

THE AMERICAN ARCHITECT

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NUMBER 2204



TOWN HALL OF PERONNE
FROM A DRAWING BY MUIRHEAD BONE

Notes from London

(BY OUR OWN CORRESPONDENT)

Illustrated by reproductions of war record drawings by Muirhead Bone, Eric Kennington and C. R. W. Nevinson, Official British Artists

DURING the war we cannot hope for close consideration of architectural problems, except by the elder brethren of the profession. That the older generation of architects is alive to the needs of the future is proved in many ways; and the solution of many difficulties will be ready in those calmer times when the world will be engaged once more in work of a non-destructive character.

Much in the future depends on the plans of to-day. Forethought was never more important, not only in connection with the actual plans, but in

regard to the means for convincing the authorities and the public of the wisdom of the proposed scheme. It would be sad, indeed, if broad-minded ideas for rebuilding the ruined cities of France and Belgium were to be disregarded, like Sir Christopher Wren's design for a new London after the great fire. How regrettable it would be if land and housing projects were not developed on lines suitable to new industrial conditions in rural places.

Fortunately, there is evidence in Great Britain that this side of the war will not be neglected. The Ministry of Reconstruction is in close touch with

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those who have experience in these matters; and a tangible example of co-operation is the request of the Local Government Board, to the Royal Institute of British Architects, that competitions shall

plant and fittings, but this outlay would be recovered speedily. A national system of electric supply would be beneficial in many indirect ways, such as smoke abatement.

The restrictions on materials, transport and labor have brought building operations in England almost to a standstill. In some cases work in progress at the beginning of the war was completed, but elsewhere buildings remain very much as they were in August, 1914, when Europe was plunged into war. A notable instance of this is the London County Hall on the Embankment, due to be completed in 1916, but still in its early stages. Although large buildings have suffered in this way and new projects have had no chance to mature, there has been a great demand for temporary buildings for office,



"BLOWN UP"

The Parish Church of Athies Destroyed by Germans Before Retreating

FROM A DRAWING BY MUIRHEAD BONE

be opened to procure designs for cottages throughout England. A sum of money has been placed at the disposal of the Institute, and the country has been divided into six areas in which separate competitions will take place.

A big scheme which is being considered seriously as a reconstruction measure is the proposal to erect super-power stations for the provision of electric light and power. These would be placed in about sixteen districts, and there would be generated the power for supplying the needs of the whole country. One of the primary objects would be to utilize the British coal resources to the greatest advantage, and to provide electric light and power at the smallest possible cost. Should this reform be instituted it would involve expenditure on buildings,



ANCIENT FRENCH HOUSE (1661) USED AS A BILLET

FROM A DRAWING BY MUIRHEAD BONE

housing and factory purposes. All over the country these have sprung up to meet the requirements of the times; and one of the most ample is the new Y. M. C. A. center for American soldiers, placed

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picturesquely on the famous Aldwych site in London. Great ingenuity is displayed to make these structures serviceable in the shortest possible space of time; in some districts the number and variety of the buildings remind one of model villages, like Bournville and Port Sunlight.

Needless to say, many of the new encampments are used for military purposes, and it may be men-



ST. BAPAUME

FROM A DRAWING BY MUIRHEAD BONE

tioned as an interesting feature of modern soldiering and communal life that adjacent land is under cultivation to make the camps self-supporting as far as possible. This principle is recognized even in the case of the British Armies overseas, for trench warfare permits troops to be stationed in one place sufficiently long to secure the crops. This year the system will be extended very largely and will be adopted without doubt by the American Army. Apart from the benefit of local food production, there is the corresponding saving in tonnage.

Visitors to the front observe the ease with which hutments are moved from place to place. This is



FRENCH CHATEAU USED AS THE HEAD-
QUARTERS OF A BRITISH UNIT
FROM A DRAWING BY MUIRHEAD BONE

due in many cases to the use of the simple buildings invented by Lieut.-Col. P. N. Nissen, so well known in Canada. The sketch of "Nissen Land," p. 339, by Mr. Eric Kennington, shows the type of structure.

The British Government has given facilities to many other artists to work at the front. First of all, Mr. Muirhead Bone went out and sent home, from time to time, drawings, which are not only of great interest at the present time, but will be valu-



SURVIVORS AT ARRAS

FROM A PAINTING BY C. R. W. NEVINSON

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able forever as records of the war... For this national purpose Mr. Bone has worked with ardor and skill. Such drawings as those reproduced here bear the hallmark of genius. After the war Arras must be rebuilt, including the important Town Hall; meanwhile a few buildings are intact, and among them are the ones depicted by another British artist, Mr. C. R. W. Nevinson, as "Survivors at Arras." Among other painters who are making war records are Mr. William Orpen, Mr. Francis

opportunities to architects, sculptors and other artists. At the present time a competition is in progress under the auspices of the Admiralty and War Office to secure a good design for a plaque to be given to the next-of-kin of those members of His Majesty's Naval and Military Forces who have fallen in the war. Most competitions, however, will be postponed until after the war.

Affairs of the Royal Institute of British Architects, the Architectural Association, and other cen-



RUINS OF A CHATEAU NEAR BRIE, ON THE SOMME
FROM A DRAWING BY MUIRHEAD BONE

Dodd, Mr. Paul Nash, Sir John Lavery, and Mr. James McBey, the last named being the official artist in Egypt and Palestine.

Collections of objects relating to the war are being made for preservation in the Imperial War Museum, and just now a preliminary selection is on view at the Royal Academy. A building for the Imperial War Museum will be required when peace returns, and this will probably form the subject of a competition among architects. It will be a form of memorial, one of many which will come into existence. There will be tributes, large and small, national, local and personal, in almost every material. The project for a better bridge over the Thames at Charing Cross will be revived. The commemoration of the dead will give unrivalled

ters of thought are kept moving quietly behind the barrage of the war. Informal meetings are held at the Institute, and Mr. Henry T. Hare, the president, hopes that architects crossing the Atlantic with the American Forces will not fail to visit 9 Conduit Street, where they will be given a hearty welcome. Similar hospitality will be shown by the Architectural Association in their new quarters at 34-35 Bedford Square, Bloomsbury.

People out of London sometimes imagine that enemy air raiders have done much damage to the buildings. This is quite a wrong idea. A few bombs have been dropped from time to time, but the result has been infinitesimal. To find traces of the damage is like looking for the proverbial needle in a haystack. Builders and glaziers are busy for

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a day or two, after these rare visitations; that is all.

The question of the statue of President Lincoln to be erected in London has caused a considerable amount of discussion. The bronze seems open to criticism, but this applies to most works of art, and in the present case many people prefer to suspend



"NISSEN LAND"

BY ERIC KENNINGTON

judgment till shipping facilities enable the statue to be transported. Admirers of the work of Mr. Jacob Epstein, born in New York, were glad to hear his words of praise in favor of Mr. G. G. Barnard, his old master. Mr. Epstein is now in the British Army as a private, but efforts are being made to obtain a release in order that he may follow his artistic career in the national interest.

The Unity of the Profession

In an address delivered by Mr. Herbert Wigglesworth, F.R.I.B.A., at a meeting of the Society of Architects, in London, certain of his remarks are so very applicable to certain similar conditions existing in this country, as to cause them to be read with considerable interest. We read:

"All of us have for long desired to have unity in the profession, and the difficulties that continue to retard this are a source of genuine disappointment and unrest. In our daily duties we are accustomed to harmonize the most discordant and intractable problems, to bring together and unite the diverse sciences, arts and crafts, and make use of the prod-

ucts of almost every trade and industry; that we should be unable to achieve unity in our own profession is surely incongruous if not absurd.

"Divisions such as have hitherto subsisted in the profession tend to isolation. Isolation is not a sign of life, and if it arises from too close contact with what is past instead of what is present, with what is dead instead of what is living, it denotes a morbid state remote from real vitality.

"Each of the two representative societies shows justification for its existence if only by its length of days; each has aims and objects which practically coincide. It should not be an impossible task to bring about closer association where interests are identical. The encroachments which now menace the profession make the immediate need of unity more urgent, but culture and education alone will not avail.

"Not only is unity desirable in itself, but it is wanted for that larger concord which should link architects with the other building professions, trades and industries. Further, the democracy requires our guidance; and the new functions they now wish to impose upon the State will claim our care. Only the weight of numbers can secure the political power and influence needed for these purposes.

"With the outbreak of the war architects realized that they must relinquish the claims of private practice so that the urgent needs of the war might not unnecessarily be retarded, and when this was recognized we all accepted the position without a murmur. Later, when it became evident that vast constructive works were to be undertaken by the State, it was felt that a time had come when the public could benefit from our architectural knowledge. Unfortunately, the authorities decided otherwise, the services of architects were scarcely utilized and architectural societies were at a discount.

"Why should the exponents of the world's great constructive art be considered as of so little value, and be with individual exceptions so quietly ignored? The blame cannot be entirely placed on those in power. Our lack of unity, our timorous policy are much at fault. Had we been more closely identified with the life of the community before the war, had we kept pace with surrounding organizations, had we displayed a wider interest in the aspirations of the people, we should not have been left to languish, we should not have been so completely dissociated from the activities of the State.

"The need of unity is so apparent, and sympathy with the proposal appears to be so general, that the failure to attain it requires to be better understood.

"The war has taught us many lessons, and it will not be altogether to the detriment of the profession if it guides us to the path of unity."

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

DIRECTORS OF DEPARTMENTS

ARCHITECTURE, FREDERICK A. GODLEY

SCULPTURE, LLOYD WARREN

MURAL PAINTING, ARTHUR CRISP

Official Notification of Awards— Judgment of February 26th, 1918

CLASS "B"—THIRD ANALYTIQUE

The Committee on Architecture proposes as subject for this Competition:

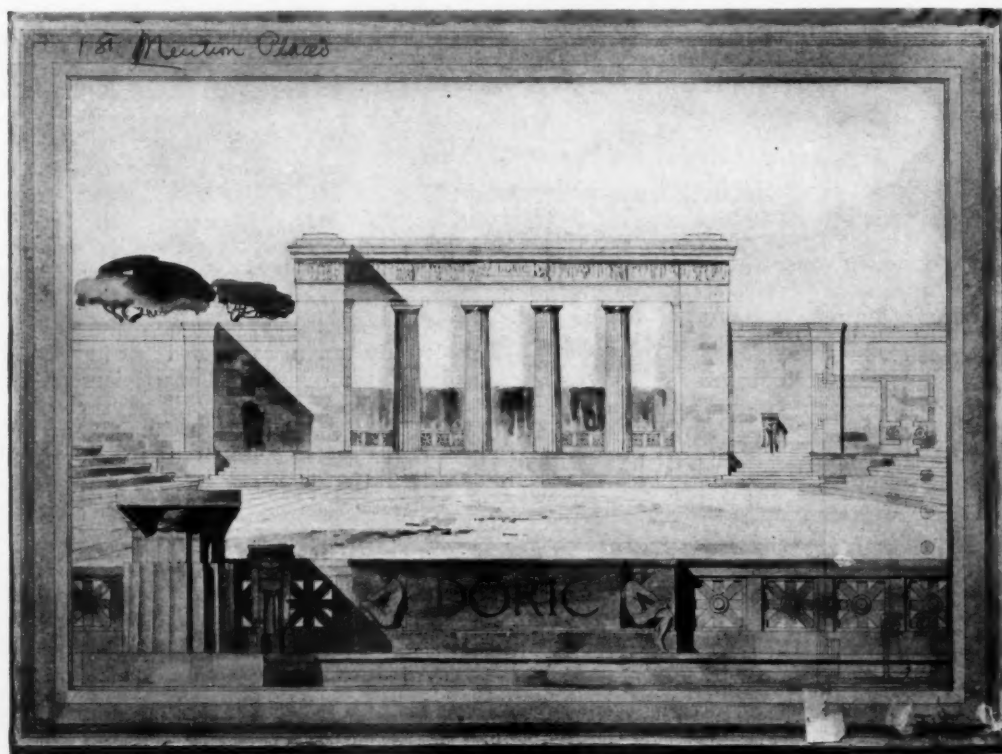
THE STAGE OF A GREEK THEATRE

PROGRAM

From the ruins which have been left to us, we can fairly well reconstruct the Greek Theatre. It was almost invariably excavated from a hillside as the theatre of Dionysus is at the Acropolis, the amphitheatre being formed by the slope of the hill. The

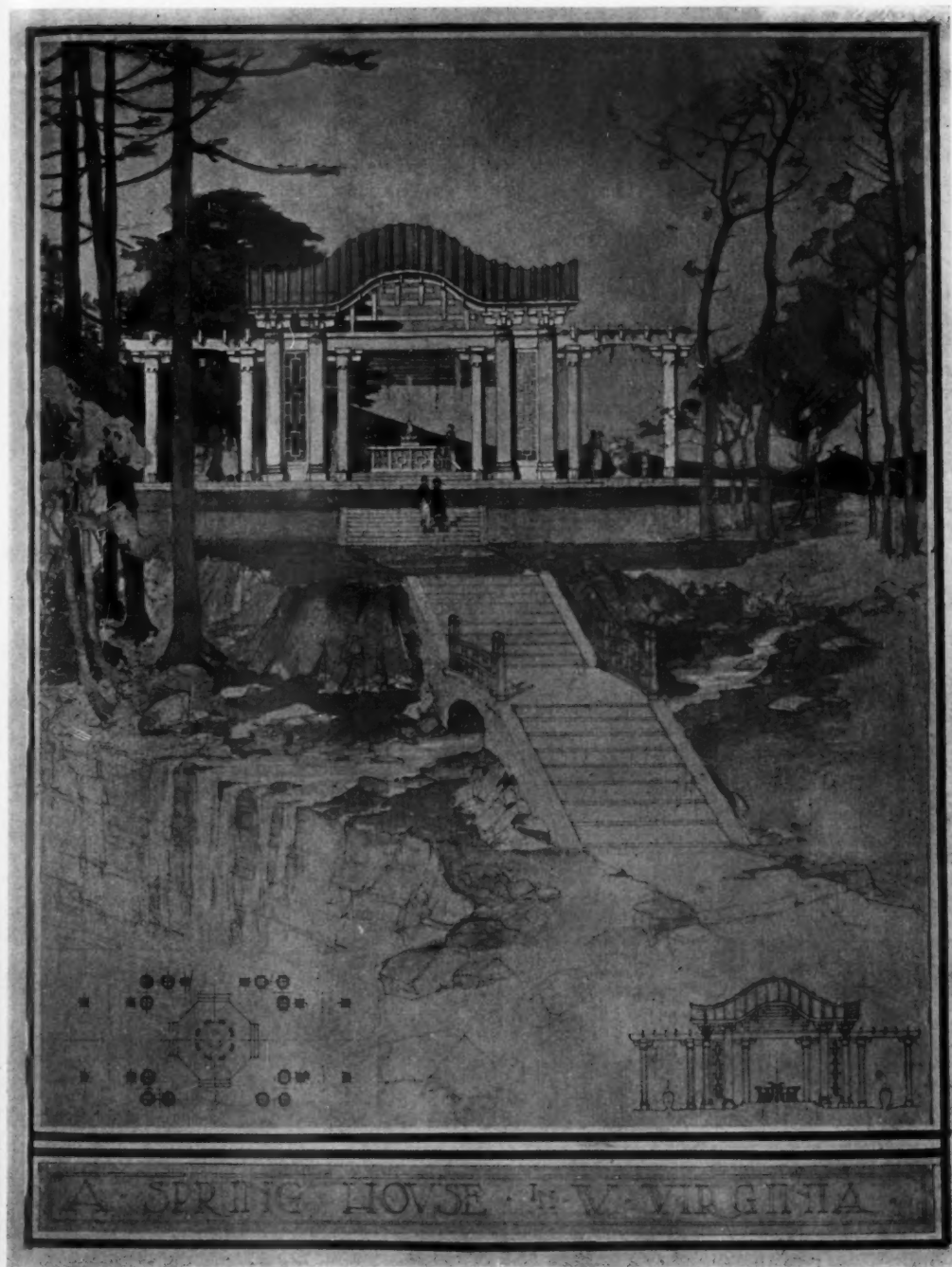
seats were arranged in semi-circles, leaving, enclosed by the lowest tier of seats, a space called the orchestra, in which was placed the altar of Dionysus and in which the choral dances to that god were performed. Facing the amphitheatre and raised above the orchestra was the stage where the plays were acted. The stage was screened at the rear by a wall which formed the permanent scene or background for the performances. This wall, of stone or marble, was treated architecturally with columns, pilasters, cornices, doors and other features, and was sometimes treated in an open manner so that the audience could view the country beyond.

The subject of this program is the stage of a Greek Theatre which is being built at a large univer-



FIRST MENTION PLACED—H. G. FOULKES, UNIVERSITY OF OREGON

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FIRST MENTION PLACED—R. BAILEY, CORNELL UNIVERSITY
CLASS "B"—THIRD PROJ. A SPRING HOUSE

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sity for the presentation of classical plays. Its total length should not exceed 100 feet. The dressing rooms may be considered beneath the stage. A small space, however, should be provided at each end of the screen for the prompter and director.

The next Analytique will be a problem in domes.

CLASS "B"—THIRD ANALYTIQUE

JURY OF AWARD: W. Lamb, L. Warren, H. R. Sedgwick, E. V. Meeks, L. C. Licht, P. Schultz, and F. T. Chamberlain.

The Stage of a Greek Theatre.

Number of Drawings Submitted: 79.

AWARDS

FIRST MENTION PLACED: L. Eason, Carnegie Inst. of Tech., Pittsburgh; J. V. Snellback, Atelier Licht, New York; H. G. Foulkes, Univ. of Oregon, Eugene.

FIRST MENTION: G. E. Hecklinger, Atelier Fowler, Baltimore; H. V. Murphy, Atelier Hirons, New York; G. A. Stauch, Atelier Licht, New York; G. S. Thalheimer, "T" Square Club, Philadelphia.

MENTION: H. P. Baxter and H. T. Bell, Beaux-Arts Atelier of Washington, D. C., Washington, D. C.; A. P. Herrmann, E. H. Brown, L. H. Rank, B. A. Pipinos, C. M. Stotz, J. C. Topnick, V. M. Kellett, E. T. Benham, W. J. Erdner and H. D. Seaver, Carnegie Inst. of Tech.,

Pittsburgh; E. H. Pedersen, P. Ciurlionis, R. D. Barnhart, H. K. Coffroth, J. Hill, E. Wolfe, P. J. Bittermann, Jr., H. R. Kaplan and H. F. Schlumbohm, Jr., Columbia University, New York; R. Mackey, F. E. Yeager, B. Hunsicker and A. R. Nelson, Cleveland Archtl. Club, Cleveland; C. Davidson and A. Berkowitz, Atelier Corbett, New York; F. H. Porter, Boston Archtl. Club, Boston; H. W. Landmann, Atelier Fowler, Baltimore; A. B. Carey and J. Lucchesi, Atelier Hirons, New York; S. Oxhandler, 1013 Bryant Avenue, New York; A. Gambell, A. McSweeney and R. G. Clifford, Portland Archtl. Club, Portland, O.; P. Hougaard and M. Sillani, Atelier Rebori, Chicago; E. C. K. Schmidt and M. Falcone, "T" Square Club, Philadelphia; H. Thompson, I. G. Smith, L. J. Ellis, H. Johnston, O. Jenkins and J. Trowbridge, University of Oregon, Eugene; A. H. Corbett, W. A. Streng, J. L. Skoog, W. Badley, W. S. Chinn, E. Grandstrand, F. V. Lockman and C. V. Rueger, University of Washington, Seattle; W. M. Icenhower and J. L. Benson, University of Kansas, Lawrence; H. A. Horn, Atelier Wynkoop, New York; R. W. Craton, Jr., T. J. Rowland, W. T. Conboye and W. L. Siebel, George Washington University, Washington, D. C.

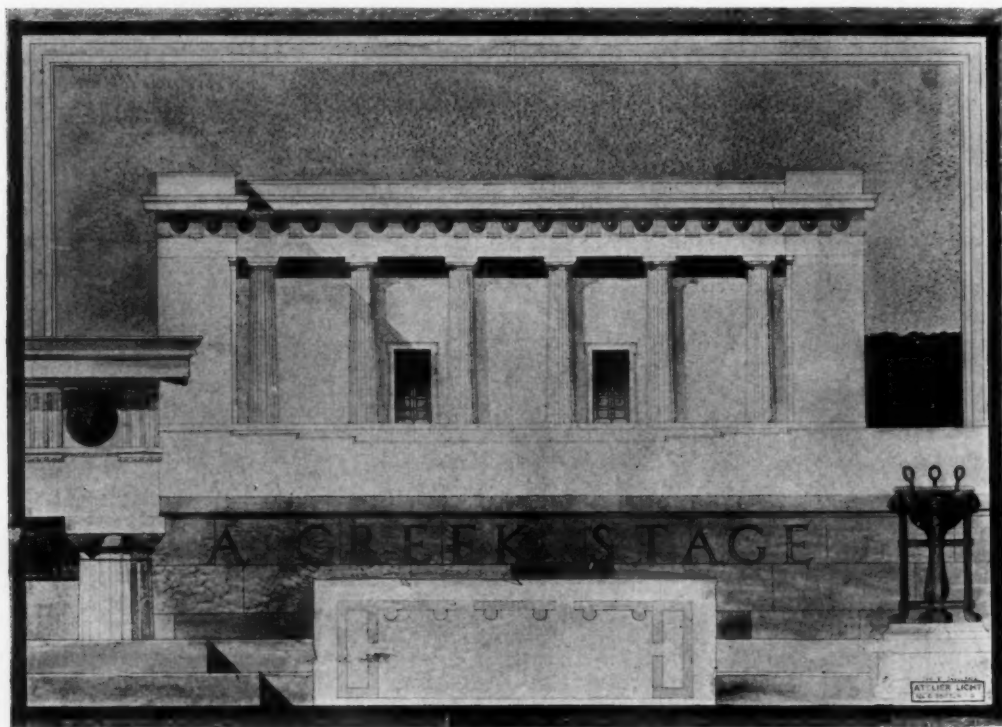
CLASS "B"—THIRD PROJECT

The Committee on Architecture proposes as subject for this Competition:

A SPRING HOUSE

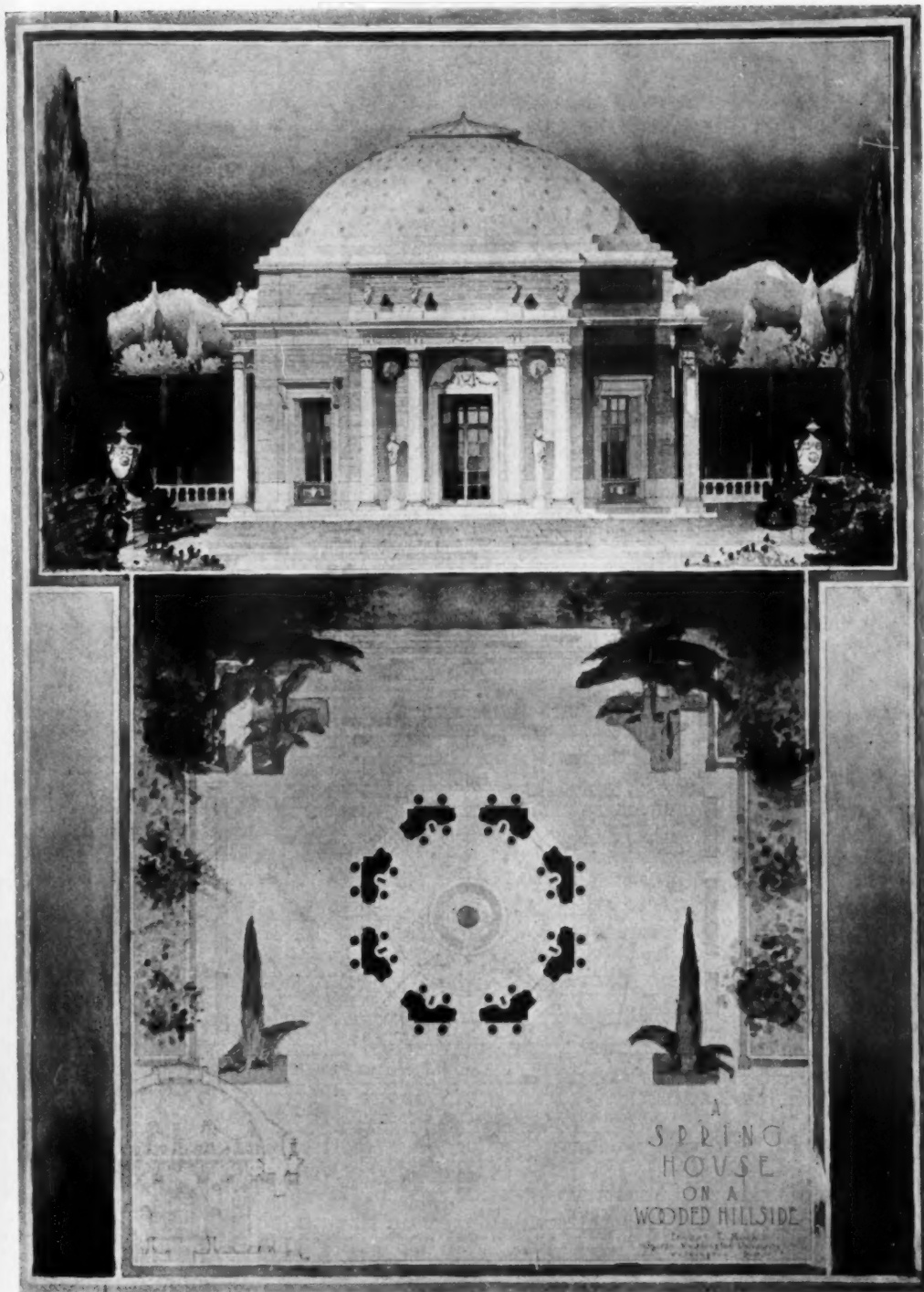
PROGRAM

On the slope of a wooded hill in the mountainous district of West Virginia there has been discovered



FIRST MENTION PLACED—J. V. SNELLBACK, ATELIER LIGHT
CLASS "B"—THIRD ANALYTIQUE. STAGE OF A GREEK THEATRE

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FIRST MENTION PLACED—E. T. MOCK, GEORGE WASHINGTON UNIVERSITY
CLASS "B"—THIRD PROJET. A SPRING HOUSE

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a spring, the waters of which possess great curative properties. A large sanitarium and hotel have been built in close proximity and it is now proposed to erect a suitable house to cover the spring and to protect those who come there to drink the waters.

This building need not be very large; its plan should not exceed 50 feet in its greatest dimension. It should contain the spring, which should be restricted to a small pool about 5 feet across. The pool is surrounded, wholly or partly, by a counter, leaving sufficient space on the inside for the attendants to serve the water to those desiring it. There should be ample space around this counter for the free circulation of the public.

The building may be set upon a terrace taking advantage of the view over the valley.

The next problem will be a small monumental building.

CLASS "B"—THIRD PROJET

JURY OF AWARD: F. A. Godley, H. W. Corbett, J. F. Harbeson, D. D. Ellington, M. B. Stout, F. C. Hirons, R. M. Hood, A. L. Noel, H. M. Woolsey, L. P. Burnham.

A Spring House.

Number of Drawings Submitted: 48.

AWARDS

FIRST MENTION PLACED: R. Bailey, Cornell University, Ithaca; G. N. Pauly, Carnegie Inst. of Tech., Pittsburgh; E. T. Mock, George Washington University, Washington, D. C.

FIRST MENTION: Y. C. Lu and E. L. Howard, Cornell University, Ithaca; J. Ungar, 28 West Nineteenth Street, Whitestone, Long Island, N. Y.; F. Monhof, Los Angeles Archtl. Club, Los Angeles.

MENTION: A. W. Eichler and J. D. Powell, Beaux-Arts Atelier of Washington, D. C., Washington, D. C.; H. N. Palmer and C. D. Lewis, Cornell University, Ithaca; R. C. Bowers, W. N. Holmquist, V. D. Kutchukian, J. B. McCool, C. R. Olmsted, C. Clark and S. Cohen, Carnegie Inst. of Tech., Pittsburgh; A. Catsanos, Columbia University, New York; N. Friz, Atelier Fowler, Baltimore; F. Von Osthoff, Atelier Hirons, New York; T. B. Johnson, Los Angeles Archtl. Club, Los Angeles; B. Wamnes, Atelier Rebori, Chicago; R. H. Bowden, New Haven Archtl. Club, New Haven; G. K. Trautwein and B. Laub, "T" Square Club, Philadelphia; W. G. O'Toole, University of Louisville, Louisville; W. R. Brown, University of Kansas, Lawrence; C. A. Stuchell, Atelier Van Leyen and Schilling, Detroit; G. A. Daidy, George Washington University, Washington, D. C.

H. C.: H. B. Dryer, Cornell University, Ithaca; C. H. Wills and A. Mercil, Cleveland and Archtl. Club, Cleveland; R. E. Golden, Atelier Hirons, New York.

XVII CENTURY SHIP HANGING DECORATION

□

*From exhibition of The
Architectural League*



DESIGNED BY
HENRY B. CULVER
AND
PAUL CHALFIN

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Unity of the Profession

JUST at this time the architectural press in England is discussing with much seriousness an address recently delivered by Mr. Herbert Wigglesworth, F.R.I.B.A., before the Society of Architects, and the subsequent discussions by members of the Society present at the meeting.

Mr. Wigglesworth spoke on the subject of the Unity of the Profession, and endeavored to point out a way by which all the various architectural societies and associations could be merged into one large society, which would include in its scope the entire profession in England.

Conditions there are in some respects, particularly as regards the character of the Royal Institute and its relation to other societies, quite different from those affecting the relation of our own Institute to state organizations and other societies. Yet there is enough in common to make the suggestions of Mr. Wigglesworth applicable to certain conditions existing in this country.

For example, Mr. Wigglesworth urges the fusion of the Royal Institute and the Society, and the formation of a Board of Control. Commenting on this feature, the *Building News* believes it should be demonstrated that there is a reasonable chance of

success attending the efforts of any such general council. A suggestion has been made that the really essential matter is the attainment of a united society, similar to the Astronomical or Geographical Societies. An organization on such a basis would, it is believed, attract not only all architects, but also a large body of influential laymen, whose artistic tendencies and respect for architecture would lead them to seek membership. This plan appears to have been received with considerable favor, and it is one that should have careful consideration in the councils of our own professional bodies.

"What exactly is meant by 'unity of profession'?" is a question asked by the *Architects' and Builders' Journal*. It finds a plain answer impossible. What would it mean in this country? The answer would seem to be less difficult under the conditions that obtain here.

While we are fighting to make the world free for democracy, why not practice what we preach in the organization of the profession? Why not do all that we can to democratize the profession of architecture, why not secure unity of the profession and thus prevent cross purposes?

Of course, those who are in a position to know the exact facts recognize that the Institute is a very valuable and dignified organization and has consistently labored to uphold the ethics of the profession and conserve its privileges. Yet there is need for something more than an academic aspect of the things that affect architecture. Unity of the profession is needed. It may be very well to state that the Institute, the State Associations, and the various Societies are all working toward the uplift of architecture; but each one is working to a considerable extent independently of the other.

The combination of all of this effort would go far toward producing results desired. The lack of carefully concerted effort as at present can serve no better purpose in the future than it has in the past.

We need unity and we need it more now than at any other time. We need the Institute, for example, as the governing body of the profession, and with it there should be affiliated every reputable architect in this country.

Perhaps we need revision of a constitution that might have served admirably a quarter of a century ago; and we need to realize that as architects we are something more than artists—we are the skilled and trained administrators of large operations and the disbursers of vast sums of money.

Complete unity of the profession will come very near accomplishing everything that is necessary to the end desired. But we can only secure that end by including under the wise administrative control of a reorganized professional body every man who has valid claim to the title of architect.

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The New Construction Division

THE creation of the Construction Division of the War Department is a product of that washing-out process that all peoples must pass through in times of great stress. This division will be under the immediate direction of the chief of staff of the army and will replace the cantonment division of the constructing quartermaster's department. It will handle the largest building program in history, aggregating \$1,084,000,000, involving the handling of vast amounts of material and unnumbered workmen.

The division is headed by Prof. Arthur Newell Talbot of the University of Illinois, president of the American Society of Civil Engineers; John Laurence Mauran of Saint Louis, president of the American Institute of Architects; Charles T. Main of Boston, president of the American Society of Mechanical Engineers; John R. Alpine, representing the American Federation of Labor; R. Goodwyn Rhett of Charleston, S. C., president of the Chamber of Commerce of the United States; E. W. Rice of Schenectady, president of the American Institute of Electrical Engineers; Frederick L. Cranford of Brooklyn, president of the General Contractors' Association of New York, and Oscar A. Reum of Chicago, representing the Building Construction Employers' Association.

Five of the eight members are presidents of great national bodies, and while their appointment seems to have been due to this fact, it seems providential that these particular men were elected to those positions by their organizations. The remaining three represent the contractors, employers and labor. In the makeup of the board every activity, both technical and practical, which enters into building construction is represented. The personnel of the board assures the success of their undertaking, provided they have authority to act on their own initiative.

Talbot has an experience which is the happy combination of the practical and theoretical. His early years of work were employed as a field engineer in the Southwest. Later, becoming connected with the University of Illinois, he was placed at the head of the Engineering Experiment Station. It is due largely to his broad vision and analytical mind that this station has attained a pre-eminent position among the world's investigators. He has that far-sightedness inherent to those born on the great limitless prairies of the Mississippi valley and the self-reliance of those but one generation removed from the pioneers who settled that territory.

In Mauran and Reum the Central States are further represented, the one an architect of national repute with successful experience in large affairs, the other a successful contractor and employer of

labor. In Main of Boston the board is especially strengthened. An authority on mill construction, he is familiar with all of the methods used to render wood constructed buildings fire resisting. Had he been connected with the cantonment construction department, the deplorable conflagration hazard that threatens our cantonments, mentioned in the editorial pages of THE AMERICAN ARCHITECT of March 13, 1918, would not exist. In Rice and Cranford the East is further represented by the technical expert and the practical builder. Architects have had less occasion to come in contact with Alpine and Rhett, and there is no doubt but that they will be found as elements of strength in the board.

It is undoubtedly a wise move to transfer the direction of building activities from a military to a civil organization. With all due respect to a military engineer, he is not competent as a building constructor. To be proficient in that art, with its vast number of constituent elements and the naturally attendant complexities, requires a specialization in training and an experience that they have no means of attaining. Again, there should be a release from the red-tape of rank and precedence which handicaps all civilian pursuits governed by a military organization.

Perhaps those who are not exactly physically fit as soldiers or are over age may come into their own in serving the country in a department where brains, experience with its attending judgment, energy and honesty are the prerequisites. The slight physical defect does not render useless the architect or contractor, neither does the clouded seeing with eyes render less effective the seeing of a well-trained and quick-acting mind.

The placing of this vast activity in the hands of such an eminently fit body of men promises well for the future and will undoubtedly result in a more complete co-operation between the professional elements that constitute a perfect building organization. All are fitted for a work and none comprehend the entire range. The mistakes that have been made naturally follow an organization of a makeup such as the almost exclusive engineering organization which has had charge of this important function. No one questions their patriotism, honesty, energy and good intent, but the organization in its makeup was not broad enough to fulfill the requirements. The new board is extremely well balanced in its makeup, geographically and professionally, and comprehends the free, independent thinking and action of the West, counterbalanced by the more conservative and precedent-guided East.

The new division will have the united support of that large body of men allied with the building industry and who have the interests of the country at heart.

Criticism and Comment

The Editors, THE AMERICAN ARCHITECT:

The communication from St. Louis, Mo., appearing in your January 2d issue and headed "Fetishes and Fallacies" is based upon such an absence of clear thought or of real perception, and is so replete with perversions of fact that one may well wonder why it was printed unaccompanied by some critical editorial comment. "In Government circles it is well known that the architect, as such, has no very good standing." The architect, as such, is in good standing with that public which knows him and, knowing him, seeks his services. Had your correspondent cared for approximation to the facts, he would undoubtedly have written: "It is well known that in certain Government circles the architect, as such, has no very good standing." In the next sentence he sets down contracting as a "profession"; and that confusion clouds the entire argument. He proceeds to draw a comparison between the practices of the architect and those of the contractor and engineer to the great disparagement of the former; and yet he remains one of "our beloved profession." He switches in one sentence from "our beloved profession" to the "Institute," which are not one and the same thing and never will be. One is led to wonder if in a profession "the leaders and teachers" of which "do not practise as they preach" it will be quite safe to try to develop a body of "contractor-architects" with all the snares which that combination will set for one whose self-interests will sooner or later reflect themselves in his professional advice. Can self-interest and the client's interest travel hand in hand in a naughty world?

Perhaps your correspondent can tell the profession (not the Institute) how to cut out the competition evil. The Institute recognizes that the evil exists and, because of the gambling instinct in the human race, and a prevalent perverted idea of self-interest, will be bound to exist. So the Institute asks that its members eliminate, in so far as possible, the element of chance and play the game fairly as a matter of skill. Is that an unwise or an unethical attitude? If the rules are wrong change them; but do not undermine the principle.

And as to that malignant fee system! The Insti-

tute does not command the practitioner to charge for his services any particular sum or after any particular manner. He is perfectly free to consult his own self-interest. The Institute does, out of a broad experience, advise its members as to the minimum which the services of one qualified to be an Institute member should be worth, and asks that this minimum be not cut when such cut might prevent another from receiving a commission.

And now comes again to the surface that confusion between the functions of architect and contractor (or engineer who is acting in his commercial rather than in his professional capacity). "Why should not the contractor have a better standing in the financial world than the architect? He invariably carries a larger balance in the bank." Substitute for architect lawyer or doctor; the question means just as much one way as another, and has no bearing on the subject. And right here your correspondent speaks from ignorance or worse: "But most of all, when a business man asks what a certain improvement will cost he (the contractor) can give a positive and direct reply." He can say "I know what it will cost, for I will contract to do the work for so much money and am financially responsible." But if the same question is asked of the architect the answer must be, if according to code, something like this: "I don't know, sir; I can only say approximately or guess at the cost. But I can get the information. I will go to the Smith, Jones Contracting Co. and find out exactly." Now, why was that perfectly inane and extraneous reference to the "code" inserted in this paragraph? The profession is under indictment, and the profession, "as such," has no code. At whom was the slap intended? Does it not seem that the person who penned the complete paragraph wrote out of dark ignorance? Or was it for the express pleasure of slinging dirt and discredit at his clean confrères? A "business man" when he asks a contractor what an improvement will cost either mentions a finished product which is to be duplicated or furnishes drawings embodying data upon which the estimate is to be based. The architect furnishes those drawings; it is his job, except in the rare instances where

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an engineer furnishes them. No contractor could be prevailed upon to base a contract on the verbal description of his needs by a "business man" or any other sort of man. No wise business man would sign a contract with a contractor who without reference to complete data would say: "I know what it will cost, for I, etc., etc." The wise business man would recognize the logic of the "for" and would feel that that logic might be carried over into the work; and that, whatever the real value might be, the *cost* to him would be as exorbitant as the contractor would choose to make it through inflated prices or skimmed work. The architect in a generality of cases approximates, even from incomplete data, more nearly to the ultimate cost than do the majority of contractors who are basing their estimates on finished drawings and specifications. Wide variation always follows when several contractors figure from the same complete data—a variation of 25 per cent is common—of 100 per cent not unknown. The architect who diagnoses a case and prepares sketches, plans, etc., which solve the problem, even though he does not build the building, is no more a parasite and no more to be considered a parasite by the public than is the doctor who, upon diagnosing a case, writes a prescription, or a lawyer who, after painstaking study and analysis, prepares his brief.

But one more point: "the small builder" has not made "inroads in the province of architecture." In localities in which architects are licensed it is quite the other way. The small builder, and he is many, who provides in an acceptable manner for the expressed needs of his "patron" deserves quite as much sympathy from the public as does the "architect"—especially as does the architect who, because of legal enactments, can crowd his notion of "art" upon a suffering community.

It is not brave nor kind of your correspondent to utter in print such illy considered complaints, or to make so ungentle an autopsy of his profession's practices and "have no remedy to offer." A remedy, however, he hardly could offer, as he has shown so slight understanding of the case.

Chicago, Ill.

IRVING K. POND.

St. Louis, February 23, 1918.

To the Editors, THE AMERICAN ARCHITECT:

The paper entitled "Fetishes and Fallacies," published in THE AMERICAN ARCHITECT on Jan. 2, will have failed of its purpose if it does not bring about a more thoughtful attitude toward the present conditions affecting the architectural profession and allied interests, or some serious attempt to investigate causes for criticism of the American Institute. Those who have replied adversely seem to have been actuated mostly by ire at the temerity of one who

could question the sufficiency of that organization or discuss the policy or lack of policy of its leaders.

To reply to personalities is scarcely worth while, and to discuss details of present practice at this time would be simply a misapplication of energy and a waste of valuable time. For many years the Institute usefully performed its functions in American life, and the reputations of its leaders who are dead and gone are secure and not in question now.

Notwithstanding denials of the fact, the consensus of opinion seems to bear out the contention that the architectural profession has lost much of its former prestige to the engineer and the contractor. As a recent instance, a representative of the Government appeared in St. Louis to seek candidates for officers to serve as superintendents of construction on hospitals and aviation construction. Competent men for this work are more usually found in architects' offices than elsewhere, yet only engineers and contractors were consulted as to recommendations. The local architects were entirely ignored and, so far as can be ascertained after inquiry, none of them learned of the officer's presence until after his departure.

Assuming criticism of the profession to be just, blame should be borne by all architects, irrespective of membership in the Institute, yet in so far as leadership is claimed by the Institute there must responsibility lie also. Its present usefulness may be proved in some better way than by wrangling over past glories or disputing over the present Code of Ethics.

In all industries the methods of conducting business which previously prevailed and were considered efficient are now rapidly being scrapped. Experiments are being made and new methods constantly introduced. What the final outcome will be no one can tell, but it is scarcely to be doubted that the building industries and trades will be equally involved, including also the business or profession of the architect.

In any building operation of magnitude there are many elements of perhaps equal importance. Finance, which provides the means; architects and engineers, who plan; contractors, who act in an executive capacity, and labor, which does the actual work of building. Besides these, more indirectly concerned, are innumerable forms of manufacture. It must be manifest that neither architects nor any one of these groups can act for the others, nor determine arbitrarily upon the relative importance of their mutual relations under the new order. Already labor has assumed a vastly more important rôle in industrial life than formerly prevailed. A world-wide revolution in all phases of social and industrial activities is immediately at hand.

In order to keep in line with the march of

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progress it is vitally necessary that a new and closer co-ordination of the building professions, industries and trades be effected quickly. This must be done not only to be of greater immediate assistance to the Government in war time, but also to insure the continuation of the mutual usefulness when peace shall have come again.

We have been informed that tentative efforts to this end have already been made by certain of the building industries' associations and engineering societies, but so far as can be learned at present no body of architects has been actively interested.

To effect this organization of the building industries it is essential that these various groups should forget their ancient prejudices and former relations and co-operate heartily for a reasonable solution of the common problem.

A movement of this kind must be national in scope, and it is natural for architects to look to the American Institute for leadership. Should this organization not be willing to assume the burden, if the opportunity passes by default, the duty will surely be undertaken by some other body of men more awake to the necessities of the times. The desirability for the organization of such an association has already been under discussion in the columns of *THE AMERICAN ARCHITECT*.

No doubt individuals formerly architects but now "engineers" have done good service for the Government in building the cantonments and in collecting data on the housing problem. That the Institute as an organization has rendered valuable service to the Government is also possibly true, but if so it has succeeded singularly well in keeping its light hidden under a bushel. So far as the public is concerned, credit for achievement has been accorded wholly to the engineers and contractors.

In regard to Government construction work, it is a matter of common knowledge that each executive branch of the Government, the Navy, and each department of the Army has necessarily a large building problem of its own which it is vainly attempting to handle through the usual military or civil agencies of peace times, merely expanded to meet the exigencies of war. This lack of a unified system of building results in unnecessary duplication of work, loss of efficiency, money, time, and confusion in execution. This is in no sense a criticism of the administration but a statement of actual conditions for which Congress, and primarily the whole Nation, is responsible.

The remedy lies in some congressional action which will eliminate the present system and enlist for Government service the entire technical and executive force of the Nation as well as the building industries and trade organizations.

A tentative suggestion looking to the organiza-

tion of the building industries, of national scope, has already appeared in the pages of *THE AMERICAN ARCHITECT*, which may serve as a starting point for discussion. The problem is too vast to be solved by any single organization, but might be solved by co-operation between all of the technical and allied business organizations and educational institutions of the country, and in such effort it is to be hoped that the American Institute of Architects may take a prominent part. But if the latter is to become a truly national organization and take its place as a dominating force in the new social order it will have to reform itself on new lines broad enough to take in all of the technically qualified throughout the United States. It must cease to be, according to all-too-common repute, merely a small circle of self-idolators seated upon imaginary pedestals high above the surging life about them of which they form no part.

THOMAS CRANE YOUNG.

St. Louis, Mo.

To the Editors, THE AMERICAN ARCHITECT:

In a series of editorials you have implied that there is need of a national organization of architects, and have assumed that the American Institute of Architects is not such, is not representative, is inactive, and, finally and specifically, has been dormant since its convention of December, 1916, or for sixteen months. This is quite a formidable list of assumptions. When to this is added the assumption that, because only one voice has been raised in protest, your statements are generally accepted, it is certainly a grave situation. In reply one may point out that you have published strong protests from Irving K. Pond, W. H. Schuchardt, Egerton Swartwout, J. H. Rankin, and Octavius Morgan. These are five, not one, and they come from Chicago, Milwaukee, New York, Philadelphia and Los Angeles. They are pretty well-known names in the profession, and you would have had more protests from equally well-known men if your editorials had been more generally read and answered.

As to the dormant period to which you refer, one gathers that you consider the conventions of the Institute as its most important if not its only activity. The conventions are valuable and have their uses, but they are so secondary that the elimination of the convention this year was considered, and a very limited and simple meeting was decided on in place of the usual convention. The activities of the Institute are carried on, first, by the Board of Directors and its Executive Committee. The board has met January, 1917, in Washington; the executive May, 1917, in Atlanta; the board September, 1917, in Cleveland, and again in Washington in January, 1918. These meetings take from two to

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three days, and are largely the direction and review of the work done by other agencies of the Institute. These agencies are the standing committees. It is impossible to do more than touch on the work done in 1917 by some of these.

The Committee on Publications has carried on, through the *Journal*, work which concerns deeply every architect, whether in the Institute bearing his share, or outside of the Institute, content with reaping the advantages. One may name two, Housing, with the first comprehensive study of English war work, and the Structural Service Department.

The Committee on Contracts and Specifications has taken the Standard Documents, and after a large number of conferences has so revised and modified these important papers as to have obtained a practically general indorsement from the building trades. This alone is no mean accomplishment for a dormant year; but in addition to this the committee has produced a handbook which will be of very great value. Again the work of this committee is of benefit not to the Institute alone, not to architects only, but to every one who builds—owners and contractors.

The Committee on Registration Laws has, largely through the New York law and its New York members, made notable progress in the standard which should be established to determine who is competent to be known officially as an architect; and the work in New York is but one phase of similar activities throughout the country in which the Institute and its chapters have done much of the work.

The Committee on Education has eleven subcommittees, and has been in constant touch with the eleven schools of architecture, whose degrees are accepted in lieu of examinations by the Institute, and has conducted an active campaign for the general teaching of the appreciation of the Arts in the colleges.

The Committee on Competitions, with its subcommittees in every Chapter, has regulated and controlled competitions, and is constantly spreading the knowledge of this complex and vexing subject. It may be quite true that competition is not the best way to choose an architect, but it is the way that must often be followed, and in such cases there is a fair way to conduct a competition, and this committee does active work the whole time in explaining this fair method, and generally gaining acceptance of it. This is a true service to owner as well as to architect.

So much for a part of the normal activities of the Institute. Now turn to its special war activities. In the *Journal* of December, 1917, the president of the Institute gave a brief outline of these. The record is there for any one to read. Before war was declared the president of the Institute

had offered his services, and at his suggestion, many individuals put their organizations at the disposal of the Government. The Government availed itself of these offers, on hospital planning and construction, on the cantonments, on the Signal Corps and camouflage, on housing, on the Shipping Board and on the Committee on Emergency Construction. One has only to read President Mauran's brief statement, and exercise a little imagination in reading between the lines what he did not say, to be convinced that the Institute can hardly be called dormant.

You refer to the Royal Institute of British Architects and compare it with the American Institute of Architects. You undoubtedly know that the Royal Institute of British Architects is quite different from the American Institute of Architects in its composition, has a subordinate class, has about four times the number of members, and is confined in a small and compact area. One might compare its activities to the activities of three Eastern Chapters of the Institute, New York, Philadelphia and Boston. No account has been taken above of Chapter activities, and yet the Chapters are but parts of the Institute. The larger Chapters have many vital activities, not the least of which is the financial and personal support of education for the younger men, and these Chapters meet every month. This is the everyday work with which to compare that of the Royal Institute of British Architects. You speak of war activities, but you give no figures as to the number of members of the Institute who are in the service, and one may probably assume that you don't know how many are in the service. If one had the figures it would probably not be a bad showing, when one considers that we have been at war one year and Great Britain four.

The American Institute of Architects is a national body; it is representative in the best sense of that misused word, which one takes to be representative of the best, not, like Congress, representative of the mediocre; it is, and always has been, an active body, doing an enormous amount of work to benefit all; this burden is carried by a few, because only a few can be found willing to bear it. It is the easiest thing to stay outside and criticize. If one examines the record of those who attack or quietly ignore the Institute it will be found that they are men who know nothing of the work of the Institute because they have never taken part in it and done their share. The moment these men enter the Institute (where all architects in good standing are welcome), and not only enter, but take part in its work, their whole point of view changes. This was especially evident when, a few years ago, the Institute began to place its Chapters on the sound and reasonable basis of a membership composed wholly of Institute members.

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Before that there had been many men in every Chapter, in some cases an actual majority, who were not members of the Institute. These outsiders, reaping the benefit of what the Institute was doing for all, but contributing nothing, were the loudest critics of the Institute. When they joined, went to their first convention, became aware of what the Institute really stood for, and began to put their shoulders to the wheel, they became its real supporters. They found that the Institute stood for an opportunity for service, and it was what they gave rather than what they got which was their true reason for supporting the Institute. Let the men who think the Institute needs reformation or new blood join it, work with and in it, reform it, help it to be better and more representative. If the Institute is not fully representative of the profession it is the fault of those who stay out, not of those who are in.

The Institute has been especially active this last sixteen months, which you so inaccurately describe as dormant. When you, or anyone else, makes constructive criticism, it is welcomed, but destructive criticism, based on assumptions that exist largely in imagination, is not only of no use, but is definitely harmful, because so many of your readers are not in a position to know the facts, and accept editorial statements as authoritative. An architect, excusing or explaining a design of his which was loud and coarse, said that it was intended for an advertisement, and he had made it scream. One is loath to believe that you made your attack on the Institute for any such purpose, but one does not readily find any other motive for so groundless an attack. Your paper has a long and honorable record, has been of great service to the profession; has helped architects everywhere, whether in the Institute or out of it; it has therefore been a co-worker with the Institute. It would be a great loss at any time if *THE AMERICAN ARCHITECT* departed from this honorable tradition, but it would be doubly to be regretted at such a time as this, when our whole energy, individual and collective, should be concentrated on one great overwhelming task, to defeat the enemy of civilization, freedom and truth.

R. ASHTON LEWIS.

R. CLIPSTON STURGIS.

Boston.

The Editors, THE AMERICAN ARCHITECT:

Your editorial of December 12 on internationalism is extremely interesting to me. What possessed you, I wonder, to start such a propaganda at this time? Is it in the air? For the spirit expressed in your editorial I have met with from all sorts and conditions of men. I have heard it in the West and in the East, and there where men congre-

gate to swap thoughts. The world is awry or we ourselves are in the middle of a transition or Renaissance without being surely conscious of it.

There is no doubt in my mind that the architects are misunderstood, misinterpreted, and relegated to the rear in these present parlous times. But why, in the name of holy things, do you select the Institute for the butt of your criticism? Why do you suggest another society? Why, indeed, in God's name, will you add to committees and camera conferences?

We all of us appreciate the weaknesses and the strength of the Institute. We know that the Institute is not moribund, for its committees are always in session and its revision and super-revision of codes and contracts are constant and continuous. Can you not comprehend, Mr. Editor, that there should be one and only one society of architects recognized by the law and the lawmakers as a vital, living, controlling force in all of those things which spell building and construction? Must I add that under this caption we include all of those things which Fine Arts spell? I beg of you allow me, please, to keep my pride of place.

Can you not comprehend that it is not societies, nor Institutes, but Men, individual personalities; Kings, Dukes, Lords, if you wish, who create policies, perpetuate ideas, demand places in the sun. Do you know, sir, that the Kings are dead and that those of us to-day are but pupils of these dead Kings? Have patience, I pray thee, and the sun will shine again, but do not impose upon us yet again one more society.

Ultra-conservatism is a most necessary essence, Mr. Editor, for otherwise you would have no revolution and revolutions are a necessity in the great scheme of life.

We are living to-day under the shadow of Junkerism, conservation and revolution, and we must be patient. Whether our profession is to be relegated to a subordinate position in the great scheme, or whether a man on horseback will come to our rescue is really immaterial, is it not?—for the pendulum swings regardless of our desires.

Our codes are codified and recodified; our ethics are scrutinized as our laundry is scrutinized, and this goes on and on while the old round globe swizzles itself on its perpetual axis. The Institute is necessary. It has done, is doing, and will continue to do its part in the progress of civilization, back and forth from Hun to Christian Science and back and forth again from esthetics to plain facts.

Do you know, sir, that the justice of the offer of plain facts or of esthetics is the question that is begged, and will you realize that esthetics as it is preached has no living place to-day where it may rest its foolish head? Have you not understood, sir, that esthetics have been yelled from the house tops.

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lo, these many years, until the real world demands a cathartic? Fie, sir, I am amazed at your lack of perspicacity, and you an editor of a trade journal.

I have only one criticism to make, only one, sir, of the present situation, and I have already planned a solution for myself. Selfish, am I not?—but I beg that you will allow me that I may make my point, so to quote from my old Shakespeare. King Henry V. having demanded his patrimony and his rights from the Crown of France:

King Henry—Tell us the Dauphin's mind.

And this, the answer. Listen, Mr. Editor, and mark the simile. The messenger replies:

"You cannot revel into dukedoms there: He therefore sends you, meeter for your spirit, this tun of treasure," thus the Dauphin speaks.

King Henry—What treasure, uncle?

Exeter—Tennis balls, my liege.

Sleep on it, I pray you, sir.

Our Institute did offer its services to our own Uncle Samuel, it demanded its place in the sun, it offered my services and my office to my own Uncle Samuel for nothing, for mine is his. Please, sir, what answer was received? I beg of you, sleep on it, sleep on it.

I want my Institute. The world needs my Institute, and by the grace of God and through the man pride of the real men in the Institute, those men who have done constructive things in the Institute, some day, this Renaissance of ours will be purged of superhuman qualities, and then, sir, when we know and the other people know the immediate necessity of constructive thought in the assembling of men and materials, then the architects will come into their own again. Now, just a minute, please. You get so excited as others do, excited over the immediate question and the local situation. We cannot separate ourselves from the continuous story. We, like the brook, will go on and on, we will play our part and disappear, we will leave our mark for those who follow us, and so does eternal life come to us, do we but play the game as men.

Mr. Editor, I am tired, and I claim that I have some right in this world of mine, where I have lived for more than forty years, when to-day I am but thirty-two. I am tired and chagrined that the supermen and the esthetic men have so fooled the living world on the essential facts of our great business or profession that those of us who are also sincere, but living in the world, must waste our energies in combating the theories of men like Cram, who will insist that we are Monks, and of those other men who yell beyond the limit of common sense that we are Botticellis. Funny, isn't it?—but it's life.

Let's forget our personal worries and try to analyze, and then to bed. What is an architect, and just what is that great society of architects, the American Institute of Architects? Do you know, sir, that many men are designing and building throughout this great country of ours who are not members of the Institute? Can you realize that a small minority only are members of the Institute, though the others have picked up the crumbs which have fallen from the tables of the convention conferences? Don't you know the answer, sir? My Lord, you are stupid. It's human nature. Your proof sheets of the Sturgis letter shows it. He doesn't know, how can he, yet he is a high-minded gentleman; can you not comprehend, and after comprehending, cease your propaganda. Understand you, sir, that minds and men are colored and transformed by environment. Forget the subject matter, my dear sir; leave it to the gods of Fate. The Institute is as it must be. It is "as is," and you are worried over localisms. That our Uncle Samuel has sent us the message, "Tennis balls, my liege," is of passing moment. That we camouflage and Y. M. C. A. is of no consequence. It helps the game of life, sir. Restrain thyself, and some day art will accept the fact that it was married to commercialism many, many centuries ago. It is really a most amusing game, sir, this game of life, for we are but the pawns of God.

New York.

FRANK E. WALLIS.





PLATE 97

HOUSE OF J. J. SCHULLINGER, RIVERDALE ON HUDSON, NEW YORK
DWIGHT JAMES BAUM, ARCHITECT



REAR VIEW

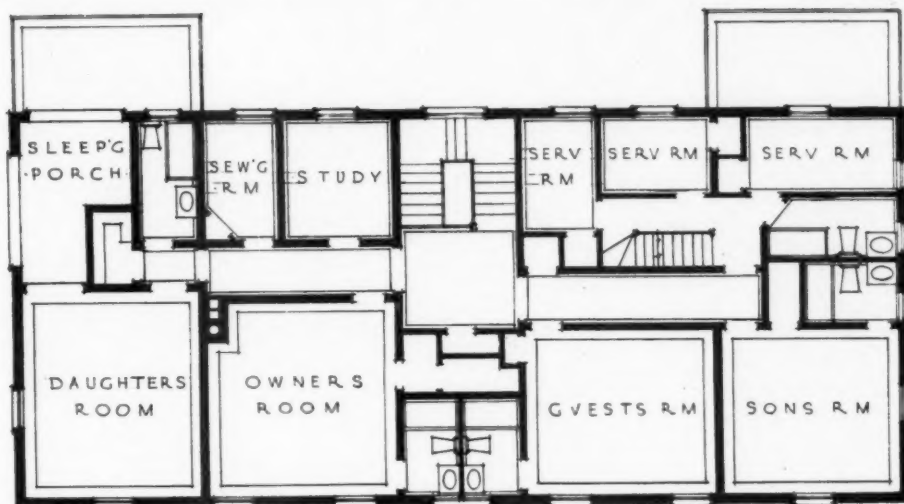


PLATE 98

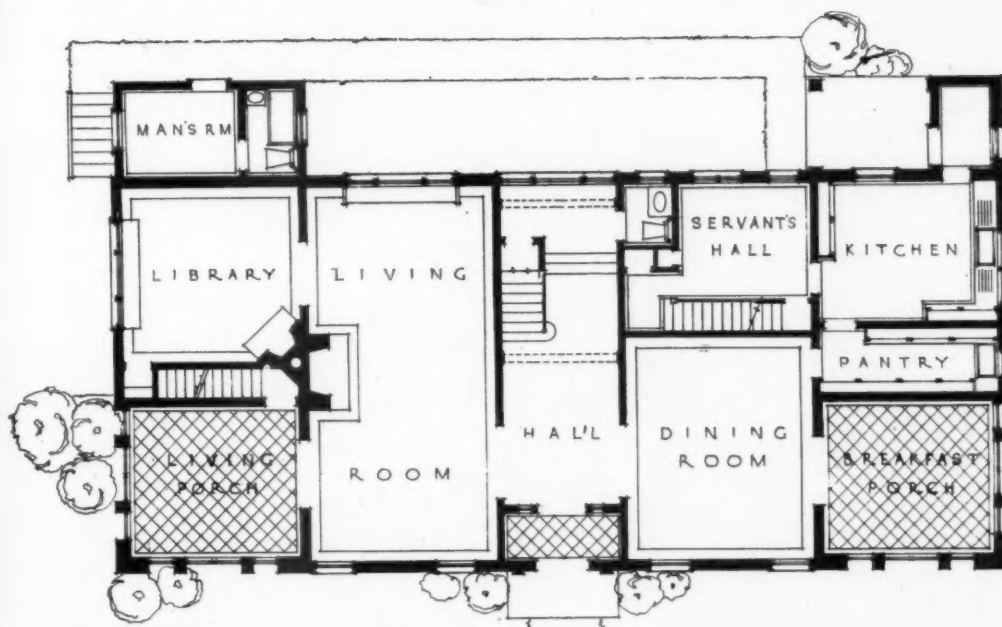
STAIR HALL

HOUSE OF J. J. SCHULLINGER, RIVERDALE ON HUDSON, NEW YORK

DWIGHT JAMES BAUM, ARCHITECT



SECOND FLOOR PLAN



FIRST FLOOR PLAN

PLATE 99

HOUSE OF J. J. SCHULLINGER, RIVERDALE ON HUDSON, NEW YORK

DWIGHT JAMES BAUM, ARCHITECT





PLATE 100

HOUSE OF J. J. SCHULLINGER, RIVERDALE ON HUDSON, NEW YORK

DWIGHT JAMES BAUM, ARCHITECT



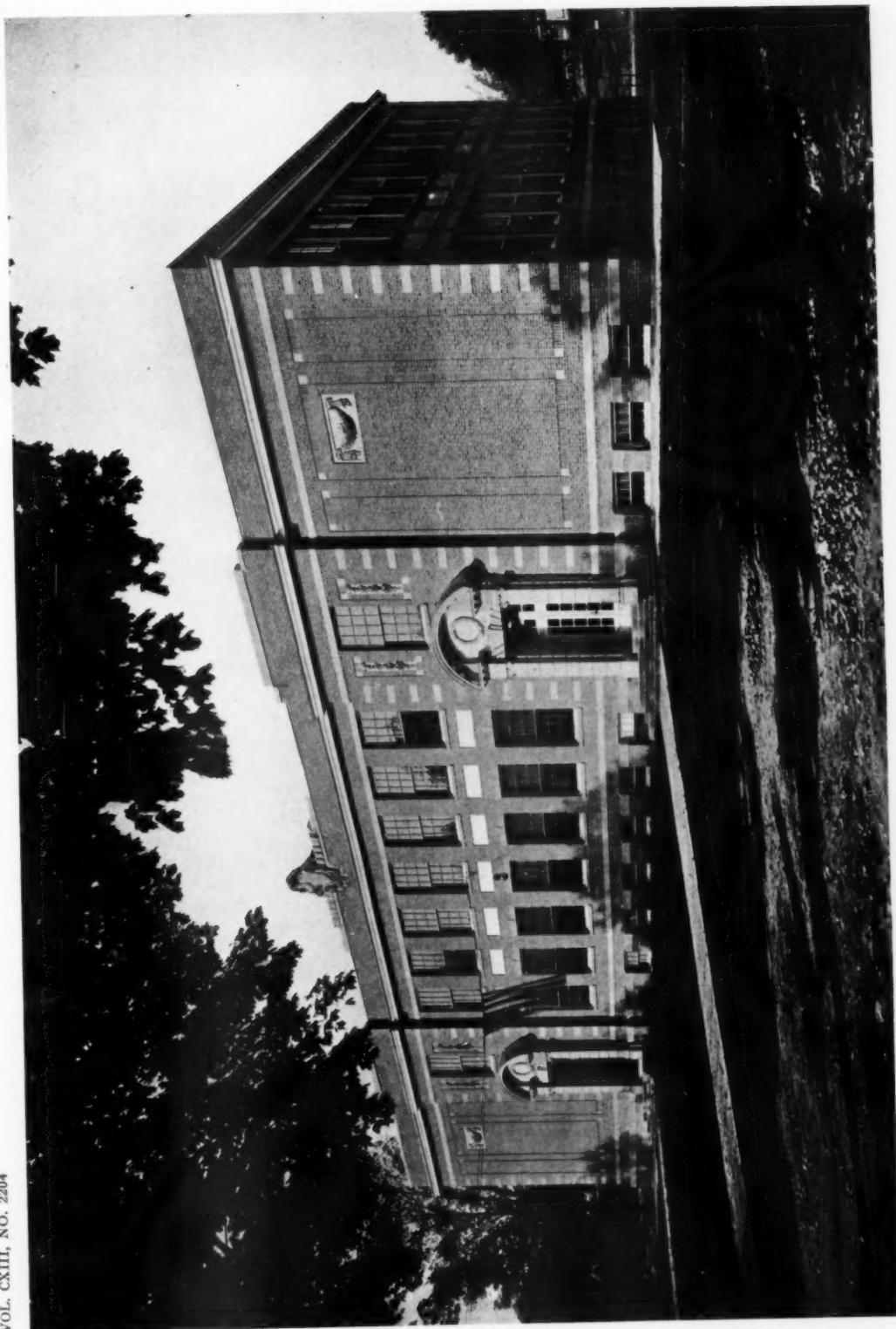
DINING ROOM



PLATE 101

LIVING ROOM

HOUSE OF J. J. SCHULLINGER, RIVERDALE ON HUDSON, NEW YORK
DWIGHT JAMES BAUM, ARCHITECT



HIGH SCHOOL, MAYNARD, MASS.
CHARLES R. GRECO, ARCHITECT

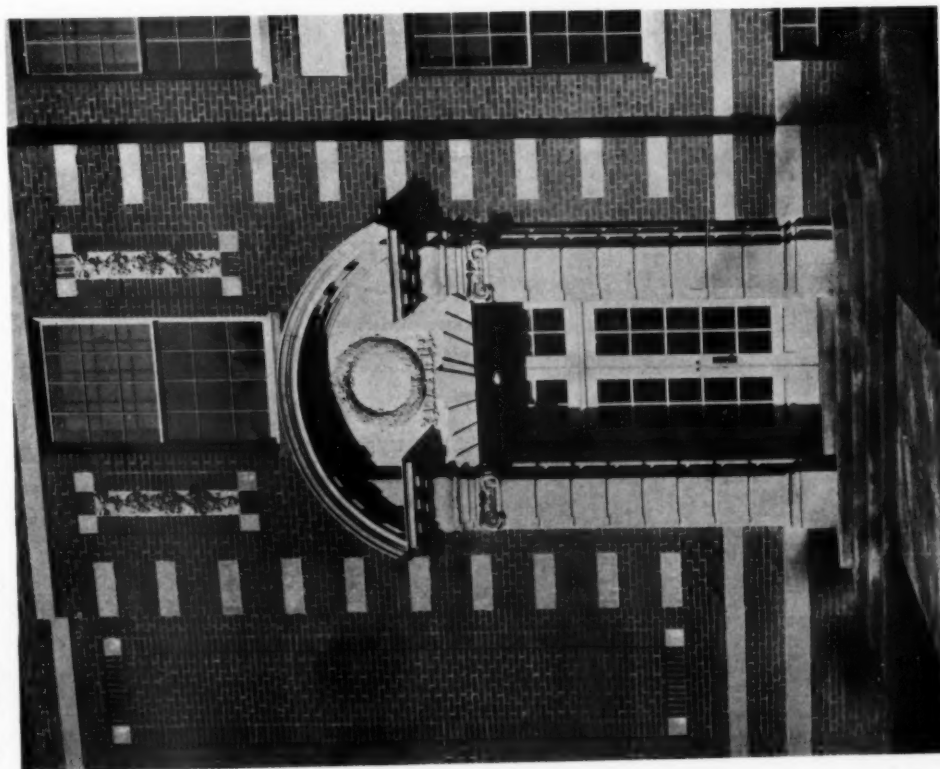
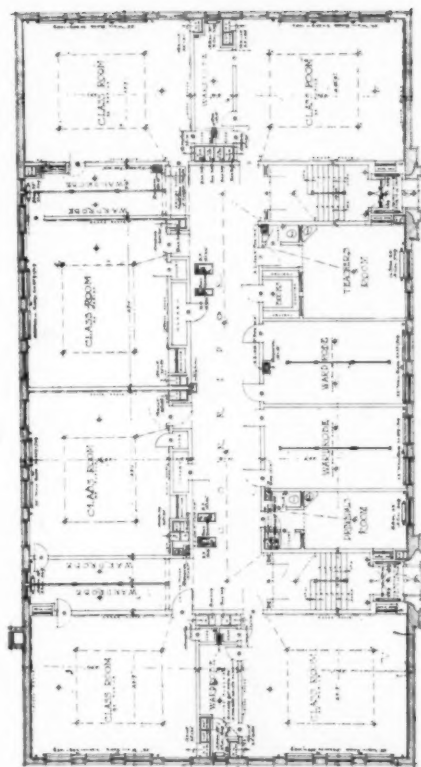


PLATE 103



HIGH SCHOOL, MAYNARD, MASS.

CHARLES R. GRECO, ARCHITECT

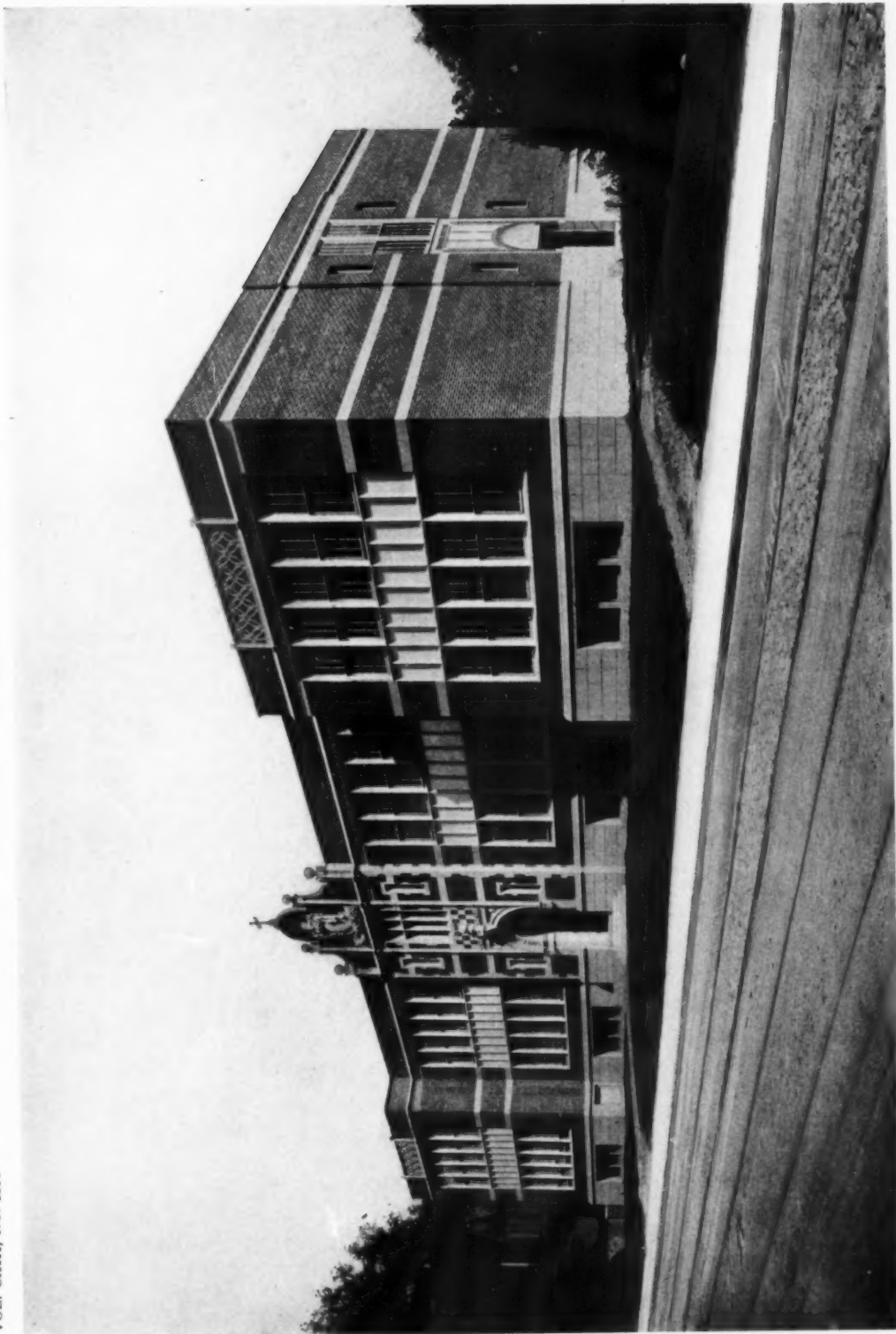


PLATE 104

ST. GREGORY'S SCHOOL, DORCHESTER, MASS.

CHARLES R. GRECO, ARCHITECT

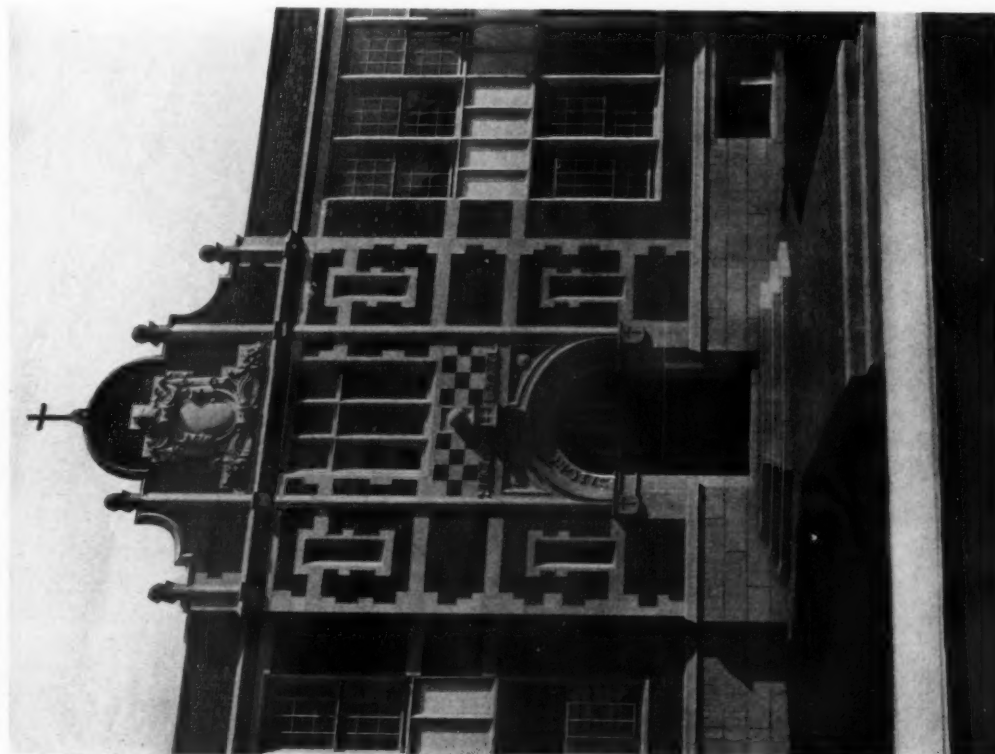
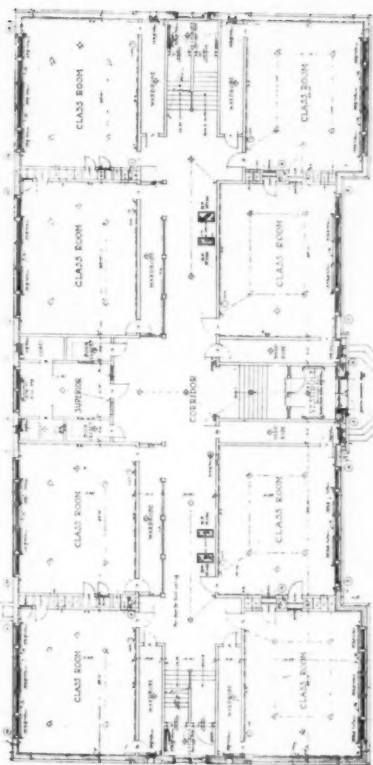


PLATE 105



ST. GREGORY'S SCHOOL, DORCHESTER, MASS.

CHARLES R. GRECO, ARCHITECT

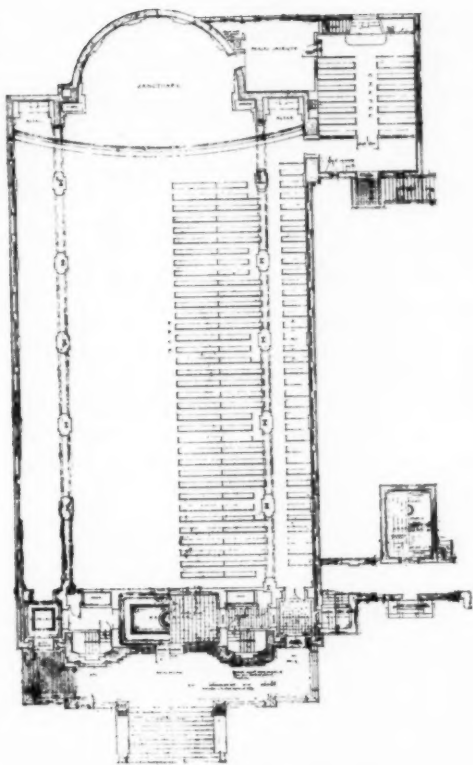
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PLATE 106



ST. MATTHEWS CHURCH, DORCHESTER, MASS.

CHARLES R. GRECO, ARCHITECT

Notes of Housing Operations

Housing for Munitions Workers

Plans for housing the rapidly growing number of workers at the munition plants and shipbuilding yards are rapidly maturing. The General Chemical Company had plans prepared recently for fifty-two workmen's houses, to be erected on its property at Claymount, Del., and has awarded a contract for their construction. The Housing Committee of the Board of Trade of Newark, N. J., is working out the details of a comprehensive scheme of housing development for that city, and it will not be long before some definite details will be decided upon. Other communities have also started plans for alleviating the intolerable conditions that exist in their vicinities, and it is expected that the movement will become general, as the need is imperative.

Workingmen's cottages have been built at Seawaren, N. J., constructed entirely of precast concrete slabs, where the industrial workingmen's colony is being developed under the auspices of the Sage Foundation Homes Company, and another model city, known as Morgan Park, at Duluth, Minn., is also constructed entirely of concrete.

Standardization in Housing Operation—England Favors It for Future Operations

In England the architects and builders are discussing the house of the future. The London *Economist* is leading this discussion and in a recent issue it said that standardization of finished parts is now generally accepted as a strong plank in any program of future housing. The fear that it would lead to tedious repetition of design is fast vanishing, and it is being realized gradually that it will not greatly interfere with the architect's individual touch. The greatest difficulty of all, however, is the utter impossibility of providing dwellings at low rents, owing to the increased cost of material and labor.

Building must be done rapidly. The slow processes, once the rule, can no longer meet the changed conditions. Houses must be had quickly, but they must be substantial. Such a policy will call for more change in building methods in England than in this country, but change may be expected here. The house built of wood can be standardized more readily than buildings of other materials. Doors and windows are already largely standardized, and the practice might be extended to stairs, floors,

cornice and interior finish. By the use of such standardization houses might be erected in shorter time and at less cost, and little or nothing need be sacrificed to quality.

Cities that Grow Over Night

The expression "Cities that Grow Over Night" has been graduated from the ranks of fiction to the world of reality since the big manufacturers of the country realized the importance of solving the housing problem presented by our entrance into the European conflict and the many resultant war industries.

Notable progress toward solution of the war workers' housing problem has been made at Bristol, Pa., by the Merchants Ship Building Corporation, which is constructing part of the mercantile fleet counted on to sink the Kaiser's submarines. This company is now erecting a complete city to house 3000 of its workmen and their families, and it is estimated the population of this made-to-order city will approximate 10,000 persons.

The town, which is well on its way toward completion, will include barracks for 1800 unmarried men, 500 apartment buildings that will house 1000 families, 500 separate group houses for 1500 other families, and 400 single houses for the larger families. Three thousand other employees of the same plant will be housed elsewhere.

This entire project, ambitious as it is, and although started only a short while ago, will be completed early in the spring. It is significant to note that all the houses thus far built are of wood frame and that with the exception of the roofs, nearly all are finished with wood, some with siding, some with shingles, and others with stucco exteriors.

Housing in Mining Districts

In the coal mine districts of West Virginia there has been considerable activity along certain restricted lines of housing. At Roaring Creek, Bower and Gilmer small frame houses of the four-room, single-family type have been erected in large numbers, at low cost and with a minimum expenditure of time and labor. Standardization was the watchword in this work, combined with maximum flexibility in management and labor.

An average of two houses per day was maintained at each of these three localities.

Washington's Alley Dwellers Homeless After July 1st

The question of lodging the greatly augmented forces in Government employ, now assembled at Washington, D. C., has assumed alarming proportions. In addition to the increasing number of men in the Service who are active there, there are unprecedented numbers of civilian workers, employed in the various departments of governmental activity, all of which have been expanded to their utmost to meet war needs.

The problem of housing these people is indeed a momentous one, and the seriousness of the situation is further augmented by the legislation regarding alley dwellers, which becomes effective July 1st, 1918. This law provides that there shall be no dwelling in alleys in the District of Columbia after July 1st, and the 15,000 people who now live in these regions are to be turned out of their abodes at that time. The Emergency Housing Association of Washington has been considering various means of taking care of these people, and has had before it three suggestions for financial resource; namely, (1) that the District float a bond issue to finance the erection of small dwellings, to be rented at \$2.50 per month to the alley dwellers; (2) that Congress be asked to appropriate outright the money needed to erect the houses; or (3) that private capital be induced to erect the dwellings.

It is probable that the last suggestion will be found the most practicable. It is said that it may be possible to persuade capitalists to back a movement to build homes for these people, providing they can be convinced that the law will not be repealed.

To Commandeer Quarters for Ship Builders

Immediately upon President Wilson's signing of the Emergency Fleet Corporation bill this week steps were taken by the proper government agents to commandeer boarding houses, hotels, apartments and even private homes in the vicinity of shipyards with the idea of making further housing provision for those engaged at shipbuilding centers.

This action is to be followed where necessary by the construction of new houses. An appropriation of \$50,000,000 has been made and the Emergency Fleet Corporation will extend loans to private shipyards at 5 per cent to carry on their present efforts. It will not, however, supply funds for new homes except at Government-owned yards.

The powers vested in the Fleet Corporation are very broad. It may purchase at private sale, lease,

or requisition, either permanently or temporarily. It may further build on such property houses with all necessary facilities, streets, sewer and water systems, etc., and may, finally, dispose of such property as a private owner might do.

Massachusetts' Plan of Industrial Housing

Realizing that the ownership of a home makes for better citizenship, the state of Massachusetts has gone into the business of building and selling workmen's homes on the installment plan. The Massachusetts Homestead Commission, which has been created by the state legislature for this purpose, is now watching the finishing touches being put on the first dozen homes built under the plan whereby it is hoped the biggest problem of the laboring man will be solved.

The commission selected Lowell, a large manufacturing center, as the community in which the first demonstration of state supervised home building should be staged. The Commission chose a plot on which there is space for about fifty homes. The 1917 legislature appropriated \$50,000 to the commission for the demonstration and on the success of the project depends the size of future appropriations.

The desire of the Homestead Commission is to accommodate, as far as possible, citizens with families now living in crowded tenements and receiving only about \$14 a week. It was the belief of the commission that a suitable house with four to five rooms and with a small garden could be provided for about \$2,000 with as small a cash payment as possible and a regular installment of \$15 a month. These terms are based on a 9 per cent gross income from the property. The recent rise in prices, however, has made it wholly impossible to provide the house with all improvements at any less than \$2,800 average, although some will cost a trifle less and some a little more.

It is planned that the tenants shall be given expert instruction in the care of the home and the garden. The Homestead Commission will directly supervise and provide this instruction so that those who have never known the joys of real home life, whose life abroad was lived in some dingy hovel and whose life in this country has been characterized only by living in the crowded tenements of our manufacturing cities, may really understand the better things in life and become infinitely better citizens.

The Homestead Commission plans, too, that every purchaser be held rigorously to his obligation to take proper care of his property and make the most profitable use of his garden.

Well Designed Cities Drawing Best Workers

A PRACTICAL DEMONSTRATION OF THE VALUE OF GOOD HOUSING

That the municipalities which provide the best housing facilities for workers will attract the most desirable industries and the best class of workmen is the conclusion reached by the New Jersey Chapter of Architects. The problem was discussed at a recent meeting and resolutions were passed offering the services of the organization to any community desiring assistance.

It was the opinion of the members that the prevailing labor congestion is due in a great degree to the fact that workmen who properly consider their families will not move to a city that has not made the necessary provision for their health and comfort. Several expressed the belief that the manufacturers should arrange to finance the erection of houses along the lines of a development project which would give ample financial return on the investment and, at the same time, afford needed accommodations to make the workers more contented.

The chapter argues that labor organizations are investigating the conditions under which their members live and are noting how manufacturers in various cities are providing for the welfare of their employees. It is the contention of the members that each city should make every provision possible to show the various classes of labor that their interests are being carefully considered and provided for.

New Use of Concrete for Industrial Housing Purposes

An interesting war-time expedient in building method is to be found in the new use which is being made of concrete for industrial housing. The system involves shooting the concrete from a cement gun against a wood frame, which serves the double purpose of reinforcement and furring.

This type of construction is saving in lumber and labor and involves no long waits for materials, since cement is available in all parts of the country. It is said that no other type of construction can produce a house of so low first cost which will at the same time possess the fire-resisting and enduring qualities usually considered inherent only in houses of brick and monolithic concrete construction.

Given good transportation facilities and a suffi-

cient number of cement guns, these houses can be erected in an incredibly short time. By standardizing the style, and building the houses in groups, any number of rows can be erected simultaneously. When it is considered that a house can be completely concreted in two and one-half days, the possibilities in speed of this system of construction are apparent.

A Bit of Financial History

The credit of the United States was so high and unquestionable that in 1900, two years after the Spanish War, 2 per cent bonds were offered at par and oversubscribed. This is a financial performance no other nation has ever equaled.

United States 4 per cent bonds in 1888 sold as high as 130 and in 1901 brought 139 $\frac{7}{8}$ on the stock market.

The United States has never defaulted on any of its bonds. Not one of its bondholders has ever lost a cent of principal or interest except those who voluntarily have taken losses by selling their bonds in a period of temporary price depression. One hundred cents on the dollar, principal and interest, has the United States always paid.

Industrial Housing Activities

The constantly increasing efforts to provide more ample housing accommodations for industrial workers are now having appreciable results. Particularly apparent is the work going on in localities devoted to government work. Prominent among these some of the following may be observed:

The Westinghouse Electric Plant has a large project under way in Media, Pa., where a new plant has recently been established. Here four hundred houses will be started immediately and rushed to completion as quickly as labor and material can be provided. This community will be known as Model City and will be developed in a way much the same as Garden City, L. I. The Worth Steel Co. also has undertaken to build two hundred houses, about fifty of which are completed.

Fort Madison, Iowa, is the scene of considerable activity of this kind. Houses numbering a hundred or more are being constructed under the auspices of the Perfection Tire & Rubber Co. No two of these dwellings are to be alike. Beauty will not be ignored, and it is alleged that this will be one of the most modern communities in the United States devoted to workmen's houses.

Digest of Commercial and Financial News

Affecting the Practice of Architecture

War Finance Corporation

The need for the creation of the War Finance Corporation which is sought to be established by the bill recently introduced in Congress is thus briefly stated by Secretary McAdoo:

"The Government's borrowings, particularly during the period immediately preceding and following each Liberty Loan, has tended to preempt the credit facilities of the banks and often to prevent them from giving needed and customary help to quasi public and private enterprises. Many instances have been brought to the attention of the Secretary of the Treasury and of the Federal Reserve Board where railroads, public utilities, power plants, and other enterprises have been prevented from obtaining the necessary loans to enable them to perform vital services in connection with the war because the bank credits ordinarily available to them are being absorbed by the Government."

The War Finance Corporation is designed to enable the banks, both national banks and State banks, and trust companies to continue to furnish essential credits for industries and enterprises which are necessary or contributory to the prosecution of the war.

1917 Fire Loss Greater Than Any Previous Year Except 1906

INCENDIARY BLAZES GAIN

Losses from fire aggregated \$230,000,000 in 1917 and were larger than in any previous year except one (1906), in the nation's history, according to a statement issued by the Council of National Defense. The San Francisco conflagration occurred in 1906.

The rapidity with which fire losses are mounting is emphasized by the statement that the 1917 damage exceeded by \$30,000,000 that of the previous year, when the total losses were \$30,000,000 more than in 1915.

The communication from the Council of National Defense asserts that a particularly ominous feature of the situation is the recent big increase in the

number of fires of incendiary origin in places where they were effective in discouraging industry, such as factories, warehouses, lumber yards, and docks.

"This disastrous condition must be improved," the communication declares. "The speeding up of industries must not be allowed to crowd out precautions known to be important, nor must overconfidence be allowed to relax safeguards. Constant watchfulness, frequent inspection, extra guards, especially at night, and proper care and segregation of all inflammable waste are measures that must be constantly urged. More energetic remedies will do much, for most fires are due to preventable causes."

Adjusting Business to War Conditions

Business readjustment to war will be the dominant note of the sixth annual meeting of the United States Chamber of Commerce. The four critical questions of the day: financing the war, railroads, centralized control of industry, and shipping, will be considered from the two-fold point of view of filling the government's requirements, but with the minimum disturbance to private industry.

More than 500,000 business men will be represented at the meeting in Chicago April 10, 11 and 12. Delegations will be there from every State in the union, from large cities and from small. There are more than 1000 local chambers of commerce and commercial organizations comprising the membership of the National Chamber of Commerce, which includes even such distant bodies as the American Chambers of Commerce at Shanghai, the Philippines, Alaska, Hawaii, Buenos Aires, Rio de Janeiro, London, Paris and some half dozen other cities abroad, and each of the 1000 local members will be represented at Chicago, by duly authorized delegates. The resolutions of the meeting may truly be said to be an accurate and authoritative expression from American business, and the fullest possible measure of co-operation between business and the government may be expected to result. As in the past, the speakers will be men of national position.

Current News

Civilian Workers Wanted for Ordnance Department

Special Training for Those Not Experts

Men having a high school education, and the natural ability to adapt themselves to new work, may qualify for a government appointment in which, under government instructors, they will receive the necessary training for the positions described below. Those who have the required technical training will be placed and advanced as quickly as their ability justifies.

The positions that may be applied for are:

Inspectors and Assistant Inspectors, Field Artillery Ammunition Steel.

Inspectors Artillery Ammunition, Cartridge Cases, Assembling, Loading, Forging, Primers, Detonators, Shell and Shrapnel Machining.

Ballistic Inspectors.

Metallurgical Chemists and Assistants.

Inspectors, Powder and Explosives.

Inspectors, Cannon, Forging Operations.

Inspectors, Gun Carriages and Parts.

Inspectors, Gun Fire Control Instruments.

Assistant Inspectors, Motor Vehicles and Artillery Wheels.

Engineers and Assistant Engineers, for tests of Ordnance Materials.

Inspectors, Ammunition Packing Boxes Machinists, accustomed to work to 1000's of inch.

These positions are under civil service regulations, but applicants will not be required to report for examination at any place. Applicant will be rated in accordance with education and general experience. No applications will be accepted from persons already in the government service unless accompanied by the written assent of the head of the concern by which the applicant is employed. Papers will be rated promptly and certification made with least possible delay. Apply or write for further information to C. V. Meserole, Special Representative of the Ordnance Dept., U. S. A., Room 800, 79 Wall St., New York City.

Competition for University Building

The New Mexico Normal University Board of Regents will meet about April 7 to discuss plans for a new building. Anyone interested in submitting plans should correspond with President Frank H. H. Roberts, Las Vegas, New Mexico.

Building a Wooden Ship

No vessel that has been launched in recent years will be watched with keener interest by shipbuilders and seafaring people generally than will the "War Mystery," the largest wooden steamship ever built, which was sent into the water this week at a Texas port for the Cunard Steamship Company. In the face of statements that the wooden ship is impractical, especially in a size approaching that of the "War Mystery"—which has a dead weight capacity of 4700 tons—it is interesting to know that Lloyd's Agency, the foremost marine insurance experts in the world, went over all the designs for the "War Mystery" type of ship and was so impressed with the practicability of the design that the vessel was given an A1 rating, as high as could be given the most substantially built steel vessel. This rating not only is remarkable for any vessel of a new type of construction, but it is especially noteworthy when it is granted in the face of criticisms and doubts expressed concerning all ships built of wood.

To Create a Market for American Wood

In compliance with a request from A. H. Oxholm, United States Lumber Trade Commissioner for the Scandinavian countries, ten sets of the samples of commercial woods, prepared by the National Lumber Manufacturers Association, are now en route across the Atlantic. Mr. Oxholm has arranged to have these samples displayed before commercial organizations and others in the Scandinavian countries, who are interested in the possibilities of getting wood supplies from the United States.

Government Control of Waterways

A committee of three has been appointed by Director General McAdoo to investigate the inland and coastwise waterways of the United States and advise him as to the best means of putting them to advantageous use in solving transportation problems. The canals of the country and the coastwise Mississippi and lake traffic will be considered. Work has already been begun by the committee, which is headed by Maj.-Gen. W. M. Black, Chief of Engineers of the United States Army.

Two Big Buildings to be Erected for Army and Navy in Washington

\$5,750,000 CONTRACT LET

Contract has been let for the erection on a cost plus percentage basis of two temporary reinforced concrete office buildings—one for the army and the other for the navy—to be built on Government property, between the Washington Monument and the Lincoln Memorial, south of B Street and west of Seventeenth Street, Washington, D. C.

The navy building is to consist of nine wings, 500 feet by 60 feet, with headhouse, connecting all nine wings, 60 feet by 860 feet. The building for the army is to be similar to the navy except that there will be eight wings, 500 feet by 60 feet, with headhouse 60 feet by 760 feet.

The buildings are to be three stories high, reinforced concrete, and fireproof in all respects. Work is to be started about March 25 and is to be completed about Aug. 15, at an estimated cost of \$5,750,000.

How an Architect Saw the Acropolis

During the course of a lecture delivered by William Lucas, F. R. I. B. A., before the Royal Victorian Institute of Architects, he described as follows his impressions of the Acropolis at Athens:

One morning at four o'clock, in the darkness I fixed my eyes in the direction of the Acropolis. Fifteen minutes later the mount was in pure silhouette outline, and while continuing to gaze intently upon that view of semi-darkness—prior to the rising of the sun—the play of atmospheric effects about the dim mass was peculiarly impressive. The base line of the upper heights became a mass of purple blue, from which there arose an ochrey blue that extended on to the tableland and enveloped its architecture as the overarching cloudless sky took on an unusual shade of light blue. Then, shortly after five o'clock, the sun peered over Mount Lykabettos, sharpening the massive outline, and revealing the main points of the structural remains.

Next, the tints of the earlier hour began to mingle, till blue, and ochre, and purple were superbly blended; and thus the first shadows of another day were gradually evolved, bathing anew the matchless composition in the purest flood of light and shade conceivable.

As the sun rose higher and higher, and southward, playing about rock, and rampart, and temple, and exhibiting in the several features various degrees of light and of shadow, the scene fast became—to me—indescribable. The moon still shone, and in conjunction with a solitary cloud that had become

visible in the brilliantly blue sky, added picturesqueness. Deep ochrey richness of temple marble, bronzed-browning of rampart, and sienna-like texturing of rock spake in harmony—all exhibiting such delicacy and softness that what was human in the composition seemed rather to have been directly sketched into the landscape by Phidias and his small band of brother architects and sculptors goaded with beauty, than built of anything material by the hand of labor. So keenly was all blended in unison.

Bill to Give President Lumber Control

The Senate Military Affairs Committee has reported favorably a bill giving President Wilson the broadest powers to take control of the timber and lumber business of this country. The full significance of this measure is found in the serious situation regarding the production of war airplanes.

The measure empowers President Wilson to commandeer any or all standing timber he may consider necessary for the use of the army and navy in construction of airplanes, or for the shipping board—which also has had trouble in getting the right sort of lumber—or for any other governmental agency that needs timber or its lumber products. In addition, it requires sawmill men to cut boards and other products in the sizes prescribed by executive order, and imposes a fine and imprisonment for violations of the order.

The labor situation in the Western and Northwestern lumber camps has had considerable influence on the production of suitable timber.

State Control of Industries Will Probably Pass with the Ending of the War

We cannot be so very confident that the war-time experiments in State control of industry will turn out to have whetted the people's appetite for fresh experiments of the sort on return of peace. Regarding the present attitude in England, the London *Economist* lately made this comment:

"In the minds both of employers and of workmen there is growing up a profound dislike of all government interference, and a not less profound determination to get quit of it at the first opportunity. The old demand of Socialist orators that the government should nationalize this, that, and the other is moribund, if not dead. What all classes now want, and want so badly that their hearts ache for it, is to complete the war in a manner satis-

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factory to the Allies, and to get rid of the government control of industry."

If this is any fair picture of public opinion in England, the probability of similar revulsion of feeling among our own highly individualist people would be reasonably strong. Generalizations are not altogether safe in the present abnormal circumstances, and no doubt it is possible that organized labor, which in England has pretty much had its way regarding wages under Government control, would favor permanent state operation for that reason. But this, like most other present-day predictions, has the weakness of dealing with surrounding conditions whose character can only dimly be foreseen. It is the remark of an eminent writer on political problems that, whatever else happens after return of peace, the one certainty is that the United States will emerge from war the most conservative, in its political and industrial instincts, of the great communities of the world.—Alexander Dana Noyes in "The Financial World" of the April *Scribner*.

Architecture in the United States

If architecture has outstripped all the other arts in the United States, it is for reasons very easily stated. It has enlisted the energies of some men of genius and more men of great talent. It has been peculiarly supported by a vast national prosperity. No modern European school of architecture has had the demand for new buildings that we have enjoyed. But it is even more important to reckon with certain less ponderable influences. Architecture has been subjected with us to a sterner discipline than has been enforced upon either painting or sculpture. Its leaders have made more of training, of exact knowledge, and, above all, they have given closer attention to the transcendent matter of taste. Why did McKim move heaven and earth to get the American Academy at Rome established? It was not to make American architects into little devotees of the Italian Renaissance. It was to enrich their minds, to steady their judgment, to fertilize their taste, to give them a keener sense of the rectitude of art. Our architecture has improved by leaps and bounds because so many of the men who make it have as their dearest possession a profound respect for their mystery, a sincere idealism. They have believed, as we were saying at the outset, that they were artists, not tradesmen. Well, of late, divers things have developed to threaten their high resolution. They have to reckon, for example, with the man who was born amid the horrors of horsehair furni-

ture, and perhaps for that very reason is keen upon dying only in the odor of a kind of Medicean sanctity.—Royal Cortissoz in New York *Tribune*.

U. S. Ordnance Base in France

\$25,000,000 DEPOT PROGRESSES

An ordnance base to cost approximately \$25,000,000 is being built in France by the United States Government. This base will include about twenty large storehouses, twelve shop buildings, a hundred smaller shops, and magazine and machine tool equipment, costing \$5,000,000.

The project includes a gun repair plant, a carriage repair plant of large capacity, a motor vehicle repair plant, a small repair plant, a large shop for the repair of horse and infantry equipment, and a reloading plant. There will be, in addition, forges, carpenter shops, and other auxiliary buildings.

Much of the construction material and equipment has arrived in France and actual construction was begun several weeks ago. Practically all of the essential materials have been contracted for and priority orders issued by the War Industries Board have expedited deliveries. It is estimated that for the maintenance of the ordnance base approximately 450 officers and 16,000 men will be required. Some difficulty was experienced in obtaining the initial units trained in manufacturing industries.

Pull vs. Efficiency

The man who is doing his work should be let alone. One reason that war preparations have gone slowly is that too many busybodies, in Congress and out, have been nagging him. One of the country's foremost engineers is great on production but short on tact. He was driving a piece of Government work ahead on a twenty-four-hour schedule when an inspector from Washington who earns less in a year than the engineer is paid each month decided that he was being slighted. He started giving orders which conflicted with those of the contractor. The engineer turned aside from his work for about thirty seconds to tell the inspector what he thought of him. That would have been all right on a private job, but the Government employee had influence, and he hastened to Washington to use it. Since then the work has lagged. It has taken most of the engineer's time to answer the charges that were lodged against him by the inspector.—*The Annalist*.

Industrial Information

New Building for Johns-Manville Company

The H. W. Johns-Manville Company has established its St. Louis branch in a new six-story building on Olive and 11th Streets. In this building Johns-Manville products have been incorporated as far as possible, while ample provisions have been made for demonstrating them in the most practical manner. Exceptional care has been taken to provide the most favorable conditions for the employees. All parts of the building are light and well ventilated.

Nalecode—A Nailing Base and Insulator

Nalecode is a compound of powdered and fibrous minerals which, when mixed with cement, form a plastic mortar that sets, making a tough, elastic mass, into which nails or screws can be driven fast as readily as into wood. This material, which is manufactured by The Berger Manufacturing Company, of Canton, O., is composed entirely of minerals, and contains no cinders, wood sawdust, other vegetable matter, or, in fact, any chemically active matter. Because of its mineral nature it does not disintegrate and lose its nailing qualities.

Nalecode is mixed on the job, either by hand or in a batch mixer, just as ordinary cement mortar is handled, and is laid just as cement mortar is laid. It forms a strong bond with concrete, tile, expanded metal and other materials, because of its fibrous nature and the Portland cement used in the mixture. Nalecode is said not to shrink while drying out, and is not injured by freezing, although freezing retards the setting. This material sets very quickly; it can be walked on two days after it is laid.

The uses of Nalecode are manifold: As a nailing base for floors of wood, linoleum, cork or carpet, a cementing base for linoleum, and a foundation for terrazzo and composition flooring; on

roofs a one and one-half inch layer on the structural slab gives a convenient nailing base for finish roofings of tile, slate, etc., and takes the place of wood sleepers, lath and sheeting on reinforced concrete roofs. In partitions a one inch coat of Nalecode, applied with a trowel on either side of a metal lath surface, gives a solid partition to which trim, panelling, blackboards and other similar material can be nailed readily, without furring strips. It is sound-proof, echo-proof, and does not crack from heat even when exposed to flame.

Nalecode is a very poor conductor of heat, and consequently when used on roofs prevents condensation. It maintains an even temperature, when used in this capacity, excluding heat in summer and retaining it in winter.

Show Window Lighting

Jove and Jupiter, Scoop and Hood are the prime factors in efficient show window lighting, as advertised by the National X-Ray Reflector Company of 37 West 46th Street, New York City, and 235 West Jackson Boulevard, Chicago. The combined efforts of Jove and Jupiter will result in every point of a window being lighted, without any wasteful glare annoying to the eyes of the passerby.

Jove and Jupiter are reflector lights, cast in special shapes to meet the peculiar needs of show window lighting.

This company is also advertising a special lamp for industrial use in their new Mazda "C-2." This blue bulb, in subduing the red and yellow rays, is said to give a light clearly approaching daylight.

Correction

In the issue of February 6th through inadvertence terra cotta received the entire credit for the Postal Life Insurance Building effect, whereas the use of variegated Indiana limestone, furnished by Cohen & Co., was used in the two lower stories.

Department of Architectural Engineering

Sales and Service Buildings for an Automobile Manufacturer

By GEORGE VOLNEY RHINES, *M. Am. Soc. C. E.*
of Mills, Rhines, Bellman and Nordhoff, Architects

THE growth and importance of the automobile business is well illustrated by the extent to which the larger companies have found it necessary to erect buildings in many of the principal cities throughout the United States. The distribution of the product of these companies has come to require larger local plants than existed in these cities, and large storage capacity near the point of final delivery has become necessary to help in equalizing factory production throughout the year as well as in equalizing the demand upon transportation facilities.

The several service stations illustrated in this number of *THE AMERICAN ARCHITECT* are selected as examples of a chain of buildings of this sort erected by the Willys-Overland Company during the last two years. The planning of these buildings called for the solution of many problems for which but slight precedent could be found, and it is the purpose of this article to outline some of these features.

These buildings were designed to meet the requirements of the sales and service departments. The sales department required salesrooms for retail sales and storage space for warehousing cars. Separate salesrooms were also required for second-hand or "used" cars taken in trade for new cars. The service department required space for making adjustments to customers' cars and space for repair shops, paint and upholstering shops, and facilities for the sale of repair parts, gasoline, lubricants, supplies and accessories. In a few instances only it was proposed to conduct a public garage in addition to the sales and service functions. All these activities were usually housed in a single building, but in several of the largest cities separate buildings were erected for retail sales, service and warehousing.

The selection of sites for these buildings was given careful consideration. A location was usually

selected on a street carrying heavy pleasure car traffic and far enough from the congested business district of the city to avoid excessive cost in land. In the largest cities, when separate retail sales buildings were erected, comparatively high-priced sites were selected, as the ground area was not great; but in cities where sales and service were located in the same building a larger lot was necessary and less expensive land selected. Corner lots were selected in almost every instance. Where separate warehouses were built the most important requirement was a location with railroad siding.

Standardization was adhered to as far as possible. Each building was, of course, an individual problem owing to size and location of lot, topography and amount of business handled in the district. The relation of departments to each other followed a standard arrangement. The style of exterior design, the type of construction, the materials used (both in interior and exterior), the finish of the salesrooms and offices, the elevators, dumbwaiters and stairways, and the exterior and interior color schemes were quite completely standardized.

All buildings of more than one story were constructed of reinforced concrete, with floors of "flat slab" design. Several of the separate retail sales buildings were but one story in height and were constructed with brick walls and steel trussed roofs.

Floor plans were worked out to provide column spacing not less than 20 ft. by 20 ft. The relation of aisles to working space or to storage space was carefully studied to make the most of the available space. Elevator location was studied in connection with aisle layout. As automobiles within the building will usually be moved with their own power, it was important that all aisles have easily turned corners and ample clearance.

The roof space was utilized in several buildings, especially in California, where fair weather can be

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depended upon for long periods. The elevators were extended to the roof level and the roof surface protected with a pavement. This space was intended for storage purposes and also for testing and tuning up motors. For the latter use, the open-air conditions would be ideal.

Fireproof features were given careful consideration on account of the hazardous nature of the occupancy. All structural features were reinforced concrete, inclosing walls were brick, all windows had steel sash and frames. Stairs and elevators

molded cornices and flat molded beams between the columns, and were furred down to conceal the sprinkler pipes.

Walls and column surfaces in salesrooms were canvased and laid off in a simple design of large panels with surface moldings. Walls and ceilings were painted in two tones of light, cool gray. All wood trim was painted in same tone as wall except doors, which were oak finished with a light colored stain. The show windows were large and started near the floor level. Salesrooms for re-sale of used



BUILDING FOR THE WILLYS-OVERLAND COMPANY, KANSAS CITY
MILLS, RHINES, BELLMAN AND NORDHOFF, ARCHITECTS

were enclosed in brick walls, and interior partitions were terra cotta. No wood was used except for trim in salesrooms and offices.

The materials used on the exterior were gray limestone and a rough texture brick with a range of color in red and brown. The exterior design for all buildings followed similar lines.

The finish in salesrooms was given careful study to produce the best possible setting for the cars on display. All ornamental detail that might detract attention from goods exhibited was avoided. Salesroom floors were laid with vitreous white tile, 6 in. square, with wide black joints. A tile base was carried around walls and columns, and at show windows the riser and stool were of tile. Tile was found to be the only available material that did not show permanent stains from oil dropping from cars on the floor. Ceilings were treated with plain

cars were finished more plainly, with painted cement floors and painted plaster walls. It was thought that too well finished a room would detract from this class of goods by contrast.

Artificial lighting of salesrooms proved to be a difficult problem to solve. Ordinarily, merchandise displayed in a show window can be brilliantly lighted without affecting the interior of the store or salesroom. In an automobile salesroom, however, the same display of goods is to be viewed through the show windows by the passing public and also by the prospective customer who has entered the room. The show window display must be rather brilliant to catch the eye of the man on the street who may be driving rapidly by, and this brilliant lighting may be very glaring and unpleasant to the persons inside the room.

Floors in repair shops were laid with wood or

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composition wearing surface. In other portions of the buildings cement floors were used except where special requirements dictated the choice of other materials.

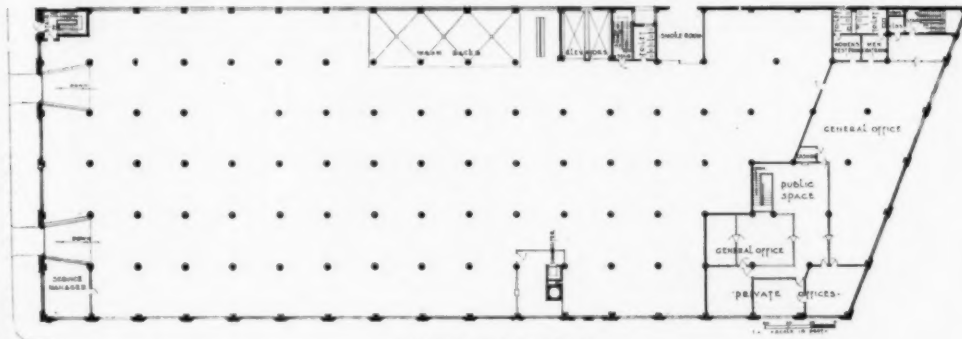
The large doors, where cars enter and leave the buildings, were equipped with electric operators to open and close them.

Cars are taken to the upper floors and from floor to floor either by elevators or inclines. Elevators were installed in all buildings, and in some inclines

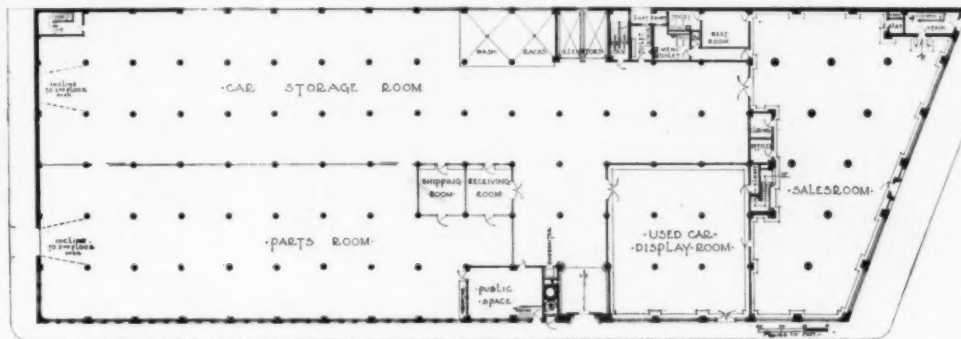
elevator shaft walls, were large and heavy, it was found advisable to use a power operator to open and close them.

Since the elevators were of large size, they could not be used economically for handling small packages, and to provide for this service power dummy elevators were installed.

Repair departments were allotted as much space as was indicated by the estimated amount of business to be handled. Besides the large general repair



SECOND FLOOR PLAN



FIRST FLOOR PLAN

BUILDING FOR THE WILLYS-OVERLAND COMPANY, KANSAS CITY
MILLS, RHINES, BELLMAN AND NORDHOFF, ARCHITECTS

were used to relieve the elevators. Inclines, as a means of elevating cars, have many advantages. There is no operating expense. If used in one direction or if wide enough for passing, a great number of cars can be handled in a given time. No failure in electric current or a breakdown in machinery is to be feared as is the case with elevators. The principal objection to inclines is the great amount of floor space which they take up. In some instances inclines can be placed outside of the building.

The elevators used were of standard design with large platforms, high speed and ample carrying capacity. As the steel doors, closing the openings in

or machine shop, smaller shops were provided to serve as forge shops, tin shops and battery shops. Forge and tin shops contained apparatus with open flames and were inclosed in fireproof walls with automatic fire doors. Battery rooms, when batteries were repaired and charged, required special plumbing with acid-proof fixtures and wastes and acid-proof floors of special tile or asphalt.

Painting departments were equipped with separate rooms for painting and varnishing and drying and with decks for rubbing finish, which were pitched to a floor drain. Varnish and drying rooms were inclosed with partitions, which were made as nearly dust-tight as possible. In some instances,

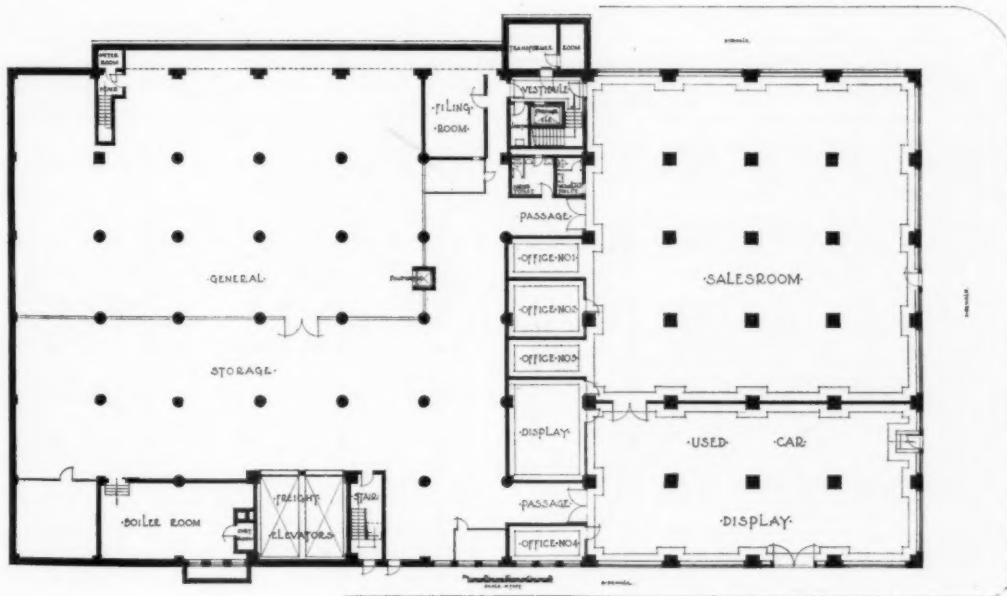


BUILDING FOR THE WILLYS-OVERLAND COMPANY, SAN FRANCISCO
MILLS, RHINES, BELLMAN AND NORDHOFF, ARCHITECTS

THE AMERICAN ARCHITECT



FIRST FLOOR PLAN



GROUND FLOOR PLAN

BUILDING FOR THE WILLYS-OVERLAND COMPANY, SAN FRANCISCO
MILLS, RHINES, BELLMAN AND NORDHOFF, ARCHITECTS



BUILDING FOR THE WILLYS-OVERLAND COMPANY, SAINT LOUIS
MILLS, RHINES, BELLMAN AND NORDHOFF, ARCHITECTS

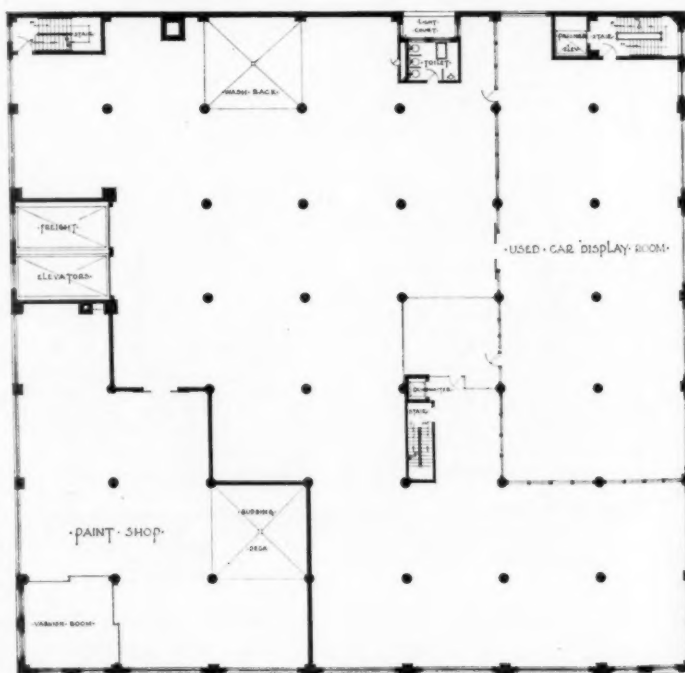
matter of much importance in certain departments. Smoke and fumes from forge fires and tinner's furnaces must be carried off. Battery rooms must be well ventilated or the fumes given off by the batteries, being charged, will affect the workmen and the finish on cars. Most important of all, however, is the ventilation of the shop where engines are repaired. Small inclosed rooms with outside openings or forced ventilation were provided for tuning motors. The main shops, however, also required positive ventilation, as motors must be run more or less, and in winter when windows are closed much illness among the workmen is caused by engine exhaust fumes unless the ventilation is adequate.

All cars received at these buildings are washed as soon as received, and again before shipment or delivery. At times

ovens were provided for baking the enamel finish.

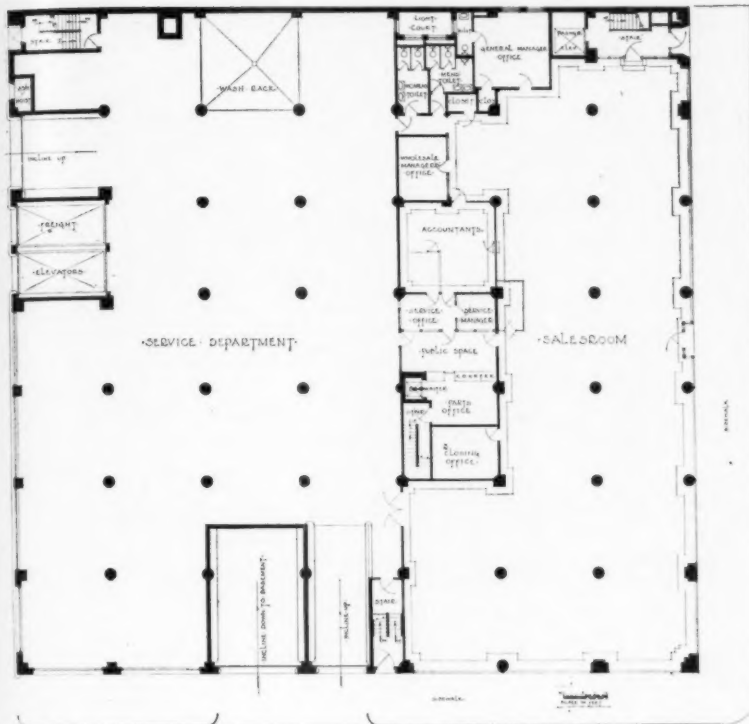
Spaces where cars were kept in storage were equipped with some means of suspending cars from the ceiling above the cars stored on the floors. By this expedient the capacity of a given space was more than doubled, as no aisles were necessary for the upper tier. In some buildings suspension was accomplished by means of wire cables attached to inserts set in the ceiling or under the face of the floor slab above. With this method a hoisting rig was necessary to raise the cars. In other buildings a more elaborate equipment was provided, consisting of a skeleton deck of steel angles suspended from above. The cars were stored on these steel angle tracks in long lines, and at one end a transfer car operating on a suspended track carried the cars to the elevator which had a landing provided at the proper elevation.

Ventilation was found to be a



SECOND FLOOR PLAN

THE AMERICAN ARCHITECT



FIRST FLOOR PLAN

BUILDING FOR THE WILLYS-OVERLAND COMPANY, SAINT LOUIS
MILLS, RHINES, BELLMAN AND NORDHOFF, ARCHITECTS

a great many cars must be washed in a short time, and often at night as well as by day. Facilities for car washing were, therefore, considered of much importance. Wash racks were provided in receiving rooms, repair shops and storage rooms. These wash racks obviously required well drained floors and convenient overhead hose connections. In addition to these it was found advantageous to provide strong artificial lighting. Some of the lighting fixtures were placed near the floor with reflectors projecting the light under the car. This arrangement permits rapid and thorough work. Hot and cold water was provided for all wash racks, and supply to the hose passed through a mixing chamber. This arrangement necessitates the heating of a large amount of water, but washing cars with cold water is not advisable in winter on account of the effect on the men doing the work.

Compressed air systems constituted an important item in the equipment of these buildings. Electric driven compressors were installed and air lines run to shop and storage floors with numerous outlets. These met the needs of tire inflation and shop processes. Pneumatic tube systems were also in-

stalled to carry order slips. Gasoline storage systems were also a part of the equipment.

Fire protection constituted one of the most important problems in connection with the equipment of these service stations. Cars containing gasoline were placed in every portion of the buildings. In some of the shops open flames were used. The insurance underwriters and the building departments in the various cities enforced many exacting regulations. These regulations varied surprisingly in different cities. All buildings of more than one story in height were equipped with automatic sprinkler equipment. In addition to these, wet stand-pipes, dry stand-pipes, chemical extinguishers, sand pails and outside fire escapes were required by the authorities. In some cases only a part of this equipment was required; in other localities all was ordered installed.

The above outline applies as a whole to the planning and equipment of some fifteen or twenty of the larger stations. Many smaller stations have been erected containing only a part of the features mentioned.

Revised Constitution Voted Down

By a vote of 1555 to 546 the proposed revised constitution of the American Society of Civil Engineers was defeated.

Government Wants Draftsmen

The U. S. Civil Service Commission announces open competitive examinations for appointment to the positions of architectural, mechanical and structural steel draftsmen, for ship work. The examinations are of the non-assembled type. Full information and application blanks may be obtained from the commission, Washington, D. C., or the civil service district secretary in Boston, New York, Philadelphia, Atlanta, Cincinnati, Chicago, St. Paul, St. Louis, New Orleans, Seattle or San Francisco.

Factory Steam for Heating

THE troubles and discomforts caused by the shortage of coal have led to considering means of preventing a recurrence of that condition. Many things can be done to accomplish this end, each of some importance. Among the means suggested is the greater utilization of exhaust steam. A cloud of steam about an exhaust head during winter weather is an absolute waste of coal and such a condition should not be permitted.

In the business sections many buildings have power plants and the exhaust steam is in excess of the heating requirements. In these neighborhoods are buildings operated with electric power generated elsewhere and are heated with low-pressure heating apparatus. The one plant is wasting coal and the other could either dispense with burning fuel or utilize in part the surplus exhaust steam of its neighbor and reduce its fuel consumption. In other words, every pound of exhaust steam condensed in a heating radiator effects a corresponding saving in some coal bunker.

There is scarcely a city block in any business section in which this waste does not occur. Manufacturing plants, in congested districts, are surrounded by store and tenement blocks, which can be heated entirely or in part by the surplus exhaust steam from the factories. It may be necessary to cross streets and alleys, but no great obstacle presents itself in this respect, and it is probable that city authorities would grant permission to do so, with certain restrictions. The supply and return mains can be run in the basements of the buildings from end to end of a block and connected to the existing apparatus. On Sundays and other days on which the factory plant does not operate the buildings can be heated with steam at low pressure. As the power plant is generally operated with an economy that the small plant does not possess, a saving of fuel is made in this way.

To utilize the exhaust steam in outlying districts would probably require the laying of quite extensive steam mains, but this is entirely practicable and is done in many localities. In these cases it may be advisable to do the heating with hot water. This service can be accomplished by heating the water in a closed heater and circulating it with a pumping apparatus. There are but few plants so located that the exhaust could not be entirely utilized and the use of the surplus would be a source of revenue to the producer and pay a handsome return on the investment.

In using exhaust steam for heating, some obstacles may present themselves, but modern practice can quite easily overcome them. To circulate this

steam with economy it is necessary to do so with a vacuum system, several of which are procurable and entirely reliable in their action. By this type of apparatus the steam is circulated without back-pressure on the engines and a positive and complete circulation is made and maintained throughout the entire system.

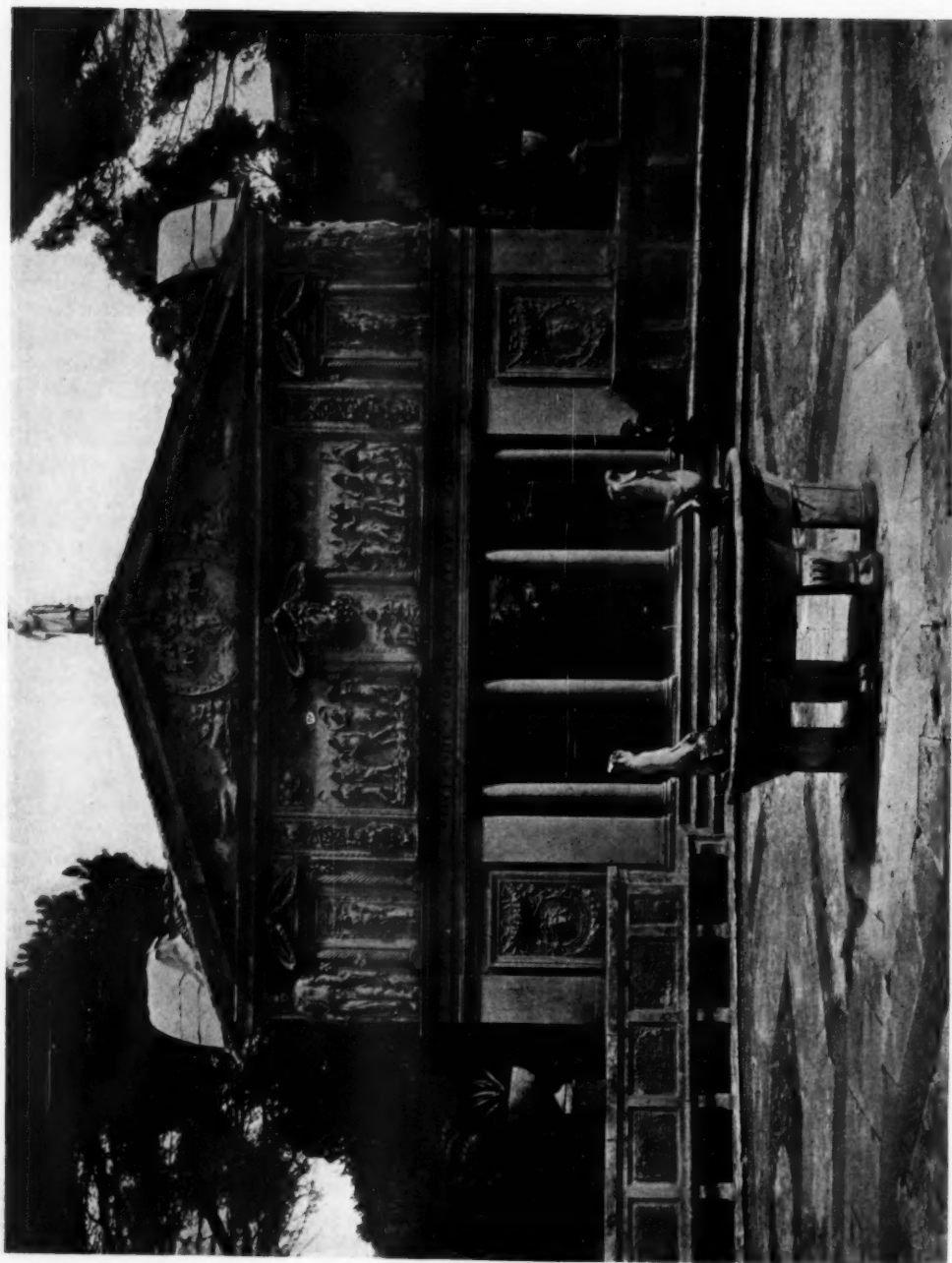
Now is the time to think of these things in order to be ready for next winter. The manufacturer or building owner whose exhaust head is surrounded with a white cloud of steam is not only wasting his own coal and money, but his neighbor who operates his own uneconomical low-pressure plant is equally guilty of waste. And in the final analysis they are responsible, to some degree, for coal shortage, with its attendant misery and suffering.

A Lesson from Halifax

The recent disaster at Halifax developed many interesting things worthy of attention. That many hundreds of people should be made blind would not be expected, but such was the deplorable result. The calamity was the result of two explosions in the harbor, the first and lighter one caused many persons to go to the windows through curiosity and the second was of sufficient force to blow the glass inward, resulting in the mutilation and blinding of hundreds of persons.

It would not be reasonable to expect buildings to be constructed so as to safeguard their occupants against the effects of such a visitation, as they are very fortunately of infrequent occurrence. The frequent occurrence of minor disturbances, however, justifies the application of these lessons to minor uses. It can readily be seen that if all of the windows in Halifax had been glazed with wire glass the attendant mutilation and blinding, due to the use of ordinary glass, would not have occurred. The use of this glass as a precaution against damage caused by the usual accidents is a desirable thing.

The availability and value of wire glass as a fire retardant is well understood, and for such purposes municipal ordinances require its use. These requirements are often of limited scope, and then the rate of insurance, due to its omission, forces its use. But moving parts that are glazed, such as doors, openings into rooms where explosions can occur, automobiles, passenger coaches and other things subject to collision shocks and flying missiles, can be rendered much safer by the use of this material. In windows and doors that are liable to be entered by burglars this glass will afford a considerable resistance to such trespassers.



THE CASINO, VATICAN GARDENS, ROME, ITALY

THE AMERICAN ARCHITECT