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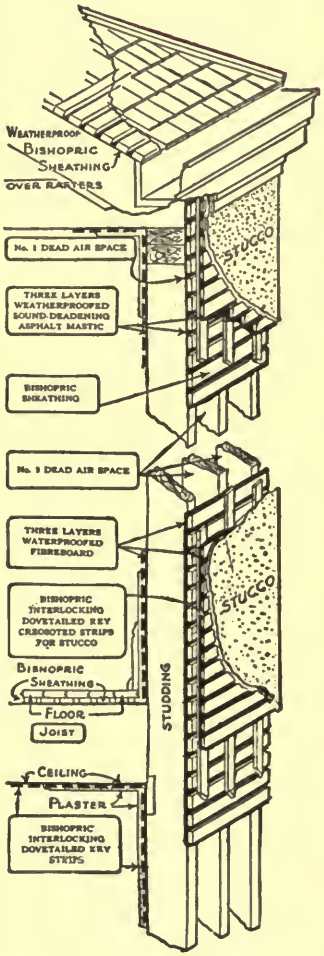

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Glencoe, Ill., November 3, 1920.

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THE ARCHITECTVRAL RECORD

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Vol. L. No. 2 AUGUST, 1921 Serial No. 275

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"THE SONG OF MORNING." DECORATIVE MURAL PANEL IN "DREAMS OF WISDOM" SERIES, PAINTED FOR A PRIVATE RESIDENCE IN LONDON, 1920.

"THE VARENGIAN SEA." PAINTING IN OIL TEMPERA, 1909.

NICHOLAS K. ROERICH

HIS ART IN ITS BEARING ON MURAL DECORATION IN AMERICA

BY ALFRED C. BOSSOM

IT IS an ill wind that does not cast good results somewhere. Russia's upheaval has sent Professor Roerich to us and he has brought a vital message at a most opportune time. During the last few years European culture has been cruelly shaken and the chaos of the war has left America as the one land in all the world where fine artistic work can probably still be accomplished. Great buildings of every type—Government structures, churches, railroad stations, banking houses, office buildings, apartment houses, hospitals—all will be built here very much sooner than they will elsewhere.

America has outgrown "white architecture" and reached a period of artistic evolution wherein color is a vital element in every complete architectural scheme. The signs of this are everywhere and the quality and scope of color conceptions are daily enlarging.

Of all the great artists of today probably Professor Nicholas K. Roerich has the most significant message for American architecture. Born in 1874 of a Scandinavian family that went to Russia in the time of Peter The Great, he has drawn to himself all that transmittable experience of the unhurried North. He refused the Ministry of Fine Arts of Bolshevist Russia and preferred to exile himself from his native land—to abandon a collection of more than two hundred Dutch primitives and some seventy-five thousand objects illustrating Russian archeology of the stone age, the collection of a lifetime.

He appreciates the requirements of architecture as few artists do, owing to the natural bent which led him into

"SAINT NICOLAS." DECORATIVE MURAL PANEL IN "DREAMS OF WISDOM" SERIES, PAINTED FOR A PRIVATE RESIDENCE IN LONDON, 1920.

archeological studies; he was a member of the Board of the Imperial Society of Architecture of Petrograd and a professor in the Imperial Petrograd Archeological Institute.

Though himself somewhat of a radical, he is not a follower of any school; and his radicalism is tempered by the best traditions of the past. He believes that each artist must work out his own conceptions and technique. As a student, in addition to his native traditions, he selected the best from China and Japan, to which he added the inspiration of the semi-barbaric of Persia, Turkey, and India. His studies in Paris gave to his work a modern note which, coupled with other influences, made him fittingly the Director of the School for the Encouragement of Arts in that great country which has been sending artistic messages to the world for so many years.

Russian literature, music, the ballet, have all been deeply appreciated in America, and now we have this great painter, who was the first President of "The World of Art," a famous group which included Benois, Serov, Veroubel, Somov, and Bakst.

His work embraces many different types of expression, in addition to painting of what may be termed easel pictures —designs of mosaic stained glass, book illustrations, theatrical scenic decoration and mural work; all are equally at his command and a peculiarly successful decorative value is present in them all.

Many of his works are to be seen throughout Europe. The National Gallery in Rome, the Louvre and the Museum of the Luxembourg at Paris, the public art galleries in Vienna, Prague, Venice, Milan, Brussels, Stockholm, Copenhagen, have examples, as have also Chicago and San Francisco; and London admired his work in the famous Post-Impressionist Exhibition, in 1911.

Specimens of his art that are now moving across this country on exhibition are both inspiring and invigorating to artists, for they contain that great imaginative quality that in turn stirs the imagination of the beholder. His colors are not only unusual and beautiful in themselves, but are grouped in rarely beautiful harmonies and also have a most decorative sense of composition. Many of his later efforts are painted in tempera, a medium which pre-eminently is suited to architectural decoration. He is a past master in color harmonies, yet he is so severe with himself that he rejects the temptation of a color play when the subject or the surroundings do not demand it.

His work has had a very remarkable influence upon the lay mind in Russia. During the war he received numerous letters from men at the front who wrote that they had seen his flames, his conflagrations, his darkness, his clouds and rocks; he literally had opened a new window to the souls of simple characters. One feels that he has a story to translate for minds of lesser insight, that he is an idealist to whom the great realities are but the suggestion of what is beyond, and that endless observation of a work of his will not lessen its interest. It carries "a thought for all time," so necessary in any work of art, such as a mural decoration, that is to be in a permanent location. When one tires of an easel picture, it can be replaced without trouble, but a mural is as much a part of the building as are the foundations or the roof.

Mural paintings in America are commonly but obvious color decoration and deal with subjects which, once observed, need never be looked at a second time. They transmit no inspiration, nor indeed any mood or concept which really justifies their existence. Professor Roerich's art is much needed just now in our transitional artistic progress.

We are advancing into a period of color. Plain white, flat exteriors are less common than they were, and the colored roof, doorway, and other details are so treated as to make a complete artistic unit of the whole building and its setting. Internally, unity of composition with color is even more frequently encountered.

As our buildings are becoming more architectural internally as well as externally, the demand for mural expression is increasing. A composition over the mantel, others over the doors, with perhaps a frieze around the walls, may form

"THE SONG OF THE WATERFALL." DECORATIVE MURAL PANEL IN "DREAMS OF WISDOM" SERIES, PAINTED FOR A PRIVATE RESIDENCE IN LONDON, 1920.

"THE LAST ANGEL." PAINTED IN TEMPERA AT TALASHKINO, 1912.

"PRINCESS MALEINE'S CHAMBER." ONE OF SEVEN SCENES FOR MAETERLINCK'S "PRINCESS MALEINE;" MOSCOW FREE THEATRE PRODUCTION, 1913.

"A CORRIDOR IN THE CASTLE." ONE OF SEVEN SCENES FOR MAETERLINCK'S "PRINCESS MALEINE;" MOSCOW FREE THEATRE PRODUCTION, 1913.

"YAROSLAVNA'S TOWER ROOM." ONE OF THREE SCENES FOR "PRINCE IGOR;" DIAGHILEV'S PARIS AND LONDON PRODUCTION, 1914.

"THE WHITE MONASTERY."
PAINTED IN LONDON, 1920.

the color spots of a unified design for the room; and the architect need no longer fear when returning to houses designed a few years before that he will see his work misrepresented by the introduction of discordant pictures; a definite mural treatment has forestalled that.

Professor Roerich's work is not too realistic, yet is sufficiently so to excite contemplation again and again, as is exemplified in the mural study forming the cover of this magazine, or in such illustrations as the "Last Angel," "The Varengian Sea," and "St. Nicolas." These all convey the feeling so conspicuous when one is conversing with the artist that his great desire is to interpret "man's relation to the universe," which is an essential inspirational motive of any permanent mural scheme.

The effect of color upon the mind is receiving much attention. Certain colors are depressing, while others, often subconsciously, produce cheerful reactions in the same way as music does. Professor Roerich, when passing through London, was induced by Dr. Young to design mural decorations with definite color relationships for wards in the latter's hospital, on the ground that the color permanently placed would aid materially in the cure of certain diseases.

Professor Roerich's work has a scale and a depth that does not introduce a false perspective value into any space he is decorating, and his color is always fully under control. He is cosmopolitan in understanding; the Slavic traditions of the North have brought him vigor; the East, intense color; the South, mysticism, and the West, realism.

Art is the one common international language, and it is especially needed in our melting pot of a country. Every building has a message which, within limits, can be most legibly conveyed by mural decoration.

The movement toward color and simplicity is quite obvious in the trend of our stage settings, costume design and treatment of fabrics. Broader and larger compositions have established themselves there beyond doubt. They contain repose, which much of our later Victorian work did not, and it is a very short step from the temporary of the stage setting to the permanence of the great building. Among the stage work that Professor Roerich has designed are Maeterlinck's "Princess Maleine," Wagner's "Valkyries," Rimsky-Korsakov's "Tsar Sultan" for Sir Thomas Beecham, and many of the operas produced by Diaghilev; and he is now working upon Rimsky-Korsakov's opera "The Snow Queen." He never attempts work of this nature until he feels the motive as the composer felt it. Thus, he designed the "Valkyries" without flame and without smoke. What he sought was mystery and symbol. In the first act the setting was all in yellow and black, the yellow suggesting Siegmund and Sieglinde, their love motive, their evanescent joy; the black, Hunding's doubt and hate, and cruelty.

The economic aftermath of the war has intensified the struggle between mechanical civilization and spiritual culture, and Professor Roerich believes that we are facing a decision as to whether we will permit the artistic side of life to be sacrificed. In America artistic development in the next twenty years will have to be promoted largely by architects. We are at that transitional point where we can adopt the utilitarian (as probably Europe may do) to the exclusion of the beautiful, or we can combine the two. We are in much the same situation as Italy at the beginning of the Renaissance.

America, like Italy in the fifteenth century, has the material resources and the cultural aspiration to unite beauty with utility in its architecture. The Italian Renaissance was a radical, modern, expression of the forward life of its time, yet it wrought in the rediscovered art forms of the classic past. It was the spirit of its own time which made it intrinsically great, but the perfected, traditional art forms which it employed lent sureness and serenity to its expression. Professor Roerich's work has a distinct message for American architects at this time, because, like that of the Renaissance masters, it is a radical, modern, expression of contemporary life, yet sure, serene, and permanent.

The FLINTRIDGE COUNTRY CLUB FLINTRIDGE *near* PASADENA, CAL. MYRON HUNT ARCHITECT

By John Taylor Boyd, Jr.

THIS design of Mr. Myron Hunt's displays certain tendencies of the architecture of the Southwest Coast. Its aspect is simple, almost bald —a characteristic which is not local alone but which may be seen in modern art all over the world.

But the local flavor is the quality of value in the Flintridge Club. Mr. Hunt chose this simple expression, not arbitrarily as a policy to be adopted in all designs, but because he felt that it grew naturally out of the landscape setting and of the human background of that South California region. The bold, rugged, vivid, colorful nature and the simple, hearty, country society—scarce two generations removed from the pioneer—are the two influences which appear in the design.

In such an inspiration there is no modernist twist which impels the artist out of the path of art and into a bog of intellectualism; there is nothing pedantic in Mr. Hunt's conception. It is an honest, direct solution of a particular problem, done in a spirit of craftsmanship in the vernacular of the region. Its type, the South California country architecture, derived from the Spanish colonial ranches and rustic missions, is well suited to a landscape of grandeur, vast sweeps of plain, rugged mountain forms, accented foliage and brilliant sunshine, and to the social background of hardy outdoor life, with a convivial spirit inherited more from the miner and the rancher and the Latin than from the Puritan.

It might be urged that the design partakes more of the spirit of the ranch than

WEST FRONT—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL.
Myron Hunt, Architect

LOOKING SOUTH ON PORCH—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL.
Myron Hunt, Architect

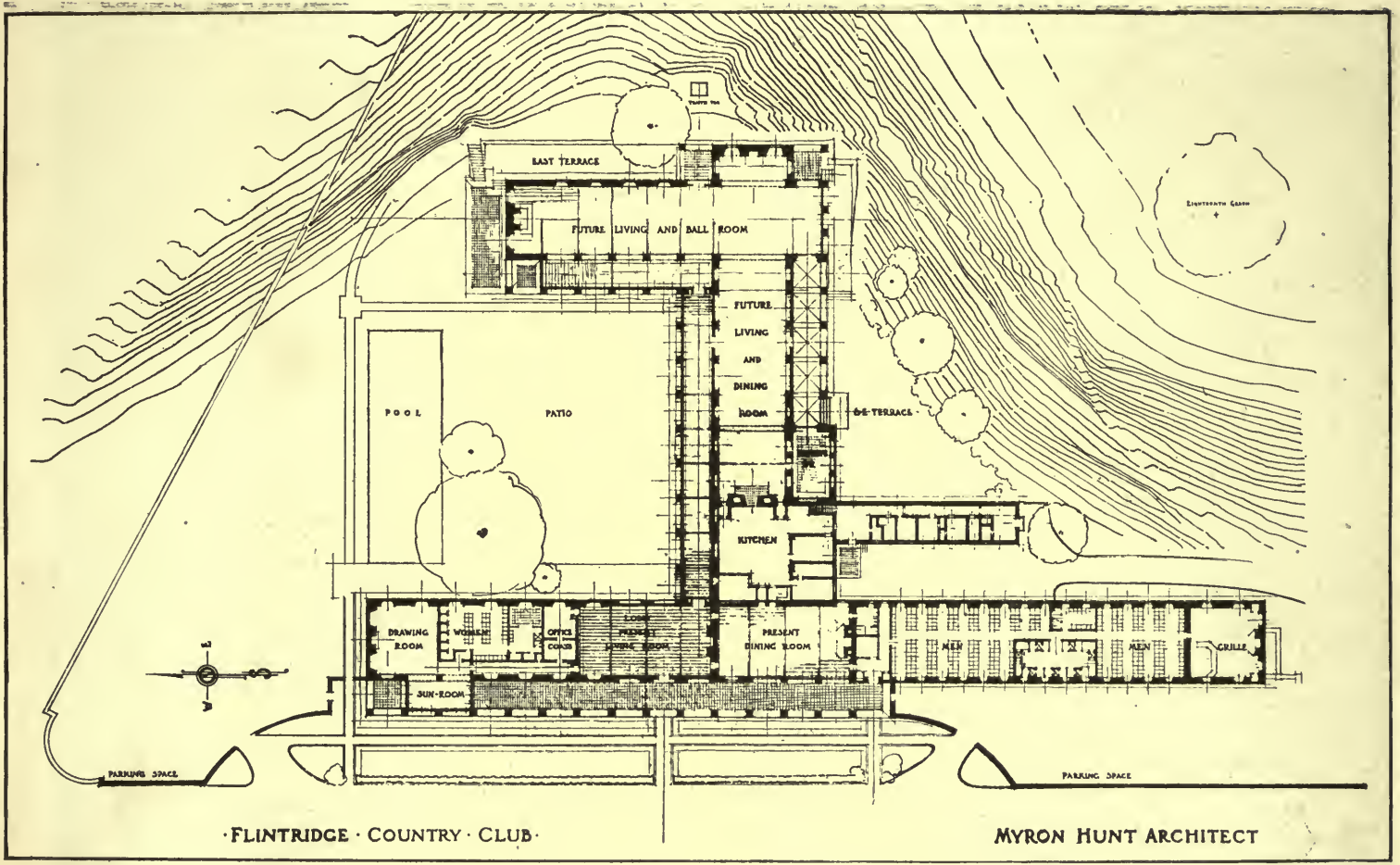
WEST FRONT—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL.
Myron Hunt, Architect

VIEW FROM THE SOUTH—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL.
Myron Hunt, Architect

PRESENT LIVING ROOM—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.

PRESENT DINING ROOM—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.

DRAWING ROOM—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.



FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR PASADENA, CAL. MYRON HUNT, ARCHITECT.

LOOKING SOUTH IN THE PATIO, TOWARD GLAZED PORCH OR TEA-ROOM—
FLINTRIDGE COUNTRY CLUB
Myron Hunt, Architect

THE PROFESSIONAL HOUSE—FLINTRIDGE COUNTRY CLUB, FLINTRIDGE, NEAR
PASADENA, CAL.
Myron Hunt, Architect

of the country club, that the exterior is not altogether expressive of the social occasion, of festivity. Also, the long unbroken roof cuts across the landscape severely. Such criticism is, in part at least, personal. The inspiration is true, and the ranch aspect is in a way vindicated by the fact that the Flintridge Country Club has a show ring, thus giving it a more vigorous, rustic character than if it were merely a golf club, although it has the inevitable golf course.

This dual character of riding and golf club makes the Flintridge Club distinct from the usual country club—that typically American "institution" which, spreading over the whole United States in two generations, is found in every town. Unlike most such features, it did not develop slowly, but sprang full-fledged at birth, in the first country club, at Brookline, Massachusetts, whose proud title, simply "The Country Club," shows that it was the progenitor of them all. The Brookline Club, though somewhat enlarged, is much the same as at its founding—a big, mansion-like house at the end of a winding drive, a white and yellow mass on a knoll amid elms, overlooking the race track and the golf course. Thus, oddly enough, this first club, like the latest one at Flintridge across the continent, has a race track, where are held horse races, steeplechases and sometimes polo games. The two clubs have the same functions, yet how different are they in expression. The difference arises in the different landscape and social setting and is a striking evidence of the importance of these two factors.

The Flintridge Club, taken by itself, is a long, open mass, formed like the small letter "h." Situated in a beautiful mountain valley north of Pasadena, on a rise of ground amid a small grove of live-oaks; it looks down over a meadow land and woods to the Arroyo Seco at the bottom of the valley.

In plan, the house is unusual because of the separation of accommodations for men and women—somewhat like two clubs. This scheme has proved successful, since it gives to the women the use of dining room and living room in company with the men, and reserves for their own use the north part of the building with a separate parking space for motors. To the men is reserved the south portion of the building.

Structurally the building is interesting, and should be understood in connection with the design. The walls are concrete, cast in metal forms, four feet thick with a twenty-inch air-space. The heating pipes run in the air-space, uninsulated, and heat the rooms by radiation from the walls, except in coldest weather, when the radiators are used. No furring is necessary on account of the air-space, and the excellent texture of the walls is simply the concrete as it comes from the forms, whitewashed outside and painted inside. The roof is terra cotta tile, like that of the old California missions—a beautiful effect of reds, browns and yellows. The floors are terrazzo of a leathery brown color.

Here clearly is construction of the most solid and simple kind, a sufficient reason for the plain, sturdy architecture. Inside, the effect is the same—rough-hewn timbered roofs, of weathered appearance, heavy wooden doors with hand-wrought hardware, and furniture in character, standing out as simple decorations against the solid walls. It is not, however, so consistent as the architecture. All is in keeping with the ranch-mission style, although certain rooms, like the tea room, designed in green and yellow, are more in a club character. From this room the view is over the wooded hills and slopes, with the Arroyo below, to the distant violet mountains.

Although very original, the Flintridge Country Club is not theatrical. It is an absolutely honest design, in keeping with the spirit of the region. There is nothing forced about its simplicity, and in this it is a worthy example of Southwest Coast country architecture. In the East, the Philadelphia architects lead all others in just this ability to create country architecture in a simple, un-selfconscious way. They, too, design in the spirit of their region. This is true craftsmanship and real architecture, and it is good to see it arising on the Pacific Coast, not imitatively, but in the fresh, original inspiration characteristic of California.

FIG. 25. APARTMENT HOUSE AT 62 BEACON ST., BOSTON. RICHARD ARNOLD FISHER, ARCHITECT.

TENDENCIES IN APARTMENT HOUSE DESIGN

PART III - BUILDINGS ON NARROW SITES

By FRANK CHOUTEAU BROWN

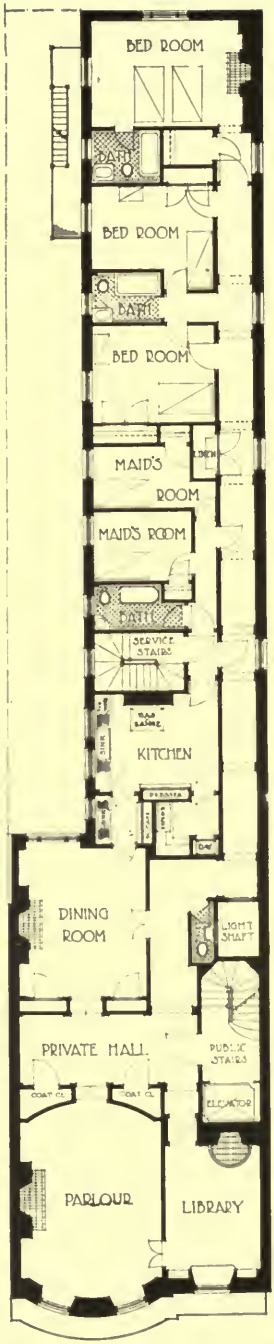
HAVING giving first consideration to the apartment remodelled from older dwellings, because of the lesson therein contained that might be of immediate assistance in helping to meet the demand for housing accommodations in our larger cities, it is now possible to undertake the study of better considered buildings, originally planned to meet the apartment house need.

The apartment manner of living is hardly an exclusively modern custom. From at least the days of ancient Rome we now know that human beings have lived in superimposed layers extending even to the height of six or eight stories. Originally the occupants of such "apartment buildings" were generally slaves, it is true, and they were always of the poorer or serving classes. It has remained for the modern of to-day, seeking a luxurious freedom from the ordinary responsibilities of housekeeping, to turn for relief to the "apartment hotel." Thus has come about a development new to our experience, and already the cause of material alteration or influence on the growth of many of our larger American cities, especially those that have within these last few years been developing most rapidly in population and wealth. Any thoughtful observer of the gradual processes of development of our modern type of civilization may well think it worth his while to study this new phenomenon and speculate as to its ultimate results and reactions.

Formerly, it is true, we in America regarded it as the misfortune of the poor rather than the privilege of the rich to inhabit the crowded "tenement," instead of enjoying the greater freedom and space possible from living in a separate house; but once our wealthier classes became accustomed to and accepted the now customary city type of private residence, the "row" or "block" house, it was only to be a short step—and, indeed, the next logical one—to hit upon the idea of economizing space and securing more return from the constantly rising land values by improving the narrow slice of land that only the comparatively wealthy might own to themselves, by a structure so arranged that a number of families might occupy it in common.

Granted the methods accepted by us as usual and customary to the growth of our American cities, this result was inevitable. The restriction of the most desirable dwelling sections to a comparatively small area was established by natural or artificial advantages early in the growth of any city. Unfortunately, as we have now come to realize, this was always the result of haphazard accident; but once established by accident, its limits were strengthened and made more absolute and inflexible by fashion and design. The result was to be that as our cities grew large and prosperous with unexpected rapidity, the values of the comparatively restricted area thus set aside for fashionable residential purposes became more and more artificially expanded within its all too narrow original limits, until the former ample lot of the earlier inhabitants had been sliced and narrowed into the thin strip of land that, in our larger cities, soon came to be all that even the wealthiest and most prosperous could afford to possess as exclusively their own.

The process has been a gradual one, although as we now look back upon it,



TYPICAL FLOOR PLAN

FIG. 26. APARTMENT HOUSE AT 62 BEACON STREET, BOSTON. RICHARD ARNOLD FISHER, ARCHT.

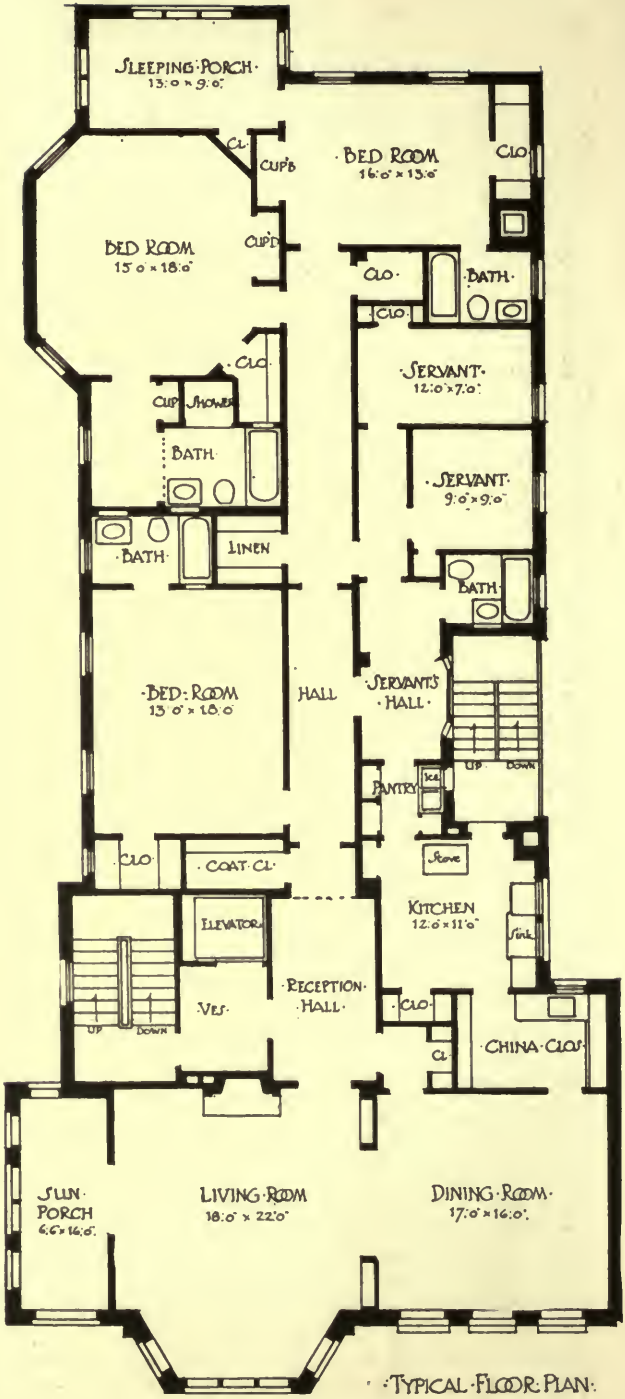


FIG. 27. APARTMENT HOUSE FOR F. T. KELLER, ESQ., CHICAGO, ILLINOIS. TALLMADGE & WATSON, ARCHITECTS.

FIG. 28. APARTMENT BUILDING FOR MRS. EDGAR MARTIN, CHICAGO, ILL. EDGAR MARTIN, ARCHITECT.

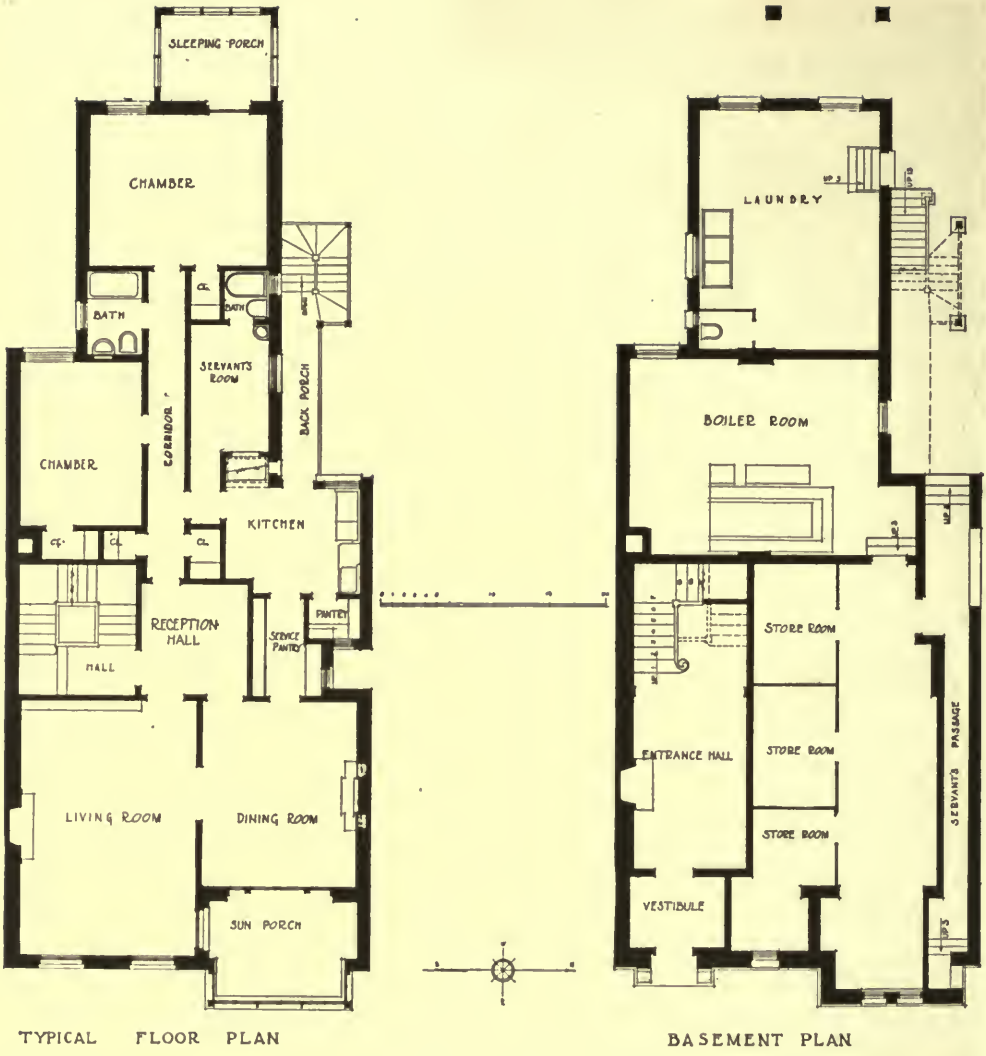


FIG. 29. FLOOR PLANS OF APARTMENT BUILDING FOR MRS. EDGAR MARTIN, CHICAGO, ILL. EDGAR MARTIN, ARCHITECT.

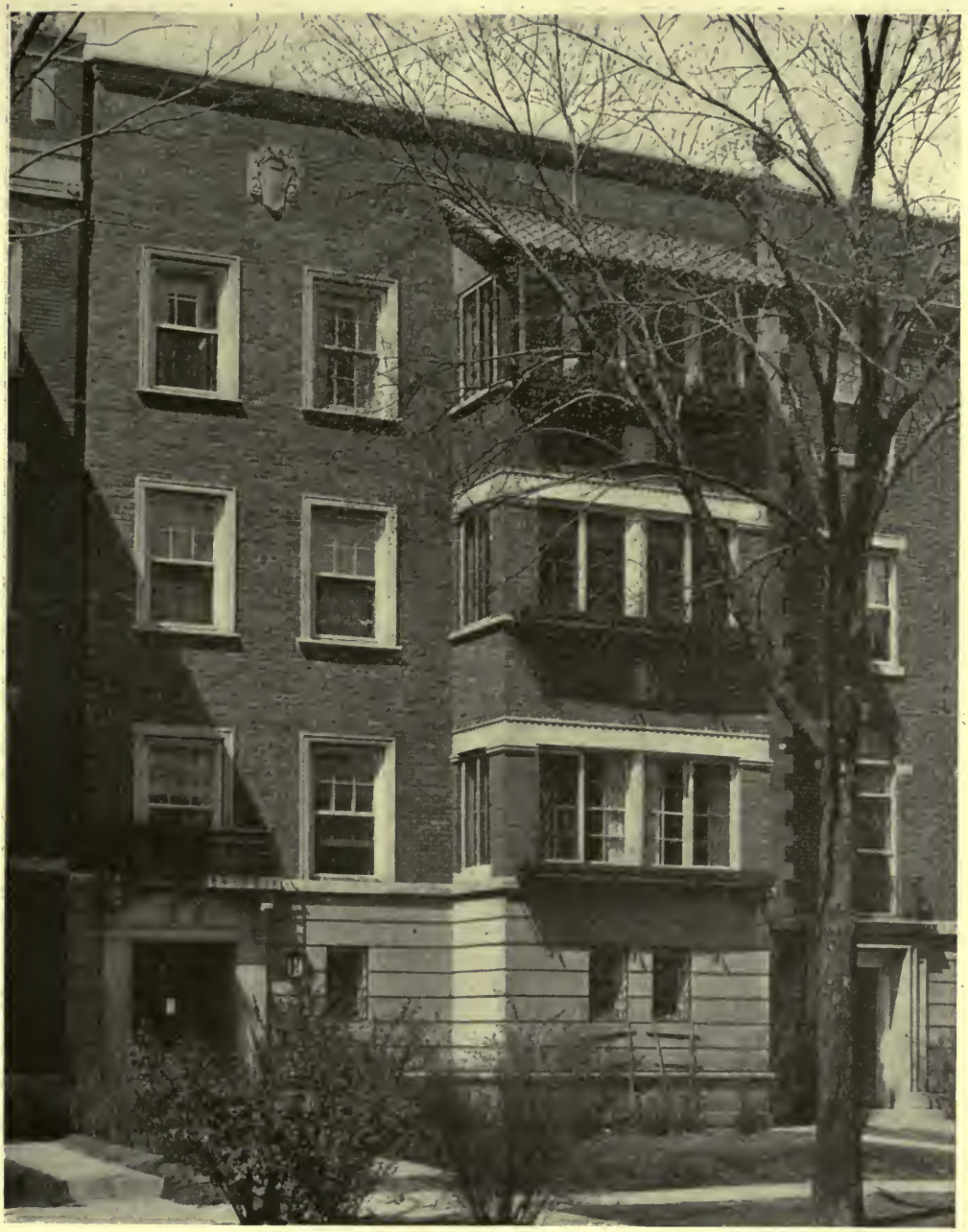
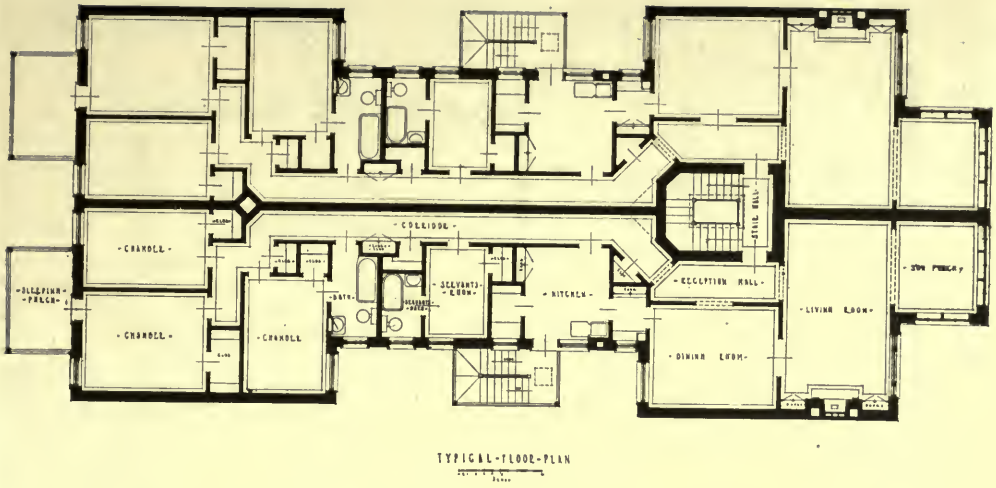
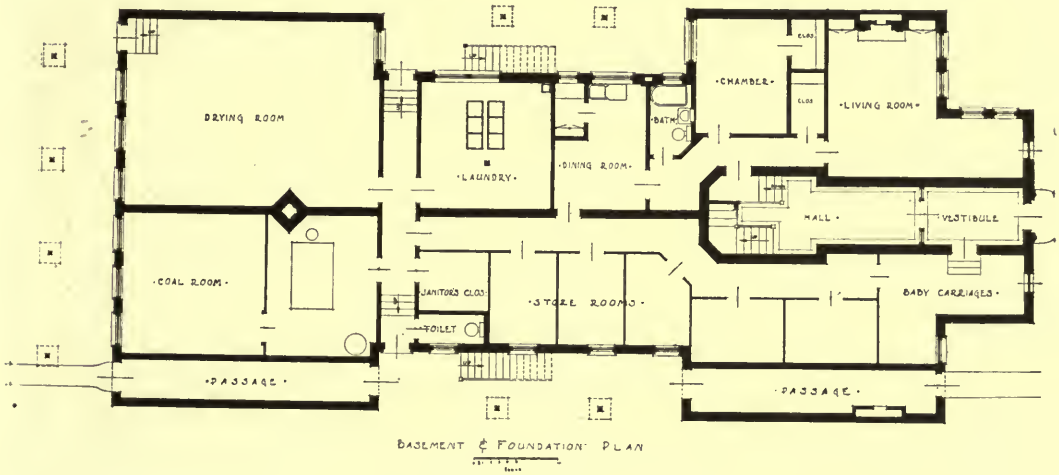


FIG. 30. H. H. BENTLEY APARTMENT, 6914 SHERIDAN ROAD, CHICAGO, ILL. H. H. BENTLEY, ARCHITECT.

FIG. 31. F. R. MOULTON'S APARTMENTS, *6227* WOODLAWN AVE., CHICAGO, ILL. RICHARD E. SCHMIDT, GARDEN & MARTIN, ARCHITECTS.



TYPICAL FLOOR PLAN



BASEMENT & FOUNDATION PLAN

FIG. 32. FLOOR PLANS OF APARTMENT BUILDING FOR F. R. MOULTON, CHICAGO, ILL. RICHARD E. SCHMIDT, GARDEN & MARTIN, ARCHITECTS.

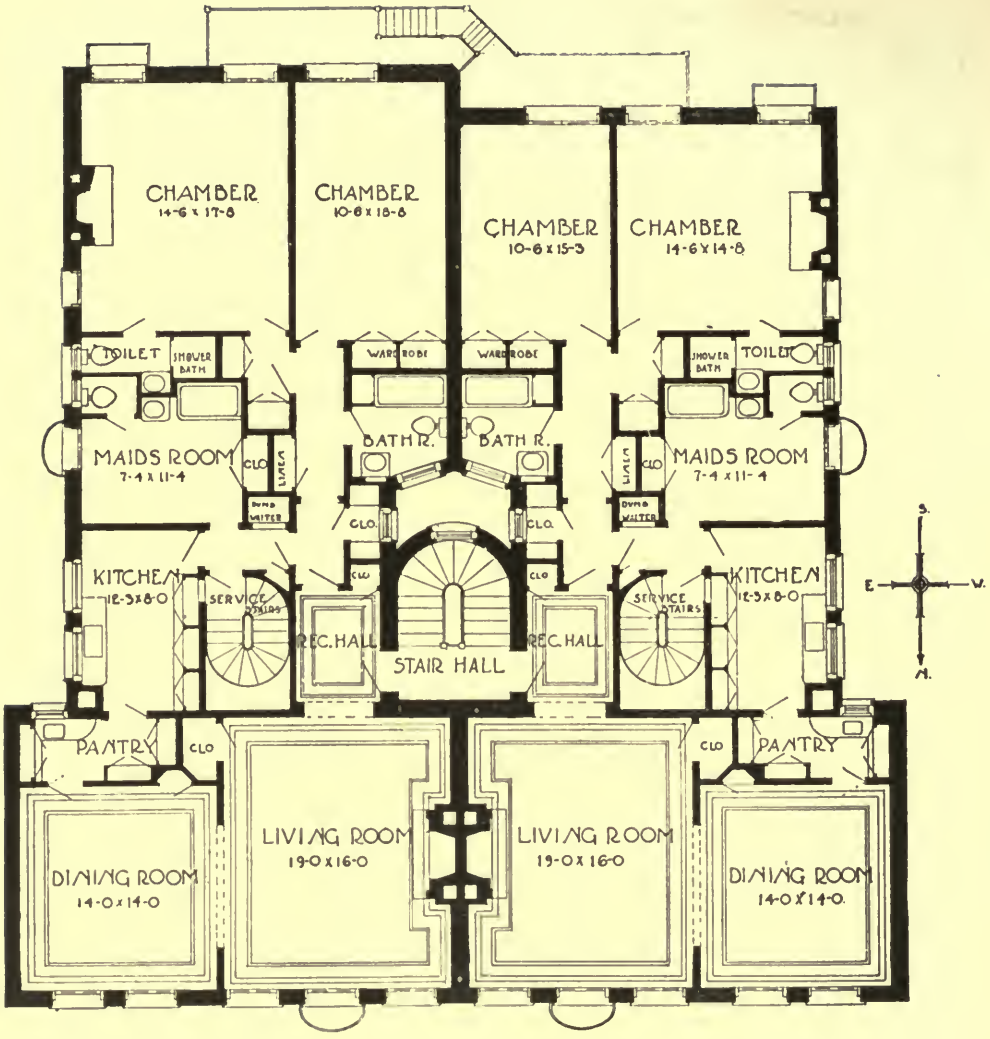


FIG. 33. TYPICAL FLOOR PLAN OF APARTMENTS AT 21 AND 31 EAST ELM STREET, CHICAGO, ILL. W. D. MANN, ARCHITECT

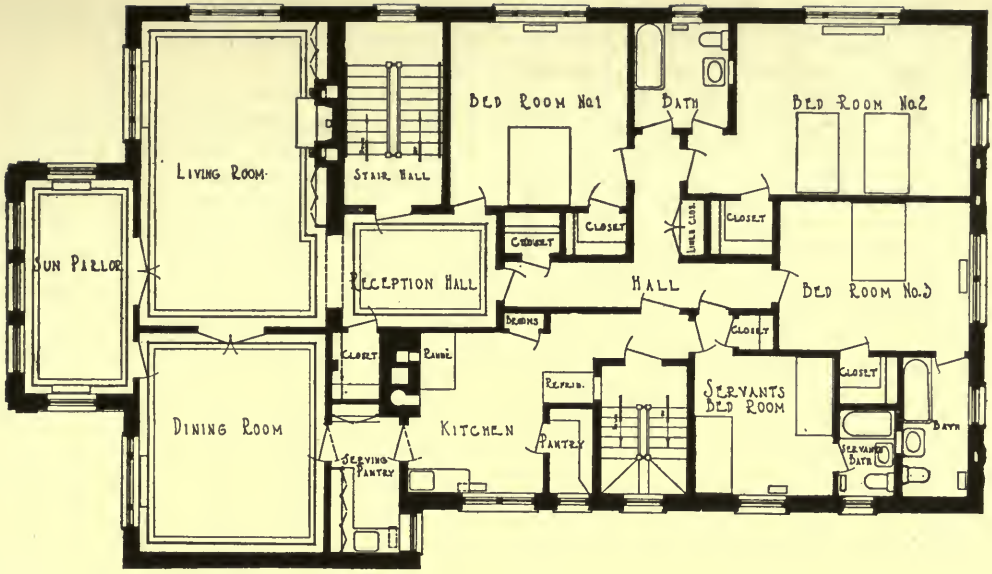


FIG. 34. APARTMENT BUILDING FOR E. J. NORCOTT, CHICAGO, ILL.
Richard E. Schmidt, Garden & Martin, Architects.

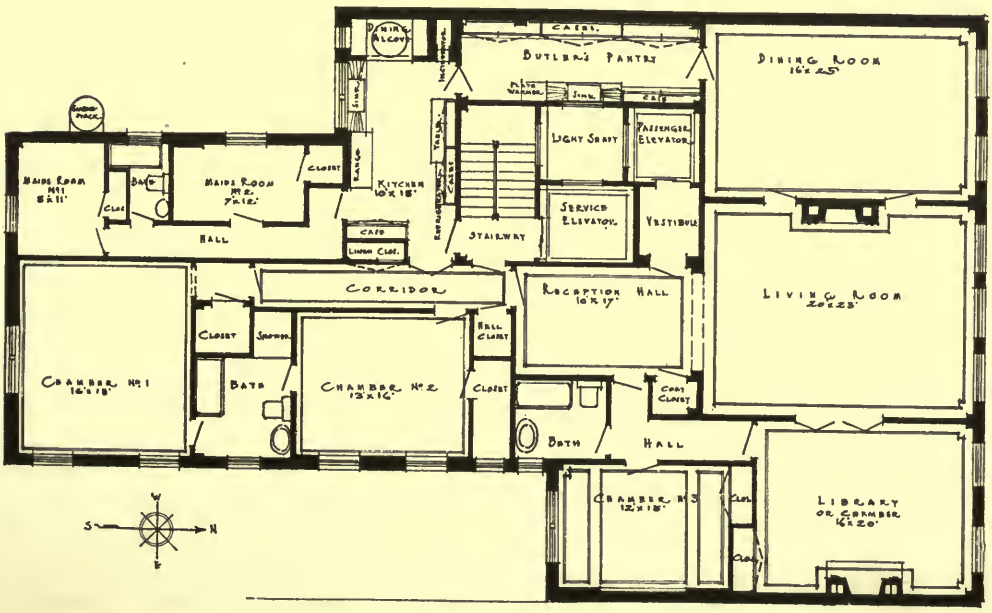


FIG. 35. TYPICAL FLOOR PLAN OF APARTMENTS AT 257 EAST DELAWARE PLACE, CHICAGO, ILL.
John A. Nyden, Architect.

the time-intervals that have actually elapsed to separate the various steps have been short enough, and in retrospect seem even almost to blend one with another. Yet it is not so very long ago that the first "apartment house"—still existing, by the way, in downtown New York—was accepted as a place of residence for themselves by families of fashion and repute.

So now, in taking up the study of the apartment house type, it would seem at once to be most natural and helpful to start with the kind of apartment possible of being developed on the normal narrow city lot—because this is the kind of lot that is still most easily to be secured for this purpose—and it was in relation to this kind of deep narrow lot that the apartment house plan was devised to conform, as it came first to be defined and established in our larger cities. The immediate result was the type of plan we now recognize to have been both immature and unfortunate—the thin strip of rooms with living rooms in front, kitchen and dining rooms in the rear, and a long corridor with three or four bedrooms opening off it in between. This type of plan was the original arangement of the apartments shown in Fig. 23 in last month's article, in dotted lines—from which they had been changed to the more modern plan shown in their later rearrangement.

There are thousands of apartments of this plan arrangement now existing all over the United States, for it was for a number of years regarded as the final and accepted type, and that at exactly the time when most of our Middle West and Eastern cities were going through the most rapid process of apartment house growth. The one single improvement that was anywhere undertaken was to widen the single lot unit to double width, when enough land could be obtained to make that arrangement possible, and place two apartments on each floor, served from a single front and rear staircase. These buildings were generally three and sometimes four stories high, making a six or eight apartment building between party walls; and it was soon found by experiment that the whole resulting building was still not too large to be readily salable, as a unit, as an investment proposition.

Once this fact was established, all subsequent building up of our immediate city suburbs with apartment buildings took this form; and there our development of the apartment plan seemed to have atrophied or stopped, until about a dozen years ago, when, in the attempt to develop some shallower lots with apartment house buildings it was, quite by accident, discovered that by using a plan of wider frontage to the apartment, securing three rooms width upon the street (and by condensing the depth of the building, reducing the corridor length, and hitching the rear rooms up nearer to the front) a new type had been found that was at once more popular with tenants and required no more actual land area for its construction. Indeed, once the plan was understandingly attacked, it even developed that a slight economy in the area covered was possible, because of the amount of square feet of corridor space that was eliminated, thus securing a final economy both in the amount of the land covered and in the actual construction cost of the building itself.

From about this time was to date the sudden growth into fashionable popularity of the "apartment manner" of living. In New York the apartment had been accepted considerably previous to this time, but it did not actually come to its popularity the country over until the long, dark, narrow corridor between living and dining rooms had been eliminated. Up to that time the apartment had been endured by those who were unable to afford any other manner of city dwelling; but after this time the apartment began to be the chosen and fashionable method of city living, preferred even by those whose income was sufficient to meet the cost of the private city dwelling; and from that time can we date the beginning of the building of "apartments de luxe," which in our two or three largest cities has now come to be a fashionable and profitable "specialty" for the speculative builder.

But it will be better to trace the growth

of the apartment house plan more in the general sequence of its actual development along the lines that have just been indicated. And so, in the larger city, it was first started in the form adapted to the single residence lot. It was only later on, in the new nearby suburbs, that the double width apartment arrived, and it was easily and obviously derived from its immediate predecessor.

It thus happens in our principal cities —outside of the special conditions, previously considered, as existing in New York—that most all real estate development in residential sections has been accomplished on the unit of the single house lot. An additional reason for this is also to be recognized. From the point of view of the city realty operator, while he has generally, in the first instance, bought his land in large areas, his first act, after making his purchase, has been always to divide it into as narrow strips as possible, and develop each strip into a single house or structure, with the intention of eventually selling the dwellings to separate owners. In this way he has in the past made his greatest profits. And oddly enough it is the fact that the greater proportion of the best present and past dwelling sections in our larger cities were first built up in this manner, the houses being later purchased by individuals, and afterwards very often entirely and expensively made over by having the interiors rearranged and redecorated, and often even the fronts torn down in order to be rebuilt after a more pretentious and individual fashion!

As a result, any tendency toward a later development of this same property with apartments was limited most frequently to a plan capable of being devised to go upon a single lot, between the old party walls remaining after the private dwelling in between has been demolished—or at the most, what could be done on a plot of land as wide as was to be obtained by purchasing two adjoining properties and throwing two lots together, thus getting a double width apartment (Fig. 35)—or two apartments wide (Fig. 32), one on each side of a common stairway. The latter plan is the one most commonly found in those sections most nearly allied with our city suburbs, where the operator can still purchase his land in an undeveloped state, and can then lay it out in lots of a width to accommodate these double apartment house plans.

The operator's point of view, however, continues to remain the same. He is only desirous of building these structures in small enough units to make it possible for him to find a purchaser easily for each building when he has finished his development, and thus get back his money and his profit, leaving the purchaser "holding the bag." Up to the years immediately before the war, it was a profitable and certain business. By buying a considerable area of vacant property, it could be purchased quite cheaply. A short term construction loan was then obtained, often at as high a rate as 10 per cent., the builder meanwhile getting all the benefit possible by buying in quantity, through building three double width buildings of four floors each giving him twenty-four apartments, for instance, all alike.

On completion of the building it was easily filled with tenants on advantageous terms, and the builder could then take his time in finding a purchaser, or might even depend upon placing a five-year mortgage on the completed property (generally of a large enough amount to more than cover all his expense of construction!), when he could sit back and collect the rents himself for the first five years, giving him a considerable profit over the cost of land and interest; and at the end of that time, when the property was about due for expensive repairs and replacements, let the mortgagee take it over, with as much back unpaid interest due as he had been able to manage! This had become an extensive and profitable business up to the time that the growing building costs occasioned by an ill-advised government policy in regard to giving labor everything for which it asked, operated to give this industry, in common with all other building, a severe setback, just about when we ourselves were entering the war.

But already conditions were changing so as to show that this would not much longer remain a lucrative industry, except in the smaller and more remote cities, where the scheme could still be worked on its old and simple lines. In our larger and wealthier cities the matter of real estate development had become more complex. The co-operatively owned apartment had come into view upon the horizon, with possibilities of profit such as had not before been dreamed of by the smaller operator of the years that had passed. But this is a matter of later growth and consideration, to be taken up later in this series. For the present, let us first consider the better classes of apartment developments possible of being undertaken with the single and double lot, of which mention has already been made, as this constitutes the first logical step in the growth of the urban apartment dwelling—and the one that is probably still of widest and greatest possibility of immediate usefulness throughout these United States.

We will now begin to find examples of greater interest elsewhere than in New York City. The two previous articles have dealt largely with material found in New York for the obvious reason that that city had experimented most with the acute conditions of housing shortage, and we will again turn to New York to find the furthest developed examples of another type of apartment that we shall want to study later, but for the present we shall find the greatest number of important and interesting examples in the Middle West, and particularly in Chicago and its vicinity.

The reasons for this are worth considering, as they are precisely those that will elsewhere exist to make this same type of plan of the widest possible interest to other communities.

The city plan of Chicago is so widespread, and so much of the apartment house development within the recent few years has taken place in the suburbs, more or less fashionable or remote, that there is not yet to be found in that city the amount of pressure that we find in New York and some other Eastern cities, for the use of the narrow strip lot completely built up between party walls, with which we have previously been concerned. To be sure, much of Chicago is now so built up, and much more will be, but up to this time a major part of the more recent apartment house construction in the immediate vicinity of Chicago has taken place upon the suburban lot, laid off in the first place for the private house within its own grounds, however narrow those grounds might be, or upon the occasional large plot left over from some large estate—in which case the development might take the direction of the large "court" plan, or the rambling grouping of apartment units around a central plant that is still the best economic and community treatment for the development into apartments of the large urban estate.

But most of these apartment developments were made on smaller, narrower lots in the more closely built and congested former suburbs that are now actually a part of the crowded city, and so we will find that they more uniformly take the shape of a narrow compressed plan (Fig. 27), sometimes with windows down one or occasionally even along both sides. This we may take to be, for the moment, the typical "Chicago type" of apartment plan, although as a matter of fact it is just as generally found in certain other cities of the Middle West. We will merely simplify the matter for ourselves by turning at once to Chicago, where we find those examples of this type that are best and most thoroughly developed.

Before turning to the West, however, let us first see what we have developed in the East to fit the single narrow city lot, that is worth while illustrating as a good solution of this type of improvement; for that there is still a demand for this kind of apartment we all know, and there is something to be seen that will be better than the universal "railroad" plan that has been generally adjudged so complete a failure.

The "railroad" apartment failed to satisfy because it had come to be generally recognized that the long dark hall con-

necting dining room at the rear with living room at the front was too inconvenient. The bedrooms in between were also generally poorly lighted from a narrow well, and, in the summer at least, poorly ventilated. Of course, on a narrow built-in lot, not a great deal can be done to correct the latter defect. It is, to a large extent, inherent in the conditions that surround the plan. The rooms between the front and rear of the lot, where street or alley exposures are obtained, must be dependent on a narrow space for light and air, whatever those rooms may be.

Between a choice of evils, however, it devolved that there were at least certain internal conveniences of plan that were better served by bringing the dining room into closer relation with the entrance hall and living rooms, even at the risk of making that room darker than some others. It is not to be forgotten that the dining room is only in actual use by the family for three short hours during the day, and at least the half of that time would be given to dinner, when artificial light would probably be required or desirable in any event.

It was also not so objectionable—at least, for the members of the family itself—that the maid's rooms and bath should come next adjoining the kitchen, and so perforce share in the conditions of restricted lighting and ventilation already set down. This arrangement would bring all the publicly used portions of the apartment conveniently together, and it is at least logical to relegate to a preferred privacy the sleeping rooms of the family and the baths that serve them, even by definitely separating all this portion of the apartment physically from the portion just considered, as has been intentionally done in some cases. This can at once best be accomplished by placing them at the rear of the lot, where they will get better light and air (and possibly even some outlook) and then doing what is humanly and ingeniously possible to reduce the apparent distances to be travelled in the connecting corridors. What, then, is to be found as a possible result?

Let us take, for instance, as extreme an example as the apartment on Beacon Street, Boston (Fig. 26). Certainly, no one would be likely to encounter a lot longer and narrower than this! The depth of the lot has been divided into three nearly equal parts. The front portion has been given to the two front rooms, entrance hall and dining room. This portion covers the full width of the lot, from party wall to party wall. The dining room is given its light from a window at the end of a court that runs entirely back to the rear street.

The next third of the lot's depth contains the kitchen and closets, service stairs, maid's bath and two maid's rooms, all with a service corridor separate from the private main hall. The latter extends from the front to the back room, no attempt being made to disguise its length except by the use of occasional cross beams, and the fortunate happenstance that it was possible to obtain several windows through the party wall to light its length—a particular and unusual privilege.

The rear portion of the plan is given to three master's bedrooms and baths. It should also be noted that the long connecting corridor is offset near the front at its start, so that its length does not appear in evidence from the front portion of the apartment, and is not disclosed to the eye of the casual visitor. Although the part of this plan as carried out at the rear is new, the front portion is built where an old single house was located (the service wall of the latter extending back about as far as the present location of the maid's bath), and between the same party walls, although all the interior arrangement and the front of the building as they now appear are of new arrangement and construction.

This plan might be directly compared with the Chicago apartment, shown beside it in Fig. 27. The latter is, of course, placed on a lot of practically twice the width, with a portion of one wall only—the right—being a party wall. The lot is wide enough so that windows down the other side permit light and outlook for the major rooms, while the service por-

tion of the building, placed down the right side, is lighted from a well or court at the right.

The length of this plan is actually far less than the other—about half—and it appears even less in comparison. Much apparent and actual length is saved from the fact that the lot was wide enough to be laterally divided into approximate thirds, the right hand third being given to the service portions, the next and larger third in the middle to the master's sleeping and living rooms, and the final narrower left hand third to the open light and air space.

This apartment contains the same number of rooms as the Boston plan last noted (excepting only that it has no library), the dining room taking its place across the front of the lot, while its area is more than supplanted by new and important units, the two "porches" or enclosed rooms that appear on both front and rear. The service stairs are exposed to the open air—a treatment generally found in this section—and the greater freedom and space given to halls, closets and staircases indicate the less crowded and more suburban character of the problem, as well as the less restricted point of view from which it was considered by the designers.

That this is not an unusual but rather the customary development of a lot of this type is easily seen from the other plans of Chicago apartments that are here reproduced. Their principal points of difference are to be found in the fact that the lots may be a little wider or narrower, in recognition of which the sides may have more outlook, or less, in the latter ultimate decrease, being fitted in between party walls, as would be the case with any Eastern city apartment. With the exception of the differences just noted, the plans are so nearly alike that the one or two reproduced might serve as well for any of the others, depending merely on minor variations of unimportant details.

The plan in Fig. 29 is on a narrower lot and built to slightly less depth. It also contains one less bedroom, but except that it covers the entire lot in width at the street front, it differs substantially little from the general arrangement of the Chicago plan first mentioned, Fig. 27. There is still less difference between this plan (Fig. 29) and the plan of the apartment next door, the façade of which is shown in Fig. 30. The plan of the latter extends more fully to the lot line at the left, being two rooms wide across the rear, with a small light court, occurring back of the staircase, lighting it, along with the hall corridor and the principal bathroom which opens off the hall in front of the rear bedroom.

These arrangements remain much the same. Indeed, given the two-room width upon the street face, and making one of these rooms the dining room, it naturally follows that the kitchen and other service dependencies must extend to the rear of this room; just as the master's portion and bedrooms must lie behind the front living room, on the slightly larger half of the lot. Most Chicago planned apartments of one apartment to the entire lot width follow this general arrangement, the lot being thus divided into two sections of uneven width down its length.

This remains true of even the wider lot shown in Fig. 35, where the apartment still covers the whole floor area, although it has three rooms rather than two rooms now upon the street, the third room being a library, and the rear portion containing both an additional master's and servant's bedroom and more space in and around the entrance hall. In Fig. 32, however, we find a difference existing in this type arrangement. This building fills the entire lot between party walls, the lot being of the approximate width of the building last mentioned. The lot has here, however, been divided laterally into two apartments, with the result that it has become necessary to locate the servant's quarters in the middle of the length of the plan from front to back, and placing the master's bedrooms at the rear, much as in the Boston plan, Fig. 26. The arrangement, nevertheless, still contains many interesting details more characteristic of the Chicago than the Eastern plan method, as is obvious by comparing the front and

rear portions of the plan with the other examples that accompany this installment.

In all these narrower and deeper plans it was of course impossible to escape utilizing a corridor of greater or less length to communicate with the rear rooms. The difference that exists in all these plans, however, from the older type mentioned at the beginning of this article, is that, in *every* case, the dining room is placed at the *front* in near relation to the living room, and the corridor leads only to the sleeping rooms, thus segregated in desirable privacy and given better exposure at the rear. Finally, in Fig. 33 is shown a plan somewhat similar to the last, in its general feature, but more crowded—and perhaps more commonplace—throughout. It is certainly less individual and expressive of the Chicago type of plan than any of the others reproduced; and it should also be noted that it suggests a direct relationship to the double-width apartment house plan of T shape, with centre extension at the rear, a type that we will later be able to study at greater length. This latter plan, as well as all the others except Fig. 26 and 32, have one or more doorways to shut off the long corridor to the rear sleeping rooms from the front living portion of the plan. In the two plans mentioned the same effect of seclusion for the sleeping rooms was obtained by "offsetting" the corridors instead.

One of the principal differences between all these plans and the regular type of Eastern apartment is not perhaps at first evident. It will only appear when the observer notices the quite different grade arrangement of the two types of building. In the photograph of the Boston example, for instance, it will be noticed that the existence of a basement is recognized in the façade, although that basement is obviously mostly below the level of the ground. It is nevertheless certainly not intended for living purposes, although it may possibly contain a few servants', or a janitor's living quarters.

The rest of its area can only be used for furnace, coal and store rooms.

But in the case of the Chicago examples illustrated, these conditions seem to differ in one important particular. The story just above the level of the street is set lower down, with less opportunity to provide light and air to the space beneath, —that could only be used as a cellar at best. The street floor of any apartment building is of course recognized to be of somewhat different arrangement than the upper stories,—although we have generally provided for our information only a "type floor plan," of an upper story, that contains for us no exact knowledge of the details of arrangement of the first floor hall and entrance. We merely recognize that some readjustment of the "type" floor plan must be made upon that story, and generally it does not require much imagination to discover a plausible arrangement that will allow of the approach to the main elevators and stairways, that alone appear upon the upper floor plans.

But in these Chicago apartments the whole lower floor is, from the point of view of Eastern custom, wasted. From the Eastern point of view it, too, should contain an apartment, omitting probably one room in order to provide space for the hallway to the elevators,—and the heating and storage spaces would in turn be placed in a lower cellar story, largely or entirely below the level of the street grade. Yet such is not the middle western custom. Not only that, but it is evident that these Chicago apartment house owners do not belong to the same heartless and bowelless race as their eastern compatriots,—they have at least some respect for the humanities and are even prepared to give some regard to the future growth and progress of the race, —for behold it, there plainly lettered, on the basement plan in Fig. 32, these significant words—"Baby Carriages"! Evidently they have a long eye toward the future, these Chicago apartment house owners; they are looking forward to other tenants, for future apartment houses, and are probably firm believers in the adage "Once an apartment house resident, always a resident in apartments," and thus prove their belief by providing the essential conveniences for being "to the manner born"!

MAIN ENTRANCE TO ADMINISTRATION BUILDING—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.

The EASTERN STORE *of* SEARS, ROEBUCK & COMPANY AT PHILADELPHIA

GEO C. NIMMONS & CO., ARCHITECTS

By George C. Nimmons

[*At the National Architectural Exhibition, in Washington, D. C., last May, held by the American Institute of Architects in connection with its annual convention, the gold medal for industrial design was awarded to George C. Nimmons & Company on the strength of this group of buildings, known as the Eastern Store of Sears, Roebuck & Company. The architectural features that lend interest and distinction to the buildings, differentiating them from customary works of industrial engineering, are simply and candidly achieved merely by giving an urbane, instead of an illiterate, expression to structural units. They are not applied ornament, adding fruitless cost to utilitarian buildings. Mr. Nimmons, in this and in other industrial plants, has made original contributions of value to industrial design, a branch of architecture in which notable progress is being made. A fuller exposition of the considerations which influence his design will be found in a series on "Modern Industrial Plants," which he wrote for* THE ARCHITECTURAL RECORD, *in the issues from November,* 1918, *to July,* 1919.—*Editor.*]

PUBLIC interest at the completion of the construction of an important group of buildings usually centers around the answers to such questions as: What is their construction and how long did it take to erect them? Why are the buildings arranged as they are? Why do they look as they do? How is the mail order business of Sears, Roebuck & Co. conducted in these buildings, and how is it possible to operate economically and successfully over such vast areas of floor space?

The Philadelphia store is the latest of several erected by Sears, Roebuck & Co., at important distributing centers. Philadelphia was selected as the most advantageous site for prompt and economical delivery of goods to customers in the Eastern territory, and for the additional reason of relieving the Chicago store of the congestion arising from increased business.

The principal requirements which formed the basis of the problem to be solved were:

1. Buildings to accommodate at first an annual business of $50,000,000 with complete provisions for greatly increasing this capacity in the future.

2. The proper location of the buildings on the site, consisting of forty acres, with proper railroad connections.

3. The adoption of the most economical fireproof construction and the determination of a plan, arrangement and design for the buildings best suited for the most direct and efficient handling of goods.

4. A simple inexpensive treatment of the exterior of the buildings that would meet with the approval of the owners and which would be appropriate and attractive enough, in the opinion of the Philadelphia Art Commission, to occupy this site on one of the city's most important boulevards.

5. Proper provisions for the health, comfort and welfare of the employees.

6. And finally, the very important requirement of including in the new store all of those features and improvements that had proven most successful in the old stores and the omission of all those which were unsuccessful or which had become obsolete.

After the site was secured a systematic study of preliminary plans for the new plant was made, over a period of about six months; and all departments

of the firm that could contribute any information were consulted. Seventeen different kinds of arrangements and plans for the buildings were prepared, and by a process of elimination and addition the final plan was built up and adopted.

This occupied the time up to August 24, 1919, and one of the requirements was that the new plant should be completed and in operation one year from the Autumn, so as to be ready to supply the following Christmas trade. The feasibility of this depended first upon the completion of the working drawings in an unusually short time. Work on them was accordingly started August 24, 1919, and completed, including the specifications, by September 15, a period of about three weeks. Bids were then taken and the contract let on the basis of these drawings and specifications, on October 10.

The kind of contract let was one with a fixed maximum limit of cost guaranteed by the contractor and a provision whereby the owner and contractor were each to share in any savings that might be made below the maximum contract price. On account of this form of contract, the architects maintained an auditing department, which audited and checked in detail all labor and material of the buildings.

Work was begun immediately, and the buildings were occupied and the operation of the plant was started the following October 18.

The plant consists of the merchandise building with a ground area of 119,000 square feet, basement and nine stories high, in which all the goods are handled, an office building of 31,650 square feet ground area, six stories and basement high, and a power plant of 19,270 square feet ground area. In addition to this, there are other minor buildings of no special interest.

The frontage of the buildings on the boulevard is 780 linear feet, and the aggregate floor area of all stories in the main buildings is 1,592,500 square feet, and their cubical contents 22,088,101 cubic feet.

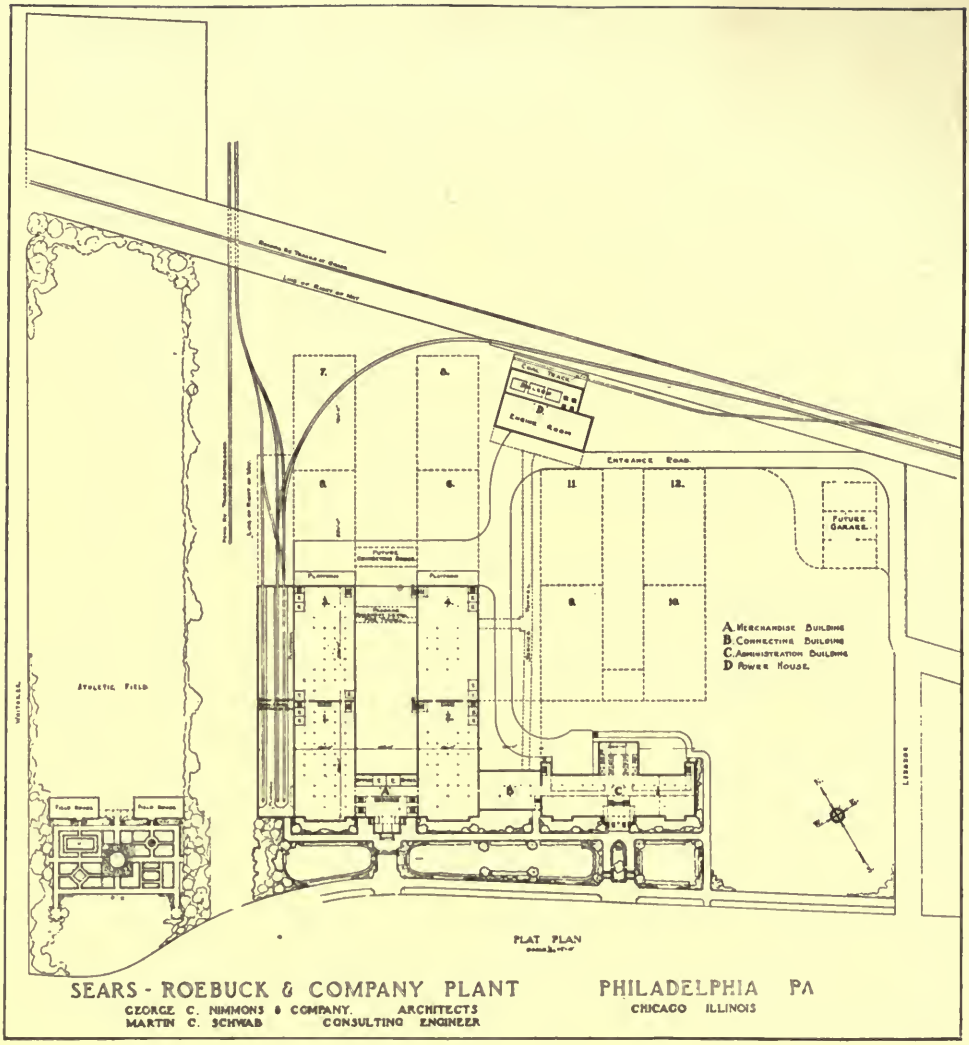
The foundations consist of 529 concrete caissons down to rock, supporting 4,766 concrete columns in the different stories, making a total length if placed end to end of thirteen miles. There were nine million brick used, 138 thousand barrels of cement and eight and one-half million pounds of reinforcing steel.

The type of construction is strictly fireproof throughout. The cantilever flat slab system of reinforced concrete was employed in the floors and columns; the walls were of common brick, faced with dark red face brick and trimmed with gray terra cotta which has blue backgrounds where ornaments occur. Wooden window frames with sliding sash were installed, except where fireproof ones were required, because of the ease with which they can be opened for ventilation and cleaning, and their greater freedom from cracks and openings which admit dust and cold draughts. The columns are spaced twenty feet apart each way and carry a live load of two hundred pounds per square foot on the floors of the merchandise building, and a lighter load in the office building. This uniform spacing of columns, both ways, is economical in construction and also makes it possible to change fixtures and equipment in the buildings from any pair of columns to any other pair without cutting or alteration.

Anyone having had important building construction to do during the years of 1919 and 1920 will probably never forget the unusual difficulties encountered through lack of efficiency and control of the craftsmen and laborers, delay and stoppages of transportation, scarcity of material, and the numerous strikes of the unions. There probably never was a time when building operations were so hampered and interfered with as they were during that period, although when work was resumed after the war it was generally assumed that workmen would be glad to return to their accustomed pursuits.

The very opposite of what was generally expected took place. The performance of the customary duties of an architect in making drawings, letting contracts,

GENERAL VIEW—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.



PLAN OF BUILDING AND GROUNDS—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.

GENERAL VIEW FROM ROOSEVELT BOULEVARD—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.

SIDE VIEW OF MERCHANDISE BUILDING—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA.
George C. Nimmons & Co., Architects.

and supervising the construction in the usual orderly fashion was easy, compared with the unusual services demanded of him at this time to safeguard the owner's interests, and in assisting the contractors to place contracts, secure necessary material, unblock transportation, and promote and expedite the work.

On this group of buildings ten men were required in the field to perform properly the duties of supervision and control by the architects. On account of the existing labor conditions and the great speed at which the construction work was obliged to go, the greatest possible vigilance and care were required to prevent accidents or collapse in the concrete work which might ruin the building and kill the workmen. At one time in the construction work, things were swinging along at the rate of a whole story of the merchandise building in a week. In order to facilitate supervision of the work and reveal at a glance a correct idea of its progress, a system of colored charts was prepared and hung on the walls of the superintendent's office to indicate every day the exact time, location, and amount of the construction of every part of work done. This was a great safeguard against accidents such as are caused by removing the forms of concrete before it is set.

Diagrammatic charts were also completed at short intervals to show the amount of work done in relation to the amount of money paid from time to time.

On the first of May the carpenters struck for higher wages, and every trade union went on strike after that in their turn, so that during part of the summer there never was a time when all of the trades were working at once. In addition to this the weather man had produced one of the worst winters for outdoor work in the history of the Philadelphia weather bureau.

However, when the 18th of October, 1920, arrived the buildings were com-

MERCHANDISE BUILDING—EASTERN STORE
OF SEARS, ROEBUCK & CO., PHILADELPHIA.
GEORGE C. NIMMONS & CO., ARCHITECTS.

pleted sufficiently for occupation and for the starting of business.

The completion of this work in this time, in the face of all these difficulties, could never have been accomplished if it had not been for the unusual ability to orders and their willingness to respond with renewed energy in surmounting difficulties, were the outstanding features of the spirit manifested throughout the work.

Why are the buildings planned as they

TOWER OF MERCHANDISE BUILDING

ot the general contractor and his subcontractors, and of the men at the head of their organizations. From the first, all work was done strictly in accordance with a scientific and comprehensive program, which provided for the organization, the method of operation and the time allotted for the completion of each stage and portion of the work. The cooperation of all, their faithful obedience are? Among the important considerations which determined the plan and arrangement of the buildings are the demands of the business transacted, the conditions of the site upon which they are built, the railroad and truck service and the very essential provision for ample future growth.

The mail order business is merchandising on a large scale; sales are made ex-

MERCHANDISE BUILDING—EASTERN STORE
OF SEARS, ROEBUCK & CO., PHILADELPHIA.
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clusively through the medium of catalogues circulated among the customers, who order from these catalogues by mail.

To the farmer or dweller in the small town or village the business offers advantages and conveniences similar to those offered by the modern department store to the residents of large cities. About ninety per cent. of the orders can be delivered to his door by parcel post.

The business of one of these plants consists of receiving the letter orders from customers, which come every day by the truck load, gathered up from the different depots in mail sacks. The letters are opened usually by machinery by the hundred. They are then read and indexed, and tickets are made out for all goods to be shipped; these tickets are sent by pneumatic tubes to the proper departments. On the tickets so made out, are indicated the departments which handle those goods, the route and manner of their shipment and, further, this very significant thing—the exact time at which each article is to arrive in the shipping room. This important feature in the handling of goods, prevents unnecessary congestion and results in distributing the handling of orders evenly over the entire period of the working day. The operation of the plant therefore becomes a uniform, steady activity which brings about maximum efficiency while at the same time preventing spasmodic speeding up.

The transmitting of orders from the departments to the shipping room is largely mechanical. If it were not, the mail order business could not be conducted in these large buildings over such vast areas of space without causing great delay in shipment and largely increased cost in handling.

The mechanical means employed for filling orders of customers, in a general way are as follows: When a ticket calling for goods to be shipped arrives through the pneumatic tubes in any department, the goods are taken out of stock and delivered to the nearest spiral chute. These goods, except the very large ones, slide round and round in their descent in these spiral chutes until they are discharged at the bottom onto the conveyor belts, which take them to the sorting aisles. They are sorted several times in a very simple way which results finally in their arriving at the particular rack where goods for the customer are assembled, as they arrive from the different departments of the store.

When all of the goods for any one of the customers have arrived in the various receiving racks made for that purpose, they are gathered together and packed in a bundle or box. The Post Office Department maintains a post office in the plant which furnishes canceled stamps to be affixed to the packages on the spot, thereby obviating the necessity of going through the city post office at this end of the shipment. Large or heavy articles go by freight or express.

This system of handling goods by means of conveyors, chutes, etc., was the chief factor which had to be taken into account in planning the merchandise building; in studying the arrangement and plan of the entire group of buildings, this building was the most important one and its requirements had first to be provided.

After considering the different ways in which the four big rooms of this building could be arranged it was decided to put them together in a "U" shape plan, because this gave the shipping room the most central location for direct action of the conveyor belts, also the best lighting for the rooms and the most advantageous arrangement for future extensions. The four rooms each contain 25,000 square feet in each of the nine stories and basement, and in addition, there is the connecting space of the tower and the train shed. The dotted lines on the plan indicate future extensions.

The office building was placed on the right so as to give the clerical employees the view and good light of the boulevard; besides, this situation is a convenient present location and will also be a central one when additions to the plant are completed.

One feature of particular importance in the plan of this building was the placing of elevators, stairs, toilets, etc., in

ADMINISTRATION BUILDING—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA. GEORGE C. NIMMONS & CO., ARCHITECTS.

WOMEN'S REST ROOM—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA.
George C. Nimmons & Co., Architects.

the rear of the center, so as to have uninterrupted light space for office use for the entire remaining area of the building. This is a distinct advantage, because the office space may then be divided, or the whole space may be used as a single unit, as traveling belts and conveyors may extend through the entire length without interruption.

The mechanical work was handled by Martin C. Schwab, consulting engineer for Sears, Roebuck & Co.

The power house provides heat and light, power for all mechanical ventilation, elevators, pumps and the pneumatic tube system, refrigeration for the drinking water circulated through the store, and for the kitchen cold storage. Space was provided in the building for the additional equipment needed for future additions. At present there are installed six 500-horsepower return tube boilers with complete mechanical stokers and mechanical means of handling coal and ashes. All discarded boxes and wooden crates are ground up in what is called the "Hog Machine Room," adjoining the basement of the merchandise building and blown back through a pipe to the boilers and consumed without further handling, as fuel.

In the engine room there are now installed one 125, one 350, and one 750 kilowatt generators, and one 1500 kilowatt turbine driven generator. All of the buildings have mechanical ventilation by which washed fresh air is provided for the different parts of the buildings according to the number of people occupying them. Each toilet fixture is also individually ventilated. All pipes, wires and conduits are run underground from the power house in a system of underground tunnels to the merchandise and office buildings.

The remaining question proposed for an answer was: Why do the buildings look as they do? The feature which dominates the group is the tower, and that should be accounted for first. The

REAR VIEW—EASTERN STORE OF SEARS, ROEBUCK & CO., PHILADELPHIA.
George C. Nimmons & Co., Architects.

reason for this tower is not at all, in the first instance, for its ornamental effect but for the very essential requirement of providing a place for the sprinkler tanks. A low rate of insurance can be secured only when a building is sprinklered and in this case the lowest rate given for this class of building was granted by the insurance authorities, all possible safeguards against fire having been provided.

Although the insurance underwriters do not require the water tanks to be enclosed like these in this tower, they do require that they shall contain a certain amount of water, be placed at a certain height above the buildings and be protected against freezing. In this case there were required four 9,000 gallon pressure tanks and one 80,000 gallon gravity tank. Inasmuch as these tanks, with their enormous weight of water, had to be supported by heavy fireproof construction, the additional expense of enclosing their supports in four walls where they extended above the roof, and thereby making a fourteen story tower at the main entrance, was relatively small compared with the benefits secured in increased office space, saving in maintenance of the tanks and in the appearance of the whole group of buildings.

The dominating tower has a very essential function to perform besides being a clock tower and an ornamental feature of the façade; had these tanks been left exposed above the buildings, as they generally are, they would have been so prominent and so ugly in the long distance views from the boulevard that they would have seriously damaged the fine appearance of the whole group of buildings.

The next most noticeable feature of the exterior is that the great wall surfaces are broken by pilasters which appear like buttresses between the windows. The reason for their presence is that it was desirable to keep the inside of the walls as free as possible from large projections of columns or piers, so as not to interfere with desks, benches and equipment which were to be placed next to the windows. The columns therefore, which form the skeleton structure of the outside walls were made to project on the outside of the walls instead of on the inside. As these columns grow smaller as they extend upward, the

natural form to give them was that of a buttress.

If one is not trying to invent a new style of architecture, the obvious thing to do at this stage of the design is to select that style which seems best suited for expressing the structure. As there was no reason structurally or otherwise for a large cornice or for carrying through strongly marked horizontal features and as the walls would be much more economically built by terminating them with a simple coping than with a cornice, the choice of a style naturally fell to the Gothic. While they had no industrial buildings such as big mail order houses in the Middle Ages, and while reinforced concrete was never even heard of, their buttress construction is correctly expressive of the construction of these buildings, the use of their wall copings are just as appropriate and their pointed arches just as applicable as round ones. This style of the Middle Ages was therefore employed and the result is Gothic architecture applied to a group of modern industrial buildings, or "Industrial Gothic," as some have applied the term.

In applying this style of architecture, no effort was made to find ready made features in old Gothic buildings and plaster them on wherever they would stick. On the contrary, an effort was made to mould the important parts of the buildings into shapes harmonious with this style, and to flavor the detail with a distinct feeling of modernity.

Terra cotta window sills and lintels (which had to be there for any kind of design), are employed in such a manner as to divide the building into pleasing proportions. Gothic tracery enriched with color is utilized in the terra cotta spandrels and entrance panels in such a way as to give interesting prominence to these features. The colors employed were gray for the tracery, blue for its openings or backgrounds, and dark grayish red for the brick.

In conclusion a brief description is given of the organization which operates this plant and the provisions for welfare work for the employees.

As soon as a decision was made to build this plant, work was started on selecting and building up an organization to run it. Shortly before the buildings were completed, about two hundred experienced men and women arrived from the other plants, mostly from the main plant at Chicago. These formed the nucleus of the new organization.

New employees were taken on as fast as they could be trained and assigned to their positions. The plant started to ship goods October 18, 1920, with about two thousand employees, a number materially increased by this date.

The welfare of the employees has always been given the most careful consideration by this firm at all of their plants. In an article in The Architectural Record for June, 1919, on the subject of "Employees' Welfare Work," a description was given of a decrease of fifty per cent. in labor turnover at the Chicago store of Sears, Roebuck & Co., attributed to the Personal Service work done there for their employees.

At the Philadelphia store the same policy has been pursued. The offices and working spaces are all well lighted and ventilated, and are in every case clean, attractive and sanitary places, well adapted for the work to be done. In the office building there is a restaurant and cafeteria supplied by a kitchen, up-to-date in all its equipment, where lunches of clean, wholesome food are served at cost price. There is a smoking room for men and a rest room for women, and also a piano and phonographs for entertainment and dancing.

On the first floor there is a completely equipped doctor's office with physicians and nurses in charge, which takes care not only of accidents and illness, but also carries on a system of examination and care of employees that endeavors to prevent sickness.

When the weather is favorable, employees are encouraged to seek the outdoors for their noon hour, where an athletic field is provided for outdoor sports, and where there are also pleasant walks among the flowers, shrubs and trees with which the grounds are landscaped.

Cigliano, San Casciano, Val Di Pesa

By

Harold Donaldson Eberlein

CIGLIANO, near the little town of San Casciano, overlooking the Val di Pesa, is a singularly striking example of the fifteenth century Tuscan villa in that it retains all the characteristic features of *cinquecento* villa life and, with one exception, has experienced no substantial change since about 1415.

Late in the Middle Ages it belonged to the Bondi, and how much of a dwelling then was there, or of exactly what sort it was, we have no means of knowing. After the Bondi the Guidetti had it, and after them the Cinelli, from whom it passed to the Marchesi Antinori, who have owned it since the fifteenth century and still occupy it.

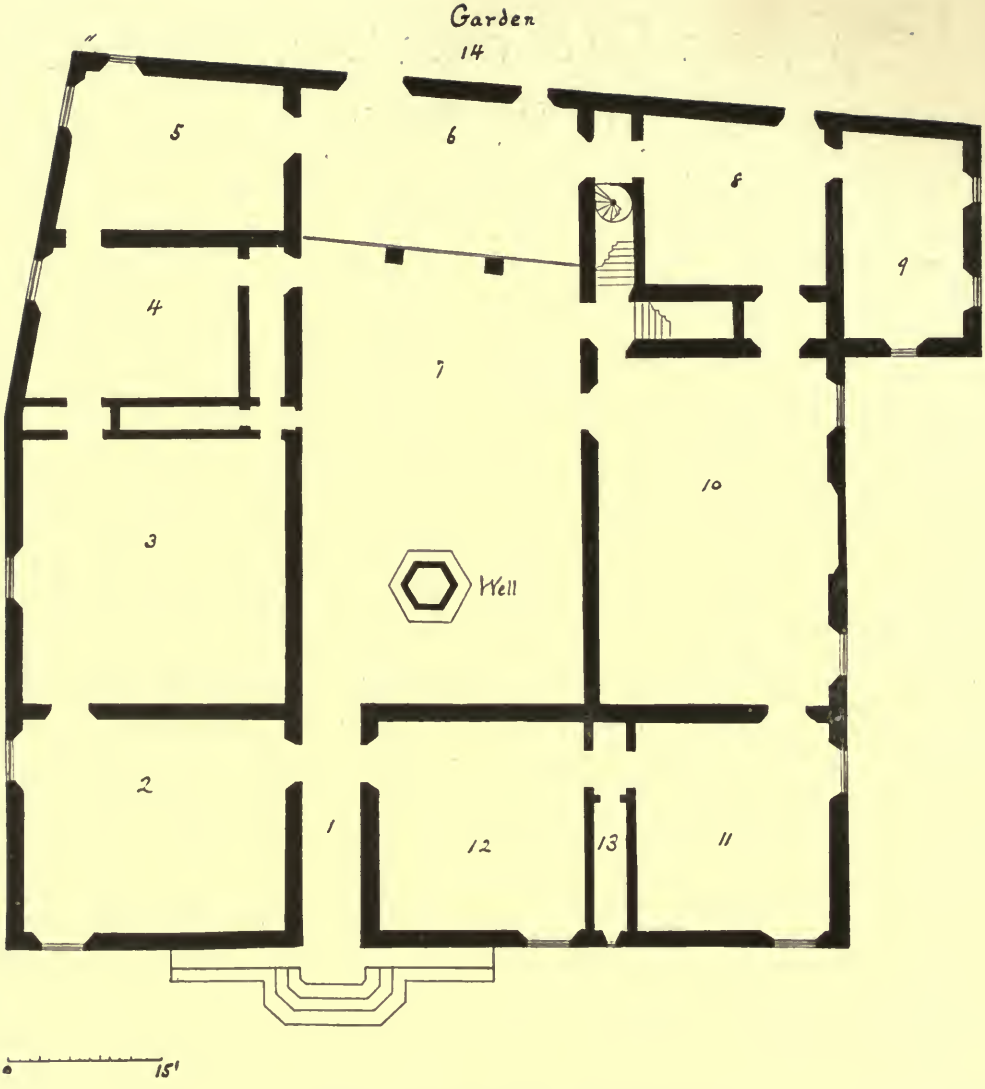
The change alluded to occurred in 1691, when the *limonaia,* or lemon house, which forms the southern boundary of the walled garden, had its façade adorned in the Baroque manner then in fashion. To balance this somewhat formal treatment of paneled and urn-topped walls, with Father Neptune, in a pebble and shell-encrusted niche, presiding over a fountain and the pool beyond, the garden front of the house was graced with a simple and unobtrusive Baroque pediment. Otherwise the villa retains its fifteenth century aspect intact.

From the *portone,* or house door, of the north front, flanked by a *panca,* or low stone bench at each side of the steps—always an indication of early work—a vaulted passage leads into the irregular quadrangle of the stone-paved *cortile.* Here is an ancient well-head and, on the south side, a triple-arched loggia. The polychrome maiolica roundels with armorial bearings, set in the wall above the pillars, are by Della Robbia. From one of the illustrations it can be seen that wires are so arranged that a canvas awning can be drawn across the whole *cortile* during the heat of the day.

The high-vaulted rooms on the ground floor are occupied by the family and also the first floor rooms on the garden front. The rest of the first floor is given over to the house servants and to some of the *contadini* who work on the immediately adjacent parts of the estate. This is quite according to the patriarchal, time-honered usage of the families who have always lived in their villas themselves, instead of renting them to others, and have preserved the traditional methods of household management, where everything is carried on under the immediate eye of the master.

At the west side, where the ground slopes abruptly away, is the great, vaulted *cantina* or store house, under the ground floor, where the oil and wine and other produce of the farm are put away. The stuccoed walls of the house are of that indescribable "Tuscan villa color" which is by turns grey, brown, buff or salmon, according to the light that falls upon it. The shutters are painted green and the window and door trims are of the customary *pietra serena.*

About seventy years ago the ancient geometrical lay-out of the garden gave place to the asymmetrical arrangement of a *giardino Inglese.* Nevertheless, the great pool, the walls, and the ingenious simplicity of garden practice, where rose beds are edged with strawberry plants and espaliered fruit trees grow against the side of the house, maintain the true Tuscan character of the enclosure, which constantly serves as a veritable outdoor living room for the family.



CIGLIANO, SAN CASCIANO, VAL DI PESA.

KEY TO PLAN:

1. Hallway
2. Study
3. Bedroom
4. Bedroom
5. Sitting Room
6. Loggia
7. Cortile—7a. Well in Cortile
8. Dining Room
9. Boudoir
10. Drawing Room
11. Bedroom
12. Bedroom
13. Bathroom
14. Garden

NORTH FRONT—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

PORTONE—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

NORTH FRONT — CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

WINDOW IN LOGGIA—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

LOGGIA IN CORTILE—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

CORTILE AND ENTRANCE—CIGLIANO,
SAN CASCIANO, VAL DI PESA, ITALY.

SOUTH FRONT — CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

GARDEN DOOR (FROM WITHOUT)—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

WEST VIEW — CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

FOUNTAIN IN WALL OF LEMON HOUSE—CIGLIANO, SAN CASCIANO, VAL DI PESA, ITALY.

POOL AND LEMON HOUSE—CIGLIANO,
SAN CASCIANO, VAL DI PESA, ITALY.

MANTELPIFCE IN UPSALA MANSION, GERMANTOWN, 1798.

The EARLY ARCHITECTURE of PENNSYLVANIA

PART IX - MANTELPIECES (Continued)

By A. LAWRENCE KOCHER

THE eighteenth century in Pennsylvania was essentially a period of wood craftsmanship, for it produced a domestic architecture which was adorned by the wood worker. This era witnessed the development of a group of joiners who were specialists in a branch or a detached phase of carpentry. The particular triumphs of these joiners consist of staircases, paneled and pilastered walls, and the chimneypiece. The chimneypiece was so inseparable a part of the domestic architecture that it is to be expected that an unusual and fond attention would be lavished upon it.

The mantel was notable for the variety of its design and for the uniform skill displayed in its workmanship. The remarkable variety of the form displays a fertility of imagination and a wealth of invention only possible when the fundamentals of an art are thoroughly understood and freely interpreted. It is, indeed, a very rare occurrence to find the same motive recurring in several instances, or even duplicated. The factory idea, involving quantity production of certain acceptable stock designs,—of doing the same thing over and over again,—did not appeal to the wood worker of the day. Having attained a success in the production of a mantelpiece, he treated it as the true artist does a picture. He avoided its repetition. Even in homes where there were eight or more hearths it is quite apparent that variety was held to be an unvarying requisite.

For instance, a glance at the examples of mantels illustrated in this issue will disclose a striking similarity within certain groups, but there is always a refreshing variety and an originality in the shaping of moldings and in the treatment of the enrichment.

It is by examining one of the subdivisions of architecture such as this, that we come nearest to discovering the mind of the builder. A sense of order and good proportion were his above all else; no detail was too minute to be given careful consideration; he left nothing to chance. He followed his rules of proportion, but always with a reservation,—for the precepts of handbooks were not accepted without question or interpretation. The system under which the artisan worked made invention possible and gave freedom to his efforts. In other words, he was not bound to a set of inflexible working drawings which hampered individual expression.

Quite different is our office system today! We now arrive at what we deem good proportion in the process of preparing preliminary sketches. Practically all decisions are reached indoors,—over the drawing boards. The shapes and sizes are fixed by full size details and by dimensioned drawings which are deliberated upon as detached parts. We separately consider a cornice, a doorway or a fragment of ornamentation. Our mistake is made in not reserving many of our conclusions until the time when these parts are erected, and then taking advantage of the action of the imagination under the stimulus of the actual setting.

The skeleton drawings which Andrew Hamilton prepared for the Old State House of Philadelphia were decidedly incomplete and left much to be determined upon at the time of the actual construction. It was in this manner, we are led to believe, that much of the worth while architecture of the Middle Ages and of the Renaissance was undertaken. It was Inigo Jones' custom to make a sketch, to which he appended the proportions of the design in writing at the side;

but he also supplemented this by revisions and additions as the building progressed. The deceptive quality of the rendered drawing was not known in his day and age; or, if known, its shortcomings were understood and consequently avoided.

Perhaps the air of distinction which pervades much early work may be accounted for by this method of building. It certainly added to the spontaneity of the style and made the architecture less self-conscious than the creations of our offices today.

The chimneypiece in the early American colony was characterized by a decided soberness and an independence of treatment and by an almost complete absence of color. With all the apparent leanings toward Vitruvius and Palladio, there is little to convince one that the chimneypiece was influenced by the classical past. It is only in the free and reminiscent usages of cornice, frieze and pilaster that we can detect an understanding of the canons of columnar architecture.

A country that is young might be expected to reveal some little barbarity in the matter of color, but, curiously enough, no such philistine lapse occurred in America. Color in interior wood decoration was eschewed as though by Puritanical or other religious precept. Perhaps this avoidance of color may be accounted for by a realization of youth and a fear of incurring the ridicule of the critical mother countries.

There are exceptions, to be sure. Instances where color was applied to wood are occasionally found, as at Linden Hall Tavern with its mantels and woodwork painted in a shade of grey-green. Blue tiles with biblical or conventional designs occur as fireplace borders in the districts settled by the "Pennsylvania Dutch," and there is an occasional bold contrast of material and hue revealed in the adoption

MANTELPIECE ON FIRST FLOOR OF SIR WILLIAM KEITH MANSION, GRAEME PARK, MONTGOMERY COUNTY.

BEDROOM FIREPLACE, CHESTNUT HILL, PHILADELPHIA.
Photo by Ph. B. Wallace.

of warm red mahogany for doors, wainscot caps and stair rails in conjunction with white woodwork.

There are several causes for the popularity of the low mantel during the latter half of the eighteenth century. The first was the tide of economy that swept over the colony as the despised English taxation increased; the second was the presence of shops of the building gild in Philadelphia which specialized in the manufacture and sale of the small mantel; third, the growing choice of lower ceilings; fourth, the decline in the fashion which favored paneled walls.

The earliest of the small mantels were little more than assemblages of moldings which framed the fireplace. The mantel shelf was absent in the opening years of the century, and when it appeared it consisted of a narrow ledge supported by a group of bed molds, as at Old Valley Inn in York County; or it assumed the restrained appearance of the Lancaster example.

The specimen illustrated from the mansion of Sir William Keith at Graeme Park, Horsham, is very evidently not so old as the construction of the walls, which were reared in 1721-22. The reason for this supposition arises from the moldings, which are considerably lighter and greater in number than the robust membering which occurs elsewhere in this house. It is also quite different from the other mantels and has the characteristic shelf of the late century with the projecting center and ends, designed to receive the garniture of candlesticks and shelf-clock.

MANTELPIECE IN L. D. WITHINGTON HOUSE, 136 QUEEN STREET, NORTHUMBERLAND.

MANTELPIECE ON SECOND FLOOR OF "THE DUST PAN," BETHLEHEM PIKE.

MANTELPIECE IN A HOUSE NEAR LANCASTER.

MANTELPIECE ON THIRD FLOOR OF HOUSE AT 313 PINE STREET, PHILADELPHIA.
Photo by Ph. B. Wallace.

Before the Revolution a new fashion was introduced in the way of enrichment. Pilasters and projecting surfaces beneath the shelf were given interest by means of an overlay of patterned and incised cutting. The art of adorning surfaces with gouge work was evidently dear to the hearts of the Colonial joiner, for the idea was quickly developed and spread rapidly until mantel surfaces were covered with extensive interlacing ornament, occasionally diversified by carved rosettes, pierced decoration and oval spider web motives.

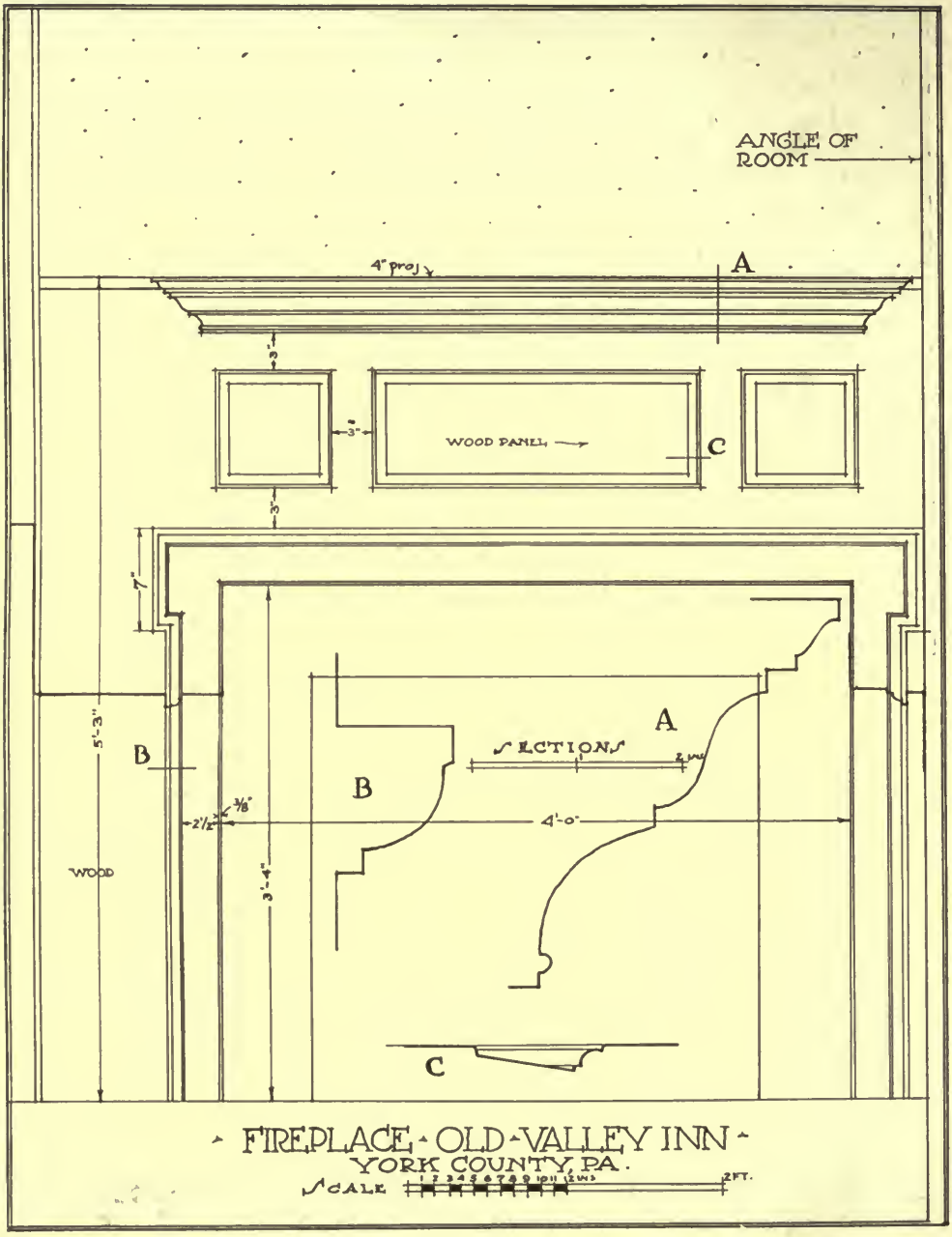
The simplest expression of this tendency can be seen in the examples from the third floor bed room of the dwelling at 313 Pine Street, Philadelphia, and the rather similar bed room fireplace at Chestnut Hill, Philadelphia. In both these cases pilasters were omitted for the sake of simplicity. In both the mantel shelf is broken by a very scant projection, beneath which occur the enriched supports. The shy beauty and charm of the two examples is made eloquent by the quiet restraint with which the ornament is used.

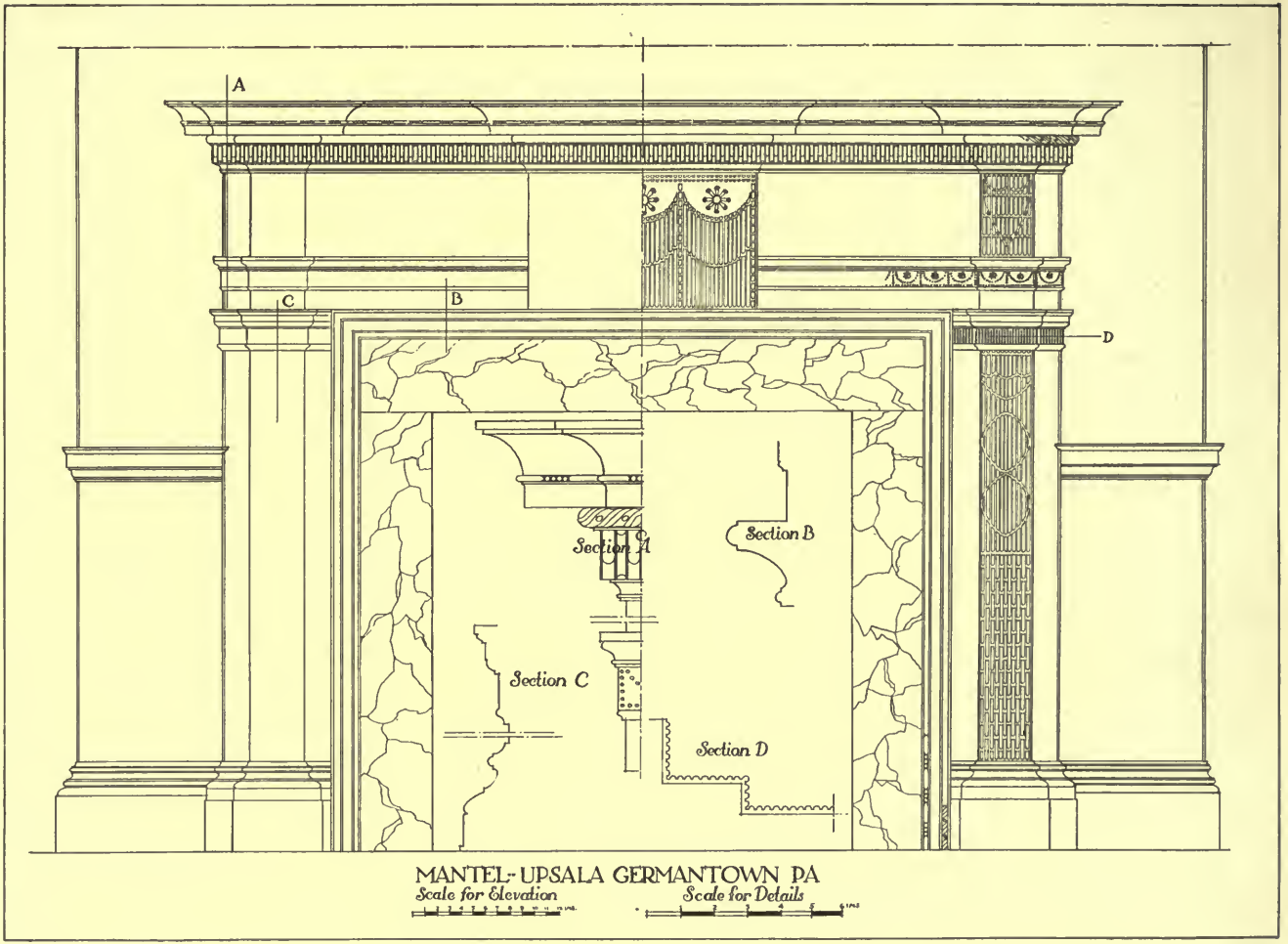
DETAIL OF MANTELPIECE FROM A HOUSE NEAR MECHANICSBURG.

The mantel in the Withington House at 136 Queen Street, Northumberland, has flanking supports and an elementary version of the gouge cutting. The conventionalized cobweb in an oval setting is carved in intaglio and in this small scale is not unpleasing. This ornament

MANTELPIECE IN CARLISLE.

MANTELPIECE IN H. S. LINN HOUSE, NORTH ALLEGHENY STREET, BELLEFONTE.

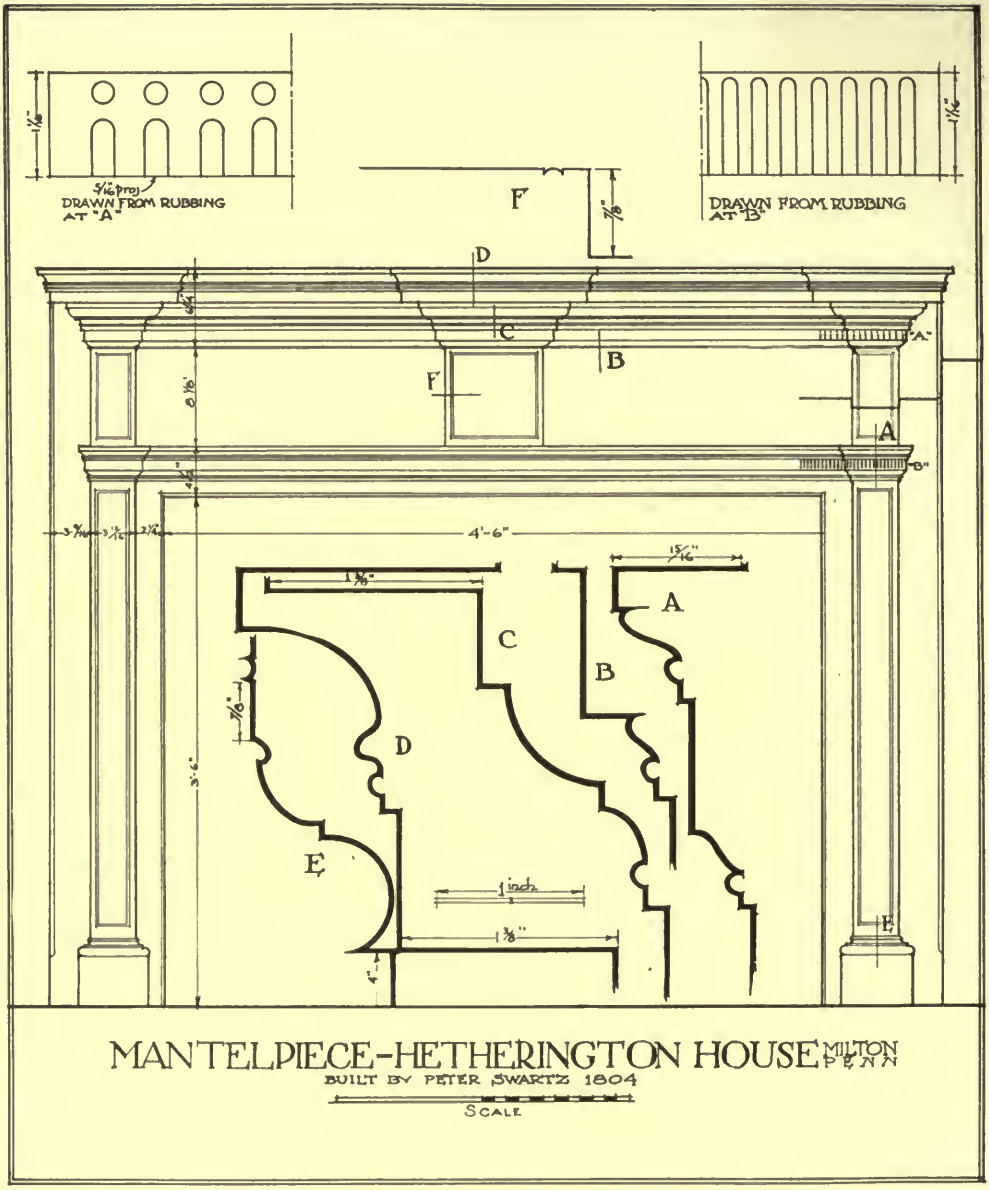

ANGLE OF ROOM
4" proj.
A
WOOD PANEL
C
7"
5'-3"
B
WOOD
3'-4"
2½"
⅜"
SECTIONS
A
B
4'-0"
C
FIREPLACE - OLD VALLEY INN -
YORK COUNTY, PA.
SCALE
2FT.



MANTEL - UPSALA GERMANTOWN PA

Scale for Elevation

Scale for Details


DRAWN FROM RUBBING AT "A"
DRAWN FROM RUBBING AT "B"
F
D
C
B
A
4'-6"
1 inch
MANTELPIECE-HETHERINGTON HOUSE MILTON PENN
BUILT BY PETER SWARTZ 1804
SCALE

MANTELPIECE IN HETHERINGTON HOUSE, MILTON. BUILT BY PETER SWARTZ, 1804.

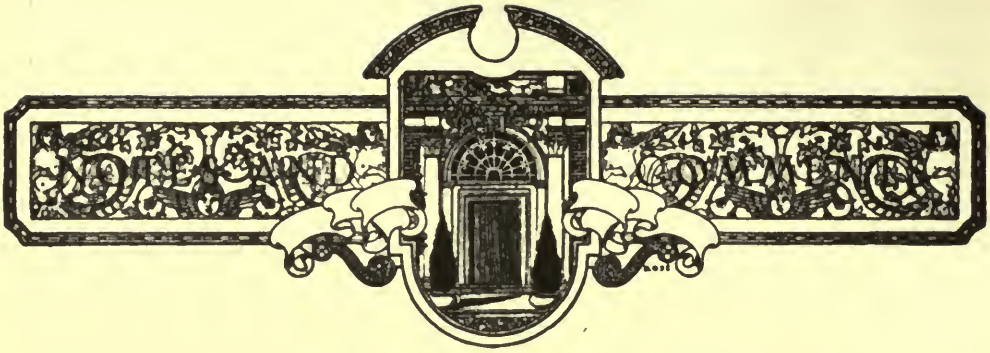
was destined to have a long run in the later Adam phase and again in the unguided Victorian period.

The two mantels illustrated from the Upsala mansion in Germantown are undoubtedly the finest examples of the incised mode. The exuberant richness shows some excellent elements of design, and we welcome the originality of the textured surface. The character of the adornment is well suited to the nature of wood—which is more than can be said of the applications of stucco by the mantel makers, who were soon to come under the influence of the American version of the Adam style. The manner in which the tooled cutting repeats the vertical lines of the pilasters is particularly fine and adds to the coherence of the ensemble. It is entirely possible that this peculiarly local enrichment was suggested to the craftsman by the traditional fluting of the supports and with experiment it assumed the distinctive quality that we see here.

The specimen from the Bethlehem Turnpike, known by the homely name of "The Dust Pan," offers a chimneypiece so closely resembling the two examples just considered as to make it appear highly probable that the group was from the same shop.

In addition to those just described, there are many others which closely correspond in shapes, but are diversified in detail by each designer's fancy. In most there is the same use of pilaster and entablature, the same general proportion of outline. All have a correctness and sense of tradition. In spite of this superficial family resemblance, there are no two that are alike in molding, ornament or proportion.

From this time onward there were two traditions followed by the succeeding mantel builders; that of the Adam brothers and that of the late Georgian group, the one continuing the local American methods, and the other the newer classical fashion. The golden age of true craftsmanship is over and workmanship henceforth is to be subordinated to the ends of ornament.



Architecture and Its New Obligations.

The Joint Legislative Committee of New York, headed by Senator Lockwood, deserves the thanks of the building industry for checking dishonest practices. It is to be regretted that the industry itself did not put an end to these, instead of leaving the task to officials; for the whole point of the investigation is that on everyone concerned in building rests the responsibility for keeping the household in order. The architect may well take part in keeping the premises clean.

Besides the need of safeguarding the integrity of building, and keeping it safeguarded, is the more immediate task of restoring the public's confidence in building. The prestige of the industry is, for the moment, shaken; and something more than unreasoned optimism or advice that all is cured and that the past should be forgotten, may be required. People will be intensely critical of results. They will demand both honesty and economy. It is, therefore, necessary that the building world set itself strongly against blackmail and graft, and also against reckless speculation or irresponsibility which will increase costs.

Fluctuations in prices are one of the greatest causes of loss to all concerned in building. Particularly unfortunate is the custom of raising prices as soon as the demand for building begins in the spring. This forces out of the market many investors who would otherwise build later in the year, and thus really acts to increase the seasonal character of building. As far as possible, late Summer and early Fall building should be encouraged, because the structures begun at that time and roofed over before cold weather sets in allow activity in many trades to be carried on under cover through the winter, thus lengthening the building year.

Policies such as these are needed to gain the best results in building, and they should be put into play at once in order to aid in overcoming the timidity of the investor.

Furthermore, the present time, being one of slackness in industry, is for that very reason apt to be an economical time for building. Finance, materials, transportation and labor—the four great factors in building costs—are all most favorable to economy. Costly delays during construction are then most easily avoided.

In this work of stabilizing conditions in building, the architect may take a share. He should be prominent in meeting the immediate need of reconciling the public. As the professional man, the one most disinterested figure in the building world, his reputation has not been tarnished in the investigation.

But more than that, when the future is thought of, the architect may well feel that a promising era opens up before him. Never were the times more favorable for architecture than they are now. For architecture, one of the youngest of the professions in the United States, after an uninterruped growth of thirty years, is now reaching maturity. It has revolutionized the design of buildings. Is there a single type of building which the architect has not completely made over, infinitely better planned, more economical, and more beautiful?

The architect will always have a monopoly of designing buildings, for the reason that his training enables him to think flexibly in three dimensions, thus creating the solid geometry of buildings. This ability to think in terms of geometry is what makes him successful in the practical design of buildings, and it also makes him an artist. Because in the measure in which an archi-

tect is able to think freely and accurately in three dimensions, he necessarily seeks form and style and finish; and this brings art into design. The very power which enables him to improve the design of a building in all practical respects is the power that makes him an artist. Hence, the profound error of the occasional advice that the architect should concern himself with construction and engineering and ignore art. These, however necessary, are only means to an end, and to disparage the artistic side of architecture is to stifle those qualities of imagination and initiative on which success in any field depends.

His ability in solid geometry has brought the architect in thirty years up the long road of progress which he has climbed; and now he has only to make his knowledge more secure and his interest wider, in order to make far greater progress than ever before. His object should be to strengthen his professional position and his business and administrative experience.

One of the finest advantages of the architect is his rôle as a professional man. Everything should be done to strengthen this advantage, which now is well recognized even in a legal way. Registration is an aid, but it would be better, I think, if the registration laws embodied more strongly the counter-obligation which rests upon the architect of absolute fidelity to the highest standards of professional practice. The architect obtains from the state a monopoly on the ground of disinterested public service, and if he violates the bargain, he should be disbarred. A seriously unprofessional act should end his career as an architect. In this way, the legal value of the architect's certificate would be strengthened, as well as the confidence in him of both public and builder.

Besides this need of strengthening his professional position, nothing will better serve the interests of the profession than increased knowledge of economics and of business methods. In economics, the architect's training—especially the mathematical part of it—should help him to grasp its principles. He should be at an advantage here, because it is recognized that economics is one of the chief needs of American business. The modern world is becoming so complex that success in it depends on being able to understand general economic conditions as well as the factors in one's own particular field.

It is, however, in the matter of business and administrative methods that so much improvement still is possible in architecture. Here architects may learn much from what the leaders of the profession are doing—how architects have gained economies in every type of structure by cutting down space and through more intensive use of the space. Such achievements can now be set forth in terms of dollars and cents in some types of buildings, and the demonstration should be carried into all other types. For instance, in low priced apartments, Allan Robinson, president of the City and Suburban Homes Company, has shown that the newest type of tenement house designed by Andrew J. Thomas can be rented about 19 per cent. cheaper than the very best of the pre-war types. In such a calculation every item of cost and of operation is determined. Could a demonstration of the usefulness of an architect's services be carried further?

Instances could be cited of the efficiency and economy gained by the architect in other types of buildings. The system of office administration and accounting in John Russell Pope's office is in many ways a model. The growing practice of letting contracts direct to sub-contractors, when done discriminatingly by the architect, insures a very considerable saving; this practice has the further merit of simplifying the complicated process of building, of allowing the architect to come into more intimate touch with building conditions, and of procuring co-operation from the sub-contractors. Finally, substantial economies are to be gained through direct cash purchasing by the architect for the client.

But, it may be argued, where will the architect find time to perform all these functions on a small commission? Such a question cannot be easily answered in all cases. One may say, however, that when an architect is able to demonstrate the business value of his services he is better able to claim a larger fee. He may gain also in another way. Formerly an architect spent much time on research into construction—on specifications, and on engineering and mechanical services, such as heating, lighting, etc.; but now these are becoming so well standardized that they are in large part reduced to routine in most kinds of buildings and require administration rather than design, which consumes so much effort.

Thus, architecture seems to stand on the threshold of a brilliant future. It has now the experience—with some perfecting still necessary—to claim its rightful part in

American life. A place stands ready for it. Today the architect's services are demanded in every field of construction, even in those fields hitherto denied him. His progress has been from the top down, from the more monumental types of buildings, public or commercial, to the commoner forms; and since the war he is entering into all kinds of housing, to its vast improvement in every respect. Formerly architecture may have been classed as a luxury; now it is a necessity. The urgent need of today is better homes, in better and more efficient towns and cities. Rising land values, creating congestion, are choking the towns; if their complexity is not controlled and simplified, their economic as well as social value is threatened. In New York City motor traffic has doubled since the armistice. This makes business hard to transact, and the social value of homes is threatened. The medical profession warns of impairment of public health, and the psychologist explains the havoc to childhood whose instincts are thwarted when deprived by the automobile of even its old makeshift playground, the street. True, this condition is not widespread, but it is growing everywhere, with nothing done to offset it.

The world has for generations been struggling to solve the problem of city life under industrial and mechanical conditions. One by one it has called in the professions to the task. The lawyer, then the engineer, and more lately the physician, with his principles of sanitation and public health, has each done his share. But now it seems clear that the final solution is in buildings and neighborhoods—in planning. This is the field of the architect and his allies, and the world now must depend on him to provide the technical solution of the modern city. The older classes of buildings and the older forms of towns and cities and neighborhoods no longer avail. They are some of the last relics of our pioneer period of history—the period of hit-or-miss, of rule-of-thumb, of quantity production. We are passing into a time of intensive economics, of more thorough cultivation, of quality, and a richer life. The need of finer homes and cities is the first condition of this new time, and this need it is the duty of the architect to supply.

JOHN TAYLOR BOYD, JR.

THE ARCHITECTURAL RECORD:

In your June issue I am credited on pages 470 and 471 with some work at 634 Fifth Avenue. A few weeks ago I had a telephone call from your office inquiring if I was the architect for the building at 634 Fifth Avenue. I replied that I was, which is correct. I find, however, that I am credited with the shop front of T. Kirkpatrick & Co. This front was constructed, probably by the tenant, after the building had been completed by me and is no doubt the work of some other architect, whose name I do not know. I regret that he should not have received the proper credit and hope you will set me right should you hear from him.

GEORGE PROVOT.

THE ARCHITECTURAL RECORD:

You are in error in naming Mr. George Provot as architect for the Kirkpatrick Jewelry Store, pictured on pages 470 and 471 of the June issue. This work was designed by myself and Mr. Moscowitz (firm name, Berlinger & Moscowitz).

J. M. BERLINGER.

THE ARCHITECTURAL RECORD:

In your June issue, on page 473, you show a shop on Fifth Avenue, with Horace Ginsberg as architect. This firm were the architects for this store front and interior alterations to the store.

HELMLE AND CORBETT.