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The AMERICAN ARCHITECT



IN THE GARDEN—PETIT TRIANON, VERSAILLES

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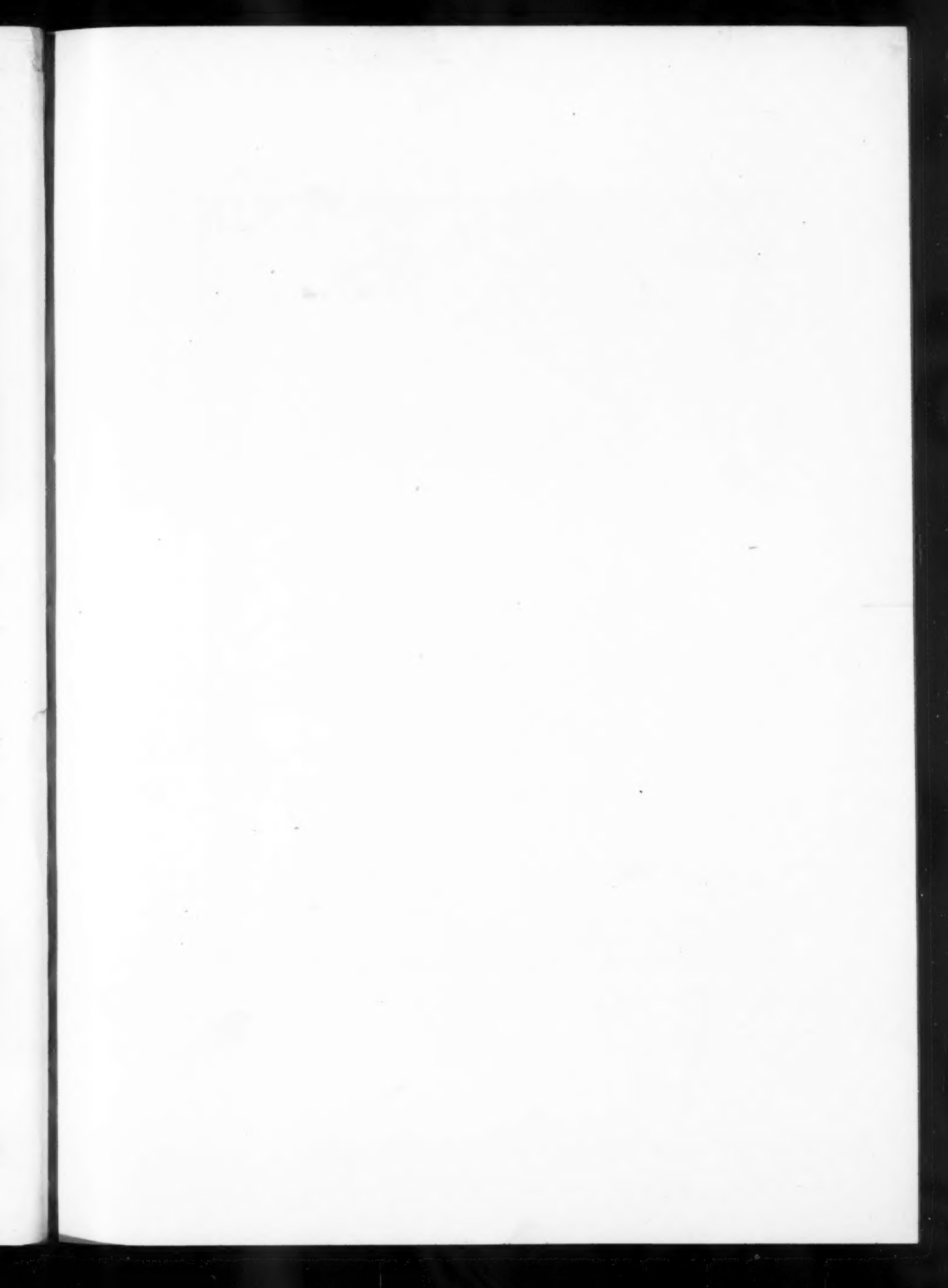
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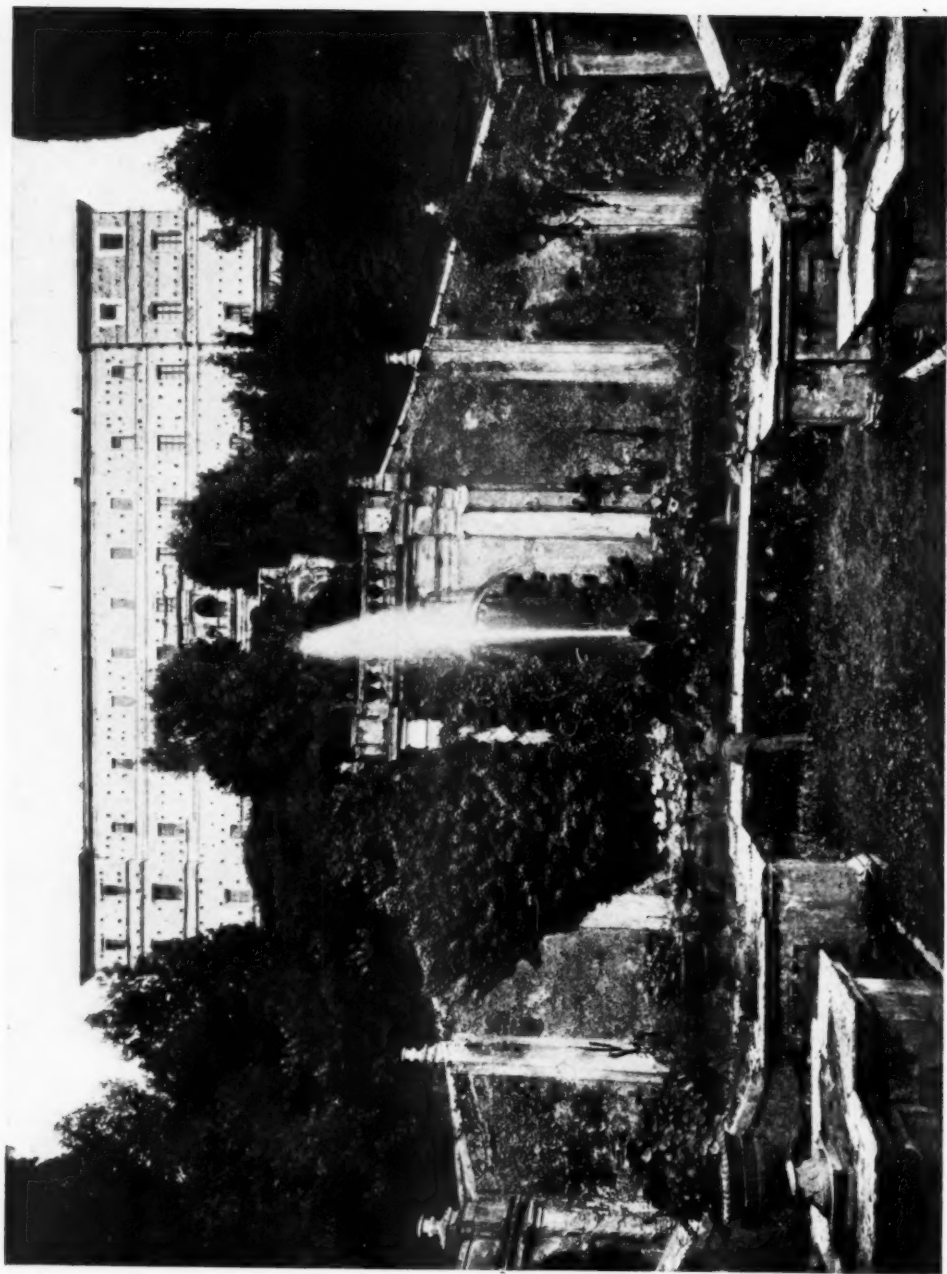


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DETAIL IN GARDENS, VILLA D'ESTE, ROME, ITALY

THE AMERICAN ARCHITECT

THE AMERICAN ARCHITECT

VOL. CXIV

WEDNESDAY, OCTOBER 9, 1918

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The Dramatic Note

Concerning a Fourth and a Fifth Dimension in Architecture

By JOY WHEELER DOW

TEXT-BOOKS which undertake to teach people how to judge architectural design are useful and necessary in many cases where the sense of observation is latent or sluggish. The books specialize in what belongs to the education of everyone—what is necessary for the layman as well as the professional, whether it be intuitively cultivated before we have become acquainted with the books, or afterward, and that is the *training of the eye*. The discussion, however, of such elements as mass, proportion, lines, balance and cases where symmetry should be disregarded, may be pursued *ad infinitum* without arriving at the real secret of successful architectural design. The science treated in the books devoted to such matters is only the staging for the drama without which we produce the plans and elevations for an empty playhouse as cold as a sepulchre. The architect has finished only half his work. It is the play that must be there, too, or at least, the scenario for the imagination to fill in with actors, dialogue, music and the audience.

There are "how to" books other than architectural treatises, which have undoubted missions, as well. There are books on how to listen to music, how to appreciate pictures, and then, there was Ovid's "Art of Love," all intended to ameliorate the monotony of existence with those unenviable natures who have no intuition for anything gracious or charitable, and who are, thereby, missing things in life, contrary to their own philosophy, which is the philosophy of materialism.

The technique of anything worth doing is important; but a knowledge of it, alone, can supply few of those intellectual pleasures, and none of the spiritual ones the average human being susceptible to impressions derives from an afternoon in the galleries of the Metropolitan Museum, or from an evening's performance of Faust or Carmen at the opera. I believe it was Impressario Grau who declared that, as far as filling the house was concerned, there was no occasion for other selections

to satisfy the musical requirements of most people, so full of everything demanded of an opera are these two I have named. It is the same with a painting or piece of architecture. Faust and Carmen are like nature in springtime (the idea is cribbed from M. de Buffon) teeming with life, harmony, melody, human sentiment and dramatic environment.

In this article I have no idea of changing those temperaments which are

chasing the coveted yet elusive spirituality they may never be able to profess. It is impossible—for temperaments, like commutation tickets, are stamped with rubricated letters—"Not Transferable"; but I have some hopes of locating the dwelling place of this elusive spirituality in architecture, and defining it for everybody with ordinary intelligence, though the use and philosophy of the thing may have to remain enigmatic in certain cases.

By consensus of educated opinion, and by the infallible test of time, all the examples of genre architecture herewith illustrated are allowed to be beautiful. Why is it? Or—as an unimpressible



WHITE-PINGREE HOUSE, SALEM
Probably the most successful porch of its type extant

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soul once said to me—"What do you go by?" And why, in the last analysis, is the portrait of an aged woman of the last century allowed to be more interesting, yes, and more beautiful than the delineation of a young girl of our own time, chosen with cunning to appeal primarily to the sex instinct, and vividly colored for the title page of a popular magazine? Well, it all lies with the dramatic note, i. e.,



A COLONIAL COURTYARD, SALEM

a certain psychical dimension everything successful in the realm of art possesses to a greater or less degree, and which can therefore be more forcibly presented to the understanding by a purely histrionic incident which I will select. Let me say, in passing, that the oftener an incident equally didactic is reflected in or suggested by a dwelling house or a portrait, the greater becomes its fame.

I think it was back in the theatrical season of 1883-4 that a play by Bronson Howard appeared upon the boards of the old Madison Square Theatre, entitled "Young Mrs. Winthrop." It was a society play of the time, but nearly as full of the business of trying to get the most material enjoyment out of life, as would be a society play of to-day. Running through it, however, as a counterpoint to this sordid sort of thing, was a love affair between an honest young man called Herbert (the part was acted by Henry Miller) and a blind girl named Edith (a part taken, I think, by Enid Leslie). Then, Agnes Booth acted the character of an egregious divorcée—Mrs. Dick Chetwyn—who always managed to miss nothing so long as her gowns were becoming, and she hadn't a headache.

In a scene where Herbert assists Mrs. Dick into her evening wraps, she detects the odor of benzine on his gloves, and taxes him with resorting to a kind of economy as unpleasant as it is incomprehensible from her standpoint. Herbert is obliged to confess that he has been saving-up his earnings in order to marry Edith and was accordingly cleaning his gloves. He confides to Mrs. Dick

that he longs for the day to come when he can work for Edith; and Mrs. Dick has to wait for the applause which follows to subside before she can go on with her lines, applause not for the actor, but for the *genuine* note in the midst of all that is spurious and artificial. But Bronson Howard threw away a far more impressive climax within his grasp. He missed a scene between Mrs. Dick and Edith. I mean a scene which is logically waiting for Edith to tell the utterly selfish woman of the world that the time-honored phrases of the marriage service, "In sickness and in health, for richer or for poorer," mean things to her, and that she is looking forward not so much to entertaining company with Herbert, dining out with Herbert, and going to the play with Herbert, as she is to *taking care* of Herbert—in sickness and in health, for richer or for poorer—to watching over him as a mother; to rising in the dark of winter mornings, that Herbert may have the proper things for breakfast, that Herbert's outer clothing may be dry; and his under clothing warm, mended and ready; to making sure that there is a fire of wood burning brightly on the hearth, and candelabra on the breakfast table, the prettiest china and silver—"not so much for company, Mrs. Dick, as for Herbert and me—to have—at our holy communion of breakfast!" And then Edith should draw nearer the footlights, and, half addressing the audience, repeat these words:

"Oh, Mrs. Dick, you can't understand, I know. There is some excuse for *you*. You never saw it, I suppose; and I shall not be able to see it, either, because—because, you know, I'm—blind; but it *will* be there!"

If Edith had said this,—well, she would have received an ovation;—for strange to say, even in those natures where a deep-seated yellow streak sends out fibers and tentacles like some hideous



ON THE ROAD TO HOLDERNESS, N. H.

"The fifth dimension of a building, then, is the enchantment of its life story multiplied again by a perceptible aureola which makes known to us and enshrines the devotion and sacrifices there have been in the lives of those who have dwelt beneath its roof."

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cancer, until all the moral philosophy is warped, still, the indestructible percentage of godliness in all nature, driven into a corner, bursts its confinement, and dominates the yellow streak, at last. Even Becky Sharp once turned upon the wishy-washy Amelia Sedley and berated her for lack of gratitude—the most diffident of the virtues—to the one person in all Amelia's life who had treated her decently—Major Dobbin.

Believe me, it is the essence of this "holy communion of breakfast" the Colonial doorways exhale, and the windows of iridescent glass which it takes the atmospheric vicissitudes of a century or two to produce, that have imparted to the houses a certain hall mark of intrinsic beauty, and at the same time an added psychological dimension in architecture. I have called the fifth to distinguish from the fourth dimension, or that which expresses the life story of a building, whether the story be good or evil in its essential features. The fifth dimension of a building, then, is the enchantment of its life story multiplied again by a perceptible aureola which makes known to us and enshrines the devotion and sacrifices there have been in the lives of those who have dwelt beneath its roof. The sensitized photographic plate in the camera usually catches this aureola, while to the eye unaided by inward susceptibility it is likely to remain an invisible power. My only regret is that it cannot be palpably reproduced in bright, amber glass like the halos around the heads of the saints in the cathedral windows, so that no one not truly blind need be slighted.

Turning for a moment to the left of the picture, it may be curious that a single untoward event in a long chapter of otherwise charitable history should be able to cast its shadow over a beautiful exterior in architecture because a house is called haunted and avoided; but it is so. Illustrations of the White-Pingree house in Salem are rare. The Salem guide books make no mention of it, and photographers avoid it as though from fear that some lurking evil might smash the glass in their equipment. The murder once enacted within its walls, Daniel Webster, in his famous peroration, called a "money-making murder"; but, for all that, his entry into the case has made it a classic and effaced the stigma. Then the victim, Captain White, was not exactly

nice and not much sympathy went out to him. He *did* have enemies in the world, although Daniel Webster, as attorney for the state, pretended he didn't; and these enemies persisted that among other tricks that were mean he paid the sailors of his merchantmen with queer money. At any rate, the portrait they show you as his, in the interesting collection of the Essex Institute, is the portrait of a man you would not trust with a plugged nickel.

The murder happened a long time ago, and art, which is only another name for charity, appears to have got the upper hand of the goblins, and ended their régime. One does not expect to run into the avenging ghost of Rizzio on the stairs at Holyrood, nor the ghost of Thomas à Becket before the high altar of Canterbury Cathedral, nor the ghost of the Duke de Guise in the Chateau of Blois. The episodes in the histories of these famous buildings have become picturesque traditions, no longer malign influences; and it seems to be so with the house that has the most beautiful dooryard in Salem, unless, indeed, it be the one shown in the other illustration from "American Renaissance" where—

—"— an unseen censor
Swung by Seraphim—"

has produced atmospheric conditions that are in perfect accord with the holy communion—of breakfast.

In our own day we have witnessed what a blight upon a house a murder usually is. They had to turn the Nathan house in West Twenty-third Street into an Adams Express agency. The good, old early nineteenth-century dwelling, No. 31 Bond Street (I believe it has long since ceased to exist) where Dr. Harvey Berdell was murdered upon a dreary winter midnight in 1857, was, ever afterward, avoided as haunted; and when Mme. Restelle was found drowned in her bath in upper Fifth Avenue, about 1878, her house practically had to be torn down before anything could be done with it commercially. What architectural merit it possessed was negatived by an intangible, sinister influence. People still believed in ghosts, and, not a few, in anathemas.

But let us dismiss this gloomy side of the subject and return to the things that make life worth living, commemorated by the holy communion of break-



A GREENWICH VILLAGE
HOUSE
Middle nineteenth century work

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HOUSE AT RIDGEFIELD PARK, N. J., EIGHTEENTH CENTURY. DUTCH INFLUENCE.

"It is the bit of cake that some other sentimental kid with the breakfast feeling is saving on the shelf of some irresistible Colonial fireplace with its crane, trammels and andirons, for *you* and for *me*."

fast—to the love that no *work* can cure, which so animates the portrait of my grandmother Dow (she had thirteen children) that it has been called a masterpiece among portraits, for no other reason that I can see. For no other reason could the deep seams and wrinkles in the face become adorably beautiful, like the same kind of mute evidence of faithful stewardship we find in the time-worn houses with their overgrown perennials and their sundials that the impertinence of man cannot make tell lies as it does the clocks, after the manner of the Germans. You cannot coerce the gnomon of a sundial. It is Kaiserproof.

I am well aware that all this intimate analysis of mine is as meaningless without the inward susceptibility as are colors to the blind. You have heard people say "as cold as charity." A curious code of false chivalry makes it proper for them to disdain the Angel of Charity, and treat her cavalierly, so as better to entertain the pagan gods of vain ambitions; but I am looking further into the vista of what usually happens. The conversion of most people, which, after a decent time, must be exploited, works automatically. It is not always high noon with our strength and health. Our light fails betimes, our vitality ebbs, and we come to see things differently. Some day we may be wounded in battle, not necessarily with the Germans, but in the battle for existence; not in the tragedy of war, but in the tragedy of peace which supervenes; and, take it

from me, there is not a heap of difference. The tragedy of war, like cyanide of potassium, works quickly; the tragedy of peace, like bichloride of mercury, slowly, but—inevitably. And then the Angels of Mercy and Charity come nearer than they have ever been, and their voices are distinctly heard.

Now, if I have unwittingly offended the camouflage optimism of anyone who prefers to close the eyes to realities, as does a spiritualist in a trance, and to profess that God is love, let me make good, and reassure my readers, by recommending an unfailing nepenthe to tranquillize and restore them to happiness without any particular profession of faith. Just do this: Cultivate the arts and graces exemplified in these illustrations of Colonial houses. Cultivate the love where you do things

rather than profess—all that I have summed up in two very homely words, "breakfast feeling"—and you'll be happy, *quand meme*, whether God be merely an easy mark to be imposed upon or—as I believe—*Captain of His ship*.

Of course, very much of this breakfast feeling—the elements of sacrifice and devotion inherent—would not seem to be necessary in such opulent-looking mansions as the Grosvenor house at Providence, the Johnnot-Nichols house at Salem or the Arnold house at Weymouth, all fascinating for



THE "GOODEY COLES" CHAMBER IN "KEEPSAKE"

The Jacobean-Colonial House at Marquette, Michigan.

"It is the play that must be there, too, or, at least, the scenario for the imagination to fill in with actors, dialogue, music and the audience."

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DETAIL, PRIEST CLARK HOUSE, AMHERST, N. H.

It is the essence of this holy communion of breakfast the Colonial doorway exhales."

what Eliza Southgate calls in her edifying "Letters" — "The ease, elegance and hospitality they express." The love that no *work* can cure would be more forcibly suggested by the old farmhouse at Ridgefield Park, the one on the road to Holderness, by the Jacobean-Colonial house at Guilford, or wherever it might look to be a hard-ground case of "make your husband chop the wood."

In the Greenwich Village house, No.

25 Bank Street, where I was born, I do not recall that my mother ever once rose early, lighted the fire and prepared breakfast. She always had a number of servants. With the unfavorable start of a rich woman, I never knew her, though, to jockey for position, as most rich fellows do, nor to side-step responsibilities to which the breakfast feeling is the prelude—responsibilities that are with us all day, if, at the final accounting, we do not wish to be covered with confusion and have to try to explain: "Why, Lord, when saw we Thee an hungered, athirst, a stranger, naked, sick and in prison and did not minister unto Thee?"

During the War of the Rebellion I have heard that people would call and tell my mother that she knew nothing of the poverty and suffering there was in the world about her. To live as well as we did in those times was very much by the misfortunes of others. I realize it, now. The fertility of the earth had, in no wise, increased, nor had any inexorable law in nature given way; but my father—the late Augustus F. Dow—could not help making money any more than I can help *not* making it. I mean money besides one's wages, and where not every cent is requisitioned, beforehand, for bread and butter. If my father ever knew the meaning of the words "thrift" and "economy" as I do,

they were not in his daily vocabulary. Yet, in spite of his extravagances, he was successful, and forged ahead, setting at naught all the Pre-Raphaelite aphorisms such as "A penny saved is a penny earned," "Save your money, boys!" etc. Success in life ever remains as problematical a thing as is extricating oneself and a dependent companion, with credit, from a field in which an untrustworthy bull is at large.

"You may do whatever's right,
Be chivalrous, and fight;
Still, everything depends upon—
—The bull."

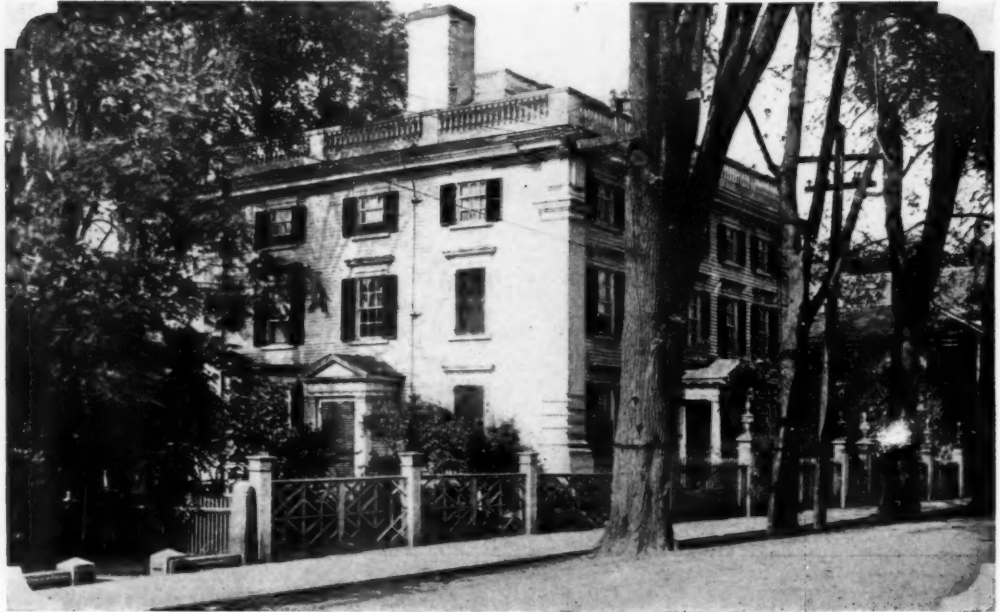
It was an age of family devotion, order and *bienseance* in Greenwich Village, those *old* war days. It was the side of Greenwich Village that nobody hears about now that the miserable Bohemian life is exploited to the point of nausea, about the abnormal men, and the women who smoke cigarettes. I once heard an old-time Greenwich Villager reply to the imputations, with evident intolerance: "Yes, I have seen the 'babies' at the 'Cremorne' and the 'Buckingham' smoke; but I have never yet seen a gentlewoman smoke." The "Cremorne" and the "Buckingham," I regret to say, were two notorious dance halls which formerly flourished on Sixth Avenue in the Chelsea Village section of the city; and the 'babies' was a colloquial reference to the deities of the *demi-monde*. Neither one of my parents had a selfish interest outside their home, and there were many homes in Greenwich Village like ours.

It has been told me so often that I have come to have a sub-conscious recollection of one day as a child when I placed a piece of cake upon the shelf of the chimney-piece in the second-story, rear



The dramatic incident, exemplified by the Arnold House at Weymouth, Mass.

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JOHONNET-NICHOLS HOUSE—SALEM (LATE 18TH CENTURY)
Designed by Samuel McIntire



THE GROSVENOR HOUSE ON ANGELL STREET
Reflecting the ease, elegance and hospitality of eighteenth century prudence

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This ancient building at Guilford, Conn., was erected in the reign of Charles II; but the characteristic school of architecture developed during the earlier reign of James I continued to hold sway in the American colonies until the close of the seventeenth century. While it is chronologically *Carolusean-Colonial*, it is academically *Jacobean-Colonial*.

chamber of this Greenwich Village house, which I was saving for my father. Some other member of the family, it seems, thinking I might forget about the cake, and it would become stale, fell for the temptation, and ate it. When my father returned that evening, and the cake was gone, I became inconsolable; but they said my disappointment was nothing compared to his, and that he did not get over it for two days. Not that I think he wanted the cake. It is doubtful if he would have eaten it just before supper. Oh, but need I explain? Most of us have times when there is something the matter inside that we do not like to confess to others, for fear that they will call us—"kids."

I will not be so foolish as to contend that this little episode of mine about the cake has had any

appreciable influence upon the architectural aspect of No. 25 Bank Street as it appears to the reader in the illustration; but I *will* contend that the *key-note* of the ever-increasing popularity of the Colonial houses, which gives to their deal boarding a



HANNAH RICHARDSON DOW
1780—1866

tone as pure and as enchanting as that of a Stradivarius violin, is entirely involved with just such genre episodes as that of a piece of cake that some other sentimental kid with the breakfast feeling is saving on the shelf over an irresistible Colonial fireplace with its crane, trammels and andirons for —*you* or for *me*.



WHITE-PINGREE HOUSE, SALEM

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THE EAGLE HUT, LONDON

American Y. M. C. A., erected 1918 in Aldwych. St. Mary-le-Strand Church is seen in the background

From the drawing by Henry Rushbury, Ministry of Information

Plans to Provide Farms for Returned U. S. Soldiers

Secretary Lane announces that the preparation of a program looking to providing farms for returned soldiers has been given into the hands of A. P. Davis, director and chief engineer of the Reclamation Service, who will have general charge of the work, and with whom will be associated Elwood Mead, H. T. Cory, and Frank W. Hanna.

Mr. Mead was formerly in charge of the land settlement work of the State of California. Mr. Cory is the engineer who had charge of closing the Salton Sea for the Southern Pacific, and Mr. Hanna is one of the most prominent engineers of the West. Mr. Weymouth, chief of construction for the Reclamation Service stationed at Denver, will report on possible irrigation projects, Mr. Cory on the

swamp and cut-over lands of the South, and Mr. Hanna on the lands of the North.

"We can have a job at good pay for every soldier who returns from France," said Secretary Lane, "if Congress will give us the financial support needed. And while at work the soldier can be making a home for himself for which he can pay the Government in forty years' time. This plan has received the indorsement of so large a percentage of Congress and the press of the country that it appears to be a probable program; it certainly is a practicable one. We have but \$200,000 now for preliminary surveys and reports, but this will be increased undoubtedly by the incoming Congress. There is enough waste and undeveloped land in this country to give every soldier a farm, but of course no such program is contemplated, because all would not want farms."

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London in War Times

WE are enabled through the courtesy of our London correspondent, Mr. Alfred Yockney, to reproduce two drawings by Henry Rushbury of the Ministry of Information, showing how every bit of available space in London is being utilized for war purposes.

The location of these American Y. M. C. A. huts in the very heart of London accents in the most forceful way the close association we have secured with our brave allies, and will serve to inculcate in the minds of our soldiers, sailors and marines, a great respect for the steadfast bravery and singleness of purpose to win this war, at all times shown by England.

While similar buildings have in this country found temporary lodgment in our public parks, they minister to our men "over here" all in their own country, and not yet removed from an atmosphere that is in most instances home.

But "over there," in England, our men are far removed from their own people, and it is therefore with a sense of gratitude they find a spot in another country where they may have rest, recreation, and good counsel among a people whose aims and endeavors are like our own.

The Road to Victory

THERE is a plain, straight road to victory and only one. America knows that road, for she has traveled it before. It is the "Road of Confidence," and since the day this country took up arms against Germany she has never deviated from that plain, straight road.

The people of America, in their resolution to destroy Prussianism, are spending fifty million dollars a day upon their army and navy, and they have been proving their grim determination by a growing desire to lend their Government all the money it needs in attaining its ultimate and inevitable goal. "The Road to Victory" is subjected to heavy traffic, and needs constant repairing. It can be repaired only for cash.

Cash means Liberty Bonds.

The Government asks no gift from the people, but merely a helping hand, for which it pays ample recompense. Yet even if it paid no recompense, the arrival of America at its destination on that "Road to Victory" would have been well worth the cost of the road's repairs. For our arrival there means the ending for all time of wholesale carnage; it means the freedom of all mankind to live in peace and security against the aggression of power; it means the "pursuit of happiness" for which we fought in '76 and an ending of imperialism as exemplified by the Hohenzollerns. It means that there never will be another Lusitania tragedy, never another rape of Belgium, never another crime of Louvain, and it means that the free peoples of the earth will really be free from the curse of militarism.

Keep the "Road to Victory" clear by buying bonds of the Fourth Liberty Loan!

Why the Building Industry May Cease to Be Alarmed

IF, as stated in Washington dispatches, when the peak of war construction has been reached, a zone system for labor will be established for the equitable distribution of man power, then an important step forward will have been taken.

With such an assurance from Washington, coupled with the further promise that there will probably be a decided modification of the Government's attitude toward construction, the building interests need not continue in their present alarm. A broader and more practical attitude toward building on the part of the various departments in Washington, combined with a better co-ordination of all these departments has had a tendency to unravel the tangled skein of conflicting decisions.

While there is as yet no sharply marked line between essential and non-essential building, men who

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are contemplating construction can receive from their State Council exact information as to whether their projects will be sanctioned, and they will thus be able to proceed with certainty or else abandon proposed operations until the arrival of better conditions. The creation of these various State Councils is a move in exactly the right direction. It will relieve much of the present uneasiness to learn that the sanction of building operations will not rest with the loaning companies, as was at one time proposed, with the result of arousing a very general protest.

These matters are, it is believed, taking on each day a more definite aspect. Much of the hysteria that at one time characterized the general attitude toward building is being allayed. Business need feel no alarm while it finds that the Government is striving to give relief.

Although minor injuries may continue in certain less important directions, the general situation is much improved. With the further successful advance of our armies in France and the settling down of the various administrative departments relating

to our war operations, many available opportunities not realized during earlier periods of our preparation are now being utilized to correct past errors. If we have patience, and patience is a vital attribute of patriotism, we shall see that the building industry will, although perhaps slowly, regain its former stability.

The American Way

All correspondents to our daily press have at one time or another referred to the astonishment expressed by the French people at the rapidity with which the Americans in France have gone about the work of preparing for the needs of the vast army that we have sent to that country. "Today a forest, tomorrow a building, the next day a workshop." This is the way, writes a correspondent to the *New York Times*, the astonished French people describe how the Americans have converted a lone and outlying section into the busiest community, where warehouses, tracks and shops have arisen as if in the night, marking the wonderfully efficient progress of our engineers in France.



THE WASHINGTON INN, ST. JAMES' SQUARE, LONDON.

American Y. M. C. A. for officers. Built 1918, within the Garden and around the Statue of William III. St. James' Church, Piccadilly in the distance.

From the Drawing by Henry Rushbury, Ministry of Marine

Criticism and Comment

The Editors, THE AMERICAN ARCHITECT:

The articles on page 293 of your issue of September 8th entitled "Industrial Housing Now and After the War" and "Good Housing a War-Time Necessity" touch a point of error in the Government's program for housing.

It occurs to me that the creation of large groups of houses suitable for workmen near the plants temporarily active will leave a most unhappy condition in normal times of deserted villages!

Would it not be much better for the future of cities and towns if the Government should take this opportunity to "eliminate slums,"—and there are plenty of them everywhere—thus meeting present needs and cleansing cities and towns for future occupancy?

Boston, Mass.

WM. H. SAYWARD,
Secretary, Master Builders' Association.

The Editors, THE AMERICAN ARCHITECT:

In this time of conflict when the forces of destruction are supreme it is not surprising that architects are overlooked and unutilized; the restlessness that is manifesting itself on all sides is only normal under the circumstances.

The murmurings in the architectural press and the criticisms heaped upon the American Institute of Architects and the profession, chiefly because the United States Government has not employed the profession in carrying out its immense building program are no more than natural. These writings are interesting and will, I trust, prove beneficial. It should be borne in mind, however, that great harm can be wrought in such a time if our best men become restive and allow their utterances to be the expression of pique and impatience. It is painful to be ignored, but we must remember that the principle that conserves and advances mankind is, first to be right in a good cause and then hold to it through every discouragement.

The practices of the profession of architecture in my opinion cannot be vastly different from what they are, because they are the product and logical outcome of practical service. The leaders of the profession are men of scholarship and breadth of vision and of sufficient versatility to adapt themselves to continually changing conditions.

The American Institute of Architects is not an authoritative body. It is the exponent of the profession and not its compelling force. It is the

pooling place of our practices where we seek together to arrive at the best; its rules and regulations can only be ethical matters. Those who would have it a highly organized body for the exercise of power and for the forcing of demands would take away its proper function as an agency of culture. Our profession is dependent upon those who voluntarily employ it for expression. If we could compel patronage the effort in the direction of accomplishing the best would abate. Consequently, organization for the exercise of power is undesirable and derogatory to professional practices.

In the excitement of the present upheaval and apparent fear of the decline of the profession some would herald us into big construction organizations to gain expression. If this were done our services would cease to be professional for our interests would become absorbed in and subordinated to the organization and opposed to the client served. Under such conditions we might get the most but could never do the best. In my opinion those who would depart and merge themselves into "efficiency organizations" to command patronage would leave the realm of the architect. Some make the general criticism that architects give estimates of cost which they far exceed in executing a building project and proceed to advise that architects be required to guarantee estimates. If this were done the architect would cease to be the disinterested adviser to his client and would become defender of himself and thus his position would be false and unprofessional. He should not make positive estimates unless he intends to assume the contract to build. Preliminary estimates can be given based on costs of previously built similar structures and with due dignity. The architect can then guarantee that if bids on his drawings and specifications exceed the preliminary estimates, he will make revisions in same without additional cost to the client to meet the desired limit of cost, and in my opinion remain entirely professional. He is in position by this procedure to show the client exactly what he loses by such revisions.

In thus defending things as they are I do not intend to justify the vast amount of incompetence existing in the profession. This, however, is not the fault of the profession. It is the fault of those who employ incompetent men.

The extension work of the profession, in my opinion, should not consist of compulsions of any kind whatsoever, but should be directed toward public enlightenment on architectural subjects. It

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should also reach out for closer contact between architects and contractors and the many craftsmen engaged in building work. The establishment of clinics or work schools for training and education in the many building arts and crafts should be offered by the architects and the builders jointly and the architects themselves should engage in the actual work in such schools for their better practical knowledge. These things would make for professional advancement and in my opinion prove an inspiration and education to all concerned. The artisans would thus absorb the ideals of the architect and the architect know and understand the work of the artisans. Incidentally the public would be better served by both.

The architect for his achievement must hold himself strictly in the realm of ideals. His outreach must be free and unrestricted. He must be primarily in love with his art to find approach to that which distinguishes him from the other building agencies. But to be a successful practitioner he must also be a capable administrator to attend justly and forcefully to all the human problems in his practice; and he must be a capable constructor in order to select and form his materials into genuine buildings. A good designer, a good administrator and a good constructor, all in one, make the ideal architect and the successful practitioner. Weakness in either one of these three makes a poor architect and a failure. Seldom if ever does any one possess uniformly all three of these fundamental gifts; consequently it is seldom if ever that any one by himself can make a success in practice. By these three things all successes and failures in the practice of the profession can be defined. Correct architectural character in design, correct judgment and the maintenance of justice and righteousness in administration and correct building structure should

be demanded of every architect and these are the things to write about if in so writing the purpose is to offer corrections to the profession.

Whatever may be the pros and cons in criticism, the fact remains that the architect stands at the head of building enterprise. His vocation is the product of necessity and economy and not of mere fancy and luxury. His advice in building matters is invaluable whatever the kind or class of building, and if avoided the lack of it works only harm to the avoider. If then the profession of architecture is such a necessity and economy and is an institution grown up out of the needs of society, those individuals or institutions proposing to build are vastly in their own light when they pass around this needed agency, and, in the nature of things, must be the sufferer. We have not the power to demand patronage but we have the prerogative and privilege and it is our duty to offer our services to those contemplating to build.

Accordingly when our Government entered war, knowing the building necessities ahead, the architects of the United States immediately offered their services. In their opinion they were among the first needed. They believe still that this Government needs them and rejoice at the undoubted evidence of increasing appreciation, however belated it may appear to be.

I regret that architects are not permitted to fight this most devout war with the best of our powers. But we are riding the seas, down in the trenches, ascending over the top side by side and traversing the skies just the same.

In the time of readjustment will come the light of all error. It is then that our advices will be needed and sought. Let us be prepared for this task with full consecration.

Atlanta, Ga.

W. A. EDWARDS.

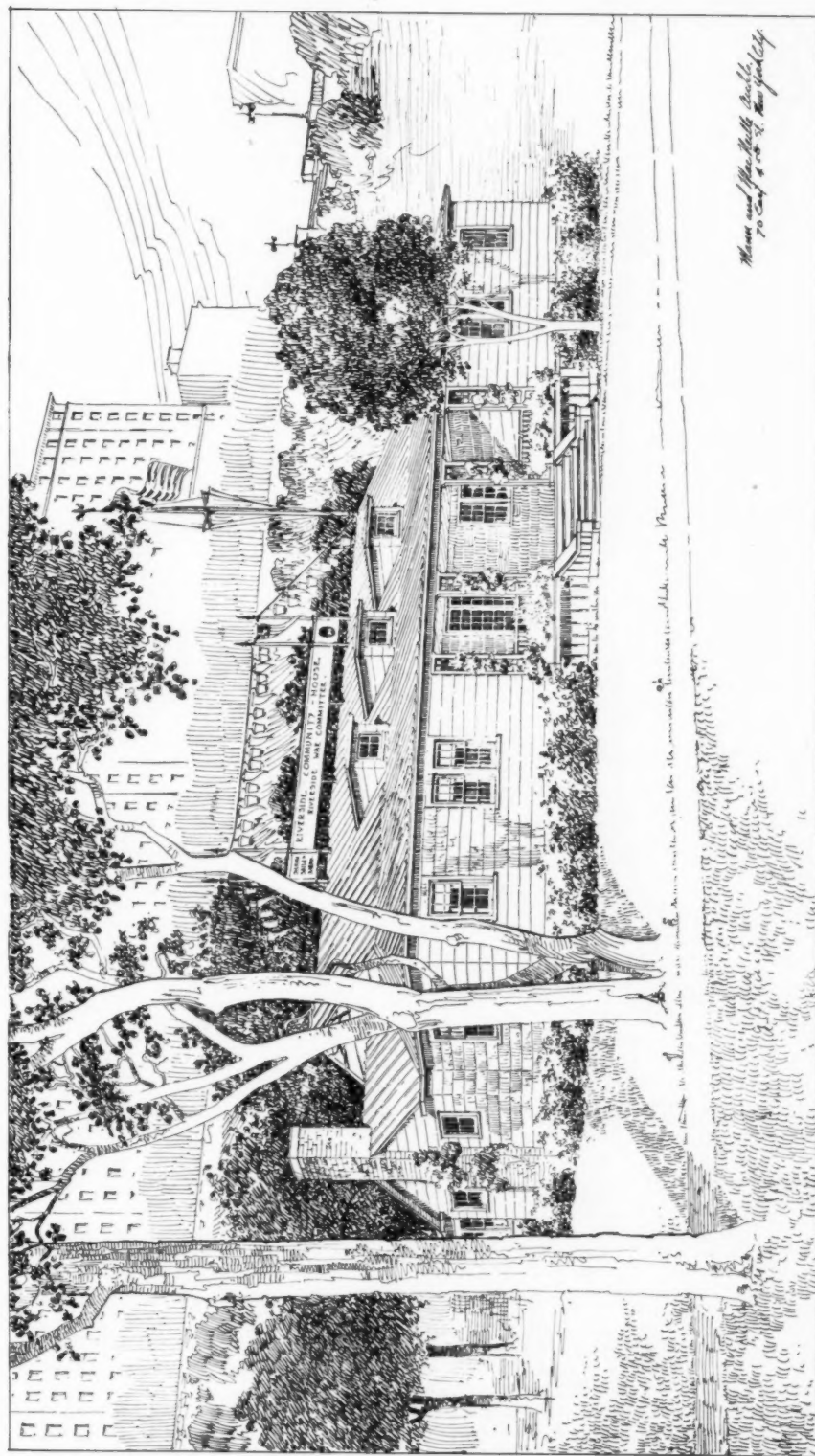
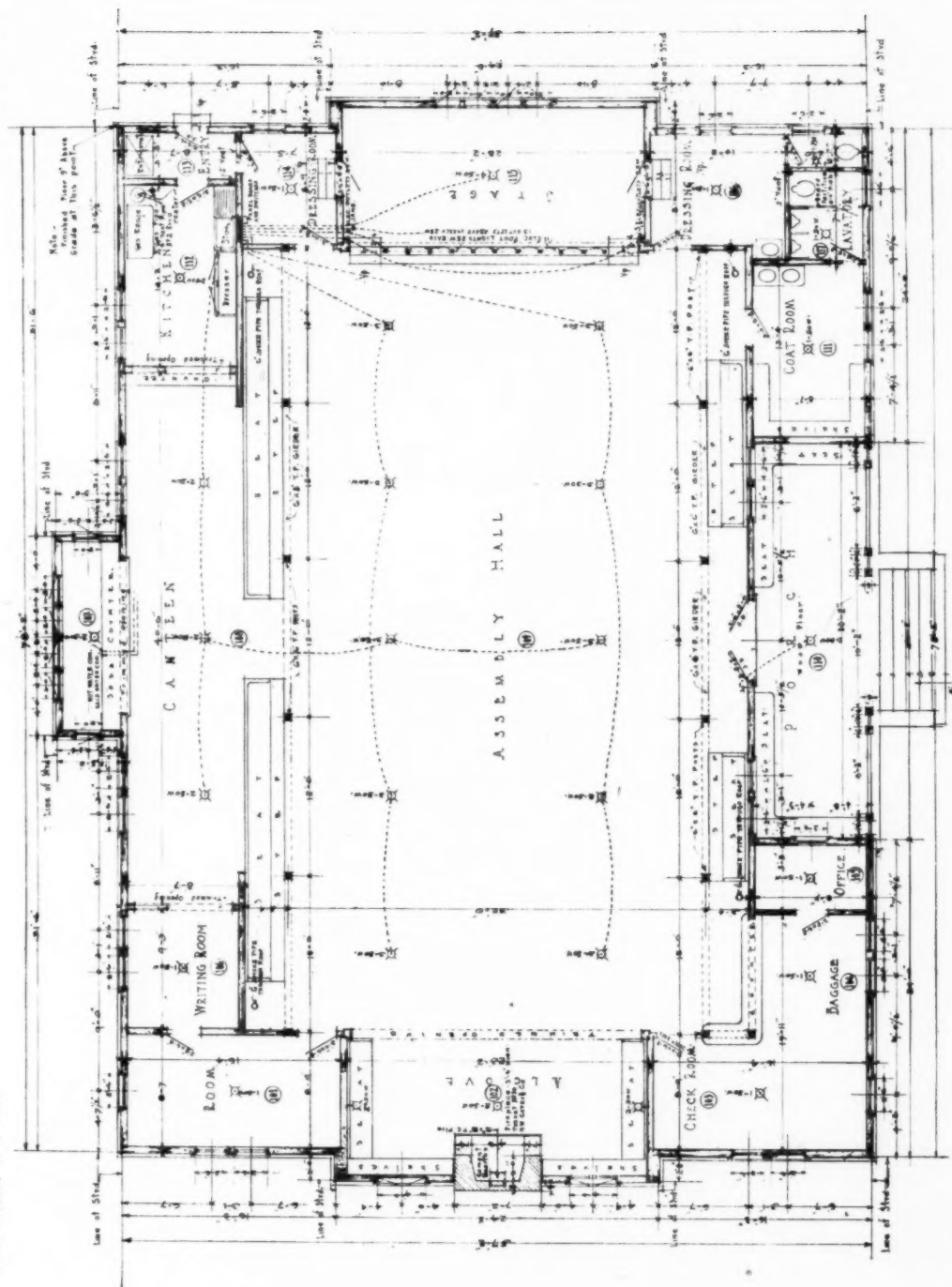
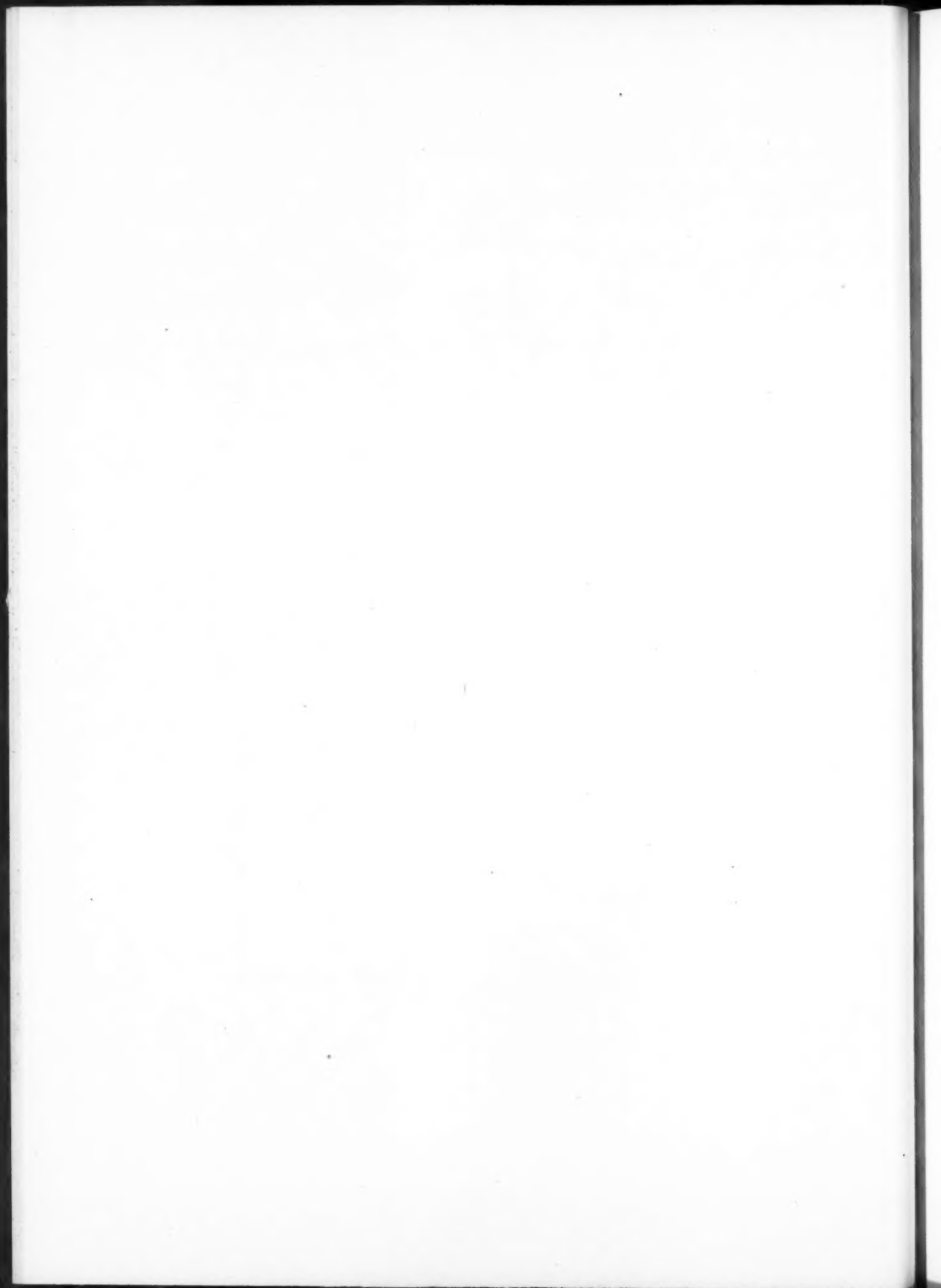


PLATE 103

SOLDIERS' AND SAILORS' COMMUNITY HOUSE, RIVERSIDE DRIVE, NEW YORK
MANN & MACNEILLE, ARCHITECTS





OCTOBER 9, 1918

THE AMERICAN ARCHITECT

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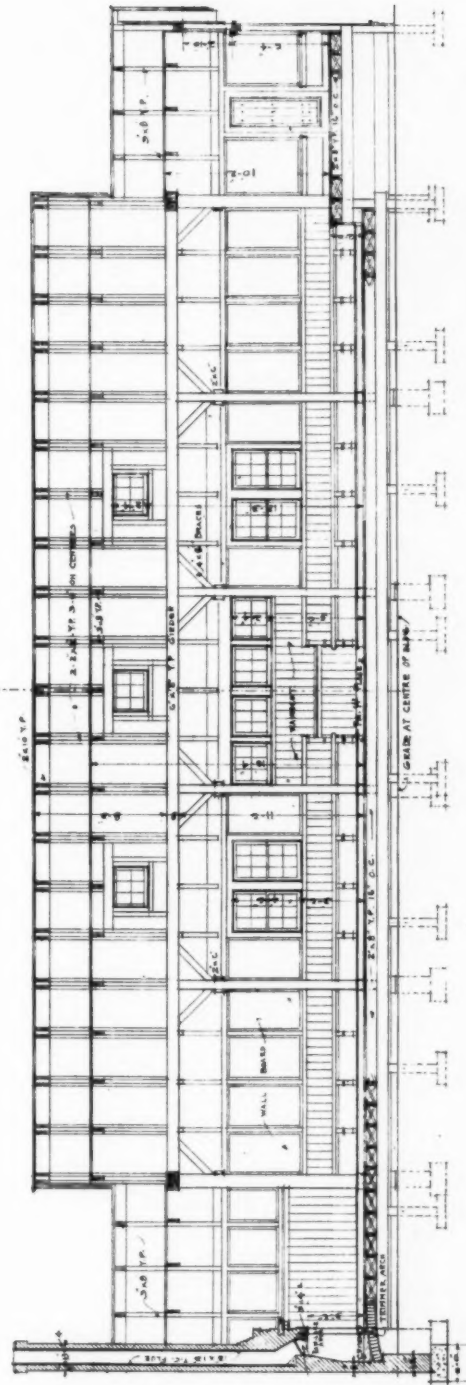
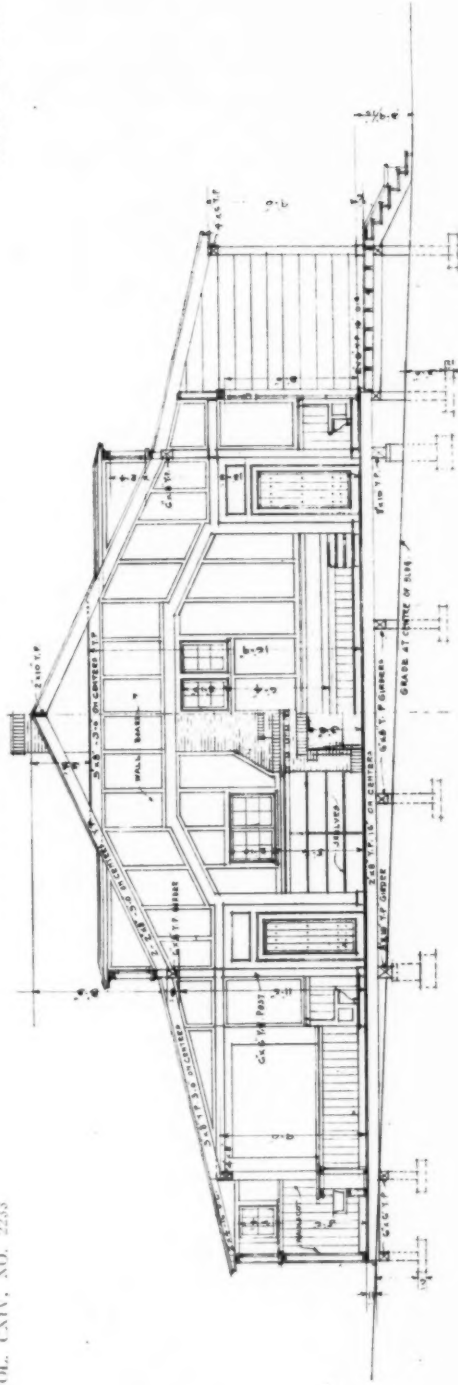


PLATE 105

SOLDIERS' AND SAILORS' COMMUNITY HOUSE, RIVERSIDE DRIVE, NEW YORK
MANN & MACNEILLE, ARCHITECTS

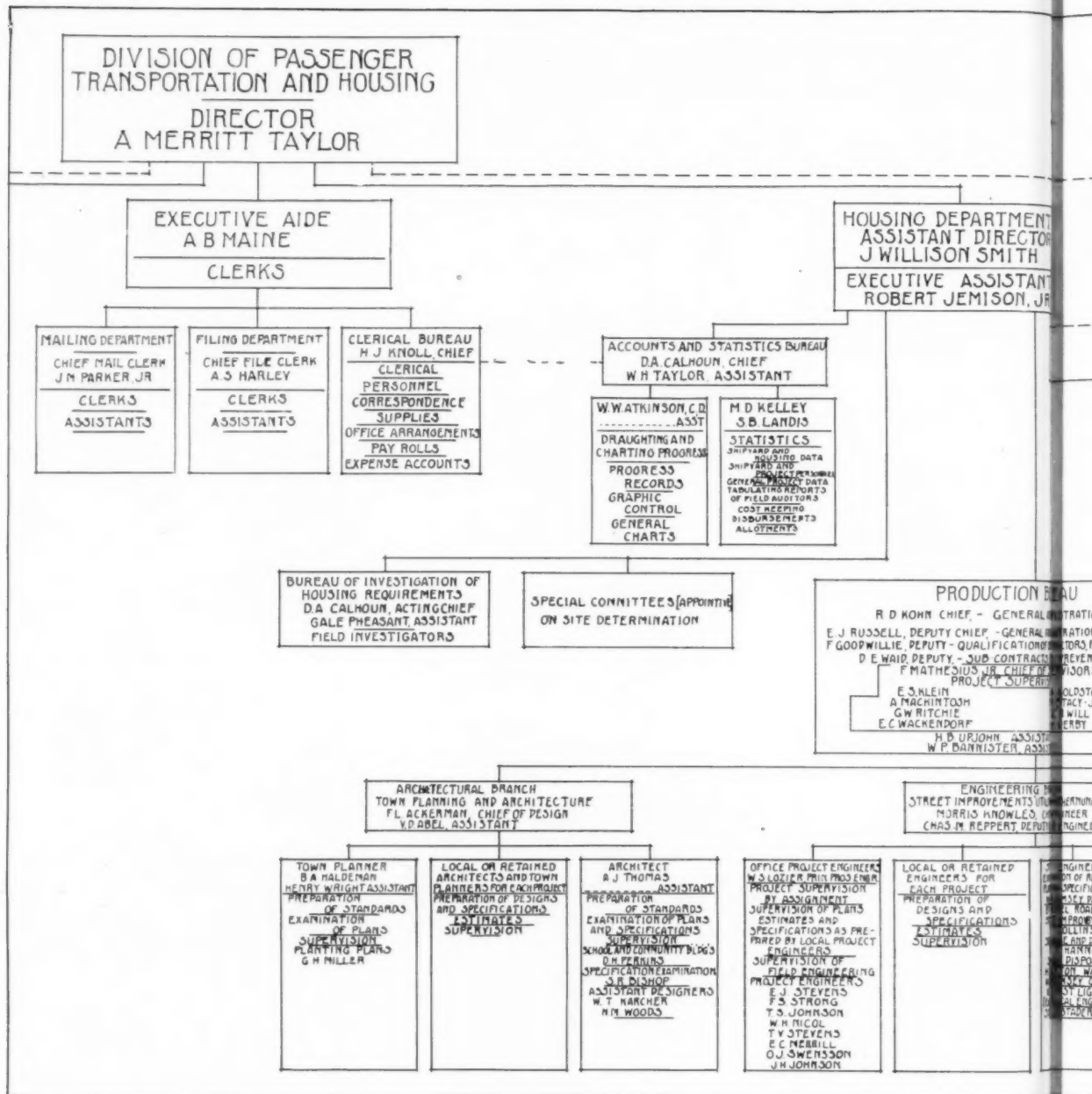


PLATE 106

THIS CHART HAS BEEN PREPARED WITH THE CO-OPERATION OF THE
EMERGENCY FLEET COMMISSION

For each separate housing development of this corporation there is assigned a special architect.



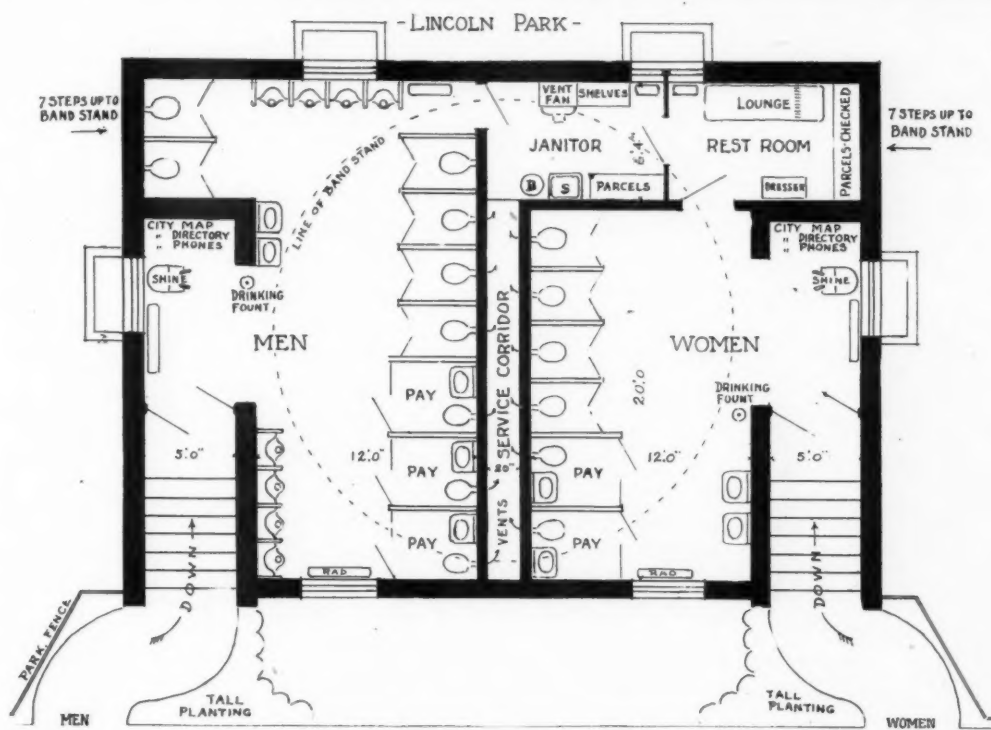


PLATE 107

COMFORT STATION AND BAND STAND FOR CITY OF LOUISVILLE, KY.

VAL. P. COLLINS, ARCHITECT

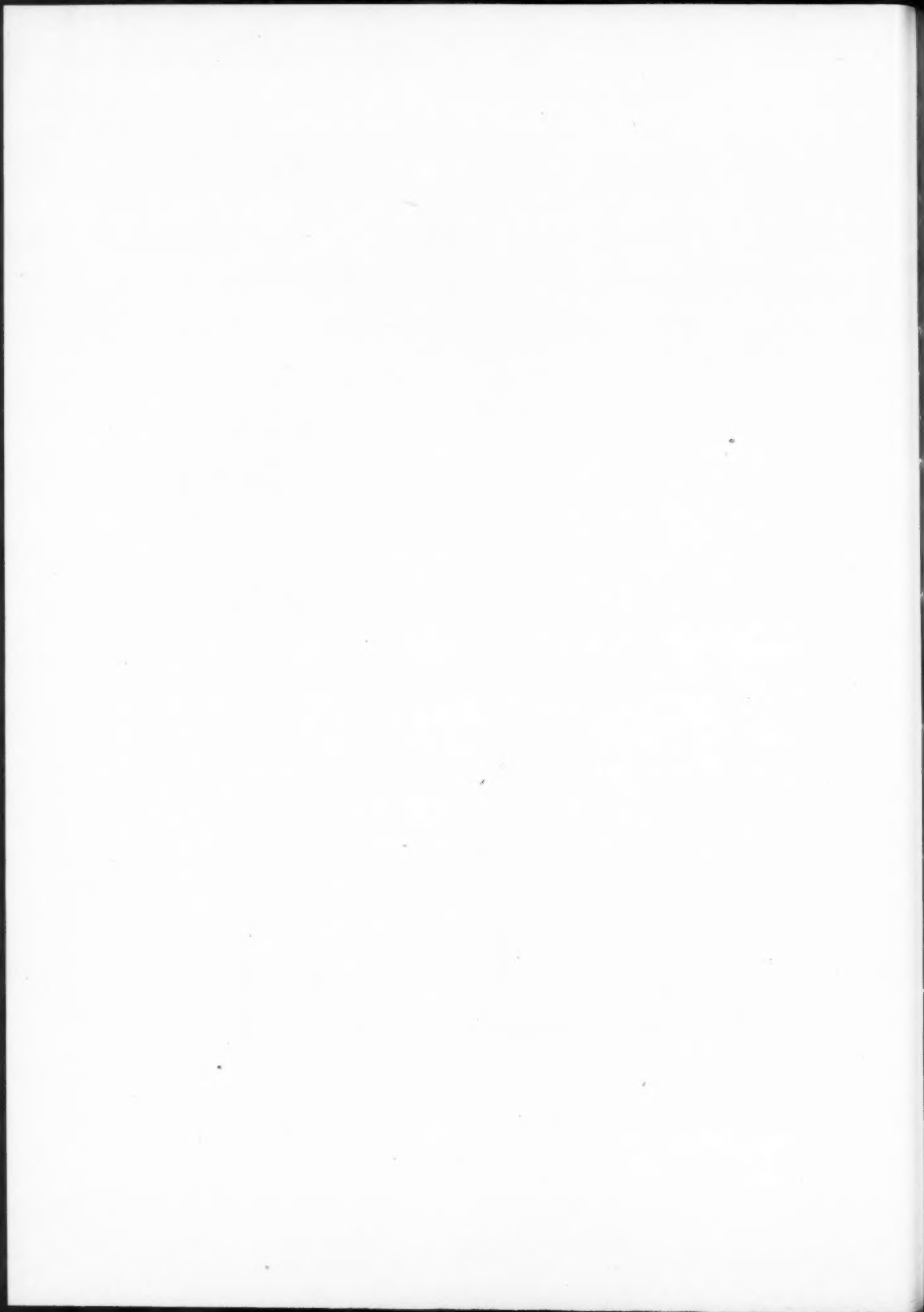




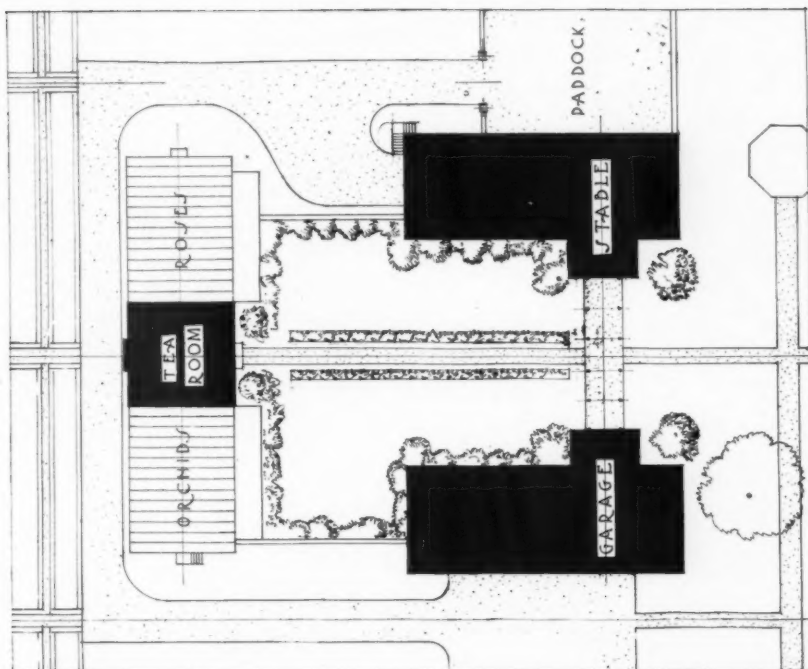
PLATE 108

COMFORT STATION AND BAND STAND FOR CITY OF LOUISVILLE, KY.

VAL. P. COLLINS, ARCHITECT



PLATE 109



GROUP OF BUILDINGS AT GENEVA, N. Y.
FOR EDWARD MCMASTER MILLS

GREEN & WICKS, ARCHITECTS

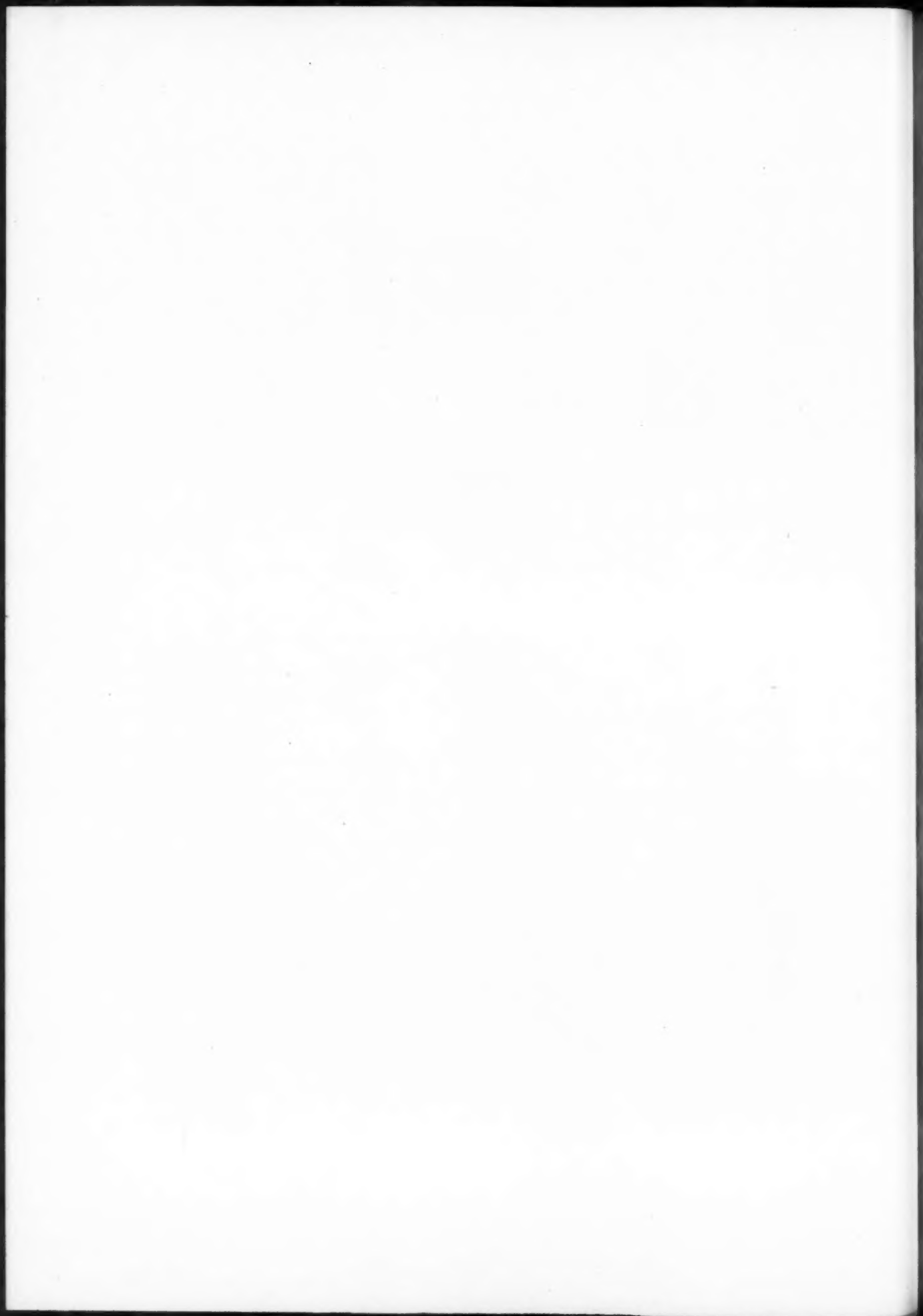
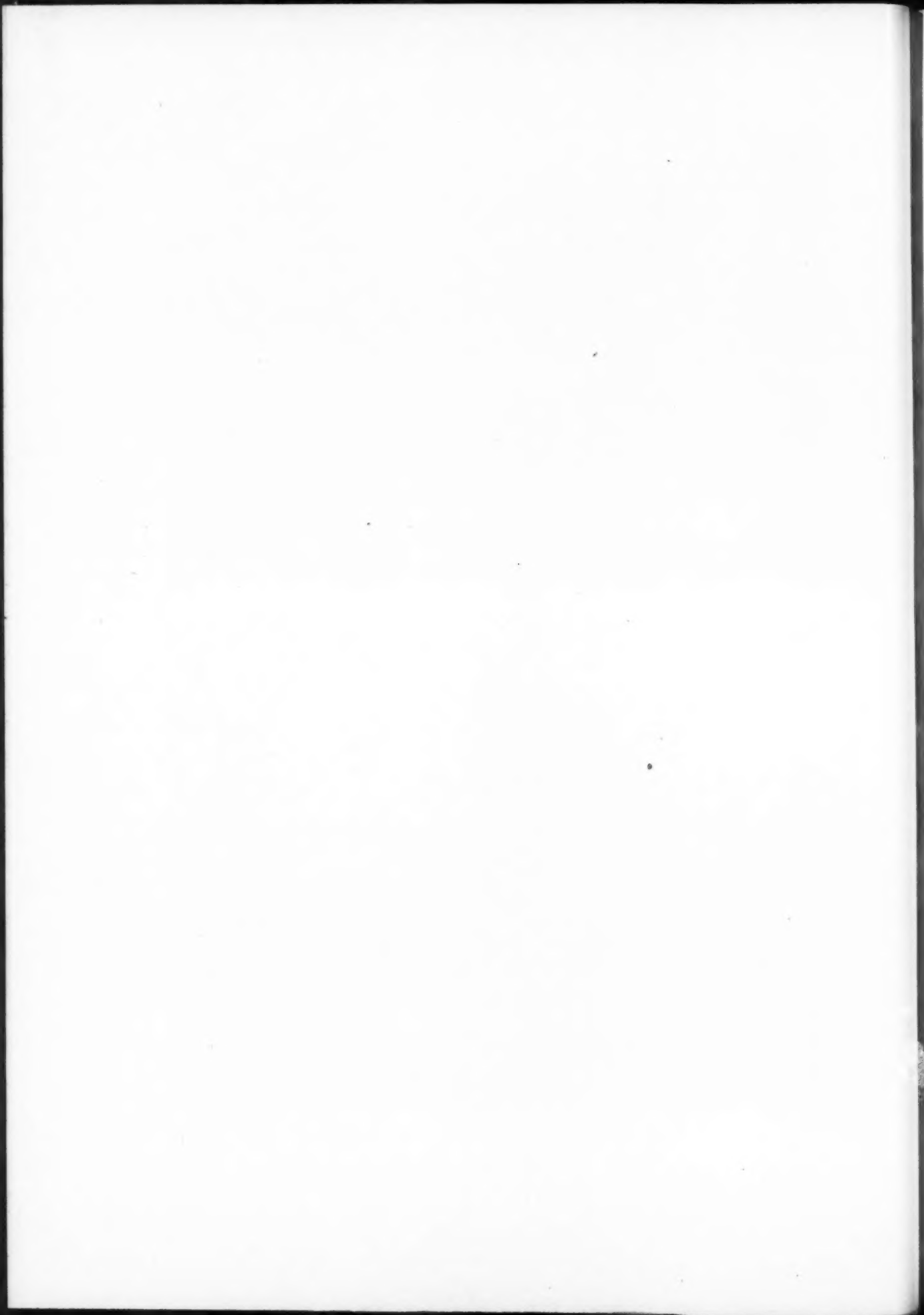




PLATE 110

GROUP OF BUILDINGS AT GENEVA, N. Y.
FOR EDWARD McMASTER MILLS

GREEN & WICKS, ARCHITECTS



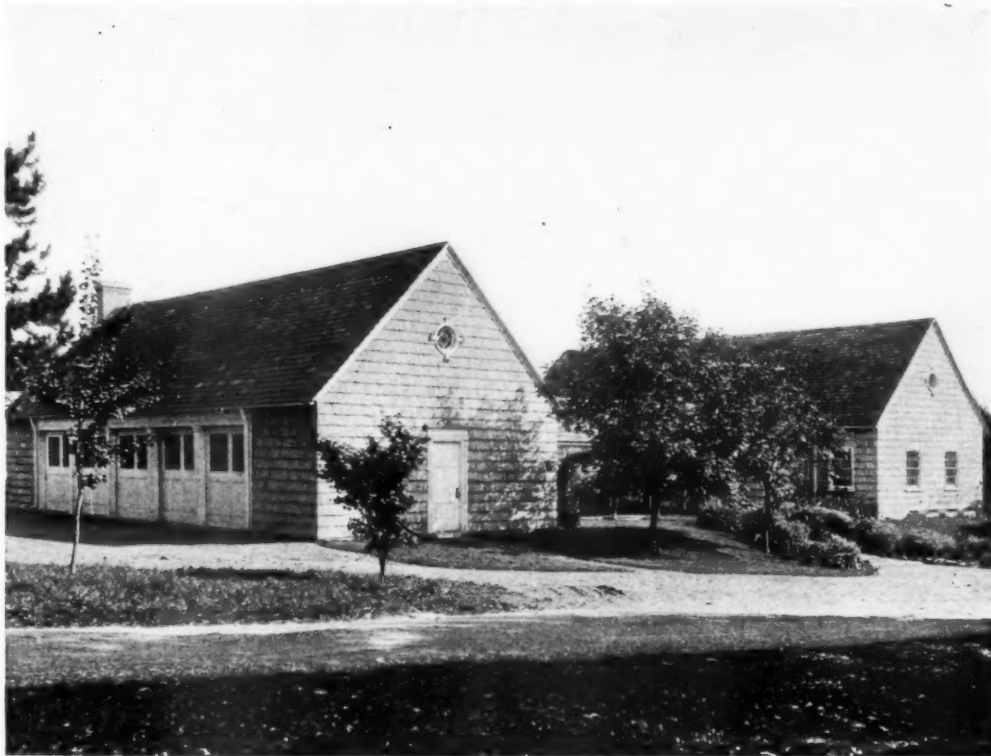


PLATE 111

GROUP OF BUILDINGS AT GENEVA, N. Y.
FOR EDWARD McMASTER MILLS

GREEN & WICKS, ARCHITECTS





Group of Buildings at Geneva, N. Y., for Edward McMaster Mills

GREEN & WICKS, *Architects*

THIS group of buildings is situated on the outskirts of Geneva, N. Y., on an estate bordering on Seneca Lake. The property when acquired by the present owner comprised a large old Colonial house and some rather indifferent stables and outhouses. The residence has been added to and this new group built, making a very complete and pleasing summer residence, occupied by the owner about eight months in the year.

The group illustrated is on the axis line of the main porch of the house, and while not directly connected with it still forms a comprehensive grouping which the owner was quick to see and entirely in sympathy with.

The estate is an old one and hardly any tree planting or grading was needed. The plot of ground was selected in its relation to the main house and studies made to see if it were possible

to group the buildings to have an architectural effect. These studies quickly showed the advantage of separating the stable from the garage, a consideration practical as well as artistic. The greenhouses were placed at the rear of the group, forming a screen for the kitchen garden beyond. The tea room was placed in the center of the glass range and the scheme works out as a practical plan from the gardener's point of view and makes a pleasing composition. The tea room is treated in a very simple Italian manner and is to be furnished in harmony with the garden to the rear of the group.

The heating plant and potting rooms are immediately under the tea room and access is had to the two ranges of glass houses by separate staircases, making it unnecessary for the gardener to go through the tea room to get from one side to the other.

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The floor is of red tile, and large and delicately detailed windows opening into both flower rooms give a very comprehensive view of the growing flowers.

Propagating beds run across the front of the greenhouse group and are reached from the basement and screened by planting on the front.

The heating plant in the greenhouse is designed to furnish heat for the stable and garage.

The garage houses five cars and has a livery room and bath for chauffeur and a room entered from colonnade used as a waiting room, besides a working pit, and is completely fitted up for repairs and the upkeep of autos—a necessary adjunct to a garage in the suburbs.

The stable on account of the sloping grade readily adapted itself to placing the horses and ponies in the basement with a paddock opening off same.

The upper floor, which is on the same grade as the court, is given up to hay and feed, and spacious quarters for the coachman and his family.

The natural slope of the ground at greenhouse also provides a large basement at the lake end entered from grade to house the interesting collection of vehicles possessed by the owner.

The exterior treatment naturally followed the inspiration gathered from the old house and is extremely simple as the illustrations show. Nowhere is there any attempt at "grand colonial," rather the hand split shingles, small doorways, cornices and detail that were so expressive of the simple lives of the early settlers.

The group as a whole, with the beautiful planting executed by the gardener and in true Colonial spirit, makes a composition very restful and quiet and distinctly American.



Architects and Engineers

WE note with interest the announcement lately received of the association of the firms of Delano & Aldrich, architects, and Charles H. Higgins, engineer. We believe that this is eminently proper in the present emergency and suggestive of great possibilities.

This announcement reads as follows:

*Messrs. Delano and Aldrich, Architects
and Charles H. Higgins, Engineer
wish to announce
that they have associated their firms for the purpose
of supplying at the least cost
complete organization for designing and supervising
the construction of Industrial Plants, Houses for
Workmen and other Essential Projects
The new firm will be known as
Delano and Aldrich and
Charles H. Higgins
Associated Architects and Engineers
126 East Thirty-eighth Street
New York*

The firm of Delano & Aldrich has established in the past fifteen years an important practice in a field which, owing to the war, is inactive. The firm of Charles H. Higgins has built up an enviable practice in the field of industrial and engineering work.

Unfortunately, in this country the service that a well-trained architect can render a client who is about to build a factory or plant is too little recognized. His whole training, if he has achieved any success in his profession, has taught him to put into the smallest compass the essential parts of a building, and, in the case of a large plant consisting of several buildings, to combine these so as to attain the maximum of convenience, light and air. Those who have employed architects for such work have pretty generally found that it was good business.

The training of the engineer, on the other hand, has led him more particularly into problems involving the forces of nature,—steam, water-power, electricity,—the study of combinations of materials to give stability and to overcome difficulties of construction.

Both the architect and the engineer are essential to the best solution of any building project. We, therefore, feel that the combination of the two is a particularly happy one and should give to the client, as the announcement states, a most complete organization for the solution of any industrial building problem.

We have made special reference to this announce-

ment not alone for the reasons above set forth, but also because it represents the first example of a dignified form of advertising by architects which has come to our attention.

Mistaken ideas of professional ethics have too long delayed action in this direction and have been a serious handicap to architects whose adherence to the rules of practice has often served to react in favor of the less scrupulous members of the profession.

The editors of THE AMERICAN ARCHITECT, selecting a number of individuals and firms who have announced themselves as architects and engineers, addressed letters to them asking the reasons that prompted this combination of the professions.

Among the number of replies received, the following interesting communication from George S. Mills, of the firm of Mills, Rhines, Bellman & Nordhoff, of Toledo, is typical.

Mr. Mills writes:

When the writer first began the practice of the profession of architecture in 1892, he came to an early realization of the fact that the term *Architect*, if the architect posed as a planner of construction, must be interpreted as including the profession of civil engineering. Shortly thereafter he saw the necessity of also including the mechanical and electrical branches of engineering, else how could he take a fee for planning and supervising the complete construction without taking money under false pretenses?

This led naturally to the conclusion that the work of an architect, rendering complete and efficient service, in anything but the most primitive forms of shelter, could only be accomplished successfully and properly by an organization of men skilled in architectural design, working with engineers of all branches of engineering, dominated by such executive leadership that all, together with an accounting force, would co-ordinate into a smoothly working unit.

This is using the term architect as is so well expressed in the definition supplied by the New York Chapter of the A. I. A.:

"An architect is a professional person whose occupation consists in originating and supplying artistic and scientific data preliminary to and in connection with the construction of buildings, their appurtenances and decorations."

It is only because the profession has been dominated to a certain extent by "men who have been content to devote their ability and energy to those tasks of detail once the province of the artisan and in so doing have lost their hold on the great problems of the whole," that the public has so differentiated between the architect and engineer and has made possible the growth of contracting organizations, who are undermining the profession of architecture because they render services that many men claiming to practice the profession of architecture do not equip themselves to render.

All this, just at this time, is pertinent to the contention to state that, for one reason or another, architects have become too far removed from actual contact with their buildings, and, if they are to regain once more the intimate touch, they must go about it in the same way as in the two instances above referred to.

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A constantly increasing number of important firms are realizing that to ignore an intimate association with every phase of the building, from its inception to its completion, is to lower the practical value of the services which architects should in every instance render their clients.

In an address delivered by Albert Kahn during the recent convention of the American Institute of Architects he spoke with reference to the present state of architectural practice, and dwelt particularly on the problems that the profession must solve if it is to regain its former position as a profession. Mr. Kahn's long experience and successful upbuilding of an efficient architectural organization clothes whatever he may say on the topics that are now insistently present with the mantle of absolute authority.

The following extracts from Mr. Kahn's address are particularly pertinent at this time:

Only Government work and buildings for concerns doing war work are being constructed, and since so much of this has been and is being entrusted to large contracting firms, the question very logically arises, why? And then the further question, what is to be done to alter the situation?

The war has acted like an electrical storm in clearing the atmosphere surrounding the practice of architecture, and in revealing the architect's position in the commonwealth. That it is not altogether what it should be is very evident, and that remedies to correct the situation must be found is equally apparent.

Primarily the past generation has been a period of tremendous industrial activity. Science has been pressed into practical service and has become the handmaid of our daily life. New forces and new machines now at our command were unheard of three decades ago. Structural steel, sanitary plumbing, modern heating and lighting, and reinforced concrete were unknown a generation ago. These developments must obviously exert their influence on building. But while the busy world was perfecting one invention upon another, architects, as a class, failed to heed the trend of the times. Only grudgingly would they allow the utilitarian to enter into the building program. Modern ideas were all right if they did not trespass upon artistic concepts. Modern requirements had the unhappy habit of interfering with preconceived ideas of beauty. But the new methods were economically sound and practically sane, so they advanced under their own impetus, and if conservative architects would not adapt themselves to new conditions, then another class must rise who would.

The impression prevailing in the minds of owners regarding architects in connection with industrial work has grown to be analogous to Mark Twain's comment on Christian Science when paraphrased. "If physicians," he says, "only knew more about Christian Science and Christian Science more about medicine, the chances are the patient would get well with either, provided he had a good nurse." And the paraphrase, "If architects only knew more about Engineering, and Engineers more about architecture, the chances are the owner would have a good building with either, provided he had a first-class contractor," is the general conviction among owners of industrial buildings.

To me the reason for the existing condition is simple. There is nothing mysterious or strange about it. Educational work among owners, and propaganda are the remedies proposed. It is not the owners who must be educated, it is the architects themselves. And as for advertising,

such never bore results unless the goods were delivered.

Put yourselves in the place of a man about to build a factory. Would you call upon the artistic superman, the ardent idealist who soars in the skies, discourses on beauty of design and everything else but practical requirements, or would you seek the man who would suggest a practical, common-sense layout to meet your requirements, the man who would look at the problem from your own standpoint, who would place himself, as it were, in your shoes, and strive to solve the problem with and for you. The answer is obvious. You would place your work with the man of sound understanding and sane judgment, rather than with the artist, even if real and not imaginary, as is so often the case. You would seek an organization composed of men competent and qualified to handle the project in its various phases of plan, design and engineering, both structural and mechanical. Now such organizations are not built in a day, but require time to bring together and perfect in team work.

The very title "Architect," which implies the building of the beautiful, fills the owner with fear that more attention will be paid to the exterior decorative details than to the many practical features so vastly more important in the problem. The engineer, little concerned with appearance, more interested in the construction and in the success of the mechanical installation, is therefore called in, and though his buildings are generally monotonous and uninteresting, he manages to satisfy his client.

Efficiency is the watchword of the day. Directness of results, good business methods and speed in construction are the desired ends. Contracting firms have been more awake to the exigencies of the times than have most architects, wherefore their success. They have appreciated the value of concerted effort, of full co-operation and of proper co-ordination, wherefore they have won the favor of the owner at the expense of the architect. We know very well that in such an arrangement the owner is at the mercy of the contractor, that he is unprotected, that he doesn't know whether he is receiving full value for the money expended, but the owner is quite willing to take his chances on this. To decry the system, then, is useless. The whole problem must finally be a matter of "survival of the fittest."

There is just one way for the architectural profession to meet the situation, and that is by serving the owner better and more efficiently than do contractors: By planning better buildings, by working more assiduously, more interestedly, by designing more economically and by obtaining results more direct and more efficient than the contractor. If we can show buildings better arranged, better constructed, at less cost, and incidentally more attractive, if we can handle an operation in a business-like manner, expeditiously and without friction, shall we need to worry about lack of appreciation or recognition? Absolutely not. In just the measure that we are equipped and capable to handle the work we seek, in just that measure will it be entrusted to us.

This is a technical age, an age of rapid advancement and achievement. Utility must have recognition before beauty. And if architecture is to remain a living force, the expression of the spirit of the age, we, the architects, must express the demand of the times in our work.

And now a few words as to organization for service, the all-important element in satisfying the client and equally important element in the architect's success. Old methods and systems have grown obsolete. The work of building has grown so complex in its many requirements that the one-man institution can no longer serve with satisfaction. With the many details involved to-day, no one individual can possibly know all, or even a part of, our work. Therefore it requires, besides planners, designers, structural engineers, heating and lighting and ventilating experts, com-

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petent outside superintendents, the necessary clerical force for business administration, and last but not least, the head properly to direct the entire group. All of these, however, form only one element of the well-organized office. A spirit of co-operation must exist as well as a full faith in the principles of an owner's rights and a complete devotion to his interests from the material dollars and cents point of view. Enthusiasm must prevail and there must be keen open-mindedness toward all things new and progressive, eagerness to keep abreast of the times, willingness to work hard, and above all else, a liberal amount of good, hard, sound common sense.

The Big Problem

The big problem confronting the Executive Officers of all Architectural Societies and other professional organizations, is how to secure the loyal support and co-operation of the individual members of the Societies. It is undoubtedly true that the majority of members of all Technical and Professional Organizations look upon membership in a professional body, not as a commission to work with their professional brothers to better conditions but as a mark of distinction similar to that conferred by a University Degree. There is always evidenced on the part of a large number of the more prominent members of all societies a "Holier Than Thou" attitude and too little regard for the viewpoint of others.

The architectural profession after the war will obviously be conducted on different lines than it has been in the past. Perhaps the architects of the future will not be an individual but an *organization*. In the future probably to a much greater extent than at present the successful architect must have in addition to all the attributes of the designer, a working knowledge of all of the professions and trades allied to architecture, and he must also be a trained business executive. Many architects to-day are maintaining that the architect of the future will also be a contracting organization.

If the profession is to retain its proud position as a profession and not become merged with the business of contracting, the architect of the future must not, as he now so often does, turn over to the general contractor much of the work and responsibility properly belonging to himself. Any architect who agrees to perform complete professional services is guilty of fraud whenever he furnishes anything less than such service.

Perhaps, after all, the theory upon which the profession has worked for many years that "Architectural service is personal service" is a mistake. No individual will ever be able in the short span of a human life to qualify as an expert in all of the allied professions and trades which are a part of the great term "Architecture." Neither is it a phys-

ical possibility for any one man to, in person, handle the multitude of details incident to any large building operation. This reasoning will obviously lead to the thought, "Why should not architects be permitted to incorporate their business and be permitted to practice architecture as corporations."

It must be remembered, however, that if history justifies a forecast of the future, architecture as an art will unquestionably prosper in America in the years to come as never before. It is only when a nation is prosperous that art flourishes and artists prosper. In the years after the war when our national resources and the energies of our people are no longer devoted to the arts that destroy, but to those of peace, may we not confidently predict that every architect will be employed in creating and building that Greater America, the America of the Future?—From *The Monthly Bulletin* of the Illinois Society of Architects.

Another Exhibition of French Cathedral Photographs at the Brooklyn Museum

In the print galleries of the Brooklyn Museum was opened to the public on September 29 a second exhibition of enlarged photographs of French cathedrals and churches in the war zone.

The purpose of this exhibition is to demonstrate the existence in all these churches of constructive refinements hitherto generally unnoticed or unappreciated by antiquarians and architects, aside from various notable recent exceptions which have been due to the Brooklyn Museum research represented by these photographs.

The so-called widening refinement is especially well represented by this exhibition. It is lacking in only one church of the entire series, namely the 15th century Gothic church of L'Épine near Châlons-sur-Marne. The widening refinement consists in a delicate outward inclination of the piers, vaulting shafts and clerestory walls of the nave, sometimes in straight lines and sometimes in delicate vertical curves or bends, which have the effect of curves. The cross section of the naves which have this construction has consequently an attenuated horseshoe form. The result is to give an effect of spaciousness to the upper part of the church. The bending or curving vertical lines are also a feature of aesthetic beauty.

Several of these churches also have deflections in plan which are especially well represented by photographs from St. Ouen at Rouen, and from Rheims cathedral. The entire church of St. Ouen, includ-

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ing the lines of piers, the clerestory walls and the outer walls of the church, is built on an attenuated S-shaped plan (the return curve, sometimes called "Hogarth's line of beauty"). Among the most remarkable photographs of the exhibition are two taken in the north and south triforium galleries of St. Ouen, which show these curves. Another form of horizontal curvature is found in the clerestory walls, parapets and roof lines of Rheims cathedral, which are curved on both sides, concave to the nave and convex to exterior; whereas the pier alignment at the pavement of the church is rectilinear. These curves are represented by very remarkable photographs which were taken on the exterior clerestory parapets. Similar curves are also found in the cathedral of Amiens, and are also well shown by photographs.

As regards the present condition of these churches and cathedrals, exact information is lacking in some cases; in others, the information is unfortunately only too complete. The present condition of Rheims cathedral is notorious. No mention appears to have been made in the public press as to the churches of St. Remi and St. Jacques at Rheims. The large church of St. Quentin, rivalling many cathedrals in dimensions, is wholly destroyed. Several bombs have fallen on the cathedral at Amiens. It was recently stated in the public press that "the cathedral was not irreparably injured." The town of Châlons-sur-Marne has been under fire from a distance but has never been occupied by the German forces. The present condition of the churches at Châlons has not been mentioned in the American press. The cathedral of Rouen and the magnificent church of St. Ouen at Rouen are undoubtedly in good condition.

Aside from the destruction or damage to the churches shown by this exhibition, it is to be understood that the constructive refinements which are illustrated by the photographs are found in at least two-thirds of the French churches and cathedrals which have been damaged or destroyed by the present war.

The exhibition has consequently a three-fold interest, partly relating to the question of repairs for many of the churches illustrated, and the importance of considering their constructive refinements, if such repairs are undertaken. Secondly, the exhibition bears on the general question of repairs in other churches and cathedrals of Northern France. Thirdly, aside from the illustrations of constructive refinement so far mentioned, the Brooklyn Museum photographs offer a remarkable and unique illustration of the picturesque beauties of French Gothic churches and cathedrals. From this point of view exceptional interest attaches to

the enlargements from the cathedrals of Amiens and Rheims. Among the latter are ten 40 x 56 views, including details of the now ruined portal sculptures, which, before the war, were the most renowned and beautiful examples of Gothic sculpture in Europe. All of the photographs are from negatives expressly made for and owned by the Brooklyn Museum. The exhibition will continue until Sunday, Oct. 20, inclusive.

Building Operations in 1917

The building operations in the larger cities of the country were much less in 1917 than in 1916. In 60 selected cities 199,738 permits were issued for buildings erected in 1917, a decrease of 70,044. The cost of these operations was \$584,193,378 in 1917, as against \$899,684,512 in 1916.

The principal causes of decrease were the scarcity and high cost of material and labor.

For 1917 a total of 145 cities reported operations costing \$687,415,605. For 1916 practically the same cities reported operations costing \$1,024,211,675. Of the 145 cities reporting for 1917, 129 stated operations by classes of structures. The total cost of the buildings erected in them was \$632,694,952. The part of this amount expended on wooden buildings was \$168,290,958, or 27 per cent; on brick or hollow tile buildings, \$322,147,677, or 51 per cent; on stone buildings, \$4,589,168, or less than 1%; on concrete buildings, \$66,511,300, or 11 per cent; and on steel skeleton buildings \$58,440,361, or 9 per cent.

A 500-foot Jack Plane

A machine so gigantic that the curvature of the earth's surface had to be taken into consideration in its construction, is being built for the United States Army as part of the program for the "salvage" of war waste, says the October *World's Work*. It is a huge planer, 500 feet long, which is to be used in the manufacture of giant lathes, which in turn are for use in the enormous "relining" plant which the Ordnance Department is building in France.

The longest planer ever built heretofore is 80 feet. To insure a perfectly level bed for this one, more than six times as long, calculations had to be made by methods employed in the science of geodesy, combining geometry and astronomy! This great machine, almost as long as the Washington Monument, will cost \$450,000. The lathes it will make will have a "swing" of 102 inches and can handle the largest "railroad" or naval gun.

The Government and People Must Co-operate in Housing Operations

Otto M. Eidlitz, president of the United States Housing Corporation, has announced that the Government will not build houses in industrial centers to relieve congestion until the local authorities have exhausted every measure to afford relief by other than governmental assistance. Mr. Eidlitz further announces that the corporation will not render financial aid to private enterprises but that it will co-operate in securing Government sanction for the projects as well as the needed priority orders from the War Industries Board. This announcement is made in view of the fact that many communities have the impression that an unlimited national fund for housing has been voted and that this fund will be apportioned without a careful scrutinizing of conditions or a consideration of alternatives. It is only as a measure of final relief that the Government will build houses for war workers, and not until every community where such relief is believed to be necessary has exhausted all its resources can it with hope of success seek governmental aid.

A Summary of Operations by Construction Division of War Department

To provide for the needs of the army, the construction division has undertaken since April, 1917, a total of 323 operations, and now has in prospect 153 more. The total cost of this program is estimated to be \$1,083,766,198.

To the end of August 93 operations had been completed, including the camps and cantonments. The cost of the finished operations was \$277,745,847. Additions and alterations of minor character are not figured as "jobs."

There are now under construction 266 jobs, which will represent a cost approximating \$636,858,351. Practically all of the work now under construction will be finished by January 1, 1919. However, some of the larger jobs, which are of a permanent nature, will not be completed until October, 1919. Included in the present construction are the development of eight port terminals at a cost of approximately \$150,000,000. One of these, the Brooklyn army supply base, estimated to cost \$40,000,000, will have the largest warehouses in the world. The other terminals in the course of construction are: South Boston, Mass., which is estimated to cost \$28,000,000; New Orleans, La., \$10,000,000; Charleston, S. C., \$25,000,000; Norfolk, Va., \$20,-

000,000; Philadelphia, Pa., \$15,000,000; Newark, N. J., \$10,000,000; Newport News, Va., about \$5,000,000.

Projects now under way include a large number of ammunition depots, quartermaster's warehouses and storage depots in inland cities, hospitals, ordnance plants, new training camps and the enlarging of other camps to provide accommodations for the increasing army and the newer methods of training. The major portion of this class of work will be finished by January 1, 1919.

Why Schoolhouse Construction Should Await the End of the War

Bernard M. Baruch, chairman of the War Industries Board, has written a letter to Mayor John F. Hylan of New York on the subject of the school-building program that New York desired to put under way, amounting to more than \$9,000,000. The case of New York is typical of the whole country, and the board's ruling, which the letter expresses, is intended as a wide precedent.

While agreeing heartily to the necessity of providing to the fullest for the education of the children, Mr. Baruch points out the danger at this time of allowing the construction side of such plans to militate against the fulfillment of the war program, which is seriously threatened by nonmilitary demands. He asks that methods be devised to make existing plants do the work instead of building new ones during the period of increasingly heavy pressure on man power, materials, especially steel, and the other elements involved.

To Change Teuton Statue

Cass Gilbert, who designed the New York Custom House, has been authorized by Secretary McAdoo to remove all German insignia from the statue of Germany above the main cornice of the Government building. The statue, which is one of twelve facing Bowling Green, was erected at the time the Custom House was completed. Germania, along with the other statues, represented the nations of ancient and modern times which have had an important commerce at sea.

The statue will be changed to a figure depicting Belgium. At present Germania bears upon her breastplate the emblem of the German eagle and on a shield at the side of the figure is carved the word "Kiel" and the initials "W. II." in the form of a monogram.

The president of the National Sculpture Society

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has been asked to act in an advisory capacity as to the modifications to be made. The statue will not be removed, but the word "Kiel" and the initials "W. II." now appearing on the shield will be taken off. The Belgian lion and the word "Belgium" will be substituted upon the shield.

Allied Nations Agree to Pool Supply of Pig Tin

Under an inter-allied pooling agreement reached by representatives of the United States, Great Britain, France, and Italy at conferences held in London, each country participating in the conference will get its needed supply of pig tin. The action amounts to an international monopoly of a beneficent nature.

The plan of distribution worked out allows the United States about 80,000 tons of pig tin or two-thirds of the world's entire production annually.

With the War Industries Board supervising the allowance to this country, all imports of pig tin, tin ores and concentrates will be consigned to the American Iron and Steel Institute, which will receive, pay for and distribute the metal to the industry through the United States Steel Products Co.

The price will be regulated by the War Industries Board and will be uniform to all consumers of 10 tons of pig tin or over. There will be another uniform price for users of less than 10 tons. These prices will be maintained at a level which will encourage production in the tin mining countries—Great Britain and the Straits Settlements chiefly—and stop profiteering. Prices, rules, and regulations will be announced later. It is probable that users and dealers may be licensed.

A Course in Ship Drafting at Columbia University

Under the Department of Extension Teaching, Columbia University is offering since Sept. 27, 1918, a course of instruction in ship drafting, consisting of three distinct parts to be taken in sequence or individually, depending upon the qualifications of applicants.

These courses are open to both men and women.

There will be three grades of instruction, beginning with mechanical drafting for those unfamiliar with the instruments and methods, followed by a first course in ship drafting based upon United States Civil Service examination requirements for assistant ship draftsmen, and a more advanced

course in the same field to prepare candidates for the United States Civil Service examination for ship draftsmen.

Each of these courses will extend over a period of twelve weeks, the first beginning September 27, the second February 5, the third July 7. When the second course begins the first will be repeated; when the third course begins both the first and second will be repeated, so that after July 7 the three courses will all be in session simultaneously, and qualified candidates may be transferred from one to the other, depending upon their individual attainments.

In view of the fact that there are numerous draftsmen, mechanical, architectural, and others, who have already mastered the processes of mechanical drafting, and whose knowledge can be applied to the new purpose within less than the twelve weeks period of the first of these courses, a special four weeks' course will be offered from January 2 to 30 inclusive, to provide the necessary information so that such students may immediately continue with the second course. Candidates should in all cases consult the instructors before undertaking any of these courses, to avoid loss of valuable time.

Application for admission must be made before registration, to Curator Richard F. Bach, Room 405, Avery Hall.

Foreign Trade Management Schools

Fifteen of the leading cities of the United States have been selected for the establishment of schools in which there shall be held courses of training in the handling and development of foreign trade, with an especial view to the increase in this class of commerce which is certain to come at the close of the war. Plans for the first steps toward the organization of these schools have been drawn by the Bureau of Education at Washington. After the preliminary survey, to be made for the purpose of ascertaining the existing local commercial and financial conditions with regard to foreign trade, final action will be taken.

These surveys are covered by means of four forms of questionnaires sent to manufacturers of export goods and others connected with the export trade, as well as financial institutions. By means of these questionnaires the exact needs of each locality may be determined and the best methods evolved in handling this development in commerce. Further, with this information in hand, the method of introducing into the local schools certain courses of training for this service can be taken up, so that when the time arrives there will be intelligent and efficient knowledge of these important matters.

Dynamiting Reinforced Concrete Posts

Light charges of dynamite were used with success in breaking up reinforced concrete columns at the Colorado State College of Agriculture. The columns were 4 ft. square and 3½ ft. long and were intended originally for cores of ornamental posts. They were built with twisted steel reinforcing bars, and conduit pipes for electric wiring were placed in the center. In addition to the rod reinforcing, there was an extra reinforcing of wiring in portions of the posts. In breaking up the columns it was necessary to use small shots because of the nearness of buildings—one structure being within 100 ft. of where the posts lay. The charge consisted of a quarter stick of dynamite, which was inserted in a hole drilled in the column. This method broke the posts to pieces so successfully that the reinforcing and electric conduits were removed intact without injury. The cost in labor for breaking up the posts was about \$4 for all the posts. To this labor cost must be added the cost of the dynamite. About eight sticks of dynamite were required for the whole job.—*Western Canada Contractor.*

Portland, Oregon, Enacts Individual Liability Ordinance

Portland, Ore., is the first city on the Pacific Coast to enact an individual liability ordinance. This has now been in force for more than a month. Active propaganda in favor of similar legislation has for some time past been carried on in Spokane, and it is expected that at an early date that city also will compel the citizen responsible for a fire due to neglect of fire prevention orders to pay for the services of the fire department.

Wooden Doors in Use for Over Two Hundred Years

One of the most remarkable instances of the permanency of wood construction has been found in the romantic and picturesque old mission church of San Xavier Del Bac, nine miles from Tucson, Arizona. The huge wooden doors, which have swung open to countless thousands, are to-day performing the service they performed when the famous old mission was built, more than 200 years ago.

The pine doors, which have been used for so long a period, were, according to tradition a part of the original building completed in 1699. When this original structure was demolished in 1793, the doors were saved from ruins and made a part of the pres-

ent building, which is built of brick and stone, and is of a Moorish-Byzantine type of architecture.

The pine doors are to-day in virtually as good condition as when they were first hewn from the trunks of the tree, a striking example of the durability and serviceability of wood as construction material, whose merit was recognized even in early times as it is to-day, when the lumber industry has grown to such enormous proportion in the United States.

Applications for Building Permits

The War Industries Board has ruled that all applications for building permits must be filed through the local representative of the Council of National Defense. Pending the preparation and distribution of forms, applications should be filed by letter.

Southern California Chapter, A. I. A.

The Southern California Chapter of the American Institute of Architects, in co-operation with the California Liberty Fair Association, have recently conducted at Los Angeles a successful exhibition of architectural drawings, mural decorations and the work of the allied industrial arts and crafts.

This co-operation on the part of an organization of architects with representative bodies of other arts and crafts, with the propaganda to encourage the Liberty Loan, is an example that could, with good result, be more generally followed.

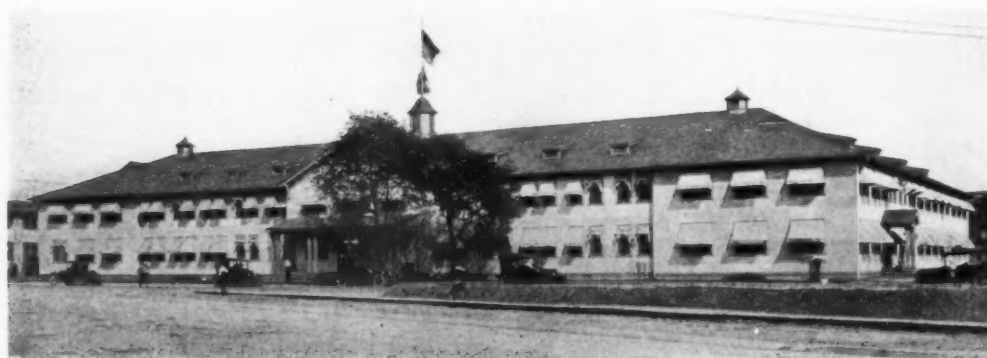
Mahogany Logs May Not Be Imported Except for Government Use

By a new ruling of the War Trade Board all outstanding licenses for the importation of mahogany logs and mahogany lumber have been revoked as to ocean shipment after Sept. 10, 1918. Hereafter no licenses for the importation of these commodities will be issued except to cover such shipments as the Director of Lumber of the War Industries Board shall certify to be suitable and necessary for Government use.

A Correction

The frontispiece in our issue of Sept. 18, "A Ballroom in the House of John R. McLean, Washington," we learn was incorrectly titled. This illustration was of the picture gallery in the house of Mrs. Henry Barton Jacobs, Mt. Vernon Place, Baltimore, Md., designed by Mr. John Russell Pope.

Department of Architectural Engineering



Administration Building at Harriman, Pa., for the Merchant Shipbuilding Corporation. Exterior walls covered with magnesia cement stucco

The Use of Magnesite in Building Construction

In Three Parts—Part III

THE work to be done by an exterior stucco varies materially from that of a flooring material. The latter requires the properties of durability needed to resist abrasion, impact and structural stresses in a marked degree. An exterior stucco requires the properties of durability needed to resist the action of the elements and the minor disarrangements of the structure on which it is placed. To be durable it must be free from damage caused by change in temperature, impervious to water, adhesive to the material upon which it is placed, resilient and free from shrinkage cracks caused by the setting up of the material. In addition to these necessary fundamental properties, magnesia cement as an exterior coating possesses many other desirable qualities.

The outstanding physical property that makes the use of magnesia cement so satisfactory as a plastic coating is its elasticity. This is partially due to its mechanical similarity to the material of which the

horns of animals is composed. In this respect it is one of those strange processes of nature wherein an inorganic substance like magnesia cement has a marked similarity to an organic substance like horn material. Inorganic plastic materials, as a rule, possess the property of brittleness to a marked degree, and brittleness is very undesirable in a coating which is applied to a base or foundation which is subject to disarrangement due to shrinkage or slight movement due to the effects of wind or slight settlements.

Magnesia cement possesses the ability to adhere to all materials in a marked degree. For this reason it is not necessary to furnish the key that is required by the usual plastic coatings. Its freedom from expansion and contraction after setting is one of the principal reasons for its adhesive ability. It can be applied to old brick or stone walls, even though they have been repeatedly covered with paint, and its ability to adhere to wood makes it

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possible to secure a weather-proof joining of magnesia cement stucco to the wooden casings and trim of exterior openings.

This quality of adhesion and elasticity is well demonstrated by applying the usual $\frac{1}{2}$ -in. coating to a 1-in. board which is first covered with a metal lath. Such a board 8 ft. long can be repeatedly deflected 3 in. in the center without breaking the bond to the board or causing any cracks to appear in the material or on its surface.

Magnesia cement has fire-resisting ability to a marked degree and in some forms is the most effective lining known for furnaces in which steel is produced. In addition to being a fire-resistive material, it also has insulating qualities, and magnesia is the essential ingredient of coverings used on steam pipes, boilers and other things that require insulating protection. These two desirable qualities are found in magnesia cement stucco. Also, as it is not subject to cracking, there is no infiltration of air and a true insulation is effected.



A residence in Des Moines, Iowa

cured in that way. For this purpose, to the magnesium oxide (MgO) is added aggregates in which is incorporated water-proofing materials. To the dry



A possibility in the rehabilitation of old frame houses, secured by altering the plan and overcoating the exterior with magnesia cement stucco

There are many reasons why magnesia cement stucco should be used as a manufactured product ready for application. The most important reason is the uniformity of the product which is best se-

material is added magnesium chloride ($MgCl_2$) of the proper density and which is furnished in suitable containers. The mortar or plastic stucco is produced by mixing this dry and liquid material in

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the correct proportion. No dry aggregate in material or water should be added to the material, as prepared in the factory.

Magnesia cement stucco can be successfully applied to several forms of wall surface and this foundation, like all foundations, must be substantial and properly constructed in order to insure permanency.

When applied to wood lath they should be spaced not more than $3/16$ in. or less than $1/8$ in. apart and the joints broken with not over seven laths to a break. A good grade of wood lath must be used and should be nailed directly to the sheathing or to each furring strip if the wall is covered with building paper and furred. The wood lath must be securely nailed with four nails to each lath, using a coated 3d number 16 gage nail.

When applied to a surface made of beveled lath attached to a form of fiber board, the lath should be placed as follows: On horizontal sheathing the lath should be vertical, on diagonally laid sheathing the lath should be placed diagonally in the opposite direction, if placed directly on studs the lath should be placed horizontally. This form of lath must be securely nailed to the sheathing or studs with No. 6 galvanized iron nails through each lath. The sheets of this prepared lathing should be placed with broken joints.

When applied to a 4- or 6-in. wide sheathing board in the face of which dove-tailed grooves are run, these boards should be securely nailed to each stud, using two 8d common nails for the 4-in. wide boards and three nails in the 6-in. wide boards. This special nailing is very essential in providing a proper foundation for the stucco.

When applied to metal lath such lath should be either galvanized or properly coated by other means. When metal lath is applied directly to sheathing boards it should be securely fastened to the sheathing with coated staples or large-headed roofing nails $7/8$ in. long. These fastenings should be spaced from 6 to 8 in. apart in all directions, holding the lath tight to the sheathing. The sheathing must be securely attached to the studs. When wood sheath-

ing is not used the studding should be covered with a heavy, strong building paper securely attached in place. Over this should be placed the lath and nailed to the studs from 6 to 8 in. apart. The purpose of the paper is to furnish a backing against which the plaster is placed and the waste of mate-



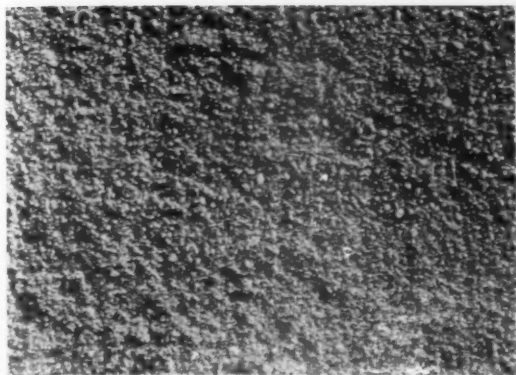
Photographed 36 months after completion. Magnesia cement stucco applied to wood lath and with a sponge-stippled finish. Note the color and texture of the work. The basement wall is of stone and finished with another material

rial is thus avoided. All metal lath should be strong and substantial, in fact a real lath of its kind.

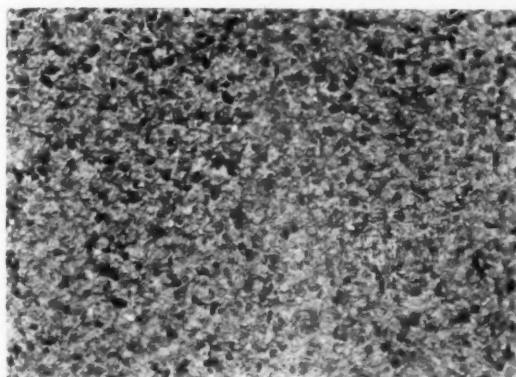
To prepare for the overcoating of frame buildings it is necessary to have the siding securely nailed in position. On this wood lath can be placed in a diagonal position not more than $3/16$ in. or less than $1/8$ in. apart, with joints broken in the usual way. Or laths can be placed vertically as a furring strip and the lath placed horizontally to receive the stucco. When metal lath is used a heavy building paper, for the purpose above mentioned, should be placed over the furring strips and metal lath securely attached to the strips.

In laying brick, hollow tile or stone to which stucco is to be applied, the face of the wall should be laid true to line and the joints flush, rough struck. The mortar used in walls to which magnesite ce-

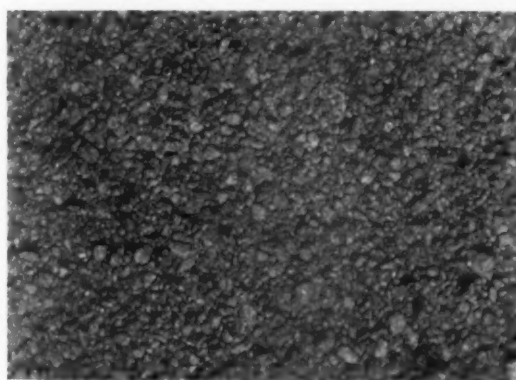
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Texture view of a marble finish applied to magnesia cement stucco, taken 58 months after completion



Texture view of a feldspar finish taken 39 months after completion



Texture view of a marble dash finish taken 62 months after completion

ment stucco is to be applied must be laid in Portland cement mortar. Lime in any form is injurious to magnesite cement. Old walls in which the lime

in the mortar has become inert can be coated with magnesite cement with safety. Old walls that have been painted should be wire brushed and picked before plastering for the purpose of removing any loose paint.

Magnesite cement stucco should be applied in



An old institutional building, in New York City, converted into apartments. Magnesia cement stucco applied to a brick wall that has been repeatedly painted

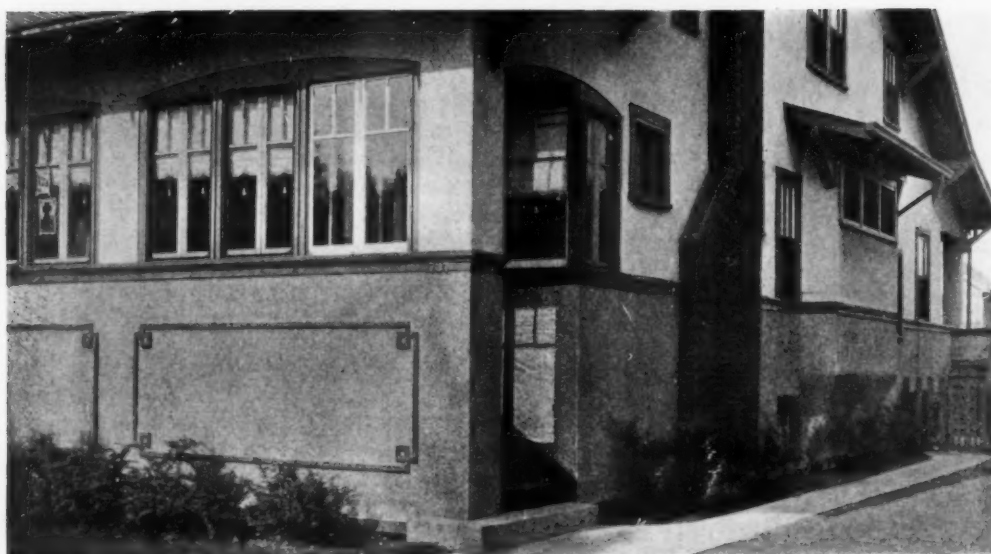
two coats, each $\frac{1}{4}$ in. thick, on all surfaces as described above. The first or scratch coat is applied in the usual manner and consists of the scratch coat material mixed with the liquid which is furnished in containers to a consistency that works easily



A residence in Richmond, Va.

under the trowel. No water should be added to this liquid as it would alter its density and injure the work. To the scratch coat is applied the finish coat and completed in any of the various manners as desired. The material is prepared as a scratch coat and as a finishing coat, the aggregates being differ-

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A residence photographed 37 months after completion. The lower portion of the magnesia cement stucco covering is finished in feldspar with white marble above

ent in each and to which no other dry material should be added. If the temperature is over 50 deg. Fahr. only as much scratch coat should be applied in one day as can be completed with the finishing

should not be used, as a contact with either steel or iron tends to darken magnesite cement stucco. A stippled effect is produced by using a moist, not wet, sponge or a stippling brush or broom. This should



Magnesia cement stucco applied to the first story of a brick hotel in lieu of stone



A possibility in rehabilitating a "row" of dwellings by applying stucco to wood lath on the lower story and rearranging the entrance

coat. In this way the finishing coat is applied before the scratch coat has become hard. When the temperature is below 50 deg. Fahr. the finish coat can be applied 24 hr. after the scratch coat is put on.

The finish can be made in various ways. A smooth finish is secured by a wood or cork float, or preferably a celluloid faced trowel. A steel trowel

be done carefully to avoid opening up spaces in the finishing coat that will permit the entrance of water through the plastering.

A pebble dash finish is secured by first floating the finishing coat to a true surface and then throwing against this surface dry dash material. This material may be made of crushed granite, quarts,

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marble, gravel or any other desired material. This dry dash material should be thrown on by another plasterer who follows immediately behind the plasterer who is applying the finishing coat. It should then be gently pressed in with a clean trowel while

as produced by the manufacturer and the contractor who is to apply the material. As is the case with most factors that enter into building construction, the material and workmanship must be right in order to avoid unsatisfactory results.



A residence in Oak Park Ill., photographed 62 months after completion. A marble-finished magnesia cement stucco applied to sheathing board having dovetailed grooves on its face. Note the color and texture

the finishing coat is still wet so as to thoroughly imbed it in the stucco.

Magnesia cement stucco can be colored with any mineral color or combination of them. The factory made product is produced in colors and when thus prepared the shade is uniform. When the aggregate is made of white sand the stucco wall surface is white owing to the white color of the magnesia cement, and owing to its being impervious it does not stain by the penetration of dust and smoke.

Magnesia cement can be applied in zero weather without damage. Although the setting up process is quite slow under these conditions, it ultimately becomes hard as when applied under usual working temperatures. This is an advantage not possessed by other plasters. It should, however, always be applied to a dry surface, except that surface be sprayed with the magnesium chloride solution as may be desirable under some conditions.

Magnesite is an important factor in building construction, especially in its use for floor finish and exterior stucco. For these uses it possesses certain physical properties that are not common to other materials. For reasons before stated, the product is not standardized as yet and in order to secure satisfactory results the architect should exercise judgment and care in selecting and using the mate-

The Friction of Water in Pipes and Fittings

THE work of the various experimental laboratories of American Universities is constantly increasing in importance. The large quantity of work done and the wide scope of the investigations add much to available technical data.

Bulletin 1759, October, 1917, of the University of Texas, is entitled *The Friction of Water in Pipe and Fittings*, by F. E. Giesecke, Head of Division of Engineering.

Eight topics were investigated and the results expressed in formulas derived from the plotted results.

A formula is given for the friction of water, at a temperature of about 70 deg. F., in one foot of new, clean, black standard pipe ranging in size from $\frac{1}{2}$ to 3 inches diameter.

It was found that the friction of water in galvanized iron pipe is slightly greater than that in black pipe.

The friction of water in used pipe is greater than in new pipe. This result is based on testing a $1\frac{1}{2}$ inch galvanized iron pipe which had been used for seven years in a hot water heating system. This is due to the incrustation caused by such use. In

this case, the coefficient of τ is about 17 per cent greater and the exponent is about 6 per cent greater than in the case of new pipe.

The friction of water in standard wrought iron couplings is very small; for a $\frac{3}{4}$ -inch pipe and a velocity of one foot per second it is equal to that in a $\frac{3}{4}$ -inch pipe whose length is equal to three diameters, and for a 1-inch pipe is equal to that in a 1-inch pipe whose length is equal to one diameter.

The friction of water due to burrs which are left in pipes by the ordinary pipe cutter when the ends of the pipe are not reamed is considerable, particularly in the smaller sizes. For a $\frac{3}{4}$ -inch pipe and a velocity of one foot per second the friction due to a pair of burrs is equal to that in a $\frac{3}{4}$ -inch pipe whose length is equal to nineteen diameters, and for a 1-inch pipe it is equal to nine diameters.

The friction of water in a standard short radius, 90 degree elbow was measured. The result is given on the basis of deducting the friction due to the length of the elbow, so that only the friction due to the change of direction of flow and that due to change of cross sectional area of conduit is considered. The elbows ranged in size from $\frac{1}{2}$ -inch to $2\frac{1}{2}$ inches in diameter. For the range of sizes and velocities investigated, the friction of a standard short radius 90 degree elbow is about the same as that of a pipe whose diameter is equal to that of the elbow and whose length is equal to twenty-five diameters.

The friction of water in short radius, ordinary elbows is greater than that in long radius, ordinary elbows; the difference is variable, decreasing with the increased velocity. For a $1\frac{1}{4}$ -inch elbow and a velocity of one-half foot per second the friction in a short radius elbow is about five times as great as in a long radius elbow; for a velocity of two feet it is about twice as great. The friction of water in short radius, drainage elbows is greater than that in long radius, drainage elbows; the difference is not as variable as in ordinary elbows. For a $1\frac{1}{4}$ -inch elbow and a velocity, ranging from one-half foot to two feet per second, the friction, in a short radius, drainage elbow is about twice as great as in a long radius, drainage elbow. The friction of water in drainage elbows, of the types and sizes tested in these experiments, is about twice as great as that in ordinary elbows.

The friction of water decreases as its temperature increases. This was demonstrated by tests with water temperatures of 70, of 100 and of 140 degrees F.

These refinements in measuring the friction of water in pipes and fittings may not be of especial value in the ordinary minor piping installation, but when applied to large systems of piping such as

described in THE AMERICAN ARCHITECT of March 27, page 389, they would undoubtedly effect an economy of installation and operation which would be of considerable importance. The formulas given can be used as a basis for working tables that would be valuable to the engineer or others who have piping installations to design.

General Contractors Convention, Chicago, November 20-21

AT the so-called federation of the building industry at Atlantic City, July 15-16, 1918, a movement was instituted among the general contractors present to organize themselves in a national way. Mention of this was made in THE AMERICAN ARCHITECT of July 24. It is true that many builders' and contractors' exchanges were represented at that convention, but as the membership of such organizations is made up largely of material producers and selling agencies, they do not represent the contractors as such. A conflict of interests is natural, in that the material man is a seller and the contractor is a buyer, and the interests of either will be better served in organizations whose membership has but one interest.

At a recent meeting of the temporary executive committee which was appointed at Atlantic City, and later enlarged, it was decided to call a convention at which a national association will be perfected. This executive committee has drafted a tentative form of constitution which will form the basis for action of the convention.

The committee adopted the following resolution: "Whereas, It is the sense of the committee that the organization of the general contractors of the United States into a national association is necessary and feasible, therefore be it

"Resolved, That a convention of the general contractors throughout the country be called at Chicago on Nov. 20-21 next for the purpose of forming a permanent organization; and be it further

"Resolved, That an invitation be extended to all general contractors to attend, and that the invitation set forth fully the purposes for which the convention is called."

The committee will meet in Chicago prior to the meeting of the convention.

The so-called building industry can never be an effective influence in business and political affairs until organized in a reasonable manner. The four great factors are the materials production and its marketing, labor, contracting, and the production of plans and specifications. The materials production and its marketing and labor are now well organized, the former being effected at Atlantic

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City, and the latter has been for many years. The contractors have, as yet, effected no powerful organization because they have worked with other interests, and it is to be hoped that at the coming convention this desirable end will be accomplished.

The production of plans and specifications, as an industry, is organized through numerous associations of architects; local, State, and one national institute. The engineers of different kinds have national, State and local associations. Neither of these kinds of producers of plans and specifications are unified in their organization, although there appears to be a well-defined intention among the engineers to accomplish such a result.

With the organization of each of the four elements of the building industry in strong units, and they in turn working together in a council representing all of them, the building industry could then have some measure of control over their affairs, and which they are utterly devoid of now. The result of the coming convention promises to have a far-reaching influence, and will undoubtedly have an effect on the practice of architecture and engineering.

A New Concrete Mixer Suggested

THE increasing attention which is being given the making and placing of concrete will undoubtedly lead to new methods in the future. The strength of concrete has now been found to depend largely on the amount of water used and the mode of mixing. The difference between laboratory and field results is becoming appreciated, and the aim is to improve the field practice.

We have all seen 1:2:4 concrete apparently no better than 1:4:10, and never knew why. We have studied failures of rich concrete, writes F. B. Walker in the *ENGINEERING NEWS-RECORD*, without arriving at satisfactory reasons therefor, and we have seen what was apparently a very ordinary concrete perfectly water-tight when in adjacent work was a very rich concrete which would leak like a sieve. The making of our concrete is analogous to the English definition of the American cocktail: A little sugar to make it sweet, a little lemon to make it sour, a little whiskey to make it strong, and a lot of water to make it weak.

The question confronting the maker of concrete is how to make it sufficiently plastic with a minimum of water. Concrete mixers are apparently the result of competition in producing the cheapest swiftly revolving tumbling barrel which will dump the greatest yardage in the fewest possible seconds. A new scheme of design must be made, and not by manufacturers of machinery but by intelligent engineers who design to achieve the necessary result.

Mr. Walker suggests a mixer involving a three-stage process: mixing the water and cement, the addition of sand, and finally the addition of the coarse aggregate. This could be done and the three stages of operation going on concurrently. He also suggests a new formula: Instead of 1:3:5, to read $\frac{1}{2}$:1:3:5, the first factor of $\frac{1}{2}$ to indicate the measure of water, with cement, sand and gravel or stone in the usual order.

Remodeling—A Conservation Move

THE remodeling and modernizing of old buildings, which is being carried on so extensively to-day, constitutes one of the greatest conservation movements in the history of the country.

What to do with the older type of building was a question which a few years ago seemed impossible to answer. The constant opening of new buildings with every modern convenience for the comfort of tenants proved a magnet which drew from the older building its most desirable tenants. Substantial structures, honestly built, were ruthlessly destroyed to make way for modern buildings because there seemed no other way out.

The war solved the problem. With the cessation of original construction, due to scarcity of labor, and other conditions, the over-built condition so prevalent in most cities gradually disappeared.

Banks, for instance, with the taking on of Liberty Loan work, required more space; the Government, with its mushroom growth of every department connected with the war, simply ate up space; industrial firms and commercial houses expanded until the overflow seeped into the older type of office building.

The older building came into its own. Space was leased at higher rentals. With the increased revenue and the healthy demand for space, the progressive manager of the building at once began extensive remodeling operations. Service must be rendered economically, waste space utilized. Old lighting fixtures must make way for newer and more modern systems; store fronts must be changed; heating systems revised to produce better results with lower fuel consumption; walls must be torn out, space relaid, new partitions erected; old window shades replaced; toilet rooms in which so much space is needlessly wasted rearranged, new partitions put in—in fact, antiquated fixtures, ample in their day but inefficient now, must be shelved.

When it became apparent that new building operations could not be carried on, it seemed to leave an awful crater in the construction field. But the law of equalization asserted itself, and a new outlet for business was established.—*Building Review*.

Industrial Information

New Use for Metal Lath

A recent use in connection with hollow tile wall construction has been suggested and used by Robert D. Kohn, architect of New York, states *Engineering and Cement World*. This is to cut sheets of metal lath into strips the width of hollow tile and use these strips laid full width of wall between each row of hollow tile blocks, securely tying the wall together and thus causing uniform action of stresses and preventing uneven settlement and unsightly cracks in stucco on hollow tile or walls. This also saves considerable waste of mortar, which would otherwise drop into the tile, and it facilitates the masons' buttering-up to a considerable degree. In some recent tile construction of this character in Peekskill, N. Y., the contractor actually saved money by adding these metal lath strips, the saving in mortar and time much more than offsetting the slight cost for the metal lath strips.

Anti-Hydro

The Anti-Hydro Waterproofing Co., with offices at 149 Broadway, New York, is circulating a leaflet in which is told the efficacy of Anti-Hydro for hardening Portland cement mixtures and making them impervious to acids, moisture, odors, gas and other agents which are destructive of the value of concrete.

Anti-Hydro is described as having a calcium base which combines chemically with cement, exciting and bringing into action all the cohesive possibilities of Portland cement. It is alleged to mix readily with water and at the same time enrich the mortar and save time in finishing. The manufacturers assert that it is so easy to use that the cost of mixing and of supervision are believed to be reduced to a minimum.

For producing dustless adamant concrete floors, Anti-Hydro is highly recommended. If treated with this liquid, they can, it is said, be used three days after laying, and will be found waterproof and durable. The makers further declare that this material prevents disintegration of walls, making them fireproof and rendering them non-conductors; in cold-storage plants it is claimed to prevent the entrance of moisture and consequent frost. We are also told that interior walls treated with Anti-Hydro better the sanitary conditions in hospitals, schools, churches and other public buildings. In factories

and commercial buildings it is claimed that the use of this material will largely overcome the non-resilience of cement mixtures to strains and shocks.

The directions for using Anti-Hydro are very simple, and are explicitly given in the leaflet referred to. The liquid is shipped in standard containers of five, ten, twenty and thirty gallons.

"Solar Grand" Fireplace Heater

In a series of pamphlets and leaflets issued by the Sanitary Heating Co., 233 Thirty-seventh Street, Brooklyn, N. Y., there are illustrated and described the line of gas heaters made by this company. Just at this time, when the question of fuel conservation is an all-important one, any heating equipment devised to effect this result will be of interest. The "Solar Grand" fireplace heater made by this company, it is claimed, will furnish sufficient heat to provide the necessary warmth throughout the winter. Other advantages claimed are that it is adapted to all standard fireplace openings; it does not require a flue connection or finished fireplace opening; it can be connected with the existing pipe line; it is substantial in construction and durable in finish. The makers further claim considerable economy in operation, and its attractiveness in design would seem to be shown in the various illustrations of this model. An important feature incorporated into this heater is one of safety from accident, as it is designed with a closed-in burner, so that the flame of the heater presents no danger to occupants of the room. The weight of the equipment is stated as 140 lb. and it is 32½ in. high and 31½ in. wide. Further particulars may be had by application to the Sanitary Heating Co.

Perforated Sheet Metals

A completely illustrated booklet has been received reviewing the large range of screens and other kinds of perforated sheet metal manufactured by the Beckley Perforating Co., Garwood, N. J.

In addition to the customary household uses for screens, these are adapted for machinery guards, for separators, stone, coal and shaker screens, stamp batteries, mining and smelting works, grain cleaning machinery, etc. They are made in a very large variety of sizes and designs, and the Beckley Co. state they are prepared to order anything in this line not illustrated.

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