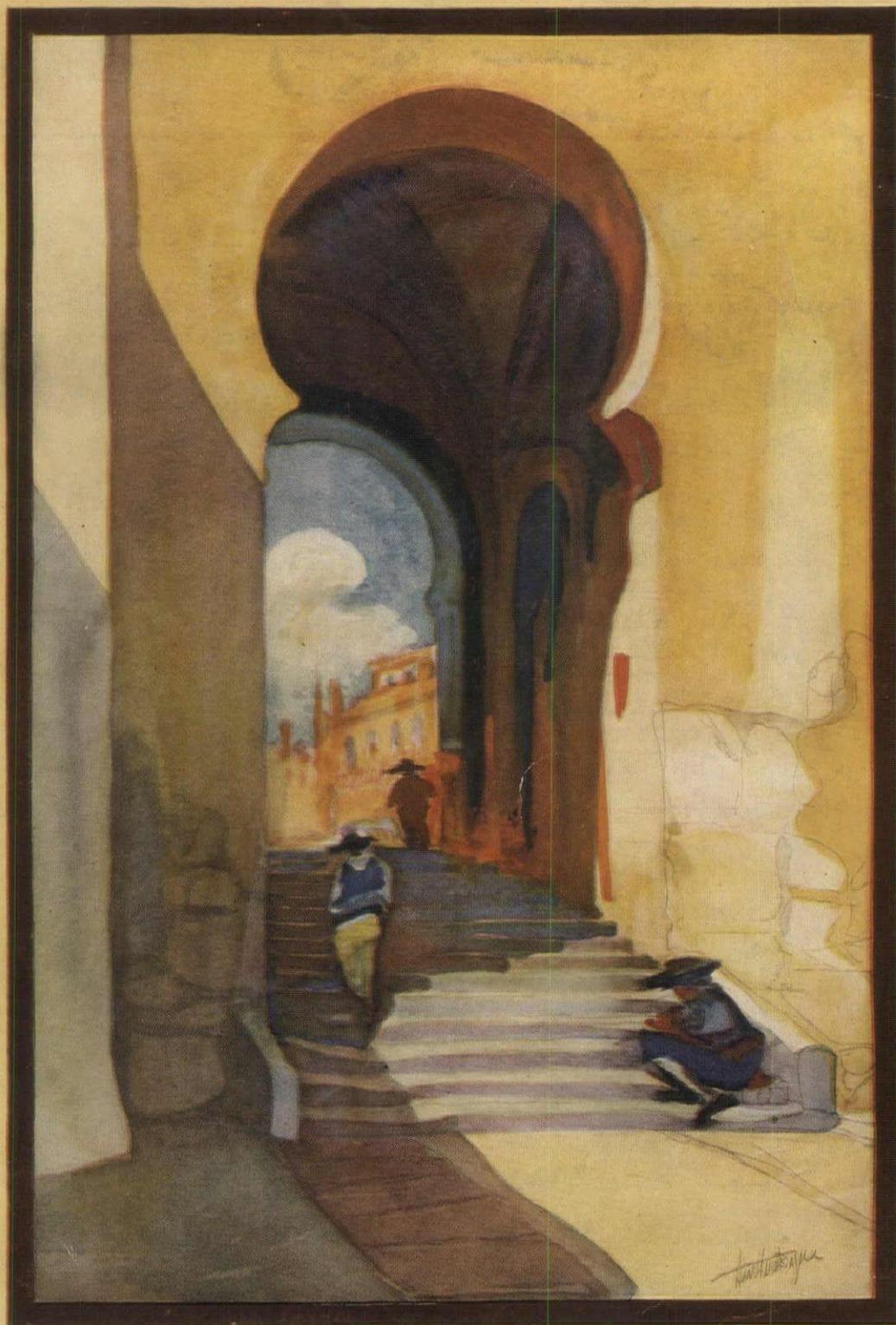


The ARCHITECTURAL RECORD July 1919



Published in New York

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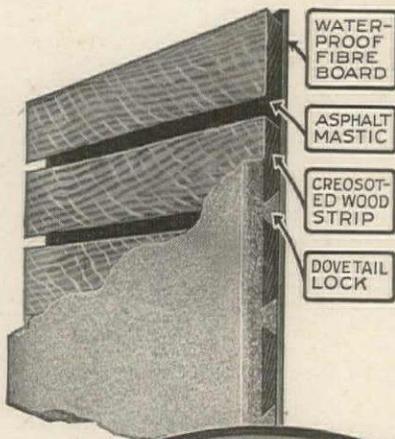
By specifying Bishopric Board, Architects save enough to provide many desirable advantages in a medium price Stucco bungalow. And they get dependable construction, for this Board has satisfactorily met every test for strength and resistance to stress. It is a combination of principles and materials age-old in building construction.

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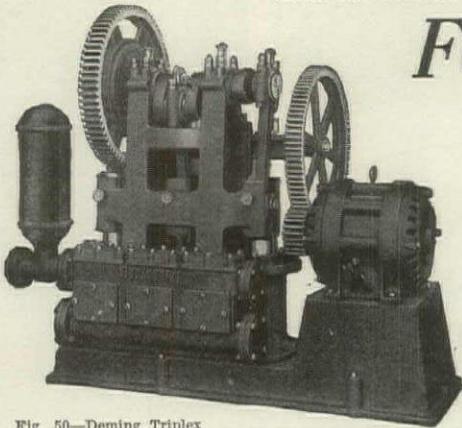
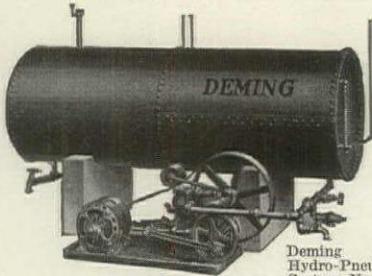


Fig. 50—Deming Triplex Power Pump

MANY small towns use less water than Brookdale Farms at Red Bank, N. J. Two Fig. 50, Deming Triplex Power Pumps, with a combined capacity of 20,000 gallons per hour, are installed.

In graphic contrast, a Deming Hydro-pneumatic System, No. 2009, needs to be run only a few minutes each day to furnish an ample supply of water to the bungalow shown on the right.



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The Deming Catalog of hand and power pumps should be in your files. Send for it on your letterhead. Use Sweet's for immediate reference.

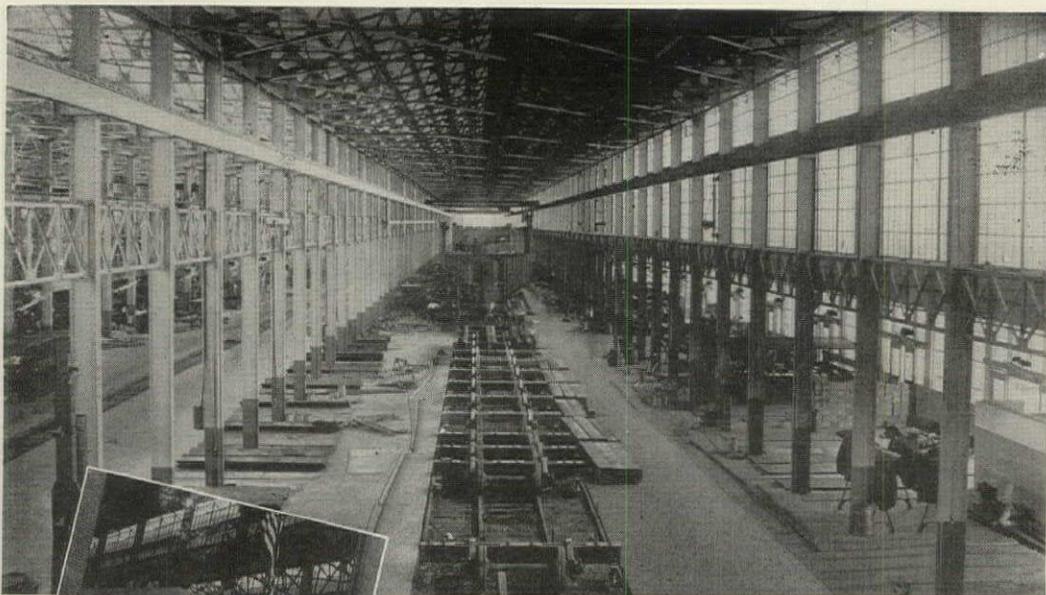
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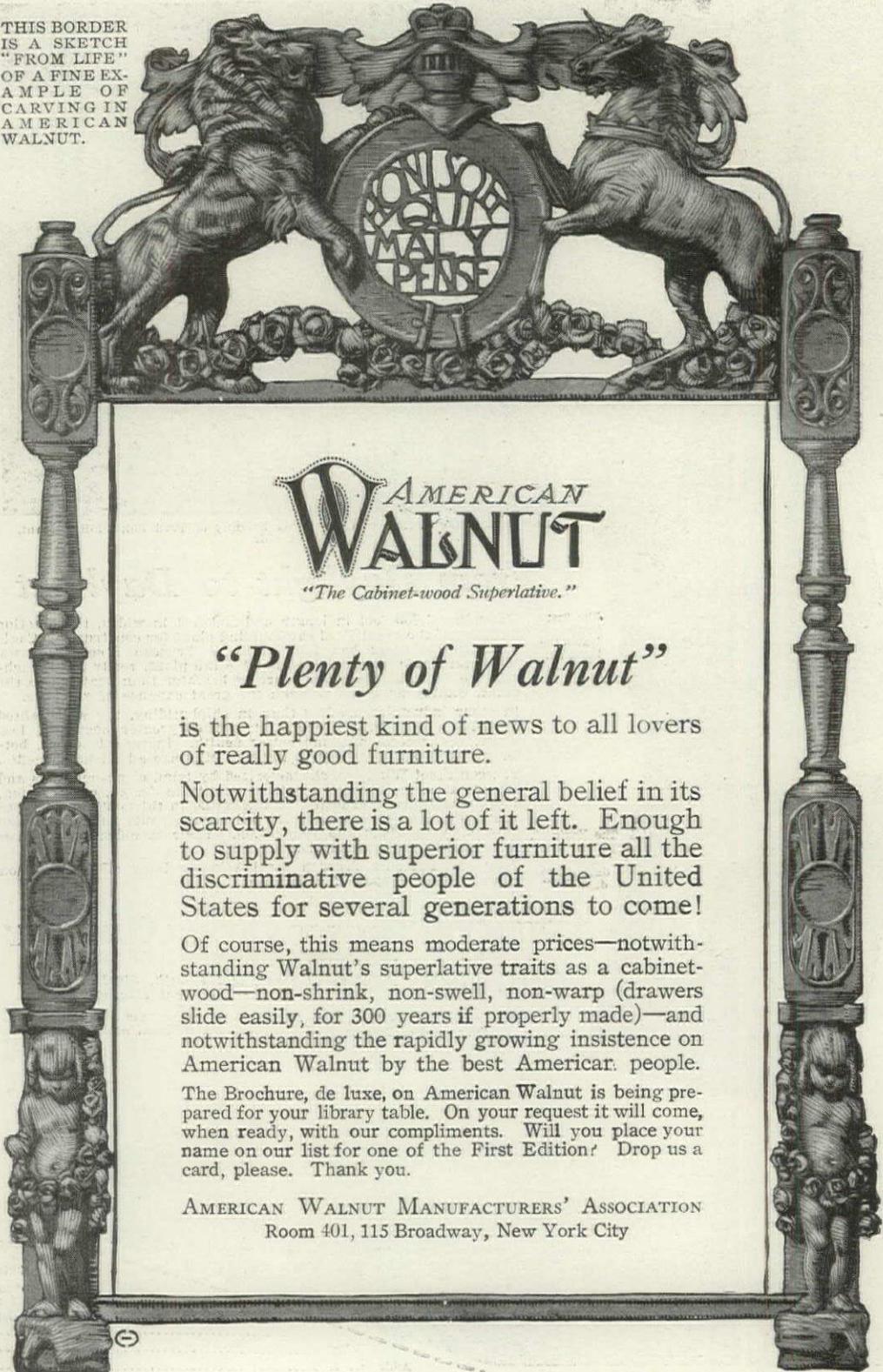
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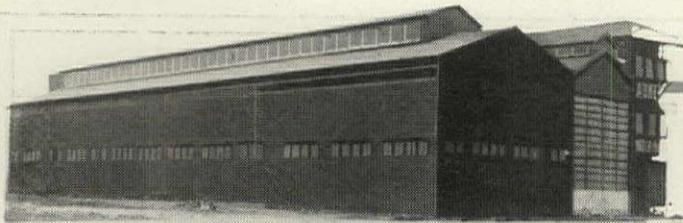
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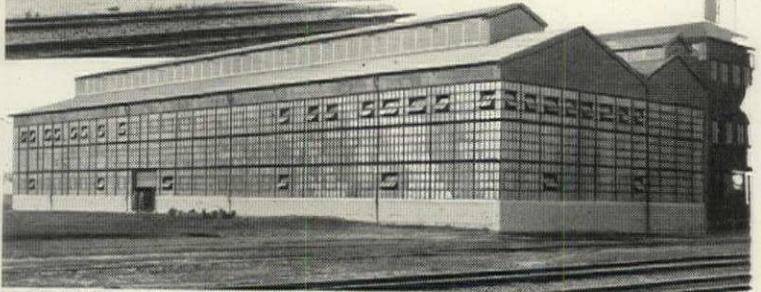
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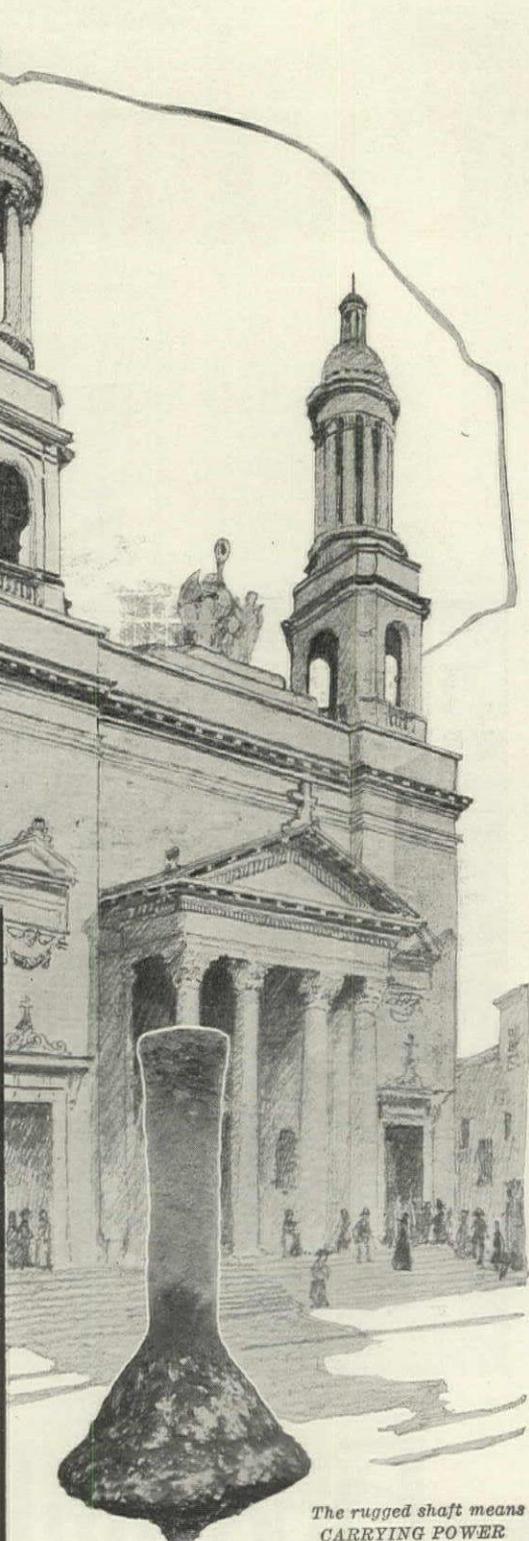
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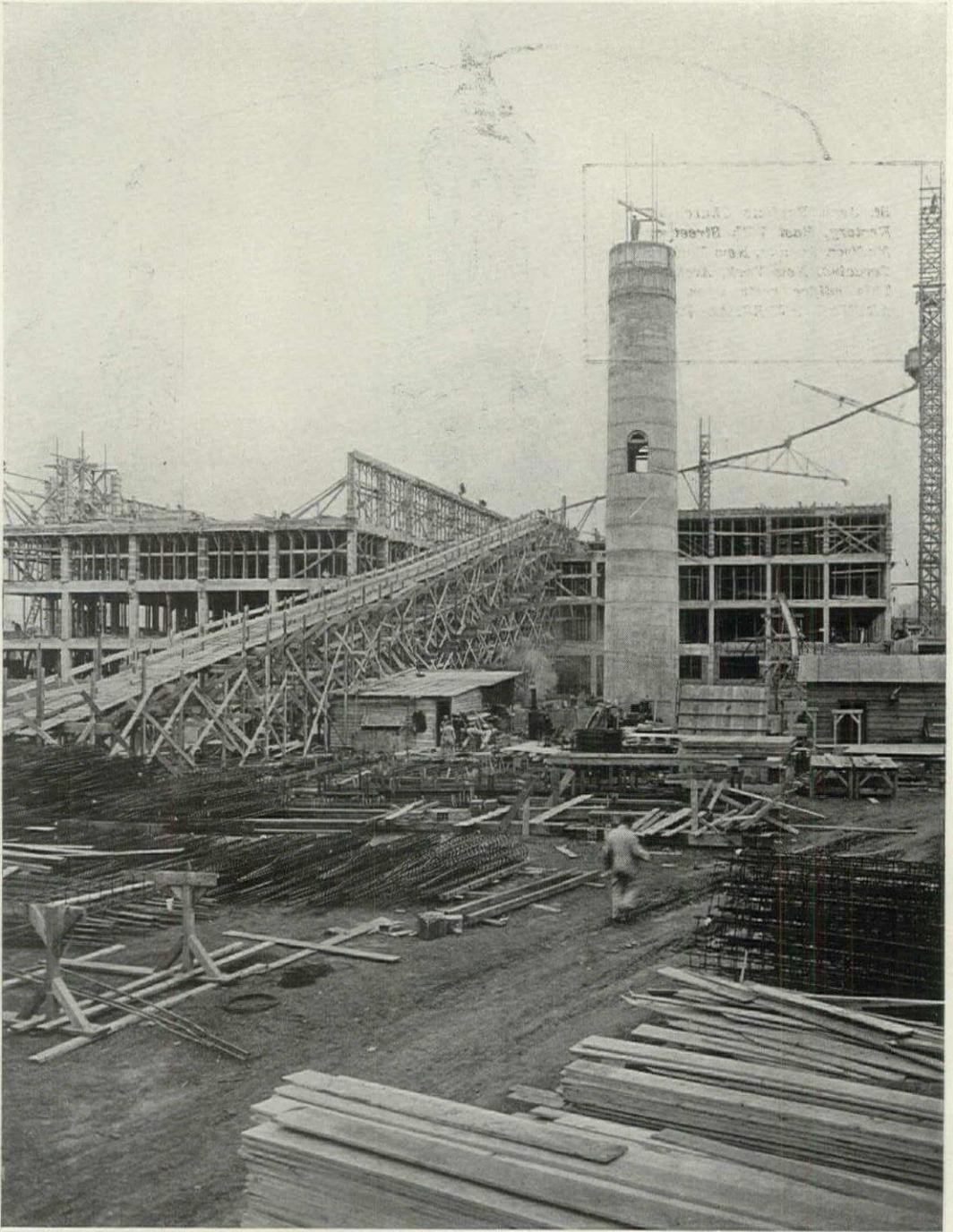
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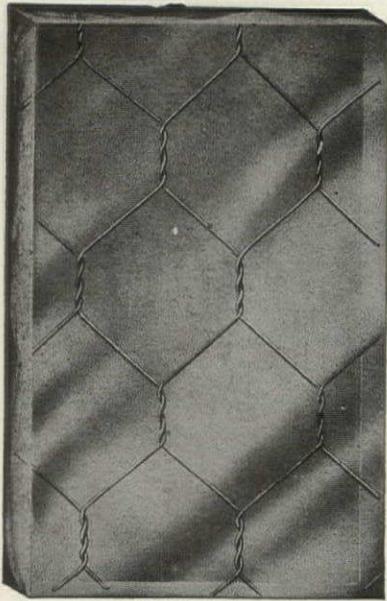
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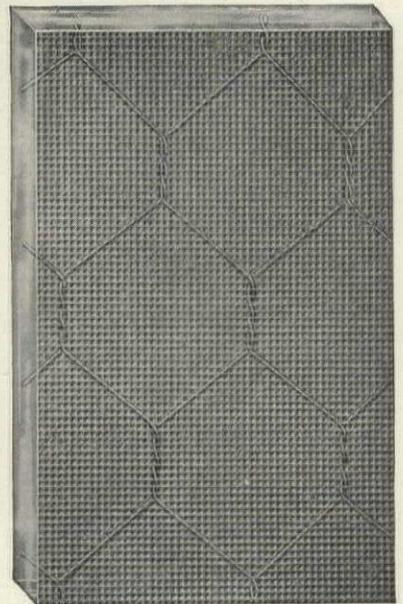


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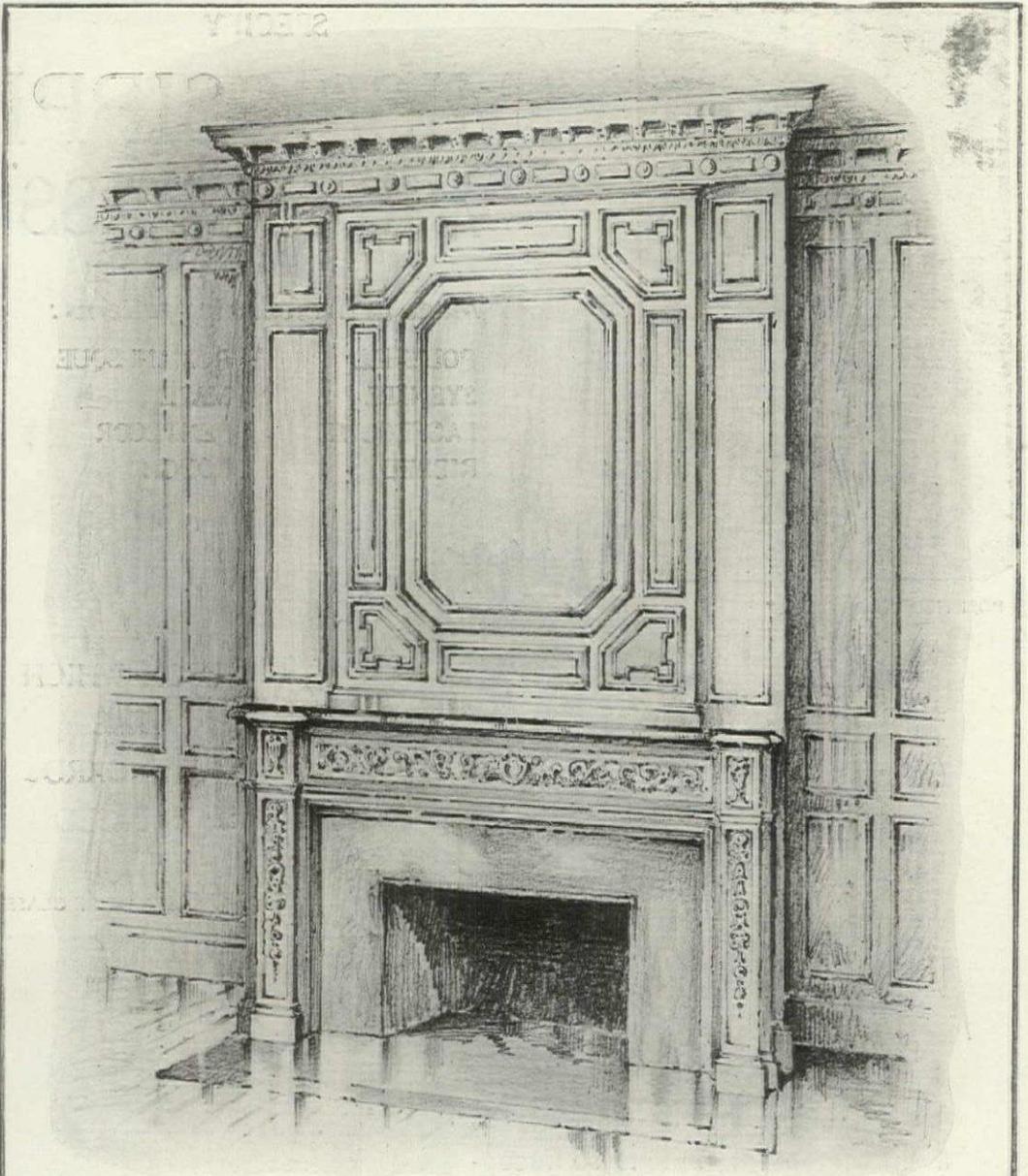


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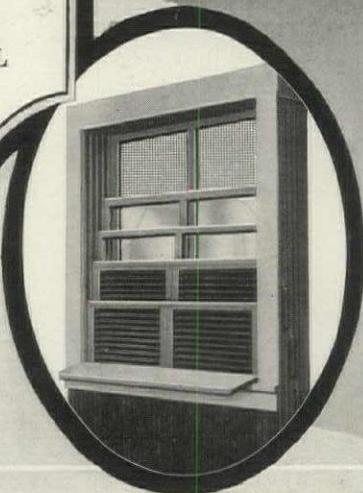
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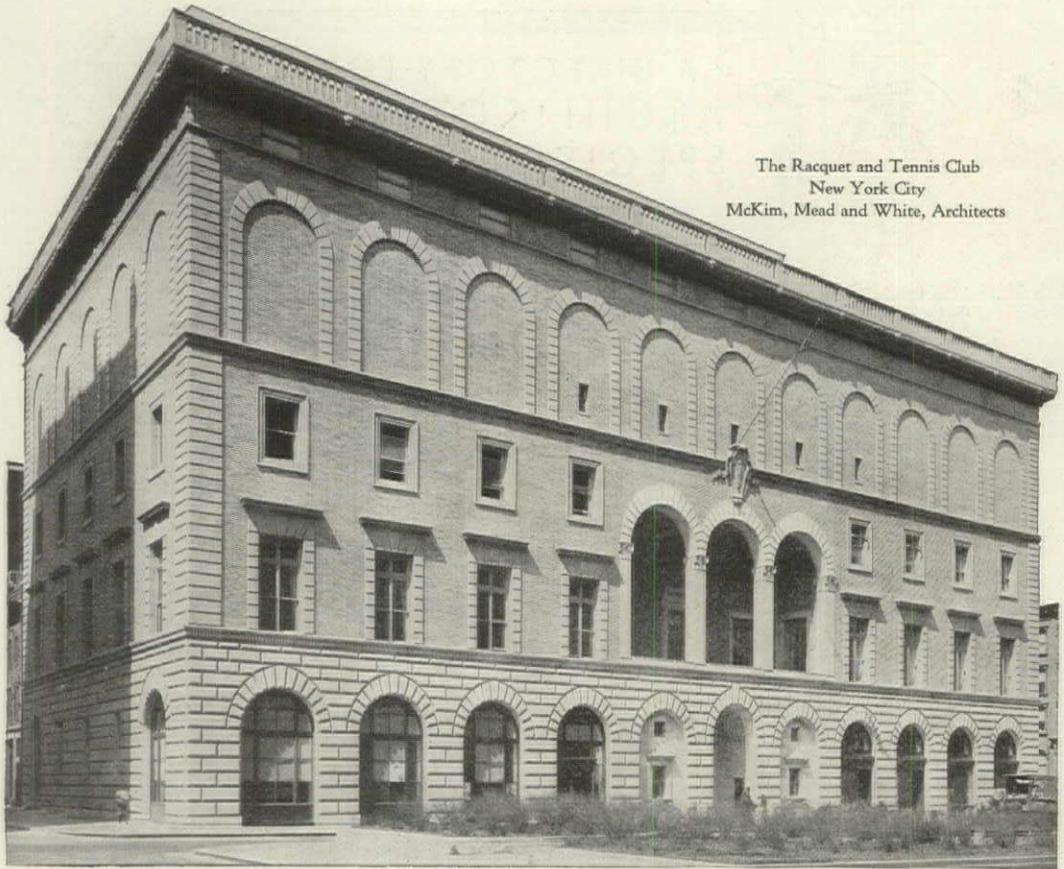


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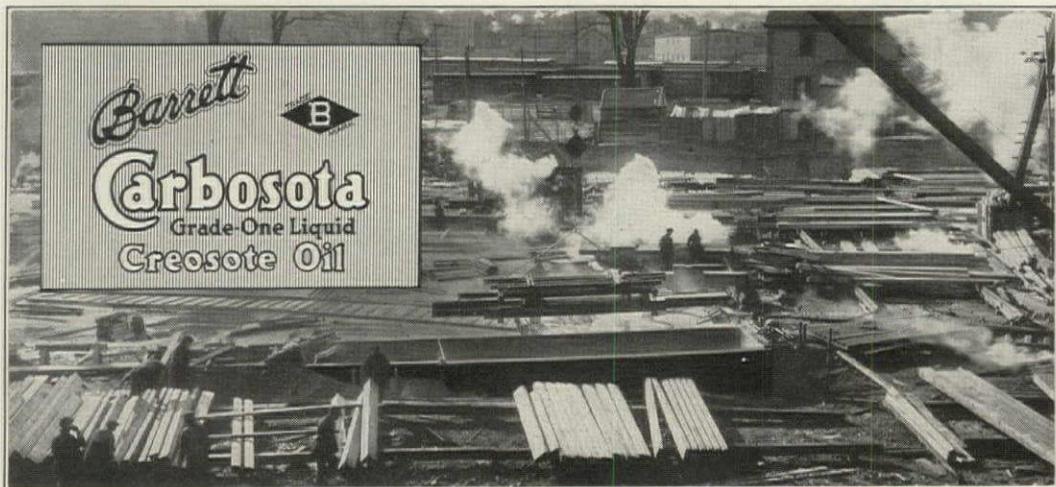
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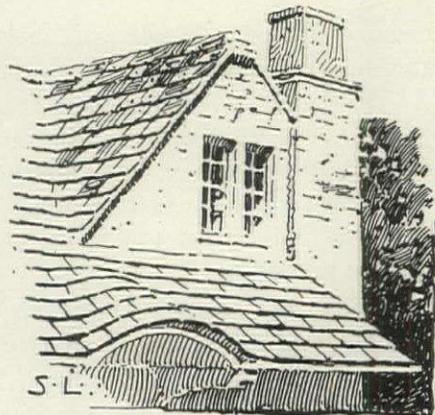
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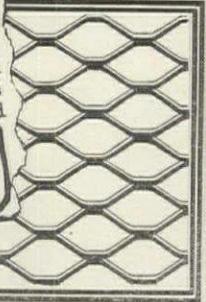
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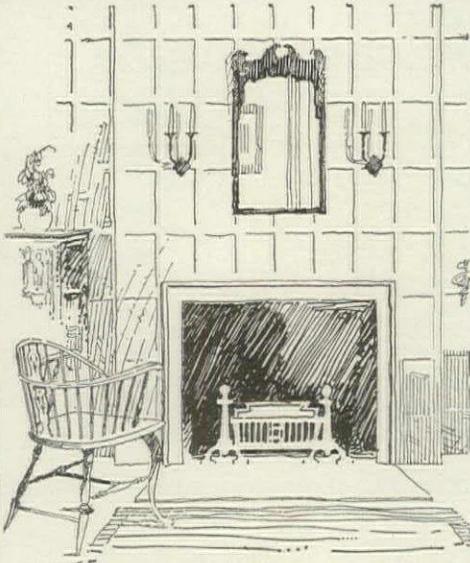
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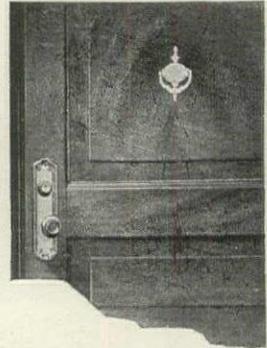
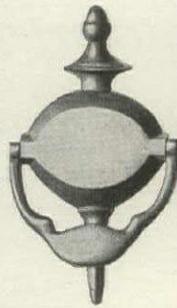


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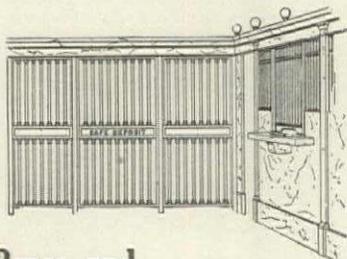
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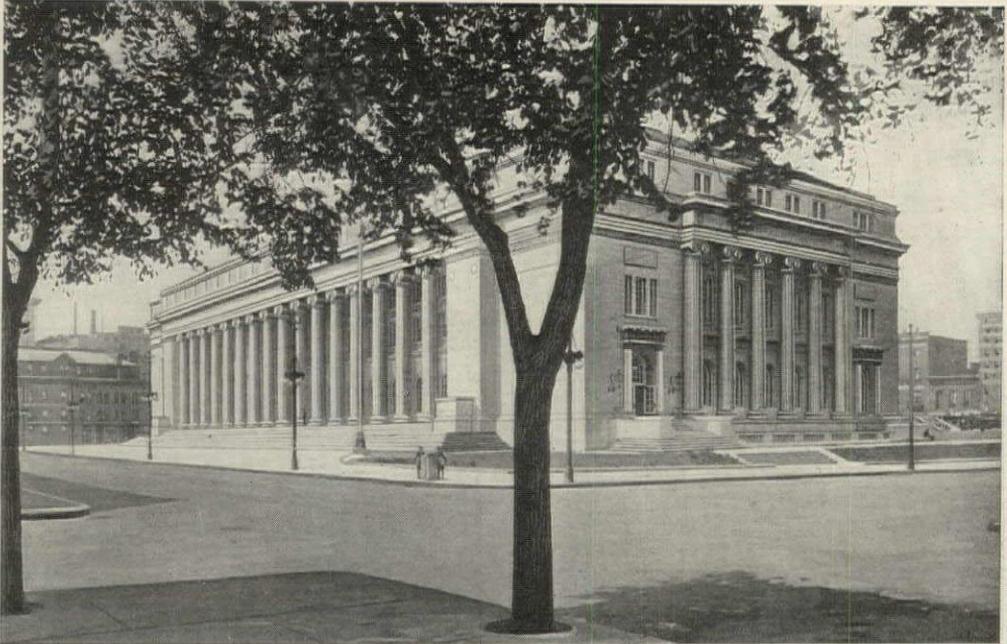
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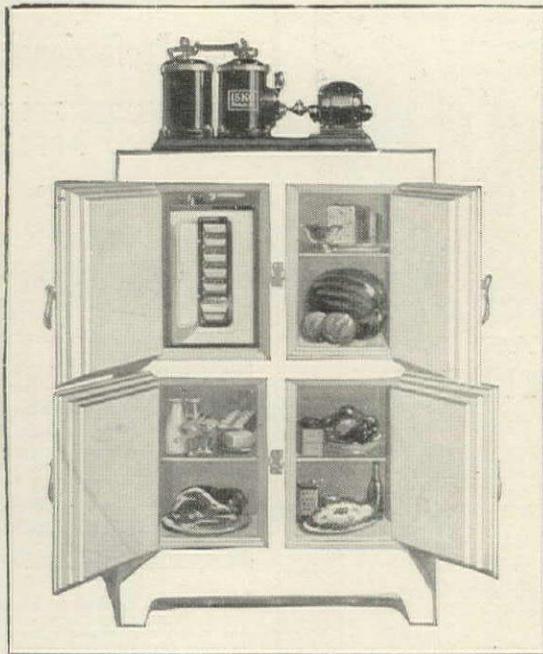
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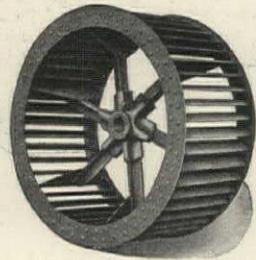
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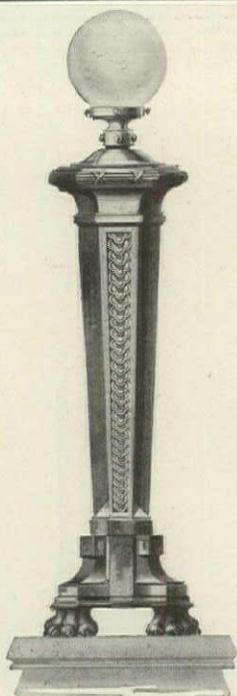
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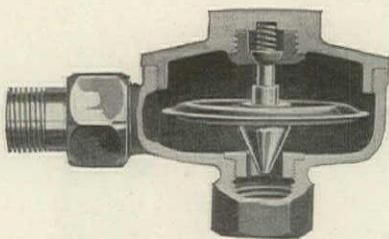
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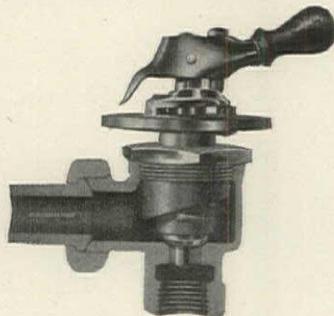
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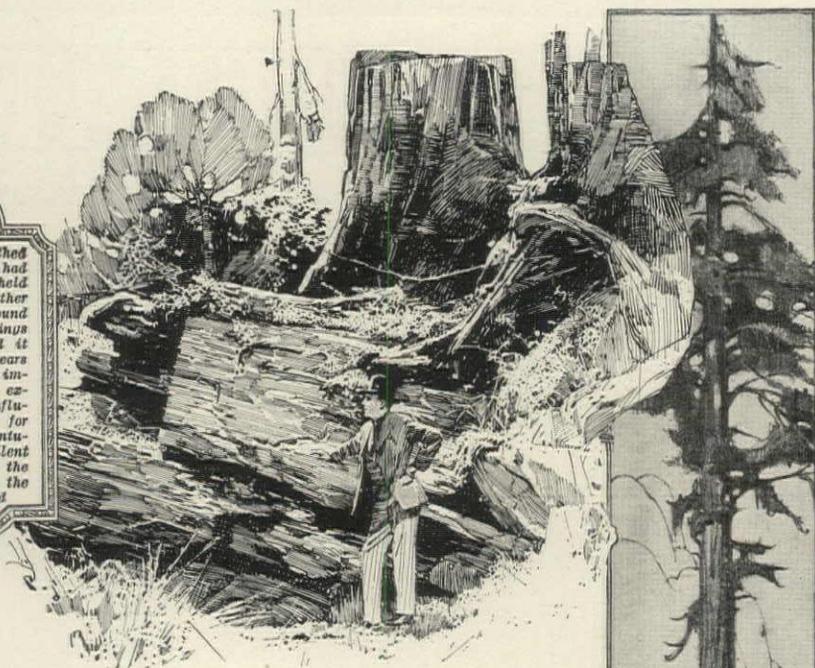
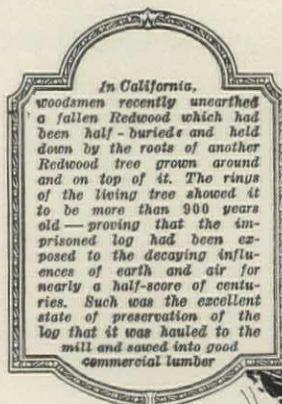


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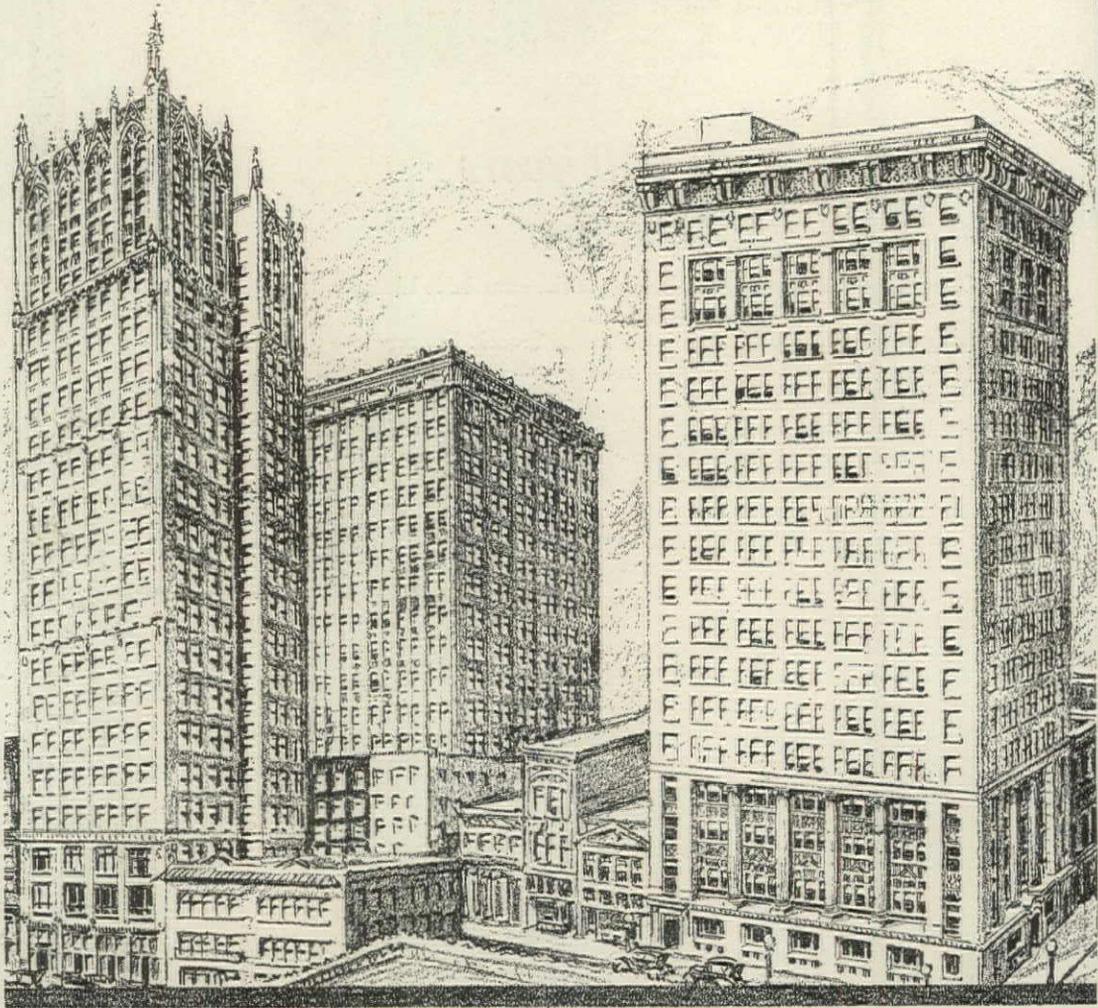
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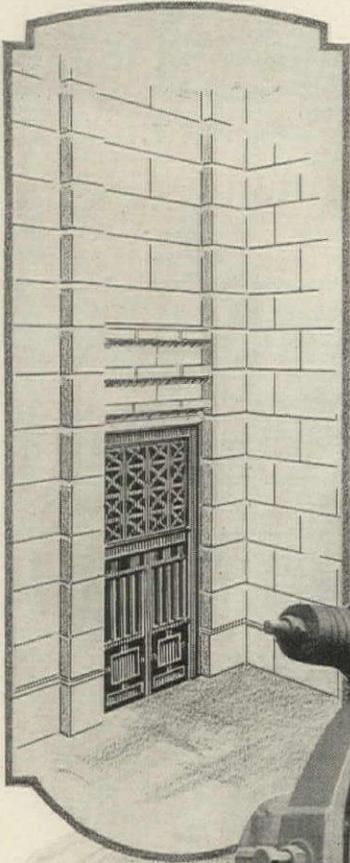
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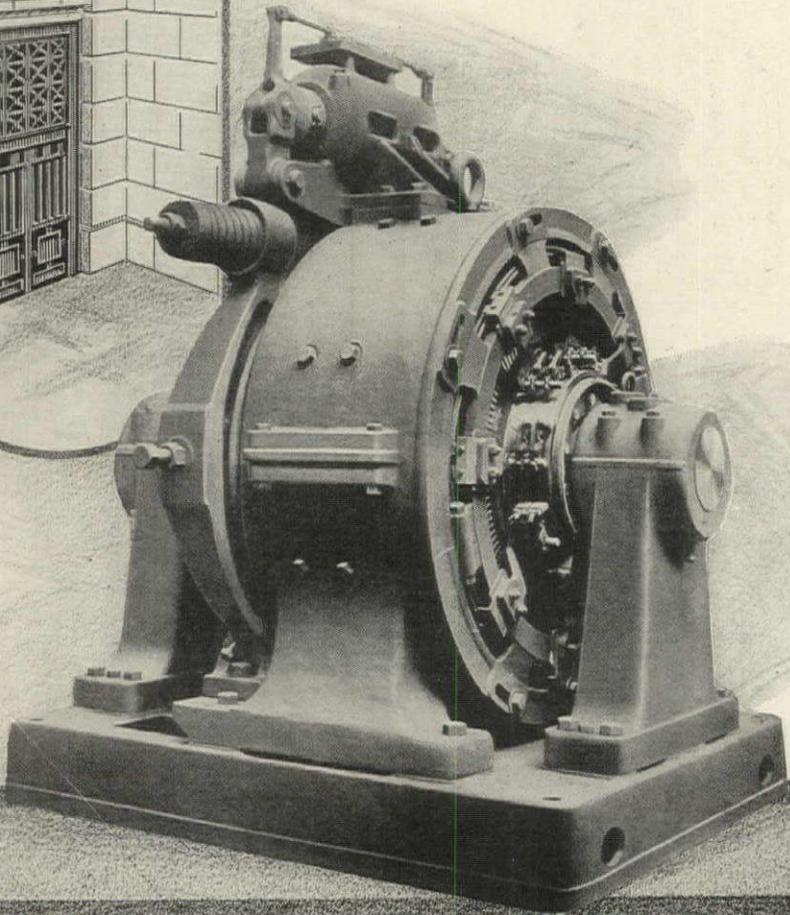
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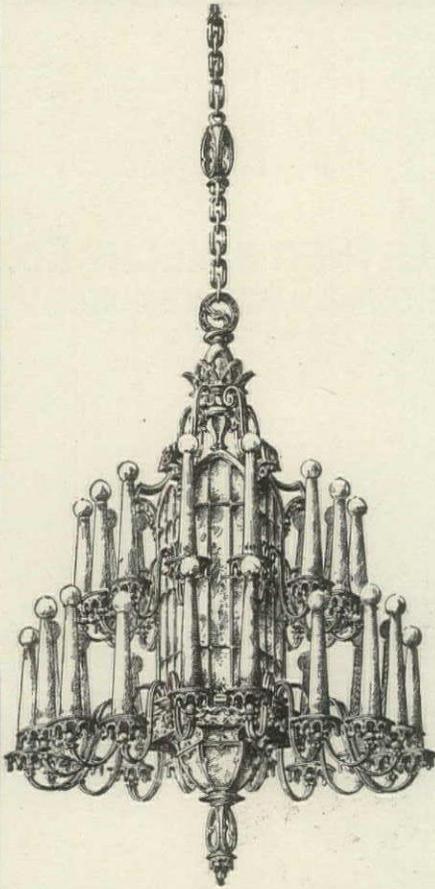
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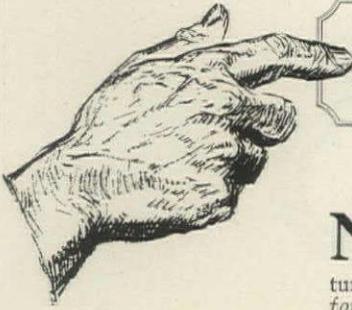
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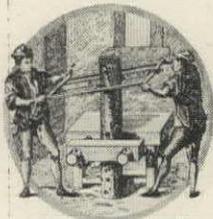
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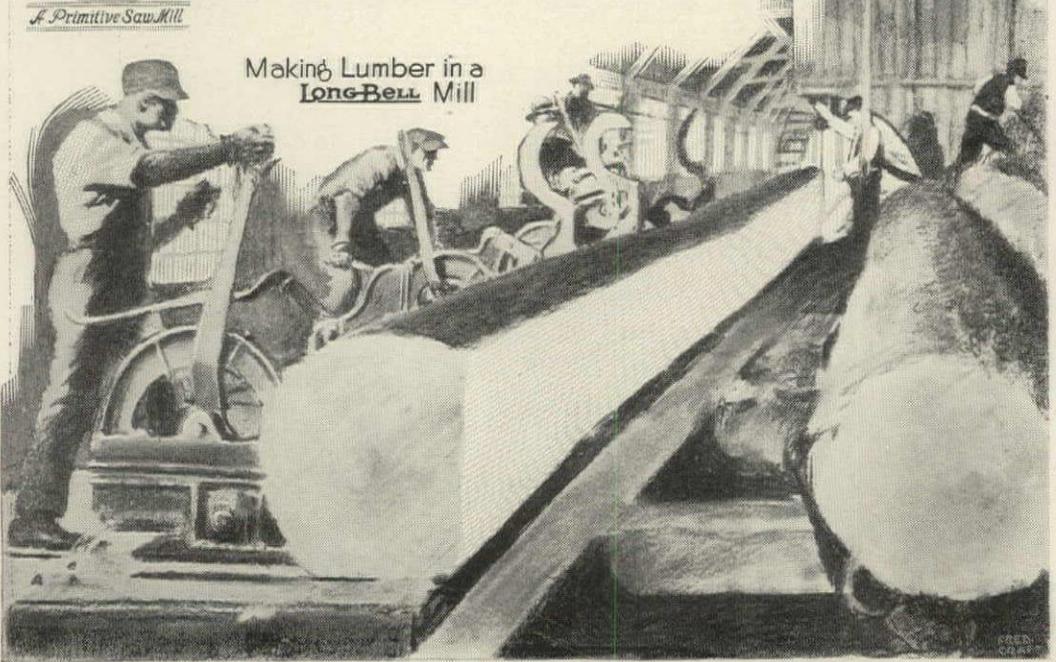
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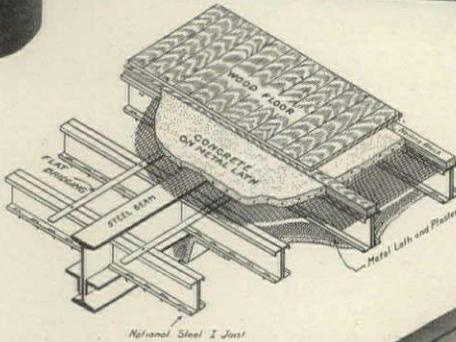
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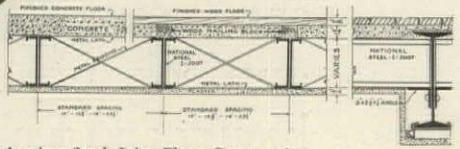
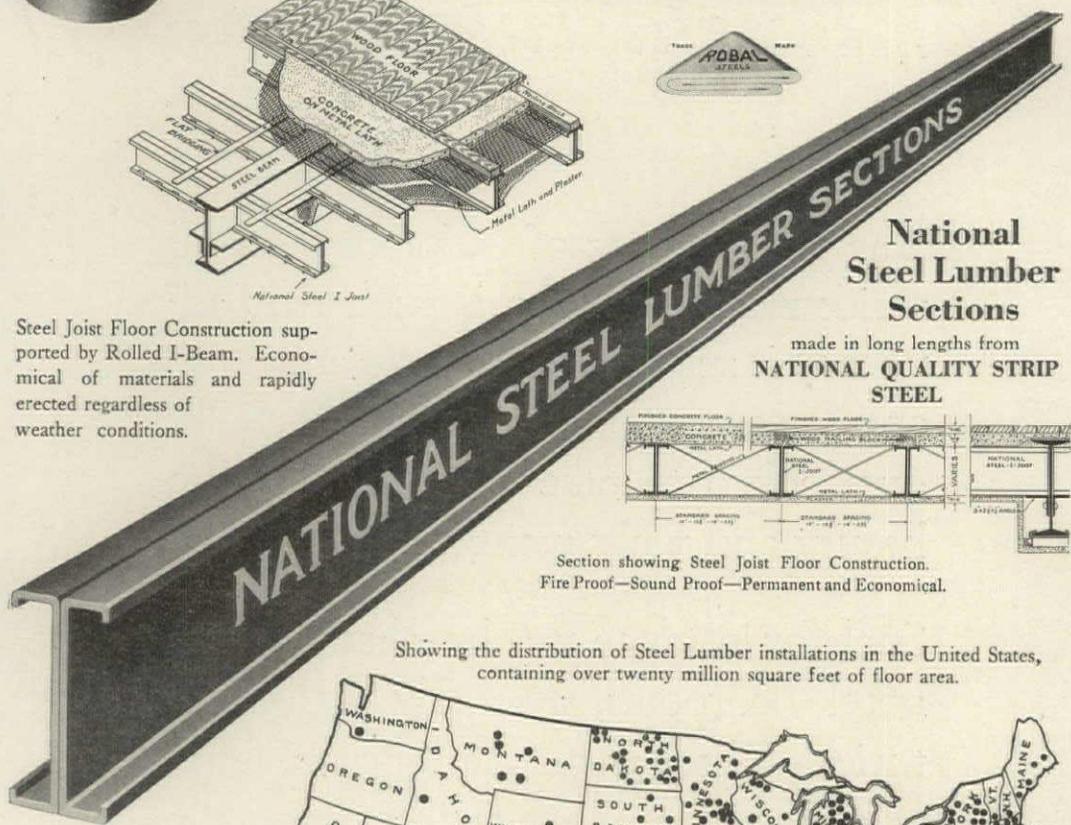
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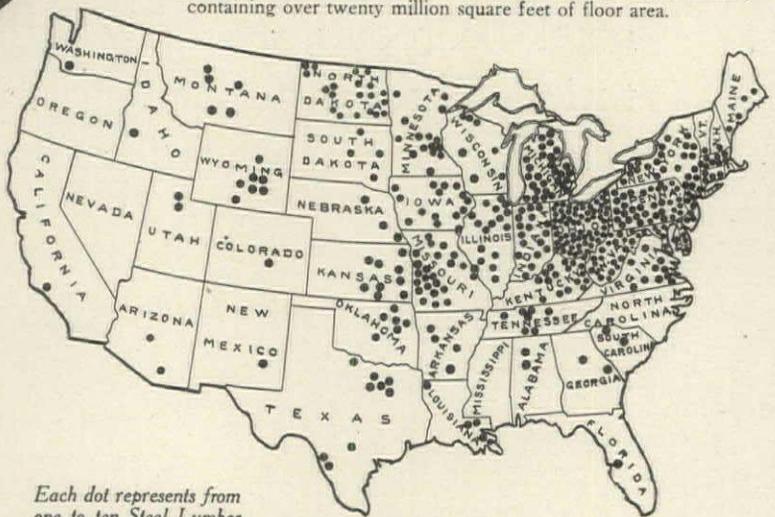
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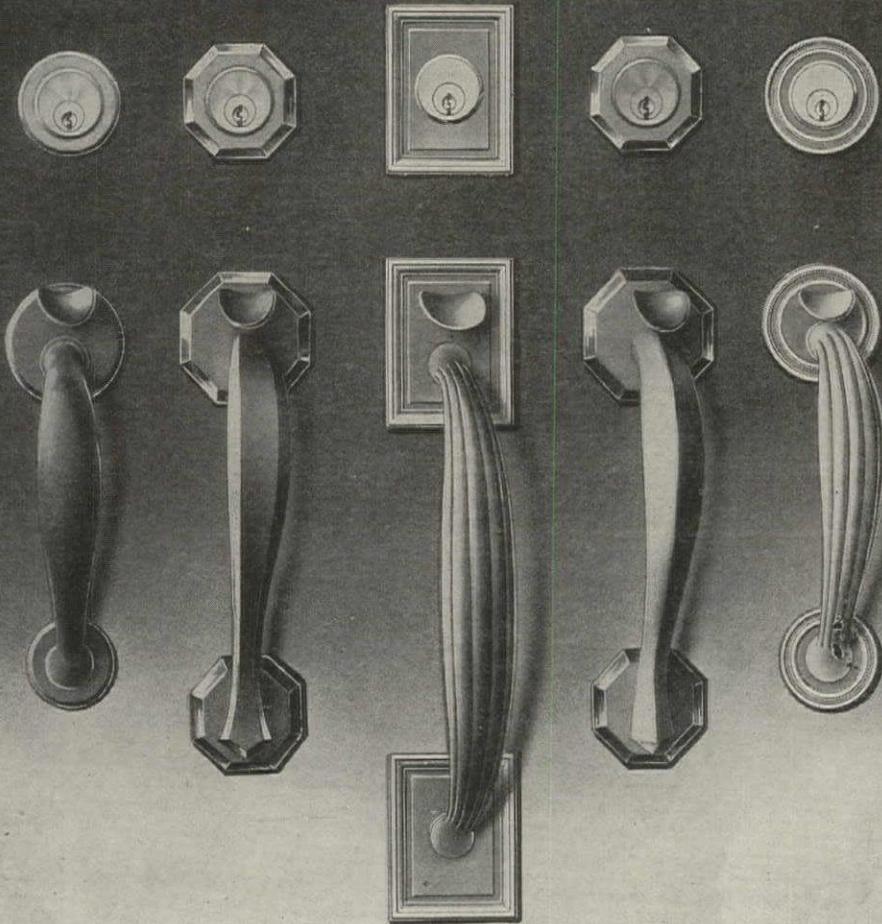
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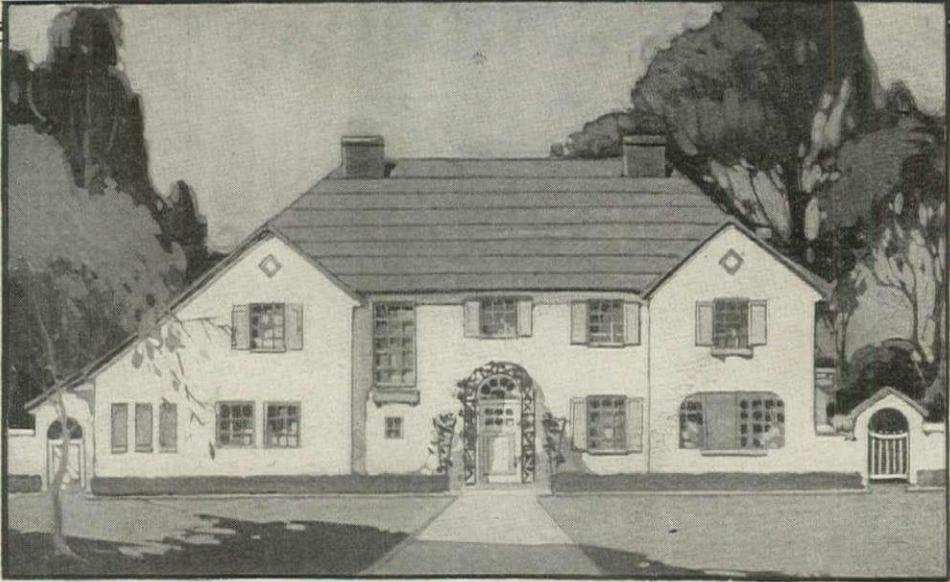
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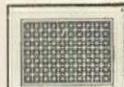
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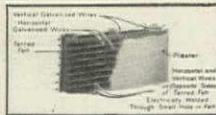


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THE ARCHITECTURAL RECORD



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ENTRANCE GATE—RESIDENCE OF A.
STEWART WALKER, ESQ., NEW YORK.
WALKER & GILLETTE, ARCHITECTS.

THE ARCHITECTURAL RECORD

VOLUME XLVI



NUMBER I

JULY, 1919

The
RESIDENCE of A. STEWART WALKER, Esq.
NEW YORK: Walker & Gillette, Architects

By John Taylor Boyd, Jr.

PERSONALITY is an essential quality in the architecture of houses. There is some basis for the claim of those who decry originality in the monumental architecture of public buildings on the argument that its character has been crystallized by the experience of ages. But surely our homes should not all be alike. We cannot, in their case, make a fetish of standardization or of current fashions and, at the same time, hope to attain any real atmosphere of art, which is the aim of every good designer.

It is the declared purpose of modern housework to avoid both stereotyped arrangements and ephemeral fashions. But the performance too often fails. Formula and unreasoned imitation are everywhere too apparent. As good design spreads out more and more through the people, which it has been doing for a generation, quality will tend to lower

unless it is stimulated by good example. The development of the American home is now well defined; we understand high standards and seek them in building houses and in furnishing them, and we have an ample technique at command. What we need to fight now is mediocrity.

The artistic progress that I have alluded to is the work of people of character and personality among both designers and their clientele. Now, however, that the world as a whole becomes interested and takes part in the procession, the highway is crowded more and more with good faithful workers, the solid, the imitative, the technically skillful who follow the crowd rather than lead it. The danger increases that design may become more of a business and less of an art.

This encroachment of the humdrum is evident in house architecture today, particularly in regard to interiors. Yet

interiors are the most personal of the architectural surroundings of our lives; in fact, they are nothing less than the world-old lore and art of the hearth-stone, that is common to all mankind. While such household art should be community art in order to attain its highest purpose, it should also express our individual selves. In other words, while our homes should follow a certain accepted taste and excellence, they need not be exactly like every other man's house from New York to Los Angeles, except for a different hanging or the turn of a molding.

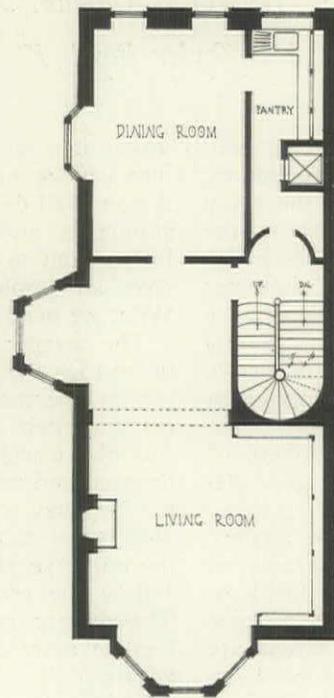
We are in danger of making the American home a business product. To mention merely the words "living room," "dining room," hallway," "bedroom," "library," is to cause most designers to think of an established formula for each, rather than to inspire them to imagine a picture. Usually nowadays the dining room means light paint, strip panels, formality, furniture just so, placed just so, with a bit of tapestry; silverware and plate ware and glassware no longer show-windowed behind glass doors, but most discreetly indicated by a candlestick or two *en axe*, as on a chapel altar; a forbidding portrait or two overlooking the scene. Entrance hallways are cold formal things, adequate frames for the ceremony of receiving the visitors' cards; no wonder the host no longer appears there, as he did in times of less sophisticated manners. A library is usually a paneled or bookcased room, light or dark, according to some half a dozen schemes concerning different arrangements of cupboards, shelves or cornices, all meaning about the same thing. Living rooms are more informal, but can you not recall examples where the pictures are exactly spotted, bal-

anced carefully *en axe*—that universal formula of the contemporary decorator—with the current magazines carefully flattened out on the table like a hand at cards, the best sellers piled about geometrically? How one longs for a bold designer who will dare get a roaring fireplace in the dining room and introduce a gleam of rich carving and color and gold and dark wood; who will take the wicker furniture out of the glassed lounging room, put color into the living room, get along without chintzes; even make the entrance hall hospitable. He would be a true adventurer.

Of course, there are designers aplenty who are able to think for themselves and for their clients. Architects have done the highest work in interiors—White, McKim, Platt, Hastings, Eyre, Bigelow, Pope, to mention only a few men long ago well known. Among young leaders Walker & Gillette have accomplished fine results in houses in work noted for its personality. Characteristic indeed is the result gained by

Mr. A. Stewart Walker of this firm in his own home in New York City, illustrated in these pages. It is a refreshing contrast to the average house design.

This house of Mr. Walker's is an alteration, but nevertheless he has treated the plan more freely than does many a designer on a new project where there are no walls or floors existing to hamper him. Like most good schemes, it is extremely simple. The lot is a twenty-foot width, on the southeast corner of a principal street. The maximum of light and air was desired; hence the stairway was placed on the inside against the party wall, and consists of one straight flight up from the basement entrance hall to the living quarters, and a winding stair hall thence



PLAN OF FIRST FLOOR—RESIDENCE OF A. STEWART WALKER, ESQ., NEW YORK.



MAIN ENTRANCE, ON REAR GARDEN—RESIDENCE OF A. STEWART WALKER, ESQ.,
NEW YORK.

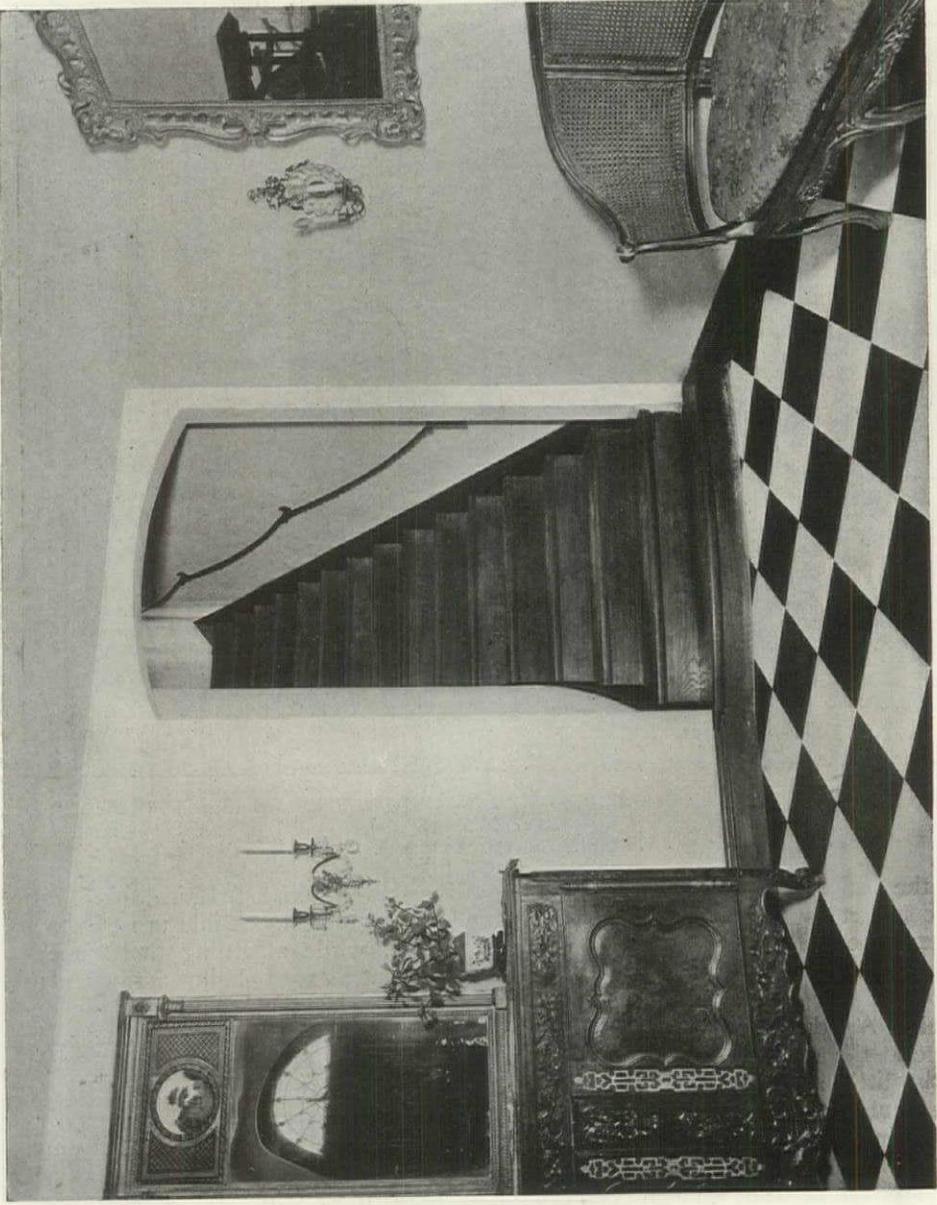
Walker & Gillette, Architects.

up to the bedroom floors. This attractive, compact arrangement eliminates the usual too-prominent stair hall, eating up priceless space, destroying the charm of a city house with its dreary stairwell. Another skillful point is the entrance at the rear, on the cross street, from the little square garden enframed by iron fence and gate and lattice decoration against the neighbors' party walls: a most distinctive and charming, yet unobtrusive effect. The kitchen is placed on the corner, on the front of the main street—a happy idea, in view of the recent enthronement of the domestic worker. This placing of the kitchen results in the square dining room on the corner on the main floor above, with the living room opening off it and occupying the south exposure on the cross street, the light streaming in through its two bay windows. The floors above are given over to bedrooms. One could

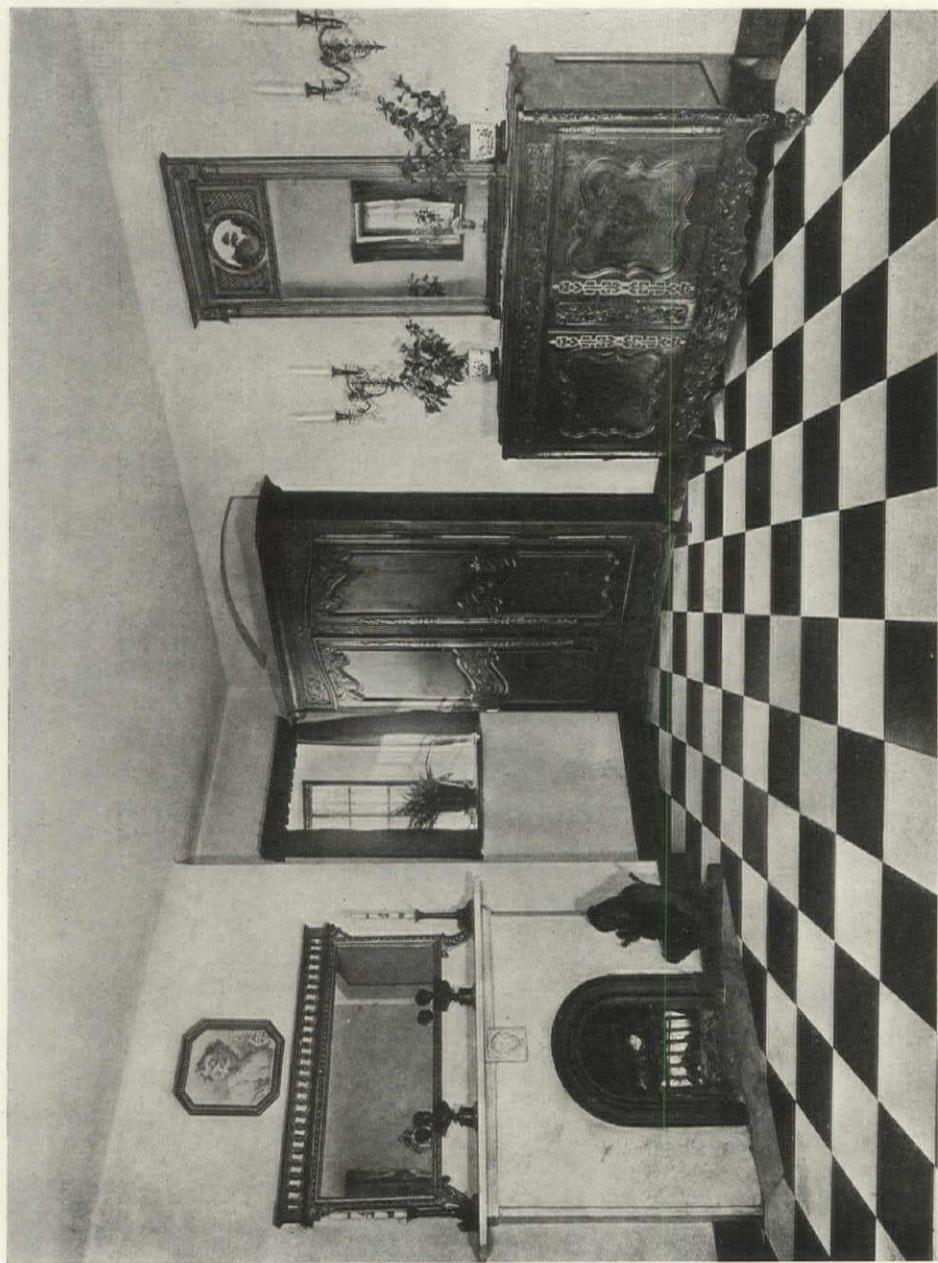
hardly find a more practical plan. It makes the greatest possible use of space and light, while affording those unexpected contrasts of light, arrangement and little vistas that so inspire the designer to do his best.

The separate rooms hold their part in this fine plan admirably. The entrance hall gives a most interesting impression to the visitor, simple, roomy, yet small in scale, and much more home-like than most New York entrances. Proportions are low, but not too low, the furniture is well chosen and placed, rather delicate, in scale with the room, not too stiff and showing well against the yellowish plaster wall. The lighting fixtures are exquisitely designed, as they are throughout the house.

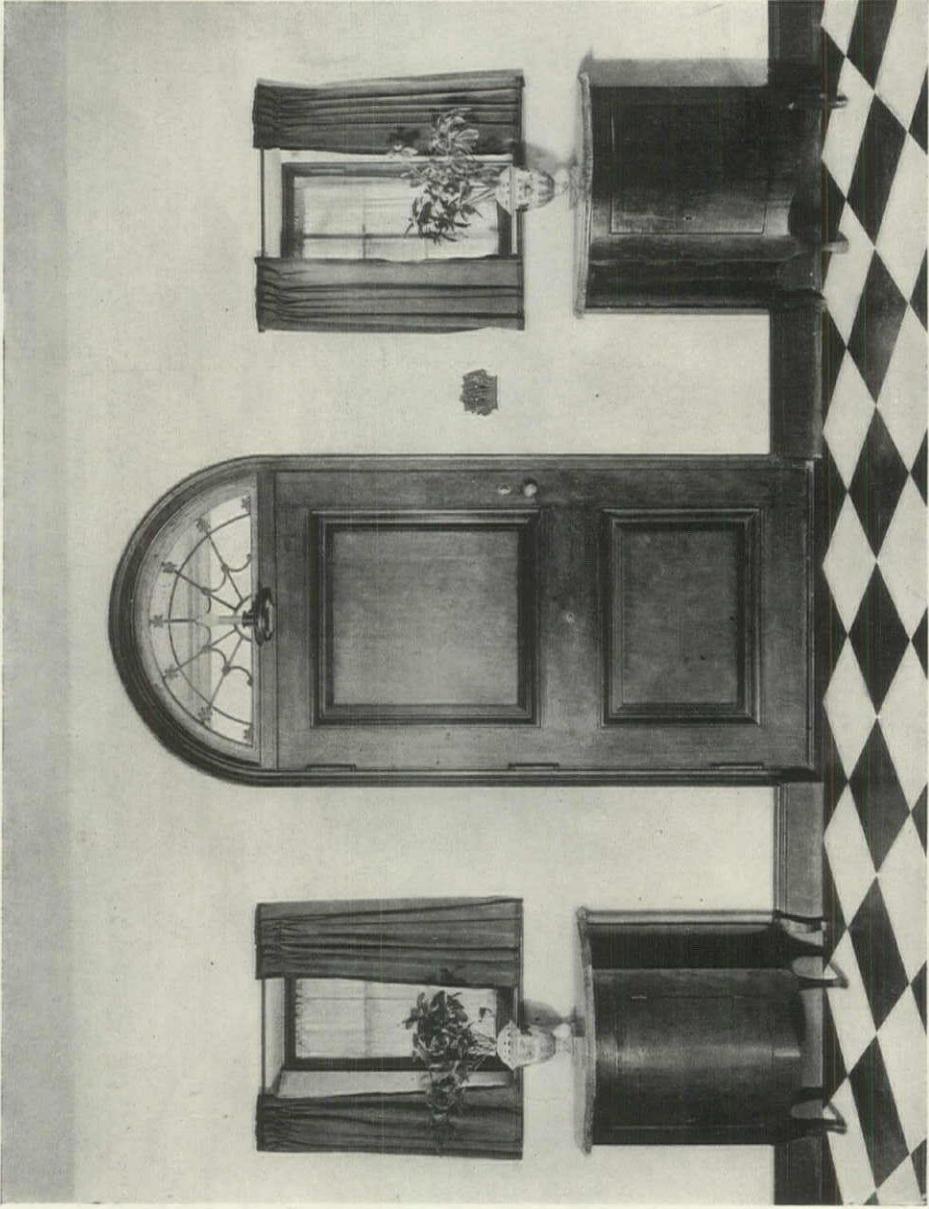
From the entrance hall, one ascends the stair, a single flight inclosed in a well, with simple oak treads and a metal hand rail of corded rope design, to find



MAIN STAIR FROM ENTRANCE HALLWAY—RESIDENCE OF A. STEWART WALKER, ESQ., NEW YORK. WALKER & GILLETTE, ARCHITECTS.



ENTRANCE HALLWAY (THE WARDROBE DOORS ARE THE ENTRANCE TO CLOAK ROOM AND SERVICE PART OF HOUSE)—RESIDENCE OF A. STEWART WALKER, ESQ., NEW YORK. WALKER & GILLETTE, ARCHITECTS.



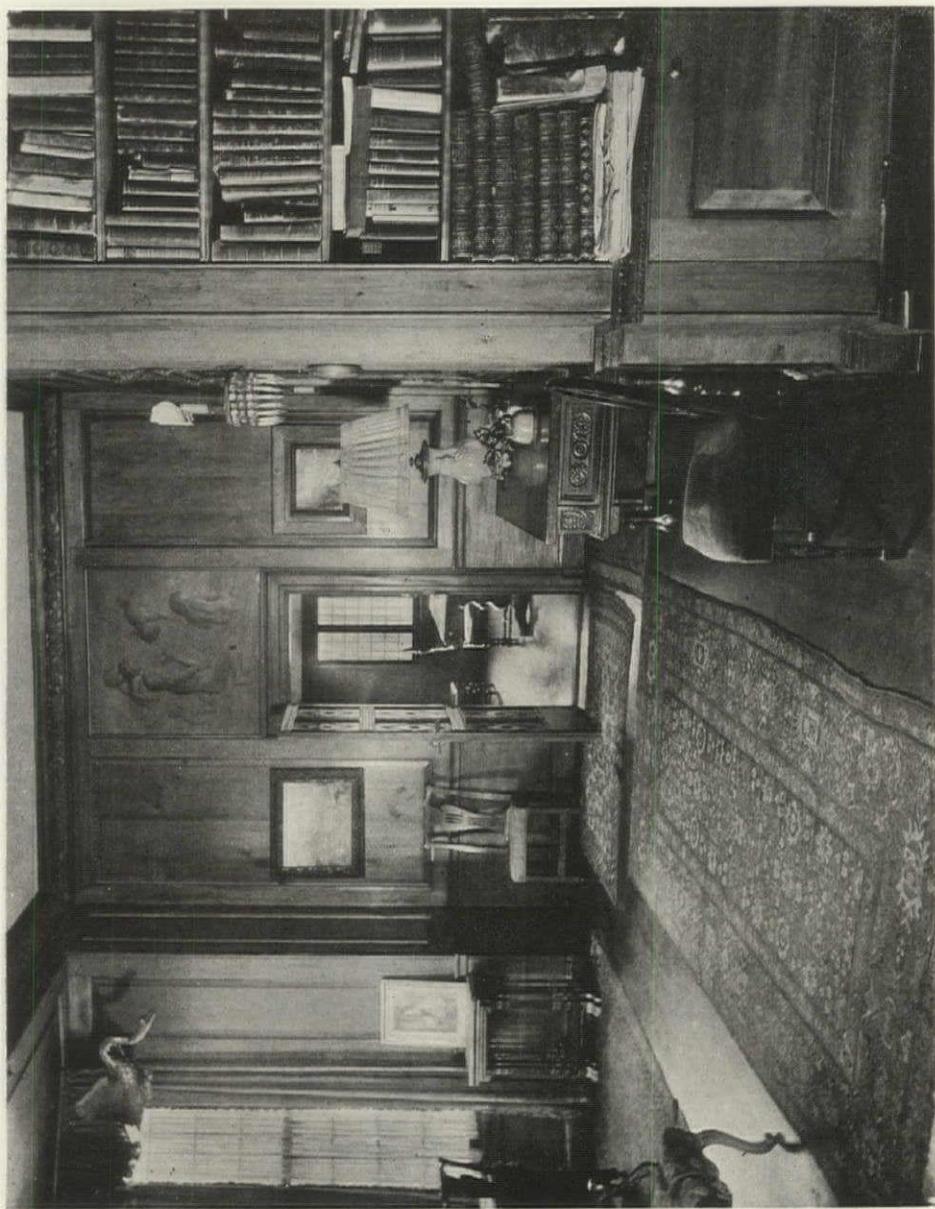
ENTRANCE DOOR (INSIDE) — RESIDENCE
OF A. STEWART WALKER, ESQ., NEW
YORK. WALKER & GILLETTE, ARCHITECTS.



LIVING ROOM, LOOKING EAST—RESIDENCE
OF A. STEWART WALKER, ESQ., NEW
YORK. WALKER & GILLETTE, ARCHITECTS.



DETAIL OF LIVING ROOM—RESIDENCE
OF A. STEWART WALKER, ESQ., NEW
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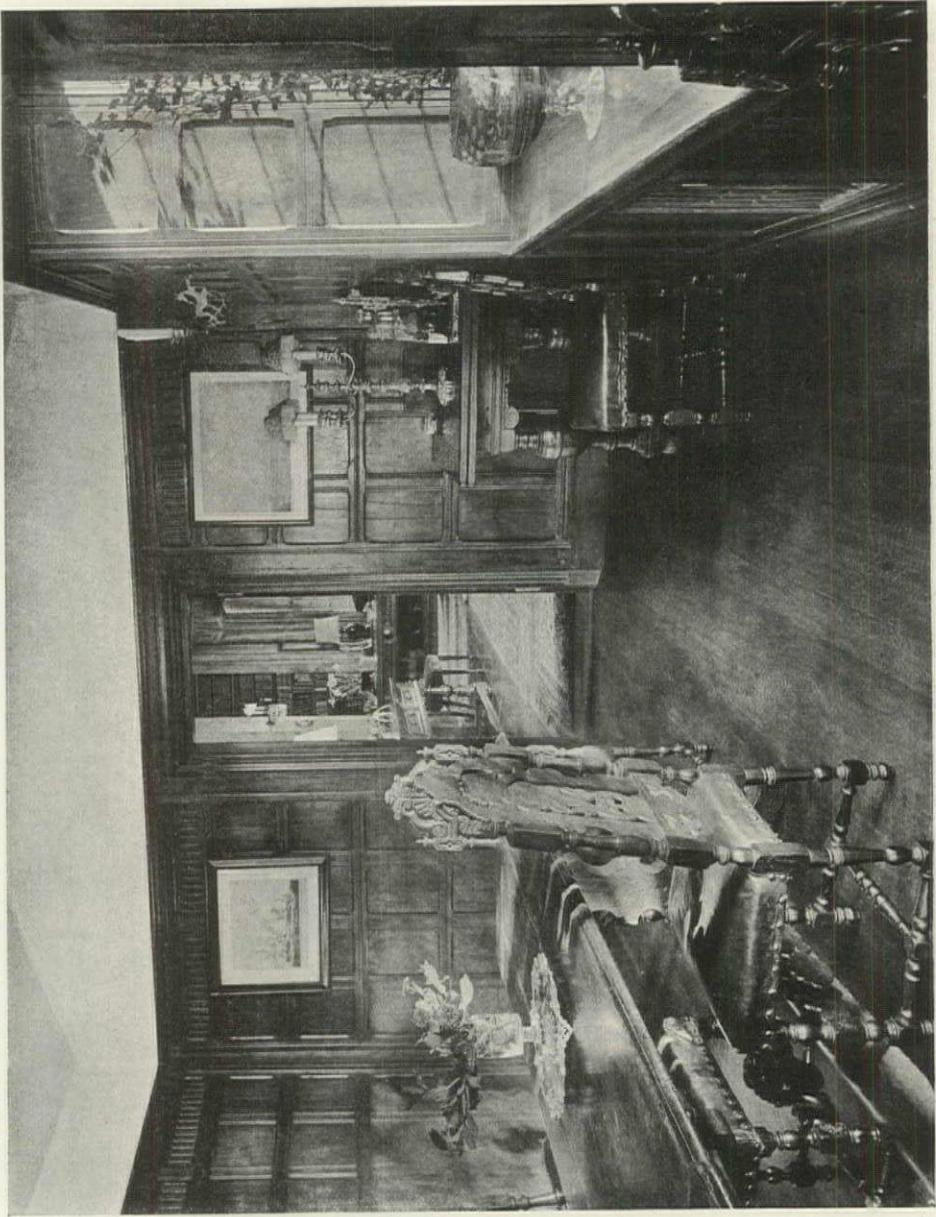
LIVING ROOM, LOOKING WEST—RESIDENCE
OF A. STEWART WALKER, ESQ., NEW
YORK. WALKER & GILLETTE, ARCHITECTS.



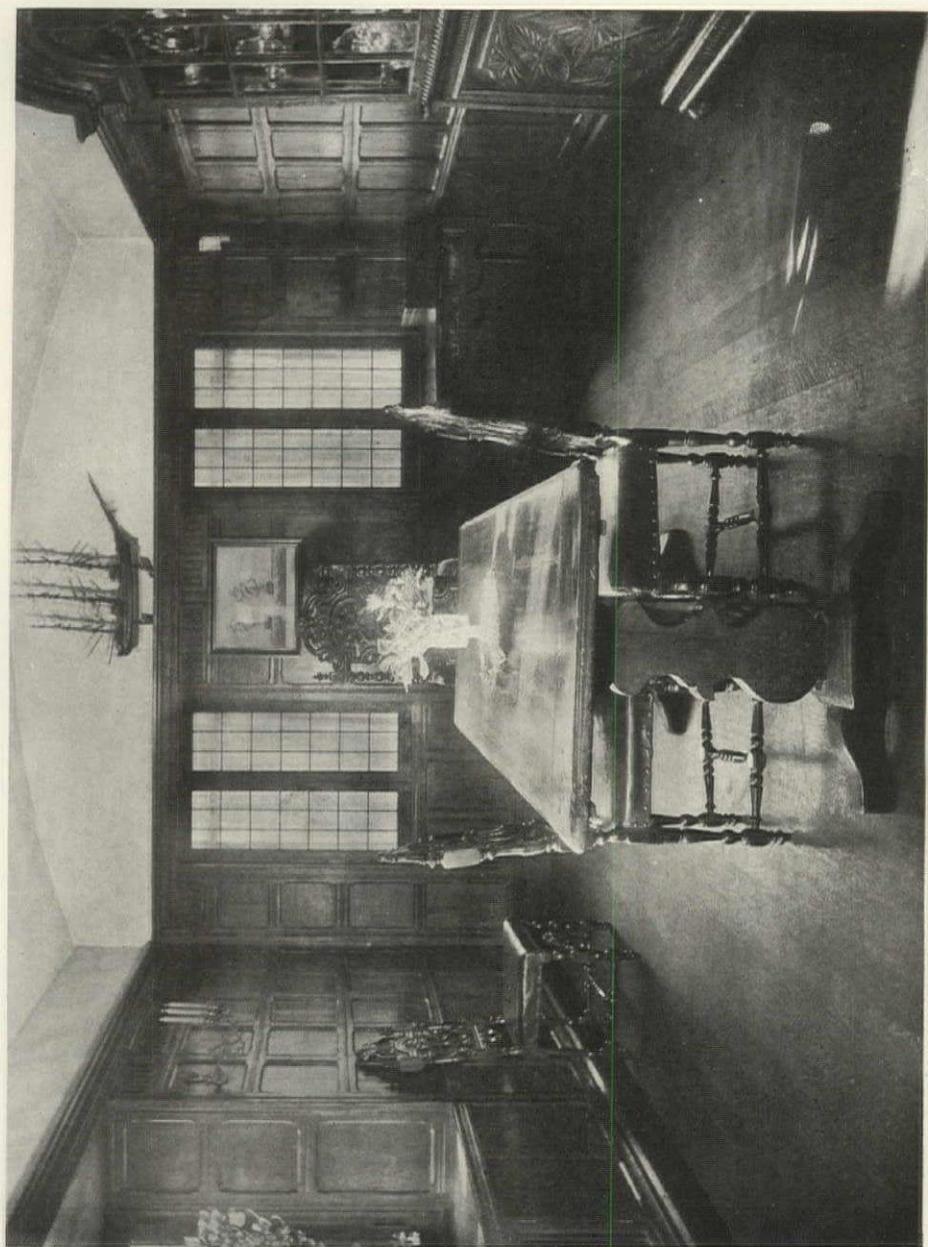
DETAIL OF LIVING ROOM—RESIDENCE
OF A. STEWART WALKER, ESQ., NEW
YORK. WALKER & GILLETTE, ARCHITECTS.



DETAIL OF LIVING ROOM—RESIDENCE
OF A. STEWART WALKER, ESQ., NEW
YORK. WALKER & GILLETTE, ARCHITECTS.



DINING ROOM, WITH VISTA INTO LIVING ROOM—
RESIDENCE OF A. STEWART WALKER, ESQ.,
NEW YORK. WALKER & GILLETTE, ARCHITECTS.



DINING ROOM—RESIDENCE OF A. STEWART WALKER,
ESQ., NEW YORK. WALKER & GILLETTE, ARCHITECTS.



STAIRWAY UP FROM MAIN FLOOR—RESI-
DENCE OF A. STEWART WALKER, ESQ., NEW
YORK—WALKER & GILLETTE, ARCHITECTS.

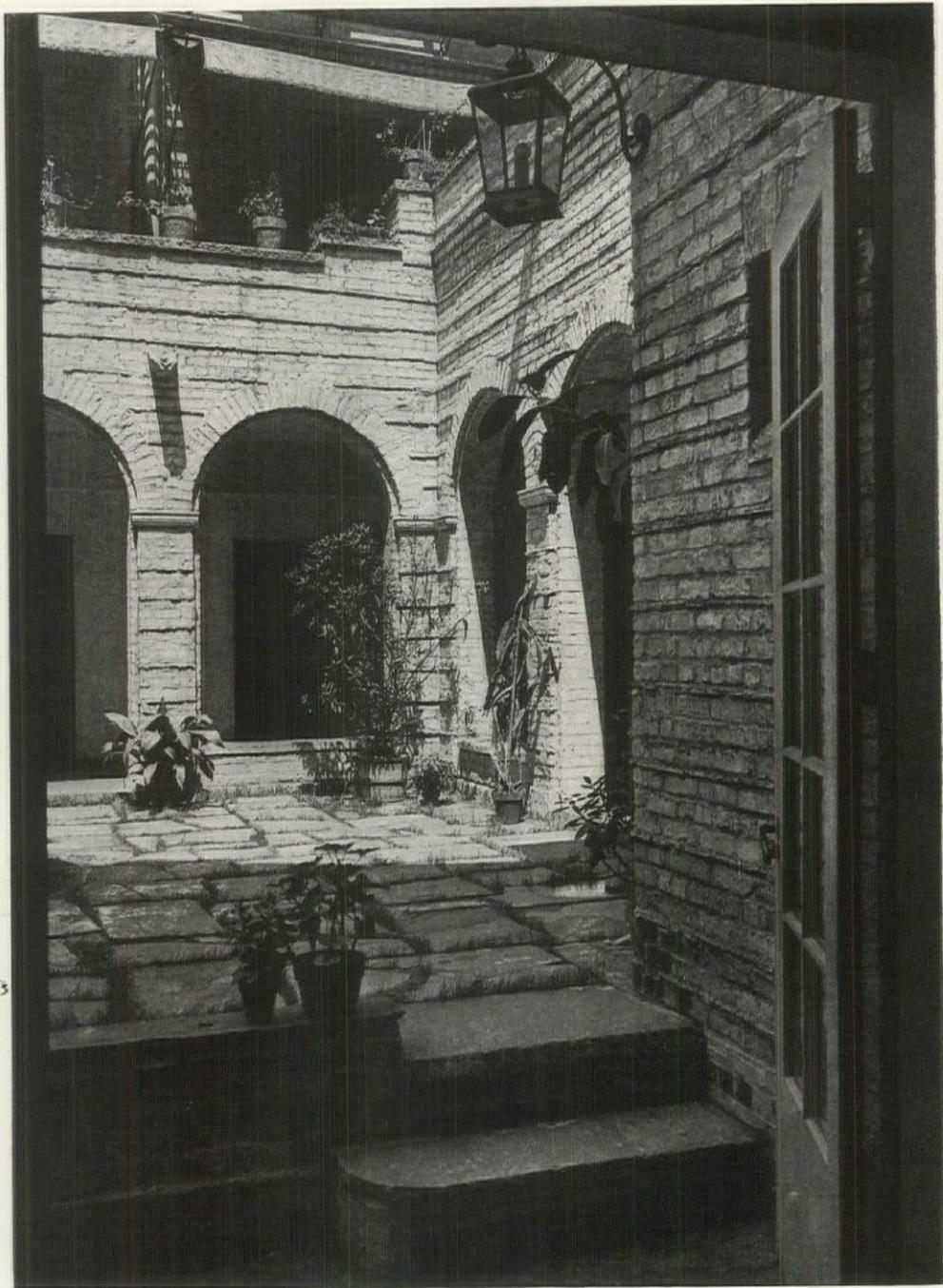
oneself at the entrance to the living room, looking through to the south bay window. And let me add, it is a living room in the true sense of the word—a room where people live at ease. This atmosphere of livableness of the room is permeating and hardly has it made itself felt than another impression of it is formed—one feels its quiet, but rich and beautiful colors. Here again the color is in harmony with the character of the room. It is comfortable, so to say, there is no insistent "keynote"; in fact, it is almost difficult to determine what the colors of the room are. There are the soft, rather light nut brown, woodwork and dark green curtains with narrow gold edging over the large bay window at the east end, and the rest of the tones are so quietly blended as hardly to be noticed.

The woodwork of this living room is a delightful study for the architect who appreciates fine wood details of paneling and mouldings. There is probably no better carved English pine cornice in existence, and the chimney piece is old. Most of the rest is pieced out, but so much in the spirit of the original fragments that one could hardly distinguish old work from new. The furniture is all of it comfortable, placed about simply, without any suspicion of designer's affectation. There is none of that ridiculous device of assembling pictures and bric-a-brac in painfully balanced grouping alluded to above. The large alcove, with shelves from floor to ceiling, fits admirably into the scheme, showing how successful an unsymmetrically shaped room may be. The floor is of oak boards about five inches wide, of dark stain. Here, as elsewhere in the house, is found that quaint assortment—not too much of it—of decorations, of pictures, carv-

ings, metal work, miscellaneous nothings that an architect is bound to pick up in his activity and which add so much that is interesting and personal in a home. Of such are the ship model in the dining room and the fine gilt bird hung in the bay window of the living room.

The living room opens into the dining room, and a most charming, intimate sort of room it is in its walls of old English paneling, rather delicate in scale and in its fine old English furniture. The ceiling is a low segmental plaster curve. This trim, dainty room offers a charming contrast to the larger, more spacious, more "spread-out" living room. Most compact of all is the little Gothic winding stair from the main floor to bedroom floors above, of broad oak treads and odd rail. Its walls are bare and the chief decorations are a number of beautiful small metal hanging lamps on the landings. Upstairs are a series of airy and most cheerful rooms, extremely simple, without formality such as strip panels. Their character has more of the lightness of a summer home than of that heaviness too often found in city houses.

All this design of Mr. Walker's house results in a rare combination of comfort and charm, of colorful decoration, of wit, personality. On the exterior there has been no attempt to modernize the plain front of gray painted brick and brownstone, and the not unpleasing old-fashioned look has been maintained. On the cross-street on either side are a number of unconventional house fronts, very simple, of stuccoed walls and gay painted details that, if developed further, will make this block one of the most interesting in New York City, where, as in most cities, blocks of houses, even if well designed individually, are usually uninspiring as a whole.



ENTRANCE TO COURT FROM ASSEMBLY
ROOM—COSMOPOLITAN CLUB, NEW
YORK. EDWARD C. DEAN, ARCHITECT.

 *The* 
COSMOPOLITAN CLUB
NEW YORK

EDWARD C. DEAN, ARCHITECT

By Leon V. Solon

THE rocketing tendency of prices for building materials and labor has caused purchasers of standing walls, sound roofs, and dry foundations to regard such items as having inherent value, worth preserving. Where a change in the purpose of the building is demanded, the consideration is carefully weighed as to whether it is essential to clear the scene with dynamite and crowbar or whether the choice of a versatile architect will not effect the desired result through conservation and a minimum activity in demolition.

An apologetic attitude, bordering on contempt, has usually characterized the architect's feeling towards alteration work; and the plane from which the problem is studied is not infrequently set deliberately at low level. It has ranked as "chores," as an unprofitable stop-gap devoid of credit, the professional equivalent to the pot-boiler of the conscienceless painter; such a pose is indefensible, and can serve no purpose other than gauging the measure of those maintaining it—in most cases superfluous data. Alteration problems are primarily essays in ingenuity, and success is not for those who are unable to mold a sequence of solutions in predetermined cubic dimensions; though it is problematic whether the existing dimensions of the shell of a converted building can impose greater restrictions on original expression than exist in the present New York City zoning laws.

The degree to which the fixed point in a problem develops into an opportunity or an impediment, is naturally measured by the intellectual fertility or barrenness of the individual furnishing the solution.

Imagination, like virtue, is more likely to be enlarged upon by those bereft than those endowed. The majority of those blessed with the faculty of constructing that individual mental combination recognized as an "idea," regard inventiveness as the staked claim of the miner, where results depend primarily on personal effort expended in the prescribed area. To the unimaginative the "idea" usually assumes the nebulous charm of a legacy imminent from an unexpected quarter.

The old dwelling converted by Mr. Dean into the Cosmopolitan Club for women was of the out-of-date variety located in Fortieth Street, east of Lexington Avenue. To describe it in its original condition as negligible architecturally would be to flirt with commendation without warrant. Such buildings have an extraneous interest, nevertheless, in that they are milestones on the road of American progress, marking the end of the dismal stretch preceding the McKim and White era. They are relics of the day when the architect was the contractor's hack, and, it must be admitted, in most cases professional accomplishment merited no superior fate. The ideals of the client of that period substantiality and middle-class comfort are apparent as the main objectives; immunity from ideals characterizes the architects' most acceptable work.

The transformation effected by Mr. Dean should prove encouraging and inspiring to holders of such property, as he has attained his effect with comparatively small outlay, by a careful study of the decorative possibilities latent in previously used material, thereby giving us a demonstration of the manner in

which the prosaic subject of conservation is amenable to artistry.

The picturesque windows and gables of the adjoining building, originally built as a church and now serving as a sculptor's studio, gave the cue in treatment and supplied the mental impulse resulting in the cloister idea. The court round which the cloister runs was made by joining together the backyards of two old Lexington Avenue houses, now leased by the Club. The cloister and loggia are supplementary approaches to a large assembly-room in the old church building. There was doubt in the minds of some of the Club Committee as to whether the creation of an arcaded court was feasible, but Mr. Dean has succeeded with judiciously calculated proportions in obtaining an exceptionally pleasing result. The exterior walls are of common brick; here the idea of conservation has been developed to advantage, as much of the material had been used before, and painted, with the result that traces of the old coats of red, blue and green paint add considerably to the color value of the wall surfaces. At every fifth course, bits of building tile are set in wide cement joints, producing an appearance of stratification enriching the common brick bonding. All exposed brickwork that can be seen above the courtyard, has been given a coat of pinkish whitewash, the color of parts of the old church building; this color is applied very irregularly and has a decidedly mature quality of tone.

The roof slates are set in cement without striking a clearing of the joints, the irregular and ragged fragments of cement left on the roof giving a texture of surface that a more precise laying of slate could not effect.

The excellent paving of the court is yet another benefit of salvage, the flagstones having made an inartistic debut as pavement of the original back-yards. These flags are set in earth with joints sodded and sown with grass seed.

The floors of the rooms opening off the court are tiled with three-inch tiles, of a rich earthen color, set very freely, no attempt being made to keep a uni-

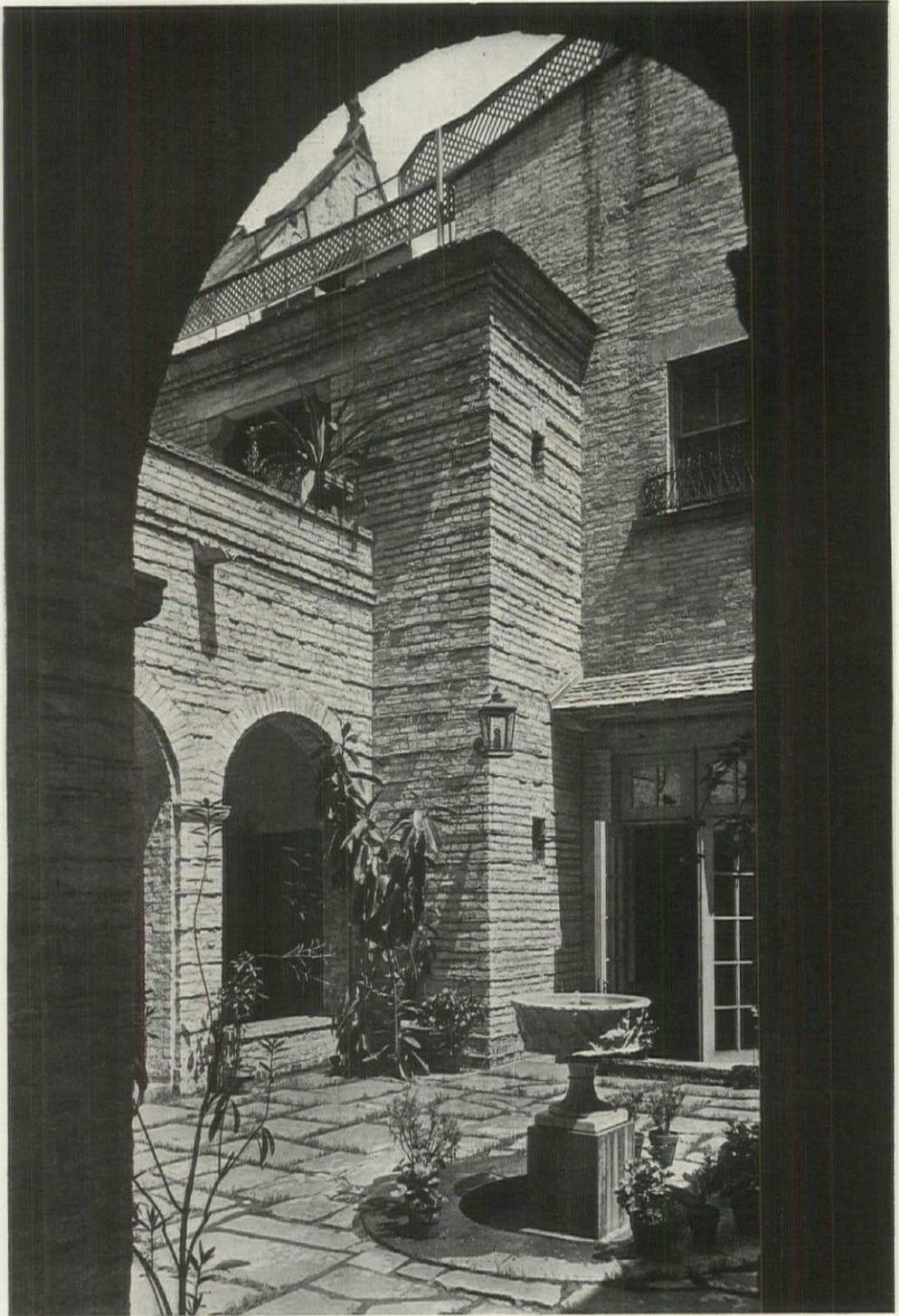
form width of cement joint. These have considerable color variation which has been used to good purpose, the shades being graded instead of taken at hazard, working up to the lightest shade in the darkest parts of the floors; the popular mottled effect has been carefully avoided in this instance with good judgment. Much variation of texture exists in the plastered wall surfaces, which are left roughly troweled.

The kitchens of the old Lexington Avenue houses were found to be on the same level with the back-yards, which facilitated their transformation into reception rooms giving off the cloister, as the open corridor is named; our illustrations show how the wide recesses occupied by the ranges have been converted into attractive fireplaces.

The arches of the courtyard are filled with sash and frames, so constructed that they may be entirely removed in the summer months, leaving the simple brick arches free from any disfiguring woodwork; the frames are bolted into the brick, the bolts being removed with the frames in the spring, and the holes plastered up and painted.

The fountain in the court comes from an old villa in North Italy and adapts itself well to its new environment. All the ironwork in the balconies and grills is ancient; the grilles in front of the cloister radiators being particularly handsome and interesting examples of old Italian workmanship of some considerable value. They were originally door-grills which have been reversed to fulfill their modern function.

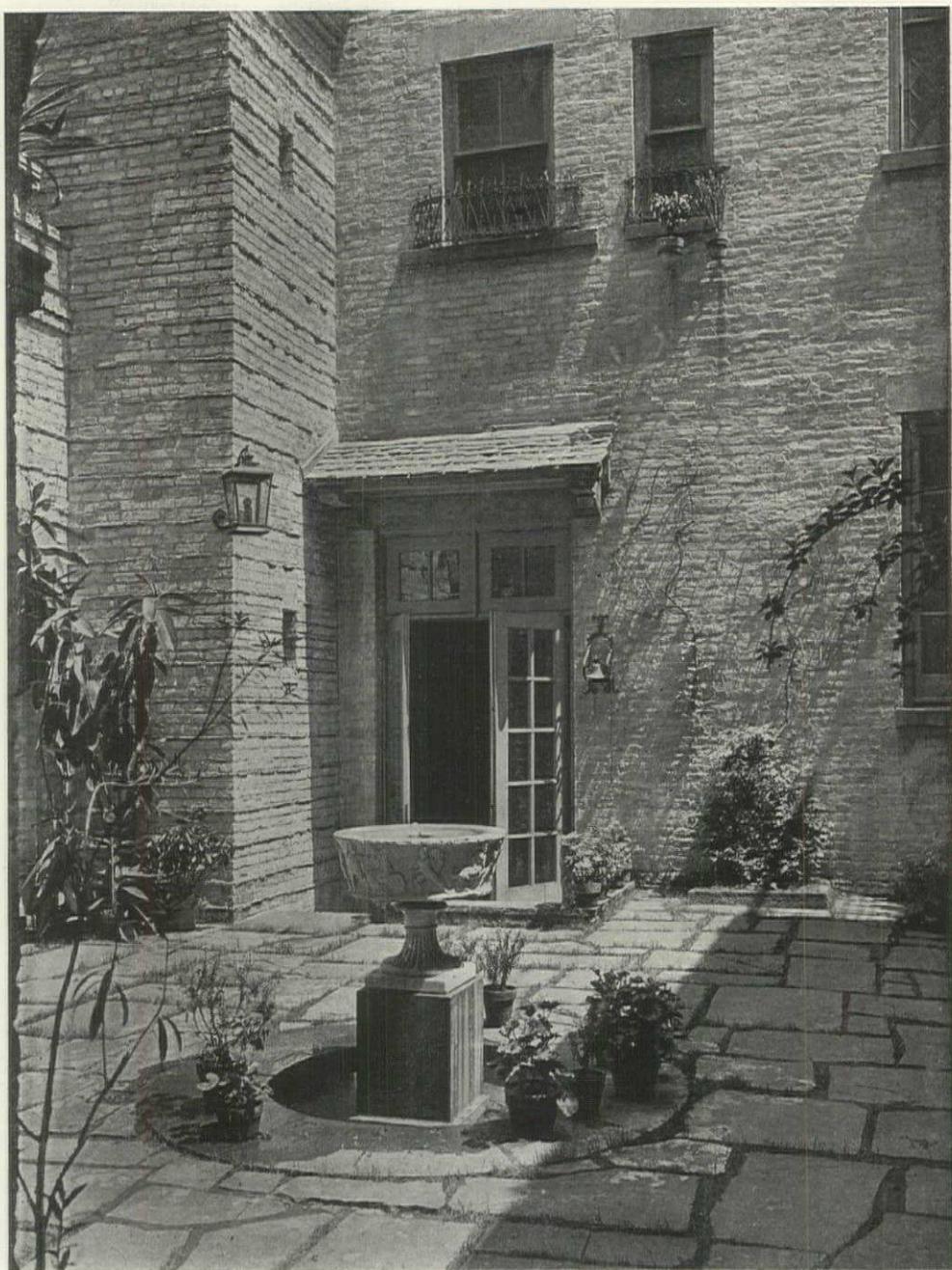
The lighting fixtures are amusing studies in conservation. These are composed of odd bits of ornamental iron and woodwork ingeniously grouped. In the loggia an old Spanish brazier, hung from chains, supplies indirect lighting. The large lantern in the courtyard is a Boston relic which began its existence as a street-lamp. Old velvets and coverings of reddish hues give the prevailing color note to the guests' reception room; rich purples and faded yellows figuring as predominant tones in the loggia. Water stain is used for all the woodwork,



VIEW OF COURT FROM ENTRANCE
CORRIDOR—COSMOPOLITAN CLUB, NEW
YORK. EDWARD C. DEAN, ARCHITECT.



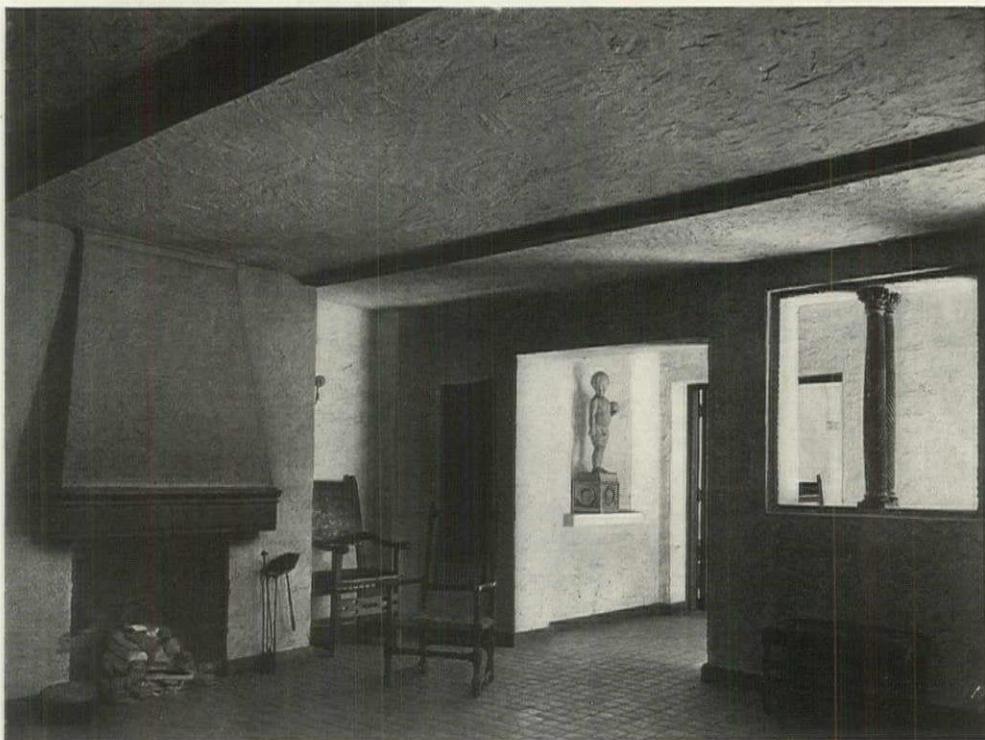
FOUNTAIN AND LOGGIA—COSMOPOLITAN CLUB,
NEW YORK. EDWARD C. DEAN, ARCHITECT.



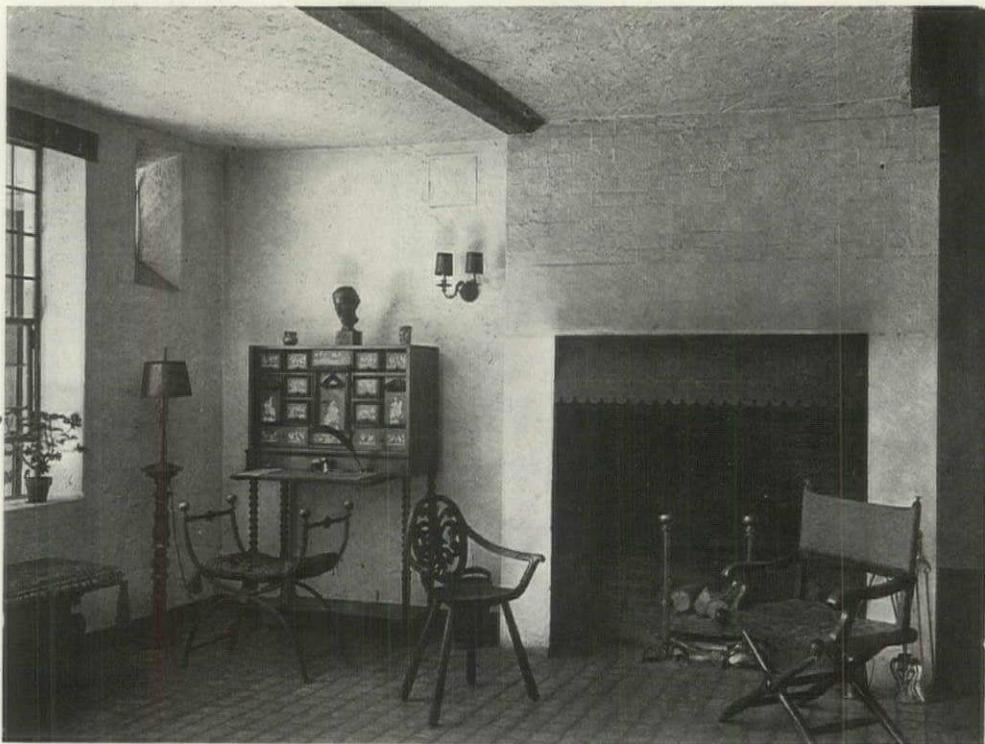
ENTRANCE TO ASSEMBLY ROOM—COSMOPOLITAN CLUB, NEW YORK. EDWARD C. DEAN, ARCHITECT.



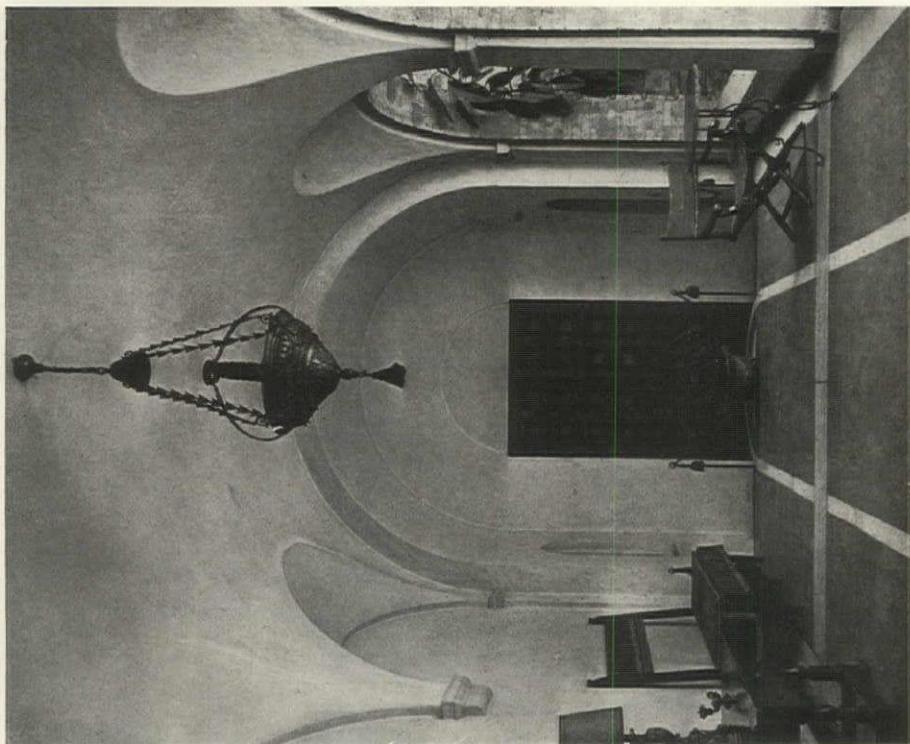
SOUTHWEST CORNER OF COURT—COSMOPOLITAN
CLUB, NEW YORK. EDWARD C. DEAN, ARCHITECT.



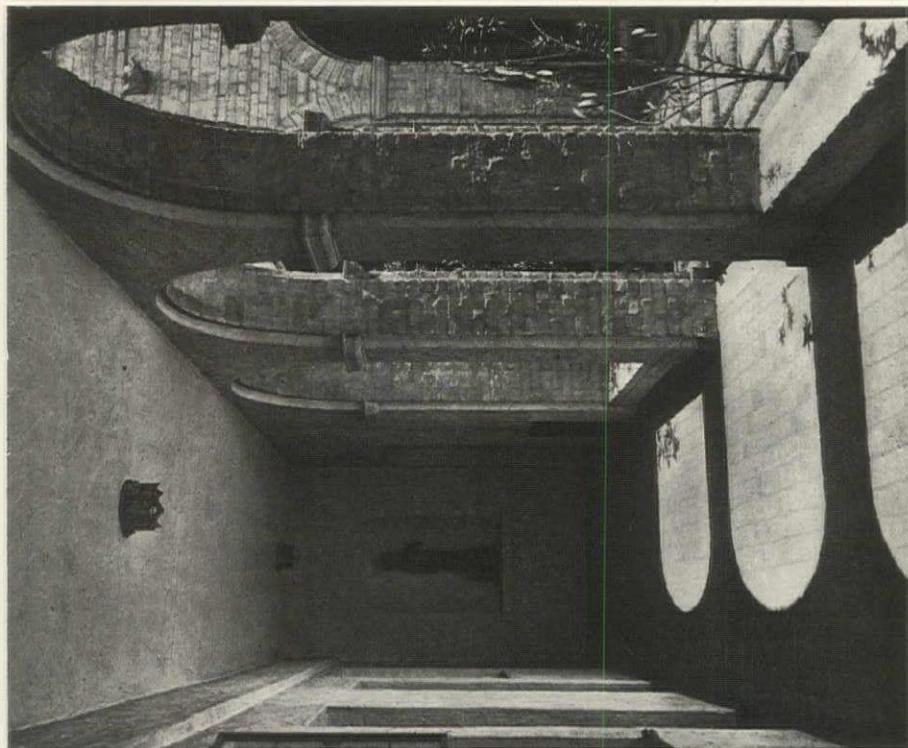
GUESTS' SITTING ROOM—COSMOPOLITAN CLUB, NEW YORK.
Edward C. Dean, Architect.



MEMBERS' WAITING ROOM—COSMOPOLITAN CLUB, NEW YORK.
Edward C. Dean, Architect.



LOGGIA—COSMOPOLITAN CLUB, NEW YORK.
Edward C. Dean, Architect.



CLOISTER—COSMOPOLITAN CLUB, NEW YORK.
Edward C. Dean, Architect.

irregularly applied and subsequently waxed.

A narrow stair leads from the guests' sitting room to the private dining room which is decorated after a late eighteenth century manner, the walls of which are paneled and alternately treated with mirrors and old Portuguese chintz. An eighteenth century Italian mirror hangs over the mantel, an obvious contemporary of the original dwelling. Another stairway leads from the guests' reception room to the members' library, reserved exclusively for members. The library is of ample dimensions and overlooks the courtyard; it consists of four of the original bedrooms thrown into one space. Heavy, tall bookcases line the walls. The lighting was increased by replacing the old windows with larger ones, leaded and decorated in their upper panels with leaden devices reproducing the various insignia of medieval metal-workers. The glazing is brightened by the introduction of purple and green glass in places. The main dining room faces Fortieth Street and is situated on the second floor; it has been enlarged and is screened from the stair-hall, the stairs formerly opening directly into the dining room. The small lunch room on the corner of Lexington Avenue and Fortieth Street is decorated after the Delafosse manner, the ornamentation being confined to the panels

over the mantel and doorways. No structural change was made in the old living room on the second floor beyond creating access to the roof of the cloister and loggia as a means of giving extra out-of-door accommodation during the warm weather, an appreciable benefit for those condemned to the city in the dog-days.

In a club instituted for the congregation and social intercourse of women engaged in literary, artistic and professional pursuits, distinctive character in plan and design is essential; in addition, an atmosphere of intellectual eclecticism must be fostered, habitually associated with old master drawings, Renaissance majolica and *cire perdue*. Where financial resources are necessarily restricted, aesthetic values must be acquired by the skilled appreciation of qualities, and decorative richness attained through texture and color manipulation, when the precious is beyond reach. Nothing here has been wasted that could serve, and all serves so adequately that deliberate choice appears at first sight to have determined selection. It is an object lesson in judicious conservation, and an example of taste as an asset in investment. A casual onlooker visiting this building would be impressed by evidences of fastidiousness in reticent taste, little suspecting that he views Economy in graceful garb.

■ The SOCIAL CENTER ■

By FISKE KIMBALL

PART III- *Civic Enterprises*

THE ultimate form of the social center is the civic community center. Its advantages over the co-operative and the philanthropic enterprise are both numerous and solid. There is no financial barrier, however low, to its enjoyment; there is no mistrust of being patronized, but instead, a sense of proprietorship. The civic ideal is to reach all, and with civic resources there is at least the possibility of this, which private agencies could never hope even to approach. The chief difficulty has been, and still is, to arouse the authorities to the necessity of civic action. For this the Y. M. C. A. and the settlements, in their different fields, have paved the way; the principle is admitted, and eager experiment as to the best method of application is in progress.

Already before the war there were notable beginnings, both in this country and abroad. To England, where the problems of modern industrialism first reached the critical stage, we may well look for valuable suggestions. Civic agencies there took up the task of housing social and recreative activities on a large scale as early as 1883, when an act of Parliament appropriated the income of the old parochial endowments of London to the purpose. Thus began the foundation of civic "industrial institutes," or "polytechnics," as they came rather accidentally to be called, in which, co-ordinately with vocational training, were to be carried on—in the words of the first regulations, (1892): "Public lectures; musical and other entertainments and exhibitions; instruction and practice in gymnastics, drill, swimming, and other bodily exercises; facilities for the formation and meeting of clubs and societies, a library, museum and reading room or rooms."

Among the finest of these numerous establishments is the Northampton In-

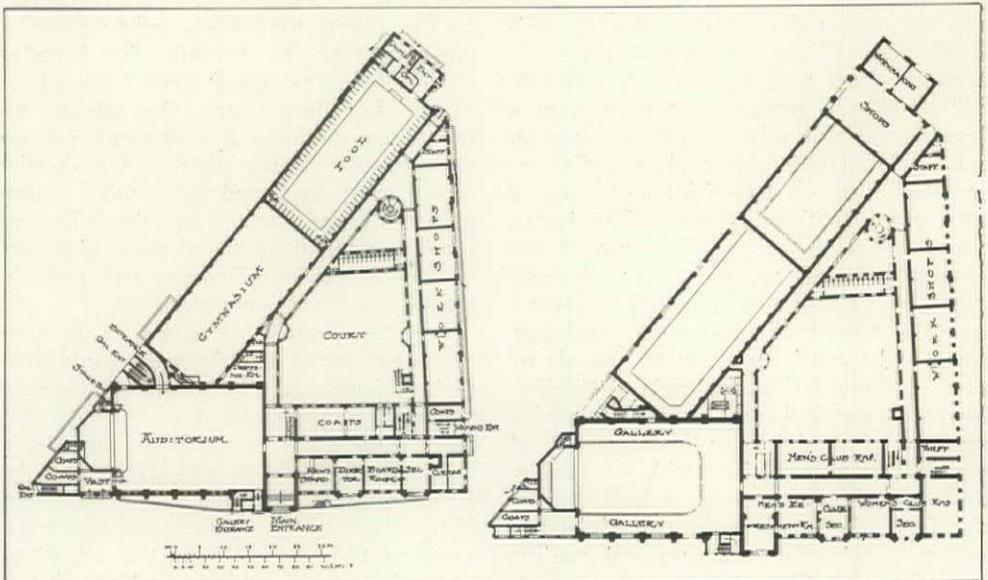
stitute in Clerkenwell. As one of three buildings of a single enterprise, "The City Polytechnic," it provides principally for the recreational and social phases of the work. About the sides of an irregular lot are arranged, with the practical ingenuity characteristic of English design, the great concert and lecture hall, the gymnasium, the large pool, the vocational shops, and the quarters for clubs and administration. Thus in England, all the activities of a social center were splendidly housed under civic auspices over twenty years ago.

In America, where public authorities generally have been unprepared to grant money for such a thoroughgoing establishment, the struggle for civic provision of social facilities has followed several distinct lines of attack. On one hand there has been the effort to secure buildings and land for this or that special facility, pressing needed—public baths, municipal gymnasiums and playgrounds; on the other, to employ existing buildings, such as the schools, for broader social uses. To these have been added in the last few years, the attempt to regenerate political life through replacing corrupt ward politics by district "town meetings," and respectable voting places. Finally has come the effort to combine several or all of these elements to secure greater efficiency and provide a true center of community life.

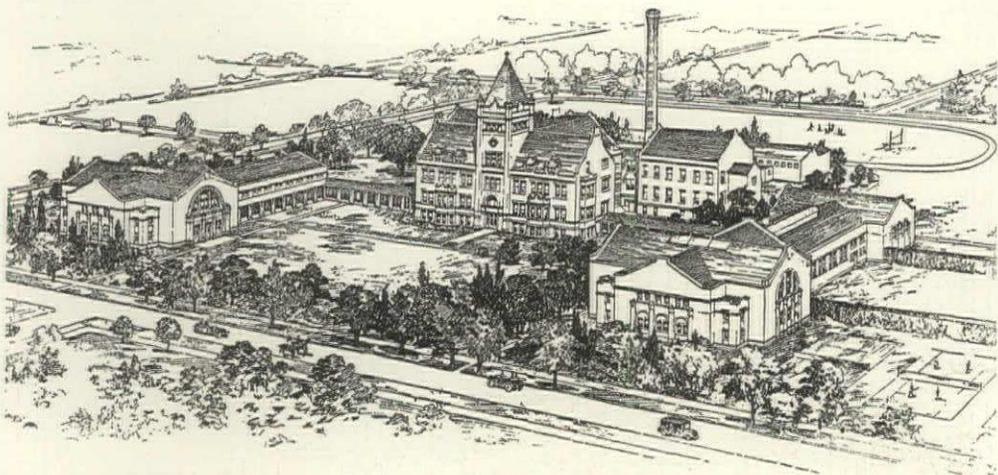
Separate municipal baths or gymnasiums are types already well established and understood. The current requirements of the "socialized school" are also now sufficiently recognized, and have been discussed very adequately in the *Architectural Record* for November, 1917. It is easy to understand the argument of the advocates of the school as a social center, on the ground of efficient utilization, night and day, summer and winter, of a plant already existing. But



NORTHAMPTON INSTITUTE, CLERKENWELL, LONDON.
E. W. Mountford, Architect.



FIRST AND SECOND FLOOR PLANS—NORTHAMPTON INSTITUTE, CLERKENWELL, LONDON.
E. W. Mountford, Architect.



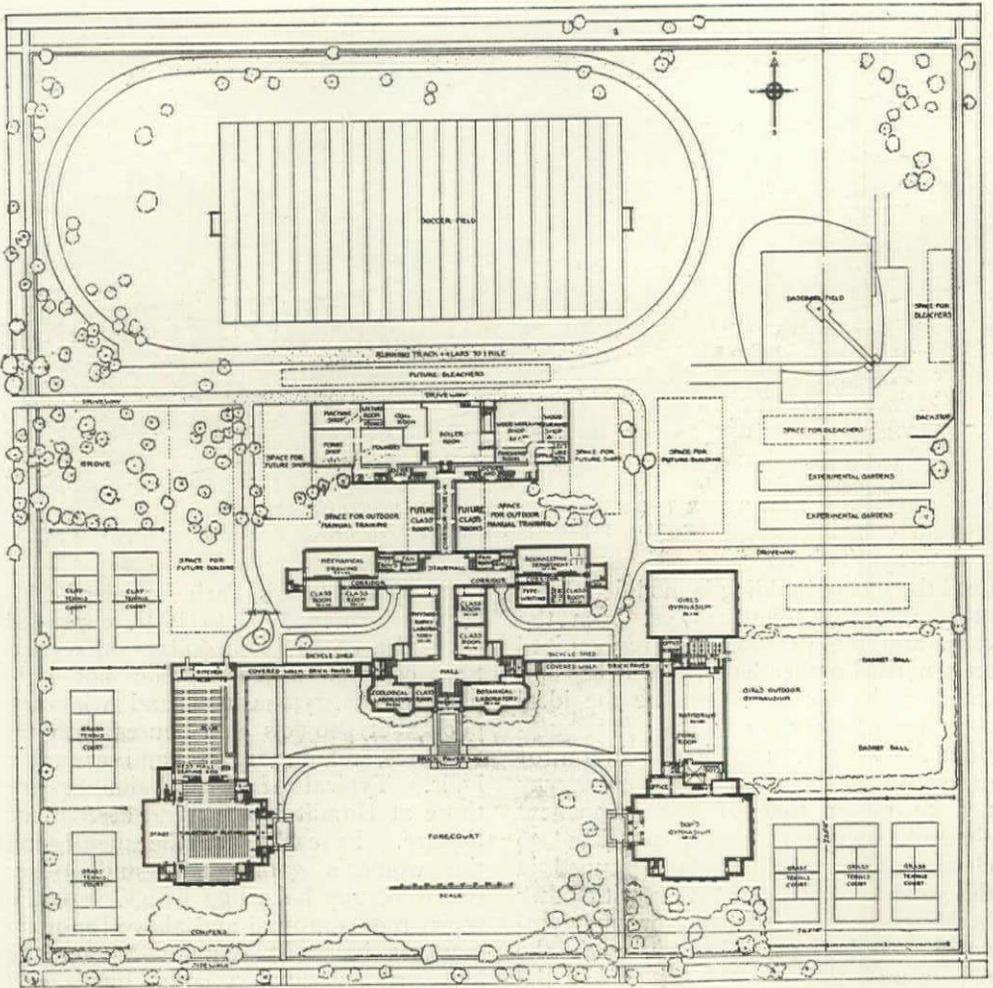
NEW TRIER TOWNSHIP HIGH SCHOOL, KENILWORTH, ILL.
Perkins, Fellows & Hamilton, Architects.

until the school building is modified much more radically than has yet been the case, and the personnel is reorganized on a much broader basis, it will be difficult for the school to become the ideal community center for adults. It is questionable whether the final relation of the school to the community center may not be rather that of one component element, somewhat closely restricted to class rooms and shops, but grouped in the most intimate connection with other buildings housing the auditorium, gymnasium and branch library, with the playground and so on—of which the school and outside organizations share the use. Such a group is foreshadowed in the scheme for a high school at Kenilworth, Illinois, where the social features occupy essentially independent units. Thus the same efficiency of utilization can be secured without having to overcome the prejudice of native-born adults against "going back to school," and without creating a single building of cumbersome, amorphous type, of which the diverse and often preferably simultaneous uses are difficult to co-ordinate and supervise.

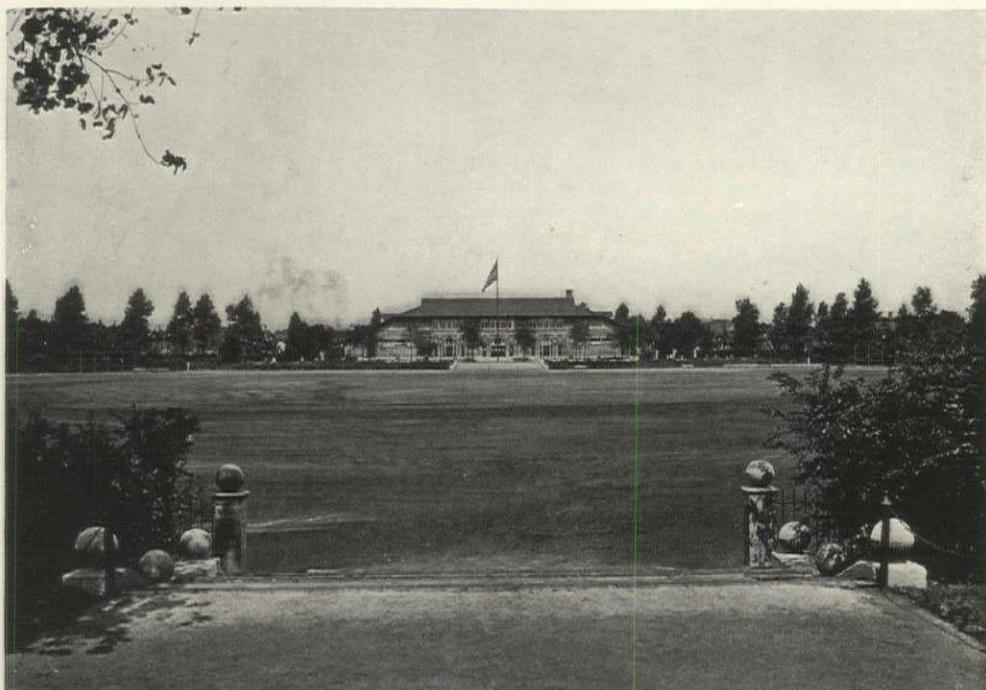
The solution of the civic community center problem has been approached from another direction, through the field house of the municipal playground or small park. The pioneer work here was

done by the South Park Board of Chicago, which in 1903 to 1907, expended six and a half million dollars on recreation centers, which include not only playgrounds, gymnasiums, and swimming pools, but people's club houses with refectories, reading rooms and assembly halls. Typical of these buildings are those at Hamilton Park and at Armour Square. In each case the men's and the women's gymnasiums and locker rooms occupy balancing wings, with the social rooms around and above the main entrance hall. At Armour Square the buildings surround a court lined with individual dressing booths and containing the swimming pool, the entrance pavilion with the social rooms forming a distinct block. A later development is to leave such a court free from youthful activities, for elderly persons who seek and require sheltered, quiet surroundings. In the more recent Chicago field houses, the size and accommodations have been increased, with gymnasiums fifty feet by eighty, assembly halls of equal size, showers for men and for women totaling over sixty, and dressing booths numbering two hundred. The precedents established in Chicago have been widely followed in other cities.

The athletic facilities of the Chicago recreation centers were instantly utilized to the full under the guidance of ath-

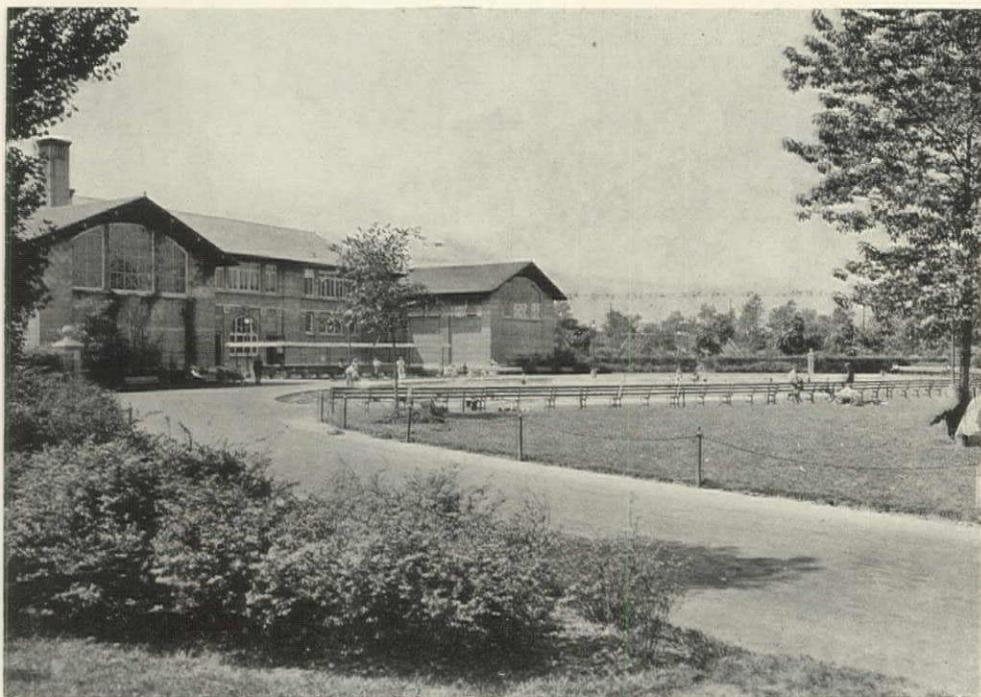


PLOT PLAN—NEW TRIER TOWNSHIP HIGH SCHOOL, KENILWORTH, ILL. PERKINS, FELLOWS & HAMILTON, ARCHITECTS.



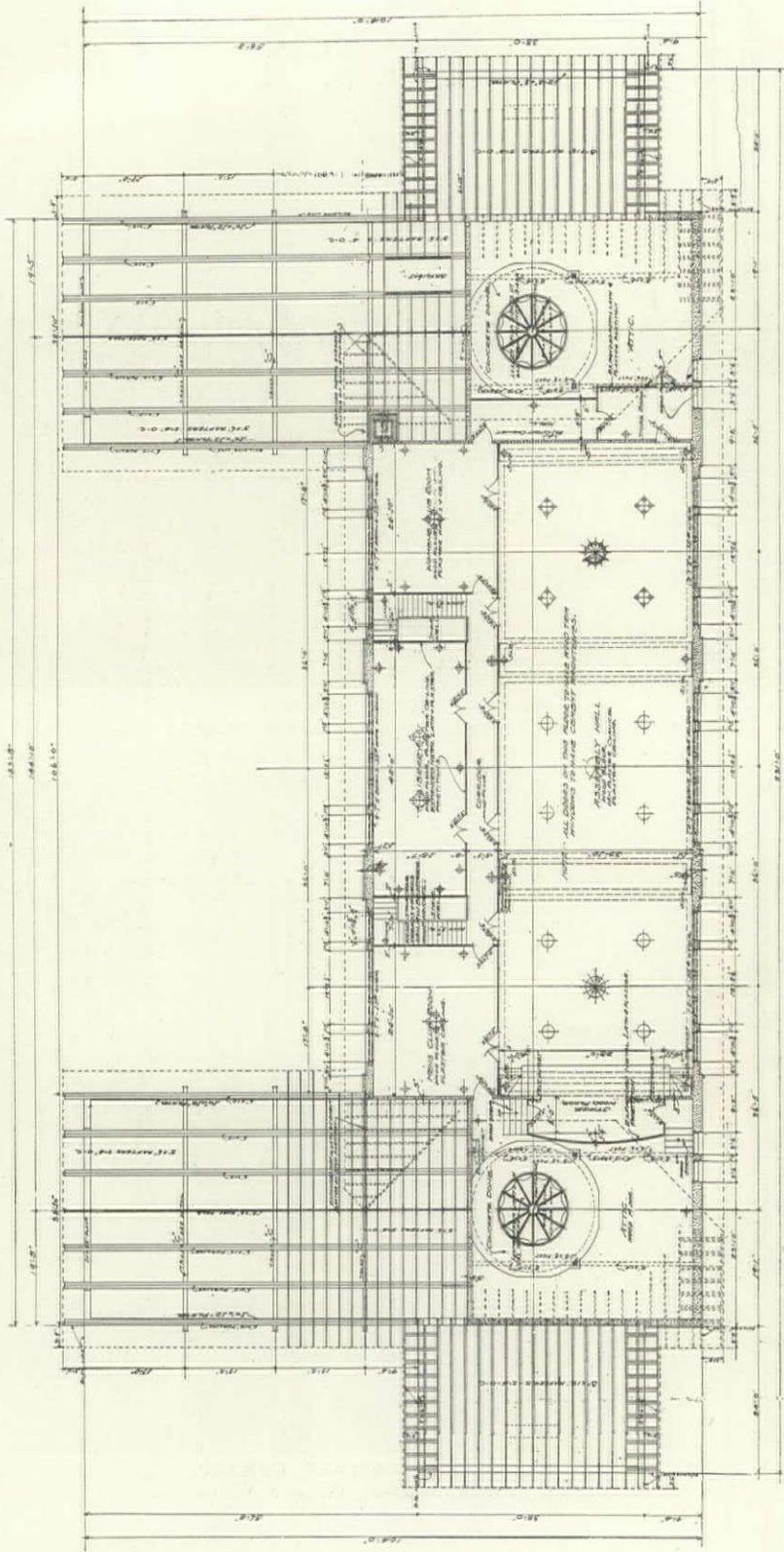
HAMILTON PARK, CHICAGO.

D. H. Burnham & Co. (Graham, Anderson, Probst & White), Architects.

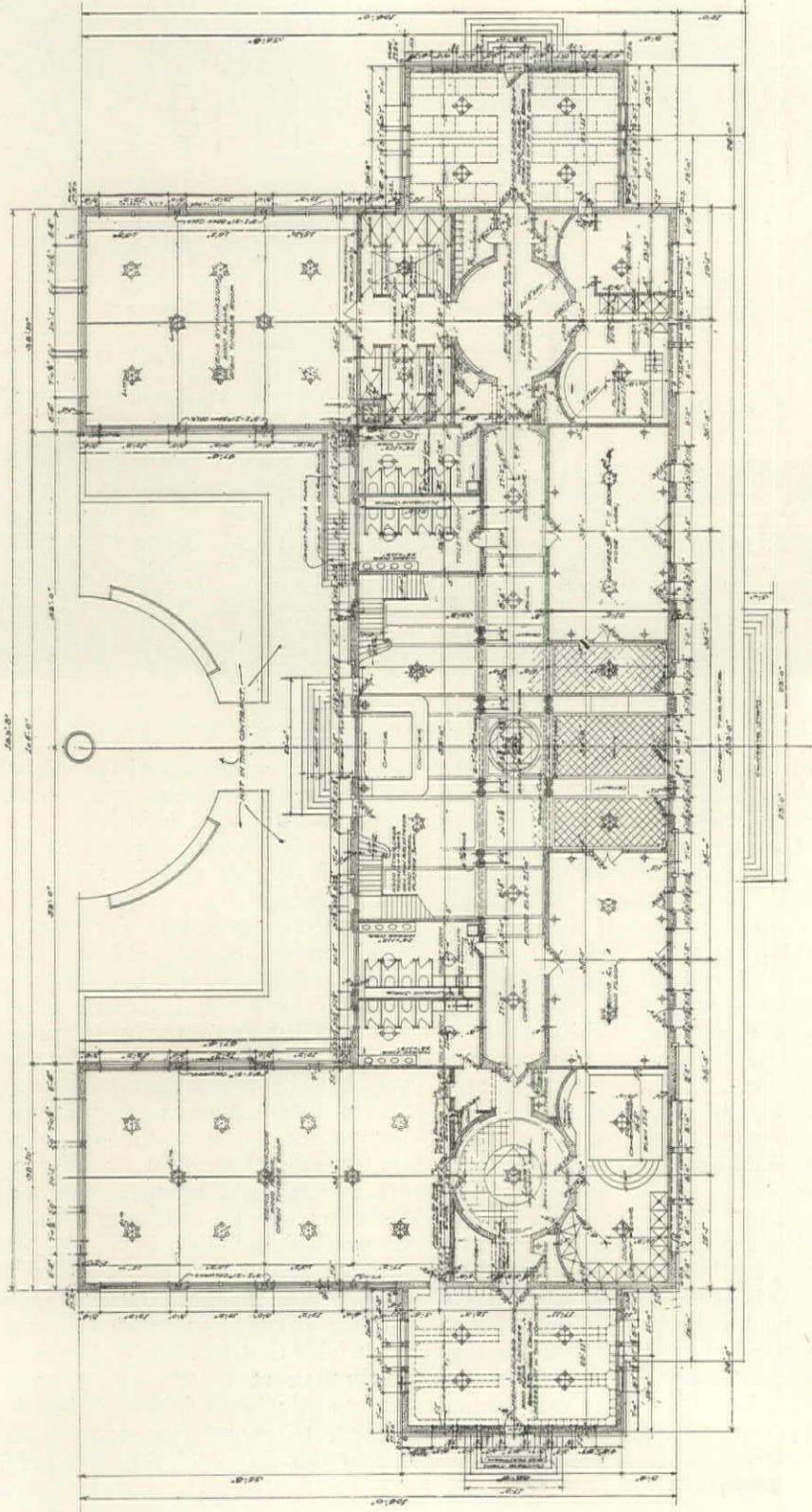


FIELD HOUSE—HAMILTON PARK, CHICAGO.

D. H. Burnham & Co. (Graham, Anderson, Probst & White), Architects.



SECOND FLOOR PLAN—SOUTH PARK COMMISSION FIELD HOUSE FOR PARK NO. 9, CHICAGO. D. H. BURNHAM & CO. (GRAHAM, ANDERSON, PROBST & WHITE), ARCHITECTS.



FIRST FLOOR PLAN—SOUTH PARK COMMISSION FIELD HOUSE FOR PARK NO. 9, CHICAGO. D. H. BURNHAM & CO. (GRAHAM, ANDERSON, PROBST & WHITE), ARCHITECTS.



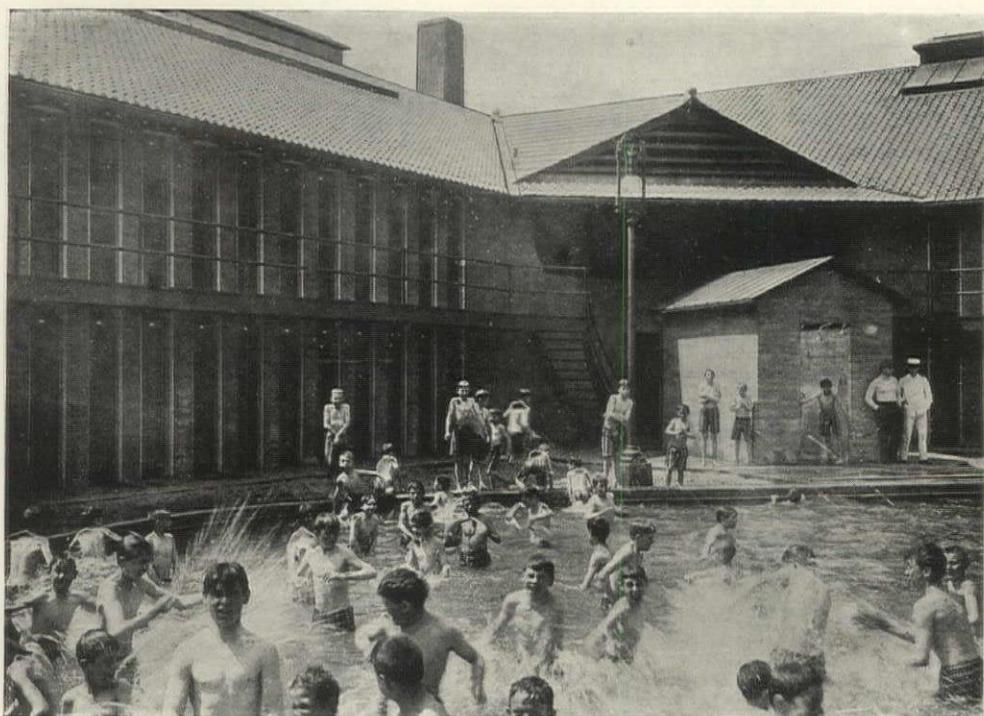
FIELD HOUSE—ARMOUR SQUARE, CHICAGO.

D. H. Burnham & Co. (Graham, Anderson, Probst & White), Architects.

letic instructors. The social activities for which their field houses afforded opportunity were naturally slower to develop. The mere provision of places for social and recreative gatherings led to a considerable use of the assembly halls and club rooms, but it was soon realized that for these to attain their full service, something more than physical accommodation was necessary. The personal element of leadership, furnished in the settlement by the workers, and especially the head worker, has accordingly been supplied by the appointment of field house directors to promote the social activities, with gratifying success.

An approach to the union of playground, school, baths, and other traditional elements is found, under urban conditions, in Chicago, at Stanford Park, with the field house of which the Washburne School and a branch library stand in close physical relation, although they are administratively distinct. Obviously the full value of such a combination would be realized only under a unified administration.

All these experiments have still left to the future the form of civic community center which might ultimately be desirable, transcending the opportunist adaptations of existing types. This question also, Chicago has sought to answer, through the competition for plans for a neighborhood center held by the City Club in 1914 and 1915, on a program prepared with the co-operation of the Illinois Chapter of the American Institute of Architects. This program was very broadly drawn, leaving to the competitor the decision as to the sorts of institutions to be included in such a center, so that it might provide for the creation of real urban sub-centers by the grouping of governmental, and even commercial buildings, as well as of educational, recreational, and social facilities. It was the belief of those responsible for the competition "that the grouping of neighborhood public and semi-public institutions at a common center would tend to stimulate neighborhood pride and activity, to reduce the social isolation of the family, and to restore, in part,



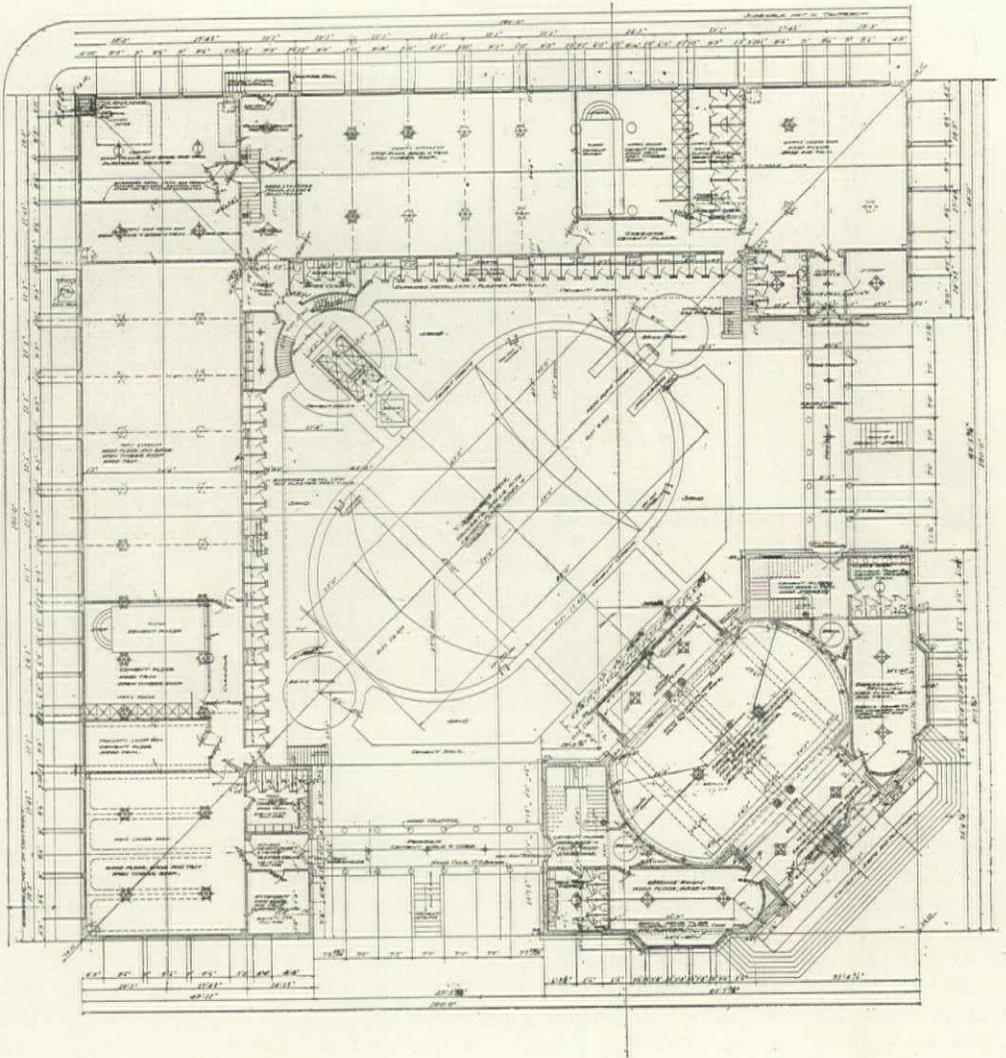
THE POOL—ARMOUR SQUARE, CHICAGO.

D. H. Burnham & Co. (Graham, Anderson, Probst & White), Architects.

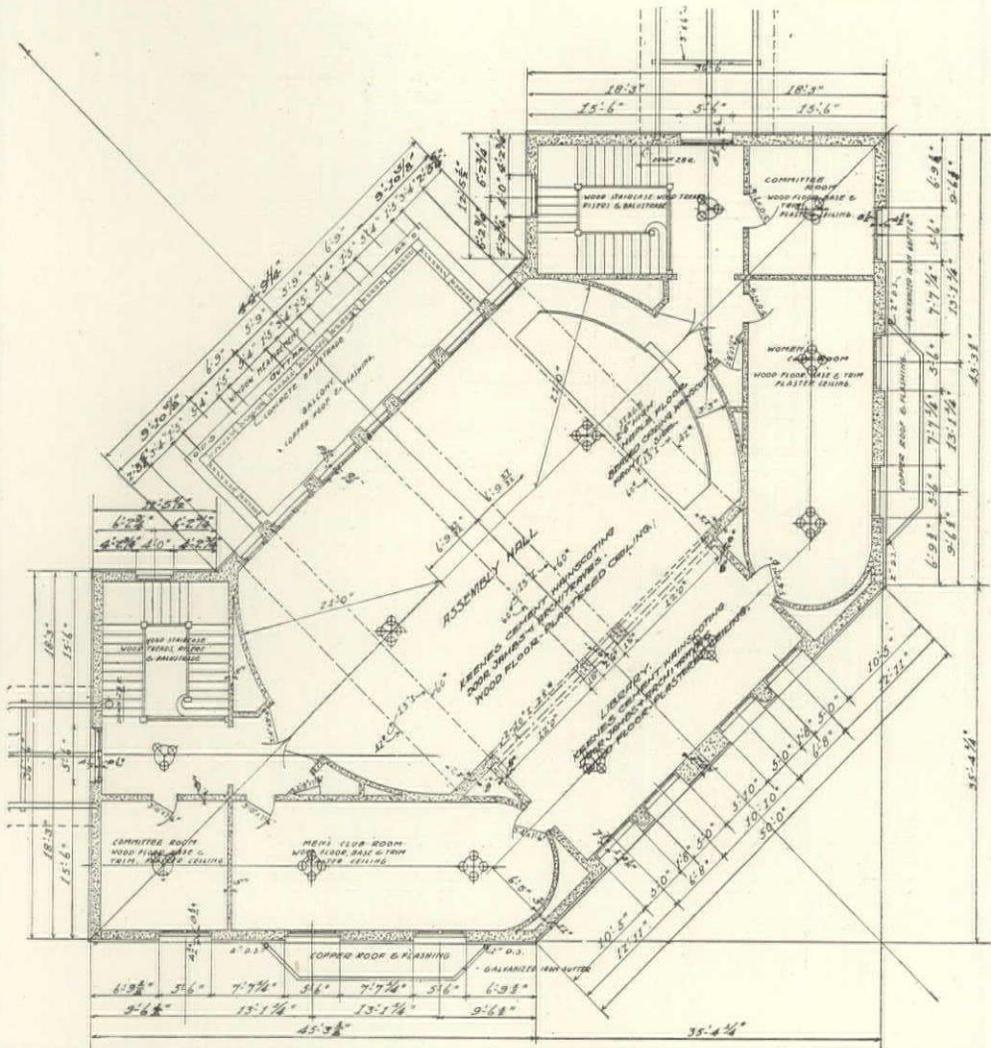
the neighborhood life which has so largely vanished from our big cities." In this belief, the authors of the premiated designs, and other submitted *hors concours*, combined in related groups not only schools, playgrounds, and library, but Y. M. C. A., Y. W. C. A., and churches; hospital and day nursery; market square, shops, banks, and moving picture theatres; post office, telegraph and express offices; police and fire stations. In advance of the proposed publication in book form of the designs submitted, Mr. Joseph Hudnut, the editor, has kindly permitted us to publish two of the plans, with other material collected by him. The book is intended to include, also, studies of comprehensive social centers for two specific neighborhoods in Chicago, prepared by Mr. Hudnut, under the auspices of a committee of the club, a block plan of one of which is also reproduced.

Meanwhile, the war has brought reinforcement to the forces working for community center buildings, through the

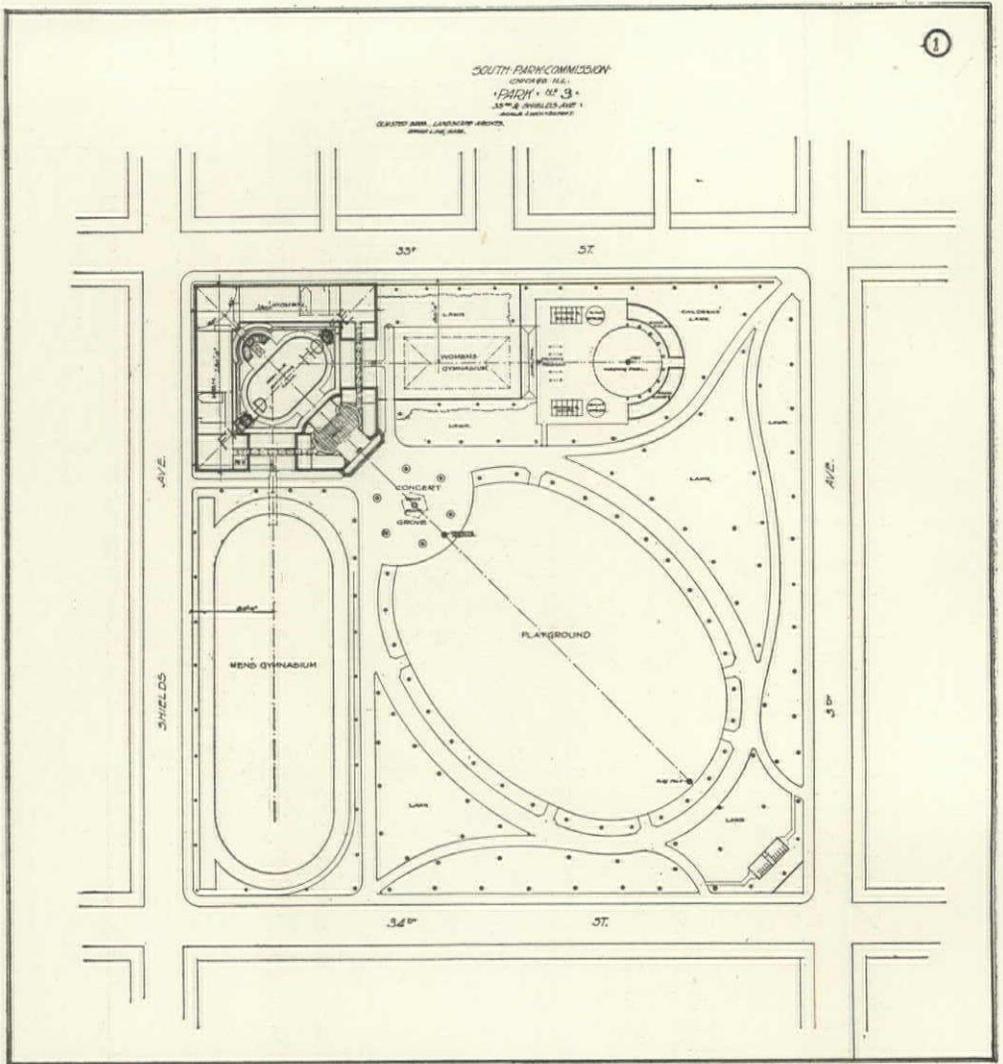
idea that the war memorials which are to be expected in every community should not take the form merely of conventional "monuments," but should be structures at once commemorating the dead and embodying the spirit of human brotherhood for which they fought. The idea is indeed an admissible one, and offers a prospect of financial support for a civic community house in many places, where one could otherwise scarcely be hoped for. Under the guidance of experienced workers, such as those of the settlements or the War Camp Community Service, it may lead to the most valuable results. The suddenness of the opportunity, however, is resulting naturally in the hasty appearance of many plans in which accumulated experience as to the most fundamental needs is little recognized. The value to the community of art, music, and drama—especially when of its own creation—is undoubted, and provision for them must be included, but in all but the most favored societies there are other matters more pressing.



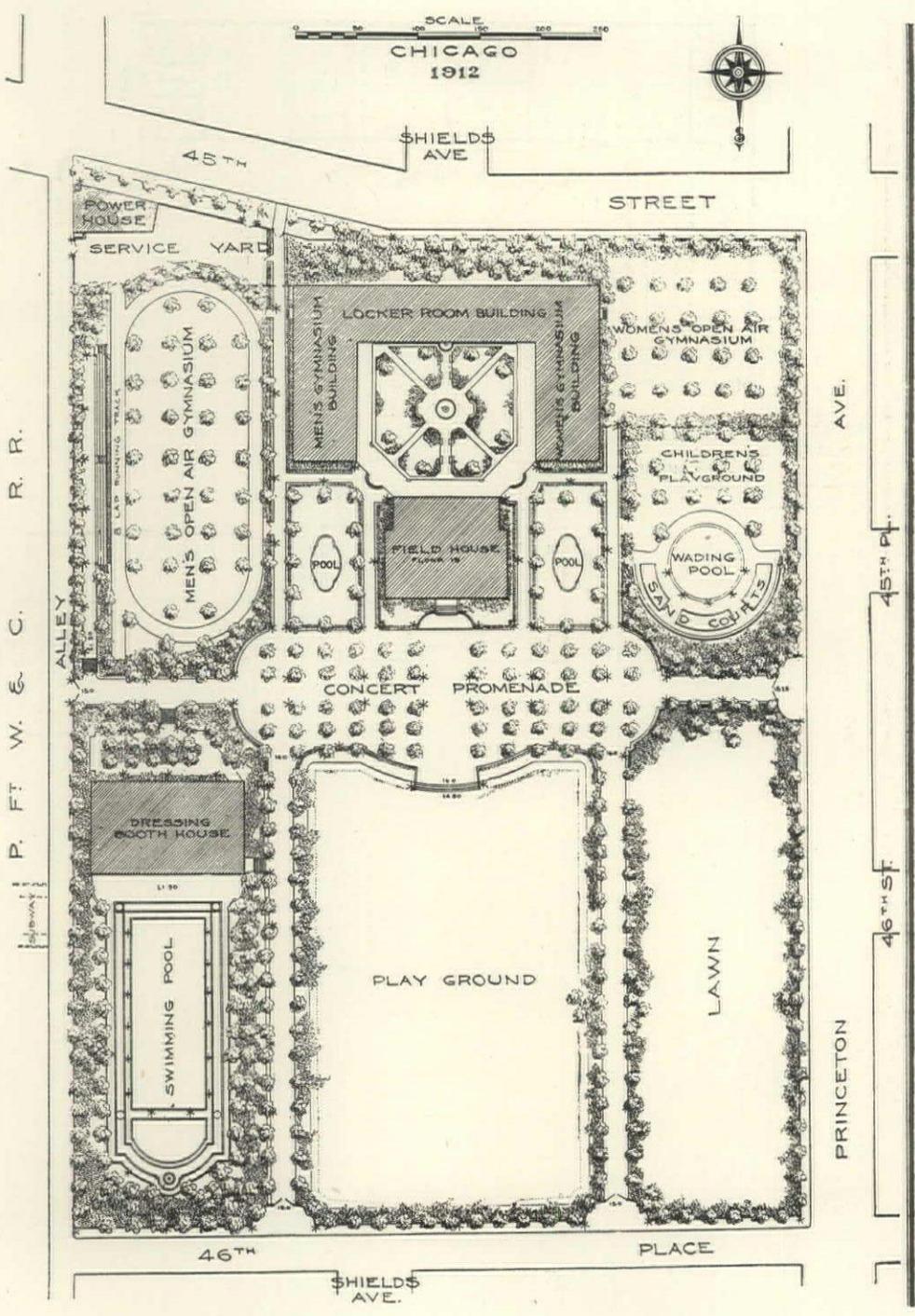
FIRST FLOOR PLAN—SOUTH PARK COMMISSION FIELD HOUSE FOR PARK NO. 3, CHICAGO. D. H. BURNHAM & CO. (GRAHAM, ANDERSON, PROBST & WHITE), ARCHITECTS.



SECOND FLOOR PLAN—SOUTH PARK COMMISSION FIELD HOUSE FOR PARK NO. 3, CHICAGO. D. H. BURNHAM & CO. (GRAHAM, ANDERSON, PROBST & WHITE), ARCHITECTS.



SOUTH PARK COMMISSION PLAN FOR PARK NO. 3, CHICAGO. D. H. BURNHAM & CO. (GRAHAM, ANDERSON, PROBST & WHITE), ARCHITECTS.



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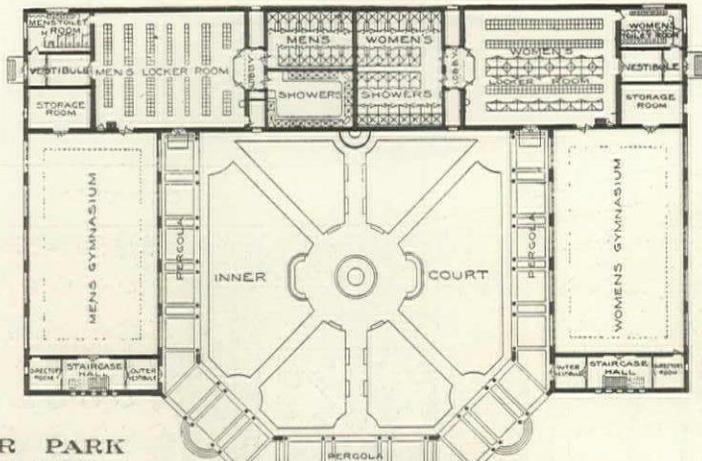
AVE.

45TH ST.

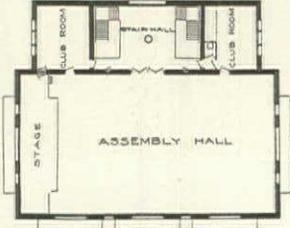
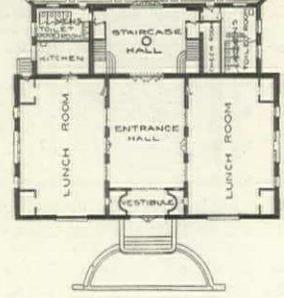
PRINCETON

46TH ST.

SOUTH PARK COMMISSION PLAN FOR FULLER PARK, CHICAGO.



**FULLER PARK
FIELD HOUSE**
SOUTH PARK COMMISSIONERS
SCALE
CHICAGO
1912



FIRST FLOOR PLAN OF MAIN BUILDING & GYMNASIUM BUILDING SECOND FLOOR PLAN OF MAIN BUILDING

SOUTH PARK COMMISSION FIELD HOUSE FOR FULLER PARK, CHICAGO.



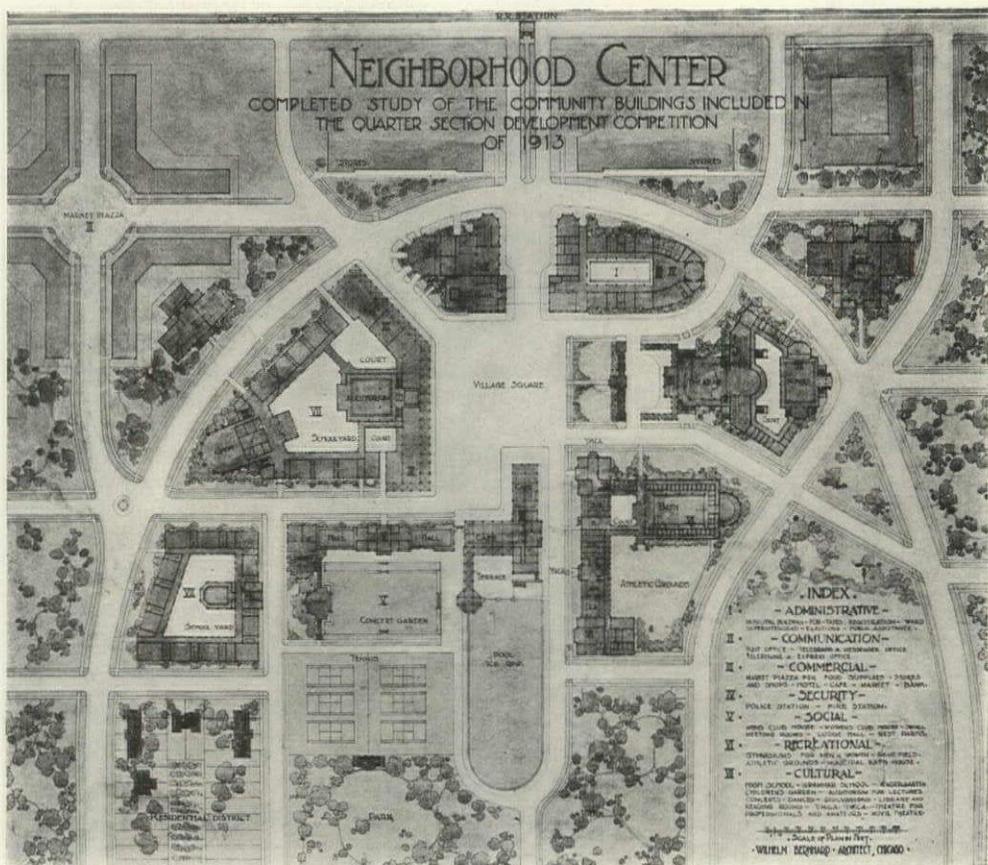
STANFORD PARK AND THE WASHBURNE SCHOOL, CHICAGO.

If the community house is not to be a mere club for the few already socially favored, it must be designed with some reference to the vital needs of the great body of laborers, artisans, clerks, factory-hands or neighboring farmers, as the case may be, and to the recent immigrants, who, in small numbers at least, exist in every town.

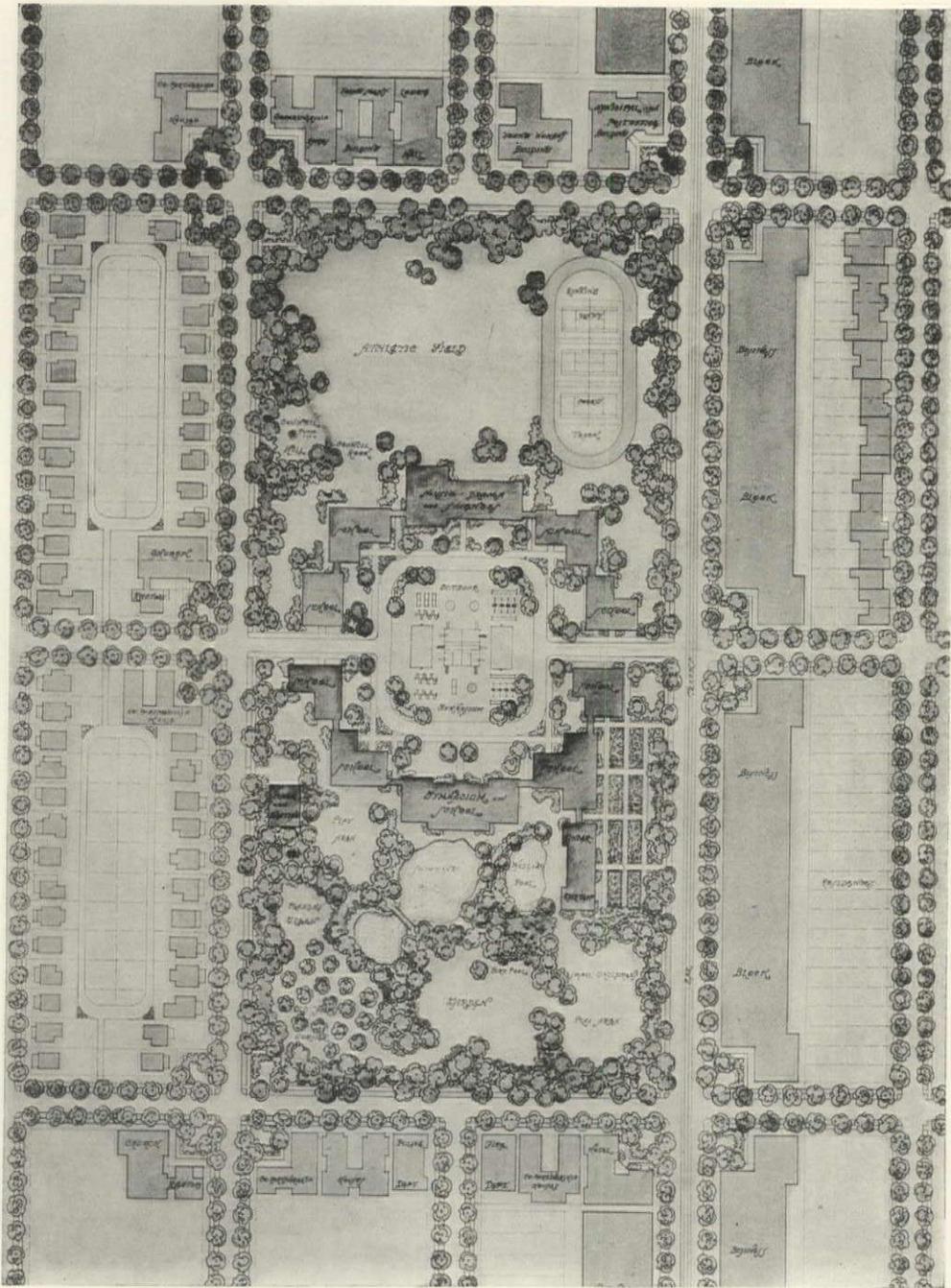
There must be the same study of the varying actual requirements of the given town or neighborhood as appears in the settlements. As it would be unwise to duplicate existing facilities, the effort should be to supply the needs unprovided for, or unsatisfactorily provided for by other agencies. In the average tenement and industrial quarter of a large city, the most pressing include a public dance hall, which may be arranged to serve also for large assemblies and amateur dramatics; decent meeting rooms for labor unions, lodges, and benefit societies; noonday rest rooms for factory girls who come from a distance and bring their lunches; an employment bureau; a

day nursery for mothers who must go out to work; a milk station, dispensary, and headquarters for the district nurse. The gymnasiums, baths and swimming pool, and branch library may be combined with these if not already provided nearby. In a small, industrial city, the requirements would not be very different, except that a municipal gymnasium and bath would be less apt to exist already, and should certainly be incorporated.

In a small New England town, the nucleus of such a structure already exists in the town hall, often already used for occasional dances and dramatics, as well as for civic meetings. It would be wasteful and everyway undesirable to duplicate its facilities, for it has already in unique degree, the character of a real center of the community. The proper course would be rather to develop the town hall to fill the broader social responsibilities of government of the present. Place should be found in it not only for the select men and their administrative subordinates, but for the



DESIGN FOR A NEIGHBORHOOD CENTER, CHICAGO CITY CLUB COMPETITION. WILLIAM BERNHARD, ARCHITECT.



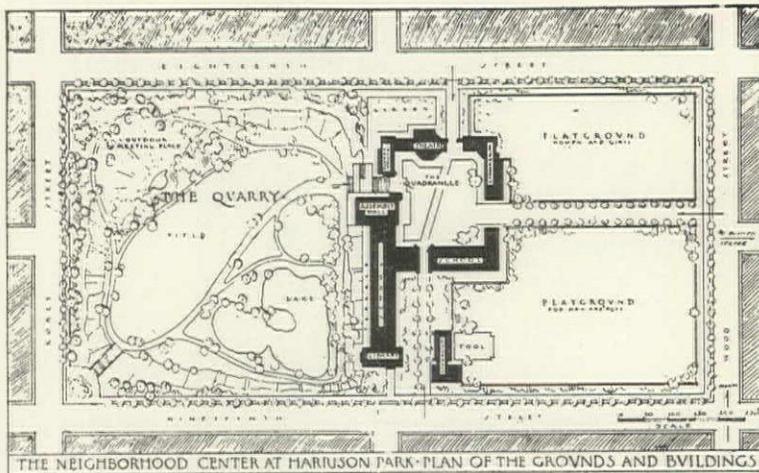
DESIGN FOR A NEIGHBORHOOD CENTER, CHICAGO CITY CLUB COMPETITION. JENS JENSEN, LANDSCAPE ARCHITECT.

welfare agencies which have grown up without official recognition, and for a new official, the social director. Possibly these officers and the larger social provisions can be secured by remodelling of the existing building, with additions. Possibly the occasion may be seized to rebuild it entirely according to the broadened idea of its functions. No building could more appropriately involve memorial features. In small towns of other sections the requirements would include the large hall which already exists in New England villages, and would provide for a civic community life which has not hitherto existed in the same degree as there.

In every case the lesson of the settlements must not be forgotten, that phys-

ical provisions alone, however ample, are less important than personnel and spirit. There must be active workers, and in the civic community centers the head workers at least must be paid by the community and paid liberally. The necessity that appointments to such positions be kept free from politics and on a high standard of character and ability is self-evident.

The true contribution of the architect to the creation of these ideal community centers of the future will not lie in visionary projects for temples of art and music preceded by triumphal arches, but in penetrating study of the pressing needs of the given community, and skillful combination of vital facilities into an organic whole.



HARRISON PARK CENTER, CHICAGO.
Joseph Hudnut, Architect.

The PLUMBING STANDARDS *for the* HOUSING PROJECTS *of the* EMERGENCY FLEET CORPORATION



By William C. Tucker

MOST of the housing activities of the Emergency Fleet Corporation were conducted along the Atlantic coast. Among the principal points around which they centered were the twenty-six shipyards and plants at Bath, Me.; Portsmouth, N. H.; Newburgh and Port Jefferson, N. Y.; Groton Iron Mines, Conn.; Gloucester, Yorkshp, First Hallen and Morgan Village, Fairview Extension, Camden, N. J.; Chester, Essington, Bristol, South Philadelphia, Hog Island, Pa.; Wilmington, Del.; Sparrows Point, St. Helena, Md.; Newport News, Va.; Savannah, Ga.; Jacksonville, Fla.; Lorain, Ohio; Wyandotte, Mich.; Manitowoc, Wis.; Tacoma and Vancouver, Wash.; and Suisun Bay, Cal. The housings comprised 9,443 dwellings, sixty dormitories, ninety-five apartment buildings, twenty-seven boarding houses, eleven cafeterias, mess halls, 300 tents, temporary bunk houses, etc., all capable of sheltering 28,190 workers or 57,540 persons, including workers and the members of their families. There has been spent for sites, improvements, transportation lines, buildings, etc., approximately \$67,429,000. The average cost per dwelling at, for example, the great Hog Island project, consisting of 1,989 dwellings and costing, when complete, \$6,800,000, was \$3,407.

The buildings of the housing projects may be divided into the following types: bungalows, generally for the south; two-story dwellings, detached, semi-detached or in groups, apartments, many with stores on the ground floor; dormitories, hotels, mess halls, kitchens and cafeterias, generally in combination with the former. The plumbing installation for the various types of buildings was surrounded with so many perplexing conditions that it had to be most carefully studied by sanitary engineering experts, who were in constant touch with the project experts. In the general scheme

of designing the plumbing, the chief sanitary engineer was obliged to keep before him a number of reports issued at different times by departments of the Government, the National Housing Association, and many commissions, together with the reports issued by the chief designer of the housing division, concerning types, forms, material and quantity of fixtures and fittings, pipe, various supplies, apparatus, etc. and which were available for immediate use at the moment of designing the work. Such reports coming from so many sources were often at variance with each other, causing great confusion and much loss of time. To obviate this, a standard set of specifications was finally evolved, setting forth in a concise form all materials, fixtures and apparatus, and their quantity, which were available for immediate use; these specifications were subject to modifications from time to time as the materials and their quantities would vary.

In designing the plumbing work for the various projects, all local ordinances and regulations were followed except where compliance was clearly inexpedient, in which case the situation was called to the attention of the local authorities and modifications were sought. In localities which had no plumbing regulations, the regulations observed were usually those of the nearest and largest municipality.

The future disposition of the buildings was kept well in sight; and the design for the plumbing was made as simple, thorough and direct as possible. The plumbing work in a building is generally separated into three important divisions; the drainage system, the water supply system, of which the hot water system is a most important sub-division, and the plumbing fixtures. The plumbing layout for all buildings was considered from every viewpoint. It was the

general scheme to design this work so that each apartment and each dwelling could be disposed of separately; in an apartment building such designing necessitated a certain amount of duplication. Designing the plumbing in this manner was a great tax upon the ideals of designing to the sanitary engineer. The question of size was most important. As the building projects became numerous, plumbing material became scarce, and smaller sizes had to be employed. This applied not only to pipe, but to the fixtures themselves, with the result that while the minimum sizes employed may not have been absolutely too small, they were very near the danger point and may even pass that point as the work ages. The term plumbing unit, which will often be employed in this paper, is understood to consist of a kitchen sink, a set of laundry tubs adjoining and a bath room containing water closet, bath and lavatory.

The material of the pipe for all the drainage and vent systems was at first "extra heavy" cast iron, but as material became scarce the extra heavy pipe was used for drainage work only and "medium" pipe for the vent system, and finally tile pipe was used for drainage work outside the building, and in many cases for the work which was buried under the cellar floor. The pipe of the water system inside the building and from the street service main to the building was always galvanized steel pipe.

The house sewer from the street to the building wall for each unit of plumbing was at first four-inch cast iron medium weight drainage pipe, which was afterwards changed to earthenware pipe as cast iron pipe became scarce; this was run either under the cellar floor or on side walls to the main soil riser, where the size was reduced to three inches and carried up through the building and the roof to the open air, where the size was increased to four inches. From the horizontal run a two-inch branch was taken for the combined waste from kitchen sink and laundry tubs; and from the vertical three-inch riser, a three-inch branch for the water closet, and a

two-inch branch for lavatory and bath waste. In all cases the work was so designed that the laundry tubs were placed immediately adjoining the kitchen sink and set with tops one inch above, so that their cover would act as tray and all refuse could be readily cleaned into sink. The one and one-half inch waste from the laundry tubs was connected to the two-inch waste from the kitchen sink, which was provided with a two-inch trap. The wastes from the lavatory, bath and water closet were run together or separately as the design required.

There was no venting of traps by special vent risers or branches where the fixtures were not over seven feet distant from the soil riser; in many cases this was extended to ten feet and when this did occur it was usual simply to extend the soil or waste risers to the roof and omit all venting. No special vent risers were provided for plumbing units in buildings of three stories or under. In hotels, dormitories or a combination of two or more plumbing units, it was the general practice to omit all trap ventilation, and to extend to outer air the soil or waste risers.

All roof drainage was run to leaders and discharged upon the surface of the ground. When the roof area was large, the leader drains were trapped and connected with the house drainage system. A separate drainage system was always provided for the floors and refrigerators of all large kitchens. A trapped floor drain was generally placed adjoining the dish-washing machine, in front of the refrigerators, which also drained over and into it, and adjoining the cook's serving table; and at such other locations as would facilitate cleaning. A grease trap of suitable size of masonry was always provided in connection with all large kitchens for the separation of grease from the kitchen waste before it entered the drainage system.

The water supply system for the plumbing units was run as direct as possible. From the street main was run a three-quarter inch service main into the cellar, where a gate valve and a meter were provided. From the meter a full-

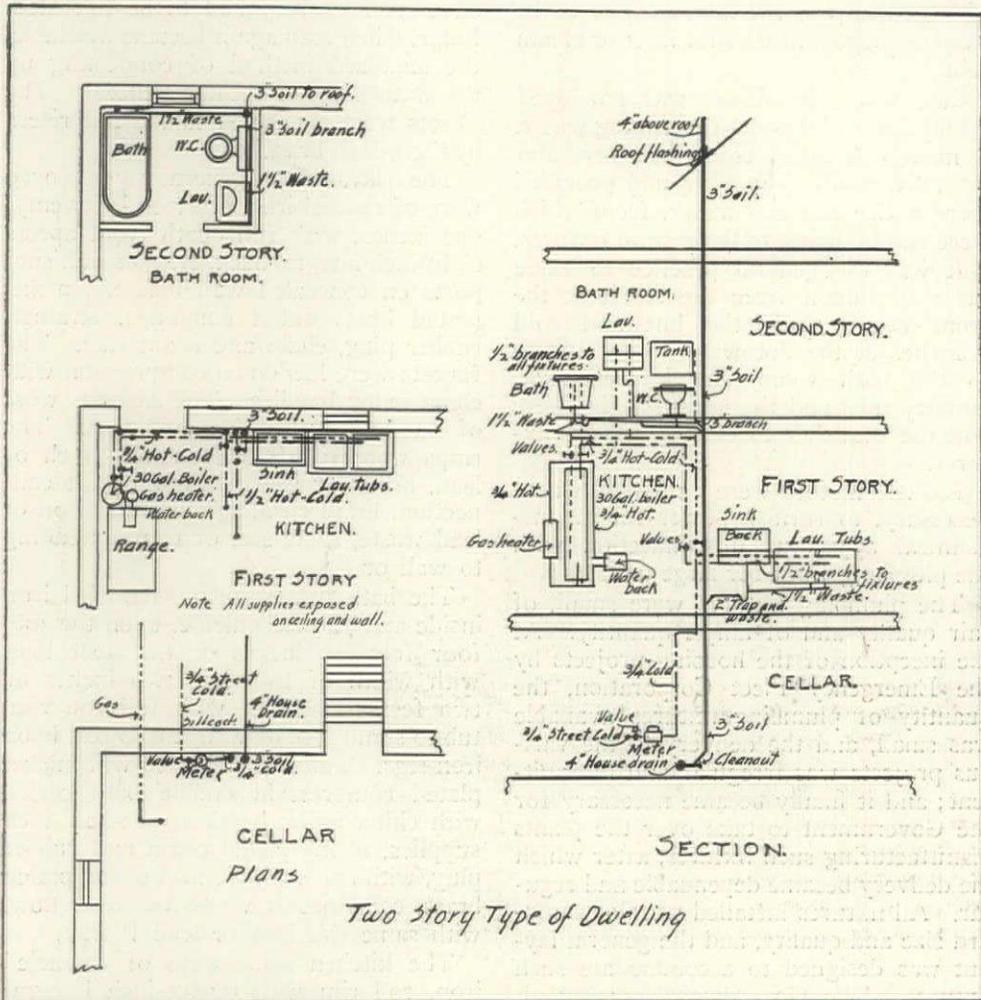


FIG. 1. PLUMBING LAYOUT IN TWO-STORY DWELLING. TYPICAL UNIT FOR ALL BUILDINGS WHERE POSSIBLE.

size main was run on the cellar ceiling and up to the bath room, from which were taken one-half inch branches to the various fixtures with a three-quarter inch branch to the kitchen boiler. At a suitable point outside of the building a sill cock for hose was provided.

The hot water for a plumbing unit was derived from a thirty-gallon galvanized steel boiler, usually placed adjoining the kitchen range with water back connection; and where gas was available, a gas water heater was always provided. In some projects the hot water boiler was placed in the cellar adjoining the furnace, with back connection, and pro-

vided with gas water heater; but as no pilot light was employed, this meant going to the cellar to start the gas heater, should the furnace not be in use. This method was soon abandoned, and the boiler was generally placed in the kitchen. From the boiler was taken a three-quarter inch branch, which was run full size to the bath room, from which were taken one-half inch branches to the various fixtures. The hot water supply for hotels, dormitories, apartment houses, kitchens, laundries, etc., where a large quantity of hot water was necessary, was obtained from ample storage tanks connected with independent heaters; or

where steam was available smaller tanks were employed, fitted with interior steam coils.

Gas, where available, was employed chiefly for cooking and for heating water. A main was taken from the street and extended into the building and provided there with valve and meter, from which were run branches to the several fixtures.

It was the general practice to valve the water main from the street at the front house wall; the hot and cold branches at the hot water boiler; those to the bath room, the kitchen sink, laundry tubs and the main supply risers and the branches to each group of fixtures.

Electric motors were employed where necessary, to furnish power for all mechanical apparatus in connection with the plumbing work for large units.

The plumbing fixtures were small, of fair quality and of ample quantity. At the inception of the housing projects by the Emergency Fleet Corporation, the quantity of plumbing fixtures available was small, and the delivery to the various projects was irregular and intermittent; and it finally became necessary for the Government to take over the plants manufacturing such fixtures, after which the delivery became dependable and regular. All fixtures installed were of standard size and quality, and the general layout was designed to accommodate such fixtures. The Government, owning all plumbing fixtures and material, furnished the requisite number and amount for each project to the storehouse keeper, who issued them to the work as became necessary. The water closets were of vitreous china deep seal washdown with siphon action, with hinged oak or birch reinforced split or oval seats and hinged covers. All closets were provided with low down tanks of vitreous china enameled iron, or other approved material with covers bolted down, and with one-half inch supply connection. On account of the scarcity of lead the lead bend was omitted, and the closet was connected directly to iron pipe. This and many other makeshift methods were not sanctioned by the engineer, but under the

circumstances they had to be tolerated. Later, when lead again became available, the standard method of connecting up the fixture again became general. The closets were connected to the soil risers by three-inch branches.

The lavatories generally employed were of enamel iron, eighteen by twenty-one inches, with full depth front apron, eight-inch integral back, bracket wall supports on concealed wall hangers, nickel plated brass outlet couplings, strainer, rubber plug, chain and chain stay. The faucets were low down compression with china index handles. The supplies were of one-half inch galvanized iron. The traps were full S one one-half inch of lead, brass, or iron, with slip joint connection, brass cleaning plug, and iron or lead waste, same size of trap, extending to wall or floor.

The bath tubs were of enameled iron inside and painted outside, upon the job, four feet six inches or five feet long with width of two feet two inches or two feet six inches, with full roll rim, tub to stand free of wall and to rest upon iron legs. Tub was provided with nickel plated compression double bath cocks, with china index handles, one-half inch supplies, nickel plated chain and rubber plug, with one one-half inch nickel plated brass, combination waste and over flow, with same size iron or lead P trap.

The kitchen sinks were of enameled iron, roll rim with twelve-inch integral backs, size eighteen by twenty-four or twenty-four by thirty inches and set where isolated, thirty-six inches above floor or one inch below top of laundry tubs when set in connection with them; sinks were supported upon concealed wall hangers, and provided with full S trap with one one-half inch lead or iron waste to floor where isolated, and two inch when set in connection with laundry tubs, with one-half inch supplies, and same size compression faucets, with china index handles.

The laundry tubs generally used were of two compartments, twenty-four by forty inches where space was limited, but twenty-four by forty-eight inches was the usual and standard size of either

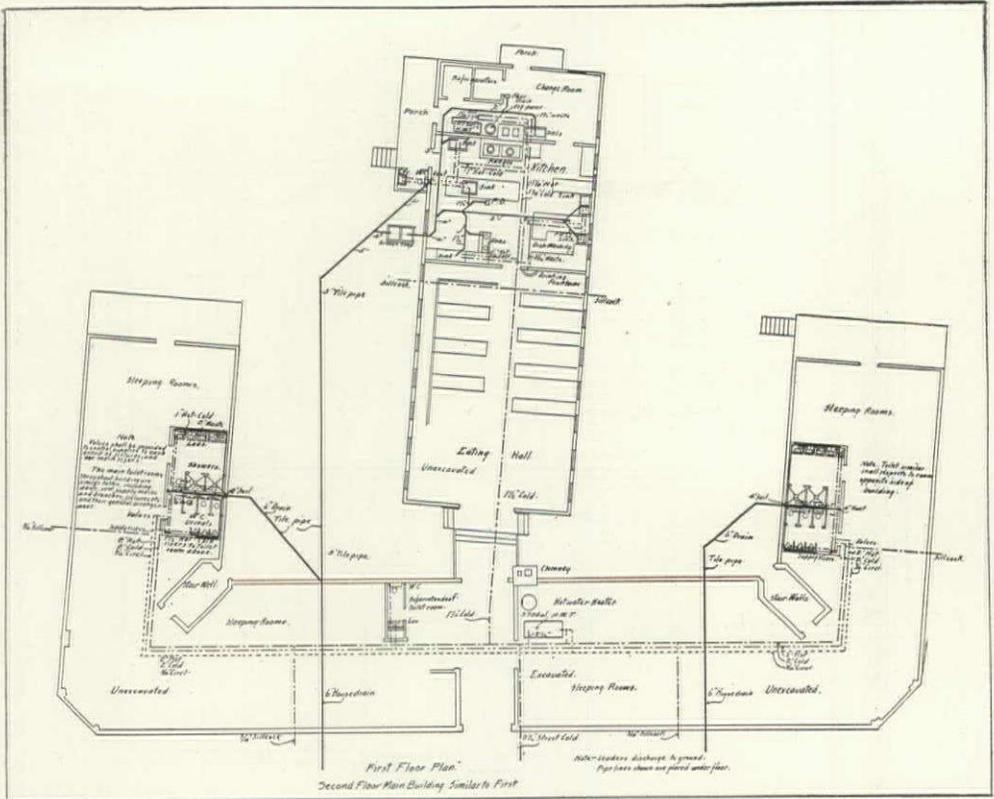


FIG. 3. PLUMBING LAYOUT FOR DORMITORY WITH KITCHEN AND MESS HALL ANNEX.

five or six, but rarely seven, and with tin, slate, or composition roof covering, and with a cellar under the entire building. In Fig. 1, is shown the plumbing layout for such a building, both in plan and section; it is what has been termed a plumbing unit, and is typical for this type of dwelling. There is shown an excellent type of bath room, situated directly over the kitchen, with clear space in front of window, which is good designing and places cost at its lowest point, doing away with long runs of pipe, requiring less heating, and confining the noises from use of fixtures to the least objectionable section of the building. The drainage work shown is most direct, with short branches, and with small sizes required. The supply system is also most direct; there are shown the meter, the controlling valves, the sill cock and the supply branches to all fixtures with their size. The boiler is shown with the gas

heater and range waterback and runs and branches. The location of the fixtures was carefully considered, and their positions as shown seem to be the most logical from all consideration. The plumbing layout was the simplest in design, the lowest in cost, the most direct, required the least amount of cutting or carpenter work to install, and was so generally excellent that this type of layout was employed wherever possible and upon all work.

The bungalow type of dwelling is shown in the Fig. No. 2, and consisted of only one story upon which was planned the kitchen and dining room, bath room and sleeping rooms. It was generally built of clapboards with composition roof, and had a cellar only under the kitchen section. This type of building was used generally for the southern projects. The plumbing layout was most simple, direct, and of low cost, but the

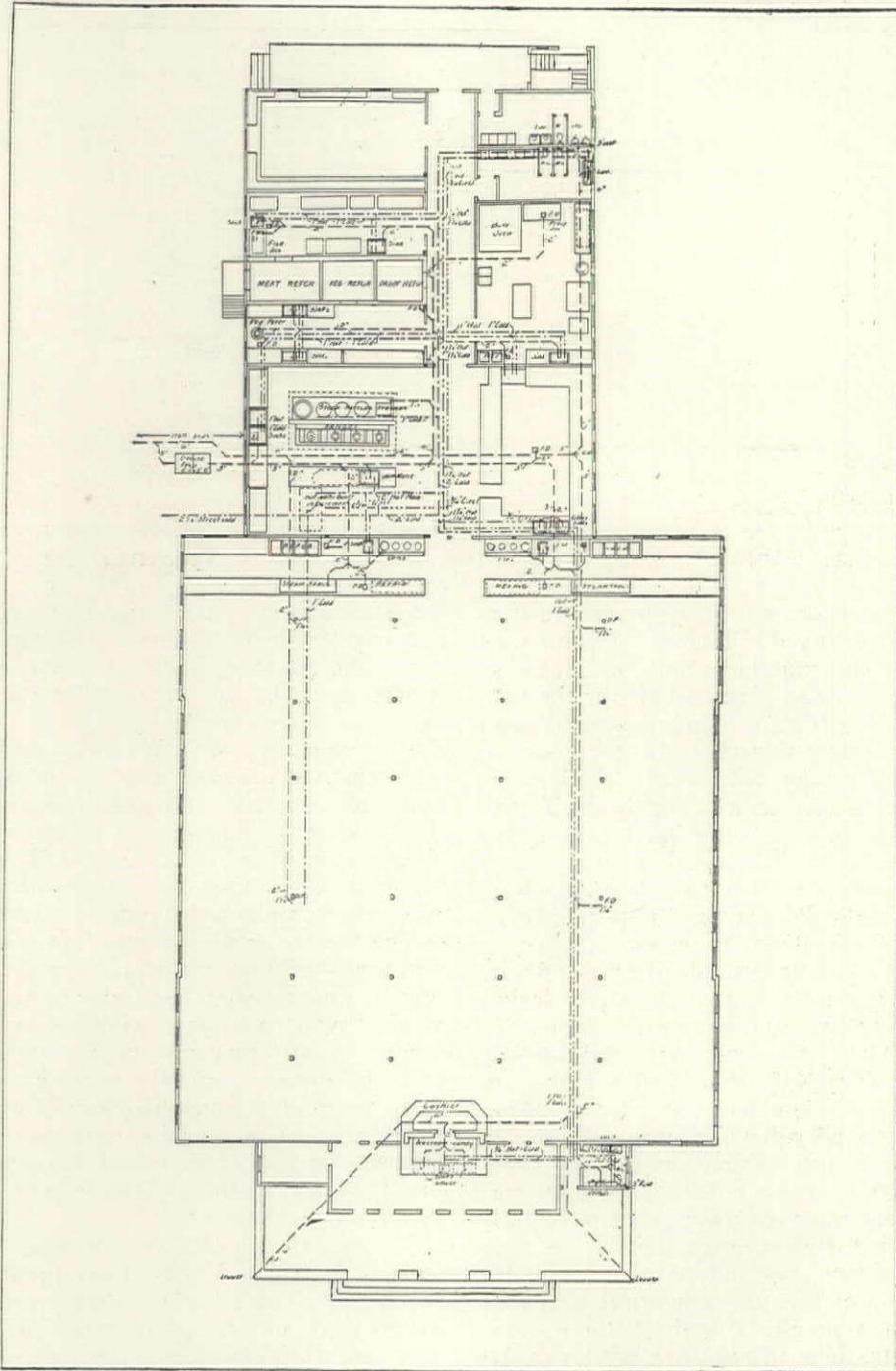


FIG. 4. PLUMBING LAYOUT FOR KITCHEN AND MESS HALL SEATING ABOUT FIVE HUNDRED.

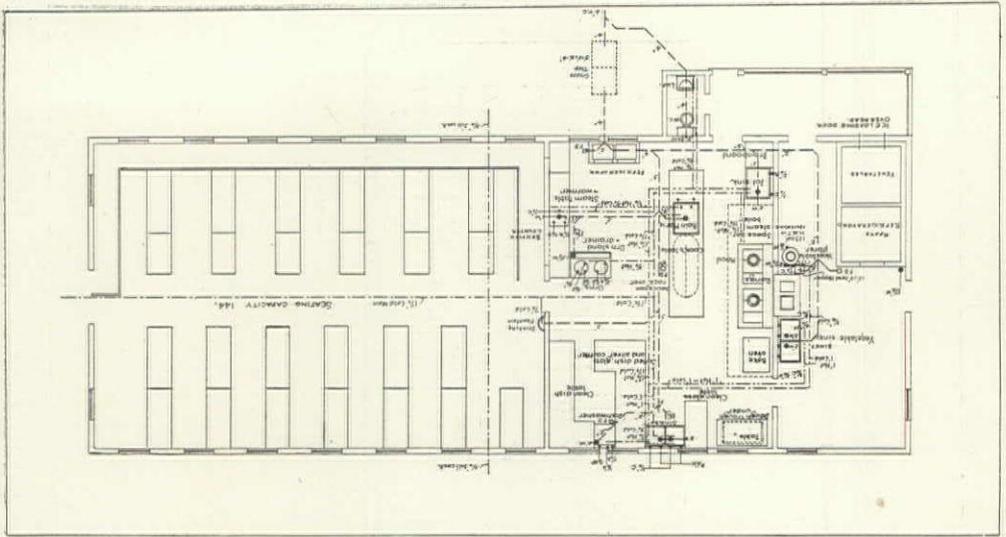


FIG. 5. PLUMBING LAYOUT FOR KITCHEN AND CAFETERIA, JACKSONVILLE, FLA.

building itself was more expensive than the two-story dwelling of the same cubage. The plumbing unit installed was practically the same as that for the two-story dwelling, including drainage, water system and fixtures. In the example shown, a poor feature of the plumbing layout is seen in locating the bath room so remote from the kitchen and hot water boiler, necessitating long runs of pipe and the placing of pipes in objectionable positions and requiring more heat for heating the water.

An excellent example of type of dormitory generally employed in the various housing projects is shown in Fig. No. 3. These buildings were substantially built (generally two stories high) and were self contained. A cellar of limited size was provided to contain only heating and hot water apparatus and the necessary fuel. These buildings were designed generally for the use of men only. The sleeping rooms were small, the toilet rooms were carefully designed, and two were provided for each story; each toilet room generally contained three water closets, three urinals, five lavatories, and two showers; no lavatories were provided in the sleeping rooms, a small toilet was provided for the superintendent. Annexed to the dormitory was the kitchen and mess hall, which were designed

large enough to afford accommodation not only for the occupants of the dormitory, but for the workmen upon the project as well. The plumbing was most carefully designed, the sizes were fair, the drainage was well laid; the plumbing was generally divided into several systems, for economy and good designing. The cold water supply was taken from the street main and run usually as shown, with valved branches connecting with the main risers and each group of fixtures.

The hot water was obtained as a rule from an independent storage tank of ample capacity with its heater. Ample valving was provided, silcocks were placed at advantageous points and at suitable distance apart. The leaders from the roof drainage discharged upon the ground. The plumbing fixtures, their connections and arrangement were generally similar to those provided for the two-story dwelling (Fig. No. 1).

The so-called hotels were very similar in construction and interior arrangement to the dormitories, but contained greater refinements and were designed for the men and their families. Each sleeping room was provided with a lavatory; otherwise the plumbing arrangement was similar to that described for the dormitory.

The apartment houses were substan-

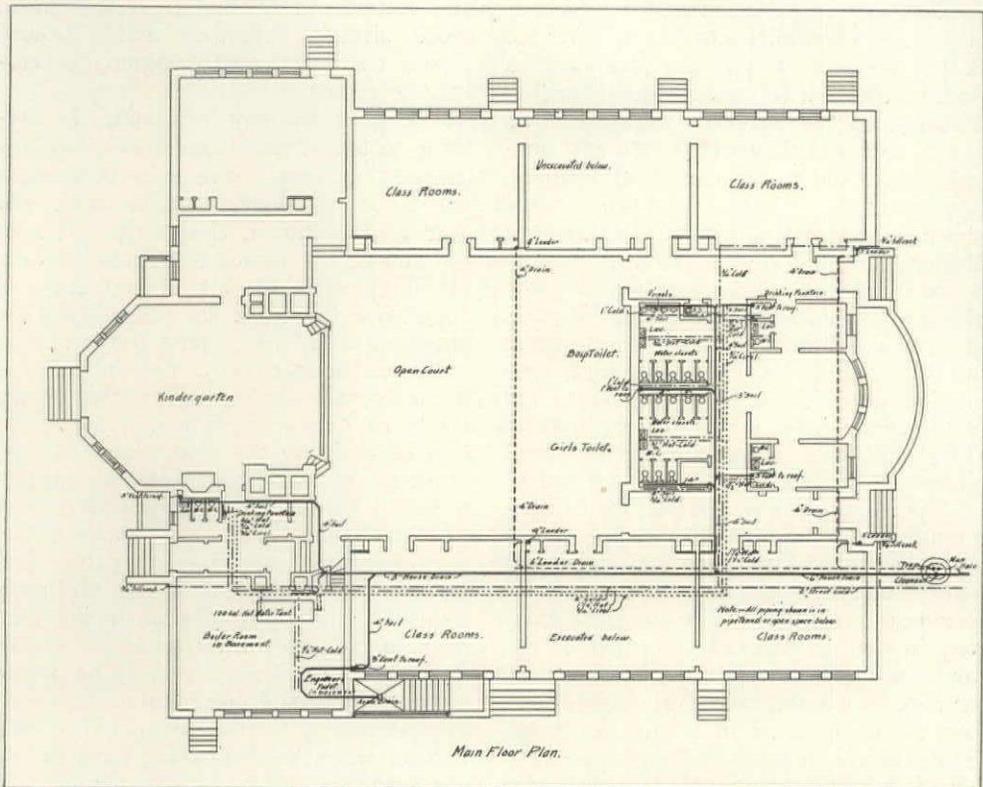


FIG. 6. PLUMBING LAYOUT FOR SCHOOL HOUSE, PORTSMOUTH, N. H.

tial buildings, generally two or three stories in height and were designed to accommodate a family on each story; each apartment contained its own kitchen and laundry, bath room and living rooms. Some of the buildings contained stores on the ground story, at the back of which was provided a toilet room containing lavatory and water closet, with sink outside adjoining. The heating and hot water for each apartment was obtained from central plants situated in the cellar. The plumbing was generally as heretofore described.

The kitchen and cafeterias, dining or mess halls, sometimes isolated and sometimes in conjunction with the dormitories and hotels, were most carefully designed. The kitchens were complete in every respect, and were provided with the latest improved equipment. In Fig. No. 4 are shown a kitchen and mess hall complete, with a seating capacity of approximately five hundred. This was a large isolated

unit. Adjoining the main entrance to the building is the toilet room, small, but of fair proportions; at the center is placed the ice cream and candy stand, with sink for washing facilities. At four points shown are provided drinking fountains, with their cold water supplies and drainage. The cafeteria has refrigerators for milk, butter, fruits, ice cream, etc., and sets of urns for hot coffee. The dish-washing department has ample counter space with sinks. The bakery is of ample size, and is provided with a necessary equipment for its proper use, including the making of ice cream. The fish department is separated from the rest of the kitchen, and has its own refrigerators and sinks. The kitchen proper has its battery of ranges, stock kettles, refrigerators for meats, vegetables and fruits and dairy products, ample sinks and such other equipment as is necessary. Adjoining the kitchen is the change room for the help, with its

lockers and toilet facilities. This building is self-contained and has its own hot water plant of ample size located in a small cellar, with mains and branches running to the different fixtures. The street cold water supply is two and one-half inches and runs to supply all fixtures, apparatus, etc. The floor and refrigerator drainage is kept separate from the general drainage. The drainage and water supply systems are of ample capacity for the demand placed upon them. In Fig. No. 5 is shown a unit similar to that shown in Fig. No. 4, but more compact, condensed and of much smaller size, and with certain omissions in equipment. This unit was most popular and was generally installed at all housing projects.

The large school house for Portsmouth, N. H., shown in Fig. No. 6 was of large size and designed from the latest data available concerning cubic air space per pupil, ventilation, heating, sanitary requirements, material of construction, and such other requirements as would tend to make the building a model and one to be followed in future designing. Toilet rooms of modern design were provided for the boys, girls, kindergarten and teachers. The hot water plant was situated in the boiler room and consisted of one-hundred-gallon storage tank with its independent heater, from which run a main with branches to different groups of fixtures. The main toilet rooms were provided with an air space and a utility corridor back of the water closet; this was good designing. On account of the large roof area, the roof drainage system was separated from the main drainage. The plumbing drainage, water supply

and fixtures were similar in design to those already described and followed closely the practice of designing heretofore described.

The question may be asked, "Is anything to be learned from these plumbing layouts?" They have the permanent merits of simplicity, compactness, low cost and economic designing. It was the aim of the writer to standardize the plumbing work for all the buildings, to popularize the work so that a complete plumbing unit, with piping fixtures, etc., could be bought by a person for his house from a catalogue; and this seems about to be accomplished. The question of omitting the vent risers for the drainage system, which was so largely followed by the Fleet Corporation, may have had results, for the Building Department of New York City has just passed an amendment to its plumbing code allowing the omission of the vent riser in buildings not over eight stories in height, providing the soil or waste riser be increased one inch in diameter, and permitting the omission of trap ventilation when the plumbing fixtures are not over five feet from these risers, provided an approved anti-siphon or deep seal be provided. The economic designing of the plumbing for the various housing projects was primarily brought about by the scarcity of material; and the writer hopes that the lesson may not be forgotten and may tend to less expensive designing and bring about cheaper installation. But under no consideration should economy be allowed to impair security, thoroughness, safety and carefulness in plumbing designing.

RENAISSANCE ARCHITECTURE AND ITS CRITICS



By A.D.F. HAMLIN



Part III. Imitation and Originality.

IN the sweeping indictment which certain critics have sought to bring in against Renaissance architecture,* the charge most frequently repeated is that of copying or imitation. It is asserted or implied that Renaissance architecture as a whole lacked originality and creative imagination. It is asserted or implied that the Italian architects after 1420 were more concerned with reproducing Roman prototypes than with designing rationally. Under the spell of the revival of classical studies, "professing to aim at restoring the 'good ancient manner,'" they sought to reproduce the antique architecture. They forsook the right path of logical design for the false path of copying, veneering the exteriors of their buildings with forms borrowed from a dead style. Fergusson calls all the post-Gothic styles Copying or Imitative Styles; all previous styles were Truthful Styles. He declares that the sixteenth century was the dividing line between the two distinct kinds of architectural art, all buildings subsequent to 1500† demanding the application to them of principles of criticism and laws of taste quite different from those invoked for all preceding ages of the art ("Modern Architecture," p. 40). "Since the revival of learning," he observes, "all architects have been composing in a dead language."

Fergusson's influence was for over a half-century very powerful among English and American writers and readers, for this book was the first, and long the only, serious effort in the language to discuss critically and comprehensively the architecture of modern times. When

it appeared, in 1862, architecture in England was in a condition which might well excite satirical criticism. In tracing back to its origins the archæological Gothic of that time, Fergusson felt that he had found the source of all its lack of vital origination in the Renaissance movement, and he included under a blanket indictment the whole product of the centuries since the Revival of Letters, as being all alike tainted with the vices of insincerity and unthinking imitation—it was a critique of protest, an outburst of artistic indignation; but it was not always fair or consistent criticism, and its errors of judgment and appreciation have misled a host of later writers. Mr. Russell Sturgis declares in his "European Architecture" (p. 369) that the Pazzi Chapel at Florence was "the beginning of modern imitative architecture," and on another page that the method of the early Renaissance architects "seemed to them . . . the Roman, and therefore the only right way." In other words, the early Renaissance started modern architecture on the path of imitation by making Roman architecture its model and norm. Mr. A. K. Porter and Mr. H. H. Statham, in their strictures on Roman architecture, lament the perpetuation of its errors by the Renaissance. It is the "depraved taste" of modern times, according to the former, that has perpetuated the Roman combination of arch and columnar order, which combination Mr. Statham declares to have "left a long legacy of falsehood to architecture, a falsehood revived at the Renaissance and still frequently perpetrated in obedience to the tyranny of custom."

Professor C. H. Moore in the Introduction to his volume on the "Character of Renaissance Architecture" observes that "a consciously retrospective motive can hardly be a vital force in artistic

*See the Record for August and September, 1917.

†Fergusson is confusing in his treatment of the centuries. He dates the corruption of architecture in one place from the Reformation, that is from 1517; in another, from the revival of learning, which must of course include the fifteenth century; while in still other passages he absolves the whole Early Renaissance—that of the fifteenth century—from the charge of copyism.

development, and the direct attempt . . . to shape the arts after classic models was an unmixed evil," but he later in several instances finds fault with the Renaissance architects for *not* following those models more closely. Against any claim that the Renaissance deviations from servile copying of the antique were evidences of independence and originality, he contends that "there is no justification for this view. As to essential forms of building there were no new conditions to be met. In seeking to change architecture superficially by an application of classic details the neo-classicists erred. They ought to have seen that classic details do not lend themselves to new uses. Their very perfection for classic use unfits them for any other. To distort and misadjust them as the Renaissance did is not to adapt them. There was no true adaptation of classic elements in Renaissance design. Such adaptation involves creative modifications which so transform original elements that to a superficial view they are not recognizable in the resulting forms."*

Let us pause for a moment to examine this reasoning. It is noticeable in the first place that it is deductive and not inductive; it assumes certain propositions *a priori*, and derives its conclusions from these; if the facts do not fit the theory, so much the worse for the facts. Moreover, terms are used without definition, in a manner which lends itself to very illusive reasoning. Thus: "A consciously retrospective motive can hardly be a vital force," etc.; what is here meant by "consciously retrospective"? For in one sense of these words such a motive has been a vital force in all artistic development; it has always built upon the past the foundations of its future. Whether it is to be a vital force or not depends upon the nature and the objects of this retrospection. The fatal character of the retrospection is first assumed, and all Renaissance architecture is then criticised on the basis of this assumption. "The direct attempt to shape the arts after classic models

was an unmixed evil"—here again is a pure assumption; whether the facts support it is the very question at issue. "Classic details do not lend themselves to new uses"—another pure assumption, contradicted by the experience of two thousand years. "Their very perfection for classic use unfits them for any other"; what is here meant by "classic use"? Does the critic contend that a Corinthian column is less suited to carry the entablature and pediment of a portico to-day than in the Augustan age, or a classic cornice less effective and beautiful now than then? "To distort and misadjust them as the Renaissance did"—this judgment is based on the singular assumption that "there was no true adaptation of classic motives in Renaissance design" because "such adaptation involves creative modifications which so transform original elements that to a superficial view they are not recognizable in the resulting forms." That is to say, no adaptation is "true" that is not carried to the extreme limit of change; and so, because the critic can recognize the classic origin of these details the Renaissance architects must be denied any credit for creative originality! One cannot help feeling, moreover, that the learned critic, in attempting to involve the Renaissance in the dilemma between directly attempting to follow classic models on the one hand—an unmixed evil; and attempting on the other to modify and adapt them—which was only to distort and misadjust them—has involved himself in another dilemma: there were no new conditions to be met, yet the classic forms were to be avoided because they were not fitted for new uses!

Leaving aside for the moment the debatable question as to the fitness of the elements of classic architecture for modern uses and as to whether the Renaissance variations and modifications of them were or were not distortions and misadjustments, one is tempted to ask whether the critics who thus seek to condemn all Renaissance architecture as fundamentally wrong in its spirit, ideals, method and performance, ever quite grasped the full implications of

*"Character of Renaissance Architecture," p. 247.

their assertions. We have a right to ask for more convincing evidence than they adduce to persuade us that suddenly the entire civilized world reversed its habits of thought, and that never since a certain date has it exhibited the qualities and capacities displayed in all its works of architecture for thousands of years before that date, nor observed the laws and principles which through all those thousands of years had been universally controlling. "We are asked to believe," says Mr. W. J. Anderson,* "on high authority that while the course of true architecture ran smoothly from prehistoric times to the end of the Gothic period, it there ended, and copyism or resuscitation of dead and unmeaning forms has since continued. In other words, that the harmony which ever subsists between the condition of man and his intellectual productions was suspended by human volition about the fifteenth century, and that architecture has from that time failed to be a natural issue of a people's civilization and a record of a nation's history."

One would suppose that to the sincere critic, anxious to discover the true significance and inner content of the art he was dealing with, the spectacle of a great and almost world-wide change in the forms and outward aspect of architecture would suggest an effort to find some more rational explanation than the easy but incredible theory of a sudden and universal extinction of logic, common sense and artistic honesty. In all this sweeping condemnation, as expressed by Professor Moore, by Ruskin, by Mr. Cram and Mr. Porter, there appears a hostile animus in which alleged moral delinquencies are associated with artistic ineptitudes to discredit the Renaissance and all its works, in a spirit that makes the impartial examination and presentation of the facts of Renaissance architecture quite impossible. With Mr. Anderson's protest against this whole attitude, I think all careful students of the Renaissance whose judgments have not been warped by a blind and uncritical worship of Greek or medieval art

will cordially agree. "There is thus," Mr. Anderson continues, "little justification for the separate classification of the Renaissance as an imitative style in harsh contradistinction to the 'true styles' of classic or medieval times. It was unquestionably an embodiment of the temper of the time, and it was precisely on that ground that it had life and became so important a part of the world's architectural history." And although its details were directly or indirectly derived from antique sources, he claims "that originality has never been displayed in greater degree than by the architects of the early Italian Renaissance." (Pp. 4-5 of work cited.)

Indeed, when one surveys the marvelous artistic fertility of the Italian Renaissance from 1420 to 1550; the extraordinary richness, variety and beauty of its productions in all the arts; the keenness and vitality of the Italian taste and of the intellectual life of the time, it becomes impossible to accept the verdict that it was an age and an art of dead copying, of slavish imitation, of the abandonment of all creative design and original thought in favor of a futile revival of dead forms.

This imputation of "copyism" rests on an uncritical and superficial observation of the facts, and a fundamental misconception of architecture itself. As I tried to point out some four years ago, (in the "Record" for May, 1915,) the tradition of architectural criticism inaugurated by the English writers of the Victorian period focused attention on the details, and chiefly the exterior details, of architecture. This narrow and superficial conception was later modified by the idea of structural logic developed by Viollet-le-Duc. To this day there are writers who cannot see beyond, behind, underneath or over their own particular interpretations of these two elements, or recognize that these are only two among the many factors that go to make up architecture as a whole. But to apply in detail the considerations of a structural logic based on the type of the stone-vaulted cathedral of the Ile-de-France to the civic, ecclesiastical and palace architecture of the Renaissance is

*"The Architecture of the Renaissance in Italy," p. 4 (4th ed.).

irrational, because it ignores the differences of the problems themselves, and of the conditions, materials, environment and purpose of the two kinds of architecture, and makes no allowance for or recognition of the real essence of the genius and spirit of the Italian Renaissance, or of changed requirements due to the inevitable change in human society and government. It seems to find fault with the Italian Renaissance architecture for not expressing the spirit, conditions, aims and civilization of its time by the same processes, method and structural reasoning that served the French builders of another kind of building in the Middle Ages, or the Greek builders of the time of Pericles.* Nothing in the world need prevent any critic from preferring a Gothic cathedral to a Renaissance palace or church, or saying that he enjoys Gothic architecture more keenly than that of the Renaissance. There are many good reasons why he may do so, as I clearly set forth in the "Record" for August, 1917. But such a preference is no justification for denying common sense, honesty and originality to the other kind of architecture. True criticism is not the mere expression of personal predilections; it is the careful analysis of the subject in the light of all that we can know about it, with due recognition of the conditions that pro-

*With reference to the importance of structural logic as a criterion in architecture, Professor Moore, in a footnote to his article in the "Record" for November, 1918, charges me with inconsistency because, after endorsing the principle that structural character is a primary consideration in architecture and the proper basis for critical estimates," I later abandon it by supporting what he calls the "spurious Gothic of the Middle Ages in which the principle is violated." Now apart from the fact that I do not abandon this principle, but on the contrary expressly declare that in these later works "structural logic was not ignored nor even forgotten; it is there, underlying the fundamental design," my readers should recognize that I have nowhere admitted structural character to be the sole primary consideration and the only proper basis for critical estimates of the art. I have on the contrary always insisted that it is but one of several factors in such estimates; that construction, planning, purpose or function, available materials and decorative details must all together be considered, not any one of them alone. The further remark in the foot note that "the structural and esthetic elements cannot be separated" in living art, in no wise contravenes my contention that esthetic logic demands equal consideration with structural logic. Inseparably as they certainly are associated in all great works of art, they may yet be quite distinct subjects of thought. Professor Moore's contention seems to be, "The two are inseparable, therefore I will ignore one of them."

duced it, and the final verdict must be based on criteria directly pertinent to these conditions. Moreover, the analysis should be as sympathetic as possible, because only by a sympathetic study can we attain to a real understanding of its inner nature. By a sympathetic study I mean, of course, a study which puts aside prejudice and preconception, and approaches its subject with a mind open to favorable views, as well as to considerations on the other side.

This sympathetic attitude, this sincere effort to get at the inner spirit of Renaissance architecture, to find a rational explanation of what may at first sight seem contrary to one's own reasoning on the problem, this readiness to appraise impartially the merits and virtues of Renaissance work is singularly lacking from most of the writings of the critics to whom I have referred. To see in all the marvelous architectural productions of the fifteenth and sixteenth centuries little but neo-paganism, reversion to a dead past, sham and copyism and untruthfulness, would seem to be evidence of a narrow and prejudiced judgment.

II.

The charge of unoriginal imitation or "copyism" results from a too exclusive attention to exterior details, coupled with a loose understanding and use of the words "copy" and "imitate," as applied to architectural design. The carrying over of form-elements from one style and age to another has been a constant phenomenon of architectural development. It is met with in the architectures of antiquity, as well as in medieval and modern times. Borrowed forms are found in all styles, but they invariably undergo adaptation and transformation, and are used in wholly novel combinations, and in a new spirit; that is, they become elements of a new style. In a former article* it was shown how the Romans drew from Greek prototypes many of the form-elements of their architecture, and how these, although their Greek origin is, in many cases, quite obvious, were,

*The Record for May, 1915.



FIG. 1. PORCH OF SAN GIORGIO IN VELABRO, ROME.
Twelfth Century. Classic Survivals in a Medieval Building.

to a great extent, transformed, and made to take their place in a wholly new kind of architecture, purely Roman in character, as far removed as possible from an imitative or copying art. The architects of the Renaissance made a similar use of the Roman elements, adhering, in the later phases of the movement, somewhat more closely to the Roman types than the Romans did to the Greek, but like the Romans employing the borrowed or suggested details in wholly new combinations to produce an architecture as different from the Roman as that was from the Greek; different in aspect, in method, in purpose, in character, in construction, in inspiration, in all that constitutes the real substance of architecture.

This preoccupation with façades and details distracts the critic's attention from the larger aspects of his subject, blinding him to the novelty and originality of the Renaissance architecture as a whole, to the wholly new types of buildings which it created, to all its dignity, spaciousness and splendor of interior design, to the

wonderful variety, ingenuity and beauty of its planning, to the largeness and stateliness of its architectural effects. One may concede much to adverse criticism of details, and yet maintain with justice a high degree of architectural merit in the design in which they occur. And whether a feature or detail derived originally from antique art, is or is not rightly used and successfully adapted depends far more upon the total effect produced than upon the closeness of its resemblance to some more or less remote classic model.

It is furthermore objected that the Renaissance, in thus resorting to antiquity for its models, was turning its back upon the contemporary Italian Gothic of the time. The Italians of the fifteenth century are said to have thus broken the continuity of their own art, reversed the stream of progress, and deliberately resorted to an extinct civilization for models to follow. Whereas, in the "Truthful Styles," the borrowing of forms was always from contemporary or just-ex-

piring styles, these architects sought to revive a dead past, because of their own lack of creative originality. Should not this conscious, deliberate deriving of forms and details from a buried past be called copying?

There is both truth and error in this charge, but more of error than of truth. During the fifteenth and sixteenth centuries there was certainly an increasing use of forms and details drawn from classical antiquity, accompanying the increasing study of ancient history and literature, philosophy and art. There was a widespread desire, often expressed, to "restore the good ancient manner." That this did not mean to reproduce the ancient types of buildings, the works actually executed plainly show; the meaning was evidently that the Italians of those days, dissatisfied with the foreign and Gothic manner which they had for more than a century been seeking to assimilate, longed for the stateliness and dignity, the largeness of scale, the breadth and repose of effect, which they now recognized and admired in even the ruins of the Roman monuments. They studied enthusiastically the means by which the Romans of old had attained and expressed these qualities, more at first for suggestion than for close imitation. Pilasters, columns, entablatures, round arches with archivolts, and the antique ornaments of moldings and arabesques came more and more into use in the palaces and churches of Italy. In the sixteenth century the resemblance to the Roman prototypes became more complete, as the study of the antique advanced in scholarly accuracy. But these details, in the first place, are not the architecture in its broader and truer sense; they are the materials and elements and trappings of the architecture. Roman architecture was not merely the Orders and the pediments and arches of Rome; it was what the Roman did with these forms and elements. Renaissance architecture is what the Renaissance did with these elements, from whatever source taken. The details and ornaments they used, however much or little they resembled those of antiquity, were but the alphabet with

which they wrote their poems in stone or brick, or marble.

Partly with these Roman details, which they freely adapted to the needs of their own problems, they created a wholly new architecture, different in purpose, application, spirit, composition and decorative effect from any and all Roman models. It was a new architecture because a new spirit had entered into art and life; but it was far more closely related to what had immediately preceded than to the Roman architecture which it is said to copy or imitate. The orderly evolution of this architecture in Tuscany first, then throughout northern Italy and Rome, was a true and vital expression of the evolutionary changes at work in Italian life and thought. It drew inspiration from the revived study of classic literature, life and art; but inspiration and copying are distinct and opposed phenomena. Roman architecture was not copied until the Roman Revival of the late eighteenth and early nineteenth centuries, and by that time the original Renaissance movement was extinct.

The charge that the Renaissance Italians arrested and turned back the normal progress of architectural development by reverting deliberately away from the existing Gothic of their time to a dead and buried past, is simply not true. It ignores the plain fact of art-history.

In the first place, it ignores what the tyro-student ought to know, that it was not the Renaissance but the invasion of Northern and Western Gothic that severed the normal continuity of Italian architectural history. The often rude but always virile Lombard style which had developed through six centuries, and the Basilican style that still persisted in Rome, were strangled by the foreign fashion introduced by Cistercian monks and French and German builders in the thirteenth century. This Northern and Western fashion was alien to the Italian taste and the Italian climate and the Italian traditions. "The invasion of the Gothic architectural forms from the North was a fateful event, a calamity if you will, but a calamity only in so far as it befell men incapable of dealing with

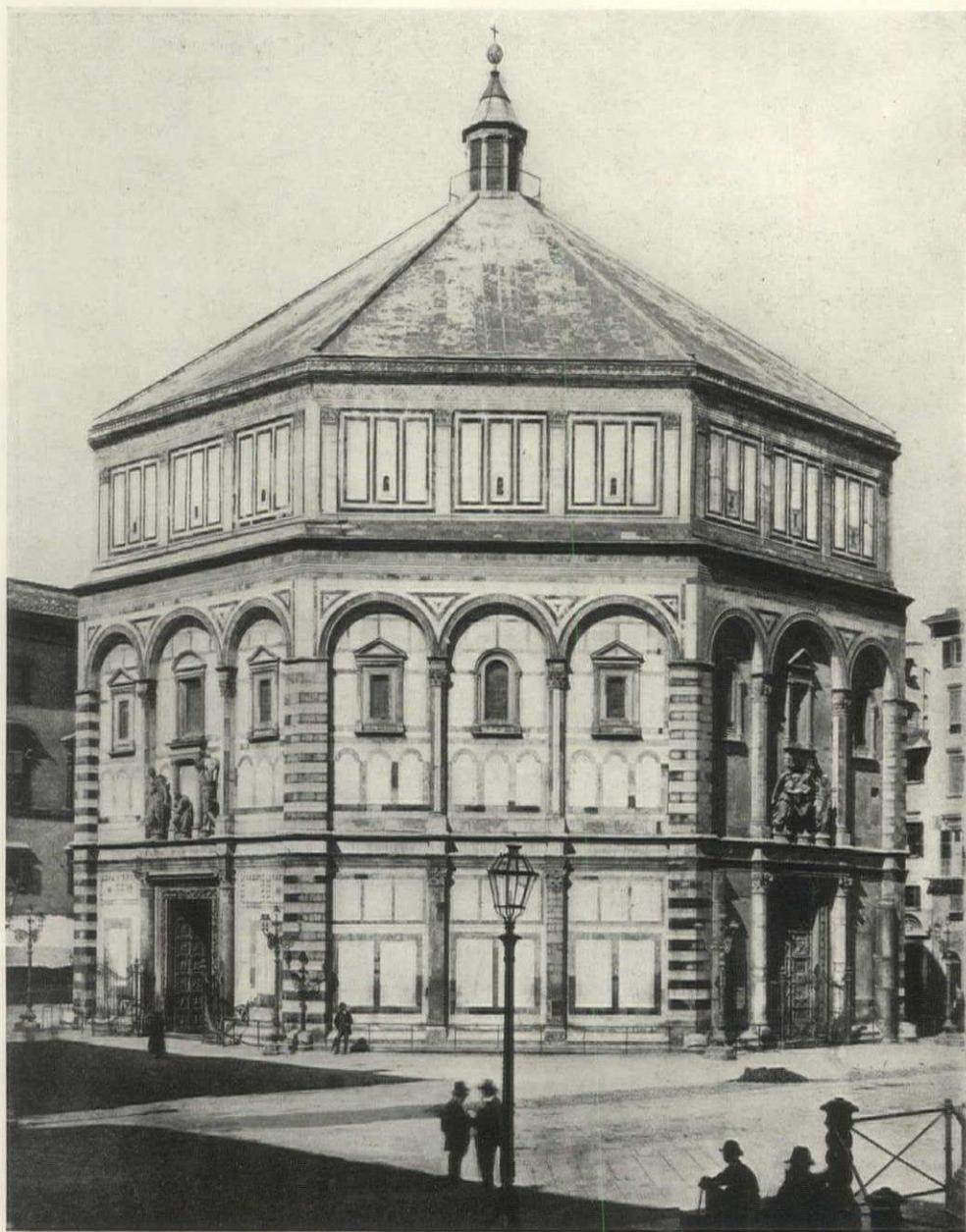


FIG. 2. BAPTISTERY, FLORENCE. EXTERIOR DECORATED ABOUT 1294. NOTE PERSISTENT CLASSIC ELEMENTS.

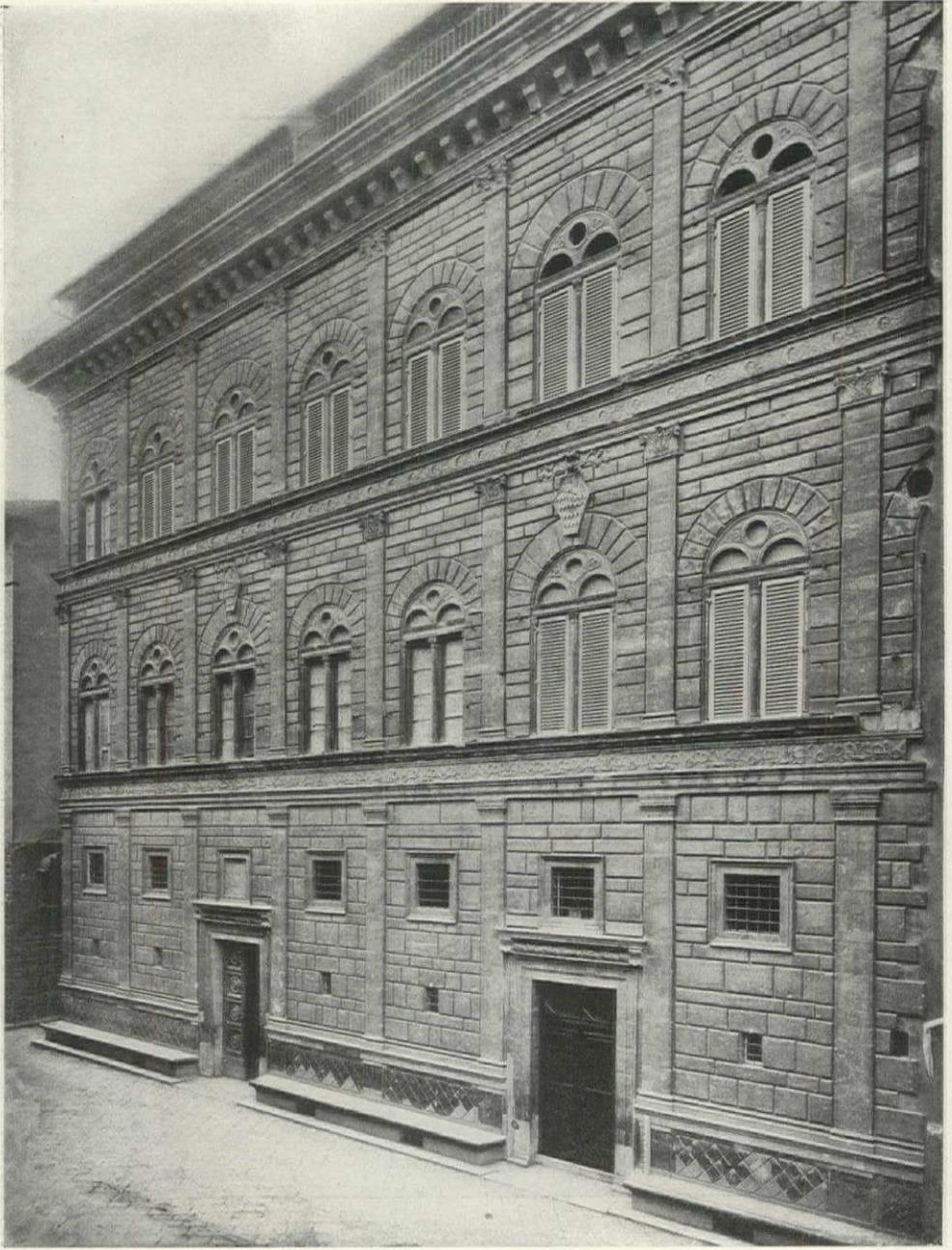


FIG. 3. RUCELLAI PALACE, FLORENCE.



FIG. 4. CAPELLA MALATESTIANA (SAN FRANCESCO), RIMINI.

it" (writes Burckhardt in "Der Cicerone"*). "If one recognizes in the Baptistery of Florence, for example, that the twelfth century was well started on the path of the development of a harmonious beauty in the use of antique forms, he will soon be convinced that under the invading Gothic forms of a somewhat later date the originally underlying tendency persisted unchanged and expressed itself in the noblest fashion under this external shell." In other words, the Roman tradition, though feeble, was still vital throughout the entire Middle Ages in Italy. So far from having ever perished, it was active through the whole duration of the Italian Gothic style. It manifested itself alike in the decorative details, the structural methods and the handling of scale. In Florence and Sienna and Rome, in Pisa and Pistoia and Orvieto the round arch with archi-volt and square-sectioned

soffit, the Corinthian capital, the three-membered entablature, the profiles and ornaments of moldings, the veneering with marble, the use of polychromatic materials and of inlay and mosaic, the delight in broad wall-surfaces, the pre-occupation with decorative effect, and the Latin or Basilican plan and type of church, are to be encountered in buildings of all the centuries from the eleventh to the fifteenth. The Renaissance architects sought to revive no dead tradition. They revitalized and liberated the natural racial and national tendencies inherited by an unbroken descent from the Romans of antiquity. The unbroken continuity of this inheritance the hostile critics generally ignore, but impartial students have recognized it in increasing numbers since Burckhardt wrote. Anderson asserts it in the work already cited, in which he refers to the Byzantine, Lombard and Romanesque styles of Italy as varying modifications of "the Latin element which lay underneath, and which in the

*Sixth Edition, Leipzig, 1893; Part II, p. 47.

fifteenth century found, in the revivification of purely Roman principles, the one outlet which was congenial to it." And indeed, one has only to look at the interior of Sienna Cathedral, or the exterior of the Florentine Baptistery, or the details of the "Mandorla" door of the Duomo of Florence or those of a score or a hundred other medieval buildings, to realize the pervasiveness and strength of this medieval classicism. What had been an imperfectly felt tendency, obeyed for the most part unconsciously, became in the fifteenth century a deliberate and intensified purpose. Even the appearance in the dawning years of that century of the mighty genius of Brunelleschi, who resumed in himself all the tendencies of his time and felt powerfully the pulses which had only begun to stir his whole generation, simply gave definiteness of direction and intensity of purpose to this existing force, and started men to studying the original sources of the inspiration which their predecessors had felt, though less strongly, through a thousand years. But in the whole range of Brunelleschi's work one looks in vain for any trace of copying of any Roman building or Roman composition. Even his most classic details of capitals and moldings are hardly more "correct" than many to be found in works of the fourteenth and preceding centuries in Rome and northern Italy.

III.

In support of the general charge of copying instead of originating, alleged by the hostile critics against the Renaissance, four or five buildings are commonly selected as examples of the deliberate copying, reproduction, imitation or "following" of particular Roman buildings in a manner and to a degree which preclude any credit for original design. I have been unable to find, in the whole vast range of the buildings of the fifteenth and sixteenth centuries in Italy, more than a half-dozen on which these critics are agreed as significant examples of this deliberate imitation.*

Many others are cited as being designed with Roman orders, arches or orna-

ments; but no one who regards architecture as something more than its exterior details can regard these as copies. The details are not used as the Romans used them; the buildings in which they figure are totally unlike any ancient Roman building. But of this more anon.

In the brief list of instances of deliberate imitation set forth by the hostile critics, four are especially conspicuous. Of these three are by Alberti (1404-1473), and one by Bramante (1444-1514). Let us examine these carefully.

In the Rucellai palace at Florence (Fig. 3), Alberti employed three tiers of flat pilasters with their entablatures to divide the bays and stories of the façade, and in so doing is said to have tried to copy Roman models or some Roman model; what model or models no critic has ventured to specify. Even Mr. W. J. Anderson declares, in speaking of this palace, that "Alberti was the first who seriously attempted the *recreation of Roman architecture* as distinguished from Roman principles."† But one searches the Roman monuments in vain for any building that bears the slightest resemblance to the Rucellai. Not a pilaster, capital, string-course, window or arch is copied from or closely resembles any Roman prototype. The Romans never built pilastered façades, but reserved the pilaster for a limited number of special uses. Moreover Alberti's pilasters are wholly unlike the Roman type, being so flat as to be hardly more than engraved on the rusticated front. The suggestion of pilasters may have been derived from the upper story of the Colosseum at Rome, which has pilasters, but neither the Rucellai pilasters themselves nor the way they are used resembles the Colosseum. On the other hand, the treatment of the upper cornice of the palace was certainly suggested by that of the Colosseum; but this single detail is the only one in which the Rucellai resembles, imitates or copies

*There are a number of gateways of late date obviously patterned after the general type of the Roman arches of triumph. But not one even of these is a textual copy; they all imitate the general type but treat the details independently. They seem to have been overlooked by the critics, and they are, of course, of only secondary importance.

†Op. cit., p. 35. The italics are ours.

any assignable Roman model. It does, however, in general composition suggest the ruined Palazzo delle Torre at Turin, with which Alberti may or may not have been acquainted; this is a brick building of uncertain date, and could in any case have suggested nothing more than a type of façade treatment. The Rucellai is in no sense a copy of even this example.

It is perfectly true that Alberti drew much of his inspiration from his enthusiastic studies of ancient ruins: the ideas, perhaps, of flat rustication and of marking the stories and dividing the bays, and an appreciation of the classic qualities of scale, proportion, and refinement of detail. But even these ideas were by no means wholly new. Pilasters and wall-strips to divide the bays, and small entablatures as belt-courses, abound in Tuscan Gothic architecture. Alberti, moreover, with all his scholar's knowledge of the Roman orders, in the Rucellai designed his own pilasters, caps and moldings in utter disregard of the Roman canons. He inaugurated a new sort of architectural effect, which for better or worse found many imitators; but in the Rucellai he certainly did not copy.

In the Capella Malatestiana (San Francesco) at Rimini, however, he is said to have copied a Roman triumphal arch; and J. A. Symonds is sure that his model was the Arch of Augustus at Rimini.* It would certainly have been quite natural for so enthusiastic a student of antique remains to draw from so fine and so accessible an example valuable suggestions for the front of this chapel. Symonds is careful to say that he "followed," not that he copied this arch. Professor Moore, on the other hand, calls it "substantially a reproduction of the Arch of Septimius Severus." When a man is alleged to have followed or copied two such widely different models, is it not evident that he copied neither, but simply drew from the general type of which these were differing examples a suggestion for the composition of his chapel front? The design was never completed, but the two-storied central

bay with its superposed orders completely destroys the analogy with either of the two arches named as its prototype. As for the engaged columns and round arch, they were already familiar features, and their use can be traced far back into the Middle Ages in both France and Italy. If this be "copying" it is a kind of copying found in all styles and ages, and is compatible with the highest originality.

The third conspicuous example of the alleged Renaissance copying of Roman models is Alberti's façade for his great and noble church of San Andrea at Mantua. Professor Moore, in Figures 19 and 20 of his "Character of Renaissance Architecture," has placed side by side drawings of this façade and of the arch of Septimius Severus, as evidence that "Alberti derived all of these façades, and especially that of San Andrea, from the Roman arch scheme, . . . and the arch of Septimius Severus may, I think, be taken as the model that he had chiefly in mind." It will be noticed that in this case the derivation is not called a reproduction, and Professor Moore's statement as he has worded it may be accepted as substantially correct. So accepted and illuminated by the two illustrations, it simply asserts and shows that Alberti had a certain type of antique arch "in mind" when he designed two or more façades which differ widely from each other as well as from each and every Roman arch from which they are said to be derived. The resemblance between the San Andrea façade and the arch illustrated, alike in composition, scale, detail and total effect, is too remote for even a suggestion of plagiarism. And it cannot be too often repeated that pilasters, pedestals, entablatures, pediments and round arches with archivolts were already "of the previous state of the art" (as the patent-lawyers say), familiar in all sorts of monuments both ancient and medieval. The only features directly assignable to the Roman arch-models are the coffering of the soffit of the great arch, and the transverse arches that open into the central archway from the side bays. It is, moreover, worthy

*"The Renaissance in Italy: the Fine Arts," p. 74. American Ed., 1883.



FIG. 5. ARCH OF AUGUSTUS, RIMINI.



FIG. 6. ARCH OF SEPTIMIUS SEVERUS, ROME.

of notice that Fergusson, the protagonist of the charge of Renaissance copyism, says nothing of this façade as an imitation of a Roman prototype, but bestows upon it almost unstinted praise. Professor Frothingham, in the fourth volume of the Sturgis-Frothingham "History of Architecture," suggests that it was derived from a little-known Roman arch in Verona, that of the Gabii, which has a gable. One guess is as good as another, and I prefer my own, as above set forth.

All these strictures as to lack of originality, it will be observed, relate wholly to the façades of these buildings; the plan and structural scheme of San Andrea are generally praised even by the hostile critics. These are as plainly inspired by the antique Roman spirit as the façades, but as plainly they are not derived nor copied from any particular example, but are the product of a free and original invention working upon ma-

terial familiar both by tradition and study.

Finally we come to Bramante's little "Tempietto" in the court of San Pietro in Montorio (Fig. 8), which is said to be "but a modified copy of an ancient model and in no true sense an original design. The changes wrought by the copyist are not of a creative kind consistent with true principles of building. . . . Such merit as it has is primarily due to the ancient model, which he would have done better to have reproduced more exactly." The prosecuting attorney complains that the criminal did not carry his evildoing quite far enough; he would have done better had he made it easier to prove the crime! The model in this case is said to have been the temple of Vesta at Tivoli. But surely to any one who has had practical experience in architectural design this is no copy at all, but an original design. It has in common with the so-called Vesta



FIG. 7. BASILICA SAN ANDREA, MANTUA.

temple absolutely nothing but the general idea of a circular peripteros. The temple of Vesta has eighteen fluted Corinthian columns, the Tempietto sixteen smooth Doric columns. No one knows how the temple was roofed; the Tempietto has a Renaissance dome on a drum—a type wholly unknown to antiquity. The colonnade is crowned by a balustrade—another feature unknown to antiquity. The cella is adorned with pilasters and niches; the supposed model has none. The model stands on a Roman podium, the “copy” has none. The proportions of the copy are absolutely unlike those of the Roman temple, and its *ensemble* produces a totally different impression. As for its circular form, it was the most natural and even obvious form of a commemorative shrine on a sacred spot—that where St. Peter was supposed to have been crucified. The idea of surround-

ing it with a colonnade was, of course, derived from classic precedent, but of copying or reproducing any Roman prototype there is no sign.

In addition to these four examples most frequently cited by the critics, Professor Moore sets forth Sansovino's beautiful Logetta at the base of the Campanile of St. Mark and his superb Libreria, both at Venice, as instances of this habit of copying. Of the latter he says: * “In the general scheme of this façade Sansovino has followed that of the ancient theatre of Marcellus, with a free introduction of additional enrichments.”

What answer can one make to so extraordinary a statement? Place side by side photographs of these two monuments and pronounce your own verdict on the resemblance. Surely the man who

*Op. cit., p. 122.

could convert the scheme of the theatre of Marcellus into the unsurpassed splendor of the Libreria merely by "a free introduction of additional enrichments" must have been an architectural genius of the highest originality! Further on our critic finds fault with the Loggetta as an extension and spoiling of the Arch of Titus, and judges that "to attach any sort of a Roman triumphal arch to the base of a medieval tower is an architectural absurdity." This pronouncement is made without regard to the way in which the alleged "Roman arch" scheme is used or the purpose to which it is put, or the beauty of the result. All the generations of artists and people of culture who have admired the Loggetta as a gem of decorative architecture must hang their heads in shame at having failed to recognize it as an absurdity!

Fergusson draws a comparison between the incomplete court-arcade of the Lesser Palace of Venice at Rome and the Colosseum. It was very likely the Colosseum that suggested the two superposed arcades of this unfinished work, but it may as well have been any one of a score of other buildings. This arcade is of the antique Roman type, it was an effort to produce something after the fashion of the Roman arcades, but I do not think it can with any reasonableness be called a "copy" of the Colosseum scheme.

The alleged boast of Michel Angelo (some say of Bramante) that he would "set the Pantheon on the Temple of Peace" is probably apocryphal; if he uttered it, it was plainly a mere "fashion of speaking," for his dome is not like the Pantheon nor the church beneath like the Temple of Peace (the Basilica of Maxentius-Constantine). The accusation of copying, in so far as it is supported by no more convincing evidence than the above examples, may well be pronounced an empty charge. One can hardly refrain from quoting "*Parturiunt montes, nascitur ridiculus mus.*"

IV.

The charge of systematic and deliberate plagiarism in the works of the

Renaissance having been answered, we still have to deal with the charge of lack of originality in the details of that architecture. We are told that the entire architectural baggage of the Renaissance is made up of forms taken from the ruins of antiquity. The Renaissance designer, even when he tries to say an original thing, is using a dead language, even as Alberti used a dead language in his treatise "*De Re Aedificatoria.*" His architecture is an architecture of the Roman orders, and Roman art was dead.

But Alberti wrote in Latin precisely because Latin was *not* a dead language in his day; it was still the language of learning and of what science there was, throughout Europe, and had gained new life from the revival of classic studies. And I have shown on a previous page how vital and persistent was the Roman architectural tradition through the entire Italian Middle Ages. Indeed, Fergusson, who first used the expression of "designing in a dead language," was compelled to admit that the Italian architects, at least in the fifteenth century, were following a perfectly natural, logical, and indeed inevitable course. "The classical style was their own, invented in their country, suited to their climate and, to a certain extent, to their wants." "It was an inevitable consequence that Classical Architecture should supersede Mediaeval in that country at some time or other"—so he wrote in his "*Modern Architecture*" (p. 43); and on a previous page he declared that "such buildings as San Miniato at Florence, and some of the basilicas at Rome, are in fact more Classical in plan, and—as their ornaments are generally borrowed from ancient buildings—far more so in detail, than many of the buildings of the Renaissance period." But now follows a curious conclusion by the author of these observations: the Renaissance architects were copyists and the medieval architects were not. The closer imitation of the antique in the medieval buildings was not copying, because "their builders were only thinking of how they might produce the best possible church for their purpose with the materials at their disposal and



FIG. 8. TEMPIETTO IN COURT OF
SAN PIETRO IN MONTORIO, ROME.

not caring to glorify themselves by showing their own individual cleverness." That is to say, the introduction of original and individual features is copying! By what means this critic penetrates to the inner motives of the two sets of designers in order to establish this difference, and why the medieval attempt at textual reproduction of the classic forms was not copying, while their modification and use in novel and original ways by the Renaissance was copying, can only be classed among the many riddles of the Fergussonian logic.

How, then, about the classic orders? They are the favorite Campus Martius for militant practice by superficial critics, and thousands are the shafts leveled and discharged at Vignola and Palladio. The Romans used the orders; the Renaissance architects used the orders; they made a special study of Roman architecture; *ergo*, they copied the Roman orders; *ergo* again, they were copyists. *Quod erat demonstrandum!*

It is perfectly true that the Italians of the sixteenth century studied the Roman orders with a somewhat careful scrutiny, and imitated them with more or less accuracy. It is, however, also true that this close study and this careful conformity did not begin until about 1500, and that through the entire Quattrocento it is difficult or impossible to find a "correct"—that is to say a closely copied—column, pilaster or entablature. For at least eighty years the Renaissance architects were content with a merely colorable approximation to the Roman types, which they treated with absolute freedom of adaptation. Turn over the thousands of pages of Geymüller's "Die Renais-

sance in Toscana," for example, with its fine photographs and accurate drawings of fifteenth and early sixteenth-century buildings, and you will seek in vain for a truly Roman or "correct" column or entablature. If the men of this time sought to revive the glories of classic architecture, it was not by copying either its buildings or its details, but by trying to

design in the same spirit of largeness, elegance and stateliness as the ancients, while planning and composing strictly for their own time in their own way. With the sixteenth century there began a stricter classicizing tendency, a greater regard for classic precedent, a closer study of classic detail, with Vitruvius as the model for the formulation of the results of their observations. Architecture became more

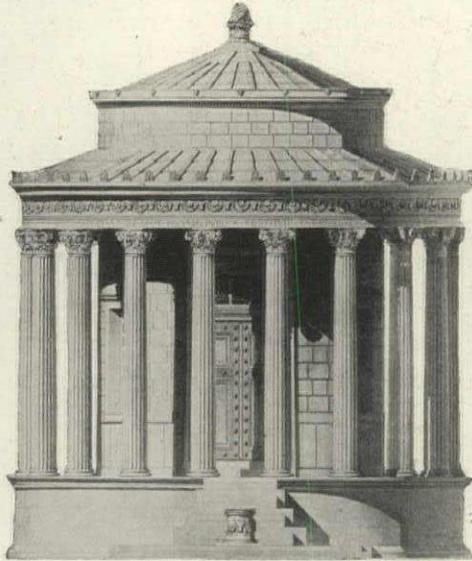


FIG. 9. TEMPLE OF VESTA AT TIVOLI.

and more a profession of the learned, an art with principles formulated in books. Yet, strange as it may seem, never was it characterized by a greater brilliancy of invention, never by a surer grasp of the fundamental principles of composition, of proportion, of planning and of decoration, than during the first half-century of this period. It never became the slave of books, and while the details of classic architecture were more accurately transcribed than before, and there was a broader application of the suggestions of composition derived from the antique than in the Quattrocento, the architecture that was produced was still as far removed as possible from a copy of the antique.

The books of "Orders" by Vignola, Palladio, Serlio and Scamozzi were not the hard-and-fast grammars they are so often considered to be. This view of

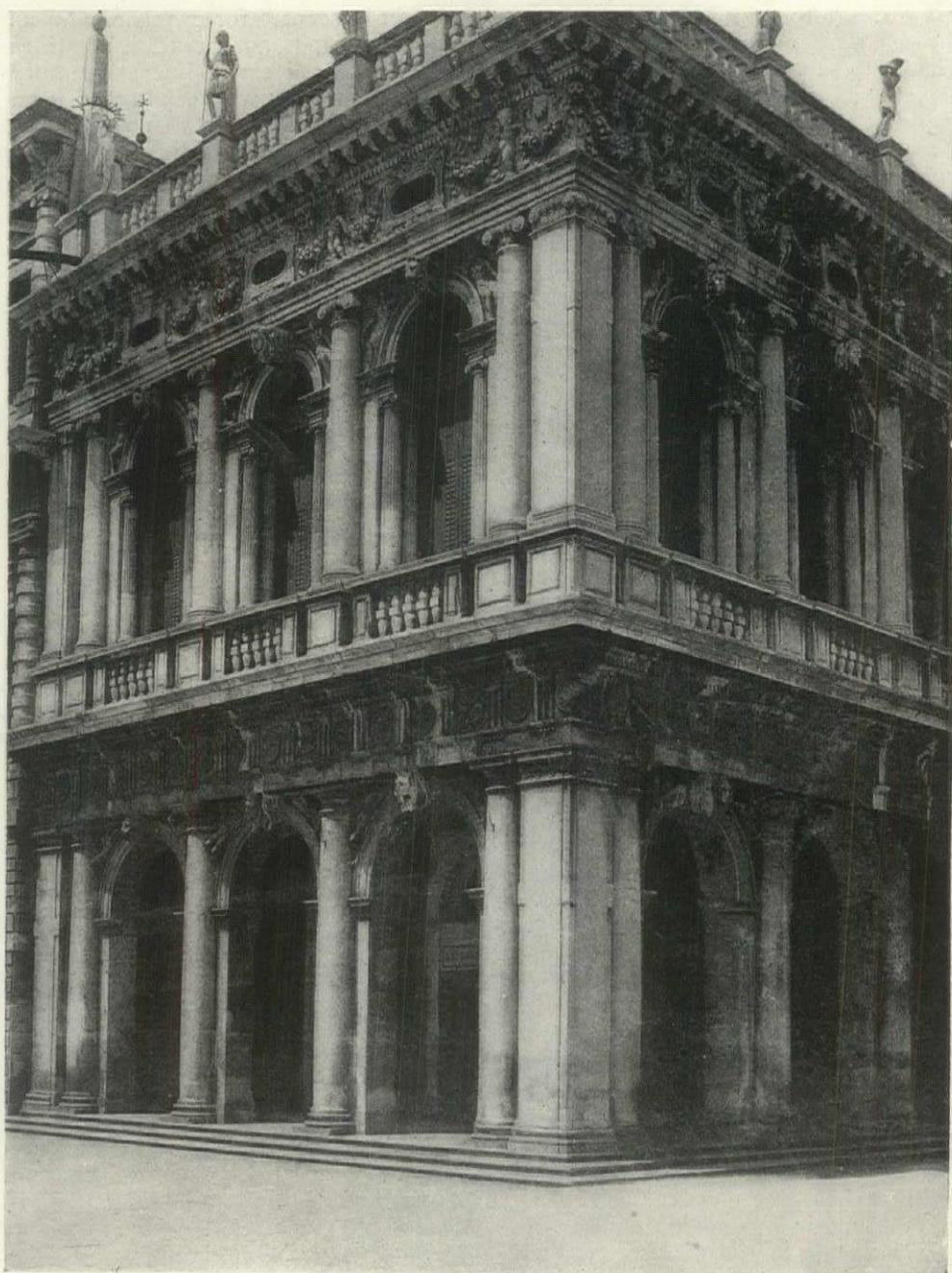


FIG. 10. ST. MARK'S LIBRARY, VENICE.

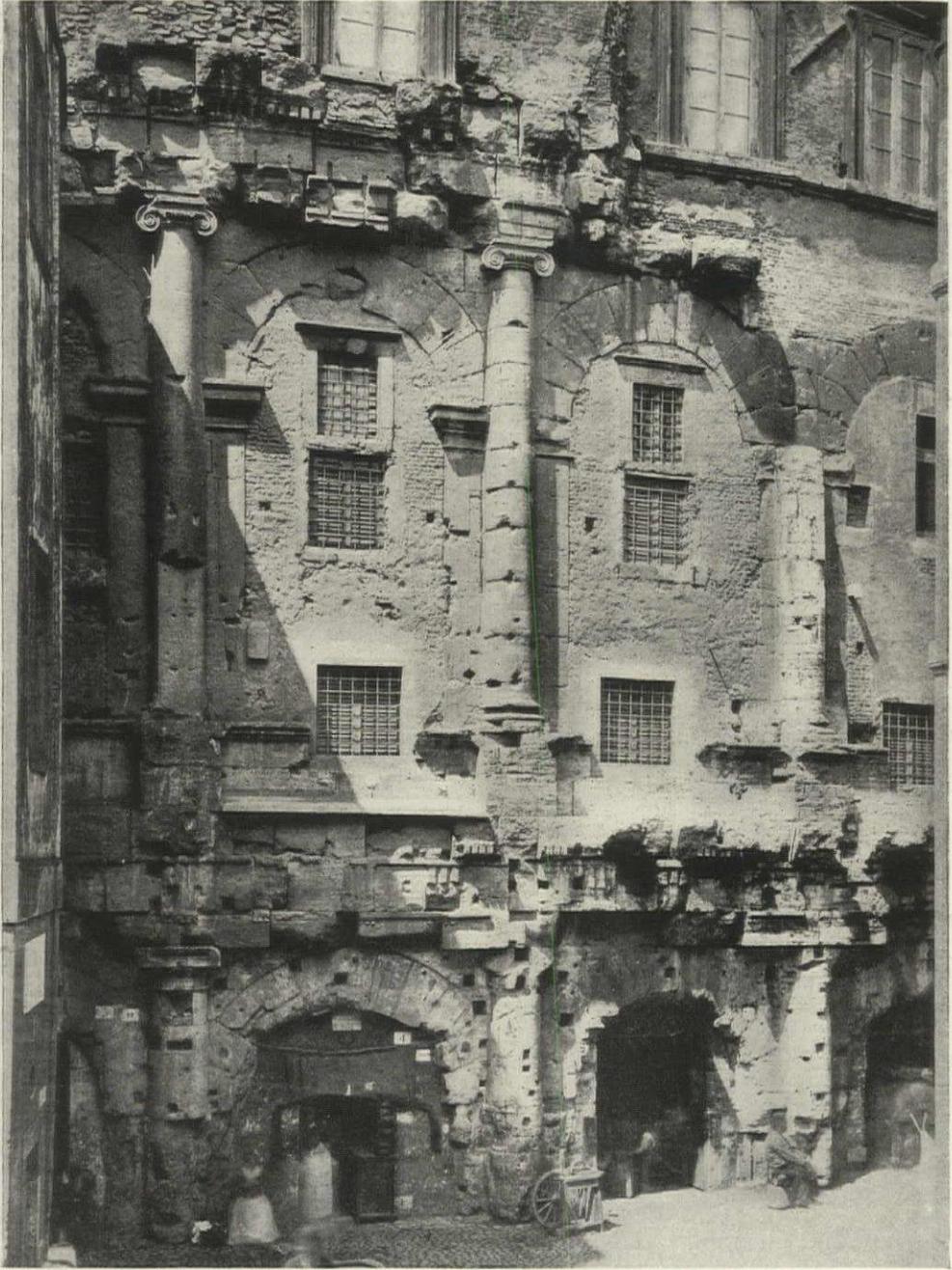


FIG. 11. THEATRE OF MARCELLUS, ROME.

their character, purpose and function is widespread, and has been the source of a vast amount of hostile criticism. But it is the result of careless or superficial observation, and disappears on careful investigation. Each of these books of the orders represents nothing but the author's own idealized generalization from the Roman examples. Save for approximate uniformity in the general proportions of each Order, no two are alike in the details of any Order. It is doubtful if any one of the Orders thus set forth in any of these books corresponds exactly with any antique example. Moreover, Vignola, at least, never conformed to his own Orders as shown in his book! None of these books seems to have hampered the freedom of the sixteenth-century designers, any more than the Canon of Polycletus reduced Greek sculpture to mechanical copying. The architects continued to proportion and detail their columns and entablatures as they pleased, to combine them, couple them, engage them, convert them into pilasters, always according to their own fancy or the need of their particular problem. A large proportion of these Renaissance treatments—for instance Bramante's rhythmical alternation of pilaster-spacing, and the occasional use of coupled columns—were quite without classic precedent.

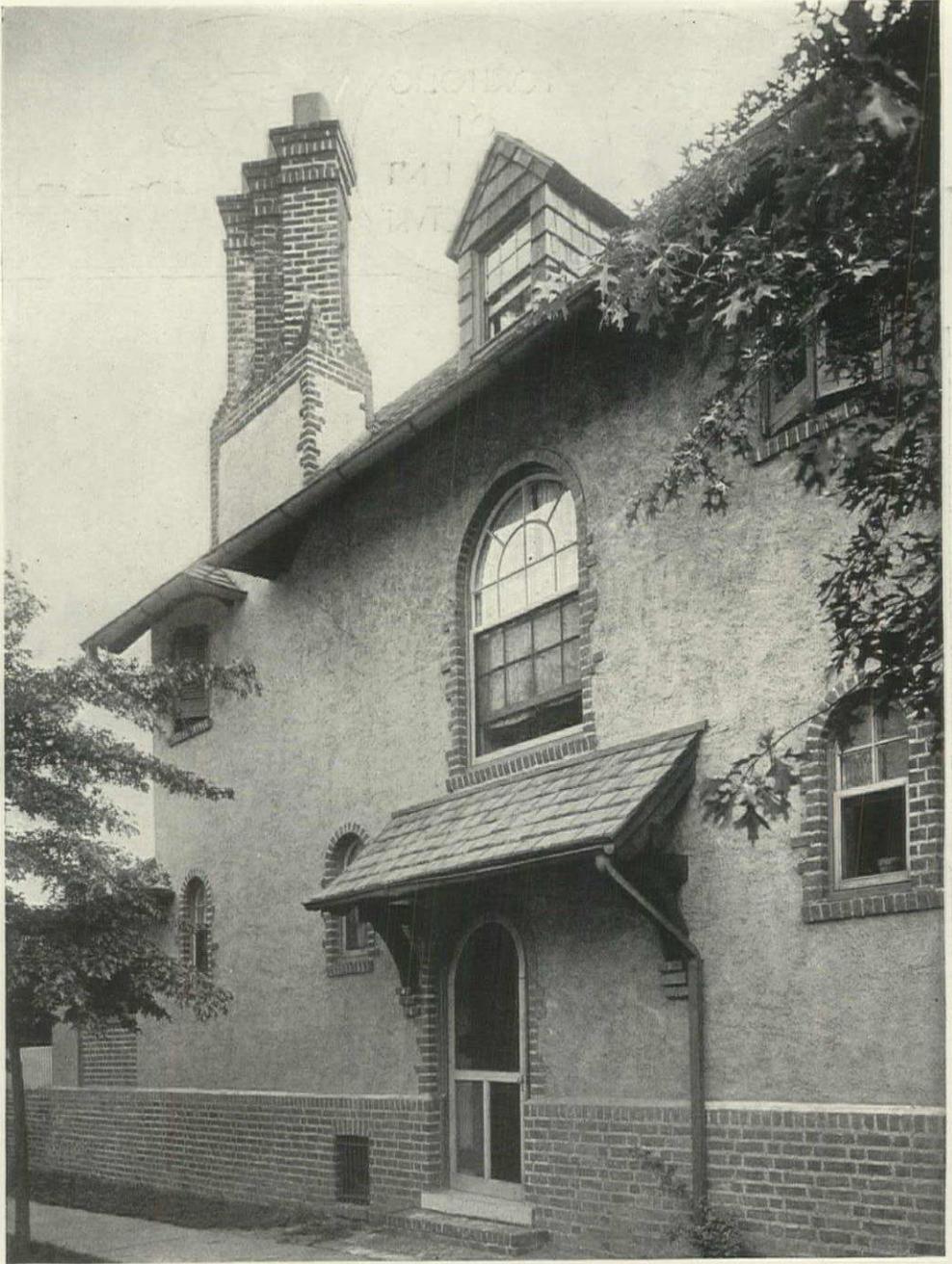
When one carefully compares the Renaissance use of forms and details of classic origin with the antique, the number, extent and variety of the Renaissance innovations becomes fairly surprising, and the evidence of careful thought and original invention is con-

vincing to any one not predetermined to see in these innovations only distortions and misadjustments. But when the comparison is extended to the larger features and thence to the fundamental conceptions of this architecture, the evidence of creative originality becomes so overwhelming that one wonders how it could ever have been ignored. The Renaissance courtyards have no antique prototypes; the Renaissance domical cruciform church was a completely new creation, the extraordinary variety of whose forms is in itself proof of a highly active creative genius; the Renaissance dome set on a drum and crowned by a lantern was an original development of the fifteenth and sixteenth centuries, based in no respect on Roman models. The Florentine or North Italian type of arcade with arches borne directly upon columns can be traced continuously back to Early Christian basilicas of the fourth century and no further. There is no evidence whatever that its isolated occurrence in Diocletian's palace at Spalato had any influence on the Renaissance designers. None of Brunelleschi's buildings nor of Michelozzi's, were patterned after any recognizable antique model. The Renaissance types of tower were evolved by the Italian architects with no help from classic prototypes. The familiar forms of the balustrade, both in their details and in their use as architectural features, were new creations of the Renaissance, absolutely without model or precedent in classic design. Yet we are told that the Renaissance lacked creative origination!

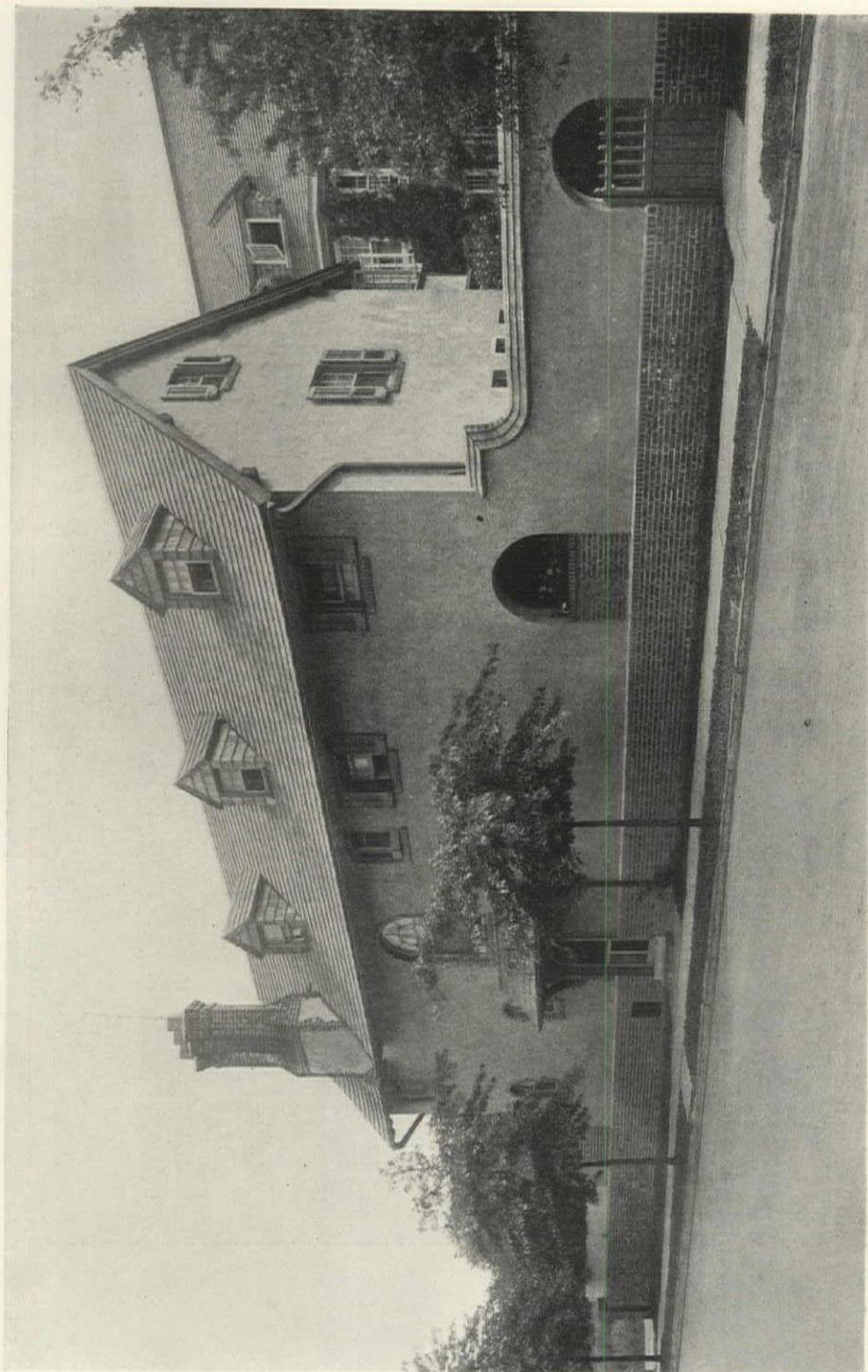
PORTFOLIO
OF
CURRENT
ARCHITECTURE



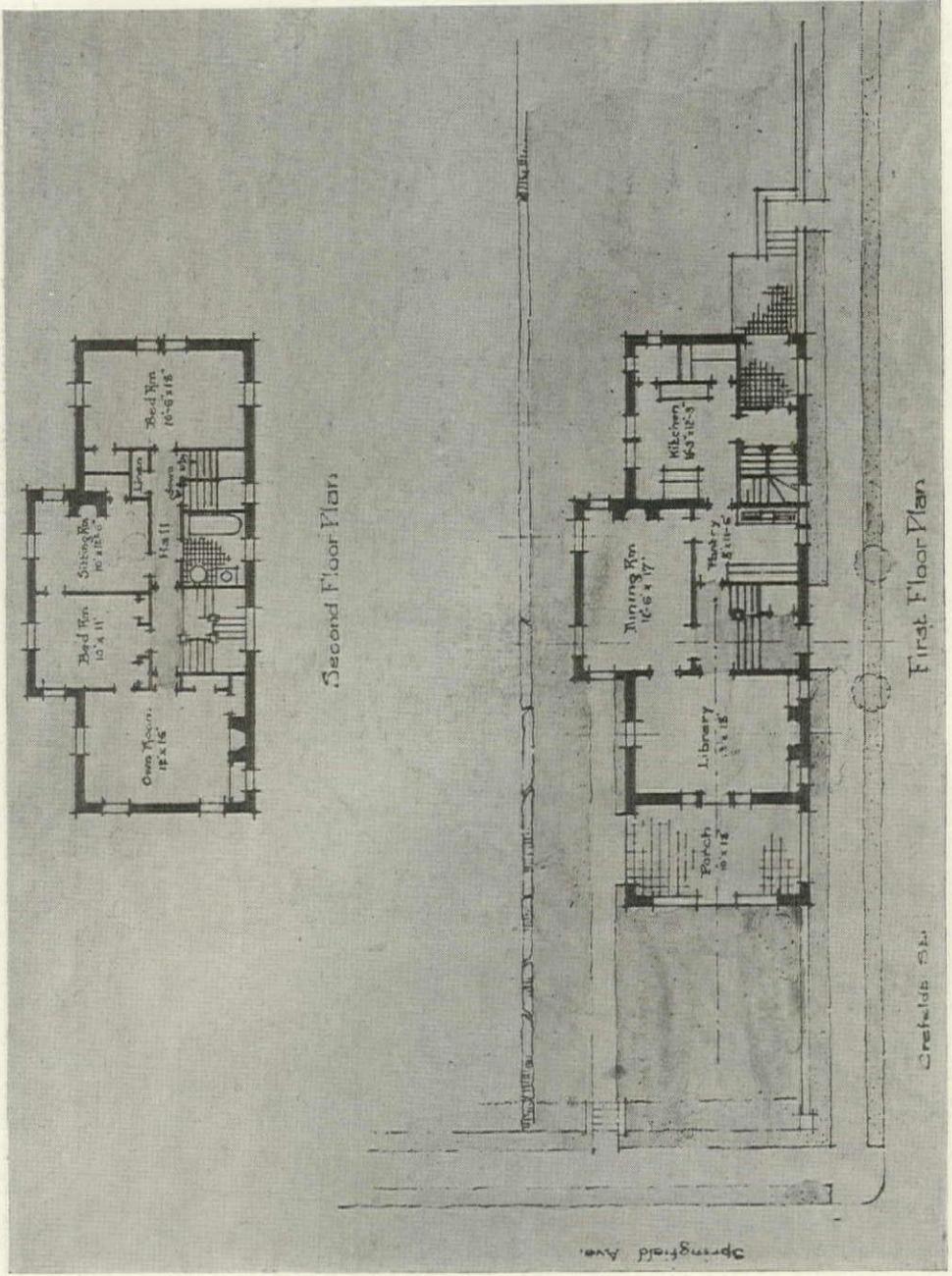
GARDEN GATE—HOUSE OF E. DIGBY BALTZELL,
ESQ., ST. MARTIN'S, CHESTNUT HILL, PHILA-
DELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



ENTRANCE DETAIL—HOUSE OF E. DIGBY BALT-
ZELL, ESQ., ST. MARTIN'S, CHESTNUT HILL, PHILA-
DELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



EAST FRONT-HOUSE OF E. DIGBY BALTZELL,
ESQ., ST. MARTIN'S, CHESTNUT HILL, PHILA-
DELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



FLOOR PLANS—HOUSE OF E. DIGBY BALTZELL, ESQ., ST. MARTIN'S, CHESTNUT HILL, PHILADELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



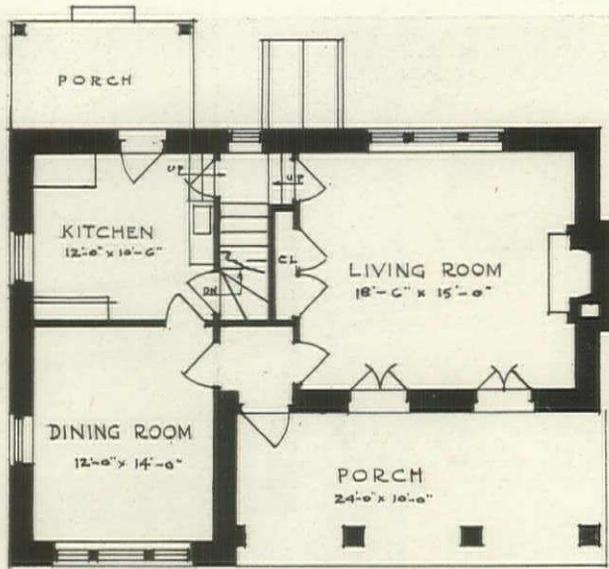
SOUTHWEST VIEW—HOUSE OF E. DIGBY BALT-
ZELL, ESQ., ST. MARTIN'S, CHESTNUT HILL, PHILA-
DELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



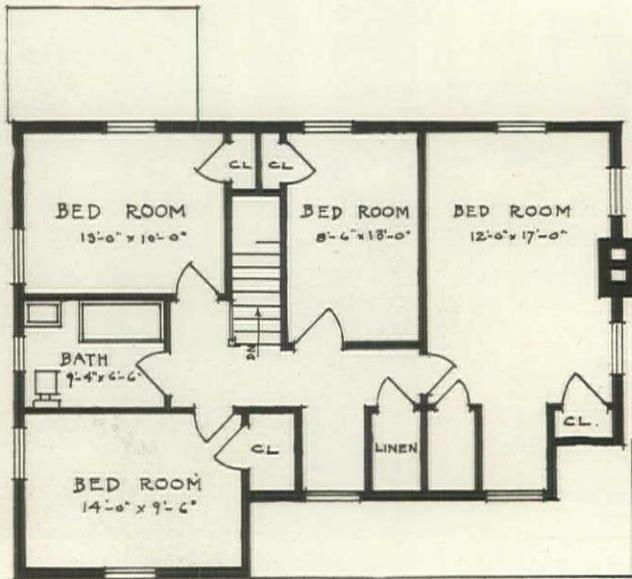
DRAWING ROOM—HOUSE OF E. DIGBY BALTZELL,
ESQ., ST. MARTIN'S, CHESTNUT HILL, PHILA-
DELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



ENTRY AND DINING ROOM—HOUSE OF E. DIGBY
BALTZELL, ESQ., ST. MARTIN'S, CHESTNUT HILL,
PHILADELPHIA. EDMUND B. GILCHRIST, ARCHITECT.



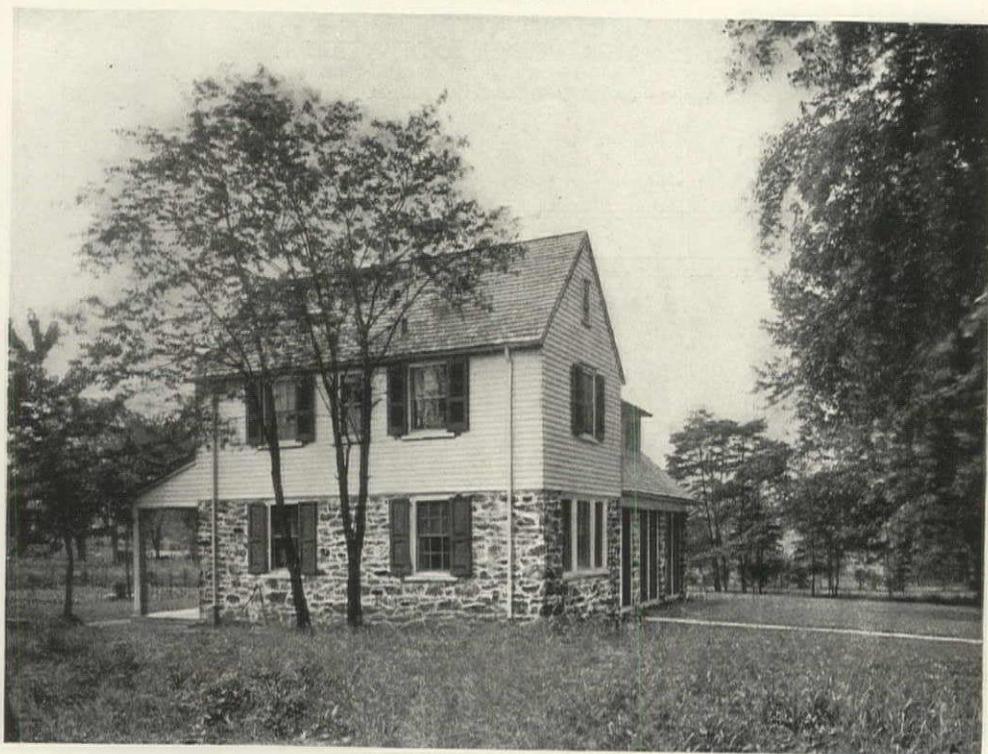
FIRST FLOOR PLAN



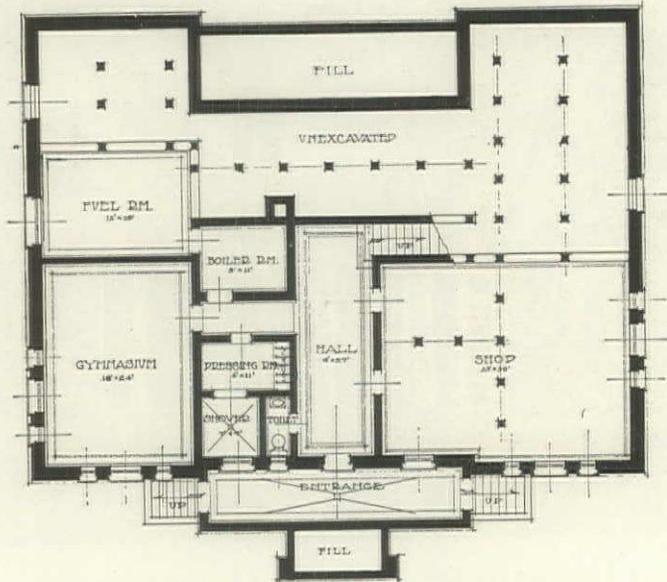
FIRST AND SECOND FLOOR PLANS—
HOUSE AT ARONIMINK, PA. EDWARD
F. HOFFMAN, JR., ARCHITECT.



NORTHWEST FRONT—HOUSE AT ARONIMINK, PA.
Edward F. Hoffman, Jr., Architect.



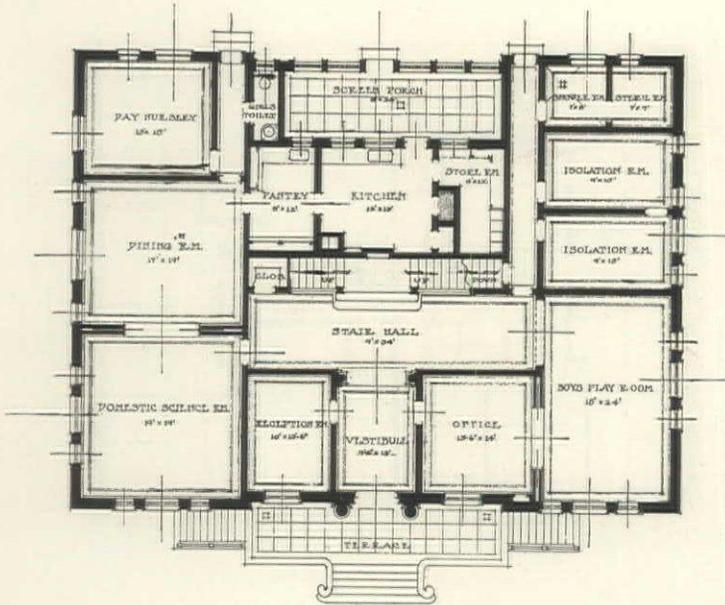
NORTHEAST FRONT—HOUSE AT ARONIMINK, PA.
Edward F. Hoffman, Jr., Architect.



BASEMENT PLAN
SCALE 3/8"=1'

SANTA BARBARA COUNTY DETENTION HOME
SANTA BARBARA CALIFORNIA

Roland F. Sauter, Architect.

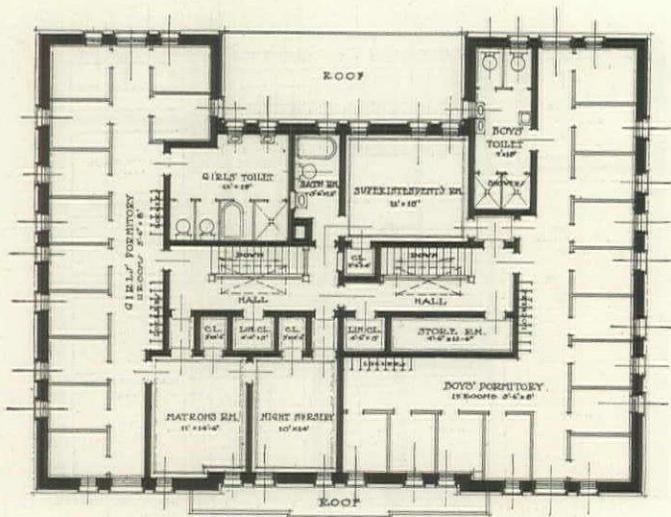


FIRST FLOOR PLAN
SCALE $\frac{1}{8}'' = 1'$

SANTA BARBARA COUNTY DETENTION HOME

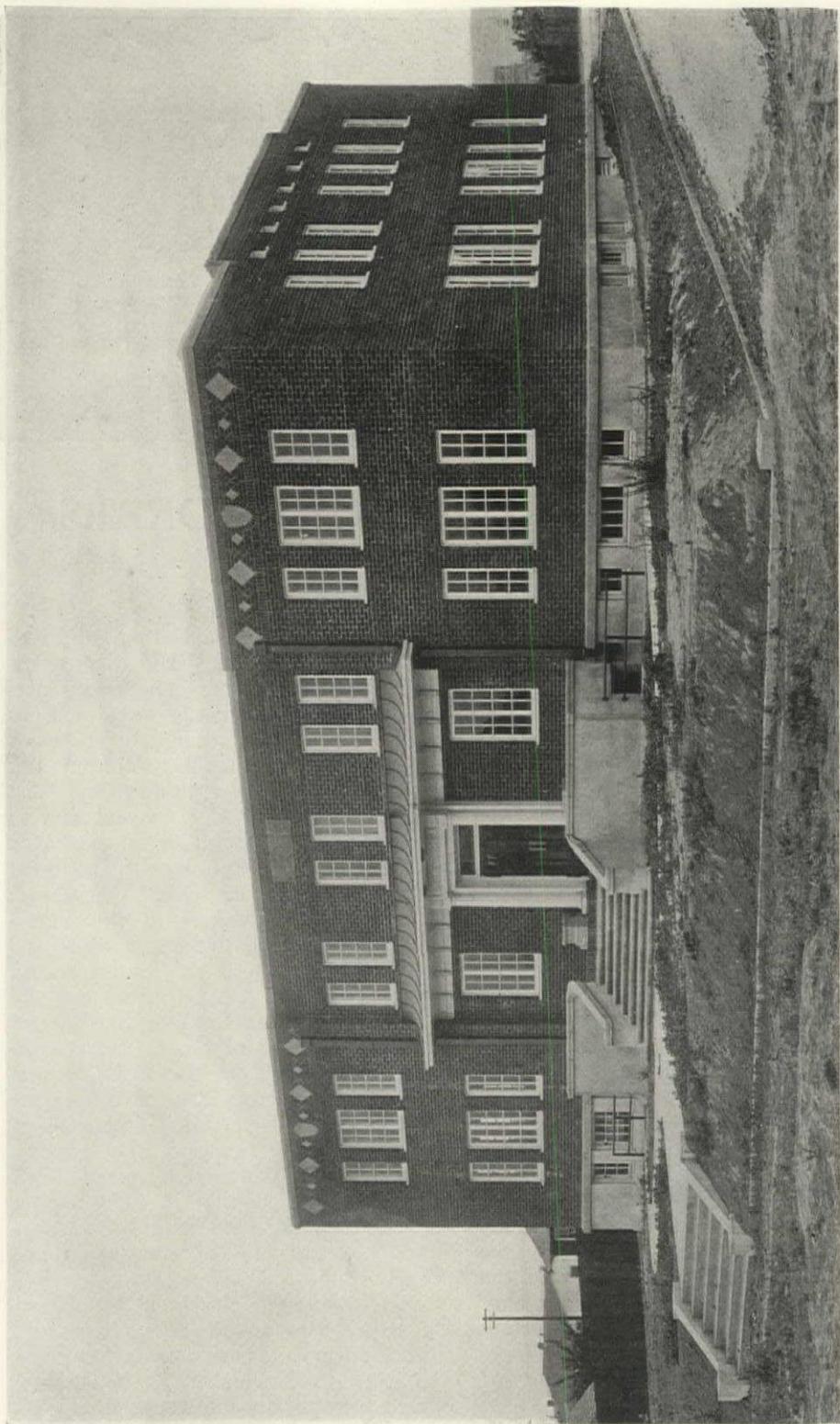
SANTA BARBARA CALIFORNIA

Roland F. Sauter, Architect.

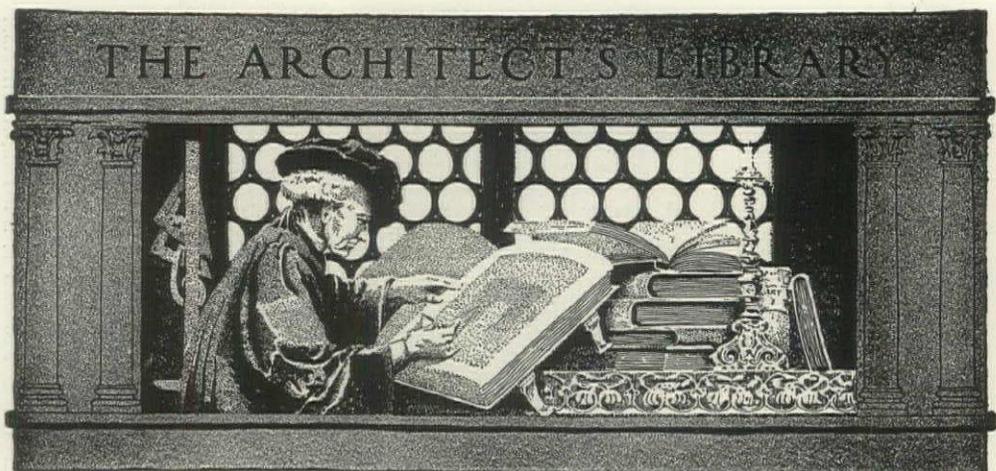


SECOND FLOOR PLAN
 SCALE 1/8"=1'-0"
 SANTA BARBARA COUNTY DETENTION HOME
 SANTA BARBARA CALIFORNIA

Roland F. Sauter, Architect.



SANTA BARBARA COUNTY DETENTION HOME, SANTA BARBARA, CALIFORNIA. ROLAND F. SAUTER, ARCHITECT.



WAR BOOKS OF THE CATHEDRALS

By BARR FERREE

Part VI

MUCH has happened in France and in the world since the great battle of Verdun opened on February 21, 1916. Great battles have been fought, colossal campaigns brought to a successful conclusion, and victory won by the Allies for right and for civilization. Much has been written on these later phases of the war, and much has yet to be written, for Verdun continues to occupy a foremost place in French writings. Three notable books on Verdun appeared in 1918, and in many general volumes it is the central event.

L'Assaut contre Verdun, by E. Diaz-Retg, is an admirable survey of events from February 21 to March 31, 1916. It thus covers the opening of the battle and the events of the first six weeks. The author is a Spanish journalist, the French edition being a translation of the Spanish original. M. Diaz-Retg did not visit Verdun until after the battle, but at this later time he thoroughly familiarized himself with the topography of the region and consulted with many of the leading combatants. He makes rather extensive use of German notes and comments, which gives to his book a somewhat broader character than many of the French books on Verdun.

The story is admirably told, and with very great clearness. He divides his book into four parts. The first treats of the preliminaries of the attack, in which, among other things, he discusses the reasons for attacking Verdun and describes at some length the final German preparations. The second section deals with the first phase of the battle and its colossal beginnings. The third section treats of the second phase, and deals with the conflicts in the Vaux-Douaumont sector, Fresnes, Forges, the Cote de l'Oie, the Bois des Corbeaux, the massacre of the Germans and the aerial bombardments. The fourth section covers the third phase, and is concerned with attacks on the Mort Homme and against Vaux, Avocourt, Malancourt and Haucourt. The German losses and the critical situation of Germany are studied in the final chapter. It is interesting to note that as early as the end of March M. Diaz-Retg did not hesitate to state that the Germans would not take Verdun.

La Victoire de Verdun, by Henri Dugard, is a more comprehensive study, since it covers the period from February 21, 1916, to November 3, 1917, thus covering practically the whole great con-

flict. The earlier parts are based on the author's previous book, *La Bataille de Verdun*, which ended with May 1, 1916. Although the present book is, therefore, very nearly complete as a history of the battle of Verdun, it is less readable than M. Diaz-Retg's absorbing study. This is obviously due to the greater number of episodes treated; the chapters are short and rather fragmentary; but the whole story is here, and to tell that was the author's purpose.

A little less than half the book is given up to an appendix in which more detailed accounts are given of many notable episodes than is included in the main text. Some of these are narratives of eye-witnesses and participants, collected, in some part, from newspapers. They constitute an exceedingly valuable collection of documents, and are more than worth while putting into permanent form. The volume concludes with a bibliography of Verdun, giving, with notes, an extensive list of writings on the battle. This very useful feature no previous writer had thought of including in his book of Verdun.

La Guerre sur le Front Occidental. L'Année de Verdun, by Joseph Reinach, is one of the most important books that has appeared to date. The author is one of the foremost military critics of France. His famous "Commentaires de Polybe" have been an almost daily feature of *Le Figaro* from the very beginning of the war, and have been republished in a long series of books.

The present volume, which carries the sub-title *Etude Stratégique, 1916*, is a masterly survey of the whole war for 1916. It is indeed the year of Verdun, for Verdun was the most important event on the western front in that year, and the larger part of this book is directly concerned with events at that city. But M. Reinach puts the battle of Verdun in its proper relationship to the war, as the leading event of a colossal conflict, by treating of all the military events of the year. Few other writers have taken so comprehensive a view, and few others, it is but the simple truth to say, were so competent to do so.

His first chapter describes conditions

on the western front prior to the opening of the battle, and when one reads M. Reinach's book one realizes how very essential it is to be informed on the situation as a whole. The second chapter deals with the opening of the battle, which, presently transformed itself into a siege, which forms the theme of the third chapter. The battle of the Somme is studied in the fourth chapter, and its underlying idea as a relief to the struggle at Verdun is brought out in a very definite way. The last chapter treats of the final events at Verdun in 1916.

This is a very bald outline of the contents of the book. It abounds in detail, and is particularly remarkable in the way in which distantly-related events are correlated with the great feature of the year, the battle of Verdun. M. Reinach, it is interesting to note, pays frequent and very high tribute to Marshal Joffre as the dominating military mind of 1916.

Au Ciel de Verdun, by Bernard Lafont, being the notes of an aviator, might be expected to offer a quite new topic among the many military books on Verdun. Much of it, however, consists of the author's reflections while in flight, and it is not, therefore, so interesting to the general reader as he may have innocently supposed. An aviator in flight is a person of the most pronounced heroism, but he can hardly present himself in the way people on earth view him; and what he is thinking about is of little interest compared with what he does. M. Lafont is quite modest enough as regards himself, but his book contributes little information to the great theme of Verdun.

Quite as modest as a writer is Philip Sidney Rice, whose *An American Crusader at Verdun* is a brief and human account of the experiences of an ambulance driver from Princeton, whose chief service was at Verdun. His work here was so dangerous and was carried out with so much courage that it was cited by the commanding general of the 69th Division of Infantry of the French Army. Mr. Rice went abroad to help in the great war, and his brief account of what he saw—rather than what he

did—has been compiled for his family and friends.

Mon Régiment dans la Fournaise de Verdun et dans la Bataille de la Somme, by Paul Dubrulle, stands distinctly apart among the host of personal reminiscences of the great war scenes. The author was a soldier priest; he was sergeant-quartermaster during the earlier part of the campaign, and was made under-lieutenant in the course of the battle of the Somme; he was killed in action in April, 1917. He was a student and a worker, and was ordained priest on August 2, 1914, the day of mobilization. He took part in the great battles of Verdun and of the Somme, and the story of his experiences is so fine, so well told and so distinctly personal that a biographical and appreciative introduction by Capt. Henry Bordeaux is prefixed to it. It is a book of unusual merit and of deep interest.

The *Histoire d'une Compagnie*, by Capt. Delvert, is the history of the 8th company of the 101st regiment of infantry. The story falls into two parts, in Champagne, at the Main de Massiges, from November 11, 1915, to April 21, 1916; and at Verdun, from April 21 to June 26, 1916. The more extensive service in the Champagne sector seems rather quiet compared to the violent events into which the regiment was thrown on its arrival at Verdun. Sent almost at once to the trenches at Fort Vaux, they were plunged into the battle almost at the height of the fighting. They were ultimately assigned to the work known as "R.1." Here they withstood five assaults in four days; they held their ground, but at the end of that time—June 5, 1916—the regiment no longer existed. It had died on the field of honor. The few survivors were relieved and ultimately assigned to other organizations. Capt. Delvert presents his story in diary form, possibly the best way in which his swiftly-moving narrative could have been told. He has a fine taste for architecture, as evidenced by his brief comments on buildings of note, seen in his campaigns or during his brief holidays.

The Aisne, in its early days, Chain-

pagne and Verdun, cover the campaigns described by Louis Hourticq, in his *Récits et Réflexions d'un Combattant*, (1915-1917). He served twice at Verdun, and took part in battles before Reims. His book may be read with interest and profit.

This can hardly be said of *A l'Ecole de la Guerre*, by Commandant J. E. Hanches. The author was an artillery officer, who served with so much distinction as to be cited four times. His book reproduces letters, chiefly to his wife. The Champagne, Verdun and Reims were the scenes of his service, but the book gives little information as to any locality and consists largely of reflections on war conditions, often of the most dolorous character. As a tribute to a brave man his book is entitled to consideration, but it supplies no information whatever.

To have served three years in the war, and survived to publish an account of it is no mean achievement. This was accomplished by J. L. Gaston Pastre, of the Artillery, in his book *Trios Ans de Front*. His service began in Belgium, and from there he was successively transferred to the Aisne and Champagne, Verdun, Argonne and Lorraine. He saw much, took an active part in all these campaigns, and has written a sprightly account of his adventures.

From Africa to the Champagne is a long cry. Very moving is the story of Vital Magne, whose *Heures de Guerre* cover this widely distributed service. The book was written during a prolonged convalescence from a serious wound. It makes no pretense to be a continuous narrative, but throws striking light on many notable incidents.

M. René Mercier, whose *Nancy Sauvée* has been previously noted in these notes, continues the story of his native city in a second book, *Nancy Bombardée*. Greater interest will be taken in the reduced facsimiles of proclamations posted in Nancy during the bombardment, with which the book is embellished, than in the author's somewhat long drawn-out story.

It is well to caution the reader that *Pendant qu'ils étaient à Noyon*, by Maurice Donnay, of the French Academy,

contains nothing whatever as to Noyon, as might be supposed from the title. The book is a collection of newspaper articles on all sorts of miscellaneous subjects, written and first published during the German occupation of Noyon. A more misleading title could not have been devised.

Almost as miscellaneous in its contents, although dealing throughout with the war, is Pierre Loti's *L'Horreur Allemande*. A substantial portion of the book is given to impressions of Italy in the war. It includes a brilliant picture of Reims, entitled "*Ca, c'est Reims qui brule!*" originally published in *L'Illustration*.

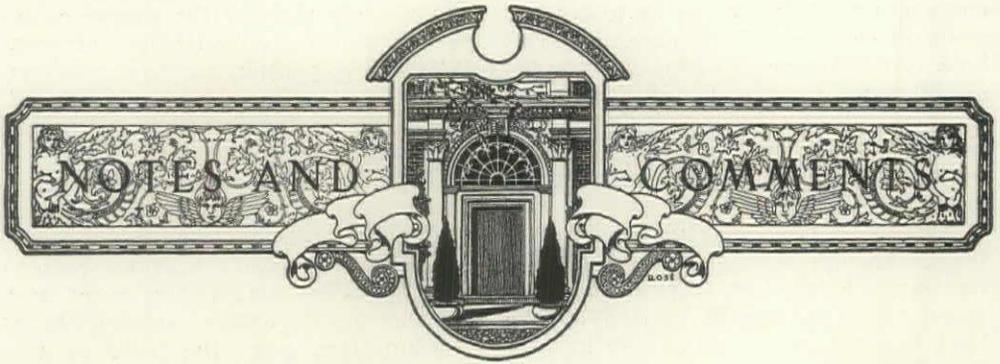
Special interest will be taken in *Souvenirs de Guerre d'un Sous-officier allemand*, as one of the few books by a German combatant that has yet appeared outside Germany. The author saw service in 1914, 1915, and 1916, and his name is not given. He was grievously wounded at Verdun, and was sent to Schleswig, finally retiring from the army and seeking refuge in Denmark. His chapters on Reims and in Champagne have a unique interest in being from the side of the attacking enemy. It is the first document of this kind we have had.

One further book in English, although of French origin, remains to be noted. This is *A Blue Devil of France*, by Capt. G. P. Capart. It is to be regretted that the publishers should have sent it out with the flamboyant cover-paper that encases it. They tell us, in short, that "it gives a more striking picture of the war, and all it has meant than has yet been presented." It is very far from doing anything of the kind. It is not

a continuous story of the war or of any part of it, but a collection of anecdotes. It is a lively book, easy to read, and contains not a few episodes of interest; but it is very far from being a serious contribution to the literature of the war.

Old Glory and Verdun, by Elizabeth Frazer, has a striking title that displays the tendency of some English and American writers to give a fictitious value to their books by bringing the sacred word Verdun into their titles. The chapter on Verdun, that gives the book its title, describes a hasty visit after the battle. The outstanding feature in this account, is the fact that the author visited Verdun. A very fortunate person.

The readers of contemporary magazines need not be informed as to the remarkable manner in which fiction has seized upon episodes in the war for furthering the sale of manuscripts. There has been so little of real interest in this flood of war-fiction, that the magazine reader has been pushed for relaxation in the very place where relaxation should have been sought. But the remarkable stories by Capt. F. Britten Austin, which have been gathered in book form under the happy title *According to Orders*, stand quite apart, and are distinctly worth while. Although the author is an English officer, he writes from the German point of view; that is to say, his stories are, apparently, told by Germans. This difficult feat in authorship he has carried out with enormous success. In many respects the most notable story in this collection is "*Nach Verdun!*" describing the first attack on Verdun as supposedly told by a German from the German side. It is a remarkable piece of work, involving no improbabilities.



War Memorials.

Interest runs high at the present moment in regard to the question of the war memorials which are certain to appear in large numbers in all parts of the country. The many constructive suggestions which appear each week in the periodicals are prompted largely by an undercurrent of fear lest the monumental horrors of post-Civil War days be repeated in the present eagerness promptly to commemorate the sacrifices of the recent war. A great danger lies in a too hasty execution of immature ideas, a danger which the French are reported to have lessened in their typically clear-sighted way by the passage of a law forbidding the erection of public war memorials for a period of ten years after the signing of peace.

As in all questions of such general interest controversy speedily arises, and we find in a general way this discussion resolving itself into an exchange of opinion upon the virtues of two types of memorial—the purely monumental work which shall commemorate idealistically in terms of art the qualities of character and of mind called forth by the great emergency of war and the more utilitarian memorial in which the idea of service is preeminently taking the form of buildings for special uses or of organizations of a social-service or civic nature.

Under these two headings come most of the definite suggestions for memorials and the list of each kind is long and various. It would seem that of the two, the purely monumental type might be of particular propriety in the commemoration of the service and sacrifice of large groups of men who were associated together against the foe in behalf of a common ideal. Such a dignified and impersonal monument

whose abstract beauty must form its essential justification, might commemorate the dead of a local regiment, battalion or division, or some particular action in which one of these units has taken part. The organization formed for social service or civic uplift, or the building devoted to similar use finds its particular appropriateness as a memorial to individuals whose energies, directed in life in channels of service to others, might thus be carried on. Some such distinction as this is at the basis of a correct choice of the general form which a memorial should take, and much confusion is avoided in the preliminary discussion by the realization of the appropriateness of one of these types to a particular occasion.

Whatever the general choice may be, the concrete memorial itself will immediately require the attention of trained professional advisers whose authority must be recognized. It is here that we begin to find a helpful attitude on the part of professional men and their related organizations. The activity of the American Federation of Arts has set the pace which is to mark the development of sentiment throughout the country in the interest of fine monumental memorials. Their action in the matter was very prompt, and early in January a circular letter was issued from the offices of the Federation, containing suggestions for the treatment of war memorials. Since that time a second circular has been issued which makes announcement of a General Committee to act in an advisory capacity to individuals or committees projecting war memorials of any kind. This committee is composed of representative men from different parts of the country prominent for their interest or accomplishment in architecture, sculpture or painting, education, law or economics, philanthropy, social service or civic reform. In addition

to this General Committee there are special regional subcommittees and a list of professional advisors for the aid and convenience of those in different parts of the country who wish specific and professional advice.

This circular makes clear the character of memorial which is the most fitting for its purpose: "The most impressive monument is one which appeals to the imagination alone, which rests not upon its material use, but upon its idealism. From such a monument flows the impulse for great and heroic action, for devotion to duty and for love of country. The Arch of Triumph of Paris, the Washington Monument and the Lincoln Memorial are examples of such monuments. They are devoid of practical utility, but they minister to a much higher use; they compel contemplation of the great men and ideals which they commemorate; they elevate the thoughts of all beholders; they arouse and make effective the finest impulses of humanity. They are the visible symbols of the aspirations of the race. The spirit may be the same whether the monument is large or small; a little roadside shrine or cross, a village fountain or a memorial tablet, speaks the same message as the majestic arch or shaft or temple, and both messages will be pure and fine and perhaps equally far-reaching, if the form of that message is appealing and beautiful. Display of wealth, ostentation and over-elaborateness are unbecoming and vulgar. Elegant simplicity, strength with refinement, and a grace of handling that imparts charm are the ends to be sought. These ends require, on the part of everybody connected with the enterprise—committee, adviser and artist—familiarity with the standards of art, and above all, good taste. Only by a combination of all these elements can a really satisfactory result be obtained."

There are suggested in this folder a number of ideas such as a village green, stained glass windows, medals, tablets and many monumental works in architecture or sculpture or a combination of both. Inquiries or suggestions with regard to any sort of memorial may be sent to Miss Leila Mechlin, Secretary, American Federation of Arts, 1741 New York avenue, Washington, D. C.

A very interesting pamphlet has been recently issued by the Municipal Art Society of New York City, dealing with this subject in a somewhat different, but by no

means less helpful way. This issue of their quarterly bulletin takes up in a constructive manner suggestions for the form and character which a memorial should take and the steps preliminary to the execution of the idea. Numerous illustrations show a variety of memorials already in existence and present the history of America's achievements both in war and in peace as expressed in monumental form. The pamphlet should be in the hands of every committee of laymen in the early stages of their deliberations on the choice of memorials.

In a talk before the New York Chapter of the American Society of Landscape Architects, Mr. Harold A. Caparn has strongly urged that propaganda be carried on with its aim the jealous guarding of the parks and other public places into which memorials are apt to enter. He urges that commemorative sculpture be not permitted in the parks unless its excellence as sculpture has been convincingly attested. The necessity of this protection of the few open spaces in cities is well recognized and its need is now all the greater when the impulse is to give this land, one of the most precious things in the city's possession, to builders of monuments without a proper care for the artistic quality of the monuments themselves.

Among the suggestions for memorials in New York City is the creation of a memorial plaza before the Grand Central Station, where the effect could be dignified and important artistically, as well as of practical benefit in its aid to the solution of the problem of traffic congestion in the neighborhood. Another suggestion, which would call into one's mind again Mr. Caparn's warning, is that of the utilization of the reservoir site in Central Park, New York, for a memorial to Mayor Mitchel. The erection of the temporary arch in Madison Square has demonstrated to most people the mistake which it would be to carry out the scheme in more monumental material than at present.

The approaching campaign for a fund to complete the nave of the Cathedral of St. John the Divine immediately suggests the idea of breathing into this building the character in part of a votive church. Certainly no building could be more metropolitan, if not national, in its position, nor less open to suggestions of utilitarian purposes.

In the west and middle west, the tendency seems to be running in the direction

of monumental city plans. This is possible in a country where land, still imperfectly developed, is not at so great a premium as in the east and such schemes permit not only of a great general scheme of breadth and dignity, but also of the introduction of many individual votive monuments. Mr. Polk discussed in these columns such a scheme of community development suggested for San Francisco, which contained many elements of value. St. Louis proposes a program to cover the reconstruction years after the war, which is dealt with in detail in a pamphlet issued by the City Plan Commission of St. Louis, with an introduction by Winston Churchill.

The Red Cross is a national, an international, institution. The work which it has done is second to none in the estimate of the sacrifice and accomplishment of the war, and some fitting memorial to its labors, other than a utilitarian building, however dignified, would be deserving of the attention of the best of the artists.

The natural creators of memorials, in which the supreme requirement is that of beauty, are the trained members of the artistic professions, architects, painters, sculptors and musicians. Music played so great a part in this war, its integrant morale was of such supreme importance that when we talk of memorials of artistic excellence should we not think also of some musical composition of beauty and dignity? Such a memorial could be more truly national than any more tangible one in that it would constitute a possession at one time of every town and hamlet in the country. This is a sort of commemorative art which cannot be made to order with any hope of great success, but it would not be surprising if its creation were only a matter of time. Some such musical composition, or cycle of compositions, would call for an auditorium or festival hall as a setting for its performance or an amphitheatre of noble inspiration, which would be fitting and dignified as monuments. The announcement of a projected memorial in Strassburg to Rouget de l'Isle, who was himself the creator of a living musical memorial whose inspiration has lasted a hundred years, is interesting in this connection.

One danger to be avoided in war memorials is the glorification of many of the

actual deeds of war and the shrouding of war's activities in a haze of romance and sentiment. This has been done too much in the past, the Germans have carried it to dreadful extremes, other European countries almost equally so, and as the present generation has seen war in all its ugly nakedness, it is not its dramatic moments which we should care to immortalize, but the spirit of courage, of heroism and sacrifice which it has inspired.

The next few months will be filled with suggestions and efforts in the direction of reconstruction and war memorials, and it is to be hoped that projects of distinction and foresight may appear on the horizon which may be reported and discussed in these columns.

CHARLES OVER CORNELIUS.

Errors of Omission.

I note in the May, 1919, issue of the Architectural Record that you have published the plans and a view of the Rochester Y. M. C. A., giving me the entire credit as architect. I desire to say that when this building was designed, the firm was Jackson, Rosencrans & Waterbury, and also that Messrs. J. Foster Warner and Claude Bragdon, of Rochester, were associated with us in the construction of the building. I am sorry that the error occurred, and if it is possible for you to do so, I should be pleased to have it corrected.

JOHN F. JACKSON.

In your issue of May, 1919, you illustrate the residence of Leonard M. Thomas, Esq., New York City, F. Burrell Hoffman, Jr., architect. This residence I built for myself some four years ago and sold it to Mr. Thomas about two years ago. Mr. Hoffman made some alterations in the interior. No alteration whatever was made on the exterior and no material alteration on the interior other than the redecoration of the dining room and the entire changing of my studio into a living room. Under these circumstances I must ask you to correct in your next issue the mistake you have made by publishing this house under the name of F. Burrell Hoffman, Jr., architect.

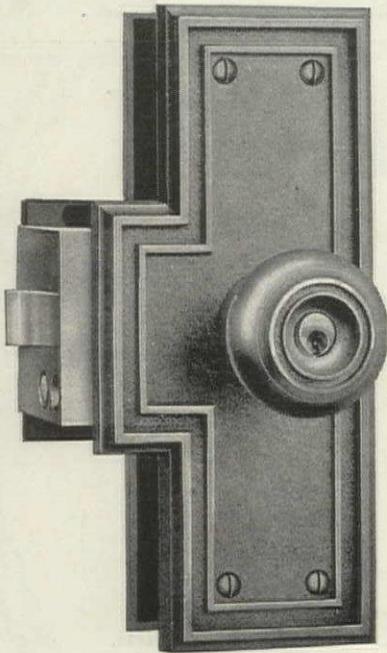
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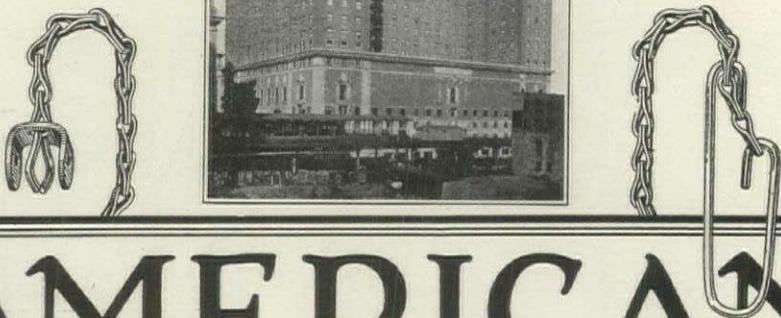
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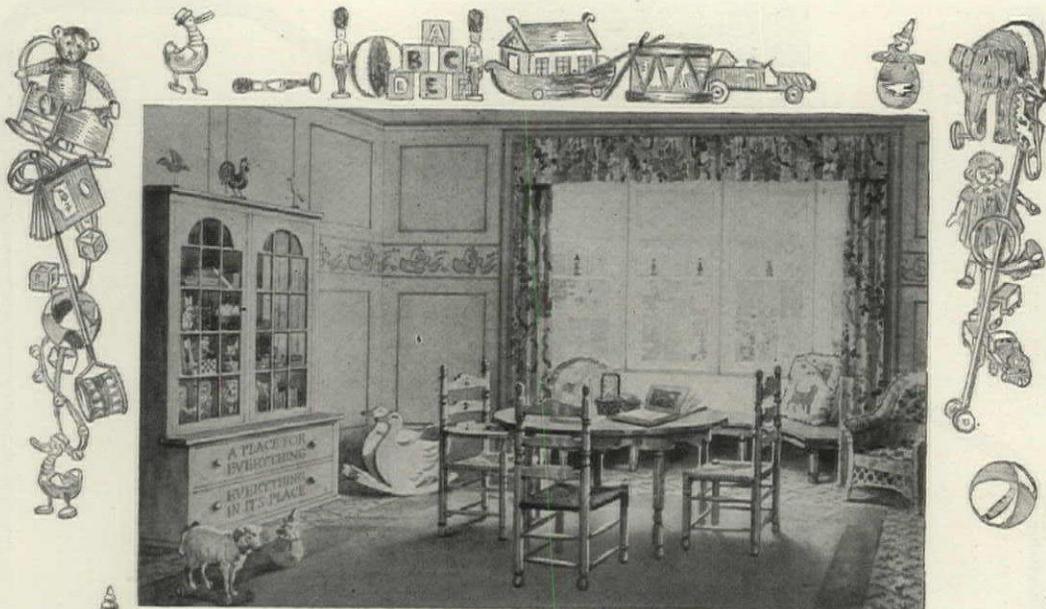
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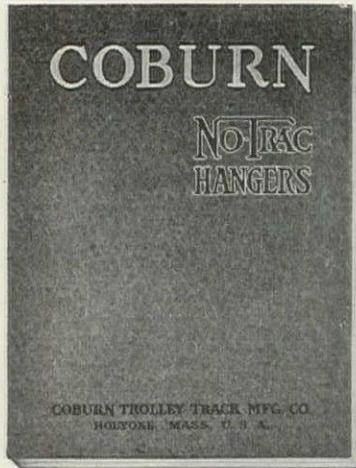
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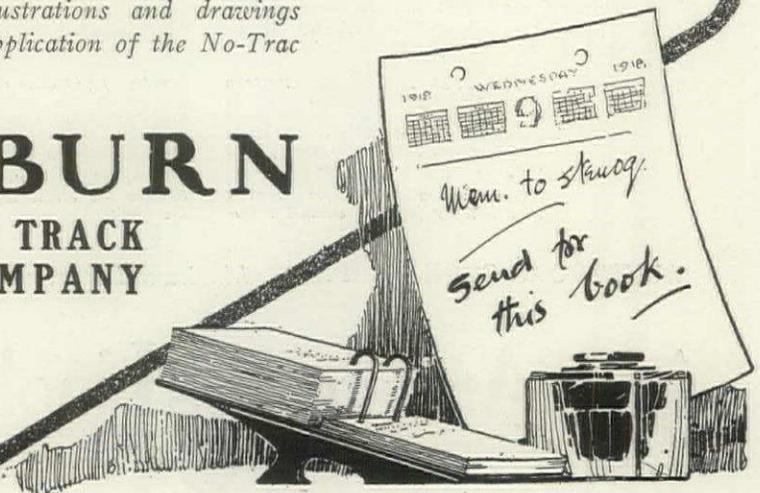
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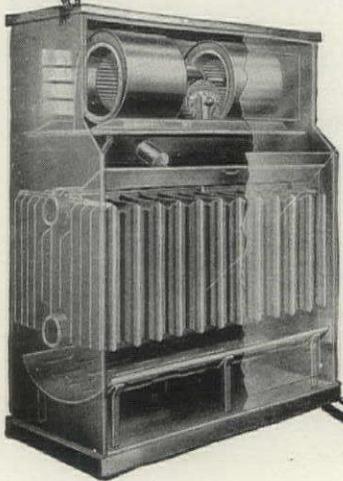
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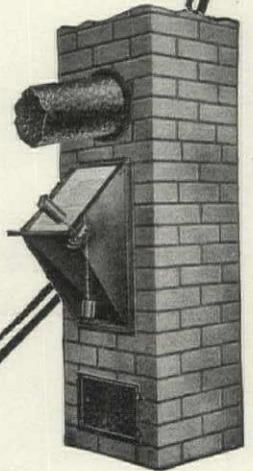
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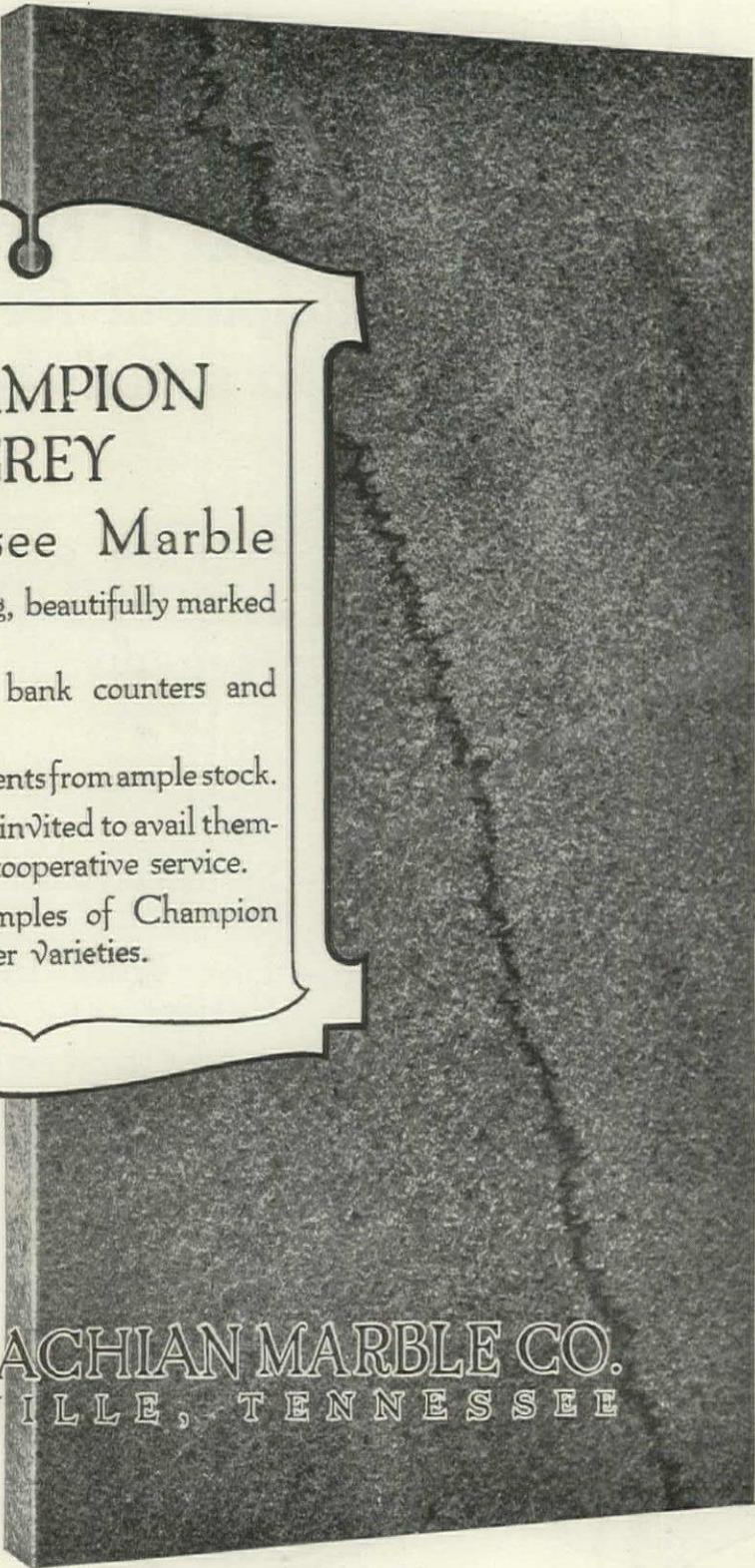
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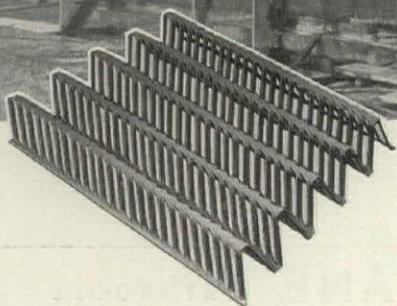
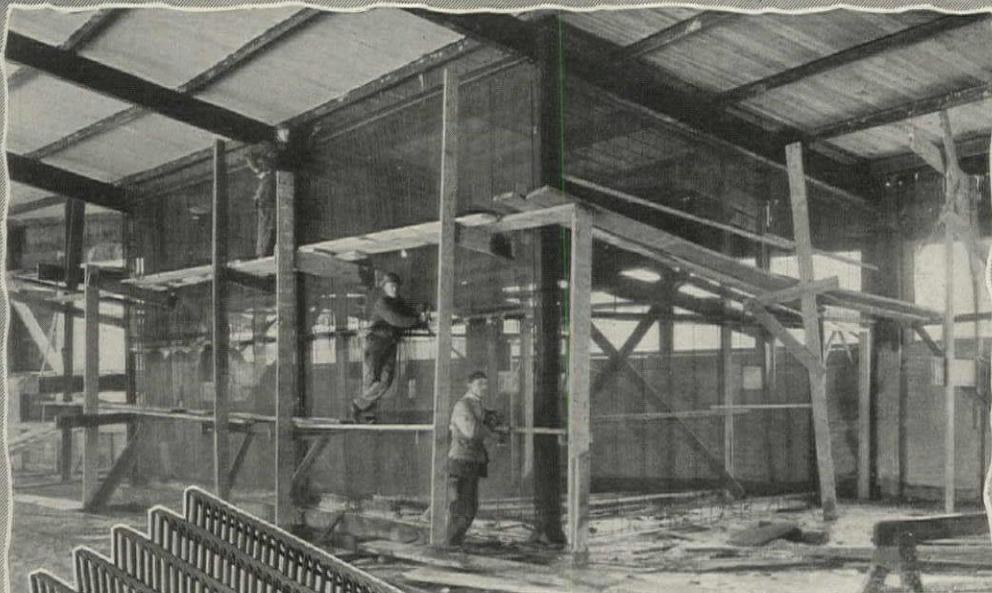
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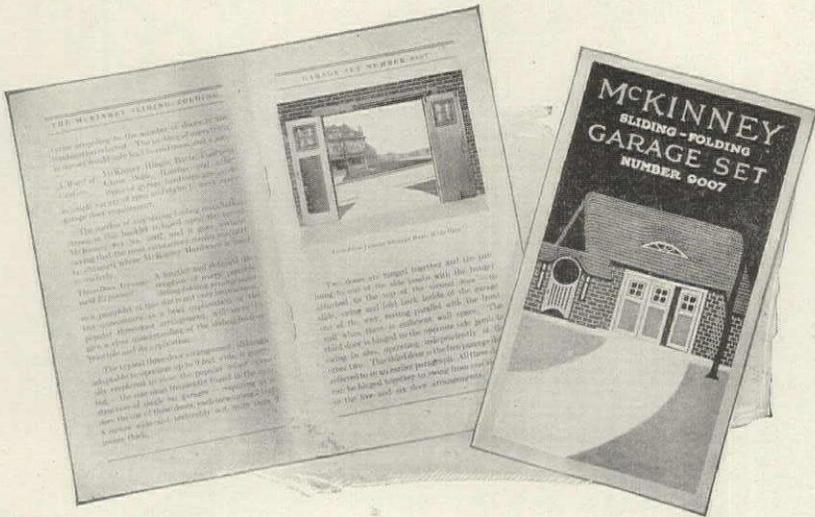
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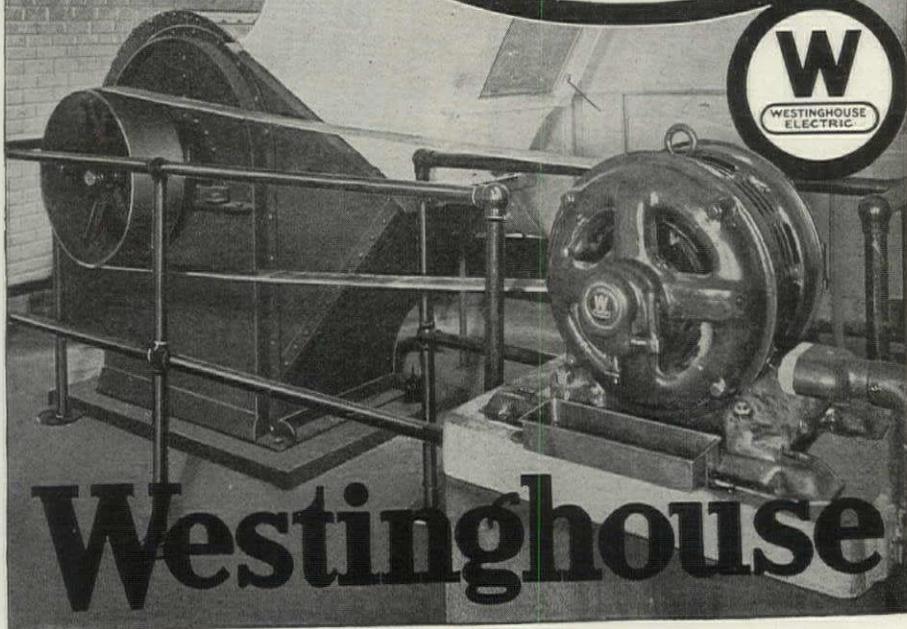
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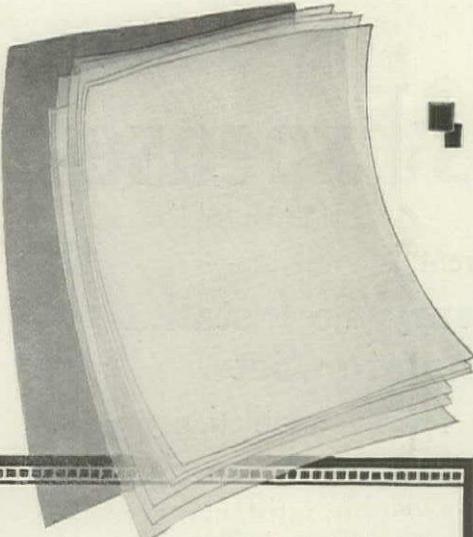
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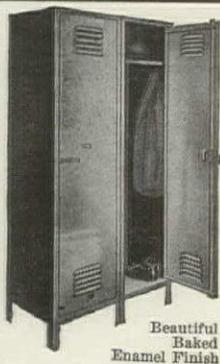
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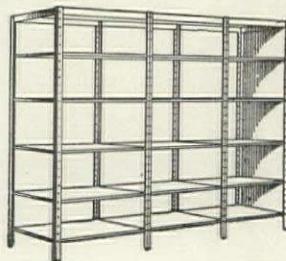
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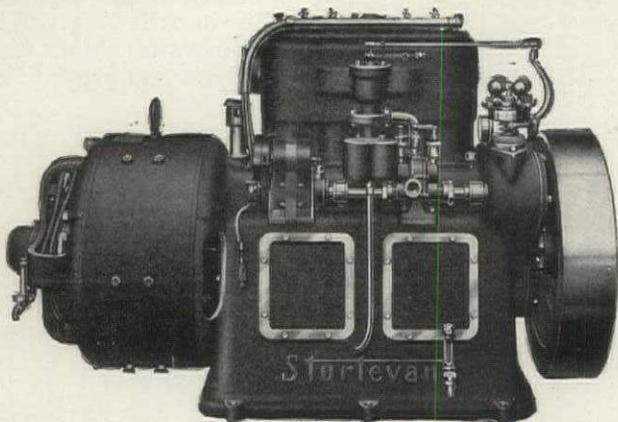


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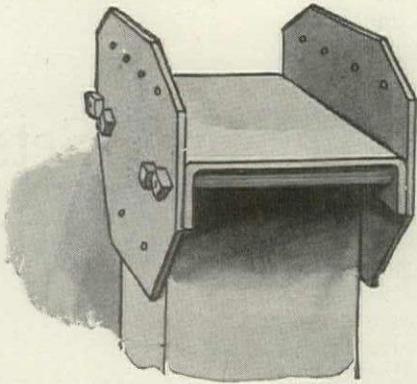
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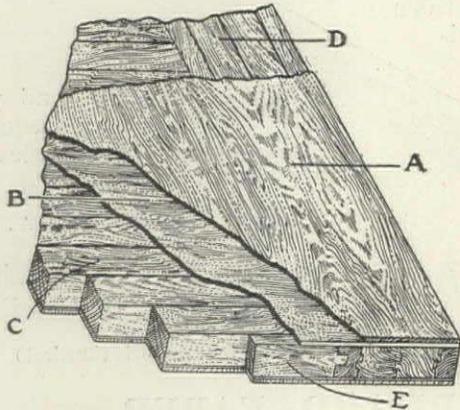
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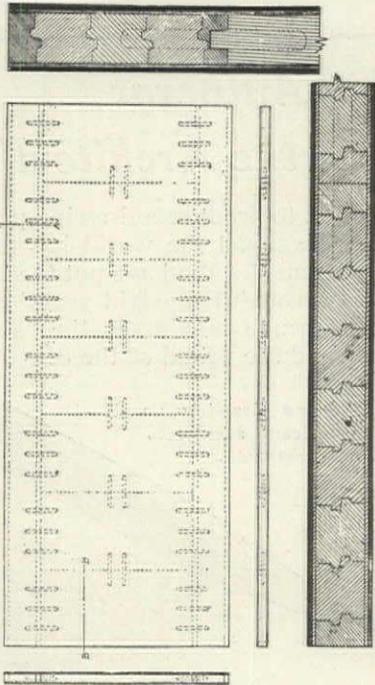
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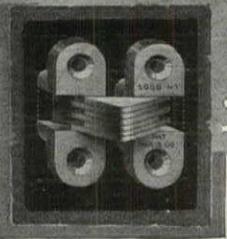
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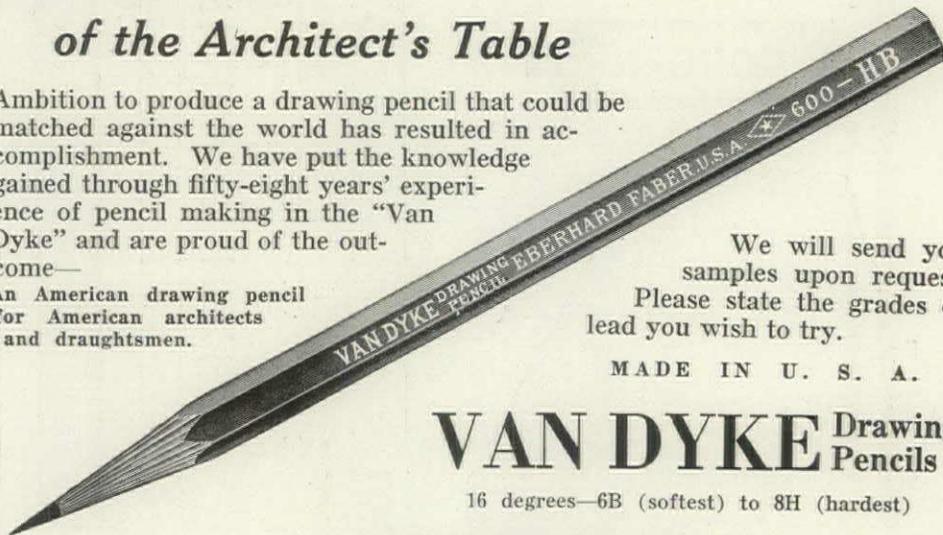
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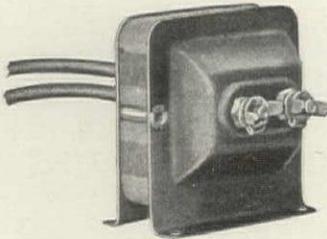
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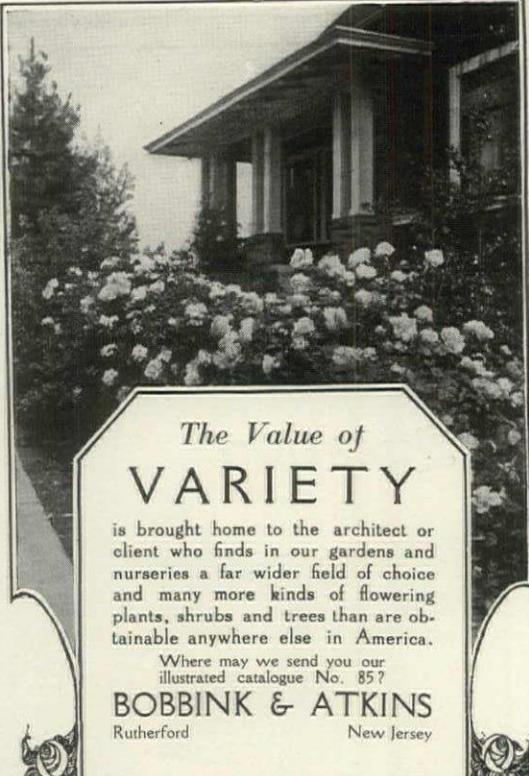
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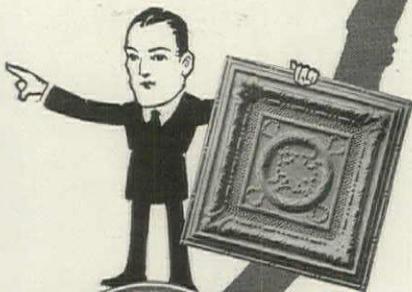
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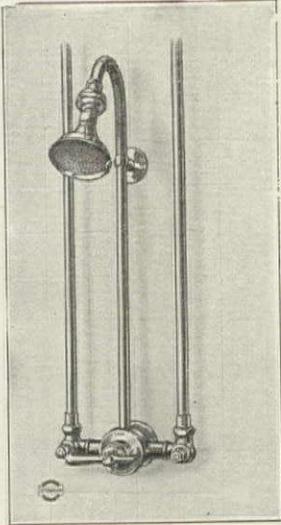
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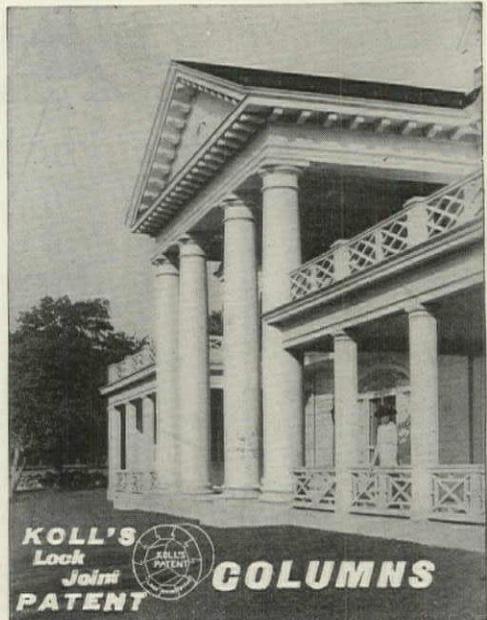
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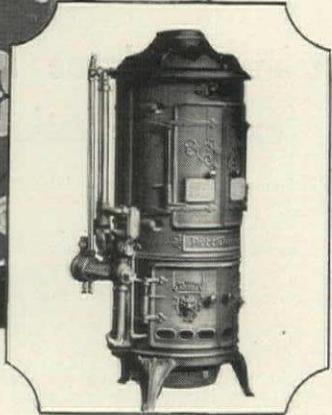
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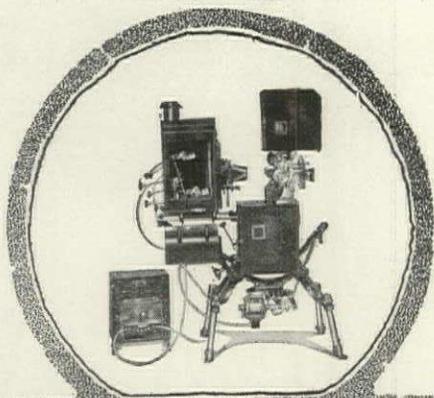
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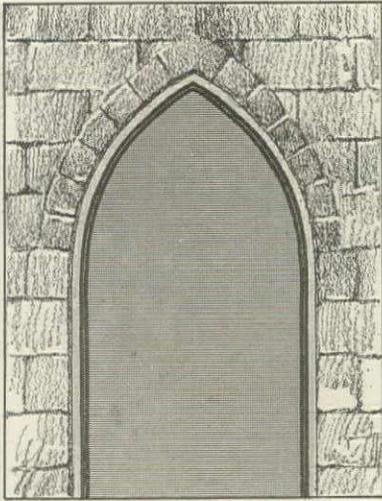
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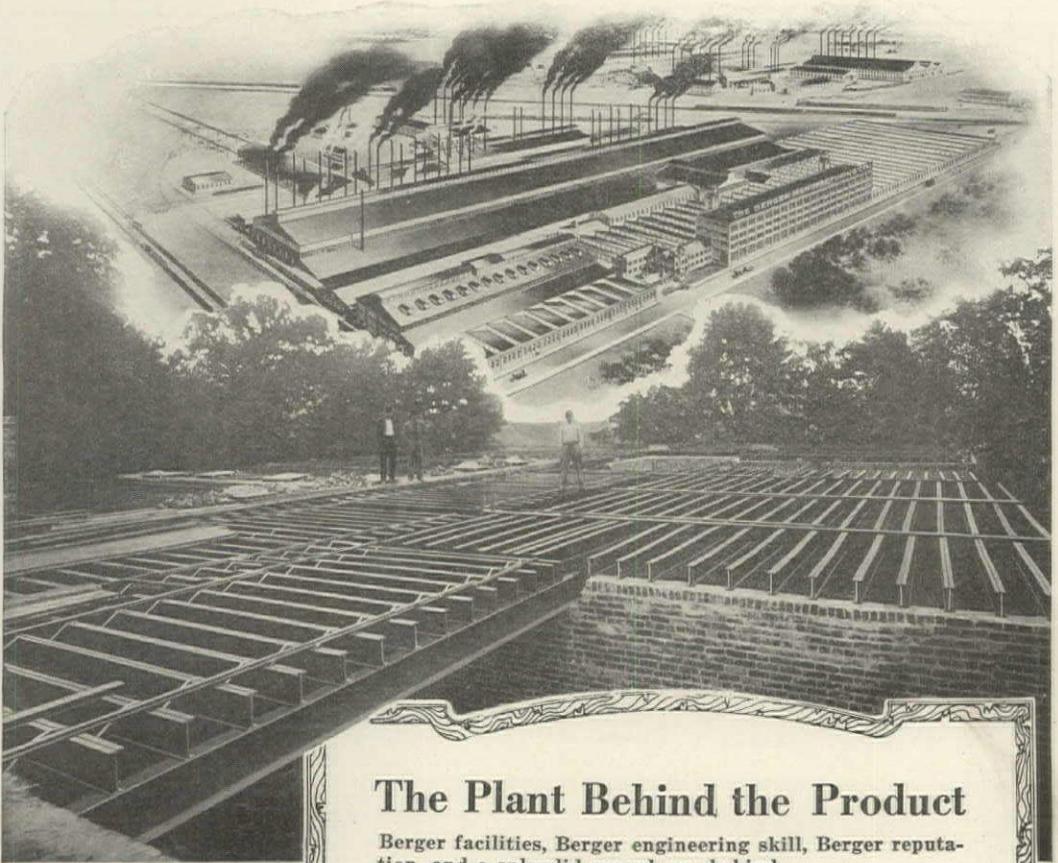
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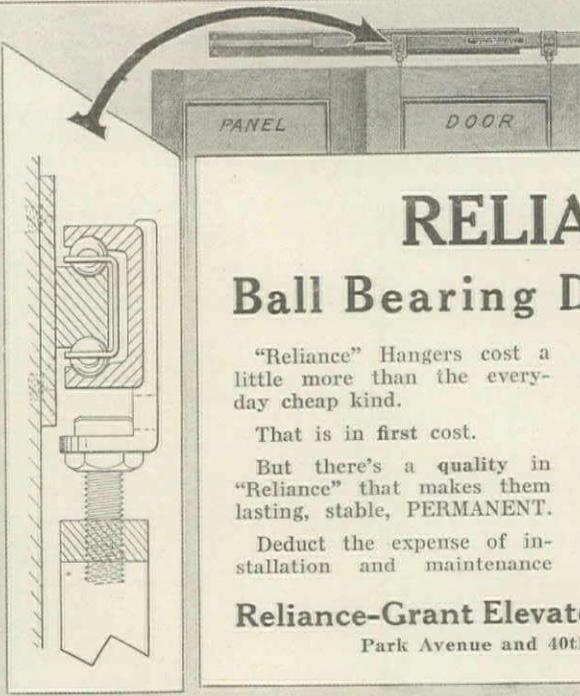
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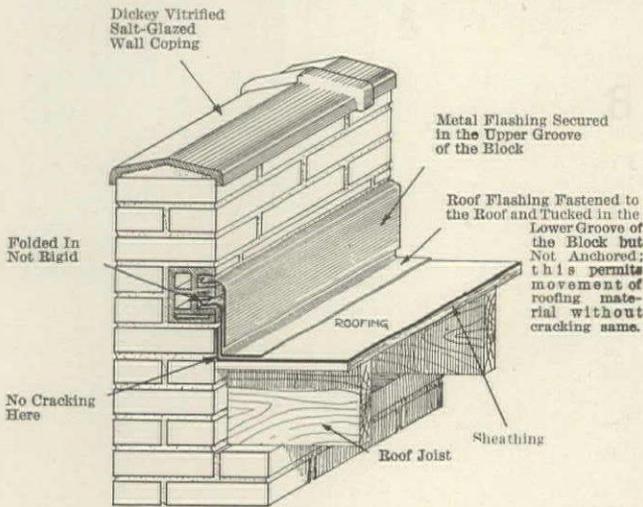
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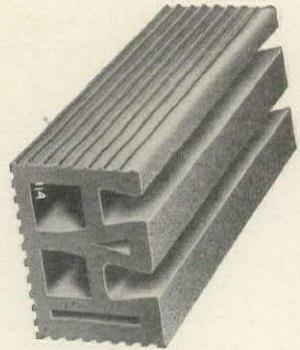
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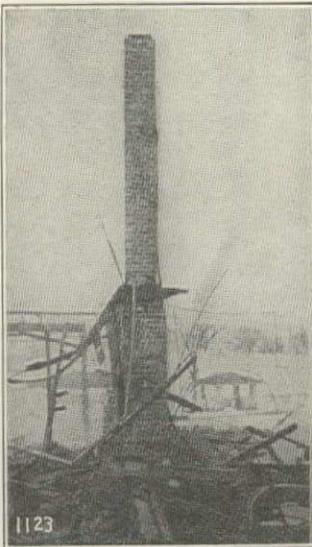
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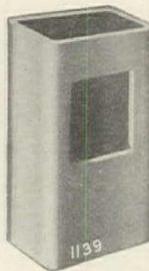
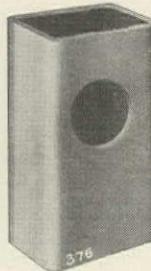
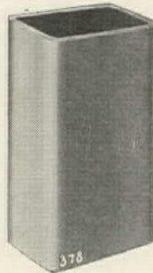


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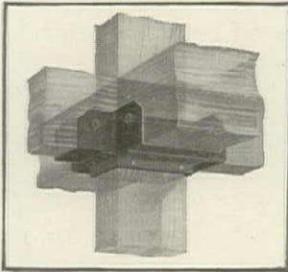
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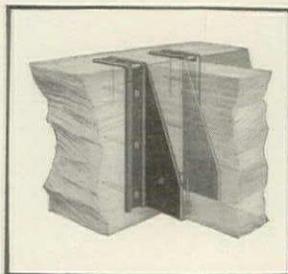
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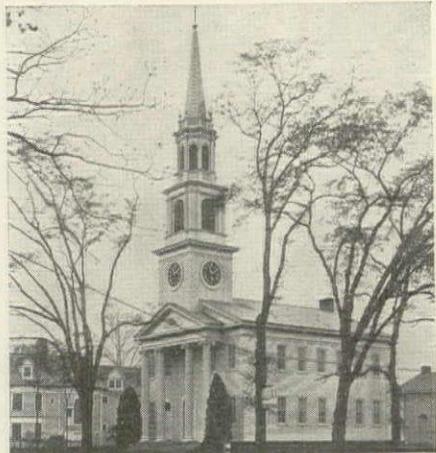
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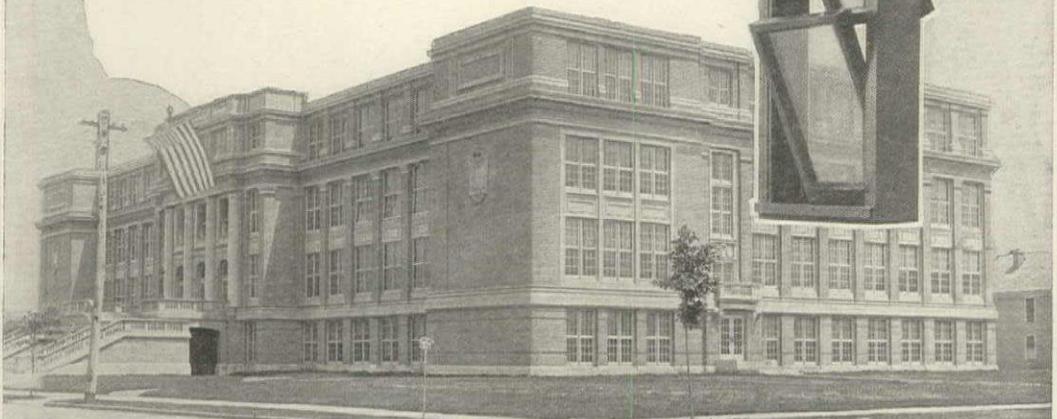
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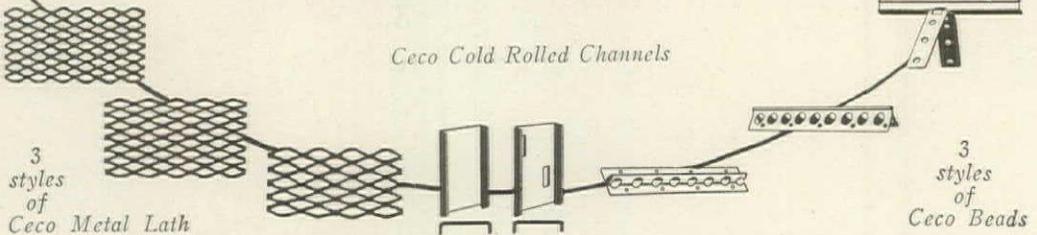
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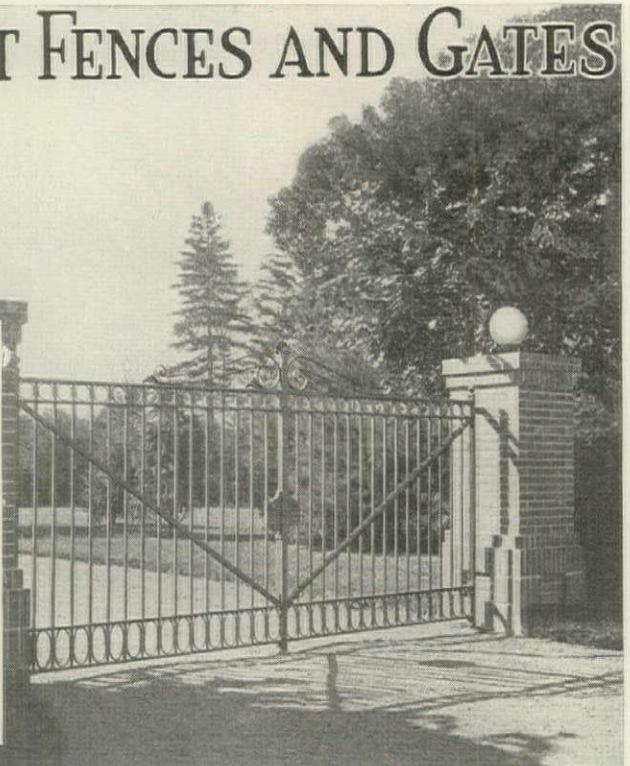
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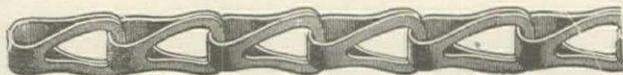
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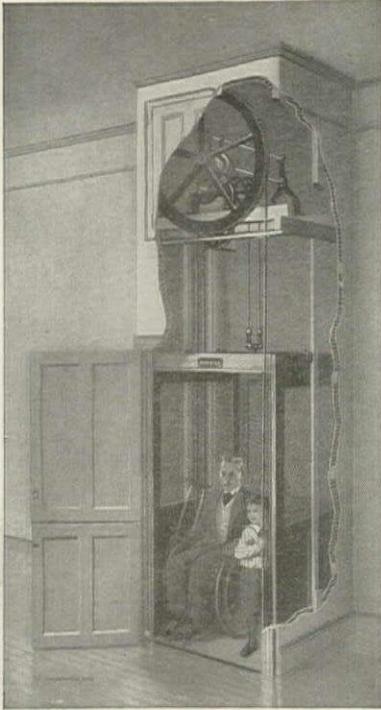
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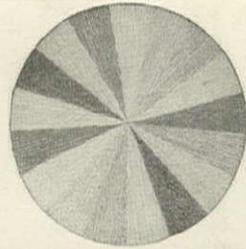
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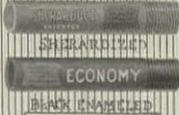
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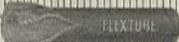
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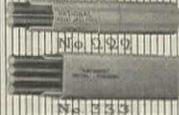
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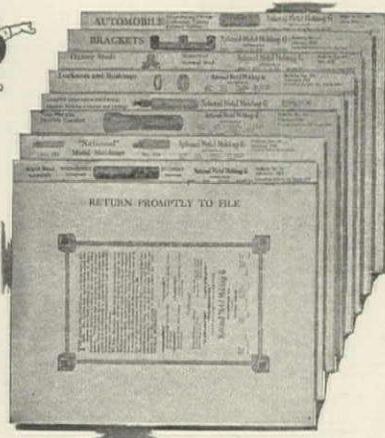


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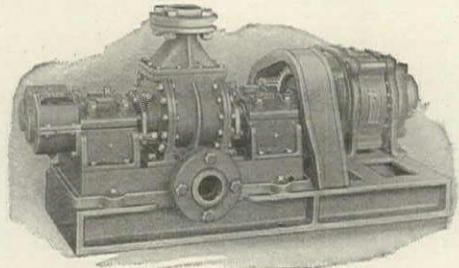
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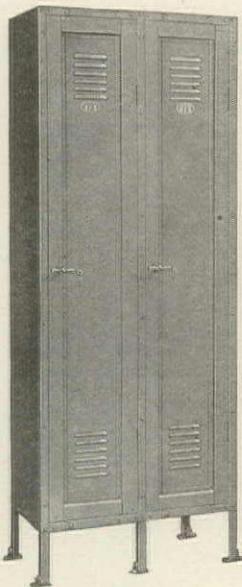
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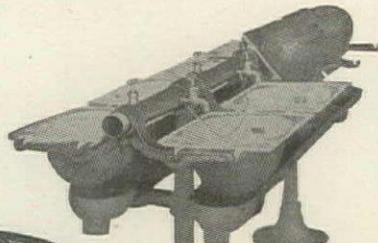
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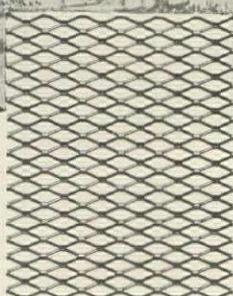
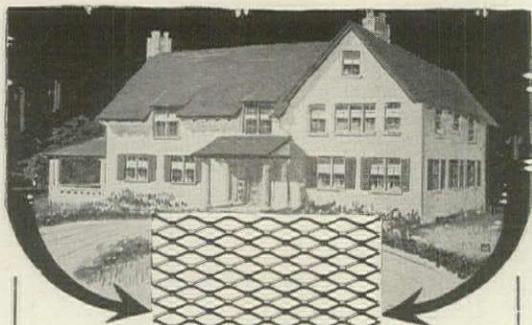
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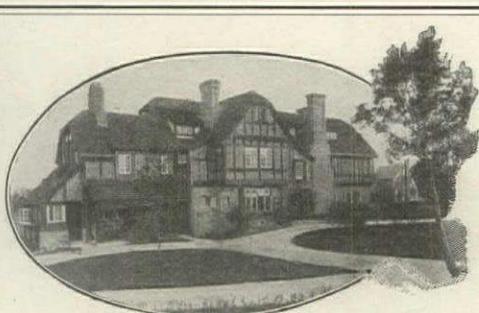
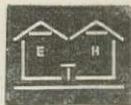
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SAMUEL CABOT, Inc., Manfg. Chemists
12 OLIVER ST., BOSTON, MASS.
24 W. Kinzie St., Chicago 523 Market St., San Francisco
Cabot's Virginia White, Stucco Stains, Brick and Cement Waterproofings, "Quilt", etc.

ECONOMY renewable FUSES

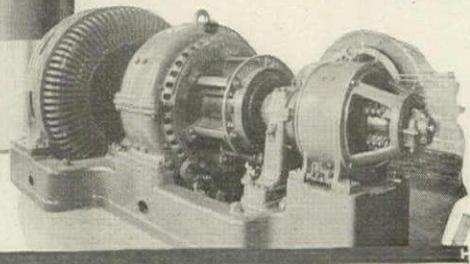
Millions of electrical circuits, in modern homes, public buildings and industrial plants, are protected against the fire and accident hazards of overloads and short circuits by ECONOMY renewable FUSES.

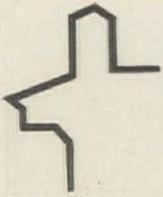
Years of performance have proved this pioneer renewable fuse to be the most efficient in operation. As compared with the use of one-time fuses it cuts annual fuse maintenance costs 80%.

An inexpensive "Drop Out" Renewal Link restores a blown Economy Fuse to its original efficiency.

Write them into your electrical specifications.

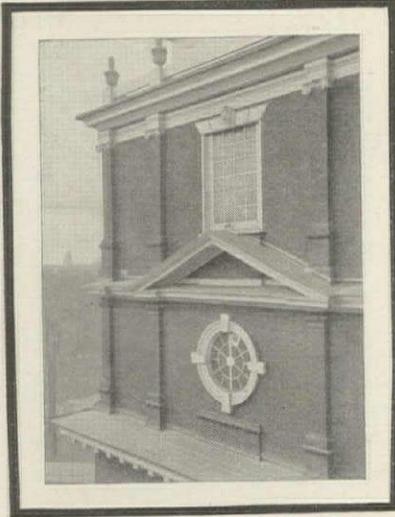
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Kinzie and Orleans Sts. CHICAGO, U. S. A.
Sole manufacturers of "ARKLESS"—the Non-Renewable Fuse with the 100% Guaranteed Indicator
ECONOMY FUSES ARE ALSO MADE IN CANADA AT MONTREAL



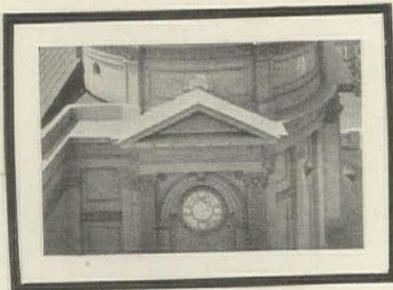


TARGET & ARROW ROOFING TIN

No 7~ COPING & CORNICE ROOF DESIGNS



Wood Pediments and Cornices on the Tower of Independence Hall protected by roofing tin.



Metal covering on all masonry Pediments and Cornices of St. Ignatius Church, San Francisco, Cal.

THE top of wood or masonry Copings and Cornices is nearly always made in sections, butted or joined together, leaving on the upper side a series of exposed joints.

These joints are either "grouted," "buttered" or "filled" with some more or less waterproof material and might remain weatherproof if there was no expansion and contraction of the Coping or Cornice, or if the building supporting them was not subject to uneven settlement or vibration of any kind.

But let even so small a crack or crevice be formed, allowing the entrance of only a few drops of water in freezing weather, and serious trouble is sure to follow.

Ample protection can be assured by covering all jointed Copings and Cornices with the proper kind and weight of Roofing Tin, which, owing to its flexibility, can be made to conform to any contour, while its thinness avoids distortion of the original design of the mouldings it protects.

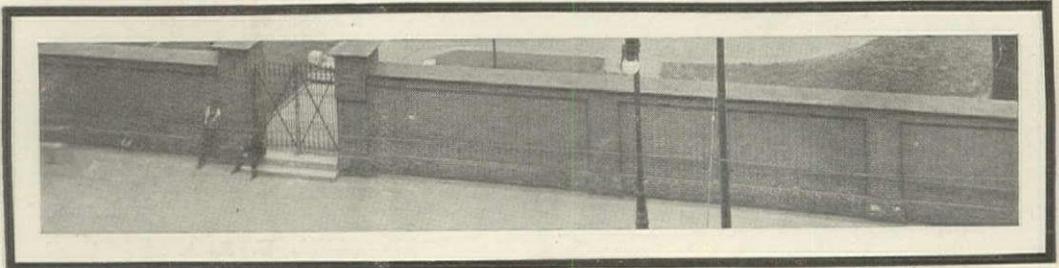
As Roofing Tin can be painted or painted and sanded any desired color it can be made to blend perfectly with the Coping or Cornice it covers.

For details of general application and color suggestions see "SERVICE SHEETS" 1, 2, 3, 4, No. 18, sent on request.

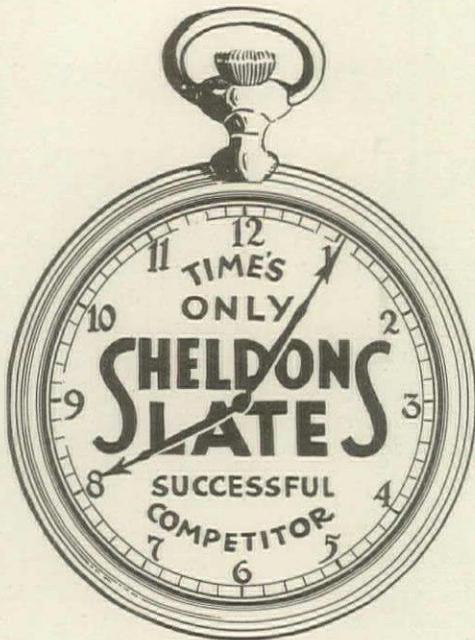
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A well preserved brick wall surrounding the Old Friends Meeting House, 4th and Arch Streets, Philadelphia, with the entire coping protected by Roofing Tin.

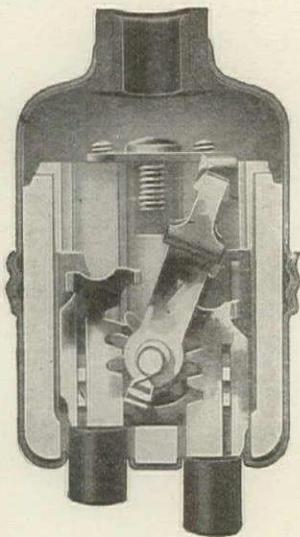


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A special type
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GRANVILLE : : NEW YORK



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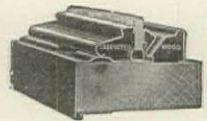


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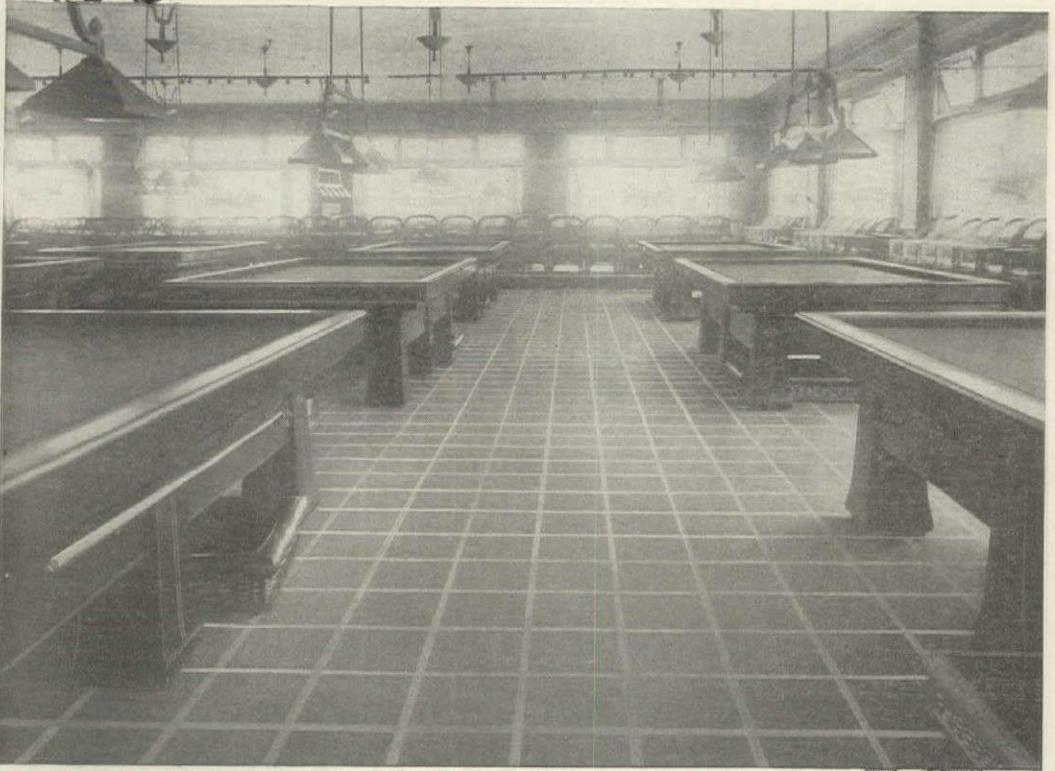
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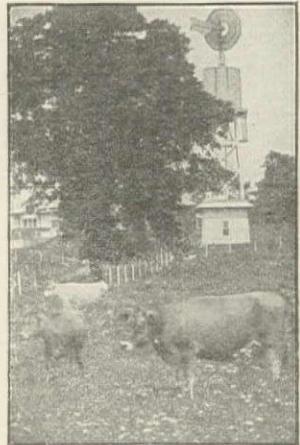
A. J. CORCORAN, Inc., 757 Jersey Avenue, Jersey City, N. J.

WATER

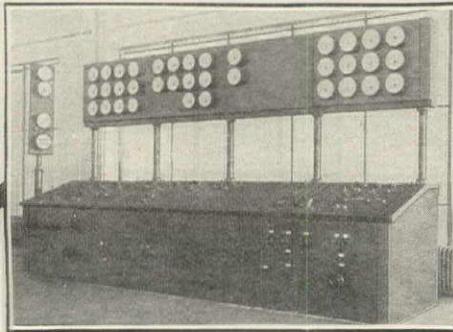
Plenty of it—and at a high pressure
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People living in the city never know or realize what a blessing water is at a "high pressure." Because they have always had water without worrying about its source, people when building in the country are apt to neglect the question of water, until the house is finished.

Before building, they should remember that nothing is as dependable as water delivered by force of gravity, from a high pressure tank, and that the best



Westinghouse Switch Gear In Cincinnati

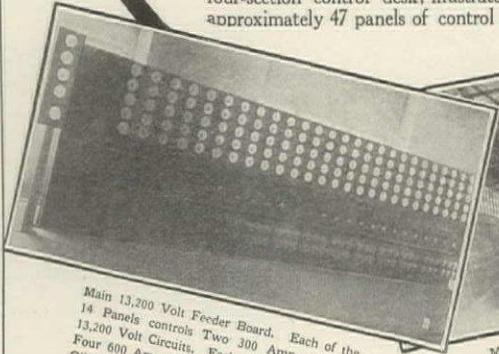


Main Control Desk.

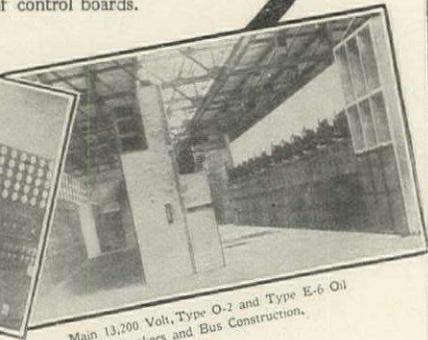
The Union Gas and Electric Co.'s West End Power House in Cincinnati is one of the most modern in the country.

The initial equipment consists of two 31,250 kv-a, 13,200 volt, 3-phase, 60-cycle turbine generators with exciters, and three 1800 kv-a, 13,200/600 volt station auxiliary transformers; twenty-four 300 ampere, 13,200 volt outgoing feeders and thirty 600 volt auxiliary feeders. Ultimate equipment will include 250,000 kv-a in turbine generator units. Sargent & Lundy, Consulting Engineers, designed and supervised the installation of the complete station equipment.

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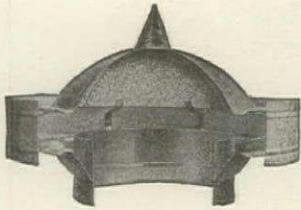


Main 13,200 Volt Feeder Board. Each of the 14 Panels controls Two 300 Amp., 3-Phase 13,200 Volt Circuits. Each Panel also controls Four 600 Amp. electrically operated Type E-6 Oil Circuit Breakers.



Main 13,200 Volt, Type O-2 and Type E-6 Oil Circuit Breakers and Bus Construction.

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.



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are built up to a standard that has been maintained for over 35 years, and always will be maintained so long as we build "GLOBE" Ventilators.

The exterior view shows the graceful lines that harmonize so well with every style of architecture.

See SWEET'S CATALOGUE. Page 463.



GLOBE VENTILATOR CO., Dept. E, TROY, N. Y.

No. 6 Corner Bar

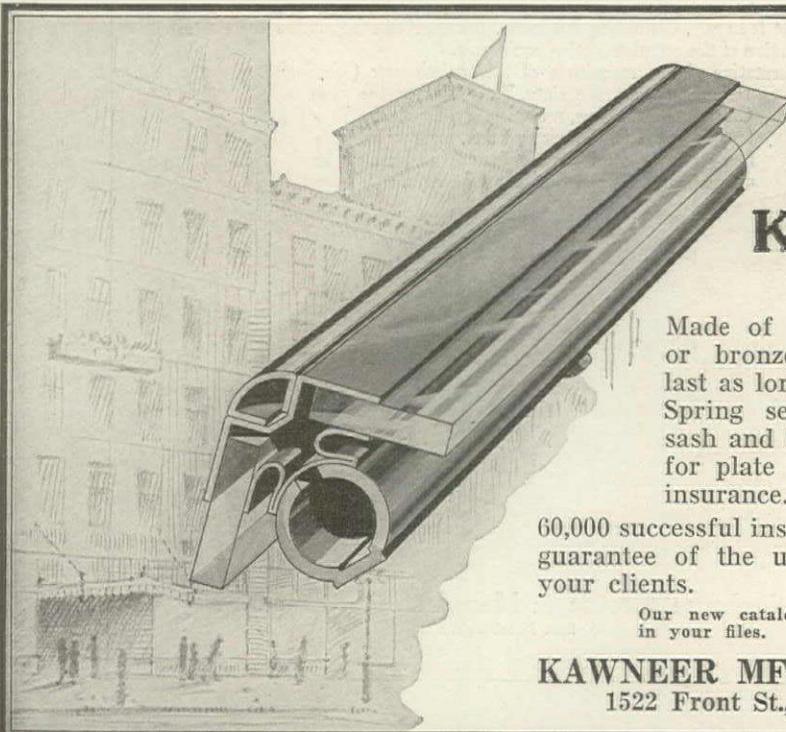
Kawneer
STORE FRONTS

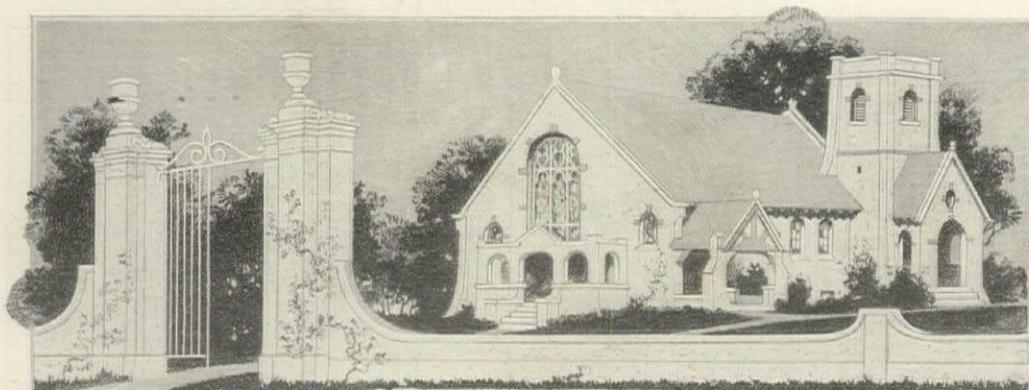
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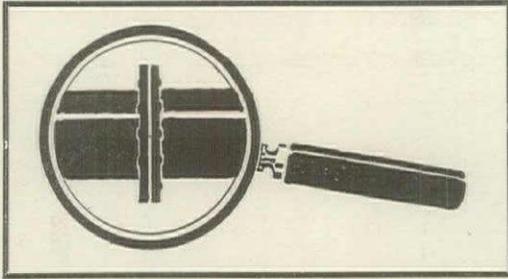
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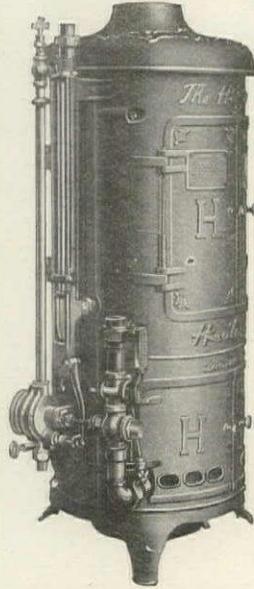
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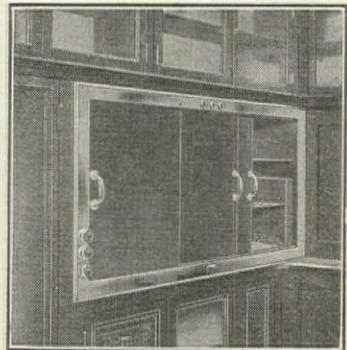
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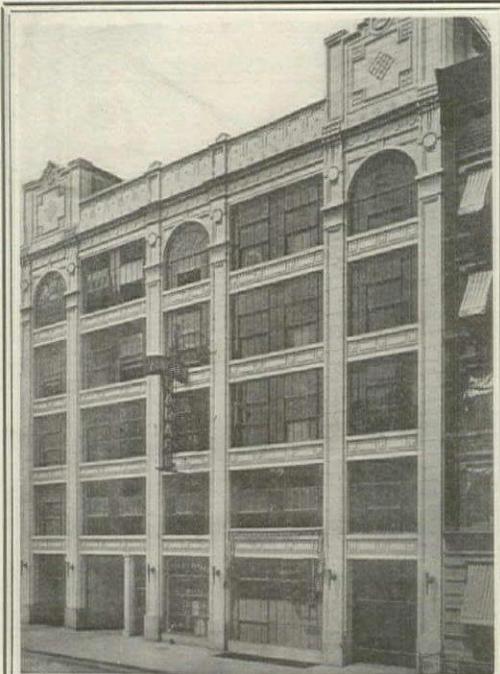


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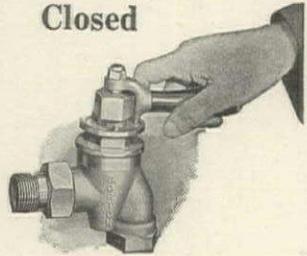
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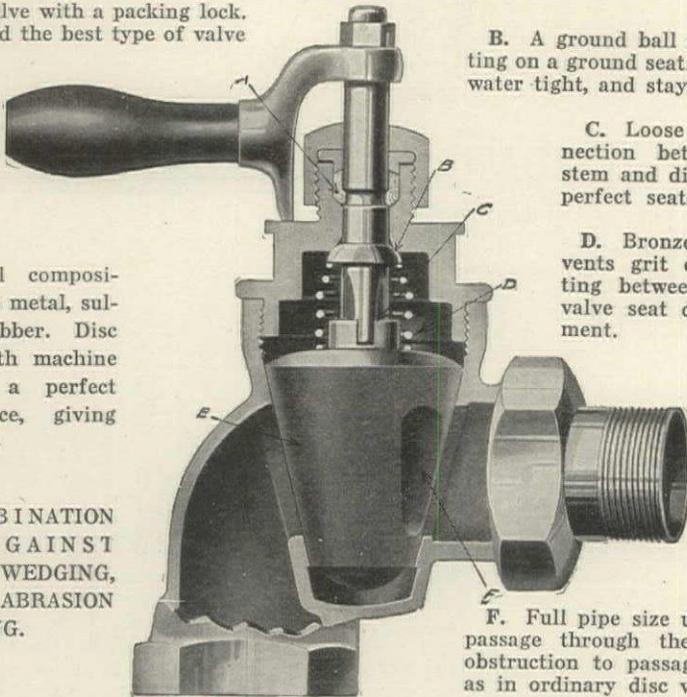
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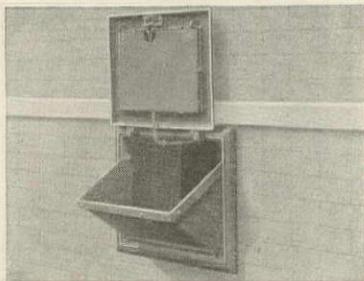
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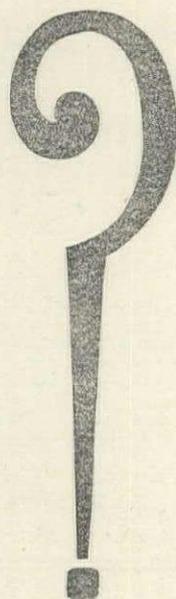
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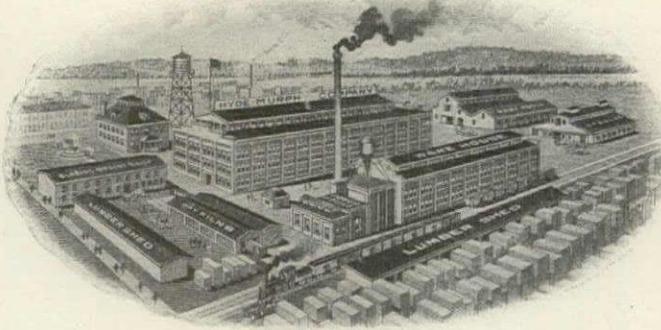


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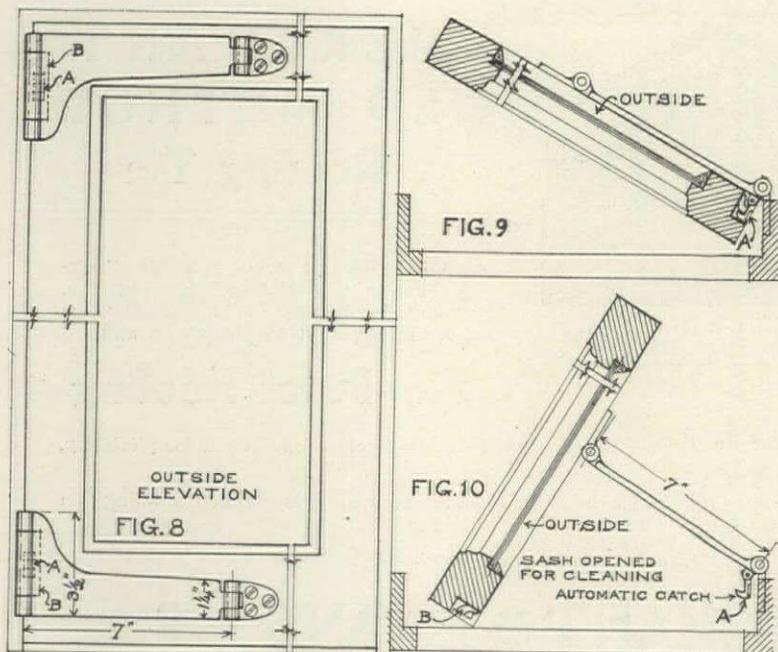
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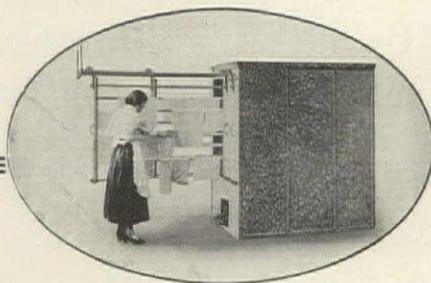
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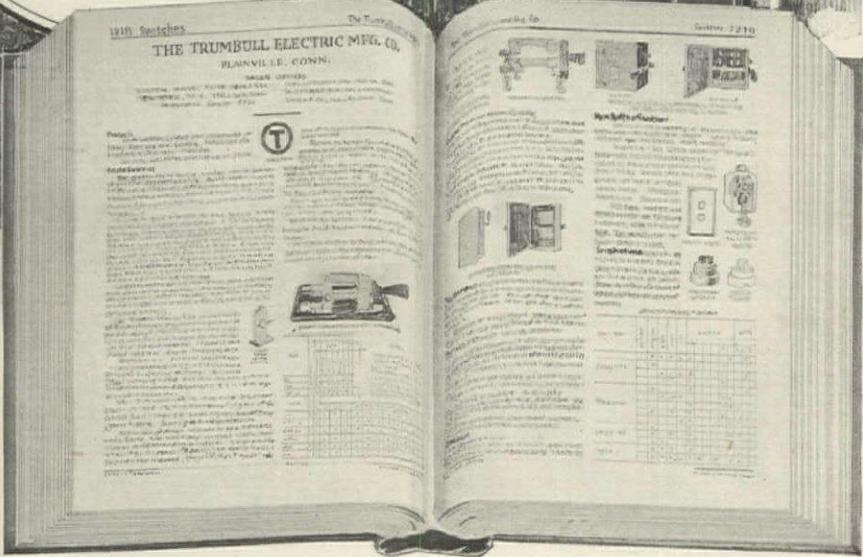
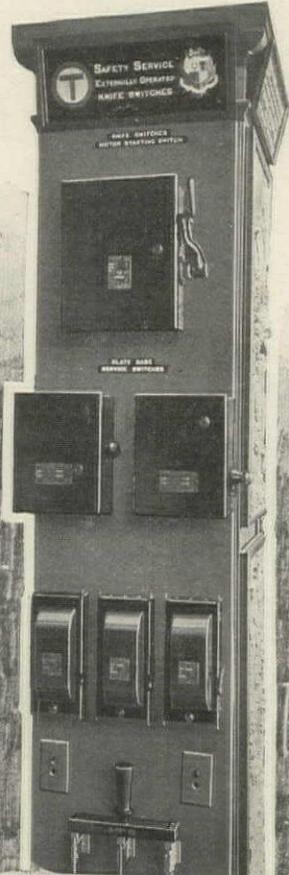
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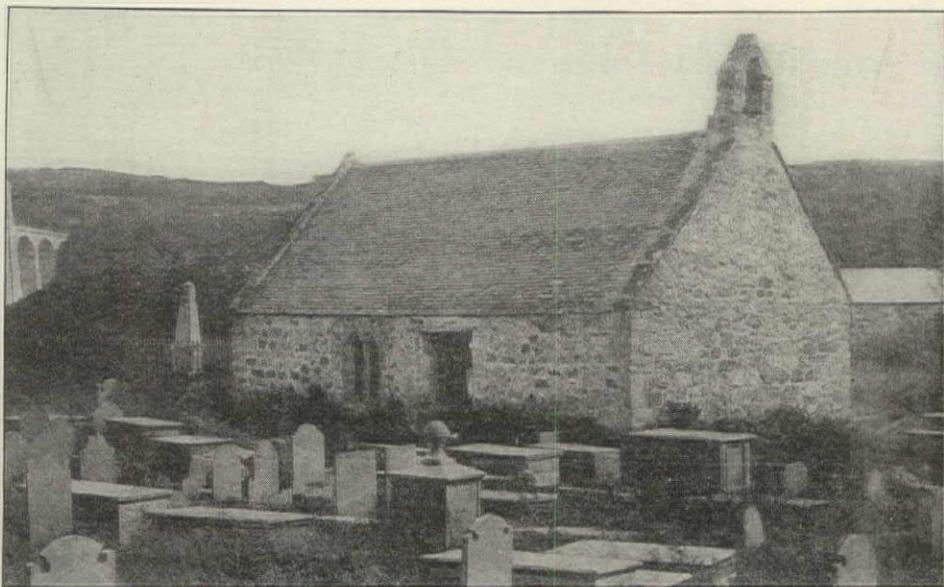
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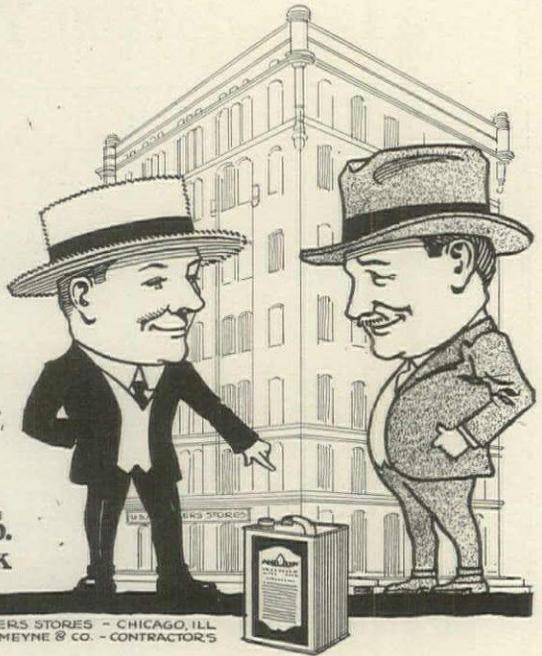
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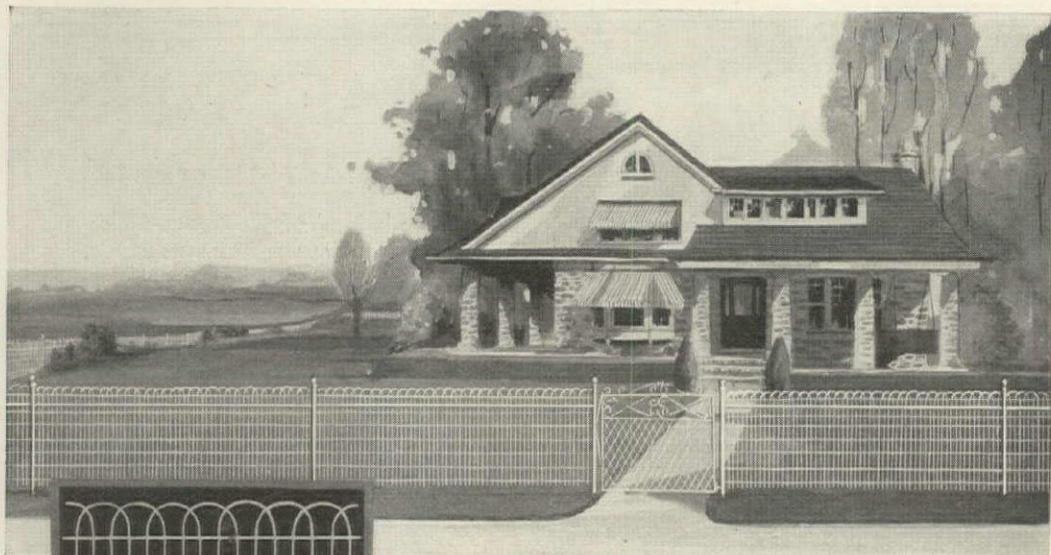


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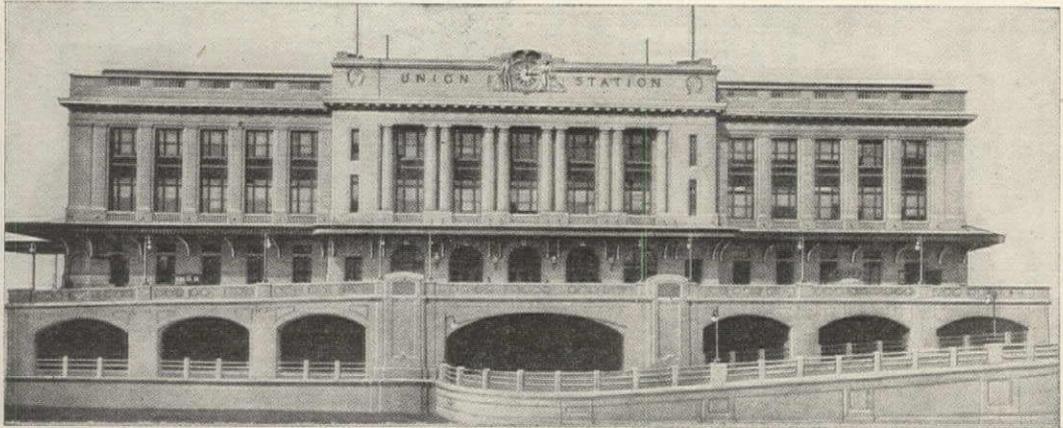
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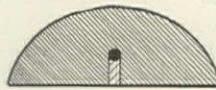
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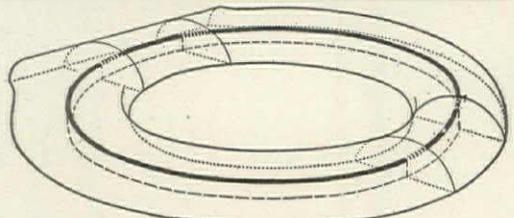
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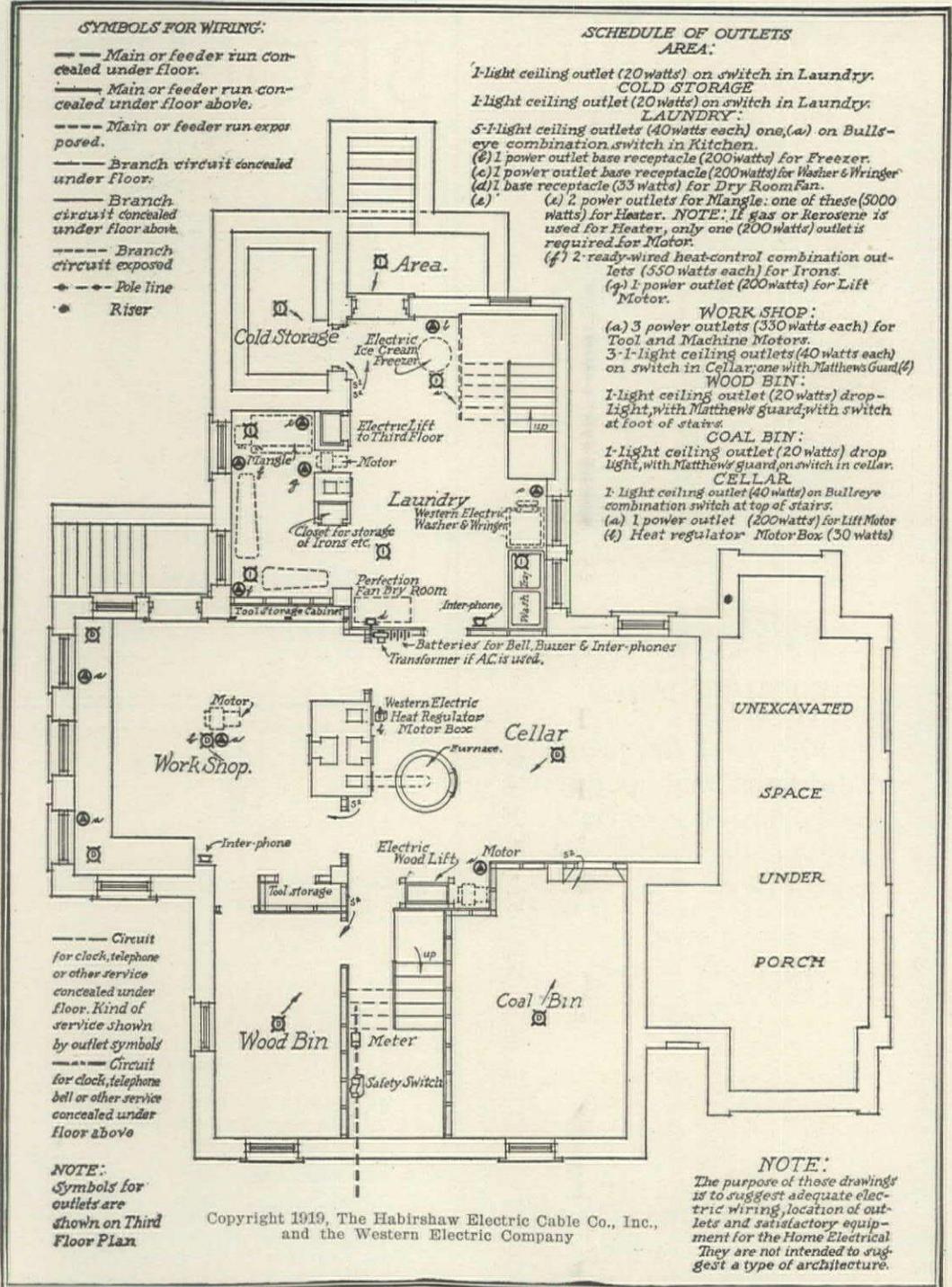
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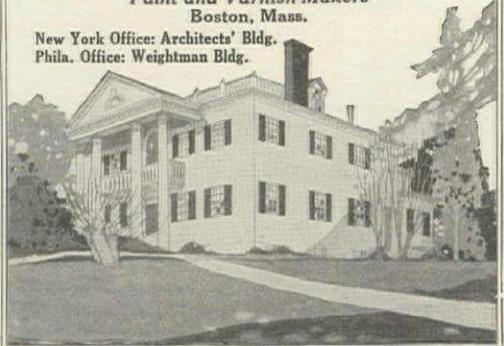
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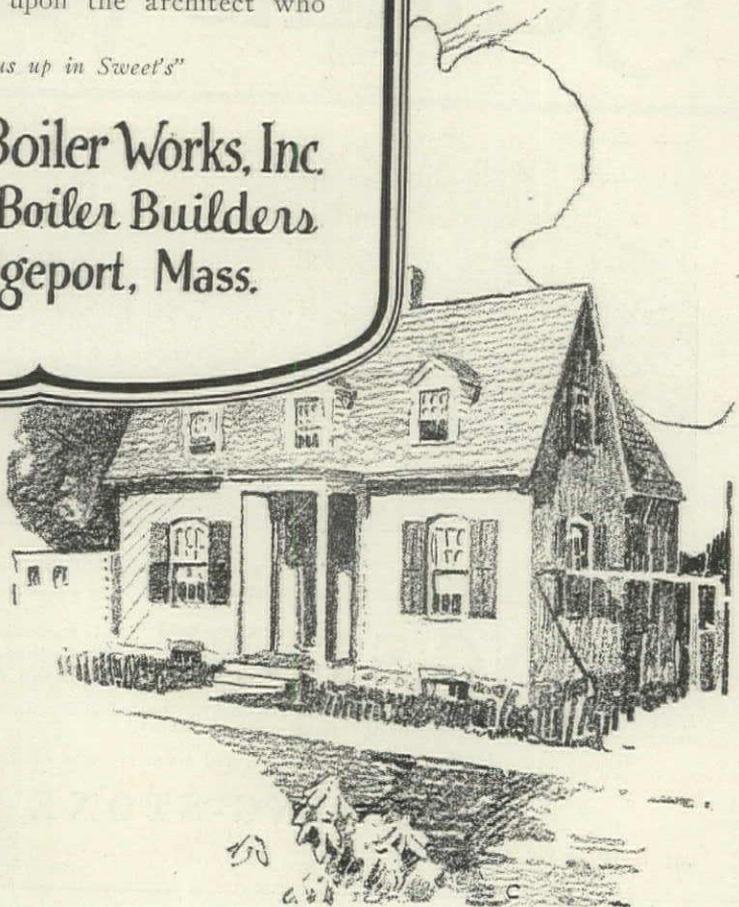
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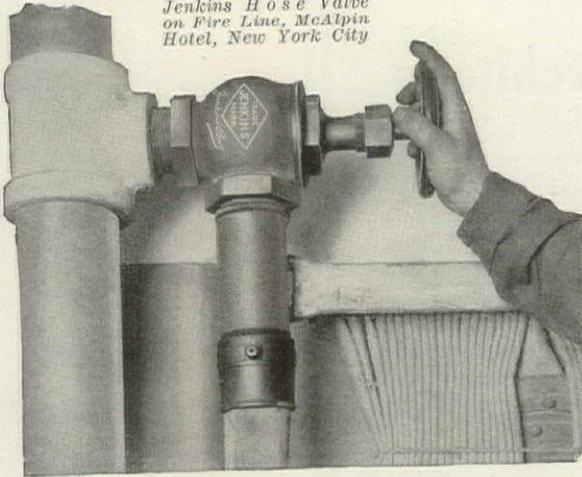
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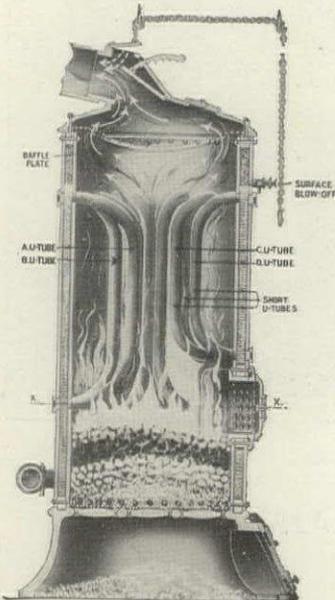
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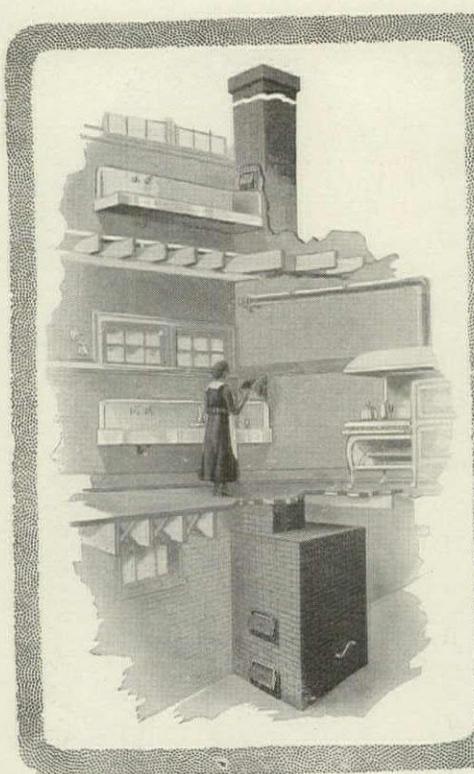
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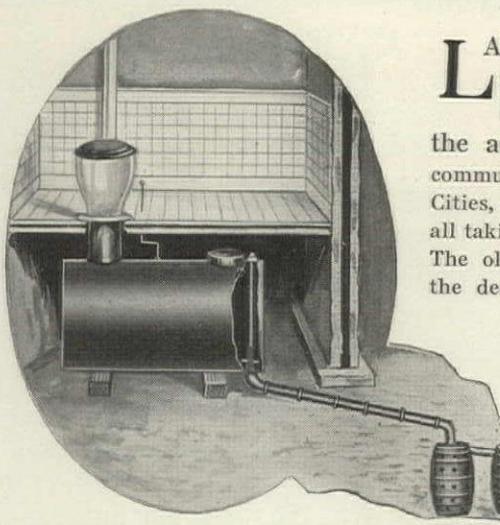
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Ro-San Chemical Closets

For Schools and Homes Without Sewerage



LATE government reports emphasize the statement we made in last month's issue concerning the activity along sanitary lines in communities where sewers are unavailable. Cities, states and the government itself are all taking drastic steps to enforce sanitation. The old-fashioned out house must go and the demand for closets of the type illustrated here is increasing. It is a problem architects will be increasingly questioned about.

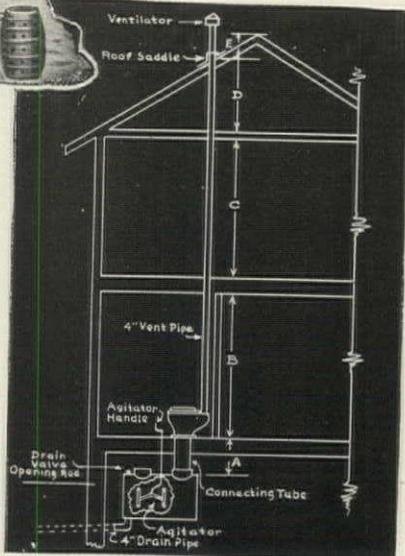
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IT CHILLS
WATER
PRACTICALLY
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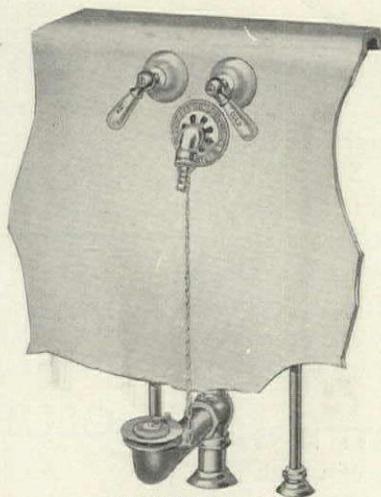
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PATENT APPLIED FOR

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in a variety of combinations

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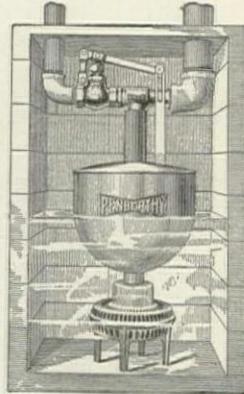
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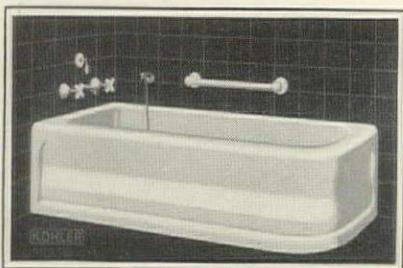
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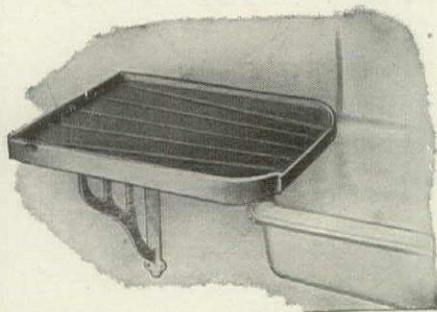
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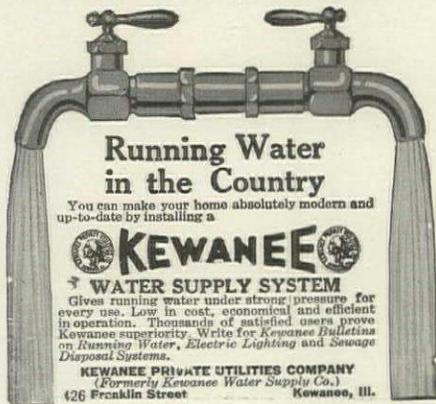
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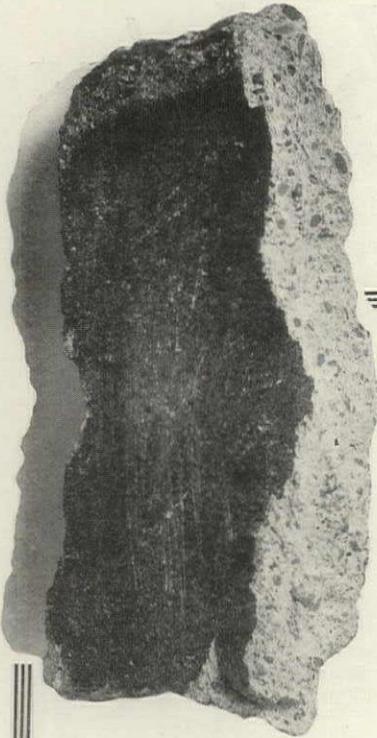
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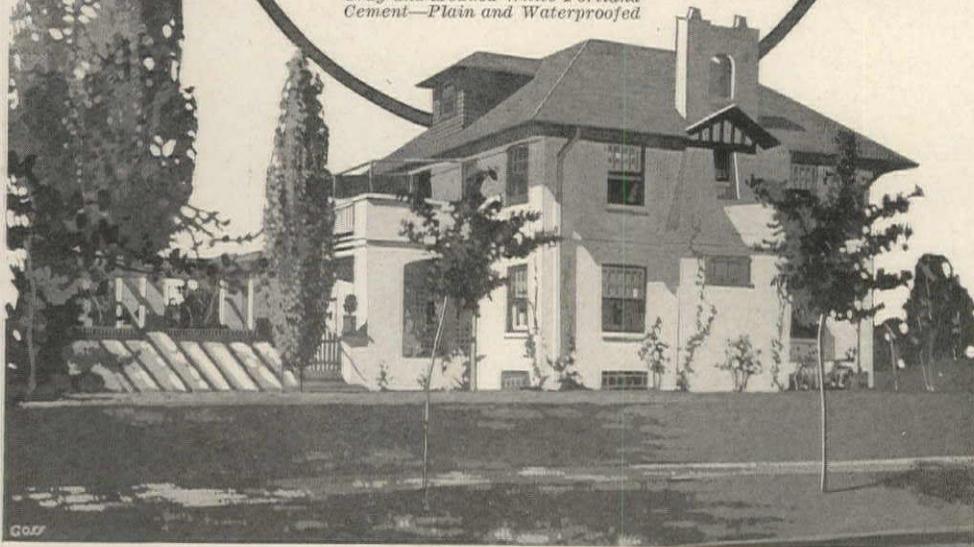
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