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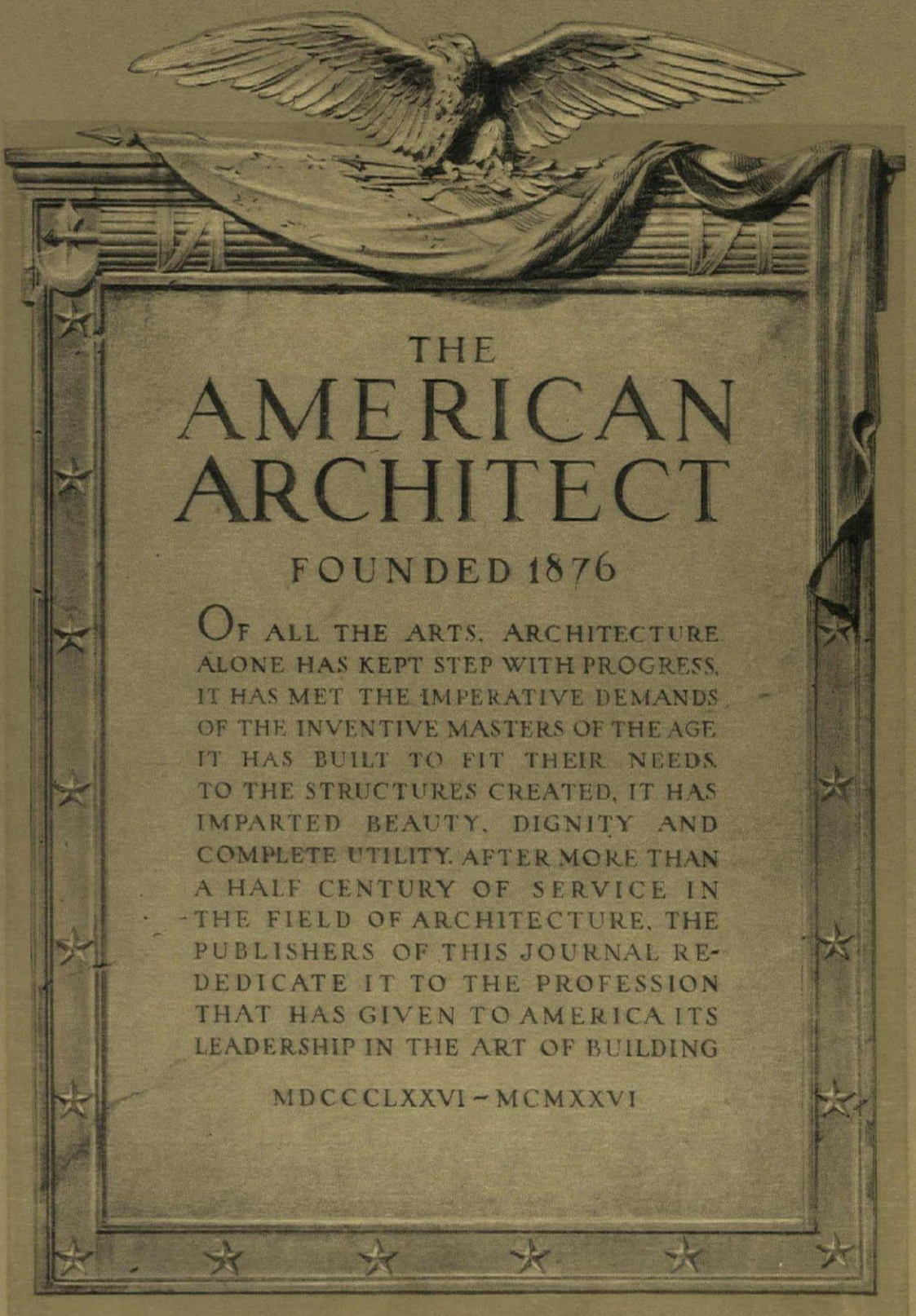

THE AMERICAN ARCHITECT

FOUNDED 1876

OF ALL THE ARTS, ARCHITECTURE ALONE HAS KEPT STEP WITH PROGRESS. IT HAS MET THE IMPERATIVE DEMANDS OF THE INVENTIVE MASTERS OF THE AGE IT HAS BUILT TO FIT THEIR NEEDS. TO THE STRUCTURES CREATED, IT HAS IMPARTED BEAUTY, DIGNITY AND COMPLETE UTILITY. AFTER MORE THAN A HALF CENTURY OF SERVICE IN THE FIELD OF ARCHITECTURE, THE PUBLISHERS OF THIS JOURNAL RE-DEDICATE IT TO THE PROFESSION THAT HAS GIVEN TO AMERICA ITS LEADERSHIP IN THE ART OF BUILDING

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APRIL 5, 1926

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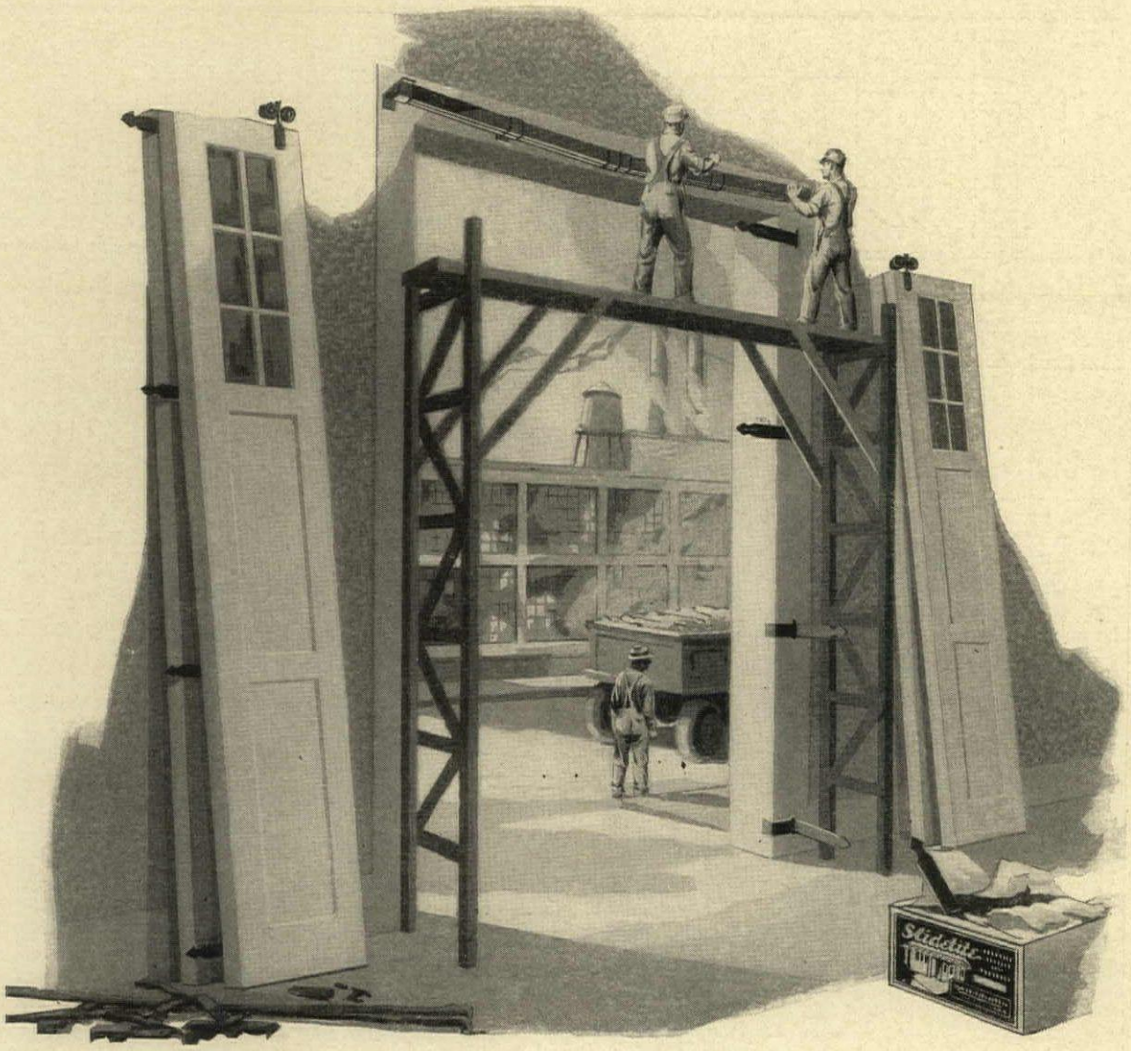

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CONSOLIDATED WITH THE ARCHITECTURAL REVIEW

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PLATES

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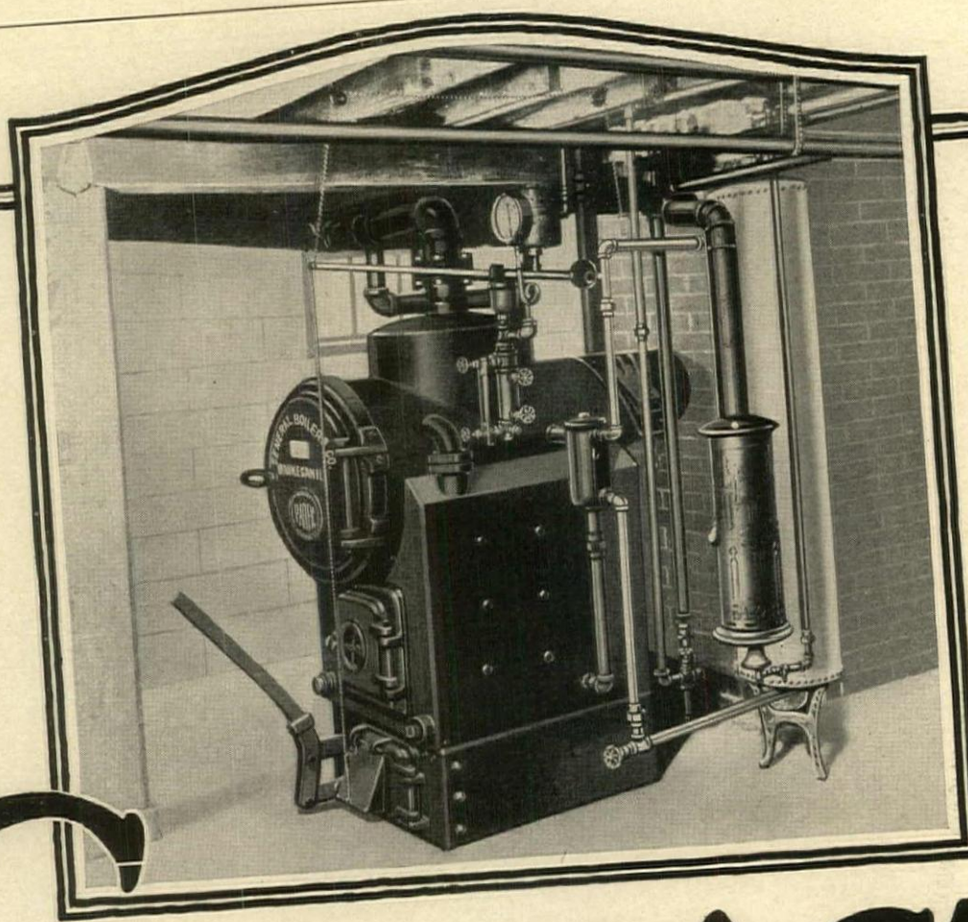

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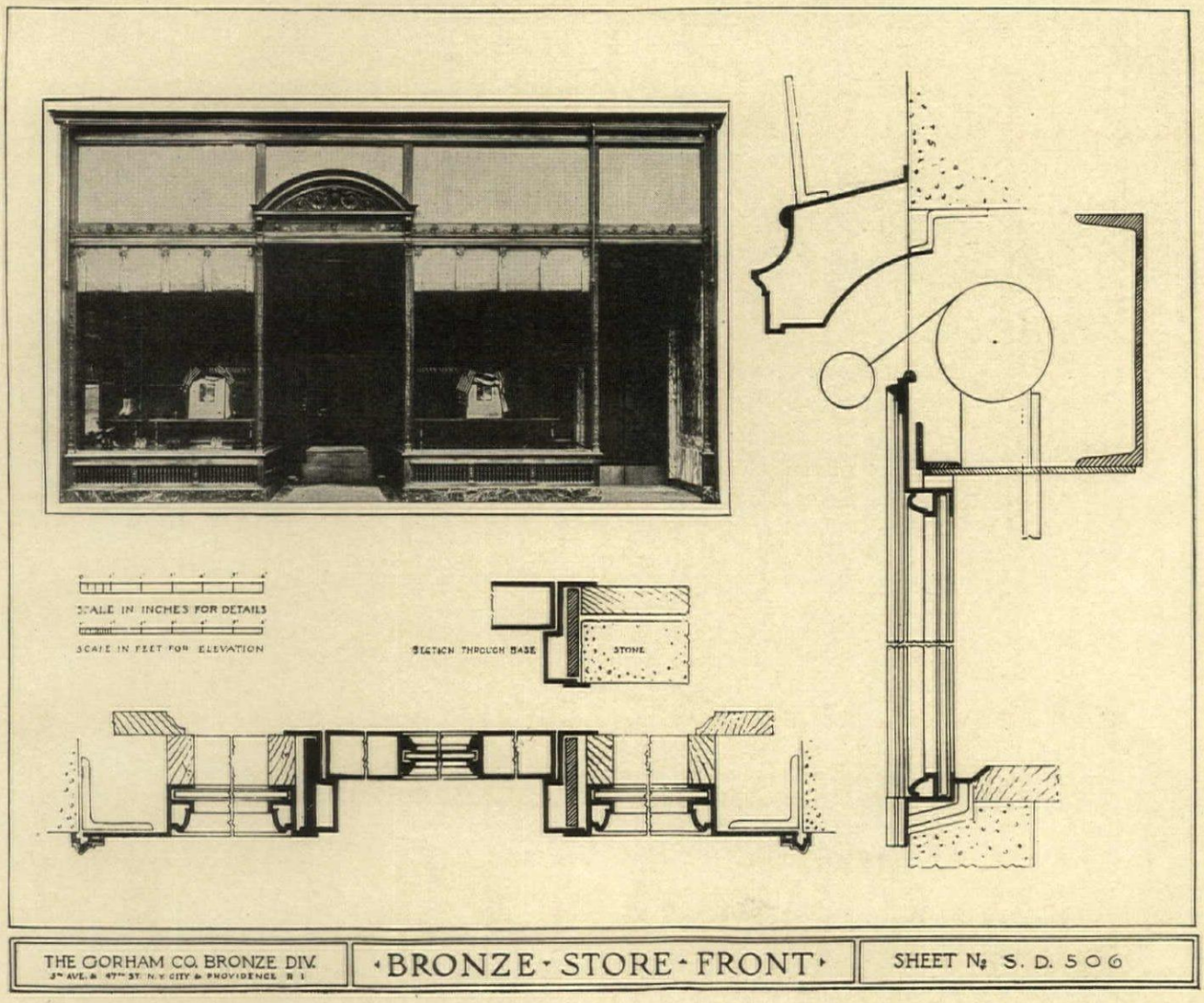

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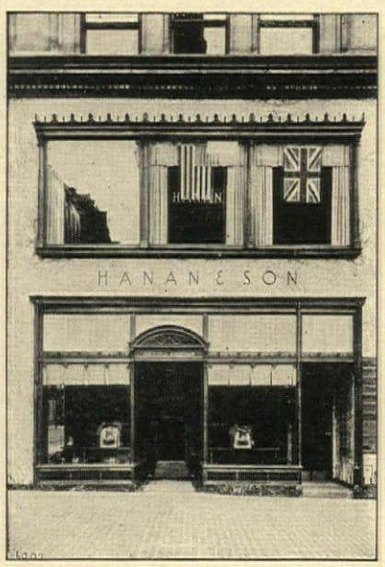

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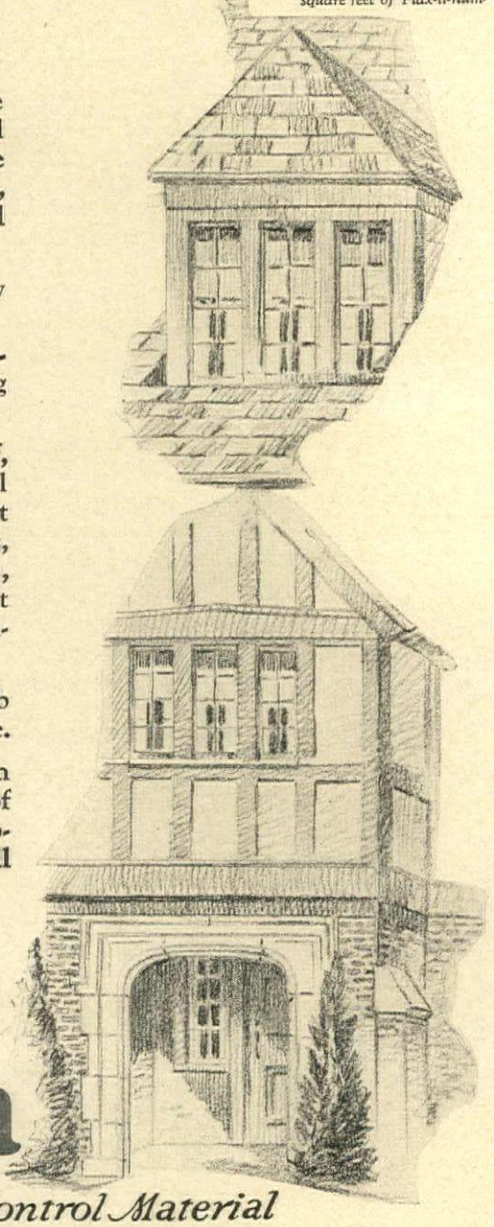

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The PUBLISHERS' PAGE

IN MANY CITIES in this country, and not so long ago (three or four decades), it was the custom for those who would be abreast of fashion, to don their newest clothes and go forth to the "Easter Parade." If the day was fair, this gathering became in a sense a pageant and those who claimed to be either the best society or who were eager to be included in that exclusive group, strolled home from church, clad in the latest fashion, the cynosure of all eyes.

In this issue and at this Easter tide, we have put on a new typographical dress. We are heralding the ides of Spring with a readjustment of our usual garb and we believe (and hope our many readers will share that belief) that we are much better dressed. This is but one of the many improvements that will be effected during 1926.

The Renaissance chateau, the city house of W. K. Vanderbilt on Fifth Avenue at Fifty-second Street, New York, is a masterpiece of architecture by the late Richard Morris Hunt, and probably ranks among the best buildings of its type in this city. Little by little the Northward trend of business on Fifth Avenue has encircled this and other important city dwellings by a cordon of commercial structures. And now this stately house is being demolished, its fine interior decorations, the work of master craftsmen in this country and in Europe, are being taken away to be resold to furbish some other dwelling or to give a mistaken sense of exclusiveness to any of the many night clubs and resorts that are springing up on Manhattan Island.

The Department of Interior Architecture of April 20 will illustrate and describe much of the interior decoration of this fine house.

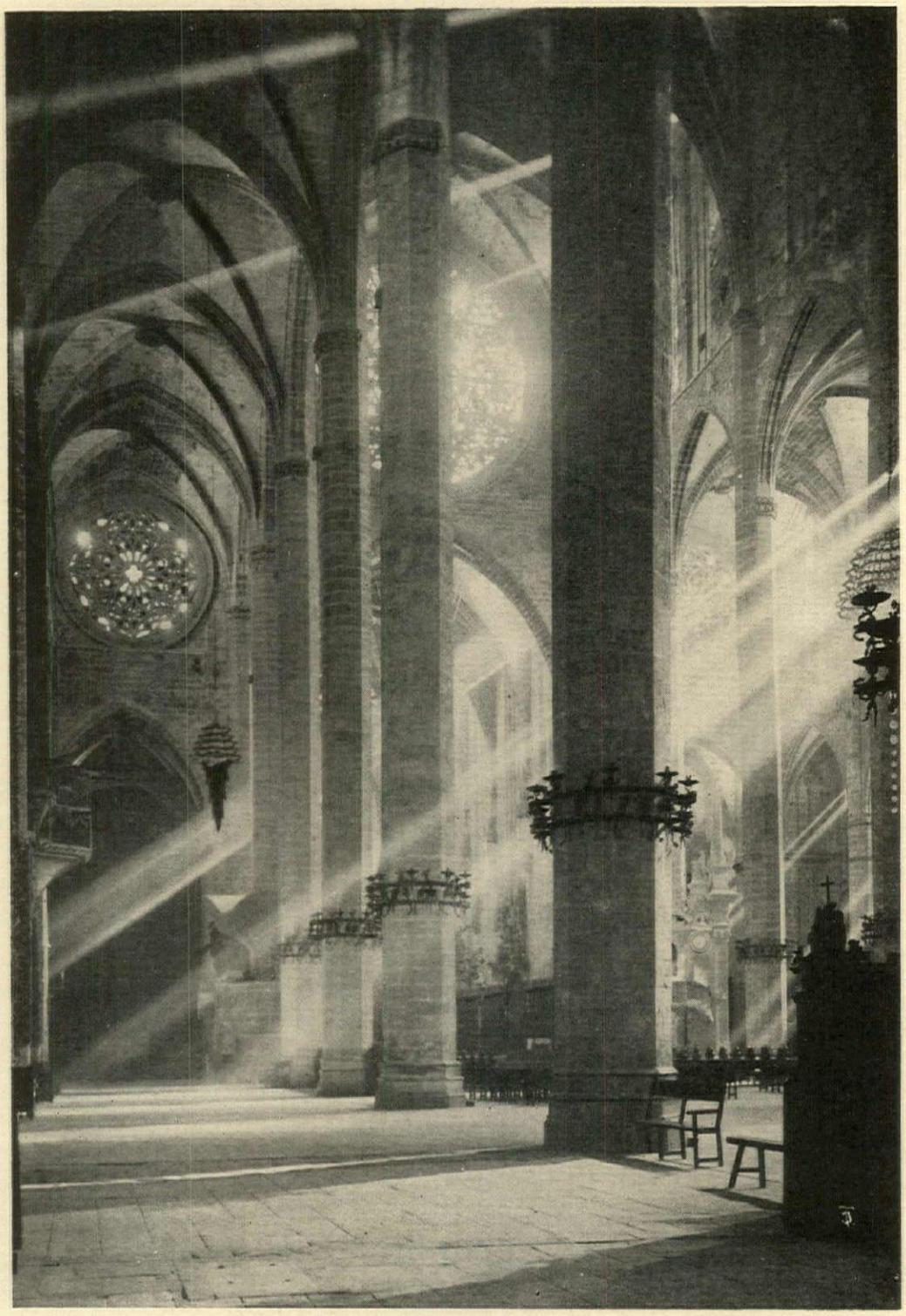
Following the earthquake at Santa Barbara, an article was contributed to this journal by Winsor Soule, architect, which exhaustively described the lessons taught as to the use of materials in sections subject to seismic disturbances. Santa Barbara has lost no time in setting forth on a comprehensive and well-considered plan of rebuilding. Much has already been accomplished. Just what that is will be set forth in a second article by Mr. Soule to appear in an early issue.

Following a custom extending over many years, this journal will fully report the proceedings of the convention of The American Institute of Architects to be held in Washington, D. C., May 5 to 7. A very full account of these proceedings will appear in issue of May 20. The program tentatively outlined gives promise of interesting proceedings. Many problems of importance to the profession will be discussed.

The fire-resisting house, of such slow burning construction as practically to eliminate the fire hazard, seems near to accomplishment. An article now being prepared for presentation in an early issue. has to do with a dwelling designed by J. C. Broderick and recently erected at Tarrytown, N. Y. Constructed of steel framed interchangeable units that may be utilized in constructing houses of any design, plan or style of architecture, the outer walls are covered with a brick veneer. The article will thoroughly describe all the various phases of construction and will have a large interest as pointing to one solution of the long-studied problem of the non-burnable house.

The work of the landscape architect is becoming with each year better organized as referring to co-operation with architects. By a well-conducted propaganda, carried forward by the American Society of Landscape Architects, through its several chapters, the general public is today better informed as to just what landscape architecture really means in the development not alone of large estates but also much smaller areas. This propaganda takes interesting form in exhibitions held by the Society in different cities. Work in landscape architecture was very prominently shown at the recent exhibition of the Architectural League of New York, and as this is written there is open in this city a dignified showing of completed work by the New York Chapter of the Society. Certain notable examples from that exhibition will be illustrated in our issue of April 20.

The subject of competitions, their conduct and importance in our architectural development, is always one of interest to the profession, and will undoubtedly form one of the leading matters that will be discussed at the forthcoming convention. Charles Butler, F. A. I. A., chairman of the Committee on Competitions of the Institute, has contributed a valuable article, to be out in our issue of April 20. Mr. Butler offers many suggestions as to the conduct of competitions and the provisions which, in his judgment, should receive serious consideration in any discussion of this important and always interesting subject.



PALMA CATHEDRAL

"PENCILS OF PALE LIGHT"

VOLUME CXXIX APRIL 5, 1926 NUMBER 2494

THE
AMERICAN
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(*Clixé Arxiu Mas*)

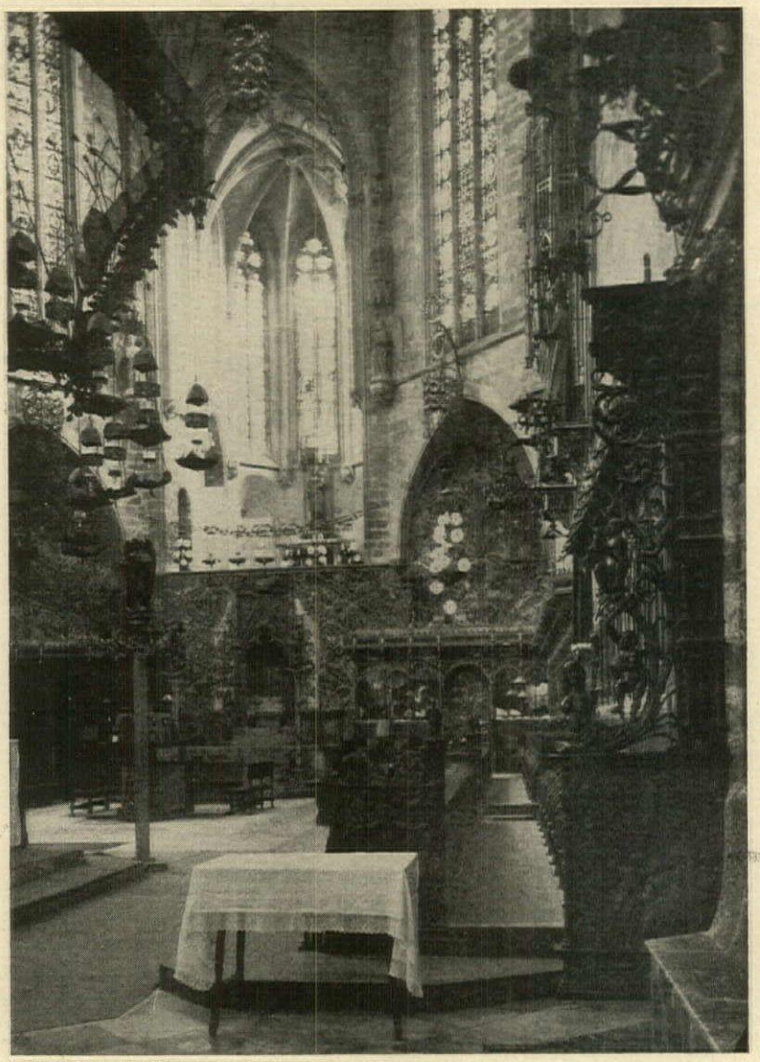
THE CATHEDRAL OF PALMA DE MALLORCA

CATALUÑAN ARCHITECTURE ·IV· PALMA CATHEDRAL

By RALPH ADAMS CRAM, F.A.I.A., LIT.D., LL.D.

"THE Fortunate Isles," Hesperides of the Golden Apples, delectable prize of many nations, such are the Islas Beleares, floating in the blue Mediterranean a night's journey south of Barcelona. The temptation is great to write of them in their many aspects; their beauty and variety and ingratiating climate; the opalescent sierra of Mallorca with the forty-mile huerta a sea of white foam when the almonds bloom in February; the fine motor roads and mountain paths, the ingratiating little yellow villages on hilltops and around the circuit of land-locked bays; the ruinous old country houses and gardens—Raxa, Alfabia, La Granja—the stately palaces of Palma, Belver and the other mediaeval castles, the stalactite caverns and the pine forests and the flowers that bloom in the winter and the fruits that are omnipresent. This, however, is an article on the crowning glory of the Island, the noble and much-ignored Cathedral of Palma, and the temptation will be resisted.

The Islands were recovered from the Moors in the year 1229 after an occupation of some six hundred years, and "El Conquistador" King Jayme I almost immediately set about building a cathedral in the gardens of the palace of the Mohammedan Governors, a wonderful site rising sheer from the



(*Clixé Arxiu Mas*)

THE CHOIR

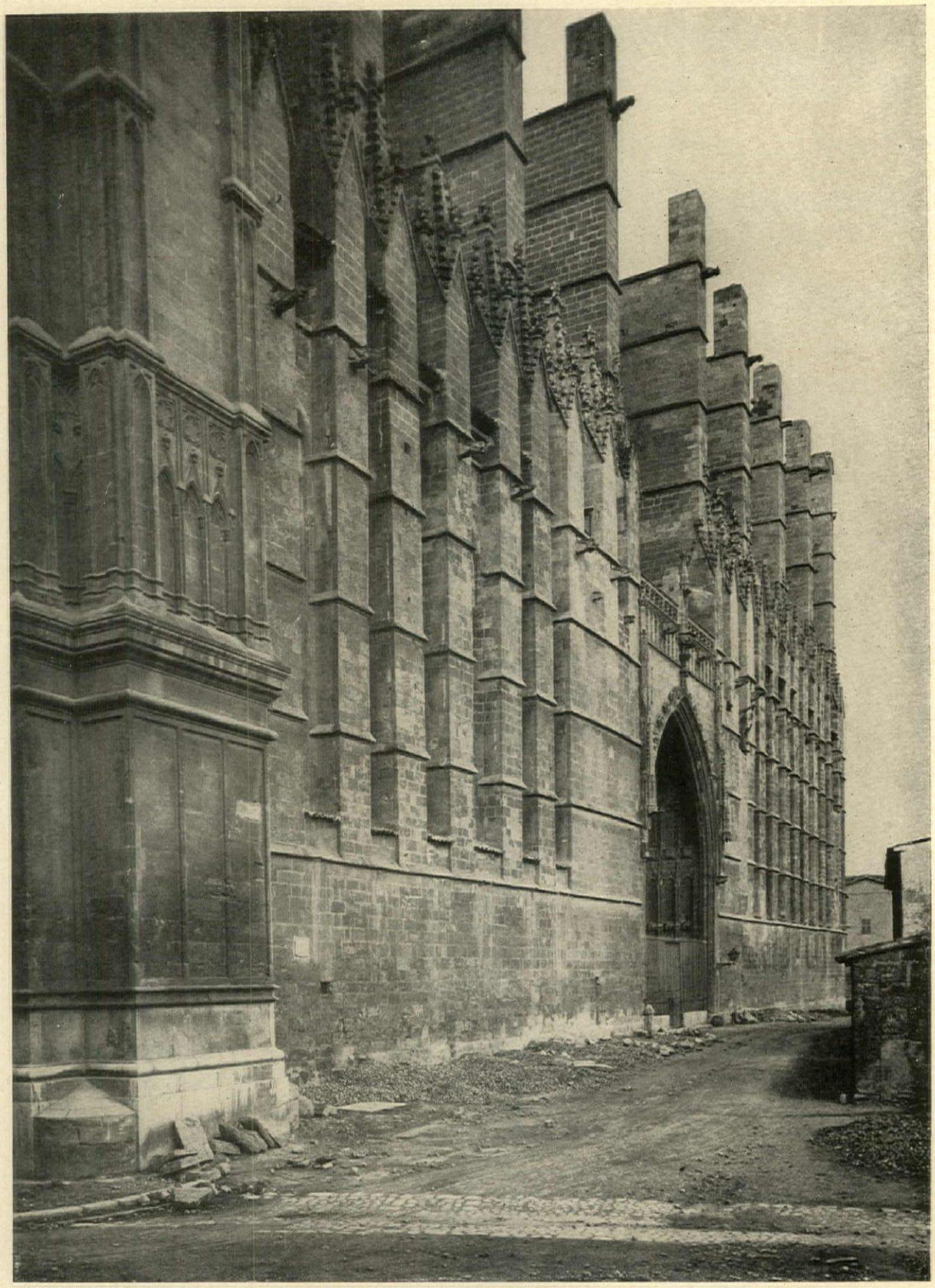
waters of the bay of Palma. Only the choir was built at first and it was not until about a century later that the nave was constructed; nevertheless the building has perfect unity and is, as a matter of fact, one of the most personal, inspiring and architecturally stimulating churches in Europe. Its dimensions are very great and the setting-out much more spacious than is the case with all other Gothic cathedrals outside Spain; indeed, in this respect Seville is its only competitor. The nave is 56 feet wide in the clear, and about twice as high, while the aisles are as wide as the naves of most English cathedrals, and are separated from the nave by slender octagonal columns less than five feet in diameter and, I suppose, some seventy feet high to the spring of the arches. The fifth bay from the choir is wider than the others and here are to be found great doorways, one opening from the north, the other giving clear on the unshaded terrace and the dazzling blue sea. Each bay of the aisles carries a large chapel between the enormous buttresses half-octagon in form, where the windows show, though they start on a square plan, the diagonals being carried by squinches. Both aisles close at the east in deep, polygonal-ended chapels quite shut off from the choir, the walls of which are unbroken except by deep, cavernous arches in which are the doors to the sacristies.

This choir is a thing of extraordinary beauty. Almost as wide as the nave, it is much lower than the nave high-vault, so what is said to be the largest rose window in the world comes between the apex of its arch and the crown of the nave vault. Similar, but much smaller roses with singularly beautiful tracery and perfectly damnable glass, flank it at either side above the arches of the easterly chapels of the aisles. The choir starts on a rectangular plan, three wide bays, with a fourth to the east which, about twenty-five feet above the floor, turns into three sides of an octagon by the use of great diagonal arches, a scheme I do not remember ever having seen outside Cataluña, and certainly used here for the first time. The great width of the choir and the fact that the apse has only three sides make possible very large, three-light windows in the diagonal walls, while the central side opens up into a lofty arch giving a clear view of the Lady Chapel, and above this arch is a fourth rose with fine tracery and beautiful glass; indeed all the choir glass is good.

The containing walls are in their lower part, absolutely plain ashlar of the silvery stone of which the interior of the cathedral is constructed, the sills of the windows being in line with the spring of the vault. This vault is a very beautiful piece of stereotomy, simple quadripartite work with exquisitely warped surfaces, and curious wall ribs that are clear only in the arches, scribing apparently against the lower surfaces of the transverse webs which start from the corbels without sign of wall ribs. Magnificent canopied niches with great statues support the vault corbels, or are applied to the vault colonnettes, but all the rest of the wall is plain, above the dark panelling that sheathes the lower walls, except for a group of three exquisite canopied niches and statues above either of the great lateral, arched doorways, and these great and rich niches are entirely done in gold-leaf and color. This note of glimmering gold on silver-gray is singularly beautiful, and when on high fast days wonderful old tapestries are stretched on either side,

(*Clixé Arxiu Mas*)

THE APSE OF ST. EULALIA, PALMA CATHEDRAL

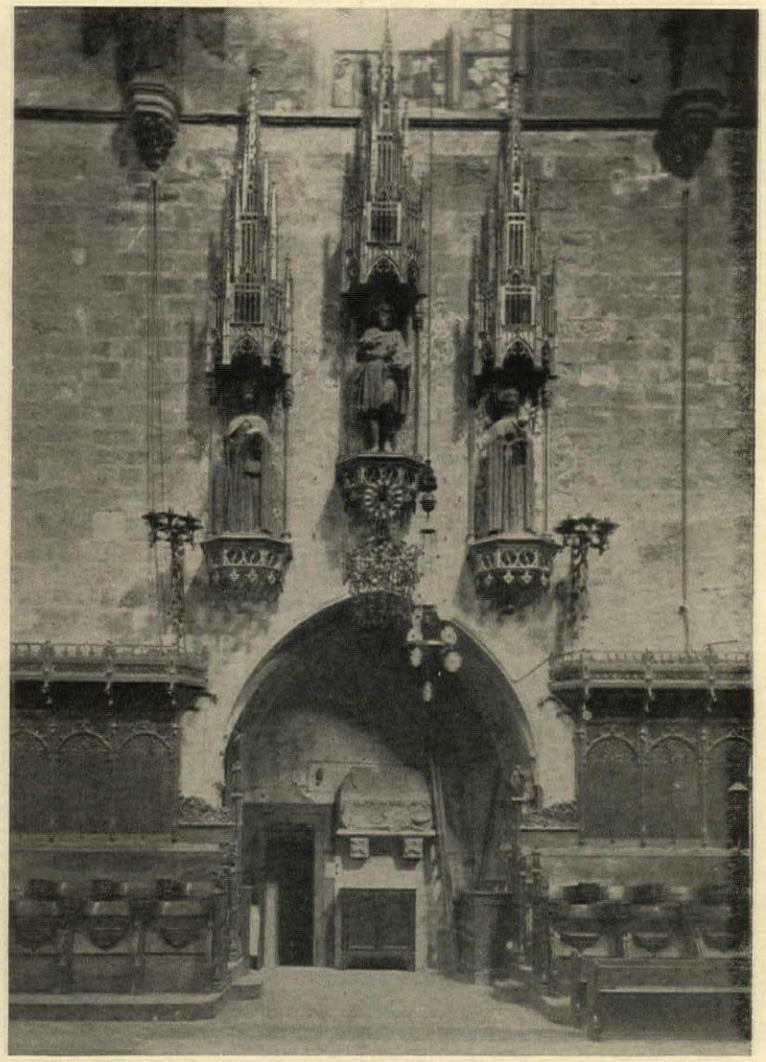


(*Clixé Arxiu Mas*)

RHYTHMIC MUSIC IN STONE, PALMA CATHEDRAL

the color effect, combined with the jeweled windows, impresses the beholder as both superb and unique.

There was dirty work in this cathedral in the early part of the century, about the only instance I know of in the Iberian peninsula, at least at so late a date. The unhappy architect of the Sagrada Familia in Barcelona (a genius whose unfettered modernism should fill Mr. Barry Byrne with holy joy) was turned loose here at the motion of certain misguided canons, and he effected a blend of shocking desecrations and of radical revolutions that really have a certain measure of justification. Like all Iberian cathedrals and churches, Palma once had a "Spanish choir," that is to say, an enclosed space in the midst of the nave, separated some distance from the sanctuary itself which in this case was the whole of the old choir. At that time the high altar was at the east end below the open arch into the Lady Chapel, and here was a very beautiful XIV century reredos of Gothic tracery, very rich and of course entirely done in color and gold. I imagine that at this time most of the choir was used for worshippers, but I don't know. Anyway, when the master of "Arte Moderno" took hold he removed the nave choir altogether, setting up the screens, panelling, galleries and pulpits in divers places—not wholly without effectiveness—removed the great gold retablo and stuck it up as a decoration above the door to the sea, brought the high altar forward almost to the entrance to the chancel, hung over it a perfectly incredible invention in the way of a combined baldachino and Calvary, which looks like black bronze but I believe is not, and then arranged his bishop's throne, canons' stalls and choir behind the altar after the fashion adopted in Westminster Cathedral. The general scheme is good, effective and practical, the details inexcusable, but worse was to follow at the hands of his pupil and successor, Señor Don J**n R***o, who has started some of the most awful painting and "stucco work" on the stalls and walls of the east end that man ever devised: he also created an incredible pulpit on the south side of the choir arch and did other very modern and advanced deeds of "derring-do;" but I understand he has now been curbed and that no more of the same sort is to follow.



(Clixé Arxiu Mas)

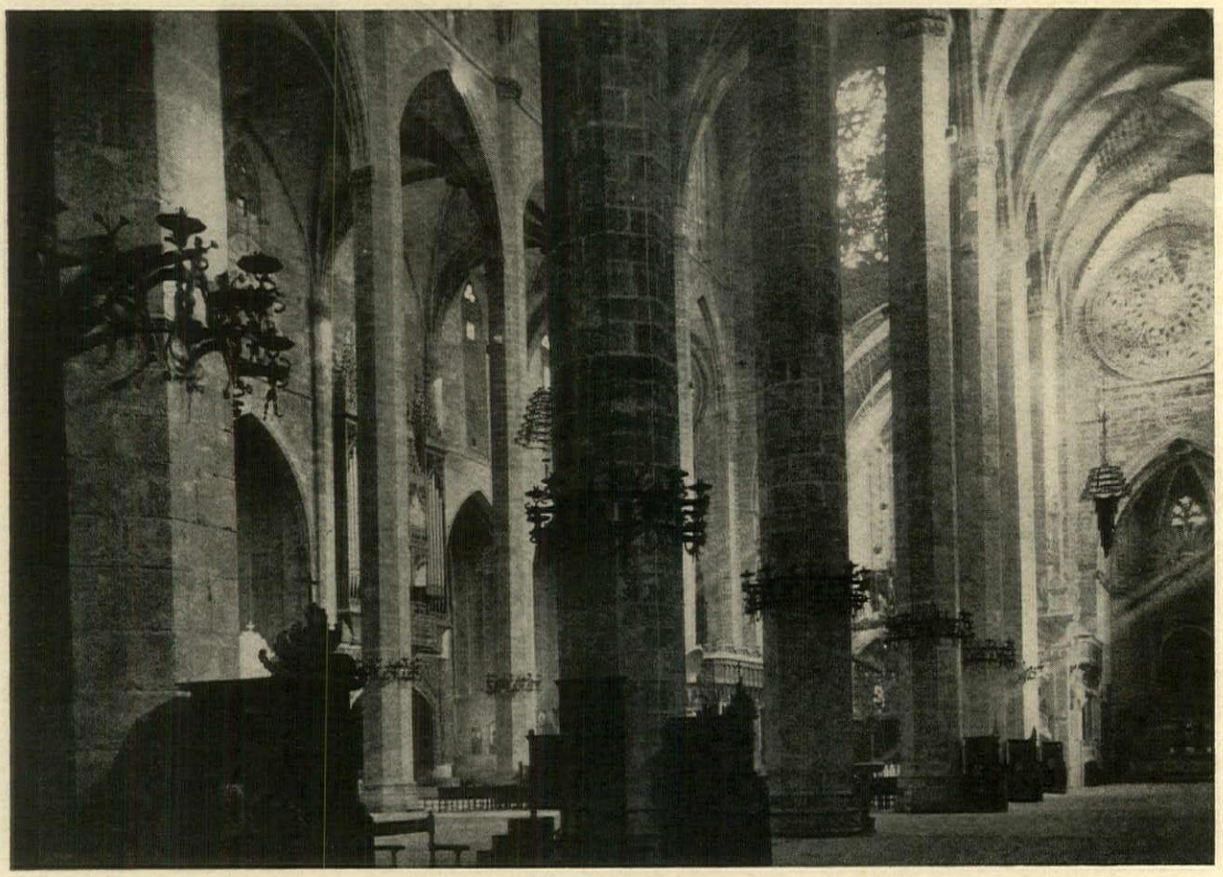
ONE OF THE SACRISTY ARCHES

And still the cathedral is not ruined, it is not even seriously damaged, for its beauty is so great that no one man or two could mar its perfection. For the removal of the nave-choir we must be grateful for once since it reveals the noble nave in all its majesty and subtle delicacy. Also it gives place for the vast crowds of devout worshippers, and in Spain it is crowds that resort to the churches, men in equal numbers with the women.

In spite of the intervening century, the choir and the nave perfectly coalesce, as I have said, and partly because of the austere simplicity of the work. That Jayme Fabre was the master-builder of the latter part is almost sure, and he is responsible for what almost amounts to a definite school of Gothic. All his work is a study in proportion, composition and the use of wide spaces of plain masonry. There is practically no carved ornamentation, the columns are simple octagons, the arches, ribs and window reveals are almost without mouldings, the arches do not overhang the shafts, the caps are mere bands of simple carving, while the walls are thin and the spacing as wide and open as masonry construction will allow. One great and impressive quality in all the churches attributed to him, is the dramatic and varied light-

ing. No two are similar in this, but all are striking. Palma is the most notable of all, but whether Master Fabre is wholly responsible is impossible to say. As originally designed and built, both choir and nave had many windows, immensely tall triple openings in the choir and apse, the four roses already spoken of with a fifth in the west end, the three sides of the polygonal chapels all pierced with traceried openings, and clerestory windows up under every vault of the nave. If all these were now in working order and filled with glass the church comes from the small penetrations in the blocked-up clerestory windows.

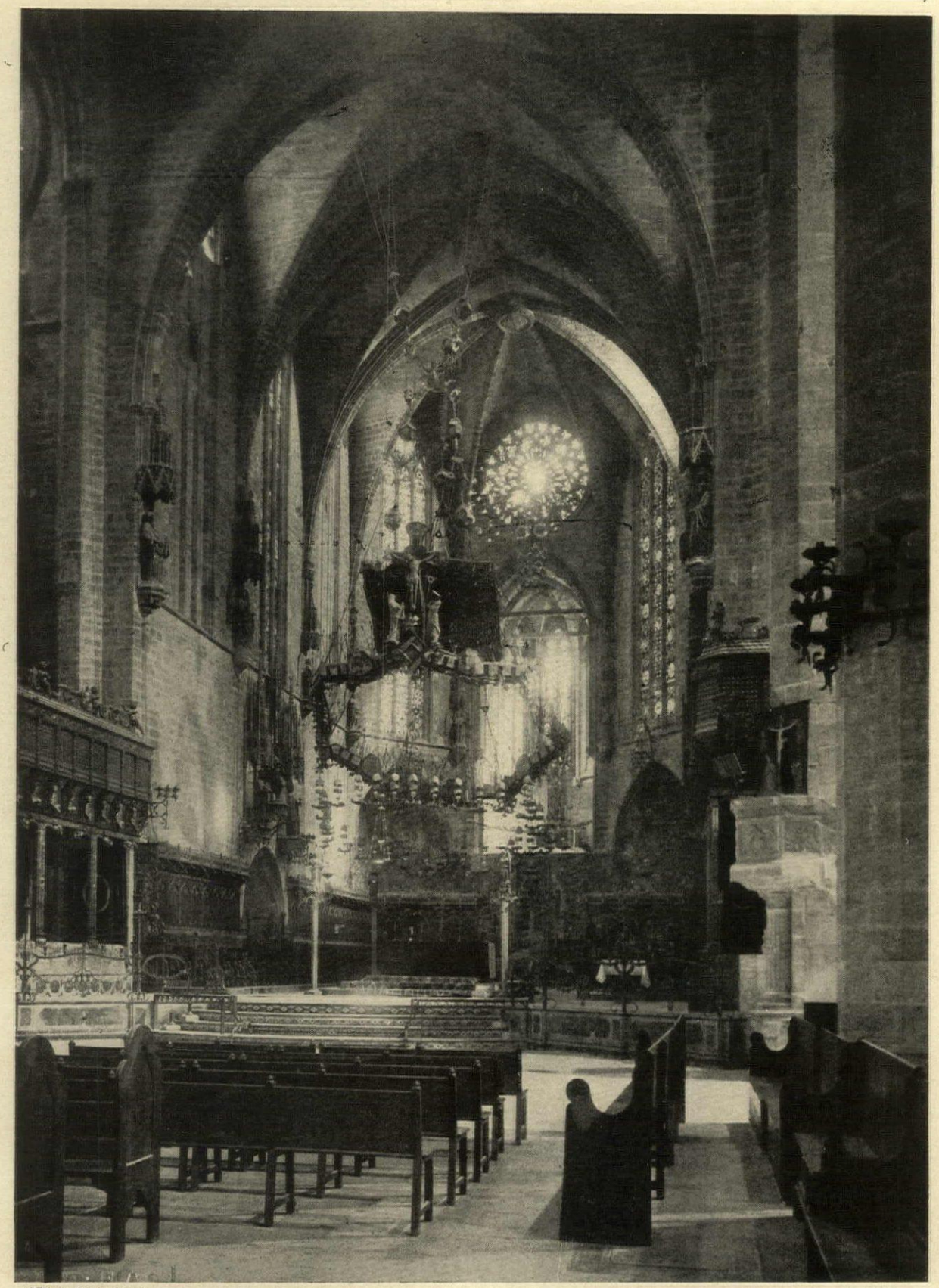
And yet the whole church, even on dark days, is full of a misty luminousness, while the long pencils of light, slanting through the little occuli high above, lace the interior with slow-moving bars of pale radiance that are beautiful beyond description. No other church in the world has quite this effect and it is in itself enough to justify a special trip to Mallorca. These rays of pearly light play a very important part not only in the



(Clixé Arxiu Mas)

COLUMNS OF TARNISHED SILVER

would be a blaze of glory, but at some time in the past, the date of which is unknown, nine-tenths of all the windows were blocked up with stone, leaving only three circular occuli in the traceried heads of each. Why this was done no one knows any more than when. A few of the windows have been opened, not many, and one chapel now has all its windows filled with interesting modern glass. All the other chapels are completely blocked by vast rococo or baroque retablos built up of gilded wood and indifferent great pictures (the effect is by no means as bad as one might suppose), so no light whatever comes in from below save what is admitted through the little circles in the chapel window heads, and, apart from the east windows and the roses, the only natural light in the nave "notan" of this masterly work of art, but also in its exquisite color effect, for they are constantly picking out some gold or color in retablo, picture, tapestry or stalls, so creating an accidental accent that reveals itself only to vanish away, the effect being one of singular movement and vitality. If the roses of the nave only had good glass the interior would be perfection, for the tarnished silver of walls, columns and vaults is a perfect background for the smouldering gold of the chapels, organ cases, niches and statues, and the dark wood of the chancel furniture. Altogether I think it is safe to say that while Seville is certainly the noblest Gothic interior ever created by man, Palma is the most personal and poignant, in this respect excelling even Chartres, Bourges and Exeter.



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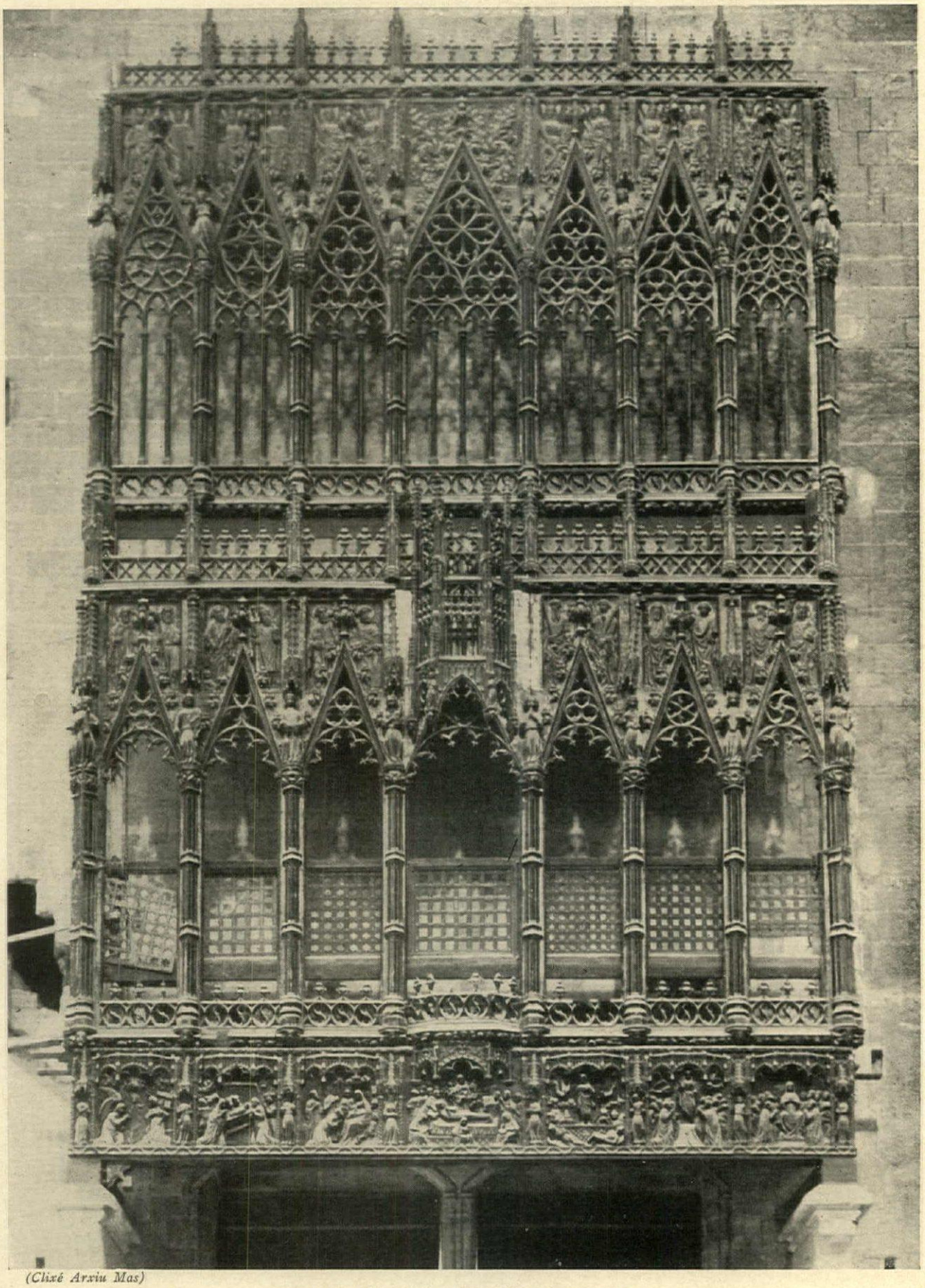
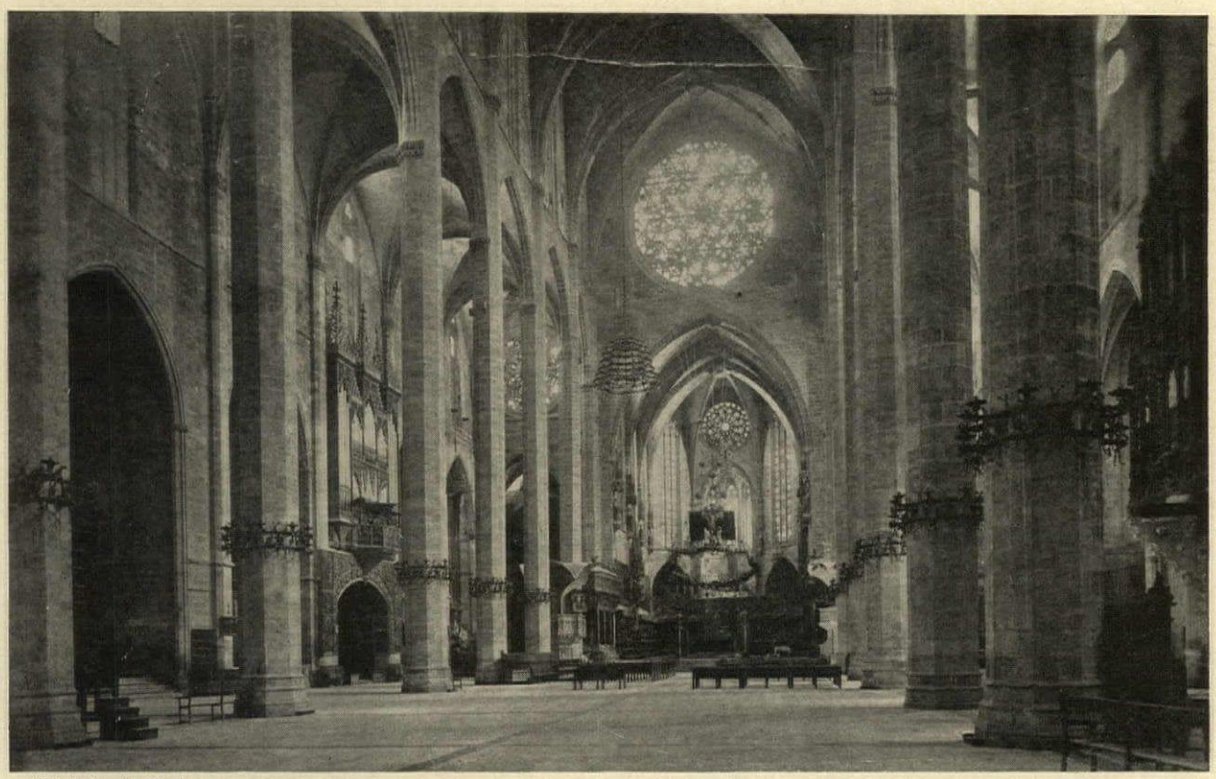
CHOIR AND SANCTUARY, PALMA CATHEDRAL



(Clixé Arxiu Mas)

THE OLD RETABLO, PALMA CATHEDRAL

I think I have said before that the Spanish church always begins to develop from within outwards, and that until the gold of the Indies began to pour in, to the ultimate ruin of the country, few of these truly Iberian churches ever achieved a logical or even handsome expression. To the Spaniard of the great day externals did not count for much. Burgos and Leon being essentially French, are exceptions of course. So is Palma, although it is Spanish, or rather Catalan, to the last degree. All that Master Fabre did was original, and though on the mainland his exteriors conform to the ascetic and rather negligent type of other contemporary work, Palma is a real and consistent creation, while it is also entirely unique. It rises sheer from the great ramparts of the old fortifications, the base of which is washed by the sea, and is built of a honey-colored stone that glows like gold in the sun, pales into lavender at dawn and into ashes-of-roses at sunset. The lower stage is a perfectly flat, unbroken wall which rises for a considerable distance with no buttress projections and with no break except the vast arch of the sea doorway. The buttresses that take the thrust of the high vault are of course enormous in depth and quite plain, with few and small offsets; between these come the aisle chapels and these have at their angles square buttresses in the same plane as the great buttresses and only a little smaller. Of course this means serried ranks of strong foursquare verticals, the spaces between being hardly wider than the buttresses themselves. The effect of this golden wall articulating itself into great verticals of varied widths and spacings is extraordinary; rhythmical like music, or the waves of the sea, and this effect is intensified by the vertical rhythm that comes from the stopping-off of the chapel buttresses at a lower level than that of those that take the high vault. There once were very simple pyramidal and crocketed pinnacles to all the buttresses, but most of these have disappeared (perhaps they never were built), though a few at the east have lately been restored. The roof of course is invisible, and the north tower, from close at hand, so the church shows as a simple, richly articulated mass of the utmost dignity and grandeur both in scale and in composition. The west front is nineteenth century and conscientious but dull, but the two great doorways, the one late and very rich Gothic, the other a naive and whimsical plateresque, are charming to a degree. Altogether Palma Cathedral is a masterpiece of architecture, and to my mind one of the most beautiful churches in Europe.



(Clixé Arxiu Mas)

THE NAVE

I should like to speak of the other churches on the Island, for there are many, but they would need an article by themselves. Particularly wonderful is the old ivory and amber facade of San Francisco, Spanish Renaissance of the most perfect and lovely type; the superbly picturesque apse of Saint Eulalia, and a charming little aisleless Gothic church (Fabre's work I suspect), the name of which I have forgotten. There are other most

delightful Renaissance churches all over the Island, while the old palaces of Palma, with their unique "zaguans," the big, half-ruinous country villas and the entirely original farmhouses, are in themselves sufficient to keep the architectural student who visits this wonderful isle busy for many months.

Yes, these are indeed "The Fortunate Isles" and the "Garden of the Hesperides." Happy is he who can come to know them through a winter of unmeasured sunshine and measurable peace.

THE CRAFTSMANSHIP OF THE FAMOUS ZULOAGA FAMILY

ALFRED C. BOSSOM, architect, has an interesting article in the January issue of *Arts and Decoration* concerning the studies of the Zuloaga family in Segovia, Spain. These cousins of Ignacio Zuloaga, the one outstanding Spanish artist, to whose work America is no stranger, are carrying on the tradition of artists, metal workers and ceramists. The inherited genius of all the past generations of this talented family, which include Daniel Zuloaga, ceramist and metal worker, Placido, father of Ignacio, widely known as the worker of Damascene, that process by which iron and steel are etched and enameled with other metals, and his father, a celebrated armourer and once the director of the Armeria at Madrid, is today expressing itself in the pottery revival which is harbored in the ancient church that stands on Iberian foundations built by the Romans and restored in the eleventh and twelfth centuries. "Because of the present widespread interest throughout the South in the Spanish flavor and character of architecture and house fittings," writes Mr. Bossom, "there can be no question but what the work of these most interesting of modern Spanish craftsmen should attract immediate and widespread favor. For as long as these Spanish-Moresque houses are being built, Spanish furniture, rugs and pottery will be essential to the developments of the interiors. That is, if the interiors are to be as fascinating and popular as the houses inspired by the architecture of picturesque Andalusia."

THE OLDEST TEMPLE IN THE WORLD

A FASCINATING story of the results of three years' excavations in the "Home of Abraham" was recently told in Kingsway Hall by C. Leonard Woolley, Director of the Joint Expedition of the British Museum and the University of Philadelphia, who, in an address before a large audience, spoke of the discoveries that had been made in the ancient city of Ur of the Chaldees. In order to continue its proportion of the cost, the British Museum is anxious to obtain financial help from all interested in the project.

Mr. Woolley first described the excavations carried on at Tell-el-Obeid, four miles from the city of Ur, where they found ruins of the oldest temple in the world to which they could assign an approximate date. It was built by an important King of Ur, who reigned somewhere between 3500 and 3300 B. C., and was of brick covered with wooden panelling raised upon a platform approached by a flight of stone steps. At the door stood statues of lions made of copper, and on each side of the door were columns encrusted with mosaic in mother-o'-pearl and red and black stones. Along the base of the walls were statues of bulls in metal, the oldest metal statues known to us by a thousand years, and so well made that modern brass founders said they could not better the work. Above this was a frieze with figures of white stone or shell, inlaid against the black background, representing cattle and farmyard scenes, with men milking cows, and others straining and storing the milk.

They found, he said, a small marble tablet which was the foundation stone of the building, and the inscription on it explained that the temple was built in honor of the goddess Nin-Kharsag. They knew before that this goddess was concerned with the creation of the world, according to the belief of the primitive people. They now found that she was the goddess of cattle and the farmyard. With these pastoral people life depended upon the livestock. Almost under the shadow of the temple, Mr. Woolley said, he found a cemetery of the same date, where people had been brought for burial from Ur. Round the bodies were placed the things they had needed in this life—foodstuffs in jars, weapons and tools in the case of a man, and beads, rouge, and eyepaint in the case of a woman. These people believed in a future life, and that the goddess who made and preserved them in this world was also prepared to bring them to a new birth in the world to come.

Speaking of the city of Ur, Mr. Woolley said its main feature was the Ziggurat—the great tower upon which stood the most holy temple of the city, dedicated to the Moon God. It was built about 2300 B.C., three centuries before the time of Abraham, who must have been familiar with it when he lived at Ur.

STAGE FITTINGS VOTED FOR NEW HIGH SCHOOLS

THE Board of Education of New York City recently approved a measure allowing approximately $4,500 for purchase of asbestos curtains and providing dressing rooms and stage lighting facilities in all high school auditoriums built in the future. No provision was made for scenery, as it was declared that the individual schools must solve that problem for themselves when the occasions arise.

INTERIOR ARCHITECTURE

THE CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

BY HOBART UPJOHN, ARCHITECT

TIME in its cycle brings about many changes and taste seems to follow a periodical rotation. Perhaps it is a natural desire for change, a continual striving for the new, but certain it is that each generation tries to outdo the last, and, with a certain inborn egotism, to look upon the past with disdain, even almost with contempt. It takes about twenty-five years to look with tolerance on a style; fifty years brings disgust; seventy-five years the small awakening of joy, while one hundred years or more is enough to wipe out the petty jealousies of an existing generation and to unfold our eyes to the beauty of any style.

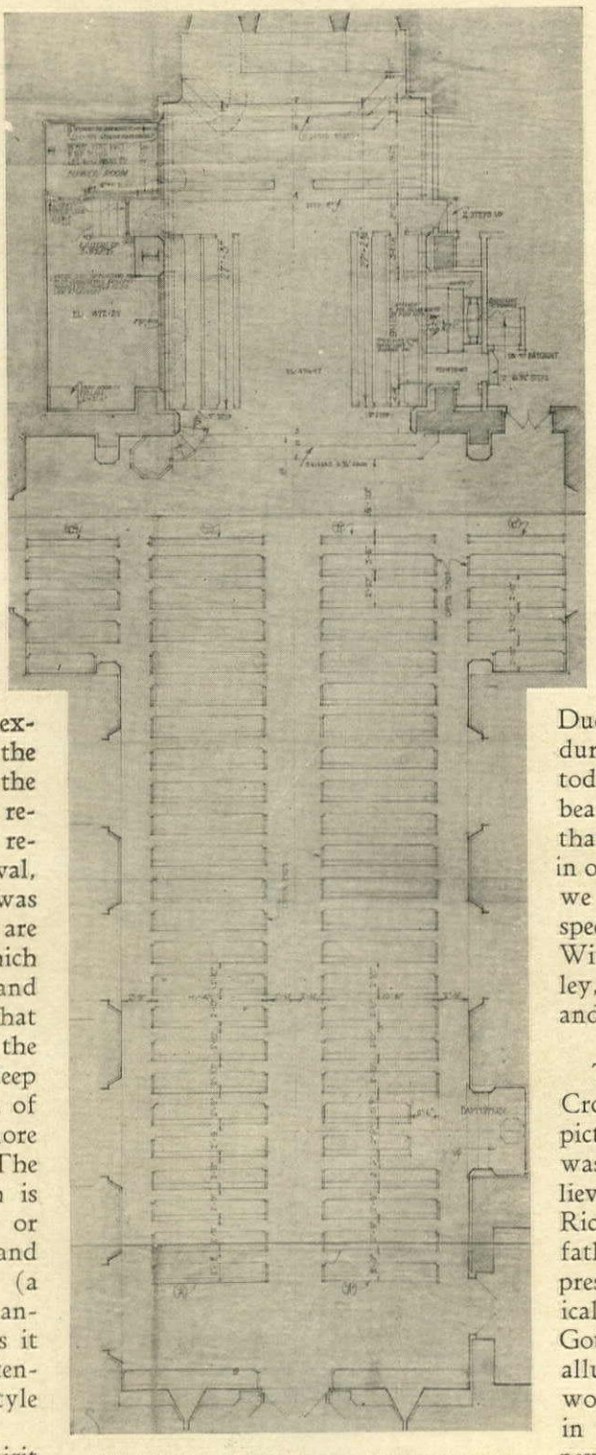
Today there seems to be a most unwarranted criticism of the Victorian era. There seems to be a general feeling that all that is good in architecture, especially Gothic church architecture, is the product of the last twenty-five years. The Victorian era, including the Victorian Gothic, as practiced in this country, is by some ignorantly condemned as a disgrace. How strange! Did we not less than fifty years ago split up gems of Colonial mantels and ruthlessly tear down the masterpieces of a period which should have been closest to our hearts, since it was the birth time of our country? A few years ago Chippendale, Hepplewhite and Sheraton were the rage, now we have advanced to Duncan Phyfe. It is not inconceivable that in a few years we will be hunting out and cherishing the best of the early part of Victoria's reign and we may look forward, not many years hence, when work of a later date will begin to be appreciated again, and with a more sincere respect than ever before. Yes, even now this is partially true, for certain of the better designs of the Victorian era are being selected by the Metropolitan Museum of Art, and mantels which a few years ago were a drug on the market are beginning to be sought in second-hand yards. Per-

FROM A PHOTOGRAPH OF THE MODEL SHOWING THE REAR VIEW OF THE BUILDINGS, WITH THE NEW CHAPEL AT THE RIGHT AND THE OLD AT THE LEFT

CHAPEL OF THE CROSS, CHAPEL HILL, N. C.—HOBART UPJOHN, ARCHITECT

haps this is due to the fact that at a certain period in life we arrive at a time when our minds go back to associations of our childhood. Those objects which remind us of happy childhood days assume a beauty that we never saw or felt before.

However this may be, it is certain that all ages of style and design have their beautiful spots, even though they may not be apparent at first glance. On the other hand, we may as well open our eyes and acknowledge that all that is designed today is not gold. The one principle back of good design is its enduring pleasure. A style that has pleased generation after generation is a safe style and commands our respect. Proportion, detail, color, mass, all are fixed in their principles of right and wrong, irrespective of age or style. For this reason, when we extravagantly condemn the work of our forebears of the Victorian age, we should remember that the Gothic revival was a purist revival, and while not all that was Gothic was good, there are examples of this period which have beauty of form, mass and proportion which owe that beauty to the fact that the design finds its roots deep down in the monuments of the past. And what more are we doing today? The best work is that which is either a good French or English Gothic design, and no matter how original (a word indefinite in its meaning), it is good so far as it holds to the unbreakable tenets and principles of the style itself.

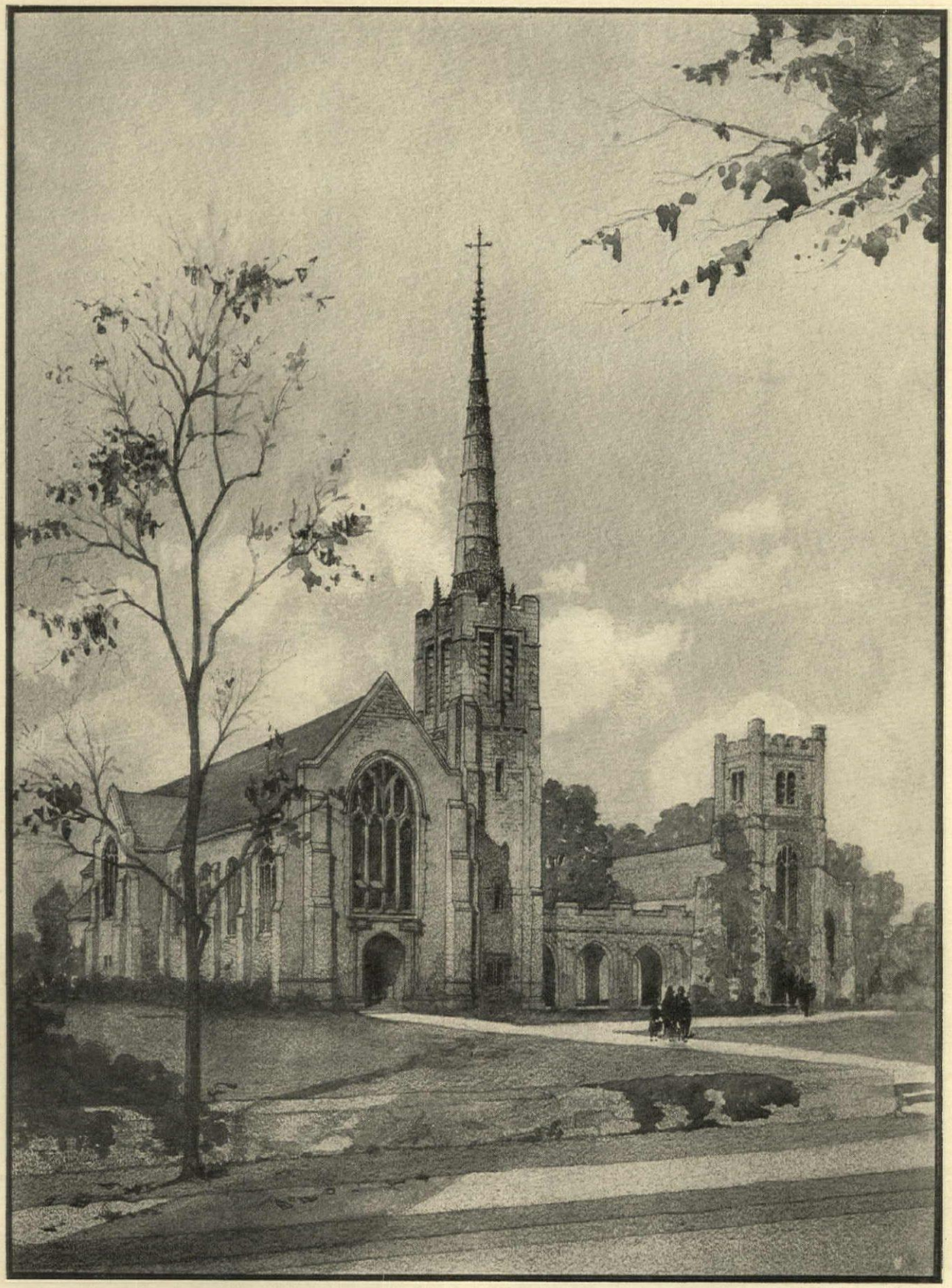


THE SEATING PLAN OF THE NEW CHAPEL
HOBART UPJOHN, ARCHITECT

It was in this very spirit that the architect entered into his work of designing the Chapel of the Cross at Chapel Hill. He had no desire to surprise with novelties, but rather to design an edifice worthy of its high purpose. That it has perpendicular windows and detail, that its proportions are of the English type, are of course true. Yet its freedom from slavish dictates of style is its only appeal to originality, for in other respects it is not different from 1850 or even from 1400. A good French essay, if really good, is good today, next year or next century if it has real merit behind it. But an essay in combined languages would hardly last out a year of popularity. And so a piece of work founded on the basic principles of architecture will be good at all times, so long as it has back of it the well-established principles of art.

So let us remember that our best books which we use today for Gothic design are those of the Victorian Gothic revivalists: Pugin, Britton, Brandon, Parker, Hope, and Violet le Duc, and that their work endures and leads the men of today as they did our forebears. Let us also not forget that there were masters here in our own country on whom we may still look with respect and honor: Renwick, Withers, Frank Wills, Dudley, Harney, Le Fevre, Hunt and the Upjohns.

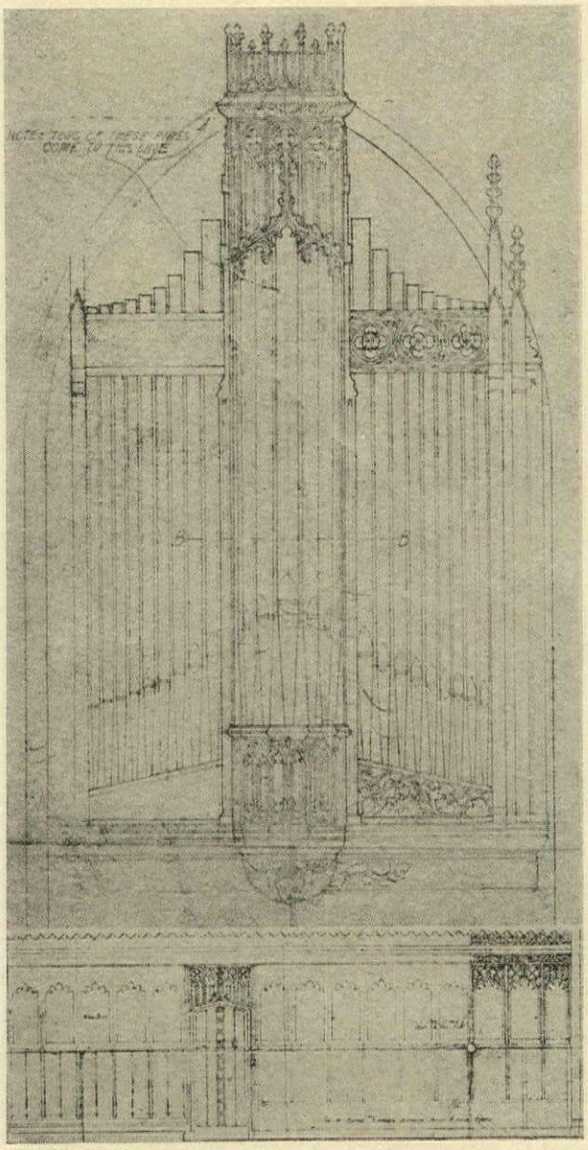
The original Chapel of the Cross, to which the additions pictured herewith were made, was built in 1848. It is believed to have been designed by Richard Upjohn, the grandfather of the architect of the present buildings. It is a typical example of the Victorian Gothic to which Mr. Upjohn alludes in his article. It is worthy of note, however, that in its construction, there is never a lack of sincerity. The hand pegs which hold woodwork together are visible, and the stone bears evidence of a hand-cut process which was then in operation. No attempt has been made to design the new group of buildings in the character of the old. Mr. Upjohn has covered



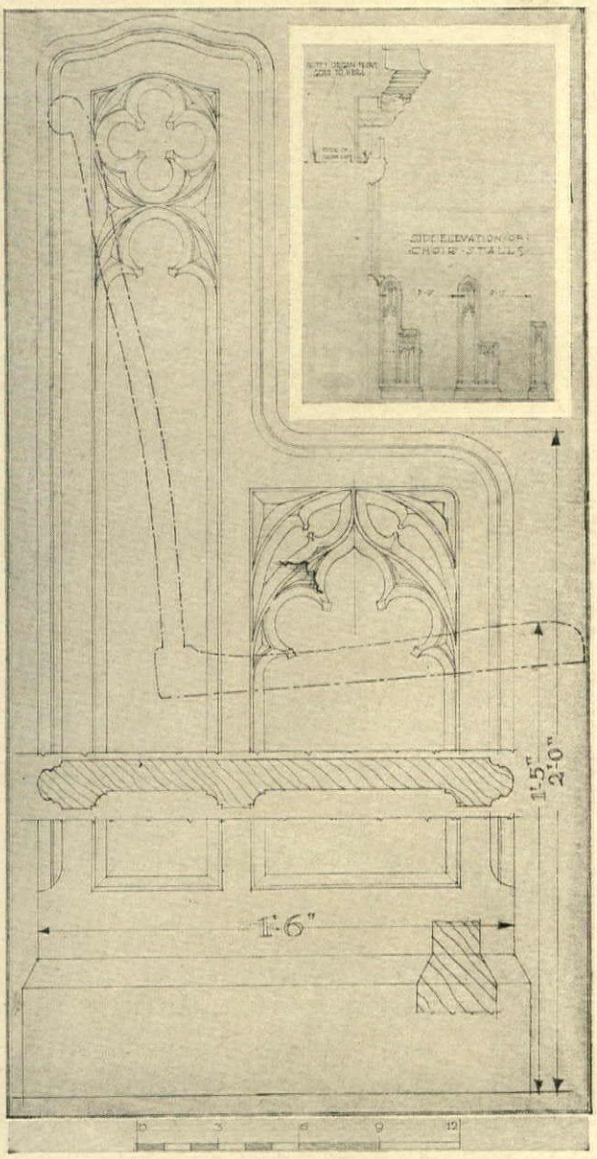
THE ARCHITECT'S RENDERING OF THE ALTERATIONS AND ADDITIONS TO THE CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

HOBART UPJOHN, ARCHITECT

that point in his article. The feature of the new building is the church which is illustrated. Other rooms are included in the *ensemble*, which adequately provide proper places of meeting for various organizations of the students of the University of North Carolina, which is located on the adjoining property.



ABOVE: ORGAN INFILL FOR TWO ARCH OPENINGS ON EAST SIDE OF CHANCEL. BELOW: ELEVATION, IN A REDUCED SCALE, OF CHANCEL SCREEN



DETAIL OF PEW-ENDS. THE INSERT SHOWS A SECTION THROUGH THE CHANCEL ARCH AND A SIDE VIEW OF THE SEATING ARRANGEMENT

CHAPEL OF THE CROSS, CHAPEL HILL, N. C.—HOBART UPJOHN, ARCHITECT

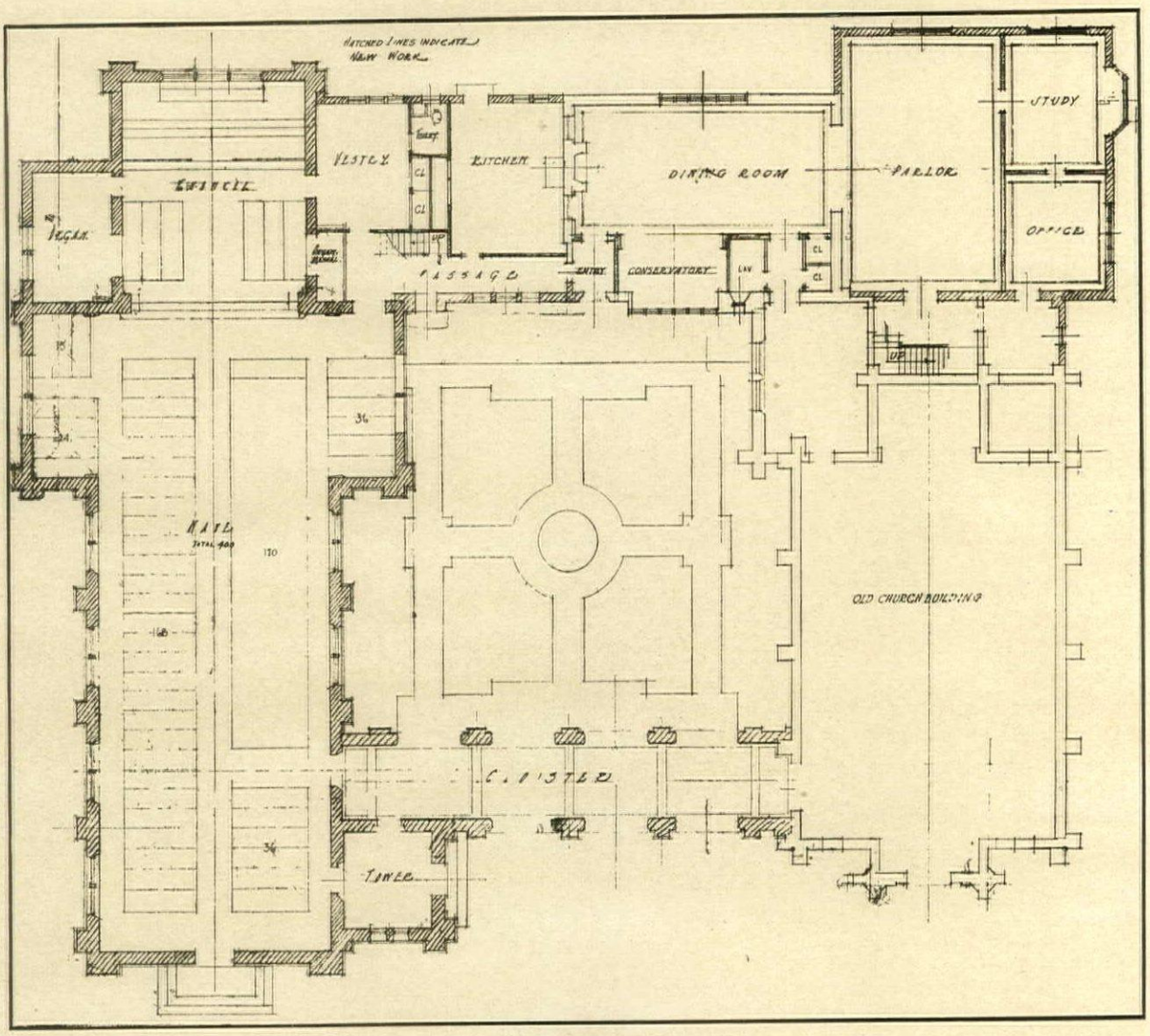
The design of the interior, which has been interpreted by various craftsmen with unusual accuracy, was inspired by the early English Gothic, and in its every detail it is true to the style. The ecclesiastical quality of the design is ever present and the building, both inside and out, impresses by its dignity and refinement. The photograph of the architect's original model, reproduced herewith, shows well the old chapel building and its relation to the new. Its interest is naturally somewhat overshadowed by the new buildings in both design and scope, but by its associations alone it invites attention and, instead of disturbing the final group, rather lends interest to it. The old building will continue to be used as a chapel in which certain services will be held, but the newer and larger edifice will be used for regular church services.

The carved woodwork is a feature of the interior of this church, a characteristic of all churches which adhere in their design to this phase of the Gothic. The perpendicular movement, which is peculiar to the style, is evident in its every detail. It is just as prominent in the design of the carving on the pew-ends, as it is in the design of the organ infills for the two arch openings on the side of the chancel.

CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

HOBART UPJOHN, ARCHITECT

(See plan on back)

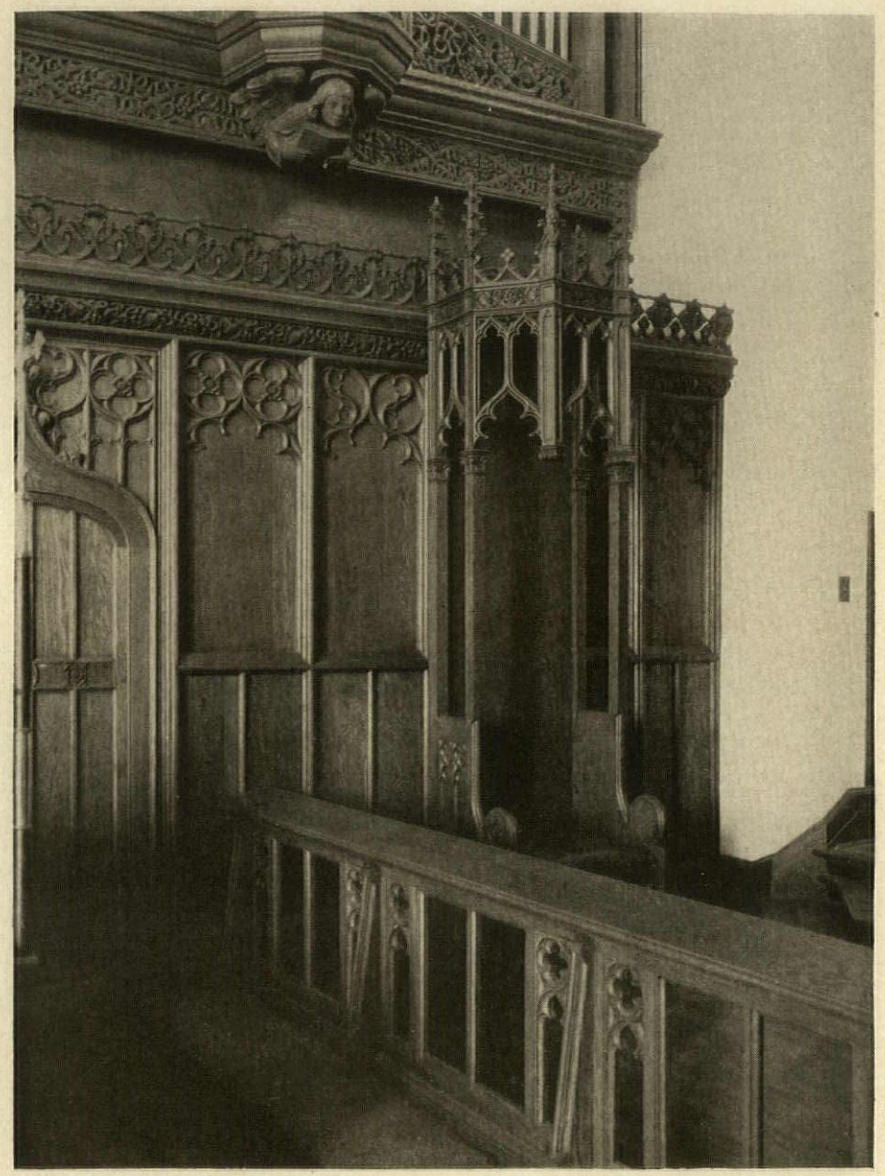


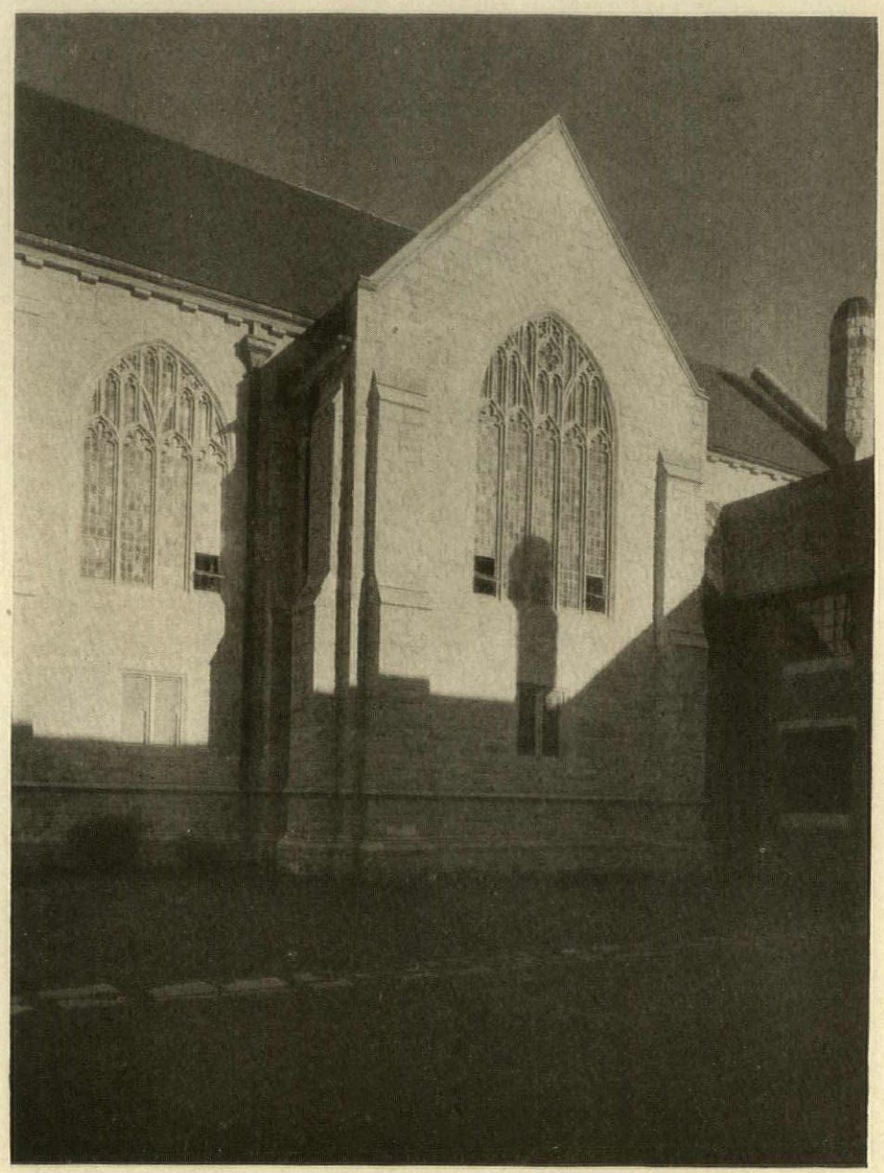
CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

HOBART UPJOHN, ARCHITECT

MAIN ENTRANCE, CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

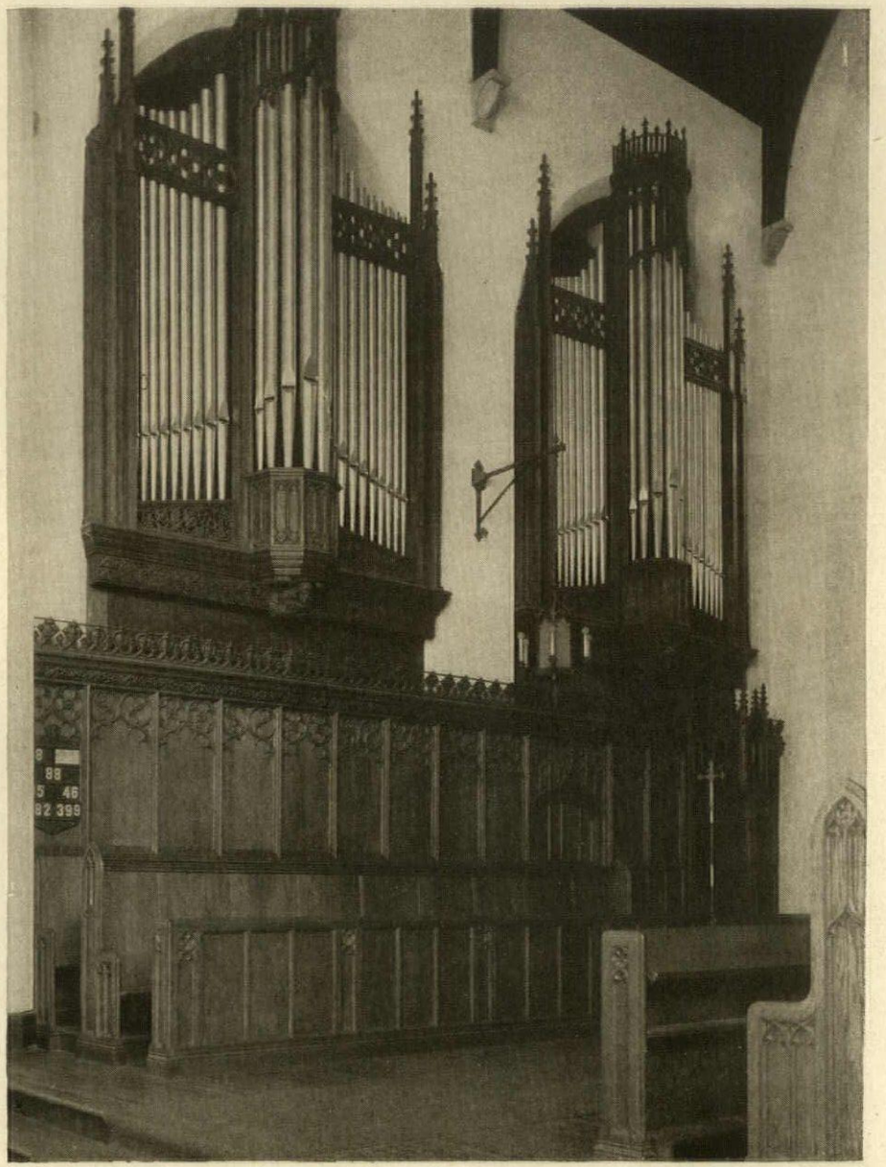
HOBART UPJOHN, ARCHITECT





CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

HOBART UPJOHN, ARCHITECT



CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

HOBART UPJOHN, ARCHITECT

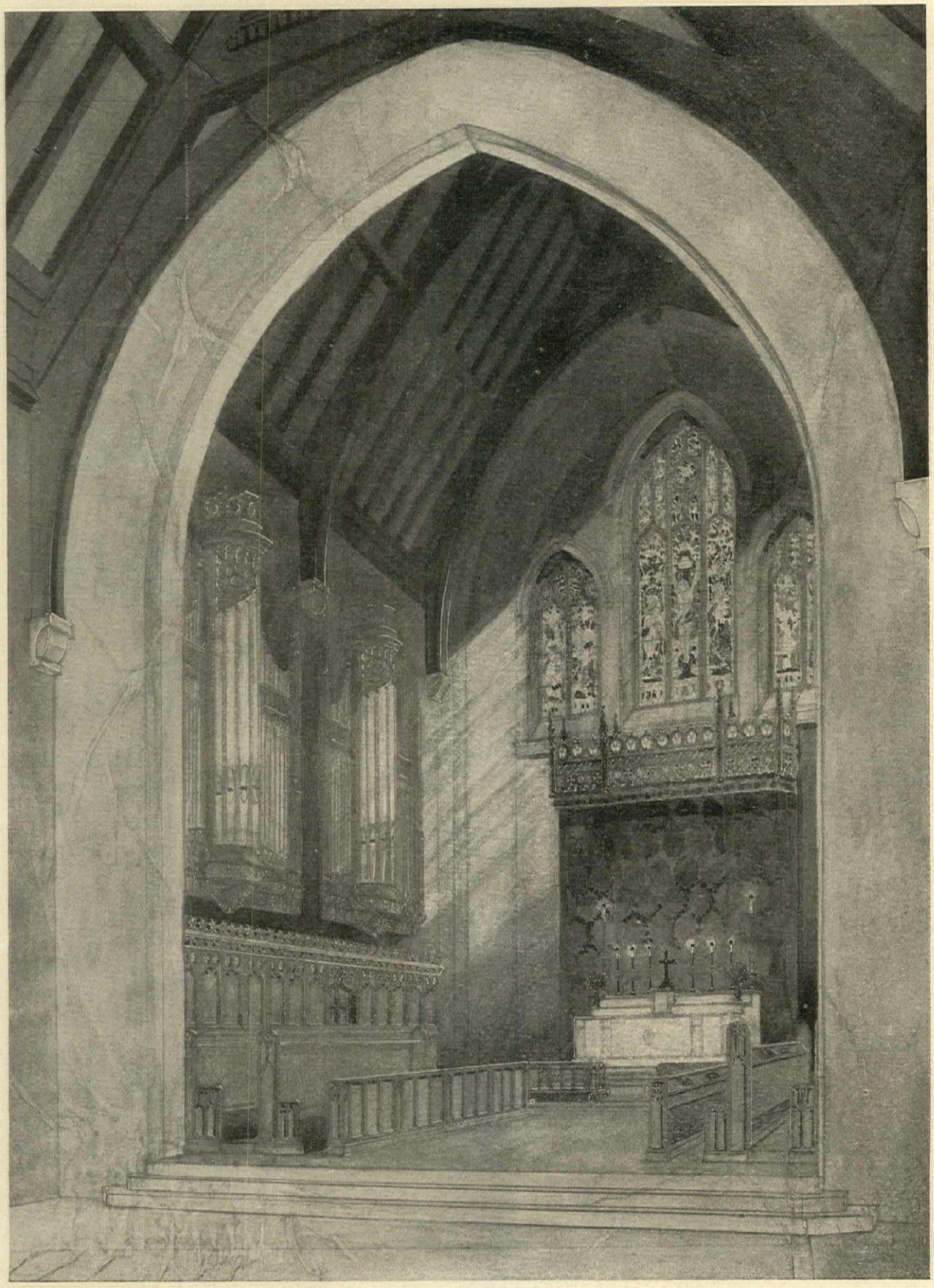
For, as Mr. Upjohn says in the introduction to this article, he had no desire to surprise with novelties, and its freedom from slavish dictates of style is its only appeal to originality. But he has designed an edifice worthy of its high purpose, and that was the goal which he hoped to attain.

DETAIL OF THE TEMPORARY CARVED WOOD ALTAR, WITH ALTAR RAIL IN THE FOREGROUND, AND DETAIL OF THE PULPIT IN THE CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

HOBART UPJOHN, ARCHITECT

WALLPAPER NIGHT AT THE ARCHITECTURAL LEAGUE OF NEW YORK

THE Architectural League of New York, at one of its regular meetings held March 4, had a "wallpaper night." Miss Nancy McClelland, a well known authority on the subject, spoke on the value of wallpaper as a means of decoration, and illustrated her remarks with well chosen examples of papers, both antique and modern. In introducing her subject, she referred to the era of plain putty-colored walls through which we have been passing, and placed the blame for this condition partly on the architects, in these words: "This idea of the putty-colored wall is partly your fault, because you set the lead, partly the fault of the decorators, because they followed your lead; partly the fault of the wallpaper manufacturers, because they did not make designs that were irresistible; and partly the fault of the great mass of the uneducated public, who, unversed in matters of decoration, found it easier to arrange a room with a plain background than with a wall which was a decoration in itself. The whole history of walls, down to the present in generation, has been the history of decorated walls. Only our putty-colored ideas put a stop to history for the time being. Fortunately, we are beginning today to see the Renaissance of the decorated wall. People are tired of plain walls. They are asking for more gaiety, more imagination, more individuality in their surroundings. It is perfectly natural that this Renaissance should first be registered, as it actually has been, in the revival of the popularity of wallpaper." Miss McClelland then pointed out, one by one, the various uses of wallpaper as a means of decoration. She referred, first, to the scenic papers in colors, in grays and the landscape design, which give a very similar effect to a wall that a mural painting does. Then she referred to those papers that are made to take the place of applied hangings. There are those that are designed and embossed to affect the gilded and stamped Spanish leathers; flock papers, manufactured as substitutes for Genoese velvets and brocades; chintz papers made to take the place of printed linens and cottons. Painted silks and taffetas are also reproduced by means of wallpaper. Then there are the marbleized papers, very heavy in quality and heavily glazed, and the tile papers, in good copies of Dutch tiles, in blue and white, and other colors. Finally, she spoke of the architectural borders and friezes in paper, by which a room may be successfully panelled without using a moulding in relief.



THE CHANCEL, CHAPEL OF THE CROSS, CHAPEL HILL, N. C.

REPRODUCTION OF THE ORIGINAL SKETCH BY THE ARCHITECT, HOBART UPJOHN

The CONFEDERATE SOLDIERS MEMORIAL *at* STONE MOUNTAIN

AUGUSTUS LUKEMAN, L. H. D., A. N. A., Sculptor

ILLUSTRATIONS REPRODUCED FROM THE ORIGINAL SKETCHES BY GERALD K. GEERLINGS

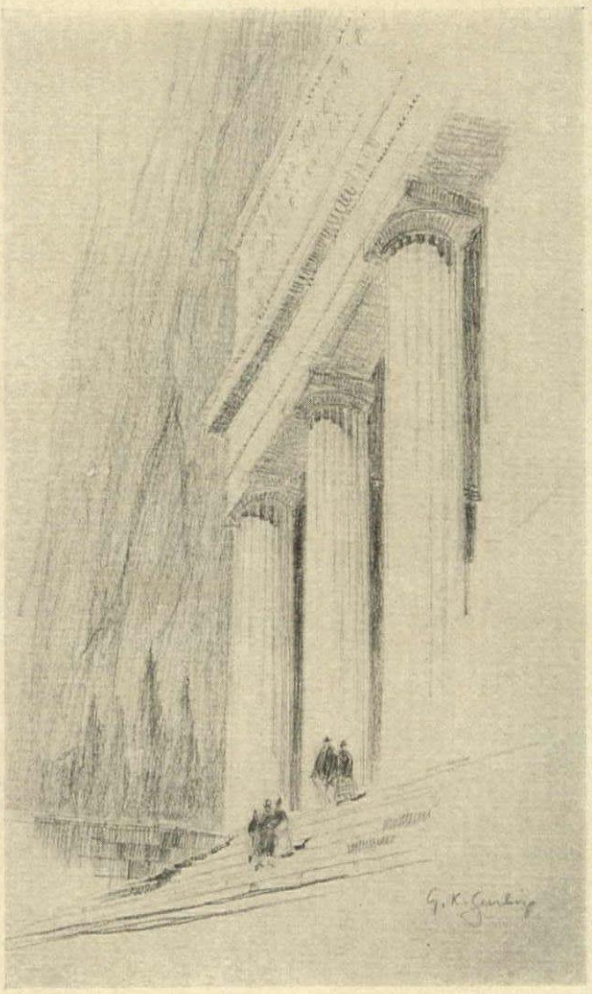
WHEN Augustus Lukeman took over the work of carrying to completion the Confederate Soldiers Memorial at Stone Mountain in Georgia, he assumed what to an artist sculptor is the most difficult of undertakings. He took a huge block of stone on which his predecessor had already carved an unfinished head, and on that he must needs incorporate his own design, making it, as far as possible, ignore another man's conception and express his own original idea. But the Stone Mountain Memorial, as now laid out by Lukeman, has become something more than "mass production," an attempt at colossal sculpture that would awe the masses and lose its appeal as soon as one had left the spot. He added in the foreground a memorial hall, carved from the solid rock, a monumental approach to it and all with the finest architectural expression. It is this architectural addition that gives dignity and proper scale to the entire undertaking and makes the whole memorial a proper subject for illustration in these pages.

It is difficult to comprehend how great an undertaking this memorial is. The rock carving it is proposed to complete in three parts. The dominant equestrian figures of Generals Lee and Jackson and President Davis are 170 feet in height. At the rear there will be a group of generals and color bearers, while passing in review will be a marching army, handled in design to convey the impression of thousands of marching soldiers. This, briefly stated, is the substance of the immense carving, in high relief, that will be visible to the beholder as far away as the human eye can distinguish it.

The architectural feature, previously referred to, is the Memorial Hall, dedicated to the women of the Southland, the tomb of the unknown soldier, a museum and a large reflecting pool. Reference to the sketch of the general view, will show the general arrangement of the memorial. The hall, cut out of the solid granite, will exceed in size any similar building ever constructed. It will in size cover a ground area of approximately fifty feet deep,

ninety-five feet long and fifty feet high, and the monolithic Ionic columns, thirteen in number, will be thirty feet high from base to cap.

It is learned from Mr. Lukeman that the preliminary step in the design for the rock face sculpture will consist of the modelling of small scale models approximately fifteen inches high. Nothing is final in these sketches and their making is merely to serve as the basis for preliminary study and decision as to changes to adapt the whole scheme to its final purpose. Such changes or modifications having been made as were deemed desirable, the whole thing was then enlarged five times and thus became the sculptor's model from which he worked



THE COLONNADE

toward the colossal scale, or an enlargement of eight times, into the final and accepted design upon the face of the mountain.

The transferring of this design to the face of the mountain involves certain mathematical measurements that in their making constitute what is perhaps the most difficult part of this undertaking. It follows along the lines of the usual enlargement in the studio, of a clay figure of perhaps twenty-four inches in height to the life-sized marble, but the taking of measurements and the "pointing"—as it is called—is a most difficult task and will, when performed, undoubtedly form the basis for many articles. To quote Mr. Lukeman: "A scale

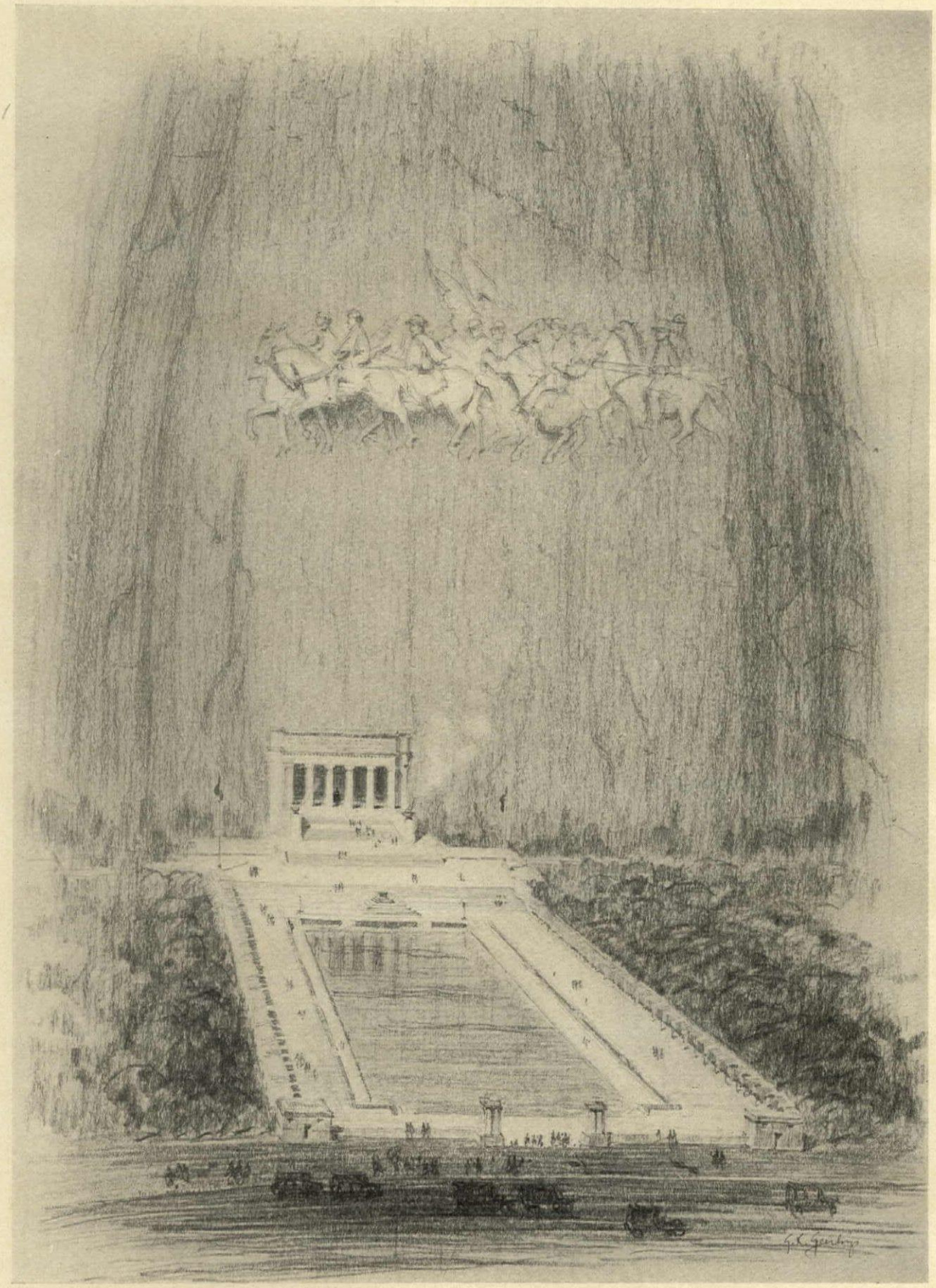
LOOKING OUT FROM MEMORIAL HALL

will be set up before the master model, and every square inch of the model will be accurately plotted with relation to its distance from the scale. When this design is transferred to the face of the mountain, each sixteen-inch space will, in topography, conform to the measurements of the master model."

The subtleties of composition and of form will, of course, be entirely the work of the sculptor. The correct copying of these in the large size will be done by carvers whose task will be to follow accurately the master model. The platform on which the carvers will work will be a steel scaffold suspended before the face of the mountain.

The interior of the Memorial Hall, large in scale, will have between each pair of columns a tablet eight feet wide and twenty-five feet high. Below each tablet, forming a continuous base to the thirteen columns, will be a vault, on the face of which will be a continuous carved decorative border, and between each column the name of one of the thirteen confederate states.

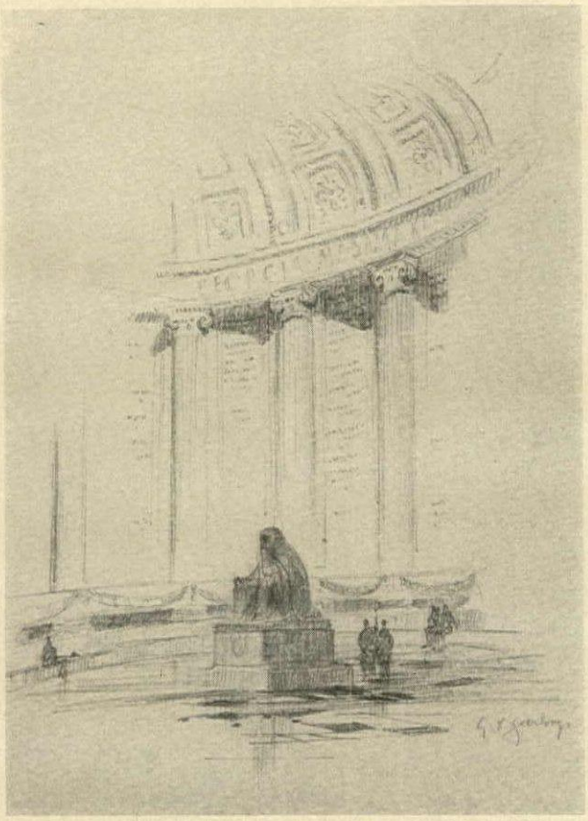
The approach to the memorial is by a monumental entrance located 650 feet from the mountain. The gateway will be 40 feet wide, flanked by pylons. The esplanade, in which is located a lagoon 125 feet wide by 300 feet long, is three



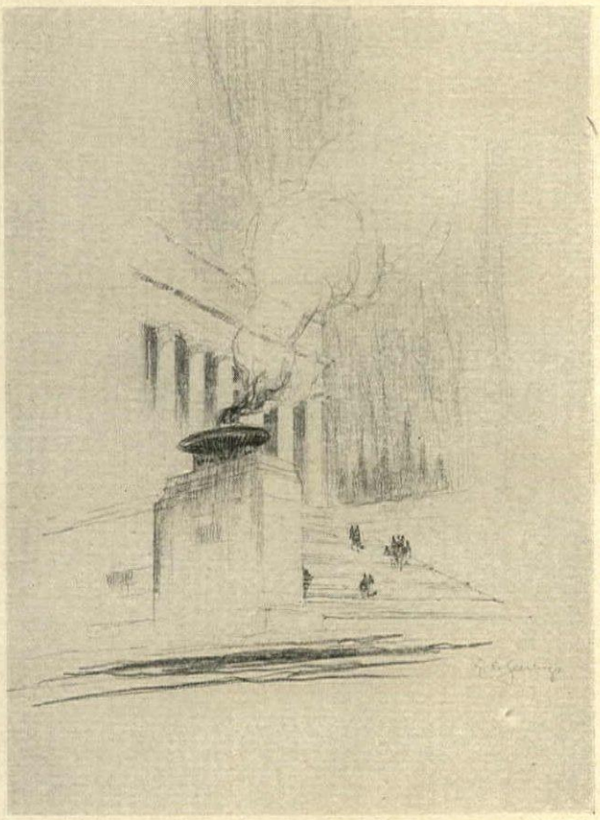
GENERAL VIEW

CONFEDERATE SOLDIERS MEMORIAL, STONE MOUNTAIN, GA.

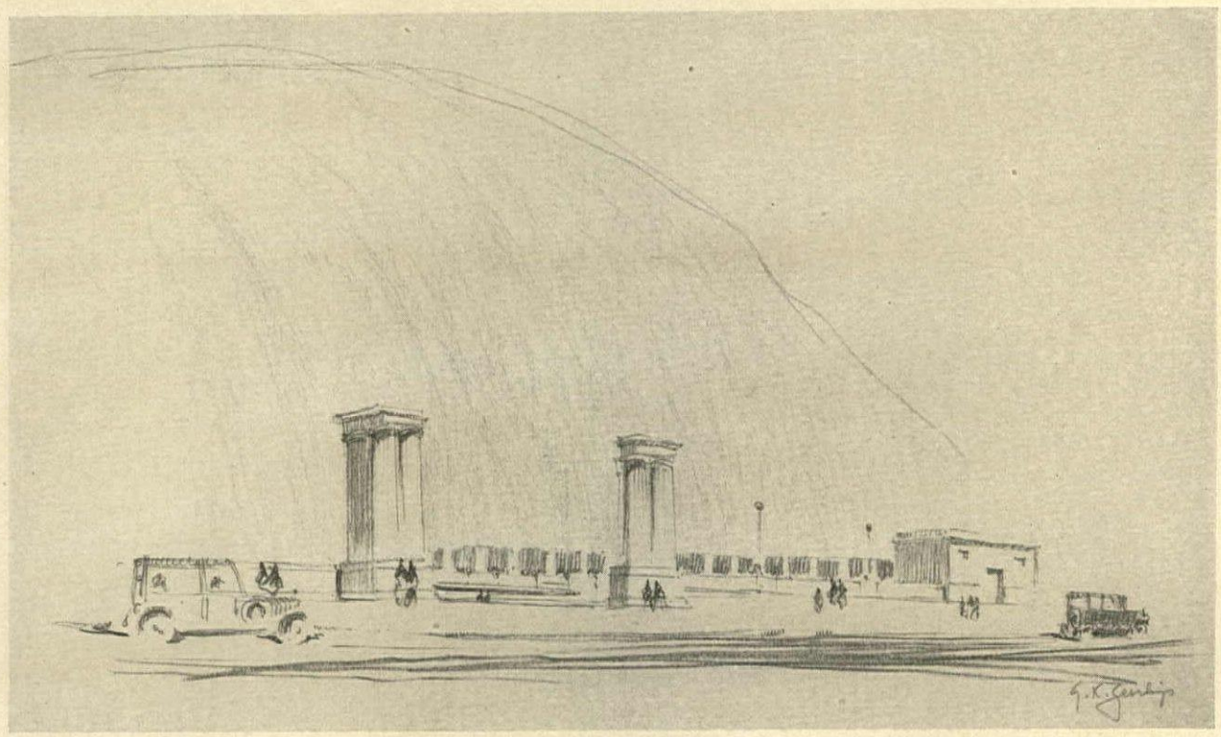
AUGUSTUS LUKEMAN, A. N. A., SCULPTOR



VEILED FIGURE OF MEMORY IN MEMORIAL HALL



APPROACH TO COLONNADE



BOULEVARD ENTRANCE TO APPROACH

CONFEDERATE SOLDIERS MEMORIAL, STONE MOUNTAIN, GA.

AUGUSTUS LUKEMAN, A. N. A., SCULPTOR

steps below the approach. The water flowing into the lagoon reaches it through a recess cut under the mountain. This produces the unusual effect of the water flowing through the mountain. From the lagoon, up a flight of forty-eight steps, the level of the Memorial Hall is reached. The facade of the Memorial Hall will be cut out of the solid granite of the mountain. It will have six Doric columns, each 45 feet high and 7½ feet in diameter. It is estimated that each column, if disengaged, would weigh not less than one hundred and fifty tons.

This large undertaking, sure of ultimate completion, is one in which the people of the South take a proper pride. The memorial will not only symbolize an epoch in our history, but it will for all time stand as a monument to a group of heroic men who laid down their lives in a cause they felt to be just. It is a tangible and everlasting record and will stand as one of the greatest achievements in the sculptor's art that the world has ever known.

OLD BOONE HOME BEING RESTORED

THE old home of Daniel Boone, located on Femme Osage Creek, St. Charles County, forty-eight miles west of St. Louis, Mo., is being transformed from a farm into a country home and will be furnished with historic furniture from an old Kentucky settlement where Boone once lived.

The homestead of the famous Missouri pioneer remains in the Boone family, for it has been purchased by two of his lineal descendants, Col. Francis M. Curle and George M. Hagee, attorneys.

Daniel Boone died September 26, 1820, in this house standing on a wooded hill, which is said to be the first stone structure erected in Missouri outside of St. Louis. The property is part of forty-five acres of land given Boone by the Spanish Government while he was a surveyor.

Boone has been universally regarded as the typical pioneer. Insensible to fear, he was, while bold and venturesome, an unassuming character.

TOMB OF THE UNKNOWN SOLDIER

EDITORIAL COMMENT

A. D. F. HAMLIN, connected for more than thirty years with the architectural school of Columbia, was struck by an automobile, and instantly killed, on the evening of March 21st. As Professor of the history of architecture at Columbia, Mr. Hamlin was widely known and respected. Combining all the fine qualities of a well bred and scholarly man, he put the impress of an outstanding personality on his work. The announcement of his sudden death shocks the entire profession of architecture.

A more extended and appreciative statement of Professor Hamlin's life and work will appear in our issue of 20th April.

A MEMBER of The American Institute of Architects has written a letter to the editor of the Institute *Journal*, asking what will the next convention do? He mentions many important matters that, in his judgment, might very profitably receive the serious attention of the convention, and places first the Small House Service Bureau.

This much discussed appendage to the Institute has not been received with unanimous approval, and in fact many are outspoken in the opinion that it should not have the endorsement of the Institute. This correspondent believes that the question of the Bureau's endorsement by the Institute should be put in the form:—"Should the name of the Institute be lent to groups of architects who may wish to experiment with an idea?" Of course, the answer to such a question would be largely influenced by the idea. In the present instance, it will be difficult to convince many architects, particularly those who are engaged in practice in the smaller communities, that the "idea" of the Small House Service Bureau does not interfere, in fact competes with their practice, largely confined to small house work.

In the same issue of the *Journal*, the secretary of the New Jersey Chapter, in a communication also to the editor, writes he has been instructed to communicate the views of a certain member, in which the majority of the chapter coincides. Concluding that statement, which is not favorable to the continuance of the endorsement of the Bureau by the Institute, it is set forth:

"It is very difficult to understand how the Institute can sell a paper on the advantages of architectural service and at the same time sell plans to eliminate this service. It is very evident that those who run the Institute do not make their living building small houses." To which the secretary adds:

"These sentiments express the views of about two hundred of our members, most of whom are striving to obtain a good practice and we think their views are worthy of consideration."

AN IMPORTANT point relating to Institute endorsement of this Bureau, or as a matter of fact, endorsement of any project conducted by groups of architects, has been brought out by these discussions. By what action should endorsement be given? By convention action or by majority vote of the entire membership? It is suggested that the name of the Institute be lent in the same way that affects an amendment to the Constitution of the United States—convention action first and then ratification by the chapters. And again, by how many chapters, a majority? Two-thirds? Three-fourths?

While this question of Institute endorsement is important, it would seem that there are other things of even greater moment that might with good purpose engage the attention of the convention.

Since Congress, by what we have always regarded as unwise action, repealed the Tarsney Act, we have been hoping that a new measure that would combine all the good features of the original enactment, plus those important things that have developed during and since the war, would replace it.

What architects are entitled to, and what they should demand by right, is that they control and advise in every major operation of building by the Federal Government.

THIS IS AN AGE of co-ordination, of the taking up of lost motion and the overcoming of duplication of effort. The Hughes Commission report to the New York State Legislature is a case in point. After an exhaustive study of existing conditions, this report points out the way in which the State may consolidate departments and in many cases entirely do away with bureaus whose work is purely duplication of that of other bureaus. This report, practical and equitable in all of its recommendations, is not regarded as a party measure, and is mainly supported by both political parties.

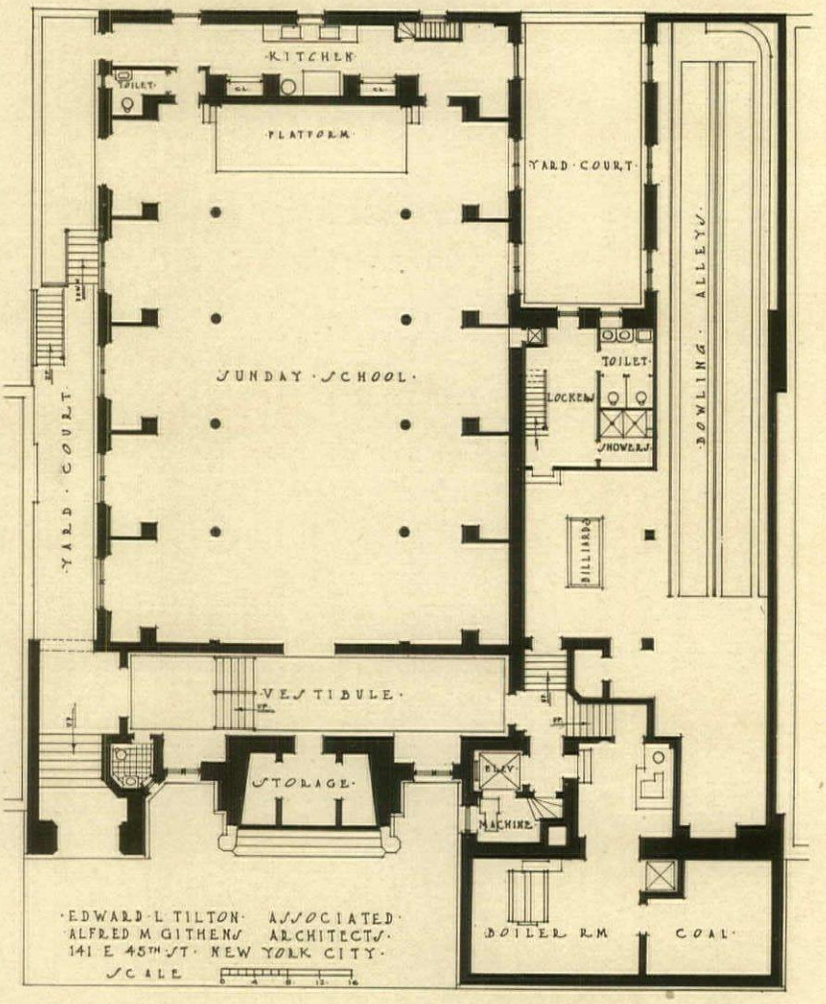
Among the various major departments of the administration at Washington, there now exists in each a department of architecture, more often designated as "engineering." The economic and artistic waste entailed by this duplication of effort is great. It is also not to the dignity of the architectural profession that the large operations undertaken and which are in the main architectural, should be nominally under the supervision of engineers.

It would appear to be a proper effort on the part of the convention of the Institute next May to make such representations to Congress as would direct attention to these anomalies and seek to restore this work to architects while at the same time bringing all under one central control.

ST. LUKE'S GERMAN EVANGELICAL LUTHERAN CHURCH, NEW YORK

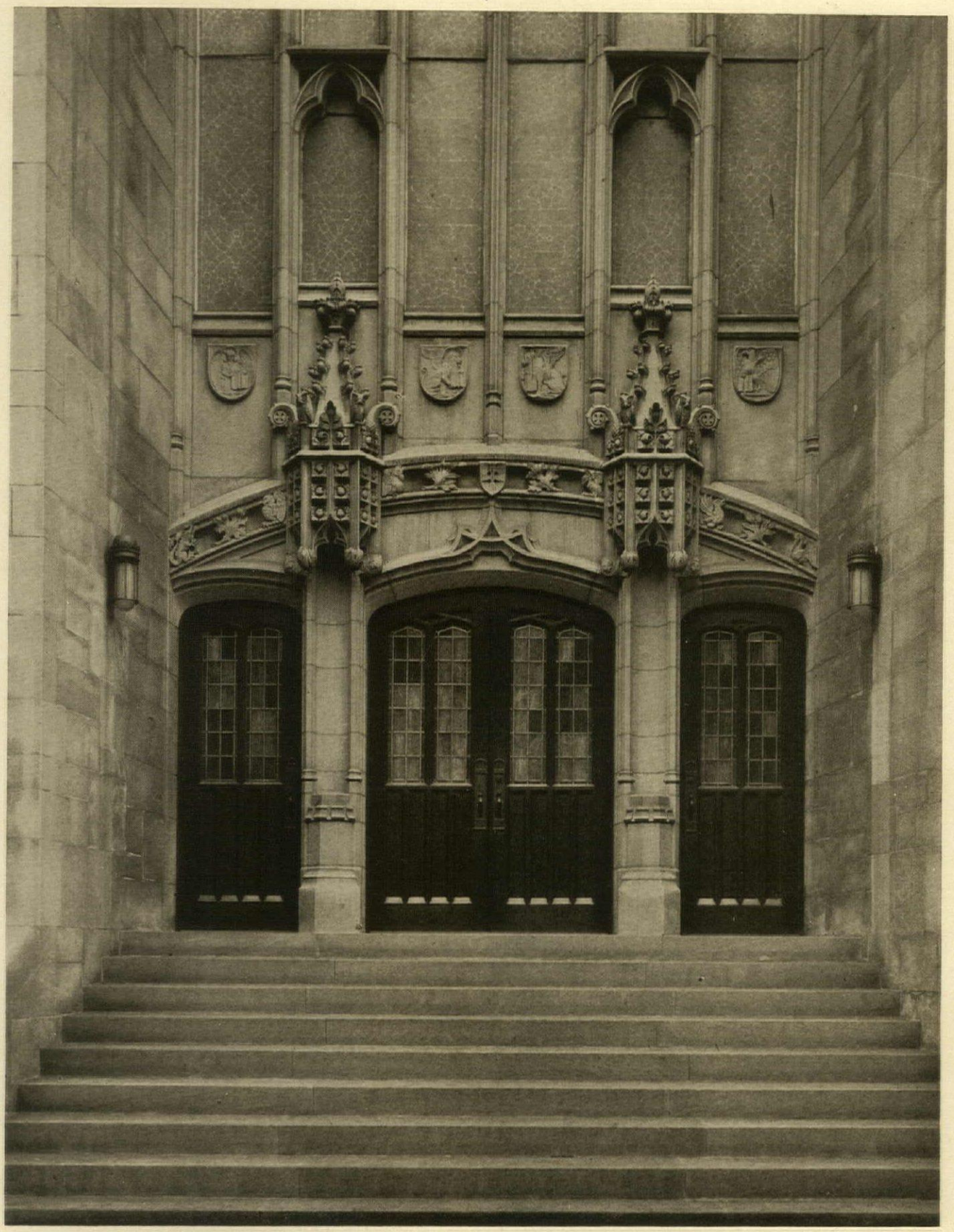
EDWARD L. TILTON and ALFRED M. GITHENS, ASSOCIATED ARCHITECTS

(See plan on back)



·BASEMENT · PLAN·

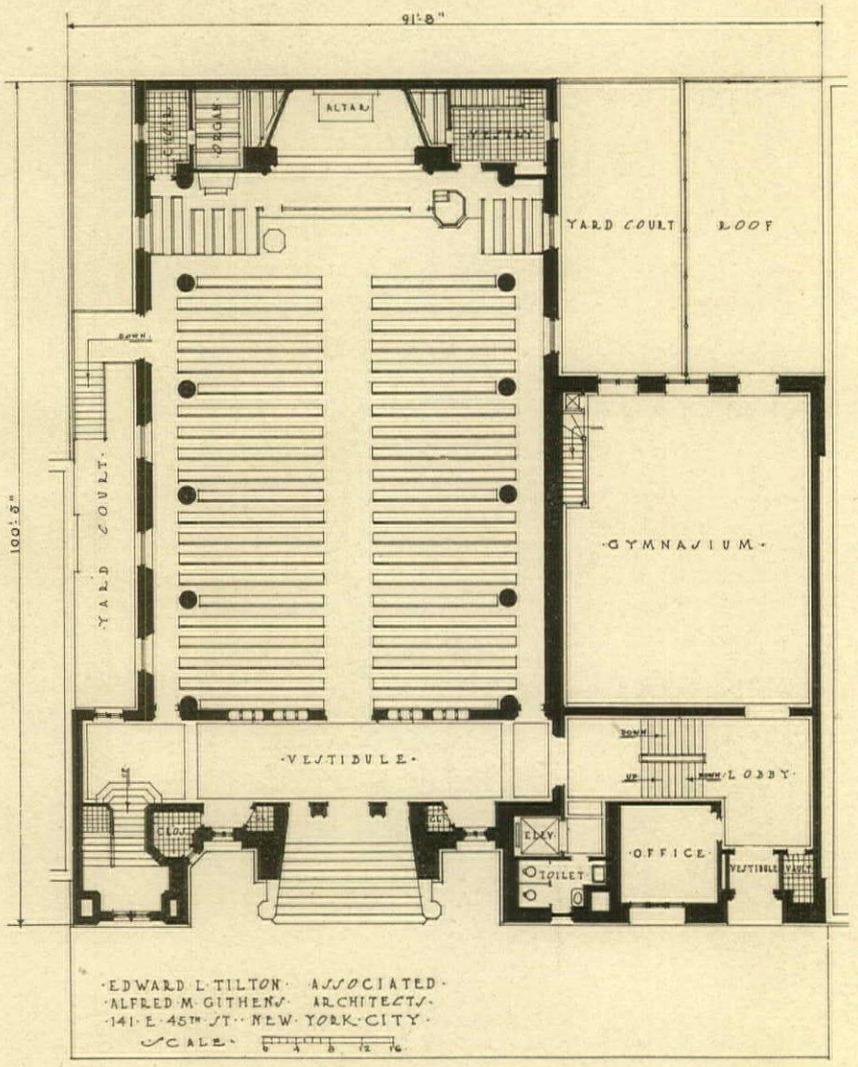
·GERMAN·EVANGELICAL·LUTHERAN·ST·LUKES·CHURCH·
·CITY·OF·NEW·YORK·



ST. LUKE'S GERMAN EVANGELICAL LUTHERAN CHURCH, NEW YORK

EDWARD L. TILTON and ALFRED M. GITHENS, ASSOCIATED ARCHITECTS

(See plan on back)



FIRST STORY PLAN

GERMAN EVANGELICAL LUTHERAN ST. LUKES CHURCH
CITY OF NEW YORK

ST. LUKE'S GERMAN EVANGELICAL LUTHERAN CHURCH, NEW YORK

EDWARD L. TILTON and ALFRED M. GITHENS, ASSOCIATED ARCHITECTS

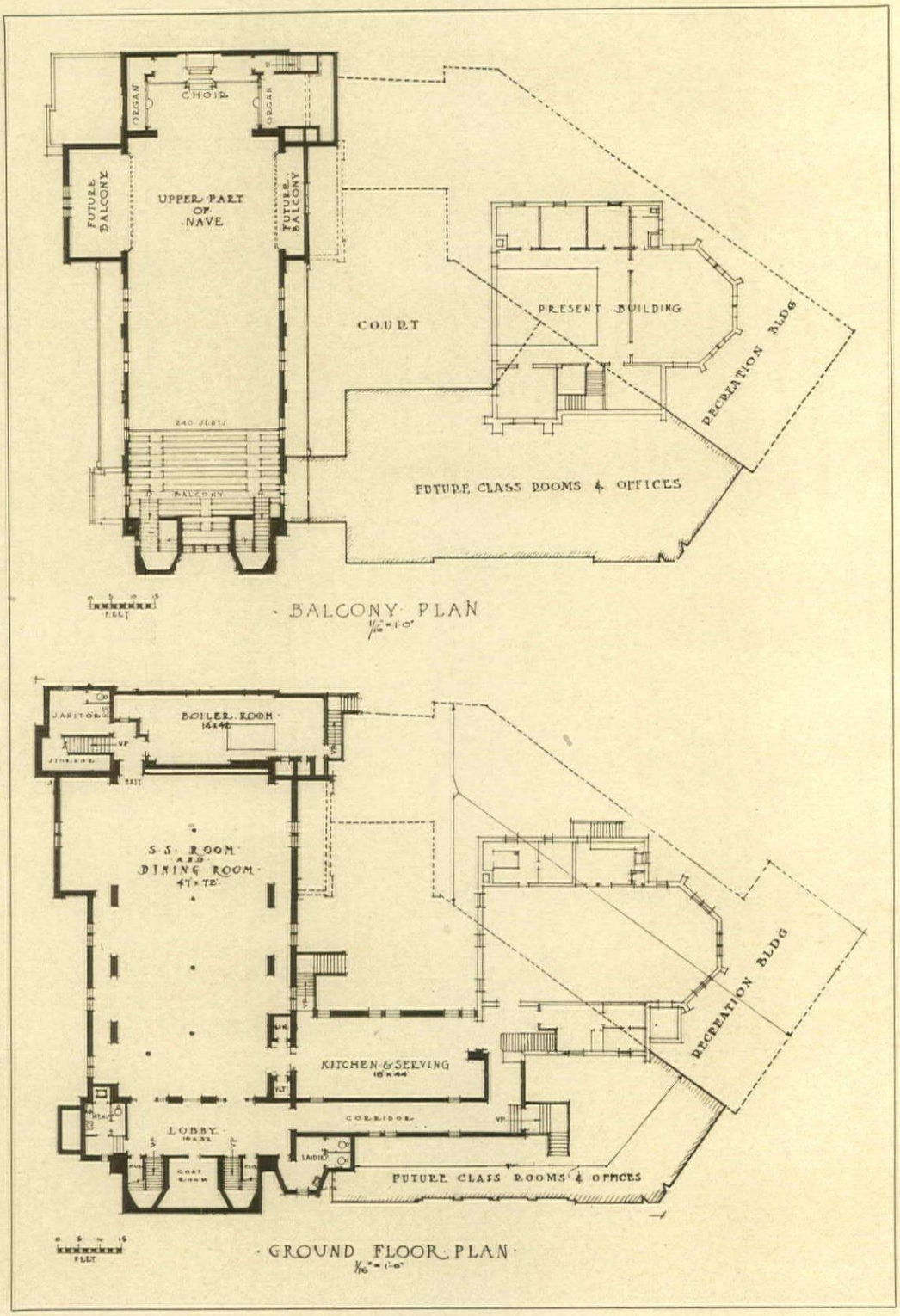
ST. LUKE'S GERMAN EVANGELICAL LUTHERAN CHURCH, NEW YORK

EDWARD L. TILTON and ALFRED M. GITHENS, ASSOCIATED ARCHITECTS

REDEEMER PRESBYTERIAN CHURCH, DETROIT, MICH.

GEORGE D. MASON & CO., ARCHITECTS

(See plans on back)



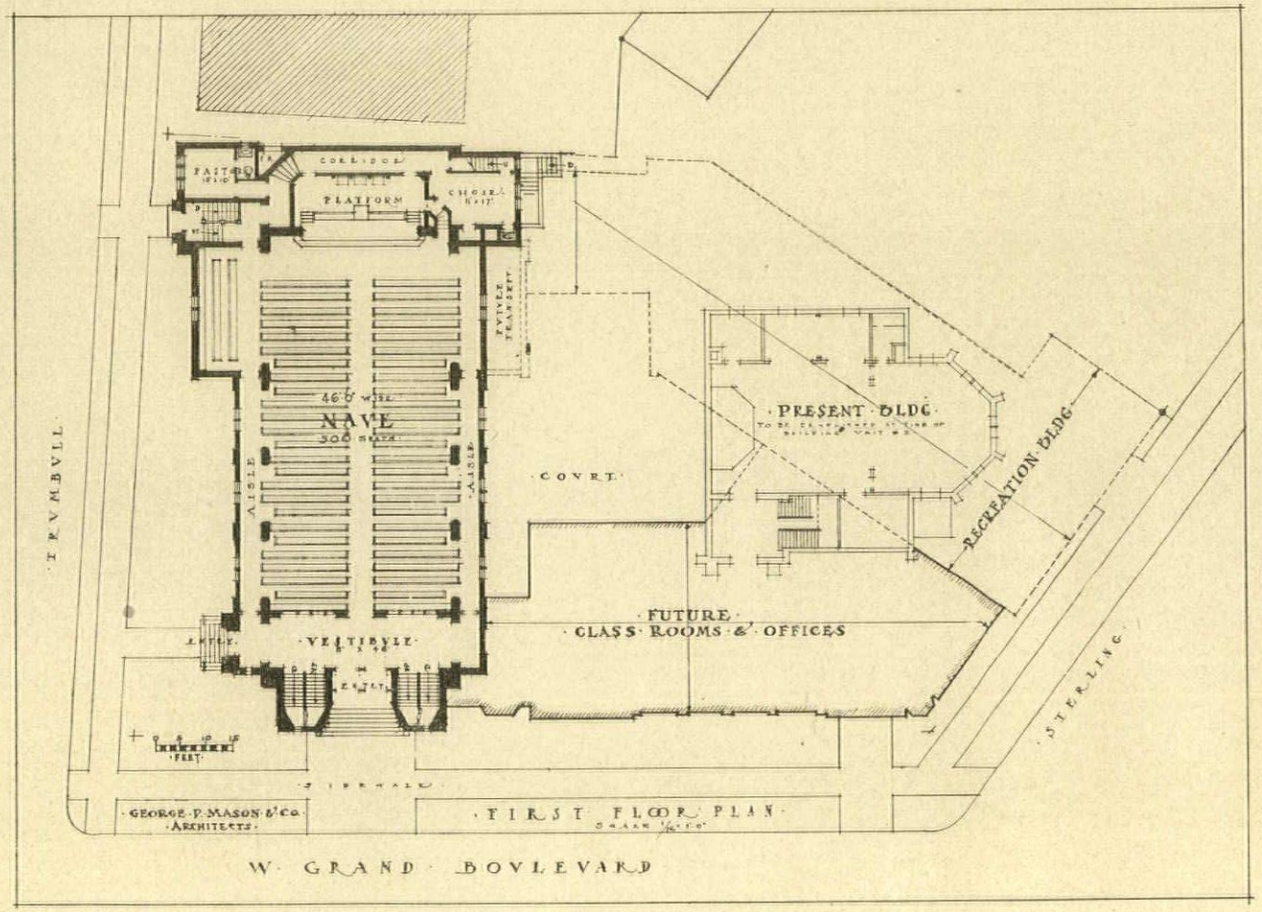
REDEEMER PRESBYTERIAN CHURCH, DETROIT, MICH.

GEORGE D. MASON & CO., ARCHITECTS

REDEEMER PRESBYTERIAN CHURCH, DETROIT, MICH.

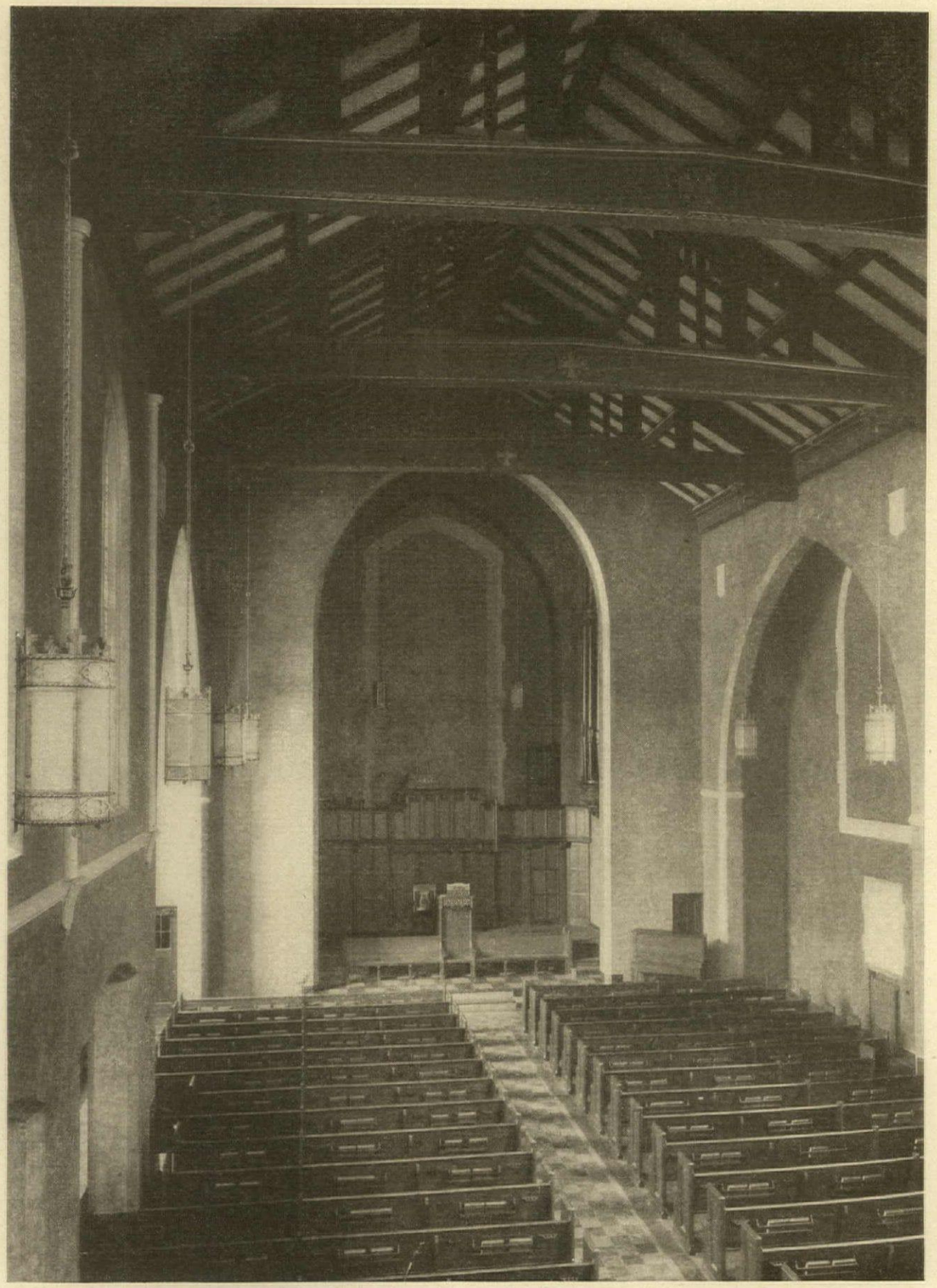
GEORGE D. MASON & CO., ARCHITECTS

(See plan on back)



REDEEMER PRESBYTERIAN CHURCH, DETROIT, MICH.

GEORGE D. MASON & CO., ARCHITECTS



REDEEMER PRESBYTERIAN CHURCH, DETROIT, MICH.

GEORGE D. MASON & CO., ARCHITECTS

REDEEMER PRESBYTERIAN CHURCH, DETROIT, MICH.

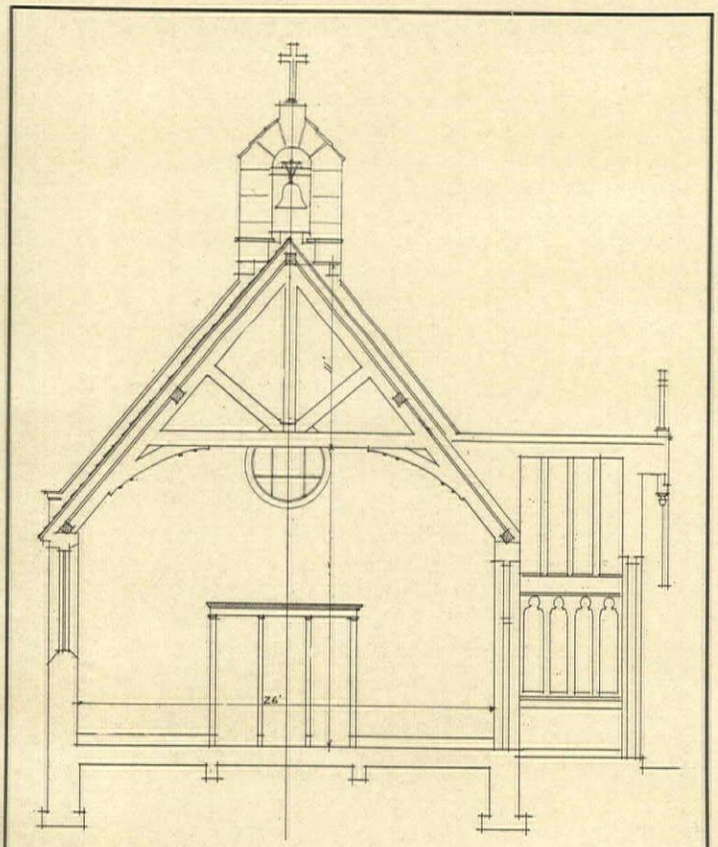
GEORGE D. MASON & CO., ARCHITECTS

ENGINEERING *and* CONSTRUCTION

FRAMING CHURCH ROOFS

THE FRAMING of church roofs presents many individual problems and unusual angles not encountered in other types of buildings. The auditorium or nave is the portion of such structures of greatest concern, since other areas are commonly of relatively short spans, the roofs of which are easily framed.

With but few exceptions, trusses of some type have entered into the construction of church roofs almost from the time churches were first built. The Pantheon at Rome, dating from about A. D. 120, which is roofed with a circular dome of brickwork and thick mortar some 142 feet in diameter, is a representative exception. Monuments of Byzantine architecture, of which St. Sophia (A. D. 532) at Constantinople is a familiar type, also employed domes of brick or porous stone, which formed both the ceiling and the roof construction. Contemporaneous with these, however, are found Basilican churches using wooden trusses to span the nave and support the protective roof covering. The Basilican church of St. Peter at Rome (A. D. 330), and many other well-known examples, were so constructed. In general, the naves relatively narrow in width, rose to lofty heights, and were finished with flat ceilings, supported on the lower chord of the roof trusses. In a few instances the trusses were left exposed, lending an added sense of height to this inspiring and impressive portion of the church.



WOODEN KING POST TRUSS IN A CHAPEL DESIGNED BY ARNOLD W. BRUNNER, ARCHITECT

In the Romanesque, we find timber roofs as well as domes, and vaulted work in late examples.

With the development of the Gothic, vaulted ceilings became the general rule. Constructed of thin slabs of stone, they were structural only in the fact that they were self-supporting. The roof proper was supported by trusses or timber work, skillfully joined and often of ingenious design.

In the mediaeval parish churches of England timber roofs reached a remarkable stage of development. Probably no feature of these edifices is more typically English than the use made of wooden trusses and ceilings with many and various combinations of rafters and beams. These culminated in the hammer-beam trusses of the fifteenth century.

These timber roofs developed without distinct stages or use of any particular type, unless it is the hammer-beam truss above referred to. The earliest and simplest timber roof consisted of rafters tied together at their lower ends by means of tie-beams, which were usually inclined upwards toward the center. The slope of the roof varied from those of very flat inclination to others quite steep.

Craftsmanship is often seen at its best in the treatment and construction of trussed rafter roofs. In the hand-hewn beams, tracery used to fill the spaces between the braces, decorative treatment of the beams and the expert use of tenons and pins so framed as to provide a rigid structure, is seen the work of masters of the art of woodworking.

Workmanship on the hammer-beam trusses is no less remarkable and in them there was developed a unique and distinct type of truss. It is to these trusses that architects of more recent date have turned for inspiration. But modern conditions have interjected new requirements into church planning and design. Unlike the churches of old, constructed in a leisurely manner, if history rightly records the facts, we are faced with the

element of time for construction reduced to a minimum. Cost becomes an important part of today's problem, for we are probably less apt to build what we can afford and wait for the rest than our ancestors four or more centuries ago. They evidently made no small plans, but often built a small part and completed the structure many years later.

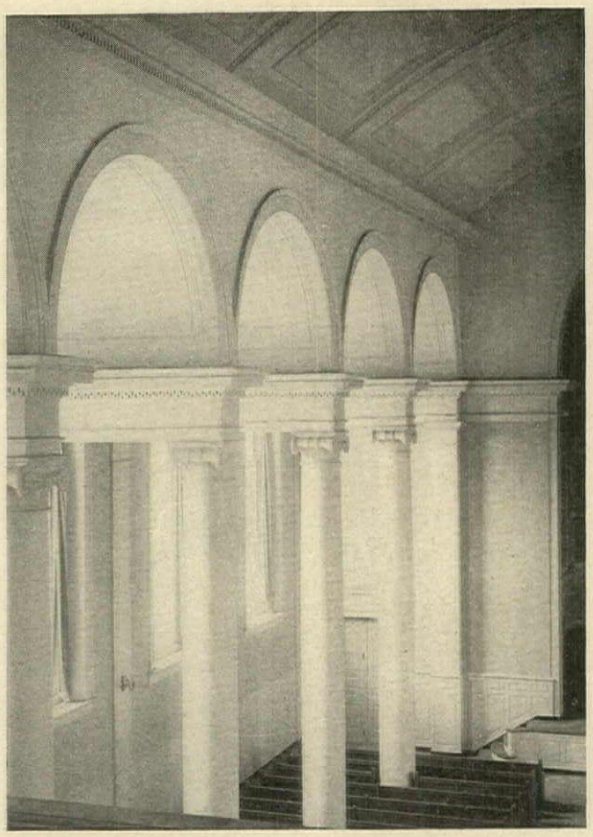
In the twentieth century it is the tendency to move quickly and build the entire structure, almost at once. As a result, impressive height, which often adds to the spiritual atmosphere of churches, must be sacrificed. Congregations often demand wide auditoriums having a clear span.

Early churches secured adequate space by side aisles on either side of the nave, all relatively narrow. The modern conception of a clear span at once eliminates the aisles, reducing the plan to a wide nave. The element of cost has probably reduced the height and we are confronted with a problem, not easily solved, in the design of the roof framing over the nave or church auditorium.

The selection of a suitable truss is an important consideration in churches of the type referred to. The king rod truss, even though exposed so that the ceiling is formed by the underside of the roof, may produce the effect of a low ceiling. The scissors truss is but little better in this respect and when seated low presents a restless quantity of lines darting off at various angles to the eye, due to the inclination of the lower chords seen in perspective. Height is usually necessary for the successful use of the hammer-beam truss, but if properly handled in design becomes an expensive method of framing. An A truss, a variation of the hammer-beam truss, appears to be the nearest approach to a successful solution of the problem. This type of truss exerts considerable thrust on the walls and requires heavy buttresses to resist this action.

A truss of this type, designed by Albion N. Van Vleck and Heath W. Lawson, is seen in the Westmont Presbyterian Church at Johnstown, Pa. The span is 48′ and the trusses are spaced 14′ o. c. Two fifteen-inch channels back to back form the inclined chords which are tied well toward the top with two twelve-inch horizontal channels. The steel members are covered with wood. One side of the truss is anchored to the seat and wall. The other side has a slotted seat which permits the truss to move as it expands or contracts. This type of truss still maintains the sense of height, since no horizontal members are seen, except near the peak. The inclined members follow the rake of the roof and have the appearance of heavy beams.

(*Continued on page 426*)

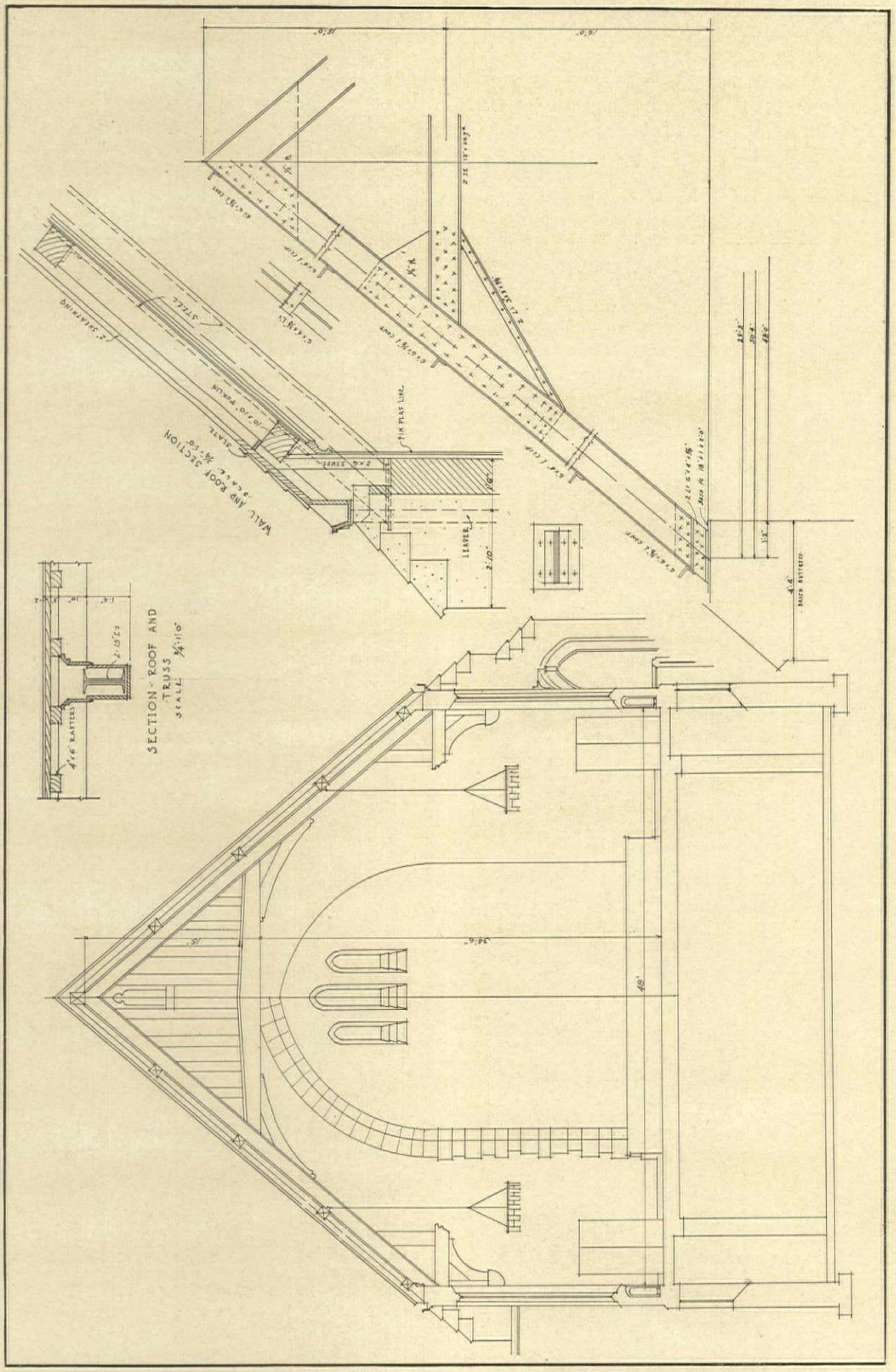


CHAPEL OF DENISON UNIVERSITY, GRANVILLE, OHIO. PLASTER CEILING SUSPENDED BELOW STEEL TRUSSES

ARNOLD W. BRUNNER, ARCHITECT

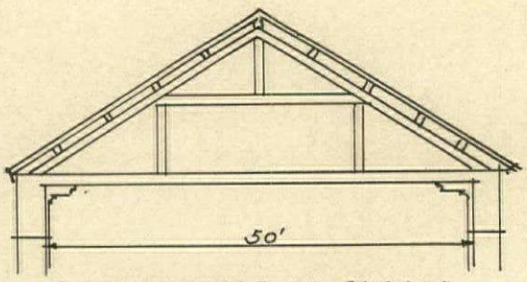
EARLY ENGLISH FORM OF HAMMER-BEAM TRUSSES USED IN THE FIRST BAPTIST CHURCH, CHICAGO, ILL.

RIDDLE & RIDDLE, ARCHITECTS

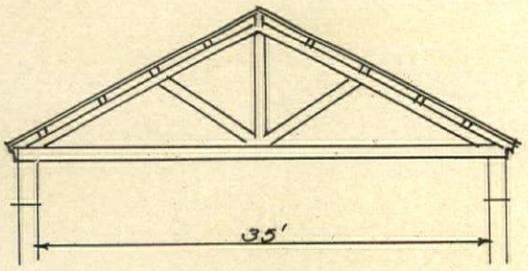


ROOF CONSTRUCTION OF THE WESTMONT PRESBYTERIAN CHURCH, JOHNSTOWN, PA.

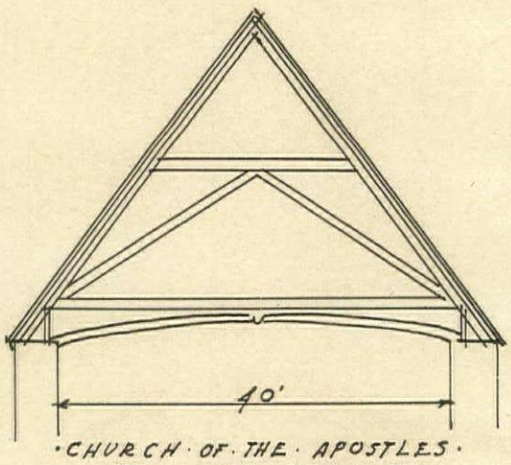
A. G. LAMONT, ARCHITECT—ARNOLD W. BRUNNER ASSOCIATES, ASSOCIATED ARCHITECTS



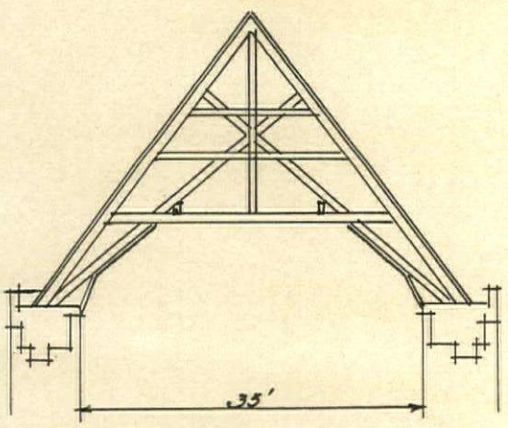
S. APOLLINARE IN CLASSE
RAVENNA - A.D. 534-39



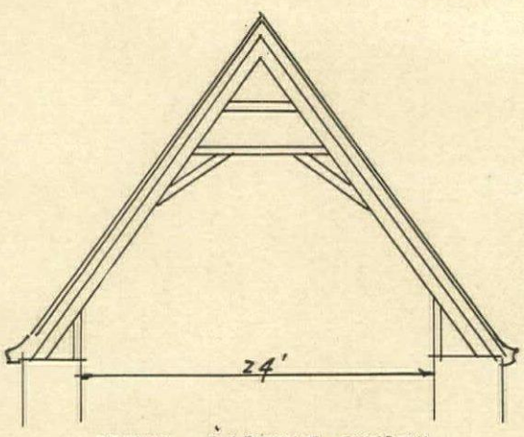
S. AGNESE FUORI LE MURA
ROME A.D. 625-38



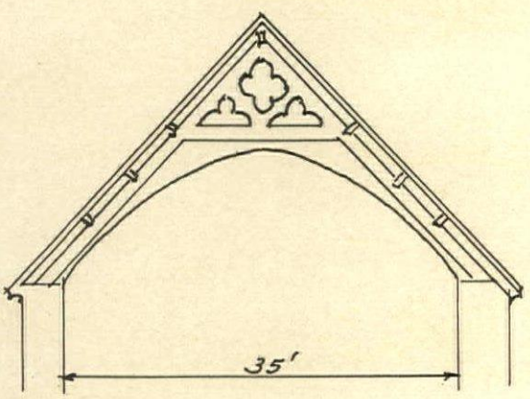
CHURCH OF THE APOSTLES
COLOGNE A.D. 1220-50



PETERBOROUGH CATHEDRAL
A.D. 1117-90



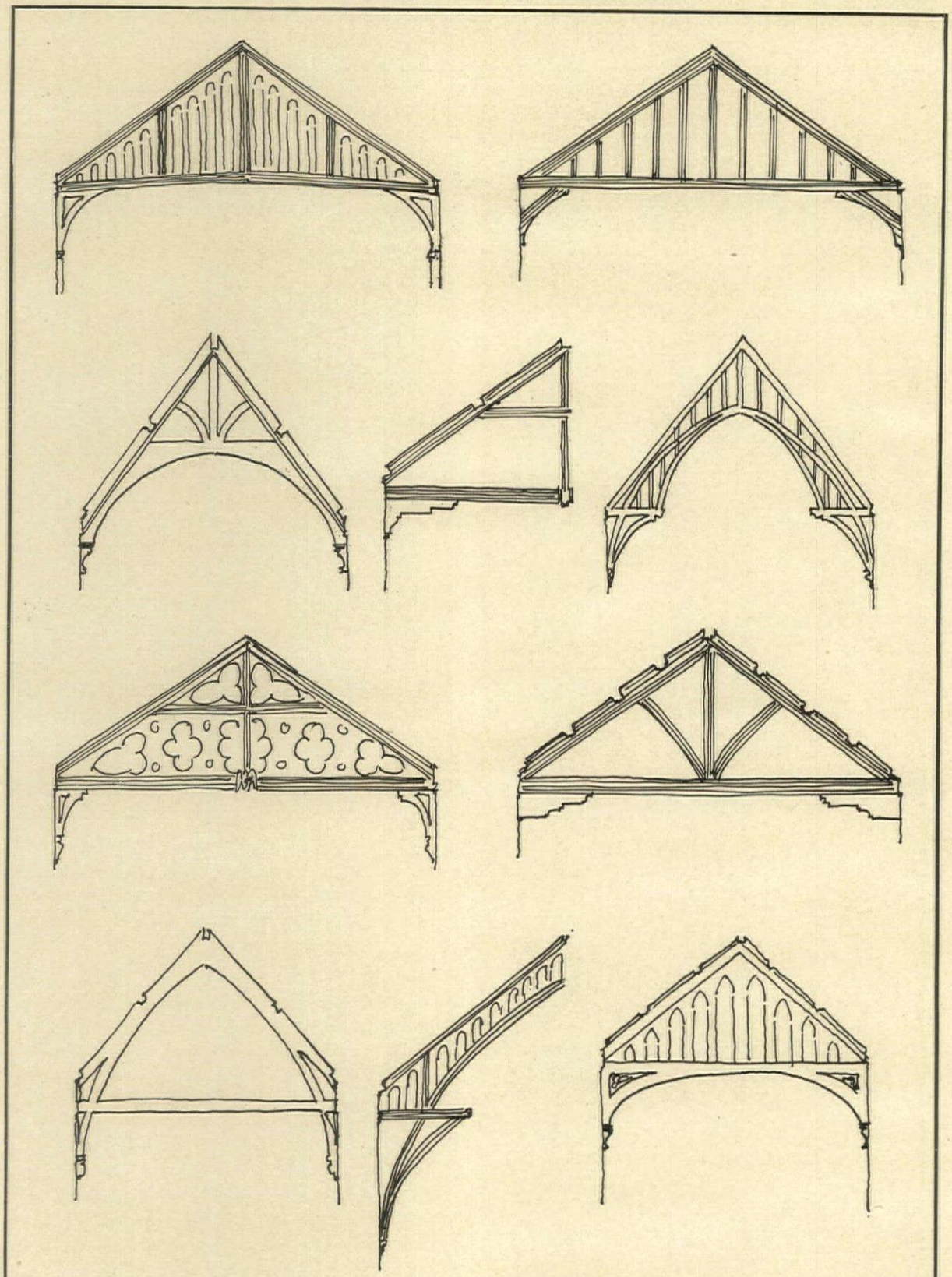
STOWE BARDOLF CHURCH
NORFOLK



THE QUESTEN HALL
WORCESTER

TYPICAL EARLY TIMBER TRUSSES

DIMENSIONS ARE APPROXIMATE



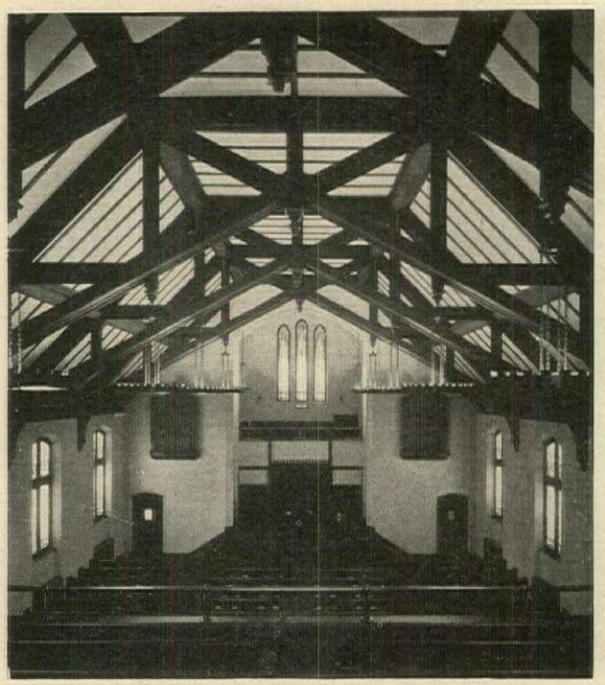
·TYPES·OF·MODERN·TRUSSES·

(*Continued from page 422*)

The necessity for wide spans usually prohibits the use of a wooden truss and steel is the logical material to replace it. Steel can be fabricated in so many ways that the future will probably see a reactionary development of trusses for churches. The need for simulating the use of wooden timbers is still retained, but we are already seeing the influence of steel as a material for roof trusses.

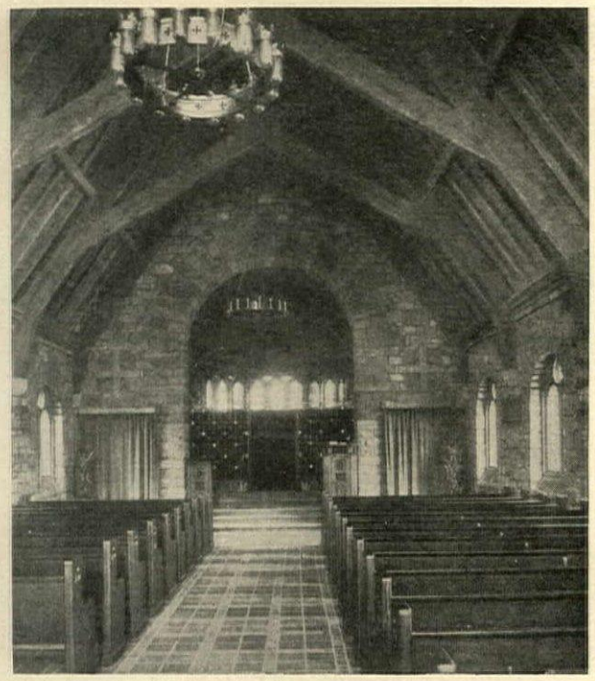
When height is possible steel trusses with a suspended ceiling can always be used. An example of this is seen in the Chapel at Denison University. The roof span of this chapel is 47′. The curved ceiling prevents a feeling or optical illusion of flatness that might have resulted from a flat ceiling.

The roof of the small chapel, designed by Arnold W. Brunner, has a span of 26′ and in this case a simple king post truss of wood has been successfully employed. The narrowness of the chapel in this case avoids any sense of lowness which might otherwise be experienced through the use of this type of truss or a suspended ceiling.



PARTIALLY EXPOSED SCISSORS TRUSSES IN THE FIRST BAPTIST CHURCH, HACKENSACK, N. J.

HARRY E. WARREN, ARCHITECT



A SIMPLE FORM OF SCISSORS TRUSS IN A CHURCH AT FOREST HILLS, L. I., N. Y.

GROSVENOR ATTERBURY, ARCHITECT

MISREPRESENT WINDOW GLASS
SOLD AS AND FOR PLATE GLASS

NUMEROUS instances wherein purchasers of glass for doors, windows, store fronts, show cases, desk tops, automobile windshield replacements, etc., have been supplied with a heavy window glass instead of the polished plate glass which they specified, have been reported to the National Better Business Bureau by the Better Business Bureau of New York, according to a recent bulletin.

In the instances investigated, the substituted material was found to be a Czecho-Slovak product known on the Continent as Vitrea. This material rates as window glass in the U. S. Customs, and while thicker than ordinary window glass, it does not possess the well known characteristics of plate glass. Apparently it is sold to the trade by the importers as and for ¼-inch window glass, the misrepresentation and confusion being the work of some unscrupulous contractors and sub-contractors. This glass undoubtedly has merit where window glass is the desired material; but advertising or selling it as and for plate glass is deceptive and misleading.

An additional element of importance in getting the specified material is the fact that at least some of the companies who insure plate glass store fronts have declined to issue policies covering windows glazed with other materials than genuine plate glass.

Architects, builders and consumers everywhere are urged to report misrepresentations of this character to local Better Business Bureaus, or to the National Better Business Bureau, 383 Madison Avenue, New York City.

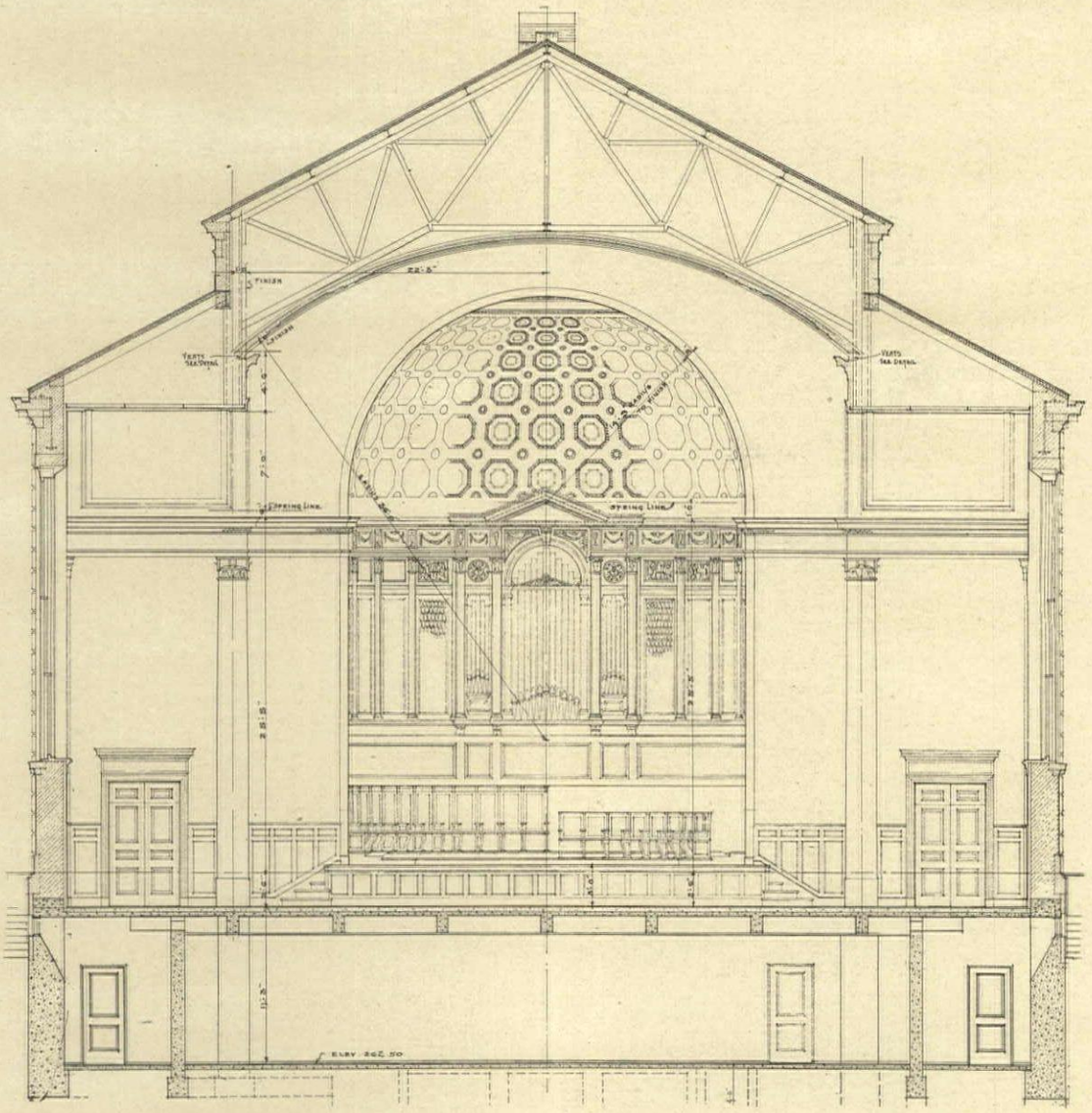
NATIONAL BUREAU OF STANDARDS, ITS FUNCTIONS AND ACTIVITIES

CIRCULAR of the Bureau of Standards, No. 1,* is a general description of this Bureau, an outline of the service which it renders, and a statement of its activities and a few of their results. This 113 page volume contains something of the history of the Bureau of Standards, its relation to various other bodies, chapters on the research work which it conducts and personnel, plant and publications. The circular is fully illustrated and will prove of interest to any one not thoroughly acquainted with the work of this Bureau.

**Superintendent of Documents, Government Printing Office, Washington, D. C. Price 50 cents.*

STUDIES OF BOND BETWEEN CONCRETE AND STEEL

THE Structural Materials Research Laboratory of Lewis Institute, Chicago, Ill., has recently issued an authorized report from the proceedings of the A. S. T. M. entitled "Studies of Bond Between Concrete and Steel" by Duff A. Abrams as Bulletin 17. This bulletin describes an investigation of the bond resistance between concrete and steel as influenced by variation in quantity of mixing water, grading of aggregate, quantity of cement, consistency, age, etc. It includes a summary, conclusion, bibliography, and list of publications of the Structural Materials Research Laboratory.



SECTION THROUGH CHAPEL AT DENISON UNIVERSITY, GRANVILLE, OHIO, SHOWING PLASTER CEILING SUSPENDED BELOW STEEL TRUSSES

ARNOLD W. BRUNNER, ARCHITECT

THE FUNCTION OF CENTRAL BUREAUS IN THE PLANNING OF CHURCHES

By A. G. LAMONT

Superintendent Bureau of Architecture, Board of National Missions of the Presbyterian Church in the U. S. A.

THE United States was settled mostly by peoples from Europe seeking religious freedom. With the materials at hand, they started to build their one-roomed meeting houses and churches. In time the log church was replaced by a little better one, but it was still the one-roomed structure erected by the members of the church, without much thought or time given to the study of the needs of the church or Sunday school, to the plans or style of architecture.

Fortunately there were men and women representing the different denominations who became tired of seeing buildings with "a Queen Anne front, a Mary-Ann back" and just "a plain Ann interior," and they commenced to seek ways and means of correcting conditions and improving the architecture.

It was decided that the best way to solve the problems was to create Bureaus of Architecture in the different denominations. These Bureaus are being set up as rapidly as provision can be made for financing them.

The working policy of these Bureaus is practically the same and offers the following service:

Their purpose is to assist congregations that are planning new buildings, or remodelling old structures; to advise pastors, sessions, Boards of Trustees, committees and architects as to the best way of planning buildings for worship, evangelism, religious education and social work; to improve the architecture of our church and manse buildings and to arouse new enthusiasm for buildings that are beautiful, worthy symbols of the Christian faith, and well adapted to the work for which they are erected; to give to congregations information that will keep them from making mistakes at the beginning, and from running into debt by projecting edifices more expensive than their financial resources warrant.

The Bureaus make preliminary sketches showing the manner in which the auditorium, departmental Sabbath school and social rooms may be arranged, and also the possibility of future expansion. It is their aim to show how buildings may be erected to meet the needs of various communities, and this in the most economical manner. They give information regarding equipment and advice concerning contracts and assist in selecting architects with whom the Bureaus will co-operate closely. The Bureaus act in the capacity of consulting architects and in no manner attempt to take the place of local architects, but co-operate with the architects selected by Building Committees.

In not a few cases congregations must promote the financial side of their building enterprises before they are in a position to secure the services of an architect. These Bureaus aim to assist Building Committees in the early stages of their work and to keep congregations from assuming obligations before they are in a position to do business. This preliminary work is of great importance.

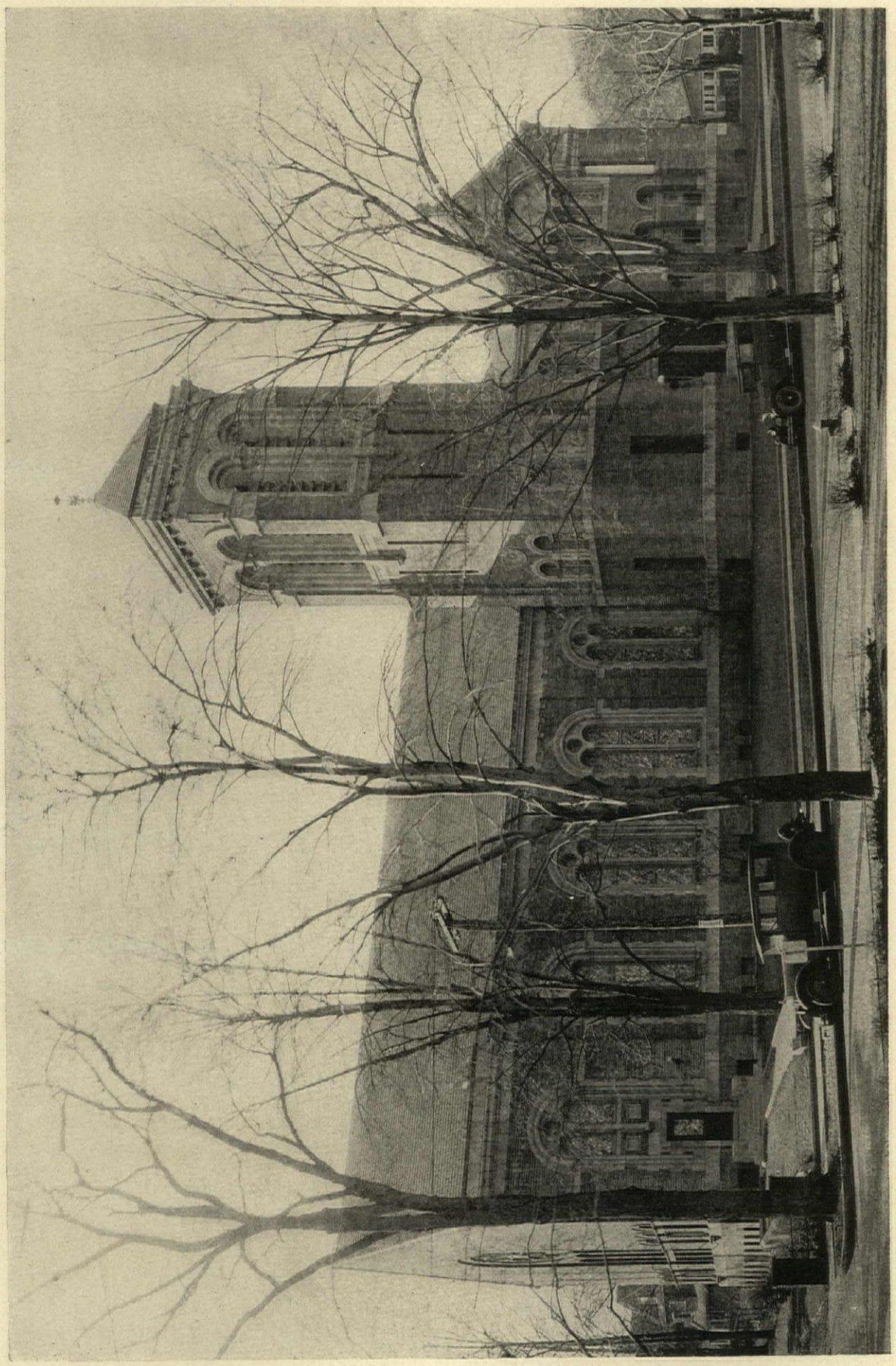
The first step is to submit to the Bureau, on a questionnaire form furnished, complete information. It is necessary to know facts like these: Character of community, nature of site, its environment, membership of the church, size of Sabbath school and the probable growth of the congregation and Sabbath school, also something about the future program of the church. The Bureau should also know something of the financial strength of the congregation and its ability to construct the edifice that is needed without assuming obligations that are too heavy.

When the questionnaire is received, fully made out, sketch plans are made. These drawings show the general arrangement of the auditorium and the approximate size of the rooms.

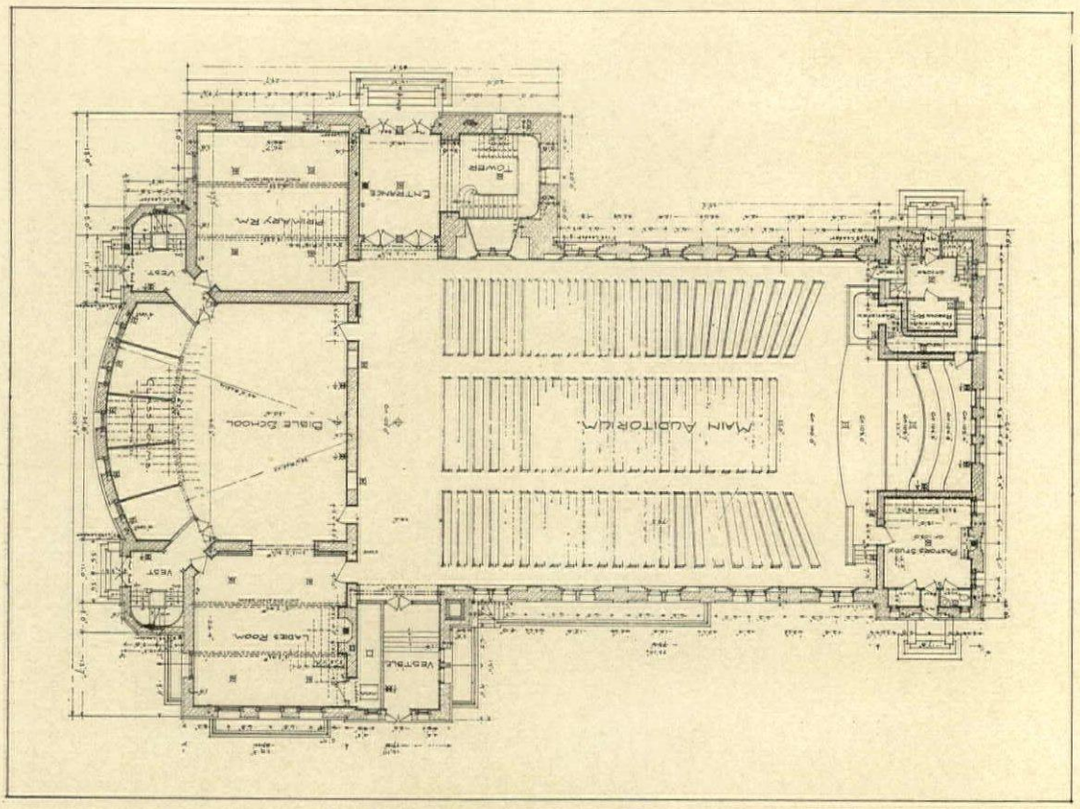
When the plans have passed the criticism of the pastor and of the Building Committee, they are then put into the hands of the architect selected by the Building Committee or the congregation and the architect makes the architectural drawings, prepares the specifications and supervises the construction of the edifice on the terms and according to the usual architectural practice. The Bureaus do not furnish stock plans. They do, however, furnish suggestive booklets.

The Bureaus of Architecture are organized for service and operate without financial profit. The charges proposed are for the purpose of making these Bureaus, as nearly as possible, self-supporting for their service.

It is not the object of these Church Bureaus of Architecture to usurp the rights or privileges of practicing architects, nor in any way try to limit them in their personal influence in working out any project for which the preliminary studies have been made. Their purpose is to co-operate with any architect that might be selected to make working drawings and supervise construction, and to give him a free hand, as far as possible, in the execution of his design.

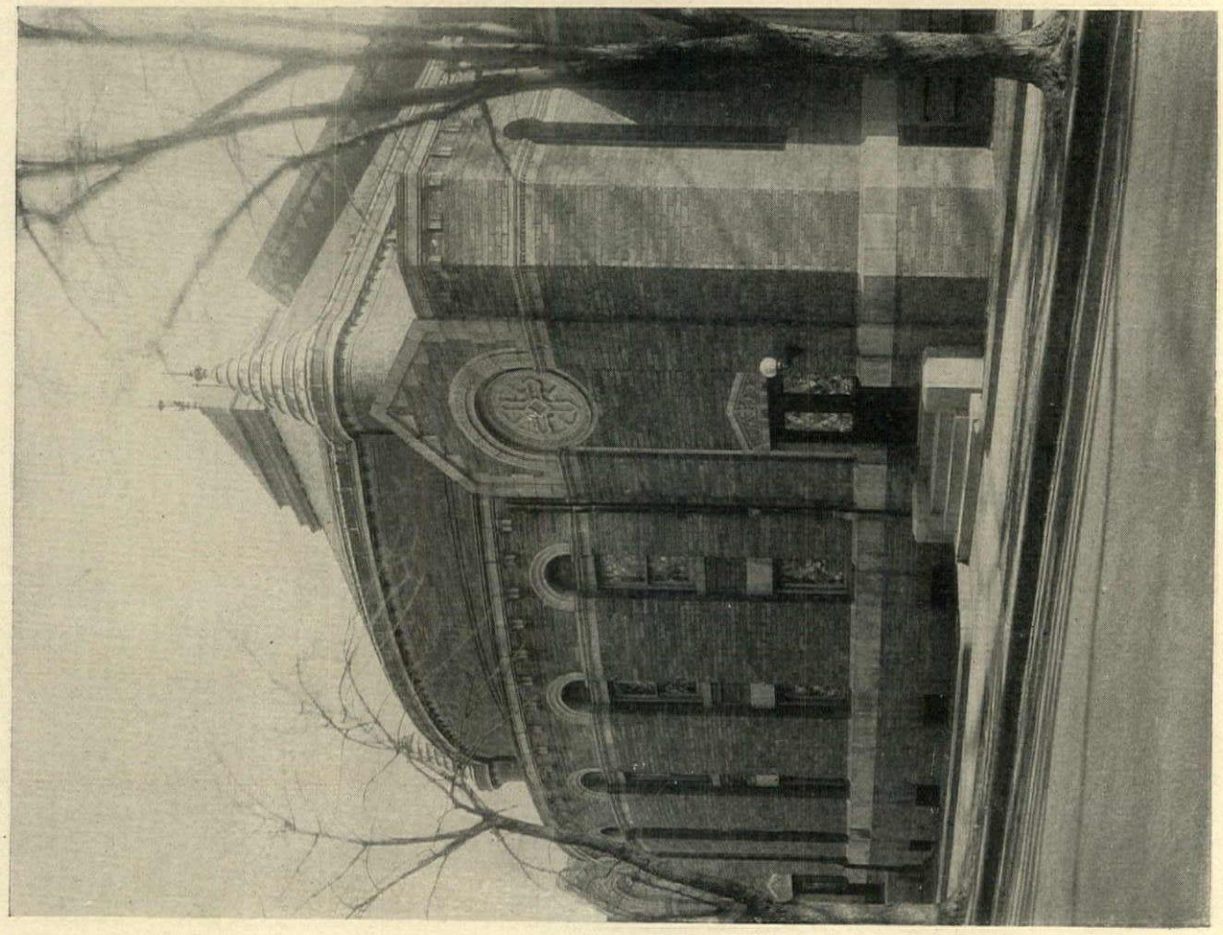


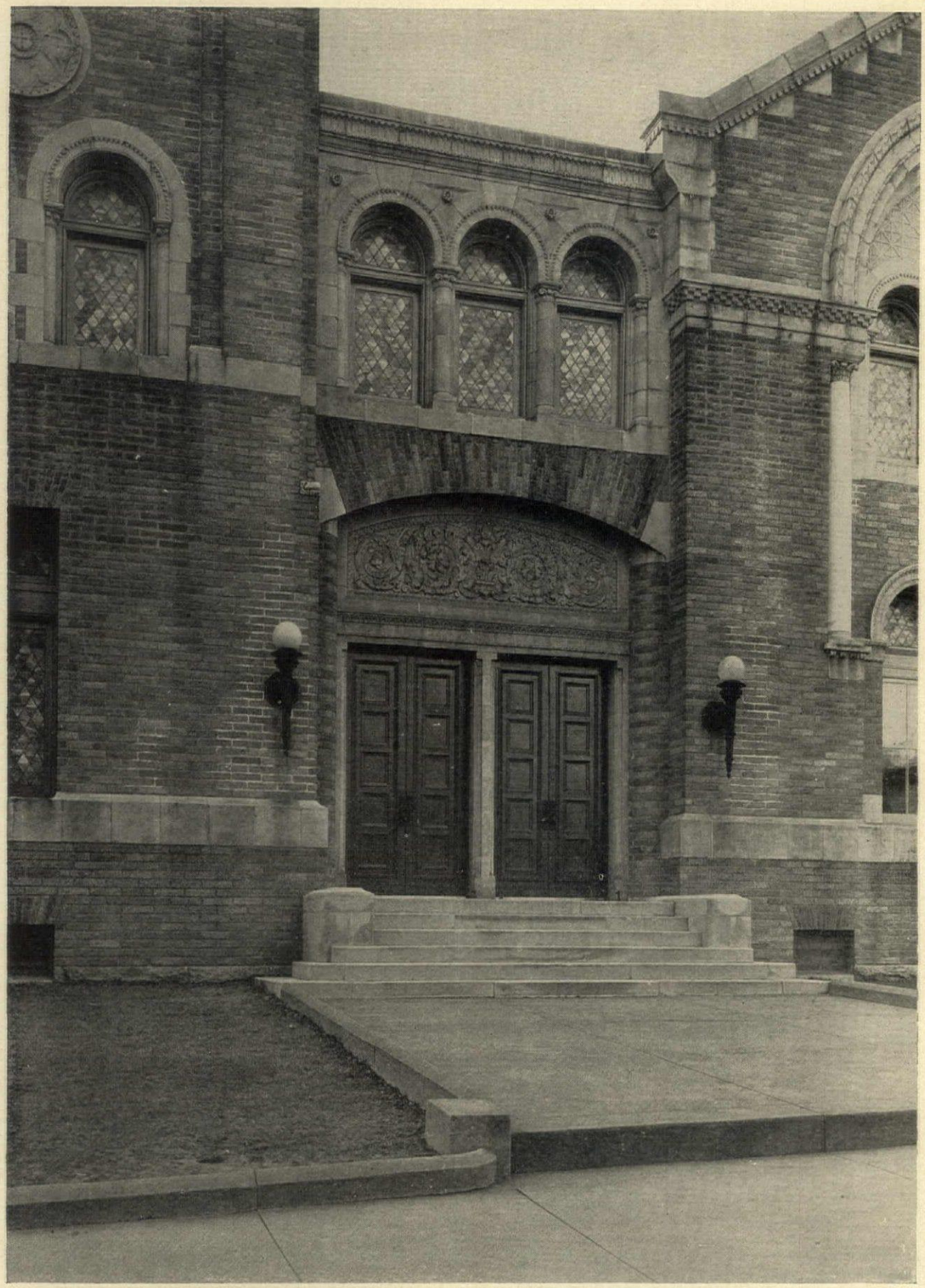
FIRST BAPTIST CHURCH, MONTCLAIR, N. J.—TACHAU & VOUGHT, ARCHITECTS



FIRST BAPTIST CHURCH,
MONTCLAIR, N. J.

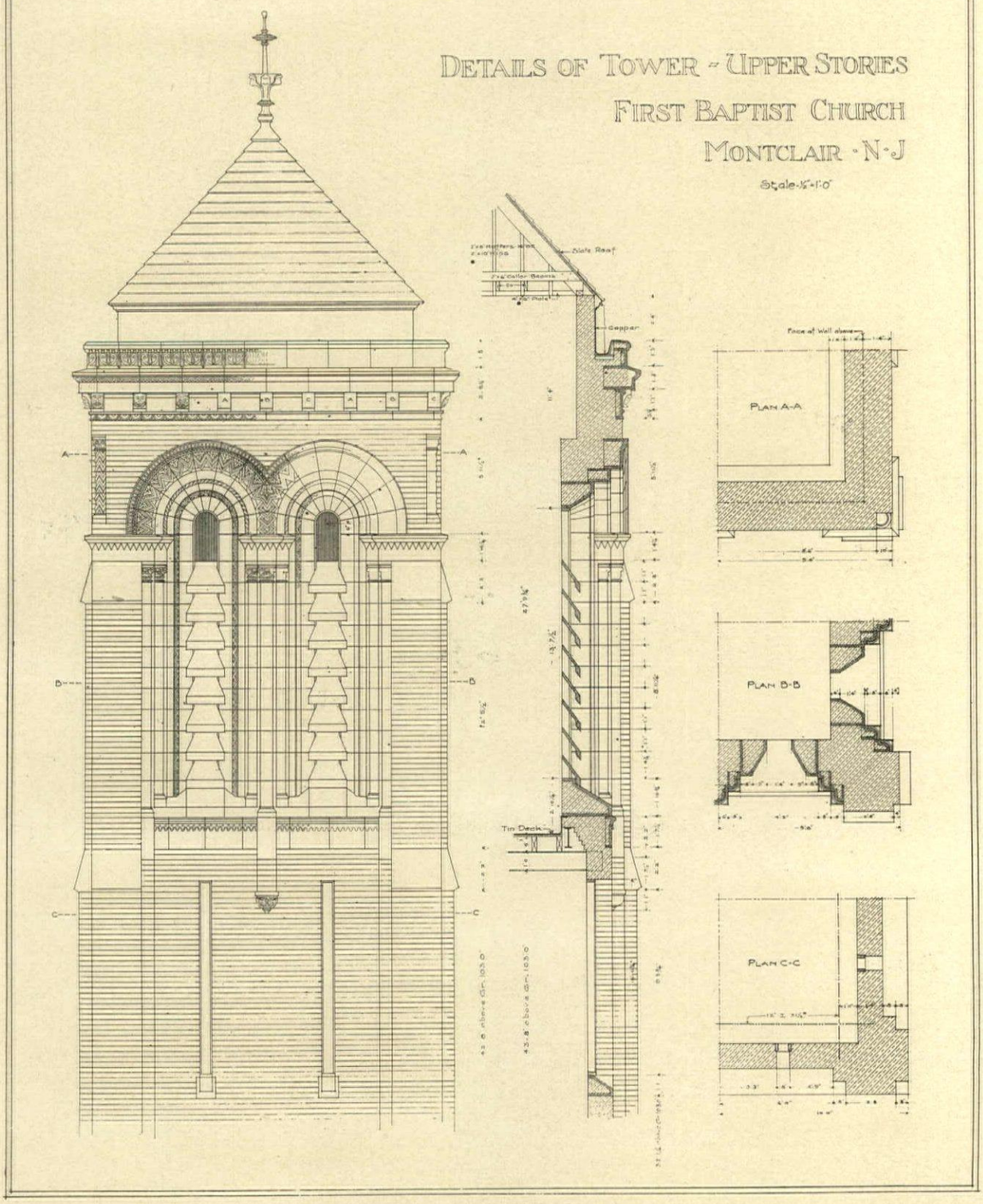
TACHAU & VOUGHT, ARCHITECTS





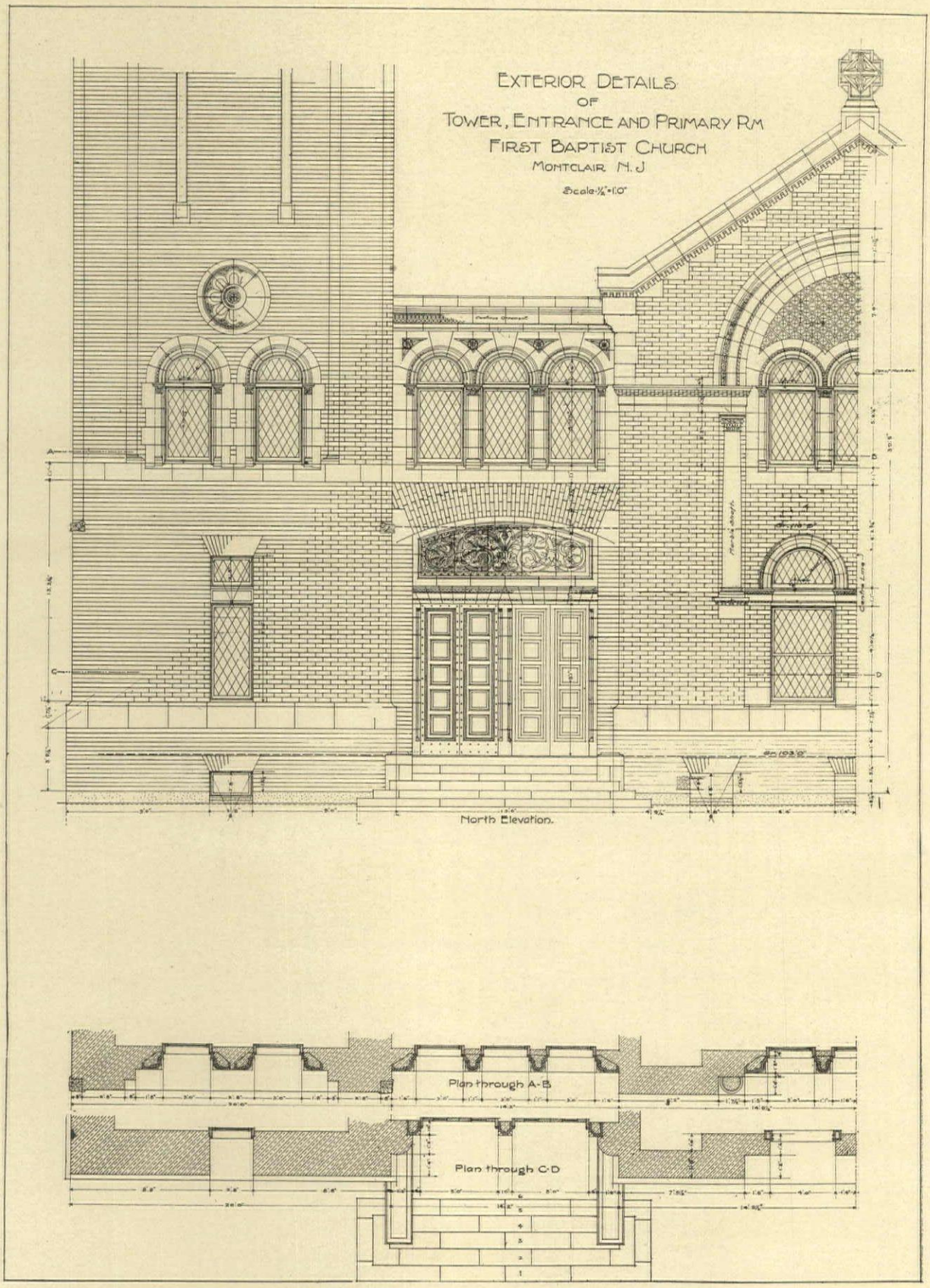
FIRST BAPTIST CHURCH, MONTCLAIR, N. J.

TACHAU & VOUGHT, ARCHITECTS



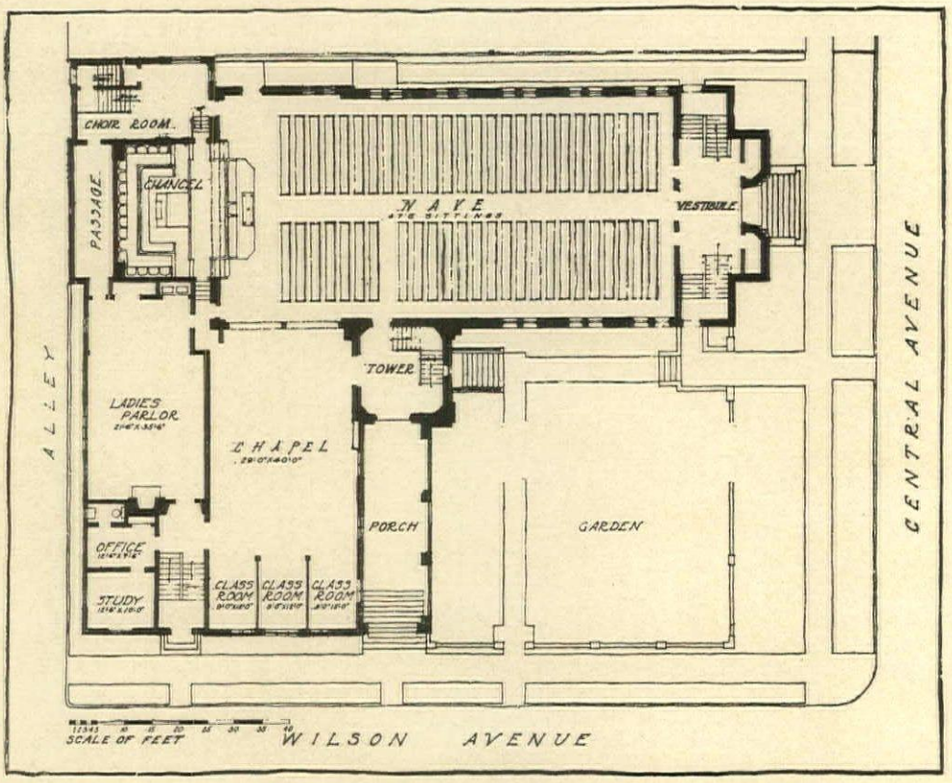
FIRST BAPTIST CHURCH, MONTCLAIR, N. J.

TACHAU & VOUGHT, ARCHITECTS



FIRST BAPTIST CHURCH, MONTCLAIR, N. J.

TACHAU & VOUGHT, ARCHITECTS



FIRST CONGREGATIONAL CHURCH, GLENDALE, CALIF.

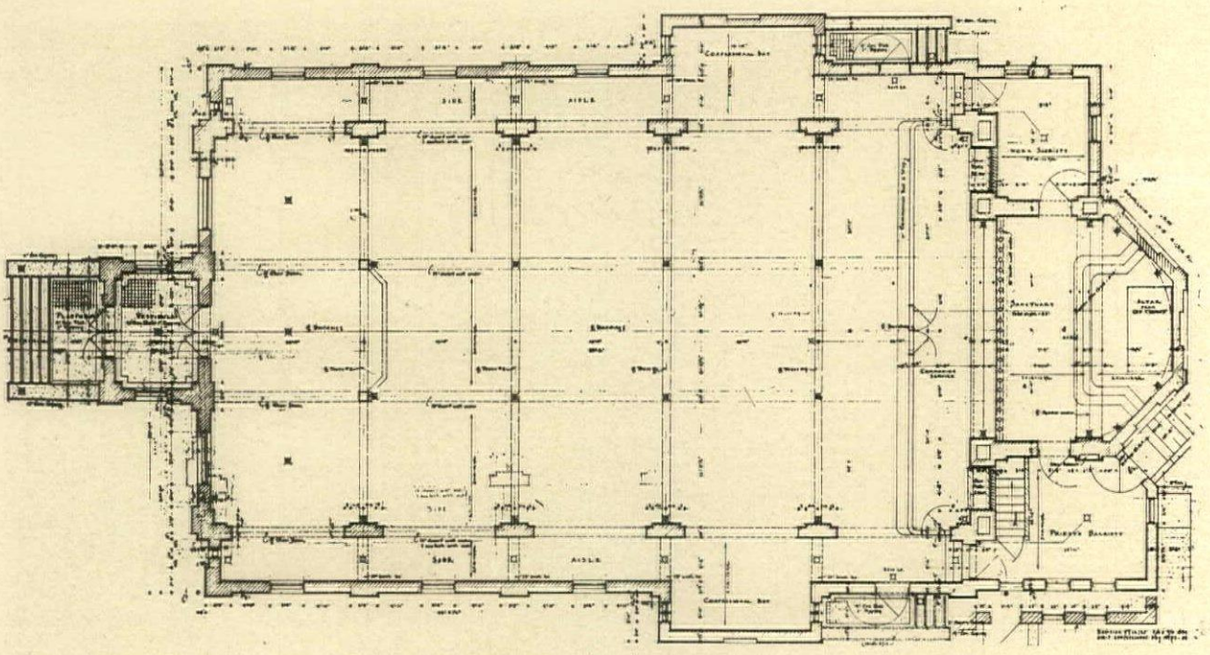
CARLETON MONROE WINSLOW, ARCHITECT

FIRST CONGREGATIONAL CHURCH, GLENDALE, CALIF.

CARLETON MONROE WINSLOW, ARCHITECT

In designing this church, the architect has appropriately sought his inspiration from early Spanish types found in this section. The interior, well composed and rational in design, has been handled with fine restraint. Careful study of circulation has produced a flexible plan. The corner garden adds to the atmosphere of tradition and also enhances the value of the scheme as a whole.

The ceiling following the lines of the roof adds the feeling of height. Iron tie rods, forming the bottom of the trusses, overcome the sense of lowness which might have occurred if heavy wooden members had been used at this point.

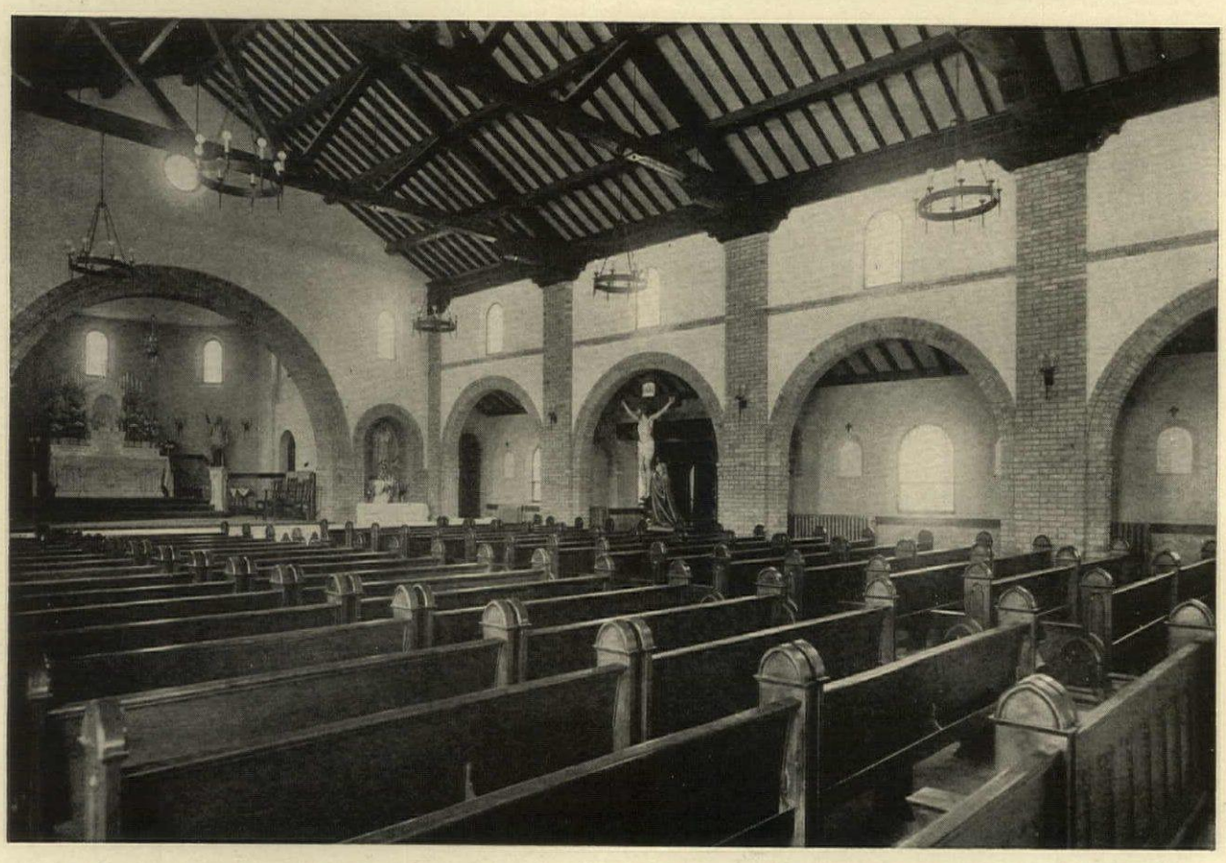


ST. FRANCIS XAVIER CHURCH, PUEBLO, COLO.

M. A. HIGGINS, ARCHITECT

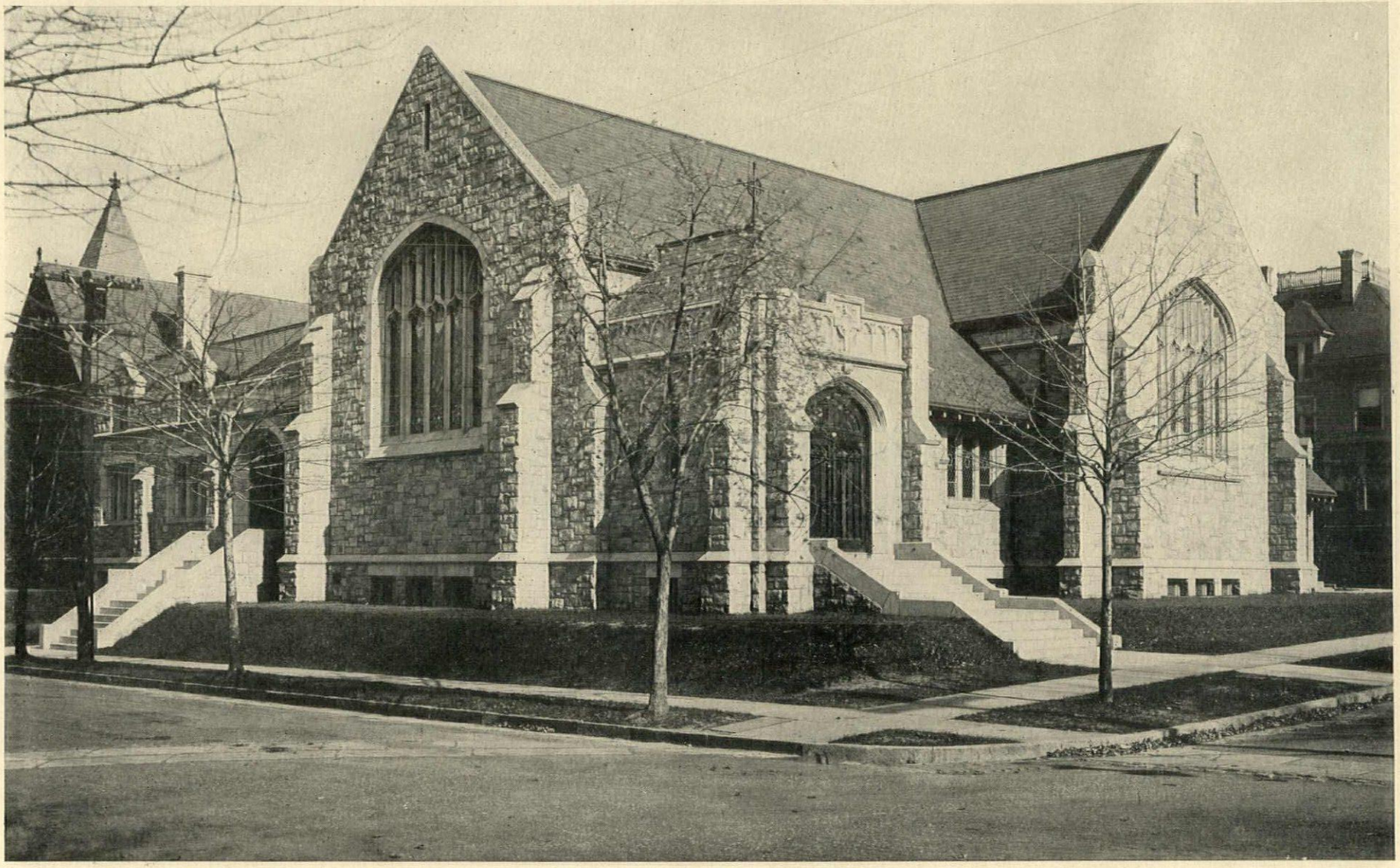
EXTERIOR: Base and trim, brown to black flashed glaze tapestry rug brick. Wood trim, white. Roofs and parapets, red Spanish tile. Exterior and interior doors, V-notched oak slabs.

INTERIOR: Buff-ivory tapestry brick trim, laid in chocolate mortar, rodded joints with tooled arches. Rough timber roof and purlins, with hand wrought iron and bolts. Ceiling, panels, turquoise blue. All wood, dark fir. All window circle heads, cathedral glass.



ST. FRANCIS XAVIER CHURCH, PUEBLO, COLO.

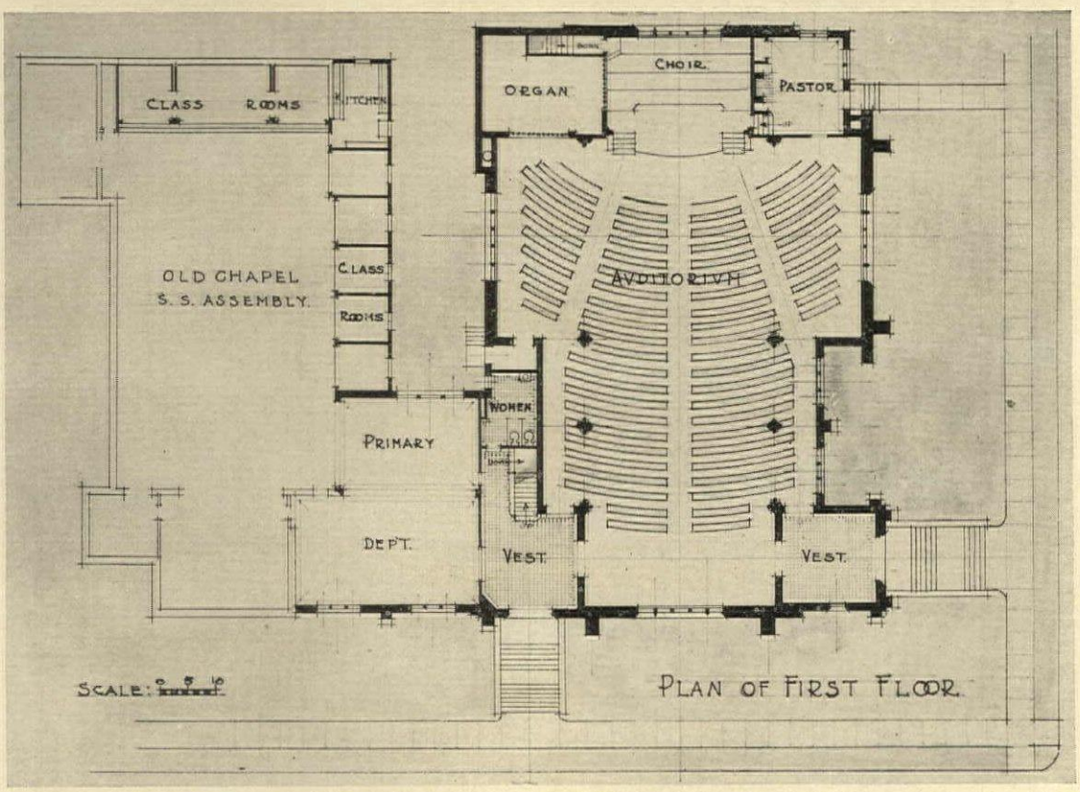
M. A. HIGGINS, ARCHITECT



FOREST HILL PRESBYTERIAN CHURCH, NEWARK, N. J.

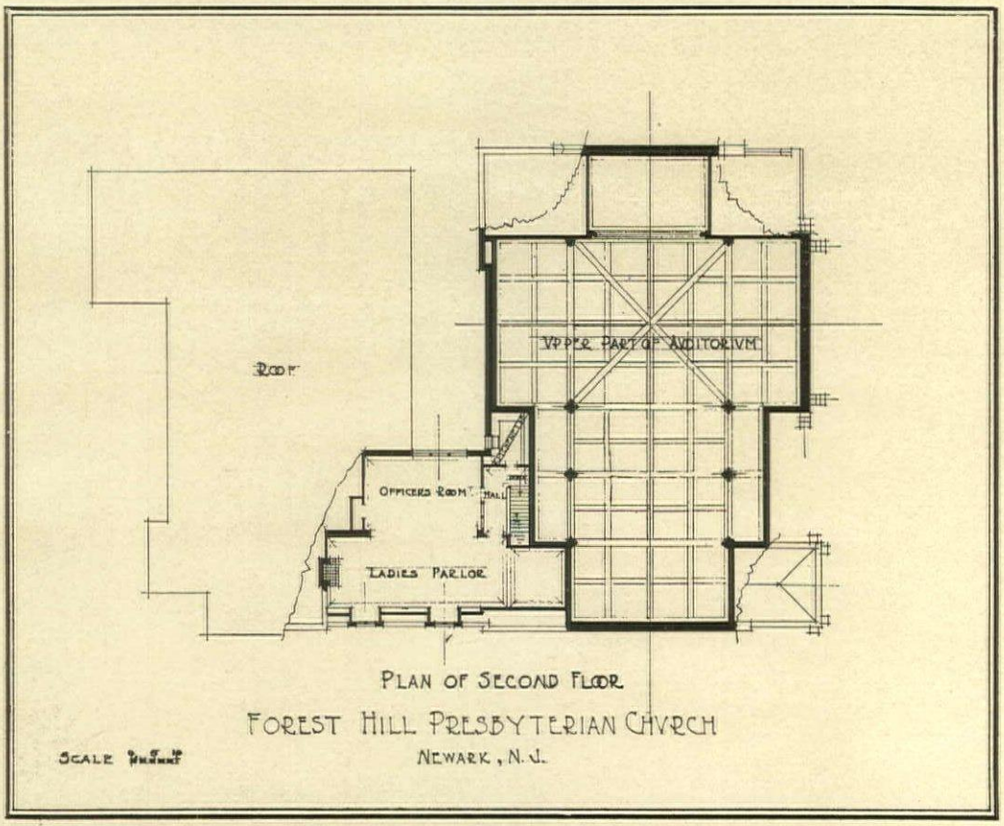
WILLIAM S. GREGORY, ARCHITECT

EXTERIOR WALLS, MASSACHUSETTS GRANITE. ROOF, SLATE AND COPPER. TRIM, OAK. STEAM HEAT. COST 18c PER CUBIC FOOT EXCLUSIVE OF ORGAN AND FURNISHINGS



FOREST HILL PRESBYTERIAN CHURCH, NEWARK, N. J.

WILLIAM S. GREGORY, ARCHITECT

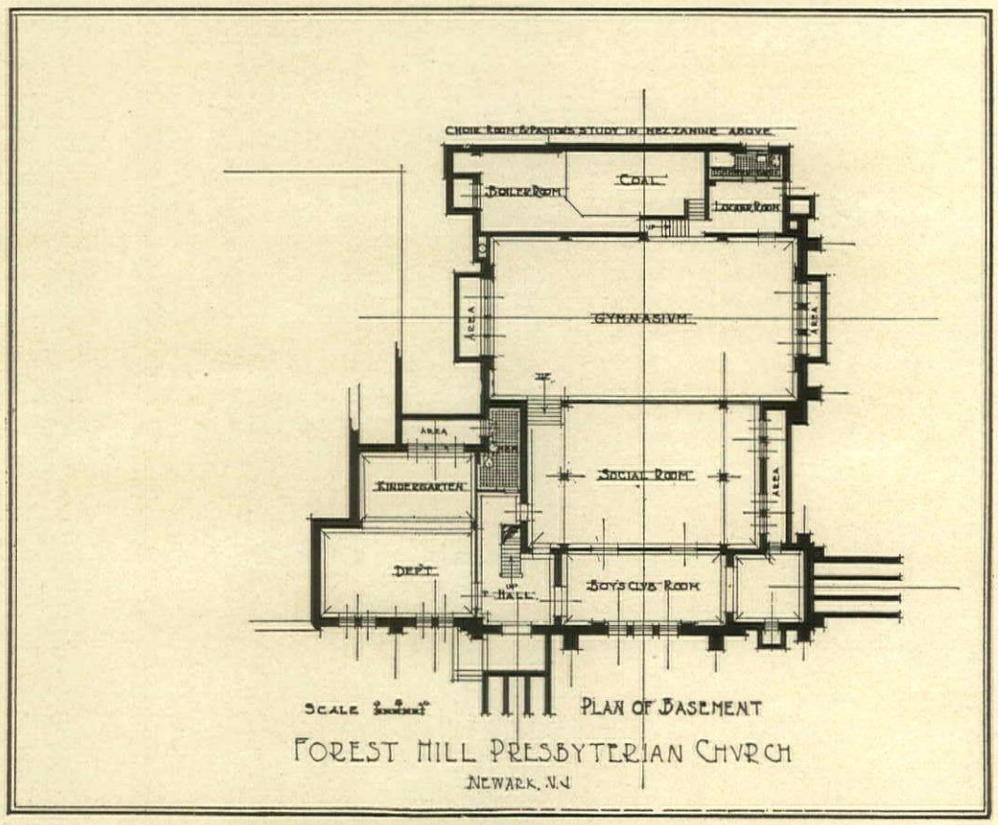


PLAN OF SECOND FLOOR

FOREST HILL PRESBYTERIAN CHURCH

NEWARK, N. J.

SCALE



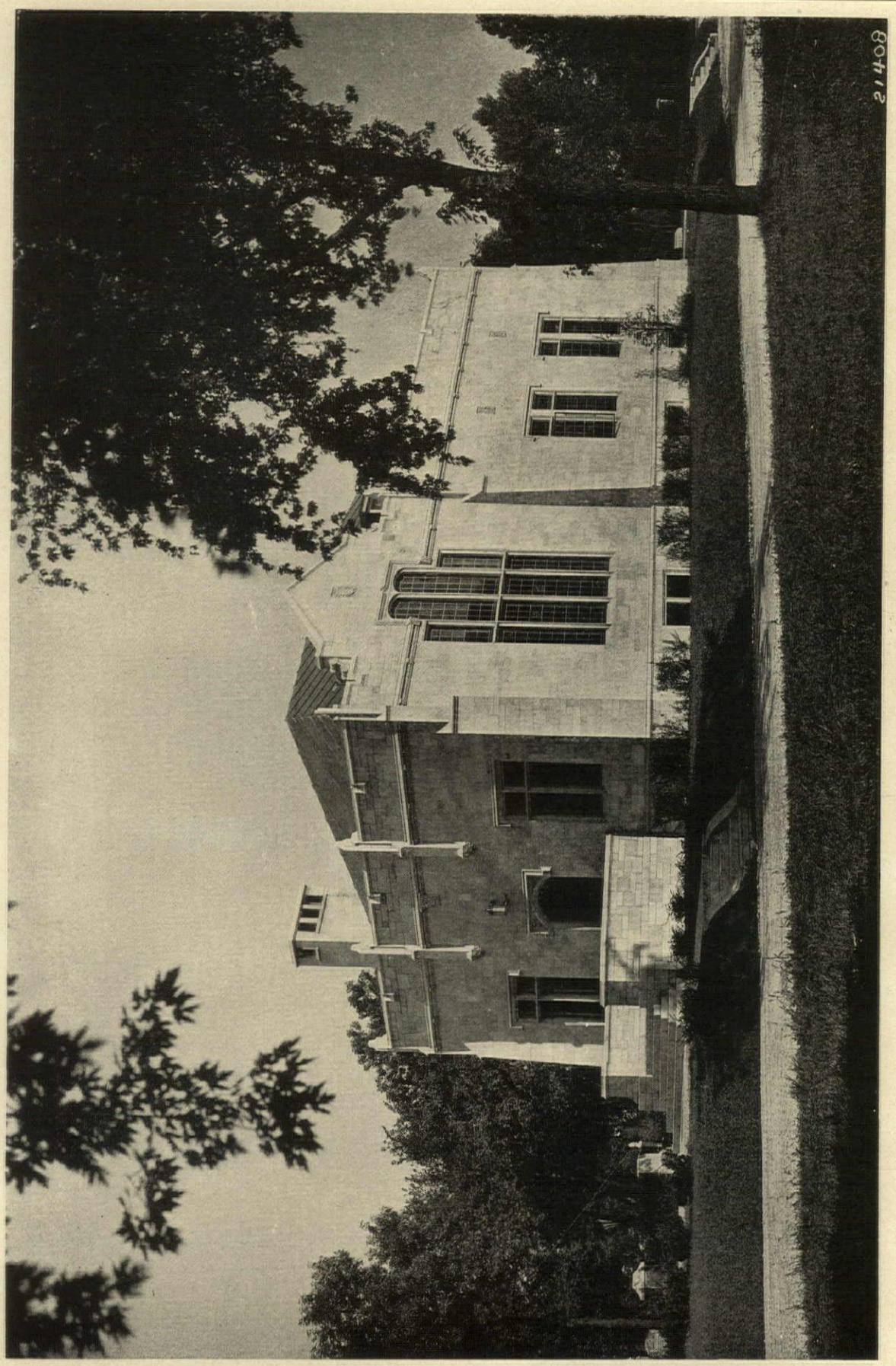
SCALE

PLAN OF BASEMENT

FOREST HILL PRESBYTERIAN CHURCH

NEWARK, N.J.

WILLIAM S. GREGORY, ARCHITECT



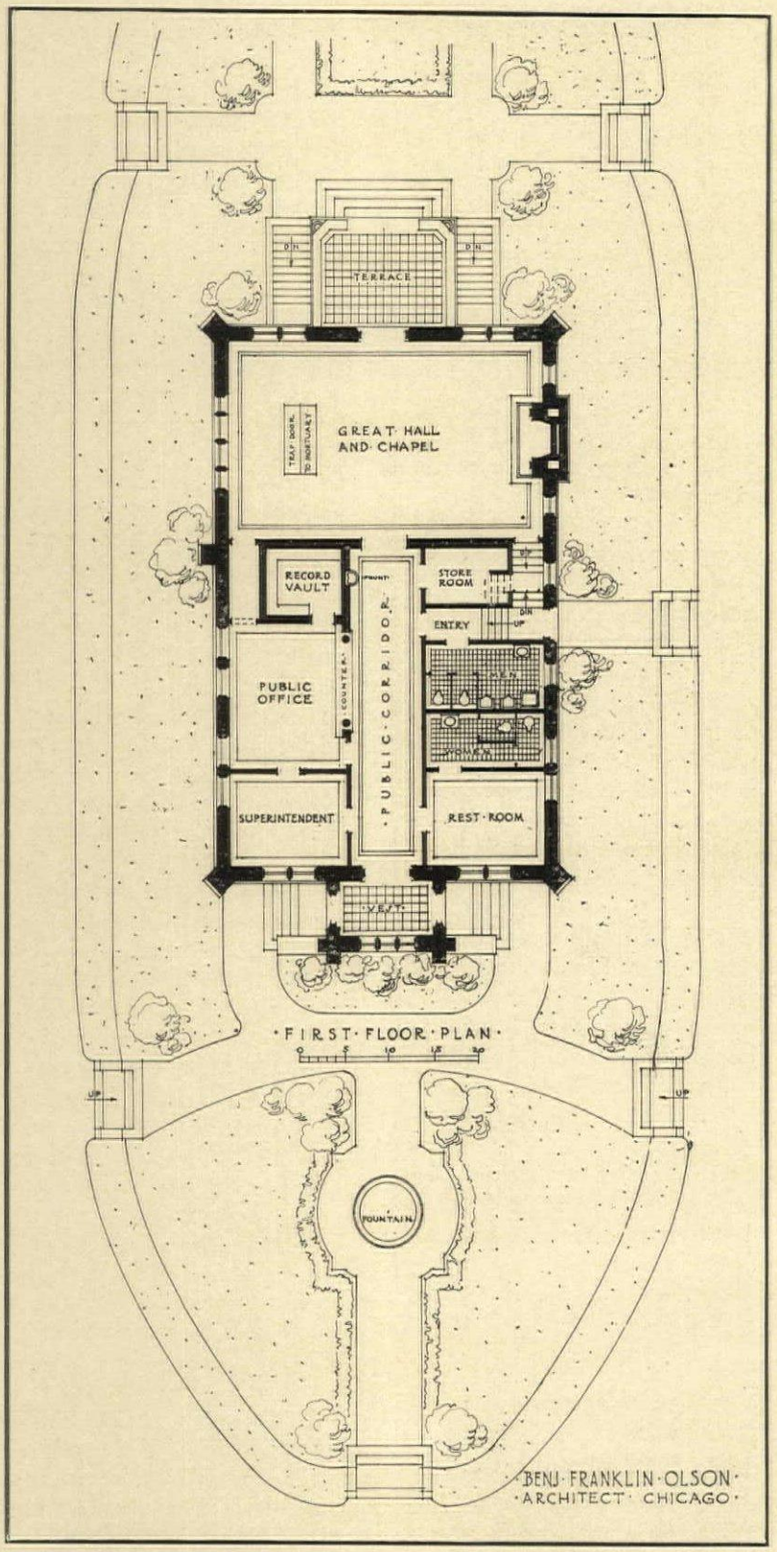
BUILDING FOR EDEN CEMETERY, SCHILLER PARK, ILL.

BENJAMIN FRANKLIN OLSON, ARCHITECT

BUILDING FOR EDEN CEMETERY, SCHILLER PARK, ILL.

BENJAMIN FRANKLIN OLSON, ARCHITECT

A NOVEL FEATURE IN THE GREAT HALL IS A TRAP DOOR ARRANGEMENT FOR USE IN SERVICES, THROUGH WHICH THE CASKET IS LOWERED BY A PORTABLE GRAVE LOWERING DEVICE TO THE MORTUARY ROOM IN THE BASEMENT. THESE TRAP DOORS ARE CONCEALED AT OTHER TIMES BY A LARGE RUG AND TABLE



BUILDING FOR EDEN CEMETERY, SCHILLER PARK, ILL.

Built 1925 at cost of $43,500, or 50.7¢ per cubic foot.

Exterior walls are brick, faced with stone, waterproofed and insulated. Roof, sheet copper. Ornamental metal, iron. Doors, wood. Windows, solid metal. Floors, wood. Partitions, wood studs.

Trim, wood. Hardware, black iron, hammered finish. Steam heat.

Ceilings of public corridor and vestibule vaulted in plaster. Side walls, buff caen stone plaster with white mortar joints.

Great Hall and Chapel ceilings, oak, rough hewn trusses and rafters. Caen stone plaster wainscot.

Lighting fixtures, old Swedish iron.

JOSEPH HUDNUT JOINS COLUMBIA FACULTY

THE appointment of Joseph Hudnut, head of the School of Architecture in the University of Virginia, as professor of the history of architecture in Columbia University, is announced. He will succeed the late Professor A. D. F. Hamlin. Professor Hudnut was graduated from Columbia in 1917 with the degree of master of science in architecture.

AMERICAN GAS ASSOCIATION COMPETITION

THE American Gas Association, 342 Madison Avenue, New York City, invites all architects, draftsmen and students in architectural schools in the United States and Canada to compete in the prize competition of the American Gas Association —the national organization of the manufactured gas industry.

The object of this competition is twofold: to bring to the attention of prospective house builders in the suburbs and residential districts of our cities and towns and to architects and draftsmen the many ways in which manufactured and natural gas may be advantageously and economically employed in the small house; and secondly, to bring before the public a selected number of well-designed houses which lend themselves to such locations and which incorporate adequate provision for gas service.

To accomplish this, the American Gas Association proposes to give nine prizes for drawings and designs submitted, as follows:

First Prize, $1,000.00; Second Prize, $500.00; Third Prize, $250.00; Fourth Prize, $250.00; Fifth Prize, $100.00; Sixth Prize, $100.00; Seventh Prize, $100.00; Eighth Prize, $100.00; Ninth Prize, $100.00.

In addition to these prizes, five projets will be chosen by the jury for honorable mention.

It is agreed that all drawings submitted will remain the property of the competitors.

For further particulars, address the American Gas Association.

COMPETITION FOR DESIGN OF CERTIFICATE IN RECOGNITION OF CRAFTSMANSHIP

THE New York Building Congress awards to the outstanding mechanics in each major trade engaged on prominent buildings a certificate in recognition of superior craftsmanship. The Congress desires a suitable form for such certificates and therefore announces a competition open to all for the most appropriate design. A prize of $150.00 will be awarded to the design accorded first place by the Jury of Award, and a prize of $50.00 to the design placed second. The design should be simple and dignified, and express by emblems, human figures, insignia or other device, the purpose of the Congress in the award. Jury of Award: Harvey W. Corbett, Chairman; Howard Greenley and Raymond M. Hood.

Further information and an outline form giving the wording of the certificate may be obtained by applying to Wm. O. Ludlow, Chairman Room 1016 Grand Central Terminal, New York.

CONGESTION IN GIBRALTAR

THE biblical injunction to "build one's house upon a rock" seems to have been followed to too great an extent in the famous Rock of Gibraltar, according to *Housing Betterment*.

Recent reports from that country indicate a great shortage in housing accommodations with serious congestion, it being reported that no fewer than 113 families of over six members each are living one family to a room. It is stated that one result of such conditions has been an increase of infantile mortality and another has been a degree of speculation in real estate which has driven the price of houses up to fantastic figures.

In view of this situation the local authorities have prepared a plan for a constructive housing policy, which has been submitted for approval to the Governor of Gibraltar. It has not, however, found favor with the military authorities, because of the fact that land for building purposes in Gibraltar is necessarily limited and the construction proposed will deprive the Government of all desirable ground space and increase the density of buildings. The military authorities maintain that the sole effect of new buildings will be to permit citizens now living outside the city limits to come within and that the congestion will remain as great as ever. It is believed, however, that in spite of these objections an understanding will be reached and that a certain amount of ground will be ceded to the city and building permitted to the amount of about $450,000.

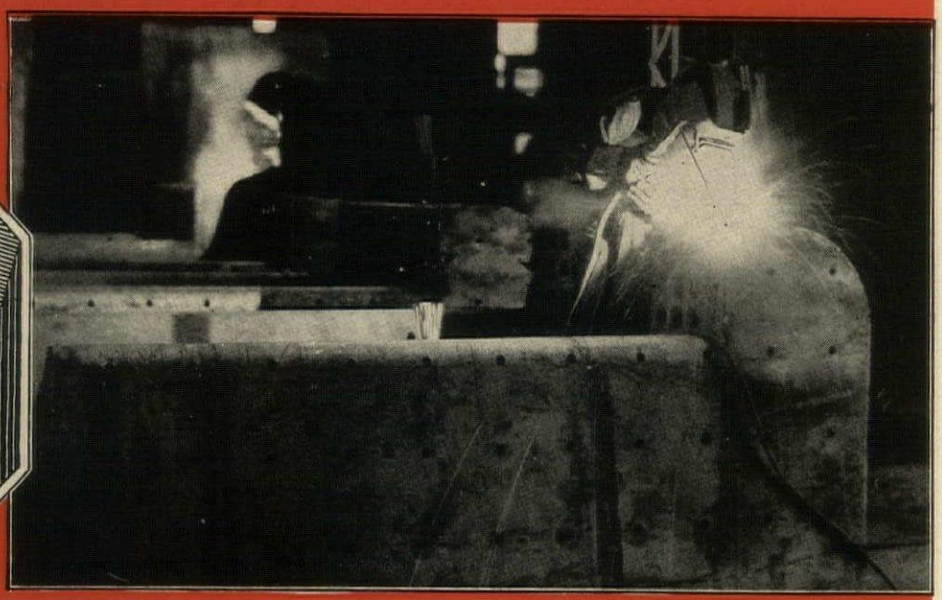
The plan contemplated includes six building sites to be made available by the Colonial Government for the erection by the local authorities of twenty tenement houses capable of accommodating more than 3,000 people to be erected at a cost of approximately $1,125,000.

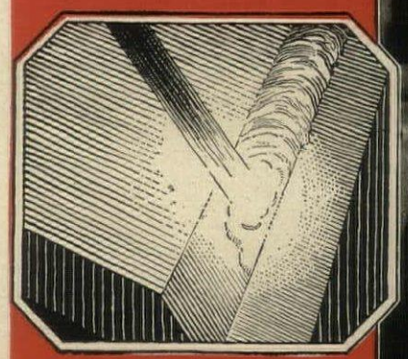
The general type of building proposed is a tenement house of three stories with external balconies, rectangular in shape and containing living apartments of from one room and kitchen to three rooms, kitchen, scullery and bathroom. These twenty houses will contain about 433 apartments. The cost of the scheme is to be met by an issue of bonds bearing 4 per cent and maturing in thirty years. Although the cost of building will prevent the charging of an economic rent, the difference between revenue and expenditure will be less than that prevailing in England. It is expected that after a period of thirty years the proposition will be on a self-supporting basis.

HEGGIE-SIMPLEX

[FORMERLY SIMPLEX]

ELECTRIC-WELDED STEEL BOILERS





Electric Welding
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SIX plates make up the Heggie-Simplex Boiler — plates of the highest grade steel, requiring fewer seams, and seams of less footage.

Firebox low carbon steel is used, because it welds evenly, and insures uniform strength at all points.

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Heggie-Simplex boilers save 25% to 45% of the fuel, reduce firings proportionately, burn *any* fuel smokelessly, save 33% of the floor space, flues clean from front, simpler and less expensive to install. Detailed specifications and catalog on request.

The Heggie-Simplex Boiler combines in one portable, electric-welded steel unit all the recognized advantages of both firebox and return tubular, double pass boilers. It has four distinctive features of fundamental importance:

1. Extra large firebox and direct heating surface.
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3. "Rear-front-rear" passage for the gases.
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Made in both smokeless and direct draft types and in a complete range of sizes for bungalows, residences and all larger installations.

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Shreveport
Spartanburg
St. Louis
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Toledo
Tulsa
Youngstown, O.
Waterloo, Ia.

BOOK NOTES

THE OLD MISSION CHURCHES AND HISTORIC HOUSES OF CALIFORNIA

THIS book is the result of six years' field work and thirteen years of research by Professor Newcomb of the University of Illinois. The Hispanic Shrines of California are described with professional accuracy and include historical notes which are of especial interest. Many fresh architectural "finds" are included. This work ably paints the alluring charm of the old world within our own shores and forms a worth while addition to the history of architecture in the United States upon a subject of which very little serious work has been done.

Restorations and the author's evidence of several hitherto misunderstood buildings are included. The author's sincere appreciation of the character, spirit and romance of historic Spanish Missions and homesteads of California will be found a source of inspiration in both text and illustration.

The Old Mission Churches and Historic Houses of California, by Rexford Newcomb, M. A., M. Arch., A. I. A. Published by J. B. Lippincott, Philadelphia, Pa. 379 pp. Frontispiece in color, 217 illustrations and measured drawings, 24 line drawings, size 8x11¼ inches, bound in buckram. Price $15.00 net.

MODERN THEATRES

MR. PICHEL'S book deals primarily with the small drama house and particularly emphasizes the requirements of the house as a theatre; the backstage arrangements and the details which make a stage a proper implement for developing the possibilities of the modern drama. It is written from the standpoint of the actor-producer and is very fair, very complete as far as it goes and contains many valuable suggestions for the improvement of the small theatre problem which is becoming so popular throughout the country at present. It really appeals to a much larger audience than the little theatre managers, and even the producers who are more interested in the big houses, could find a great deal to draw from in these pages. The present age is one of extremes in theatre construction. We have had erected in the last few years a great many large and magnificent playhouses, and now we are coming into an era of the small community theatre seating 700 or less, which is coming to be the exponent of the modern drama. The style of house which is suitable for one is not suitable for the other, but the fundamental principles of stage planning, the point of view which would weigh the relative values of the various functions of a theatre are similar, if not identical, in most cases. Mr. Pichel wisely does not go into the matter of theatre design as architecture. That is something that varies so widely with the individual architect and with the problem that we have not yet reached a point where we can lay down fundamental principles, but in everything else that has to do with the small theatre, this book is a most welcome addition to the extant literature on the subject, and the actor, the producer and the lover of the drama will have a better idea of the functions of the modern theatre by reading carefully this very well presented collection of facts, a collection which perhaps because of the absence of dogmatic statements, is all the more valuable as an incentive to thought and investigation.

C. H. BLACKALL.

Modern Theatres, by Irving Pichel. 102 pp., with bibliography and 40 pp. illustrations. Full cloth. Price $2.25. New York, Harcourt, Brace & Co.

BRICKWORK IN ITALY

BRICK is no longer just brick, as it was for centuries. It has become a most artistic medium for carrying forward originality in design. From the one time red or yellow brick to the present brick of all colors or tones, and of varying textures, is but a brief period in a history that dates back to antiquity.

One of the most scholarly and authoritative histories dealing with brick, and specifically as to a certain location, is a book just published by the American Face Brick Association of Chicago. This book, Brickwork in Italy, is from the pen of G. C. Mars, Ph. D., who, as editor and compiler, has created a work that will be of the greatest value to architects. Probably no other one man in this country is better equipped than is Dr. Mars to undertake a work of this character. The text is a series of well written essays treating of Brick in Roman Antiquity by Prof. Ing. Carlo Roccatelli, Brick in the Middle Ages by Prof. Ing. Enrico Verdozzi, Renaissance and Baroque Brickwork by Prof. Roccatelli, and concludes with an account of present methods of manufacture and the use of brick for various types of buildings, by Prof. Verdozzi.

Grouped in this way and treated thus authoritatively, we have a comprehensive and condensed history of brick and one that gives the reader many facts not heretofore contained in one volume. The illustrations have been selected with unusual care. They are "off the beaten track" inasmuch as they are not the presentation of well known examples from hackneyed points of view, but supplement the text in the finest way.

Brickwork in Italy, by G. C. Mars, Ph. D. Price $6.00, linen bound; $7.00, half morocco bound. Postage to foreign countries 50 cents additional. The American Face Brick Association, Chicago, Ill.

(Photo U. & U.)

The Wrigley Building, Chicago,

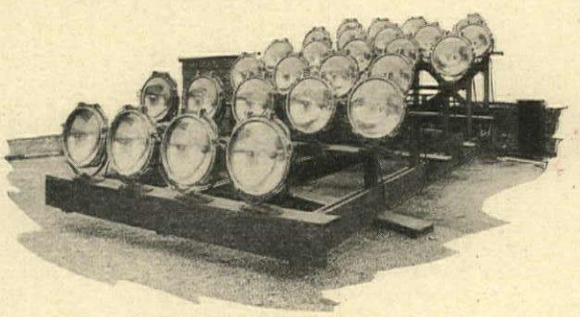
North, South and West faces lighted by Pyle-O-Lytes, type No. 2375

MORE light, with fewer projectors and a consequently lowered operating cost, are features of the recent installation of Pyle-O-Lytes to light the north, south and west facades of the famous Wrigley Building.

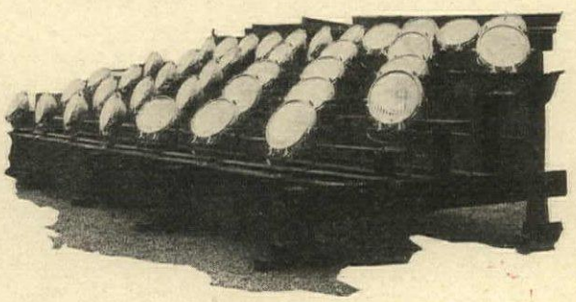
The other point which is particularly desirable in this case is the fact that the Pyle-O-Lyte projectors are permanent units. The materials of construction are permanent, and the case of the projector is totally enclosed and sealed, ending the reflector deterioration which is so common with other types of units.

There is no possible entrance of dust, moisture, or gases to reduce the reflector efficiency, and actual operation demonstrates that lamp life is materially lengthened.

Bulletins on the type No. 2375 Pyle-O-Lytes will be sent to any architect who is interested in floodlighting of buildings. The services of Pyle-National engineers are available for consultation on projector layouts.



The bank of Pyle-O-Lytes which illuminates the south face. These projectors are on the east side of Michigan Avenue, south of the bridge and over 700 feet away from the building.



The bank which lights the north face. Notice the rectangular divergence lenses used here to obtain accurate distribution.

THE PYLE-NATIONAL COMPANY

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OLD ENGLISH HOUSES

THE latest publication by J. Alfred Gotch, an English architect and an honorary corresponding member of the A. I. A., tells an interesting story of the development of domestic architecture in England from mediæval times to the present day. The author details the condition which necessitated or inspired each architectural phase and of the resulting mode of life of those who inhabited these houses. Occasionally, historical anecdotes are intertwined in the text, thus giving greater emphasis to its real meaning as well as introducing an amusing side to the subject which makes its reading easier and even adds to its informative quality. The book is divided into eight chapters. The Mediæval House, the subject of the first chapter, is seen as more of a fortress than a home; the Tudor House is described, influenced strongly by the Italians, although its plan, with its long gallery, was truly English; symmetry in design and Classic ornamentation, characteristic of the Elizabethan house, are given two chapters; the change in proportion, practiced by Inigo Jones and his pupil, John Webb, is dealt with in the chapter entitled The Carolean House. The Queen Anne House of Wren's time, in which a desire for display was combined with comfort, follows; then the Small House, of singular charm because "they were expressions of the countryside around them," and, finally, The Georgian House, in which the old Gothic ideas are entirely replaced by the Classic, simpler and lighter than any preceding, but still emphasizing display more than comfort. As the author states in the preface, he attempts to tell a story of "domestic architecture in England from the time men first built with permanent materials in words that will be understood by readers unfamiliar with the subject." In that he has succeeded. The text is interesting, light, instructive and entertaining. Many full-page illustrations are shown,—well-chosen examples of English architecture.

Old English Houses, by J. A. Gotch. Two hundred odd pages, with 7 plans and 48 illustrations; 6x9; bound in board covers; published by E. P. Dutton & Company, New York. Price $7.00.

THE FALISCANS IN PREHISTORIC TIMES

THE above is the title of volume 5 of papers and monographs of the American Academy in Rome. The author is Louise Adams Holland, one-time resident at the Academy.

Frankly, we admit no knowledge of the Faliscans, but as we have a decided liking for archæology and a deep respect for the men and women who are delving into the past, we took up this volume with a feeling of interest, and its perusal has been very much worth while.

The Faliscans, we learn, were a people supposedly akin to the Latins, and spoke a Latinic dialect. They take their name from the ancient city of Falerii, located in Etruria.

These papers deal, in a series of six chapters, with the various evidences of this early civilization as disclosed through successive periods of excavation of tombs. Writing the history of a people long extinct on facts based on such archæological treasure has materially added to our knowledge, and while the non-professional reader may not be able fully to comprehend all that is set down, he will get a certain knowledge that is undoubtedly useful. The work done in this direction under the inspiration of the American Academy in Rome is of very great value. In fact, this institution has so greatly justified the wisdom of its founders and is now so efficiently functioning as to entitle the Academy to continued support and encouragement.

HOW TO DISTINGUISH THE SAINTS IN ART

THE most recent volume by Major Arthur De Bles, How to Distinguish the Saints in Art, while primarily intended for picture lovers, dealers and experts, will be found of interest to architects and decorators.

The numerous illustrations of saints and madonnas, etc., afford an opportunity for comparison and study. The work includes among others a classification of saints by the costumes worn; an index of illustrations by categories; lists of artists, museums and churches where works of these artists can be seen; and a new table of Martyrdoms; a list of attributes and symbols with the saints who bear them, and a chronological list of Popes from St. Peter until the end of the Grand Period in Art.

How to Distinguish the Saints in Art, by Major Arthur De Bles. Published by Art Culture Publications, Inc., New York. 168 pp., more than 400 illustrations, size 8¾x12 inches. Price $7.50.

FRESH AIR AND VENTILATION

IN a volume published recently, entitled French Air and Ventilation, Dr. C. E. A. Winslow, Professor of Public Health, Yale School of Medicine, has made a popular presentation of the results of recent research on the subject of ventilation.

Professor Winslow has treated the subject in a broad way and outlined the modern conception of what constitutes good ventilation and tells how to get it under varying conditions. During the past ten years many developments through research have made the matter of ventilation practically a new science.

Ventilation is considered under five headings on "Atmosphere and Human Health," "What Constitutes Good Ventilation," "How to Secure Good Ventilation" "Factory Ventilation," and "Climate and Season and the Hygiene of the Skin."

Fresh Air and Ventilation. By Dr. C. E. A. Winslow. Published by E. P. Dutton & Co., New York. 182 pp. Size 5½x7¾ inches. Cloth bound. Price $2.00.

CURRENT NEWS

SCHOOL AND LIBRARY

CONSTRUCTION of new schools and libraries absorbed 5 per cent of all the money spent for new buildings in the United States in 1923, it is learned from press despatches.

COST OF PAUPERISM

THE "average pauper" requires $334.64 annually for his maintenance, lives on 4.02 acres of land, of which 2.14 acres are cultivated for his support, and which, with stock and farm equipment, are worth, per inmate, $563.13, the Department of Labor has announced in a report, entitled The Cost of American Almshouses.

REAL ESTATE VALUES

REAL estate not taxed in the United States, including schools, churches, and State and local public buildings and institutions, is valued at $20,032,475,000. The real estate in the City of New York was valued for taxable purposes for 1925 at $12,301,509,000, or about 4 per cent of the total national wealth of the United States.

PARIS TO RENT LAMP POSTS

PARIS has decided to permit her lamp posts to be used for advertising purposes, but will not let them be disfigured. In voting to authorize the Prefect to sign a contract for 1,000 posts to carry advertisements, the Municipal Council made the conditions that the signs must be "artistic" and must not be placed on streets which have special historical or sentimental associations.

The contractor must pay the city 400 francs (about $16) for each post he uses and 50 per cent of his profits. Before final permission for using posts in any district is given, two committees, one on artistic values of the proposed "ads" and one on antiquarian standing of the streets affected, must be consulted. The council itself will have the final word.

The French Society for Prevention of Cruelty to Animals hitherto has been allowed to paint a notice, "Be Kind to Animals," on Paris lamp posts, but these signs have been so small as to be hardly noticeable.

HISTORIC HOUSE A GIFT

THE historic Douglass House in Trenton, N. J., in which General Washington conferred with his staff on the night of January 2, 1777, recently became the property of the State of New Jersey. It was given by the Douglass House Committee to the State House Commission. The house was transferred a short while ago from its original location in a southern section of the city to Stacy Park, which practically surrounds the State Capitol.

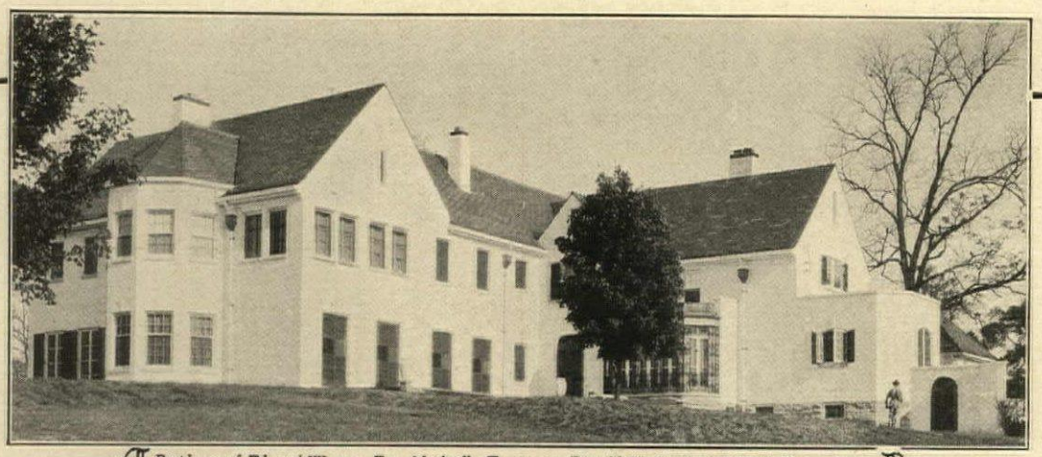
The building was completely restored by the Douglass House Committee. Ceremonies in the Assembly Chamber of the State House marked the transfer of ownership of the Douglass House. State Controller Bugbee of the State House Commission accepted the property for the State. As he did so cannon boomed a salute in Stacy Park.

ROADSIDE TREES

SEVERAL newspaper letters advocate roadside tree and shrub planting, states *The Architects' Journal*, London. They nearly all come from optimists who favor the idea. Some of their suggestions are a little fantastic. One of the letters is courageously headed "Road Orchards," as if the human boy could resist so alluring a temptation to help himself to fruit and nuts. It is a lady who, possibly in ignorance of boyish leanings to depravity in the matter of ungathered greengrocery, suggests the wholesale planting by the roadside of walnut, chestnut, apple, pear, cherry, plum, damson, and other luscious dainties. Most charming! England would forthwith become a paradise; but has the lady forgotten the cynical proverb which declares that "stolen fruits are sweet?" Yet who does not envy the Japanese the poetic inspiration of their cherry blossoms?

MATERIALS AND BRILLIANCE OF STYLE

A COMPREHENSIVE glimpse of the buildings of Northern Italy in the Renaissance period, chiefly those of Pavia, Milan, and neighboring centers, was given in a lecture by Sir Banister Fletcher, architect, at the Central School of Arts and Crafts, London, a short while ago. Milan, said Sir Banister, when she had shaken off the German influences which had prevailed in the Gothic period, soon reverted to the old Classical traditions which in Italy had always been dormant, to the solidity and stateliness of design and the delicacy of conventional detail. The beautiful marble of Carrara made a new refinement possible; while in the valley of Lombardy, the clay provided a brick architecture characteristic in its aspect, and the latter, too, lent itself to a grace of decorative detail which was dear to the Italian spirit. At the great Carthusian church of Certosa, at Pavia, the brick Gothic blended oddly with the brick Renaissance of the gorgeous west front, in which Gothic vertical lines took the form of pilasters and slender baluster columns.



Residence of Edward Warner, Esq., Nashville, Tennessee. Donald W. Southgate, Nashville, architect. H. S. Vaughn, Nashville, builder. Celotex Insulating Lumber used for sound-deadening and insulation.

INSULATED

at practically no extra cost

Why Donald W. Southgate specified Celotex Insulating Lumber for this beautiful Nashville home

Every architect knows the advantages of insulating the houses he designs.

But ordinary insulation is quite an added expense. Although one of the most important features of a house, insulation is usually one of the first to be cut out when you have to figure costs closely. Not so when you specify Celotex Insulating Lumber.

As sheathing

Used as sheathing, in place of wood lumber and building paper, Celotex adds effective insulation at actually less than the cost of ordinary construction.

Celotex has *three* times the heat stopping power of wood lumber, *eight* times that of plaster board, *twelve* times that of brick and *twenty-five* times that of concrete. Its thermal conductivity is .33 B. t. u. per hour per square foot per degree Fahrenheit per inch thickness (Armour Institute).

A Celotex sheathed house is much stronger than one of ordinary construction. Tests show that the resistance of Celotex to lateral distortion is several times that of wood sheathing.

Under plaster

On inside walls, Celotex gives insulation and deadens sound when used in place of lath. Plaster bonds directly with the surface of Celotex. It makes a stronger wall; less apt to crack; and free from lath marks. This construction costs a little more than a wood lath and plaster wall—and is worth it.

The only insulation that is not an extra

No other effective insulating material possesses this structural strength that makes it part of the building itself instead of an extra material and expense.

We will gladly mail our A. I. A. portfolio of detail sheets showing numerous applications free to architects. Just mail the coupon below for your copy.

LOOK AHEAD!

Architects are warning their clients against building uninsulated houses today.

Five years from now such houses will be out-of-date. Nobody will want to live in them. Nobody will want to buy or rent them. Nobody will think of building them.

THE CELOTEX COMPANY
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Mills: NEW ORLEANS, LA.

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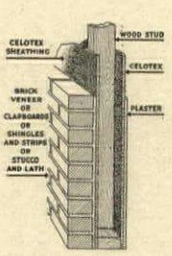

How Celotex is used

Celotex is used in outside walls as sheathing, replacing wood lumber and eliminating the use of building paper. On inside walls plaster is applied directly to its surface. This eliminates the use of lath. Results: more comfort, greater strength and security, longer life and less upkeep expense.

CELOTEX
INSULATING LUMBER

THE CELOTEX COMPANY, Dept. T-64
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Please send A. I. A. portfolios on Celotex
American Architect-4-5-26

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City..... State.....

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

HYDRO-ELECTRIC POWER IN ITALY

ITALY, on account of a lack of fuel, has turned to the development of water power, states a recent issue of *Engineering News-Record*. There are many falls already developing upwards of 10,000 horse power and the total actually installed is now 2,275,000 horse power, or practically 40 per cent of the 5,500,000 horse power which it is estimated the streams of the country could produce. The greatest development is in Lombardy in North Italy. In 1898 the installed horse power was only 115,000 and in 1908 it was 552,000. By 1928 it may exceed 3,000,000 horse power.

BUILDING OF 800 ROOMS FOUND BY NEW MEXICO DIGGERS

RUINS of ancient Pueblo Bonito, N. M., which revealed to geologists a pre-historic underground settlement, are declared to be only the "upper story" of still another buried village. Neil Judd, director of excavations of the National Geographic Society, has announced that the second underground city covers at least three and a quarter acres.

Among the dwellings found in the pueblo, Mr. Judd said, was a building of 800 rooms, of which 500 were on one floor. Many of the underground dwellings stand four stories high.

BROOKLYN MUSEUM OPENS NEW SECTION

THE Brooklyn Museum of Art has inaugurated a new section that will be devoted to the arts of the savage tribes. This exhibit was arranged with a view to its appeal, particularly to designers searching for new thought. Textiles will be conspicuous. It is predicted that the opening will mark the beginning of a new method of museum exhibitions. In the center of the hall are many large pillars extending up to the ceiling and thus supporting the roof for both balcony and the lower floor. These will be painted in brilliant colors and in fantastic designs to give the keynote of brightness and life that is characteristic of the entire new Ethnological Gallery.

TO MEASURE INCOME ON REALTY INVESTMENT IN U. S.

THE actual income now being realized on real estate investment in the United States will be measured in a survey to be made by the Mortgage and Finance Division of the National Association of Real Estate Boards.

In this survey the division, as an aid in financing real estate transactions, will collect confidential reports of building costs and rental returns. From this material a gauge will be established by which to judge the income real property should yield.

Separate surveys of representative cities in every section of the country have been planned, the results of which will be compiled in a report to show the present relation between rentals and other income from property and the investment made.

Properties will be classified as to type, including in the study apartment buildings, dwellings, industrial and commercial property. Both gross and net incomes will be included in the survey.

PERSONALS

G. Whitecross Ritchie, architect, has moved his offices to suite 406 Kosloff Building, 2410½ West Seventh Street, Los Angeles, Calif.

❖

John Mead Howells, architect, is now located at 154 East Forty-sixth Street, New York City, having moved his offices from 367 Lexington Avenue.

❖

John Hocke, architect, announces that he has moved his office from 7602 Chappel Avenue to suites 4 and 5 Harbor Bank Building, 1604 East Seventy-ninth Street, Chicago, Ill.

❖

Charles R. Greco, architect, Edward G. Reed, associated, announce the removal of their offices to 1031-33 Guardian Building, Cleveland, Ohio. Their Boston office remains at the same address, 11 Beacon Street.

❖

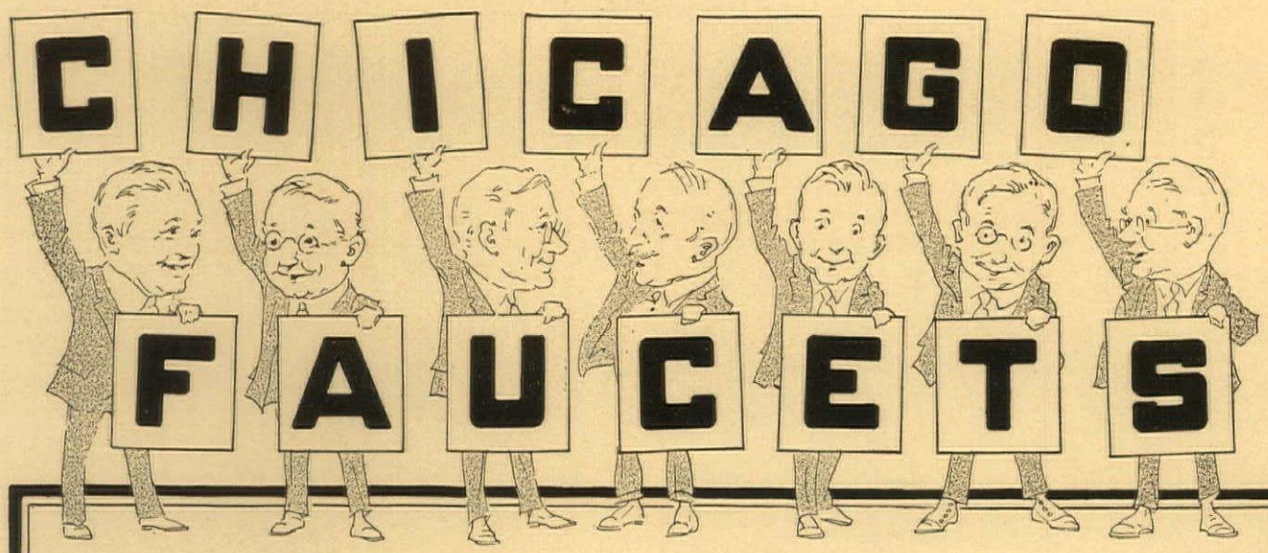
The architectural firm of Green & Evans has been dissolved by mutual consent. James C. Green will carry on the business under his own name at the old address, 100 East Forty-fifth Street, New York City.

❖

A. A. Aegerter and Norman I. Bailey, formerly associated with the late A. B. Groves, have opened an office for the practice of architecture under the firm name of Aegerter & Bailey, architects, 1904 Railway Exchange Building, St. Louis, Mo. Manufacturers are requested to send catalogs and samples.

❖

Announcement is made of the dissolution of the architectural firm of Godley & Sedgwick. Frederick A. Godley will assume the unfinished business of the firm and continue the practice of architecture at the old address, 522 Fifth Avenue, New York City. Henry R. Sedgwick will continue the practice of architecture at 16 East Forty-seventh Street, New York City.



Unanimous!

Seven out of seven Building Managers voted for CHICAGO FAUCETS!

[A True Story]

The Architect was reading his specifications. Seven Building Managers, invited into consultation, were listening. At last they came to the subject of faucets.

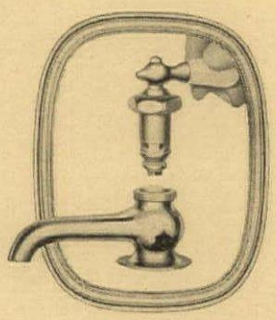
"Self-closing faucets," read the Architect.

"Chicago Faucets," said the seven Building Managers, one after another.

Then they all looked at each other and smiled. They had all been through the same experience, had all reached the same conclusion independently.

A standardized working unit that can be changed as quickly as an electric bulb; a replaceable seat that prevents any wear on the main body casting—these are the two main reasons why Building Managers and Engineers prefer Chicago Faucets and recommend them wherever they go.

If you don't know about them yet, write for all the details.



Standardized, Renewable Working Unit

Can be changed as easily as an electric bulb. One unit fits all faucets. *Seat* replaceable like washer. No wear on main body casting; the reason why *Chicago Faucets outlast the building.*

THE CHICAGO FAUCET CO.
2700-22 N. Crawford Avenue Chicago

REFERENCE LIST OF BUSINESS LITERATURE

A Service arranged for the use of the Architect, Specification Writer and Architect Engineer

THIS list of the more important business literature of Manufacturers of building material and equipment is published each issue. Any of these publications may be had without charge, unless otherwise noted, by applying to The American Architect, 239 West 39th Street, New York, or obtained directly from the manufacturers. Either the titles or the numbers may be used in ordering.

Arranged according to the Standard Construction Classification adopted by the American Institute of Architects.

1. PREPARATION OF SITE

2. EXCAVATION

3. MASONRY MATERIALS

American Face Brick Association, 1754 People's Life Bldg., Chicago, Ill.

103. *The Story of Brick.* Contains the history of, and basic requirements of building brick, artistic, sanitary and economic reasons, comparative costs, and fire safety with photographs and drawings, and illustrates ancient and modern architecture works of note in brick. Size, 7 x 9¼ in. 56 pp.

Kosmos Portland Cement Co., Louisville, Ky.

877. *Kosmortar. A Mason's Cement.* A circular describing the properties of this material, tests of strength and directions for its use. 8 pp. Illustrated. Size, 3½ x 8¼ in.

Louisville Cement Co., Inc., Louisville, Ky.

311. *Brixment, the Perfect Mortar.* The reading of this little book gives one a feeling that definite valuable information has been acquired about one of the oldest building materials. Modern science has given the mason a strong water-resisting mortar with the desirable "feel" of the best rich lime mortar. 16 pp. Illustrated, in colors. Size, 5½ x 7¾ in.

694. *Brixment for Perfect Mortar.* A description of the chemical and physical properties of Brixment, advantages of its use in mortars for brick and stone masonry, tests of strength and directions for use. In cover for filing. 16 pp. Illustrated. Size, 8½ x 11 in.

Ricketson Mineral Paint Works, Milwaukee, Wis.

376. *Ricketson Mortar Colors.* Two interesting folders with color card, for these well-known fadeless colors for mortar, cement, stucco and brick, in use for 35 years. Size, 3¼ x 6 in.

The Truseon Laboratories, Detroit, Mich.

920. *Sweep Hardness Into Your Concrete Floors.* Pamphlet of information on Agatex chemical cement floor hardener, with specifications for use. Illustrated. 8 pp. Size, 4 x 9 in.

4. CONCRETE AND MONOLITHIC CONSTRUCTION

American Steel & Wire Co., 208 La Salle St., Chicago, Ill.

849. *Wire Reinforcing Fabric in Buildings.* A catalog describing triangle mesh fabric and electric weld fabric reinforcing for concrete construction, details, tables and designing data. 58 pp. Illustrated. Size, 6 x 9 in.

Cement-Gun Company, Inc., Allentown, Pa.

1030. *Gunite Bulletins.* A series of bulletins describing the adaptability of gunite, cement-gun product, for a wide range of construction and replacement work of all kinds. Illustrated. Size, 6½ x 9½ in.

Concrete Engineering Co., Omaha, Neb.

347. *Handbook of Fireproof Construction.* An illustrated treatise on the design and construction of reinforced concrete floors with and without suspended ceilings. The Meyer Steel-form Construction is emphasized and tables are given of safe loads for ribbed concrete floors. 40 pp. Illustrated. Size, 8½ x 11 in.

Portland Cement Association, 347 Madison Ave., New York City.

595. *Concrete Floors—Proposed Standard Specifications of the American Concrete Institute.* Specifications with explanatory notes covering materials, proportions, mixing and curing. Plain and reinforced slabs are covered as well as one and two course floors and wearing courses. 18 pp. Size, 6 x 9 in.

636. *Concrete Data for Engineers and Architects.* A valuable booklet containing the reports of the Structural Materials Research Laboratories at Lewis Institute, Chicago, in abbreviated form. It is of great value to writers of specifications. 18 pp. Illustrated. Size, 8½ x 11 in.

Truseon Steel Company, Youngstown, Ohio.

317. *Truscon Floortyle Construction—Form D-352.* Contains complete data and illustrations of Floortyle installations. 10 pp. Illustrated. Size, 8½ x 11 in.

United States Gypsum Company, 204 West Monroe St., Chicago, Ill.

819. *Sheetrock Pyrofill Construction.* A catalog describing a built-up construction for roofs and floors, consisting of sheetrock; a metal fabric and pyrofill. Details, designing data and specifications. 16 pp. Illustrated. Size, 8½ x 11 in.

5. BRICK WORK

American Face Brick Association, 1754 People's Life Bldg., Chicago, Ill.

371. *Architectural Details in Brickwork. Series One, Two and Three.* Each series consists of an indexed folder case to fit standard vertical letter file, containing between 30 and 40 half-tones in brown ink on fine quality paper. These collections are inspiring aids to all designers. Sent free to architects who apply on their office stationery; to others, 50 cents for each series.

855. *English Precedent for Modern Brickwork.* A book of plates and measured drawings of Tudor and Georgian brickwork with a few recent variations of modern architects in the spirit of the old work. Price $2.00. 100 pp. Illustrated. Size, 8½ x 11 in.

The Common Brick Manufacturers' Association of America, Guarantee Title Bldg., Cleveland, O.

1011. *Skintled Brickwork.* A valuable brochure illustrating the effects secured by skintled brickwork made of common brick. Close-up views showing working details and general illustrations. Price 15 cents. 16 pp. Illustrated. Size, 8½ x 11 in.

1012. *Hollow Walls of Brick.* A booklet containing general illustrations, detail methods and insulation qualities of hollow walls of brick. 24 pp. Illustrated. Size, 8½ x 11 in.

6. FOUNDATIONS

Raymond Concrete Pile Co., 140 Cedar St., New York.

156. *Raymond Concrete Piles—Special Concrete Work.* A booklet with data concerning the scope of the Raymond Concrete Pile Co., for special concrete work. It classifies piles, showing by illustration, text and drawings, the relative value of special shape and manufacture of piles. It gives formulae for working loads, and relative economy. Size, 8½ x 11½. 60 pp.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

7. WATERPROOFING AND DAMPPROOFING

Samuel Cabot, Inc., 141 Milk St., Boston, Mass.

340. *Cabot's Waterproofing Specialties.* Describes Dampproofing, Clear Brick Waterproofing and Clear Cement Waterproofing with specifications and covering data. 12 pp. Illustrated. Size, 4 x 9 in.

The Philip Carey Co., Lockland, Cincinnati, Ohio.

1035. *Carey Waterproofing and Dampproofing Specifications.* A valuable file of eleven specifications for waterproofing and dampproofing various types of structures with different conditions. 44 pp. Illustrated. Size, 8 x 10¼ in.

A. C. Horn Company, Long Island City.

972. *Waterproofings.* A folder containing loose leaf specifications for waterproofings and dampproofings for all places, materials and for all conditions. Also service bulletin. 32 pp. Illustrated. Size, 8½ x 11 in.

L. Sonneborn Sons, Inc., 114 Fifth Ave., New York City.

891. *Dampproofing and Waterproofing. Floor Treatments.* Bulletins of specification data for dampproofing structures and for floor hardening and coloring. Sent on request on business stationery. In folders. Size, 8½ x 11 in.

Truscon Laboratories, Detroit, Mich.

955. *Truscon Waterproofing Specifications, Book "A."* New and revised specifications for waterproofing mass concrete, cement stucco, brick masonry, also dampproofing paints, oil proofings and quick-set for concrete. How to use and quantity required. 26 pp. Illustrated. Size, 8½ x 11 in.

967. *Specifications for Truscon Waterproofing, Dampproofing and Oil Proofing, Book "A."* Complete specifications for all conditions requiring water and dampproofing for concrete, plaster, stucco, stone and other masonry. 14 pp. Illustrated. Size, 8½ x 11 in.

8. STONE WORK

Indiana Limestone Quarrymen's Assn., P. O. Box 503, Bedford, Ind.

366. *Standard Specifications for Cut Stone Work.* This is Vol. III, Series "A-3," Service publications on Indiana Limestone, containing Specifications and Supplementary Data, relating to best methods of specifying and using this stone for all building purposes. This valuable work is not for general distribution. It can be obtained only from a Field Representative of the Association or through direct request from architect written on his letterhead. 56 pp. Illustrated. Size, 8½ x 11 in.

845. *School and College Buildings, Vol. 6, Series B.* A profusely illustrated booklet showing the use of Indiana Limestone in a large number of educational buildings of all kinds and types and in all parts of the United States. 80 pp. Illustrated. Size, 8½ x 11 in.

National Building Granite Quarries Assn., Inc., 31 State Street, Boston, Mass.

416. *Architectural Granite No. 1 of the Granite Series.* This booklet contains descriptions of the various granites used for building purposes; surface finishes and how obtained; profiles of mouldings and how to estimate cost, typical details; complete specifications and 19 plates in colors of granite from various quarries. 16 pp. Illustrated. Size, 8½ x 11 in.

914. *Studies in Granite No. 2 of Series.* A collection of 18 plates of granite details selected from important American buildings. In folder. 18 pp. Illustrated. Size, 8½ x 11 in.

9. ARCHITECTURAL TERRA COTTA

Atlantic Terra Cotta Co., 350 Madison Ave., N. Y. C.

903. *Chimney Pots.* A booklet containing details of chimney pots adapted to Colonial, English, Gothic, Tudor and Georgian houses, colored plates, dimensions and specifications. 12 pp. Illustrated. Size, 8½ x 11 in.

1075. *Terra Cotta in Japan.* No. 5 Vol. VIII. February, 1926. Atlantic Terra Cotta Co., monograph illustrated with photographs and drawings of buildings erected in Osaka, Tokio and Kobe. 16 pp. Illustrated. Size, 8½ x 11 in.

National Terra Cotta Society, 19 West 44th St., New York City.

664. *Standard Specifications.* Contains complete detailed specifications for the manufacture, furnishing and setting of terra cotta, a glossary of terms relating to terra cotta and a short form specification for incorporating in architects' specification. 12 pp. Size, 8½ x 11 in.

668. *Better Banks.* Illustrating many banking buildings in terra cotta, with an article on its use in bank design by Alfred C. Bossom, architect. 32 pp. Illustrated. Size, 8½ x 11 in.

The Northwestern Terra Cotta Co., 2525 Clybourn Ave., Chicago Ill.

96. *Architectural Terra Cotta.* A collected set of advertisements in a book, giving examples of architectural terra cotta, ornamental desings and illustrations of examples of facades of moving-picture houses, office buildings, shops, vestibules and corridors in which Northwestern Terra Cotta was used. Size, 8½ x 11 in. 78 pp.

10. BLOCK CONSTRUCTION

11. PAVING

American Three Way-Luxfer Prism Co., 13th Street and 55th Court, Chicago,, Ill.

424. *Daylighting.* Catalog 21. A complete catalog on glass prisms for use in transoms, sidewalk and floor lights, skylights, etc., for lighting places inaccessible to direct daylight. Contains also measurements, specifications and other data required by designers. 42 pp. Illustrated. Size, 8½ x 11 in.

12. ROOFING, SHEET METAL AND SKYLIGHTS

American Sheet & Tin Plate Co., Frick Building, Pittsburgh, Pa.

452. *Reference Book. Pocket Edition.* Covers the complete line of Sheet and Tin Mill Products. 168 pp. Illustrated. Size, 2½ x 4½ in.

463. *Copper—Its Effects Upon Steel for Roofing Tin.* Describes the merits of high-grade roofing tin plates and the advantages of the copper-steel alloy. 28 pp. Illustrated. Size, 8½ x 11 in.

Wm. L. Barrell Co., 50 Leonard St., N. Y. C.

778. *Con-Ser-Tex Canvas Roofing.* A booklet giving facts and figures concerning the use of canvas roofing on roofs of all kinds and floors of porches, sleeping balconies, garage, kitchen and laundry floors, gutters, valleys and hips. 12 pp. Illustrated. Size, 3¾ x 7 in.

The Philip Carey Co., Lockland, Cincinnati, Ohio.

378. *Architects' Specification Book on Built-up Roofing.* A manual for detailers and specification writers. Contains complete details and specifications for each type of Carey Asphalt Built-up Roof. 20 pp. Illustrated. Size, 8½ x 11 in.

Copper and Brass Research Association, 25 Broadway, New York.

1041. *Copper Roofings.* Information for architects, including standard details and specifications for the use of copper as a roofing material. 26 pp. Illustrated. Size, 8½ x 11 in.

1042. *Copper Flashings.* A handbook of data on the use of copper as a flashing material with standard details of construction and specifications for sheet-copper work. Second edition dated Feb., 1925. 66 pp. Illustrated. Size, 8½ x 11 in.

The Edwards Manufacturing Company, Cincinnati, Ohio.

535. *Shingles and Spanish Style of Copper.* This book, illustrated in colors, describes the forms, sizes, weights and methods of application of roof coverings, gutters, downspouts, etc., of copper. 16 pp. Illustrated in special indexed folder for letter size vertical files.

Ludowici-Celadon Co., Chicago, Ill.

120. *Roofing Tile.* A detailed reference for architects' use. Sheets of detailed construction drawings to scale of tile sections of various types and dimensions, giving notes of their uses and positions for various conditions of architectural necessity. Size, 9½ x 13½ in. 106 plates.

154. *The Roof Beautiful.* Booklet. Well illustrated with photographs and drawings, giving history and origin of roofing tile, and advantages over other forms of roofing. Types shown by detailed illustrations. Size, 8 x 10¼ in. 32 pp.

Milwaukee Corrugating Co., Milwaukee, Wis.

815. *Milcor Architectural Sheet Metal Guide. Catalog No. 24.* A complete catalog of sheet metal ceilings and side walls, zinc and copper ornaments, cornices, skylights, ventilators, gutters, downspouts and roofing tiles. 64 pp. Illustrated. Size, 8½ x 11 in.

Mohawk Asbestos Slate Co., Inc., Utica, N. Y.

873. *The Roof Everlasting.* A booklet describing the advantages of the Mohawk tapered asbestos shingle with specifications for installation. 20 pp. Illustrated. Size, 3¾ x 6½ in.

Rising and Nelson Slate Company, 101 Park Ave., New York, N.Y.

496. *Tudor Stone Roofs.* This leaflet discusses colors and sizes of Tudor hand-wrought slates; deals with the service given to architects and tells how the material is quarried for each product after careful drawing and specifications are prepared in co-operation with architects. Special grades are described in detail and illustrations are given of buildings with Tudor slate roofs. Contains also specifications of laying slate. 4 pp. Illustrated. Size, 8½ x 11 in.

571. *Tudor Stone Roofs.* A brochure describing the 7 special grades of Tudor Stone and the 7 grades of commercial slate produced by this company with illustrations of many structures on which it has been used. 28 pp. Illustrated. Size, 6 x 9½ in.

Vendor Slate Co., Easton, Pa.

332. *The Vendor Book of Roofing Slate for Architects.* Contains original information on slate in various architectural uses; history, geology, sundry practical matters; complete descriptive classification; extended treatise on architectural roof design and specifications. 24 pp. Illustrated. Size, 8½ x 11 in.

333. Occasional brochures on architecturally pertinent phases of roofing slate sent on request.

13. STRUCTURAL STEEL AND IRON

Bethlehem Steel Co., Bethlehem, Pa.

1080. *Bethlehem Structural Shapes.* Condensed catalog S-16 revised to January, 1925. Explanatory notes and tables of weights, dimensions and properties of Bethlehem girder beams, I-beams, H-columns. Bethlehem columns supplementary sections, reinforced 14-inch H-columns and special compound columns. 36 pp. Illustrated. Size, 4 x 6½ in.

1081. *Bethlehem Standard Structural Shapes.* Shipbuilding shapes and steel plates, condensed catalog S-13. Explanatory notes, standard allowable variations, classification of extras, tables of weights, dimensions and properties of standard I-beams, channels, angles and Z-bars. Tables of sizes and tolerances of Universal plates and sheared plates. 60 pp. Illustrated. Size, 4 x 6½ in.

1082. *Bethlehem Rolled Steel Slabs for Column Bases.* Catalog S-17 revised to December, 1925, general information, instructions for ordering, tables of minimum and maximum rolling lengths for various widths and thicknesses and weights and dimensions of rolled steel slabs for column bases. 12 pp. Illustrated. Size, 4 x 6½ in.

Lally Column Co., Inc., 211-249 Lombardy St., Brooklyn, N. Y.

122. *Lally Columns. Handbook.* Detailed construction diagrams for various types of steel construction. The text describes advantages of endurance and economy of the column. Various tests, tables of sizes, dimensions, weight, carrying capacities, and data on other structural materials are given. Size, 4⅝ x 6⅝ in. 81 pp.

REFERENCE LIST OF BUSINESS LITERTURE—Continued

13. STRUCTURAL STEEL AND IRON—Continued

The General Fireproofing Building Products, Youngstown, Ohio.

945. *The Steel Lumber Handbook.* Full details on steel lumber floor construction with tables and drawings. Size, 8½ x 11 in.

14. MISCELLANEOUS STEEL AND IRON

American Abrasive Metals Co., 50 Church St., New York.

1043. *Feralun Anti-Slip Treads.* A circular giving suggested details for the use of anti-slip materials in building construction and detail information for specification writer and drafting room. 4 pp. Illustrated. Size, 8½ x 11 in.

Colonial Fireplace Co., 4603 -4617 Roosevelt Road, Chicago, Ill.

1078. *Brick Fireplaces and Artistic Wood Mantelpieces.* Catalog 15-25. Showing fireplaces, mantels, dampers, grates, ash dumps and hoods. 40 pp. Ill. Size 8½ x 11 inches.

H. W. Covert & Co., 137 East 46th St., New York City.

774. *Fireplace and Flue Construction.* A treatise explaining the elements of fireplace construction with details and dimensions and description of dampers and other accessories. 12 pp. Illustrated. Size, 8½ x 11 in.

The Donley Brothers Co., 13900 Miles Ave., Cleveland, Ohio.

912. *Donley Book of Fireplaces, 3rd Edition.* This book contains designs of fireplaces, valuable construction plans and data and catalog of dampers, grates and accessories. 24 pp. Illustrated. Size, 7½ x 10½ in.

Ferro Studio, Inc., 228 East 150th St., N. Y.

991. *Craftsmanship in Wrought Iron.* A booklet illustrating wrought iron gates, doors, grilles, entrance gates, lanterns, railings, chandeliers, hardware and fireplace fittings. 48 pp. Illustrated. Size, 8 x 11 in.

Edwin A. Jackson & Bro., Inc., 50 Beekman St., New York, also Lexington Ave., at 65th St., New York.

171. Booklet showing general construction and size of chutes to receive coal. Two types are built into the foundation wall with glass panel in place of cellar window; another type is placed flush with the ground, and is placed adjacent to wall, or can be placed near the street curb. Size, 3½ x 6¼ in. 16 pp.

823. *Fireplace metal work,* including dampers, ashdumps, ashpit doors, andirons, firetools and spark screens giving dimensions and prices. 16 pp. Illustrated. Size, 8 x 11 in.

The Safety Stair Tread Co., Wooster, Ohio.

828. *The Wear on Stairs.* A catalog describing the properties of white brass, brass and black safety treads for stairs. 12 pp. Illustrated. Size, 3½ x 9¼ in.

829. *Wooster Safe Groove Tread.* Catalog describing safe groove treads and thresholds and security nosings, made of white brass, brass and black steel. 4 pp. Illustrated. Size, 8½ x 11 in.

Truscon Steel Co., Youngstown, Ohio.

641. *Truscon Steel Joist Data Book.* Complete data of steel joists giving properties, dimensions, safe loads, coefficients of deflection, details of connections, specifications, directions for installations. 32 pp. Illustrated. Size, 8½ x 11 in.

15. ORNAMENTAL METAL WORK AND PHYSICAL PROPERTIES OF METALS

American Brass Co., Main Office, Waterbury, Conn.

138. *Price List and Data Book.* Illustrated. Looseleaf Catalog. Covers entire line of Sheets, Wire, Rods, Tubes, etc., in various metals. Useful tables. Size, 3⅞ x 7 in. 168 pp.

139. *Illustrated Pamphlets.* Describes the use and adaptability of Extruded Architectural Shapes, Benedict Nickel, Brass and Copper Pipe in Iron Pipe sizes for plumbing installations. Size, 8½ x 11 in.

16. FIRE RESISTING DOORS, WINDOWS AND TRIM

Crittall Casement Window Co., Detroit, Mich.

672. *Crittall Universal Casement, Catalog No.* 22. Contains complete description, photographs, specifications and details of steel casement windows for banks, schools, residences, churches, hospitals, set directly into masonry and with auxiliary frames. 76 pp. Illustrated. Size, 9 x 12 in.

695. *Crittall Solid Steel Reversible Windows. Catalog No.* 1–24. A catalog explaining the advantages of reversible metal windows for office buildings, schools, hospitals and other substantial buildings. Details of construction and specifications. 20 pp. Illustrated. Size, 8½ x 11½ in.

Dahlstrom Metallic Door Co., Jamestown, N. Y.

674. *Architectural Catalog.* Illustrated catalog showing styles and types of Dahlstrom Standard Construction Hollow Metal Doors and Trim. Conduo-Base, etc. Also various types of frames, jamb construction and architectural shapes. 178 pp. Illustrated. Size, 8½ x 11 in. in looseleaf.

International Casement Co., Jamestown, N. Y.

833. *International Casements for Homes of Distinction and Charm. Catalog No.* 9. A reference book for those interested in high-grade window construction. 24 pp. Illustrated. Size, 10¾ x 7¾ in.

834. *International Casements. Catalog No.* 7. A complete catalog, including working details, hardware, screen, specifications and fine illustrations of modern American installations as well as 16th Century Tudor and Jacobean residences in England. 224 pp. Illustrated. Size, 8½ x 11 in. Sent to practising architects on receipt of request on business letter-head.

Jamestown Metal Desk Co., Inc., Jamestown, N. Y.

1077 *"Medesco" Hollow Metal Doors and Elevator Enclosures.* Catalog B. Metal door designs, combination buck and jambs, finished steel jambs and mouldings. Detail drawings and sections. A catalog for filing. 32 pp. Ill. Size 8½ x 11 inches.

Wm. H. Jackson Co., 335 Carroll St., Brooklyn, N. Y. C.

1018. *Jackson Windows of Bronze. Catalog No.* 21. Standard bronze solid section double-hung, casement and special windows, details of types, illustrations of installations. 16 pp. Illustrated. Size, 8½ x 11 in.

The Kawneer Company, Niles, Michigan.

933. *Kawneer Windows.* Catalog describing double hung and casement windows made of solid nickel-silver heavy cold rolled mouldings with welded joints. Construction details and specifications. 18 pp. Illustrated. Size, 8½ x 11 in.

958. *Kawneer Solid Nickel Silver Windows.* A catalog describing the construction and installation of Kawneer Solid Nickel Silver Windows in both double hung and casement types. 18 pp. Illustrated. Size, 8½ x 11 in.

David Lupton's Sons Company, Philadelphia, Pa.

953. *Lupton Pivoted Sash, Catalog No.* 12-*A.* Describing all types of pivoted steel sash operating devices engineering data, specifications and installation directions. 48 pp. Illustrated. Size, 8½ x 11 in.

1051. *How Windows Can Make Better Homes. Publication C*-135. A booklet on the importance of windows and the use of steel casements for all rooms in the house. Illustrations are in color. 12 pp. Illustrated. Size, 3⅞ x 7 in.

S. H. Pomeroy Co., Inc., 282 East 134th St., New York City.

1019. *Superior Windows.* Catalog of hollow metal double hung windows made of hot dipped galvanized copper-bearing steel. Details and specifications. 12 pp. Illustrated. Size, 6½ x 12½ in.

1020. *Superior Type Double Hung Windows. Bulletin B.* Complete details and specifications of the Superior double hung window of bronze or copper bearing hot dipped galvanized steel. 8 pp. Illustrated. Sizes, 4½ x 10¾ in.

Richards-Wilcox Mfg. Co., Aurora, Ill.

796. *Fire Doors and Hardware. Catalog No. A*-25. A catalog of standard, approved tin-clad fire doors, steel frames, automatic door hangers, tracks and fixtures; also hinges, locks and accessories. Details, dimensions and installation diagrams. 96 pp. Illustrated. Size, 8½ x 11 in.

The Sykes Company, 2300 W. 58th St., Chicago, Ill.

978. *Integral Steel Door Buck and Trim. Specification No.* 134 *and Folder No.* 234. Specifications and details for four types of steel door bucks and trim. Each 4 pp. Illustrated. Size, 8½ x 11 in.

979. *Sykes Steel Integral Door Buck and Trim. Booklet No.* 34. Describing an improved construction, method of installation and Sykes Hollow Metal Doors. 8 pp. Illustrated. Size, 6 x 9 in.

Thorp Fire Proof Door Co., 1600 Central Ave., Minneapolis, Minn.

1029. *Thorp Reference Book of Fireproof Doors.* A book containing details of construction, working drawings and specifications of first quality fireproof doors, partitions and interior trim. Full size moulding sections. Details of important executed work. 96 pp. Illustrated. Size, 8½ x 11 in.

Truscon Steel Co., Youngstown, Ohio.

348. *Truscon Steel Sash.* This handbook has been prepared for detailers and specification writers. The descriptions are clear and the details are complete. 80 pp. Illustrated. Size, 8½ x 11 in.

898. *The Donovan Awning Type Steel Window.* A catalog containing details, specifications and complete description of the working and advantages of the Truscon-built Donovan Awning Type Window especially adapted for schools, hospitals and other buildings. 12 pp. Illustrated. Size, 8½ x 11 in.

The United Metal Products Co., Canton, Ohio.

968. *Architects' Handbook.* A very fine catalog of hollow metal doors, metal partitions, metal bucks and jambs, metal conduo-base, and metal mouldings. 108 pp. Illustrated. Size, 8½ x 11 in.

17. SPECIAL DOORS AND WINDOWS

Irving Hamlin, 1500 Lincoln St., Evanston, Ill.

735. *The Evanston Sound-Proof Door: also The Hamlinized Folding partitions.* A circular explaining the construction of a sound-proof door and folding partitions hermetically sealed against odors, dust, light, weather and air, especially adapted to music schools, hospitals, etc. 8 pp. Size, 8½ x 11 in.

907. *The Evanston Sound-Proof Door.* A catalog giving details and hardware equipment of sound, odor, dust and air proof doors for hospitals and music schools. Also Hamlinized folding partitions for churches, Sunday Schools and Public Schools. 10 pp. Illustrated. Size, 8½ x 11 in.

The Kinnear Manufacturing Company, Columbus, Ohio.

455. *Steel Rolling and Folding Doors and Shutters. Catalog No.* 52. This catalog is devoted to service doors adaptable to building of all classes, piers, factories, warehouses, etc. Illustrates their uses and contains tables for designers and detailers. 96 pp. Illustrated. Size, 8 x 11 in.

18. VAULTS AND SAFES

The River-Grip Steel Co., 2735 Prospect Ave., Cleveland, Ohio.

768. *The Rivet-Grip System of Bank Vault Reinforcement.* This handbook explains the fundamentals of bank vault design and the advantages of the Rivet-Grip System of Reinforcement. Details of vertical and horizontal types, specifications and installations. 34 pp. Illustrated. Size, 8½ x 11 in.

19. CARPENTRY

Andersen Lumber Company, Bayport, Minn. (formerly South Stillwater).

559. *Complete Catalog for Architects and Builders.* Describes Andersen Standard Window Frames and Cellar Sash Frames, which are in 7 units instead of 57 and may be assembled and nailed in 10 minutes. Shows uses in special construction for it comes in 121 sizes and styles. 24 pp. Illustrated. Size, 7¾ x 10¾ in.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

19. CARPENTRY—Continued

E. L. Bruce Co., Memphis, Tenn.

1083. *Oak Flooring Specification Manual.* A filing folder, A. I. A. File No. 19e9, containing grading rules; uses of different grades; Standard sizes; laying instructions; methods of scraping and suggested specification form. 16 pp. Size, 8½ x 11 in.

California White and Sugar Pine Manufacturers Association, 690 Call Building, San Francisco, Calif.

875. *Information Sheets.* These sheets, with folder, contain information, illustrations and data pertaining to the use of California White and Sugar Pine in building construction. Size, 8½ x 11 in. In folder.

Chamberlin Metal Weather Strip Co., 1644 Lafayette Boulevard, Detroit, Mich.

918. *Excluding Cold and Dust.* A booklet describing the dust and weather proofing of doors and windows. 16 pp. Illustrated. Size, 5 x 7½ in.

919. *Chamberlain Metal Weather Strip Details.* A catalog containing valuable details of the installations of Chamberlain Metal Weather Strips of all kinds of windows and doors. A draughting table book. 48 pp. Illustrated. In folder. Size, 8¼ x 10¾ in.

Curtis Companies Service Bureau, Clinton, Iowa.

663. *Keeping Down the Cost of Your Woodwork.* A book illustrating Curtis interior woodwork and built-in cabinets and fixtures designed by Trowbridge and Ackerman, Architects, New York. Colored illustrations and details. 16 pp. Illustrated. Size, 7 x 9¼ in.

926. *Curtis Woodwork.* A valuable booklet presenting the entire line of woodwork such as entrances, doors, windows, exterior mouldings, stairs and permanent furniture. Sent on request. 40 pp. Illustrated. Size, 9 x 12 in.

The Diamond Metal Weatherstrip Co., Columbus, Ohio.

616. *The Diamond Way.* A catalog of full size details showing the application of Diamond metal weather strips to double hung and casement windows and doors with complete specifications. 34 pp. Illustrated. Size, 8½ x 11 in.

Dierks Lumber & Coal Co., Kansas City, Mo.

1059. *Interior Trim.* Booklet illustrating in color and describing the use of soft pine for interior mill-work throughout the house. 16 pp. Illustrated. Size, 8 x 10 in.

Hartman-Sanders Company, 6 East 39th St., New York City.

334. *Catalog No.* 47. Illustrating Kell's Patent Lock Joint wood stave columns for exterior and interior use. 48 pp. Illustrated. Size, 7½ x 10 in.

The Higgin Manufacturing Co., 5th and Washington Ave., Newport, Ky.

353. *Screen Your Home in the Higgin Way.* A description of Higgin door and window screens with practical data. 16 pp. Illustrated. Size, 8½ x 11½ in.

Hoffbauer Co., Inc., 101 Park Ave., New York City.

1026. *ABC Weatherstrips.* Catalog of all bronze construction weatherstrips for all types of doors and windows. Details and specifications. 4 pp. Illustrated. Size, 8½ x 11 in.

Edwin A. Jackson & Bro., Inc., 50 Beekman St., New York, also Lexington Ave., at 65th St., New York City.

90. *Wood Mantels. Portfolio.* Wood mantel designs of various types and openings, giving dimensions, projections and showing fireplace grate designs. Size, 9 x 6¼ in. 32 pp.

The Long-Bell Lumber Co., R. A. Long Building, Kansas City, Mo.

204. *The Perfect Floor.* Tells how to lay finish and care for Oak Flooring. 16 pp. 14 illustrations. Size, 5⅛ x 7⅝ in.

McKeown Bros. Co., 21 East 40th St., New York City.

434. *Clear Floor Space.* A folder showing uses and advantages of McKeown "Lattis" and "Bowstring" long span wood roof trusses. 4 pp. Illustrated. Size, 8½ x 11 in.

Monarch Metal Products Co., 5020 Penrose Street, St. Louis, Mo.

820. *Monarch Metal Weather Strip Manual.* This new manual contains the latest data on the subject of air infiltration through doors and windows with details and specifications for the installation of Monarch Metal Weather Strips. 44 pp. Illustrated. Size, 8½ x 11 in.

Roddis Lumber and Veneer Co., Marshfield, Wisc.

1068. *Roddis Doors, Catalog G.* Describes the construction and standard design of Roddis doors. 182 pp. Illustrated. Size, 8½ x 11 in.

1069. *Roddis Doors for Hotels, Hospitals, and Roddis "Fourteen-Seventy-Five" Flush Doors.* Three booklets describing and illustrating standard door designs. Each 14 pp. Illustrated. Size, 8½ x 11 in.

G. E. Walter, 157 East 44th St., New York City.

966. *Compo Ornament for Exterior and Interior Decoration.* An extensive catalog of capitals, brackets and compo ornament in all periods and styles also made in Duretta fireproof composition. 125 pp. Illustrated. Size, 8¾ x 11⅝ in.

Watson Manufacturing Co., Jamestown, N. Y.

737. *Watson Insect Screens.* Reprint of space in Sweet's Catalog giving illustrations and detailed data for the use of architects. 21 pp. Illustrated. Size, 8½ x 11 in.

J. G. Wilson Corporation, 11 East 38th St., New York City.

738. *Sectionfold and Rolling Partitions and Hygienic School Wardrobes. Catalog* 37. A catalog explaining the use, construction and installation of sectionfold and rolling partitions, also school wardrobes. Details, dimensions and specifications. 40 pp. Ill. 8½ x 11 in.

20. FURRING AND LATHING

American Steel & Wire Co., Chicago, Ill.

228. *Stucco Homes Reinforced With Triangle Mesh Fabric.* A pamphlet containing valuable data on stucco work with tables of qualities of material and many illustrations of houses covered with stucco applied on Triangle Mesh Fabric. 24 pp. Illustrated. Size, 6 x 9 in.

The Bostwick Steel Lath Co., Niles, Ohio.

916. *Bostwick Metal Lath.* Leaflets describing the various types of metal lath, metal grounds, invisible picture moulding, expanded metal, corner heads, wall plugs and wall ties. 8 leaflets, 2 and 4 pp. Illustrated. Size, 3¼ x 6¼ in.

Concrete Engineering Co., Omaha, Neb.

346. *How to Use Ceco Lathing Materials.* An illustrated treatise on the use of expanded metal lath. Contains construction details and complete specifications, with sample piece of lath in pocket on cover of book. 16 pp. Illustrated. Size, 8½ x 11 in.

The General Fireproofing Building Products, Youngstown, Ohio.

944. *The Herringbone Book.* A complete treatise on the use of metal lath in all types of construction. Size, 8½ x 11 in.

Milwaukee Corrugating Co., Milwaukee, Wis.

838. *The Milcor Manual. Catalog No.* 20. A data book for designing the use of expanded metal lath, expansion cornerheads and casings, steel floor domes and other fireproof building products. Specifications and details. 64 pp. Illustrated. Size, 8½ x 11 in.

Truscon Steel Company, Youngstown, Ohio.

316. *Hy-Rib and Metal Lath.* Tables, general data and illustrations of Hy-Rib and metal lath constructions. 6 pp. Illustrated. Size, 8½ x 11 in.

21. PLASTERING

The Bishopric Mfg. Co., Cincinnati, Ohio.

839. *Bishopric Sunfast Finish.* A folder illustrating and describing a color and damp-proof coating applicable to new and old stucco surfaces. Illustrated with color plates. 16 pp. Illustrated. Size, 3½ x 6¼ in.

Palmer Lime & Cement Co., 103 Park Ave., New York City.

938. *French Imported Caen Stone Cement.* A catalog describing the material and its properties, illustrations of its application in important buildings, specifications and instructions. 20 pp. Illustrated. Size, 8½ x 11 in.

Portland Cement Association, 347 Madison Ave., New York City.

594. *Portland Cement Stucco.* Illustrated leaflet of recommended practice for Portland Cement Stucco. Contains data on materials, proportions, application and curing. Table of colors for various tints, photographs of surface textures and drawings of construction details also given. 15 pp. Illustrated. Size, 8½ x 11 in.

The Rocbond Co., Van Wert, Ohio.

1056. *Standard Specifications for Stucco Work.* Application of Rocbond for exterior work on wood lath, metal lath, patented basis and masonry. Specifications for over coating old frame and masonry. 3 pp. Size, 8 x 11 in.

United States Gypsum Co., 205 West Monroe St., Chicago, Ill.

911. *Oriental Stucco.* A booklet describing the use of Oriental Stucco with specifications and especially embossed pages showing different surface textures in colors. 10 pp. and 10 plates. Illustrated. Size, 8½ x 11 in.

22. MARBLE AND SLATE

The Georgia Marble Co., Tate, Pickens Co., Ga., New York Office, 1328 Broadway.

634. *Why Georgia Marble is Better.* Booklet, 3⅜ x 6 in. Gives analysis, physical qualities, comparison of absorption with granites, opinions of authorities, etc.

The Vitrolite Company, Chamber of Commerce Bldg., Chicago, Ill

1006. *Vitrolite Slab Material.* Catalogs describing the use of Vitrolite for use as wainscoting, wall covering, toilet room stalls, counter fronts and all slab uses in schools, universities, retail stores, hospitals, hotels, clubs, office buildings, homes and apartment buildings. Special catalog for each purpose. 8 and 16 pp. Illustrated. Size, 8 x 11 in.

23. FLOOR AND WALL TILE AND ACCESSORIES

Armstrong Cork and Insulation Co., Pittsburgh, Pa.

901. *Linolite Floors and Cork Tile Floors.* Catalog 07 describing Linolite floors for residences and Catalog 08 describing Linolite floors for public and semi-public buildings, both with colored charts; Catalog Q-4 describing Armstrong's Cork Tile floors for all purposes. 26, 36 and 30 pp. Illustrated. Size, 8½ x 11 in.

Bonded Floors Co., Inc., Division of Congoleum-Nairn, Inc., 1421 Chestnut St., Philadelphia, Pa.

936. *The "Distinctive Floors" Series.* Three pamphlets, illustrated in color, describing (1) Battleship Linoleum; (2) Treadlite Tile; (3) Natural Cork Tile. Each 8 pp. Size, 7¾ x 10¾ in.

937. *Practical Working Specifications.* Specifications and installation details of Battleship Linoleum, Treadlite Tile and Cork Tile. Each 1 pp. Illustrated. Size, 8½ x 11 in.

997. *Gold Seal Treadlite Tile.* Six color pattern sheets illustrating the wide range of colors, combinations and use of Treadlite Tiles. 6 sheets. Illustrated. Size, 8½ x 11 in.

United States Rubber Co., 1790 Broadway, New York City.

959. *Period Adaptations for Modern Floors.* This book illustrates the adaptability of "U. S." Tile floors to the different periods of architectural styles and also its use in a wide range of modern buildings. Price, $1.00. 60 pp. Illustrated. Size, 8½ x 11 in.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

24. PLASTIC FLOORS

The Duraflex Company, Baltimore, Md.

782. *Duraflex.* Catalog with description and specifications for a permanent wearing surface for all floors and stair treads, except heavy-duty factory or shop floors and those subject to the action of oils and greases. 44 pp. Illustrated. Size, 8½ x 11 in.

Franklyn B. Muller, Inc., Waukegan, Ill.

242. *Asbestone Flooring Composition.* A book describing uses of and giving specifications and directions for Composition Flooring, Base, Wainscoting, etc. Size, 8½ x 11 in. Illustrated.

25. PAINT, PAINTING AND FINISHING

Aluminum Company of America, New Kensington, Pa.

1037. *Aluminum Paint.* A treatise on the physical properties of aluminum paint and its uses in modern industry. 20 pp. Illustrated. Size, 5¼ x 5¼ in.

1061. *Aluminum Paint Manual.* A booklet on selecting the proper paint, how to prepare it and how to use in on metal, wood or concrete. 14 pp. Size, 4 x 6¾ in.

Craftex Company, 146 Summer St., Boston, Mass.

1001. *Craftex.* A circular describing a textural wall finish applied with a brush. Large range of finishes and colors. 4 pp. Illustrated. Size, 8½ x 11 in.

1002. *Notes on Using Craftex.* Directions for preparing and using Craftex on various wall surfaces and finishes. 5 pp. Illustrated. Size, 8½ x 11 in.

Joseph Dixon Crucible Co., Jersey City, N. J.

324. *Dixon's Silica Graphite Paint.* A pamphlet describing the physical properties of silica-graphite paint and especially the wide difference between it and other protective paints. Contains also sample color card with specifications. 20 pp. and 6 pp. in color card. Illustrated. Size, 3¼ x 6¼ in.

The Glidden Company, Cleveland, Ohio.

419. *Architectural Specifications Book*—8⅛ x 10¾ in. 32 pp. Containing complete architectural specifications and general instruction for the application of Glidden Paints and Varnishes, including Ripolin. Directions for the proper finishing of wood, metal, plaster, concrete, brick, and ohter surfaces, both interior and exterior, are included in this specification book.

A. C. Horn Co., Long Island City, N. Y.

971. *Horn's House Paints.* Catalogs and color cards of paints for exterior wood work, porch and deck paints, shingle and stucco paints and china flat oil paints. 18 pp. Illustrated. Size, 3½ x 6¼ in.

National Lead Company, 111 Broadway, New York City.

389. *"White-Lead Paint."* Color folder for glass finish and flat finish together with useful notes on painting and a collection of approximate formulas for obtaining the colors shown on the color folder. 8 pp. Illustrated. Size, 3⅜ x 8½ in.

894. *Handy Book on Painting.* A handbook containing complete directions for the mixing and application of paints for all purposes. A most useful book. 124 pp. Size, 8¼ x 5½ in.

Peaslee-Gaulbert Company, Louisville, Ky.

909. *Architects' Specification Chart.* A series of 100 specifications for exterior and interior painting and finishing on all kinds of materials. 87 pp. Size, 8½ x 11½ in.

910. *Interior Decoration. Wood Finishing. House Painting.* Three catalogs containing colored combination charts for paints, stains and wall finishes. 20, 20 and 24 pp. Illustrated. Size, 9 x 12, 6½ x 8½, and 7 x 9 in.

Pratt & Lambert, Inc., Buffalo, N. Y.

759. *Specification Manual for Painting, Varnishing and Enameling.* Complete specifications for painting, varnishing and enameling interior and exterior wood, plaster and metal work. 38 pp. Size, 8½ x 11 in.

The Sherwin-Williams Co., Cleveland, Ohio.

1045. *Painting and Varnishing Specifications.* A book of specifications, with color cards, for painting, enameling, staining and varnishing every kind of exterior and interior surfaces, roofs, furnishings, metal work, structural steel, dampproofing and wood preserving. 44 pp. Illustrated. Size, 8½ x 11 in.

L. Sonneborn Sons, Inc., 114 Fifth Ave., New York City.

892. *Interior and Exterior Painting and Structural Painting.* Bulletins of specifications for interior and exterior paints, and paints for structural work, technical paints and roof protection. Sent on request on business stationery. In folders. Size, 8½ x 11 in.

The Truscon Laboratories, Detroit, Mich.

921. *Assortment of Color Cards.* Information and specifications on the following materials: Bar-Ox Inhibitive Steel Paint—3½ x 6¼ in. 4 pp. Asepticote Interior Flat Wall Paint 8 pp. 3¾ x 8¾ in. Stone-Tex Exterior Masonry Paint. 8 pp. 3½ x 6¼ in. Waterproof Enamels, 4 pp., 3½ x 6¼ in. Waterproof House Paint, 8 pp. 3¾ x 8¾ in. Waterproof Varnish. 8 pp. 3½ x 6¼ in. Illustrated.

26. GLASS AND GLAZING

Brasco Manufacturing Co., 5025–35 Wabash Ave., Chicago, Ill.

1053. *General Catalog No.* 30. Brasco copper store fronts. A comprehensive description of items used in store front construction. 24 pp. Illustrated. Size, 8½ x 11 in.

1054. *Brasco Copper Store Fronts.* Full size detail sheets No. 7, 8, 9, 10, 11, 12 and 13. Details of door post and sills, awning cover, corner, division and reverse bars, sash and bulk head covers, transom bars. Series 200, 500 and "standard" construction. sheets, detail drawings, Size, 17¼ x 18½ in.

Detroit Show Case Co., Detroit, Mich.

77. *Designs. A Booklet.* Store fronts and display windows designs, giving plans and elevations and descriptions. Size, 9¼ x 12 in. 16 pp.

78. *Details.* Sheets of full size details of "Desco" awning transom bar covers, sill covers, side, head and jamb covers, ventilated hollow metal sash and profile of members. Size, 16 x 21½ in. 3 sheets.

The Kawneer Company, Niles, Mich.

956. *Kawneer Solid Copper Store Front Construction Catalog L.* 1925 *Edition.* A treatise on the installation of Kawneer solid copper store fronts, with sectional and detail views of sash, corner and division bars, jambs, sills and transom bars. 32 pp. Illustrated. Size, 8½ x 11 in.

Mississippi Wire Glass Co., 220 Fifth Ave., New York City.

1015. *Mississippi Service.* A complete catalog illustrating the wire glass products and their adaptability for various uses. Technical data and sizes. 32 pp. Illustrated. Size, 4 x 8½ in.

1016. *Factrolited.* Circular showing tests of light distribution through "Factrolite" wire glass for industrial plants. Also fire resisting qualities. 4 pp. Illustrated. Size, 6 x 9 in.

27. HARDWARE

The T. J. Callahan Co., 205 Apple St., Dayton, Ohio.

842. *Callahan Sash Control.* Bulletin (1) Sash Control in Power Plants; (2) Sash Control in Industrial Plants; (3) Simplifying Sash Control; and (4) Sash Control for Gymnasia and Halls. Each 8 pp. Illustrated. Size, 8½ x 11 in.

861. *Callahan Catalog Bulletins.* Bulletins of sash operators for side walls, etc. Size, 8½ x 11 in.

P. & F. Corbin, New Britain, Conn.

540. *Automatic Exit Fixtures.* A catalog of fixtures that provide a ready exit at all times, as a child can operate them with ease. Doors to which they are applied can always be opened from the inside, even whem locked against entrance. 4 pp. Illustrated. Size, 8¾ x 11¾ in.

Monarch Metal Products Co., 5020 Penrose St., St. Louis, Mo.

975. *Monarch Casement Hardware.* Catalog illustrating casement window control locks, stays and checks, also checks for transoms. Dimensions and details for installation. 21 pp. Illustrated. Size, 8½ x 11 in.

Richards-Wilcox Mfg. Co., Aurora, Ill.

897. *Special Purpose Hinges, Catalog No.* 42. Devoted exclusively to special purpose hinges for every purpose. Hinge problems solved by Engineering Department, catalog sent on request. 26 pp. Illustrated. Size, 8½ x 11 in.

939. *Big Door Hardware Catalog No.* 41. This catalog describes a complete line of hardware and hangers for accordian, parallel sliding, vertical bi-folding and other types for large openings in round houses, freight houses, shipping rooms, mills and warehouses. Also overhead trolley equipment. 24 pp. Illustrated. Size, 8½ x 11 in.

940. *Sliding and Folding Partitions Door Hardware. Catalog No.* 40. A complete line of hardware for partition doors of all kinds and for all places. Description, details and directions for ordering. 32 pp. Illustrated. Size, 8½ x 11 in.

988. *Singleknob Garage Door Controller.* Catalog describing garage door operator by which one or both of a pair of doors can be opened and held in that position. 4 pp. Illustrated. Size, 8 x 11 in.

Samson Cordage Works, Boston, Mass.

586. *Samson Sash Cord.* Specifications and condensed descriptions of Samson spot window sash cords, Samson mahogany wire center sash cord and accessories. 24 pp. Illustrated. Size, 3½ x 6¼ in.

The Smith & Egge Mfg. Co., Bridgeport, Conn.

773. *Chains. Catalog A-1.* Describing the "Giant Metal." "Red Metal" and Steel Sash Chains made by this company with strength, size and weight data. Also illustrating cable chains, plumbers' chains and other special chains. 24 pp. Illustrated. Size, 6 x 8½ in.

The Stanley Works, New Britain, Conn.

11. *Wrought Hardware.* This catalog describes additions to the Stanely line of Wrought Hardware, as well as the older well-known specialties and various styles of butts, hinges, bolts, etc. 376 pp. Illustrated. Size, 6½ x 9½ in.

12. *Garage Hardware, Booklet, illustrated.* Garages and their equipment, such as hinges, hasps, door holders, latch sets, chain and hand bolts, showing illustrations and text with dimensions of garages, describing the Stanley works product. Size, 6 x 9 in. 24 pp.

495. *Stanley Detail Manual.* A catalog in looseleaf binder, consisting of five sections on Butts, Bolts, Blinds and Shutter Hardware, Stanely Garage Hardware, Screen and Sash Hardware. Detail drawings are given, showing clearances and other data needed by detailers. 116 pp. Illustrated. Size, 7½ x 10½ in.

Steffens Amberg Co., 262 Morris Ave., Newark, N. J., successors to Frank F. Smith Hardware Co.

851. *Panic Exit Locks, Catalog No.* 20. A catalog describing panic exit locks of the gravity, mortise and horizontal rim types. Details, dimensions, specifications and installation data. 32 pp. Illustrated. Size, 8½ x 11 in.

Vonegut Hardware Co., Indianapolis, Ind

310. *Prince Self-Releasing Fire Exit Device. Supplement to Von Duprin Catalog No.* 12. Contains valuable information for architects on the selection, detailing, etc., of Prince devices for doors and windows to insure safety against fire panic. 32 pp. Illustrated. Size, 8 x 11 in.

747. *Von Duprin Self-Releasing Fire Exit Latches, Reference Book—No.* 240. A complete catalog with details of the working part of these latches, handle bars, butts, door holders and accessories. Dimensions and installation direction. 96 pp. Illustrated. Size, 8½ x 11 in.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

28. FURNISHINGS

American Seating Co., 14 East Jackson Blvd., Chicago, Ill.

866. *Ars Ecclesiastia.* A booklet illustrating the products of the wood carving studios of this company made for all church purposes. 39 full page plates. 48 pp. Illustrated. Size, 8½ x 11 in.

867. *Church Furniture.* Three catalogs illustrating church seating furniture, chancel furniture and Sunday School furniture. 48, 32 and 24 pages. Illustrated. Size, 8½ x 11 in.

Armstrong Cork Co., Lancaster, Pa.

880. *Business Floors, Third Edition.* This valuable booklet is devoted to the use of linoleum for floors in business places and shows many designs by colored plates. Installations and cover of these floors is fully described. 48 pp. Illustrated. Size, 6¼ x 9½ in.

881. *Armstrong's Linoleum Floors. Fourth Edition.* Complete specifications and details for the installation of linoleum floors in all kinds of buildings and for all uses, also plates showing designs in color. 86 pp. Illustrated. Size, 8½ x 11 in.

Bonded Floors Co., 1421 Chestnut St., Philadelphia, Pa.

716. *Gold Seal Battleship Linoleum.* An illustrated booklet showing Gold-Seal Battleship Linoleum, installations, reproductions of the products in color, general information, specifications, etc. 8 pp. Illustrated. Size, 7¾ x 10¾ in.

719. *Linoleum.* A standard specification of the material, workmanship and guarantee, with valuable comments and suggestions. Also additional clauses for insertion in specifications for Masonry, Heating, etc., Federal Department specifications for Battleship linoleum and details of installation. 8 pp. Illustrated. Size, 8½ x 11 in.

936. *Linoleum Specifications.* Standard specifications for the installation of Battleship linoleum with detailed description and explanation. Also includes Federal Government Specification No. 209. 8 pp. Illustrated. Size, 8½ x 11 in.

Hardwick & Magee Company, 1220 Market St., Philadelphia, Pa.

826. *Fine Carpets in Famous Places.* A beautifully illustrated catalog describing the varieties of the Hardwick and Magee Co.'s Wilton carpets and rugs for hotels, theatres, lodge halls, clubs, churches, hospitals and railroad cars. 24 pp. Illustrated. Size, 8 x 10½ in.

The Hart & Hutchinson Co., New Britain, Conn.

1038. *Veneer Steel.* A folder showing construction details typical groupings of standard Veneer-Steel Units for toilets, showers and dressing room compartments, screens and coupon booths, and suggested specifications. 6 pp. Illustrated. Size, 8½ x 10¾ in.

Kent-Costikyan, 585 Fifth Ave., New York City.

954. *The House of Kent-Costikyan.* A booklet describing the various types and grades of carpets and rugs, including antique rugs of the Ispahan and Kuba types, in the extensive stocks of this company. 16 pp. Illustrated in color. Size, 5½ x 8 in.

The Lincrusta-Walton Company, Hackensack, N. J.

519. *Lincrusto-Walton.* This book gives directions for buying, caring for and applying Lincrusta-Walton; together with color chart and many pages showing patterns. 67 pp. Size, 8½ x 11 in. Illustrated. Bound in boards.

David Lupton Sons Co., Philadelphia, Pa.

963. *Lupton Steel Equipment, Catalog D.* Illustrating with details of all kinds of steel shelving for display and storage in factories, stores and offices and cabinets, desks, benches and tool boxes. 40 pp. Illustrated. Size, 8½ x 11 in.

The B. L. Marble Chair Co., Bedford, Ohio.

973. *Office Chairs, Catalog No.* 32. Revised and enlarged catalog of chairs for lodges, court rooms, directors' rooms, every kind of office chairs, costumers', waste boxes, settees and accessories. 88 pp. Illustrated. Size, 9¼ x 12 in.

Charles D. Poulson Co., 295 Fifth Ave., New York City.

1062. *Character in Carpet.* A booklet illustrated in color and descriptive of Claridge wide seamless carpet and "Hermitage" high pile Wiltons. 22 pp. Illustrated. Size, 9½ x 12¾ in.

Stewart Hartshorn Co., 250 Fifth Ave., New York City.

1039. *Hartshorn Shade Rollers.* Sizes and description of spring rollers of wood and metal, and brackets. Methods of hanging window shades, window and store awnings, and veranda rollers. 32 pp. Illustrated. Size, 5¼ x 8 in.

The Vitrolite Co., Chamber of Commerce Bldg., Chicago, Ill.

1007. *Vitrolite Slab Material.* Catalog showing the use of Vitrolite for table and counter tops, counter fronts and bases for industrial buildings, laboratores, stores and restaurants. Special catalogs for each purpose. 8 and 16 pp. Illustrated. Size, 8 x 11 in.

Wallpaper Manufacturers Association of the United States, 461 Eighth Ave., New York City.

913. *Wallpaper Magazine.* A monthly publication for architects, building contractors and wallpaper dealers to acquaint them with the many interesting and artistic uses for wallpaper. 32 pp. Illustrated. Size, 8 x 11 in.

Watson Manufacturing Co., Jamestown, N. Y.

788. *Watson Metal Office Furniture.* Catalog describing steel furniture for offices, banks and public buildings. Installations illustrated. 55 pp. Illustrated. Size, 8½ x 11 in.

Henry Weis Manufacturing Co., Atchison, Kansas.

790. *WeiSteel Compartments. Catalog No.* 11. Plans, specifications and details of metal partitions and doors for toilet rooms, shower and dressing rooms, hospital cubicles and enclosures of all kinds. 32 pp. Illustrated. Size, 8 x 11 in.

29. PLUMBING

W. D. Allen Mfg. Co., 566 West Lake St., Chicago, Ill.; 69 Warren St., New York City.

809. *Standpipe Detail and Specification.* A series of plates illustrating fire hose cabinets, and specifications and illustrations of standpipes, hose racks, Siamese and other valves, hose and accessories. 13 pp. Illustrated. Size, 8½ x 11 in.

American Brass Co., Waterbury, Conn.

862. *Brass Pipe for Water Service, Publication B-1.* A compilation of data on corrosion of various kinds of pipe and the value of Anaconda Brass Pipe for permanent service, also comparative cost estimates. 31 pp. Illustrated. Size, 8¼ x 11 in.

J. H. Balmer Co., 259 Plane St., Newark, N. J.

1028. *China Necessities.* Catalog of bath room accessories consisting of towel racks; shelves; tooth brush, tumbler and soap holders, hand rails, hooks and paper holder. 24 pp. Illustrated. Size, 5½ x 8½ in.

The Beaton & Cadwell Mfg. Co., New Britain, Conn.

813. *"Genuine" Perfection Line. Catalog No.* 7. A catalog describing a complete line of Simplex Flush valves, automatic air valves, floor and ceiling plates, towel bars, pipe hangers and accessories. 90 pp. Illustrated. Size, 4 x 6 in.

A. M. Byers Company, Pittsburgh, Pa.

679. *What is Wrought Iron? Bulletin* 26-*A.* Contains the definition of wrought iron, methods of manufacture, chemical and physical characteristics; advantages of wrought iron as a pipe material; service records from old buildings equipped with Byers Genuine Wrought Iron Pipe. How to tell the difference between iron and steel pipe. 40 pp. Illustrated. Size, 8 x 10¼ in.

680. *The Installation Cost of Pipe. Bulletin* 38. Contains cost analysis of a variety of plumbing, heating, power and industrial systems, with notes on corrosive effects in different kinds of service. 32 pp. Illustrated. Size, 8 x 10¾ in.

The Duriron Co., Dayton, Ohio.

758. *Duriron Acidproof Building Equipment. Bulletin No.* 134. An architect's handbook describing the advantages of Duriron material in contact with corrosive liquids and fumes. Details and dimensions of drainage pipes and fittings and acid-proof exhaust fans and ducts. 24 pp. Illustrated. Size, 8½ x 11 in.

1008. *Duriron Drain Pipe and Fittings. Bulletin No.* 134-*A.* Bulletin describing the physical properties, details and specifications for drain pipe and fittings which are non-corrosive to acid, alkali and other chemical wastes of industrial plants, laboratories, hospitals and colleges. 20 pp. Illustrated. Size, 8¼ x 11 in.

Ever Hot Heater Co., 5189 Wesson Ave., Detroit, Mich.

1025. *Technical Manual for Architects and Engineers.* Describing the construction of Ever-Hot automatic water heaters with installation and operation instruction, economics, engineering data and specifications. 26 pp. Illustrated. Size, 8½ x 11 in.

Excelso Specialty Works, 119 Clinton St., Buffalo, N. Y.

843. *Excelso Quality Water Heaters.* Catalog describing a complete line of water heaters to be attached to furnaces, steam and hot water heating boilers. 8 pp. Illustrated. Size, 3¼ x 6¼ in.

Hedges & Brothers, 105 South Street, Newark, N. J.

990. *Pilot Flush Valves. Price List "B"* 1925. Circular illustrating a complete line of valves for lavatories and urinals. Also mixing valves, spreaders, strainers and sanitary accessories. 4 pp. Illustrated. Size, 8½ x 10¾ in.

Hess Warming & Ventilating Co., 1204 Tacoma Bldg., Chicago, Ill.

860. *Hess Snow-White Steel Cabinets and Mirrors.* A catalog with details of construction, dimensions, weights and prices of Snow-White steel cabinets of various styles and mirror access doors and frames to pipe shaft. 16 pp. Illustrated. Size, 4 x 6 in.

Humphrey Company, Kalamazoo, Mich.

789. *Humphrey Gas Water Heater.* A catalog and sales manual giving details, dimensions, capacities and specifications of a complete line of standard automatic gas water heaters and automatic multi-coil storage systems. 32 pp. Illustrated. Size, 7½ x 10¾ in.

Jenkins Brothers, 80 White Street, New York City.

856. *Jenkins Valves for Hotels, Apartment Houses, Clubs, Auditoriums and Theatres.* A special catalog showing the fitness of certain Jenkins Valves for all of the power, heating, plumbing and fire protection requirements of this kind of buildings. 48 pp. Illustrated. Size, 4½ x 7½ in.

857. *Jenkins Valves for Office Buildings, Lofts, Banks, Stores and Jenkins Valves for Industrial Plants and Factories.* Two catalogs showing the special fitness of certain Jenkins Valves for all of the power, heating, plumbing and fire protection requirements of these kinds of buildings. 48 pp. Illustrated. Size, 4½ x 7½ in.

858. *Jenkins Valves for Public Buildings, Schools, Universities, Churches, Community Houses and Jenkins Valves for Hospitals, Sanatoriums, Allied Institutions.* Two special catalogs showing the fitness of certain Jenkins Valves for the power, heating, plumbing and fire protection requirements of these kinds of buildings. 48 pp. Illustrated. Size, 4½ x 7½ in.

The Kennedy Valve Mfg. Co., Elmira, N. Y.

801. *Kennedy Valves. Catalog No.* 45. A catalog illustrating a complete line of gate, globe and angle, check, back-water and sewer-gas valves for every purpose. Dimensions, details and specifications. 142 pp. Illustrated. Size, 5 x 8 in.

802. *Kennedy Pipe Fittings. Catalog No.* 45. A catalog describing a complete line of malleable iron and cast-iron flanged pipe fittings, reducers and cast-iron flanges for every purpose. Details, dimensions and drilling templates. 142 pp. Illustrated. Size, 5 x 8 in.

803. *Kennedy Fire Hydrants. Catalog No.* 45. A catalog describing a complete line of fire hydrants and accessories. Details, dimensions and installation directions. 142 pp. Illustrated. Size, 5 x 8 in.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

29. PLUMBING—Continued

Kohler Company, Kohler, Wis.

209. "*Kohler of Kohler.*" A booklet on enameled plumbing ware describing processes of manufacture and cataloging staple baths, lavatories, kitchen sinks, slop sinks, laundry trays, closet combinations. 48 pp. Illustrated. Size, 5⅛ x 8 in. Roughing-in measurement sheets, 5 x 8 in.

531. *Catalog F.* This is a complete catalog of Kohler enameled ware for plumbing installations, together with high-grade fittings. There is also a brief and interesting description of the manufacture of high-grade enameled ware and a statement of the facts about Kohler village, one of the discussed experiments in modern industrial town building. 215 pp. Cloth bound. Illustrated. Size, 7½ x 10⅜ in.

756. *Kohler Automatic Power and Light.* A catalog illustrating a complete line of isolated automatic electric plants of 800 to 2,500 watts capacity, operated by gas or gasolene. Specifications. 48 pp. Illustrated. Size, 6 x 8½ in.

Thomas Maddock's Sons Company, Trenton, N. J.

696. *Vitreous China Plumbing Fixtures.* A valuable and complete catalog of vitreous china lavatories, drinking fountains, bidets, water closets, urinals, slop sinks, bathtubs, kitchen sink accessories. Completely illustrated with roughing-in diagrams. 242 pp. Illustrated. Size, 8 x 11 in.

The Permutit Company, 440 Fourth Ave., New York City.

105. *Permutit (Water Rectification Systems.)* Illustrated booklet. Describes all methods of softening water, including the original Zeolite process. For homes, hotels, apartment houses, swimming pools, laundries, and industrial plants. Size, 8½ x 11 in. 32 pp.

The Whitlock Coil Pipe Co., Hartford, Conn.

1046. A looseleaf folder of water storage heaters, preheaters, water treatment, details and sales manual. 16 pp. Illustrated. Size, 8½ x 11 in. Bulletins, looseleaf, details and data water heaters and fuel oil heaters. 52 pp. Illustrated. Size, 5½ x 8½ in.

30. HEATING AND VENTILATING

The American Foundry and Furnace Co., Bloomington, Ill.

1076. *The American System of Fan Blast Heating and Ventilating.* A looseleaf folder on the American system of direct transmission air heating for producing heat and ventilation in schools, churches and theatres. 22 pp. Illustrated. Size, 8½ x 11 in.

American Radiator Co., 104-108 West 42d St., New York City.

427. *Ideal-Arcola Heating Outfit.* A book describing a system of hot water heating for small and medium size houses. The boiler is placed in a room and resembles a stove. No cellar required. The ash carrying reduced to a minimum. 24 pp. Illustrated. Size, 6 x 8½ in.

The Bayley Manufacturing Company, 732-760 Greenbush St., Milwaukee, Wis.

486. *Bulletin No.* 23. This bulletin is descriptive of the Bayley Turbo-Atomizer, the Bayley Turbo Air-Washer and Air Conditioner, for cleaning, cooling, tempering, humidifying and de-humidifying air. It contains an interesting treatise on air conditioning methods, together with useful tables and a set of specifications. 32 pp. Illustrated. Size, 7¾ x 10½ in.

Buckeye Blower Co., Columbus, Ohio.

960. *Heatovent System. Bulletin No.* 123. Illustrating individual heating and ventilating units for schools and places of public assemblage. Engineering data, details and specifications. 14 pp. Illustrated. Size, 8 x 10½ in.

Buffalo Forge Co., 490 Broadway, Buffalo, N. Y.

215. *Buffalo Fan System of Heating, Ventilating and Humidifying, Catalog* 700. This contains a general discussion of heating and ventilating under four heads. Part 1, Public Buildings. Part 2, Industrial Plants. Part 3, Buffalo Apparatus. Part 4, Fan Engineering.

976. *Fan Engineering.* An engineering handbook in three parts: Physical properties of air, heat and humidity; air movement for heating, ventilation, forced draft, etc.; performance tables and general information concerning standard apparatus for fan work; appendix, tables. 610 pp. Illustrated. Size, 4¼ x 7 in. Price, $4.00.

Burnham Boiler Corporation, Irvington, N. Y.

800. *Letters To and Fro.* A booklet which explains the difference between steam, hot water and vapor systems of heating and the relative cost of each. Questions, answers and boiler data. 34 pp. Size, 7 x 10 in.

C. A. Dunham Co., 230 East Ohio St., Chicago, Ill.

831. *The Dunham Heating Service Bulletins.* Bulletin 101, Radiator Traps; 102, The Dunham Blast Trap; 103, Medium Pressure Traps; 104, Packless Radiator Valves; 105, Oil Separators and Suction Strainers; 106, Reducing Pressure Valves and Vacuum Pump Governors; 107, Air Line Valves; 108, Home Heating Systems; 109, The Dunham Return Heating System; 110, Vacuum Heating System; 111, Installing House Heating System. Illustrated. Size, 8½ x 11 in.

993. *The Dunham Hand Book, No.* 314. Revised edition of valuable book devoted to steam heating installations for all purposes. Describes apparatus, piping plans, engineering data. 190 pp. Illustrated. Size, 3¾ x 6½ in.

1010. *Dunham Return Heating System. Bulletin No.* 109. Showing the application of the Dunham Return Trap and Radiator Trap to secure positive circulation of steam and correct disposal of return water. Complete details of installation, dimensions, specifications and design data. 16 pp. Illustrated. Size, 8 x 11 in.

The Duriron Company, Dayton, Ohio.

1009. *Duriron Ventilating Fans and Hoods. Bulletin No.* 140. Bulletin describing a line of electrically driven exhaust fans for use with acid and other corrosive fumes in industrial plants and laboratories. Also non-corrosive equipment for laboratory hoods. 20 pp. Illustrated. Size, 8½ x 11 in.

General Boilers Co., Waukegan, Ill.

799. "Bulletin SC-24 describes and illustrates, with specifications, all types of Pacific Steel Heating Boilers for operation on coal. Bulletin OF-24 covers Pacific Oil Fired Steel Boilers."

1071. *Bulletin SC-26.* Descriptive illustrations and specifications. Pacific Direct Draft and Up Draft Smokeless Boilers; Bulletin OF-26 covers Pacific Oil Fired Boilers; Bulletin RT-26 Pacific Steel Residence Boilers; and DD-26 Pacific Down Draft Boilers.

Gillis & Geoghegan, 545 West Broadway, New York City.

969. *The G. & G. Telescopic Hoist.* A catalog containing specifications in two forms: (1) using manufacturer's name, and (2) without using manufacturer's name. Detail in ¼-inch scale for each telescopic model and special material handling section. Fully illustrated with photographs of actual installations and descriptive matter of same. 24 pp. 2 colors. Illustrated. Size, 8½ x 11 in.

Daniel P. Gracom, 101 Park Ave., New York City.

995. *Radiator Enclosures.* A circular illustrating and describing a line of artistic metal radiator enclosures in various styles and colors. 6 pp. Illustrated. Size, 5¾ x 4¼ in.

Hart & Cooley Co., New Britain, Conn.

1065. *Wrought Grilles. Folder No.* 8. Bulletin containing examples of the best methods of installing grilles under conditions most commonly encountered, details and specifications. 6 pp. Illustrated. Size, 8½ x 11 in.

Healy-Ruff Co., 765 Hampden Ave., St. Paul, Minn.

1067. *E-Z Radiator Hangers.* Folder containing specifications, installation details and description of radiator wall hangers, 4 pp. Illustrated. Size, 8½ x 10½ in.

Heggie Simplex Boilers Co., Joliet, Ill.

1070. *Catalog No.* 26. Heggis-Simplex Electric Welded Steel Heating Boilers. Descriptive illustrations and detailed data on size, ratings, etc. 22 pp. Illustrated. Size, 8½ x 10¾ in.

Hess Warming and Ventilating Co., 1209 Tacoma Bldg., Chicago, Ill.

178. *Modern Furnace Heating.* An illustrated book on the Hess Welded Steel Furnaces. Pipe and Pipeless, notes for installation, sectional views, showing parts and operation, dimensions, register designs, pipes and fittings. Size, 6 x 9½ in. 48 pp.

Ilg Electric Ventilating Co., 2850 North Crawford Ave., Chicago, Ill.

1072. *Looseleaf Catalog.* Illustrating electrical ventilating equipment complete encyclopedia on modern methods of ventilating and heating stores, offices, theatres, restaurants, garages, houses, public buildings. 400 pp. Illustrated.

1073. *Instructions for Installing Ilg Ventilating Fans.* A book of interest to the architect and engineer. Includes diagrams and instructions for ventilation of various types of buildings.

International Heater Co., Utica, N. Y.

998. *International Warm Air Furnaces.* The Baronet, Economy and Carton furnaces are described in catalogs for each type. Details, dimensions, capacities and designing data. 16-16-24 pages. Illustrated. Size, 7½ x 10½ in.

999. *International Economy Boilers.* Catalog of cast-iron sectional steam and hot water heating boilers, also hot water supply boilers All sizes and capacities, details, capacities and designing data. 36 pp. Illustrated. Size, 7½ x 10½ in.

Johnson Service Company, 149 Michigan St., Milwaukee, Wis.

391. *The Regulation of Temperature and Humidity.* A description of the Johnson System of temperature regulation and humidity control for buildings; showing many kinds of thermostatic appliances for automatically maintaining uniform temperature. 63 pp. Illustrated. Size, 8½ x 11 in.

392. *Johnson Electric Thermostat, Valves and Controllers.* A catalog of devices mentioned in the title. 24 pp. Illustrated. Size, 3½ x 6 in.

Kewanee Boiler Co., Kewanee, Ill.

771. *Kewanee Power Boilers. Catalog No.* 79. A complete description of brick set horizontal tubular power boilers with full and half front settings. Also smokeless tubular boilers with drawn draft furnace and steel casing. Also steel portable locomotive boilers, grates, breechings, cast-iron fronts, air receivers, storage tanks and accessories. 34 pp. Illustrated. Size, 6 x 9 in.

881. *Kewanee Firebox Boilers, Water Heaters, Tanks and Garbage Burners.* General Catalog No. 80. This catalog gives capacities, dimensions and selling data for firebox, boilers, portable and power boilers, and water heaters, garbage burners, tanks, radiators and breechings. 24 pp. Illustrated. Size, 8½ x 10½ in.

Knowles Mushroom Ventilator Co., 204 Franklin St., New York City.

906. *Ventilation for Auditoriums.* A catalog describing fresh air diffusers used in connection with mechanical systems of ventilation in auditoriums, schools, churches, and public buildings. Complete details and design data. 8 pp. Illustrated. Size, 8½ x 11 in.

Midwest Air Filters, Inc., Bradford, Pa.

924. *Midwest Air Filters—Baffle Impingement Type.* Bulletins, specifications, folders and catalogs covering the applications of these filters in the ventilation of schools, hotels, office buildings, theatres, museums, and other buildings, as well as the various uses in industrial plants, central stations, etc. Illustrated. Size, 8½ x 11 in.

Modine Manufacturing Co., Racine, Wis.

1057. *Bulletin A.* Modine Unit heater for steam or hot water heating systems. Bulletin describes general and mechanical advantages of Modine Unit Heaters. 8 pp. Illustrated. Size, 8½ x 11 in.

National Tube Co., Frick Bldg., Pittsburgh, Pa.

670. *National Bulletin No.* 25*B. Third Edition.* Devoted to the installation of steel pipe in large buildings, architectural anti-corrosion engineering, gas piping, specifications and tables of strength and properties. 74 pp. Illustrated. Size, 8½ x 10¾ in.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

30. HEATING AND VENTILATING—Continued

The Herman Nelson Corporation (formerly Moline Heat), Moline, Ill.

411. *Univent Ventilation. Architects' and Engineers' Edition.* A scientific treatise on ventilation for schools, offices and similar buildings; with 40 pages of engineering data on ventilation for architects and engineers. 72 pp.

Peerless Unit Ventilation Co., Inc., Skillman Ave., and Hulst St., Long Island City, N. Y.

1048. *PeerVent Heating and Ventilating Units.* Booklet descriptive of Unit heating and ventilating units, mechanical features and advantages. Directions for laying out unit systems, complete engineering data and details of standard units. 62 pp. Illustrated. Size, 8¼ x 10¾ in.

Richardson & Boynton Co., New York, N. Y., Chicago, Ill., Philadelphia, Pa., Providence, R. I., Boston, Mass.

290. *The Richardson Vapor Vacuum-Pressure Heating System.* An interesting book which presents in clear non-technical language the principles of Vapor-Vacuum-Pressure heating; the economy over ordinary steam heating, steam and hot-water systems may be altered to use the principle with views of buildings where the V-V-P system is installed. 14 pp. Illustrated. Size, 8 x 11 in.

291. *Perfect Warm Air Furnaces.* No. 203. Contains a full description of various types of warm air furnaces and parts, with dimensions and necessary data. 24 pp. Illustrated. Size, 8 x 10½ in.

B. F. Sturtevant Co., Hyde Park, Boston, Mass.

1085. *Silentvane Fans. Catalog No.* 290. Illustrates and describes fans as installed in ventilating systems of buildings shown. Catalog includes Designs 1 and 2 with performance tables, dimension sheets and specifications. A-IA File No. 30-d1. 92 pp. Illustrated. Size, 8½ x 11 in.

1086. *Multivane Fans. Catalog No.* 271. A-IA File No. 30-d1. Catalog gives dimensions, capacities, horse-powers, performance tables, specifications and detail description of Multivane fans. Design No. 3. 96 pp. Illustrated. Size, 8½ x 11 in.

Thatcher Co., 131-135 West 35th St., New York City.

748. *Thatcher Boilers and Thatcher Furnaces.* Catalog describing a series of cast-iron steam and hot water heating boilers and also one describing a series of cast-iron warm air heaters. Accessories, details and dimensions. 80 pp. and 24 pp. Illustrated. Sizes, 4½ x 7½ and 8½ x 11 in.

Tuttle and Bailey Mfg. Co., 2 West 45th St., New York City.

844. *Registers and Grilles, 78 Annual Catalog.* A catalog illustrating a complete line of cast Ferrocraft Grills, describing their advantages; details, dimensions and installation data. 76 pp. Illustrated. Size, 7½ x 10½ in.

Young Pump Co., 230 East Ohio St., Chicago, Ill.

965. *Young Centrifugal Vacuum and Boiler Feed Pump Bulletin No.* 5. Describes electrically driven centrifugal vacuum and boiler food pumps, and receiving or accumulator tanks. Capacities, dimensions and specifications. 12 pp. Illustrated. Size, 8 x 10½ in.

31. ELECTRICAL WORK

Frank Adam Electric Co., St. Louis, Mo.

629. *The Control of Lighting in Theatres.* A book describing means for complete control of lighting the stage, auditorium and other parts of the theatres with distribution schedules and specifications. Also specifications of control to Masonic buildings, schools and colleges. 32 pp. Illustrated. Size, 8 x 11 in.

741. *Panel Board Catalog No.* 32. A complete catalog of standard panel boards, steel cabinets, switches and accessories. 48 pp. Illustrated. Size, 7¾ x 10¾ in.

Cooper Hewitt Electric Company, 95 River Street, Hoboken, N. J.

553. *Industrial Lighting Briefs.* No. 1 deals with Industrial Lighting in theory and practice. No. 2 deals with the engineering of illumination with Cooper Hewitt Lamps. No. 3 deals with the quickness of response of the Hand to Eye. Each 4 pp. Size, 8 x 10½ in.

Curtis Lighting, Inc., 119 West Jackson Blvd., Chicago, Ill.

1079. *Architectural Detail Plates.* With suggestions and data for lighting equipment specifications. Plates Nos. 68, 69 and 70 deal with Church, Gymnasium and Public Building lighting respectively, and are sent free to any registered architect who requests them on his own letterhead.

L. Erikson Electric Co., 6 Portland St., Boston, Mass.

1005. *Erikson Reflectors. Catalog No.* 91. A catalog covering Erikson Reflectors and special lighting equipment for Banks, Theatres, Stores, Churches and Hospitals; shows cuts of reflectors, illustrations of representative installations, and also gives valuable engineering data as to the application of this type of equipment. 73 pp. Illustrated. Size, 8 x 11 in.

I. P. Frink, Inc., 24th St. and 10th Ave., New York City.

150. *Light Service for Hospitals. Catalog No.* 426. A booklet illustrated with photographs and drawings, showing the types of light for use in hospitals, as operating table reflectors, linolite and multilite concentrators, ward reflectors, bed lights and microscopic reflectors, giving sizes and dimensions, explaining their particular fitness for special uses. Size, 7 x 10 in. 12 pp.

218. *Picture Lighting. Booklet No.* 422. A pamphlet describing Frink Reflectors for lighting pictures, art galleries, decorated ceilings, cove lighting, the lighting of stained glass, etc., and containing a list of private and public galleries using Frink Reflectors. 24 pp. Illustrated. Size, 5¼ x 7 in.

219. *Frink Reflectors and Lighting Specialties for Stores. Catalog No.* 424. A catalog containing a description of the Frink Lighting System for Stores; the Synthetic System of Window Illumination; and a number of appliances to produce the most effective lighting of displayed objects. 20 pp. Illustrated. Size, 8 x 11 in.

220. *Frink Lighting Service for Banks and Insurance Companies' Reflectors. Catalog No.* 425. A very interesting treatise on the lighting of offices; with details of illustrations and description of lamps and reflectors. Contains a list covering several pages of banks using Frink Desk and Screen Fixtures. 36 pp. Illustrated. Size, 8¼ x 11 in.

The Edwin F. Guth Co., Jefferson and Washington Aves., St. Louis, Mo.

992. *Lighting Equipment. Catalog No.* 15. A looseleaf catalog illustrating a very extensive and complete line of lighting fixtures of all types and for all purposes. 96 pp. Illustrated. Size, 8½ x 11 in.

1060. *Forge Craft Luminaires Wall Bracket.* Booklet illustrating and describing iron, copper and iron and copper electric lighting fixtures for small houses. 16 pp. Illustrated. Size, 8½ x 10½ in.

Gleason-Tiebout Glass Co., 200 Fifth Ave., New York City.

F-870. *Celestial Light.* A folder illustrating and describing the advantages of celestialite glass, which gives as nearly the effect of sunlight as is commercially possible. A few typical celestialite lighting fixtures are shown. Includes partial list of installations. 4 pp. Illustrated. Size, 10 x 12 in.

Graybar Electric Co., 100 East 42nd St., New York City.

1052. *Electrical Supply Year Book,* 1926-27. A complete catalog of electrical supplies made by the Western Electric Company. The 1925 edition of the "National Electrical Code" of the National Board of Fire Underwriters is included as well as valuable electrical data. 1012 pp. Illustrated. Size, 8 x 11 in.

The Hart & Hegeman Mfg. Co., 342 Capitol Ave., Hartford, Conn.

699. *H. & H. Electrical Wiring Devices. Catalog "R."* Catalog of a complete line of switches, sockets, plugs, receptacles, plates, rosettes, cut-outs, elexits and accessories. Two identical catalogs in two sizes. 152 pp. Illustrated. Sizes, 5 x 6¼ and 8 x 10½ in.

871. *Architect's Handbook of H. & H. Wiring Devices.* This catalog was compiled by an architect. Contains descripion and prices of a complete line of switches, receptacles and outlets. 16 pp. Illustrated. Size, 8½ x 11 in.

Harvey Hubbell, Inc., Bridgeport, Conn.

297. *Electrical Specialties. Catalog No.* 17, 1921. This catalog contains descriptions with prices of the thousand and one items connected with electric light, electric alarm and small electric appliance installations in modern buildings. 104 pp. Illustrated. Size, 8 x 10½ in.

401. *Hubbell Flush Door Receptacles.* Description of a safe, convenient and practical wall outlet de luxe for fine residences, clubs, hotels, public buildings and offices. 4 pp. Illustrated. Size, 8 x 10 in.

Ivori Craft Corp., 290 Chestnut St., Newark, N. J.

1040. *Ivori-craft Flush Plates.* Folder describing Ivori-craft composition flush cover plates for convenience outlets and switches. Standard and special shapes, colors and price list. 4 pp. Illustrated. Size, 8½ x 11 in.

Kliegl Bros., 321 West 50th Street, New York City.

1084. *Kliegl Theatrical, Decorative and Spectacular Lighting. Catalog M.* Description of complete line of lighting specialties and lighting effects for stages, etc. Catalog includes stage equipment, exit signs, aisle and step lights, dimmers, switchboards and other special lighting apparatus. 128 pp. Illustrated. Size, 7¾ x 10 ½ in.

Stromberg-Carlson Telephone Mfg. Co., Rochester, New York City.

304. *Inter-Communicating Telephone Systems. Bulletin No.* 1017. A pamphlet giving just the information required for the installation of intercommunicating systems from 2 to 32 stations capacity. 15 pp. Illustrated. Size, 7¾ x 10 in.

Youngstown Sheet and Tube Co., Youngstown, Ohio.

1017. *Electrical Conduit.* Circular giving complete data about Buckeye Rigid Conduit and Realflex Flexible Steel Armored Cable with specifications. 6 pp. Illustrated. Size, 8½ x 11 in.

32. REFRIGERATION

Baker Ice Machine Co., Inc., Omaha, Neb.

661. *Baker System Refrigeration.* A catalog explaining the application of refrigeration for hotels, hospitals, institutions and restaurants requiring up to 50 tons daily capacity including mechanical details and specifications. 20 pp. Illustrated. Size, 9 x 12 in.

Delco-Light Co., Dayton, Ohio.

962. *Frigidaire.* Booklet describing installations and details of automatic refrigerating equipment for residential hotels and apartment buildings. 50 pp. Illustrated. Size, 8½ x 11 in.

Frick Company, Waynesboro, Pa.

959. *F-P Raw Water Ice-Making Systems. F-P Bulletin No.* 4. This bulletin explains a method of raw water ice-making by the F-P low pressure systems and the economies effected. 24 pp. Illustrated. Size, 6 x 9 in.

Jamison Cold Storage Door Co., Hagerstown, Md.

569. *Heavy Duty Cold Storage Doors. Catalog No.* 10. Complete description of both hinged and sliding cold storage doors for every equipment. Also description of cold storage windows and ice chutes. 79 pp. Illustrated. Size, 5¾ x 9 in.

The Jewett Refrigerator Company, 27 Chandler Street, Buffalo, N. Y.

655. *Manual of Refrigerators.* This manual completely describes the construction of refrigerators for use in hotels, clubs, hospitals institutions and residences, with specifications. Numerous plans showing size and arrangement of refrigerators in kitchens, service and lunch rooms are included. 30 pp. Illustrated. Size, 8½ x 11 in.

REFERENCE LIST OF BUSINESS LITERATURE—Continued

33. ELEVATORS

Kimbull Bros. Co., Council Bluffs, Iowa.

742. *Kimball Straight Line Drive Elevators.* A complete catalog of passenger, freight and garage traction elevators, push button elevators, dumbwaiters, sidewalk and ash hoist elevators, 36 pp. Illustrated. Size, 8½ x 11 in.

Otis Elevator Co., 260 Eleventh Ave., New York City.

651. *Otis Geared and Gearless Traction Elevators.* Leaflets describing all types of geared and gearless traction elevators with details of machines, motors and controllers for these types. Illustrated. Size, 8½ x 11 in.

652. *Elevators and Inclined Elevators.* A comprehensive catalog illustrating the use of escalators for transporting people in stores, subways, railroad stations, theatres and mills; also inclined freight elevators for stores, factories, warehouses and docks adjustable to tide levels. 22 pp. Illustrated. Size, 8½ in.

Richards-Wilcox Mfg. Co., Aurora, Ill.

795. *"Ideal" Elevator Door Hardware. Catalog No.* **37.** A catalog showing hangers for every type of elevator doors hand operated, interlocking door controllers, bar locks and accessories. 56 pp. Illustrated. Size, 8½ x 11 in.

Sedgwick Machine Works, 144 West 15th St., New York City.

60. *Hand Power Elevator and Dumbwaiters in Modern Architectural Construction.* Illustrated catalog. Size, 4¼ x 8¼ in. 80 pp.

A. B. See Electric Elevator Co., 52 Vesey St., New York City.

169. Photographs and description in detail of elevator equipment manufactured by the A. B. See Electric Elevator Co. Size, 6 x 8 in.

35. EQUIPMENT, STATIONARY

American Stove Co., St. Louis, Mo.

1050. *Handbook on Gas Ranges for Architects and Builders.* A practical book of data on gas ranges and pipe sizes for the files of the architect and specification writer. 32 pp. Illustrated, Size, 8¾ x 11¼ in.

Chicago Dryer Co., 2210 No. Crawford Ave., Chicago, Ill.

66. *Laundry Appliances.* Illustrated catalog, Descriptions of Laundry Dryers, Electric Washing Machines and Ironing Machines, especially adapted for use in residences, apartment buildings and and small institutions. Size, 8½ x 11 in. 48 pp.

George M. Clark & Co., Division of American Stove Co., 179 Michigan Ave., Chicago, Ill.

458. *Gas Stove Catalog No.* 114. A complete catalog of Clark Jewell gas stoves; water heaters; room heaters; ovens; waffle irons; cake bakers; hot plates, etc. 76 pp. Illustrated. Size, 6 x 9 in.

R. W. Clark Mfg. Co., 1774 Wilson Ave., Chicago, Ill.

588. *Clark Directories and Clark Changeable Bulletin Boards.* Two pamphlets describing the Clark Changeable Bulletin Board and Directories for Office Buildings, Hotels, Business Buildings, etc. 8 pp. and 4 pp. Illustrated. Size, 6¼ x 9 in.

Cutler Mail Chute Co., Rochester, N. Y.

294. *The Cutler Mail Chute. Model F.* Describes the Cutler Mail Chute in its standard form, known as Model F. Contains data for rough floor openings not included in the Mail Chute contract. 16 pp. Illustrated. Size, 4 x 9¼ in.

J. C. Deagan, Inc., 189 Deagan Bldg., Chicago.

783. *Deagan Tower Chimes.* Describing the important features of Deagan Tower Chimes and including information concerning the space requirements and construction required for installing chimes in towers and belfries. 8 pp. Size, 8½ x 11 in.

W. F. Dougherty & Sons, Inc., 1009 Arch St., Philadelphia, Pa.

764. *Kitchen Equipment for Hotels and Institutions.* Several catalogs covering a complete line of cooking apparatus.

G. & G. Atlas Systems, Inc., 535 West Broadway, New York City.

983. *G. & G. Atlas Pneumatic Tube Systems.* A circular explaining the advantages of pneumatic tube systems for department stores, banks, hotels, office buildings, hospitals and industrial plants. Illustrations of installations and details. 8 pp. Illustrated. Size, 8½ x 11 in.

Edwin A. Jackson & Bro., Inc., 50 Beekman St., New York City.

170. Booklet showing general construction and sizes of garbage receivers to be placed underground for suburban use; also types to be built into the walls of city homes and apartments; also types for the suburban wall with opening on inside for the maid and outside for the garbage man. Size, 3½ x 6¼ in. 16 pp.

Kerner Incinerator Company, 1029 Chestnut St., Milwaukee, Wis.

381. *The Sanitary Elimination of Household Waste. M-3 Folder.* Description of construction, installation and operation of the Kernerator for residences. Illustrated by views of residences in which the Kernerator is installed, with cuts showing all details. 15 pp. Illustrated. Size, 4 x 9 in.

Fred Medart Mfg. Co., St. Louis, Mo.

1066. *Catalog L-3 Gymnasium Apparatus. Catalog M-2.* Catalogs illustrate and describe all apparatus made for these purposes. L-3 contains 14 pages of general information on the planning of gymnasiums with sizes of regulation Volley Ball, Basket Ball, Indoor Base Ball, Playground Base Ball and Tennis Courts. Catalog L-3: 92 pp. Illustrated. Size, 9 x 12 in. Catalog M-2: 44 pp. Illustrated. Size, 9 x 12 in.

Harry M. Perry, 702 N. Main St., Los Angeles, Calif.

F-867. *Beltslacker.* A slack-belt idler designed to maintain driving tension and increase the pulling capacity of belts of power driven equipment. Description and table of average full load speeds of A. C. Motors and approximate belt speeds. 2 pp. Illustrated. Size, 8½ x 11 in.

The Pfaudler Company, Rochester, N. Y.

581. *Glass Lined Steel Laundry Chute.* Catalog describing a glass lined steel laundry chute with flushing ring at top and drain connection at bottom, specifications, dimensions and details adapted to hospitals and hotels. 14 pp. Illustrated. Size, 5½ x 7⅜ in.

Richardson & Boynton Co., New York, N. Y., Chicago, Ill., Philadelphia, Pa., Providence, R. I.,Boston, Mass.

292. *Perfect Cooking Ranges.* Description and dimensions of the complete line of the new high enamel finish Richardson Perfect ranges with charts and information regarding combination coal and gas cooking ranges. 40 pp. Illustrated. Size, 8½ x 11 in.

36. CONSTRUCTION PLANT

37. INSULATION

Armstrong Cork & Insulation Co., Pittsburgh, Pa.

900. *Insulation of Dwellings.* A booklet explaining the methods of insulation, their relative values and the advantages of using Armstrong's Nonpareil Corkboard. A valuable publication. 40 pp. Illustrated. Size, 8½ x 11 in.

918. *Nonpareil Cork Covering.* A treatise describing the production and manufacturing of cork pipe covering for steam and refrigerating systems. Designing data, specifications and installation directions 48 pp. Illustrated. Size, 8½ x 11 in.

The Philip Carey Co., Lockland, Cincinnati, Ohio.

379. *Pipe and Boiler Coverings. Catalog* 1362. A catalog and manual pipe and boiler coverings, cements, etc. Contains a number of valuable diagrams and tables. 71 pp. Illustrated. Size, 6 x 9 in.

The Celotex Co., 645 North Michigan Ave., Chicago, Ill.

106. *Celotex Specifications.* Specifications and details for Celotex insulating lumber. Arranged for Architects' files. 12 pp. Illustrated. Size, 8½ x 11 in.

F. 841. *Celotex Specifications for Roof Insulation.* Specifications and details for Celotex industrial board for roof insulation and under floor coverings. 20 pp. Illustrated. Size, 8½ x 11 in.

Flax-li-num Insulating Co., St. Paul, Minn.

930. *Heat Insulation for Houses.* A scientific bulletin summarizing and condensing the data or research laboratories, explaining the theory of heat insulation and correct methods of bringing all wall or roof types within a standard heat transmission at lowest cost by use of Flax-li-num. Gives properties, uses and history of Flax-li-num. 24 pp. Illustrated. Size, 8½ x 11 in.

931. *For Comfort and Economy.* The non-technical story of heat and sound insulation, its theory, practice and history. Contains one-half inch sample of Flax-li-num and shows advantages of its use in all types of house and apartment construction. 32 pp. Illustrated. Size, 5 x 7 in.

Hydrex Asphalt Products Corpn., 120 Liberty St., New York City.

757. *Sound Deadening and Insulation.* Illustrated pamphlet. Describes Hydrex "Saniflor" and gives specifications for use under floors, in partitions and under roofs.

United States Mineral Wool Co., 280 Madison Ave., New York City.

83. *The Uses of Mineral Wool in Architecture.* Illustrated booklet. Properties of insulation against heat, frost, sound, and as a fireproofing, with section drawings and specifications for use. It gives rule for estimate and cost. Size, 5¼ x 6⅝ in. 34 pp.

39. ACOUSTICS

The Celotex Co., 645 North Michigan Ave., Chicago, Ill.

1063. *Acousti-Celotex Specifications.* Specifications and details for the application and decoration of Acousti-Celotex for acoustical treatment. 12 pp. Illustrated. Size, 8½ x 11 in.

Johns-Manville, Inc., 294 Madison Ave., New York City.

710. *Architectural Acoustics.* A treatise on the correction of architectural acoustics in churches, schools, hospitals, office buildings and other places. 24 pp. Illustrated. Size, 6 x 9 in.

40. REGULATIONS

I PLANS AND DESIGNS

American Face Brick Association, 1754 People's Life Bldg., Chicago, Ill.

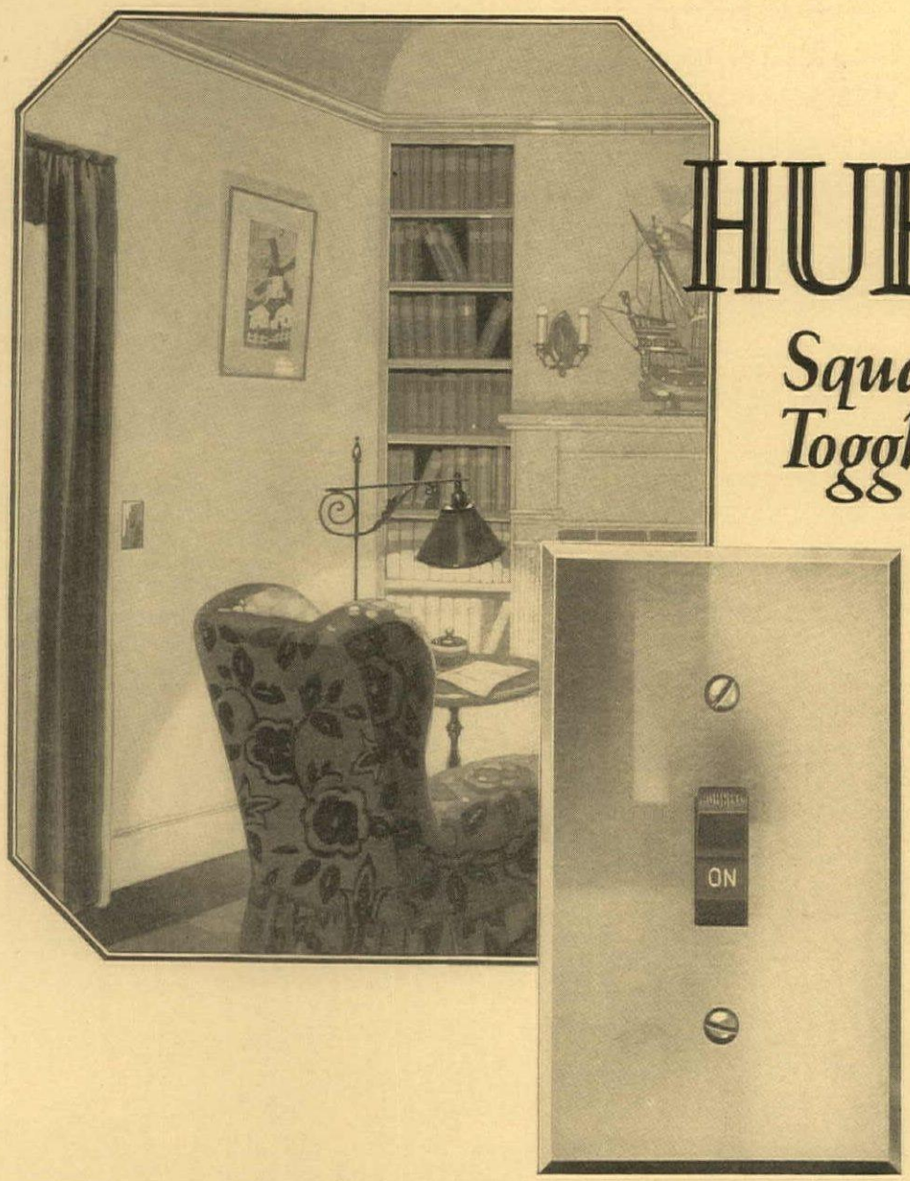
155. *The Home of Beauty.* A booklet containing fifty prize designs for small brick houses submitted in national competition by architects. Texts by Aymar Ambury II, Architect. Size, 8 x 10 in. 72 pp. Price, 50 cents.

The American Pin Company, Waterbury, Conn.

985. *American Renderers.* A series illustrating the work of American Renderers of which five of twelve are issued. A monthly publication free to architects. Each 4 pp. Illustrated. Size, 9 x 12 in.

California White and Sugar Pine Manufacturers Association, 690 Call Building, San Francisco, Calif.

874. *Pine Homes.* A valuable booklet containing details of frame building construction and the manufactured products of the association and illustrations of constructed buildings. 48 pp. Illustrated. Size, 7 x 10 in.



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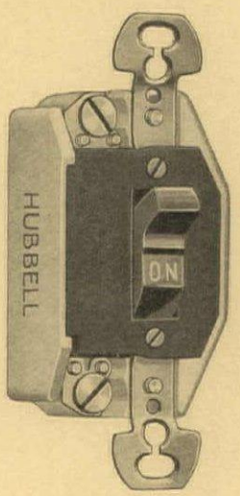

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The Kohler Co., Kohler, Wisc.

F-860. *Kohler Village.* Booklet describing the development of the industrial village of the Kohler Co., at Kohler, Wisc. Mural paints by Arthur Covey installed in the Administration Building are shown in colors. 46 pp. Illustrated. Size, 8 x 10½ in.

Ramp Buildings Corporation, 21 East 40th St., New York City.

1021. *D'Humy Motoramps. Catalog No.* 25. Describes a type of construction for multi-floor garages with comparative data of other types, investment, cost and capacity data. 15 pp. Illustrated. Size, 8½ x 11 in.

1022. *Garage Design Data.* Service bulletins to architects containing garage design data. Ask for preceding bulletins. 2 pp. Illustrated. Size, 8½ x 11 in.

Truscon Steel Company, Youngstown, Ohio.

318. *Truscon Standard Buildings. Form D-398.* Describes Truscon Standard Steel Buildings, with diagrams, illustrations of installations, descriptive matter and list of users. 48 pp. Illustrated. Size, 8½ x 11 in.

638. *Daylighting Schools.* A treatise on the daylighting and window ventilation of school buildings quoting eminent authorities, illustrated with diagrams of lighting data and details of suitable windows. 28 pp. Illustrated. Size, 8½ x 11 in.

II GENERAL CATALOGS

American Lead Pencil Co., 220 Fifth Ave., New York City.

268. *Booklet C-20. Venus Pencil in Mechanical Drafting.* And interesting illustrated booklet showing the possibilities of the Venus Drawing Pencil for drafting. Size, 6 x 9 in.

H. W. Covert & Co., 137 East 46th St., New York City.

775. *Fireplace Fittings in Iron and Brass.* A catalog of andirons, fire sets, fire screens, fenders, woodholders, willow wood baskets, hearth brooms, grates, candlesticks, lanterns and other accessories made in iron and brass. 36 pp. Illustrated. Size, 5½ x 8½ in.

Joseph Dixon Crucible Company, Pencil Department, Jersey City, N. J.

325. *Finding Your Pencil.* A book explaining the various degrees of hardness of the Eldorado pencil and the grade most suitable for every man, who uses a pencil, be he business or professional man, clerk or draftsman. Accompanied by a color chart of Dixon colored crayons. 16 pp. and 4 pp. in color chart. Illustrated. In colors. Size, 3¼ x 6 in.

Charles M. Higgins & Co., 271 Ninth St., Brooklyn, N. Y.

928. *Higgins' Inks and Adhesives.* A complete catalog of inks, pastes, mucilages, photo mounters and such drafting room accessories. 30 pp. Illustrated. Size, 3½ x 6¼ in.

Johns-Manville, Inc., New York City.

752. *Johns-Manville Service to Industry.* A complete catalog of Asbestos Roofings, Heat and Electric Insulations, Waterproofing, Industrial Flooring, etc. Complete details and specifications. Valuable reference book for architects. 260 pp. Illustrated. Size, 8½ x 11 in.

Truscon Steel Company, Youngstown, Ohio.

319. *Truscon Building Products. Form D-376.* Contains a brief description of each of the Truscon Products. 112 pp. Illustrated. Size, 8½ x 11 in.

A. Wyckoff & Sons Co., Elmira, N. Y.

397. *Wyckoff Wood Pipe. Catalog No.* 42. A description of machine-made woodstave pipe and Wyckoff's express steam pipe casing. Contains also a number of pages of useful formulas and tables for hydraulic computation. 92 pp. Illustrated. Size, 6 x 9 in.

III FINANCING OF ENTERPRISES

G. L. Miller & Company, Hurt Building, Atlanta, Ga.

929. *The Miller Plan.* A booklet explaining the Miller Plan of financing building projects, disbursements to contractors and liquidation of bonds. 18 pp. Illustrated. Size, 9 x 12 in.

S. W. Straus & Co., 565 Fifth Ave., New York City.

183R. *The Straus Plan of Finance.* A book describing the methods of S. W. Straus & Co., in helping to finance the erection of the larger class of properties such as office and apartment buildings, hotels, loft buildings and similar structures. A book valuable to the architect who desires to study the business side of the profession. 24 pp. Illustrated. Size, 7¼ x 10½ in.

Eleven lovely colors—with a charm of life and texture such as stucco never had before—are offered every architect in Oriental Stucco. These beautiful effects are made certain, too, in the exact tone you choose, because Oriental Stucco comes with its every ingredient, including the color, scientifically proportioned and machine mixed at our mills. It needs only the addition of water at the job.

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The Johnson System Of Temperature And Humidity Control is more than the superior system of automatic heat regulation. It is *totally efficient* and *perfectly successful;* thoroughly assuring the results required. And the latter reason is advisedly why to specify Johnson System Of Temperature And Humidity Control — in homes, schools, hospitals, business, civic and institutional buildings. . . . . .

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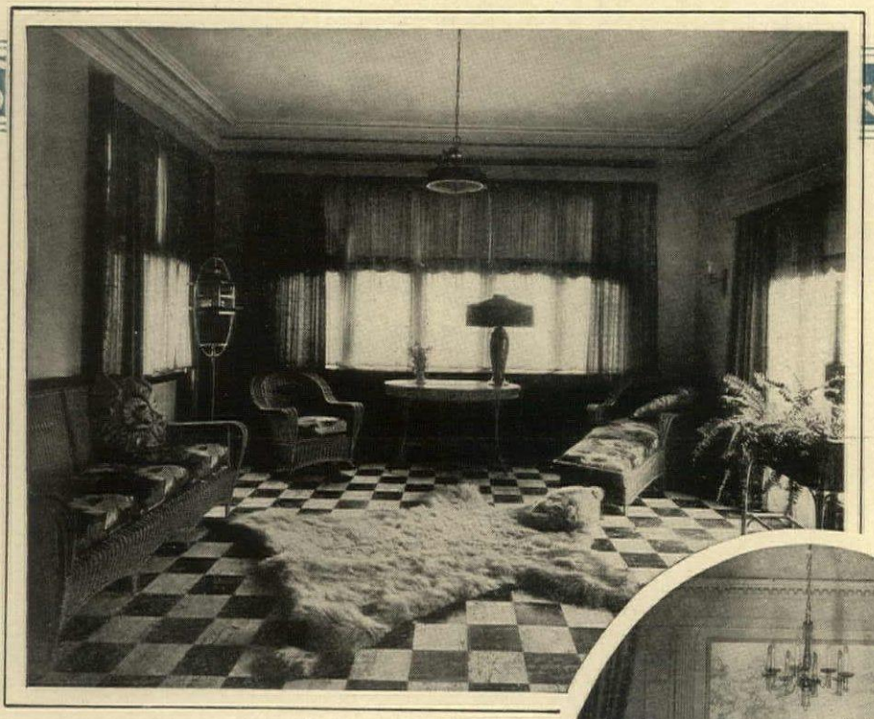
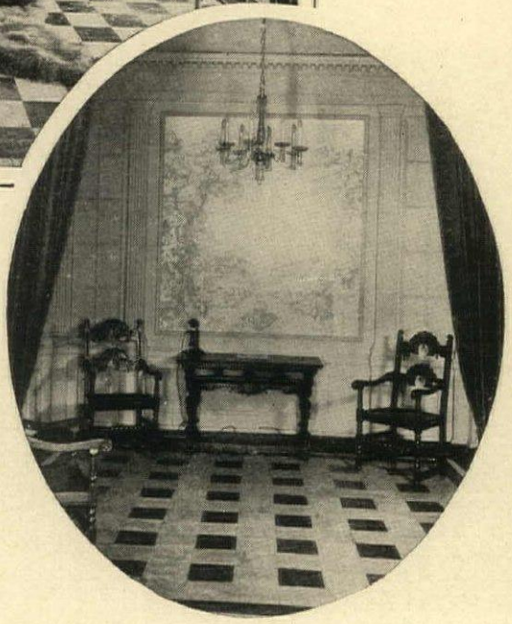


Interesting use of U. S. Tile in Sun-room and Foyer.



FOR FOYER, SUN-ROOM, OR KITCHEN—A FLOOR OF "U. S." TILE

Architects specializing in residential and apartment design are finding that rubber flooring admirably suits their requirements in an ever-increasing number of specifications.

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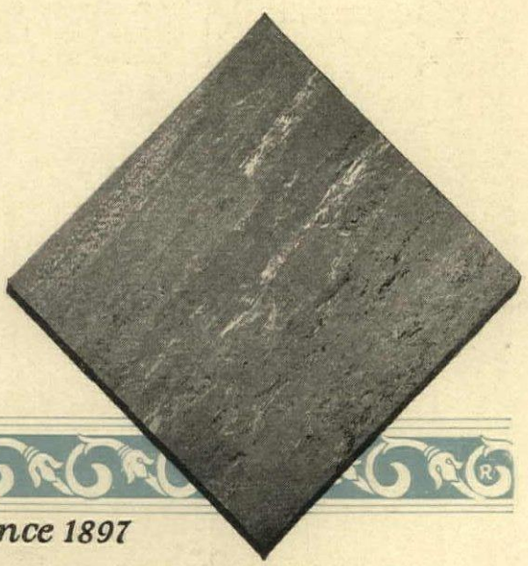
Colorful, noiseless, comfortable, and easily cleaned—"U. S." Tile represents the maximum achievement in rubber floor construction.



Flooring Department

United States Rubber Company

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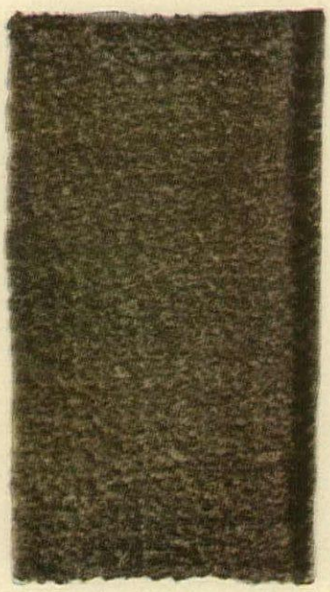

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Its deep, rich, lustrous pile is made from yarns in which are spun the choicest wools from Russia, Scotland, Persia and Australia, dyed in beautiful soft colors as illustrated.

Quotations will be made from Architects' plans

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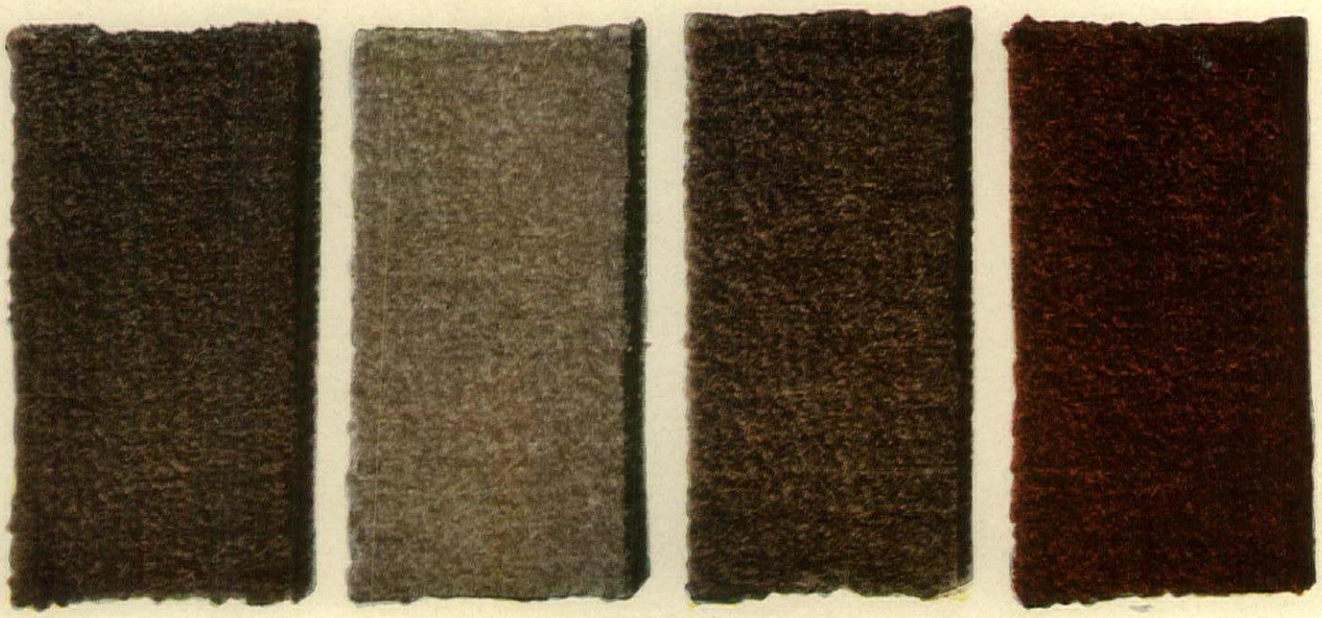

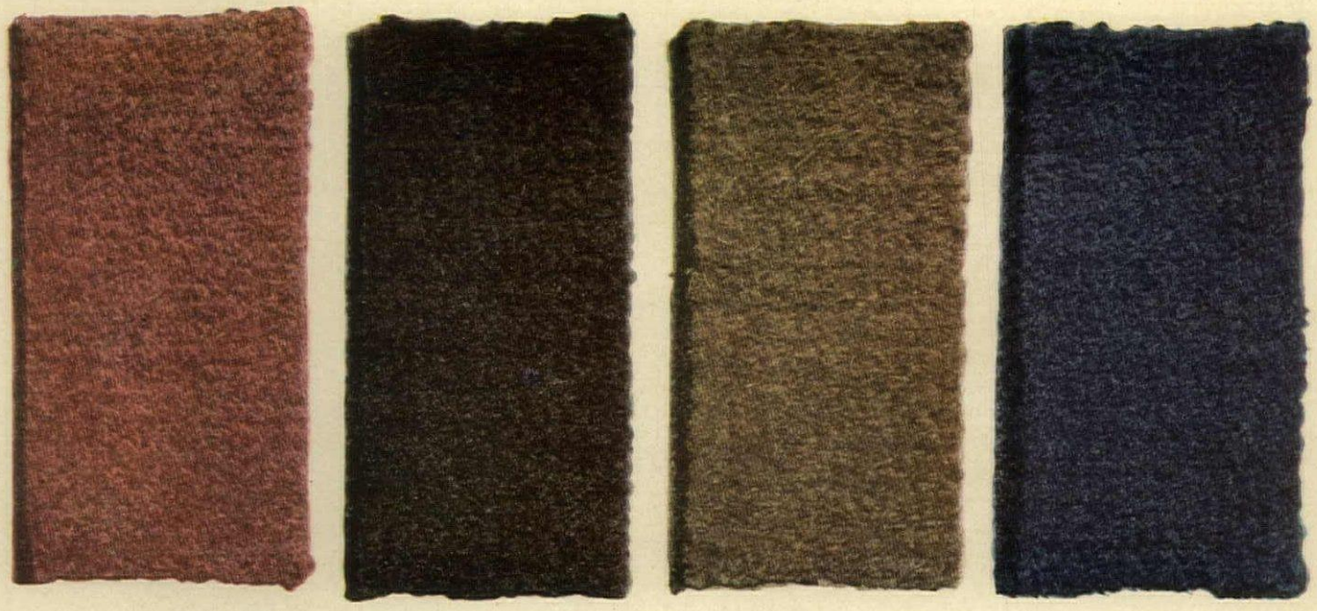

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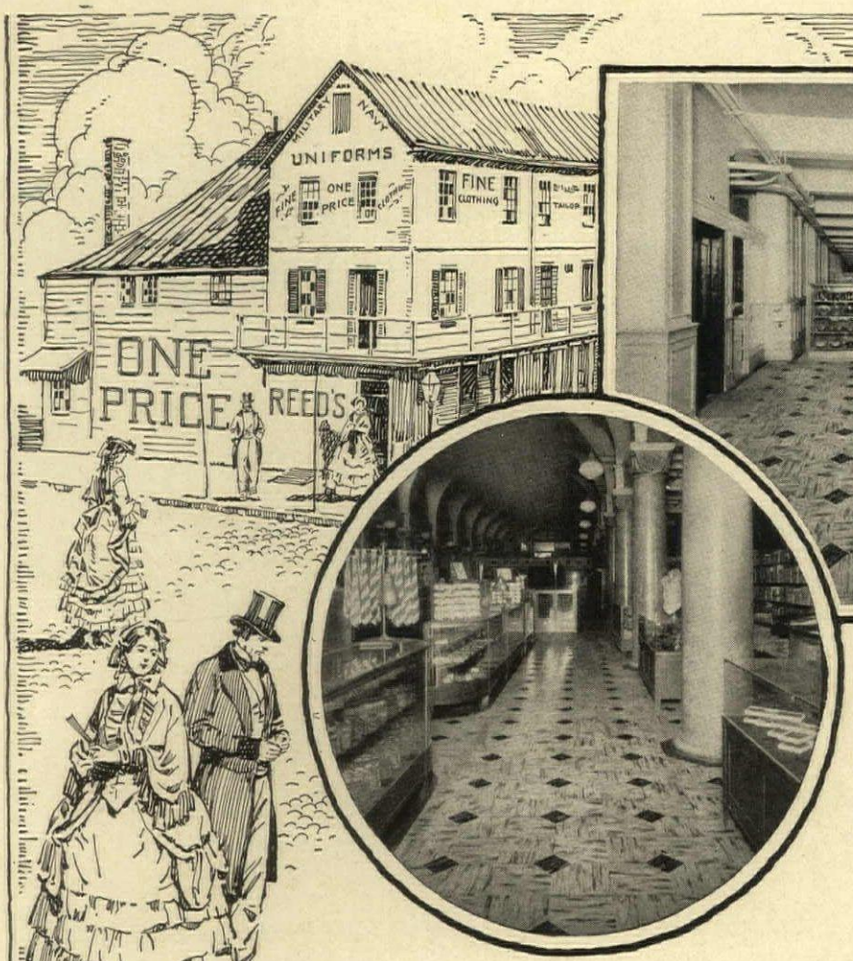

GOLD Seal Marble-ized Tile in the store of Jacob Reed & Sons, Philadelphia, Pa.

This new BONDED FLOOR differs from other marbleized materials in that it is both washable and waxable. Waxing not only adds years to the floor's term of service but also gives it a soft, lustrous sheen that greatly enhances its beauty.

The *oldest* store and the *newest* floor

One hundred years of progress! In 1826, a small tailoring shop—in 1926, Jacob Reed & Sons, recognized as leading clothiers in Philadelphia, and known over the country.

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BONDED FLOORS COMPANY, INC.

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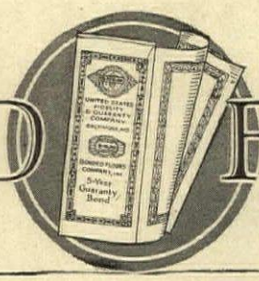

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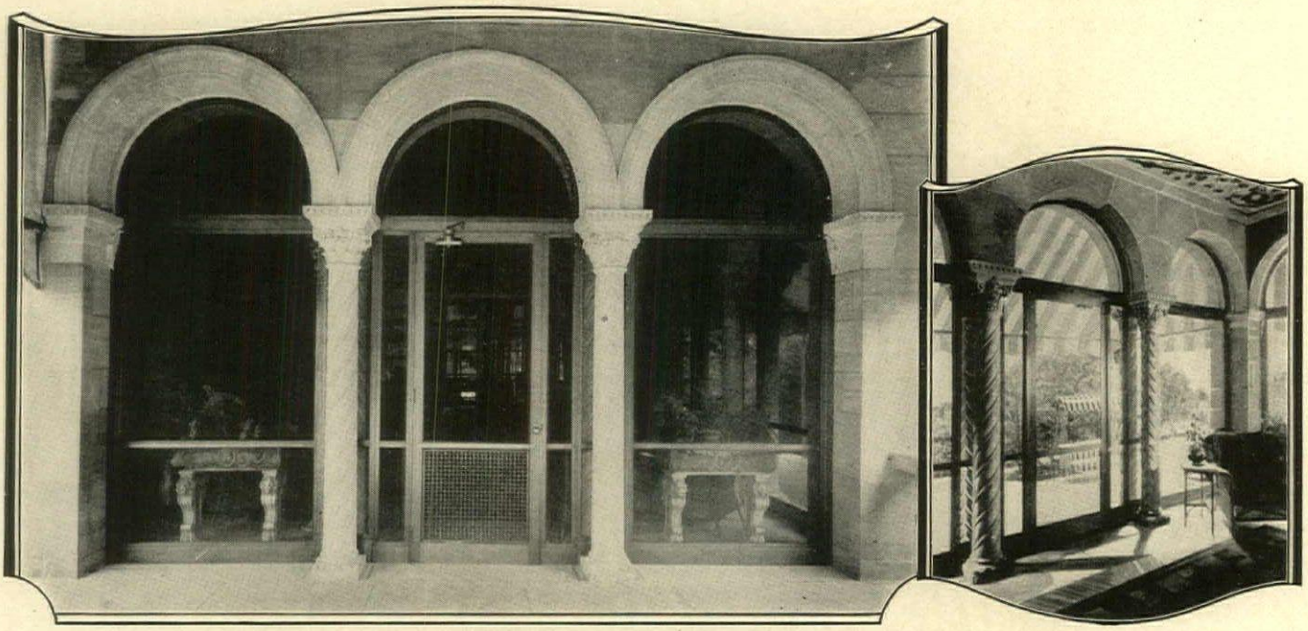

Porch of Edw. F. Fisher, Detroit, Mich. Richard H. Marr, Architect. All-Bronze screen construction

A fine example of Higgin screening

THIS beautiful porch suggests what pleasing effects may be secured when the architect and the Higgin service-man cooperate.

The narrow bronze frames are unobtrusively ornamental, perfectly in keeping with the marble and stone, and equally as durable. The fine-mesh bronze cloth never needs painting and is held smoothly and permanently taut on the frames by splines set into the frame with a driving fit, preventing sagging and bagging.

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The Higgin service-man in your city can be of real advantage to you. He has specialized data and experience on screens and weather strips that should be utilized by your staff.

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Look in your telephone or city directory for the address of your local Higgin Service Office, or write to the home office direct.

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Screens for casements — wood or metal opening in.

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Screens for double hung windows.

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Weather strips for casements opening out.

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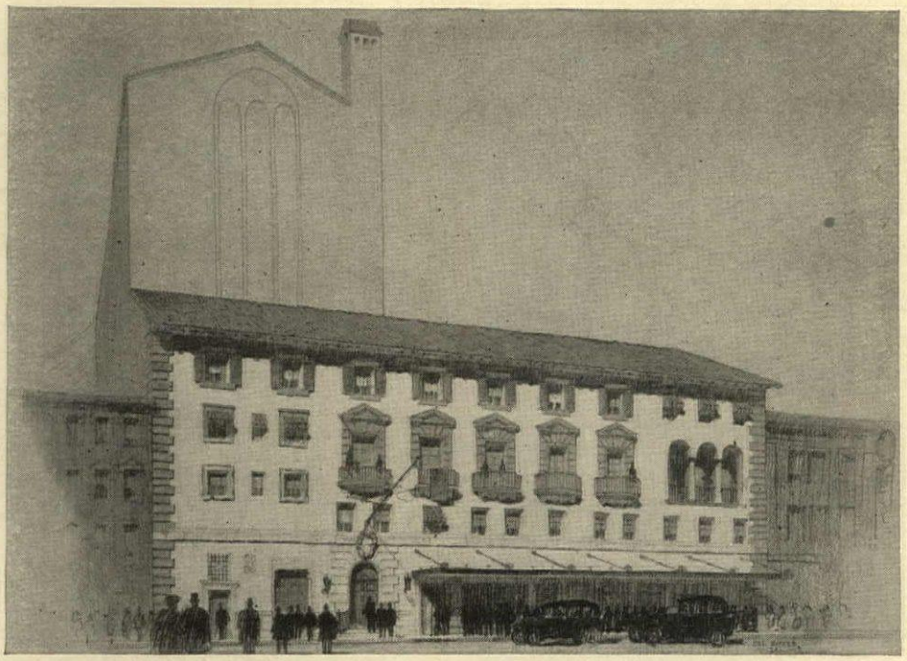

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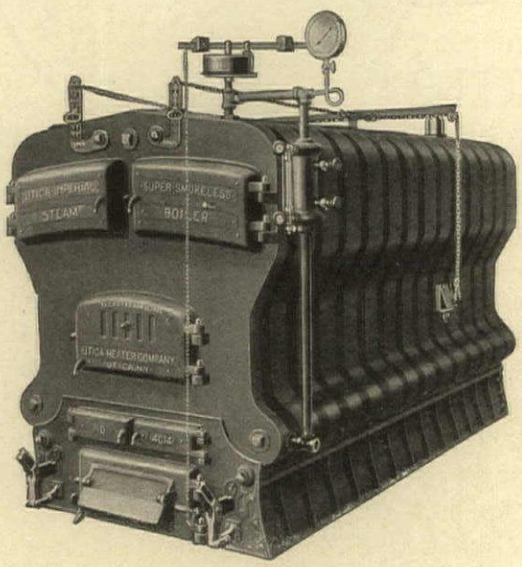

Exterior View of Boiler

UTICA-IMPERIAL SUPER-SMOKELESS Boilers protect this building against high fuel costs by being able to utilize the cheape t available fuel. They will burn even the poorer grades of soft coal without smoke and with the highest efficiency, utilizing as valuable fuel the smoke and soot ordinarily wasted up the chimney in costly clouds. They have proved remarkably efficient for oil-burning, and will utilize successfully hard coal, coke and other fuels—thus protecting the Building Owner against any fuel situation. Utica-Imperial SUPER-SMOKELESS Boilers are an insurance policy against high fuel costs and fuel emergencies.

UTICA-IMPERIAL

SUPER-SMOKELESS BOILERS

Manufactured by the

UTICA HEATER COMPANY, Utica, N. Y.

Sales Offices in the Principal Cities

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Magnificent New Arlington Hotel, Hot Springs National Park. Finished throughout in Arkansas Soft Pine Woodwork.

Arkansas Soft Pine

SATIN-LIKE INTERIOR TRIM

For Fine Hotels and Apartments

IN this meritorious woodwork, you have these specific advantages: an extremely close, fine grain; an elastic fibre which actually covers finishing nails; freedom from rosin or pitch, with attendant absorbing qualities uniform throughout the area; a surface which sands to the smooth texture of plate glass upon which the painter may do his best work; a finished woodwork with which you may execute your commission to the utmost satisfaction of the man who pays for it.

Arkansas Soft Pine is produced abundantly. It costs less than rarer woods of no greater merit. It costs more than others of less merit. At moderate cost it provides superfine woodwork. It can be enameled, or stained and rubbed, with definite certainty that the finished work will be exactly what you intend.

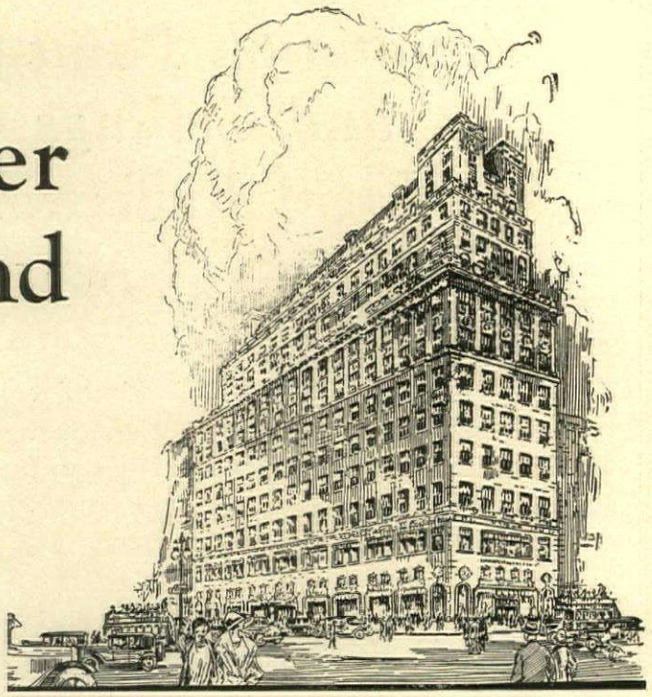
Our finished samples and natural panels enable you to confirm these statements. Our handbook and finishing instructions equip you to follow them. These are yours for the asking, without obligation. Send in your request today. See Sweets catalog, pp. 1230-31.

Arkansas Soft Pine is trademarked and sold by dealers and planing mills east of the Rockies

ARKANSAS SOFT PINE BUREAU

801 Boyle Bldg. Little Rock, Ark.

Fifth Avenue prefers Carrier Air Washers and "Buffalo" Fans—



Where New York builds its finest structures, where all that is modern may be seen, where beauty, comfort and utility approach perfection, in short—on Fifth Avenue, Carrier Air Washers and Buffalo Fans will be found in a large percentage of the newer buildings.

This popularity is not accidental nor is it due to low price. Efficiency and long-life were the first considerations in every installation, and quiet operation and simplicity were essential.

If you do not have our catalogs in your files, a line will bring them.

McCutcheon's—

The beautiful new McCutcheon store, opened October 28, 1925, where Buffalo fans distribute tempered air for heating.

A few of the many others

Among other Fifth Avenue structures where Buffalo-Carrier equipment will be found are:

BURTON BUILDING
B. ALTMAN COMPANY
LORD & TAYLOR
WALLACH BROTHERS
POSTAL LIFE INSURANCE BUILDING
E. B. MEYROWITZ
E. M. GATTLE COMPANY
SAKS & COMPANY

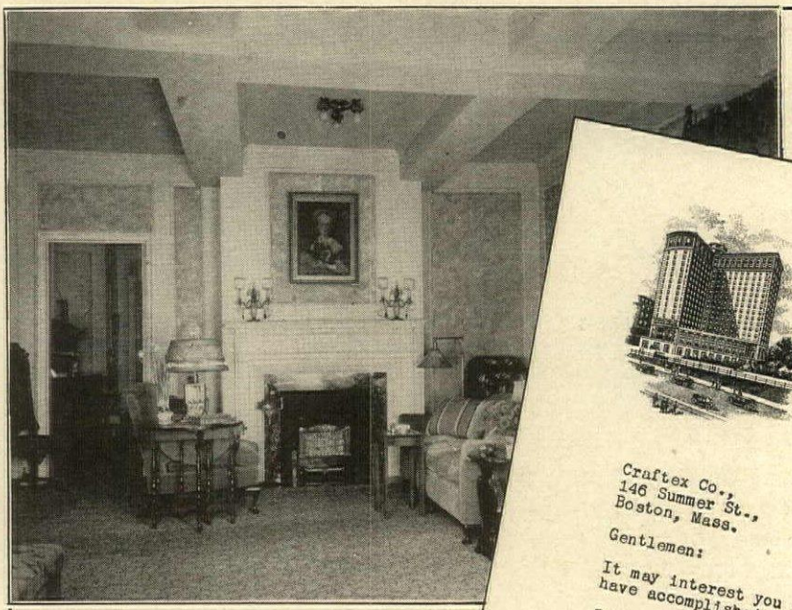
BUFFALO FORGE COMPANY

Carrier Air Conditioning Co., of America

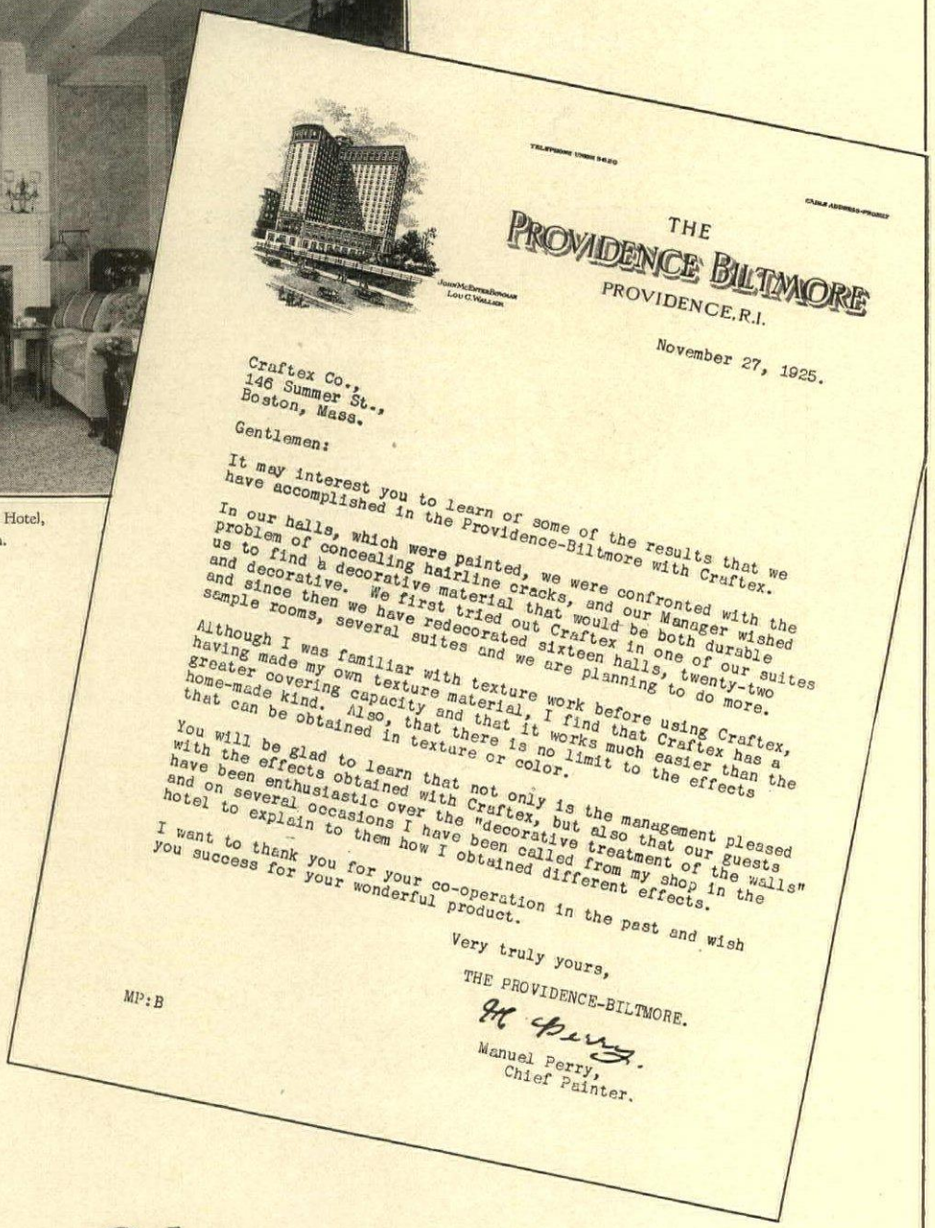
444 BROADWAY BUFFALO, NEW YORK

In Canada—Canadian Blower & Forge Co., Ltd. Kitchener, Ont.

"Buffalo"-Carrier for complete heating-ventilating



Craftex walls in apartment in Providence Biltmore Hotel, Providence, R. I. Warren & Wetmore, Arch.



THE PROVIDENCE BILTMORE
PROVIDENCE, R.I.

November 27, 1925.

Craftex Co.,
146 Summer St.,
Boston, Mass.

Gentlemen:

It may interest you to learn of some of the results that we have accomplished in the Providence-Biltmore with Craftex.

In our halls, which were painted, we were confronted with the problem of concealing hairline cracks, and our Manager wished us to find a decorative material that would be both durable and decorative. We first tried out Craftex in one of our suites and since then we have redecorated sixteen halls, twenty-two sample rooms, several suites and we are planning to do more.

Although I was familiar with texture work before using Craftex, having made my own texture material, I find that Craftex has a greater covering capacity and that it works much easier than the home-made kind. Also, that there is no limit to the effects that can be obtained in texture or color.

You will be glad to learn that not only is the management pleased with the effects obtained with Craftex, but also that our guests have been enthusiastic over the "decorative treatment of the walls" and on several occasions I have been called from my shop in the hotel to explain to them how I obtained different effects.

I want to thank you for your co-operation in the past and wish you success for your wonderful product.

Very truly yours,
THE PROVIDENCE-BILTMORE.
M Perry.
Manuel Perry,
Chief Painter.

MP:B

The Providence Biltmore Writes Us a Letter

OUR architectural service department will be glad to confer with you on any decorative problem you may have in mind.

CRAFTEX COMPANY

146 Summer St., Boston, Mass.

220 South State St. Chicago
285 Madison Avenue New York
457 Kingshighway St. Louis, Mo.
605 Bona Allen Bldg. Atlanta, Ga.

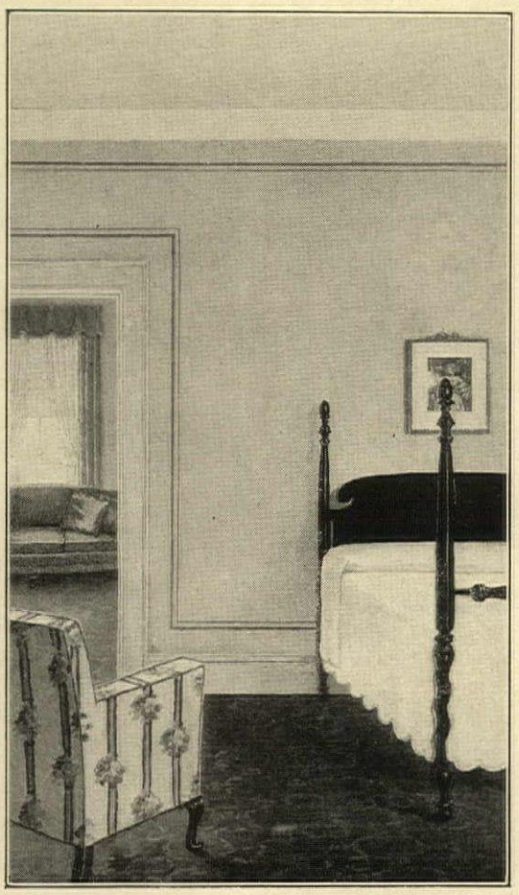
Providence Biltmore. Warren & Wetmore, Arch.

Interesting Interiors

By M. REA PAUL, *Consulting Colorist*

THIRD of a series of articles discussing practical uses of the newer wall finishes obtainable with Dutch Boy white-lead and Dutch Boy flatting oil

THE STRIPING EFFECT



A hotel bedroom in which the striping effect has been used to advantage. Reproduced from full color painting appearing in "Decorative Possibilities of Paint"— a valuable new booklet which will be sent you upon request.

THE simple but interesting wall treatment obtained in this hotel bedroom is known as the Striping Effect. It consists of a narrow banding line of some harmonizing color of greater strength and depth of tone than the color applied to the side wall. The line parallels the trim, being applied a few inches from it.

Where an interior has been treated in a single color, striping lines add a distinctive touch of additional color interest to the walls. Striping is an easy effect to secure. The line is indicated by snapping a taut chalked string against the wall surface. Then the stripes are struck off by means of a lining brush or added by tamping on color through the openings of a stencil. If a glazed finish is employed, a border motif may be obtained by the wiped stencil method.

Rooms for which it is suited

The Striping Effect is well suited for any interior where a simple yet interesting treatment is desired. In the home, it may be used for the bedroom, kitchen, or reception hall; it is frequently used in the bedrooms of the club or hotel; in the reception room of the office; and in the waiting room of the railroad station.

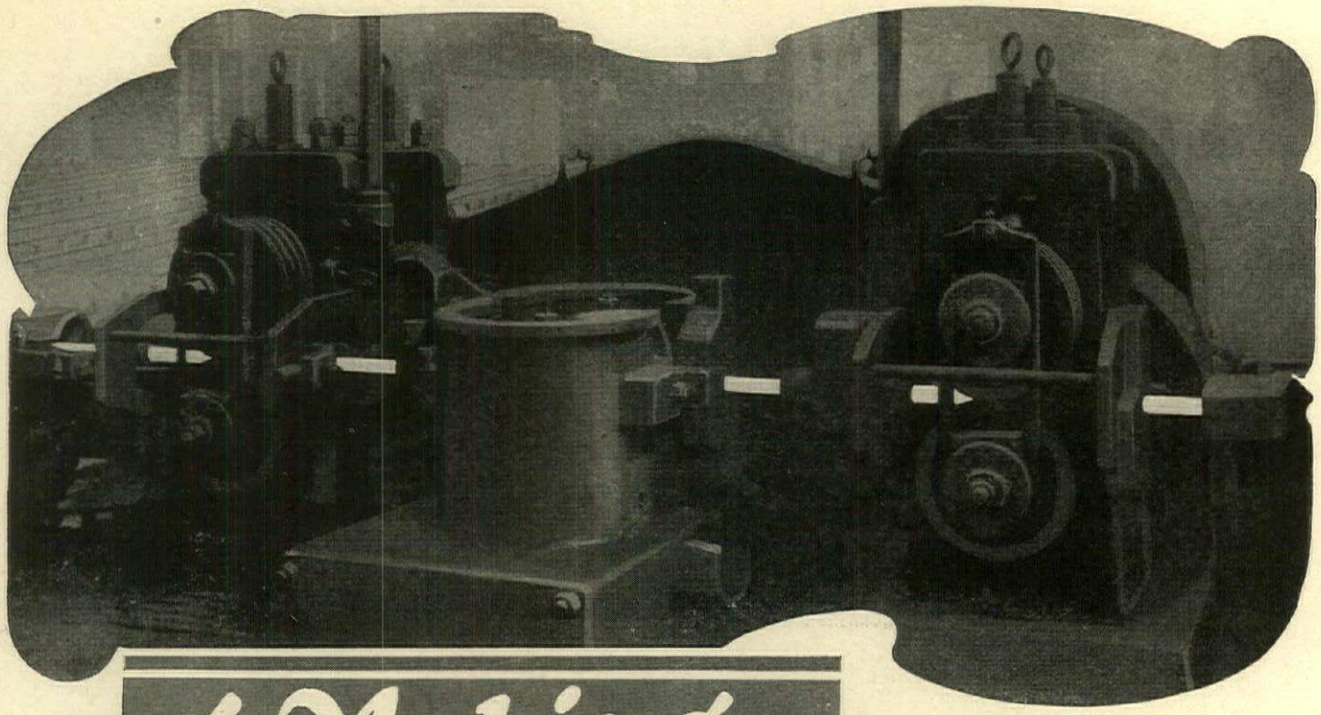
Free booklet on Decorative Painting

A new booklet, "The Decorative Possibilities of Paint," containing full color illustrations and complete instructions on how to obtain many interesting wall finishes with Dutch Boy white-lead and Dutch Boy flatting oil, has just come off the press. You may secure a copy by writing our nearest branch.

Color specialists in the Department of Decoration of National Lead Company, will be glad to assist you, without charge, in planning decorative wall treatments you have in mind. They will help select the schemes of treatment, submit color suggestions and color renderings for your approval and, if you wish, assist in the writing of your specifications. Address the Department of Decoration in care of our nearest branch.

NATIONAL LEAD COMPANY

New York, 111 Broadway; Boston, 131 State Street; Buffalo, 116 Oak Street; Chicago, 900 West 18th Street; Cincinnati, 659 Freeman Avenue; Cleveland, 820 West Superior Avenue; St. Louis, 722 Chestnut Street; San Francisco, 485 California Street; Pittsburgh, National Lead & Oil Co. of Penna., 316 Fourth Avenue; Philadelphia, John T. Lewis & Bros. Co , 437 Chestnut Street



Making Good Pipe Better

The pipe passes from the transfer table to these special rolls where it is reduced slightly in diameter and increased in length. By thus rolling the pipe, the hardened welding-scale is loosened, drops from the pipe walls and is later removed by being either washed or blown out.

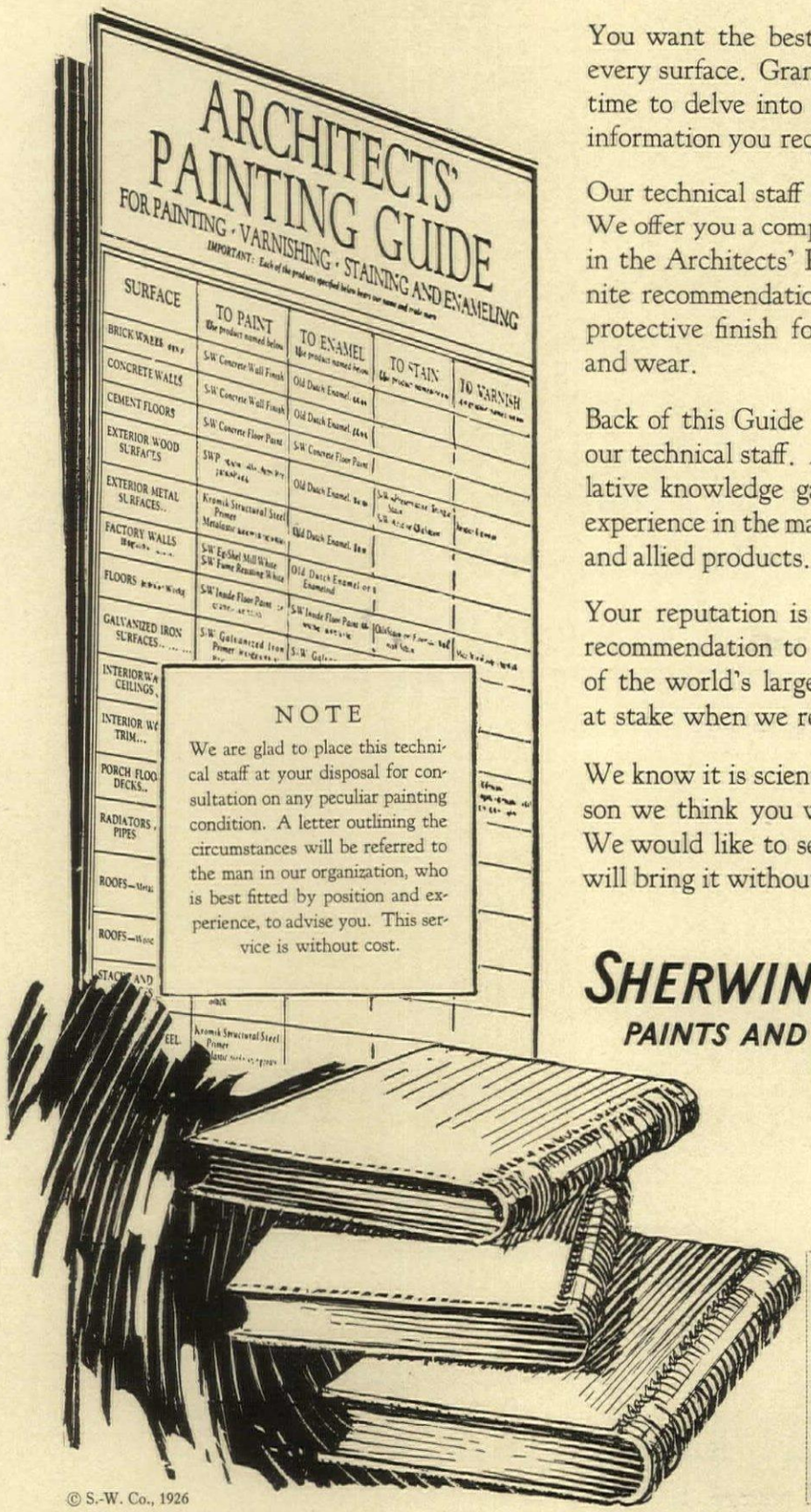
AN important link in the chain of manufacture is the series of specially designed rolls pictured above, by which "NATIONAL" Butt-weld Pipe is made *free from scale.* Here, entirely by mechanical means, the little patches of scale, which caused pipe consumers so much "grief" before this process was invented, are eliminated.

When the pipe leaves the welding furnace, and while still hot, it is passed through the sizing rolls and then across a cooling or transfer table to these scale free rolls. The sizing rolls slightly reduce the diameter and stretch the pipe lengthwise, and the welding-scale (which forms on the skelp in the furnace) is partly loosened. In the specially designed scale free rolls, the pipe is further reduced in size and lengthened. This working of the metal laterally and longitudinally breaks off the scale which has become brittle in cooling so that it falls from the pipe walls and is later blown out by compressed air or washed out with water. This process is applied to "NATIONAL" Butt-weld Pipe (sizes ⅛ to 3-inch).

Pipe free from scale has clean, smooth surfaces for galvanizing or other coatings; friction losses caused by rough interior surfaces are reduced, and the working capacity of the pipe is greatly increased; the clogging of pipe or small orifices and damage to valve seats and delicate apparatus by loose scale in the line are practically eliminated, and the tendency to pitting is minimized. For details of this process and its advantages, write for a copy of Bulletin No. 7.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.
DISTRICT SALES OFFICES IN THE LARGER CITIES

A Novel Way of Securing the Paint Experience of Experts—



You want the best and most durable finish for every surface. Granted! Usually you do not have time to delve into technicalities and dig out the information you require. Granted again!

Our technical staff has done this digging for you. We offer you a compact fund of paint information in the Architects' Painting Guide. It gives definite recommendations for the most durable and protective finish for every condition of surface and wear.

Back of this Guide is the practical knowledge of our technical staff. And back of *them* is the cumulative knowledge gained through sixty years of experience in the manufacture of paints, varnishes and allied products.

Your reputation is at stake when you make a recommendation to your client. The reputation of the world's largest manufacturers of paints is at stake when we recommend this Guide to you.

We know it is scientifically correct. For that reason we think you will find it of practical value. We would like to send you a copy. The coupon will bring it without delay.

SHERWIN-WILLIAMS
PAINTS AND VARNISHES
COVER THE EARTH

The Sherwin-Williams Co., Dept. D
880 Canal Road, Cleveland, Ohio

Without obligations, please send me a copy of the S-W Architectural Painting Guide.

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Address.....

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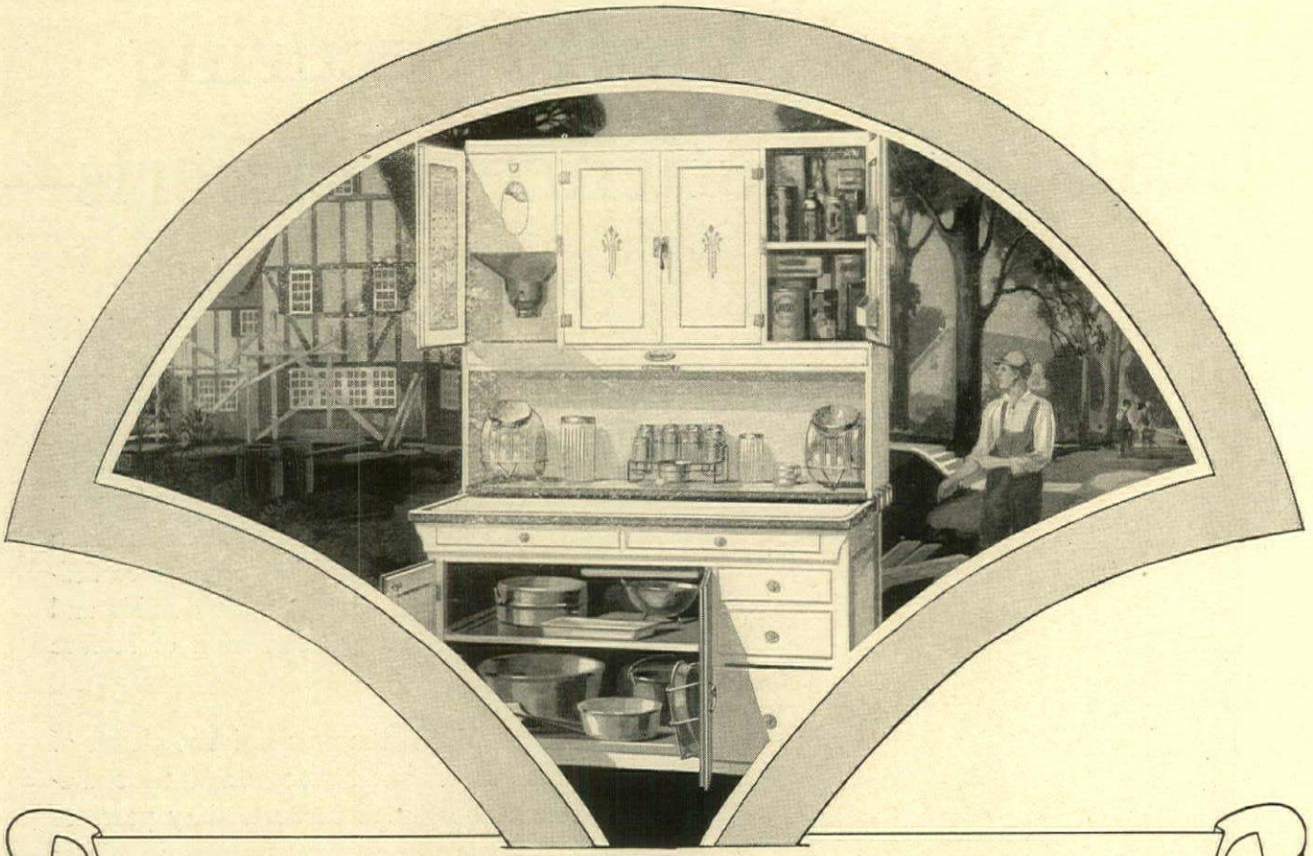


Interesting comparison of costs is set forth in our new booklet

In appraising the modern cabinet, with its known beauty and convenience, as standard equipment for the kitchen, it is logical to consider the item of cost. Pertinent facts and figures are presented in our booklet.

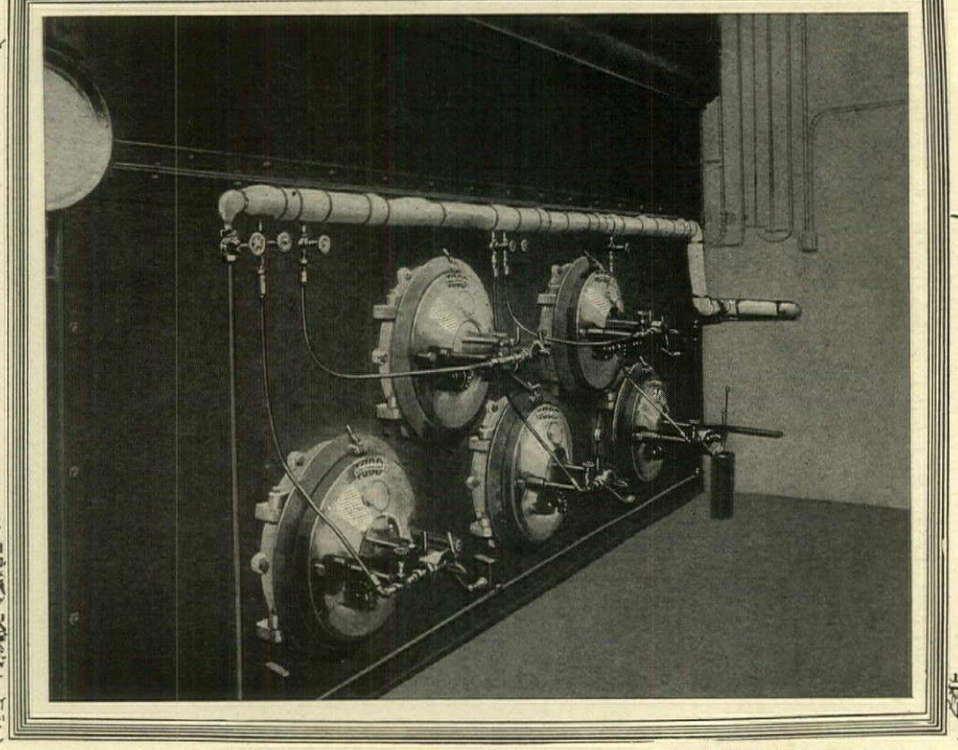
For a modest seven-room house, the conventional arrangement of built-in shelves, with cupboards below, is estimated at $75 to $100, with many installations running into much larger expenditures.

Some architects apparently do not realize that a high class cabinet, modern to the minute, may be figured at a considerably lower price range. If the fixed construction were equipped with porceliron work-surface, movable flour bin, metal bread box and numerous other cabinet features, cost comparisons would be still more striking.

The built-in shelves are the product of hand work, with units purchased in small lots. The surpassing value in the cabinet is made possible by quantity production and precision methods of manufacture. The cabinet is more sanitary, more graceful in appearance, more in keeping with the spirit of the modern kitchen.

Many architects now allow space for the cabinet in the kitchen floor plan. After that, provision is made for utility closets or additional shelves if needed. To specify Sellers is to make sure of getting a beautiful cabinet built to the highest standards of design and construction. Booklet with illustrations and detailed descriptions sent free to architects and builders upon request. G. I. Sellers & Sons Company, Elwood, Indiana.

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual



Todd Oil Burner Installation in the Plant of R. H. Steele Laundry Co., Jersey City, N. J.

Who Knows Most about Oil Burning?

The great increase in the use of oil as a fuel, which has taken place during the past few years, started in the marine field and spread rapidly to land industrial plants.

The experience of Todd Shipyards Corporation has been extensive in both these fields. The marine field alone includes the installation of oil burning equipment in over 2,500 vessels.

Such an experience, the services of our expert engineers, and the extensive experimentation which has accompanied all the work of this corporation, have resulted in a perfected type of oil burner.

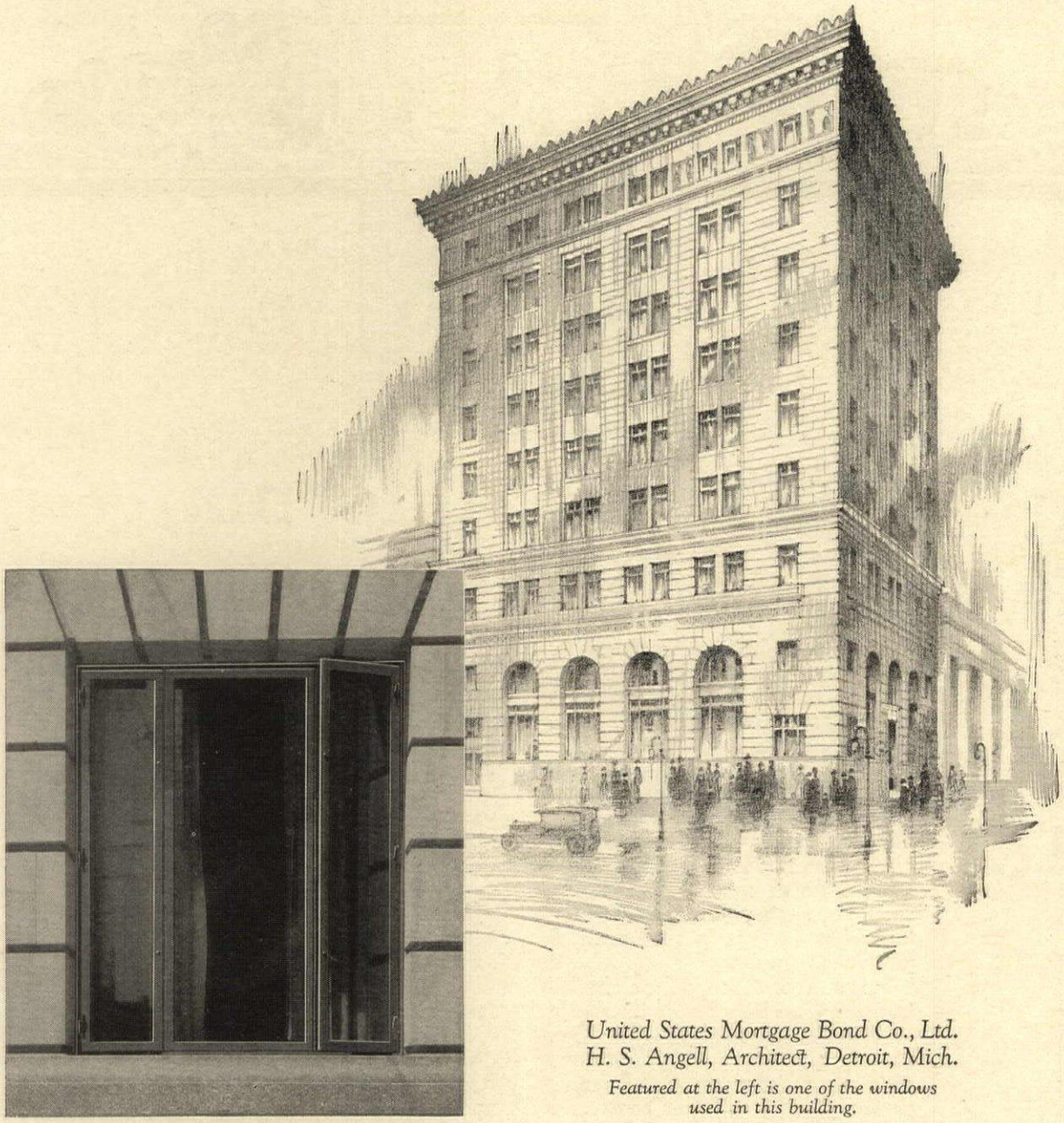
These burners are peculiarly suitable for the burning of all types of oil, including the heavy Mexican oils, which are high in heat value and low in cost.

If your determination to modernize your plant, has interested you in fuel oil, TODD OIL BURNER AND ENGINEERING CORPORATION is at your service, and will be very glad to correspond with you regarding your problem.

TODD DRY DOCK ENGINEERING
& REPAIR CORPORATION

Foot of 23rd Street, Brooklyn, New York

TODD
NEW YORK, U.S.A.



United States Mortgage Bond Co., Ltd.
H. S. Angell, Architect, Detroit, Mich.

Featured at the left is one of the windows used in this building.

WHEN the architect and owners of the above building decided to use Kawneer Solid Nickel Silver Windows their verdict was based largely upon economy.

The original cost of Kawneer windows is the final cost. The sturdy mouldings which are formed from heavy gauge rustless metal are securely welded at all joints. Painting and finishing or future replacement due to corrosion, is eliminated.

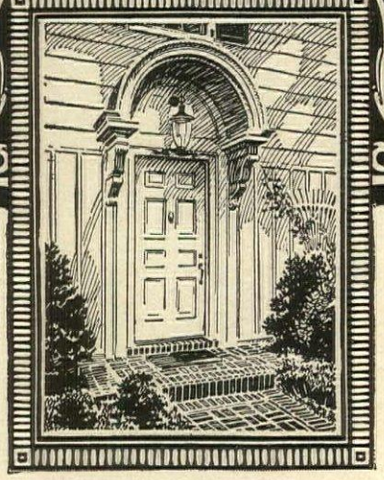
In addition to this the interlocking of sash and jamb is so positive that the passage of cold air through these points is rendered impossible, thus reducing fuel costs.

These features tend to minimize the upkeep and operating costs of any building.

Information pertaining to Windows or Store Fronts will be gladly furnished.

SEE OUR CATALOGUE IN SWEET'S

THE Kawneer COMPANY
NILES, MICHIGAN



ESSCO California White Pine

THOSE who have used lumber manufactured from timber on our tract testify as to its unusually soft texture, and the fine even grain of the wood.

Architects and builders are unanimous in their endorsement of its outstanding characteristics which are: soft and workable texture; close, even and uniform grain; pale, light tones in color; light weight; smooth, satiny surface without "raised grain" with a minimum of pitch or resin.

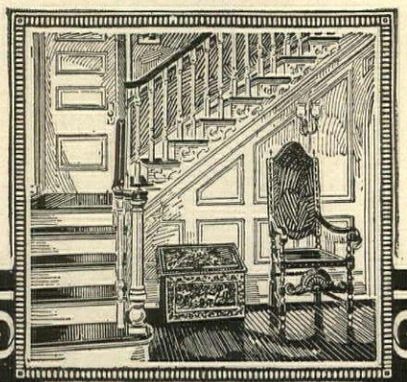
It is a favorite wood for all building purposes because of its ample strength and durability. It does not warp, swell, shrink, check, or split. It takes enamel and paint, perfectly, requires fewer coats and does not discolor enamel or paint. It cuts easily and smoothly, with or across grain—easy to fit hardware. It holds nails and screws firmly. It holds a sharp edge in moulding and detail work.

Essco California White Pine is used for all building purposes including doors, interior and exterior, window sash, window and door frames, interior finish and trim, interior panels, mouldings, ceiling and partition, built-in woodwork, exterior siding and trim, porch columns, subflooring, sheathing, framing, lath, farm buildings and concrete frames.

Essco California White Pine is produced and sold under the usual high standards of *Essco* manufacture and service.

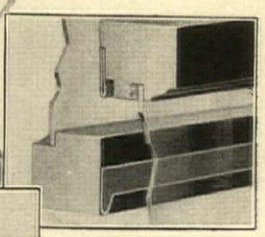
EXCHANGE SAWMILLS SALES CO.

Kansas City, Mo.

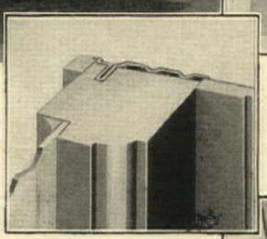


Chamberlin *assumes full* Responsibility *for* Installation – *Results Permanently Guaranteed*!

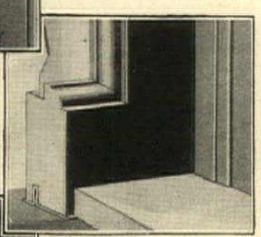
Washington School, St. Paul, Minn. F. X. Tewes, City Archt., A. C. Thomas Guthrie, Construction Co. Contrs., completely equipped with Chamberlin metal weather strips and caulking.



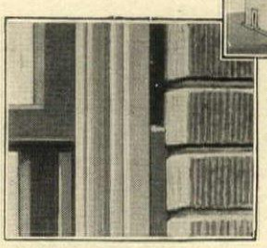
Chamberlin "Meeting Rail" is constructed of two heavyinterlockingweather-proof strips.



Famous Chamberlin "Track" strip with its corrugations on which the window slides.



Flanged sill strip dovetails with slotted groove in the sash—head strip is identical in design.



Chamberlin Caulking prevents all possible leakage of cold air, rain and dust around the frame.

YOU safeguard yourself and clients when you specify Chamberlin Metal Weather Strips—the accepted standard. Chamberlin installs its weather strips for you—takes full responsibility for their installation—and guarantees both product and results for the life of the building. For 33 years Chamberlin has maintained this manufacture—installation—lifetime guarantee policy. 20,000,000 windows and doors, and close to a million customers furnish striking evidence to its soundness. Take advantage of the service and skill Chamberlin offers you. The nationwide Chamberlin organization is at your disposal. Estimates are gladly given without obligation.

Write for Chamberlin Literature

CHAMBERLIN METAL WEATHER STRIP CO.
West Lafayette Blvd., Detroit, Michigan

100 Sales and Service Offices throughout the United States

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"SINCE 1893-THE STANDARD"

CHAMBERLIN
METAL WEATHERSTRIP CO.
West Lafayette Blvd. Detroit, Mich.

Please send copy of your new detail book, also copy of illustrated booklet.

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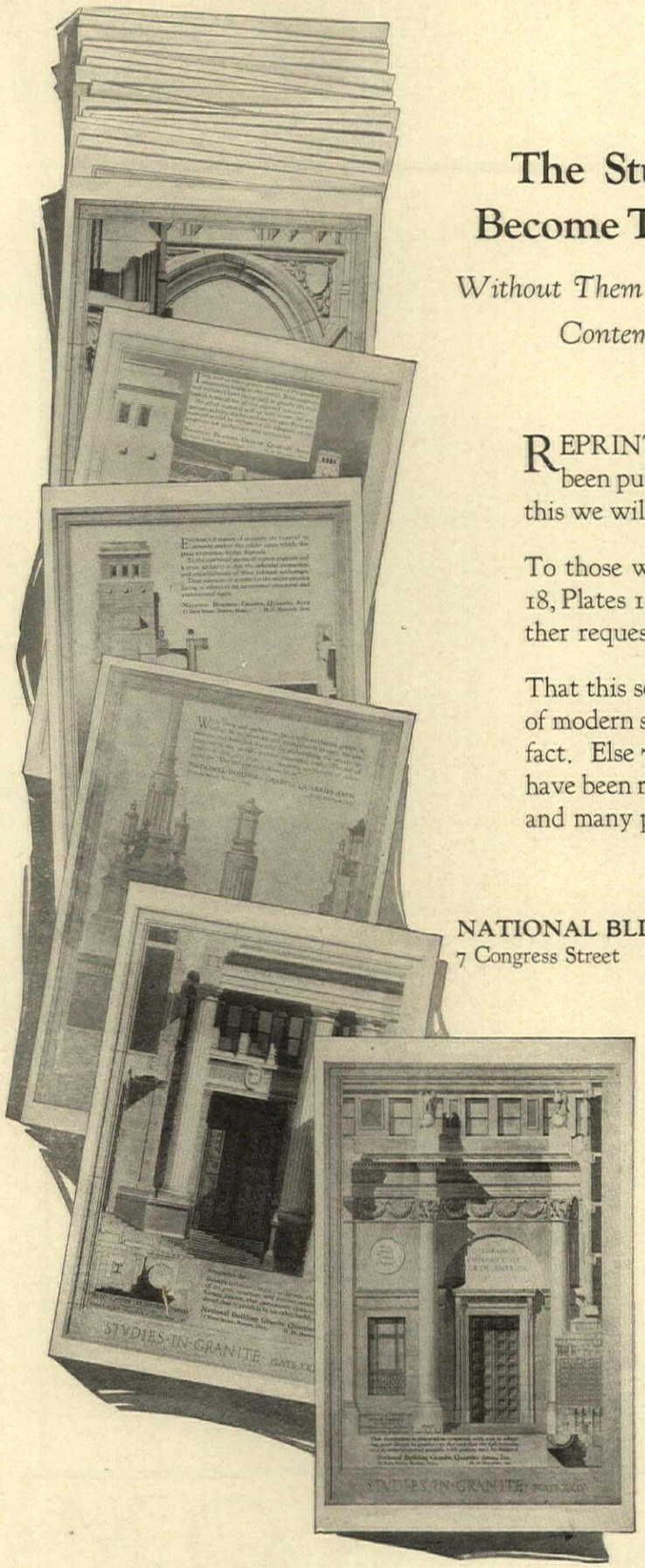

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Without Them You Miss a Valuable Contribution to Contemporary Architectural Literature

REPRINTS of the Studies in Granite have now been published in file size portfolios. A copy of this we will be glad to send to anyone interested.

To those who have already received Plates 11 to 18, Plates 19 to 24 will be forwarded without further request.

That this series of twenty-four Studies in Granite of modern structures has great interest is a proven fact. Else 7,000 requests for the series would not have been received from all over the United States and many parts of the world.

NATIONAL BLDG. GRANITE QUARRIES ASSOCIATION
7 Congress Street Boston, Mass
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Please send to the address below the portfolio of Studies in Granite that are now ready.

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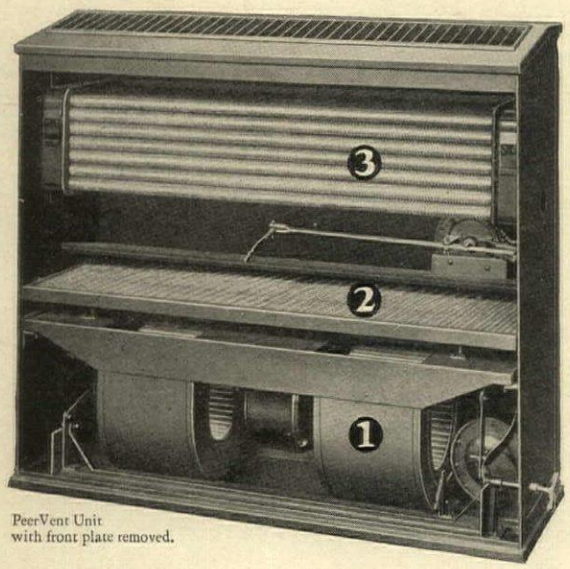
PEERVENT Unit System

Heating and Ventilation

for schools, libraries, hospitals, churches, club rooms, dormitories, theaters, banks, offices, auditoriums, and other buildings.

THE PeerVent System of Heating and Ventilating consists of a series of units—one unit usually for each room requiring ventilation. Each unit operates independently and each room therefore gets exactly the required amount of heat and fresh air—without waste of coal or power.

Operation is very simple. Two noiseless motor driven fans (1) draw in fresh air from out-of-doors, through an opening in the back of the unit, and force it upward through the unit. An air filter (any type, specified separately) cleans the air as it is blown upward from the fans. A simple mixing damper (not shown in the picture) swings back and forth under hand or thermostat control and guides the incoming air through the radiator (3), or around the radiator, or partly around and partly through it. Perfect control of room temperature is thus obtained. The volume of ventilation is constant.



PeerVent Unit with front plate removed.

The standard unit is usually placed beneath a window—it is only 36 inches high—but many adaptations are available, including concealed and semi-concealed types, to meet a wide range of architectural requirements.

Units of various sizes and capacities are furnished. For schools the usual standard of ventilation is 30 cubic feet of air per minute for each pupil. A radiator large enough to heat this volume of incoming air to any desired degree, from very low outdoor temperatures, is provided in each PeerVent Unit.

Ordinary direct radiation is commonly installed in addition to the PeerVent Units, but the direct radiation is used only for extreme conditions, such as exceptionally cold weather.

Cold rooms can be heated quickly with PeerVent Units before being occupied by means of recirculation. The recirculation dampers (operated by hand at the unit or pneumatically from a remote point) shut off the flow of incoming air from out-of-doors and allow the fans to draw in air from within the room, through a grille near the bottom of the unit. Thus the air in the room is recirculated through the unit until it is warmed to the required temperature.

INDUSTRIAL UNITS. For use in factories, garages, etc., a special unit is available. Details and pictures will be sent on request.

More information, fully illustrated, is given in the PeerVent Catalogue. Write for it (on your letterhead, please); or wire collect if you wish to see our local sales representative.

PEERLESS UNIT VENTILATION CO., INC.

Pioneers in Unit Ventilation

Skillman Avenue and Hulst Street

Long Island City, N. Y.

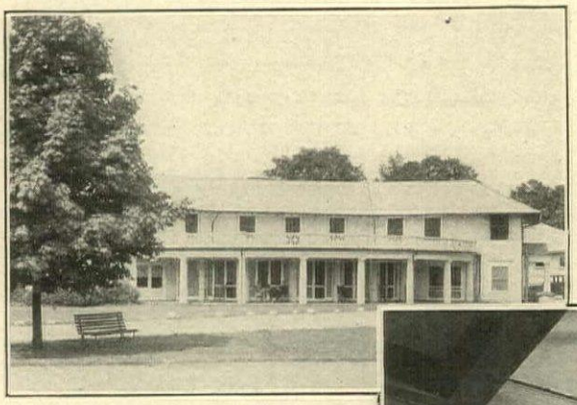
CHICAGO 808 Monadnock Bldg.	PITTSBURGH 339 Second Avenue	DES MOINES 520 Securities Building
BOSTON 100 Boylston St.	CLEVELAND 1836 Euclid Avenue	PORTLAND, ORE. 927 Board of Trade Bldg.
SPRINGFIELD, MASS. 196 Worthington St.	DETROIT 723 Lafayette Bldg.	TORONTO, CANADA Darling Bros., Ltd., 77 York St.

Write for Catalog
(on your letterhead, please)

Linseed Oil Gives Paint Its Wearing Quality

The Amount of Linseed Oil in

LINCRUSTA-WALTON



is equivalent to more than

20 COATS *of* PAINT

Lincrusta-Walton
TRADE MARK REGISTERED

The old plaster walls in the Grill Room of the Hackensack Country Club were covered with Lincrusta-Walton Pattern No. 604.

Creating not only the effect of wood paneling but securing also the protective and permanent features of wood

LINCRUSTA-WALTON CO.

Division Tait Paper and Color Industries, Inc.

HACKENSACK NEW JERSEY

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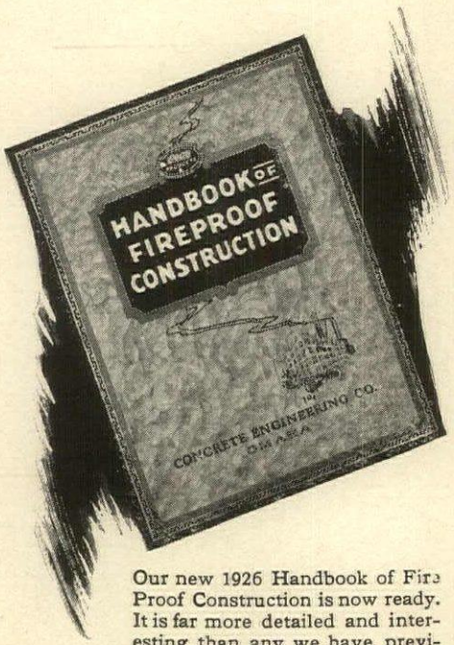
Ceco SUPER Service

That Means—

You Can Have

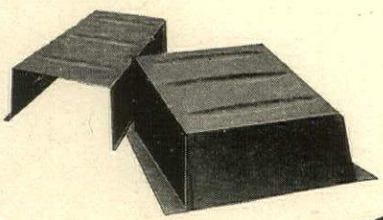
Quicker Fabrication and Shipment

CECO Super Service is all that the name implies. The speed of fabrication and shipment from our completely equipped warehouses listed below, and our field organization of thoroughly trained men to place and remove steelforms, is enabling our customers to make quicker progress on their jobs everywhere. Write, wire, or call us on your next order and let us show you what "Ceco Super Service" really is.



Our new 1926 Handbook of Fire Proof Construction is now ready. It is far more detailed and interesting than any we have previously published. A copy will be sent on request. Write for it today.

Meyer Removable Steelforms, one of the greatest achievements effecting the saving of concrete, steel, formwork, time and labor in modern building construction. Sold on rental basis only, including installation and removal. The savings effected are reflected in our prices.



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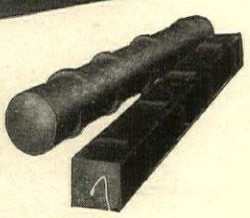

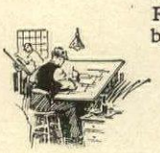

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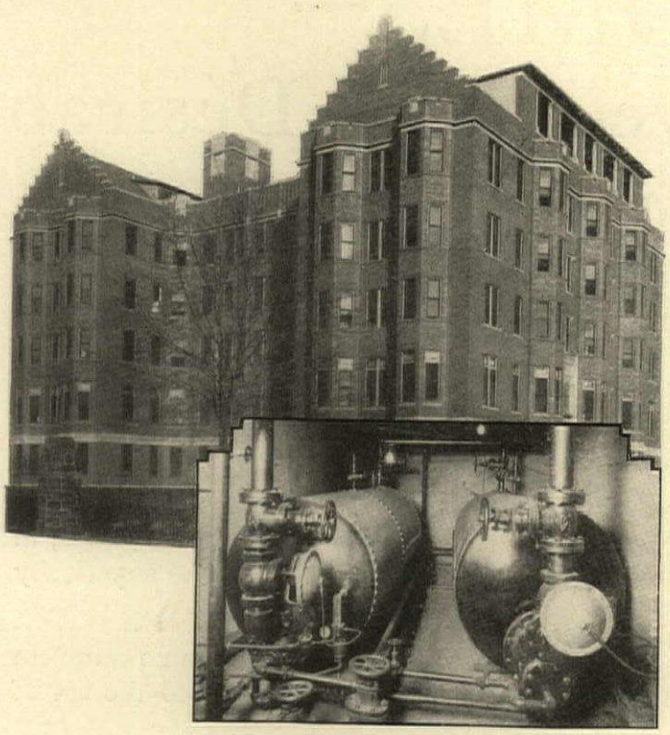

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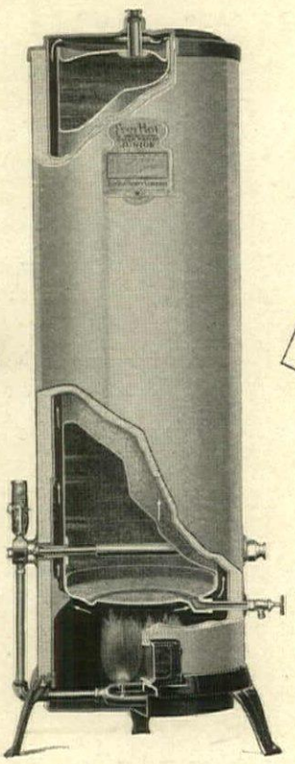

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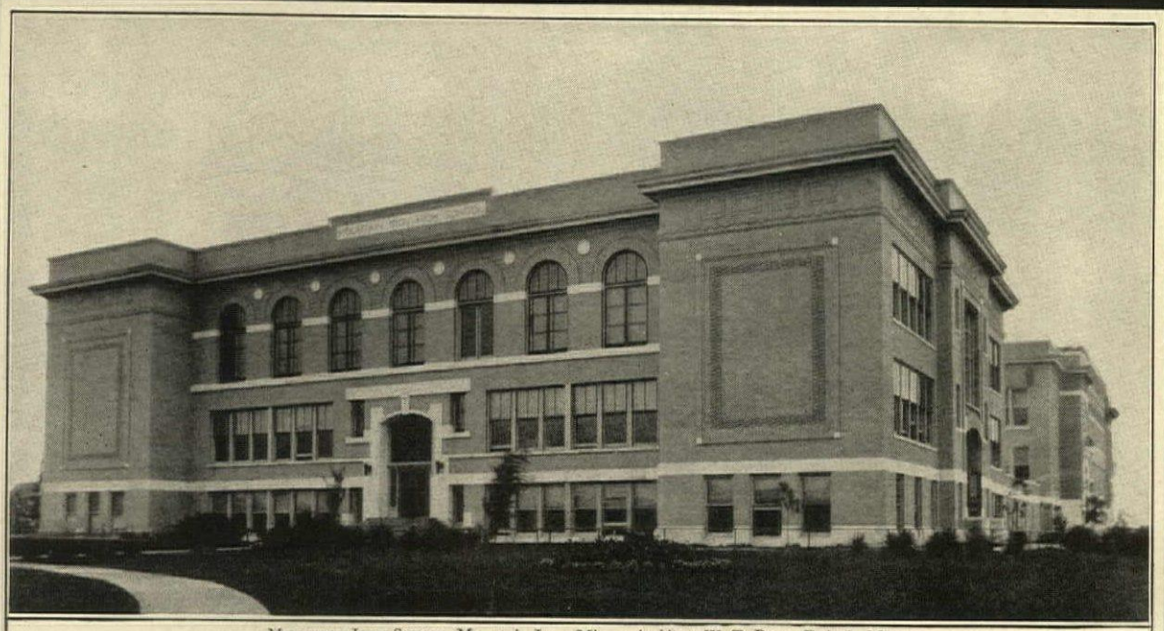

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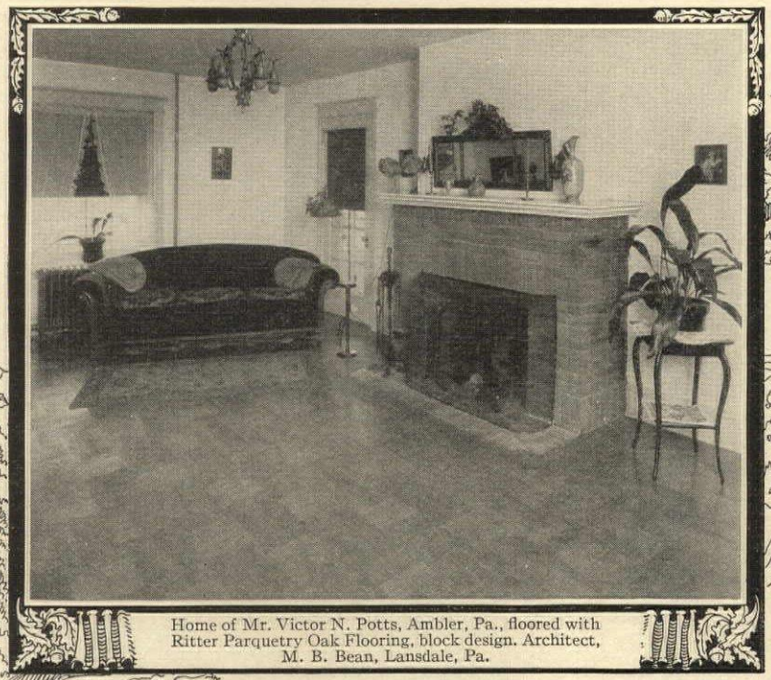

Home of Mr. Victor N. Potts, Ambler, Pa., floored with Ritter Parquetry Oak Flooring, block design. Architect, M. B. Bean, Lansdale, Pa.

Facts Worth Knowing About Ritter Appalachian Oak Flooring

THREE of the important reasons for the ease and economy with which Ritter Appalachian oak flooring can be laid, are: The excellent texture of all the timber used in its manufacture, the extreme care in air drying and kiln drying the lumber, and the safeguards taken to have the finished product reach the customer in the best possible condition.

SCIENTIFICALLY KILN DRIED. After being sufficiently air dried, the lumber is placed in modern kilns, under the observation of skilled kiln operators until uniformly dried to an average of from five to six per cent moisture content. It is then removed to a cooling place where it remains long enough to allow the wood fibers to become adjusted to a normal temperature before the lumber is manufactured into flooring.

STORED IN STEAM HEATED WAREROOMS. After the flooring has been manufactured, graded and bundled, it is kept, until shipment, in steam heated warerooms, in which uniform conditions of humidity and temperature are maintained, as a safeguard against the absorption of moisture.

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Ritter Flooring drives up tightly, nails readily, and makes a job of which the workman may be proud; substantial savings in time, labor and material are obtained and the finished floors give continuous service and delight to the owner.

Many architects and builders have learned that the excellent texture of Appalachian Oak from which Ritter Flooring is made, combined with painstaking attention to the seasoning, as well as accuracy of manufacture, care in grading and handling from completion of manufacture until loaded in cars for final destination, assure their obtaining Oak floors of the highest quality when Ritter Appalachian Oak Flooring is used.

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To be certain of getting beautiful, durable floors, specify Ritter Appalachian Oak Flooring, because consideration is not given grain, texture and color in the Standard Rules for Grading Oak Flooring.

See "Sweets" and "American Architect Specification Manual" for complete data on laying oak floors.

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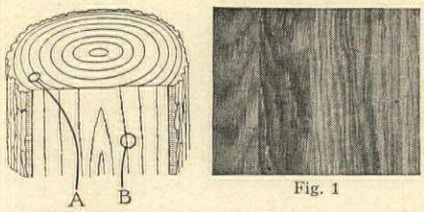

Fig. 1

Illustrations show the effect of timber growth upon flooring. Fast growth causes wide annular growth rings (A) which in turn produce the coarse grain (B). This is typical of much inferior oak flooring. (Fig. 1).

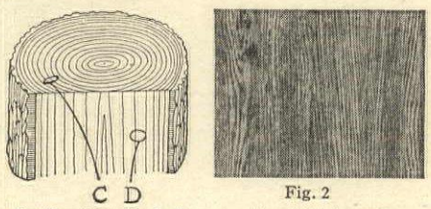

Fig. 2

On the other hand, slow growth, which depends on favorable climate, soil and drainage, results in close annular growth rings (C) which in turn produce fine, even grain (D), typical of all Ritter Appalachian Oak Flooring. (Fig. 2).

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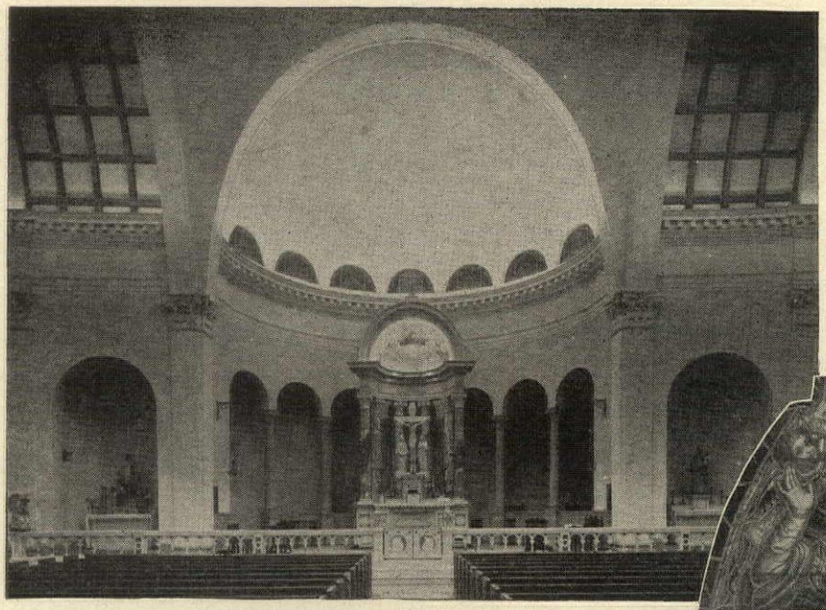

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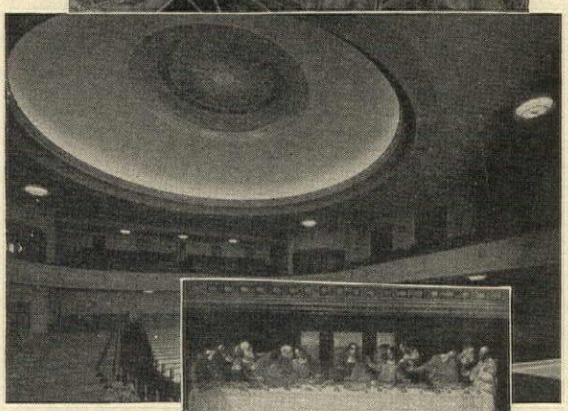

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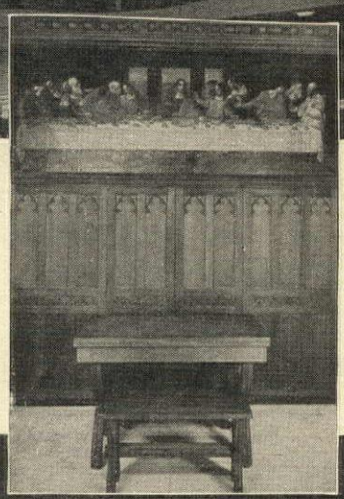

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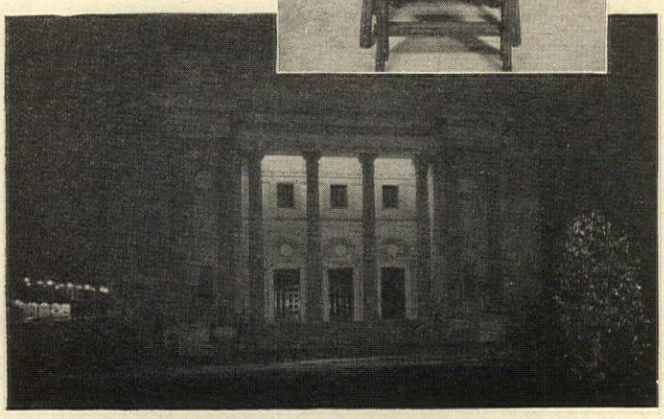
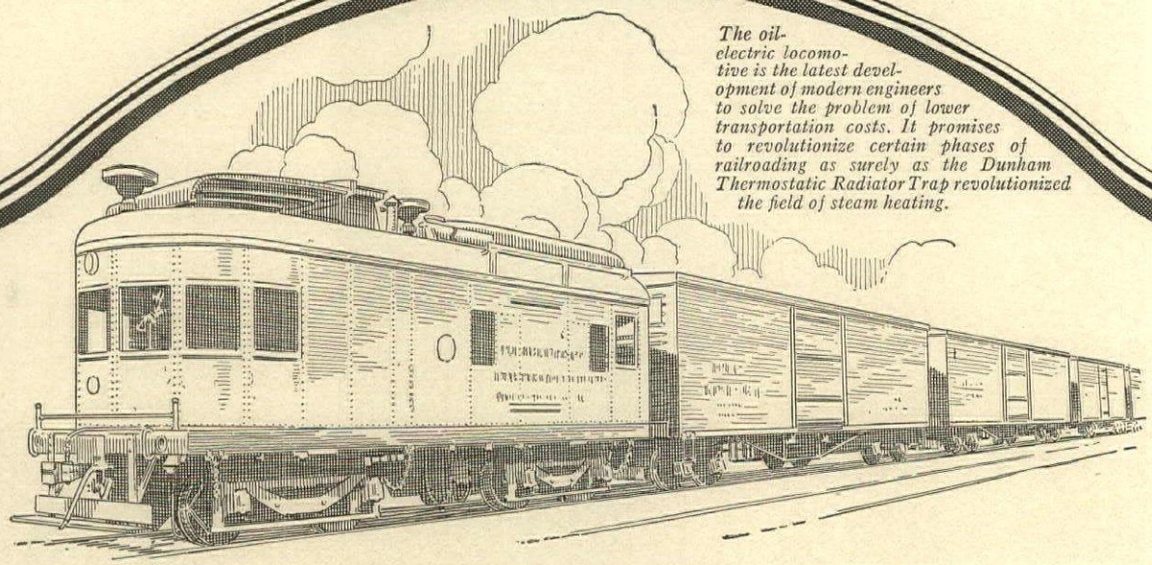


An interesting exterior illumination Fourth Church of Christ Scientist, San Francisco, Cal.



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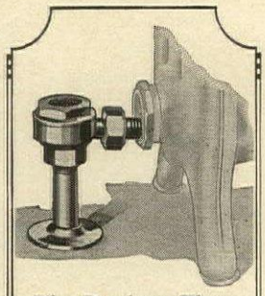

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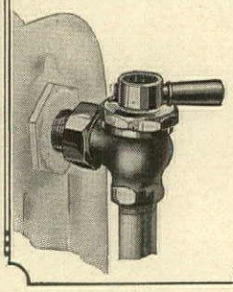

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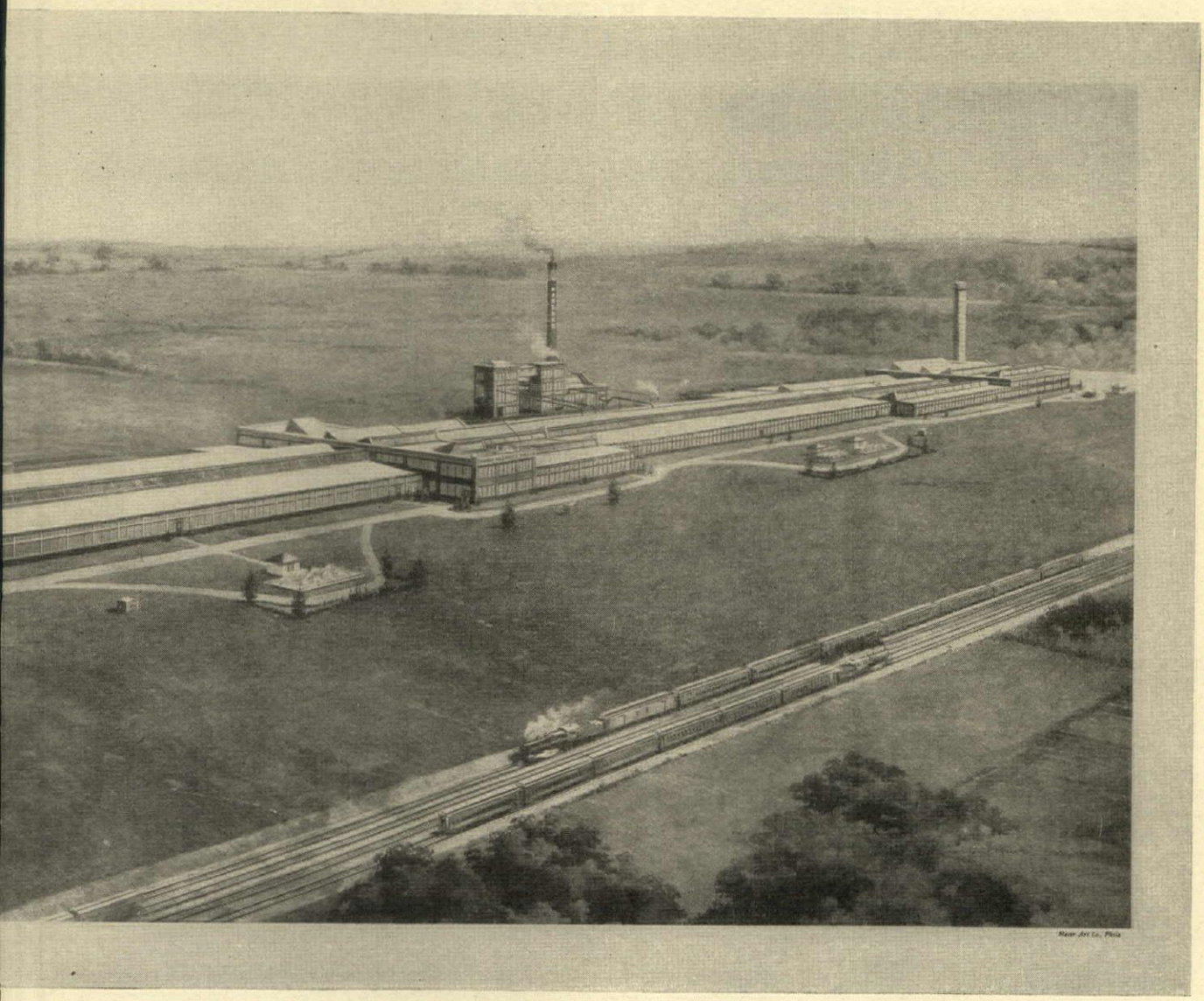

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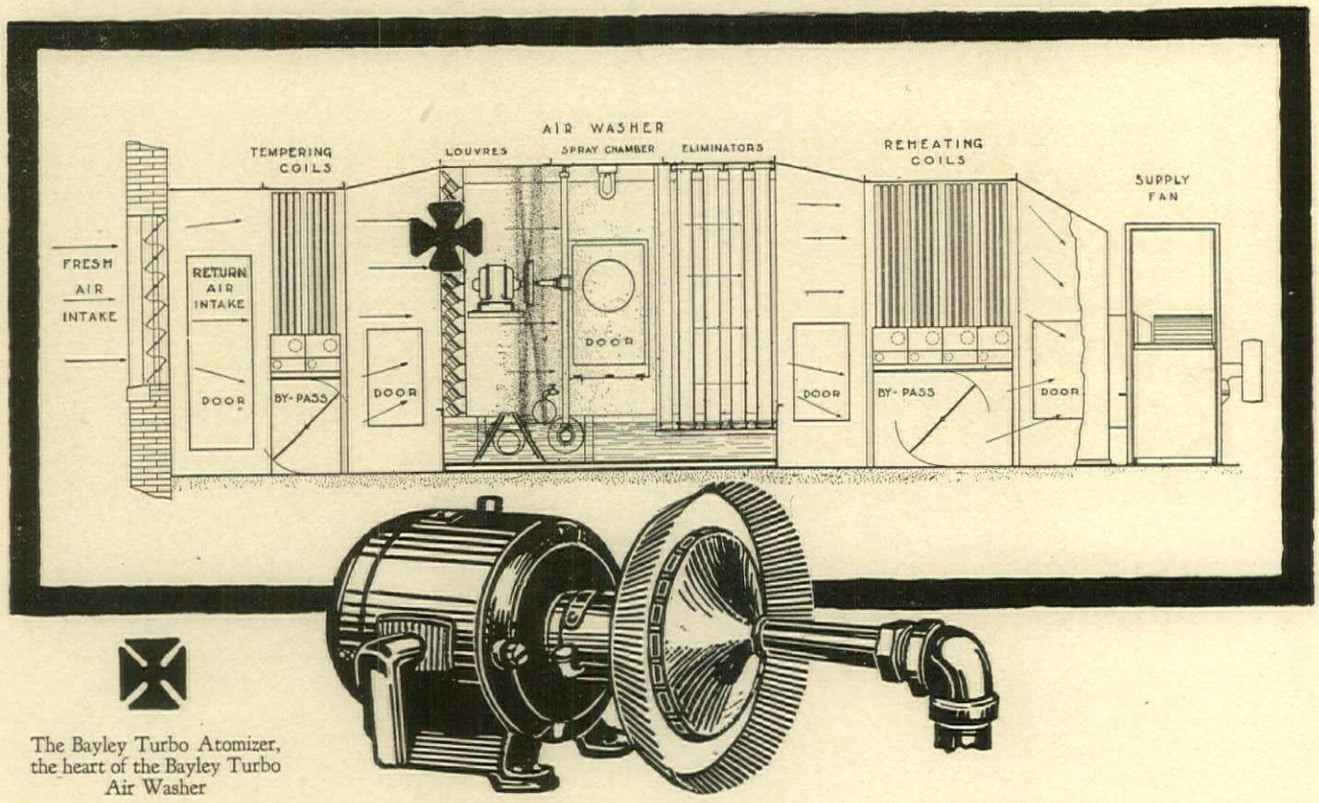

The Bayley Turbo Atomizer, the heart of the Bayley Turbo Air Washer

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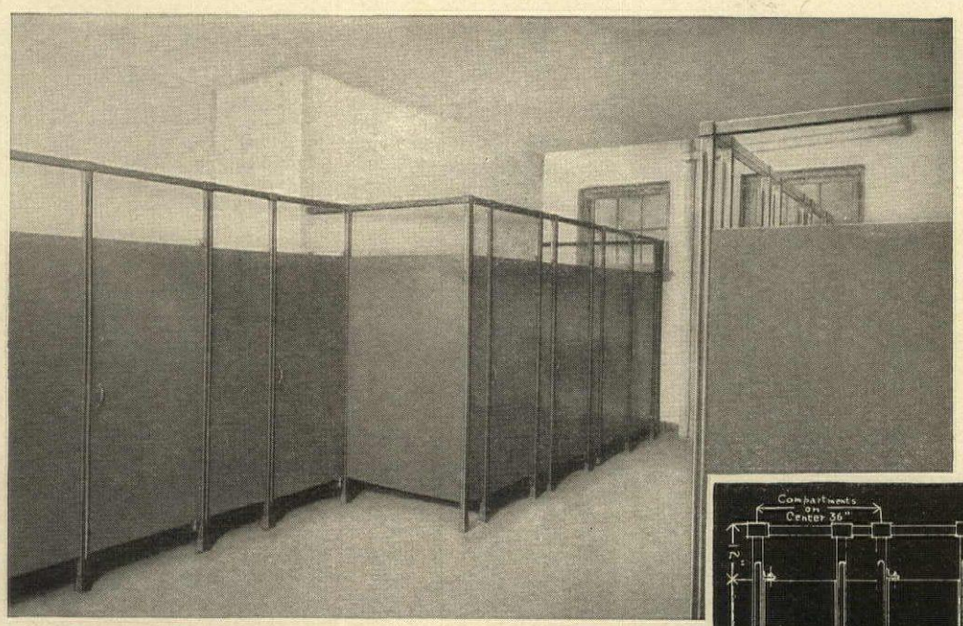

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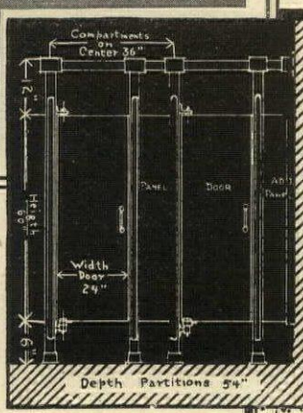

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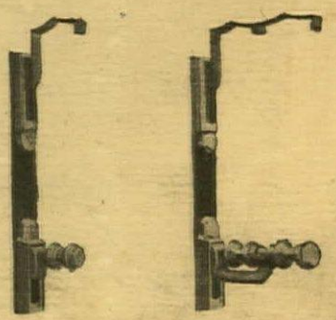

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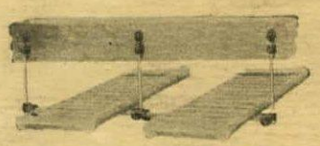

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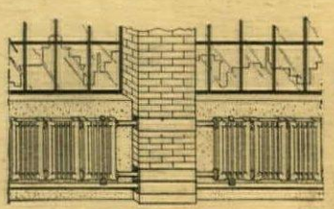

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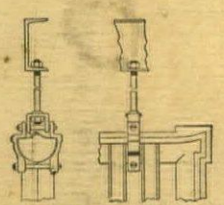

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