The AMERICAN ARCHITECT

Building Ban Removed

ALL remaining restrictions on non-war constructions have been removed by the War Industries Board. This permits the resumption of every building activity suspended by the war. The Building Industry of this country may now enter upon the consideration of the problems of reconstruction, which, if properly solved, will maintain it as the second largest of our industries.

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ENTRANCE DETAIL

UNITED STATES FUEL BUILDING No. 2, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

THE AMERICAN ARCHITECT

VOL. CXIV WEDNESDAY, NOVEMBER 27, 1918 NUMBER 2240

BUILDING FOR THE UNITED STATES COUNCIL OF NATIONAL DEFENSE

The Architect in War Work

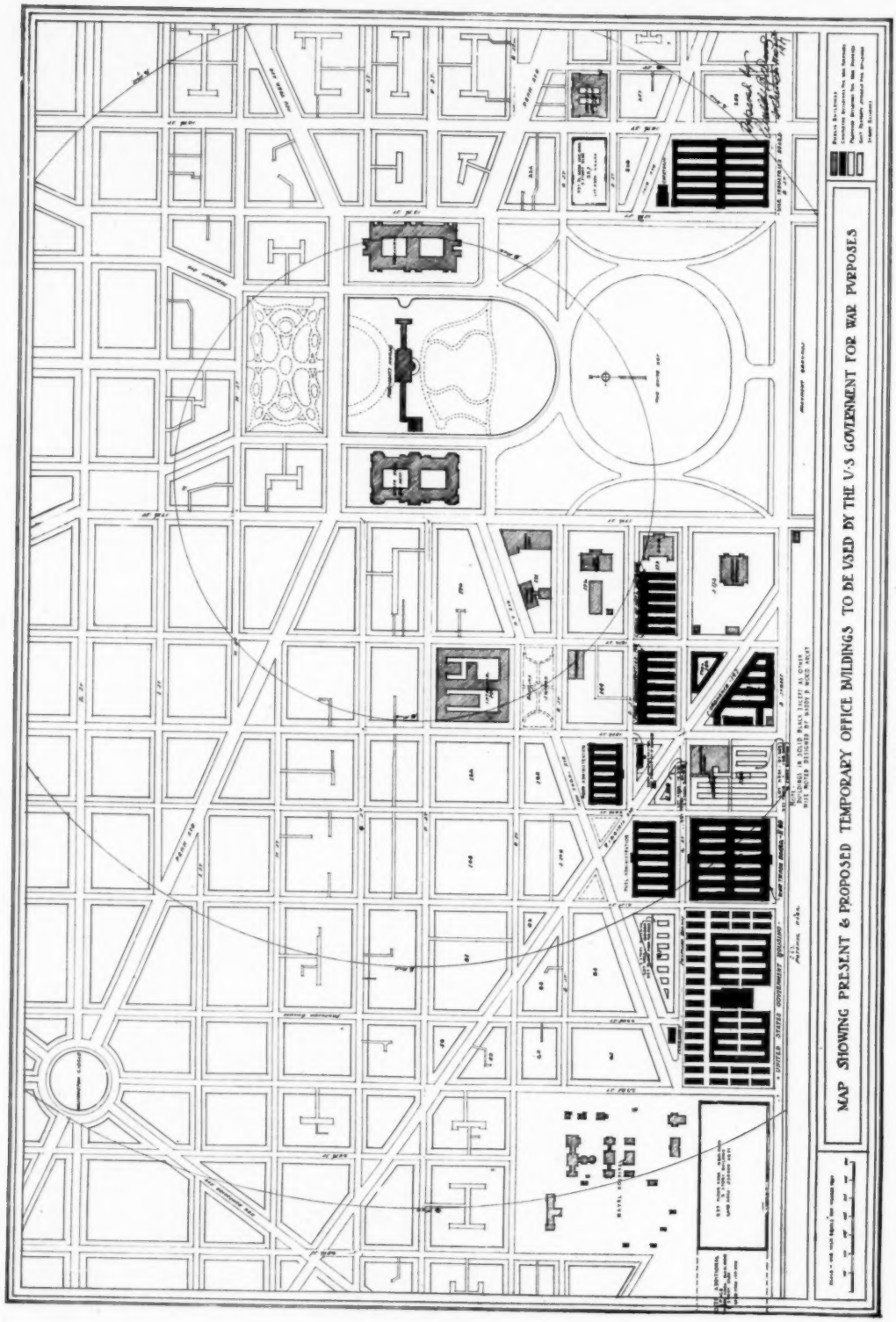
By WADDY B. WOOD, *F. A. I. A.*

Illustrated by the groups of temporary office buildings designed and erected by Mr. Wood for the Government

AFTER many years of practice in Washington, and particularly since we entered into this war, opportunity of a most unusual character has made it possible to judge exactly and without prejudice, just what has been the relation of the profession of architecture to the Government and that of the Government toward architects. Particularly since the war began has a very close association with large and emergent schemes of construction—a knowledge of men and methods—enabled the formation of an opinion that remains unchangeable.

The profession of architecture has not been ignored by the Government. Of that I am sure. What has happened is what in view of the past was morally sure to happen. Because of the fact that the organized elements of the profession failed to secure recognition of architects as a group of highly trained and efficient men, it has remained for individuals with a very high sense of professional dignity to lay the foundation for the future rehabilitation of the profession in the estimation of those in control of the various departments. To those men who with an unselfish attitude toward the Government have contributed their services at the expense of great personal sacrifice and often to the decided abandonment of every claim for consideration to which they may have been rightfully entitled, is the credit due. When the profession of architecture passes through, as it must, its period of reconstruction, it will then be proper to entrust these patriotic men with the arrangement of the program that will insure its rehabilitation. It is right that they should rule who have so faithfully served. By their very acts they will have earned the gratitude of the profession, and by those same acts will they have also recovered the respect of those in high public office whose judgment in the past has been based on a representation of what in no way has been typical of the profession.

As proof of the feeling that has existed among officers who have been in charge of war work, a prominent officer of the regular army told the writer just after our entry into the war that in the appointment of reserve officers, experience had shown that there were three classes of men which should as far as possible be ignored. These were college professors, distinguished consultants, and architects. The impression implied was that these three classes represented purely theoretical types of men and that the emergencies called for the most practical types. Personal observation has shown me that the Washington departments have large numbers of architects doing the most valuable and practical work. Does

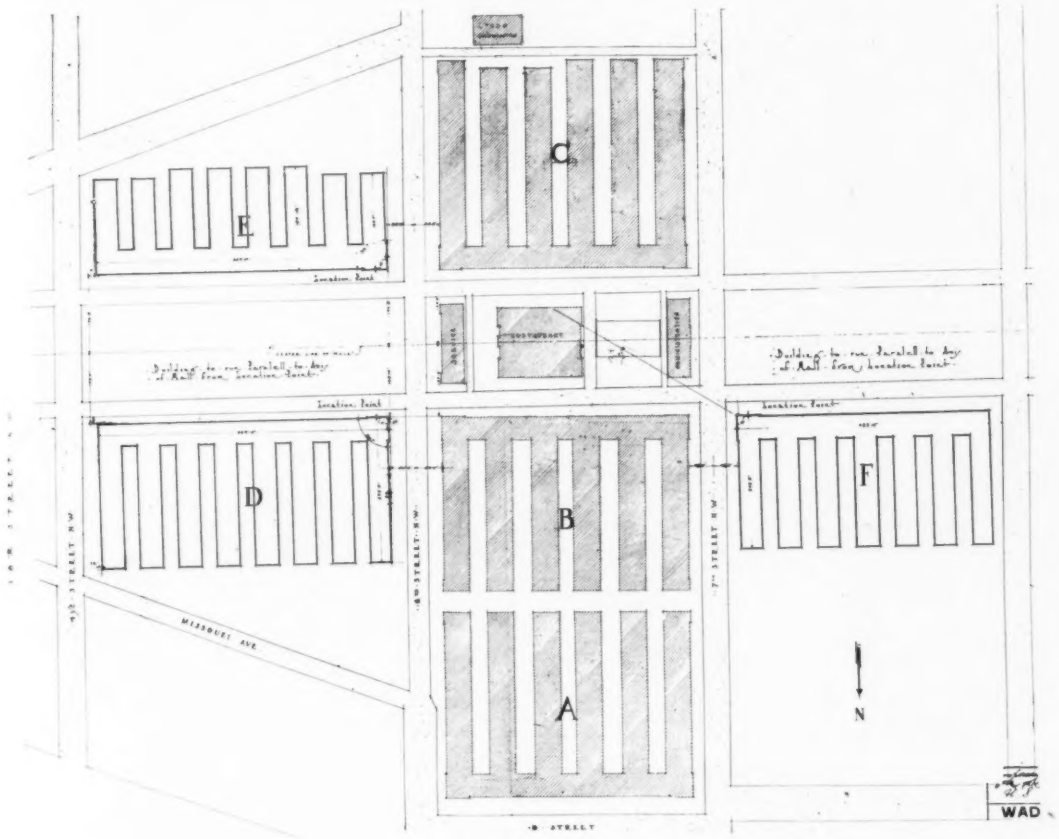

MAP SHOWING PRESENT & PROPOSED TEMPORARY OFFICE BUILDINGS TO BE USED BY THE U.S. GOVERNMENT FOR WAR PURPOSES
WADDY B. WOOD, ARCHITECT

it not, therefore, clearly indicate that the view so widely held and so strongly expressed has been due to the mistaken attitude of organized architecture toward the Government during the past few years?

The harm has been done and it must be undone. As has been stated, individuals have largely contributed toward the righting of this wrong, but until the organizations that represent the profession

problem in hand. Its magnitude, even if the building was a large one, was small as compared with the present enormous quantity production, resulting in the two great necessities of speed and economy. Speed and economy, while in a limited way part of every pre-war task, have new meanings to-day.

It is useless to deplore the fact that the Government had to be assured of the value of the profes-



BLOCK PLAN

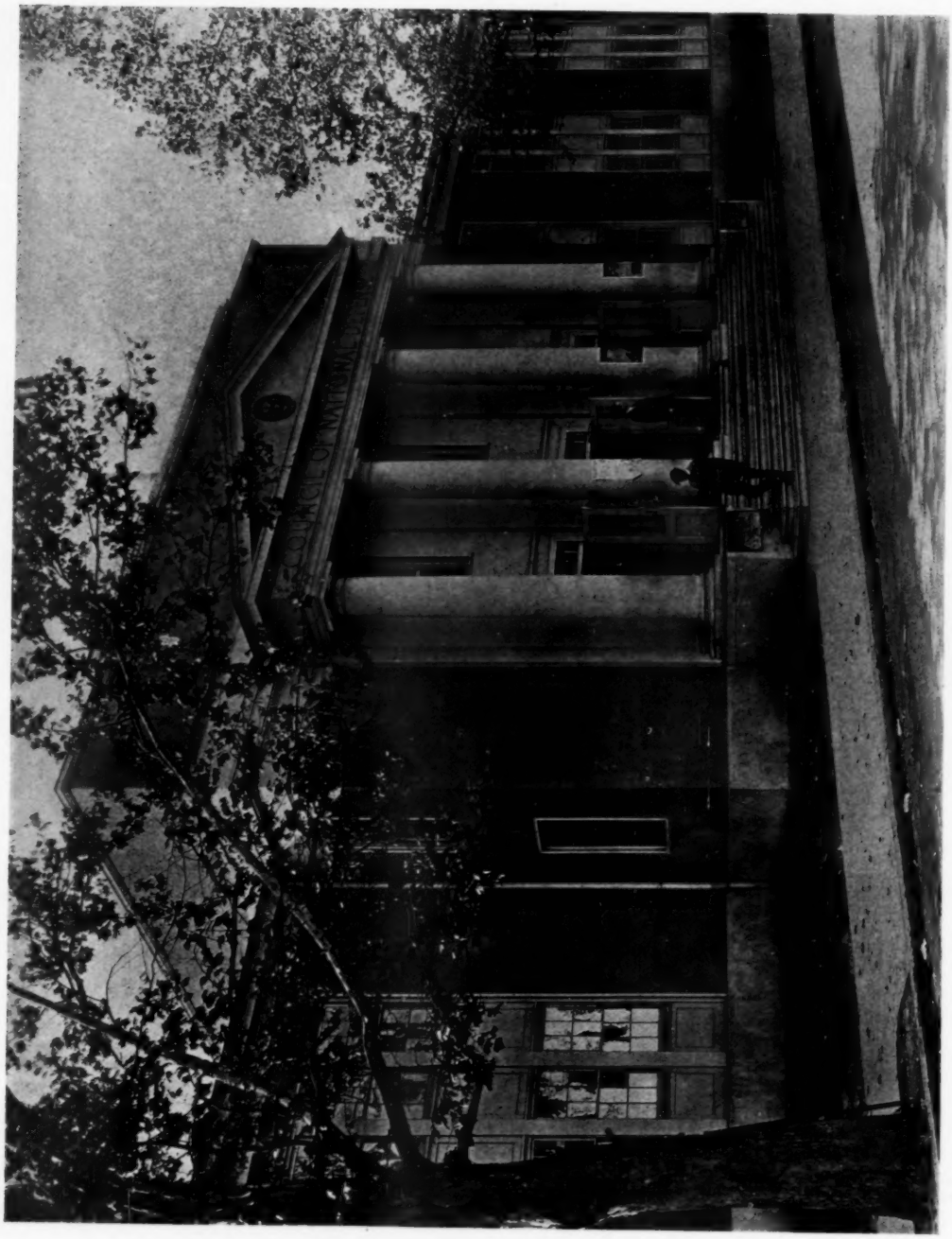
TEMPORARY OFFICE BUILDING FOR THE UNITED STATES GOVERNMENT, WASHINGTON, D. C.

Buildings A, B and C designed by United States Department of Public Buildings and Grounds. Buildings D, E and F designed by Waddy B. Wood.

place it in its proper position as related to the Government we may not hope for any change in the present attitude.

Architects are naturally men of strong imagination. It should therefore be easy for them to mentalize the fact that all the conditions affecting their fitness as architects are now different from the conditions at any previous time. In the past, the one fixed purpose has been the solution of the simple

sion of architecture through individuals, when it might, and should have done so through the profession as a body. Contrasted with the activities of other bodies allied to building, it is of interest to note that builders and engineers, almost at the inception of the war, had a firm, business-like understanding with the Government. As far as I have been able to learn, no similar contract relating to architects' services has been presented by the



ENTRANCE DETAIL

BUILDING FOR THE UNITED STATES COUNCIL OF NATIONAL DEFENSE, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

architects for approval by the Government as a general arrangement for all departments to use.

Speculative building in the United States had grown to enormous proportions, and its method of conduct was slowly but surely forcing to the wall architects practicing as members of the Institute. Of course in all these various speculative building operations, plans and specifications were being prepared, but the knowledge early gained of the value of quantity production and the consequent speed and economy of duplication, all secured without the service of a duly qualified architect proved to the satisfaction of those people that the services of an architect could be well dispensed with. Was, and is, such a condition conducive to the stability of this country's building operations?

The conceptions as to the practice of architecture that have been so insistently put forward and that have resulted in present conditions must needs be reversed. It is certain that the one great lesson we shall learn from this war is that of the great expediency of quantity production and its saving of human sweat and toil. The hand of labor of yesterday must give place to the machine-made results of to-day. This does not mean that our civilization will become less interesting; on the contrary, it clearly indicates that it will attain higher and better phases. Nor does it mean that an architect with carefully nurtured love of beauty will, in accepting this new order of things, be restricted in his ability to impart beauty to his design, to impart dignity to his structures. Everything he will do will be ruled by more logical efforts, and without this logical aspect, the guiding star of his work will become so dimmed as to fail to serve in showing him the road on which he may successfully venture.

Some will urge that by adoption of machine work and quantity production, that subtle touch of hands

THE MALL, BETWEEN 4½ AND 7TH STREETS

Showing temporary structures, chimneys, aerials and other features, placed by Government, which obstruct an uninterrupted view from the Capitol to the Monument.

DETAIL OF PRINCIPAL ENTRANCE

UNITED STATES WAR TRADE BOARD BUILDING, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

which makes all building a thing of beauty will be lost. The answer to this would seem to be that one such touch on a great building stands forth as more human, more beautiful, than all the hundred touches we have made in the past.

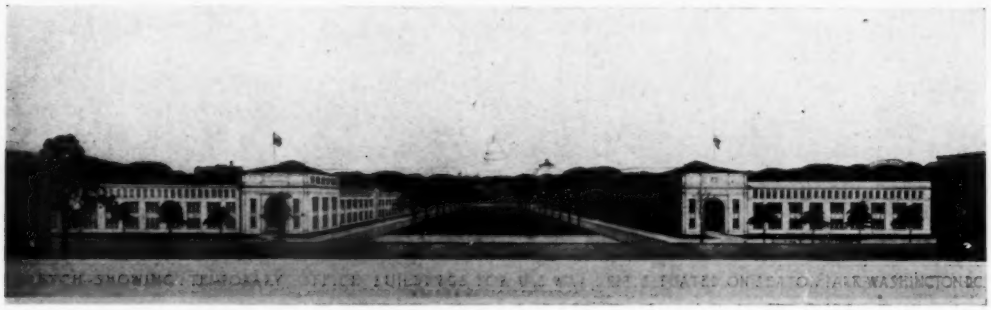
Let us take for example a vast office building with ideal conditions of lighting, economy of space and other well-considered essentials, which is built to serve war necessities, where it is imperative that the most economical completion of the work be assured. To serve these ends it is found that the best results would be attained by repeating over and over again a certain well-handled practical motive. Let us further suppose that the architect tops his building with a well-designed cornice and in the one central spot erects a beautiful entrance. Would not this constitute a well-executed work of architectural merit?

In the many temporary buildings I have been called upon by the Government to construct in Washington I early learned that the best method of securing a satisfactory result was as outlined above, in the careful selection of a logical unit, and its duplication throughout the entire design. The economy lies in this repetition of the simple unit, and the entrance, done but once, can be made more elaborate, and in its construction receive the personal touch of hand work, for the reason that the proportion of its cost is infinitesimal as compared to that of the entire structure. Undoubtedly this more elaborate central feature has the tendency to advance to its own scale of good architecture the many units grouped about it.

All these things have been learned as the result of war's necessities in quick construction. Every architect may not have had similar opportunities,

VIEW LOOKING NORTH ON EIGHTEENTH STREET, BETWEEN BUILDING FOR COUNCIL OF NATIONAL DEFENSE AND FUEL BUILDING No. 2

WADDY B. WOOD, *ARCHITECT*



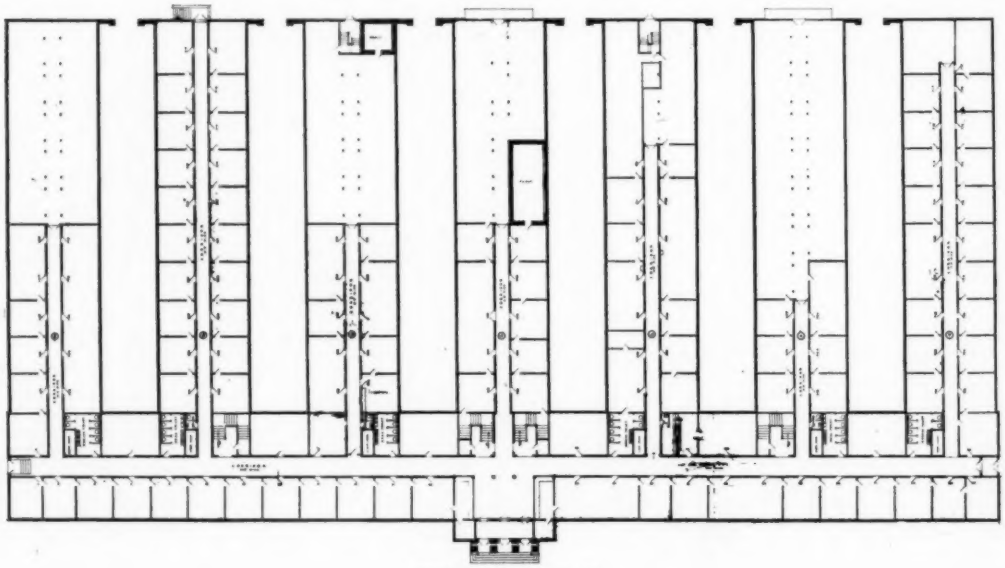
AVIATION SECTION ORDNANCE ENGINEERING

TEMPORARY OFFICE BUILDINGS FOR UNITED STATES WAR DEPARTMENT
WADDY B. WOOD, *ARCHITECT*

and for this reason these suggestions are set down here as concrete evidence of the changing things which affect the practice of the future.

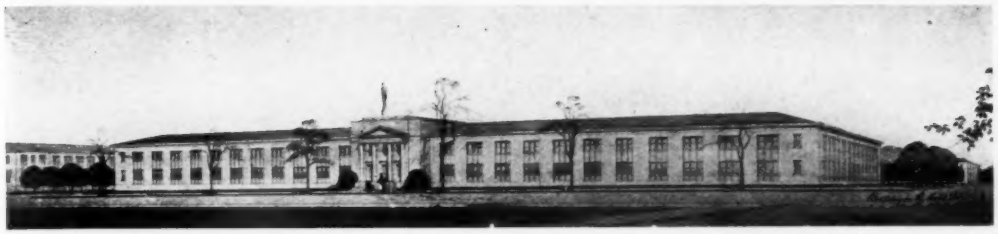
As in design and planning, so in the building and business aspect of the work. Many things of which in the past most of us had but a hazy notion have in the prosecution of the services to provide these many temporary structures been made actual experience. The ever-present question of building contracts stands out as an instance solved by actual experience. Because of the uncertainty of the cost of labor and material, and the speed necessary to produce these buildings for war purposes, it was found imperative to let contracts for building on the "fee plus" system. The builders were selected with reference to their past experience and reputation for results, and their demonstrated financial responsibility. When so selected they were thoroughly impressed with the necessity for speed and economy. The results have been a revelation, and as a practical lesson in speed and economy should be of value to the profession everywhere. The old system of taking bids that we might prove to a client the economy of our methods is proved to be a mistaken one.

The general results of some incompetent getting the work and the architect having to shoulder the blame are too well known to waste words on. Why,



FIRST FLOOR PLAN

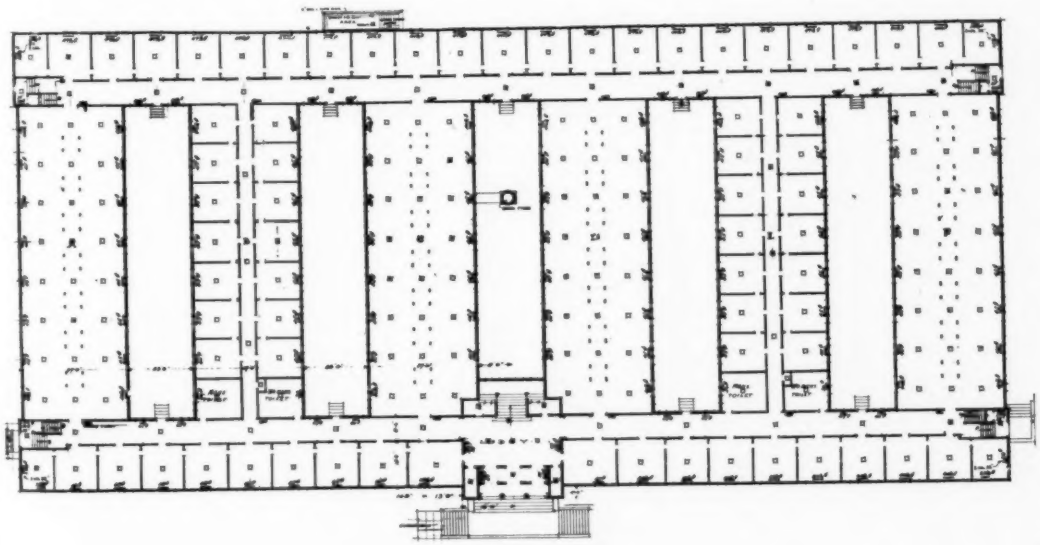
UNITED STATES FOOD ADMINISTRATION BUILDING No. 1
WADDY B. WOOD, *ARCHITECT*



UNITED STATES FOOD ADMINISTRATION BUILDING NO. 1
WADDY B. WOOD, *ARCHITECT*

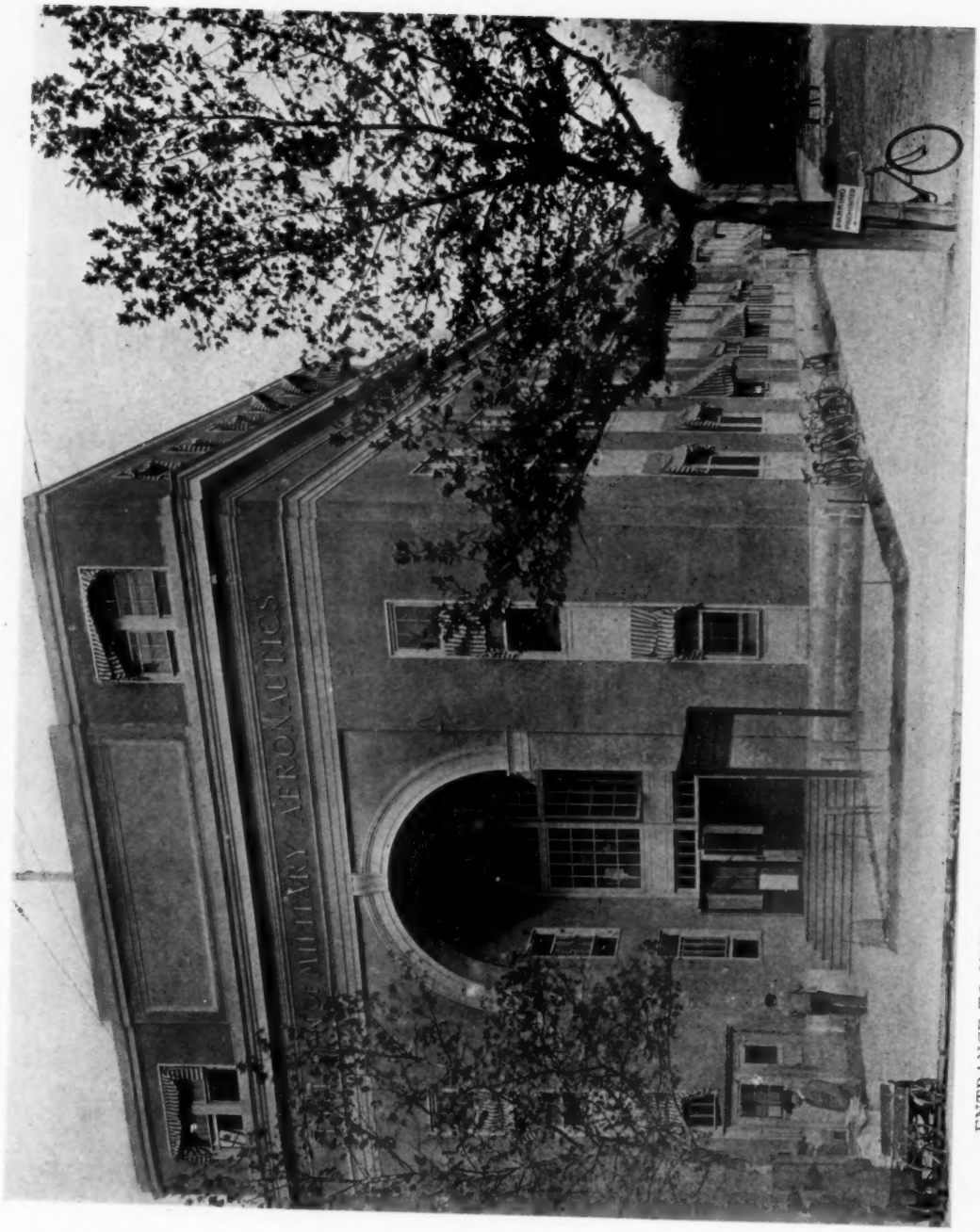
let me ask, should the architect assume such a responsibility? Why should not the owner pay an honest price and obtain the results which follow? If the "fee plus" system is used, architects will be able to select builders for their efficient organizations, intelligence and honesty, and not for what is mistakenly supposed to be an advantage, their ability to show the cheapest results. All the results from these large operations conducted for the Government have demonstrated that selecting the builder on the same basis of efficiency and character as the architect is selected, would show the best results and would educate a higher class of men to the building trade. All this constitutes a small part of the many lessons that this war has taught.

Then there has been the all-important question of materials. The materials most practical under certain conditions had to be very carefully considered. These things have led to the conclusion that a superficial knowledge on the part of architects as to the suitability of materials for specific work has led the public to regard with suspicion the ability of architects to render efficient service. Have we made the close study of this important feature that would insure to our clients the best results? In this broad experience in the rush of emergency Government work it has been further learned that the so-called studying of plans is dangerously wasteful in time, and more often results in illogical and complicated results than not. If all problems are analyzed to their simplest forms, the result will be equally simple. There is great danger in the complication of a simple thing, and there is also danger in the writing of too many and too complex specifications, and producing too many elaborate drawings. Are we not, as architects, prone to lose sight of the big, broad aspect of things while we juggle with the small and insignificant? Experience demonstrates



FIRST FLOOR PLAN

UNITED STATES FOOD ADMINISTRATION BUILDING No. 2
WADDY B. WOOD, *ARCHITECT*

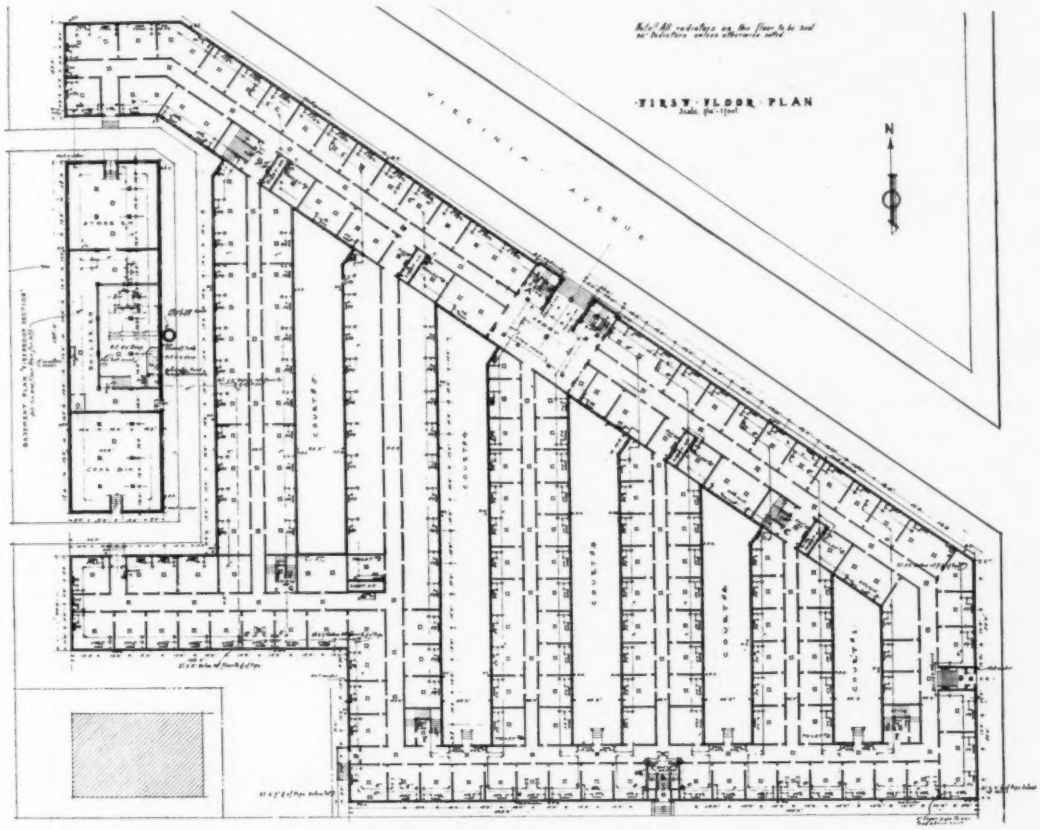


ENTRANCE TO UNITED STATES BUILDING FOR DIVISION OF AERONAUTICS, WASHINGTON, D. C.
WADDY B. WOOD, *ARCHITECT*

that the most logical and valuable conclusions are the result of a quick mental process and that when they are attained only by a labored effort it is not always because the problem is difficult, but more often because we have not thoroughly studied it at the outset.

Considering the attitude of the architect in his relations to the Government and the Government's ness than it is to devise a better way of doing things.

In conclusion, I am of the opinion that after the war, architects may be able to receive through the Government a very great technical assistance as the result of the Government's experience in connection with the procuring of materials, and methods of shipment devised, and the wide knowledge gained

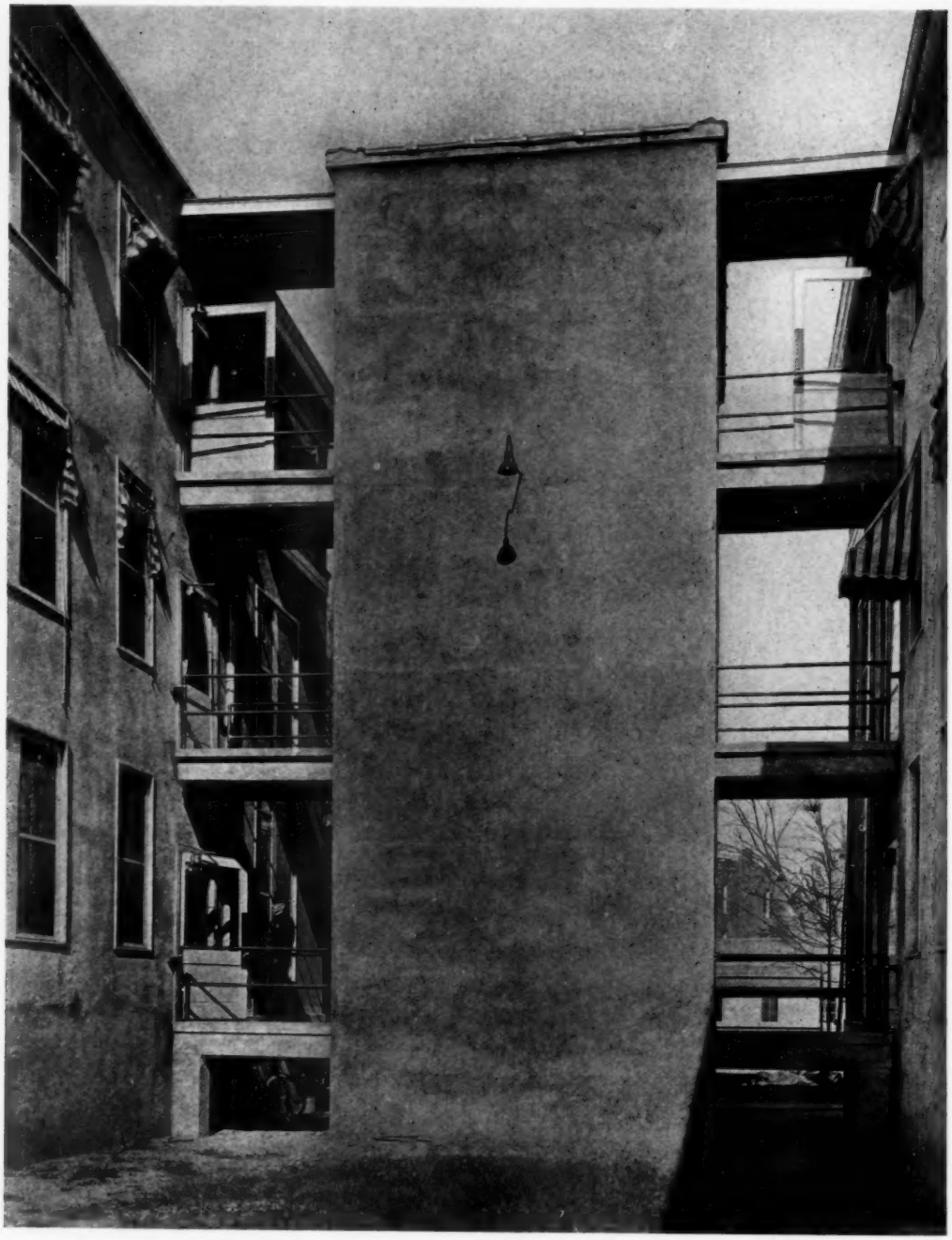


ORDNANCE BUILDING No. 1

This building has been converted into an emergency 500-bed hospital, for the care of patients suffering from "Spanish Influenza." The conversion was accomplished in one week.

WADDY B. WOOD, *ARCHITECT*

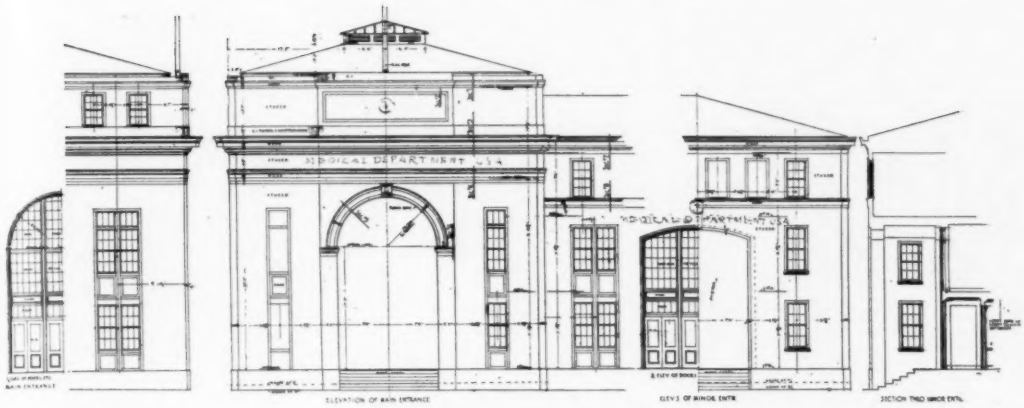
method of conducting its business, it is possible through this past year's experience to set down in the most emphatic manner the impressions received. Much has been written, and wherever two or more men gathered, much has been said about Governmental "red tape." After an intimate experience with those people who conduct Government work I have reached the conclusion that the Government uses less "red tape" in proportion to the results obtained than the average architect. It is easier to criticise the red tape in Government control of busi- in means of adaptability of materials under conditions that were formerly unknown. The Government's conduct of the war, the limited time in which to conduct gigantic operations, both here and abroad, has been so amazing in results that the methods employed should be studied with care and all the facts known before any criticism is indulged in. The conclusion that the executive efficiency in our army and navy is unequalled anywhere seems indisputable. Close inspection of these methods by architects will serve as a liberal education in modern



FIRE TOWER BETWEEN BAYS OF THREE-STORY NON-FIREPROOF BUILDINGS FOR AIRCRAFT AND MEDICAL CORPS

View taken in interior of court, showing cantilever bridges which are not connected to buildings.

WADDY B. WOOD, *ARCHITECT*



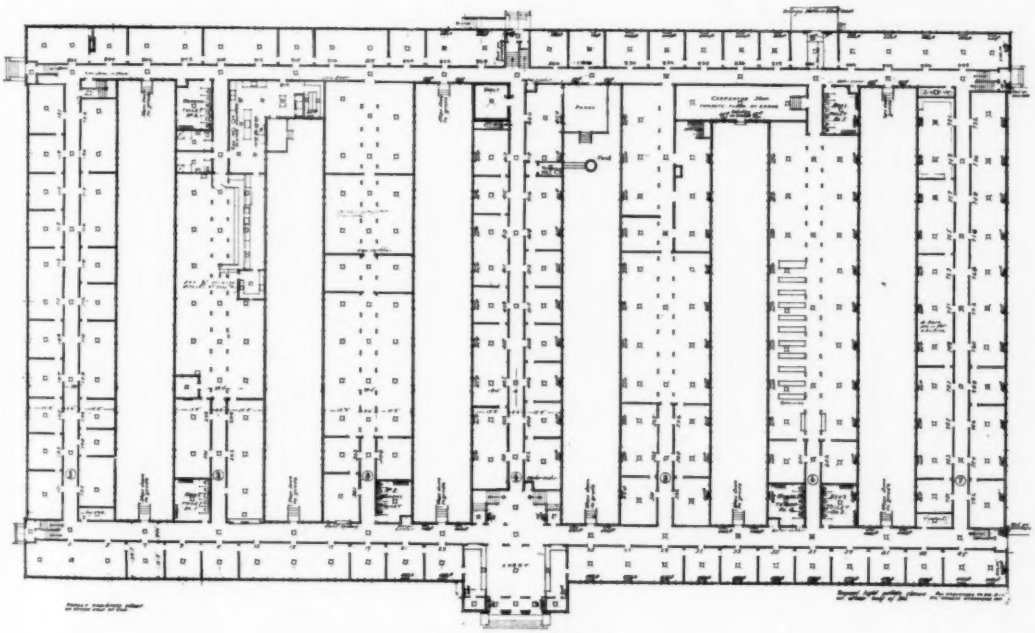
DETAILS OF CORNER PAVILIONS

SURGEON GENERAL'S OFFICE, MEDICAL DEPARTMENT

WADDY B. WOOD, *ARCHITECT*

methods of efficiency and provide an opportunity for every man in the profession to enlarge his capabilities for the great work in reconstruction that is before him. In fact the educational opportunity offered is so unusual that if organized architecture will endeavor to learn of these things through a competent representation it will have served a very useful purpose and will be able to demonstrate that no amount of theoretical knowledge can equal the practical ways that have been the great factor in the successful issue which has been reached.

Organized architecture might well be remodeled along the lines of the efficiency shown by our army and navy. When it has been, the profession will be so busily engaged with the matters that really pertain to practice, that the dreamer and visionary, the poseur and incompetent will find no place in its



FIRST FLOOR PLAN

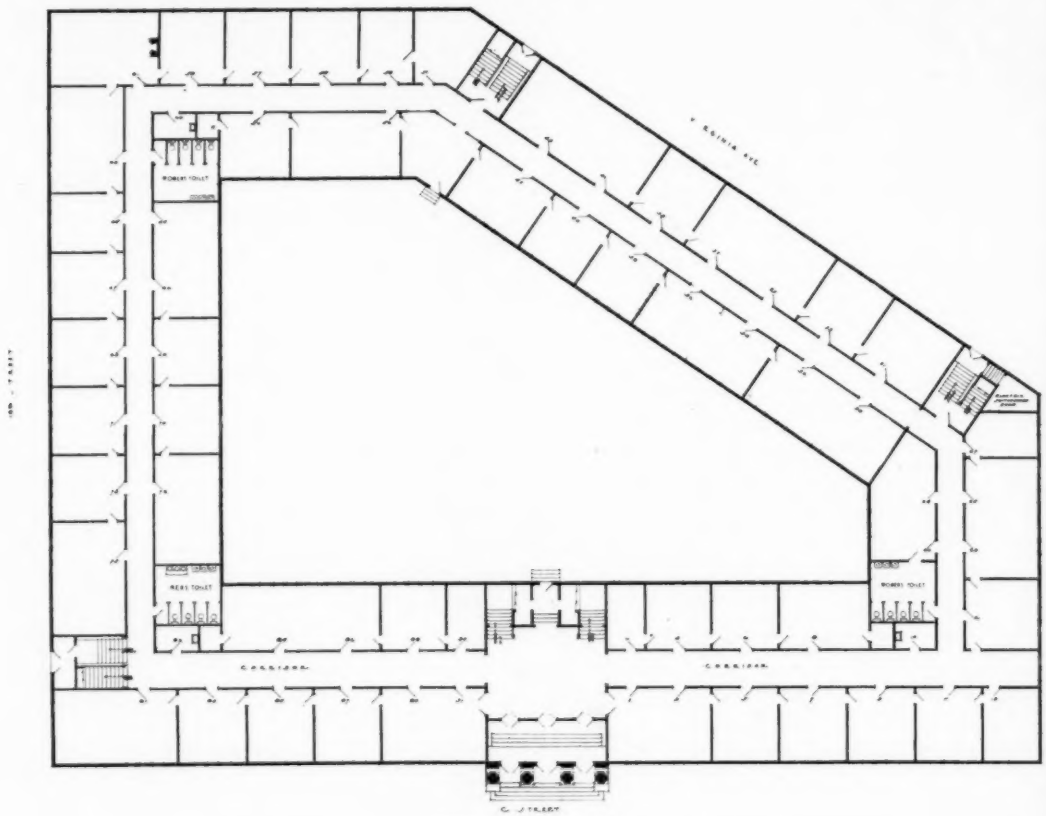
UNITED STATES FUEL ADMINISTRATION BUILDING No. 2

WADDY B. WOOD, *ARCHITECT*

organization, and in fact may find it desirable to seek other fields of effort.

Now that the war is practically over, one fact seems to me such a credit to our honesty and patriotism that it should not be overlooked: During the entire period of my employment by the Government on a number of projects that seem vast to me, although small in relation to what was done by others, I can say that not once during the period of this work did any contractor, sub-contractor, material man, or any one wishing to get employment in connection with my undertakings, make a single suggestion to me that could possibly be construed as being anything but honorable. No man tried to get the advantage by anything underhand from another applicant for work, and when I told him frankly that another firm had been selected because we believed it better able to do the work, there was no complaint. This leads me to believe that this has been a clean and patriotic war, and when the vastness of the undertaking is considered, an economic one.

In closing this article I would like to say that the American Institute of Architects has just appointed a large committee called the "War and Post War Committee" which will undoubtedly take up and consider the very things which have been mentioned in this article, showing that different minds are thinking of the same thing at the same time, without knowing each other's thoughts. We have now in Mr. Thomas Kimball, president of the Institute, the very man to lift the profession as a body to the position to which its work entitles it, and now that the war is over, I think our profession can, without bragging, go before the country and say that it has done its part as an Institute and individually.



FIRST FLOOR PLAN

UNITED STATES FUEL ADMINISTRATION BUILDING No. 1

WADDY B. WOOD, *ARCHITECT*

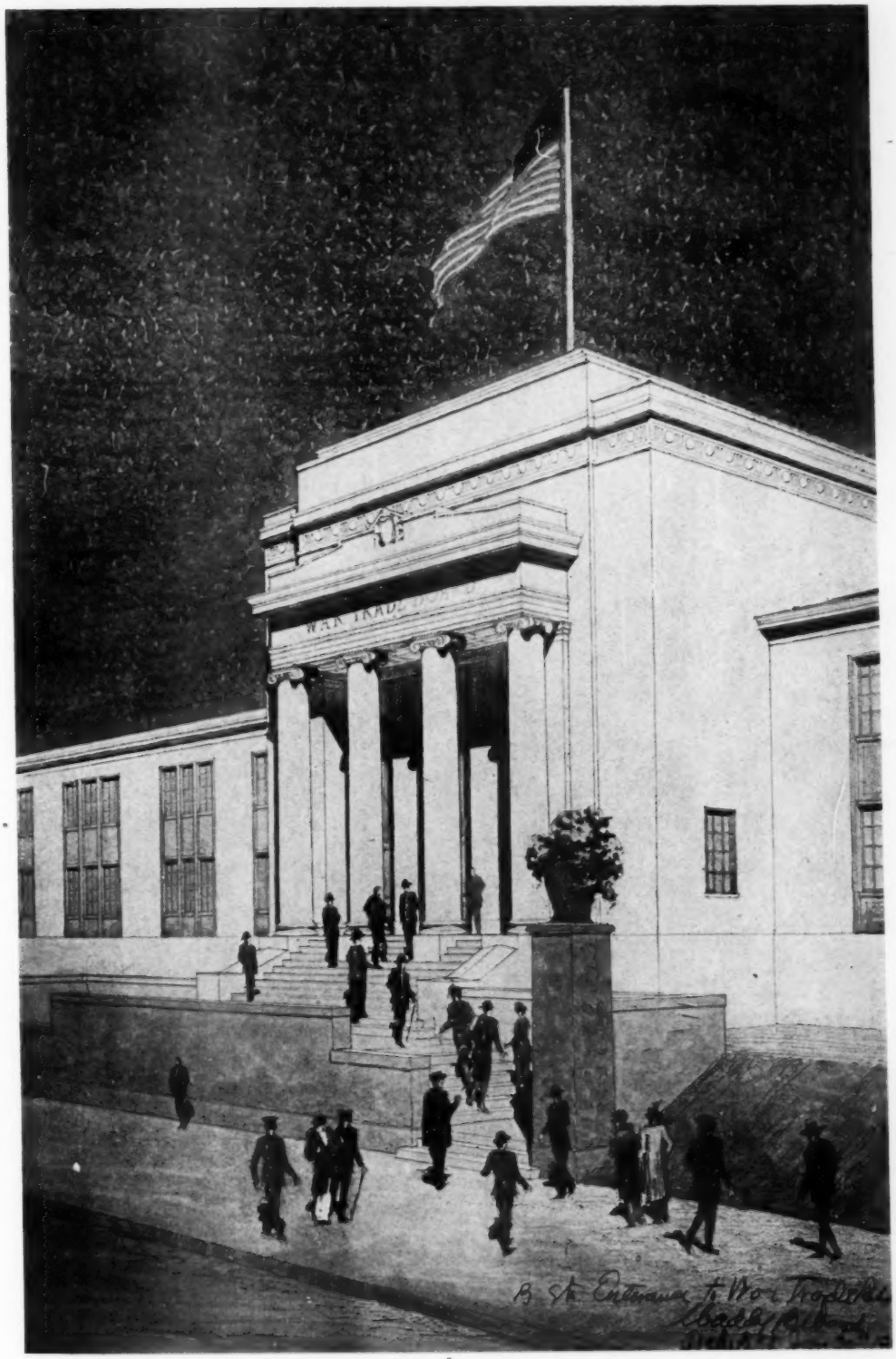


PLATE 161 DETAIL OF MAIN ENTRANCE

BUILDING FOR UNITED STATES WAR TRADE BOARD,
WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

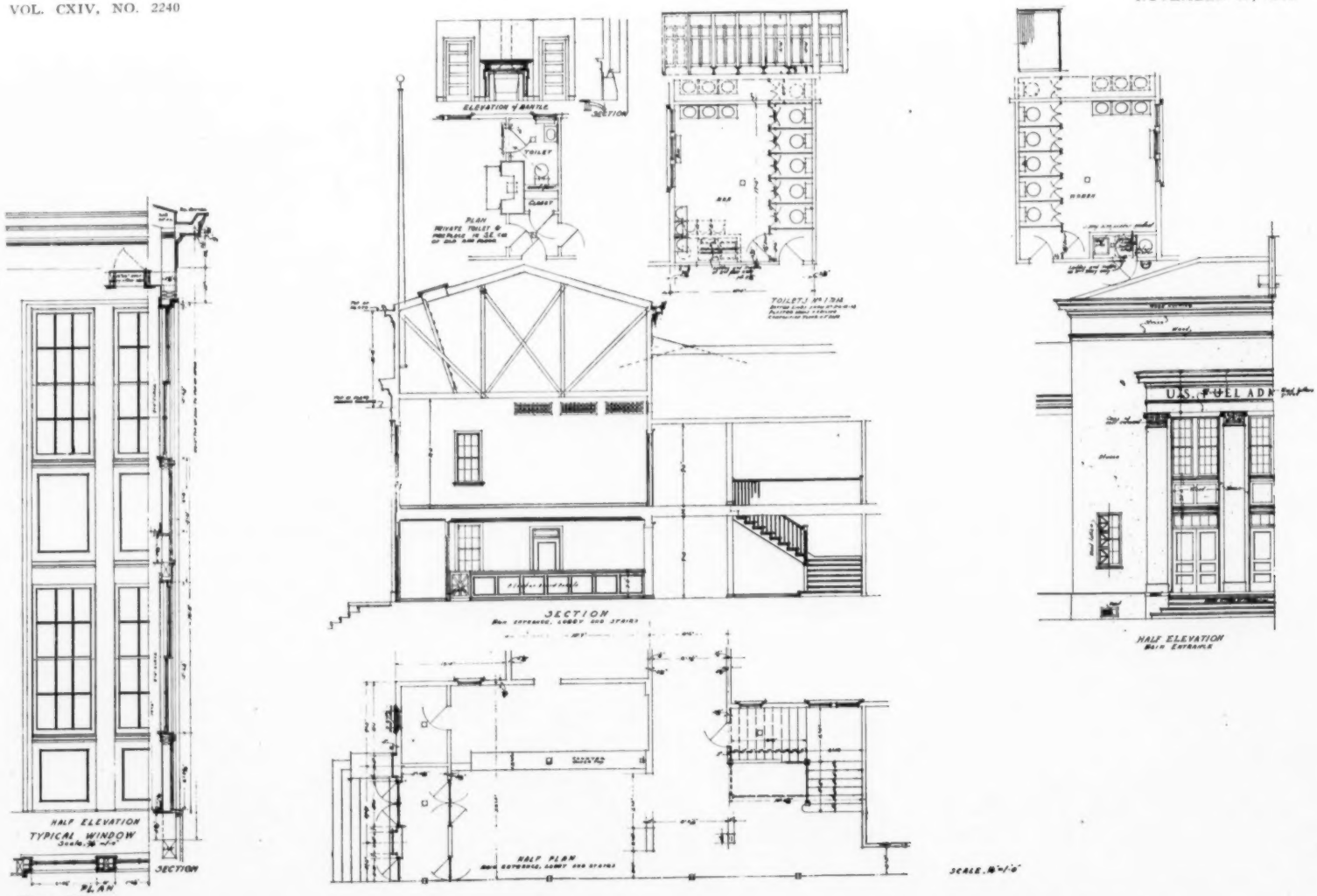


PLATE 162

UNITED STATES FUEL ADMINISTRATION BUILDING, NO. 2, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

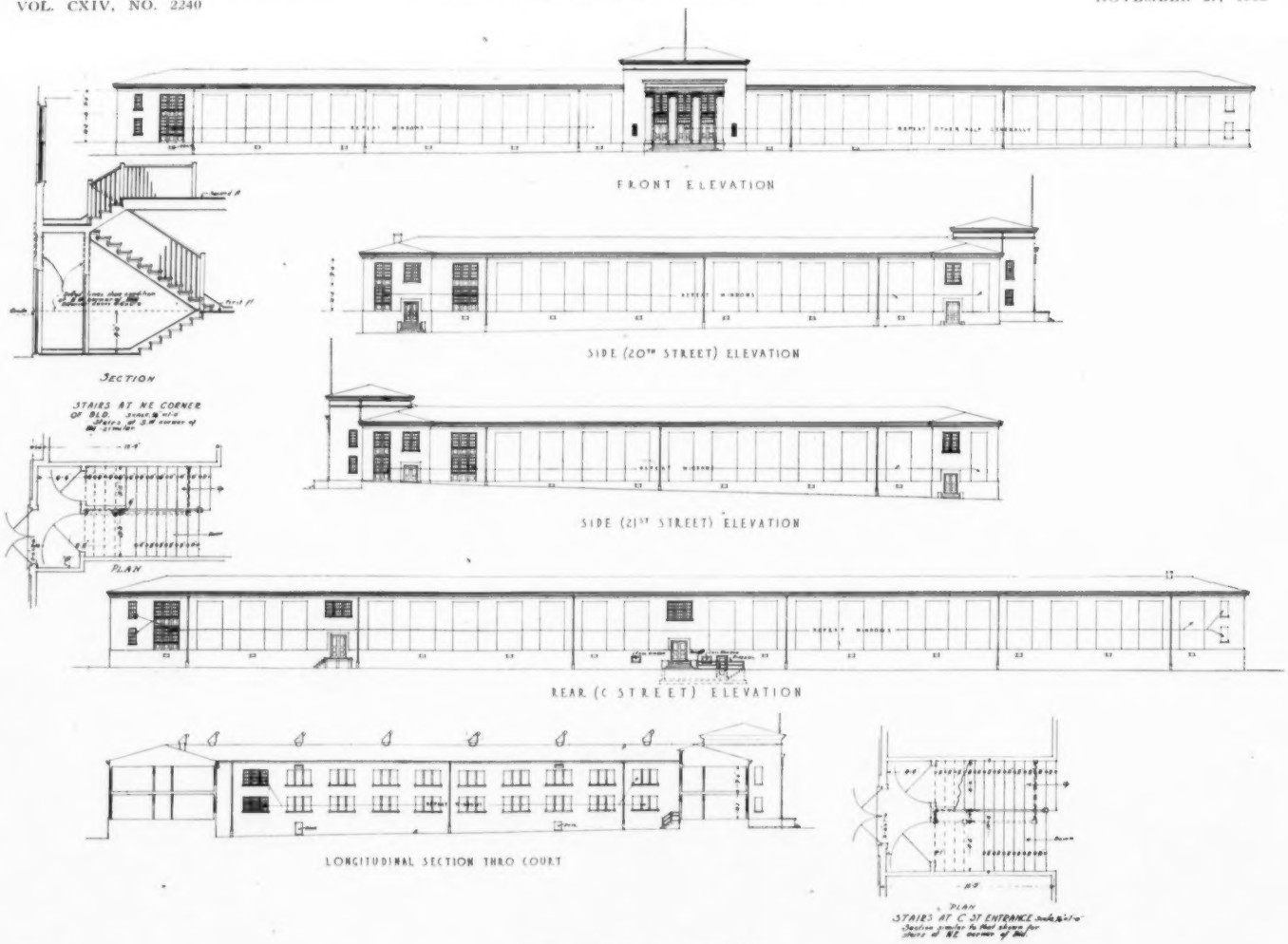


PLATE 163

ELEVATIONS AND SECTIONS

UNITED STATES FUEL ADMINISTRATION BUILDING No. 2, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

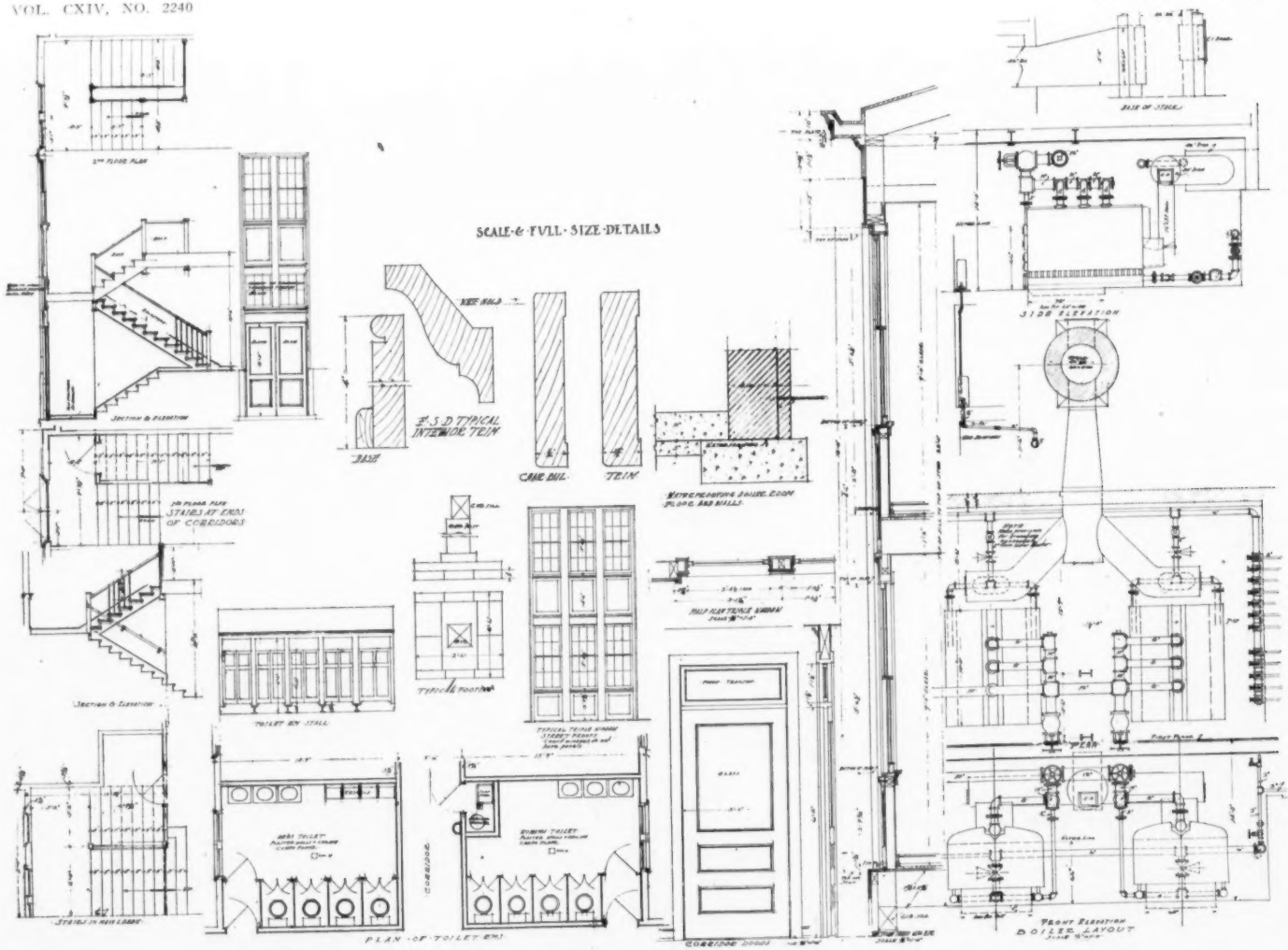


PLATE 164

UNITED STATES FOOD ADMINISTRATION BUILDING NO. 2, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

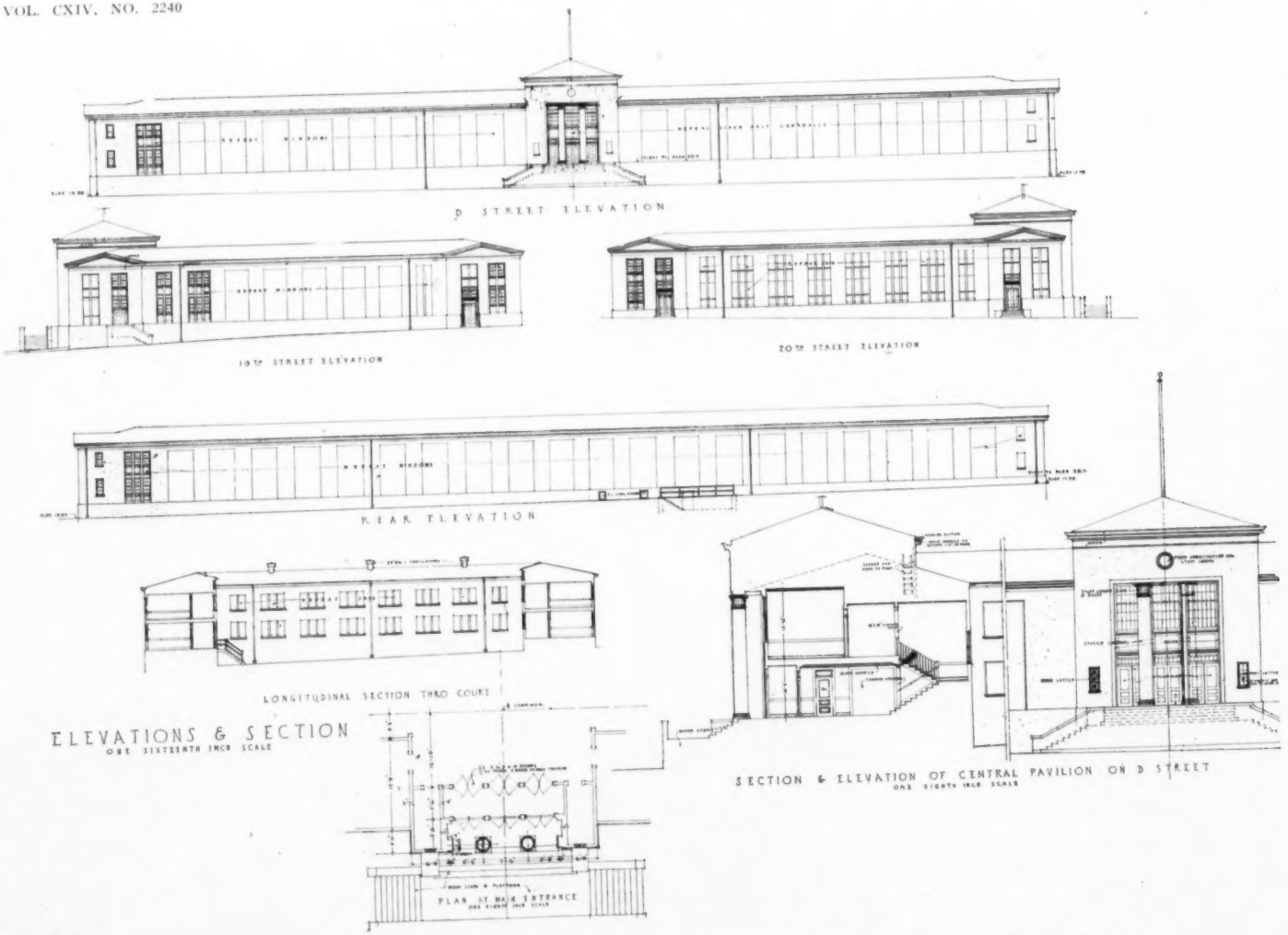
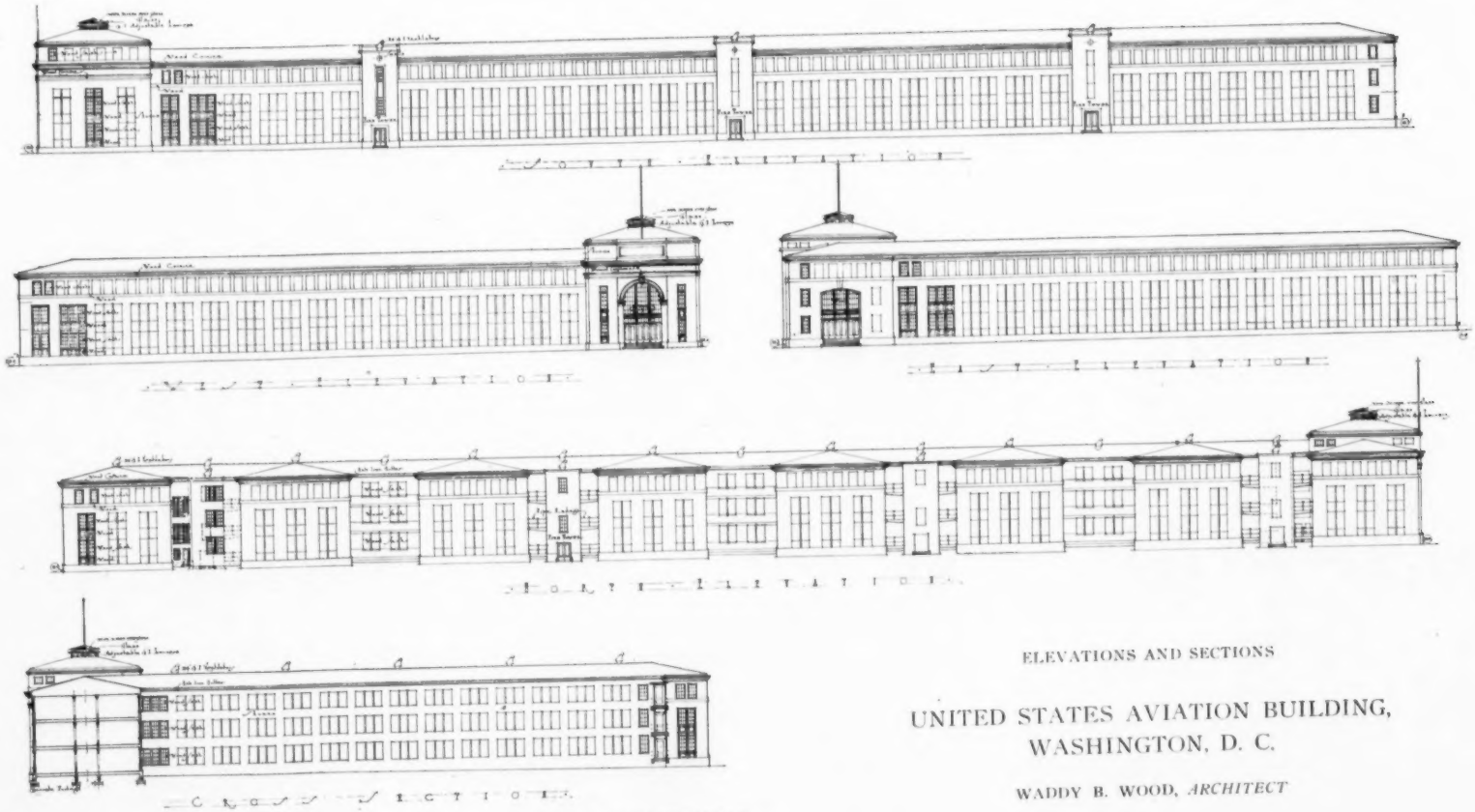


PLATE 165

UNITED STATES FOOD ADMINISTRATION BUILDING NO. 2, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*



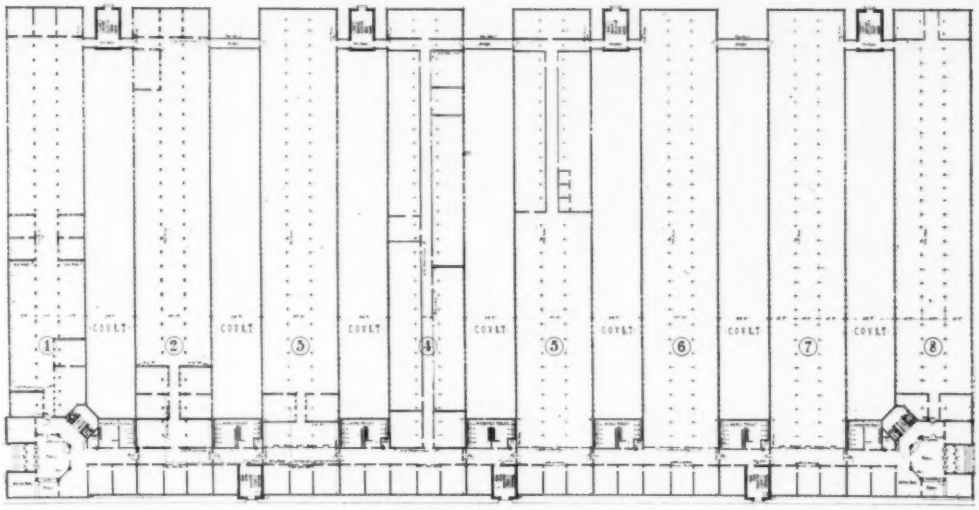
SCALE OF ELEVATIONS & SECTION 1/8 = 1'-0"

BUILDING "D".

ELEVATIONS AND SECTIONS

UNITED STATES AVIATION BUILDING, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*



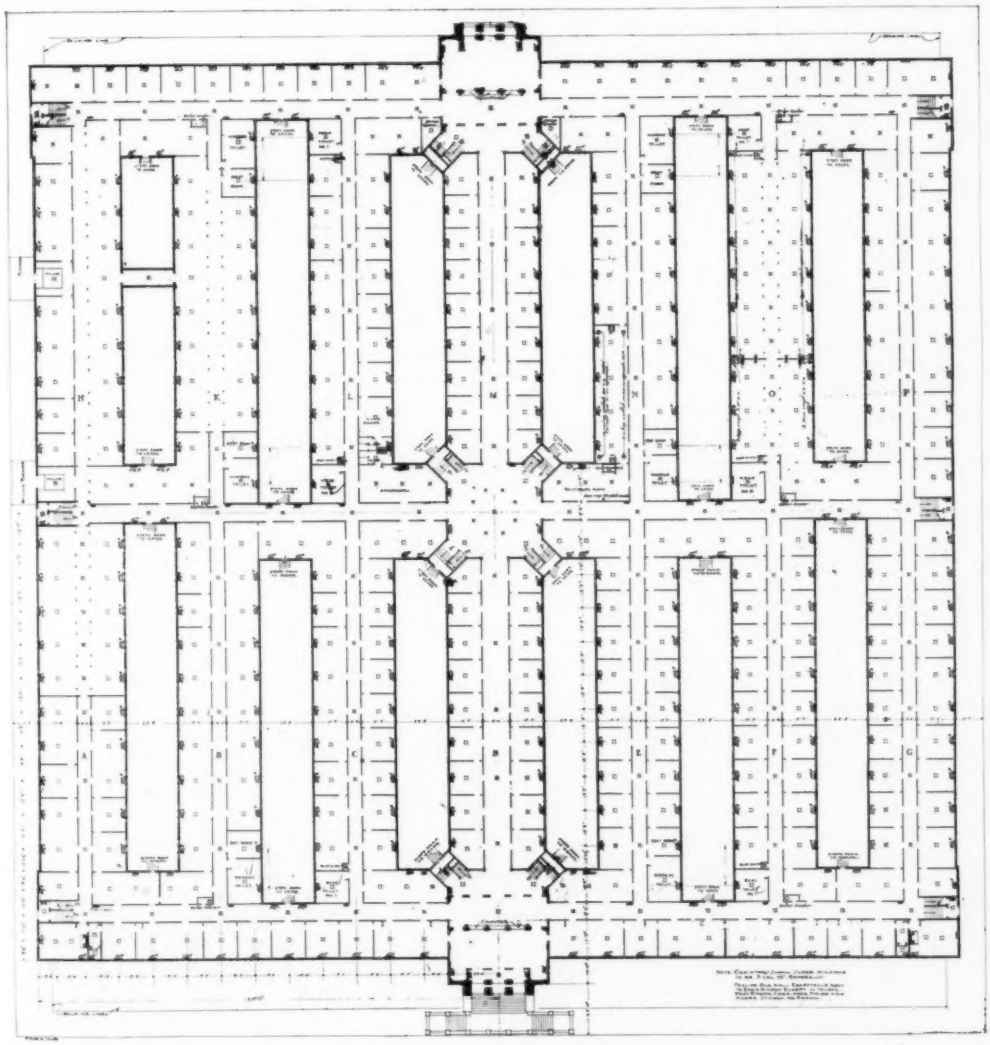


PLATE 167

ABOVE:—FIRST FLOOR PLAN AVIATION BUILDING
BELOW:—FIRST FLOOR PLAN WAR TRADE BOARD

TEMPORARY OFFICE BUILDINGS FOR THE UNITED STATES GOVERNMENT, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

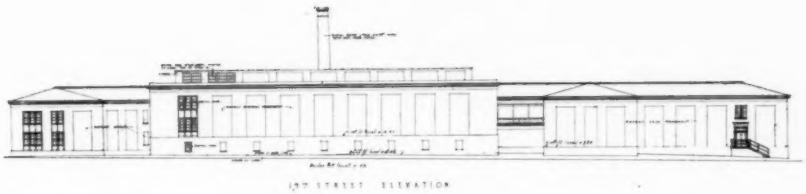


Plate 168

UNITED STATES ORDNANCE BUILDING NO. 1, WASHINGTON, D. C.

WADDY B. WOOD, *ARCHITECT*

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VOL. CXIV NOVEMBER 27, 1918 No. 2240

Federating Architecture Among the Allies

WE are going to have many things to think about. We shall have to consider them carefully and seriously. Every man who hopes to secure for himself that part of future prosperity to which he is entitled must make no mistake. There will be decisions to make and they shall have to be made quickly. Procrastination will be fatal in any future plans.

There will be a very close inter-relation in all the matters affecting the practice of the profession of architecture. Closer than ever before.

Every architect must needs participate in the councils of the future. Why not? Does not labor by its thorough organization effect the measures that it believes are essential to its safety and protection? Does not labor present the most perfect organization for its own good that exists?

If architects, through a mistaken idea of dignity, refuse to join themselves in one complete representative body, are they not driving forward to a period of chaos?

Certainly there are great things to think about; one of them will be the federation of all architectural societies into one representative body. And by representative we mean just that—an organization that will stand for architecture wherever it shall be practiced in the United States. And then, having accomplished this very necessary end, what is more natural than the closest affiliation with similar organizations in other countries? Our own forces, with those of our Allies, have shot away, broken down all national boundaries. The world to-day comes nearer a great federation of men striving for a common purpose than ever before. Why not, then, an international convention of the profession, participated in by all the representative architectural organizations of the allied countries?

Can anyone conceive a better method of bringing home to all the world the true meaning of the profession of architecture?

Let us consider a minute. Tons of paper have been covered in describing the vandalism of the German army and deploring the destruction of monumental buildings in France and Belgium. No one tries to minimize the loss; every one is earnest in protest. Is not this loss one of architecture? Does the average reader think of it as architecture? A conference, such as is here suggested, would result in widespread appreciation of architecture. No one would thereafter dispute its value as a great educational meeting. Let us arrange for an allied conference of architects as quickly as we can.

The United States has shown its resourcefulness in times of war. In recognition of their great ability its armies have the position of honor in the advance into German territory. We are now known to all the world as a nation of doers. Will anyone doubt that representatives of American organized architecture would be received with the greatest respect in the councils of the profession in Europe?

This conference should be brought about as speedily as possible. The delegation from this country should represent the entire profession of architecture in the United States. No other would accomplish the object sought.

All Barriers Removed

ALL remaining restrictions on non-war construction were, by an order of the War Industries Board issued on November 22, removed. By this action, building in the United States may be carried forward exactly as in the days before we entered into the war.

Just how soon we shall return to normal conditions depends entirely on the foresight that has been practiced by all those engaged in building. If the oft-repeated admonition to plan, prepare and co-ordinate all the many things essential to a resumption of building has been heeded, we shall soon be actively engaged.

Every patriotic man in this country whose work has brought him into the building industry may properly take to himself a certain measure of satis-

faction. In spite of the exactions and restrictions placed on building and the production of materials, many of which were often believed arbitrary and unnecessary, those directly affected have at the risk of large monetary losses, patiently acquiesced in the wishes of the Government. Now that our armies are victorious and we have emerged from this struggle with dignity and great honor, we may rightfully go forward to our future destiny, elated with the pride of a duty done, and a staunch upholding of the Government.

In those great problems which are classed in the general program of reconstruction, none are more vital to this country's welfare than those which affect the industry of building. In one way or another, building is allied to every social, economic, educational and industrial problem. It is proof of the thoroughness of organization of this vast industry, that although greatly retarded, and in some instances actually suspended, there has been no disruption. We shall be able, in fact we are at once proceeding, to go forward without impairment of efficiency, and shall soon be in a position as to stocks and available supply to fill every demand.

This is preparedness in the highest degree, an efficiency such as one would naturally associate with the second largest of our industries. It proclaims the adaptability of the American character, its great powers of assimilation. The victories of our industrial workers, while not so spectacular as those of our men in arms, and while not so generally apparent to the average reader of the daily paper, are none the less of the vital factors in nation building that have placed this country where it stands.

The moral of it all is that we are emerging from a great conflict, tried and found fit. To maintain this, every man must do his part, his "bit," just as conscientiously now as if we were at war.

These are the duties of true citizenship. These are the things that will strengthen this great industry. Naturally the people look to those who by advantages of higher educational training and a well developed technical ability are qualified for leadership at this time. Architects are pre-eminently in this class of well-trained men.

The Architect and the Government

MR. WOOD'S article in this issue is an interesting description of an architect's experience while actively engaged during war times on large operations for the Government. Few men, during the past sixteen months have had better opportunities to study Governmental methods. His deductions as set down are of great value and serve to correct many erroneous impressions relative to the real attitude toward architects in war work.

A further opportunity is afforded to direct attention to efficiency of organization in architects' offices, and in the present instance this efficiency is emphasized by the fact that the large operations undertaken were conducted without any increase in the working space over that employed in normal times. Some facts gained by personal observation and investigation will permit opportunity to learn more clearly what was accomplished in this undertaking.

In the different emergency buildings for the Government designed and constructed by Mr. Wood, ranging in cost from $200,000 to more than $3,000,000, ninety acres of floor space have been covered. All of the necessary drawings have been made in a drafting room 16 x 18 feet in size, and the force employed was from four to eight men and a stenographer.

The lesson taught by this accomplishment would seem to be as set forth by Mr. Wood in his article, the strict elimination of every unnecessary drawing, specification and a minimum of "red tape." Further, unusually good judgment was undoubtedly shown in the selection of subordinates as well as executive skill in directing their efforts. In short, architecture as a business has in this case had its highest development. No organization engaged in successful merchandising could have been more efficiently conducted in its business relation than was this architect's comparatively small office. Yet, from this small drafting room, personal observation showed that there was issuing a steady flow of the necessary drawings and instructions that were keeping employed a vast army of men all over Washington where these buildings were springing up.

Can anything be plainer? Can any argument based on a theoretical or academic presentation of the function of an architect be as convincing as what has been accomplished in this instance? Can anyone doubt that the various departments of Government work served by this office will have been compelled to revise a hitherto incorrect idea of an architect and what he means to building? And will anyone seek to deny that it is in such individual cases that the profession is best served in its struggle for rehabilitation in the judgment of the Government and through it by all the people everywhere?

The Practice of Architecture

MANY things give indications of changes in the making. Through conversation, correspondence or reading these signs are constantly recurring testimonies, and a tabulation is unconsciously made of them until the ideas become insistent in their presence. To verify the general impression, a systematic collation of all the evidence is in order.

In arriving at a conclusion by this mental process, it will be found that among the diverse problems demanding attention at this time, one of manifest importance is that of the attitude of the public toward the architect and of the architect in his relations to himself and others.

The practice of architecture is probably to-day, more than ever before, a matter of barter and trade. The monies invested in building structures demand a return service which represents full value. This value is measured in the adaptability of the structure to its use, its durability and its appearance. These three factors are the fundamentals of correct planning and to render adequate service it appears to be essential that the architect should fully qualify himself to meet these basic requirements.

An analysis has been made of a great amount of data pertaining to this subject and the majority opinion has been condensed into the following five paragraphs which embrace the most common of the points developed. This brief consensus of opinion is not intended to cover the multitude of conditions that exist in such relations, but it is thought that possibly it comprises the basic factors.

1. The business of architecture is inseparable from the profession of architecture. Together they comprehend the originating, promoting, designing, planning, directing and controlling the construction of buildings and their appurtenances.

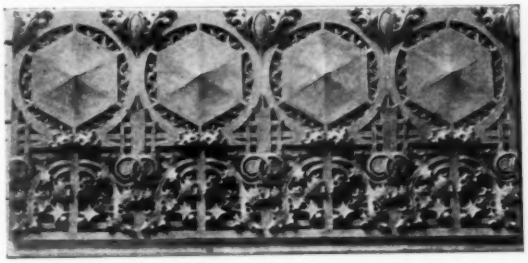
2. To develop a general demand for architectural service—without which only limited opportunities for practice will be presented—the architect must, as an individual and collectively, employ proper and effective means to create a universal appreciation of its intrinsic value.

3. To fully perform his function, the architect must organize, equip and operate his business so as to render complete service in the production of plans and specifications for everything embraced in the construction, equipment and furnishing of buildings.

4. He must furnish complete and detailed supervision of construction and be closely identified with it. He must be responsible financially, as well as morally, for all of his acts, including the correctness of design, the completeness and accuracy of plans, specifications and details, and the construction of the building in accordance therewith; his responsibility to be contingent only on his being accorded freedom in deciding all matters of structural design, mechanical equipment and the selection of materials and workmen.

5. He must control and regulate the business affairs of the building operation so as to safeguard all interests. He must be just and impartial in deciding all controversies within his jurisdiction, but where his own interests are involved he must submit the controversy to arbitration.

A free expression of opinion is invited in the hope that further light may be thrown upon the attitude of the profession toward this important matter.



Readjusting Industry

Notes on the Building and Allied Interests and the Factors Which Affect Them

The American Chamber of Commerce in London Makes Important Definite Suggestions on American Reconstruction

THE following statement has been proposed by the Directors of the American Chamber of Commerce in London for immediate consideration by business men in the United States:

The American Chamber of Commerce in London, formed for the purpose, among others, of furthering Anglo-American trade relations, believes that the time has come for the business communities of the United States to reach conclusions on certain fundamental questions, which will aid our Government to formulate an after-war trade policy founded upon the reasoned public opinion of the country.

The very fact that the idea of a League of Nations, expounded by our President and interpreted by distinguished statesmen, is daily taking more concrete form, makes it necessary that the people of the United States, unaccustomed hitherto to think in terms of international relationships, should understand how the growth of our trade beyond our borders has unavoidably brought us into contact with all the nations likely to be members of such a league, and more than any other with the British Empire. This Chamber believes that the establishment of friendly trade relations between the English-speaking peoples, and the removal of all motives of distrust and suspicion arising out of the possibilities of commercial rivalry must be essential elements in a successful and permanent League of Nations.

Had the European war never occurred American foreign trade would doubtless have shown notable development since 1914. As things befell, the closing of the oceans to German shipping, not less than the diversion of British industrial effort to war purposes on land and sea, have contributed to an expansion of our foreign trade beyond all conceivable anticipation. Again, the decision of Germany to resort to unrestricted submarine warfare created an emergency which was met in America by a vast extemporized program of ship building, the realization of which to-day is winning the admiration of the civilized world. However decisive may prove to be our contribution of ships during this fateful period, its consequences after the war are bound to be no less far-reaching.

At the present time the imperative demands for tonnage to transport the American army at maximum speed to France have brought about increasingly severe restrictions upon overseas trade, affecting both the British Empire and the United States. The economic consequences of these restrictions have often been unexpected, and in certain cases have led to the belief in one country that they directly benefited the other.

To the German submarine, then, may be traced, broadly speaking, certain special circumstances existing to-day—the phenomenal growth of our overseas trade as well as of our merchant marine—circumstances which inevitably raise issues with Great Britain, the most important carrier and trader in the world before the war. Nothing would suit Germany better than to breed discord out of them; nothing, this Chamber believes, is more important to the future of the world than a good-natured adjustment of these issues between the English-speaking peoples.

The American Chamber of Commerce in London has noted with the greatest interest the proposals recently put forward in Congress for the creation of a Reconstruction Commission. It hopes that no time will be lost before the definite establishment of some such instrumentality, but it most emphatically believes that its membership should include a large proportion of the most experienced men of business.

In view of the rapidly developing international situation this Chamber believes that it is none too soon for a decision to be reached, in agreement with our Allies, upon a plan for the equitable distribution of raw materials to reconstitute the stocks depleted by the wastage of war and by the criminal folly of the German submarines.

The fiscal policy of the British Empire is approaching a turning point which may have far-reaching effects upon our mutual trade. This policy, which to-day can be said to be still in the making, will be the resultant of many complex factors, of which our own attitude, as Mr. Lloyd George himself has intimated, will not be the least

important, and a series of conferences between responsible delegates could have none but beneficial results for both countries.

Another matter urgently calling for joint action is that of dual income tax assessment. Not only does the present situation work unjustified hardship on individuals of both nationalities, but it also practically prohibits the employment of the capital of one country in the enterprises of the other, and is thus a strong deterrent to all co-operation between them in the work of reconstruction.

Reference has already been made to the growth of our merchant marine. It is not unnatural that a certain apprehension should be felt in some quarters at the formidable figures of our new construction, for quite apart from its importance in terms of tonnage, the existence of a huge Government-owned fleet, with no known policy for its future operation under peace conditions, must inevitably be a disquieting factor both in the freight and in the commodity markets of the world.

This leads to another matter deemed by the Chamber to be of supreme importance to the future. The all-embracing scope of modern war has imposed the creation of Government bodies to control practically every form of activity, and much of this machinery is so constituted that its perpetuation after the war presents no serious difficulties. This Chamber recognizes that during an indeterminate period after the end of the war it will not be possible to relax all control over industry and other activities, but it fervently believes that the restoration of private initiative and of the natural play of economic laws should be one of the first objectives of reconstruction.

The foregoing are only a few of the larger questions which might profitably be discussed. The American Chamber of Commerce in London has witnessed, and in many cases has shared in, the benefits derived from personal contact and frank discussion with British authorities and men of affairs.

The American Chamber of Commerce in London therefore earnestly urges that every effort be made to secure prompt action by Congress for the appointment of a Federal Reconstruction Commission, containing a strong representation of men of sound experience and judgment in matters of foreign trade, with authority to proceed at once to confer with similar bodies in Great Britain and the other countries at war with the Central Powers upon all matters touching their economic relations with the United States.

(NOTE.—The foregoing was written before the signing of the armistice.)

Economic Control to Be Continued

There will be no let-up of the activities of any of the four principal non-military war agencies—the War Industries Board, the War Trade Board, and the Food and Fuel Administrations—with the end of fighting.

The Food and Fuel Administrations continue under the Lever act until the President proclaims peace after ratification of a treaty by the Senate. They automatically go out of existence then.

There is still need for conservation of fuel, and probably will be no great lessening of fuel conservation measures for some months.

Because of the need of feeding the released peoples of northern France, Belgium, Central and Southern Europe, the Food Administration's activities must continue.

At the War Industries Board officials declared there would be much work for that organization to do. They foresee no serious industrial disturbance with the Government's grip on all war industries and materials held tight. The board retains its authority until peace is formally proclaimed.

Import and export control exercised by the War Trade Board probably will continue indefinitely to assure shipping space for the constant flow of supplies for American forces and the Allies, which will be required for many months to come. Any lifting of the present embargoes until the world gets back to its normal commercial stride, officials said, would mean flooding America with foreign orders that would strip the country of practically all immediately available commodities.

Railroads will continue under Government control until twenty-one months after peace has been declared officially, unless Congress meanwhile enacts new legislations shortening this period or providing for permanent Federal direction.

Government operation of telephone and telegraph communications by the Post Office Department will continue for at least a year.

After the War

Now that the war is over, the reconstruction of the world becomes the dominant question of the hour, says *The Manufacturers' Record*.

American railroads will have to be rebuilt and enormously expanded, making a greater demand for steel rails than the entire steel rail capacity of the country.

American highways will require the expenditure of billions of dollars to develop a system worthy of the name.

Our rivers and harbors will have to be deepened and the water transportation interests utilized in keeping with the vast traffic of that hour.

Building activities which have been halted for the last four years will then have to leap forward, and building supply materials will be in a great demand.

More than $1,000,000,000 will have to be expended upon the reconstruction and restoration of the industrial interests of France, and hundreds of millions upon the rebuilding of Belgium.

All Great Britain will have to take up enormous house building construction work, for houses are badly needed, and the reshaping of its railroads and its merchant marine and other activities.

Russia will be opened up to broad world encircling business development.

South America and Africa, Canada and Australia, and other countries will all begin a period of construction work, because for the last four years the world has concentrated its whole thought upon war. Then it will turn with equal eagerness to the work of the upbuilding influences brought into existence by peace. Great enterprises and small will be in evidence everywhere throughout the world.

The man who fails to keep this situation constantly before his mind, and so shape his business as to be ready to turn his activities upon the mighty opportunity which will then come to the brain and the machinery and capital of the world, will miss a chance such as may never again come to him. It behooves every business man in all the land, looking forward to the time when peace will surely come, to be ready to make the most of the unusual situation.

The Atlantic City Conference on Reconstruction

Preliminary plans for the War Emergency and Reconstruction Conference of War Service Committees to be held at Atlantic City, December 4, 5 and 6, are announced by the Chamber of Commerce of the United States.

Reconstruction will be given a prominent place on the program, as it is recognized this subject must be taken up, to the end that there may be placed at the command of the Government all available sources of information. The work of reconstruction suggests the creation of a federation of all war service committees that whatever study and planning is carried on may be on behalf of all business. War industries and non-war industries are concerned equally in the determination of reconstruction problems. All European countries already are under way with reconstruction plans.

The Atlantic City conference will include four general sessions and numerous group and committee meetings. Into the final session will be brought for final action all the proceedings of the meetings.

United States Materials for Reconstruction of France

André Tardieu, French High Commissioner to the United States, has advised the French War Commission that their services will be absolutely required in this country for many months to come, possibly one year. This commission will be charged with the securing of materials from the United States for the reconstruction of France. The plan, as now outlined, is that the French War Commission will work with the War Industries Board of the United States to secure the proper allocation of material produced in the United States, so that not only can construction in this country go forward, but that France can also be rapidly rebuilt. This may be one of the reasons for the limitation of free building in this country.

In speaking before the Merchants' Association of New York, Monsieur Tardieu stated that there had been destroyed in France 350,000 residences, and that the reconstruction of destroyed buildings of all types would require four million tons of steel.

Facts, Not Theories, to Determine Future Problems

There is every indication that the questioning attitude will develop greatly during the reconstruction period. The world has suffered too much to take anything for granted any more, and every arrangement for the future is going to be inquired into by men who will be better informed than they were four years ago. Political chicanery and economic quackery are going to have the most trying time of their respective and concurrent careers. The demagogue with his smattering of terms and his ignorance of content is to be challenged in the same spirit as the self-satisfied and obtuse reactionary. Both of them have missed the meaning of our time. Both will go down before the judgment of sane and enlightened public opinion.

National Convention of Building Industries

A convention of building industries has been called by the National Federation to meet at Hotel Traymore, Atlantic City, N. J., on Friday and Saturday, December 6th and 7th.

Department of Architectural Engineering

Industrial Sanitary Standards

[Those who are familiar with the sanitary facilities usually provided for workers a few years ago will appreciate the consideration given to this subject by the leading industrial employers today. The example set by the large and successful corporations is bound to have its effect on the smaller employer and this, with the increasing enactment of laws pertaining to the subject, indicates a universal improvement in the near future. The Standard Oil Company (New Jersey) has adopted a specification of sanitary standards, under date of July 29, 1918, which applies to all of the plants operated by that corporation. These specifications were prepared by C. E. Hicks, Consulting Engineer for the company. They are given in a slightly modified form but sufficient to provide the architect with the data on which he can build his own specification. The distribution of fixtures to accommodate the number of operatives is of interest and value and will afford data to be considered when this important subject is to be decided.]

Industrial Sanitary Standards

To govern in the purchase and installation of all new sanitary equipment for the use of wage earners.

Toilet, Wash and Locker Rooms

General: Wash, toilet and locker rooms to be provided for all employees, at points throughout the works, easy of access to employees and in groups of three separate rooms, preferably adjacent, with doors between. If necessary, the toilet rooms may be installed in separate location.

Toilet Rooms

Floors: Floors to have a substantial concrete base slab which is to be finished with 1:2 cement and sand, troweled smooth, and painted with light gray or brown concrete floor paint. A combined trap and floor drain to be installed to permit washing of floors.

Wainscot: Walls to have a 5′ 0″ high wainscot of 1″ thick American or English size enamel brick seconds, with sanitary cove base, Ogee return on top and Bullnoses around window openings. Enamel brick to be laid up against rough cement plaster and to be buttered with mortar consisting of 1 part Portland cement, 2½ parts fine screened sand and ½ part well-slaked lump lime (do not use hydrated lime if it can be avoided). Joints to be ⅛″ wide and racked to a depth of ⅛″, which, when set, are to be filled with white Atlas cement grout and struck flush. White sand may be added for joints wider than ⅛″ in a proportion of 1 part Atlas white cement and 1 part fine screened white sand.

All enamel brick, before laying, must be soaked in water until thoroughly saturated.

Walls and Ceilings: Walls above wainscot, and ceilings, shall receive a rough coat of cement plaster and a finish coat of Keene's cement plaster applied in ⅛″ thickness, carefully worked and troweled smooth to avoid cracks or open spaces.

To keep walls clean they may be washed or coated with white calcimine.

Windows: On new installations every toilet room or every water closet or urinal compartment shall have a window opening directly to the outdoor air. All window sills to be no less than 5 ft. from floor, and no window shall be less than 1 ft. wide nor have an area of less than 6 sq. ft., measured between stop heads, for one water closet or urinal. For every additional such fixture, the area of such window shall be increased at least 1 sq. ft. A skylight shall be deemed the equivalent of a window, provided that it has fixed or movable louvres with openings of the net openable area prescribed for such window.

Every such window shall open upon a street or upon a yard or open space, uncovered at the top, which in its least horizontal dimension shall be one-tenth (1/10) the height of the highest abutting wall but in no case less than 6 ft.

Ventilation: All toilet rooms not lighted by win-

dows that open easily shall be adequately ventilated to the outside air by artificial means. Every water closet compartment entirely separated from the remainder of the toilet room by partitions extending from the floor to the ceiling and not provided with a window opening easily shall be adequately ventilated to the outside air by artificial means.

Screening: The entrance to all toilet rooms shall be provided with a screen to ensure privacy. This screen shall be at least 6 ft. in height, and shall extend to within at least four inches of the floor and, if the space permits, shall be not less than 2 feet wider than the door leading into such toilet room.

Light: All toilet rooms and water closet compartments shall be adequately illuminated by natural or artificial light.

Heating: All toilet rooms and water closet compartments shall be adequately heated at all times.

Water Closets: White vitreous china silent action syphon jet closet with top inlet and floor outlet, 2″ brass spud, extended front lip and cut-back rim, flushed all the way around. Height 14½″, opening of bowl 16″, water surface 14″ x 10″, sanitary rim with 1¼″ downward projection inside of bowl, water seal 3″ and trap opening conforming with Government specifications.

Each closet to be furnished with a closet seat, open front and back, having nickel plated special heavy hinges; also a nickel plated, predetermined flush and a flush valve with stop and necessary mechanism for seat action.

The flush valve will operate on any pressure from 5 pounds up, provided the proper volume of water is supplied. To ensure this, the contractor will furnish a piping diagram giving the proper sizes, upon receipt of a sketch or plan giving: 1. Number and location of valves. 2. Pressure at water main. 3. Distance from water main or tank to flush valves.

Strainer: Where salt water is used for flushing closets and urinals, a strainer is to be connected into supply line to prevent grit and dirt from reaching mechanism of valves.

Stalls: Closets to be installed in single or double rows. Stall partitions to be cast iron, painted, for toilet rooms located under condenser boxes or at such point where exposed to the corrosive action of gases, etc. Pipe stanchions and braces for stalls to be painted.

In toilet rooms not exposed to gases, stall partitions may be made of sheet metal, painted, or ⅞″ slate. Pipe stanchions and braces for stalls to be nickel plated.

Stall partitions to be 30″ wide, 48″ deep, 3′ 6″ high from top of standard, 5′ 0″ high from floor, and to be provided with wood or metal doors 36″ high, 18″ above floor. Each stall to be equipped with two nickel plated coat hooks and a toilet paper fixture of the automatic single sheet feed type.

Number and Ratio of Water Closets: For toilet rooms designed to accommodate the number of employees indicated:

For 1 to 15 employees:
1 water closet per 5 employees on day work.
1 water closet per 5 employees on shift work; *i.e.*,
1 water closet per 15 employees on cons.ituting 3 shifts.

For 15 to 40 employees:
1 water closet per 10 employees on day work.
1 water closet per 10 employees on shift work; *i.e.*,
1 water closet per 30 employees constituting 3 shifts.

For 40 to 100 employees:
1 water closet per 20 employees on day work.
1 water closet per 20 employees on shift work; *i.e.*,
1 water closet per 60 employees constituting 3 shifts.

For 100 to 500 employees:
1 water closet per 30 employees on day work.
1 water closet per 30 employees on shift work; *i.e.*,
1 wa.er closet per 90 employees constituting 3 shifts.

For 500 to 1000 employees:
1 water closet per 35 employees on day work.
1 water closet per 35 employees on shift work; *i.e.*,
1 water closet per 105 employees constituting 3 shifts.

For 1000 to 5000 employees:
1 water closet per 40 employees on day work.
1 water closet per 40 employees on shift work; *i.e.*,
1 water closet per 120 employees constituting 3 shifts.

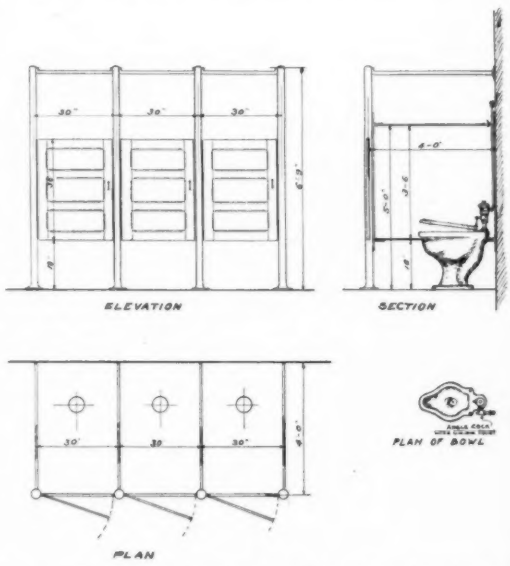


Fig. 1. The water closet and stall in plan, elevation and section.

Urinals: Porcelain urinal stalls, 1′ 6″ wide, 3′ 5″ high, 9½″ deep from face to back, with vitreous automatic flushing cisterns, with nickel-plated brass brackets, spreader and inlet coupling and brass waste plug and coupling with removable brass grating and nickel plated flush pipe.

One flush tank to supply not more than three urinals.

Each urinal to have an individual non-syphoning lead clean-out trap, with threaded brass cover, set flush with raised floor. Traps to be located between urinal stalls, to make them readily accessible, but far enough back of standing platform to avoid their forming an obstacle.

Spacing and Setting Urinals: Urinals to be spaced not less than 30″ from center line to center line, and to be set with top of lip 3″ above main floor line, the entire floor around urinals, which is to extend 30″ from rear of urinals and across battery, including space between stalls, to be 3″ above main floor line. The raised floor to pitch toward and to be flush with lip of urinal and to be 1″ hexagonal white tile ¼″ thick, laid according to Tile Setters' Specifications, or a satisfactory finish applied to a concrete floor. Floor in space between urinals to be laid on a slope of 4″ in 12″, pitching forward. Stop for raised floor to be 4″ thick concrete curb.

Number and Ratio of Urinals: For toilet rooms designed to accommodate the number of employees indicated:

For 1 to 15 employees:
1 urinal per 7 employees on day work.
1 urinal per 7 employees on shift work; *i.e.*,
1 urinal per 21 employees constituting 3 shifts.

For 15 to 40 employees:
1 urinal per 15 employees on day work.
1 urinal per 15 employees on shift work; *i.e.*,
1 urinal per 45 employees constituting 3 shifts.

For 40 to 100 employees:
1 urinal per 25 employees on day work.
1 urinal per 25 employees on shift work; *i.e.*,
1 urinal per 75 employees constituting 3 shifts.

For 100 to 500 employees:
1 urinal per 35 employees on day work.
1 urinal per 35 employees on shift work; *i.e.*,
1 urinal per 105 employees constituting 3 shifts.

For 500 to 1000 employees:
1 urinal per 50 employees on on day work.
1 urinal per 50 employees on shift work; *i.e.*,
1 urinal per 150 employees constituting 3 shifts.

For 1000 to 5000 employees:
1 urinal per 75 employees on day work.
1 urinal per 75 employees on shift work; *i.e.*,
1 urinal per 225 employees constituting 3 shifts.

Cleanliness: A janitor shall be held responsible for the maintenance of all toilet, wash and locker rooms, including water closet compartments, in a clean and sanitary condition.

Wash Rooms

Floors, Wainscot, Walls and *Ceilings, Windows, Ventilators, Lighting, Heating, Drains:* Same as specified for toilet rooms, except walls and ceilings to be painted with light color washable oil paint instead of calcimine.

Wash Sinks: Wash sinks to be of cast iron, 2 ft. 6 in. x 6 ft., enameled inside with exterior sprayed with white enamel; rim of sink to be 31″ from floor; supported on two porcelain enameled iron pedestals and fitted with two 18″ double iron

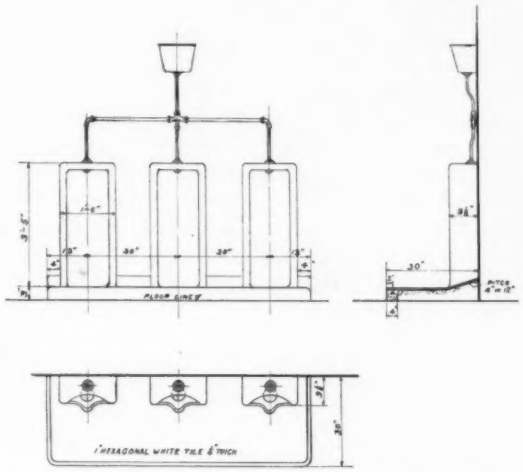


Fig. 2. The urinals in plan, elevation and section, showing the special raised floor construction.

supply pipe supports sprayed with white enamel; with two ¾″ rough nickel plated brass supply pipes, each having three rough nickel plated brass double faucet connections right and left hand threaded and arranged so that the hot water is at the left hand side of all faucets; with six rough nickel plated

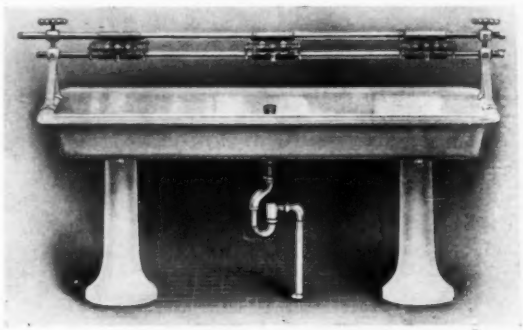


Fig. 3. Double wash sink on pedestals, to stand in the middle of the room, permitting access on two sides.

brass, rose spray (with No. 52 drilled holes), double mixing, quick pressing faucets, with nickel plated beehive strainer and 1½″ nickel plated cast brass "S" trap, without plug or stopper, fitted with six rough nickel plated brass soap dishes. All fittings to be attached in such manner that easy removal of same is made impossible.

For wall mounting use 13¼" wide inside x 6'0" long wash sinks, with 8" high integral back, fittings and finish to be as specified above.

Warm Water Supply: Warm water is to be supplied to wash stand faucets by means of a thermostatic steam and water mixer. These mixers furnish warm water at a temperature of 120° and are to be installed in the following proportion:

25 G.P.M. capacity mixers for 18 faucets or less.
40 G.P.M. capacity mixers for 36 faucets or less.

It should be understood that with these mixers the steam pressure must be at least 25 pounds higher than the water pressure to insure proper heating and volume of delivery. Further, steam pressure should in no case be more than 125 pounds.

Number and Ratio of Faucets: For wash rooms designed to accommodate the number of employees indicated:

For 1 to 15 employees:
1 faucet per 2 employees on day work.
1 faucet per 2 employees on shift work; *i.e.*,
1 faucet per 6 employees constituting 3 shifts.

For 15 to 40 employees:
1 faucet per 3 employees on day work.
1 faucet per 3 employees on shift work; *i.e.*,
1 faucet per 9 employees constituting 3 shifts.

For 40 to 100 employees:
1 faucet per 5 employees on day work.
1 faucet per 5 employees on shift work; *i.e.*,
1 faucet per 15 employees constituting 3 shifts.

For 100 to 500 employees:
1 faucet per 8 employees on day work.
1 faucet per 8 employees on shift work; *i.e.*,
1 faucet per 24 employees constituting 3 shifts.

For 500 to 1000 employees:
1 faucet per 10 employees on day work.
1 faucet per 10 employees on shift work; *i.e.*,
1 faucet per 30 employees constituting 3 shifts.

For 1000 to 5000 employees:
1 faucet per 15 employees on day work.
1 faucet per 15 employees on shift work; *i.e.*,
1 faucet per 45 employees constituting 3 shifts.

Showers: Shower heads to be 5" diam. cast brass, nickel plated rain shower heads with adjustable ball joint and self-closing controlling valve with nickel plated chain pull and ring. Mixing column to be ½" nickel plated brass pipe; supply pipes to be ⅜" nickel plated brass from mains up, with ⅜", 4-ball, china indexed handle, swivel disc compression cocks. The horizontal supply mains to be nickel plated brass pipes and nickel plated brass fittings, of sufficient size to take care of number of showers in a battery. All fittings to be attached in such manner that easy removal of same is made impossible.

Stalls: Stalls to be made of slate, not less than ⅞" thick. Dimensions of stalls to be 3' x 3'. Height of backs and partitions from floor up to be 6' 6". Partition slabs to be supported on self-contained slate legs 6" wide; remainder of partition section to

Fig. 4. Wash sink for wall mounting, on pedestals and with integral back.

be cut away to a height of 12" from floor line, to permit flow of water (see sketch). End partitions to be full. Partitions to be secured to backs by means of nickel plated brass angle clips and to be braced in front by means of 1¼" nickel plated brass tubing. The floor of the shower stall to be sloped to the back ½" in 12", and to be made of one part cement and two parts sand finish, troweled smooth and waterproofed if necessary. A concrete trough is to run in rear of shower stalls, with drains for each five stalls, drains to be a combined trap and drain. A 4" wide curb wall is to be run around shower enclosure, 4" above floor line, to keep water within shower stalls. A wood floor mat is to be furnished for each shower compartment. Comfortable wood benches and a sufficient number of clothes hooks shall be provided for each battery of showers. Rough nickel plated brass soap dish to be mounted on partition of each stall at a height of 4' from floor line.

Warm Water Supply: Warm water is to be supplied to showers by means of a thermostatic steam and water mixer. These mixers are to be installed in the following proportion:

25 G.P.M. capacity for five showers or less.
40 G.P.M. capacity for ten showers or less.

Wherever practicable and construction permits, the shower stalls are to be faced with openings toward wall, leaving an aisle between stalls and the wall, to give more privacy to bathers, cutting off the view from employees using wash stands.

Number and Ratio of Showers: For wash rooms

designed to accommodate the number of employees designated:

For 1 to 15 employees:
1 shower per 15 employees on day work.
1 shower per 5 employees on shift work; *i.e.*,
1 shower per 15 employees constituting 3 shifts.

For 15 to 40 employees:
1 shower per 15 employees on day work.
1 shower per 7 employees on shift work; *i.e.*,
1 shower per 21 employees constituting 3 shifts.

For 40 to 100 employees:
1 shower per 20 employees on day work.
1 shower per 10 employees on shift work; *i.e.*,
1 shower per 30 employees constituting 3 shifts.

For 100 to 500 employees:
1 shower per 30 employees on day work.
1 shower per 20 employees on shift work; *i.e.*,
1 shower per 60 employees constituting 3 shifts.

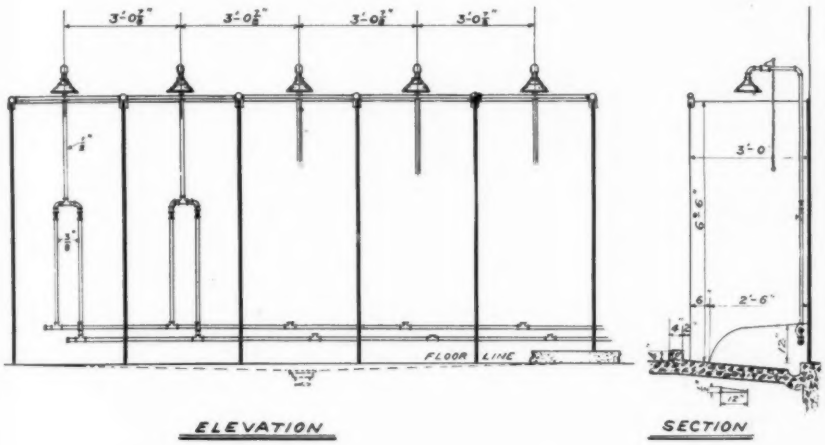


Fig. 5. The showers in plan, elevation and section, showing stalls and special floor construction.

For 500 to 1000 employees:
1 shower per 40 employees on day work.
1 shower per 25 employees on shift work; *i.e.*,
1 shower per 75 employees constituting 3 shifts.

For 1000 to 5000 employees:
1 shower per 50 employees on day work.
1 shower per 30 employees on shift work; *i.e.*,
1 shower per 90 employees constituting 3 shifts.

Locker Rooms

Same specifications as toilet rooms, except no enamel brick wainscot; therefore floor finish is to be worked against walls to form a 2″ radius sanitary cove flush with finished plaster line.

Lockers: Each employee to be provided with one steel locker with louvred door, slanting top, 18″ wide, 15″ deep, 70″ high. Lockers to be equipped with steel angle legs 16″ high, and steel supports to permit the placing of a bench board 10″ wide immediately against and running along front of lockers, at the same time allowing the door to be opened without interference of the bench in front of same.

All lockers to be furnished with padlock or other substantial lock, chain, clothes hook and pulley, for hanging dirty working clothes immediately above lockers (see sketch), or separate locker compartment for working clothes, and all employees to be forbidden to hang working clothes in lockers with street clothes.

In ordering, number of lockers in row must be specified, as this will govern location of bench supports. Height from floor to ceiling must also be stated.

Drinking Fountains

Drinking water faucets shall be of such design and construction as to obviate the direct application of the lips to the water outlet, and are to be installed as rapidly as practicable, in convenient locations.

A sanitary bubbler, with self-closing compression faucets, is recommended.

Water to be refrigerated in the summer and tested periodically by chemical and bacteriological examinations, and filtered when necessary.

Ice used for cooling purposes shall be applied in such a manner that the ice itself will not come in contact with the drinking water, and the water from the melting ice will not become mixed with the drinking water.

Water receptacles shall be thoroughly cleansed weekly and then sterilized with steam or with boiling water.

Employees engaged in the care and maintenance of drinking facilities shall be determined to be free from communicable diseases by physical examination.

Still Cleaners

Exterior working clothes of still cleaners to be provided by the company, without charge, and laundered at least twice a week at company's expense.

Soap and Towels

Company to supply a limited amount of soap without charge, all employees to supply and care for their own towels.

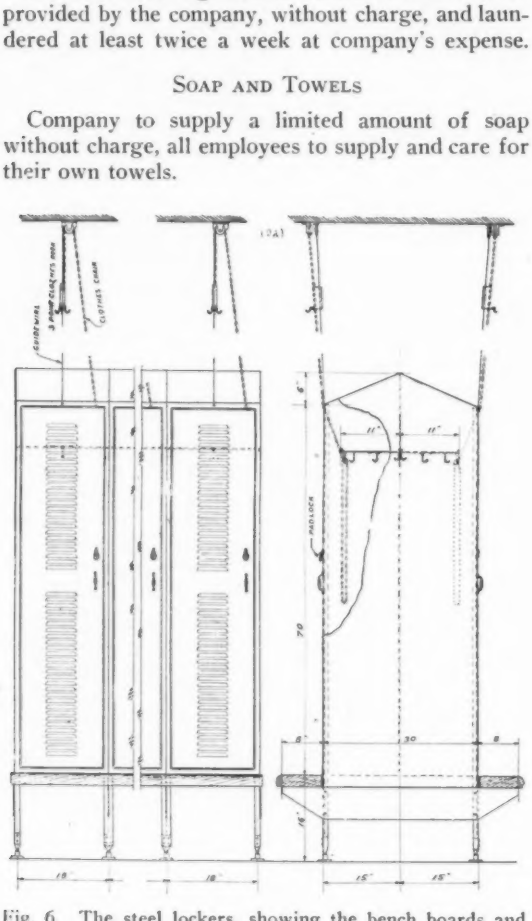


Fig. 6. The steel lockers, showing the bench boards and apparatus for hanging working clothes above.

General Construction Details

Ventilators: Approved sheet metal ventilators may be used, of size necessary for effective and satisfactory ventilation. Ventilators must be equipped with damper so that during extreme cold weather they may be shut off if necessary. Glass top ventilators may be used where light is desired. Each ventilator is also to have a copper, bronze or Monel metal netting (20 mesh, No. 33 wire) covering opening, to keep out flies and mosquitoes. The kind of metal to be specified for mosquito netting is ject to local conditions. In all cases the most durable metal is to be used for each particular installation, depending on gases and fumes to which it is exposed.

Window and Door Openings: All window and door openings in toilet, wash, and locker rooms, to be provided with copper, bronze or Monel metal mosquito netting (20 mesh, No. 33 wire). The kind of metal to be specified for mosquito netting is subject to local conditions. In all cases the most durable metal is to be used for each particular installation, depending on gases and fumes to which it is exposed.

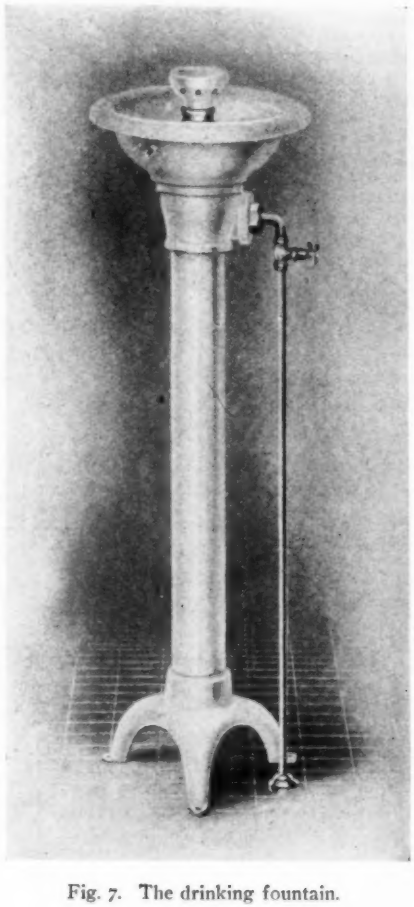


Fig. 7. The drinking fountain.

Water Lines: All water lines, whether for flushing or washing purposes (whether salt or fresh water), shall be cast iron bell and spigot pipe, coated, for large sizes, and galvanized wrought iron pipe for small sizes. The use of plain wrought iron pipe shall be discontinued as it will cause rust stains on toilet and lavatory fixtures.

Sewers: All sewers from lavatory and toilet fixtures are to be properly vented to the atmosphere to insure a rapid flow-off and to avoid syphoning of traps.

Hot Water Supply and Regulators: The thermostatic steam and water mixers herein specified for wash sinks and showers, are to heat water direct to a temperature of 120° and be safe against scalding. Where, however, other hot water heaters are now in use and their use is to be continued in connection with these standards, one of the following devices is to be installed as a matter of safety precautions:

A thermostatic water controller to be installed in hot water line supply to sinks and showers to prevent scalding.

A regulator is to be installed in hot water boiler proper and set to keep temperature of water below scalding point.

Revision: These specifications are subject to revision in accordance with State or Municipal regulations.

The Engineer's Creed

THE facilities for acquiring engineering education in this country are of comparatively recent origin and have been developed during the past five or six decades. At this time an engineering education can be acquired in every section of the country, and with the excellent engineering literature and publications available the engineer finds no obstacles in easily keeping in touch with the rapid advances of the profession.

During the pioneer days and the first half of the period above referred to engineers organized themselves into societies which became national in scope. The purpose of these societies was to enlarge the scope of technical knowledge by the interchange of information among themselves. That work was of the utmost importance at that time and was a material factor in adding to the store of available data.

Unfortunately some of these national engineering societies have continued that particular activity regardless of the fact that their contributions to engineering knowledge are but a small proportion in the material annually developed by other agencies. It is becoming constantly more apparent that more engineering facts are being discovered and developed into usefulness through the agency of experimental laboratories than by any other means. These laboratories are supported by and operated by large corporations for the development of their business or by public funds granted to them as adjuncts of state supported schools.

It naturally follows then that the activities of some of these engineering organizations are accomplishing work of no vital importance, and their membership acquiesces in supporting an association which is often, in effect, a limited clique personally operated. Fortunately, this state of desuetude is not that of many national organizations, for some of them have broadened their scope to comprehend numerous allied subjects and conduct their activities in such a manner that they are a vital thing, personal to each member. The American Institute of Mining Engineers is a notable example of the progressive national organization.

A new organization has recently been effected, originating in the central states, which has made a progress unparalleled by any other engineering organization, and its membership is of commanding importance in numbers and personnel. This society, the American Association of Engineers, devotes its activities to the welfare of its members as engineers. The consideration of technical subjects has no place in their work, as that is better accomplished in other ways. They devote their labors to the establishment of proper relations between engineers and between engineers and the public; to conserve and maintain all of the rights and privileges to which they are justly entitled, both moral and legal; to render to the public such service as they are qualified to perform; to create the proper appreciation of the functions of the engineer generally; to establish themselves as a necessary factor in the national, civic and political growth of the nation; an association to benefit the engineer in a business and social way so as to enable him to assume his rightful place in the political economy of the country. In these times such an objective will insure the success of any such society if impartially and unselfishly conducted.

A resolution adopted at the last convention of the association resulted in a committee of one being appointed to formulate an "Engineer's Creed." He is one of the best known and most beloved of our engineers, whose work in this particular is anonymous, and he asks that his work fare forth on its own merit. Naturally, if this "creed" lives up to its name, the engineers will cherish and preserve it. If it does not find a place in their hearts it will be forgotten and become a member of that inoperative group of codes of ethics that exist to plague their possessors.

Engineering is essentially the correct application of the fact in producing a desirable result. This can be done in various ways, but engineers realize that all applications of natural laws must be honestly made or a retributive result follows. The creed correctly reflects this sentiment and should find its place continuously in the mind and heart of the engineer.

We quote

The engineer has obligations; a few of which may be adverted to.

In accepting an engagement in any field of service in which he has not already proved his attainments to be equal to the task, he should be frank with his client and state just what his previous experience has been and give the reasons which, in his judgment, justify his undertaking the contemplated work. Many a man has had responsibilities thrust upon him by clients who, though fully aware of his lack of previous experience in the field which they wished him to enter, recognized in him resourcefulness, good judgment, industry and frank honesty, which they believed fitted him to carry the new responsibility to a successful issue; and not often has he failed.

The engineer, in responsible charge of construction work which is being done by a contractor, individual or firm, at once exercises two functions, one requiring engineering knowledge, skill and experience; the other judicial fitness. He becomes the arbiter between the principal, man, firm or corporation for whom the work is being done and whose money is paying for it, and the contractor who is doing the work. He must be a just judge, executing righteous judgment between the parties to the contract, without fear or favor. The fact that his client, the principal or first party to the contract, pays him must not have the value of a pennyweight in tipping the scale in favor of the source of his income. The engineer owes his client an allegiance demanding intelligent, conscientious and diligent service. That he owes, but his debt demands for its liquidation no act, no word which would compromise his integrity or offend his sense of justice and right.

The engineer's obligation to serve is not limited to the duties for which he is paid; he owes it to his equals in service, to his subordinates and to the public at large. His equals are his brothers with whom he should share his knowledge and experience, should they seek it. His subordinates should find in him the help of good example; the friend with whom they may take counsel, and the mentor who will impart of his knowledge of life, of men and things, to aid them in shaping their conduct and their purpose.

To the public at large, he owes good citizenship. With every other citizen he shares responsibilities for government, civic, state and national, and his efforts should be to make government good. He cannot hold himself aloof from those activities which our form of government imposes upon those who live under it, and escape responsibility for its shortcomings and its failures. If an unworthy man represents him in any governing body, he shares that unworthiness unless he exercised the right and duty of good citizenship and tried to put a good man into the office that the weak or bad man holds. "They also serve who only stand and wait" may be true of those who through misfortune are cut off from life's activities, but the saying does not apply to any live engineer. "He must be up and doing." He must keep his mental equipment as fit for service as the soldier keeps his arms, and the guiding motives of his life true, lest they fail him when the hour of trial comes.

Moreover, an engineer owes a professional obligation to the public by reason of his special training along technical lines. Therefore, he should use his knowledge and experience to promote the general welfare by every means in his power. He stands upon the watch tower of progress to warn against danger and to show the way to better methods in dealing with problems of engineering. He should stand against the individual or group of individuals who try to exploit, for their own profit or advantage, forces of nature which belong to the nation, the state or the municipality, without making a just return therefore to the rightful owners of the potentiality.

Wherefore should an organization of honorable men present a code of ethics when each carries in his own mind and heart rules of right living and honorable action?

It is "Lest we forget."

The law-abiding are not conscious of the restraints of the law, but the lawless are made to feel its power. A code of ethics accepted by the great body of professional men is the declaration of their faith, the chart by which they direct their course in the voyage of life. To this chart one who is in doubt may turn for suggestion as to the right course in any time of perplexity and by the principles laid down in this chart transgressors will be judged and disciplined by their fellows.

The Code

Any code of ethics must be predicated upon the basic principles of truth and honesty. "Whatsoever things are true, whatsoever things are honest," are the things for which engineers must contend.

An engineer may not "go beyond and defraud his brother" by any underhanded act or method. He may not do or say anything which will injure his brother's reputation or his business for the purpose of securing his own advancement or profit. This admonition carries with it no obligation to refrain from telling known and absolute truth about an unworthy brother, as a protection to others, but the truth so told must be such as can be substantiated, and he who tells it must have the courage which will not shrink from the consequence of his telling.

The engineer owes his client allegiance demanding his most conscientious service. But conscientious service to the client must never entail a surrender of personal convictions of tru.h and right.

An engineer who receives compensation from an employer may not receive gift, commission or remuneration of any kind from a third party with whom he does business for that employer.

An engineer seeking to build up his business may not resort to self-laudation in advertising. He may state briefly the lines of work in which he has had experience and enumerate responsible positions which he has held and give his references.

An engineer who employs others, either in his own service or in that of the client who employs him, should recognize in his relationship to them an obliga ion of exemplary conduct, of helpfulness and personal interest in those with whom he is thus brought in contact, and he should discharge such obligation tactfully and kindly.

The honor of the profession should be dear to every engineer and he should remember that his own character and conduct reflect honor, or the reverse, upon the profession.

If, then, he so lives that his own honor shall never be smirched by his own act or omission, he will thus maintain the honor of the organization to which he belongs.

Industrial Information

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

Curtains and Comfort

If any architect has been too beset with the big things to realize the repose and beauty that result from tasteful draperies, let him address a note to the Kirsch Mfg. Co., Sturgis, Mich., for two booklets each of unusual suggestive value. The interesting illustrations of draped windows and doors are, however, but a pretext for bringing to attention the drapery fixtures which this company manufactures.

Chief among these fixtures are flat curtain rods which are claimed to be non-sagging, non-tarnishing and non-rusting. They are made in solid or extension lengths and for any known style of door or window. They give ample room for the movement of the window shade. The flatness makes possible a neat, smooth hem instead of a puckery ridge, and acts as a stiffening for French headpieces where used. They are said to be easy to put up and take down, without tugging or pulling, yet do not come down accidentally. They can be attached to set off good woodwork or to conceal the other kind.

These fixtures are usable also in novel ways; there is a strong swinging rod for the kitchen window and so-called "fresh air" swinging flat curtain rods, which part in the middle and admit light and air. When the room is being cleaned this has obvious advantages over the old way of pinning the curtains up or throwing them over a picture frame or piece of furniture. It also protects them against stormy weather.

"The Rod and Drapery Style Book" and "Kirsch Exclusive Drapery Fixtures" will be of considerable interest to architects.

Factory Sanitation

If anyone had ten years ago asserted that factories, heretofore so largely associated with uncleanliness, would have bathroom and shower facilities, none would have believed him. But here is a book, issued by the Standard Sanitary Manufacturing Co. of Pittsburgh and other large cities, dealing entirely with the broad and important question of how to have a thoroughly sanitary factory.

This book is illustrated by pictures of the past and present in factory conditions as regard the health and cleanliness of the employed, and the modern methods of promoting the comfort and efficiency of factory workers are dealt with in an instructive manner. The economic value of factory sanitation is discussed; the matter of *morale* in up-to-date and dignified factory installations, with all the ramifications of shower rooms, swimming pools, locker rooms, pure drinking water and emergency rooms are given space. The value of the trained nurse in the factory is also analyzed.

The book closes with an elaborate description of various kinds of baths and their particular uses.

The Standard Sanitary Manufacturing Co. maintains show rooms and service stations in the principal cities of the United States and Canada, which architects are invited to visit and avail themselves of the opportunities presented to enlarge their knowledge of plumbing fixtures and installations of all kinds. These showrooms contain a complete representation of baths, lavatories, showers, sinks, drinking fountains, etc., and in addition there are several fully equipped model bathrooms for residences ranging from the moderate priced to the most elaborate, from which valuable suggestions may be obtained.

Tile Floors and Walls

In line with the spirit of the times, which demands good sanitation and high efficiency, tile floors and walls, are offered by the Associated Tile Manufacturers of Beaver Falls, Pa., for use in bathrooms, kitchens, hospitals and public halls. Particular reference is made to the clay tile made by these people for use in hospitals, but the application is, of course, as wide as one cares to make it.

Tile is non-absorbent, so that no uncleanliness can penetrate below the surface beyond the reach of a scrubbing brush. The smoothness leaves no possibility for dust or germs to accumulate. This material is entirely inorganic, so it is not subject to decay or odorousness. The ease with which tile may be cleaned is a large factor in its usefulness and forms an element of considerable economy. Rounded corners and curved bases also reduce the amount of effort ordinarily consumed in cleaning.

Owing to its fire-resistant properties, tile, it is said, has been set down by Fire Underwriters as a choice risk, and thereby paves the way to further savings accruing from low insurance premiums.

The material distributed by the Associated Tile

Co. comes in about a dozen colors, thus satisfying the need for variety in surroundings, and the now much talked-of desirability of attractiveness. It is durable beyond ordinary limits, tearproof, heelproof, acidproof, scarproof, unfading. Its assortment of color makes possible artistic combinations without any sacrifice of the inherent qualities of the material. By a judicious use of tile and the numberless varieties of decorative borders possible, hospitals can emphasize the cheerfulness of environment now more and more widely recognized as a valuable asset in hospital buildings.

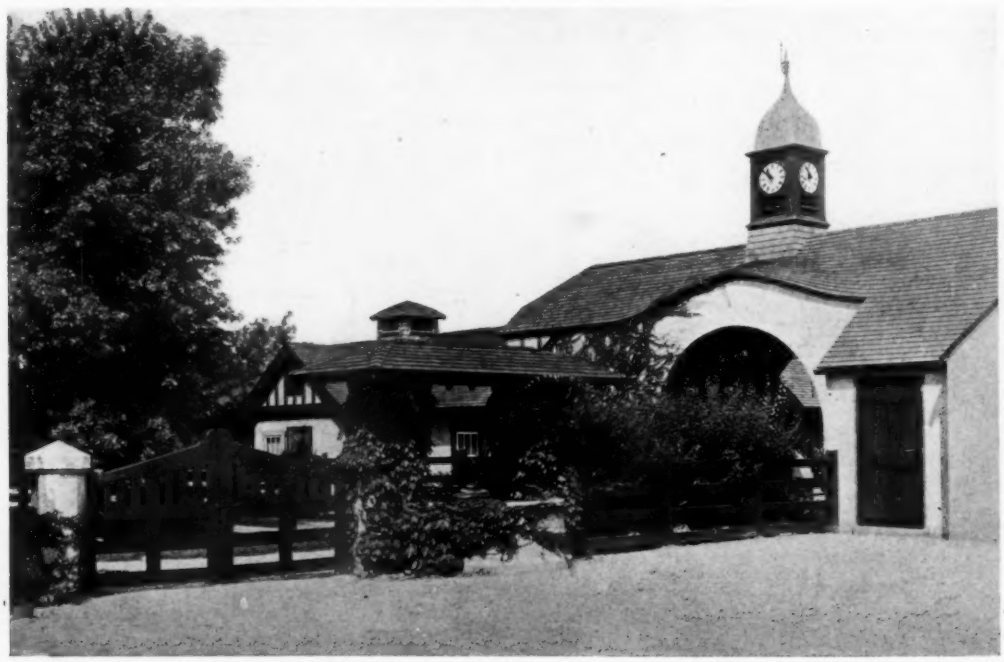
Sanitary Earthenware

A catalogue in which the aim has been to provide a complete reference and specification book of sanitary appliances—an encyclopedia of earthenware fixtures—has been prepared by Thomas Maddock's Sons Co., of Trenton, N. J. In looking this over it is seen that instead of a description of each article, the text takes the form of a specification. This gives a clear and concise analysis of each article mentioned, and simplifies the architect's work in ordering. The book is very carefully indexed and provided with a loose-leaf supplement which may be kept up to date. Wherever necessary and practicable, interesting diagrams are presented to show the inner mechanism of closets and lavatories, and the literature is replete with illustrations of all sanitary equipment and accessories.

Model Bathrooms

The lessons we are constantly taught regarding the intimate connection between baths and general well-being are made very simple of application by a reference to the booklets issued by the Kohler Co. of Kohler, Wis. In these booklets are illustrated a series of bathtubs and bathroom appliances which will lure the most recalcitrant into the army of lovers of cleanliness. The reader is taken through the entire process of manufacturing a bathtub by the Kohler method.

This company also carries a line of kitchen sinks and laundry tubs with white enamel finish, for which cleanliness and great durability are also claimed. The prices asked for all these things are not excessive, and a large variety of styles is available to choose from.



A GROUP OF FARM BUILDINGS — ALFRED HOPKINS, *ARCHITECT*