

SCIENTIFIC AMERICAN

Building Monthly.

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THE TERRACE—HOUSE OF E. J. BERWIND, ESQ., NEWPORT, R. I.—See page 69.
MR. HORACE TRUMBAUER, ARCHITECT.

SCIENTIFIC AMERICAN BUILDING MONTHLY

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*. The engravings presented in this issue are made from photographs taken specially for the SCIENTIFIC AMERICAN BUILDING MONTHLY.

MONTHLY COMMENT.

THERE are, of course, many differences between American and foreign cities, but perhaps the most notable one is the charm that many of the old buildings of the older cities of England and the Continent have, as compared with the general monotony and lack of charm in our American cities. So far as monotony is concerned, it is but fair to point out the palm is certainly borne by the newer European towns. Nothing more deadly than some of the newly built quarters of the smaller French cities can be imagined; unless it is some small Western American towns where such a person as an architect is quite unknown. The presence of architects and their works does not, unfortunately, mean the gift of charm to the communities benefited by their presence; but if an architect has taste and skill, it is entirely his own fault if he does not produce some buildings of interest.

But the interest of the old buildings of Europe is something quite apart and distinctive. It is something which the greatest skill of to-day can not reproduce. It is the refining touch of age, which men can not manufacture, and which is acquired so slowly that no living man can hope to see his contemporary buildings so improved. Time softens ornament, it rubs down rough edges, it darkens high colors, it beautifies even uninteresting buildings exactly as age gives dignity to men and women. We have far too little of this in our land, where the march of events is so rapid that the old structures must make way for new ones, and where even new buildings have newer successors within astonishingly brief intervals of time. Modern ingenuity has produced many counterfeits of old works of art, but it has not yet undertaken to make a new building look old. It is at least certain that if we are to have beautiful buildings they must be beautiful from the very beginning; we simply can not wait for them to grow beautiful through age. And it some-

times seems that the very greatest age will never give beauty to many modern structures.

THE past winter is likely to stand as a notable one in matters of fire; the records do not show a severer season, and no one can wish a worse one. The horrible catastrophe of the Iroquois Theater fire in Chicago was alone sufficiently terrible to make the winter a memorable one; but the later fires in Baltimore and Rochester, the many large buildings which have been destroyed by the same agency in various parts of the country, make up a sum total that is truly formidable. One fact stands out firmly in all these catastrophes, and that is the superiority of modern building methods as exemplified in fireproof construction. No one maintains that that system is absolutely proof against fires of all sorts and intensities; it is simply the best we can do, and that that best is often excellent has now, unfortunately, been abundantly demonstrated.

SHALL the architect always follow the instructions of his client if they are compatible with the laws of nature and the possibility of building? The question is a nice one. A literal adherence to instructions may involve the architect in an effort to accomplish the impossible; moreover, the result, when completed, may be something quite unsatisfactory to the client. If the architect produce his instructions in reply to such fault finding, he is apt to be told that he should have known better. No doubt he should, but how is he to know that the client, after positively insisting on a particular line of action, had no idea of the results which would follow and really did not mean what he said? This is one of the most difficult matters the architect has to face, and it would seem that no positive rule can be laid down either way. The trouble, should it arise, rests on the client's own knowledge or lack of knowledge. It is a difficulty that can only be remedied by an increased faith on the part of the client in the architect and his ability.

THE value of lead as an architectural material was brought before an English architectural association not long since, and the speaker's hearers forcibly reminded of the great beauty and utility of this long neglected material in building. The use of lead for decorative purposes is, indeed, very ancient. Modern builders have seldom used it, although it succumbs to fire alone.

THE HOUSE OF THE FUTURE.

HOUSES undeniably have a past, and one need be no prophet to maintain that they will have a future. The past of the house is not an interesting subject to the living present; the modern householder is not at all concerned with the sort of houses his forefathers lived in; his single interest in houses, if he has any interest in them at all, is that he shall have the best he can, and all the rest of the world may go hang.

It is an unreasonable modern view, a narrow, self-centered standpoint which does no one so much discredit as the very person putting it forth. The comforts the modern householder has, the superiority of his home to that of his father—unless he be a very young man—has been obtained only through many years of progress. The old house may have no comforts as we moderns understand them, but this very absence of comforts, this want of conveniences, has been the making of the modern house.

The advantages of the modern house may be very briefly epitomized. They may be summed up in two words, "better sanitation." The old house may have had smaller rooms, but at least they were ample for their purposes. Literally they were smaller in every sense; windows were smaller, doors were smaller, ceilings were lower, dimensions were more cramped. But no one realized this. Not to go beyond the architectural history of the United States, it is apparent that, when occasion arose, large houses, quite comparable to the large house of to-day, were built, for examples are still standing. But the average house, the house of the average citizen, was distinctly unpretentious, but quite complete and sufficient as standards were understood.

The house of to-day is, of course, a very different structure from the house of a hundred years since. In some respects it is better; in some respects it is not so good. The chances are it is not so well built. It is a positive fact that it abounds, in every part, with machine made materials, with machine made ornaments, with flimsy decorations, with cheap workmanship, and with rapid building. But all these faults, in a certain sense, are offset and covered up by the vast betterments known as improved sanitation. The cemented cellar, the water pipes, the stationary range, the permanent supply of hot water, the bathroom, all these are the gifts of modern science to the betterment of the home.

That these betterments, in their turn, are not always well used, that modern plumbing is often defective, that modern heating appliances have a remarkable ap-

titude for getting out of repair, does not lessen the general value of these appliances, nor does it diminish the general fact that the modern house has improvements, betterments, conveniences, and devices that the old house knew nothing of, and the absence of which makes the old house, with all its gentle grace of refined old age, ill suited to modern needs.

So far as artistic expression is concerned, that is an entirely different question. Here is a subject on which there is ample room for debate. The old house is almost certain to have a character and charm of its own which comes from old age and from nothing else. The newest houses, even of the most splendid art, can not compete with this. Many new houses are of unquestioned interest and beauty, but it would be a fruitless task to argue which were the more beautiful, the old houses or the new. This, at least, may be said, that the average house of to-day is certainly esthetically in advance of the average house of twenty-five years since—of forty years ago; perhaps, of even longer time. We have at least moved on from fifty years ago in the matter of design; whether we have improved on a hundred years since is clearly open for discussion.

Meanwhile it must be apparent that the modern house is but a milestone in future progress. The time is not far distant when progress in house building, in design, in equipment, and in construction, seemed at a standstill. That, happily, belongs to the past. The importance of the house as an aid to life and as a help to civilization is now universally recognized. Vast industries have grown up in household equipment; great interests are concerned with household betterment; science and art have joined hands in making the modern house a safe and beautiful structure. And if science has predominated in this work, it has been because the temperament of the age is scientific rather than esthetic.

The best of modern houses, therefore, are but steps in an evolution whose end we can not see. So persistent is house betterment that the house of to-day becomes the house of yesterday the moment its new neighbor is erected. The most prodigal expenditure is apt, in a few years, to find itself behind the times. A few years ago a mammoth hotel was built in New York at a cost never before approached. Every possible refinement of art and science was lavished upon it, and the world went agape to view it. Ten years later this modern wonder found itself without certain equipments that many less splendid and much less pretentious structures had as a matter of course.

The progress in private houses has been scarcely less marked. More and more things are added, newer devices introduced, new conveniences provided, and modern ingenuity apparently exhausted until the next house is built, when something newer still is provided. The steps of progress and of newness may not always be rapid, they may not always be needed, but they point the way to the furtherance of architectural ingenuity and the possibility of a new type of dwellings.

Some English architects have recently considered this very interesting question of the future of the house. The discussion proceeded more on the question of style than of utility, as though style had anything to do with the betterment of household living. The form and frame of the house, the style of its architecture, the expression of its nature, are quite of the smallest interest compared with the helps that science has contributed toward house betterment.

On the question of style there is much to be said. A survey of architecture for the past hundred years would show a veritable medley of styles, some having a few years' duration, some limited to the work of a single practitioner, some coming in only that they might quickly go out. Styles in houses have changed, not quite so rapidly as styles in dress, but they have changed so frequently that a comparison between the two is not wholly grotesque.

It is interesting to note that of the various persons concerned in this recent discussion only one, and he not an architect, seriously considered what the future of the modern house may actually become. This was Mr. H. G. Wells, the novelist whose prophetic stories have had so considerable a vogue. "The Twentieth-Century House," he thought, possibly, will have no chimneys (electric heating superseding the coal fire); while the shafts for the admission of air to the rooms will offer scope for the metal designer, and the emergence of the shaft on the roof will be made an architectural feature, which will also result in windows being no longer needed for ventilation, so that they may be of any shape and in any position; all corners of rooms will be rounded, and walls will be of tubing and plaster; finally the architect will be called upon to design "a wide forest of buildings in which many families may live, and which will contain a common restaurant and trattoria, a common infants' school, club apartments, and the like."

This is an interesting speculation, but hardly a pleasant one to look forward to realizing.

TALKS ON ARCHITECTURE

BY BARR FERREE.

MR. HORACE TRUMBauer AND THE BERWIND HOUSE
AT NEWPORT, R. I.

IT is no small distinction to become architect-in-chief to the rich people of Philadelphia. The true Philadelphian will, perhaps, maintain that that is something quite different from being architect to the old families of Philadelphia. This is probably true; but against this may be set the fact that, whether new or old, it is the present rich who are doing the most to redeem the dulness of Philadelphia's aristocratic architecture, who are giving new life and variety to the staid old town, and are doing their utmost to transform it into a capital of evident activities. It is a distinction to have helped in giving visible expression to the new life of the old Quaker City, and that is, and will always be, perhaps, the chief distinction of Mr. Horace Trumbauer, architect, of Philadelphia, and the designer of some of the more pretentious houses built in and around Philadelphia within the last decade, and houses

such architectural qualities exist, and, neither knowing nor caring, are quite incapable of demanding them.

It is not, however, to Mr. Trumbauer's discredit that he has not turned out masterpieces of building; it is very much more to the point that he has built a number of splendid stately houses, sumptuous in execution, impressive in appearance, and—for the abundance of his work establishes the fact—eminently satisfactory to his clients. Although rightly classed among the "young architects" of Philadelphia, his work has already enjoyed considerable geographical distribution, and he can point with just pride to a number of stately buildings erected elsewhere than in the immediate vicinity of his own city.

The residence of E. J. Berwind, Esq., at Newport, R. I., is a case in point. Newport is nothing if not sumptuous, and that it is very gay and the resort of the very rich are facts too patent to need rehearsal in this place. Newport requires and demands wealth as its chief essential. The doings of the rich elsewhere are carefully chronicled as matters of supposedly public interest; the influence of the wealthy on the social

has given it its modern vogue; which has raised the price of its real estate to unheard of values, and which has led to the erection of some of the most pretentious of American country houses. Country houses they are, and veritable villas, buildings erected with all the conveniences, appliances, comforts, and qualifications of a city mansion, and equally well endowed with all the paraphernalia of country living. And all this great building enterprise is for pleasure. People do not visit Newport for serious work, for study, for business, but for sheer delight, for the passing of a pleasant season, and for a form of recreation that differs, in many respects, from the recreations of other seasons and places.

I know of nothing that compares so directly with Newport as Versailles in its splendor under Louis XIV. It is true, Versailles was a single palace, built by a despotic monarch for his own delight, and Newport is an aggregation of palaces, built, not by despots, but by free American citizens. But the palace of Versailles was a vast architectural background for court fêtes and festivities of all sorts. Just so the palaces of Newport are architectural backgrounds for the pleasures



THE HALL—HOUSE OF E. J. BERWIND, ESQ., NEWPORT, R. I.

built elsewhere through Philadelphia influence, precept, and advice.

It is an interesting circumstance that much, if not the larger part, of Mr. Trumbauer's work has been the building of great houses for wealthy clients. A more delightful task never fell to the lot of any architect, either in Philadelphia or elsewhere. And Mr. Trumbauer has been especially fortunate in having had commissions of the very largest size, sumptuous palaces, built, apparently, regardless of cost, environed in spacious and splendid grounds, and furnished within with all the grandeur of gorgeous furnishings. One such commission would have made the name and fortune of many an architect. What can be said of the man who has had a dozen or more such commissions?

It is quite natural that work inspired by such conditions should have a very decided quality of splendor. The architecture may not always rise to the utmost heights, as, indeed, little of modern architecture does; it may not be inspiring, suggestive, or helpful; but these are the refinements of requirements that scarce any modern architect lives up to, requirements of so high a degree that few modern clients know or care

and intellectual life of every community is well known; but in Newport alone is its presence and possession frankly required as a means of admission to the select circle which rules its social fortunes. Architecturally, therefore, Newport stands quite alone and apart from other communities in the United States.

One other characteristic needs to be mentioned, and that is the heterogeneous character of the Newport population. Every community has its own special life and character, even though these distinctions are not heavily marked. But Newport is a community of communities; it is the one place of resort of all the rich people of all the country. If New Yorkers predominate there, it is only because there are more wealthy people in New York to find recreation within its limits, and not because it is a resort for New Yorkers. Doubtless people of good breeding are the same everywhere, and Newport is, undoubtedly, a veritable well of good manners; but the fact that its inhabitants come from everywhere emphasizes the more its special character and brings out more clearly the fact that it is a community of wealth.

And it is also a community of pleasure. It is this which

and sports of its inhabitants. The scale is different, the time, the place, the manners, but the architectural meaning of both places is identical.

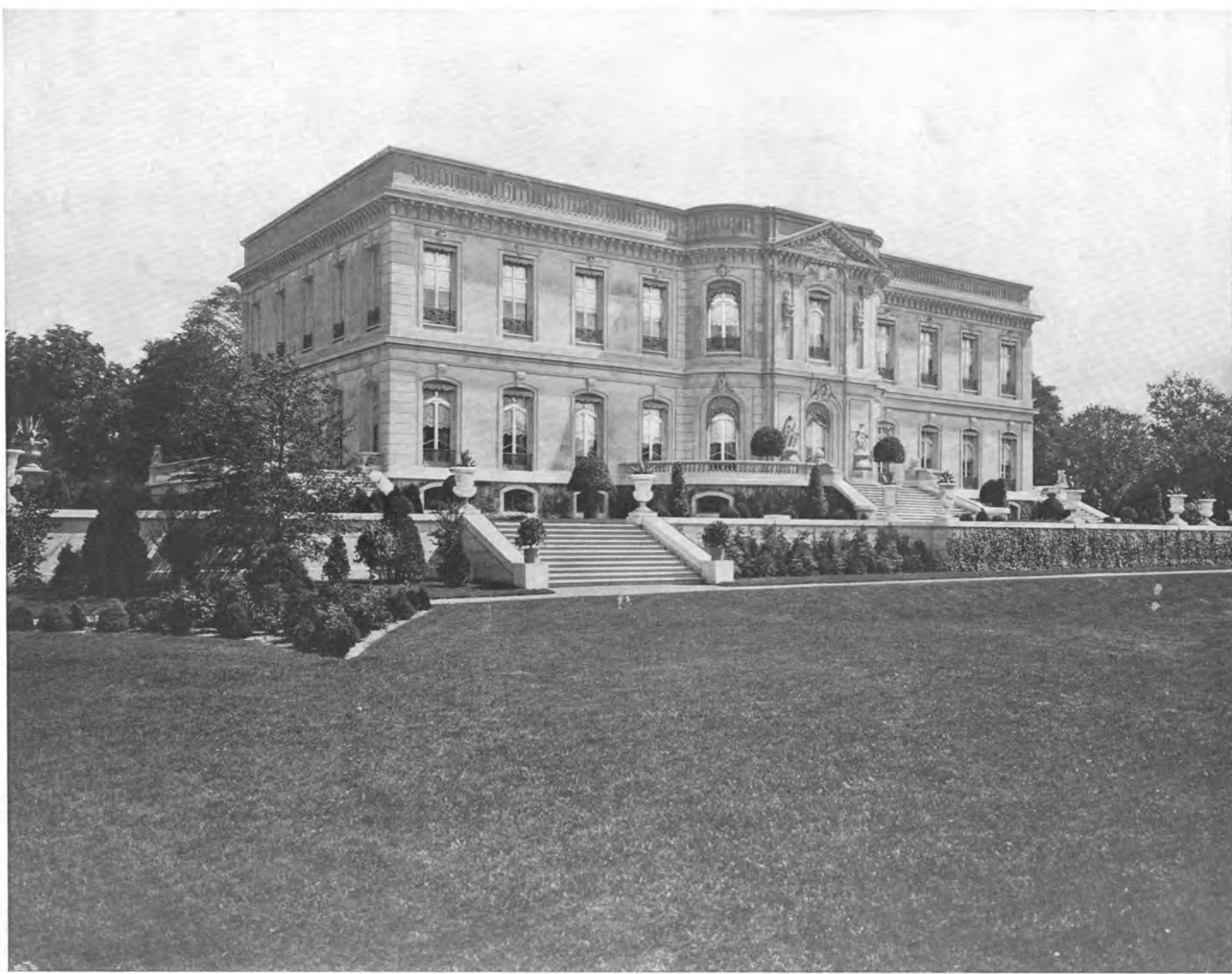
Thus the Newport house must be large, splendid, and expensive. It will be the scene of many expensive entertainments; it must properly set forth the wealth and social position of its owner; it must be properly environed in handsome grounds; it must be rich within and without; it must have architectural interest, and be a place worthy of comment and illustration.

Mr. Berwind's house is all of this, and in a very good way. Neither the largest nor the most costly of recent Newport palaces, it is both large and splendid and thoroughly sumptuous. The grounds, while sufficiently spacious to give the house a proper setting, are not large as grounds around great houses go. But they are entirely ample, and the architect has made the most of his opportunities by means of terraces and stairways, vases, statues, and balustrades, and a free use of shrubbery and plants. The grounds hardly constitute a formal garden, but are a very happy setting to the mansion for which they were created.

(Concluded on page 82.)

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HOUSE OF E. J. BERWIND, ESQ., NEWPORT, R. I.

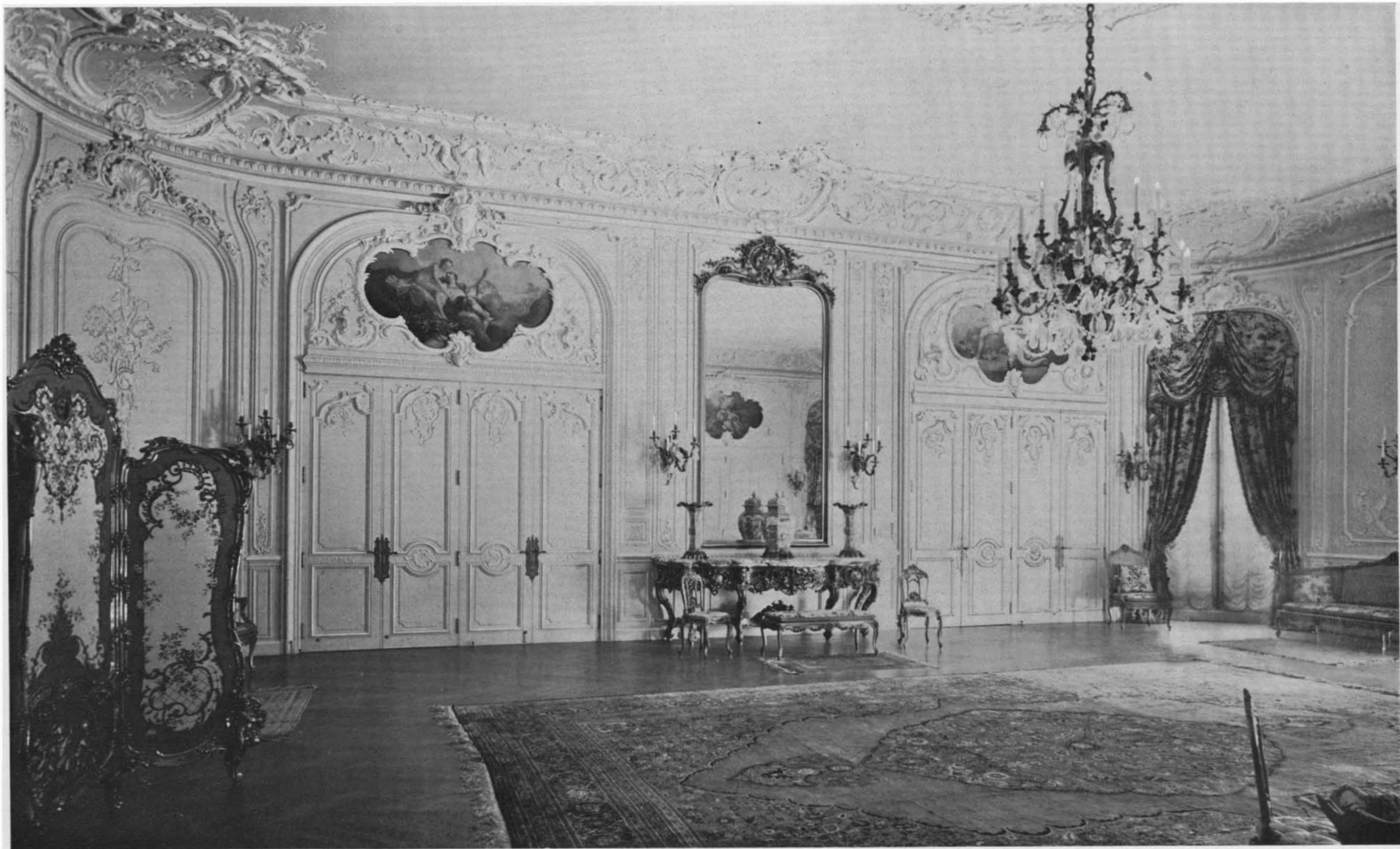
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BALLROOM.

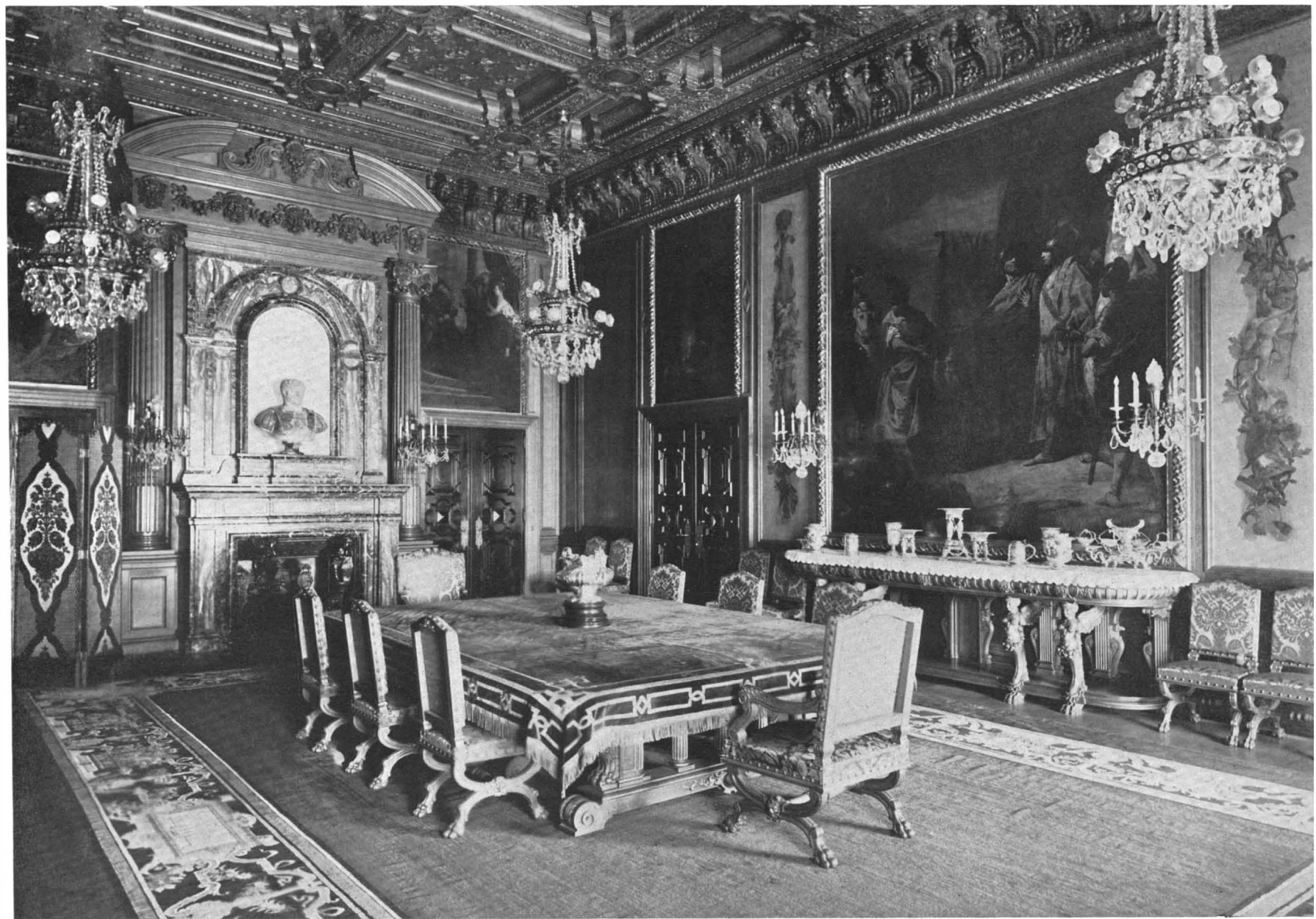


THE HALL.

HOUSE OF E. J. BERWIND, ESQ., NEWPORT, R. I.—See page 69.
MR. HORACE TRUMBAUER, ARCHITECT.



THE GARDEN.



DINING-ROOM.

HOUSE OF E. J. BERWIND, ESQ., NEWPORT, R. I.—See page 69.
MR. HORACE TRUMBAUER, ARCHITECT.

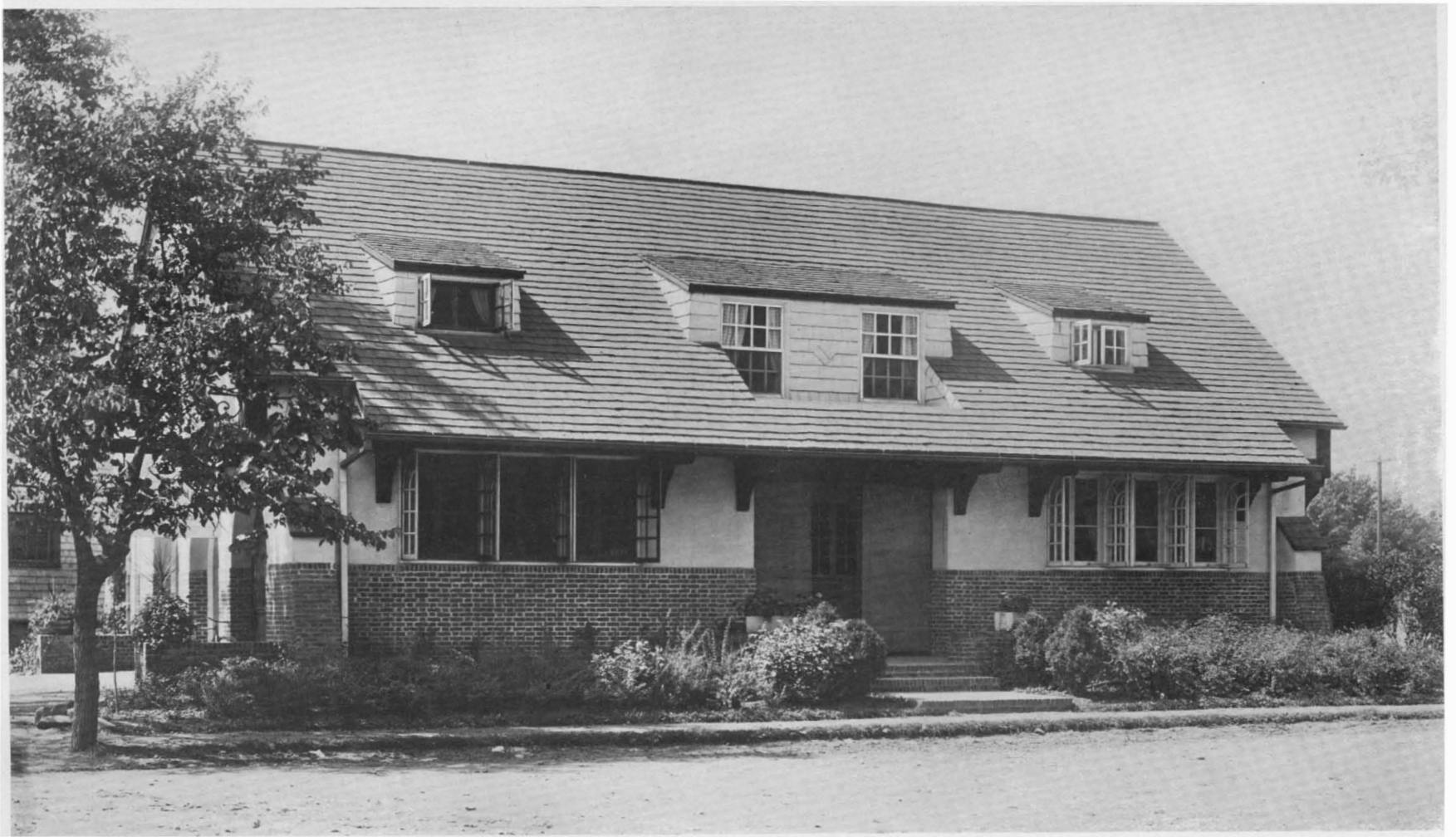


— SECOND FLOOR PLAN —



— FIRST FLOOR PLAN —

A HOUSE AT NEWARK, N. J.—See page 83.
MR. CARL F. REHMAN, ARCHITECT.

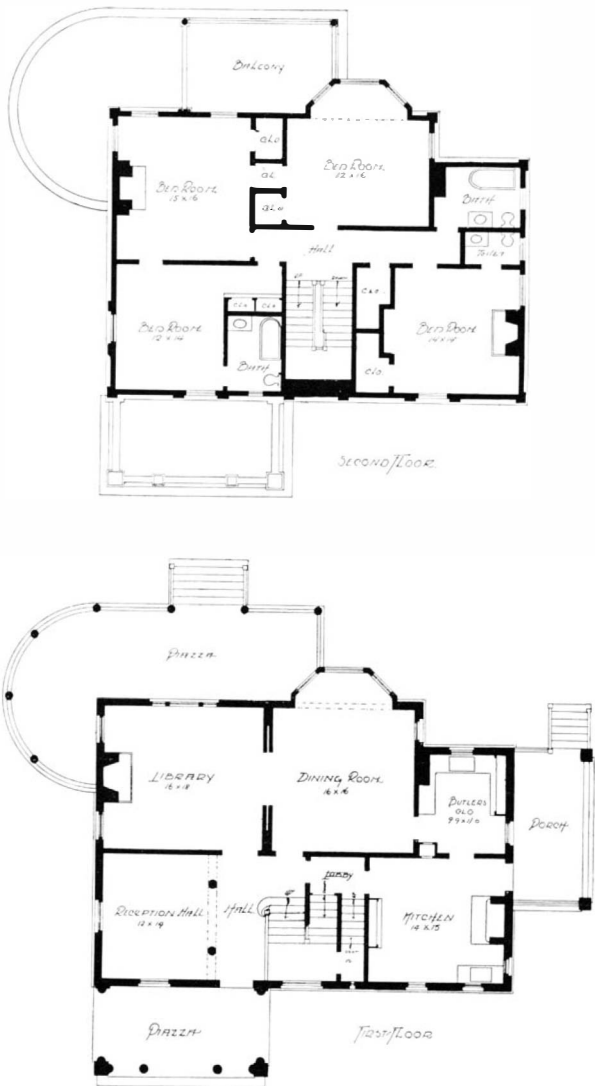


VIEW OF HOUSE AND DRUG SHOP.

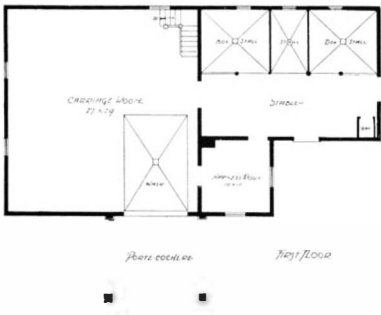


VIEW OF DRUG SHOP.

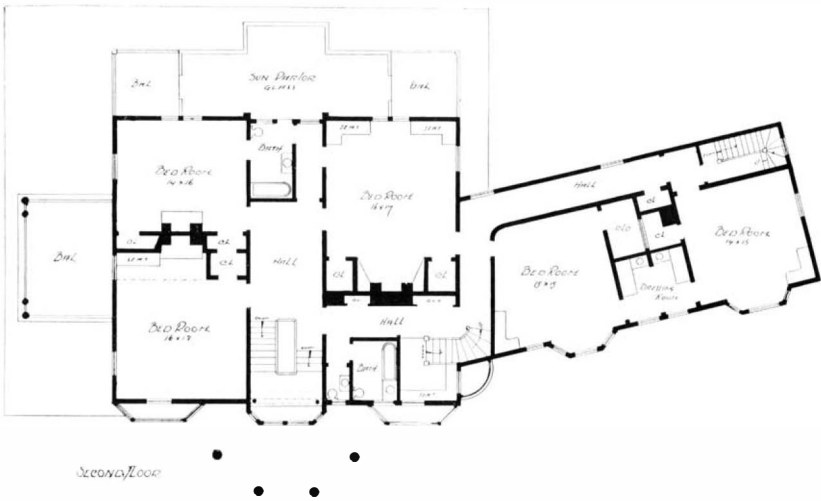
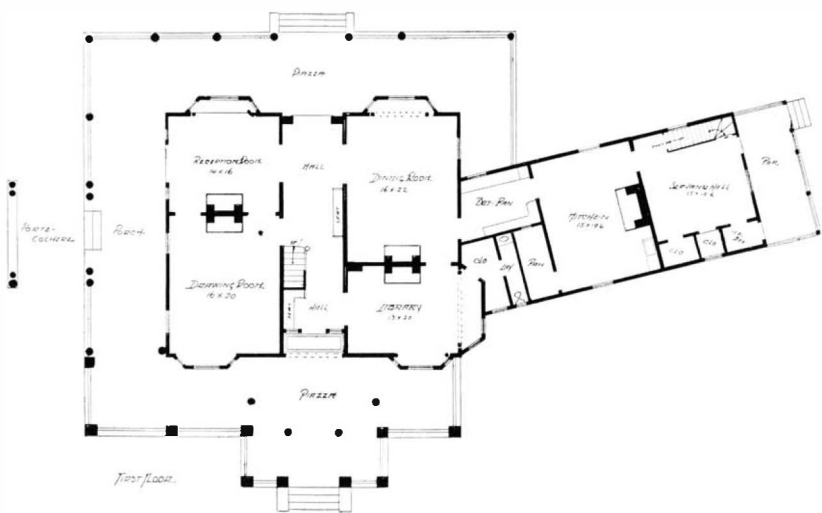
A DRUG SHOP AND HOUSE AT WOODMERE, L. I.—See page 84.
MR. CHARLES BARTON KEEN, ARCHITECT.



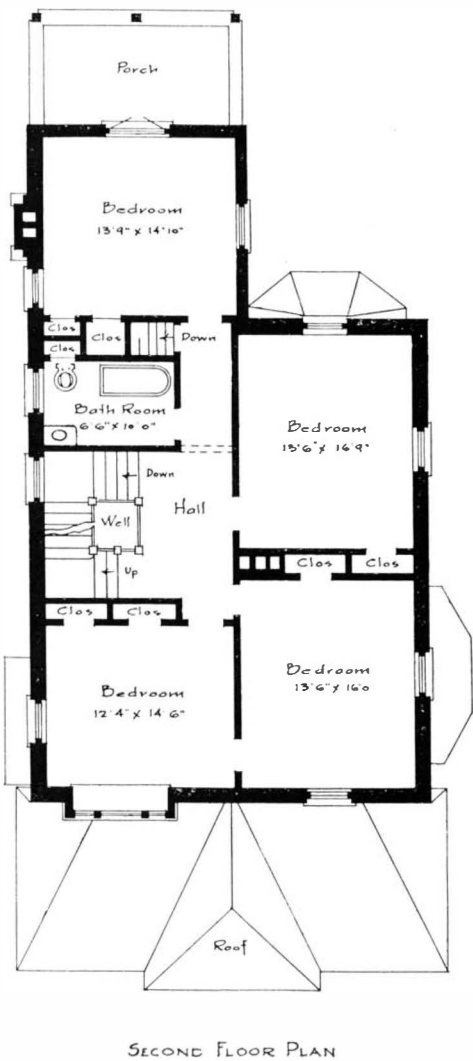
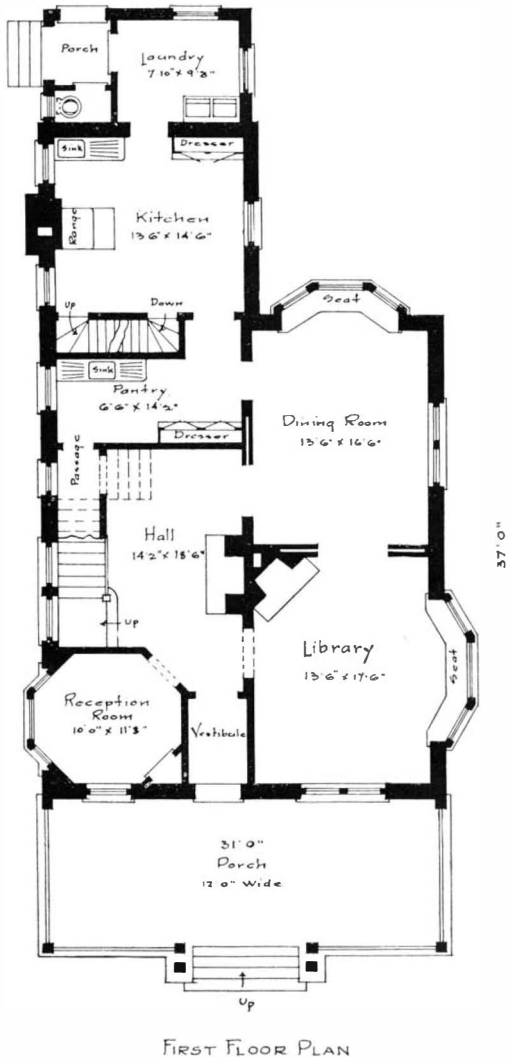
THE COUNTRY RESIDENCE AND STABLE OF MISS AMY DURYEE, SUMMIT, N. J.—See page 83.
MR. CHARLES ALLING GIFFORD, ARCHITECTS.



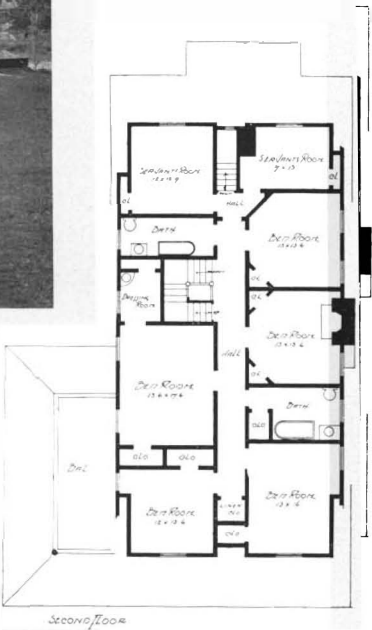
THE COUNTRY RESIDENCE AND STABLE OF MISS AMY DURYEE, SUMMIT, N. J.—See page 83.
MR. CHARLES ALLING GIFFORD, ARCHITECT.



RESIDENCE OF EDWARD W. SCOTT, ESQ., ALLENHURST, N. J.—See page 82.



HOUSE OF GEORGE M. MEGARGEE, ESQ., PELHAM, PA.—See page 84.
MR. LAURENCE VISSCHER BOYD, ARCHITECT.



“REDRUFF FARM,” THE SUMMER HOME OF JAMES K. HOYT, ESQ., AT SOUND BEACH, CONN.—See page 84.
MR. HERBERT LUCAS, ARCHITECT.

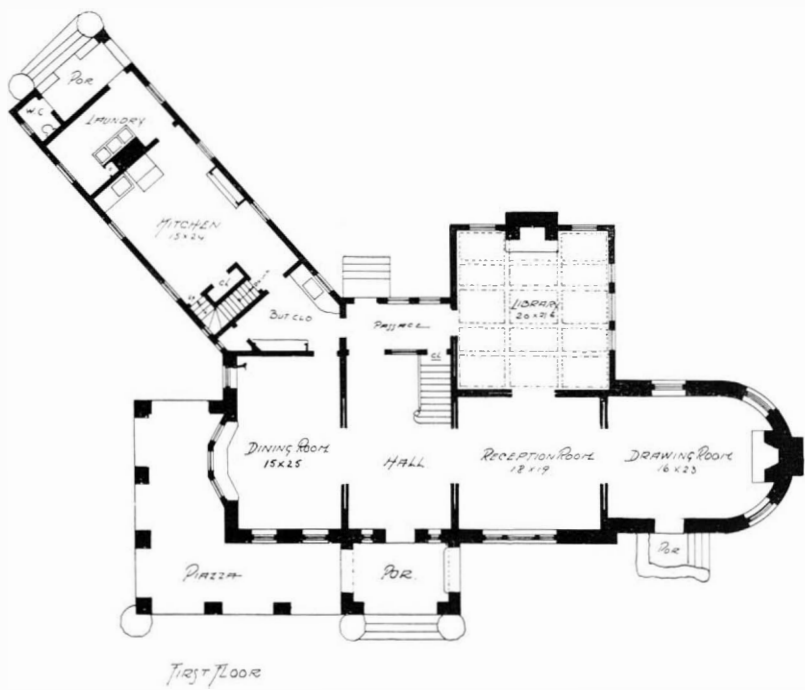


LIVING-ROOM.

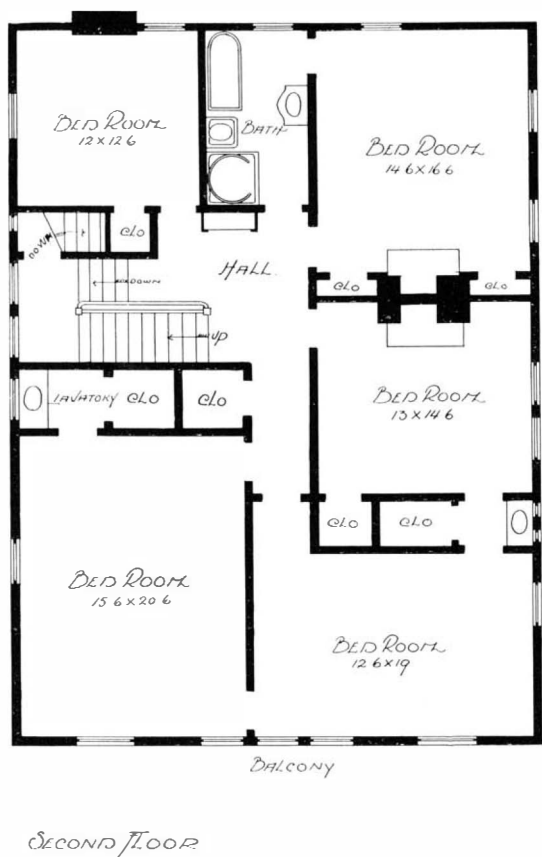
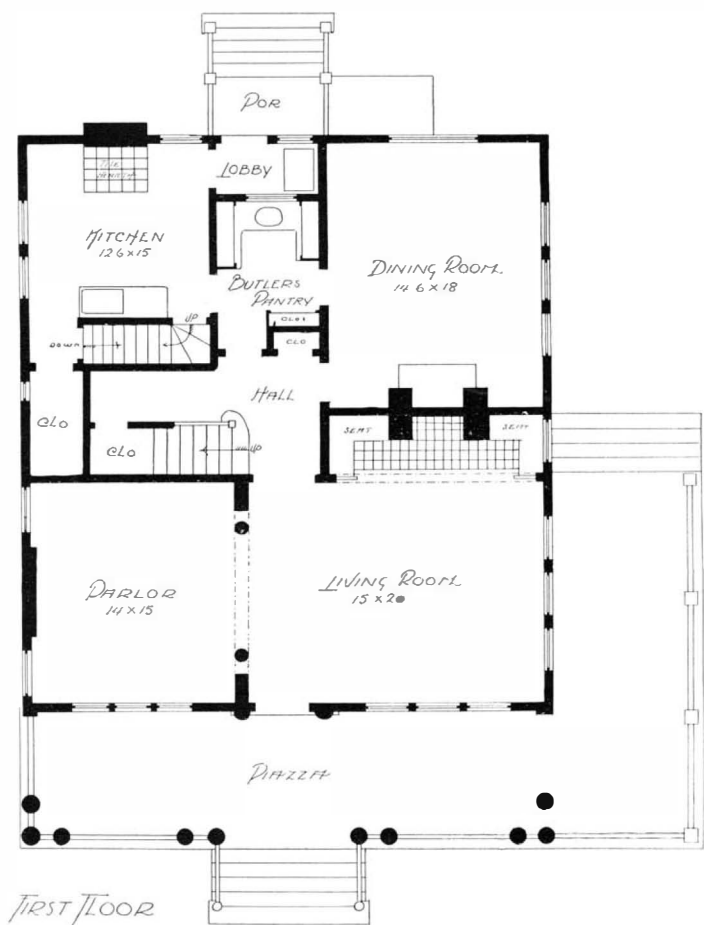


DINING-ROOM.

“REDRUFF FARM,” THE SUMMER HOME OF JAMES K. HOYT, ESQ., AT SOUND BEACH, CONN.—See page 84.
MR. HERBERT LUCAS, ARCHITECT.



RESIDENCE OF MRS. FLORENCE M. GRISWOLD, AT ESSEX FELS, N. J.—See page 84.
MR. LAURENCE VISSCHER BOYD, ARCHITECT.



A JAPANESE HOUSE AND GARDEN.—See page 82.
MESSRS. PETIT & GREEN, ARCHITECTS.

MR. HORACE TRUMBAUER AND THE BERWIND HOUSE AT NEWPORT, R. I.

(Concluded from page 69.)

The house is stately, and this is more than half the battle. It is of generous size, broadly treated, the horizontal lines well marked, the windows large, the central part projected just sufficiently to mark the entrance and to emphasize it; on the whole, well conceived and well carried out. The rising ground on which it is placed adds materially to its dignity.

That the interior is ornate the exterior has already told us. No one builds a house of this design in such a place without preparing for greater sumptuousness within than may be discerned without. One naturally lavishes decorations on an interior that one refrains from exposing to the vulgar eye without. The inside of the house is, therefore, very much more splendid than the splendid outside. Broad corridors, lofty ceilings, large rooms, gilding, precious marbles, superb tapestries, rich furniture, fine paintings, costly carpets; these form and make up the contents of every great house, the individuality depending upon the taste of the owner and the architect, and the particular kind of rich possessions available for such purposes.

The chief rooms are the ballroom, the dining-room, the library, the palm room, the drawing-room, the breakfast-room, the gallery hall, and the stair hall. The stairs ascend on either side of the entrance and rise directly from the main hall, which in itself is a spacious apartment, richly decorated and richly furnished. The ballroom is a very beautiful apartment, paneled throughout, and with paintings let into the panels above the great double doors. The dining-room is one of the richest rooms in the house, with a coffered ceiling, monumental mantelpiece, decorative panels and fine paintings. It is truly a "state" dining-room, ample in size and admirably adapted to the giving of large dinners and elaborate entertainments.

It is well known that the building and furnishing of this house gave a great deal of pleasure to its owners, and that it must have done so is entirely evident to those who have visited it, and it is not less apparent from photographs of the interior. The illustrations which accompany this article afford an excellent insight into one of the most interesting houses of Newport, a house that is not only interesting in itself, but interesting as an illustration of the life of one of the most remarkable communities in America.

A JAPANESE HOUSE AND GARDEN.

THE Japanese house and garden which is illustrated on pages 81 and 82 has been recently erected for Dean Alvord, Esq., at Prospect Park South, Brooklyn, N. Y. The building of a Japanese house to conform with the climatic conditions of America and to the requirements of its people is a novel feat. The style, as a study of the illustrations will reveal, is carried out with the most minute detail; all of the dominant characteristics of the Japanese style of architecture being closely followed, for the delicate feeling for curved lines which are to be found in nearly every portion of the building, in the roof lines, which are the most prominent, in the contour of the brackets, in the

outlines of the columns, etc., which feature is, of course, of far greater prominence and importance than in the case of any other architectural style. Practically every portion of its curved ridge, hips, gables, eaves, and all the varying curves flow into each other, grow out of each other, until they form a whole that is light, delicate, and graceful.

The exterior of the building is stuccoed, and the upright and cross beams which form the panels, and all other woodwork, together with the stucco, is painted a dark grayish green. The roof is of galvanized iron, in the imitation of red tile of brilliant coloring. The windows throughout are of leaded glass. The interior arrangement is formed so far as is possible with the Japanese style and decoration, combined with the modern American style and its conveniences. The living-hall is trimmed with cypress stained a dark color, and it has a paneled wall and a ceiling in square form with the panels filled in with ornamental plasterwork treated with Japanese decoration. The ingle-nook contains a hearth of red tile, a fireplace with similar facings, and a mantel of Japanese design, with a shelf supported on caryatids rising with heads of Oriental character. This ingle-nook is provided with seats on either side of fireplace and nook.

The parlor is trimmed with similar wood and is separated from the living-hall by an archway supported on columns. The walls and ceilings are paneled with cypress strips, which are stained, and the wall space between is treated with a Japanese decoration. The dining-room is trimmed with birch and it has a paneled wainscoting, which is finished with a plate-rack. The wall space above this plate-rack and the ceiling is treated with a gold papered effect. The butler's pantry is fitted with dressers, bowl, and cupboard replete. The kitchen is furnished with a chimney breast with a red tiled hearth and range, a sink, dresser, store pantry, lobby large enough to admit ice-box, and a stairway to the cellar and to the second story.

The second story is finished in hazel, and it contains five bedrooms furnished with large, well fitted closets with lavatory conveniences, and a bathroom, which is furnished with porcelain fixtures and exposed nickel-plated plumbing. The walls and floor are paved with Japanese tile. The third floor contains a guest room, billiard-room, two servant bedrooms and bathroom, and a trunk room. The cellar, cemented, contains a laundry, heating apparatus, fuel rooms, and cold storage.



ENTRANCE—JAPANESE GARDEN.

The garden, which was laid out by a Japanese gardener, and which surrounds the building, forms a pleasing addition to the already attractive landscape. The serpentine walks which extend through the garden are of rough concrete, with square tiles of Japanese character, being placed at random, according to the impulsive nature of the gardener, and yet with most artistic and effective results. A wooden and bamboo gateway, with hood, forms the entrance from the main walk into the garden, which is in itself ornamented by groups of foliage and Japanese lanterns, which add much to the picturesqueness of the general whole. Messrs. Petit & Green, architects, 21 West Thirty-fourth Street, New York.

RESIDENCE OF EDWARD W. SCOTT, ESQ., ALLENHURST, N. J.

THE residence of Edward W. Scott, Esq., at Allenhurst, on the Jersey coast, is illustrated on page 76. It occupies in ground plan a space of 50 x 125 feet, not including porches. The plan is that of the old Colonial mansion. A central hall is flanked on each side with, respectively, reception-room and drawing-room to the right, and dining-room and library to the left, and back of them the kitchen, butler's pantry, servants' dining-room, etc.

The second and third floors contain ten commodious sleeping rooms with connecting baths. A large morning-room is well arranged on the main front of the second floor. Ample rooms for the servants are located on the rear of the third floor and entirely separated from the main front.

The first requirement of a seashore residence is plenty of porch room, and this Mr. Scott has obtained by carrying entirely around the three sides of the house a porch fourteen feet wide, with certain portions so arranged that in autumn they can be utilized as sun parlors. The proportions of the building are exceedingly good. The north shows a two-story colonnade in semicircular form, with entablatures and railings. The caps are rich in ornament, while bays of simple but classic character flank this central feature.

The east and west fronts are somewhat similar to the north, having two-story colonnades, with roofs, balustrades, etc. These colonnades on the second floor form desirable porches, thoroughly protected from the weather. One of these second floor colonnades on the south front connects by means of French windows with the family sitting-room, affording a fine ocean view.

The building is constructed of wood with brick filling, the various details being beautifully arranged. A deep cornice of good proportions surmounts the house and continues entirely around it. The roof is slightly Mansard, and its extreme top is again surmounted and enclosed by a balustrade, from which vantage point a magnificent view of the Atlantic Ocean can be obtained. The exterior is painted a soft yellow, all moulded and ornamental work being picked out in ivory white. Large posts of yellow white brick, surmounted by very handsome electric lanterns, bound the sides of each entrance to the beautiful grounds; the whole arranged so cleverly that almost the entire premises can be illuminated at night by the mere turn of an electric switch.

Entering the main hall, the old Colonial again presents itself in all its simple beauty. A low wainscot extends entirely around the hall, on which rests fluted pilasters surmounted by an entablature of classic detail, the length of the ceiling being broken by ma-



A JAPANESE GARDEN.

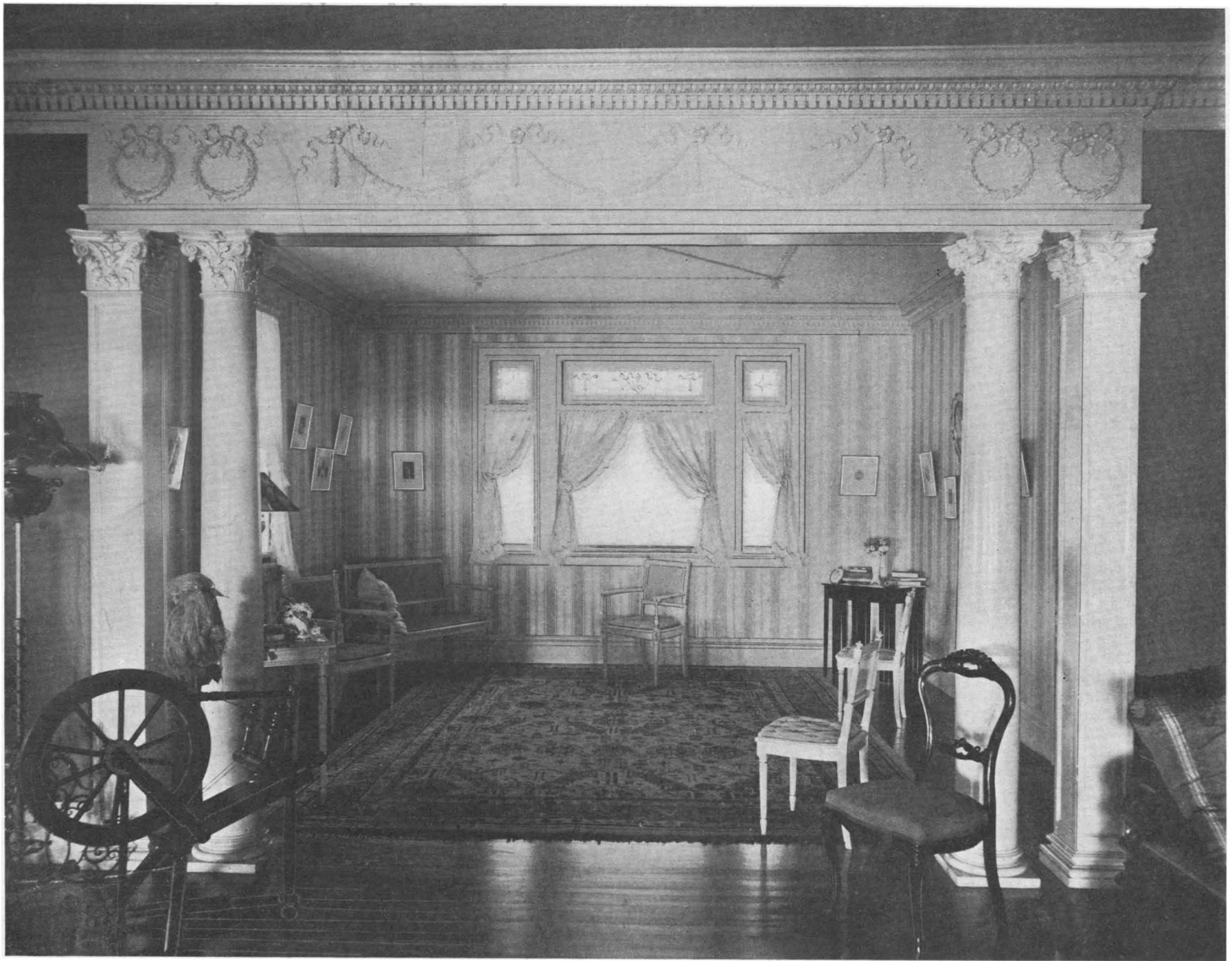
hogany beams of simple pattern. The floor is of hard wood. The stairway is white, the rail and newels being in mahogany. The entrance doors at either end are Colonial in design, with leaded glass. All the rooms are cheerful and harmonious in design. The butler's pantry, kitchen, servants' hall, pantries, etc., are fitted with all the best modern conveniences. The bedrooms are treated with harmonious effects. The cemented cellar contains the laundry, heating apparatus, etc. The reception-room is treated with a moss green effect, and it has an ornamental leaded glass window, 8 x 10 feet, facing the ocean, which is quite the feature of this room. The open fireplace is fitted with tiled facings and hearth, and a mantel of Colonial style. The drawing-room is separated from the reception-room by archways, and it is treated with Colonial effects. It has a similar fireplace in the reception-room. The library is provided with an open fireplace and two bay-windows, which are separated by arches supported on columns of Colonial design. The walls are treated in a deep, rich red. The dining-room is treated in delft blue and white, and it has a similar bay window treatment and fireplace.

hall is treated in a similar manner, and it has a low, paneled wainscoting and bookcases built in, and an open fireplace with red tiled facings and hearth and a mantel with Colonial columns supporting a massive hood. The dining-room is treated with white enamel and it has a paneled wainscoting and a fireplace built of Tiffany brick, with facings and a hearth of the same and a mantelsheff. The butler's pantry is fitted up with sink, dressers and closets. The kitchen and its dependencies are trimmed with North Carolina pine, and each is fitted with all the best modern improvements. The servants' porch is a pleasant feature of the house.

The second floor is treated with white enamel, and it contains four bedrooms, two bathrooms, and linen closet. Each bedroom is furnished with well fitted closets, and two of the bedrooms have open fireplaces. The bathrooms are trimmed with ash, and each is fitted with porcelain fixtures and exposed nickelplated plumbing. The third floor contains three servant bedrooms and bath, and a trunk room. The cemented cellar contains the laundry, heating apparatus, and fuel rooms.

A HOUSE AT NEWARK, N. J.

THE house which is illustrated on page 72 has been built for Mr. Carl F. Rehman, at Mount Prospect Avenue, Newark, N. J. The main idea has evidently been inspired by a love for the old Dutch homesteads, of which there are many fine examples in New Jersey, and which certainly have the earliest and fullest right to be classed as Colonial. The brick terrace, with its wall on the east front, seems an excellent way of freeing the building from the usual covered piazza and of gaining all the comfort that the piazza affords. The little wooden seats by the door and the one on the rear porch provide an attractive feature. The front elevation has been kept as low as possible, and has the good general proportions and the delightful simplicity of the old Colonial house. The small panes of glass in the sashes, the moons in the heavy white shutters, and the heavy door knocker, carry out the idea of this particular style. The rear has been as carefully planned as the front, and it is remarkable how little care is often given to the planning of rear elevations. The one thought in general is that the rear should express the sentiment of the kitchen, and that any



A RECEPTION-ROOM.

THE COUNTRY RESIDENCE AND STABLE OF MISS AMY DURYEE, AT SUMMIT, N. J.

THE illustrations on pages 74 and 75 present the country residence and stable of Miss Amy Duryee, at Summit, N. J. The underpinning is built of rock-faced stone laid up at random. The superstructure, from the underpinning to the second story windows, is built of a repressed Jersey brick, with black headers, and is laid in Flemish bond; the remainder of the building is covered with a rough cast treated with an ivory white color. The trimmings are painted ivory white. The roof is covered with shingles and is treated with Venetian red. Dimensions: Front, 47 ft.; side, 32 ft., exclusive of porch and piazza. Height of ceilings: Cellar, 7 ft. 6 in.; first story, 10 ft.; second, 9 ft.; third, 8 ft.

The entrance is into a square hall, which is trimmed with white pine treated with white enamel. The reception and staircase halls are practically one, except that they are separated one from the other by an archway supported on Colonial columns. The staircase is paneled and it has oak treads, white enameled balusters and newel posts, and a mahogany rail. The living-

The Stable.—The stable is built in harmony with the house, and the entire exterior of the building is coated with plaster stucco. The trimmings are painted white. The roof is covered with shingles and is stained a Venetian red. The interior throughout the first story is ceiled with narrow beaded stuff and finished natural. The floor is of cement concrete, and the carriage-room has a carriage wash connected with a drain, and a harness closet provided with harness cases with sliding glass doors.

The stable has a cement floor, and it contains two box stalls and one single stall fitted with the usual ornamental iron fittings and fixtures. A stairway leads from the carriage room to the second story, which contains two bedrooms and ample space for the storage of hay, feed, etc. Mr. Charles Alling Gifford, architect, 18 East Seventeenth Street, New York.

A RECEPTION-ROOM.

THE illustration shown above affords a glimpse into the reception-room of a house designed by Mr. Frank A. Moore, architect, Windsor Arcade, Fifth Avenue and Forty-seventh Street, New York.

amount of peculiar outjuttings is permissible. "If you want to see me respectable and dressed up, come round to the front," most houses say to the houses behind them. The garden front should in reality be as well treated as the street front. It pays, for it adds greatly, especially in suburban sections, to the general refinement of the neighborhood.

The interior of the house is a surprise in its large sized rooms. One enters a little anteroom and from that the general living room, which is thirty-eight feet wide and twenty feet deep, and has two good sized nooks, one for lounging seats and one for the desk table and reading lamp. The wood is oak of broad grain, stained a dark brown, and the walls are covered with green burlap, with the ceiling of a golden brown. The dining-room is decorated like the living-room and is connected with it by large sliding doors. The burlap of the anteroom is the same golden brown of the living-room ceiling. On the second floor the unity of the lower floor is offset by disconnected rooms, each in a different color, one red, one blue, one yellow, and one green. The rooms are all large and airy. The wardrobes and closets are fitted up in the most modern

fashion. There are two bathrooms. The woodwork is in natural oak or in white enamel paint. The whole house is very carefully and thoughtfully planned, and as a result there is no waste space. Cost, \$7,600 complete. Mr. Carl F. Rehman, architect, 756 Broad Street, Newark, N. J.

HOUSE OF GEORGE M. MEGARGEE, ESQ., PELHAM, PA.

On page 77 will be found an illustration of a house built for George M. Megargee, Esq., at Pelham, Pa. The building is an adaptation of the English half-timber style. The underpinning and the first story are built of Sayre & Fisher brick of a soft, warm color, laid up in red mortar. The remainder of the building, including the gables, is paneled with rough yellow pine and stained a dark shade of umber. These panels are filled in with rough plaster cast. The main roof and porch roofs are covered with cypress shingles and stained red. The trimmings are painted ivory white. Dimensions: Front, 35 ft.; side, 60 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 9 ft.; third, 8 ft. 6 in.

A special feature of this house is the commodious living-hall with its beamed ceiling, its large open fireplace of Pompeian brick, and the ornamental staircase with leaded glass windows at the side. This hall, from the first story to the third story, is trimmed with selected oak and is finished antique. The small reception-room is trimmed with pine and is treated with white enamel gloss. The library is trimmed with birch and finished in mahogany. It has a bay window with seat and an open fireplace furnished with tiled facings and hearth and a mantel. The dining-room is trimmed with selected oak, finished antique, and it has a paneled wainscoting, and a bay window with seat. The butler's pantry is fitted with drawers, shelves, dresser, and sink complete. The kitchen is trimmed with yellow pine and contains all the best modern conveniences. The laundry is also trimmed in a similar manner, and is fitted up complete.

The second floor contains four bedrooms and a bathroom. Three of the bedrooms are trimmed and finished in chestnut and are in white enamel. The bathroom has a tiled floor and wainscoting 4 feet 6 inches in height, and is provided with porcelain fixtures and exposed nickelplated plumbing. The third floor contains two servants' bedrooms and bath, and also one large room suitable for a billiard-room. A cemented cellar contains fuel rooms, cold storage, etc. The house is heated by a central plant. Mr. Laurence Visscher Boyd, architect, Harrison Building, Philadelphia, Pa.

A DRUG SHOP AND HOUSE AT WOODMERE, L. I.

On page 73 will be found an illustration of a drug shop and house built for Mr. William Wisendanger, at Woodmere, L. I., by the Woodmere Land Association, of which Mr. R. L. Burton is the owner. This combination for a drug shop and a house together is a most interesting and satisfactory solution of a long felt want for suburban uses, and Mr. Burton has very successfully demonstrated this problem by the construction of an attractive building, as the illustrations show.

The underpinning and the first story up to the first story windows are built of brick, black headers, laid in Flemish bond. The remainder of the building is covered with stucco. The trimmings and all woodwork are of chestnut stained brown. The roof is covered with shingles and is stained a Venetian red. The drug store is trimmed and fitted up with oak, and the windows and doors are of plate glass. A private stairway from the exterior leads to the physician's offices, which are placed over the drug store, and consist of one large and one small room.

The living quarters, which are entered from the street, are trimmed with chestnut and are finished in a dark, soft brown color. The living-room has an open fireplace built of black header brick, with the facings and a hearth of the same, and a mantel shelf, and it

has also a paneled seat at one side of the fireplace. The semi-boxed stairway rises from this living-room to the second floor. The dining-room is well ventilated, and it has a plate-rack five feet from the floor and extending around the room. The kitchen and its dependencies are fitted with all the best modern conveniences.

The second floor is also trimmed with chestnut, and it contains three bedrooms, a large linen closet, and bathroom; the latter is provided with porcelain fixtures and exposed nickelplated plumbing.

There is a cemented cellar under the entire building, which is divided into two parts, one for the shop and one for the house. Each has a heating apparatus, fuel rooms, and storage space. Mr. Charles Barton Keen, architect, 1604 Chestnut Street, Philadelphia, Pa.

"REDRUFF FARM," THE SUMMER HOME OF JAMES K. HOYT, ESQ., AT SOUND BEACH, CONN.

On pages 78 and 79 will be found illustrations of "Redruff Farm," the summer home of James K. Hoyt,



A STAIRCASE—RESIDENCE OF HENRY BLISS, ESQ.

Esq., at Sound Beach, Conn. The underpinning and chimneys are built of field stone laid up at random. The remainder of the house is covered on the exterior framework with matched sheathing, and then shingles, which are left to weather finish naturally, the trimmings and blinds being painted a dark red. The roof is covered with shingles. Dimensions: Front, 34 ft. 9 in.; side, 57 ft. 6 in., not including piazza and porch. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft.

The plan is arranged with the idea of having one large living-room, a dining-room separated from the living-room, and provided with the usual kitchen and its dependencies, while the sleeping quarters are provided on the second floor. The living-room is treated with white enamel and it has a wainscoting to the height of six feet, above which the walls are covered with crimson burlap. The ceiling is beamed and cross beamed, and the spaces between are tinted a Colonial yellow. The staircase is a broad, spacious one with oak treads, white enamel balusters and newels, and a mahogany rail. The large open fireplace is built in an attractive manner. Two fluted Ionic columns form an attractive feature of this room.

The dining-room is also treated with white enamel and has a high wainscoting, which is finished with a plate-rack, and an open fireplace, which is built of fieldstone. There are also two china closets built in

either side of room, with glass doors. The butler's pantry is fitted with drawers, dressers, cupboards, and sink. The kitchen and laundry are trimmed with yellow pine, and each is fitted with ample closet room and all the best modern conveniences.

The second story is also treated with white enamel, and contains five bedrooms and two bathrooms, besides two servants' bedrooms, which have a private stairway to the kitchen. The bathrooms have tiled wainscoting and are furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains ample storage space. The cellar, cemented, contains a hot air furnace, fuel room, and storage. Mr. Herbert Lucas, architect, St. James Building, 1133 Broadway, New York.

RESIDENCE OF MRS. FLORENCE M. GRISWOLD, AT ESSEX FELS, N. J.

The residence illustrated on page 80 has been erected for Mrs. Florence M. Griswold, at Essex Fells, N. J. It is built in the rambling order. The underpinning and the first story are built of rock faced stone laid with broad white joints. The second and third stories are part in stucco work and in shingles; the former is tinted a cream color, while the beams are stained a soft brown color in harmony, and the shingles a red color. The roof is covered with shingles and is stained with a dull moss green effect. Dimensions: Front, 105 ft.; side, 64 ft. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 8 ft. 6 in.; third, 8 ft.

The hall, a central one, is trimmed with oak, and it contains an ornamental staircase turned out of similar wood. The reception-room and parlor are trimmed with oak, and the latter is furnished with an open fireplace with tiled facings and hearth and a mantel. The ceiling of this room is carried up with the peak, and both the walls and ceiling are coated with a stucco plaster, which is pebble-dashed and tinted a cream yellow. The library is trimmed with oak and it has a paneled wainscoting and a beamed ceiling, and it also contains an open fireplace built of rock-faced field stone, with a hearth of the same and a similar facing rising to the ceiling and finished with a rough hewn stone shelf supported on corbeled brackets. The dining-room is also trimmed with oak, and it has a bay window, and a plate rack at the height of seven feet. The butler's pantry is fitted with drawers, dressers, sink, etc., complete. The kitchen and laundry, both of large dimensions, are fitted with all the best modern conveniences.

The second floor is trimmed with white pine, treated with white enamel, and it contains a

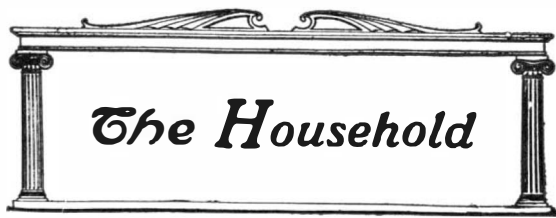
large open hall, six bedrooms, large linen closet, and two bathrooms; the latter are wainscoted with white enameled tile, with blue tile cap, and they have a floor paved with tiled mosaic, and contain porcelain fixtures, with exposed nickel plumbing. The third floor contains three bedrooms and a bathroom trimmed with white pine finished natural. The cellar contains the heating apparatus, fuel rooms, etc. This house was built by Messrs. Wendell & Treat, of Essex Fells, N. J. Mr. Laurence Visscher Boyd, architect, Harrison Building, Philadelphia, Pa.

A STAIRCASE.

The illustration given above shows the staircase in the residence of Henry Bliss, Esq., Chestnut Hill, Mass. Mr. H. S. Frazer, 84 Exchange Place, Boston, Mass., was the architect of the house.

A CORRECTION.

It is due Mr. Charles A. Platt, the architect of the grounds of Mrs. Charles F. Sprague, illustrated in the BUILDING MONTHLY for March, to make clear the fact that Messrs. Little & Brown were the architects of the house and forecourt alone, while he was the architect and designer of all the other architectural embellishments of the garden and surroundings. Several of our illustrations unwittingly credited some of Mr. Platt's work to the other architects.



The Household

HOUSECLEANING.

THE last week of March or the beginning of April, says a recent writer, is the time usually chosen by country housekeepers for housecleaning.

A neat housekeeper likes to have her stoves out of the way when housecleaning is done, but in very cold seasons it is impossible to do away with them before the end of May, while in warm seasons they are often superfluous in March. Spring housecleaning, therefore, must be divided into sections. The birds, especially the flycatchers, which usually come in March, ought to decide the time for the disinfection of the house and the annual war against insect pests which hatch out indoors and outdoors at about this season.

Science states that fitting moths and impure germs of every kind appear as early as March, when the robin and bluebird come from the South to rid the trees of grubs, and the industrious woodpecker fights vigorously against the same enemy of mankind and of fruit trees. The housewife must attack the moth in March or very early in April before it has hatched out of the egg and begun its work.

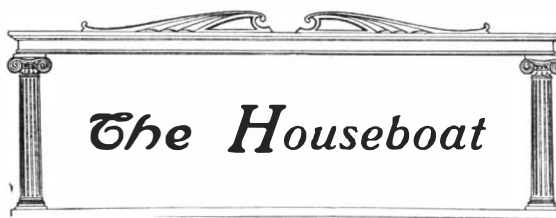
In sections of the country where the buffalo moth has set up a habitat for itself, carpets, rugs, and woolen clothes should be cleaned and the premises made ready for summer as early as this season. It is an unpleasant thought that in steam-heated houses, where the temperature is uniform, the buffalo moth leads a continual existence, emerging from its grub state in any month of the year, instead of waiting until the warm sun of the vernal season. The battle with the buffalo moth under some circumstances is well-nigh a hopeless one. When this creature first came a well-known entomologist of the State recommended that its habitats be saturated with benzine after carpets, rugs, and clothing, which it had attacked, had been well beaten. Its ways are ways of darkness, and the creature avoids the light, therefore dark corners of closets and wardrobes should be carefully searched and cleaned as early in March as it is practicable to do so. Good housekeepers drive away the buffalo moths by making the premises unpleasant for them. Camphor, pepper, tobacco, and various other articles will accomplish this purpose, but nothing but benzine poured on them will actually annihilate them. This insect has a curious passion for the red parts of the rug, and will eat out this color and leave the rest, especially if it is on the edge of the border.

COLOR AND HEALTH.

JUST as light caused us to feel cheerful and warmth made us feel comfortable, so, says an English writer, it will be found that color in soft graduated tones had an immense effect on our well being. Staring, garish, inharmonious tints must have a somewhat similar effect through the eye on the brain as loud cacophonous sounds have through the ear. Wall paper should be selected with due regard to the aspect of the room, and the value of sunshine is particularly to be insisted on. Huge blocks of artisans' dwellings should not be multiplied in the heart of our great cities. The object should be to get the workers away from their work when it is finished, by increasing the facilities for quick and cheap transit. With the startling development of electric traction the time was not far distant when it would be the exception and not the rule for the workers to live in close proximity to their work, when this was performed in crowded areas.

AN ENGLISH DECORATIVE CLOTH.

A NEW decorative cloth has been lately introduced in England. The canvases of coarse texture used hitherto served well on the walls of large halls or staircases, but for spaces of a more confined area a texture of a different kind is desirable. This is met by the new crush and buckram cloths. They all have that manifestation of being a woven fabric, which is not to be imitated in paper. At the same time the surface is sufficiently smooth to prevent the accumulation of dust, which is one of the drawbacks of a coarser material. An immense variety of agreeable colors is available, and the artist and decorator can, therefore, obtain any kind of ground which he may seek in order to apply stenciling or other decoration. For ceilings and places where a colored ground is unnecessary there is a white buckram. It should be noted that the colors are not dyed. Pigment colors are employed, and the cloth itself is consequently suitable for covering walls. The hanging is not difficult, and the cloths are supplied in rolls. A thicker paste than is used in papering is sufficient.



The Houseboat

A MISSISSIPPI HOUSEBOAT.

THE New York Sun publishes an account of a Mississippi houseboat from which the following excerpts are taken:

Instead of pulling the Idler along by means of a cable, the Wanderer pushes the houseboat in front of it. The stern of the Idler is fitted to the bow of the Wanderer, and the two boats are held together by heavy chains, so that they steer as one craft.

The Idler is 120 feet long and 20 feet beam. Her lower deck contains all the cabins, staterooms, etc., of the vessel.

The advantages of not having the motive power on the houseboat are many. There is a total absence of the throbbing and jarring of machinery. There is no heat, no smoke, no smell, and no room is taken by the engines which might be put to other use.

The main deck is entirely surrounded by light but strong iron guards. A great plate glass window fills the bow end of the enclosed deck, and is flanked by two doors. These lead into the saloon, a luxuriously furnished apartment, 16 by 22 feet. It is entirely finished in polished woods. Besides the large bow window there are twelve others. Writing desk, piano, tables, chairs, divans, books, pictures—all the accessories of a comfortable and up-to-date home are here. Electric lights make it brilliant at night, and steam heat enables the happy voyager on the Idler to snap his fingers at storms or cold weather. Every door, window, and transom on the boat is carefully screened. From the saloon a long narrow passage leads through the center of the boat, and from this open the six staterooms. Each of these is 6½ by 11 feet. Each has a lower berth of the size of an ordinary bed, while above is a berth of the width of a single bed.

Each room has three windows and six large transoms, electric lights, porcelain basin with hot and cold water, steam heat, a large dressing-bureau, a wardrobe, and one chair. Each room is completely furnished in its color; red, yellow, blue, green, pink, lavender; the color scheme is complete, even to the candlestick and the candle. The passage flanked by the staterooms ends in the dining-room, a beautiful apartment 10 by 16 feet in size, with corner cupboards, where the boat's own special glass and china gleam behind the leaded panes. Back of the dining-room is a cross hall opening at each end onto the outer gangway, giving air and preventing any heat or odors from the kitchen or the electric light plant from invading the forward part of the boat. A drop table here is raised to be used as a serving-table at meal times. At the other end of this hall is a recess for the water cooler, and conveniently near by is the lemon squeezer, the ice shaver, the shaker, etc.

Beyond the cross hall on the starboard side is the aft gangway leading to the upper deck. Next comes the kitchen. Behind the kitchen is the cold storage room, next the ice house, then the men's bathroom, next the laundry, and finally the servants' bath. On the larboard side, beginning at the cross hall, are, first, a bathroom, then the electric light plant, then the servants' rooms. There are two gangways leading to the upper deck, which is entirely open at the sides, although canvas curtains may be dropped so as to shut it in, either in part or entirely. A latticework screen divides this deck, but the forward portion is a clear ninety feet in length.

Here are hammocks, great swinging leather cushioned settees with high backs, an army of lounging chairs, rugs, cushions—all the gay paraphernalia of summer loafing. The deck has its own complement of electric lights, as well as a powerful searchlight.

Back of the lattice are three water tanks; one, with a capacity of 250 gallons, carries artesian water for drinking. The other two take the river water for all other purposes. On the hurricane deck, above this one, are four clinker-built boats for use in fishing expeditions or in case of accident.

The hold of the Idler is divided into coal cellar, storeroom, and wine cellar.

The Wanderer is 100 feet in length and has a 20-foot beam. It is as white as the Idler, and is by no means an unworthy Cinderella to go along with its lady-of-leisure sister craft.

The lower deck is enclosed. Here are the boiler and engines, the latter 10-inch bore and 6-foot stroke. On the saloon deck are two dining-rooms, eight staterooms, a bath, and the kitchen. Occasionally, when there is too large a party to be accommodated on the Idler, some of the men are berthed on the Wanderer.

The success of this boat has been very great. It is a distinctive type, suited to Western waters.



The Garden

THE JOY OF GARDENING.

IT is the joy of gardening that it brings its own reward, which, in the larger number of cases, is sure and certain. Granted it is hard work if one must potter around the flower beds oneself, but even that is a joy if the garden is not too large and too much is not planned. One should not be discouraged because one's space and one's resources are small. A few plants are better than none at all every time.

SOWING ANNUAL SEEDS.

THE sowing of annuals, says an exchange, is best done during April, the hardier ones earlier in the month and the more delicate ones later. The soil should be deeply worked by digging a good spit deep in autumn if the land be heavy, or in the early spring if it be light. For light land enrichment should be provided in the shape of cow, pig, or peat moss litter manure, placed in a thick layer eight inches to a foot below the surface; that is to say, at the bottom of the spit. For heavy and clay soils well decayed horse manure is best. It is well also to lighten clay land by digging in road grit, cinder ashes, and other materials calculated to render the soil open and porous. No manure should be incorporated with the surface soil. The seed is furnished with sufficient nourishment for the earliest small rootlets, which make their first growth best in soil fine and sandy, with some powdery leaf mold intermixed. To stimulate strong after-growth, the surface can be top-dressed to advantage when the shoots, showing through the soil, tell that a network of fine roots has been formed below. Then a little complete artificial manure intermingled in with a compost of fine earth or cocoa fiber refuse, spent tanners' bark, or other suitable materials, mixed with a little gypsum, may be given with advantage as a surface mulching.

After the soil has been prepared, and the surface evenly raked over, the seed should be sown very thinly in masses or groups to get the best effects with the flowers. The method of sowing in rows is only permissible in the case of dwarf annuals for bordering. A convenient method of forming a "drill" to receive seeds is to make a circular ring with an inverted large flower pot lightly pressed and turned half round and back again. In this "drill" the seeds should be very sparingly sown and lightly covered over. The center of the circle should be labeled with the name of the plant before filling in the "drill" with soil. Thinning can be performed easily in the case of such a ring of seedlings, and should be done very early.

PLANTS FOR A CITY GARDEN.

WHERE there is enough of sunlight plant hardy pinks. The Chinese and Japanese varieties of this flower, although without fragrance, are so rich in coloring as to make them highly desirable. The Chabaud carnations and C. Marguerite are of beautiful colors and rich fragrance.

But the sunny garden has such a wide range of choice that it is well to turn and give to the shady garden a helping hand. Perhaps there is one in which no ray of sunlight ever strikes the ground. In such a one the chief dependence must be placed on ferns. Then there are among perennials the Campanula carpatica, with either blue or white flowers, C. rotundifolia, blooming in August, columbines in many varieties, Dicentra spectabilis (wrongly called "Dielytra" by florists), and D. eximia, the latter having the longer blooming period. There are the "monkshoods," some varieties of which may be had blooming through the entire summer, but they are poisonous, and should not be planted where there are children. In the spring there are lilies of the valley and Phlox divaricata, while later on there are Phlox maculata and Cyclamen Europaeum. Ajuga genevensis and A. reptans rubra are also good spring bloomers for shady places. Of low growing plants there are daisies (Bellis perennis). Armenia maritima, Cerastium tomentosum, whose silvery foliage makes a lovely edging for the border, Asperula odorata and Myosotis.

The chief glory of the shady garden must be the terrestrial orchids. Among the most desirable for shaded situations are Cypripedium acaule, rose-colored flowers; C. pubescens, yellow; C. spectabile, rose-purple or nearly white; Goodyera pubescens, white, and Habenaria psychodes, rose-purple and fragrant.—Exchange.

FORMALITY and artificiality in the making of bouquets are fatal to artistic work, because they are the opposites of simplicity and naturalness.



The Bachelor

THE BACHELOR HOME.

AND why not? If not a sign of the times, the bachelor home is certainly something which exists, which appeals to many people, and which has some definite characteristics of its own. These characteristics are, perhaps, less well marked than is generally imagined. The abiding place of the bachelor girl need not differ widely from the abiding place of a group of women, and there always have been such homes, and doubtless always will be. But the bachelor is more with us to-day than she ever has been; her wants are anticipated to a larger extent; she insists, not only on her womanliness, but on her bachelorhood.

The BUILDING MONTHLY has, for some time past, been gathering material which may help to make bachelor life more comfortable so far as descriptions of such homes may throw light on the subject. We have no wish to further that state of life: that is a personal matter which concerns the individual only. We maintain no marriage bureau, and we hold no brief for the bachelor, man or maid. But bachelor homes have an interest to many people, and descriptions of them have thus a proper place in these pages. This month the ladies; another time, the men.

THE BACHELOR MAID.

THERE never yet was a bachelor woman's flat, says a daily paper, that could not furnish a helpful hint in interior decoration, and one recently fitted up is so pretty, yet simple, that it is worth a description.

The apartment is "L" shaped, with the main living-room at the angle, one fair sized room at each end, and a bathroom at the back. The paper is a restful grayish brown, most unobtrusive and a fine background for almost any picture, and most effective with the old ivory tinted door and window frames. The ceiling is also done in the ivory tint, which is allowed to continue down the walls for about eighteen inches, to meet the picture moldings.

About ten inches below the picture molding a narrow wooden shelf has been fastened in the wall. It is nearly six feet long, to span the space over the fireplace, and is made of grained oak, stained dark green. On this shelf are several pieces of copper and brass—bowls, pitchers, etc., each one of which catches the light and reflects a brilliant note.

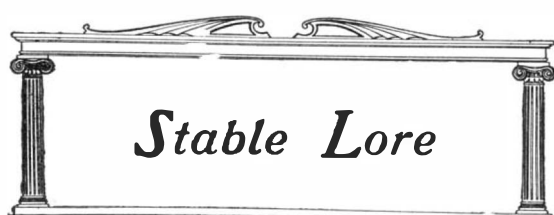
On the side of the room opposite the fireplace a wide, low couch is most inviting. Made from an inexpensive wooden cot, with springs, the legs of which are sawed off, it stands about fifteen inches from the floor, including the thickness of the denim covered mattress. At each end a wide wooden arm, made in the same green effect as the shelves, the combined effort of the owner and the carpenter, forms a convenient transient resting place for the teacups of the people occupying the spacious corners of the couch. A bagdad in old French blue and dull green serves as a couch cover, and there are about a dozen pillows, covered in old tapestry effects.

The chairs in the room are of varied patterns, and mostly dark in color, ranging from a large, squarely built black oak armchair to a little green Indian camp stool at the side of the fireplace.

A useful piece of furniture is a combination seat and set of bookshelves. The seat is about as high as a steamer trunk, and as deep, and three and one-half feet wide; wooden sides, curving back gracefully from the front edge, run up to a height of about nine feet, forming the inclosing ends of the bookshelves, which begin about five feet from the floor. Several cushions are piled in the seat, and all the visible woodwork is of the same color as the arms of the couch.

The oak floor of the apartment, kept highly polished, is decorated with two rugs in dull Persian colors. Two gray foxes, shot by a friend, complete the floor covering. The bay window at the end of the room is hung with dainty washable curtains, a white swiss with pale orange stripes. The pictures on the walls consist of three or four good photographs of masters, effectively framed in dark wood, the Mona Lisa, a Rembrandt, a Corot. In happy contrast there are also a few bright colored sketches in pastel and water color, mostly local landscape and the work of friends.

At the hour that seems characteristic of this cozy spot—late afternoon—the charming details are harmonized by the light from a "real" log fire, that terrible modern travesty, the gas log, having been banished. As the evening comes on, candles are lighted; not ordinary candles, but a unique product known as "bayberry candles." They are made by an old resident in the country in Long Island.



Stable Lore

A LARGE PRIVATE STABLE IN BROOKLYN.

THE building of private stables, of large and frequently ornamental construction, has increased of late in our large cities. One of the most complete of recent stables is that of Herbert Lee Pratt, Esq., of Brooklyn. The following description is taken from the Brooklyn Daily Eagle:

The exterior is simple, in its two story front of brick of a deep red mottled brown with white stone trimmings. The coach house proper, reached through the carriage door or the livery room, is big and broad. Its ceiling is of iron girders, though there is but one story above, thus permitting a single ceiling and giving the building additional security in case of fire. One panel between the girders is an elevator for raising feed in bulk to the big storeroom overhead, an elevator, however, that when not in use becomes a part of the ceiling. The radiators are swung up high on the walls, within a few feet of the ceiling that they may not be in the way of carriages on the floor.

On this stable's floor there is space for six equipages of the largest size, with room for an ample driveway between the two rows. The walls of the carriage house proper have been kept plain and unadorned. The big room's sole ornament as background for the blue and black panels, with their trimmings of French gray of the rows of coach and traps, is the cases for harness in ash and glass that extend across the rear wall, broken only by the door to the stable itself. There is no separate harness room.

A cool, agreeable yellow and white is the effect of this coach house in front. The girders of its ceiling are in yellow, with panels of ash. For a height of perhaps eight feet up, the walls are of white enameled brick, this extending on both sides to the harness cases at the rear. Above the white enamel there is a dull brick of yellow brown, reaching to the ceiling.

Six equipages stand in the coach house for the start off, five horses in the stable beyond. These vehicles include, beside the famous coach, a single horse brougham, a vis-à-vis, a cabriolet, a hansom. Against the white and yellow these black and rich blue panels stand out effectively and vividly, accentuated by the sand floor covering here, which is one of the most remarkable ever laid down in patterns in a coach house.

Floor designs in sand have come to be one of the chief features of a modern stable. They give the carriage floor a trimness, an effect of color and artistic neatness obtainable in no other way. The vehicles rest on this thin carpet of sand, which is bordered and decorated in colored sands by stencils according to the coachman's taste and ability. It is in these days part of a coachman's profession to know how to put together an effective sand floor.

The coach house floor is, of course, of concrete. The vehicles stand upon it in two rows, as has been said, with a driveway in between. Each of these big squares the coachman has treated elaborately and pictorially.

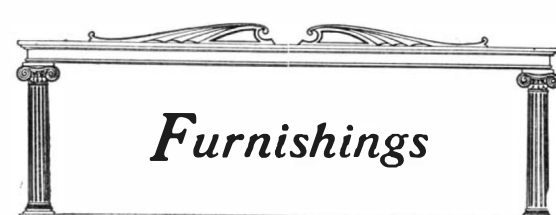
Not the least thing about this stable and its carriage house are its little niceties of detail. The livery room and its entire second floor are cases in point. When the carriage doors are closed, entrance to the stable is through the former. This is a narrow apartment, hardly more than a passageway in space, finished in ash, yet it is fitted up finely. Along one side are the clothes presses, with glass door, holding the livery of the establishment—dark blue, with silver buttons. On the other side is a mirror above a folding table.

Where the door from the street opens into the livery room is a flight of stairs leading to the rooms above and the feed loft back of them.

There are three good-sized rooms, running across the building's front, each with two windows, sunny and bright. There is a vast difference here in cheerfulness from the average city apartment, with its dark center rooms. The middle room is the parlor. On one side of this is a kitchen, on the other a bedroom.

The parlor is a dining-room as well, for it has a sideboard in it. In the bedroom, besides a dresser, there is a brass bedstead. An easy-to-work cooking stove is in the kitchen, and surrounding the windows here are pantry cupboards built into the wall high and picturesquely. There is good furniture, comfortable chairs and sofas, attractive wall paperings.

From this hallway to the coachman's rooms another leads at right angles back along this second floor. To its left is a bathroom and three bedrooms, one now held by the coachman as a spare room, another occupied by one of the grooms. To the right of this hallway is the feed loft, shut off very securely.



Furnishings

A BEDROOM IN WILLOW.

GREEN, says an exchange, is the color usually to be found in bedrooms furnished in willow. There will be in addition to the bedstead a pretty desk, and there are many designs from which to choose, some with shelves for books and small drawers at the back, and others with a plain desk top and drawers beneath. There are dressing-tables with strong willow-covered posts supporting the mirrors, and with several drawers beneath the table; there are also couches in several designs, and easy chairs, simple desk and dressing-table chairs, and one or more small stands or tables.

If one must have carpets, remarks a writer in Good Housekeeping, let them be tacked down at intervals of not less than six inches, and with long tacks driven in only a short distance. Or, better still, have the carpets fitted with brass eyes to drop over nails set permanently in the floor. Then, with some moving of furniture, the carpet can be cleaned frequently in the open air; better yet, have the carpet fill only the central part of the room, showing the bare floor for say one and one-half feet near the walls. This means less furniture to move at cleaning time, and, therefore, more frequent cleanings.

In making over a carpet that originally fitted the entire room, usually enough good pieces can be secured to make a presentable covering, when allowance is made for this bare floor around the walls. The floor can be painted, if in bad condition, or, what is better, lay a parquet wood border to meet the line of the carpet.

The modern steam cleaning of carpets is not so good as that of older days, as the airing is desirable. In cleaning a carpet it should be laid on the grass, face down, and then well beaten from the back. This causes the dirt to drop out of the loops where it is so deeply embedded. Brushing the surface with a broom removes the lighter particles, and washing with a cloth wet in diluted ammonia will both clean and freshen the surface.

Matting is dirty and expensive for continuous wear. For summer, however, it is highly desirable.

SLIP COVERS.

A NEW material, says a contemporary, that gives a crisp appearance to the furniture when made up into slips is a French linen embroidered with tiny dots. This comes in 50-inch goods at \$1.00 a yard, and its range of colors—blue, red, green, heliotrope, and brown—adapts it to any color scheme that has been attempted for the winter months.

Cretonne has for a long time been used for bedroom furniture coverings, but only lately has it been adopted in other rooms. A daring use of a big flowered pattern made up with red binding made a summer parlor so distinctive that the idea is worth repeating.

Some of the art tickings have particularly pleasing designs, small and well-defined, that make them serviceable for certain pieces of furniture.

In the linen taffetas a hitherto unexplored field is now opened for the lovers of the beautiful in connection with the summer coverings or slips. The light brown or natural linen colored groundwork is more durable for this purpose than the white and the all-over patterns are the most economical. Roses tied with ribbon knots, garlands of flowers with stripes of contrasting colors and conventional designs are some of the styles that are pretty for slip covers.

In very dainty bedrooms the white dimities that have been sold for spreads and valances are now being used for furniture covers. At from 35 up to 60 cents a yard these dimities, in white and also in colored designs, are inexpensive for summer slips. It is essential that slip covers should be washable.

ELECTRIC LIGHT FIXTURES.

A SMOKING-ROOM, described as lighted by electricity, has bulbs dropping from simple metal sconces set in the wall and veiled by means of little white curtains that hang from a framework of metal to match the sconce. Weighted with a narrow fringe of crystal, gold or silver fringe, such curtains look charming indeed. Curtains are quite a new feature of electric fittings, and very pretty they look in every case where the light can be completely hidden, except from the point of view of the person who sits beneath it, and who requires the radiance of its brilliance to fall upon her book or needlework. The curtains can easily be removed to be washed and cleaned.

New
Building
Patents

Plumbing

Legal Notes

The following list of New Patents relating to Building and Sanitary Science is prepared expressly for the SCIENTIFIC AMERICAN BUILDING MONTHLY by MUNN & Co., Solicitors of American and foreign Patents.

A PRINTED COPY of the specification and drawing of any patent in this list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, if exact date or number is furnished. Remit to MUNN & Co., 361 Broadway, New York.

BRICK, STONE AND TILE.

COMBINED BRICK AND TILE. D. W. Anderson, Richmond, Va. February 2.....750,789, 750,790
FLOOR TILING. W. J. Ellis, Akron, Ohio. February 2. 750,954
MANUFACTURING OF FIREPROOF BRICKS OR MATERIAL. F. Cruger, Berlin, Germany. February 2.....751,080
CONCRETE BUILDING BLOCKS. F. A. Malette, Geneva, N. Y. February 2.....751,089
TILE. S. B. Flint, New York, N. Y. February 2.....751,275
BUILDING TILE. J. Schall, Evergreen Park, Ill. February 2.....751,346
CHIMNEY TILE. F. Minger, Westbend, Iowa. February 9.....751,534
BUILDING BLOCK. E. O. Baylor, Adrian, Mich. February 9.....751,711
BUILDING OR PAVING BLOCKS. F. B. Henry, Philadelphia, Pa. February 16.....752,070
TILE. R. McCarrel, Jacksonville, Fla. February 23. 752,697
ILLUMINATING TILE. J. Jacobs, Brooklyn, N. Y. February 23.....753,078

CARPENTRY.

STAIRWAY. E. Ohnstrand, Jamestown, N. Y. February 2.....751,098
WINDOW. H. C. Nelson, Salem, Ohio. February 9. 751,747
WEATHER STRIP. G. L. Parker, Bremerton, Wash. February 16.....752,355
WEATHER STRIP. W. H. Etter, Marietta, Ohio. February 16.....752,390
WEATHER STRIP. C. Vose, New York, N. Y. February 23.....752,729
WEATHER STRIP. J. H. Foote, Cincinnati, Ohio. February 23.....752,767
WINDOW SASH. I. W. Emerson, Milford, Mass. February 23.....752,831

CONSTRUCTION.

WINDOW SASH. E. Ohnstrand, Jamestown, N. Y. February 2.....750,999
PROTECTING PLATE FOR WINDOW SILLS. W. A. Pratz, Marshall, Texas. February 2.....751,008
CENTERING SUPPORT. G. H. Kunneke, New York, N. Y. February 2.....751,181
REVOLVING METALLIC WINDOW. L. Christenson, New York, N. Y. February 2.....751,379
METAL WINDOW. J. A. Knisely, Chicago, Ill. February 9.....751,521
SKYLIGHT. Mullins, Hare and Nelson, Salem, Ohio. February 9.....751,746
METHOD OF BUILDING CONCRETE WALLS. D. G. Gray, Philadelphia, Pa. February 9.....751,789
COMPOSITE BUILDING CONSTRUCTION. J. Kahn, Detroit, Mich. February 9.....751,921
WALL FURRING. C. E. Dobbin, New York, N. Y. February 16.....752,530
WALL OR VAULT. J. G. F. Lund, Drammen, Norway. February 23.....752,694
SKYLIGHT. C. W. Smith, New York, N. Y. February 23.....752,869
CEMENT ROOFING PLATE. Baden and Gluss, Hamler, Ohio. February 23.....753,188

ELEVATORS.

ELEVATOR CAM. W. Humphreys, New York, N. Y. February 2.....751,173
MEANS FOR ARRESTING ELEVATOR CARS. P. F. Hallock. February 9.....751,504

FIREPROOFING AND FIRE EXTINGUISHMENT.

SELF-CLOSING FIRE DOOR. G. Wideman, Aurora, Ill. February 9.....751,593
FIRE EXTINGUISHING DEVICE. C. Brown, Chicago, Ill. February 16.....752,327
FIRE DOOR CLOSING DEVICE. H. L. Cochran, Sheridansville, Pa. February 23.....752,825
FIREPROOF STRUCTURE. N. Poulson, Brooklyn, N. Y. February 23.....753,208, 753,209
FIREPROOF DOOR. N. Poulson, Brooklyn, N. Y. February 23.....753,210

HARDWARE.

RELEASE HINGE. R. D. Struble, Philadelphia, Pa. February 2.....750,908
SASH FASTENER. R. S. Reid, Timaru, N. Z. February 9.....751,809
SASH FASTENER. James E. Gibbs, Bridgewater, Va. February 16.....752,062
LOCK. C. Faust, Rhinelander, Wis. February 16.....752,148
WINDOW SASH FASTENER. P. H. Page, Surrey Centre, Canada. February 16.....752,253
SASH HOLDER. E. Hermann, Ander, Texas. February 16.....752,549
KNOB ATTACHMENT. P. La Belle, Anderson, Ind. February 16.....752,623
LOCK. P. La Belle, Anderson, Ind. February 16.....752,624
WINDOW LOCK AND BURGLAR ALARM. P. Hinkel, Chicago, Ill. February 23.....752,775

HEATING AND VENTILATION.

COMBINED SCREEN, WINDOW AND VENTILATOR ATTACHMENT FOR DOORS. J. H. Moskow, San Francisco, Cal. February 9.....751,668
RADIATOR SUPPORT. J. A. Beury, Beury, W. Va. February 9.....751,828
HOT WATER RADIATOR. J. J. Lawler, Mt. Vernon, N. Y. February 23.....752,987
RADIATOR. G. M. Aylesworth, Collingwood, Canada. February 23.....753,031

MISCELLANEOUS.

MORTAR HOLDING AND DISCHARGING DEVICE. F. C. Ferris, Columbus, Ohio. February 2.....750,837
RETAINING MATERIAL FOR PLASTER OR THE LIKE. Murphy and Camp, Chicago, Ill. February 2.....751,094
FLOORING OR WALL COVERING MATERIAL. J. J. C. and M. Smith, Passaic, N. J. February 16.....752,116
LEADED GLASS MOSAIC. F. L. Linden, Chicago, Ill. February 16.....752,346

PLUMBING.

VENTILATING DEVICE FOR WATER CLOSETS, ETC. A. Drouillard, Windsor, Canada. February 2.....750,952
WATER CLOSET ATTACHMENT. P. H. Bacon, New Haven, Conn. February 16.....752,321
WATER CLOSET. J. W. Kelly, Chicago, Ill. February 23.....752,906

TOOLS.

CARPENTERS' TOOL. F. Lindblad, New York, N. Y. February 2.....750,866
PLUMB AND LEVEL. H. Duisen, St. Louis, Mo. February 16.....752,535

PLUMBING EVILS AND REMEDIES.

THE dangers of badly-planned, haphazard work, and shoddy materials, pointed out a recent English writer, are now much more thought of than formerly, although indifference yet prevails in some quarters. The evils we have now to lament arise from a variety of causes: 1. Plumbing in the past has not been sufficiently recognized as a distinct craft. 2. Unskilled labor and incompetent workmen are to be found in the trade, due largely to the falling away of the apprenticeship system. 3. Ignorance, negligence, and deliberate wrongdoing are not unknown. 4. The use of unsuitable materials as the result of competition and low tenders. "Cheap" and "nasty" are twins, and there is nothing cheap in money if the lives of our fellow-creatures are endangered. 5. The absence of supervision by an independent authority.

The injurious influences at work in connection with plumbing are: 1. The liquid and solid refuse discharged from basins, sinks, wash-hand basins, and water-closets; and, 2. the products of the decomposition and putrefaction of this matter. This putrefaction produces gases which, mingling with the air in the soil pipes and drains and sewers, constitute what is loosely spoken of as "sewer gas," which, in a well-ventilated system, should not be inferior to, or more hurtful than, the air of an overcrowded room, workshop, or school. It is composed of ordinary atmospheric air, with the addition of less than 1 per cent. of the gases and vapors given off by decomposing sewage.

It is the putrefaction produced by the organisms or germs of the organic material deposited on the sides of the pipes, or in the cracks or inequalities (often the result of bad workmanship), which gives off gaseous impurities of an injurious nature, because they seriously diminish the oxygen, and also are poisonous in themselves. They should, therefore, be excluded from the dwellings, and this is one of the main requirements of good plumbing. These gases and germs enter the dwelling through various avenues. We may take it roughly that neither gases nor germs can pass through a properly constructed and properly laid water trap, on a properly ventilated system. If a little amount of gas does pass, it is probably rendered harmless by filtration through the water. If, in any way, the water seal is broken, whether by faulty work or by siphonage, then both gases and germs will doubtless be conveyed within the house. Or admission might be gained by loose joints, or cracks, or punctures in the pipes, aided by suction and the warmer atmosphere of the dwelling. Having gained entrance, what is the effect on the health of the inmates? Specific disease can only be produced by the specific organism, because these germs breed true. To the causation of enteric fever the bacillus typhosus is necessary, but that organism is not found in the soil pipes unless from the excremental discharges of an enteric-infected patient. It is immaterial whether these germs, having gained admission, are carried directly to the victim, or are deposited on milk, or in water, etc., and then swallowed, afterward multiplying readily in the human intestines, producing the specific fever. While it may be safe to argue that ordinary soil pipe or drain air does not produce any specific disease, such as enteric fever, it is admitted that the frequent and prolonged inhalation of this air has a devitalizing influence, by lowering the general tone of health, and thereby weakening the power of resistance to infection, and even to ordinary ailments, such as catarrhs. Such symptoms as headache, sickness, loss of appetite, feeling of lassitude, sore throat, and diarrhea, and feverishness are frequently produced in houses to which drain air has free access. Continued residence under such circumstances may lead to a seeming toleration in the human system, but impairment of the general health and appetite, with loss of vigor, may be noticed.

A NEW ANNOUNCER.

A NOVELTY in the life of the "in and out" notifications, which are coming more and more into use, both in private houses and apartments, is shown in one of the shops. It consists of a box made of hardwood, and it is provided with a slit for letters and has a lock and key. On the outside of the box is a dial, provided with a hand for marking the time of return, and on one side of the box is the word "In" and on the other the word "Out." On top of the box is a small white slate in a mahogany frame, with a pencil attached. This may be replaced with a pencil and pad if preferred.

FORECLOSURE OF LIEN.

ON foreclosure of a mechanic's lien, sub-contractors can not obtain a personal judgment against the contractor unless they have filed a lien. *Nussberger vs. Wasserman et al.*, 81 N. Y. Supp. 295.

MATERIALMEN'S LIENS.

Ky. St., Section 2,463, giving to those who perform labor or furnish material for the improvement of real estate a lien thereon, and on the land, to secure the amount thereof, with costs, etc., imposes on the owner the duty, to the extent of the full contract price, of seeing that the mechanics and materialmen are paid, and no payment made by him to the contractor, even without notice of the claims of the mechanics and materialmen, can relieve him therefrom. *N. O. Nelson Mfg. Co. vs. Mann et al.*, 71 S. W. Rep. (Ky.) 851.

TIME FOR ENFORCING LIEN.

BURNS' Rev. St. 1894, Section 7,257 (Horner's Rev. St. 1897, Section 5,395), provides that one seeking to acquire a mechanic's lien must file notice in the recorder's office of the proper county "within sixty days after performing such labor or furnishing such material." Section 7,259 (Section 5,298) declares that any person having such lien may enforce same by filing his complaint in the proper court within one year from the time said notice was filed. Section 7,255 (Section 5,293) gives to certain persons and claims a preference without the filing of the notice of lien. *Held*, that Section 7,255 did not extend the time for enforcing the lien. *Smith et al. vs. Tate et al.*, 66 N. E. Rep. (Ind.) 88.

LIEN ON HOMESTEAD.

IN Comp. Laws, Section 10,711, providing that where lands on which improvements are made are held and occupied as a homestead, the mechanic's lien provided for in the act shall attach to the lands and improvements, if the improvements be made in pursuance of a written contract, signed by both husband and wife, the word "homestead" is used in its constitutional sense, and the excess over the \$1,500 exemption provided for in the constitution is subject to mechanics' liens, though the contract for the improvements is not signed by the wife. *McAlister vs. Des Rochers et al.*

COMPLETION PREVENTED BY OWNER.

WHEN, under a building contract, the contractor has been prevented from completing his work by the fault of the owner, the legal measure of damages is generally, for the work done, such a proportion of the entire price as the fair cost of that work bears to the fair cost of the whole work, and, in respect to the work not done, such profits as he would have realized by doing it. *Wilson vs. Borden*, 54 At. Rep. (N. J.) 815.

EXTENSION OF TIME.

WHERE, after the expiration of a reasonable time within which a contractor was required to complete an annex to a building, and after the old building has been destroyed by fire, the owners demanded that the contractors complete the building, such demand constituted an extension of time, and a waiver of the contractor's failure to seasonably perform the contract. *Krause et al. vs. Board of School Trustees of School Town of Crothersville*, 66 N. E. Rep. (Ind.) 1010.

EXTRAS-DEFECTIVE WORK.

WHERE columns to support a balcony of a building were rendered necessary on account of the defective manner in which the contractor performed his work, he was not entitled to charge for the same as extras. *Vanderhoof vs. Shell*, 72 Pac. Rep. (Or.) 126.

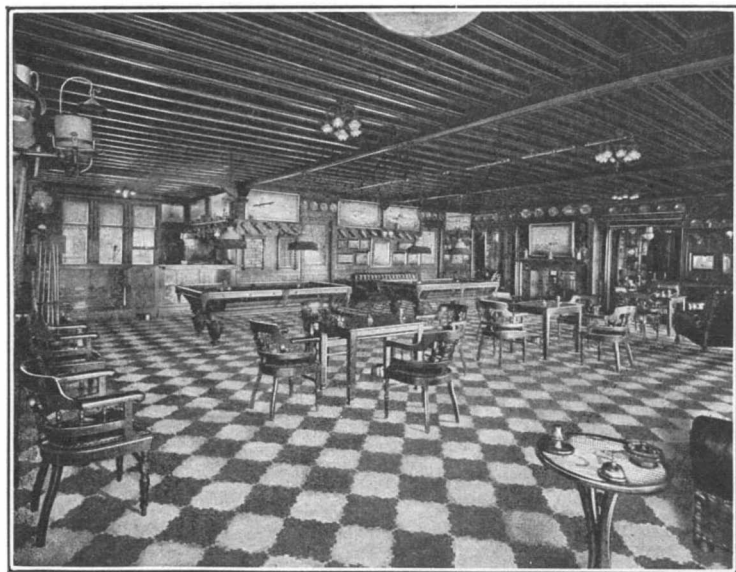
ENGLISH PAVILION, ST. LOUIS.

THE English Pavilion just completed in the grounds of the St. Louis Exhibition is practically a reproduction of the Orangery at Kew, carried out under the architectural direction of Messrs. Ernest George & Yates, the well known English architects. The building has been solidly erected so that it could remain as a permanent building if required. The materials are timber and Portland cement upon metal latings. It is a building of much interest and quite characteristic in style and plan.

Publishers' Department

INTERLOCKING RUBBER TILING.

IMPROVEMENTS made in India rubber have always been quickly followed by demands for its application to industrial needs. Destined to success immediately it sprang into its mere gum shoe prominence, it has ever since advanced to the position of a constructive feature in much of our ornamental, scientific, and practical work. The material definitely embraces so many possibilities in the direction of elasticity, insolubility, economy, impenetrability, flexibility, and endurance that it is bound to enter into an infinite variety of uses, and be a fit and adequate investment for the betterment of the world, so long as no accident interferes with its production and vulcanization. It is a foe to all gases and liquids, and a friend to tires, boots, mechanical goods, druggists' sundries, game im-



INTERLOCKING RUBBER TILED FLOOR.

plements, clothing, etc. It is put into belting, tubing, packing, hose, valves, stopples, pumps, wheels, rings, washers, and many other articles. It is successfully used in place of earthen tiles in many large buildings. Manufactured in a carefully selected variety of colors and forms, this rubber tiling is a favorite for floating palaces, business offices, vestibules, halls, billiard-rooms, churches, libraries, hotels, hospitals, and wherever a perfect walking surface is desired in private residences and important structures. Interlocking rubber tiling is manufactured by the New York Belting and Packing Company, Ltd., and freely endorsed by architects and engineers. It is especially and peculiarly adapted for use in water craft, whether yachts, steamships, or men-of-war. It stands constant straining and racking without cracking or separating, and its non-slippery feature is of high value at sea, and as an instance of its fitness for ocean-going service we mention that it was selected by the Russian officers for flooring on the Cramp built battleship recently sunk at Port Arthur. A list of places of the highest rank all over the country using rubber tiling would give an excellent idea of the wide adoption of this material, but it is obviously inconvenient to mention more than a few, such as Marshall Field, Siegel Cooper Co., National Bank of North America, United States Capitol, Philadelphia City Hall, United States battleships, People's line of steamers, the yachts Conqueror and Niagara, palace car companies, Waldorf-Astoria, Brooklyn Hospital, Grace Church, and Dakota Flat. In the modern floor used in the above list of representative constructions each tile is interchangeable, and may be readily removed if necessary, but is shaped so as to lock firmly into the adjoining tiles, the whole forming any design and combination of colors desirable, and producing a solid area of flooring unlimited in size, non-absorbent, odorless, impossible to loosen up, and incapable of harboring any germs. The practicability of the nosing as applied to stair treads is at once apparent, possessing, as it does, the safe non-slippery feature of tiling, and interlocking with the tread. A very important product of this firm is rubber belting, which possesses unsurpassed efficiency for the transmission of power. Its basis of strength is cotton duck, the plies of which can be increased to resist any required tensile strain, and uniformity of strength and thickness throughout can be always relied upon. It is completely waterproof, not easily affected by range of temperature, and its flexibility and smoothness of surface give perfect contact with pulley and insure the transmission of

the maximum horse power without slipping. It is, therefore, adapted not only for all regular work, such as main engine drives, countershafting, etc., but is especially suited for saw and paper mill service, elevators and conveyors, threshing and brick making machinery, and all exposed outdoor work. Mats and matting form another feature of manufacture in a list comprising perforated, embossed solid back, corrugated rubber, diamond cell, coin, car step, and pyramid mats. The firm also makes a very extensive line of packing goods, consisting of about thirty varieties; sixty kinds of hose; apron cloth, billiard and pool table cushions, bottles, bags, coffin strips, tips, tubing in many styles, typewriter platens and rolls, disks, and thousands of other articles. A works which covers so many acres at Passaic, N. J., and is capable of shipping its products all over the world, has the industrial distinction of always being busy manufacturing all the essentials in the sciences, the arts, and domestic life obtainable from one of the most wonderful and useful of the growths of nature. There, may be seen the great output of the most substantial and delicate goods, and there, may be appreciated the alertness and enterprise that enable the development of such a vast variety of constantly multiplying objects of novelty and utility. There, whatever may be superficially spread or molded or cast into forms, are bound to be expressed in some well fashioned device or strong protected fabric as dainty or as sturdy as skilled workmanship and improved appliances can produce. The illustration in connection with this article shows a billiard-room floor covered with interlocking rubber tiling. The address of the manufacturers of these mechanical rubber goods is No. 25 Park Place, New York, N. Y.

DRAWING PAPER AND DRAWING BOARDS.

A NEW line of detail paper has recently been put on sale by some of the leading dealers under the name of Strathmore Detail Drawing Paper, white and buff, and those who have tried the stock prize it highly, and intend using it permanently.

Another line of some interest to architects and draftsmen is the Strathmore Drawing Board for pen and ink; also Strathmore Illustrating Board for water colors. These boards are of exceptional merit, and they are used and recommended by the leading artists and architects of the country.

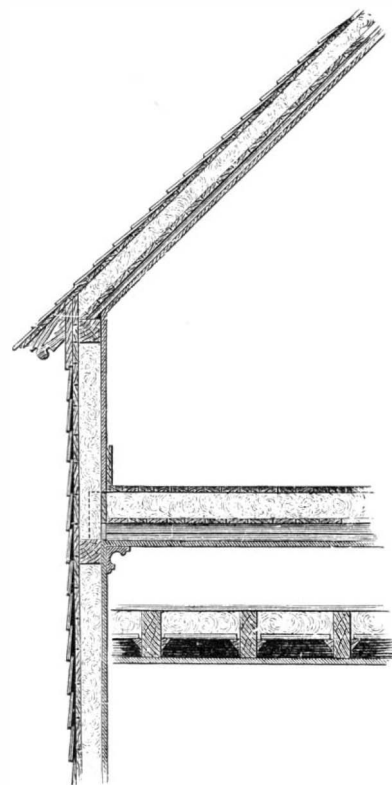
The manufacturers, the Mittineague Paper Company, of Mittineague, Mass., have for a number of years been noted for the quality of their product, and if it is kept up to the present standard it will always find a ready market.

PRISMATIC GLASS.

FROM an opinion given by celebrated lawyers we have the information that their firm has carefully examined and considered the five Letters Patent of the United States which are now owned by the Daylight Glass Manufacturing Company, Nos. 608-610 Chestnut Street, Philadelphia, Pa., under which licenses have been granted to the American Luxfer Prism Company and George K. Maltby & Co., for machines for making prismatic glass, for a method of making sheets or panes of prismatic glass for use in making prismatic windows, and for a method of making prismatic windows. In this firm's opinion, the patents which we have mentioned above are good and valid patents, and cover very broadly (1) the machines which are used in making plates of prismatic glass by the rolling process or method; (2) the method of making panes or windows of prismatic glass, which consists in rolling the glass into a sheet having rolled prismatic projections on its surface and then annealing and cutting the sheets in the desired manner, and (3) the product resulting from the methods just described, to wit, a prismatic glass window comprising a sheet of rolled glass, having rolled prismatic projections upon its surface and having the property that it may be cut into the size or shape desired. These patents all relate to what is now termed the "sheet glass" method of making prismatic glass or prismatic windows. The five inventions covered by these patents are closely related. The fact that patents have been granted to the Daylight Glass Manufacturing Company for machines which are particularly adapted for carrying out the method, as well as for the method and for the product, is an indication of the broad novelty of these inventions, and its attorneys say that it is also an assurance that the company will be able to maintain its exclusive rights thereunder, and that every feature or aspect of the invention is covered, and covered broadly, in these patents. This firm of lawyers is clearly of the opinion that these patents can be sustained against any infringer.

INSULATION OF HEAT, COLD, AND NOISE.

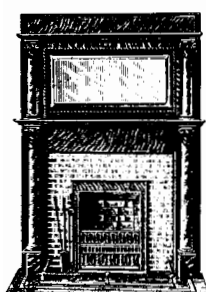
IN the construction of buildings of all classes or kinds used or occupied for offices, dwellings, school-houses, amusement and concert halls, theaters, etc., the question of insulation of heat, cold, and deafening is an important one for those who are desirous of having a building as fire and sound proof as it can be made, and be comfortable in summer and winter. In the selection of a material for this purpose, it is necessary to employ one which is not only fireproof, but also at the same time a good non-conductor of heat and sound. To obtain the best results, it is essential that the material chosen should be properly used. This is done by filling the entire space between the studding, as these spaces form flues for the conveyance of sound and fire from cellar to roof. For this reason alone, asbestos sheathing is not desirable, although in itself it is fireproof. The same may be said of paper sheathing and hair felt; nor are they as good as asbestos paper, from the fact that they will decay, and in so doing give off unpleasant odors, and neither is fireproof. It is also well, when selecting some material for insulation and deafening, that it should be light, clean, and easily applied. Brick filling between studding is not very satisfactory, because the space between the studding (16 inch centers) is not adaptable unless you break the bricks, and use what are called bats, which are not good insulators, as they are heavy and hold moisture. Among the materials which have been extensively used during the past few years for insulation and deafening, mineral wool has fully met the requirements in all buildings wherever it has been applied. From statistics and tests we learn that its fusing point is 2,200 degrees Fahrenheit. This shows that it is fireproof. It fills the entire spaces between studs, thereby securing the deadening of sound and the prevention of fire running from the cellar to the roof through the inevitable flues with a rapidity most astonishing and disastrous. Experience shows also that mineral wool saves its cost by what it saves in fuel in two or three years, in an ordinary dwelling house, and other instances prove its doing so every five or six months. Of course, this is by the reservation of steam heat. Furthermore, in its favor is the fact that, because it is mineral, it affords no abiding place for vermin of any kind, as it is absolutely vermin proof. Therefore, as mineral wool possesses all the qualities claimed above, that is, fireproof, insulation of heat or cold, deadening of sound, and vermin proof, there can be no question as to its being unsurpassed by any other materials on the market. All who desire comfortable homes, that are cool in summer or warm in winter, free from noises, and for very little cost, considering



MINERAL WOOL BETWEEN STUDDING.

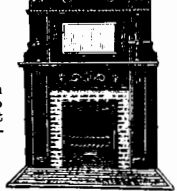
the amount of comfort obtainable by proper application, will do well to give this material their careful attention and consideration. In the accompanying illustration, mineral wool is shown filling the spaces between studding. Mineral wool pipe covering is manufactured by the United States Mineral Wool Company, No. 143 Liberty Street, New York, N. Y. The firm also makes corrugated copper gaskets.

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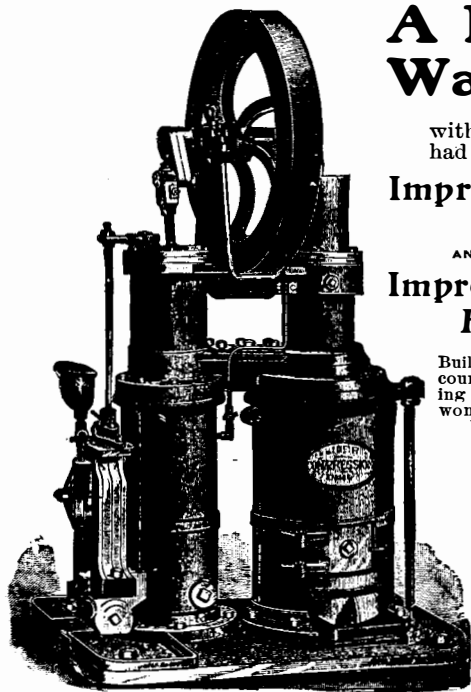
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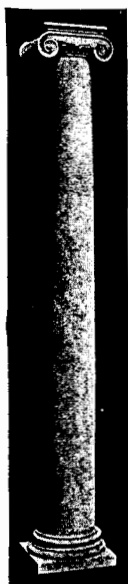
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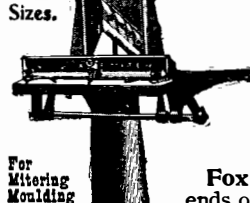
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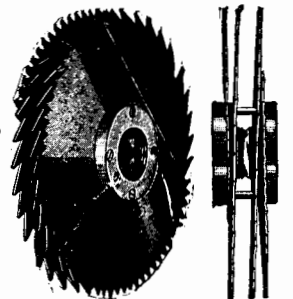
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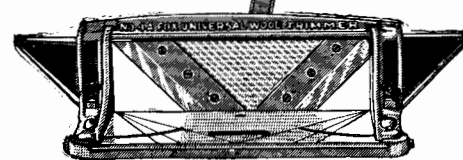


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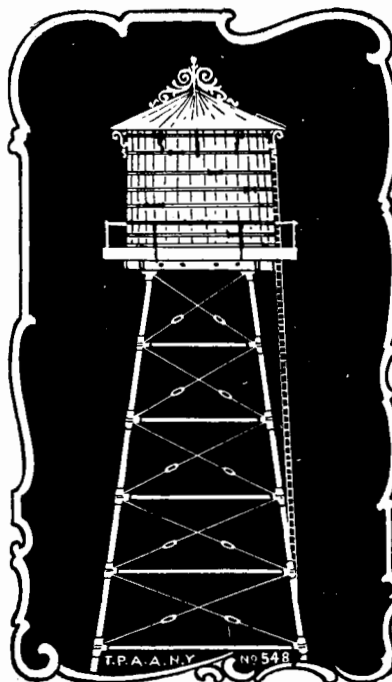
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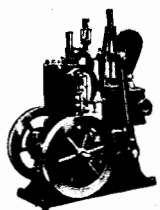
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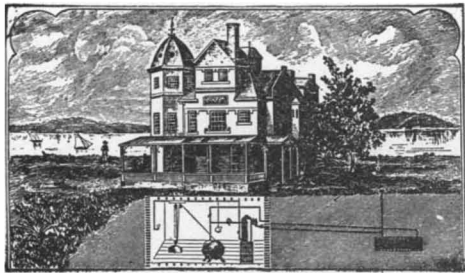
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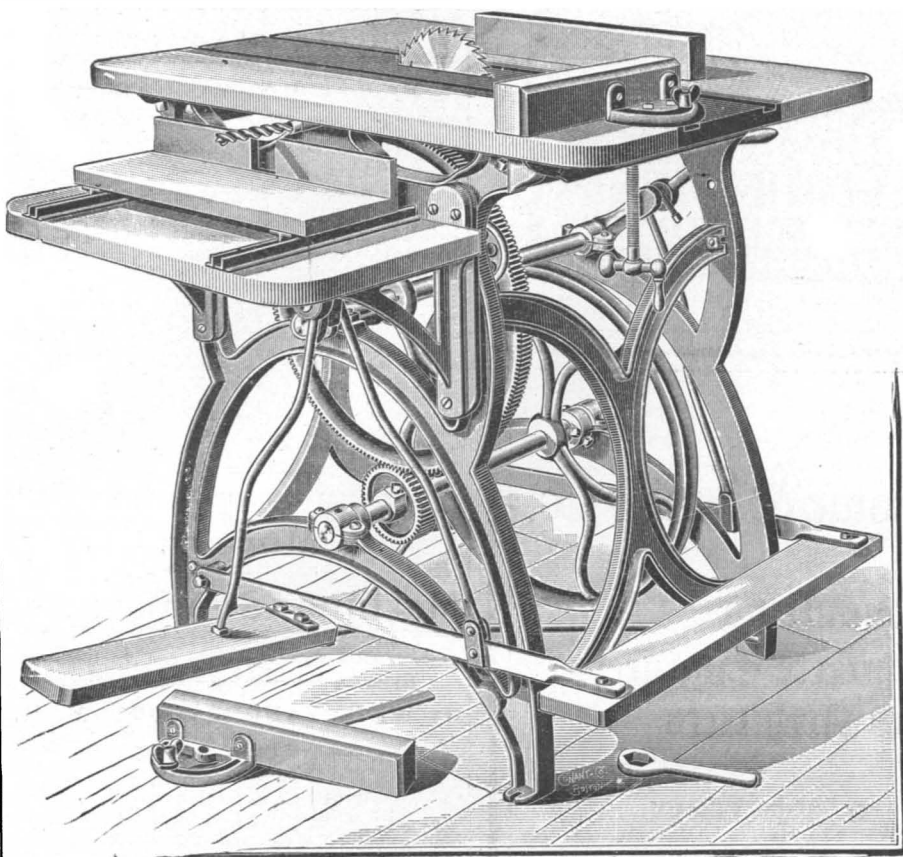
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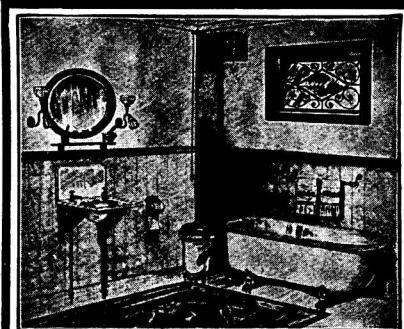
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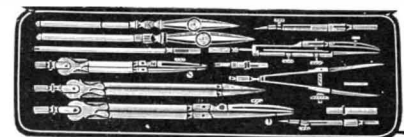


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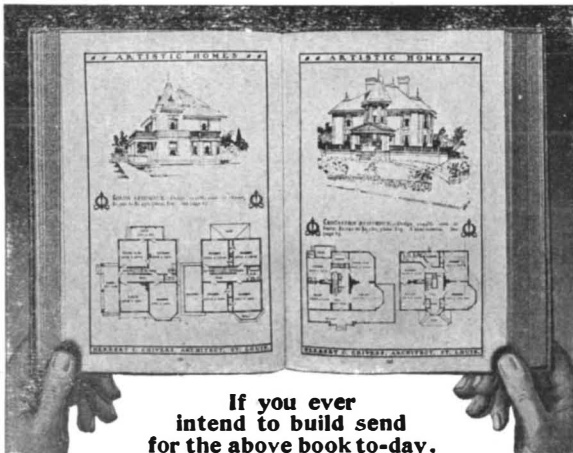
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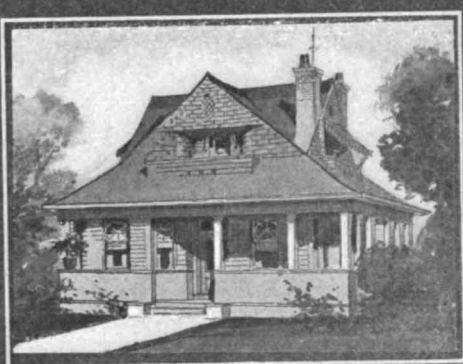
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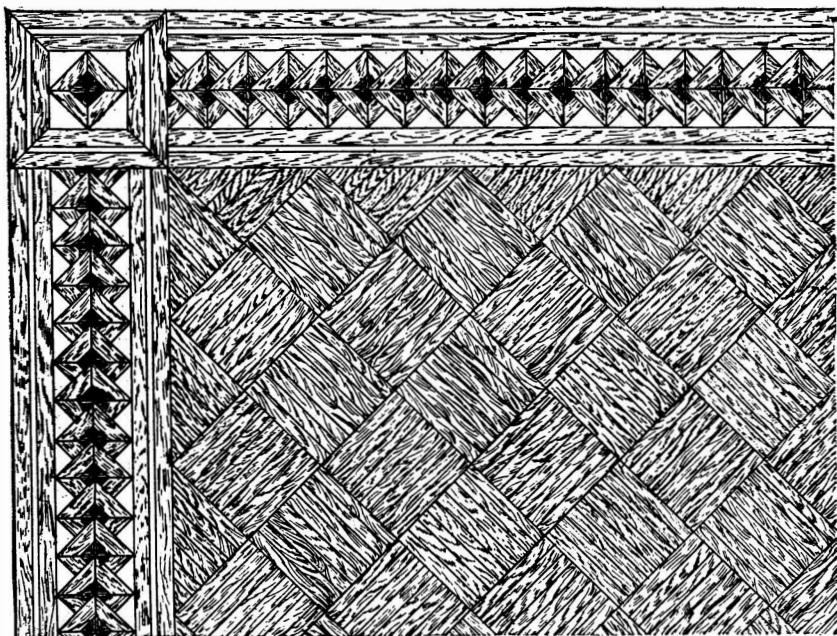


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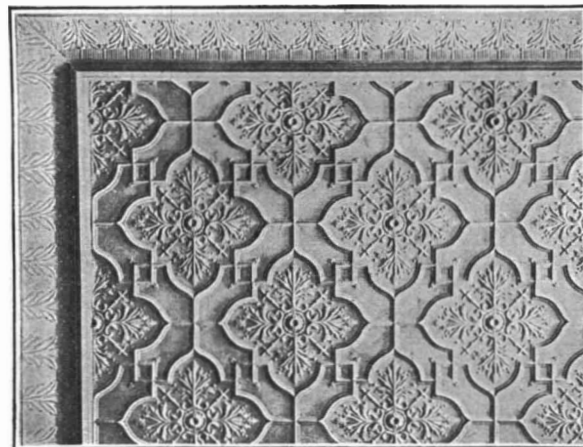


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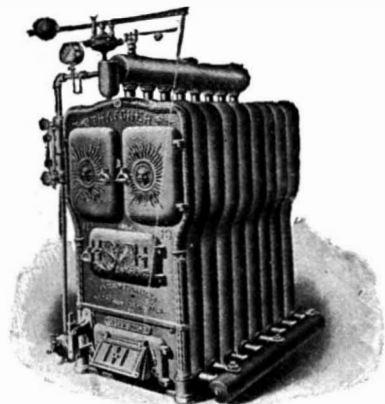
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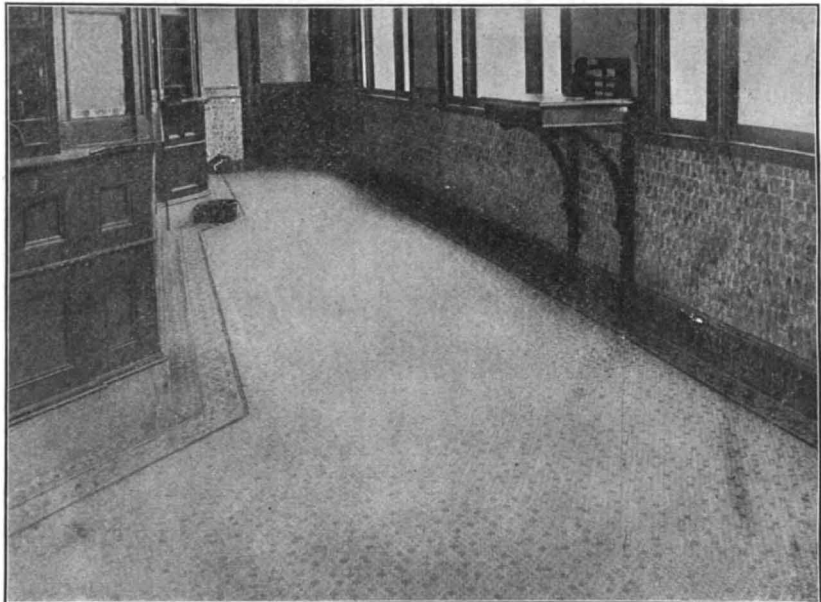
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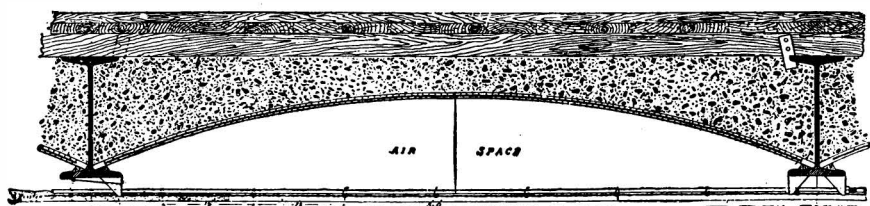
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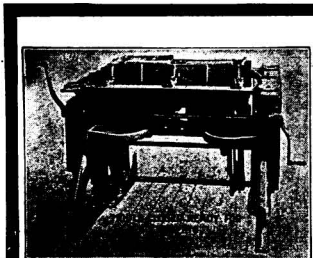
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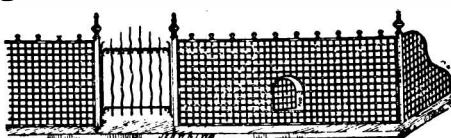
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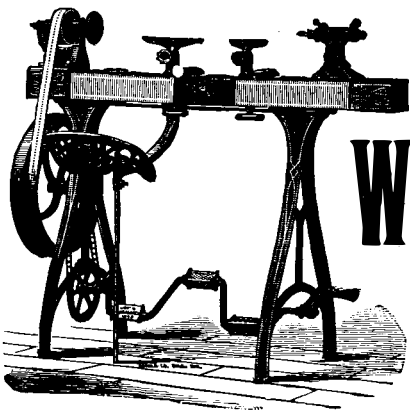


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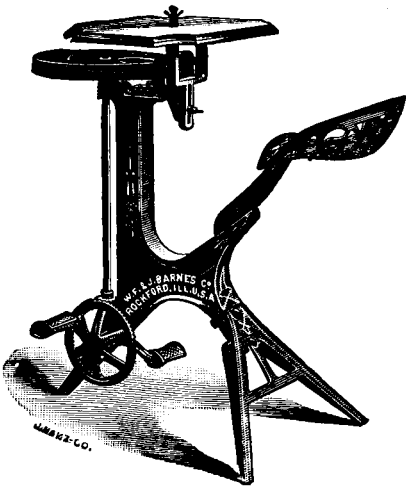
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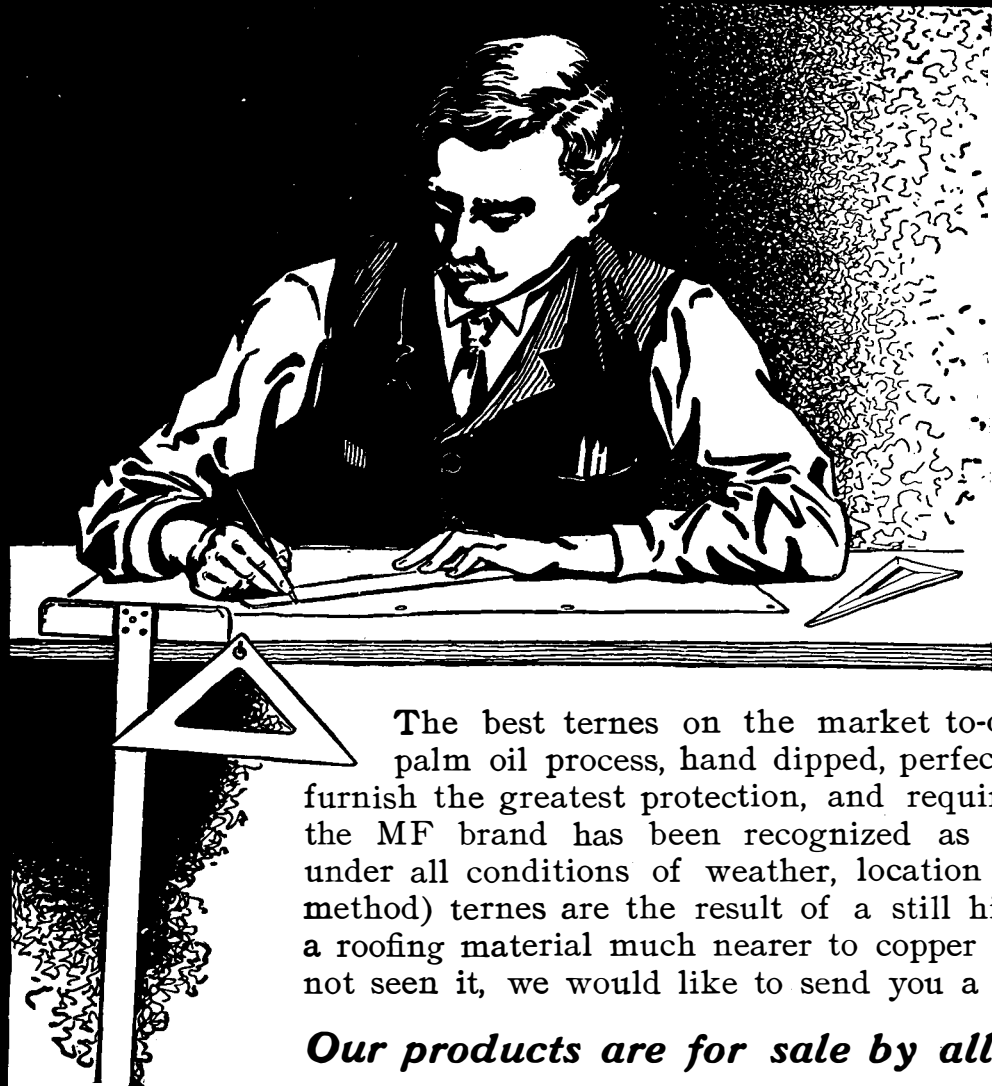
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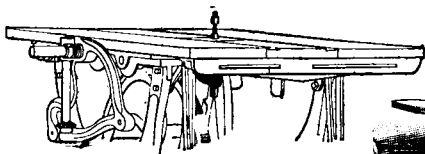
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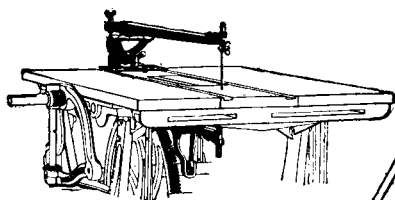
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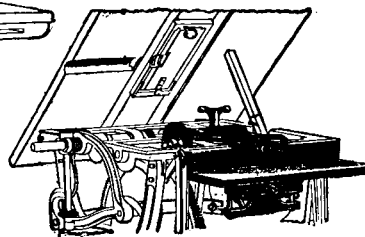
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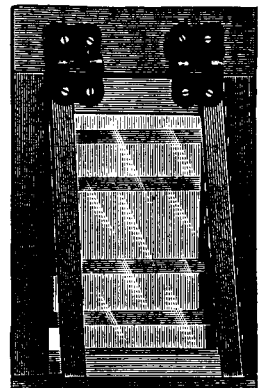
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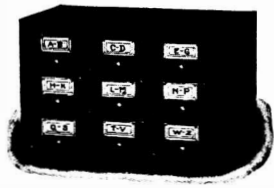
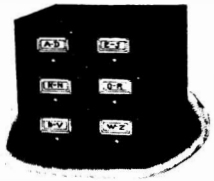
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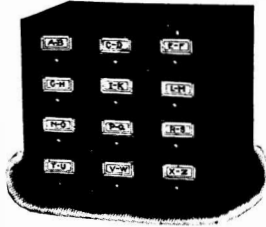
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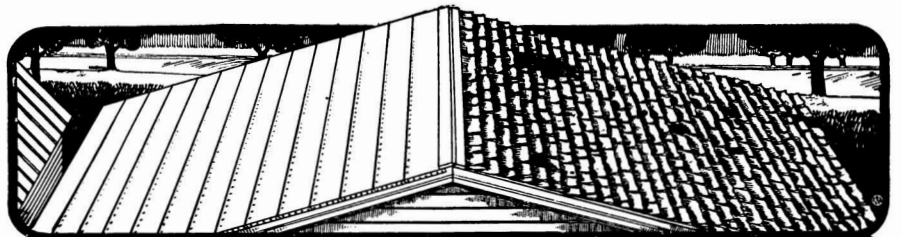
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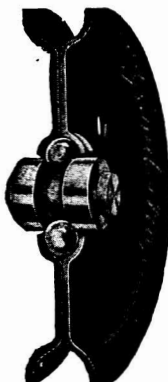
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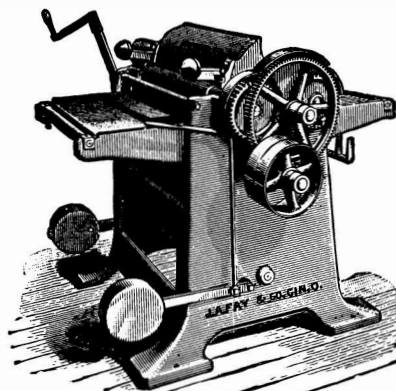
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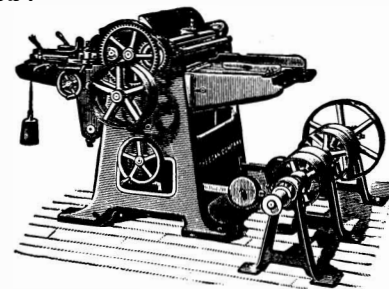
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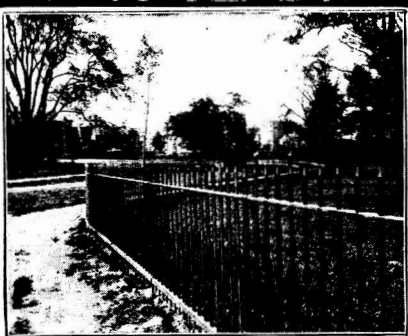


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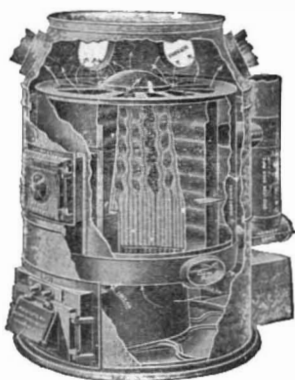
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