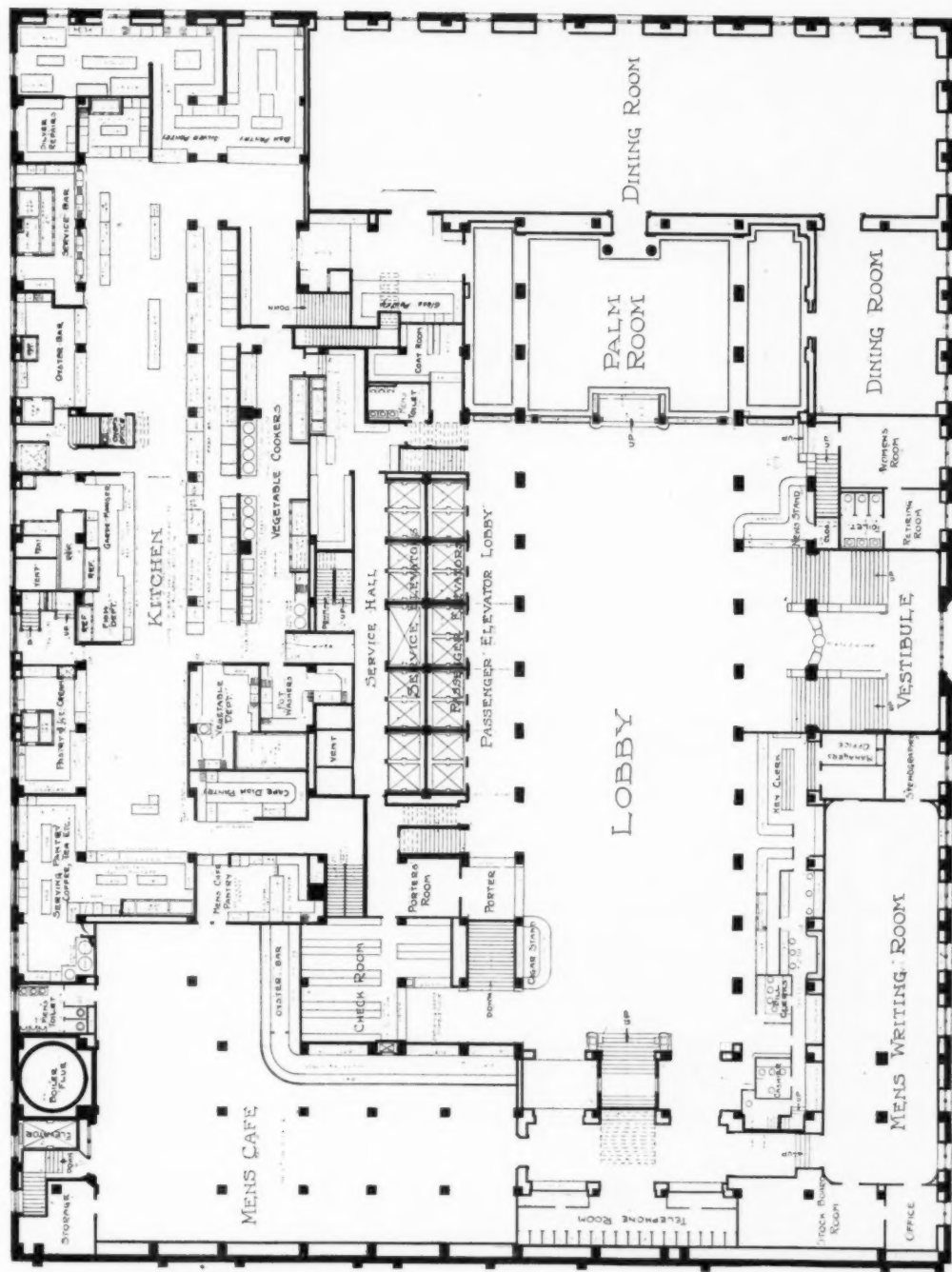


PLATE 74

BALL ROOM LOBBY

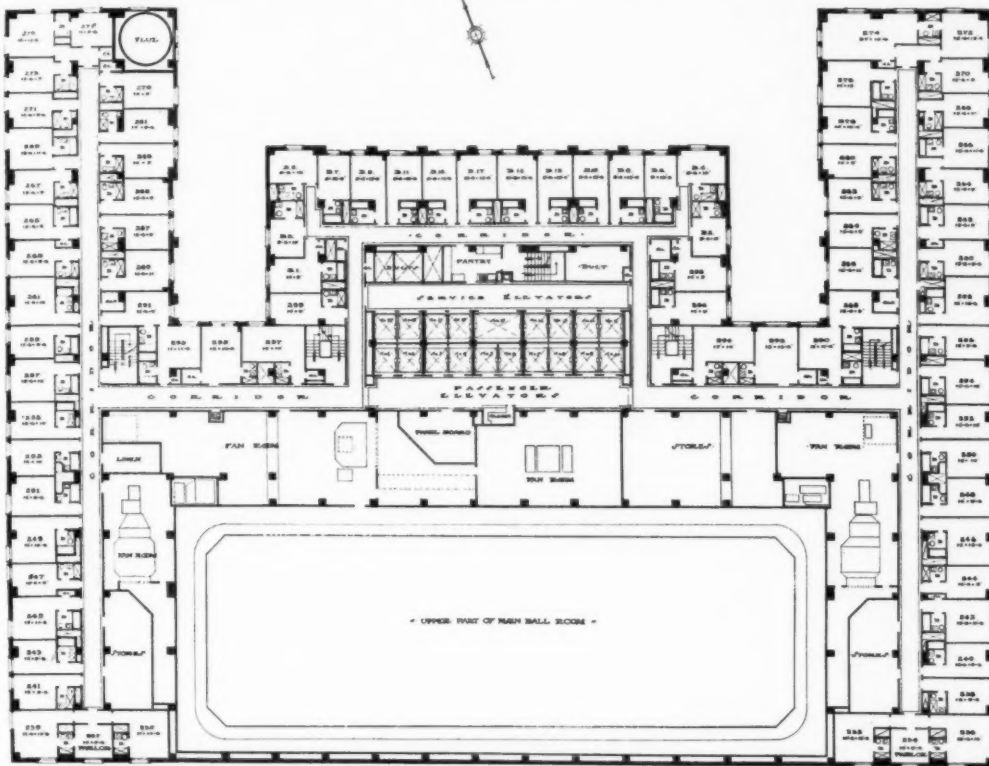
THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK
WARREN & WETMORE, ARCHITECTS



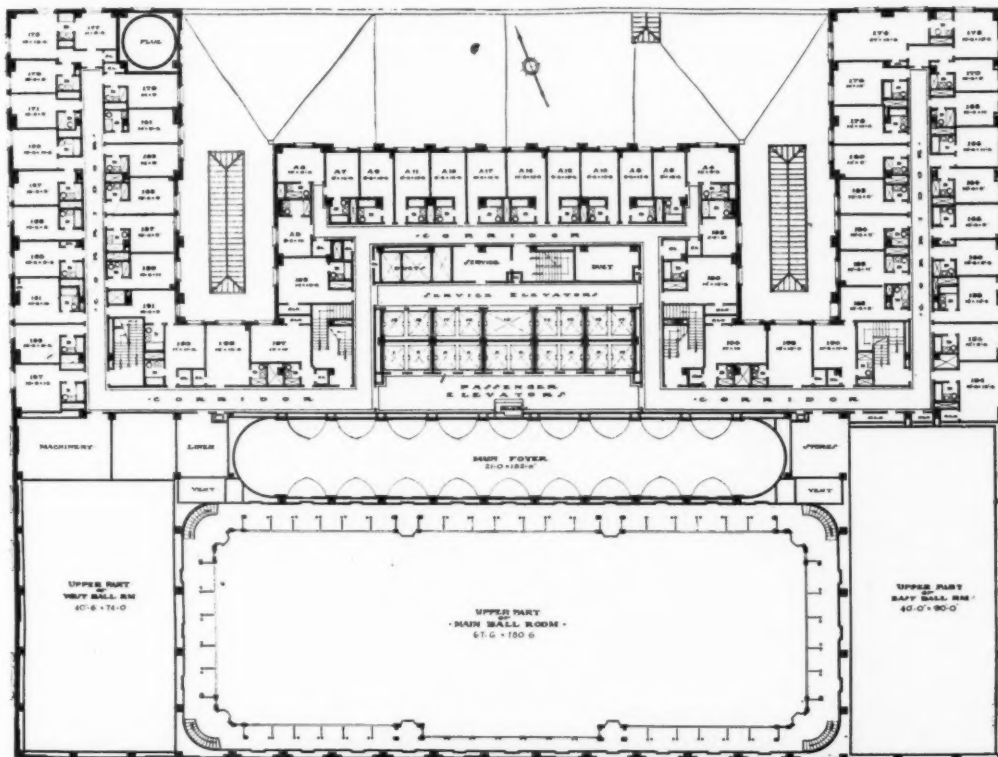




· FORTY-THIRD ST ·



SECOND BEDROOM FLOOR



FIRST BEDROOM FLOOR

PLATE 76

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK

WARREN & WETMORE, ARCHITECTS



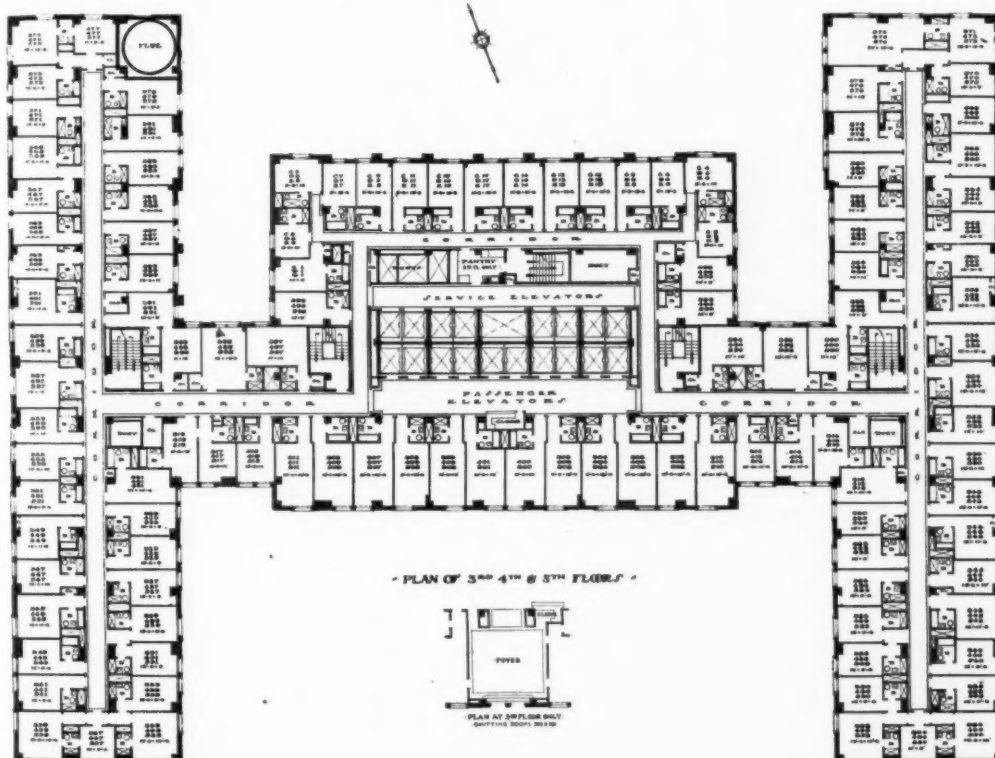
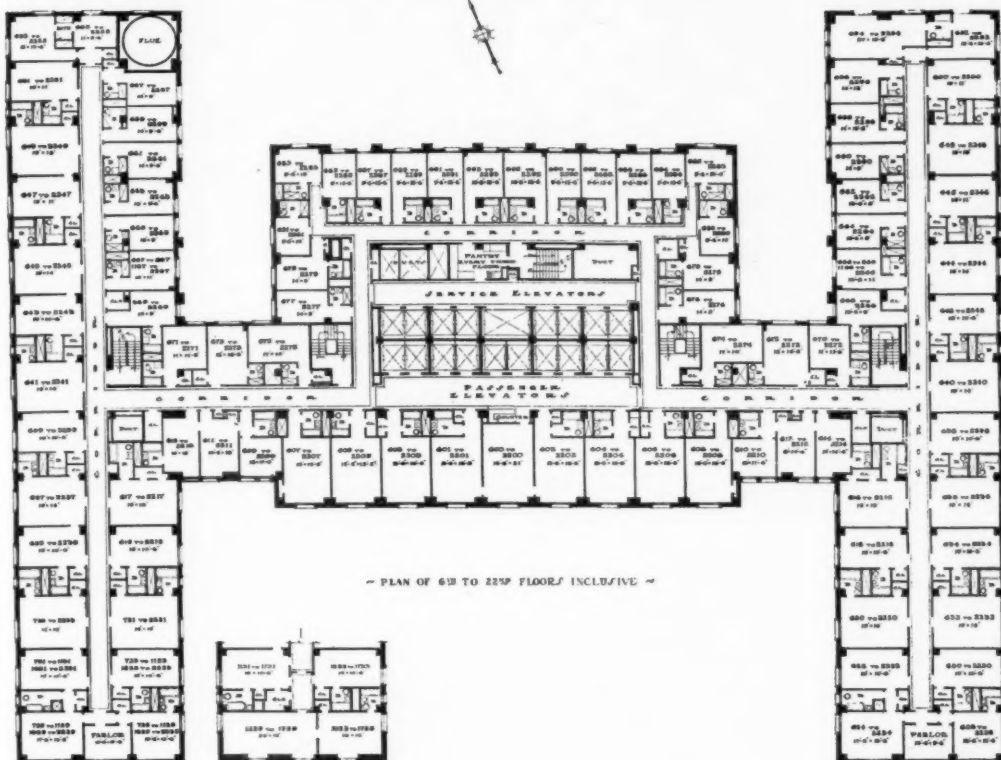


PLATE 77

THE COMMODORE—A NEW HOTEL ON PERSHING SQUARE, NEW YORK

WARREN & WETMORE, ARCHITECTS



Financial and Commercial Digest

As Affecting the Practice of Architecture

Scores Business Timidity

Charles T. Clayton, director of the Training Service of the Department of Labor, who is in touch with business enterprises in all parts of the United States, describes the present business situation as nothing more serious than a psychological state that has induced timidity.

"Business is positively going ahead," Mr. Clayton says, "and the biggest men of the country know it. I know that one of the largest railroad companies in the United States has been advertising for weeks trying to get machinists. At the same time, there are thousands of machinists out of work. The explanation is that most of these men are really not machinists at all, but machine operators. They haven't the real knowledge of machine work that they absolutely must have to make good. It is a fact, too, that the Employment Service recently examined a number of machinists for 156 jobs open to qualified men. Of about the same number of applicants, only three were found competent. In one community where there were 9000 alleged machinists, only 211 were qualified for real machine work.

"A great many industries in the United States at this minute are running under-manned because skilled help cannot be had. There are jobs enough, and men enough, but the men need training to hold the jobs.

"Business is slack because it is turning the corner; because there is uncertainty about future prices, and because a great many people are taking stock. The most far-seeing business men in America, I know from personal experience, are not delaying their plans for any one of these considerations, and the man who waits is almost certain to get 'stung.'"

War Trade Balances

The great excess of exports over imports during the war period occurred almost exclusively in the trade with Europe while in the trade with other parts of the world, notably Asia and South America, there was a large excess of imports over exports, says the National City Bank.

In the fiscal year 1915, practically all of which fell within the war period, the excess of exports to Europe over the imports from that continent

amounted to \$1,357,000,000; in 1916, \$2,383,000,000; in 1917, \$3,714,000,000, and in the fiscal year 1918, \$3,326,000,000, while the excess during the months of July, August, September and October, 1918, was \$1,267,000,000, making the excess of exports to Europe during the entire war period more than \$12,000,000,000; and even this does not tell the full story, since over \$1,000,000,000 worth of merchandise for European Russia was sent during the war to her Asiatic ports and recorded by our Government figures as exports to Asia when in fact their final destination was Europe.

Saving During the War

The savings made during the war were greater than for any other four-year period in the history of the United States. The per capita of savings in banks, trust companies and war savings was \$89.11 in 1914, and \$113.45 in 1918, an increase of 27.3 per cent.

The net earnings of the National Banks of the United States during the last fiscal year were \$212,332,000, the largest on record.

The War Cost of Food

Figures of food costs obtained by the Federal Bureau of Labor Statistics from more than 2000 retail stores in forty-five cities show an increase of 83 per cent since the beginning of the war.

Railroad Income Short One-Fourth

The financial results of Government operation of railroads, disclosed by Director-General Hines, show that the new Federal railroad income for the year fell short of the standard return by \$202,135,602. The standard return for the year is given as \$890,385,685. The net Federal income was \$688,200,083.

Operating revenue increased \$853,868,213, or 21.4 per cent. Operating expenses increased \$1,130,770,166, or 40.3 per cent. Net operating expenses decreased \$276,901,953, or 23.5 per cent. Net Federal income corresponding to standard return guaranteed by the Government decreased \$272,292,028 under Government control and operation of the roads, or 28.3 per cent.

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The statement points out that wage increases had the effect of increasing the 1918 operating expenses by \$583,000,000. The full effect of the wage increase was not felt in 1918, as some of the higher wages did not go into effect until late in the year, and the effect of these increased wages for a full year could not be shown by the 1918 figures. There are some who believe these wage increases for the full year 1919 will reach \$900,000,000.

Standardization as Aid to Price Reduction

Speaking on the immediate resumption of building activities as a national asset, F. T. Miller, of the U. S. Department of Labor, said that it is probable that the cost per cubic foot of modern fireproof buildings, up to three years ago, at least, was less than the cost per cubic foot of the old six-story, non-elevator, non-fireproof building of thirty years ago.

This is because of the rapid advance in the art, the manufacture of materials in large quantities, and the more ready assembling of the component

parts through standardization of forms. In the assembling of these materials there are one to two hundred skilled artisans. As inventions and improvements occur—as metal lath is substituted for the wooden, reinforced concrete for brick, the kalamein doors for wooden doors, etc., these trades suffer successively and yet the public is benefited.

In the adjustment of the incidental trade disputes over such matters occurs our greatest trouble, yet this is just the same kind of trouble which occurred in Manchester, England, on the introduction of the textile machinery, and as has occurred in every great industrial center upon the introduction of the labor-saving devices and improvements, each temporarily injuring one trade yet benefiting society as a whole. Less than 10 per cent of our labor difficulties in the building line are due to contests for wages.

Home building and home owning is the basis of the strength of the nation. While the home is not a negotiable investment, history has shown that it pays very large financial returns in the increased efficiency of the family. The home-owning spirit is awakened in about 120 cities throughout the United States for which end agitation is now active.

Current News

Secretary Creates Claims Board

To supervise and co-ordinate the work of the various War Department agencies engaged in the settlement of claims resulting from the termination of contracts or other procurement obligations made necessary by the suspension of hostilities, and to authorize and approve such settlements, a claims board has been created by the Secretary of War.

The members of the War Department Claims Board are: Benedict Crowell, Assistant Secretary of War and director of munitions, president; G. H. Dorr, assistant director of munitions; Brig. Gen. George W. Burr, assistant director of purchase, storage, and traffic; Brig. Gen. Herbert M. Lord, director of finance; Lieut. Col. Herbert H. Lehman, assistant to the director of purchase, storage, and traffic.

Special members of the board are W. H. Davis, for Ordnance Department contracts and obligations; Col. C. A. McKenney, for contracts and obligations of the purchase and storage division; Major H. L. Goodhart, for contracts and obligations of the Chemical Warfare Service, Medical

Corps and Signal Corps. Other special members may be appointed by the president of the board when necessary for duty in connection with other procurement bureaus or agencies of the War Department.

Formulate Plans to Urge Construction Work

With a view of supplying work for surplus labor the Division of Public Works and Construction Development of the Department of Labor last week met with twenty-five representatives of building and loan associations from almost every section of the United States, to formulate plans for necessary construction and obtaining assistance to this end.

In normal times, it was developed during the meeting, ordinary construction work each year aggregated approximately 600,000 homes built to take care of the normal growth of the country and to replace the losses occasioned by fire and other destructive agencies. During the past two years this class of construction work has ceased almost

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entirely. Conservative figures furnished by the representatives of the associations indicated that more than 1,000,000 homes are needed to take care of the normal growth and destruction during the past two years. The major portion of this construction, it is believed, has not been abandoned, but rather delayed, and it is with this idea in mind that a way to make liquid the associations' assets is being worked out so as to provide more money to float home-building loans.

Seriousness of the labor situation in Montana has resulted in action being taken, at the instance of Scott Leavitt, Federal director of Montana, by the State County Commissioners' Association, which has passed a resolution urging legislation to increase the powers of county commissioners so that they may undertake construction of public works on a large scale.

Approval of early legislation to broaden the scope of the commissioners' authority, it is believed, will be met promptly, as members of both House and Senate who have been interviewed on the matter have expressed themselves as heartily in accord with the plan.

The Future of Jerusalem's Architecture

Jerusalem's architectural, political, economic and social future is outlined in the *Spectator*, London. As a result of the great change which has put new life in its veins, it is written:

"The Moslems find comfort in the British assurance that the town planning scheme now afoot will not touch the ancient city within the walls. This scheme does not altogether please the Jews, for it involves the destruction of hundreds of the hideous erections which have arisen outside the walls of late years—shops and dwellings which have ruined the approach to Jerusalem. For the Jew, with all his artistic temperament, is not studious of architectural symmetry, and centuries of Ghetto life have not inspired him with much domiciling taste.

"The plans for the new city have been drawn by Mr. McLean, chief engineer of Alexandria, who was responsible for the Khartoum improvements. Among the chief features of the Jerusalem plans is a splendid boulevard running from the southwest toward the old city, intersected by an arboreous rond-point containing the British War Memorial. In future all buildings are to be in keeping with the local character; no more red roofs, no more flaunting gilded domes and other Neo-Byzantine atrocities. That eyesore, the Kaiser's clock tower, is to come down. The Holy City is hereafter to preserve her architectural soul secure from outside violation, and

with this security, may become one of the most beautiful, as it is the holiest, the most ancient, and the most interesting, city in the world.

"Jerusalem is giddy with prosperity. The British 'Tommy' is here, and a Pactolian stream of piastres floods the shops, bazaars, the very gutters. None so meek, so dull, so unenterprising but can divert some of this torrent; and Turk, Jew, and Gentile, shopmen, curio-sellers, restaurateurs, cabmen, guides, photographers, artisans, hucksters, barbers, shoeblacks, and beggars, are enjoying an affluence they have never known or dreamt of since King Solomon's day. Jerusalem in war time has become very much like one of the numerous febrile, army-infested towns of Northern France, and in her streets a thousand allurements, from cheap jewelry to pink ice cream, appeal irresistibly to the passing thousands of dust-covered soldiers."

Plans Burial Ground for Our Men in France

A bill has been introduced in the Congress by Representative S. D. Fess, of Ohio, to incorporate the American Field of Honor Association, consisting of prominent and patriotic people throughout the country, to co-operate in selecting and beautifying an estate in France as a final resting place of all Americans who died in battle abroad. The plan is to have a sort of Arlington Cemetery somewhere in France for the American heroes.

American Art In Luxembourg Museum

An official exhibition of American paintings and sculpture will be held in the Luxembourg Museum in Paris during May and June, it has been definitely decided. The plan was under consideration before the war, but only since the ending of hostilities have definite arrangements for the project been effected.

About one hundred paintings and about twenty small bronzes, busts and reliefs and a few other pieces in marble will be sent abroad, while it is possible that a small number of works in black and white, drawings, etchings and lithographs will be added to the collection. No large sculpture will be taken on account of the limited transportation facilities.

A committee, representative of all phases of present-day art in the United States, and comprising three or four corresponding members who will be professional artists of high standing in other cities, such as Boston, Philadelphia and Chicago, will vote

in the selection of exhibitors. Exhibition will be solely by invitation and the collection will include works of living artists only. It was decided by the committee, working in harmony with the plans of the Paris authorities, that if works of dead artists were considered it would require as much space as is to be accorded living artists, and the purpose of the exhibition is to place before the European world of art a carefully selected collection of representative American art of the present day.

It is also contemplated that a return exhibition of French art in New York will be held next winter.

Salt Lake Predicts Building Boom

Salt Lake City, Utah, expects a building boom in the Spring that will necessitate the services of every workman in that city. An industrial survey made recently by the labor federation disclosed the fact that many of the leading concerns have already completed plans for construction activities. Records of the federation show that in the past the prosperity of the city has always been assured when the city's financial interests have thrown their resources into buildings and real estate. Many private owners of property in the city have declared their intentions of building homes and making improvements on property.

Colleges to Admit "War Special" Students

The Bureau of Education of the United States is securing for returning soldiers and sailors admission to colleges, which under ordinary circumstances would not be possible because of lack of qualifications and standards. There are many men now awaiting discharge who are not regularly or formally prepared for college, but who are especially intelligent, and, as a result of their army contacts, aspire to have a more advanced training.

The Bureau of Education has obtained the aid of 87 of the best universities in America, who have consented to admit those who do not quite conform to their regulations as "war specials."

Certain qualifications, however, will be necessary, but a lower standard will be made in "war special" matriculants, and in each case where candidates desire to enter courses of study which by their professional nature require advanced and technical preparation, the giving of such examinations as will satisfy the institutional officers of the applicants' fitness to pursue such courses will be had.

Push Public Undertakings to Completion

Three things may be done in every community in the United States to speed readjustment in industry, prevent suffering and lack of employment, and bring to an end the period of uncertainty between the signing of the armistice and the treaty of peace, according to Geo. W. Coleman of the U. S. Department of Labor. Mr. Coleman has sent to business organizations throughout the country a letter in which he has outlined the things to be done to help aid the new era born amid the wreckage of war.

"See that your town starts at once and pushes to completion schoolhouses and other public undertakings halted by the war," he says. "Projects involving at least \$80,000,000 in schools were postponed last year through military necessity. Even if the country puts \$200,000,000 into schoolhouses this year we would not catch up with the needs of our children.

"The best antidote to the growth of elements of discontent and violence lies in each man owning his own home. The man who is building or in process of paying for a home, which he can call his own, is rarely, if ever, an anarchist. England alone is planning the building of 1,000,000 houses needed to-day, and we are advised that hundreds of thousands of new houses should be put up in America the present year. The citizen who builds a home this Spring will increase the social efficiency of his family and be a public benefactor as well.

"Individually and as a society, work toward the co-operative ideal in community life. Co-operation is to-day succeeding competition as the keynote of modern life and thought."

Raise Fund for National Cathedral

More than \$2,500,000 has already been raised for the building of a National Episcopal cathedral in Washington. Announcement was made this week that the National Cathedral Association is enlarging the organization, begun in 1907, to resume building operations this spring. The cathedral can be completed in three years.

Paint Peace Conference Scenes

The British artists Orpen and St. John have started work painting scenes from the Peace Conference. Both recently returned from the British front, where they have been painting war scenes.

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Making Prosperity Permanent

Temporary and even make-shift buildings are justifiable only when the worth of the things what are housed or to be housed in them are cheap. In countries where life is cheap the places where men live by labor are cheap.

In America cheap livestock, and cheap hay and grain, produced on cheap land, produced conditions where sometimes no buildings at all were provided to house them, and what buildings were erected were of a temporary character.

These conditions are only traditions to the present generation. But they teach a lesson of relative values.

Our fathers measured the cost of building against the value of the grain or livestock the buildings would house, and felt that it was cheaper to spend their time and energy in growing more livestock and grain than in building substantially.

Even if the land became worn out by repeated croppings, it was not worth while to spend time in fertilizing it. It was cheaper to take on more land, or move if the situation was not convenient. The low prices received for farm products in those days nevertheless gave profits from one year's operation of a quarter section of land to buy another quarter section of equally good land. This land was bound to rise in price and rise rapidly. The best interest of the farmers therefore was to put every dollar into more land, rather than into buildings.

They served themselves best by farming as much acreage as possible even though they farmed it inefficiently; and piled grain on the ground until they could find time to haul it to market, and let their livestock take care of themselves by the shelter of a straw stack, or under sheds made of poles covered thatched with straw.

Those days are gone. There were plenty of "land poor" men in the past. They put up with hardships and discomforts. Their belief in the future sustained them, but there was often a woeful waste and an unnecessary waste. The method of operating was unthinkingly followed just because it was "the way everyone did."

While the man of to-day who would allow his machinery, stock and farm products to suffer the onslaughts of wet, heat and cold, without the protection of good buildings, would fail in a short time, there is still a number who have not awakened to the change of conditions—who do not realize the value of permanent building.

The practice of wastefulness survived the economic reason for it. The economic reason we have described. The practice is rapidly disappearing.

The wasteful saving that made farming laborious and colorless drove the younger generation away from the farm. There were none of the graces of life, of the things to satisfy the desire to live and enjoy. The future was always being discounted by the present—putting up with hard labor and inconvenience for good times to come.

Nowhere to-day is there greater opportunity to live normally and enjoy life as on the modern farm. The time when nature was continually lending without interest has passed. We worked Nature to the limit. Now we realize what it is to work with Nature, and get bigger dividends than we got loans from Nature's surplus.

The average price received for stock, hay and grain is so high that we must save every bit of them we possibly can. We cannot afford to let any of our stock die, or any of our hay or grain be destroyed.

Builders have contrived all sorts of structures suited to the farmer's needs. There used to be only one material that could be used—lumber. Now, lumber is being more intelligently used, for we have discovered the uses of other materials for permanent buildings. The farm is now a permanent manufactory of foodstuffs. It can never become "worn out" under modern management. Its buildings must have all the permanence of the modern factory, sanitary, fireproof, sightly.—*The National Builder.*

Inter-Racial Council Formed

That an active Americanization of our foreign population is necessary in order to eliminate conflicting attitudes and intentions in our readjustment is penetrating the ranks of our people. The subject, with its close alliance to our many problems, has evoked the interest of prominent citizens who have now organized better to help foreigners, and, of course, their chosen country.

The direct aims of the organization are threefold: first, the education of the immigrant in the language, principles and ideals of the American people; second, industrial co-operation, whereby foreign laborers arriving here may be made to realize their opportunities and the desire of their employers for fair play; third, providing for the various groups, opportunity for association and other national groups, that racial aspirations may be brought into harmony.

The council has been established as a permanent organization, with Gen. T. Coleman du Pont as chairman. Representative men of the principal races from which our immigrants come are in process of being selected for work in this organization.

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Labor will be represented, and Arthur E. Holder, of the Vocational Education Board, Washington, is also one of the members.

Discussing the objects of the council, Alexander J. Hemphill, chairman of the board of directors of the Guaranty Trust Co., said:

"The first purpose is to create a better understanding and better feeling among the races in America, to the end that not only shall those who constitute our foreign-born population merge themselves effectively into our political and social structure, but that the countries from which they sprang may have a better and more complete understanding of America and its ideals."

Lumber Course Proves of Wide Value

The correspondence course in lumber and its uses, announced some time ago by the School of Forestry, University of Idaho, at Moscow, Idaho, has met with a ready acceptance the enrollment exceeding expectations. The course was offered in response to a demand for information in convenient form, regarding the properties of wood and the adaptability of different woods to different uses.

The topics treated include the structure of woods, physical properties of wood, standard grades and sizes, structural timbers, seasoning and preservation of woods, lumber prices, lumber production and the war-time use of wood.

The course is designed to be of special value to lumber dealers, lumber salesmen, contractors or builders, carpenters, manual training teachers, and others connected with the woodworking industries.

France Offers U. S. Monument Site

France has offered to present to the United States the site for a monument on French soil to American soldiers who died "on the field of honor." Edouard de Billy, of the French High Commission, has sent to Secretary of War Baker the following translation of a cablegram received from Andrew Tardieu, head of the commission, who is now in Paris:

"I am informed by Mr. de Billy that it is proposed to erect in France a monument to the American soldiers who have died on the field of honor. Mr. Clemenceau begs me to advise you that France wishes to offer the ground for the erection of this monument."

In acknowledging receipt of this message, Mr. Baker expressed deep appreciation and added that

upon the passage of legislation pending in Congress he would be happy to take up with the French authorities the question of co-operation from the French Government.

Great Britain Allows Trade in Hardwood

A British order effective March 1 has abolished restrictions on dealings in hardwood timber outside the United Kingdom. A cablegram from the consul general at London states that existing stocks in that country will be sold at public auction. Stocks are approximately as follows: Cypress, 220 carloads; gum, 183; cottonwood, 81; chestnut, 13; ash, 40; walnut, 40; oak, 176; birch, 62; poplar, 525; various other wood, 20; in addition there are about 300 carloads still to arrive.

A Roosevelt Memorial Bird Fountain

Announcement has been made that the National Association of Audubon Societies and affiliated organizations would begin work at once for the erection in New York City or Washington of a Roosevelt memorial bird fountain. Eminent American sculptors will be asked to present plans, it was said, and a national committee of nature lovers and sportsmen would soon be formed to advance the project.

Comparative Cost of a Quarter Century of Building

Shall contractors combine in a State organization to maintain the high cost of building and at the same time reduce labor to pre-war wage conditions?

That was the proposal of Ralph McLeran at the annual banquet of the Sacramento Builders' Exchange.

Mayor Carmichael congratulated about 125 builders present on the fact that the war being over building would resume. McLeran did not think it would unless he could form a combination of contractors and get wages back to "normal." He wanted a State organization of builders' exchanges similar to the State Building Trades Council. He stated that many of the trades had recently demanded and been granted an increase of one dollar a day, some trades now receiving \$9.00 per day. These wages, he said, could not prevail if building was to resume. Furthermore, contractors would have to get together and insist upon the acceptance

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by the owners and architects of the lowest bids received.

The acceptance of lowest bids is all very fine in theory and would be ideal from the contractor's point of view, but incidentally I have closed contracts on over twelve million dollars of work during the last twelve years at prices \$1,364,375.21 less than the lowest bids, or approximately 13 per cent of the total cost of the work. Whereas an equal amount of work oftentimes costs more where the lowest bidder must get the job. In other words, the compulsory acceptance of lowest bids is a temptation to bidders to fix prices.

But to reduce wages is not necessary, and I don't think it can be done. If it can, why stop at pre-war conditions? Why not go back twenty-five years and reduce labor to \$1.00 per day?

We can build better buildings to-day with high wages than we could twenty-five years ago with low wages.

The modern printing press turns out fifty thousand papers in an hour, while the old Franklin press could print but 500 an hour.

The tractor to-day can do the work of fifty horses in cultivating our fields. The hoist, the concrete mixer and numberless labor-saving devices and improved methods can do the work that formerly required expensive man power.

Mr. McLeran is wrong.

The following comparative costs during the past twenty-five years is the answer:

	Cu. Ft. Cost
Chronicle Building, 1890.....	.40
Mills Building, 1891.....	.40
Merchants' Exchange, 1903.....	.34
Chronicle, 16-story, 1905.....	.3472
Mills Annex, 1908.....	.26
First National Bank, 1908.....	.44
Insurance Exchange, 1912.....	.282
Mills Addition, 1913.....	.2404
Hobart Building, 1914.....	.3447
Hallidie (glass front), 1917.....	.1513

WILLIS POLK.

Jan. 17, 1919.

Detroit's First Builders Show

The first annual Detroit Builders Show will be held during the week of March 15 to 23 at the Wayne Gardens, Detroit, Mich. The exhibition will include a complete display of building products and equipments. It is expected, in view of the present state of the building trade, that there will be a large number of builders present and that the proceedings will have more than usual interest.

Personals

After serving in the Army Y. M. C. A. for some time, Lee Black, architect, of Lansing, Mich., has reopened his offices at 517 Oakland Building, that city.

A partnership has been formed by H. W. Bueming and Alexander C. Guth, architects. Their offices will be located at 521 Jackson Street, Chicago, Ill.

A partnership for the practice of architecture has been formed by M. B. Rissman and Leo S. Hirschfeld, with offices in the City Hall Square Building, Chicago, Ill.

The firm of Hitchings & Hutchings, architects, has been formed at 176 Federal Street, Boston, Mass. They will be pleased to receive manufacturers' samples and catalogs.

D. C. Newman Collins, architect and engineer, having completed his duties with the Government, has returned to the practice of his profession. His offices will be at 14 John Street, New York.

A partnership to practice architecture has been formed by Edward H. Bennett and William E. Parsons, with offices at 1800 Railway Exchange Building, Chicago, Ill. Mr. Parsons will act as consulting architect for the firm.

The Building Trades Employers' Association of New Rochelle, N. Y., has inaugurated a movement officially endorsing the U. S. Government slogan "Build Now," in the direction of meeting the demand for new houses in that community.

Lieut. Edwin Kopf of the architectural firm of McGuire & Shook, Indianapolis, has been mustered out from service in England and will return to his practice. The office of his firm has been moved to the Indiana Pythian Building, that city.

Harry Marshak, recently with the architectural department of the U. S. Navy at Washington, D. C., and Joseph A. Hickey, formerly connected with the engineering department of the U. S. Rubber Co. at Providence, have formed a partnership for the practice of architecture, and have opened offices in the Strand Building at Providence, R. I. They would be pleased to receive manufacturers' catalogs and samples.

The firm of Whitsitt & Schulzke, architects, has reopened offices at 610 Peoples Bank Building, Moline, Ill., following the discharge from the service of Captain H. W. Whitsitt, of the construction division of the Ordnance Department, who entered the army immediately upon the declaration of war, and Captain W. H. Schulzke, who entered the air service in December, 1917. The firm desires to receive manufacturers' samples and catalogs.

Late News in Architectural Fields

Lumbermen Confer with Government Officials

Representatives of the Government and the hardwoods and black walnut industries met last week at Washington to give further discussion to the method of procedure for the disposal of Government surplus stocks of hardwoods and walnut lumber that would be for the best interests of the administration and at the same time meet with the approval of the industry.

In the case of hardwoods, those present at the conference agreed that the quantity, less than 9,000,000 feet, was too small to be even a factor in the market. A plan was agreed to by which a committee representing the producers is to act in an advisory capacity to the Director of Sales of the War Department in the disposition of the small amounts of surplus hardwoods not absorbed by the construction bureaus of the Government or by the industry; this committee to advise as to market conditions and to assist in securing purchasers for the stocks as rapidly as they become available. It was agreed by those present that this action on the part of the Government removes these small surplus stocks as a disturbing factor in the hardwood market.

The conference in regard to walnut lumber brought out the fact that the Government representatives having these stocks in charge would so dispose of the stocks as not to in any way adversely affect the market. The plan is under consideration by which these stocks will be disposed of in co-operation with the industry, and the representatives of the walnut industry agreed to submit a proposal for the purchase of these stocks.

French Sand Breaks Commodity Prices

Prices for ordinary building sand, which have been held at practically war levels, were broken this week when dealers flooded the market with French sand which has been brought here in large quantities since the close of the war as ballast in troop ships. Contractors, since the armistice was signed, have been forced to meet the Government fixed price in the neighborhood of \$2.25 delivered, representing a wholesale price of approximately \$1.25 a cubic yard. The price was maintained en-

tirely according to the supply here in the market prior to the movement of troops back to home ports. It was expected that there would be an automatic drop back to proportionately pre-war levels when building sand in this market was 50 cents a cubic yard.

For the past month or so sand from Belgium and France has been dumped on the New York piers in such quantities as to be a menace. When the larger contracting firms found that there was to be no return to lower prices they took the step to force the commodity lower on delivery price in this market. A new material delivery company was organized, and announced a price for ballast sand at \$1.85, or 40 cents below the former delivered market price.

The price of broken stone in New York has also dropped 25 cents a cubic yard, making the quotation to-day \$3.25 for inch and a half and three-quarter-inch stone. The expected \$4 drop in the price of structural steel, the belief that lumber has touched its lowest level, with the rigidity of cement and brick prices, has tended to support the belief in the building construction field that everything is being cleared for the immediate resumption of building construction.

Meetings were held this week by both tile and brick manufacturers to readjust the situation to the best possible position with relation to the builder this spring. The ceramic tile interests met in New York City, while the brick manufacturers convened at Newburgh, both with the idea of putting the market in attractive shape for the prospective builder before the season starts next month.

New Housing Bureau Director Named

The appointment has been announced by Secretary of Labor Wilson of L. K. Sherman, chief engineer of the housing corporation, to succeed Otto M. Eidlitz as director of the Bureau of Industrial Housing and Transportation, the United States Department of Labor, who recently resigned to resume his private business. Mr. Sherman is 49 years old, a native of Massachusetts, and was graduated from the Massachusetts Institute of Technology as a civil engineer in 1892. His experience for the last 27 years has been as an engineer or executive on construction. His offices are in Chicago.

Department of Architectural Engineering



Port Jefferson, Long Island, N. Y. Alfred C. Bossom, Architect. Started Aug. 1, 1918; photograph taken Dec. 1, 1918. Ready for occupancy.

Quantity House Production Methods, Construction Branch, Emergency Fleet Corporation

THAT the impossible of yesterday is the possible of to-day has been evidenced in many ways within the past two years. These achievements have demonstrated the ability of this country to satisfy the most onerous demands and the methods by which these things have been done are worthy of study. The knowledge thus gained will exert a powerful influence on future undertakings and can be adapted to many problems not yet solved. Construction projects, on a scale of magnitude heretofore not undertaken, will become comparatively common. This enlargement of such enterprise will be a resultant of increased demands, of a knowledge of our actual abilities and from having accomplished great things.

Construction projects require the employment of two factors, the plan of the architect and engineer

and the construction organization. It is the accomplishment of construction organization that will be here described.

The imperative need of ships made necessary the establishment of a large number of shipyards. As these yards were located near cities already congested the housing of these additional workmen was urgent. The increase in number of the workmen employed in shipbuilding from 120,000 on Nov. 15, 1917, to 384,850 on Nov. 15, 1918, indicates the need of the housing work which was undertaken and carried to completion in record-breaking time. This work was done for the United States Shipping Board Emergency Fleet Corporation as an activity of the Division of Passenger Transportation and Housing. The Production Bureau of the Housing Department had charge of the production of build-

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ings and the installation of public utilities. This bureau was directed by a chief and a deputy chief of administration, R. D. Kohn and E. J. Russell, architects, of New York and St. Louis respectively. This bureau included the Architectural Branch, in

9 hotels and a number of miscellaneous structures. The buildings are of permanent construction, being of brick, frame, hollow tile and stucco. They are equipped with basements, heating plants, hot and cold water, gas ranges, laundry tubs, kitchen cabi-



Wyandotte, Mich. Branch of Design, Housing Department, Architects. 78 houses, started Sept. 1, 1918; photograph taken Dec. 16, 1918. Houses occupied.

charge of F. L. Ackerman, architect, Chief of Design; the Engineering Branch, in charge of Morris Knowles, Chief Engineer; the Construction Branch, in charge of W. G. Luce, Chief of Construction.

The work of these three branches was of great importance and the co-operation between them was

nets, fully equipped bath rooms with tub, water closet and lavatory, electric lights and fixtures. They were completely finished and decorated includ-



Lorain, Ohio. Abram Garfield, Architect. 232 houses and 2 apartment buildings.

very effective. The Construction Branch was inaugurated on March 1, 1918, and on Jan. 1, 1919, the work of construction was practically completed on 26 projects, extended along the Atlantic Coast from Florida to Maine and as far inland as Wisconsin.

The work involved included the building of 8949 individual homes, 1119 apartments, 21 dormitories,



Jacksonville, Fla. H. J. Klutho, Architect. 158 houses. Work started Aug. 28, 1918; photograph taken Dec. 16, 1918.



Lorain, Ohio. Abram Garfield, Architect. 232 houses and 2 apartment buildings.

ing the wall paper. The work of this branch also included the grading of streets and lots, the building of pavements, curbs and sidewalks, the installation of sewers, gas and water mains, the planting of trees, shrubs, hedges and grass plots. They took

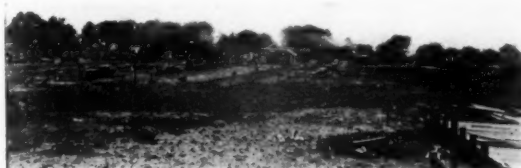
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Buckman Village, Chester, Pa. G. Edwin Brumbaugh, Simon & Bassett, Architects. Photograph taken Dec. 16, 1918. Houses completed, tree planting in streets under way.

the bare ground and on it constructed complete towns, having every modern improvement.

Practically all materials used in this work were purchased through the Construction Division of the War Department. This was the better method.



Buckman Village, Chester, Pa. G. Edwin Brumbaugh, Simon & Bassett, Architects. 278 houses, 21 apartment houses, 1 boarding house and 1 waiting station. Work started July 1, 1918. Photograph taken Aug. 1, 1918.



Buckman Village, Chester, Pa. G. Edwin Brumbaugh, Simon & Bassett, Architects. Photograph taken Dec. 16, 1918. Many houses occupied.

kind and adaptability of materials, quantity of production, transportation facilities, cost and other factors. These items had to be considered, not only from the standpoint of the project needing these materials immediately, but also with reference to possible developments in the vicinity of the producing locality. It can readily be seen that it would be poor management to make a long haul of materials for one project and deplete the stocks, when



Buckman Village, Chester, Pa. G. Edwin Brumbaugh, Simon & Bassett, Architects. Photograph taken Dec. 16, 1918. Rear yards and service alley at the left, street at the right. Houses occupied.

the same kind of material would later be needed in the production vicinity and thus require another long haul to supply the need.

It was also found that many materials ordinarily used in construction must be conserved for use in the direct prosecution of war. This applied more particularly to copper, cast iron, various oils, lead, bituminous products and other things used in the manufacture of munitions. The serious shortage of fuel made it necessary to use materials, as much

although it worked hardships in some instances, as it enabled the War Industries Board, who passed on all material requirements in conjunction with the Purchasing Department of the Division, to make surveys of the various material productions in all parts of the country. These surveys embraced the

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as possible, which did not require the use of fuel in their production.

The scarcity of freight cars, the shortage of fuel and motive power to move them and the congestion of the railroads on our Eastern seaboard, made the

is a most notable achievement. The problem was to construct these buildings out of materials, the use of which would least interfere with the vigorous prosecution of the war and on which there were no restrictions and to get them in the shortest possible



South Philadelphia houses, Essington, Pa. Duhring, Okie & Ziegler, Architects. 200 houses and 1 store building. Work started July 10, 1918; photograph taken Dec. 16, 1918.

problem of transportation one of grave importance. This necessitated the elimination of long hauls where possible. It was also found advisable to bring the materials to the seaboard, when possible, at a right angle to the coast line in order to avoid

time so as to not conflict with the Government transportation program, also to carry on the work expeditiously regardless of the serious labor shortage.



Chester Hotel, Chester, Pa. G. Edwin Brumbaugh, Simon & Bassett, Architects. Started July 1, 1918. Photograph taken Dec. 12, 1918.

transportation through the congested area. It will be readily seen that the selection of the materials, their purchase, transportation and expediting presented an important and complicated problem.

Until the work of the Housing Department of the Emergency Fleet Corporation was undertaken, no development of that kind had ever been attempted on a scale of such magnitude even under normal conditions. When the abnormal conditions that affected every element of such a project are considered and the fact that the work was accomplished with the record-breaking speed that was absolutely necessary in order not to disrupt the Government war program, the work of the Construction Branch



Dundalk, Md. E. L. Palmer, Jr., Architect. 520 houses, 2 boarding houses, stores and athletic field. Started June 15, 1918; photograph taken Dec. 1, 1918.



Hog Island Dormitories, Philadelphia, Pa. G. M. Bartlett, Architect. 4 group hotels with dining halls, store building, heating plant, laundry, pump house, bakery and warehouse.

A large proportion of the labor was inexperienced in this class of work and recruited from all parts of the country.

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It was not necessary for the contractors to devote weeks estimating the quantities and ordering the materials as the Construction Branch was responsible for their purchase and delivery, including the equipment when required. Only contractors of

complicated problem owing to the fact that the lists had to be made in conjunction with the War Industries Board and subject to their approval. This was necessary in order not to interfere with the general war program. Another factor in this work



Union Park Gardens, Wilmington, Del. Ballinger & Perrot, Architects. 510 houses, 1 apartment house and 4 store buildings. Work started July 1, 1918; photograph taken Dec. 21, 1918.



St. Helena, Md. E. L. Palmer, Jr., Architect. 296 houses, mess hall and kitchen and power house. Started May 15, 1918; photograph taken Nov. 15, 1918.

known ability were selected and the work was awarded on a lump-sum fee basis; the Construction Branch furnished the lists of materials, attended to their purchase, quality, transportation and delivery; took care of the funds and payrolls and the adjust-

was the constant substitution of materials which were, on a moment's notice, withdrawn from use owing to their scarcity or other requirements of the Government. Transportation difficulties also, at times, made substitutions necessary. It was under these conditions that Mr. Dyer was compelled to



Yorkship Village, West Collingswood, N. J. Electus D. Litchfield, Architect. 907 houses and 1 schoolhouse. Started May 15, 1918; photograph taken Dec. 16, 1918. Houses completed, road-making delayed by lack of materials for public utilities.



Sun Village, Chester, Pa. Branch of Design, Department of Housing, Architects. 430 houses, 18 apartment buildings with stores under 8. Work started July 12, 1918; photograph taken Dec. 17, 1918. Houses occupied.



Washington Avenue Apartments, Newport News, Va. Francis Y. Joannes, Architect. 4 apartment buildings with 323 apartments and dormitory rooms. Started June 1, 1918; photograph taken Dec. 15, 1918, occupied.



Hilton Village, Newport News, Va. Francis Y. Joannes, Architect. 501 houses, 2 apartment buildings with stores under, fire house and incinerator.

ment of all labor disputes, the United States Employment Bureau assisting with the recruiting of labor. This procedure left the contractor free to devote his entire time to the work of actual construction.

Mr. M. M. Dyer, of Boston, Supervisor of Estimates of Materials, had charge of making all material lists and quantity surveys. This was a very

labor in furnishing the lists which controlled the supply of material to the project.

In order to save time the materials often had to be listed from pencil sketches, and, on many occasions, the materials which it was known would be required, were ordered before any drawings were prepared. They were in transit in such quantities as to be delivered at the site of the project almost coincident with the arrival of the drawings and the contractors with their outfits and equipment.

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The material lists, when completed, were given to Mr. H. W. Jensen, a contractor of Pittsburgh, Supervisor of Materials Procurement. He had charge of the purchasing and procuring of all materials. These purchases were made through the Construction Division of the War Department by

the kind, quality and quantity of available materials as well as the ability of the various vendors to furnish them. Only in emergencies were materials purchased in the open markets for immediate use, pending the arrival of materials through the regular channels.



Dormitories, Essington, Pa. Duhring, Okie & Ziegler, Architects. 2 dormitories for 614 men, 1 dormitory for 27 women, mess hall and kitchen and boiler house. Started June 22, 1918, completed Aug. 24, 1918.

Mr. James Albro, who maintained an office with the Construction Division at Washington, representing the Construction Branch of the Housing Department as Supervisor of Material Purchases and reporting to Mr. Jensen.

Purchasing in this way simplified the problem and the close contact with the War Department resulted in the elimination of red-tape and delays, permitting of maximum speed in the work. The Governmental purchases of material tended toward doing away with competition, control of the market and enabled the Construction Branch to be always familiar with

The use of standardized products was adopted as far as possible. The Architectural Branch adopted certain standard units, such as windows, doors, trim, plumbing and lighting fixtures. These standards were furnished to the project architects and were incorporated into their designs with the most satisfactory results. Economy in cost and time, with no lessening of architectural effect were gained by the use of these standards, and it is one of the valuable lessons taught by the work of the Housing Department.

(To be continued)

Equivalent Temperature of Guaranteed Steam and Hot Water Heat

By HENRY N. DIX, M. E.

NINETY-NINE times out of a hundred, when a heating plant is tested, the temperature outdoors is not that which the specification or contract states to be the temperature when a certain indoor temperature is to be obtained. In other words, the contract may call for a temperature of 70 deg. in zero weather, but on the day of the test the outdoor temperature is not zero but some other, usually higher. The question then arises, what is the temperature to which the building should heat under these conditions in order to fulfill the guarantee?

For the use of the architect, engineer, contractor and the trade this article has been prepared with the hope that it may prove of interest and value to

them. The formula and charts apply equally well to buildings heated by direct or indirect radiation, and hot blast.

There have been published, from time to time, tables which have purported to give the temperature to which a building should heat, with different outdoor temperatures, when the quantity of radiation installed is correct to heat the building to 70 deg. with an outdoor temperature of zero. These tables have usually been satisfactory for the heating of residences in the so-called 70-0 region. However, there are many buildings where they cannot be used because many combinations of indoor and outdoor temperatures are required. Again, these tables have been made applicable to steam-heated

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buildings. A large percentage of modern buildings are heated by gravity hot water systems and these tables do not apply, owing to a difference between steam and hot water heating.

For these conditions the following formula will hold good with internal temperatures varying from 40 deg. to 100 deg. F. Outside of these limits the coefficient of transmission of the radiators and building materials will have changed enough to cause this formula to be inexact. For all practical purposes it is sufficiently accurate to be used even with the higher temperatures that result from testing in summer weather.

$$C = \frac{T(A - B) + D(T - A)}{T - B}$$

in which

T = Internal temp. of radiator.

A = Guaranteed room temp. with outdoor temp. B .

B = Outdoor temp. on the day temp. A is to be maintained.

C = Indoor temp. to which building will heat when

D = Outdoor temp. on the day of test.

For example:

A heating plant is installed in a building and guaranteed to heat the building to 60 deg. with an outdoor temperature of minus 10 deg. with steam at five pounds gauge pressure. The day the test is to be run off the outdoor temperature is 15 deg. above zero. What temperature of the room should be obtained in order to fulfill the guarantee?

Substituting in the formula we have

$$A = 60, B = -10, D = 15, T = 225.$$

then

$$C = \frac{225(60 - -10) + 15(225 - 60)}{225 - -10} = \frac{225 \times 70 + 15 \times 165}{235} = 77.5 \text{ deg. F.}$$

The objection to using this formula, however, is that it requires considerable computation to arrive at your result. With this in mind the accompanying charts have been prepared. These charts have been made by using the above formula.

Charts Nos. 1, 2 and 3 are for use with low pressure steam and will be found sufficiently accurate to give satisfactory results where the steam pressures vary from atmosphere to 10 lbs. gauge. The charts themselves were plotted using a steam temperature of 220 deg. F.

Charts Nos. 4, 5 and 6 are for use with open tank, gravity hot water systems, and although plotted for an average temperature in radiators of 165 deg. F. will be found sufficiently accurate with

a temperature variation of 10 deg. each way of this figure.

Although the charts themselves are almost self-explanatory, an example showing their use will perhaps make them clearer.

A building has been guaranteed to heat to 65 deg. when the outdoor temperature is zero, steam at 2 lb. pressure. However, on the day of the test the temperature outdoors registers 35 deg. and the indoor temperature is maintained at 92 deg. Is the quantity of radiation as installed sufficient to satisfy the guarantee? What temperature will probably be maintained indoors with the radiation installed when the temperature is zero? What temperature should have been reached at the test?

Outdoor Temp. Day of Test, F.	EQUIVALENT INDOOR TEMPERATURE DAY OF TEST					
	GUARANTEED TEMPERATURE RANGE					
	70° & +10°		70° & 0°		70° & -10°	
	S.	W.	S.	W.	S.	W.
-10	56	58	63	64	70	70
-5	59	61	67	67	73	73
0	63	64	70	70	77	75
5	66	67	73	73	80	78
10	70	70	77	76	83	81
15	74	73	80	79	86	84
20	77	76	84	82	90	86
25	81	79	87	84	93	89
30	84	82	90	87	96	92
35	88	85	94	90	99	94
40	91	88	97	93	103	97
45	95	91	101	96	106	100
50	99	95	104	99	109	103
55	102	98	107	102	112	105
60	106	101	111	105	116	108
65	109	104	114	108	119	111
70	113	107	118	110	122	113

Referring to chart No. 2, we find that the horizontal line through 65 deg. on the left-hand scale intersects the diagonal line marked 35 deg. at a point corresponding to 89 deg. on the lower scale. Therefore, inasmuch as 92 deg. was obtained at the test, the radiation as installed is more than ample to fulfill the guarantee, as we found from the chart that 89 deg. was all that was required. To find the temperature which will be obtained in zero weather, we find that the vertical line through 92 deg. on the lower scale intersects the 35 deg. diagonal line at a little over 68 deg. on the side scale, which is the temperature it will be possible to heat the building in zero weather.

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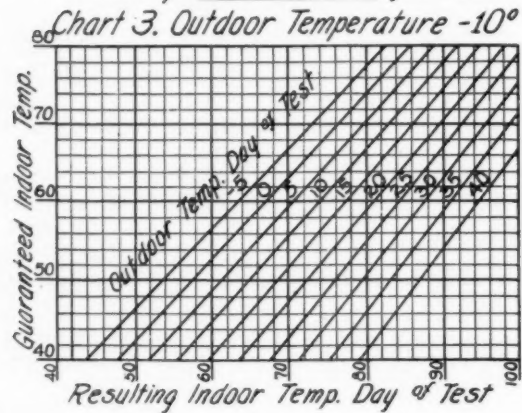
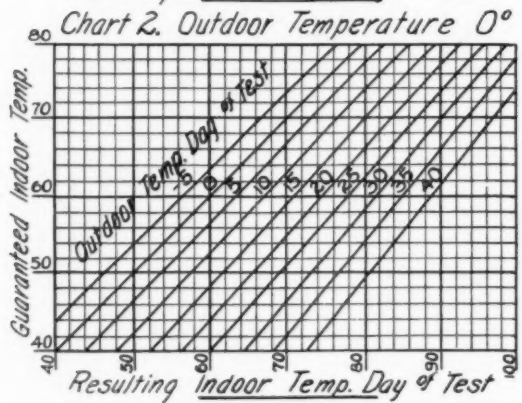
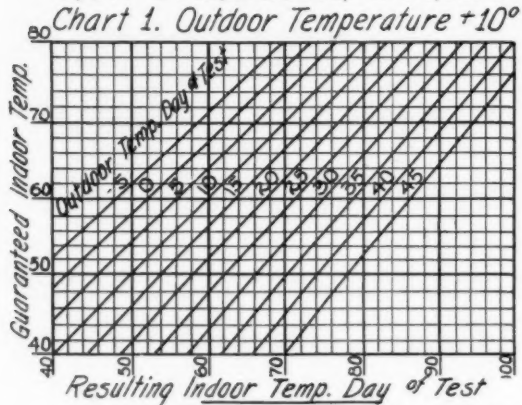
The same method of procedure should be followed with the other charts.

For the convenience of those whose business consists largely of residence heating, where the desired temperature is usually 70 deg., the table has been compiled with the resulting temperature given to the nearest degree.

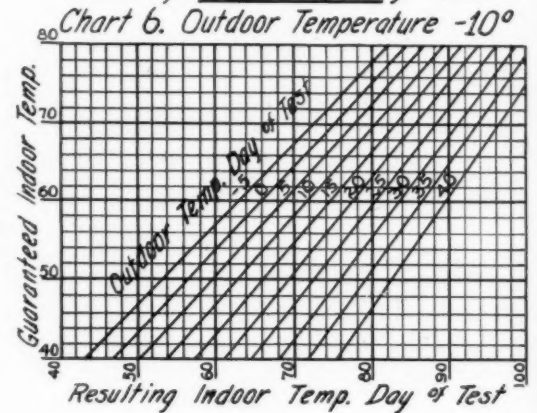
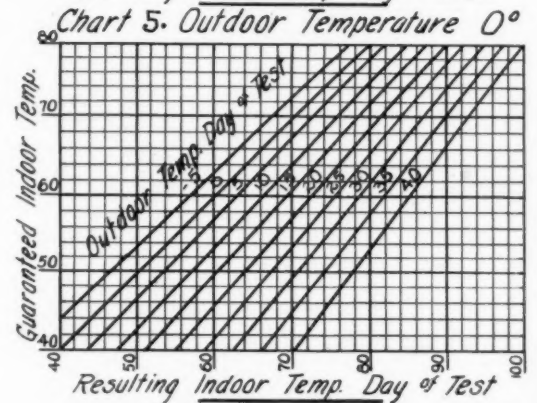
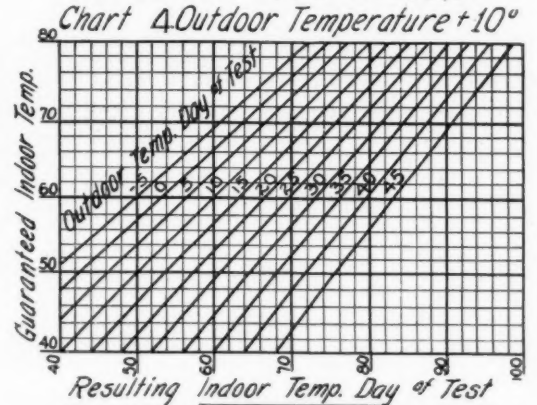
It is hardly necessary to say that this table and

charts only hold good when the test is run under conditions identical with those in winter, i. e., all windows, doors, fireplace flues, etc., must be kept closed, the pressure or temperature of the boiler must be that figured for winter and everything approaching as nearly as possible actual winter working conditions. Thus applied this data will serve its purpose.

LOW PRESSURE STEAM



GRAVITY HOT WATER



Industrial Information

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

Stucco vs. Fate

"Man builds, time decays, the elements destroy, flame consumes, man builds."

This constant round of labor on the part of man, to counteract the forces of nature, is brought to attention by the above quotation printed in a description of "Rocbond," an exterior stucco, made in Van Wert, Ohio, by the Rocbond Co., Inc.

In our efficient age, this does not proceed unchallenged, for in use of the product mentioned the heretofore relentless destiny shall be mollified and her efforts directed elsewhere to teach further valuable lessons.

The use of stucco generally has so much to commend it with which the architect is already familiar that a review of these things need not be set down at this time. But Rocbond Stucco offers certain advantages which are not so commonly appreciated.

The particular service which Rocbond renders is due to the fact that it is prepared at the factory and not by an indifferent or unskilled workman on the job. It is made in one grade only, and is mixed with a non-freezing mixing liquid which can be applied in any temperature. The dry material is shipped in paper and cloth bags; the mixing liquid is shipped in steel drums. Rocbond is delivered to the job in fixed proportions ready to use. Nothing is added or taken from it. To add sand or water would make it unfit for use. Thus the vagaries of human nature are as far as possible eliminated from its application, and the result is claimed to be uniformly good.

Rocbond may be applied to any building base, brick, hollow tile, wood or metal lath, and adheres as an integral part to such base. It is applied in two coats. The principal ingredient is Magnesite, so that it is fire-resisting, waterproof and a non-conductor of heat. It may be used instead of repainting, and once so used maintains the building on which it is applied in a waterproof, fire-resisting and slightly condition. It is on this account widely employed for remodelling.

It is possible to obtain large color variety in Rocbond Stucco. What is known as "dash finish" provides many unique color effects, which are stated not to fade or deteriorate, but to yield in a desirable manner to the effects of weathering.

Architects interested in this subject may write the Rocbond Co. in Van Wert, Ohio, for their literature.

Metal Lath

Just at a time when the use of concrete is so prominently identified with important building projects, its association with metal lath for permanence and safety is of special interest.

Metal lath is a base and reinforcement for plaster and stucco. It is made from flat sheets of metal expanded into an open mesh and so formed that the plaster imbeds the lath, making a solid unit wall.

The Associated Metal Lath Manufacturers, 813 Woodward Building, Washington, D. C., comprises ten nationally known manufacturers and metal supply companies, all united in their endorsement and exploitation of metal lath. The architect should be impressed with the economy, beauty and variety of construction which for thirty years has been made possible by the use of metal lath. He should be convinced that metal lath insures the duration of the decorative scheme by holding the walls and ceilings fast and rigid, thus obviating cracks and falling plaster and the need for constant redecoration.

It is stated by the members of this association that metal lath walls and ceilings are sound proof, and that for dividing partitions, a thin solid wall of plastered metal lath gains floor space and effects substantial saving in weight over other types of fire-resistant walls.

The decorator and plasterer like metal lath because of its adaptability and because they know their workmanship will last. For the architect, the use of metal lath and stucco offers unlimited possibilities for individual treatment, and creates that sense of security in a building which is so important to the comfort of the occupants.

The method of construction herein discussed carries with it a promise of beauty and a pledge of permanence. The association assures the architect that his responsibility will be fulfilled in every sense if metal lath construction is employed, and the joy in the completed building will be enhanced by the knowledge that it will endure.

Congoleum

Congoleum is a material from which has been made a sanitary, low-priced floor covering which comes in styles appropriate for any room. These are produced by the Congoleum Co., a subdivision

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of the Barrett Co., Philadelphia, Pa., in imitations of wood or carpet. They combine the elements of good design and coloring with superior qualities of sanitation, durability and economy. They are claimed to be absolutely unaffected by constant washing, as no material is used which can rot from dampness, and they are accordingly guaranteed as waterproof and easy to keep clean and wholesome. They have a firm, durable surface that does not gather dust and dirt and therefore do not require sweeping or beating; they may be kept clean and bright with simply a damp mop. The makers say, further, that Congoleum "art rugs" lie flat without fastening. They "hug the floor" so that dust cannot accumulate underneath. They remain perfectly flat after being unrolled, without any tendency to "kick up" or curl at the edges or corners. They will not slide out of place or interfere with swinging doors.

McCray Refrigerators

Sufficient recognition is not always given by the busy architect to the importance of a sanitary refrigerator. If it is damp, foul smelling and germ producing, it may cause serious illness.

McCray ice chests have proved their sanitary qualities and superiority under the most exacting tests of food experts. They are used in the Government pure food laboratories at Washington and in the diet kitchens of the leading hospitals, clubs, public institutions and residences.

The system of refrigeration followed in these installations is based on the application of all the natural laws known to relate to this large subject. Advantage is taken of every principle which physics and experience have evolved. The hardware and materials used are of the most substantial and serviceable kind. Every accessory has been incorporated with a thought for convenience and efficacy in achieving its purpose.

In considering the subject of refrigerators, the

construction of the walls is of prime importance, for it is the insulation which determines whether the refrigerator shall be an ice-waster or an ice-saver.

It has been stated by a well-known physician in an address to the American Medical Association that the average refrigerator is only 30 per cent efficient and that 70 per cent of the ice power is used up in overcoming heat which percolates in from without. Wasted ice in a hot spell means not only wasted food but often wasted lives from spoiled food. This is all guarded against in the McCray product.

One model of the McCray is so designed that it may be placed near the street entrance of the kitchen when this is on the ground floor. The iceman may have access to it without entering the room and without walking off with the other contents.

Other models may be built into the house and finished to harmonize with the surrounding woodwork. They are made in numerous sizes. The McCray Refrigerator Co. may be addressed at Kendallville, Ind., for further information on a valuable and important product.

Graphite Products

"Dixon's Graphite Products" is the title of a new pocket catalog issued by the Joseph Dixon Crucible Company of Jersey City. While not so complete as the large general catalog, it furnishes a comprehensive idea of the variety of products made by this long established concern.

Pages have been devoted to lists of articles especially for mills, railroads, automobiles, etc. The descriptions are brief, but the company will gladly send pamphlets dealing in detail with any of the individual members of the line. This new catalog will be found useful to all users of lubricants, paints or pencils. Ask for Booklet No. 14-KP.

