

The AMERICAN ARCHITECT



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DETAIL OF STAIRWAY, GARDENS OF VILLA D'ESTE

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Bishopric Board makes stucco finish popular

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Build a stucco house with Bishopric Board, using the right stucco mixture, and you will secure in largest measure the qualities of beauty, wear and comfort.

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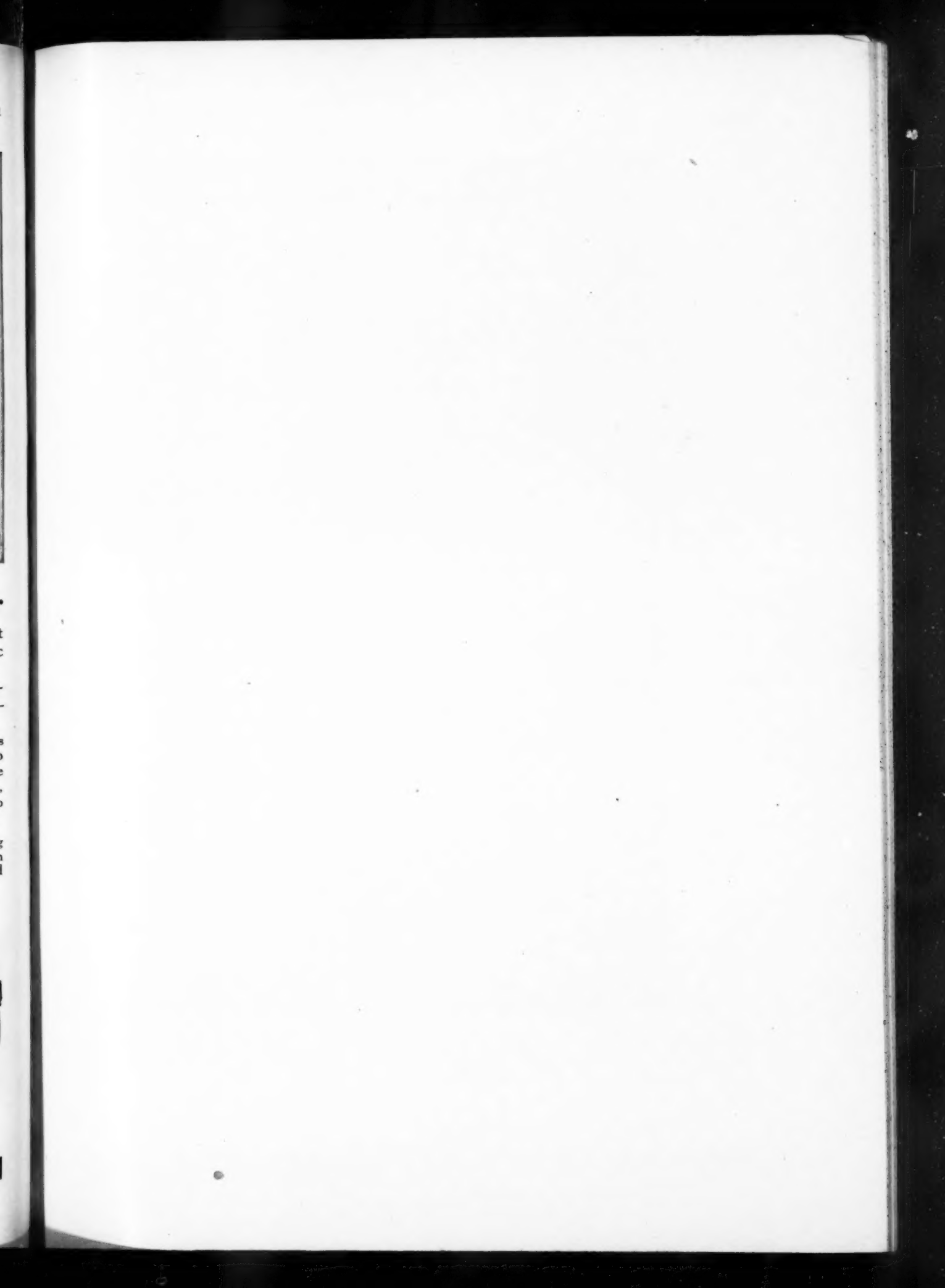
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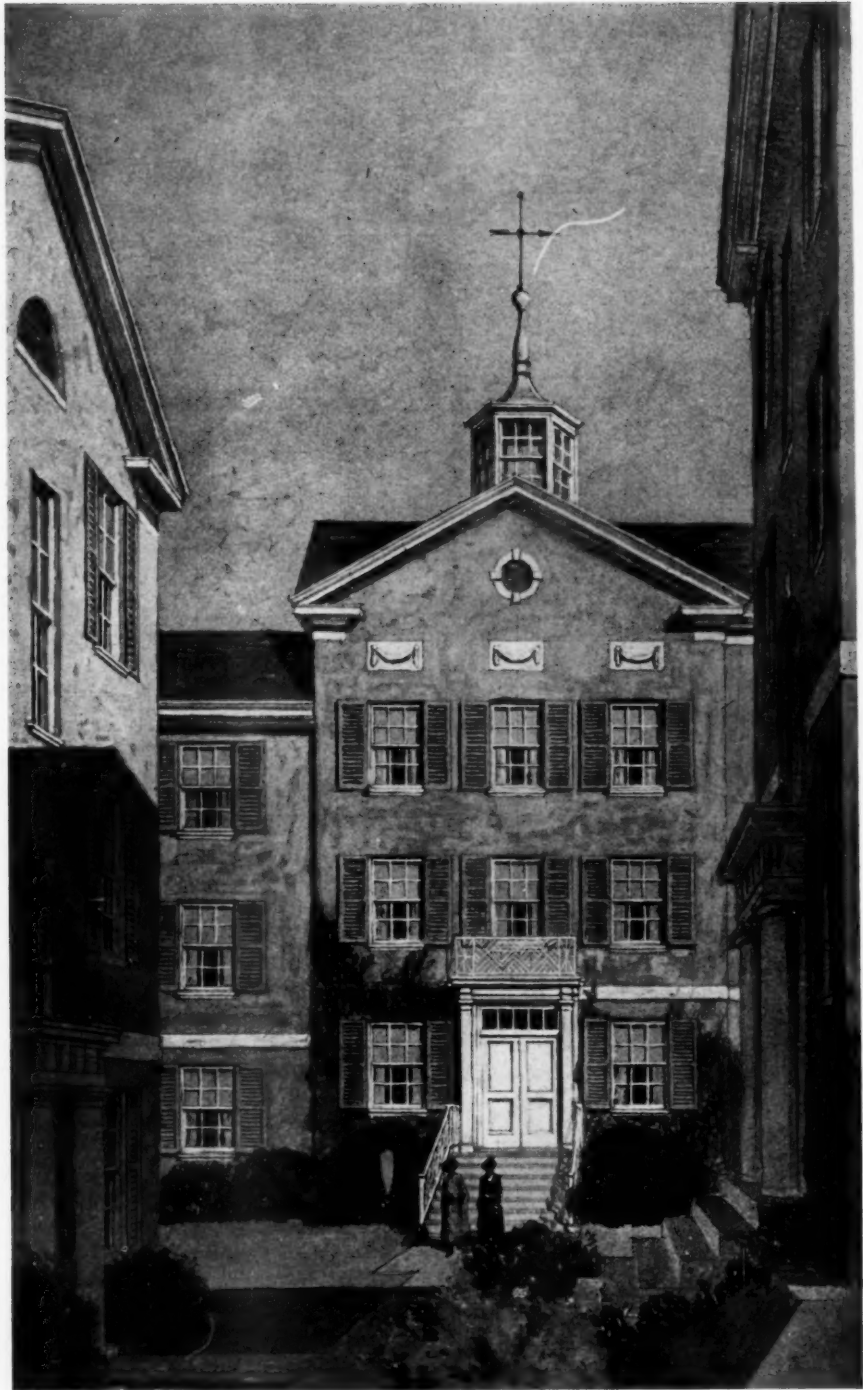


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Write today, investigate for yourself. Be convinced.







COURT VIEW, WOMAN'S RESIDENCE HALLS—23^D AND B STREET GROUP

WADDY B. WOOD, ARCHITECT

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RESIDENCE HALLS, VIEWED FROM UNION STATION, SHOWING STATION PLAZA AND FOUNTAIN

WADDY B. WOOD, ARCHITECT

Housing War Workers in Washington

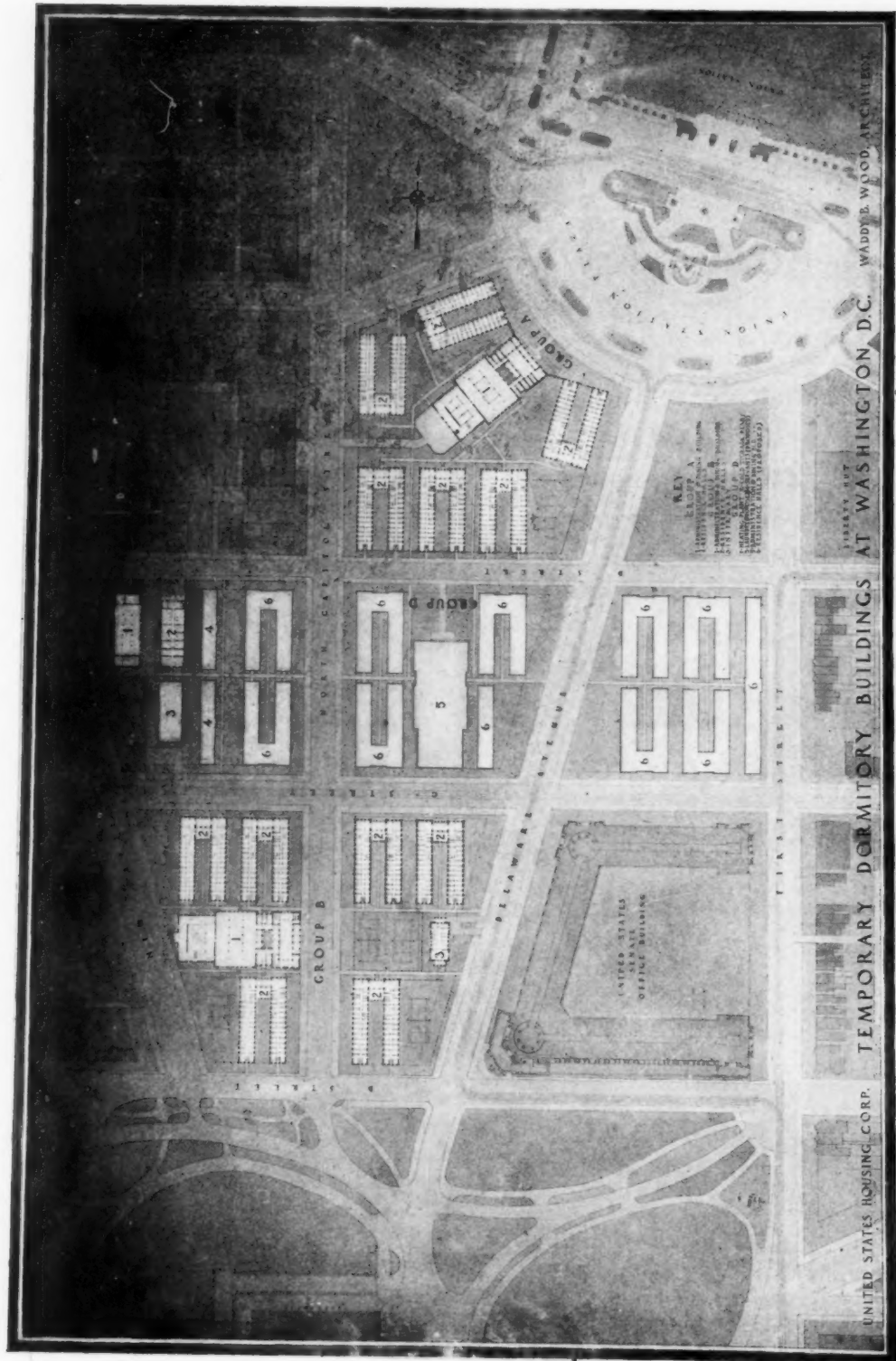
WITH the completion in December of its housing project in Washington, in the area between the Capitol and the Station, commonly known as the Station Plaza, the United States Housing Corporation hopes not only to relieve in a measure the local demand for rooms, but also to add buildings to the general scheme of city planning in Washington that will harmonize with other structures in the vicinity. This development is divided into two groups, the Station Plaza and the Capitol Plaza, each deriving its name from the direction it faces.

Two thousand persons will be housed in these two groups. All, of course, will be persons engaged in various departments of the Government. The occupants of the two groups will be located generally in single rooms, and whether or not any of the space will be allotted to men has not been definitely decided. At the present time the demand for rooms for women workers is the greater. This and many similar questions will be answered when the dormitories are nearer completion. The an-

swers will be largely governed by circumstances as they exist at the time of the opening of the dormitories.

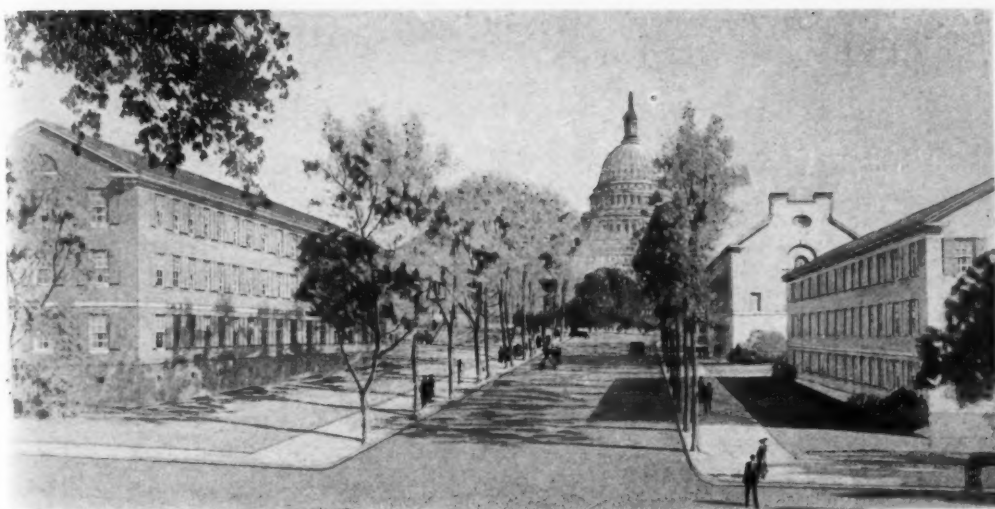
At Twenty-third and B Streets, however, on the ground owned by the Government and bounded on the south by D Street, on the north by C Street, the east by Twenty-first Street, and the west by Twenty-third Street, the United States Housing Corporation will have soon under way another development for the housing of 2800 war workers. Fifteen hundred of these will be accommodated in single rooms and thirteen hundred in small apartments. This work has not yet been started, but will be soon in progress, with completion planned for the earliest date possible consistent with good construction.

The buildings are of temporary construction. Simple colonial designs have been employed throughout. When the trees and shrubs are placed, when the lawns are in and the whole development has had time enough to assume in some degree an air of permanency, the district will give the im-



STATION PLAZA, HOUSING GROUP, WASHINGTON, D. C.
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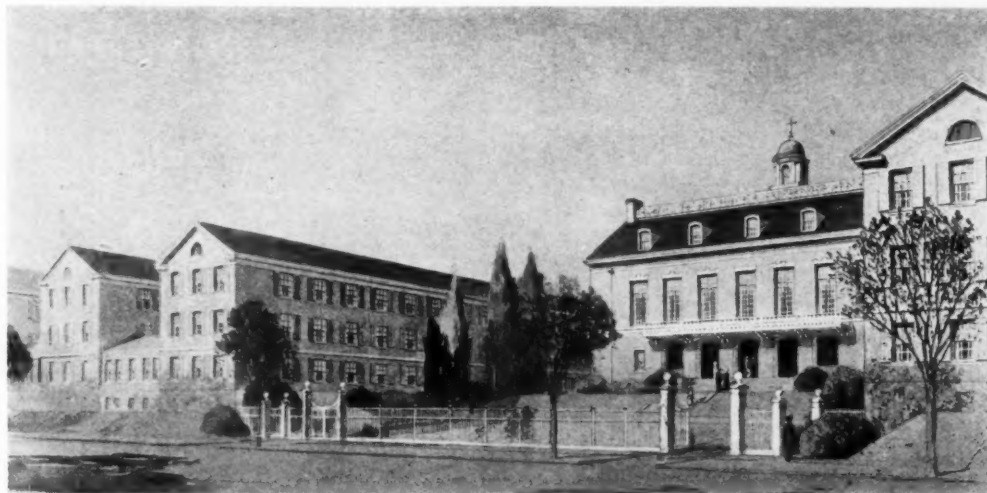
WOMEN'S RESIDENCE HALLS—CAPITOL GROUP

pression of an American city during Crown colony days. This effect will be strengthened by cream tile facing and stucco exterior. Green blinds, white trim and black slate-colored roofs will add contrasting touches.

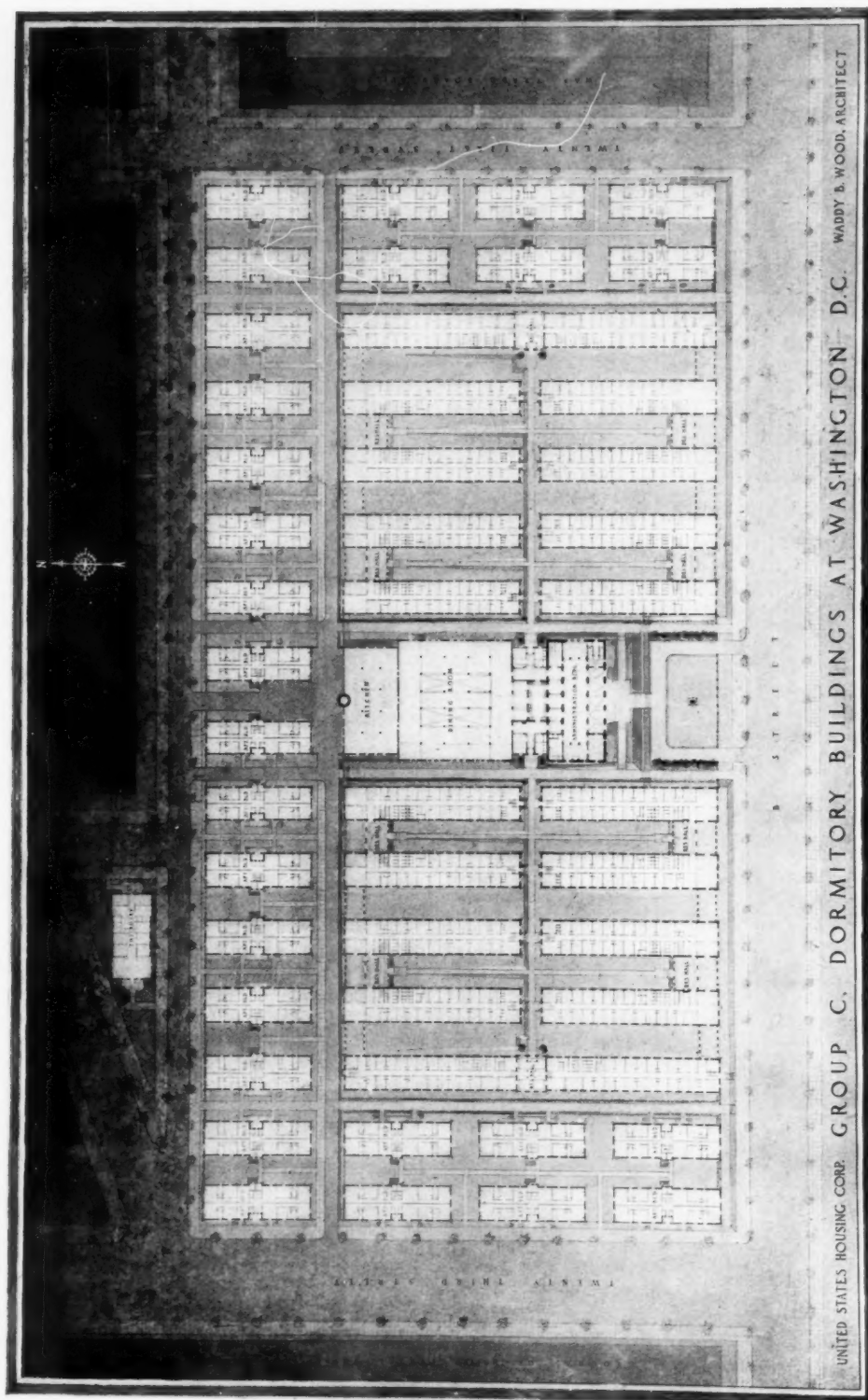
The designs were made by Waddy B. Wood, of Washington, D. C., in close co-operation with the United States Housing Corporation and the various experts called in by it. The buildings are the result of the best advice that could be offered for this type of construction, supplying this particular need and complying with requirements as to time

and appropriation. Experts on hotels, schools, apartment house arrangements, women's welfare work, refrigeration, heating, electricity and sanitation and details, including furniture and room decorations, have all been consulted with regard to these buildings; in fact, this is the policy of the Housing Corporation regarding any construction in hand.

In the Station and Capitol Groups, dormitory rooms will be uniformly 9' 3" x 11' 5", although a small proportion of double rooms will also be provided. Each room will contain one large win-



23D AND B STREET GROUP



TWENTY-THIRD AND B STREET (CAPITOL) GROUP, WASHINGTON, D. C.

WADDY B. WOOD, ARCHITECT

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dow, a basin with hot and cold water, one electric light in the ceiling and a base plug for light or fan. The windows will have outside blinds with curtains and shades inside. Each room is to be provided with a large closet, an iron bed, two chairs, a bureau and a writing table. Extra clothing may be placed in a utility box to be slid under the bed.

The dormitories will be three stories high and grouped into separate detached buildings, each consisting of two parallel wings. The first and second floor of each two-wing unit will be connected, this connection forming the curve of the letter "U," the parallel wings making the sides. The connection on the first floor, or the curve of the "U," is to be devoted to entrance, lobby and sitting rooms for occupants and guests. Above this is to be a second floor canvas-covered porch provided with porch furniture. The third floors of the two parallel wings will not be connected. In the basement below is to be storage rooms for trunks, servants' quarters, and a kitchenette and laundry for the women's group. Each hall cares for twenty-five persons, with a toilet, washroom and shower and tub baths. Six buildings as described above are to be used, each for a general group. Each group is arranged around a large dining room, which will have ample kitchen capacity.

In the dining room and connected to it is the administration center, which will contain a large porch and commodious lobby, with writing and sitting rooms and general offices nearby. The arrangement will be the same as may be found in a well ordered country club.

Above the administration building in the women's group is to be the auditorium, with a seating capacity of approximately 500. It will be equipped with a stage adaptable for theatrical entertainments, lectures or moving-picture shows. Dressing rooms will be accessible to the stage. The floor will not be tilted as in a theatre, but will be flat so that the hall can be used for community dances and social functions.

In the Twenty-third and B Street group the ar-



BETWEEN TWO WINGS OF RESIDENCE HALLS

rangements for women are similar to the above. There will be space for 1500 persons in single rooms, with dining rooms and administration offices. Around this group and cut off from it are to be the apartment buildings. Each of the buildings is to be three stories high and will contain four apartments on each floor. This will make separate units of twelve apartments each.

The apartments will be standard in size, containing a living room, two double bed rooms, kitchenette and a bath room, which will be equipped with shower and usual appliances. The kitchen, in addition to the usual equipment, will contain an ice box, chest of drawers and an electric range. Space in the basement will be used for maids' quarters, janitors, public laundry and storage. Steam heat will be used throughout the three groups. Each of the groups is to be provided with an infirmary in a separate building, which will contain wards, single rooms, diet kitchen, office, examination room, sterilizer and porches. These will be under the direction of a competent trained nurse and supervised by visiting physicians of the city. These infirmaries will be capable of caring for twenty patients.

Intimate Thoughts on Professional Ethics

By JOHN WATSON DAVIDGE

THERE is no set of professional men who talk more about professional etiquette, and practice it less, than architects. The architectural code of ethics is like the service bell that rang continuously in the courtyard of the hotel in Washington, described by Charles Dickens in his terrible "American Notes," but to which nobody paid the slightest attention; and logically so.

When anyone is very ill, and you fail to call a physician, you are liable to find your way to jail. If your financial interests require a decision at law, and you fail to retain an attorney, your friends will lead you gently away to an asylum—but if a man has a building project to exploit, there is nothing to compel him to seek the services of an architect, even for monumental work, in this country. Within the recollection of those who are still living, architectural practice was largely confined to Gothic church edifices. Unlike a serious illness requiring medical attention at once, the man with a building proposition may defer action indefinitely, or go ahead with the undertaking without professional advice. In either case, the architect loses just so much of his legitimate means of livelihood.

There is no way for architects in America to enforce a code of ethics in practice, nor to exact penalties for violations of it. If, like many civilized nations, we appreciate the value of art in regulating a sky line, a *coup d'oeil*, and distinguished between a thing of beauty and a hideous nightmare, we would have a national art committee at Washington, a state art commission in every state, and a municipal art commission for every community. Our present embarrassment would soon disappear, and we could have a code of ethics for the regulation of architectural practice, to some purpose.

It is true, every American community of any size has its building department; but that only passes upon the likelihood of whether a building will stand upright for any length of time, or sooner or later unexpectedly collapses; and as far as improving our national architecture or encouraging the architects are concerned, helps not at all. Into a land where there is so little *raison d'être* for architects, our architectural schools continue to turn out *diplômés* at such a rate, that Professor Ware, some time preceptor of the School of Architecture at Columbia University, once told me that he dared

not stop to think of what was to become of them, when the possible chances of obtaining commissions from the apathetic public, even in periods of phenomenal building activity, were ridiculously incommensurate with the number of men graduated.

A competent art commission could change all this embarrassment by simply issuing its certificates to practice, based upon a safe ratio between the architectural needs of the different communities and their respective population and wealth. It could also have oversight of the number of matriculations in the schools of architecture, which would prove very salutary to the profession as a means of livelihood. In our present state of disorganization, a man is a goose who selects architecture, with that aim first and foremost in his mind. I mean to make a living, for, to the average architect, his practice is rather more of an avocation than a profession, and under these circumstances it has been only hoped that a code of ethics could be formulated that would prove so obvious to the interest of all reputable architects, that it would work automatically. To this end have appeared, from time to time, the numerous tentative codes, all of them eminently specious, but of no avail.

From page 158 of Alice Morse Earle's "Home Life in Colonial Days," I make the following excerpt—"In a paper published in the American Museum in 1787, an old farmer says:

"'At this time my farm gave me and my family a good living on the produce of it, and left me one year with another one hundred and fifty silver dollars, for I never spent more than ten dollars a year, which was for salt, nails and the like. Nothing to eat, drink or wear was bought, as my farm provided all.'"

To think of being independent of the autocratic food administrators and the profiteers—what bliss! Now, if the fertility of the earth could only be relied upon in the more thickly settled parts of the country where buildings are erected, to do this stunt, everyone who so desired could pursue his favorite avocation with assiduity; and all such commissions as could be corralled agreeably to the most ladylike of ethics, would add just so much to one's comforts, ease and the refinements of life. Indeed, architecture as an avocation is what obtains largely with British architects, to-day, many of whom de-

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rive first aid from a livable, if often slender ap-
panage.

To lift the practice of architecture out of the category of avocations, in the present deranged condition of this country's art interests, and to place it beside professions offering a fairer chance of livelihood, would mean the painless extermination of at least 75 per cent of the architects still clinging to the title, unless in some other effectual way they could be eliminated from the competitive field. To talk to the average architect who has not made the price of a bun manufactured from that miserable substitute—barley flour, for more than a year, about a code of professional ethics, would be like asking some unfortunate one meets on the street—without offering him or her the price of a sandwich or cup of coffee at Childs'—to come to Jesus. Nor is it always safe to mention the code of ethics to an architect who belongs to the front rank of successful practitioners. The subject may be welcomed and entertained for a while, but be very careful how you touch upon ideals. The *faux pas* usually occurs as you cross the threshold of his private office just after a multi-millionaire with a sky-scraping proposition has gone out, and the successful architect is about to fall for the temptation of betraying the innocents of America who trust him, for what is tantamount to thirty shining pièces of silver—but put yourself in his place. What is he to do?

If he declines to perpetrate the proposed enormity, the rich man will take his commission not to some deserving architect or architects who are starving, which might be worth while the supreme renunciation, but to some other noted architect with still less conscience; and in the absence of laws regulating the appearance of our cities—such as they have in France—he knows that the egregious crime against art is bound to be committed sooner or later. If he deliberately throws his opportunity away, as the story goes of the penitent who managed to put by an ambrosial temptation which need not be mentioned now, then the sordid expediency of commercialism in the rôle of the wicked father-confessor, will tell him to go and eat a bale of hay. If he demurs at this—that he is not a horse, our commercial expediency scathingly replies—“No, but you are an ass!” Visitors from other lands have called this commercial expediency of ours the curse of America; and if we are discussing such gracious things as art and charity, it certainly is. And there you are!

Happily, the present chaotic state of things caused by the war cannot last forever, but even in normal times the percentage in favor of the bank—to borrow the gambler's vernacular—in architectural practice in America is much greater than it

is in either a straight game of faro or roulette—greater than it is out on the fair and free highway, without equipment of any kind. Sir Robert Howard's poetry beginning—“One gains by what another is bereft” to suit my needs at this time, should be paraphrased to read—“One architect gains by what a score or more are bereft.” It seems to me that I never obtained a decent commission, but I was subconsciously aware of the fact that I was depriving several professional brethren of what legitimately may have belonged to them by right of priority if nothing else, and who may have needed the work even more than I, although I cannot conceive that they could have needed it very much more. If anyone could have looked in upon this successful architect bent double over the drawing-board, with the plans of a three-thousand-dollar cottage, grinding his own ink, making his own tracings, doing his own typewriting, licking his own postage-stamps, and making himself generally useful, that person would have felt like the tourist who unexpectedly came upon the mutilated statue in the hall of the Louvre, which, referring to his Baedeker, he found was called—“The Winged Victory,” and who exclaimed—“If this be victory, God help defeat!”

Occasionally, there comes a hopeful-looking envelope addressed to me, in the mails, when I say to myself—“Now, here goes for an American adaptation of Chambord, just my size!” I would be content with one of the minor chateaux of the Cote d'Or, like Bussy-Rabutin. I would have been thankful to do the plans for a modest Cotswold cottage of the time of Henry VIII. I defer opening the envelope until I consult the horoscope, only to find later that the letter within is from some deluded draughtsman raving about my art, and “longing”—he says—“to work in my studio.” I have to reply—“All right, my dear fellow: but be sure to bring your work with you, for I have none.”

Occasionally, someone has beaten a path to my “house in the woods” to tell me that a set of plans already prepared, and paid for, has been discarded for the reason that my predecessor was not “sufficiently artistic, and too businesslike.” Not “sufficiently artistic,” perhaps, but fancy “too businesslike!” I am informed that he had planned for the customary corruption fund of the commercial argument, instead of a subsidy to be consecrated solely to the interests of art. Fancy, again! No doubt my predecessor was dumb-founded at this new attitude. Not that the corruption fund was to be used dishonestly, but merely to appeal to the natural cupidity and avarice there is in human nature. Needless to say, I did not have to manœuvre to distract the client's attention from the “man with the muck

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rage" in these instances, nor did I have to exhort the clients, in the words of Cardinal Richelieu to his ward—Julie de Mortimer, in the play—to "look loftier." *They had arrived.*

The more you educate and refine people, the more idealism follows in their train, the more decent folks want to make the world they live in. Sometimes it has been the man who was the idealist, and sometimes, the woman—and sometimes, again, it would be a very dear friend of either or both, who like "Brer Fox," lay low, whose name I cannot recall in a single instance; but in order to convey my idea delicately to the reader, let me say his name was—"Colonel House."

I was an *idealist*, so that the party who was seeking one, managed to find my address. Not that I could well afford to be an idealist, but I happened to be born so, and nobody has yet succeeded in swapping temperaments. I never enjoyed that delightful state of independence of the late Richard Morris Hunt when an opulent dame with utter disloyalty to the old family architect—who had been like a family doctor—called upon him, unexpectedly, to ask him to design her new home to be erected on Fifth Avenue, opposite the park. Mr. Hunt could afford idealism, and while the new client had no idea that *art was merely despised charity only in another guise*, she thought Mr. Hunt the bright, particular star among architects, who could produce the proper thing in the way of a residence for someone who cultivated rocks in lieu of spirituality.

As a matter of fact, the code of ethics is more often violated by the fickle-minded and arbitrary client than by the architect. When anyone goes hungry to bed he might curse the code, whereas the real trouble lies with the usurious percentage demanded by the bank for the game of architecture as it is now played. With an authoritative art commission, and laws prohibiting the erection of *all* sky-scrapers which, everyone knows, are only make-shifts for temporarily congested districts, there could be no temptations—no jeopardy of the architect's integrity. Instead of jockeying for excuse, and further demeaning himself before the people, the opulent client with his rent-trap proposition would be detained in the antechamber long enough for the noted architect to reach for the telephone at the side of his desk, to ask central to be connected with the Police Department, as promptly as possible. No, so long as the present utter demoralization of our national art continues, and humanity is humanity, the unprofessional, the meretricious and the grafters are not entirely without excuse.

I think I may gracefully say this, for I have

never heard of complaint from anyone that I ever transgressed a single clause in the code of ethics, whereas, I have suffered repeatedly where work which should have come to me has been spirited away in a mysterious fashion—so mysterious that I believe it could not have been done had not the clients, themselves, been accessories, either before or after the fact. I used to keep count of these incidents, like the girl who kept count of the men who had kissed her; but after the number reached ten, I gave up doing so, as did she, for it ceased to be interesting.

In cases of legitimate succession, it might be admissible to sign the plans as architect; but even here, I do not think I should ever claim to be the architect of a predecessor's design. I never saw the tracings for the *Basilica di San Pietro in Vaticano*, which repose, maybe, among the treasures of the Vatican Library in Rome, and where there was a long sequence of successions, but I will bet, according to American custom, that the last set of tracings used are signed somewhat to the following effect—to wit:

Giovanni Lorenzo Bernini,
Architect, Roma,
Successor to Carlo Maderna, Architect,
Successor to Vignola & Co., Architects,
Successors to Michelangiolo, "It,"
Main Office, Bargello Annex, Firenze,
Successor to Baldasare Peruzzi,
Architect, Siena.
Successor to Raffaello & Co.,
Via Delle Belle Arti, Roma,
Painters, Architects & Mural Decorators,
(Modern Portraits in Groups with Saints a
Specialty),
Successors to Bramante & Sangallo, Architects,
Porta Angelica, Roma.



ST. PETER'S, FROM THE TIBER

The Wisdom of Reticence

I REMEMBER an old story—so old, indeed, that it may perhaps be reincarnated with impunity—which referred to the case of a visitor who took part in some solemn and dignified banquet, and who, in outward appearance at least, conformed to the general high tone of that assembly. After contending with various complicated items of the menu in silence, our humble friend was at last betrayed by the arrival of a dish of familiar and homely baked potatoes. "Them's the jokers for me," he said. The point of this parable is that reticence, which, like the silence of the parrot, may be the mask of a thoughtful disposition, may also present a very effectual screen to ignorance. A man may be silent because he has too much to say or because he has nothing to say. In the latter case the wisdom of reticence is obvious.

In these days reticence in building is often praised. We commend some design for a building as "restrained." But it may be doubted in many cases whether the designer has anything to restrain, and whether this view of his work as representing a noble refraining from the expression of the brilliant ideas with which his mind teems may not be more charitable than true.

The old builders were seldom reticent. They laughed, they sang, and cracked their jokes, in stone or timber, with a sort of careless freedom. Building was to them a language, a common speech, which they used freely and spontaneously. And behold! practically everything they said or did was good.

No such happy freedom does the modern architect enjoy. The wisdom of reticence on his part is obvious. I may recall an instance of what I mean, the case of an old town in Surrey where, in the midst of a street composed mainly of delightfully expressive old houses, a modern example of the earlier manner of Norman Shaw presents itself. It was duly enriched with carving and ornament, designed with brilliant enthusiasm, but executed with the lifeless and mechanical precision of the modern workman. And so, despite the distinguished designer, it was glaringly out of place amidst the genuine old work with which it was surrounded.

It is easy now to see the main error of the Victorian revivalists. They forgot the craftsman. In the same town is a frontage in the later austere manner of Mr. Lutyens. I am not sure whether it is actually the work of that architect, but can only say that if it is not, it ought to be. This building holds its own well beside the old work because it has learnt the virtue of silence in such company. Had

any piece of modern expression in craftsmanship been added—a carved barge aboard, let us say—the lack of virtue in modern craftsmanship would have at once stood revealed. In a recent visit to an old Wiltshire town as yet almost unspoiled by modern building, I came across some beautiful old almshouses with a porch in which all the features of Classic architecture were made the sport of the old English craftsman. As a grammatical statement it was hopelessly wrong, but as a spontaneous and vital work of art it was a thing to thank the gods for. Strange it is how these old builders could "take their ease in Zion." They seem to have been granted the freedom of that city, and they could do no wrong there even if they tried. The modern architect might be so moved by the beauty of such a porch as this that he would unwisely resolve to measure it carefully and "reproduce" it when occasion arose. And having done so, he might learn perhaps from the disappointing result not to do it again. That would be if he is wise enough to learn from his errors, and not like Mrs. Tullim's gold fish, who, in circling their glass prison, have learnt to avoid hitting the glass. What is the conclusion of the whole matter? For the time being the supreme virtue of the architect must be reticence until he gets a medium for expression in living craftsmanship. And how is that to be obtained? Obviously we must begin at the beginning. To the men who build with their hands must be given again their old skill. I believe this can only be done, since building is necessarily the expression of the social state, by far-reaching changes in our present social system. Good building can never result as the natural and normal expression of the community under a capital and labor system in which labor is used mainly for the purposes of producing profits. It can only be produced, as it was in the middle ages, by the association of workers in some modern equivalent of the old Trades Guilds. It was these associations which lay at the root of all the glorious flower and fruit which the old world produced in the building world. It is true the virtue of the tradition outlived these institutions and still finds expression in later periods. But it was the spirit of the old Guilds which inspired all the beauty of our old building, all the same. Modern building in all its hideous depravity is but the outward symptom of the disease of our social state which expresses itself in other forms in labor unrest and strikes. For the truth is that our democracy is at present mainly camouflage. Political government only touches the worker at points. It is outside his

real world, which is a world of industry in which autocracy still reigns supreme. Until this state within the State is democratized no good building can be normally produced. And until that happens our supreme virtue must be reticence.—M. H. Baillie-Scott in *The Architect*, London.

After-War Control of Industry

To many it may seem an easy matter for the War Industries Board to continue functioning after the cessation of hostilities, for the purpose of replacing industries upon a peace basis; but the difficulties are far from negligible, states *The Iron Age*. As to the existence of the War Industries Board and other Governmental agencies for the prosecution of the war there is no complication, since activities created "for the period of the war" do not terminate until the President issues his peace proclamation, and some are definitely constituted to run for limited periods thereafter. The terms of an armistice may make the resumption of hostilities practically impossible, but legally the war lasts until peace is formally proclaimed, and there may therefore be months of commercial readjustments before the legal advent of peace.

The difficulty lies with the powers of the War Industries Board. Some of the powers exercised have rested upon full legal foundation, others have rested simply upon the co-operative spirit of commercial interests, which recognized a plain public duty, and made many sacrifices in order to perform that duty. The process of reconstruction aimed at is one that will benefit industry, and co-operation in that connection might be questioned on legal grounds. It is intimated that legislation will be sought, but such legislation may be difficult to formulate and still more difficult to carry through promptly.

The object hitherto has been a plain and simple one; the objective in the reconstruction period involves a complication of purposes. Thus far there has been but one position: "Winning the war is everything; nothing else counts." To put industry on a safe and remunerative basis for future years may seem a simple proposition, but the various interests involved, related to each other in complicated manner, have to be considered, for the eventual restoration of individual initiative and control is of course essential. Hitherto the stimulation of high-cost production has been warranted, for the war might be won by the last ton of steel or the last ship. It has been necessary to keep labor satisfied, even to pamper labor and to wink at or even support injustices. In reconstruction these are among the things that are precisely to be avoided. Large profits on the

one hand and heavy taxation on the other have alternately been used to excuse each other, but no such theories are reasonable in peace times. Taxation will have to be much more scientific, while on the other hand exceptional profits will hardly be regarded as being for the common good.

It is the essence of war to be extremely wasteful of materials, when waste is thought of in ordinary terms, for the military value of material is subject to wide and almost instantaneous fluctuations. A hundred shells at a given time and place may be more valuable than a hundred thousand at another time and place. The change from war time to peace time conditions cannot be effected without something akin to waste, viewed in the abstract. The marshaling of industry for winning the war has been a gradual process, production increasing continuously to a peak. Reconstruction cannot proceed in the same way, from little beginnings to larger and larger things. The whole war machine in all its accumulated bigness is the present fact and must be dealt with accordingly. In a sense, the maximum transformation effort must come at the start, gradually tapering off as less and less remains to be done. Thus in a way reconstruction is a much greater task than was the building of the industrial war machine.

One vital fact in this problem is that the intimate knowledge of industries acquired by the War Industries Board and the close relations that have been built up between the board and industries constitutes a very valuable asset, and one therefore that must be used for the common good. The statement of the problem is simple. The solution will prove both intricate and interesting.

Scientific Precision for Industries Advocated

War-taught lessons of scientific precision applied to all industrial operations is the substance of an article in a recent issue of *Commerce Reports* by Burwell S. Cutler, chief of the Bureau of Foreign and Domestic Commerce. He contends that the elimination of waste in distribution as well as in production, and the close study of the laws of supply and demand, are basic necessities. He says:

"If there is any one thing that the present war has taught our producers and merchants it is the basic necessity of scientific precision. Time and again military failure has been threatened by inability to utilize to the *nth* degree the scanty materials available for production of munitions. This is no less true in the manufacture and distribution of uniforms than of guns and shells. The elimination of waste, whether it be in men or time or material,

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has been forced upon all belligerent peoples as a measure of national defence.

"It was impossible for any one of the belligerent nations to increase its production proportionately to the needs of its armies and its civilian population and at the same time withdraw from factory and shop millions of men—unless the utmost skill in the use of remaining facilities was employed. Factory after factory had to reduce the waste formerly resulting from rejection of faulty workmanship; even the original amounts of material allowed for standard units of production were reduced to the point where greater output and less material ran concurrently. For instance, a far greater volume of steel products is now being made with less steel than was anywhere near the case four years ago. Less wool is found in clothing; less first-grade sole leather in shoes, etc. Yet this change has come about in many cases without deterioration in quality, measured by the usefulness of the article. It is quite conceivable that a 6-inch shell can be given as high a destructive force with a 1/16-inch casing as a 1/8-inch casing, and that is true of the other commodities mentioned, the test being always the exact purpose to be served.

"Under the supervision of the best scientific managers to be found in industrial and mercantile life, every process of production and distribution has been carefully measured, until a nearly ideal attainment is established as a standard for all to follow. The need was desperate and the regeneration has been thorough.

"It may be said that the ground of procedure has been exact data, ascertained by thorough study and experimentation. Putting it another way, no goods are manufactured for which a specific need is not thoroughly apparent; neither is there delivery of articles to any region where want of them is not acute. This surety of procedure requires, of course, a prior study of the facts, and these facts are the data to which I refer. The inquiry has extended into many phases of human activity.

"This habit of basing all operations on sound and accurate information may be expected to survive after the war in the factories and storehouses of Europe. We in the United States must adopt the same attitude of scientific precision, and should, as business men, avoid the excess cost of business conducted on inspiration as compared with business based on industrial and trade data. The Department of Commerce and other institutions of authority can supply our business interests with the facts of the case relative to almost any economic problem or uncertainty, if the business men will acquire the habit of applying to those agencies for advice and information."

Description of Suggested Design for a Victory Memorial

By O. R. EGGERS AND E. H. ROSENGARTEN

IN celebrating and commemorating the victorious homecoming of our war heroes it must not be forgotten that the Navy's eternal vigilance made the "Bridge of Ships" and victory possible, and while not called upon to participate in a great sea combat, its labors were unceasing and perilous. To celebrate fittingly the triumphal event the proposed memorial must not only express our joy and gratitude at the return of the living and our reverence for those who have made the supreme sacrifice, but must be so situated that the sentiment and spontaneity of the occasion may be simultaneously shared by both the naval and land forces.

Above all it is most important that a memorial of such scale and grandeur should have a fitting site. An accessible and appropriate location bordering upon the noble and historic Hudson is suggested at Riverside Drive and 110th Street. Here nature has formed a natural and beautiful amphitheater of unlimited capacity at which both land and naval forces could share equal honors. Big and vast in scale, the occasion demands a memorial of equal and fitting proportion. Other impressive memorials erected along the same thoroughfare contribute their dignity and beauty to the *tout ensemble*.

The Central Park site if chosen or any other site so far discussed would be analogous to ushering the guests through the back door into the reception room, whereas in the river site design herein submitted, the guests are immediately welcomed at the front door by the President, Mayor and other dignitaries.

In theme the composition consists of two monumental marble arches representing the old and the new world, now united in victory by the Bridge of Ships carved in relief on the base of the connecting marble peristyle. The latter with its crowning central motif supports a quadriga of Victory and is also planned as a Hall of Fame, each bay forming a reviewing box for use of the dignitaries during the grand reception, those for the President and Mayor being directly in the center beneath the new Victory bell, whose voice will be awakened for the first time by the President proclaiming anew "Liberty throughout all the land and to all the inhabitants."

A river terrace formed by arching over the railroad tracks affords communication between the landing stage and memorial by means of connecting steps.

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From a structural and engineering standpoint the site lends itself naturally to requirements involving the minimum labor and expense, delivery of materials by water or rail directly at the site facilitating the erection of both the temporary as well as the permanent structure later on.

Recent Legal Decisions

EFFECT OF FILING LIEN CLAIMS BEFORE COMPLETION

A contractor, on the owner's default in payment, has the right to abandon further performance and sue for damages or in quantum meruit for the value of the work done, but he is not bound to do so. He has the right to keep the contract in force and refuse his assent to any repudiation or rescission and fully complete the work. A contractor's abandonment of a contract will not, where a mechanic's lien is asserted, be presumed, but must be established by evidence. Although a contractor before completing performance filed lien claims, the filing of such claims did not amount to an election not to go on with the contract, but were merely precautionary steps in the attempted protection of his rights.—*Feick v. Stephens*, 250 Fed. 185.

SUB-CONTRACTOR'S LIEN CLAIM

If an owner has represented to a sub-contractor that it is not necessary to file a claim for lien, because, for example, the principal contractor has given a bond, the owner is estopped from taking advantage of the sub-contractors's failure to file his claim within the statutory period. But the burden is on the sub-contractor to show this estoppel.—*Cedar Rapids Sash & Door Co. v. Reinburgh*, Iowa Supreme Court, 168 N. W. 270.

STOP NOTICE CLAIMANTS

The New Jersey Court of Chancery holds that an action at law will lie by a stop noticing claimant of a mechanics's lien against the owner, but it is necessary for the claimant to prove there is a sum due from the owner to the contractor under all the terms of the contract. Where several notices of claim are served on the owner, and there is question of priority or validity, or dispute as to the amount due from the owner to the architect, the general New Jersey practice is for the owner to seek relief in equity on bill of interpleader, or in the nature of interpleader. It is dangerous for the owner to permit suits brought by stop noticing claimants to go against him before seeking such relief.—*Brunetti v. Grandi* (N. J.) 104 Atl. 139.

CONDITIONS AGAINST SUBLETTING CONTRACTS

A reference in a subcontract to the general contract for a particular purpose makes it a part of the subcontract only for the purpose specified. Therefore the other terms and conditions of the original contract between the contractor and the owner do not affect the subcontract. A provision in the original contract that the contractor shall not sublet the work without the written consent of the original contractee is for the benefit of the latter and may be waived by him. Therefore a contractor may make a valid contract to sublet the work, although in violation of the provision of the original contract prohibiting subletting without the written consent of the original contractee. It is incumbent on the contractor to obtain the necessary consent to sublet the work, and make his contract good. This is not the duty of the subcontractor.—*Wallace v. Oregon Engineering & Construction Co.*, Oregon Supreme Court, 174 Pac. 156.

CONTRACTOR'S LIABILITY UNDER WORKMEN'S COMPENSATION ACT

The Michigan Supreme Court holds, *Wordhall v. Irwin*, 167 N. W. 845, that where the owner of a building in need of repairs called up a general building and repairing contractor and asked him to do the work, and the contractor sent a plasterer in the habit of doing odd jobs for him, charging by the hour or by the job, the plasterer was not in the employ of the contractor, who was not liable to pay compensation to his widow under the Michigan Workmen's Compensation Act for his death from a fall from a ladder.

MATERIALMAN'S NOTICE TO OWNER

An owner by letter requested a subcontractor's materialman to give him the stop notice provided for by the California statute. The owner's demand set forth the notice, which sufficiently described the property. The demand was served by the owner on the materialman's credit manager. The materialman failed to give the stop notice. It was held, in an action by him to foreclose a materialman's lien, that he could not claim any lien on the owner's property for materials furnished; the statute providing that a materialman who shall refuse to give notice that he has furnished material and its amount shall be deprived of the right to claim the lien. The statute was held not unconstitutional as depriving materialmen or laborers of the lien given by article 20, section 15, of the state constitution.—*M. O. Nelson Mfg. Co. v. Rush*, California Supreme Court, 174 Pac. 327.

THE AMERICAN ARCHITECT

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The Victory Arch in New York

THE first movement toward the decoration of the streets of the City of New York on the occasion when we shall welcome the return of our victorious forces from abroad has been set afoot. This takes the form of a memorial arch to be erected on a site not yet decided upon. The matter in its inception is under the direction of Mr. Rodman Wanamaker, who is acting at the request of Mayor Hylan.

The preliminary sketch, shown in the daily press, is not encouraging to those who are jealous of the artistic integrity of these memorials, but reference to the names of men appointed to act on the committee of a Victory Arch discloses a personnel which includes men of the highest ability, so there is no just cause for uneasiness.

Since that day when the National Sculpture Society unveiled to the gaze of admiring New Yorkers the stately Dewey Arch at Madison Square, and Stanford White's Washington Arch at lower Fifth Avenue, we have seen a very decided retardance in the production of temporary memorials, and an equally decided renaissance, culminating on the occasion of the Fourth Liberty Loan. We are therefore awaiting with considerable interest the perfection of the design for this Victory Arch.

Let history not repeat itself in the present instance, as in the fate of the arch designed to welcome Admiral Dewey's return to this country. On that occasion the arch placed just north of Twenty-third Street, at the intersection of Broadway and Fifth Avenue, was the work of almost the entire membership of the National Sculpture Society. From the inception of the idea to the completion of the arch, not more than three weeks elapsed. As an example of the sculptors' memorial art, nothing finer had appeared in this country. The sentiment favoring its duplication in enduring material was practically unanimous. But so many obstacles were placed in the way of this scheme, so much underground political influence disclosed to control its site and the selection of the men to have it in charge, that the enthusiasm dwindled to cold indifference. Many men will recall the artistic glory of the Dewey Arch, and each will have many times regretted its passing.

JUST exactly in the same way will those who have the artistic welfare of this city at heart deplore the removal of the Altar of Liberty that now stands within but a few feet of where once was the Dewey Arch. We have few enough of this sort of thing in New York. Why not make this Altar of Liberty permanent and when we have seen the model of the proposed Victory Arch and found it good, why not proceed at the outset with a view to its permanency?

The failure carefully to consider the question of site has resulted in the loss to the city of past temporary decorative features of merit that might well have become permanent, so it will be well in the present instance to give this matter of site very serious study. All artists are agreed that a feature of this kind that will be generally approved in its original location cannot be set up in another with equally satisfactory results. Naturally a monumental structure will be designed with regard to its environment. Its removal to any other location would logically result in an architectural misfit.

CERTAINLY any selection of a site in Central Park, as has been suggested, would be a grievous error. This arch logically belongs on Fifth Avenue somewhere between its beginning at Washington Square and Fifty-ninth Street. It is along this avenue that we at home have carried on the fight to sustain our men abroad. Down its broad pavement have marched the legions that have gone forth to battle, and it is on this avenue we shall no doubt acclaim their return. So Fifth Avenue will be the logical location. Just where may well be left to the committee now selected. It is safe to

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assume that the large proportion of architects serving on the committee will see to it that the design and location are both well balanced.

In view of what has been done in New York during the past six months in decorating its thoroughfares, it is believed that we may calmly await progress in the Victory Arch and those minor decorations which will be evolved. All we have to do as a people is enthusiastically to support the work, with the almost certain knowledge that it will be one in which we shall take great pride.

All of which is the result of a very rapid advancement in our artistic progress.

Don't Let the *Poseur* Get You

In the November issue of *Architecture* appears an editorial under the head of "Don't Let the Bolsheviki Get You," in which the editor refers to "an amusing amount of discussion as to the changing aspect of the architectural profession."

Just how it is possible to derive "amusement" from a discussion of present conditions in the practice of architecture is not entirely clear. Possibly when one reads the following expression in the course of this editorial, he may be able to comprehend why the editor found a serious consideration of real problems diverting:

"It may be that many architects have been too absorbed in their art to spare the time to act as overseers during the erection of their buildings, that they have shied from contact with the purely material side of things. But there are hundreds of competent foremen and office assistants who can do this work to one who can design a beautiful building."

Could there be condensed into the same number of lines a statement that would more clearly show a lack of knowledge as to just what constitutes the functions of correct architectural practice? It is really unfortunate that the ideas set forth in this editorial, which are identical with those which have almost proved the undoing of the profession, should be fostered in a journal that purports to be published in the interest of architects.

If the architect is simply the originator of the design, why should he be entrusted with the conduct of the operations necessary to complete the structure? If he merely supplies the design does he not compel the client to provide all the many and necessary departments of engineering, building construction and business management to protect his interest and save him from loss? Does not the architect, in fact, by a purely artistic attitude toward the building, declare to all the world that he is simply the artist and not the master builder?

Why employ an architect except as a designer,

if architects are so prone to shy from contact with the purely material side of things? Certainly there are hundreds of competent foremen and also there are many competent designers, so why engage an architect at all?

It must be, to state the case mildly, exasperating to that sturdy group of men in the profession who have seen the handwriting on the wall, and for the past year have done everything that they could to restore confidence in architecture in the minds of the public, to find an architectural journal urging the very things that have proved so disastrous in the past.

To quote again from this editorial:

"It may be that changing industrial conditions will demand some new adjustment in the conduct of the offices of the architects; but let us not find fault with the man who can create a beautiful structure just because he is not a good mixer, has neither the time nor the disposition to perform the duties of the salesman as well as the architect."

Comment is unnecessary. We are not concerned in this discussion with the conduct of architects' offices, but we are with the attitude of the architect toward his work. No one that knows what the profession of architecture is would for a moment seek to deprive architects of their rightful title as artists, and anyone who knows what other great functions are necessary to a man trained in architecture to carry on his practice successfully and completely, would readily understand that the origination of the design was simply the charcoal sketch on which the architect would build his picture in enduring materials and that his careful superintendence of the work did not make of him a "salesman."

If architects become "too much absorbed in their art" to spare the time as "overseers"—note the ignorance of the true meaning of superintendence—can they by any reasoning or excuse evade the responsibility for the proper completion of the building?

The Journal of the American Institute of Architects, in a special End-of-the-War Bulletin to Architects, makes this significant statement:

"The Journal of the A. I. A. is founded on the belief that building is first the science of good construction and that the question of art must follow as a logical sequence, and not take first place, as many would have us believe."

If it is Bolshevism on the part of architects to give to clients the complete service for which they are being paid, then the editor of *Architecture* has taken from this word the very reproach he has intended and made it one to be assumed with pride by architects as indicating a proper and honest performance of all their duties of which designing is but one.

Criticism and Comment

The Era of the Bath

The Editors, THE AMERICAN ARCHITECT:

By the publication of Dr. Woods Hutchinson's article on "The Era of the Bath" in *THE AMERICAN ARCHITECT* of November 13, you have performed a distinct service to the civic and community workers of this country. Now is the crucial time for educational work along the lines which you indicate, and the more attention given the movement the more quickly will people generally realize the great need for private and public bathing facilities.

In this connection may I enlarge upon a suggestion thrown out in the last paragraph of Dr. Hutchinson's article? Referring to the sense of personal cleanliness which is characteristic of our soldiers and sailors, he states that when they return they will still demand their tri-weekly or daily bath, and that they will "insist upon its matchless benefits being extended to the whole community."

Some time ago it was pointed out in the weekly bulletin of the Municipal Reference Library that the war, apparently, had given considerable impetus to the movement for public baths in American cities. In the same issue a recent article was quoted which stated that "Never in the history of literature on baths has such an array of instructive papers appeared. They testify to the important part taken by hygiene and baths in the conservation of the fighting capacity of our defenders." At about that time the American Association for Promoting Hygiene and Public Baths gave evidence of renewed vitality and commenced the publication of an interesting journal devoted to the subject.

In the nation-wide program of reconstruction now being advocated should we not urge that attention be given to the problem of providing adequate municipal bathing facilities? We are not so far removed from Michelets' "mille ans sans bain" that we can unduly pride ourselves upon our achievements. Modern public baths, we are informed, began in Germany, and the first public bath house, credited to Liverpool, England, was not erected until 1892. In the United States it required an extensive investigation by the Federal Bureau of Labor (1893) to bring about a realization of our shortcomings. Since that time much progress has been made due largely to the untiring efforts of such idealists as Dr. Simon Baruch, of New York City.

But even to-day our municipal bathing facilities

are far behind those furnished to the poorest slave who walked the streets of ancient Rome. That city, in the fourth century A. D., is said to have possessed over 800 public baths as against the 22 now available for the citizens of New York. In Rome, also, the public bath houses were of enormous size and contained every possible convenience for the comfort of the patrons. The encyclopædias inform us that "the later Imperial thermæ became the centre of the public leisurely life of Rome, including libraries, lecture rooms, gardens, porticoes, gymnasia, running tracks, and every variety of incentive to luxurious ease."

Numerous American cities are contemplating the construction of community buildings as memorials of the war. These buildings might very well be planned to include baths and swimming pools, as is customary in public gymnasiums. It would seem to me that this is a movement which should receive the hearty backing and support of the readers of *THE AMERICAN ARCHITECT* as well as of civic and social workers generally.

DORSEY W. HYDE, JR.,

Librarian Municipal Reference Library, New York.

"Skin Specialists"

The Editors, THE AMERICAN ARCHITECT:

The engineering articles in the engineering section of *THE AMERICAN ARCHITECT* are very valuable. There is great trouble, however, to interest architects and draftsmen in the construction side of the work. This is a deplorable state of affairs, and their ignorance in structural matters results in an economic loss to the community and a great deal of bad and unsatisfactory building.

It is unfortunately the practice in certain architectural schools to consider "design" as something entirely separate and distinct from practical construction, and the students of "design" rather affect a supercilious air regarding construction. This is largely due to the ignorant professors who aim to teach architecture, but who are not grounded themselves in the fundamentals of construction, and try to make a virtue of their ignorance in such matters. I have been through a number of architects' offices of standing, and I have also worked from a number of architectural drawings, and the ignorance of fundamental construction principles is appalling. It

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is rather the fashion among the so-called "masters of design" to sneer at the practical part of the work, and I think the architectural journals could, as a part of their educational work, do something to overcome this very dangerous and unjustifiable attitude.

In medicine, even a skin specialist is required to know something of anatomy, and while a great many of the so-called "designers" are merely "skin specialists" in architecture, yet they should not be allowed to practice unless they have a comprehensive knowledge of the anatomy of a building. The art of architecture suffers to-day from lack of new ideas, because the "skin specialists" are mostly concerned with grafting the epidermis of historic and pre-historic buildings on skeletons which have no relation whatever to the function of the external covering.

WILLIAM COPELAND FURBER.

Philadelphia, Pa.

Improving the Design of Farm Buildings

The movement inaugurated by Mr. George W. Maher, president of the Illinois Chapter of the American Institute of Architects, to develop and improve the designing and planning of farmers' houses and dependent buildings, referred to in *THE AMERICAN ARCHITECT* of November 6 and 20, has aroused widespread interest, particularly in those States in the Middle West where agriculture forms the principal industry.

Letters received by the editors of *THE AMERICAN ARCHITECT* from governors of many States, commenting on this movement, are unanimous in an expression of their hearty approval and willingness to co-operate. We quote:

Governor Burnquist of Minnesota:

"I have read with much interest the editorial relative to development of farm buildings. A very large portion of the farmers in our State have splendid dwellings and other buildings, but of course much can yet be done to improve them. The work of our State Art Society, which you mention in your editorial, has had a wholesome effect. The whole matter is one worthy of careful thought."

Governor Edge of New Jersey:

"I desire to thank you for the copy of *THE AMERICAN ARCHITECT* containing the editorial on the necessity for artistic and practical development of farm buildings throughout the country.

While the proposition which you outline may be a little in advance of the times, it appeals to me very strongly as being thoroughly practicable and full of opportunity for not only improving the appearance of the landscape, but also making farm life more attractive. Naturally the latter consideration is vastly more important, as something substantial must be done to attract workers to our farms and to the millions of acres of undeveloped farm land."

Governor Cox of Ohio:

"I have noted the editorial on 'Improvement of Farm Surroundings' in the November 6 issue of *THE AMERICAN ARCHITECT*. Your motive in this regard is most worthy, and anything you can do to encourage a movement for making more pleasant the living conditions on our farms should have approval. Nothing can add more to the necessary trend back to the farm than the creation of attractive home surroundings."

Governor Cornwell of West Virginia:

"I do not know anything more desirable than to stimulate among the farmers of this country a desire for better architecture in the building of their homes, as well as the installation of modern improvements. I think the Federal Government and the States each have wide fields of usefulness in educating people who reside in the country along those lines."

Governor Capper of Kansas:

"I have read with very great interest the editorial in your issue of November 6 with reference to the importance of a campaign for better farm buildings. The editorial is timely and I am in full accord with your stand. Along with better roads through the rural communities and improved farm machinery there should come more attention to improvements in farm buildings. It is one factor which will do much to stop the constant flow of our young people from the farm to the city."

Governor Lowden of Illinois:

"I quite agree with you as to the importance of giving more attention to farm architecture. There is no doubt in my mind that attractive farm buildings not only have an aesthetic value, but also result in better agriculture. The farmer who feels the satisfaction that comes from a pleasing and attractive environment of farm buildings will find new satisfaction in the better cultivation of his fields. He will therefore become a better farmer."

"I have already been doing something along this line, and wish your program all success."

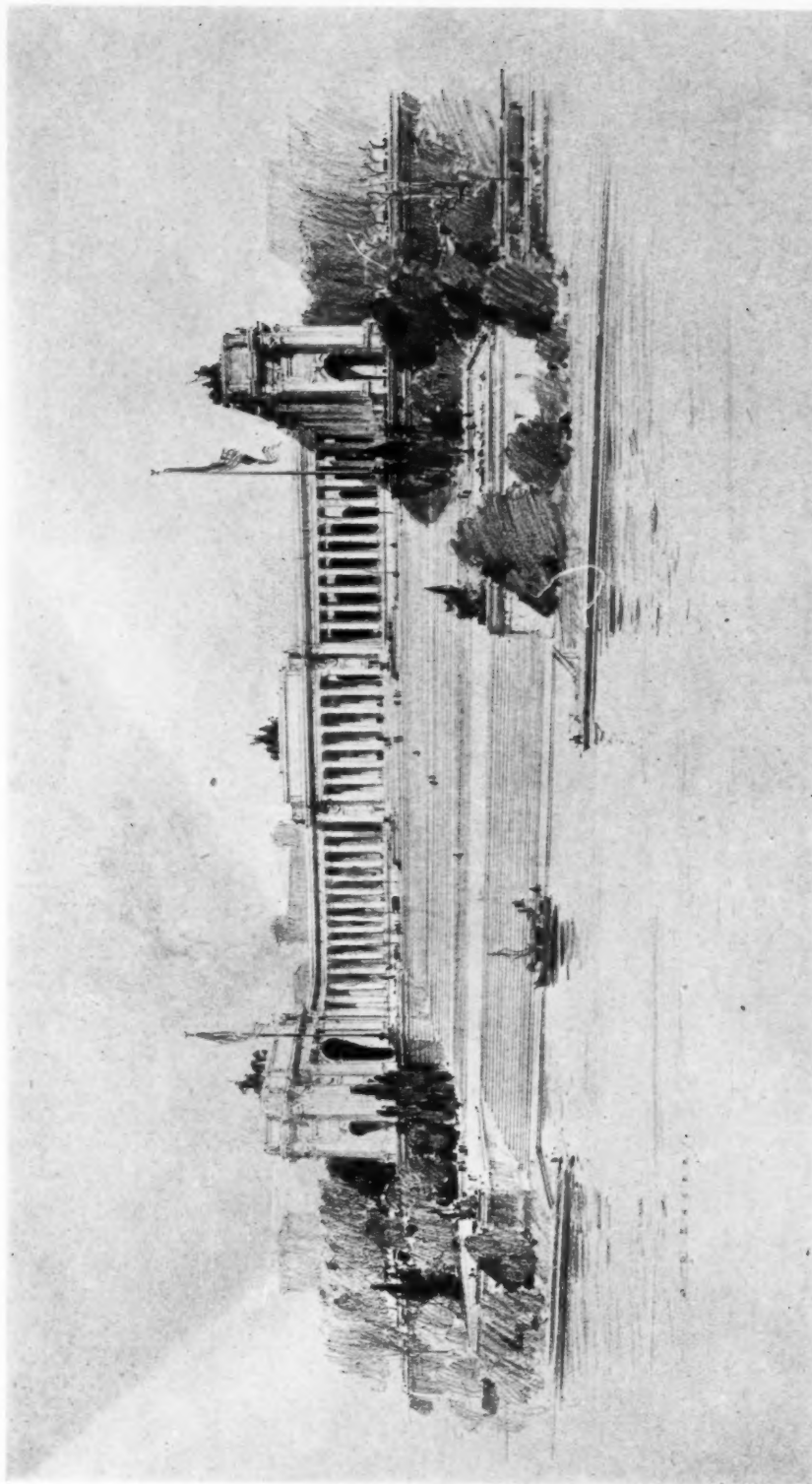
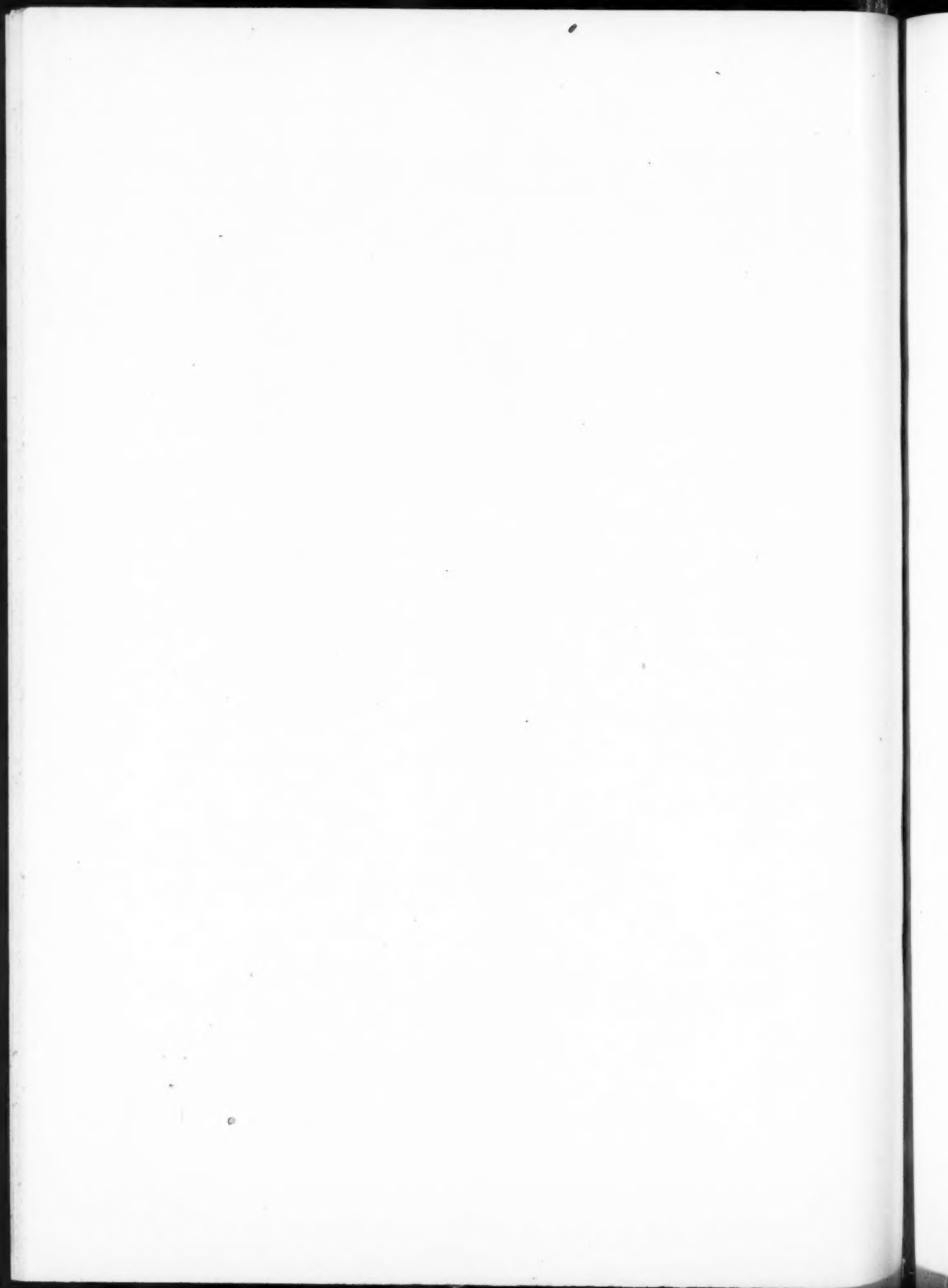


PLATE 169

A SUGGESTED DESIGN FOR A VICTORY MEMORIAL IN NEW YORK

BY OTTO R. EGGERS AND E. H. ROSENGARTEN

Reproduced from the Original Drawings by Otto R. Eggers



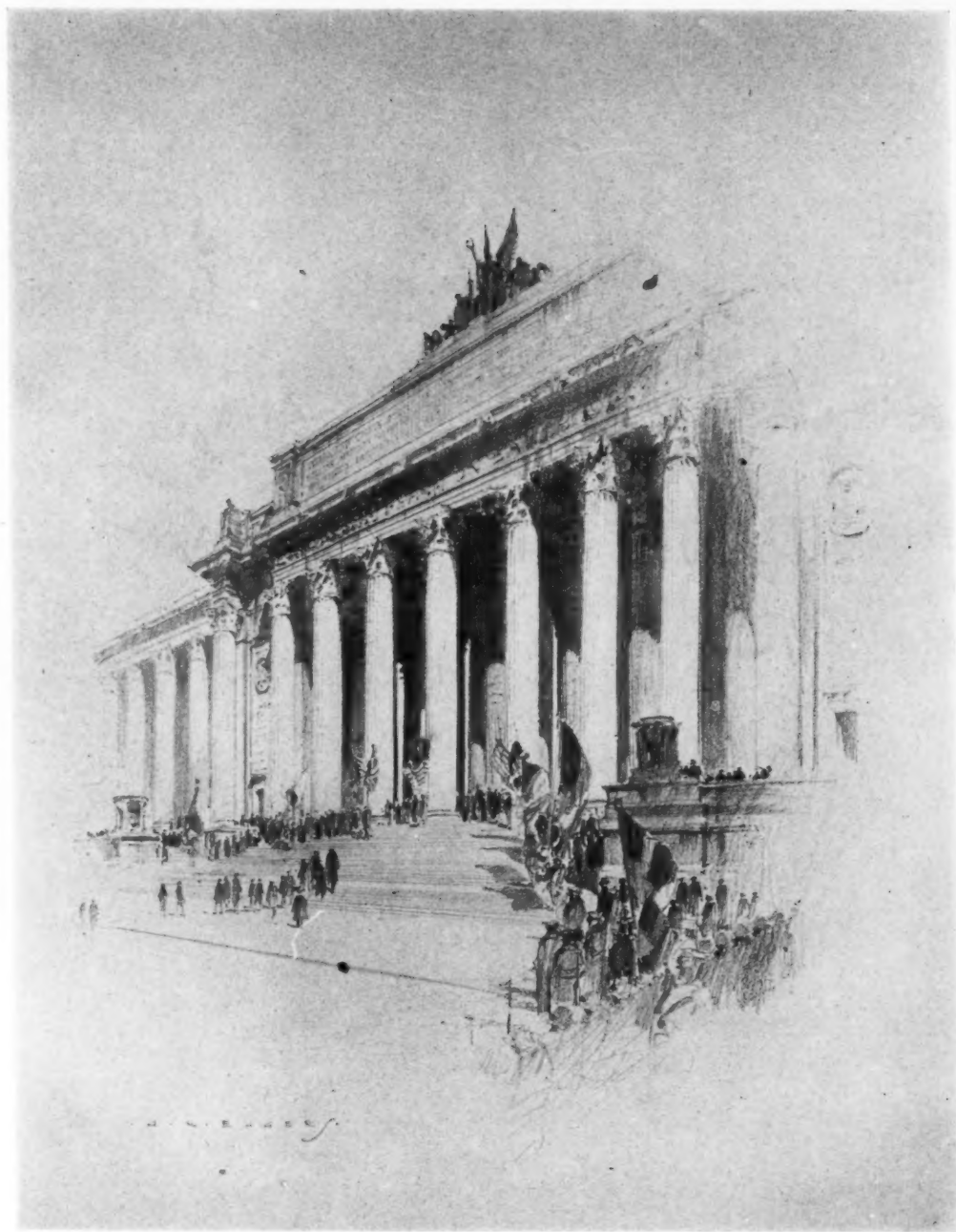


PLATE 170

A SUGGESTED DESIGN FOR A VICTORY MEMORIAL IN NEW YORK

BY OTTO R. EGGERS AND E. H. ROSENGARTEN

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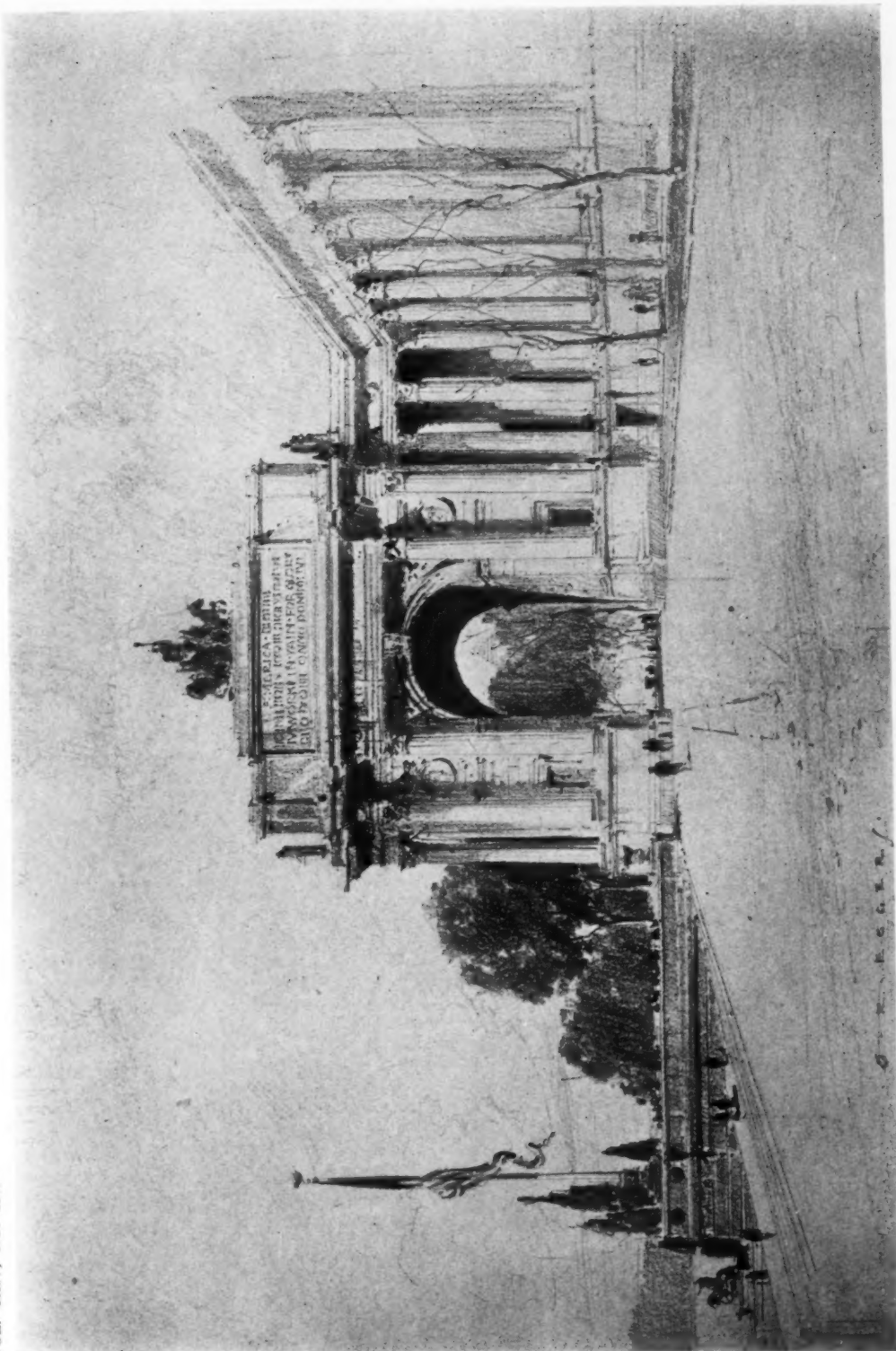


PLATE 171

A SUGGESTED DESIGN FOR A VICTORY MEMORIAL IN NEW YORK

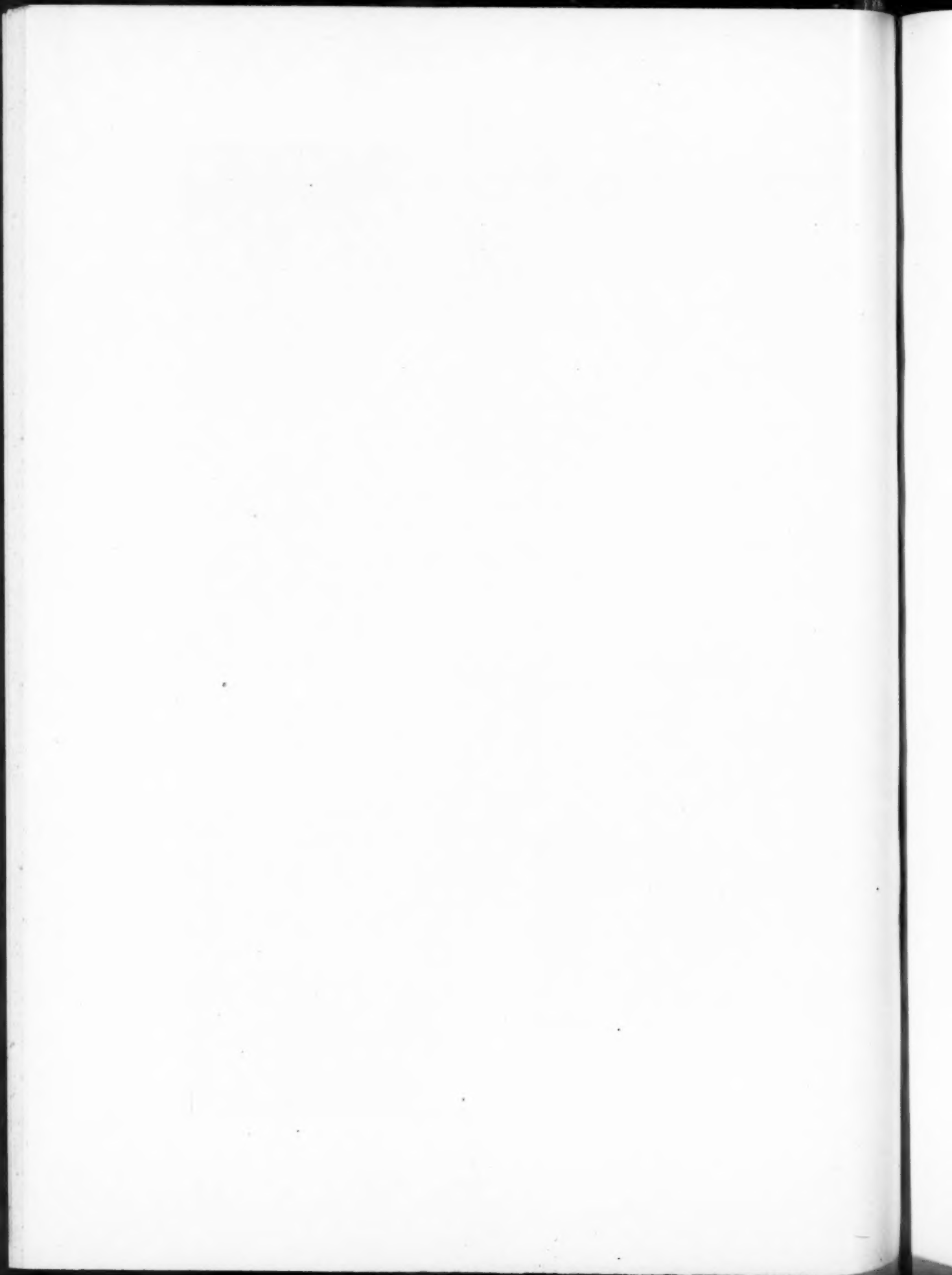
BY OTTO R. EGGERS AND E. H. ROSENGARTEN

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PLATE 172

TOWN HALL, WESTON, MASS.
BIGELOW & WADSWORTH, ARCHITECTS



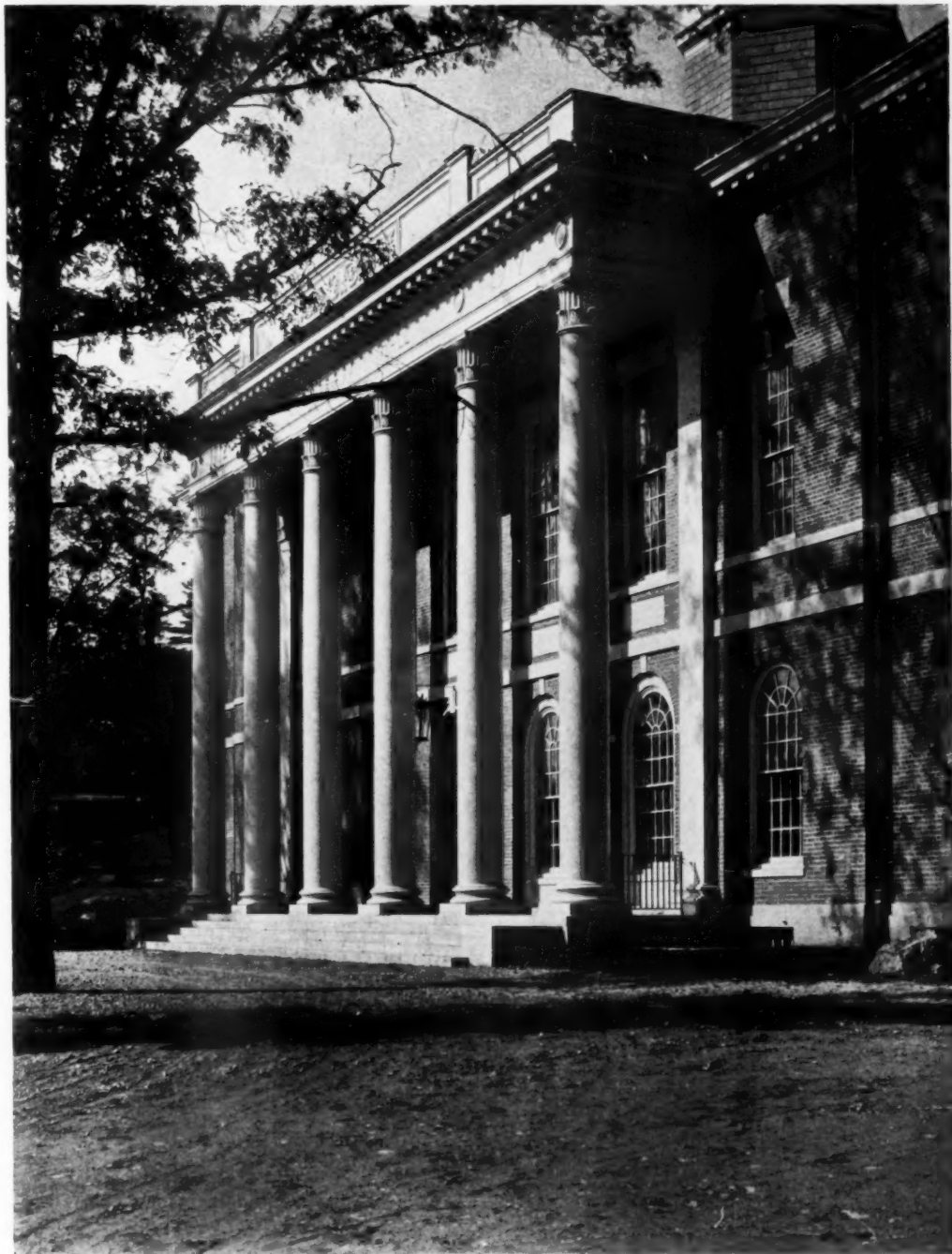
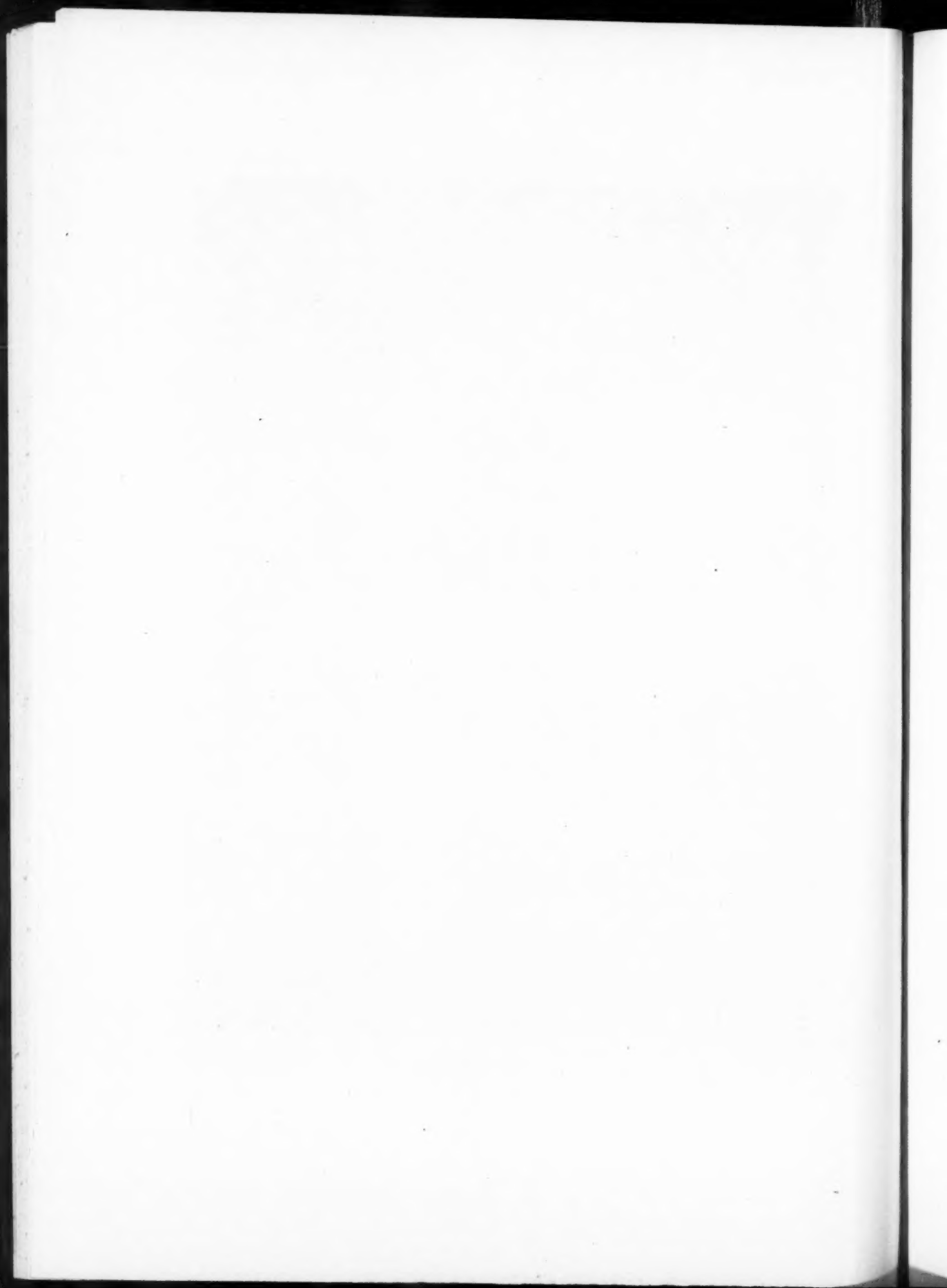


PLATE 173

TOWN HALL, WESTON, MASS.

BIGELOW & WADSWORTH, ARCHITECTS.



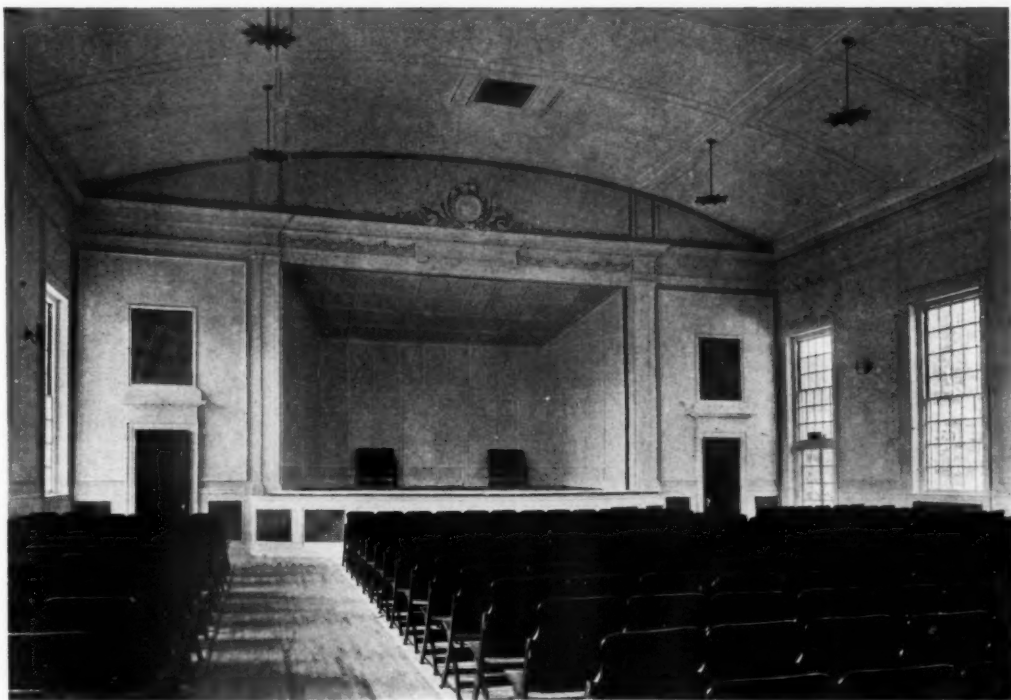
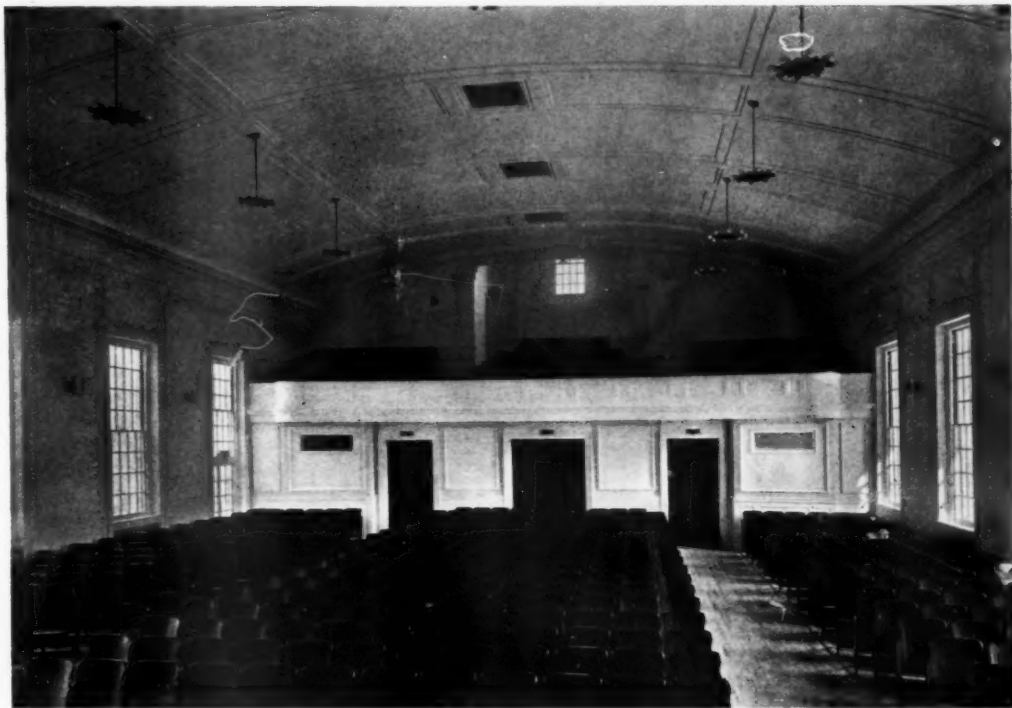
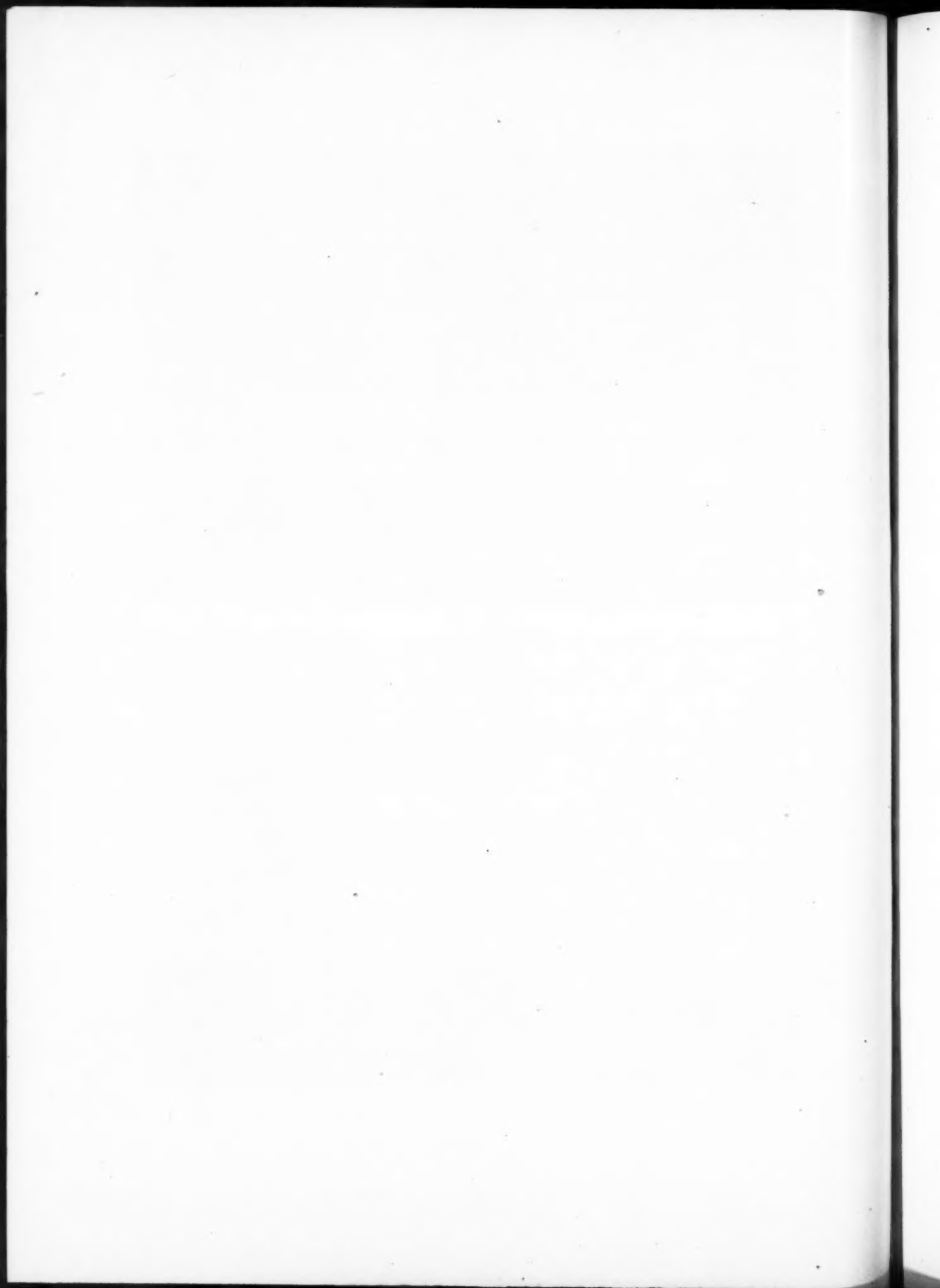
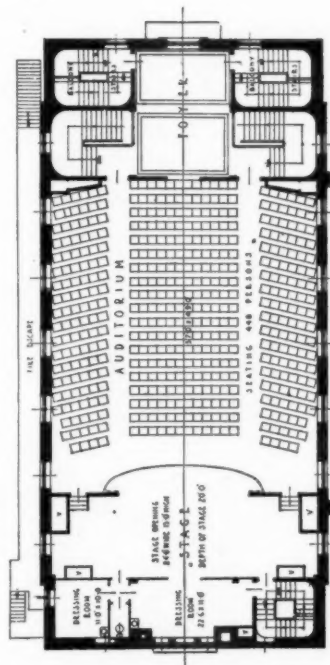


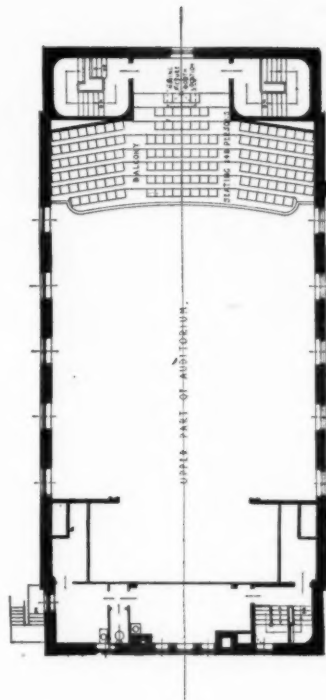
PLATE 174

TOWN HALL, WESTON, MASS.
BIGELOW & WADSWORTH, ARCHITECTS

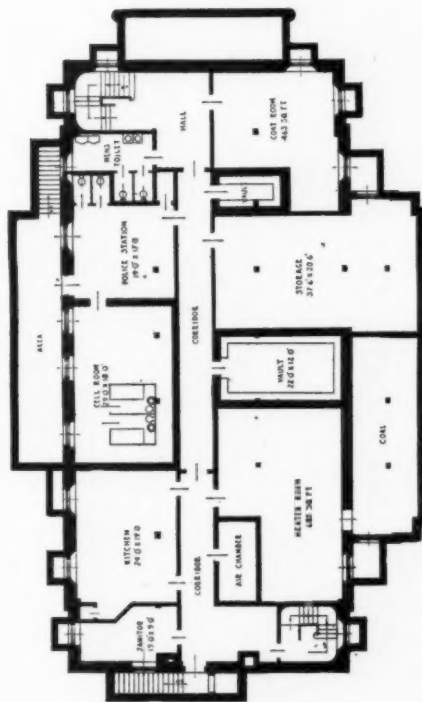




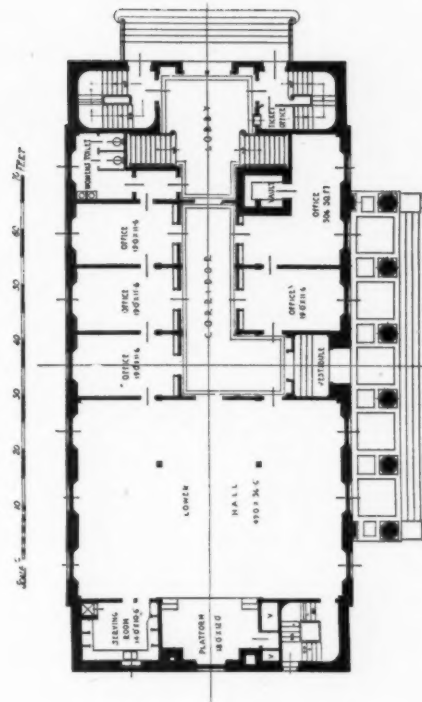
SECOND FLOOR PLAN



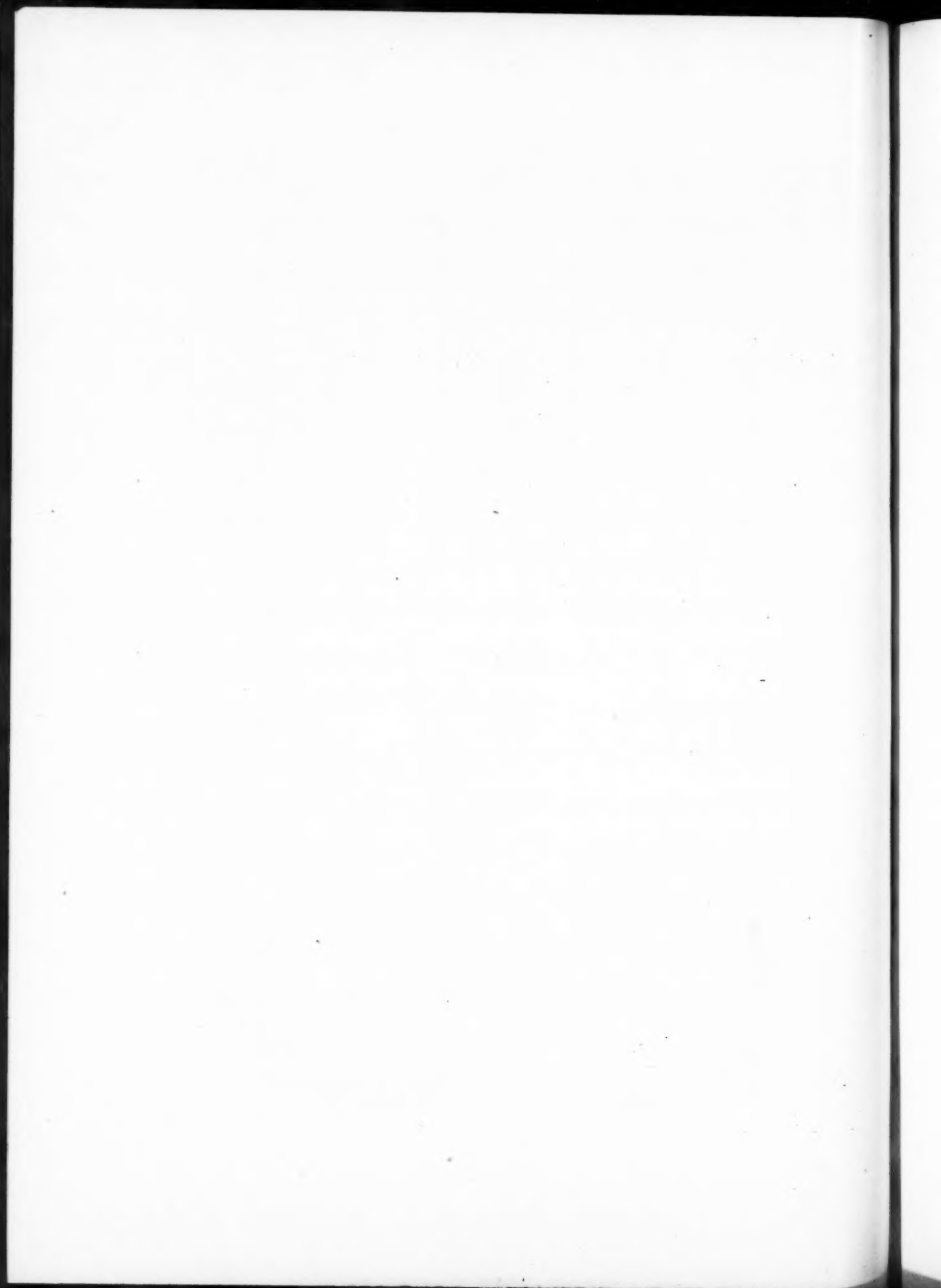
THIRD FLOOR PLAN



BASEMENT FLOOR PLAN



FIRST FLOOR PLAN



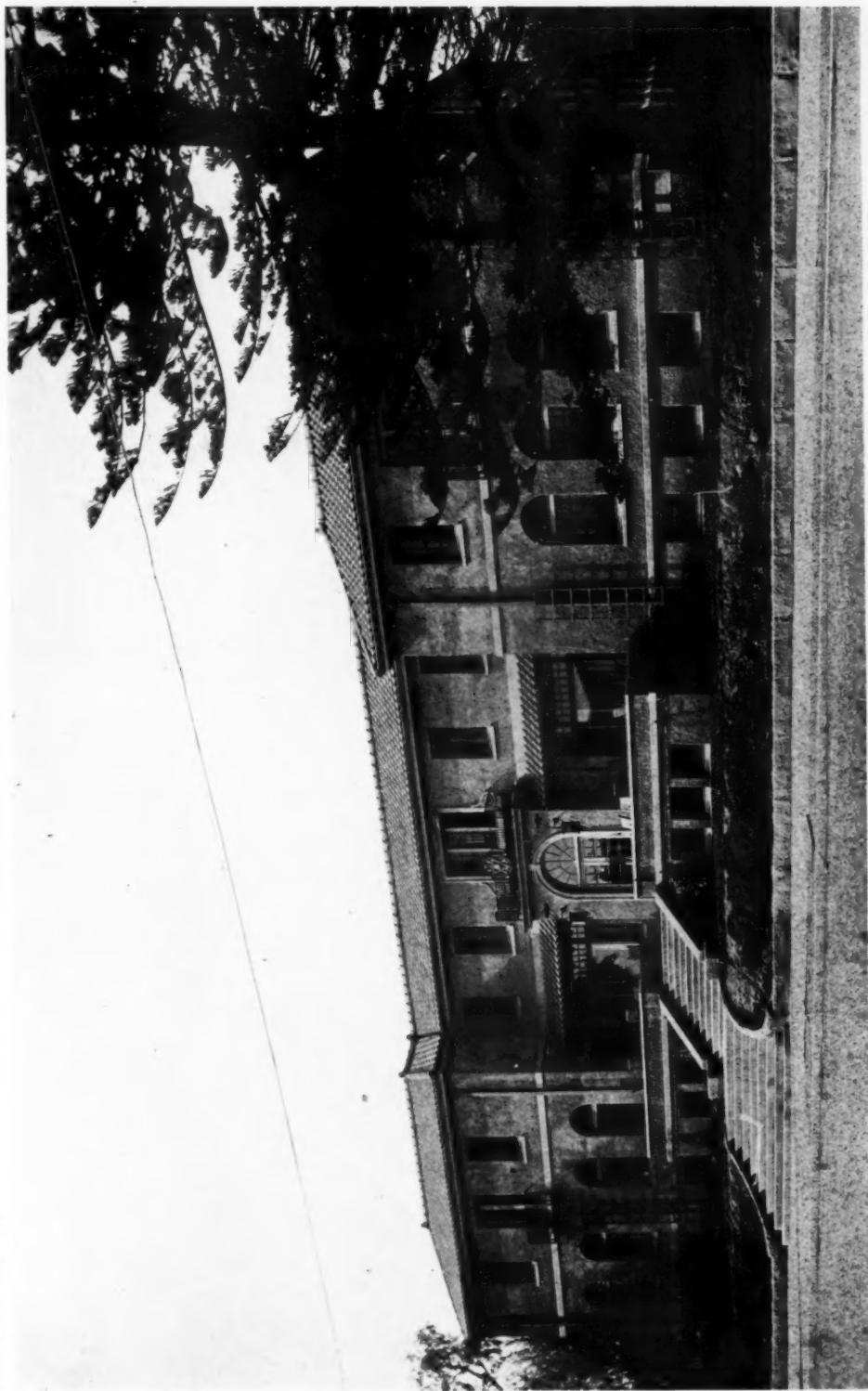
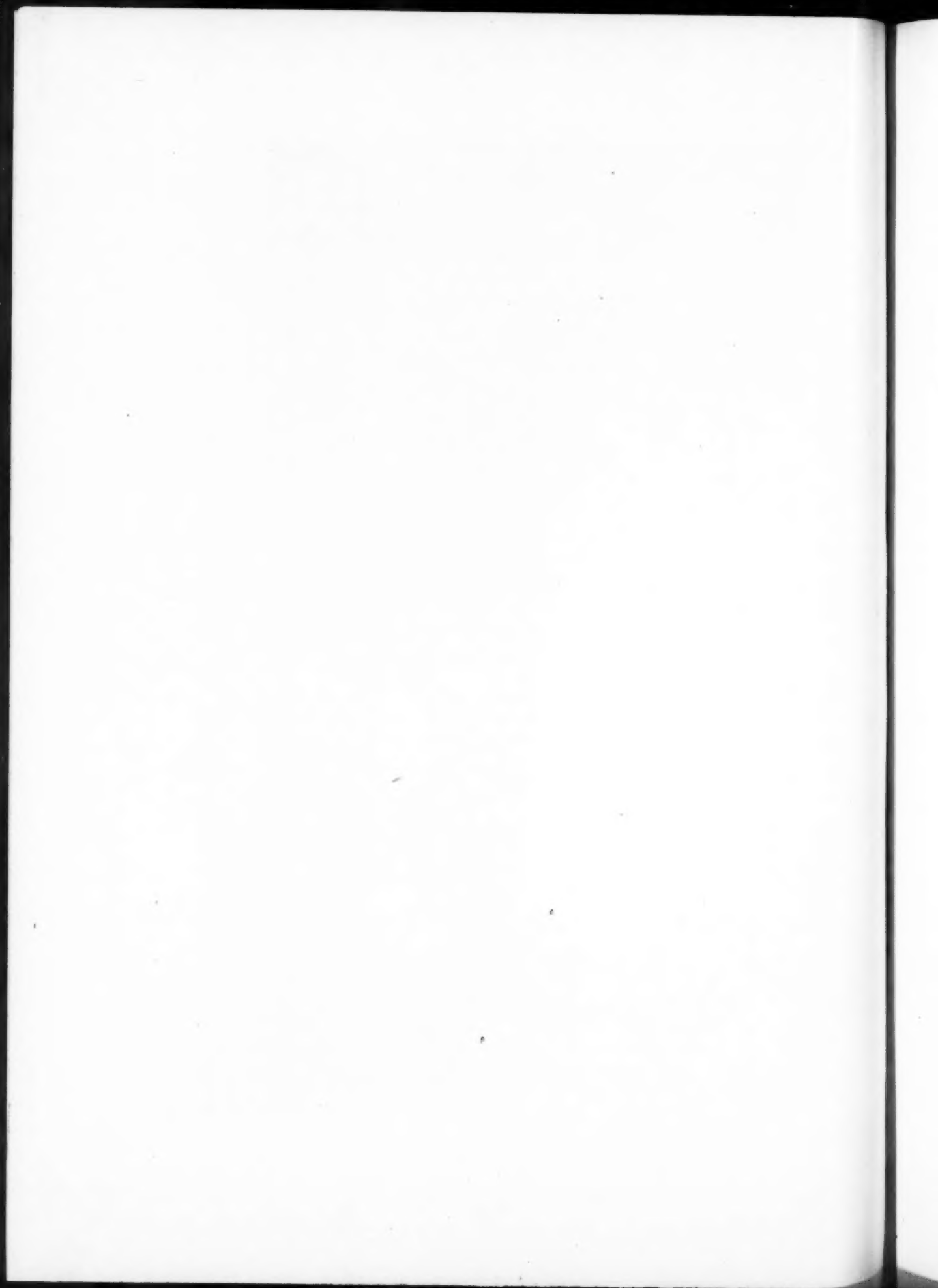


PLATE 176

Y. M. C. A. BUILDING, SANTA BARBARA, CAL.
RUSSEL RAY AND WINSOR SOULE, ASSOCIATE ARCHITECTS

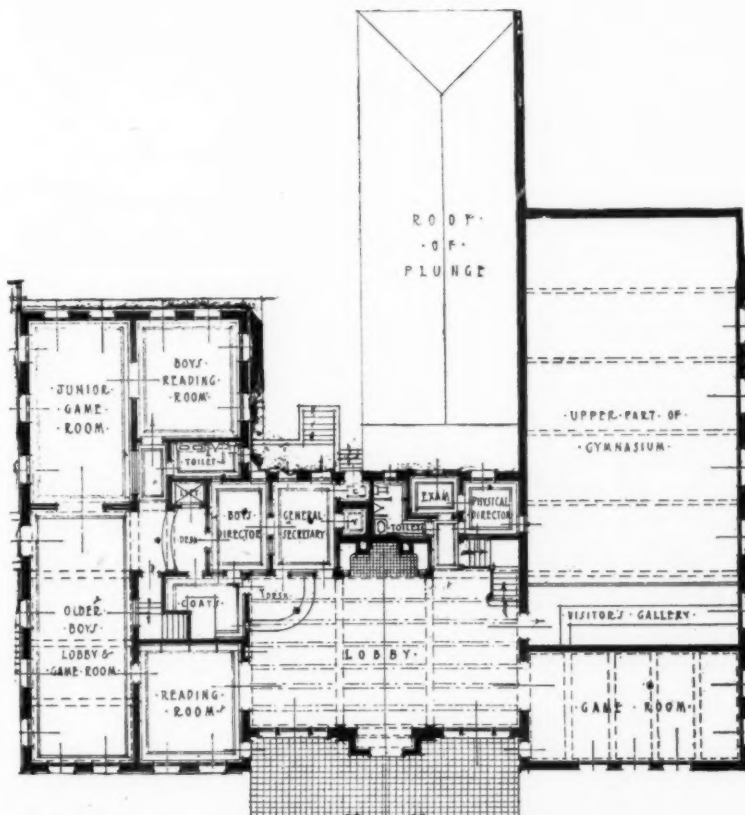


VOL. CXIV, NO. 2241

This is a detailed architectural floor plan of a building, identified as 1000 Broadway. The plan shows a complex arrangement of rooms and corridors. Key areas include:

- Top Section:** A large rectangular area labeled "PLUNGE" is situated at the top center. To its right is a large rectangular room labeled "GYMNASIUM".
- Right Section:** Below the "GYMNASIUM" is another large rectangular room labeled "AUXILIARY-GYMNASIUM".
- Central Section:** A long, narrow corridor runs vertically through the center. To the left of this corridor is a large room labeled "BOYS-LOCKERS". To the right is a room labeled "BOYS-SCOUTS & CLUB-ROOM".
- Bottom Section:** The bottom of the plan features several rooms: "KITCHEN", "ASSEMBLY-ROOM", "CLASS-ROOM", "BOILER-ROOM", "DRYING-ROOM", "BUSINESS-MENS-LOCKERS", and "STAIRS".
- Other Rooms:** Smaller rooms and areas are labeled, including "LADIES", "BOYS-TRAIL", "CHAIRS", "SHOWERS-BOYS", "SHOWERS-MEN", "TUB", and "STAIRS".

The plan uses various symbols to represent architectural features like doors, windows, stairs, and furniture. The overall layout suggests a multi-story building with a mix of recreational and functional spaces.



Y. M. C. A. BUILDING, SANTA BARBARA, CAL.

RUSSEL RAY AND WINSOR SOULE, ASSOCIATE ARCHITECTS

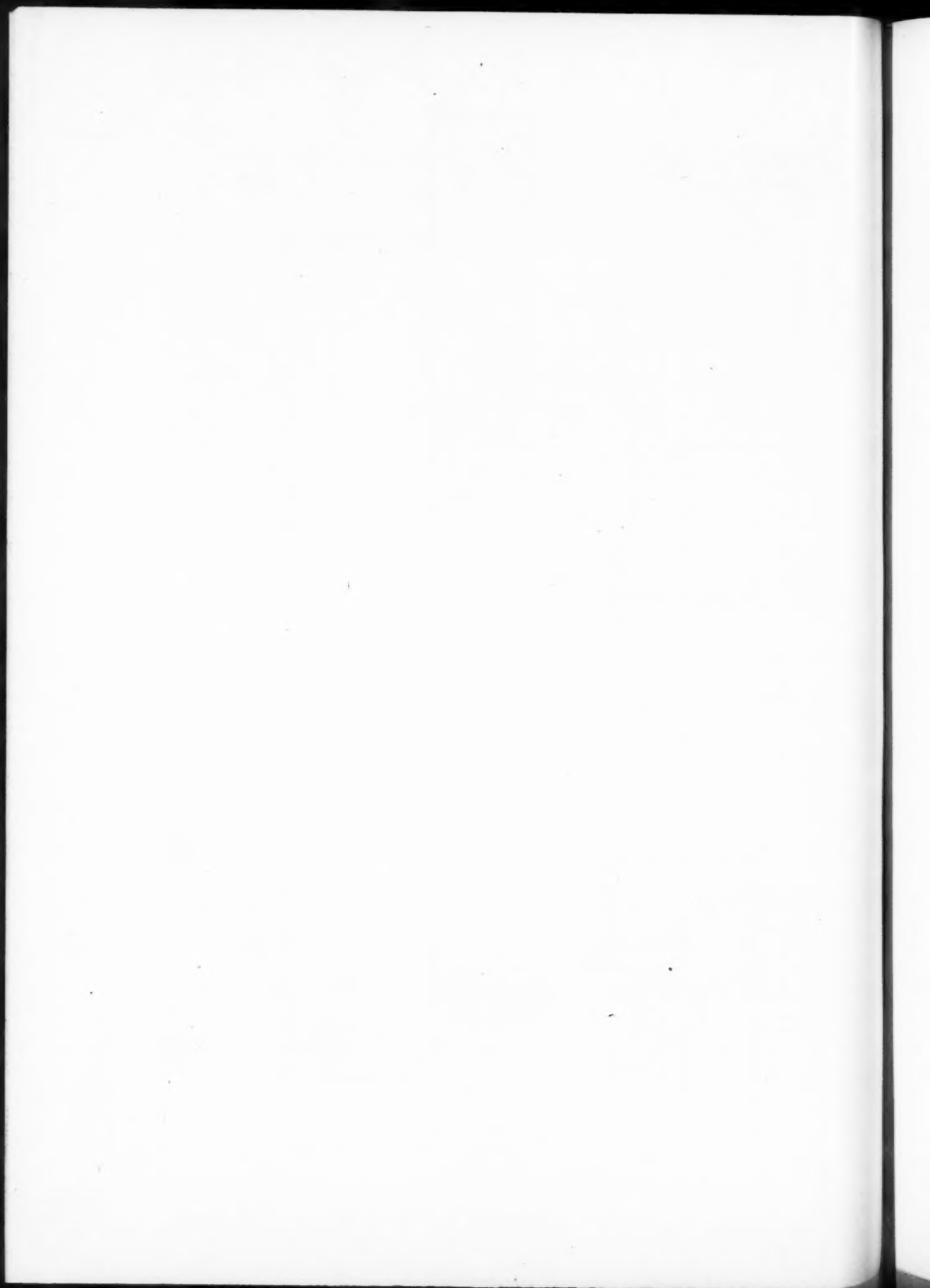
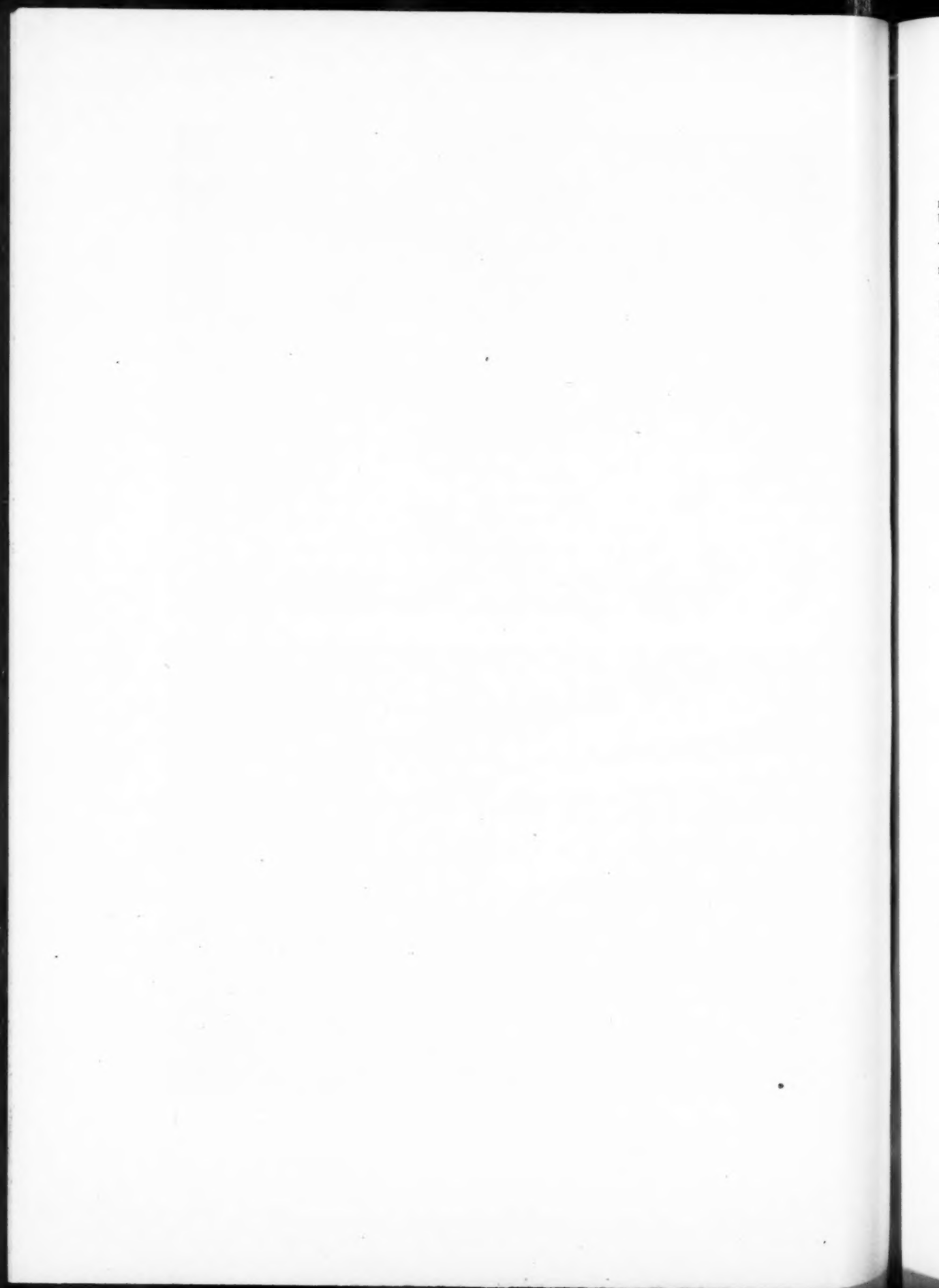




PLATE 178

Y. M. C. A. BUILDING, SANTA BARBARA, CAL.

RUSSEL RAY AND WINSOR SOULE, ASSOCIATE ARCHITECTS



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New York Society of Architects

The New York Society of Architects held its regular monthly meeting November 19th at the United Engineering Societies Building, President J. Rieley Gordon in the chair.

There was a good attendance of representative members from the Greater City and from the State.

After transaction of routine business various topics of interest were discussed. Mr. Edward W. Loth of Troy, in an interesting address, laid stress upon the importance of architects broadening their sphere of active interests and becoming "good mixers," in the sense of identifying themselves with movements on foot in the various lines of industry. As an instance, he mentioned the convention in Boston of the National Housing Association, which represents a movement for the amelioration of the home conditions of the people and which has long been in existence in England and other countries, but somewhat neglected here. A resolution was passed that the president appoint a committee to represent the Society, and that the Society join the National Association.

It was also resolved that a committee be appointed to co-operate with the Allied Real Estate Board and the Tenement House Commissioner, in formulating a bill to facilitate the conversion of existing dwellings into three or four family tenement houses.

The question of sending a representative of the society to the convention of the Federation of Building Industries, to be held in Atlantic City the first week of December, was discussed and referred for action to the Board of Directors.

The advent of peace after a long night of conflict, bloodshed, business depression and universal sorrow was hailed as signalizing the dawn of a new era, and this led to a discussion as to the most practical and appropriate method of celebrating the happy event.

Control of Raw Materials and Shipping, During Reconstruction

The after-war business problem receiving the most important attention at present in England is that of the control of raw materials and shipping. Detailed studies of sources and methods of control and distribution are being made, but there does not yet appear to be agreement on the general principles of control. On the one hand powerful interests are urging immediate co-operation between Great Britain, France and the United States for the formation of a world-control which will, at the appropriate time, be able to distribute

raw materials as seems best. On the other hand, some are pointing out that such action would in principle be contrary to President Wilson's policy of "no economic combination within the League of Nations." It is understood in London that American Government opinion believes that a free field should be left for developing a new world policy on raw materials and shipping. As a matter of fact, world arrangements are already being made with the sanction and even the assistance of the British Government in regard to oil and metals, while shipping plans change or develop daily. The American Chamber of Commerce in London has urged commercial bodies in America to consider the entire subject.

A recapitulation of definite suggestions on American reconstruction, made by the American Chamber of Commerce in London, appeared on page 648, in our issue of November 27.

Portable Belgian Town

On the slope of a hill near Havre, France, states *Domestic Engineering*, a typical Belgian village is being built by the American Red Cross. The houses are all to be portable. When peace time comes the entire village will be moved to Belgium. Every house is being built so that it may be readily taken down, shipped and reassembled.

There are to be two schools with Belgian teachers, a Belgian priest, Belgian civic officials and a large co-operative store. The inhabitants, who will move into the village as soon as the buildings are complete, will be 100 families of refugees from Belgium, who are destitute and who have each at least four children. The cottages will have electric light, running water, and gardens, and will rent for \$6 a month. Those who cannot pay rent will be provided for.

This important reconstruction work is one of the first large tasks to be undertaken in the rebuilding of devastated Belgium.

A Greek Natural Cement

Greece and the neighboring territories use only a limited amount of manufactured cement, states *Construction*, all of which is imported, but obtain their chief supply from the volcanic island of Santorini, in the Aegean Sea, which produces a natural cement called "Portselena." Mixed in certain proportion with sand and lime, this natural product is an excellent substitute for the manufactured article. Portselena has been used for many centuries and is still being used throughout the Near East for

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bridges, harbor works, breakwaters, forts, light-houses, etc., in the Mediterranean, the Black Sea, and the Adriatic. With it the Venetians constructed the great fort of Monemvasia and Nauplia, then the Gibraltar of the eastern Mediterranean, the foundations of which are in the sea, intact and immovable up to now after many centuries. The forts of Crete and those of the Dardanelles are also built with Portselena.

England's Present Need for Housing

Mr. Hayes Fisher, president of the Local Government Board, London, addressing the members of the Birmingham City Council, said that there was a deficiency of at least 300,000 houses in the country. While they were aiming at building 300,000 within twelve months after the war was over, they were anything but sure that they would be able to do it. Three hundred thousand houses would require 350,000 men to build them if they were to be built in a year, quite apart from the men who were to clear the sites and do many other necessary things. They doubted if they would be able to build the 300,000, even although they got all the help they could from local authorities, public utility societies and private builders. It was not only workmen's dwellings that would be required after the war. Numerous other buildings were required, and there would be an immense amount of repair work to be done. "Look at the devastation in the north of France! Look at Belgium! All that has got to be reconstructed." There would be a great demand for building and repair work in France and Belgium, as in this country, and we should have to share with them the material that will be available.

Reclaiming Land for Soldiers

The Committee on Public Lands of the Senate has unanimously reported in favor of a bill appropriating \$1,000,000 to make surveys of farms for returning soldiers—a project in which the Secretary of the Interior has been much interested. In its report, the committee says in part:

The proposed legislation is for the purpose of providing an opportunity to procure homes for those of our returning sailors and soldiers who may wish them upon their return from the war, as well as giving a like opportunity to thousands of workers in munitions factories and other war industries who at the conclusion of the war will be out of employ-

ment. It is intended to promote as nothing else ever has the "back to the land" spirit.

The report then refers to the overcrowded conditions of city life, and fears that these conditions will be made worse by the returning warriors and also by the men and women now engaged in munition towns who will be thrown out of work. It believes that many of these men and women will have saved sufficient funds to locate upon and improve land. It should be the object of the Government and it is the object of this proposed legislation to provide them with the opportunity of getting the land.

The Council of National Defense has asked its state and other divisions to disseminate as widely as possible the information contained in the report of the committee, in order that those who would take advantage of the offer which is being made should hear of it.

Plain Talk by an English Contemporary

The Architect and Contract Reporter of London, discussing editorially in a recent issue after the war problems, refers to trade unions and the effect of its organization on production. It states:

The Government has found out what the employers of labor already knew, that trade union rules are a barrier to production. It has promised their restoration after the war, and the pledge must, if desired, be kept. It will then be for labor to decide whether it will make it possible for capital to pay the wages it desires. If we want to keep up with America in the race of national prosperity, labor has only to give its consent to conditions which will make it possible for it to obtain the largest share of the good things of the earth. If not, labor will have to pay the penalty of its mistake, and the doles and contrivances of an official-ridden community will not in the end help it.

But we are quite certain that though the great body of the people have submitted to restrictions during the last four years for one object, and that alone, they are in no humor to consent to being exploited to further the aims of theorists who have not made good their claim to be allowed to plan out a new autocracy, and that if any such attempt is made the political party or parties which try to effect it will find they have mistaken the temper of the electors from whom they derive their support. It is even possible that if they did by political legerdemain contrive to carry out their wishes they would find themselves in the position of those who in the past have passed measures they dared not put into force, for we are certain that the bulk of the

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people are determined that the departmental control and interference with the private liberties of the people must cease within the shortest possible time after the restoration of the peace which we all anticipate in the near future.

Industrial Housing in Great Britain

Industrial housing at the present time constitutes one of the most important classes of building. The character of such housing requirements is exemplified by an official report recently presented to the British Minister of Reconstruction, which states in substance as follows:

In England the unsatisfactory condition of working-class housing as regards both quality and quantity is now realized on all hands. Census statistics support the contention that the majority of the working people are inadequately housed. Even the best type of workmen's dwelling as at present existing is only too often inconvenient in its arrangement and lacking in reasonable accommodations. In the older houses, which so large a proportion of the working population inhabit, there is little privacy and comfort. The effects of these conditions are bad enough for the men, but rather worse for the women.

New National Labor Bureau

The Department of Labor has created a new bureau, the Working Conditions Service, which is to work out a program of uniform standards for working conditions in all industries.

For administrative purposes there are to be three divisions in the bureau—division of industrial hygiene and medicine, division of labor administration, and division of safety engineering. Since there are in operation other agencies with the specialized function of dealing with wages and hours as controversial questions between employers and employed, this service will not deal with these questions as such, but will direct its attention to the other aspects of working industries as denoted in the names of the divisions.

Vocation Offices Opened

Offices are now open in fourteen large cities of the United States to receive the applications of disabled soldiers and sailors for free education to equip them for the vocation for which they are most fitted. These offices have been established by the Federal Board of Vocations in Washington.

Philadelphia, New York, Boston, Atlanta, New Orleans, Cincinnati, St. Louis, Dallas, Denver, Chicago, Minneapolis, San Francisco and Seattle.

While he is receiving re-education the Government will pay the disabled man \$65 a month, and in addition will provide him with the funds necessary to pay educational fees. Each man accepted for re-education will be sent to an institution giving special courses in the line he has chosen or he will receive instruction in any industry he wishes to learn. During his training period allowances will be made by the Government to his dependents. These will be fixed in proportion to the amount they received while he was in active service.

When the disabled man has finished his training the Federal Board promises to have employment ready for him. After he has gone to work again his compensation from the War Risk Insurance Bureau begins and will continue unaffected by the amount of his earnings.

Britain Works Out Changes

Employment for each British soldier will be provided after the great armies in the field have been demobilized, according to comprehensive plans which are now being worked out by the Government. The machinery of war will be turned into machinery of peace as expeditiously as possible, so that there will be no period of stagnation during which there might be much distress.

Money grants to civilians and former soldiers who are unemployed owing to peace are to be provided. There will be extra allowances for dependents. These grants will run for thirteen weeks for civilians and twenty-six weeks for discharged soldiers.

Men employed in "pivotal industries" and mines will be the first to be discharged from the army, and workers in other trades will be released according to national needs. Married men will receive preference. For a year after the war permanent appointments to the civil service will be reserved for officers and soldiers.

Plans are being worked out to give soldiers special facilities to obtain land. Men from the Dominions employed at war work in England will be quickly released. The Ministry of Munitions will be supplanted by the Ministry of Supply, which will dispose of war stores the value of which is estimated at £500,000,000. Production of materials needed in the building trades will be expedited. Iron and steel will be released from control at once, and other metals will be placed on the pre-war basis in six months.

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Will Restore Louvain

Announcement has been made of the organization of the National Committee in the United States for the Restoration of the University of Louvain, with President Nicholas Murray Butler of Columbia University as chairman. The committee includes fifty of the leading public men of the United States. Among the members are the two former Presidents, William Howard Taft and Theodore Roosevelt. The secretary's office where those desiring to aid in the restoration of the great Belgian university may send books is established at the J. Pierpont Morgan library in this city. An opportunity is here afforded to participate in a much to be commended work.

The wanton destruction of the ancient and celebrated University Halls of Louvain, including the treasures of its splendid library, has evoked the unanimous indignation of the entire civilized world. Founded in 1495, the University of Louvain has for centuries been an international center of science and learning, attended by students from all nations.

National committees are being organized in all the leading nations to co-operate with the International Committee for the Restoration of the University of Louvain.

Our World Trade Grows

The foreign trade of the United States in the calendar year ending Dec. 31 seems likely to make another high record. A compilation by the National City Bank, of New York, estimating the trade of the full year based upon the figures thus far available, puts the total imports at approximately \$3,100,000,000, and the total exports at approximately \$6,200,000,000, thus estimating the year's total trade at approximately \$9,300,000,000, against \$9,185,000,000 in 1917, the former high record year. The excess of exports over imports for the four and one-half years of war, will, the bank said, exceed \$11,000,000,000, or more than that of the forty years preceding the war.



VIEW IN ONE OF THE BAYS IN THE UNITED STATES BUILDING FOR DIVISION OF MILITARY AERONAUTICS

WADDY B. WOOD, ARCHITECT

Department of Architectural Engineering



CLINIC ROOM, CHICAGO LYING-IN HOSPITAL
RICHARD E. SCHMIDT, GARDEN & MARTIN, ARCHITECTS

The Use of Color in Operating Rooms

THE common conception of an operating room is that of a room finished entirely in white. To make them in that way is a habit of long standing, the origin of which is not clearly defined. To see operating rooms finished in colors is such a radical departure from the universal habit, that examples and the reasons therefor are of interest. The number of these colored operating rooms is increasing, which is evidence that the idea is gaining new adherents. Naturally this departure from established custom divides the surgical operators into two factions.

While it is probably not within the province of the architect to advise the surgeon as to the manner of finishing the operating room, it is to his advantage to know of the different methods in use and the reasons advanced for such usage and to form his own conclusions as to the better method of treatment. One of the earliest writers on the use of color in operating rooms was Major Harry M. Sherman, A.M., M.D., F.A.C.S., San Francisco, who wrote of the Green Operating Room at St. Luke's Hospital, San Francisco, in *The California State Journal of Medicine*, and which was noted in

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THE AMERICAN ARCHITECT of April 24, 1918, page 503. This naturally caused some discussion and the advancement of arguments for the white operating rooms, which will be considered later.

A surgical operation is work and a certain intensity of illumination at the work is absolutely essential. This illumination may be derived from natural and artificial sources, and while any desired degree of intensity can be secured at the work there are other conditions that may destroy the efficiency of the lighting. Among these a dverse conditions the most damaging is that of glare, the presence of which in any place is now generally conceded to be inexcusable by illuminating engineers.

Obviously the thing to be desired, states Dr. Sherman,* is the maximum illumination with the minimal glare. Glare is an excess of light on the object looked at or in the environment, so that the retina is overexcited and fatigued. By as much as the light is in excess it overfatigues, and by as

much as it overfatigues it is a disadvantage. He arranged for the reflection from white encaustic tiling of all the light that strikes the wall above the



Fig. 1. Plan of the green (west) operating room, St. Luke's Hospital, San Francisco, Lewis P. Hobart, *Architect*. Floor and wainscot of green tile, walls above of white tile, ceiling pale cream color.



Fig. 2. Section A B of the green operating room.

While Dr. Sherman was the first to write on the subject, it appears that the idea occurred to several persons and a number of installations probably occurred simultaneously. Some of these installations are illustrated, and it appears that quite a range of colors has been used, apparently with satisfactory results.



Fig. 3. North elevation of the green operating room.

six-foot line from the floor, and the same is true of the ceiling, which is a very pale cream color.

*The Modern Hospital, August, 1918.

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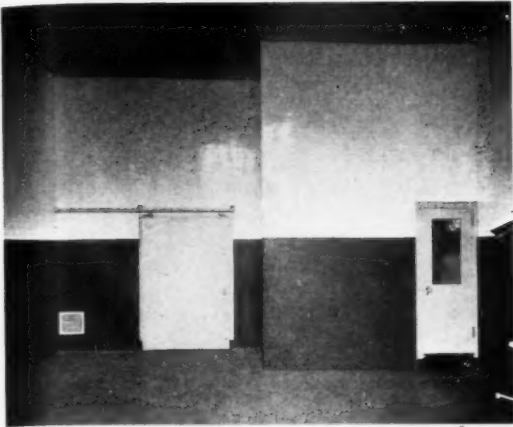


Fig. 4. South elevation of the green operating room, showing sliding door to corridor and anaesthetic room.

This is the light that can shine into a wound, which is where it is needed. All of the light that can be reflected upward from the lower part of the wall

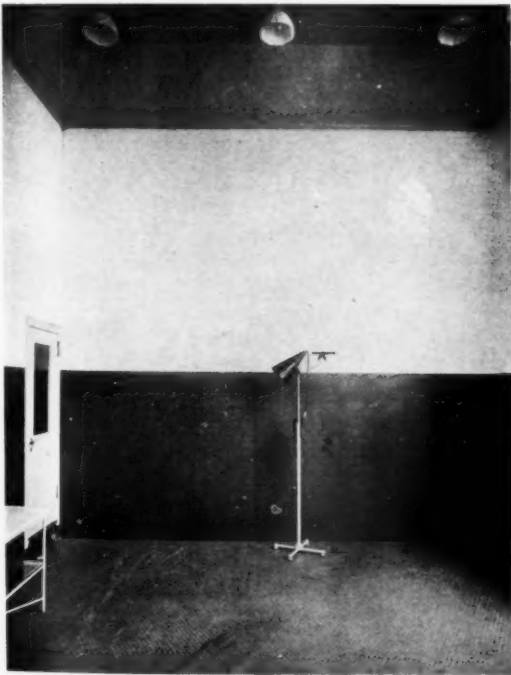


Fig. 5. West elevation of the green operating room.

and from the floor and can shine into the operator's face and eyes he extinguishes by the dark green wainscot and floor, and he uses dark blue sheets,

towels and gowns for the same purpose, the blue material replacing the black originally used, because of its being a pleasant color rather than an absence of color. This appears to be a simple and economical method, for there is no waste of useful light and there is quick extinguishment of useless light.

Dr. Sherman selected the color for his green operating room on the basis of the complementary character of green to the red of the blood. Hering has shown that in pure red there is no green, and in pure green no red; that is, these colors cannot be perceived at the same time in the same color—they are mutually exclusive so far as sensation is

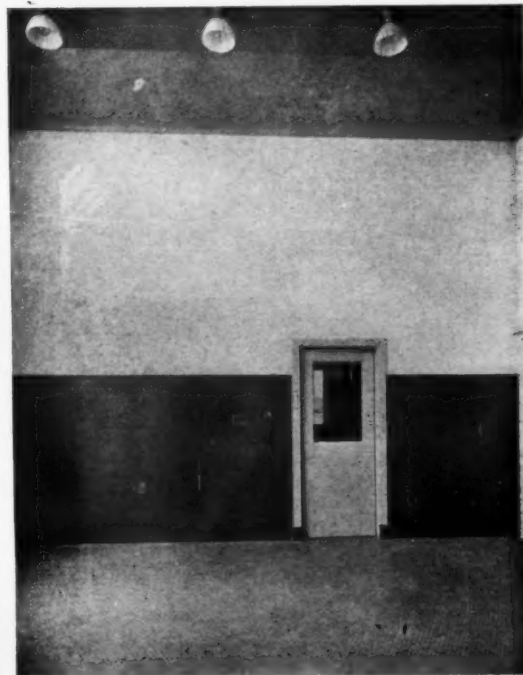


Fig. 6. East elevation of the green operating room, showing door to sterilizing room.

concerned. Therefore the eye, looking back to the wound after a glance across the room, can carry none of the green impression from the floor or wainscot with it. Even if light from the floor or wainscot should be reflected into the wound, it could not illuminate it, for green light would be extinguished in a red wound.

Even if green had not the special relation to red that it has, it still would be the first or one of the first colors to choose, because of its place in or near the middle of the spectrum. Landon, Heckel

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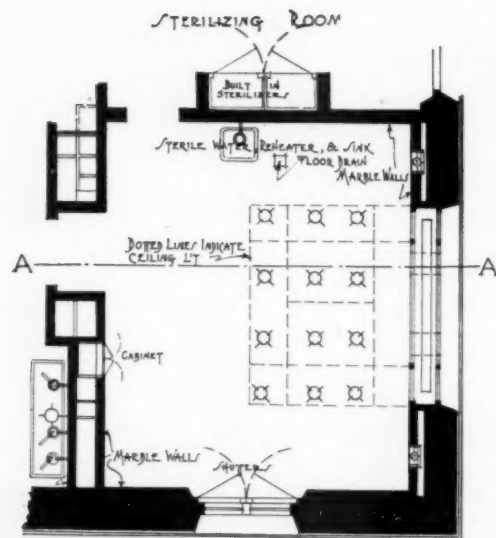


Fig. 7. Plan of an operating room, Ross Pavilion, Royal Victoria Hospital, Montreal. Stevens and Lee, Architects.

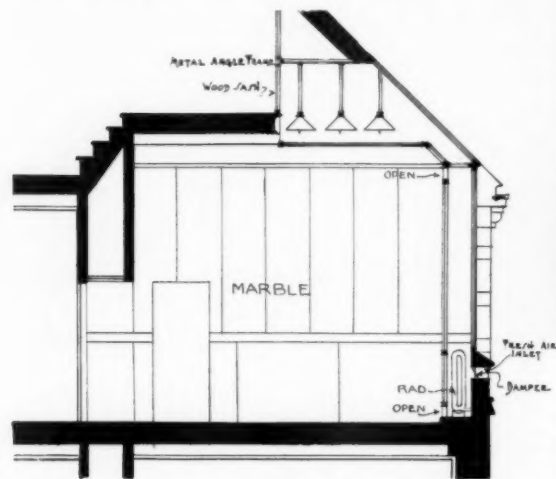


Fig. 8. Section A A of Fig. 7.

and Risley* all agree as to the desirability of selecting a color from the middle of the spectrum. Heckel particularly advises avoiding the red end of the spectrum because of the "pronounced chemical changes" which the colors of that end produce in the eyes, and Landon particularly advises the selection of green, as it stimulates "capacity for work and care in the execution of it," and maintains "the vitality of the subject." It may be that Landon's conclusions are somewhat fanciful, even though

*Rapp, Alfred C.: Surfaces and Colors for Hospitals and Schools, with discussion by Dr. S. D. Risley, prefatory notes by Dr. S. D. Risley and Dr. E. B. Heckel, Bulletin 38, Educational Bureau, Paint Manufacturers' Association of the United States.

they are drawn from a very carefully planned and executed series of experiments, or perhaps we undervalue the less obvious conclusions because the obvious ones are matters of such common knowledge, such as the depressing effect of dark rooms and the contrary effect of well-lighted ones, but his major conclusions agree wholly with those of the other two authors, who are both ophthalmologists and interested in securing in schools and hospitals restful, harmonious color in rooms, because of the effect on the eyes.

Continuing, Dr. Sherman quotes Cutting* for the selection of green for its effect on the pupil of the eye. He shows that pupillary reactions are in accordance with luminosity, and green, blue and violet at the less luminous end of the spectrum permit pupillary dilation, so that the eye, looking up from a red wound and seeing the blue sheets in the immediate environment and the green of the floor and wainscot beyond them, would have a larger

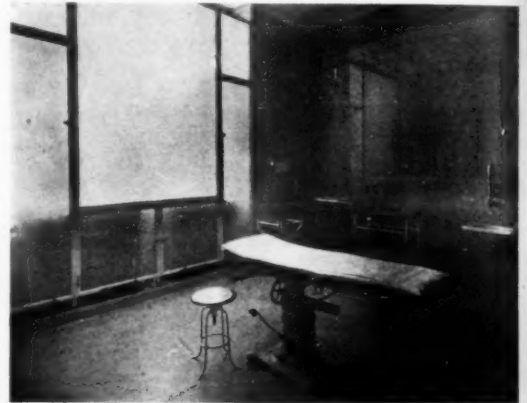


Fig. 9. Interior view of Fig. 7.

rather than a smaller pupil when it looked back into the wound. If, on the other hand, the eye looked up from a red wound to a white environment, it would suffer at once a pupillary contraction, for the white light contains all the luminosity of the red *plus* all of the rest of the spectrum. Looking back now into the wound, there must be a time, brief perhaps, but still measurable, when the eye must readjust itself to the darker field.

There is a decided preference for the green room among the operators at St. Luke's Hospital as against the other rooms finished in the conventional white tiling.

Figs. 1 to 6 inclusive illustrate this room. The light reflecting ability of the white tile wall above the wainscot and the absence of glare from the

*Cutting, James A.: The Reaction of the Pupil to Colored Light, Journal Nervous and Mental Diseases, October, 1917.

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Fig. 10. Major operating room of the Barre, Vermont, Hospital. Edward F. Stevens, *Architect*.

wainscot and floor is indicated. A direct system of artificial lighting is very properly used as the lighting units are well above the line of vision, and their

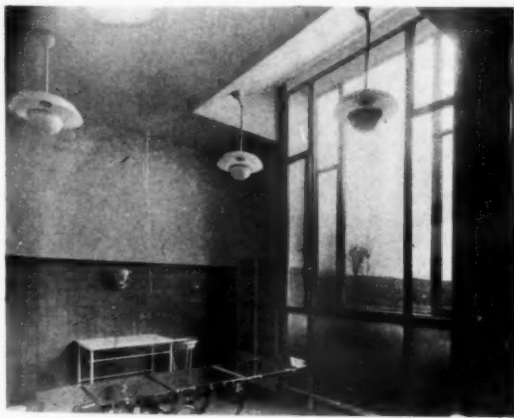


Fig. 11. Operating room of the Benjamin Stickney Cable Hospital, Ipswich. Edward F. Stevens, *Architect*.

location with reference to their height above the work plane insures a diffusion of light without shadows. Intense local illumination is accomplished by movable units as shown in Fig. 5.

Figs. 7 to 9 inclusive illustrate an operating

room in the Ross Pavilion, Royal Victoria Hospital, Montreal. This room is 15 ft. 6 in. by 18 ft. 6 in. in size and 14 ft. high. The window screen is of ground glass and the ceiling of white glass with irregular surface which diffuses the artificial light. The artificial light is supplied by twelve 300-watt nitrogen lamps. The floor is of gray Tennessee marble and the walls covered with a light-toned yellow Italian marble; the plastered ceiling is painted in light color. The reflection of the window screen and ceiling light is very apparent on the marble wall covering. The artificial lighting of this room, in connection with the color of marble used on the walls, closely approaches the effect of daylight. It is considered a successful treatment by the surgeons.

In Fig. 10 the floor and base is of dark gray terrazzo, the walls are painted in two tones of light brown. The artificial light is provided by a swing-



Fig. 12. Operating room of the Mason Hospital, Clarksburg, W. Va. Edward F. Stevens, *Architect*.

ing crane electric lamp with local illumination provided by an electric lighting unit on a movable standard.

The operating room of the Benjamin Stickney Cable Hospital, Ipswich, Edward F. Stevens, Architect, illustrated in Fig. 11, has a floor of gray Grueby sand tiles and wainscot of buff Grueby tiles. Walls and ceiling are painted light buff. The window is glazed with clear glass in double sash. The 300-watt nitrogen lamps are installed in semi-indirect, semi-enclosing fixtures so located as to furnish a uniform illumination of adequate intensity.

The room shown in Fig. 12 has a floor of white flint tiles, wainscot of white glazed tile and walls painted a light cream color. The artificial lighting is furnished by four 300-watt nitrogen lamps in special reflectors similar to those shown in Fig. 11.

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The result of the white dado is not satisfactory, causing an unpleasant brilliant glare of reflected light.

In the room shown in Fig. 13, in the Harper Hospital, designed by Malcomson and Higginbotham, architects, the floor and base is of gray terrazzo, the dado of 6 x 6-matt finish green tile. The walls and ceiling, painted in light color, aid in furnishing an adequate intensity of light on the work.

Figs. 14 and 15 illustrate two operating rooms with floors of 1 inch green hexagonal tile and wainscot in green tile. The plastered surfaces are painted a cream tint. The cove treatment at the floor line is carried under the door casings as shown in Fig. 15.

Fig. 16 illustrates a private operating room for special work; the floor and wainscot are of pink gray matt-glazed tile. The plastered surfaces are painted in light tints.



Fig. 13. Operating room of the Harper Hospital, Detroit. Malcomson and Higginbotham, Architects.

The illustration on page 681 and Fig. 17 are of the clinic and an operating room in the Chicago Lying-In Hospital by Richard E. Schmidt, Garden and Martin, architects. The floors are finished with a gray flint tile and the wainscot with a green semi-matt tile. The plastered surfaces are painted in light tones. Of the large number of operating rooms designed by this firm, but few have been finished with tile on the walls. It is their custom to finish the cement plastered walls with enamel paint in colors or tints as may be desired. Attention is called to the small dial under the clock dial. This smaller dial has a large hand which is visible from all parts of the room and beats seconds, enabling the surgeon to accurately measure the elapsing time.

When planning the Alexian Brothers Hospital, Chicago, in 1910, Mr. Schmidt used a gray floor

tile. In requesting this, the surgeons stated that the light reflected from the white floors had the same effect on the eyes as that from snow. This made it impossible for some seconds after a glance at the floor to place the proper values on the colors of the



Fig. 14. Special operating room of St. Joseph's Hospital, Stockton, California. Thomas Mulcahy, Architect.

tissues in the operating area. Several years ago he used a gray tile floor and wainscot in combination with green paint on the walls and ceilings in the operating rooms of the Mothers' Aid Hospital and has used this combination of colors a number of times since then with satisfactory results.

A steady light is a necessity, and operating rooms into which direct sunlight enters are very objection-



Fig. 15. Minor operating room of St. Joseph's Hospital, Stockton, California. Thomas Mulcahy, Architect.

able on this account. This is overcome to a great extent by locating the operating room so that the exposure is to the northern sky. The skybrightness in this exposure can be variable in a marked degree, resulting in a fluctuating light. There is probably no way in which this can be overcome on

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certain days except to resort to artificial illumination.

A defense of the white operating room has been made by Captain William Lee Secor,* M. D., A. M., F. A. C. S., in which he gives two reasons for admitting sunlight to an operating room; first,



Fig. 16. A private operating room at Indianapolis.

to illuminate it, and second, to sterilize it. The illumination of a room depends on the amount of light admitted to the room and the amount of light that is reflected from the surfaces with which it comes in contact. It is said that the coefficient of reflection of white is 88 per cent, light green 42, medium green 14 and dark green 11 per cent. What is the advantage of going to great expense to permit an abundance of light to enter an operating room through expensive ground glass windows if only from 11 to 42 per cent of it is to be used and the rest absorbed by the surrounding surfaces? This may be questioned because the light falling directly on the work plane or field of operation is not affected in its initial intensity by the surroundings. It is, however, reinforced by that light which is reflected from the walls and ceilings. The light reflected from the floor and a 5 or 6 ft. high wainscot could not find its way to the field of operation except it was reflected back from the ceiling, and in this case its intensity would be decreased to a negligible amount. Therefore it does not appear that a tinted floor and wainscot has any effect on the light at the field of operation where it is needed.

Continuing, Dr. Secor states that to tint the walls of an operating room not only does violence to the aesthetic and psychic effect of the pure white room, but makes it much more difficult to keep the room clean and sterile. White will show up macroscopic dirt much better than colors and also makes it easier to rid the room of microscopic contamination, for the effect of strong light upon some of our most dreaded bacteria is well known.

*The Modern Hospital, September, 1917.

He states that about four years ago they had built at the hospital at Kerrville, Texas, an octagonal operating room with a pyramidal ceiling and roof. Four sides of this room, from the floor to the apex of the ceiling are glazed with heavy ground glass, which admits an abundance of north light. The walls and the furniture are finished in white. To obviate the bad effects of the glare large amber-tinted spectacles are worn with a modified Mayo cap having a small beak, the back part of its skirt being cut away to make it cooler.

This is an unusual construction of an operating room and one which evidently provides a decided excess of light, which necessitates reducing the effects of its intensity on the operator. Whether the use of amber-colored spectacles is a drawback in performing an operation is a matter for surgeons to decide, but to a layman the addition of such paraphernalia might suggest a restricted free-



Fig. 17. Operating room in the Chicago Lying-In Hospital. Richard E. Schmidt, Garden & Martin, Architects.

dom of action which is not desirable in any process requiring concentrated attention and skillful manipulation.

The use of white surfaces to make apparent the presence of macroscopic dirt would indicate laxity of good housekeeping. There is no reason why a black surface cannot be as clean and sterile as a white surface; it is simply a question of janitor service. It is a well-known fact that sunlight destroys many species of bacteria, and it is reasonable to suppose that bacteria lodged on a dark surface would be destroyed by the light, as the light would pass through the bacteria to a dark surface as well as to a white surface. In this case the bacteria is merely a substance interposed between a source of light and another substance. A person standing in front of a dark wall feels the beneficial

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effects of sunlight as much as if a white wall were behind them, the reflected heat and light from the white wall being the only difference.

The aesthetic and psychic effect of a white room is largely a matter of habit and is a resultant of accustomed surroundings. If a white operating room had never been used this condition could not exist. As there seems to be a decided difference of opinion on this subject it is of importance to the architect, who is called upon to design these rooms, to inform himself on the subject through every source of information that is available.

A Definition

A DEFINITION of the engineer has been formulated by A. H. Krum, Director of Engineering, United States Employment Service, Chicago. It reads:

"An engineer is one who economically directs man-power and, by scientific design, utilizes the forces and materials of nature for the benefit of mankind."

It is entirely proper for the engineer to arrogate to himself these functions, but they apply, with equal validity, to the architect.

The engineer constructs the bridge, railroad and all other means of transportation for the convenience and material benefit of mankind. He also irrigates the waste spaces and renders them fertile and productive. The water works and the sewerage system add to man's physical comfort and sanitary existence. These things, however, do not comprise the most essential needs of human beings. In all climates and all places, shelter and food are the first requirements of human life. Peoples have lived as great nations without the things attributed to the engineer, but never without food and shelter. Providing shelter is particularly the function of the architect and makes him essential.

Many of the things which the engineer claims as entirely within his province are a part of the architect's activities and have been apparently usurped to some extent by the engineer. The word architect can be substituted for the word engineer in Mr. Krum's definition with entire propriety, but a complete definition of the architect must include another attribute.

To the utilitarian sheltering of human activities must be added that aesthetic development and refinement which has the acknowledged power of spiritual and moral uplift. It is this quality which is possessed by buildings throughout all the ages that has had a marked effect on the advance of civilization. The element of beauty, expressed aesthetic design, adds that value which has caused

the desire to possess and retain the things which incorporate it. Existing buildings of past periods of the world's existence all possess this quality—all others have perished. This is the absolute demonstration of the eternal quality of aesthetic design which the architect has added to the bare necessity of providing shelter.

No individual possesses the abilities necessary to produce works of beauty and utility of the perfect degree. But those monuments of building construction which have these requisites are the joint production of both the architect and the engineer, and are living demonstrations of the necessity of these two, working in peace and harmony, in order to secure the desired objective.

Illumination for Safety

THE relation between light curtailment and accidents has been discussed by R. E. Simpson,* in which he refers to a survey of 91,000 accidents from the records of The Travelers Insurance Company for the year 1910. Of these 21,658, or 23.8 per cent, were attributable to improper or inadequate illumination. As there has been a vast improvement in the art of illumination since that time it is probable that the number of accidents due to this cause has been decreased, but there is reason to believe that at least 18 per cent of our industrial accidents at this time are due to that cause.

New factories are lighted often by up-to-date equipment consisting of high-efficiency lamps without providing proper reflector protection. This comes from a failure to appreciate the difference between light and illumination, between a reflector and a wire guard. The elimination of accidents due to this cause is simply a matter of purchasing approved equipment and installing it properly. It seems proper to include illumination in the list of mechanical safeguards. Especial attention should be given to those neglected places, stairways, elevated gangways, passageways and storage spaces. Any line of travel must be well lighted to insure safety. The British Government survey of industrial hazards shows that 40 per cent more men are injured by falling and stumbling in the winter months than in summer months. The physical condition of stairways and passageways is the same for both periods, the difference being illumination.

It is the duty of the architect to safeguard clients by planning the lighting himself rather than to leave it to an electrical contractor, without appreciation of illumination for safety.

*Twelfth annual convention of the Illuminating Engineering Society, New York, October, 1913.

Industrial Information

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

Less Noise !

The overtaking, enervating hustle and bustle of city life is not exclusively due to the need for rapid output. It is the noise, the sharp, grating, irregular noise, or the dull, constant vibration of sound always about us that produces an artificial stimulation or urge which causes that tired and irritable feeling at the end of the day. Loud vibration has other ill effects. Among the workers it is responsible for misunderstood instructions; the structure that houses it gradually weakens.

Vibration of this objectionable kind should be suppressed, and it can be suppressed without much trouble. For the purpose, Nonpareil Cork Machinery Isolation is advocated by its makers, The Armstrong Cork & Insulation Co., with headquarters in Pittsburgh, Pa. It is useful wherever noise is to be deadened; hospitals, libraries, machine shops, printing plants, steamships, apartments, hotels, and in manufacturing establishments in which vibration should be reduced.

The desired effect is produced by the character of the material. Nonpareil Cork Machinery Isolation is composed of pure granulated cork compressed in metal molds and baked at a moderate temperature. This results in a resilient, moisture-proof material. The baking process brings out the natural rosin of the cork, cementing the granules firmly together and making the use of any artificial binder unnecessary. After baking, each sheet is trimmed and sanded to insure uniform size and thickness. Aside from its value as a sound deadener, which has received favorable comment from a large number of users, this product has the two added advantages of simplicity in application and moderation in cost.

Clean Walls

Until recently no one has been at all disconcerted that months of accumulated dust would remain on the surface of the walls that it has heretofore been impossible to clean without risk to the wall decorations.

Sanitas is a product of the Standard Oil Cloth Co., 320 Broadway, New York, which deserves consideration as a wall covering susceptible of a good cleaning whenever one is needed. If you know people who, in rehanging pictures, have been em-

barrassed by faded and discolored walls, the guarantee of Sanitas will prevent future discomfort from the same cause. Sanitas is a cloth wall covering finished in durable oil colors, four coats applied evenly and smoothly by machinery and dried in electrically heated ovens of immense proportions. This oil surface is said to be non-absorbent and impervious to grease and water stains. The ease with which it may be cleaned and the fact that it is smooth and non-porous enough to keep germs out are factors in its favor. It fits tight, so that it will not crack or peel if properly applied. It can be placed direct on old walls or new ones. It is believed that rough plaster and scaling kalsomine can be overcome by its use. The makers especially commend Sanitas for the warm sections of the country because peculiarities of climatic variations do not seem to affect it. Some of the Sanitas coverings have been known to give service from eight to twelve years.

This material comes in a large variety of decorative designs, reproducing effects of tapestry, leather, grass cloth, etc., at a moderate cost, as well as glazed styles for bathrooms and kitchens.

A booklet furnished by the Standard Oil Cloth Co. gives full particulars, including directions for hanging. It also contains a little batch of samples showing styles for every type of room both in plain solid tints and with stencil decorations.

The Wall Around the Child

To demonstrate to architects the value of wall decoration as an architectural asset is not necessary. They have long been aware of its usefulness in this capacity. But in places where children spend much time, wall decorations have an even greater importance, for here the educational element is an added factor. The imagination of the impressionable child is guided by his immediate surroundings. By color and form, by picture and story, will he be aroused to active thought and interest in the world outside.

These thoughts are prompted by a booklet containing more than a usual fund of suggestion along these lines, printed for the Schmitz-Horning Co., 777 East Eighty-second Street, Cleveland, Ohio. This is invitingly illustrated in many colors and depicts a large variety of panoramic friezes for interior use. The object of the book is to exploit

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San-kro-mura wall decorations. The claim is made by the Schmitz-Horning Co. that all their productions are sanitary and may be readily cleaned with a damp cloth or sponge without in any way causing the colors to stain or fade. The book shows possibilities for wall decoration that are of considerable interest.

While no specific discussion is given as to the limitation of the material for any particular room, it is felt especially available for children's nurseries and playrooms, their schools and libraries. In these places it is fitting that decorations wisely chosen should lend their charm and exert their influence.

Resting While Working

Much talk is made on the subject of woman in industry and the desirability of certain improvements in equipment to make for her greater convenience. What of this woman in her home? Should not the double duties of industrial work and household administration both receive attention, and the business of each, where possible, co-ordinate with the other?

It is conceded that the woman in industry must either before her outside work or after spend much time and energy in her kitchen. Why not install equipment in this all-important room which will make activity there a pleasure and not a drudge? With the use of the Hoosier Kitchen Cabinet sold

by the Hoosier Manufacturing Company in New Castle, Indiana, convenience and efficient performance are practically guaranteed. If you accept one on trial and it does not justify the claims made for it, the full cost is returned.

The Hoosier Kitchen Cabinet is a spacious dresser containing all manner of practical implements and accessories without any superfluities. It comes in many sizes adaptable for small and larger kitchens. By its use the worker may sit at her work, for the things she needs are within easy reach. She saves many steps each day, and this, while an undoubted advantage for the tired business woman, is also a bait for the domestic servant.

This cabinet saves food by preventing waste in measuring and mixing and by keeping supplies in protected places. It is sensibly arranged with the most used articles nearest at hand.

In addition to the obvious requirements of such a cabinet, many details have been thought of and incorporated to take away the irksomeness and the little trying troubles; there is a cook book holder for open or closed book; a bill file for meat and grocery bills; a labelled compartment tray for money; a patented want list. There is also an extension table which slides out beyond the base. All the accessories are made in the most approved way as to durability and cleanliness.

These cabinets range in price from about \$40.00 to \$70.00, and contribute much to the efficiency of a well-regulated household.