

# SCIENTIFIC AMERICAN

## Building Monthly.

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NEW YORK, DECEMBER, 1904.

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THE SMALL SALON,

THE HOUSE OF MRS. RICHARD CAMBRILL, NEWPORT, R. I.—See page 115.  
MESSRS. CARRÈRE & HASTINGS, ARCHITECTS.

# 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.

THE BUILDING MONTHLY for 1905 promises several new and original features of special value to its army of readers. Barr Ferree's "Notable American Houses" will continue to be the leading feature of the magazine, and will treat of many new and important houses of great architectural beauty and much personal interest. Arrangements have also been completed for a series of twelve articles—one to be published each month—under the general title of "Helps to Home Building," dealing in a direct way with the practical problems that confront the householder in the building and furnishing of the home. The subjects include: "What the Home Builder Should Know," "Difficulties to be Overcome," "The Plan," "The Structure," "The Design," "The Rooms and Their Uses," "Furnishing the House," "Color," "The Arts and the House," "Living in the House," "The House Garden," and "The Persons Concerned," the latter being a careful consideration of the relationships existing between the owner, the architect, the builder and the family in the erection of a dwelling. These papers are the result of wide experience and observation; they attack the problem of home building from an entirely new standpoint; and are crowded with useful suggestions and stimulating advice. Another new departure will be a department entitled "Fifty Suggestions for the Home," a new compilation of household suggestion and advice drawn from the best and most authoritative sources. While in no sense a summary of recent writings on the house, this department will give the readers of the BUILDING

MONTHLY a host of valuable and timely suggestions in a more convenient and accessible form than is now obtainable. "The Garden Month by Month" will be another new and special feature, giving practical information on what to do in the garden each month. Interiors and interior details will be fully treated, and will form a regular feature of each issue. As for the regular features which have made this magazine so brilliantly successful, it is sufficient to point out that they will be maintained at the highest standard. The illustrations will be selected with the utmost care and will be presented in the best form of the engraver's and printer's art. The descriptions of the houses illustrated, which are based on personal observation, will continue to be a unique feature of this magazine. The departments, as heretofore, will be varied in subject, and will summarize the latest and best thought on all matters affecting the home that have architectural significance.

It may be well to repeat, at this time, a brief statement of the purpose and scope of the BUILDING MONTHLY which has appeared before in our columns. The distinct aim of the BUILDING MONTHLY is to help its readers to better building. The illustrations reproduce homes and other structures of the highest grade and of varying costs. It seeks to interest the architect, the house owner, the real estate promoter, the home maker and the builder. It stands for the good and the true and the beautiful in art. Its papers on "Notable American Houses" bring before its readers the best work of our most conspicuous architects in costly building. Its descriptions of houses are brief but compact with information. Its "Departments" constitute a "review of reviews" summary of current comment, suggestion and help in all matters relating to the construction of the home, its decoration, equipment and use. Now is the time to subscribe!

FIGURES covering the income and expenses of the Louisiana Purchase Exposition at St. Louis will soon be made public, and it will then be possible to know, with some accuracy, just what the loss occasioned by this gigantic enterprise will have been. That it will be large is quite certain, and that it will be greatly in excess of the most liberal estimates is most unfortunately likely to be true. Now that the exhibition has been practically brought to a conclusion it is thoroughly apparent that the brave people of St. Louis assumed a greater burden than they should have dreamed of undertaking. Infinite praise and credit must always remain with this inland city for the courage and energy with which they applied themselves to their gigantic task; but they simply did not have the local population on which a great exhibition must draw to be financially successful. And financially successful does not mean a balancing of income and expenditure, but an emergence from the proceedings with a reasonable deficit. The local populace is what must in every case make up the great majority of fair visitors, and, unless this be very large, there can only result dismal failure and disappointment.

## THE BEAUTY OF ARCHITECTURE.

THE beauty of architecture is its supremest quality; it is its finest and noblest expression. The aim and purpose of a building is to fill some human need; its beauty is the jewel with which the more homely construction is decked. It is the fine garment of loveliness with which the bride arrays herself. It is the supreme touch, the utmost point to which architecture can attain.

All architecture is not beautiful—how well we know it! All architecture is not intended to be beautiful; many buildings are, necessarily, poor and humble, slight and insignificant, even harsh and utilitarian. Some are so rigid in their lines, so purposeful in their use, so restricted in their ends, that beauty is the last quality they can hope to have, the last they should be thought of having.

Nor can all architectural beauty be of the same quality of loveliness. The beauty of one building is not that of another; the glory of one style is not that of another; the taste of one age is the taste of its age alone, and not of that of previous or past epochs. The standard of architectural beauty varies with nationality and with age. It is as varied as the standards of human beauty.

Surely this is no detriment, for it gives an added zest to architectural enjoyment. It is as unthinkable that all buildings should look alike as that they should all have the same purpose and be used by human beings identical in mind and in appearance. It is the glory of architecture that it meets every possible requirement. True, it is the human mind which directs and produces this result, but architecture is the medium through which the end is accomplished.

So we may rejoice and delight in architecture because of its variety—its variety of form, its variety of materials, its variety of ornament, its variety of utility,

its variety of beauty. Utility stands at one end of the scale, beauty at the other; and the noblest structure is that in which each quality puts forth its utmost effort; in which each has its own part to perform and does its best. For utility and beauty can not strive against each other. A structure in which some utility is lost because way must be made for beauty fails in true architectural expression; exactly as the untrue man fails when put to the test. And a building in which beauty is sacrificed to utility is likewise false and wanting and can not boast the highest merit.

Beauty in architecture is an exacting mistress. It demands everything. Half way measures will not bring it. Half hearted effort will not win it. Make-shift expedients will not accomplish it. Architectural beauty admits no failure; it must be good and true, complete and sound, thorough and entire. It must be right. That it is costly adds to its merit. That it is difficult to obtain adds to its splendor. That it is rare and unusual means beauty itself.

Yet a little beauty is not to be despised. On the contrary, it is to be welcomed as an oasis in a desert. It is a quality so rare and so inspiring that a little of it may redeem and glorify a building generally sordid and uninteresting. It is never to be belittled because there is not much of it. Better, by far, a little beauty than none at all. Better one supreme part, one inspired feature, one manifest effort, than nothing at all.

It appears to be an innate characteristic of the human mind that it does not always rise to the height of finest expression. The greatest masters in art have nodded, and nodded more than once. The works of even the supremest minds are not always of the same degree of excellence. It is human to fail, and human to be unequal and uneven. So architecture, the most human of the arts, fails and nods when the very best is to be expected of it. And so general is this rule, so many are the failures of the art, that the wonder is, not that these failures exist, but that any success, any artistic success, any success of pure beauty, should be obtained at any time.

It is more important there should be some beauty than none; but unless this is good and true, refined and elevating, it is not beauty in the highest sense, but an artificial product which too loudly proclaims the inefficiency of its human inventor. "Almost beautiful" is, it is true, a pet phrase and one that frequently rises to the lips; but the limiting word is but an admission that it is not beauty at all, but simply something which is not beauty.

Beauty being the supremest quality of architecture, it follows that it is an essential quality. No building can, by any possibility, be too beautiful, and every building should be as beautiful as it can be. There may be reasons, and the best of reasons, why beauty can not penetrate every part of a structure. It may be of a nature that will not permit it; the cost may not allow it, the ability of the designer—alas that such limits should exist!—may forbid it. Of excuses there is an abundance, and very many of them real and true. But the ardor of the beauty lover is not lessened because of circumstances over which he has no control or of whose existence he may have no knowledge.

Beauty that is beauty, real beauty, is never forced in architecture. It is a natural product, fitting gracefully the structure to which it belongs. The moment it assumes an artificial air, the moment it seems out of place, it ceases to be beauty and becomes a hybrid product for which there is no name. It is a quality that belongs to architecture by right.

It is the most difficult of all qualities to obtain. Architecture is never an easy art; beautiful architecture is its most difficult phase. The creation of beautiful things is easier to some men than to others, but pure beauty is never easy, although it is never labored. The greatest artists have ever been the hardest workers, and genius has well been defined as akin to a capacity for labor.

If beauty can only be had by means of hard work—which means simply consummate ability—it is certainly never obtained by stringing adventitious ornaments upon a building otherwise inoffensive. Ornament is not beauty, but beauty is ornamental. The addition of parts to a building which may in themselves be beautiful, and yet which have no real place either in function or in design, will not make a building beautiful. The multiplication of detail, even of a refined and delicate quality, will not, in itself, give beauty, although the parts may in themselves be truly beautiful. The intrusion of unnecessary features will not bring beauty. The striving after effort which is manifestly striving will not redeem an otherwise un-beautiful building.

It is sense and right that give beauty; it is appreciation of purpose; it is purpose rightly used; it is care and distinction; it is penetrating thought; it is exquisite workmanship; and, above all, it is appreciation of fitness. All these things make for beauty in a building and help toward obtaining it. Sometimes one will be more helpful than another, but behind the whole scheme must lie thought and effort.



## NOTABLE AMERICAN HOUSES\*

BY BARR FERREE.

THE HOUSE OF MRS. RICHARD GAMBRILL,  
NEWPORT, R. I.

THE startling beauty and daring originality of Mrs. Richard Gambrill's house give it high rank among the notable houses of America. It is one of the most individual mansions in Newport, a house of refined beauty, admirably studied in all its parts, yet of truly spontaneous design. It is delightful to find a house of which so much can be said, and much more could be added, for the house is one of very penetrating charm, and will more than hold its own in comparison with other houses of similar grade and cost.

For that it is a costly house is at once apparent from the mere fact of its erection in our summer capital; it is much more interesting to observe that its very distinguished air and the idea of splendor it so naturally conveys were obtained by the simplest means. Described in the briefest words, the house is a rectangular structure covered with a high pointed roof. The walls, moreover, are so bare of projections—and of ornament—that quite special emphasis is given to the string course below the windows of the second

is built. Each has, it is true, a carved keystone, and those of the first story are assimilated with a carved decoration under the shallow balconies below the upper windows; these balconies, moreover, are supported on carved brackets, and are enclosed within wrought iron railings; but the ornamental features are very subdued and restrained, and handled with a fine appreciation of the values of notes of emphasis in a wall otherwise completely plain and featureless.

The cornice alone has firm projection; but it is very beautifully modeled and forms a happy base for the great roof with which the house is crowned. And this is splendid—a roof so high and fine in silhouette as to give distinction and character to the building—a roof that not only covers the house, but covers it grandly. It is two stories high, with two tiers of windows. The rule of structural simplicity which is so marked in the lower part of the house obtains here as well; for while the lower series has simple pointed roofs, and the upper are happy little ovals, neither contains an ornamental element which detracts in any way from their structural severity. But they are agreeable dormers for all their plainness and are in complete harmony with the lower parts of the design.

The final feature of the roof is the chimneys. Of

mental value. Plain as the body of the house is, the ornamental features of the exterior are very marked. Messrs. Carrere & Hastings have, in fact, suppressed the wall ornament that greater emphasis might be given to the doorways and loggias. The former are quite monumental in design, and consist of round arched portals, contained within double columns, which support an entablature on which is a balustrade that forms the central balcony of the two main fronts. The detail of these doorways is very beautiful and is in splendid contrast with the sobriety with which the adjoining walls are finished.

The loggias, however, are the chief distinction of the house and its most conspicuous ornament. They are brilliant pieces of design, richly decorative in their effect and enormously individual. And this is not the less true because they have no structural affinity with the building to which they are attached. Their large round arched openings are not found elsewhere; their flat roofs and crowning balustrades characterize them alone; and yet one realizes, instinctively, that it was to heighten the effect of these lovely porches that all the rest was kept as quiet as could be; that the very essential differences in design are at once a bond of sympathy between the various parts of the whole; and



THE LOGGIA—THE HOUSE OF MRS. RICHARD GAMBRILL, NEWPORT, R. I.

story, and—let it be frankly stated—to the water pipes that are deliberately applied to the main walls. As the basis for an interesting ensemble in house design it would seem impossible to have less, and yet from these very simple materials has been created a dwelling that is easily one of the most individual houses in America, a house, moreover, the designing of which must have been an occasion of fine delight to its architects, and the possession of which must be a special pride to its owner.

The body of the house is a good study in wall design. Even the windows have no external frames, but are sunk within the thick white stucco of which it

these the main building has ten, four on each face and one on each end. They emerge from the sloping roof midway between the dormers, whether the measurement be taken between the two series or between the windows. They are plain, severe stacks, ornamented only with the simplest of moldings at their summits, and being of the same height—although those on the ends emerge at a higher point than those on the sides—they have a very striking and characteristic effect.

I have spoken at some length of the simplicity which characterizes the main portion of this house, not only because it is a quality so essential to this design, but because it is a quality comparatively rare in Newport palaces. A sumptuous exterior is so characteristic of the great Newport house that a house not plentifully bestrewn with ornament is almost unknown. Yet here is a house so simply designed as to be almost severe in its chief parts, and yet thoroughly delightful and individual. As a matter of fact, the fine proportions, the admirable spacing of the voids and solids, the treatment of the carved ornament—very slight, indeed, but very admirably used—serve at once to give this design a rare distinction of its own. Were there nothing else it would still be interesting and merits warm commendation.

But, as a matter of fact, there is a good deal else, and that of very striking interest and deeply orna-

that—and this is surely the crowning test of all—no other porches than these would have adjusted themselves to the main building.

They stand one at each end of the garden front, and are identical in design. They are one story high, with three arches on the side and a projecting bay on the front. The arches are plainly cut in the walls without moldings, but have large carved keystones and festooned spandrels. The walls are covered with trellises of lattice work in formal patterns, with large upper ovals, and the windows have folding shutters of similar design and material, and elaborately designed fanlights in the arches over the openings. On the corner piers of the balustrade are sculptured groups.

These ornamental features, therefore, so transform and embellish the severe central portion as to completely change the whole character of the design. The house no longer appears as a simply walled building with so many windows let into its surface, but is a dwelling of great individuality and beauty, delightfully ornamental in its full effect and of very marked originality of design. It is a brilliantly successful house and one of rare charm.

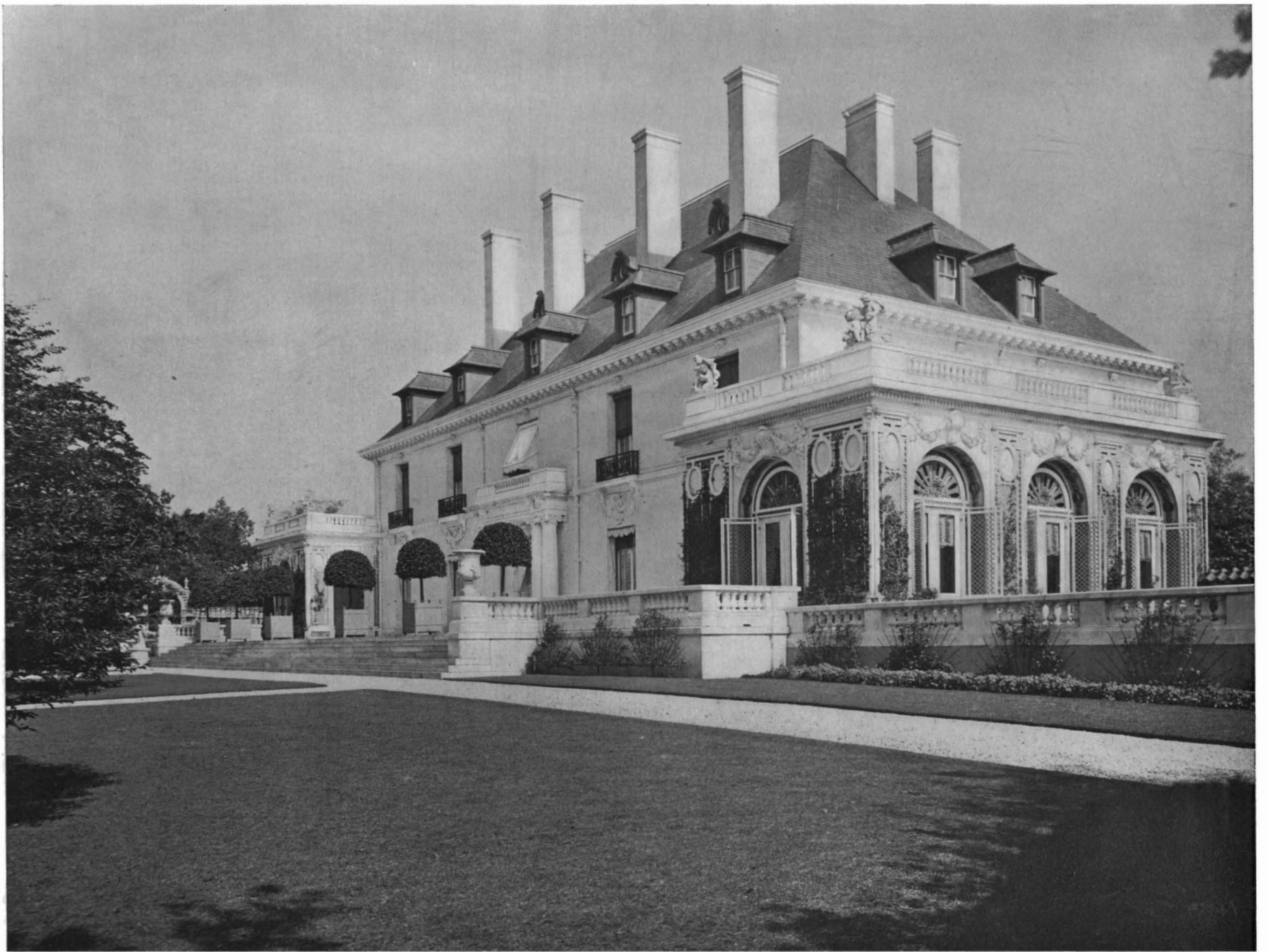
The grounds which surround it have been arranged in fine harmony with it. The building stands on a terrace, much of which is enclosed within balustrades. The approaches of the two fronts—the garden front and

(Concluded on page 131.)

\* Previous articles in this series: "BILTMORE," THE ESTATE OF GEORGE W. VANDERBILT, ESQ., BILTMORE, N. C., February, 1903. "THE GARDEN AT 'GEORGIAN COURT,'" THE HOUSE OF GEORGE J. GOULD, ESQ., LAKEWOOD, N. J., August, 1903. "HARBOR HILL," THE ESTATE OF CLARENCE H. MACKAY, ESQ., ROSLYN, N. Y., September, 1903. "THE ORCHARD," THE COUNTRY SEAT OF JAMES LAWRENCE BREESE, ESQ., SOUTHAMPTON, N. Y., November, 1903. "THE RESIDENCE OF W. L. STOW, ESQ., ROSLYN, N. Y., December, 1903. "WHITE HALL," THE HOUSE OF HENRY M. FLAGLER, ESQ., PALM BEACH, FLA., January, 1904. "FAULKNER FARM," THE ESTATE OF MRS. CHARLES F. SPRAGUE, BROOKLINE, MASS., March, 1904. "THE HOUSE OF E. J. BERWIND, ESQ., NEWPORT, R. I., April, 1904. "GREY CRAIG," THE ESTATE OF J. MITCHELL CLARK, ESQ., NEWPORT, R. I., May, 1904. "BLAIRSDEN," THE ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J., June, 1904. "KILDYSART," THE COUNTRY SEAT OF DANIEL O'DAY, ESQ., DEAL BEACH, N. J., July, 1904. "THE ESTATE OF HENRY W. POOR, ESQ., TUXEDO, N. Y., August, 1904. "THE COUNTRY SEAT OF STANFORD WHITE, ESQ., ST. JAMES, L. I., N. Y., September, 1904. "DREAMWOLD," THE ESTATE OF THOMAS W. LAWSON, ESQ., EGYPT, MASS., October, 1904. "THE HOUSE OF HERMAN B. DURYEA, ESQ., OLD WESTBURY, N. Y., November, 1904.

# SCIENTIFIC AMERICAN

## Building Monthly.



THE HOUSE OF MRS. RICHARD GAMBRILL, NEWPORT, R. I.

No. 230

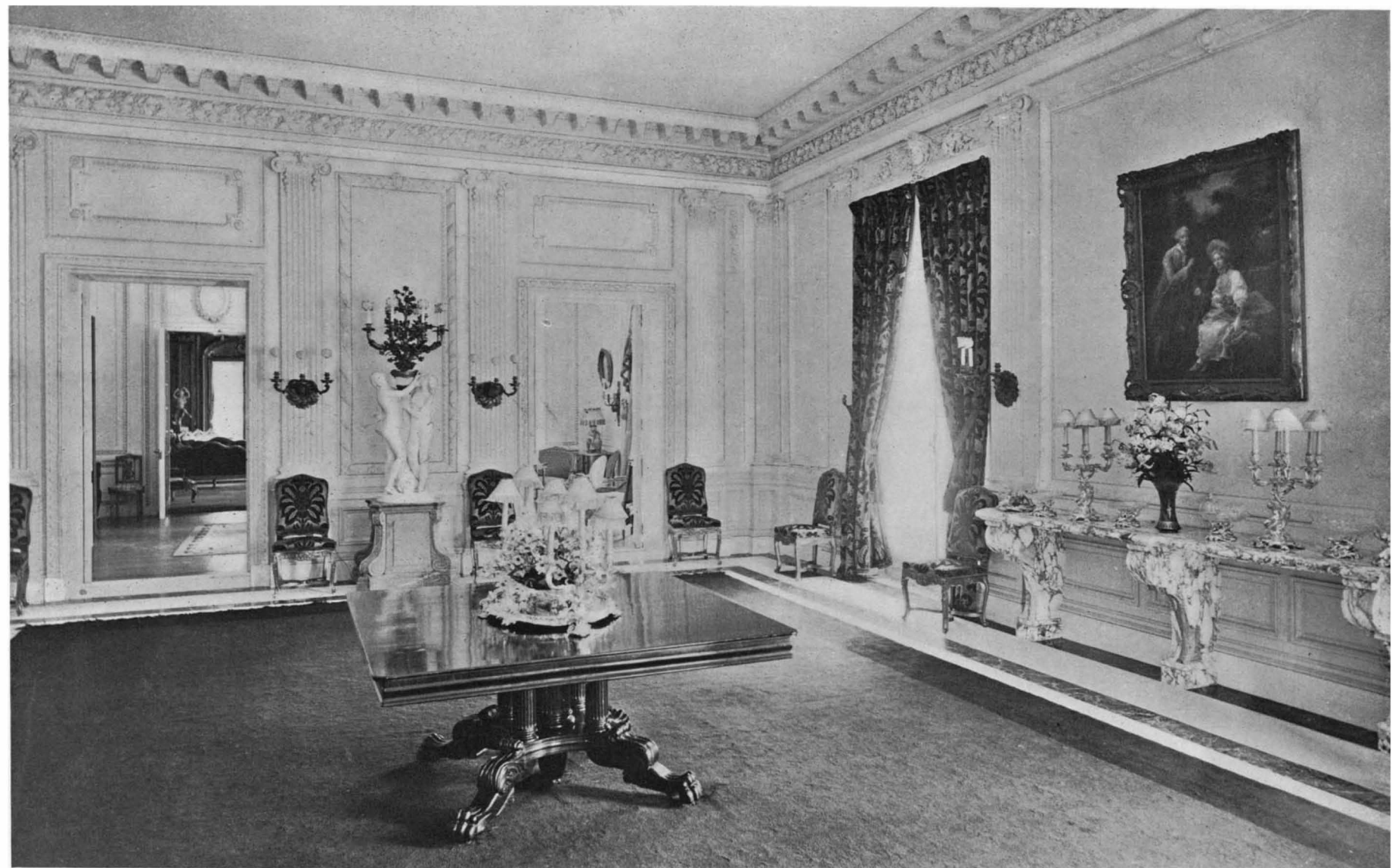
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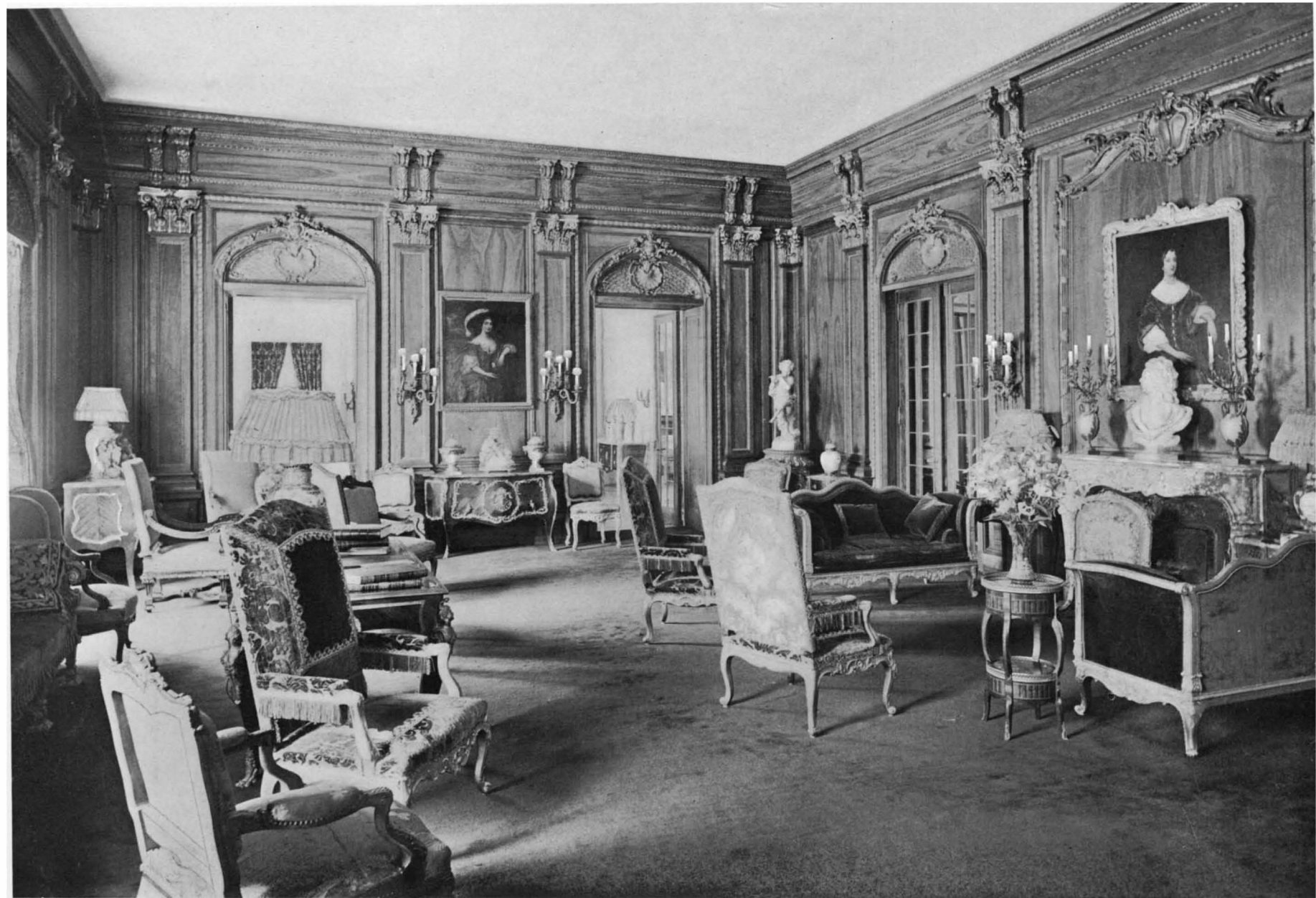
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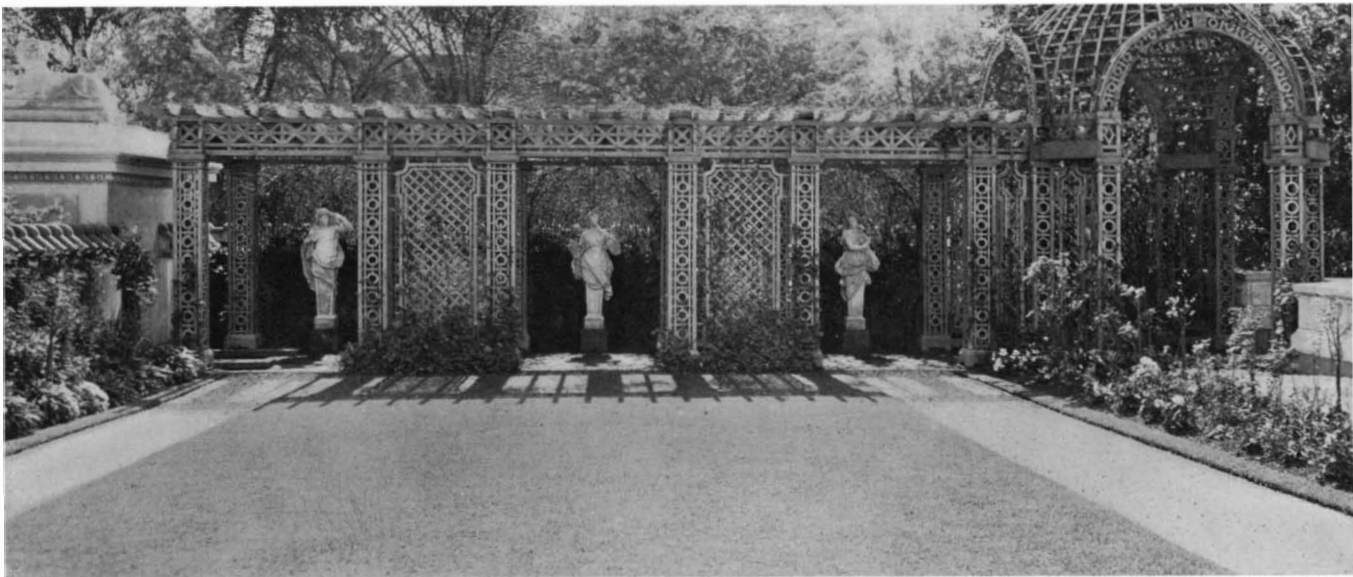


THE DINING-ROOM.



THE LARGE SALON.

THE HOUSE OF MRS. RICHARD GAMBRILL, NEWPORT, R. I.—See page 115.  
MESSRS. CARRERE & HASTINGS, ARCHITECTS.



THE PERGOLA.



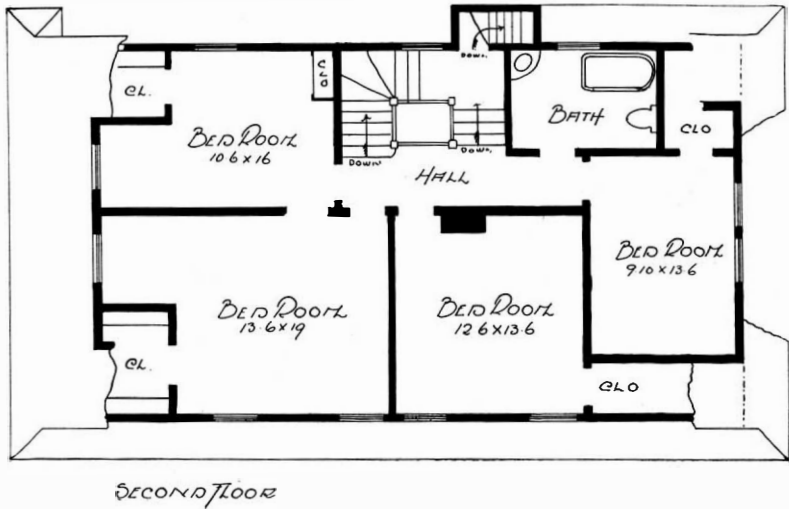
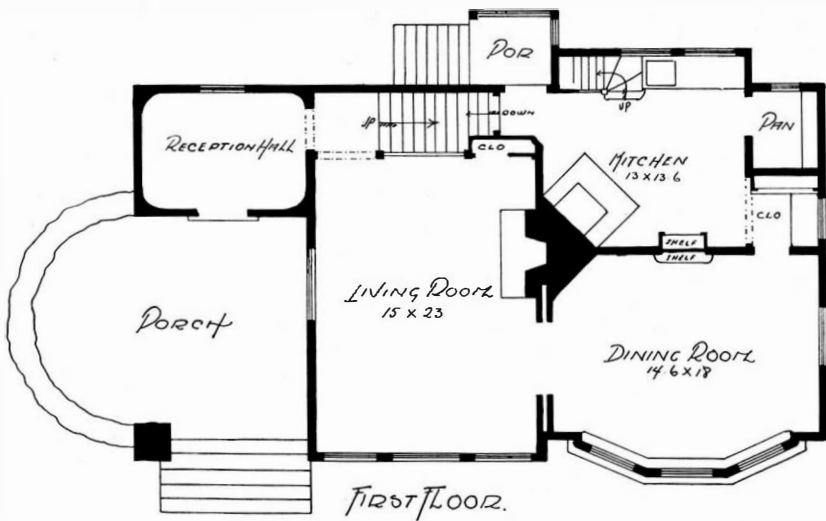
THE GARDEN FRONT.



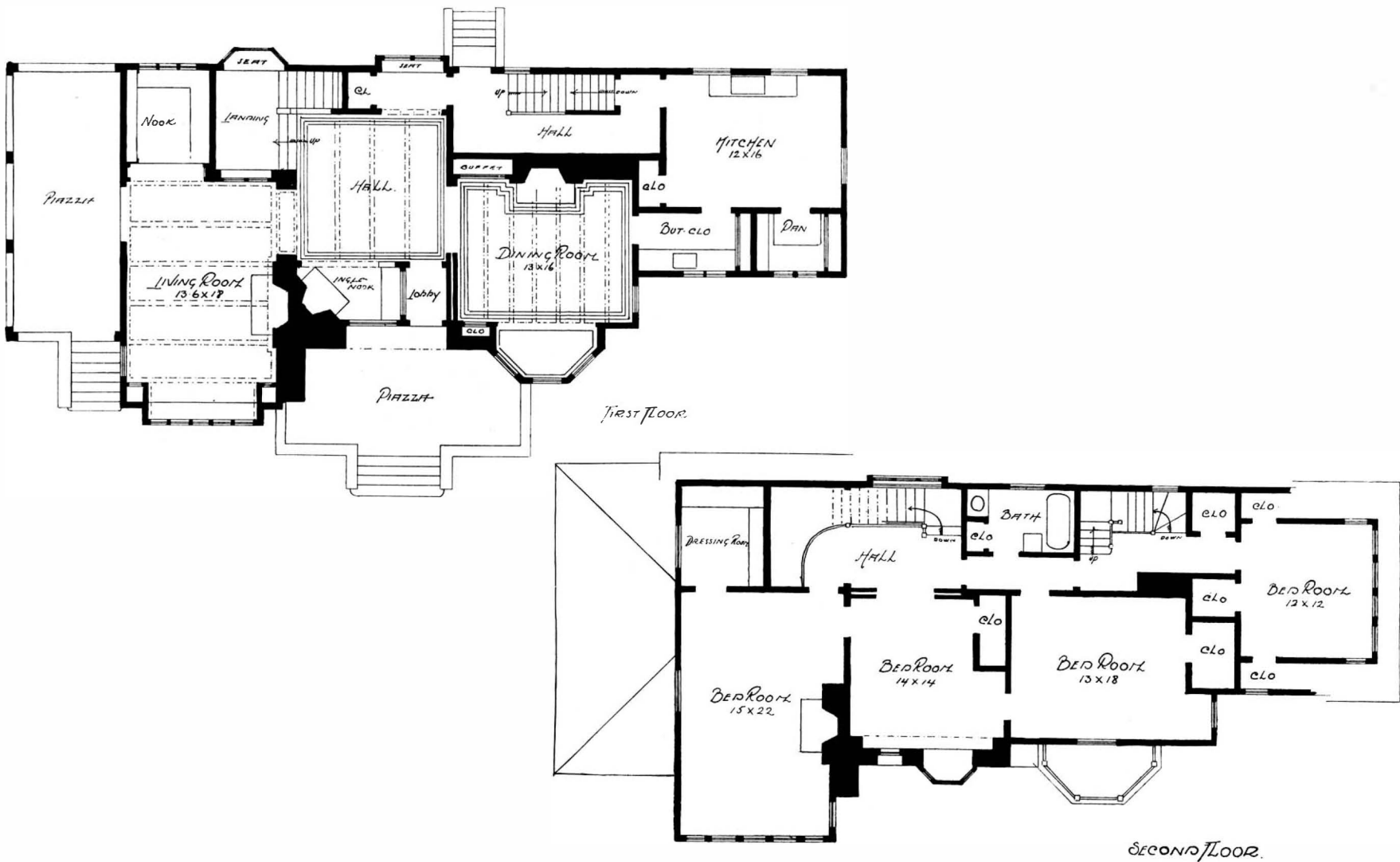
THE HALL.

THE HOUSE OF MRS. RICHARD GAMBRILL, NEWPORT, R. I.—See page 115.  
MESSRS. CARRÈRE & HASTINGS, ARCHITECTS.



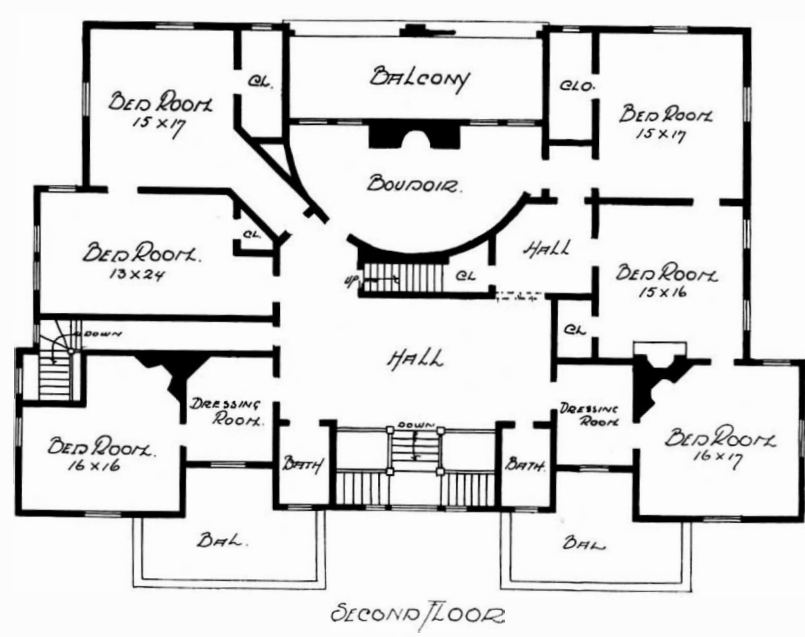
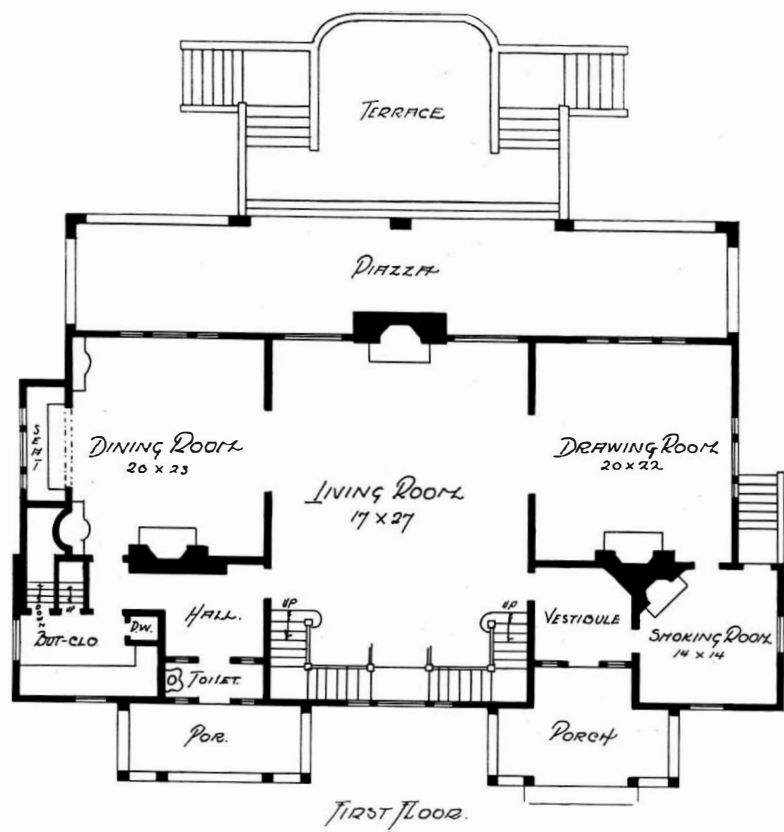


A HOUSE AT MONTCLAIR, N. J.—See page 129.  
MR. E. R. NORTH, ARCHITECT.



THE HOUSE OF ARTHUR A. ADAMS, ESQ., BROOKLINE, MASS.—See page 128.  
MR. ARTHUR H. BOWDITCH, ARCHITECT.





“REVERIE COVE,” THE SUMMER HOME OF MRS. M. C. JONES, BAR HARBOR, MAINE.—See page 129.  
MR. FRED. L. SAVAGE, ARCHITECT.



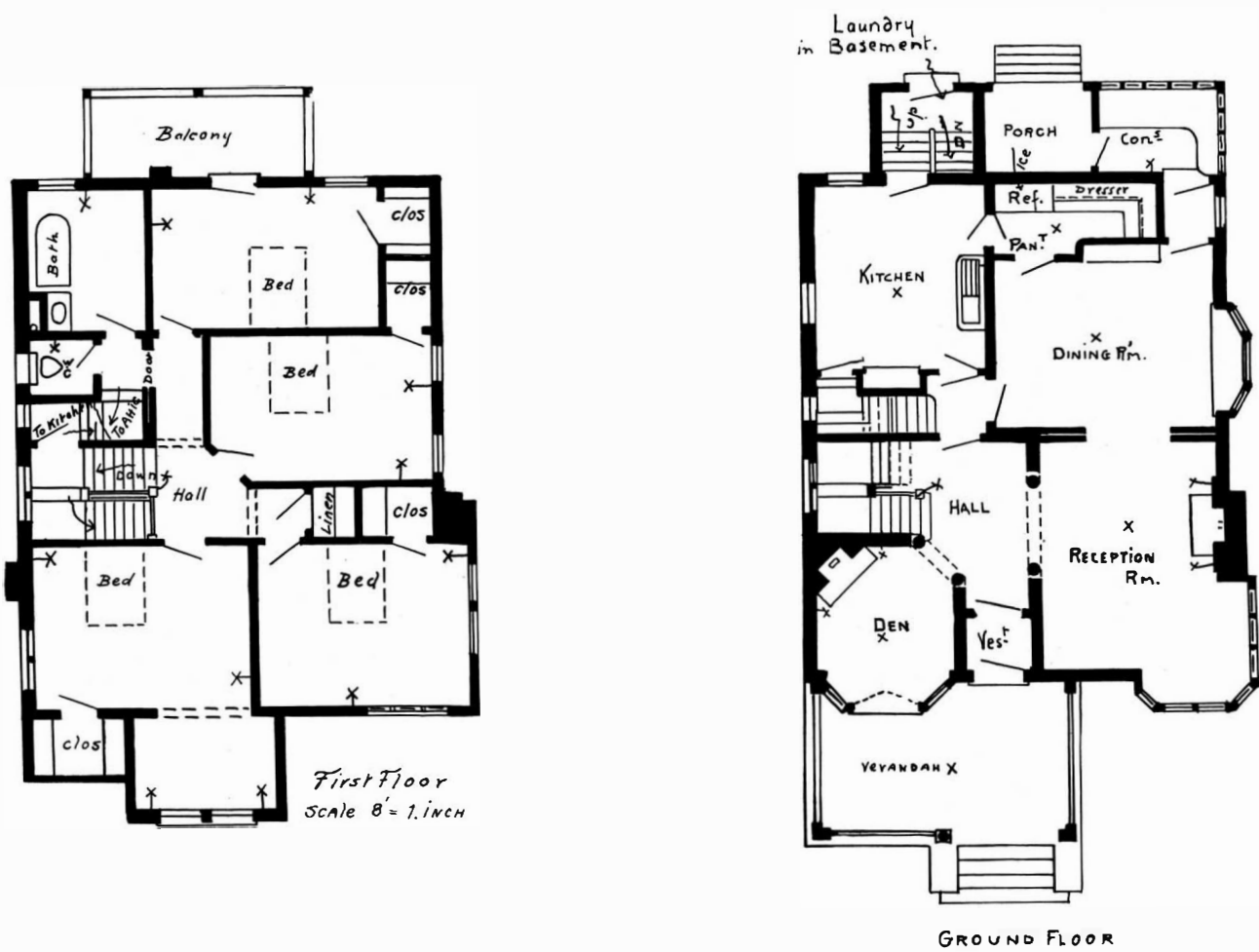
THE DRAWING-ROOM.



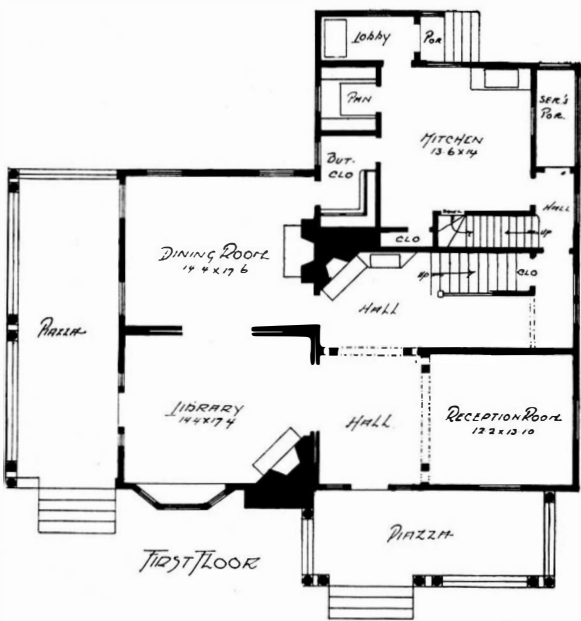
THE LIVING-ROOM.

“REVERIE COVE,” THE SUMMER HOME OF MRS. M. C. JONES, BAR HARBOR, MAINE.—See page 129.  
MR. FRED. L. SAVAGE, ARCHITECT.



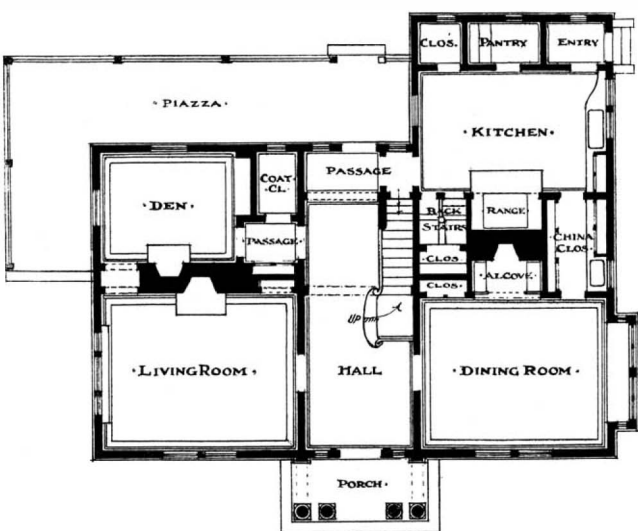


A COTTAGE IN TORONTO, CANADA.—See page 128.  
MR. R. J. EDWARDS, ARCHITECT.



THE HOUSE OF ALBERT M. HUNT, ESQ., AUBURNDALE, MASS.—See page 130.  
MR. THOMAS W. JAMES, ARCHITECT.





FIRST FLOOR PLAN



SECOND FLOOR PLAN



THE HALL AND STAIRCASE.

THE HOUSE OF MRS. J. J. HAYES, DEDHAM, MASS.—See page 130.  
MR. JAMES PURDON, ARCHITECT.



DINING-ROOM.



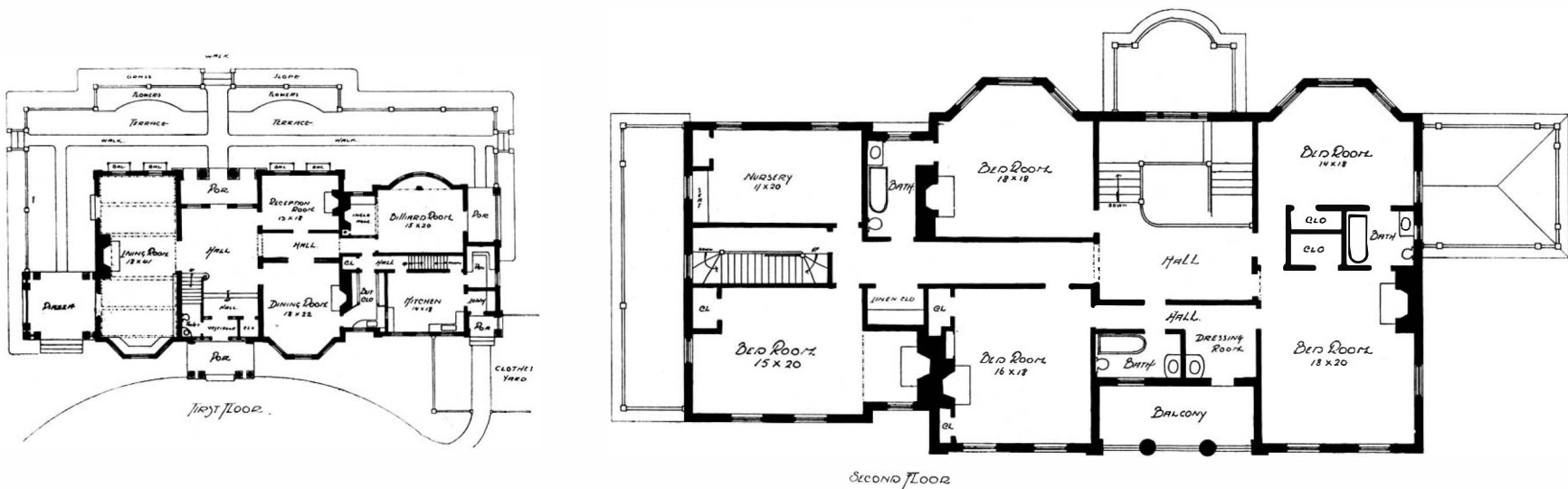
LIVING-ROOM.

THE HOUSE OF MRS. J. J. HAYES, DEDHAM, MASS.—See page 130.  
MR. JAMES PURDON, ARCHITECT.





THE JAMAICA POND FRONT.



THE REAR FRONT.

THE HOUSE OF NELSON CURTIS, ESQ., JAMAICA PLAIN, MASS.—See page 128.  
MESSRS. CHAPMAN & FRAZER, ARCHITECTS.





THE HALL.



THE LIVING-ROOM.

THE HOUSE OF NELSON CURTIS, ESQ., JAMAICA PLAIN, MASS.—See page 128.  
MESSRS. CHAPMAN, & FRASER, ARCHITECTS.



### THE HOUSE OF NELSON CURTIS, ESQ., JAMAICA PLAIN, MASS.

THE large Colonial house of the Georgian period illustrated on pages 126, 127, 129, and below, has been completed for Nelson Curtis, Esq., at Jamaica Plain, Mass. It is placed on the Parkway and faces Jamaica Pond, while its own particular site is well covered with stately elm trees, which add dignity to the estate. The house is built of red brick, with white marble trimmings; it has white shutters on the first story windows and green blinds on the second. The carriage porch and piazzas are well arranged and bear a good relation to the interior plan. The terraces, enclosed with balustrades of wood, having walks laid with red bricks in herring-bone pattern, form quite a feature of the exterior scheme.

The hall, which extends directly through the house, opens through French windows on to the recessed porch and terrace which faces the Parkway. The

height of bookcases. This room has a beamed ceiling, and an open fireplace with facings and hearth of Tiffany bricks, and a paneled mantel and over-mantel.

The billiard-room is trimmed with cypress and is finished with Flemish treatment. The ingle nook is an attractive feature, and is fitted with a paneled seat, over which are a cluster of windows, an open fireplace with Roman brick facings, a floor paved with English red tile, and walls paneled from floor to ceiling.

The dining-room is trimmed with mahogany and has a paneled wainscoting, above which the walls are covered with tapestry, finishing at the ceiling with a wooden cornice. The large open fireplace is built with brick facings and hearth, and a mantel with paneled over-mantel. The butler's pantry is fitted up with butler's bowl, drawers, dressers, etc. The kitchen and its dependencies are fitted with all conveniences.

The entire second floor is finished in white, and it contains five bedrooms, nursery, three bathrooms, and

mental staircase. The drawing-room is trimmed with white wood, and is treated with white enamel paint, and it has a bay window, and an open fireplace with tiled facings and hearth and a mantel of Colonial style. The den is an attractive room and it also has an open fireplace, and is treated similar to the drawing-room. The dining-room is trimmed with white wood, and is treated with a weather stain. It has a paneled wainscoting with a beamed and paneled ceiling. All the ceilings to the rooms, except the dining-room, have coves with stucco finish to the picture molding. The conservatory off the dining room is an attractive feature. The butler's pantry and kitchen are fitted with all the best modern conveniences.

The second story is trimmed with Georgia pine, and is stained a dark green. This floor contains four bedrooms, with large, well fitted up closets, linen closet and bathroom. The latter is furnished with porcelain fixtures and exposed nickelplated plumbing. The third



THE DINING-ROOM—THE HOUSE OF NELSON CURTIS, ESQ., JAMAICA PLAIN, MASS.

arrangement of the rooms is well shown on the plans. The first floor contains the living and public rooms, while the second story contains the family rooms and baths, grouped so as to avoid the necessity of going into the main hall in order to go from one to the other.

The decorations and color scheme of the interior are harmonious and effective. The hall is treated with white enamel, which harmonizes very nicely with the walls, which are in crimson. There is a paneled wainscoting extending around the room, finished with a mahogany cap. The staircase is broad and handsome in design, with white enamel balustrade and newel, and a mahogany rail. The toilet, lavatory and coat-room are placed beneath it. The reception-room is treated in enamel white, and has a low Colonial wainscoting, above which the walls are covered with yellow silk of a golden hue. The open fireplaces have onyx facings and hearth and a Colonial mantel. The living-room is trimmed with California redwood, and the walls are covered with green silk. Low bookcases are built in, and the paneled wainscoting is carried to the

a dressing-room. The bathrooms have tiled floor and walls, and are furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the servants' quarters and bathroom, besides several guest rooms, trunk rooms, etc.

Messrs. Chapman & Frazer, architects, 8 Exchange Place, Boston, Mass.

### A COTTAGE IN TORONTO, CANADA.

THE house illustrated on page 122 has been built on Delaware Avenue, Toronto, Canada. The underpinning, the first story, and part of the second, are built of hard fired red brick laid in red mortar. The front part of the second story is beamed in the form of half-timber work, the beams being stained green, and the plaster a silver gray color. The remainder of the woodwork is painted white. The windows in all the principal rooms are of plate glass. The roof is covered with blue slate.

The hall is trimmed with oak and has a vestibule with a paneled wainscot at the entrance and an orna-

floor contains a billiard-room and the servants' quarters. A cemented cellar contains a laundry, heating apparatus, fuel rooms, etc. Cost, \$5,500 complete.

Mr. R. J. Edwards, architect, Toronto, Canada.

### THE HOUSE OF ARTHUR A. ADAMS, ESQ., BROOKLINE MASS.

THE attractive house which is illustrated on page 119 has been erected for Arthur A. Adams, Esq., at Brookline, Mass. It is of English character in its design, is well treated, and the chimney forms an important architectural feature. The underpinning is built of rock faced stone. The superstructure is covered on the exterior with shingles, which are stained a soft brown color, while the trimmings are painted a soft cream white. The roof is also shingled, and is stained a dull green color. The brickwork around the front door and chimney is built of buff brick. The entrance is into a vestibule with paneled walls and ceilings, the whole being of white pine and painted ivory white. There is a leaded-glass window placed in between the

vestibule and the ingle nook. The hall is also trimmed with white pine and is painted similar. It has ceiling beams, and a paneled dado to the height of the doors. The ingle nook has a paneled ceiling and walls, and it is fitted with seat and an open fireplace built of brick with the facings and a hearth of the same. The stairs rise up from two broad steps to a broader platform, from which the remaining stairs rise to the second story. The landing has a bay window thrown out with seat, and it has white painted balusters and a mahogany rail. The living-room is trimmed with white pine, and it is painted a dark bottle green, and this harmonizes very satisfactorily with the wall covering, which is of crimson, and the ceiling beams. The alcove contains a bookcase built in and a paneled seat, and it is lighted by a cluster of leaded-glass windows. The fireplace is built of brick, and it has a mantel of handsome design. Double doors open into the piazza at the side, which is enclosed with glass, and forms a sun-room. The dining room is trimmed

**"REVERIE COVE," THE SUMMER HOME OF MRS. M. C. JONES, BAR HARBOR, MAINE.**

THE summer home of Mrs. M. C. Jones, at Bar Harbor, Me., is located on a high point of ground, sloping to the water's edge. On account of the prominence of the site, as well as its exposure, a special scheme of construction was adopted. The land slopes off rapidly to the rear, and it permitted the placing of the kitchen, servants' hall, laundry and their dependencies in the basement. The house is designed in the Spanish style, and its exterior walls are built of stucco, which is stained a soft yellow color, while the trimmings are painted an apple green. The shingle roof is stained a brilliant red and forms a very happy contrast with the color scheme. Illustrations are shown on pages 120 and 121.

The entrance is into a square vestibule of large dimensions, from which the living hall is reached. Both are painted in dark Flemish oak, and the latter has a paneled wainscoting and a beamed ceiling.

buffet built in on either side of the alcove, and an open fireplace with gold speckled brick facings, and a mantel to correspond with the character of the room.

The second floor is trimmed with white pine, finished naturally. This floor contains six bedrooms, boudoir, two dressing-rooms, and two bathrooms; the latter are finished with white enamel and furnished with porcelain fixtures and exposed nickelplated plumbing. The floors, throughout, are of hard wood. The third floor contains the servants' rooms and bath, trunk room and two guest rooms.

Mr. Fred. L. Savage, architect, Bar Harbor, Maine.

**A HOUSE AT MONTCLAIR, N. J.**

THE house illustrated on page 118 was erected for E. R. North, Esq., at Montclair, N. J. It is designed in the gambrel roof style, and is a combination of fieldstone, clapboards, and shingles. The underpinning, part of the first story, and the columns and terrace at the piazza are built of fieldstone, laid up at random. The



THE TERRACE—THE HOUSE OF NELSON CURTIS, ESQ., JAMAICA PLAIN, MASS.—See page 128.

with oak and it contains a beamed ceiling and a chair rail. The open fireplace has an ornamental mantel, and at the side of it there is a sideboard built in, with cupboards under the counter enclosed with small wooden doors, and cupboards over the counter enclosed with leaded-glass doors. The butler's closet is fitted up with sink, drawers, cupboards, enclosed with glass, and plenty of good shelving. The rear hall is of unusually large dimensions, and it has an open staircase.

The kitchen is fitted with sink, range, large store pantry and all conveniences. The second floor is handsomely treated with white painted trim, and each room is artistically papered in one color scheme. There are four bedrooms, one drawing-room, and a bathroom; the latter is furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains three rooms and trunk room. A cemented cellar contains a laundry, servants' bathroom, fuel room, furnace, cold storage room, etc.

Mr. Arthur H. Bowditch, architect, Brookline, Mass.

Massive fluted columns form the newel posts to the staircase, and the arcaded effect produced in the living-hall. The staircase rises from either side of the hall to a broad landing, from which a central run rises to the second story, the under side of which is handsomely paneled. A cluster of latticed windows is placed on the landing, and also below the same. The fireplace is built of old gold Roman brick, with the facings and a hearth of the same, and a massive mantel. The smoking-room to the right of the vestibule is finished in a similar manner, and it has an open fireplace built of Roman brick.

The drawing-room is trimmed with pine and is treated with white paint, and has a low paneled wainscoting of Colonial style, and an open fireplace built of white enameled brick, with the facings and hearth of the same, and mantel with fluted pilasters supporting the shelf.

The dining-room is finished in Flemish oak, and has a paneled wainscoting three and one-half feet in height; it also has an alcove with paneled seat, with a

remainder of the first story is covered with clapboards, painted white. The second and third stories are covered with shingles, which are stained a reddish brown. The roof is also covered with shingles and is stained a dull shade of moss green. The reception-hall is trimmed with quartered oak, and forms an entrance to the living-room, which is also trimmed with quartered oak.

The living-room has a paneled wainscoting and an open fireplace with tiled facings and hearth, and mantel of oak. The staircase is an attractive feature of the house, and is separated from the living-room by columns which rise to the ceiling, the spaces between the columns being filled in with spindlework. The stairs are reached both from the living-room and the reception-hall. The dining-room is trimmed with oak, and has a paneled wainscoting and a bay window. The kitchen and its dependencies are fitted up with all the best modern fixtures complete.

The second story is trimmed with white pine and is treated with white enamel paint, and contains four



bedrooms and a bathroom, the latter treated with white enamel paint throughout and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the servant quarters and ample storage. There are a laundry, furnace, and fuel rooms in the cellar.

Mr. E. R. North, architect.

#### THE HOUSE OF MRS. J. J. HAYES, DEDHAM, MASS.

THE illustrations on pages 124-125 and below present the residence of Mrs. J. J. Hayes, at Dedham, Mass. The house is designed and planned in a quaint manner in the Colonial style, and, in order to produce a more horizontal effect, the exterior is clapboarded with alternate courses of 7-inch and 2-inch clapboards. These clapboards are painted a soft shade of Colonial gray, and the trimmings are painted white. The roof is low and straight in form, and is covered with shingles.

The interior throughout is trimmed with white

a china cabinet built in, with doors glazed with small lights. The butler's pantry is fitted with dressers, drawers, closets, bowl, etc. The kitchen is furnished with an alcove for range, dresser, sink, closet, store pantry, and an entry large enough to admit ice-box.

The second floor contains four bedrooms with large clothes closets, two bathrooms, besides a large linen closet, and two servants' rooms and bath over the kitchen extension. The bathrooms are furnished with porcelain fixtures and exposed plumbing, all nickel-plated. The cellar contains the heating apparatus, fuel rooms, laundry, etc.

Mr. James Purdon, architect, 8 Beacon Street, Boston, Mass.

#### THE HOUSE OF ALBERT M. HUNT, ESQ., AUBURNDALE, MASS.

THE illustrations shown on page 123 present a house erected for Albert M. Hunt, Esq., at Auburndale, Mass. It is designed in a picturesque manner. The under-

The second floor is trimmed with pine and is treated naturally with oil and varnish. This floor contains four bedrooms, sewing-room, eight closets, linen closet, bathroom, and one servant's room. The bathroom is furnished with porcelain fixtures and exposed nickel-plated plumbing. The third floor contains one room, ample storage space, and an open attic. The cellar, cemented, contains laundry, furnace, fuel rooms, etc.

Mr. Thomas W. James, architect, 27 School Street, Boston, Mass.

#### SANITARY HOUSEKEEPING.

FEW women there are, says Harper's Bazar, who do not know how salient an item is the scrupulous care of the refrigerator or ice-chest, yet how many of us take the trouble to see that this important work is rightly accomplished? It is monotonous reading to be told that this receptacle should be cleansed thoroughly twice a week and wiped out daily. The



INGLE-NOOK IN THE DINING-ROOM, HOUSE OF MRS. J. J. HAYES, DEDHAM, MASS.

wood, painted white, with mahogany doors. The house is planned with a central hall, and contains an ornamental staircase with white painted balusters and a mahogany rail. The wall has a plaster dado painted white, and finished with a mahogany cap; the wall space above is covered with tapestry and is finished at the top with a wooden cornice.

The library to the left of the entrance is furnished with a similar dado, and the walls above are covered with a wall paper of greenish hue. It has an open fireplace built of brick, with the facings and a hearth of brick, and a mantel of Colonial style. The den is painted white, and has a brick fireplace.

The dining-room has a low Colonial dado same as the hall, and the wall space above is covered with paper of blue colorings. The attractive features of the room is the flower bay window, which is laid with a tiled shelf, and the ingle nook, which is paneled to the height of the mantel, containing a brick fireplace with the facings and a hearth of the same and a mantel of Colonial style. There are also paneled seats at either side of the fireplace. At one side of the ingle room is

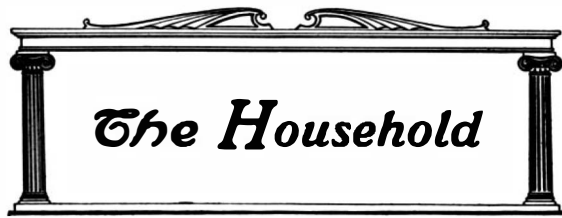
pinning is constructed of field stone laid up at random. The chimney is similarly constructed, and is an architectural feature in itself. The exterior is covered with shingles, and is stained green. The roof is covered with shingles and is left to finish naturally.

The plan shows an entrance hall which is separated from the stair hall and also from the reception-room by Colonial columns supporting archways. These three apartments are treated with white enamel. The stair hall contains an ornamental staircase, with mahogany rail, and an open fireplace furnished with a red tiled hearth, and a mantel of Colonial style. There is a paneled seat at the side of the mantel.

The living-room is trimmed and treated same as the hall, and has a bay window with seat, and an open fireplace fitted with white tiled facings and hearth, and a mantel of Colonial style. The dining-room is trimmed with oak, and has an open fireplace with green tile facings and hearth, and a mantel of oak. The kitchen and its dependencies are fitted with all the best modern conveniences, and it is trimmed with white pine finished natural.

waste-pipe leading from the ice-chamber too often proves a medium for the "solid food" culture of germs, as the constant dripping of melted ice will, unless unusual care is bestowed upon it, form a gelatinous coat on which the germs of fermentation thrive. A strong alkali, such as potash—commercially known as lye—or chloride of lime, should be poured down this pipe at least twice a week.

Sinks, washstands and toilets should likewise receive careful attention and disinfectants should be generously used. The kitchen should be the focal-point of our aggression, for herein lie many of the unseen possibilities to make or mar the health and contentment of a household. In these days of slipshod housemaids, many of whom, unfortunately, we are compelled to choose from the rank and file of the uneducated and untrained, who have only the crudest notions relative to personal hygiene, the only alternative is to take things in our own hands and make training-schools of our own kitchens, not only in justice to the health of our immediate families, but for the well-being of future generations.



## The Household

### IS LESS FURNITURE BEING USED?

THE announcement is being made through the public press that much less furniture is being used in household rooms than has recently been the fashion. It may be taken for granted that the furniture makers are not responsible for this statement. The object of furniture makers is to sell furniture, and it is quite obvious that the more sold, the better it will be for them. Liberal purchases and liberal quantities of furniture is the motto of the furniture man, and he certainly would not take the trouble to put forth the idea that space, empty space, is the chief thing for the modern room, and as little furniture as can be got along with.

And it may be questioned if the owners of sumptuous homes are in sympathy, in practical sympathy, with such a notion. The houses of the great, rich, splendid, sumptuous houses, show no falling off in the number of articles set around the rooms. The BUILDING MONTHLY has published many interiors which show quite elaborately furnished rooms, and with no falling off in the quantity of articles.

The contention, however, is not made that much furniture is a good thing. Quite the contrary is true. We unquestionably have too much of it. Our rooms too long have been greatly overcrowded with a host of articles which, decorative in intent, have been simply impediments to motion and snares to the awkward. Of course it will be contended that rooms are not race-courses, and that awkward persons have no business in places where they can not move about with ease and comfort. The first of these statements is most positively true; as to the second, it can only be submitted that awkwardness is often an accompaniment of gentility, and the most careful person is liable to knock a delicate vase off a delicate table stood in some unsuspected spot. No room is ever helped by overcrowding, and many a good one is spoiled by too much furniture. Temptations to overcrowd are difficult to resist, because each piece may be beautiful in itself, and it will not always be realized that the accumulation of beautiful pieces may produce a result that is decidedly unhappy. If there is a movement for less furniture than has heretofore been the custom, it is a good thing and deserves hearty encouragement.

### THREE GOOD EMPIRE ROOMS.

A DAILY paper describes three Empire rooms of quite unusual beauty. The house was less than twenty feet broad, and there were three rooms on the entrance floor, opening one into another, making an effect not unlike an elongated Pullman car. The owner, who wanted Empire furniture, was fortunate enough to fall into the hands of a skilful decorator, and her rooms were delightful and artistically empty. One room held two graceful sofas with genuine ormolu ornaments and covers in yellow silk, of the same color as the wall draperies and the curtains. Two chairs and two cabinets with doors, sparingly ornamented with real ormolu, completed the furniture of this room.

The middle room leading into the dining room contained a high desk, a heavy round table and four chairs. This room was done also in yellow to increase the sense of space and not have the vision disturbed by too many tints in such a comparatively small area. The dining room had a heavy mahogany sofa and twelve chairs. All the pieces were genuine First Empire and with two consoles gave the room just the formal stiffness which was the essential feature of this period.

These rooms were sparsely furnished for New York ten years ago, but the woman who owned that house was fortunate enough to have a good decorator and to put her confidence in him. As a result she never grew tired of Empire furniture. When it went out of style, her rooms were just as beautiful as ever, because they had been done with a sense of what real taste and the periods of time require.

### BEDROOM FURNISHINGS.

BEDROOMS are furnished very simply nowadays, says an exchange. Carpets have been banished in many houses, and nothing is allowed in the way of hangings that may not easily be washed. The bedspread and bureau linens may be as elaborate as one chooses. Very handsome spreads are made of heavy linen sheets inset with heavy lace bands. Pillows are smaller, and are usually kept by day in a box slipped under the bed. A round bolster with a cover to match the spread is substituted. Marseilles spreads are not in vogue at present, dimity and linen having taken their place to a large extent.

### THE HOUSE OF MRS. RICHARD GAMBRILL, NEWPORT, R. I.

(Concluded from page 115.)

the entrance front—are much alike, with broad flights of steps, balustrades finished at the ends with large vases and ornamented with bay trees of very rare symmetry. All these parts add greatly to the beauty of the building and very delightfully adjust its relationship to the grounds. On the right of the entrance front is the stable, designed in harmony with the house, and close beside it is a service yard, which stands at a lower level than the spacious forecourt and other grounds. On the other side of the house is a great green garden, with paths of grass marked off with low borders of flowers, and a vast central fountain, whose jet throws a stream of water high into the air. Stone benches are placed around the fountain, and groups of statuary stand on decorated bases. On the sides of the house the view is closed with a latticed pergola, with piers of small open circles and latticed panels. Sculptured figures stand under the openings, and at one end of each is a great domed summer house, also of lattice design.

With such a splendid exterior a sumptuous interior follows as a matter of course. The entrance hall is designed in a monumental manner, with walls of Caen stone and columns of polished marble. The door openings are flat, with round arched niches between them, and the cornice is richly detailed. To the right the stairs to the upper story ascend in a graceful curve. Behind them are the pantries and service rooms, which connect with other rooms and with the kitchen in the basement. To the left is the library, a daintily designed room in very light green. Three large rooms on the garden front complete the apartments on this floor. In the center is the small salon, exquisitely paneled with ornament in low relief. On the left is the large salon or living-room, paneled throughout with Italian walnut with ornaments in subdued gold. The dining-room, on the right, is also paneled and treated with pilasters. The furniture throughout is very rich and beautiful.

The loggias form open rooms for the summer, but are enclosed within glass for the cold weather. Their lower walls are lined with stone. Above is a frieze, painted by James Wall Finn, of birds and vases of flowers under trellised arbors. A similar design, with many variations, is painted on the ceilings. A light bluish green is the dominant color in these very remarkable and highly individual decorations. The loggias are handsomely furnished and form delightful rooms, available for use at all seasons of the year.

NOTE.—The illustrations of Mrs. Richard Gambrill's house have been taken from "American Estates and Gardens." Munn & Co., publishers.

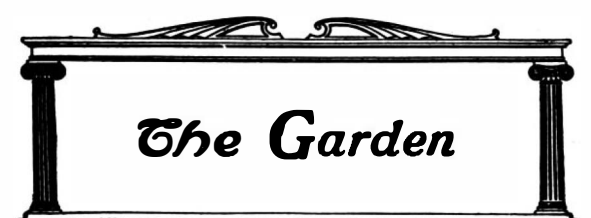
### ART IN THE HOUSE.

THE home, says a recent lecturer, is the center for the development of any people. The family life reaches its greatest efficacy only in its best environment, and the best environment is that which is most healthful and most enjoyable. Art is that element in the home which makes possible the enjoyment of beauty, wherever it may occur. It should be found not only in pictures, literature, music, sculpture and buildings, but in the simplest kitchen utensils, in the appointments of the dining-room, the selection and arrangement of carpets, draperies, furnishings, ornaments for the drawing-room—in short, it is the spirit that moves the emotions, touches the esthetic sense and makes enjoyment possible.

### OUTSIDE PAINTS.

A WRITER in an exchange, discussing the best paint for the exterior of dwelling houses, suggests that if the house has not been painted before a first coat or priming of pure white lead be used, either plain or tinted, to suit the taste, and with pure raw linseed oil for a thinner, and not over 5 per cent. turpentine drier added. This is to be rubbed well into the wood and allowed to stand at least three days before the second coat is applied. For new work it is best to have three coats, and for the third and last coat a mixture of four parts white lead, by weight, to one part of zinc white, colored to suit the fancy, and thinned again with pure raw linseed oil and not over 5 per cent. Japan drier. Should it be decided to use prepared paint, let the first or priming paint be pure lead and have the prepared paint used as second and third coats, following directions on label. If the house has been painted before, see that the surface is thoroughly dusted and every loose particle of old paint removed; touch up where needed and have the surface repainted with either two coats of pure lead tinted with color, or have two coats of prepared paint applied.

ARTISANS' dwellings to the value of about \$800,000 are being erected by the municipality of Milan, Italy.



## The Garden

### THE HYDRANGEA.

THERE are over thirty species of hydrangeas known, says Richard Rothe in "Park and Cemetery." The latest introduction is *Hydrangea Hortensis rosea*, or dwarf, bushy habit and by nature bright pink color, readily changing to blue. Its serrated leaves are dark olive-green and are borne on red stems. The plant flowers very freely and, from its appearance at last spring's flower shows, where its introducers had a number on exhibition, bids fair to become a very popular pot plant for the Easter trade. Growers in England, Germany and France strongly commend its good forcing qualities and graceful habit of growth. The climbing variety, *Hydrangea scandens*, a hardy species from Japan, less known perhaps, is useful for covering walls or bare tree trunks. Its white cymes, appearing as early as June, are less conspicuous, but the dark-green, densely set foliage forms a very attractive picture. The old variety, *Hydrangea Hortensis* and *Hydrangea Otaksa*, however, remain unexcelled for beautifying home surroundings, especially for decorating piazza, stairways and lawn.

### THE OLD ENGLISH GARDEN AT ST. LOUIS.

AMONG the many garden displays at the Louisiana Purchase Exposition, the old English garden, attached to the British pavilion, attracted special attention. It was unique in two respects—first, in regard to its mode of arrangement; and, second, in regard to the class of material used. The sunken garden and fountain on the east of the building were the main features of the grounds. The fountain played between 8 A. M. and 6 P. M., and added greatly to the appearance of the garden. The corner piers of the Lily-tanks were ornamented with beautifully designed terra-cotta vases filled with plants of *Phoenix reclinata*, *Ferns*, *Vinca variegata*, *Asparagus Sprengeri*, etc. In the water was a collection of hardy and tender *Nymphaeas* in flower, *Water Hyacinths*, *Water Poppies*, and other aquatics.

The hedge forming the enclosed spaces in the panels on each side of the fountain was of California Privet (*Ligustrum ovalifolium*), and where this came thinly it was covered with Japanese varieties of *Ipomoea*, which made a beautiful display during the early part of the day. At the corners of the edge were standard plants of *Prunus Pissardi*, the dark purple foliage of which is very conspicuous over the green Privet.

The flower beds were all rectangular in shape, and surrounded by an edging of *Kochia scoparia*, which makes a beautiful border, and very well fills the place of Box edging. Some 10,000 plants of this were used, the greater number having been raised from seed.

In keeping with the character of the garden, old-fashioned annual and herbaceous flowers were planted wherever practicable, and all carpet and modern bedding was avoided. In the sunken garden were large beds of *Zinnias*, *Balsams*, *Phlox Drummondii*, *Antirrhinums*, etc. An exhibit of *Gaillardias* and *Montbretias* made a good display.

An exhibit of some 4,000 tuberous-rooting *Begonias* were later used to take the place of other exhibits which were past blooming. The display commenced in March with *Crocuses*, followed by *Hyacinths*, *Narcissi*, *Tulips*, etc., which in their turn were succeeded by early-sown *Stocks*, *Sweet Alyssum*, *Silene*, *English and Spanish Iris*, *Anemones*, etc., after which came the main crop of flowers.

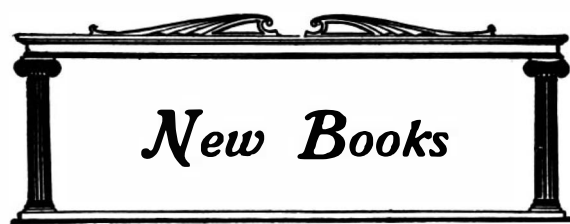
The old-fashioned bowling-green, with its sloping sides and circular ends, excited the curiosity of the visitors. Masses of flowering shrubs, among which were planted *Cannas*, *Salvia splendens*, etc., formed a background to the green. A row of *Carolina Poplars* was on each side of the garden, whilst a low hedge of Privet formed the boundary. In a border on each side of the sunken garden an exhibit of herbaceous plants was arranged.

In the border immediately in front of the pavilion terrace, *Petunias* made a brilliant display. They were greatly admired for the size of the flowers. Scattered about in the garden were sixty fine specimens of topiary work. Some good collections of *Dahlias* were also shown in different parts of the garden.

### THE TREATMENT OF BOUNDARY LINES.

A GARDEN, says an exchange, should be so honestly laid as to appear strong and permanently attractive. It should also have its boundary lines so arranged and planted as to effectually destroy the actual limitations of the estate. The height and character of boundary and party fences detract from many fine houses.





### AMERICAN ESTATES AND GARDENS.

AMERICAN ESTATES AND GARDENS. By Barr Ferree. New York: Munn & Co. 1904. Pp. 340. Illustrations, 275. Price, \$10.00 net.

The building of large houses is an art which not only greatly interests and encourages the architect—because it gives him large opportunities and ample fees—but it is a matter of very general interest. The public curiosity, in fact, as to the rich man and his life, is never satiated. His doings and his houses, his yachts and his estates, are matters of the widest possible concern.

But the rich man's house in America has long since passed beyond the point where it is simply food for the curious. In the best sense of the word it is now a work of architecture, a structure whose cost is large simply because it is built in a fine way of fine materials, and because handsome grounds, beautifully arranged, are a natural and fit accompaniment to it. This is a distinct architectural achievement, a genuine architectural evolution; for the best work of our present-day architects has real value; it often has distinction, and it is seldom without merit.

A book dealing with large houses in a large way; a book covering as well as so extended a field could be covered within the necessarily restricted limits of a single volume; a book so abundantly illustrated that each separate house might well be said to be presented in its entirety—such a book must have a very hearty welcome, and present a review of the best in American domestic architecture in a thoroughly satisfactory manner.

All of this Mr. Ferree's book does in a very comprehensive way. Its subjects range from Newport to California, from Massachusetts to Pennsylvania, and they are, without exception, houses of the first rank in art, in cost and in extent, houses rightly deserving the description sumptuous, and representing, in a very true sense of the word, the best work of contemporary architects in splendid dwellings. Treating as it does of the great American country house in its entirety, illustrating, in a very complete manner, the inside as well as the outside of these palatial mansions, picturing their gardens, likewise, and many details of large estates, it must meet with a hearty welcome, and win immediate recognition as the standard work on the subject.

Mechanically the book leaves absolutely nothing to be desired. Its pages are of generous size, 10 1-2 by 13 1-3 inches—a page quite ample enough for illustrations of good dimensions and valuable detail. Its pictures are very numerous, numbering a total of 275, and as many of these are full paged, it is apparent that this feature of the book has been planned and developed on a princely scale. The illustrations, moreover, have been printed in a truly superb manner, and as photographic reproductions have extraordinary merit. They are clear and distinct, with every detail carefully brought out, forming, in fact, one of the most remarkable series of pictures that have come from any American printer. It is beautifully bound, with a cover of quite unusual beauty in green, black and gold.

While the illustrations constitute, in many senses, the most interesting part of the book, Mr. Ferree's descriptive text has great value in giving much information concerning these great houses. It is written in a thoroughly sympathetic manner, and adds largely to the value of the book. This beautiful volume on the great houses and gardens of America is entirely worthy of its subject, and is a valuable and beautiful record of some of the most important achievements in the building art in America.

### THE APPRECIATION OF SCULPTURE.

THE APPRECIATION OF SCULPTURE: A HANDBOOK. By Russell Sturgis. New York: The Baker & Taylor Co., 1904. Pp. 226. Price, \$1.50 net.

A year ago Dr. Sturgis published a notable book entitled "How to Judge Architecture," which was intended to help the layman in the appreciation of architecture. He has now supplemented this by the present volume on sculpture, which has an identical purpose, namely, to explain and make clear the real nature of excellence in sculpture.

It is a thoroughly admirable book, written with a fine enthusiasm for the art, yet so admirably restrained as to be wholly without indication of personal bias for the art of any one period or of any one sculptor. It presents indeed the claim of sculpture for consideration in a thoroughly delightful way, and the reader

who opens the book is not likely to lay it down until it is finished. Like his previous essay on architecture, this volume has, as a background, the history of sculpture, but it is in no sense a history. Beginning with Greek sculpture, "which is the most generally recognized as without fault, humanly speaking, and even without serious shortcoming," the author follows the historical development of sculpture to our own day, interrupting his narrative only for a brief look backward into Egyptian sculpture. This method has the very distinct advantage of giving the reader an excellent summary of the whole history of the subject, without the formality that would attend the setting down of historic facts, and at the same time enables the author to write critically but without the display of exacting learning which the historical method would call for.

"Sculpture," says Dr. Sturgis, "is always the most sensitive of the arts. It is the most easily lost and the most difficult to recover." "The sculptor," he continues, "must, first of all, know how to produce, in soft material which he molds, or in hard material which he cuts, whatever forms he may perceive even dimly in his mind. Therefore it is that the close daily and hourly study of the sculptor will be generally directed toward that form of art which promises the most to him as its pupil." Again, he says, "The question for the sculptor himself is not how he is to express a certain epoch, a certain race of men, a certain incident, a certain sentiment—not so much as these or any one of them, as how to produce a beautiful work of art." "The object of a great and important work of sculpture is and must be," he adds, "very largely the presentation of pure form in a new and charming aspect. What has the sculptor to say so important as this: 'Come and see this new combination of masses beautifully composed, made up of details beautifully modelled?'" "The hope of any fine art," he says in conclusion, "is in the singleness of purpose of its workmen. What we require of them is, then, an undisturbed and constant devotion to it. And, that this may be possible to the artist, the public must learn that only artistic work is to be had from an artist, and must really stop asking him for moral teaching, and archeological information and general exhortation. . . . Even more than sentiment, even more than action, pure sculpture is the one thing needful."

Admirable words, these, and the book is filled with such much needed comment. Decorative sculpture is almost completely ignored, the book concerning itself simply with sculpture for itself, sculpture for sculpture's sake. It is a notable contribution to the somewhat scant literature on the subject, and will doubtless have the very hearty welcome and wide appreciation it deserves.

### ITALIAN GARDENS AND VILLAS.

ITALIAN VILLAS AND THEIR GARDENS. By Edith Wharton. New York: The Century Company. 1904. Pp. 275. Price \$6.00 net.

A sumptuously illustrated book on Italian gardens can not fail to win large popularity. Mrs. Wharton's book is by no means her first venture in the realm of architectural writing, her acquaintance with the technique of her subject being more than sufficient to enable her to write intelligently on the matters discussed in this book. It is a rapid review of the more characteristic villas of Florence, Siena, Rome, Genoa, Lombardy, and Venetia, and naturally describes many of the more important Italian villas and their surrounding gardens. It is a garden book, indeed, rather than one concerned with buildings, for it is of gardens she chiefly writes, and it is the gardens which offer most of the subjects for the illustrations.

Of these the drawings in color by Maxfield Parrish are not only lovely, but quite unusual. Some are reproduced in tint, but the larger number are in color, reproduced in an exquisitely delicate manner, yet with great brilliancy of touch. The photographs are hardly expressive and scarcely add to the value of the book; and were it not for Mr. Parrish's beautiful pictures it might seem inadequately illustrated. And, notwithstanding the color plates, it may be questioned if a better idea of Italian gardens might not be had from a group of photographs of a cost no greater than the price of this volume. But it is pleasant to have these beautiful places pictured as they are here, and the mechanical make-up of the book leaves absolutely nothing to be desired.

Mrs. Wharton's volume is so largely one of brief descriptions that, valuable as it is to have such notes, it can hardly serve to directly stimulate an interest in the application of Italian gardens to American conditions. A chapter on this aspect of the subject would have added greatly to the value and interest of the book. She begins by pointing out that while it is an exaggeration to say that there are no flowers in Italian gardens, yet to enjoy and appreciate the Italian garden craft one must always bear in mind that it is independent of floriculture. This, she adds, is no doubt

partly explained by the difficulty of cultivating any but spring flowers in so hot and dry a climate. She shrewdly points out that the garden must be studied in relation to the house, and both in relation to the landscape, and reminds us that the recognition of the fact that the enclosing landscape was naturally included in the garden was the first step in the development of the great garden-art of the Renaissance. The next step was the architect's discovery of the means by which nature and art might be fused in his picture. Three problems were thus produced—the garden must be adapted to the architectural lines of the house it adjoined; it must be adapted to the requirements of the inmates of the house, in the sense of providing shady walks, sunny bowling greens, parterres and orchards, all conveniently accessible; and, finally, it must be adapted to the landscape.

This is a very clear and concise statement of the real problem that underlies all landscape gardening, and as Mrs. Wharton very pertinently adds, the finest solutions were given in the Italian country house from the beginning of the sixteenth to the end of the eighteenth century. Just what these solutions were, how they varied in different parts of Italy, how changes were made in successive years, and what the results are to-day, her book is intended to show. It is a topic that is well calculated to excite the most boundless enthusiasm, and of this Mrs. Wharton has little to spare. But her book is an excellent introduction to a most interesting subject, and must greatly widen the interest in the great gardens of Italy.

### PRINCIPLES OF HYGIENE.

THE PRINCIPLES OF HYGIENE: A PRACTICAL MANUAL FOR STUDENTS, PHYSICIANS, AND HEALTH OFFICERS. By D. H. Bergey. Illustrated. Second edition, thoroughly revised and enlarged. Philadelphia, New York, and London: W. B. Saunders & Co., 1904. Price, \$3.00 net.

Dr. Bergey's book has undergone a critical revision for this new second edition, and in its present form it now represents the practical advances made in the science of hygiene up to date. Intended to meet the needs of students of medicine in the acquirement of a knowledge of those principles upon which modern hygienic practices are based, and to aid physicians and health officers in familiarizing themselves with the advances made in hygiene and sanitation in recent years, it has a definite value for every one who would keep abreast of the advances of sanitary science. The volume is based on the most recent discoveries, and represents the practical advances made in the science of hygiene. The rapid strides made in our knowledge of the entire subject has rendered such a book, reflecting the more recent discoveries, a real necessity.

Dr. Bergey presents a very complete summary of his subject. Chapters on air, ventilation, heating water, sewage and garbage disposal are followed by others on personal hygiene, including food and dieting, exercise and clothing, school hygiene, military hygiene, naval hygiene. Other topics include the soil, habitations, vital causes of disease, disinfection, quarantine and miscellaneous topics. Illustrations are used to supplement the text when needed. It is an excellent summary of the present knowledge of hygiene.

### THE ARCHITECTS' DIRECTORY.

THE ARCHITECTS' DIRECTORY AND SPECIFICATION INDEX FOR 1904-1905. Sixth Edition. New York: William J. Comstock. 1904. Pp. 160. Price \$2.00 net.

Mr. William J. Comstock presents the sixth annual edition of the "Architects' Directory and Specification Index for 1904-1905." This book embraces a complete list of the architects in the United States and Canada. The names are classified by States and towns, indicating those who are members of the various architectural societies in the United States. Considerable space is devoted to the details concerning the architectural societies, architectural schools, and architectural publications. The Specification Index of Manufacturers of and Dealers in Building Materials is carefully compiled, and forms a unique list. The edition for this year has been revised, corrected, and supplemented by the addition of a list of Landscape Architects, Naval Architects, New Schedule of Charges, and the American Institute of Architects.

### A BOOK ON LETTERING.

THE THEORY AND PRACTICE OF LETTERING. By Christopher E. Sherman, C.E. Columbus, Ohio: Midland Publishing Co. 1904. 8vo, 49 pp.

That this work has been found of great practical value by engineers and draftsmen generally is indicated by the fact that it has reached its sixth edition. It was originally written as a college thesis, but has since been rewritten and new sample drawings of letters gilded. It treats comprehensively of all kinds of lettering likely to be met with by students of engineering, for whose use and instruction it is primarily intended.

Paint

PAINTING ZINC ROOFS.

WHERE zinc is exposed to chemical action, says the Metal Worker, it can be painted, but, before any painting is done, the zinc must have a rough surface, such as is caused by the oxide or made by mechanical means. A good time to paint zinc—probably the best time—is when the roof has a thorough coating of oxide. The paint then takes a good hold and will remain for some time. Zinc can be painted at once if it is desired, but, as before stated, it must be on a rough surface. The rough surface can be gotten by either sandpapering the roof or scrubbing it with sand. The latter method is preferable, because it is the easiest. This will cause a roughened surface, to which paint will readily adhere. It is better, however, to wait until the roof has its own coating of oxide. The paint will crack and peel off if the zinc has not this rough surface. Silicate of zinc is the best mineral paint that can be used for this purpose.

CYPRESS FINISH.

It has been remarked that cypress is not a substitute for white pine, says an exchange. After making all due allowance for the high qualities for which white pine is noted, including prices, it remains that as a finishing material its claims are largely comprised in the ease with which it is worked. It is not at all adapted to purposes of natural finish, and if painted the principal thing to commend it for that purpose over other much cheaper woods is in the working of it. And even in this respect cypress suffers little, if anything, by comparison. White pine retains the favor of a certain class of the community for much the same reason that young men pursue the political bias of their sires. There is about as much serious thought and no more analytical consideration bestowed upon the merits of the matter in the one case than in the other.

While white pine interior finish is best painted, it is a positive sin to hide the natural beauties of cypress. Cypress requires no disguise and is improved by none—neither paints nor stains—and for the same reason that the lily needs no adornment. "Beauty unadorned is adorned the most." It is easy to run a jack plane over a white pine board, but nature has done for cypress what no other wood can boast—invested it with every honest virtue essential to easy working, general utility, durability and ornament. There is no finishing wood of equally moderate cost that can approach cypress as an embodiment of so many and equal native virtues. The whole world has an opportunity of verifying these facts for itself at the World's Fair in St. Louis.

THE SMELL OF PAINT.

THE smell of paint is sickening to most persons, and to many the painting and decorating of the house is a serious ordeal to be faced. Headache is a common experience. Possibly the oil with which the painter mixes his pigments is sufficient to cause nausea, although there seems to be little doubt that minute quantities of lead are inhaled also. Persons have been known to suffer from a severe attack of colic after sitting in a room for a few hours a day in which there were canvases covered with white lead and a drying oil. Artists, again, have been attacked with paralysis owing to the action of the oil paint, even although the colors were ground and the brushes cleaned by an assistant. The quantity of lead so inhaled must be very small, says the Lancet, but it should be borne in mind that some people are extremely susceptible to the action of the poison. Such persons should make a strenuous endeavor to leave the house during its painting and decoration, while those who are compelled to remain should take all reasonable precautions, and live in the fresh air as much as possible. In the sleeping room a very careful precaution is to leave the washing basin full of clean water, or, better still, milk, during the night. In the morning a greasy film will be found on the surface of the water, and it is reasonable to suppose that some of the oil has thus been attracted from the air. Milk is a well known absorbent of odors and appears to act more effectually than water for this purpose, for after exposure in a freshly painted house the milk will be found to smell quite distinctly of paint. Milk thus tainted should, of course, be thrown away. Lastly, it may be pointed out that there are some excellent permanent pigments to be had now which are quite free from lead, and in a great number of cases these paints might be substituted with decided advantage to the health of those persons who show a marked idiosyncrasy towards lead compounds.

Stable Lore

SOME PRACTICAL HINTS ON STABLES.

THE following notes are taken from a series of practical papers on the stable printed in the New York Evening Post:

Hayracks are obsolete, the hay being fed from the floor these days. Mangers and troughs should be interchangeable, to admit taking out, scrubbing, and sunning. There should be abundance of water, not standing to be fouled, but fed from buckets (used for no other purpose), and especially should horses be watered the last thing at night. For working horses, use the "clock" feeding system instead of feeding a horse and then jumping him into the shafts before his mouth is empty. Hay should not be kept over the stable when there is facility for keeping it elsewhere, as it accumulates odor like tea or butter. Neither should men's sleeping quarters be above a stable where it can be avoided; a horse does not thrive when sleeping under the sounding board of a cheap Harlem flat.

Stall division should not go to the floor, but an inch or so should give base ventilation, sending odor upward, and keeping the feet and legs cool. The partitions can otherwise be built solid, and should not be too high to permit the horses to see each other. A stalled horse gets very lonely staring hours at a blank wall, which is enough to drive a strong man to drink or suicide. No wonder the animal makes close friends with a cat, a goat, or whatever living thing he can attract for companionship. In other cases the English "bail" separation is good—two planks dovetailed, hung down from rafters, by ropes or chains at head or foot, ending a foot and a half from the ground, the upper edge being not less than four feet and a half. These separate horses effectually, and, what is more, are apt to cure stall kickers.

No stable has any business to smell unduly strong. If it does, it is either badly constructed or badly kept, generally the latter. An automobile house should smell worse than a horse stable. The trouble is that thousands go for building and equipment, and only tens for wages, although it must be admitted that with the bulk of help to-day, stable and otherwise, it seems a case of the help getting all he can, and doing as little as he can; the old honored principle of taking a pride in one's work seems dead and past. Still, a good man can make a poor stable more healthful and more effective than a poor man can keep a perfectly equipped stable, and one is ever reaching for the higher attribute. Nevertheless, if the horse is thin, lame, or generally amiss, look first into stable surroundings, then into the help, then into the food, not forgetting the realm of perquisites! That, however, is another story. Food should be varied. Not oats and hay, year in, year out, but scores of changes which common sense or experience suggests. It is to be regretted that so many horse owners and stablemen get into a rut. They have been accustomed to do things this or that way for so long that a change never occurs to them, and, what is worse still, when any idea is brought to their notice they take it as a direct insult, possibly as reflecting upon the lack of thought which they acknowledge, but none the less resent.

Just at present there seems to be a tremendous leaning to English ideas, and while many of these are good, the result of long years of practical experience around horses of all degrees, it must be remembered, when adapting these items, that there is a tremendous difference in climatic surroundings.

PRESIDENT ELIOT ON CITY PARKS.

ONE indispensable condition for the adequate use of public reservations, points out President Charles W. Eliot, in a paper printed in the Christian Register, is security against violence, and fear of violence, and even against annoyances, or the sight of rude or disorderly conduct. All public reservations, whether large or small, need to be well policed, so that women and children can feel perfectly safe in them. This is, of course, an expensive matter; but neither city playgrounds nor country parks will be adequately used by the persons who need them unless they are intelligently and adequately policed. A public beach, grove or forest will soon get a bad reputation if it is not vigilantly watched. Every city square or garden should be brightly lighted: first, because light is the best policeman, as Emerson said, just as publicity is the best safeguard against financial and industrial wrongs; and, secondly, because every such open space should be treated as a public park or popular reception room.

New Building Patents

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.

ARTIFICIAL STONE. J. W. Lewis, Bokoshe, Ind. October 4 .....	771,479
BUILDING BRICK OR BLOCK. T. W. Worrall, New York, N. Y. October 4 .....	771,520
BUILDING BLOCK. T. Podmore, Wilkesbarre, Pa. October 18 .....	772,476
BUILDING TILE. C. T. Seested, Kansas City, Mo. October 25 .....	773,230
BUILDING BLOCK. Marion Brothers, Robertsville, Ohio. October 25 .....	773,244
ARTIFICIAL STONE. E. D. Reed, Ann Arbor, Mich. October 25 .....	773,421

CARPENTRY.

STEP. M. V. B. Ethridge, New York, N. Y. October 4 .....	771,772
SELF-CLOSING WINDOW. H. C. Smith, New York, N. Y. October 11 .....	772,260
WINDOW. S. Ragona, New York, N. Y. October 18 .....	772,580
SLIDING AND SWINGING SASH WINDOW. E. H. Ullner, Woodcliff, N. J. October 18 .....	772,686
WINDOW CONSTRUCTION. E. H. Lunken, Cincinnati, Ohio. October 25 .....	773,330

CONSTRUCTION.

SHEET PILING. W. C. Harder, Chicago, Ill. October 4 .....	771,426
METAL CORNER BEAD. F. A. Sawyer, Everett, Mass. October 4 .....	771,577
BRICK-LAYING MACHINE. John Thomson, Chicago, Ill. October 11 .....	772,191
WALL FOR BUILDINGS. J. A. Ferguson, Denver, Col. October 11 .....	771,816
TILED ROOF. W. Ludowici, Munich, Germany. October 18 .....	772,363
FLOOR AND CEILING. A. Probst, Hesselthal, Germany. October 18 .....	772,372
ARCH CONSTRUCTION. G. L. Junge, Pittsburg, Pa. October 25 .....	773,149
BUILDING CONSTRUCTION. A. Munczarski, New York, N. Y. October 25 .....	773,215
CONCRETE-STEEL CONSTRUCTION. P. Kuhne, New York, N. Y. October 25 .....	773,327
BUILDING CONSTRUCTION. E. May, New York, N. Y. October 25 .....	773,404
WALL, FLOOR, AND CEILING PLATE. W. R. Willetts, Waterbury, Conn. October 25 .....	773,445
BUILDING BLOCK AND WALL. O. Gilhaar, Milwaukee, Wis. October 25 .....	773,493

ELEVATORS.

ELEVATOR. H. R. Wellman, New York, N. Y. October 11 .....	772,074
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FIREPROOFING AND FIRE EXTINGUISHMENT.

FIRE ALARM SYSTEM. W. L. Denio, Rochester, N. Y. October 18 .....	772,644
FIREPROOF ILLUMINATING STRUCTURE. F. L. O. Wadsworth, Allegheny, Pa. October 25 .....	773,174

HARDWARE.

SASH BALANCE. W. Sehuch, West Hoboken, N. J. October 4 .....	771,276
LOCK. W. A. Grant, Brooklyn, N. Y. October 4 .....	771,305
SEPARABLE HINGE. S. F. Meek, New York, N. Y. October 4 .....	771,654
TRANSOM LIFTER. W. T. Adams, Reading, Pa. October 18 .....	772,600
WINDOW SASH FASTENER. J. Brewer, Hazleton, Pa. October 25 .....	772,920
LOCK. A. Grossbeck, Allegheny, Pa. October 25 .....	773,319
TRANSOM LIFTER. H. L. Trunyer, Portsmouth, Pa. October 25 .....	773,352

HEATING AND VENTILATION.

HEATING APPARATUS. L. G. Horn, Mocksville, N. C. October 4 .....	771,308
VENTILATOR. C. A. Withers, Augusta, Ga. October 4 .....	771,449
HEATING SYSTEM. A. G. Paul, Boston, Mass. October 4 .....	771,744, 771,745
LIGHTING AND HEATING APPLIANCE. H. Darwin, Erdington, England. October 18 .....	772,698
RADIATOR. H. K. Austin, Reading, Mass. October 18 .....	772,858
FITTING FOR STEAM HEATING SYSTEMS. C. A. Ball, Washington, D. C. October 18 .....	772,859
COMBINED BLOWER AND FIRE SCREEN. Bloom & Krebs, St. Paul, Minn. October 25 .....	772,918
HOT AIR REGISTER. C. H. Foster, Omaha, Neb. October 25 .....	773,068
HEATING SYSTEM. U. S. Johnson, Milwaukee, Wis. October 25 .....	773,078

MISCELLANEOUS.

PAINTER'S SCAFFOLD. G. R. Laughlin, Peoria, Ill. October 11 .....	771,878
ELECTRICAL CONDUIT. A. Fellheimer, Chicago, Ill. October 18 .....	772,350

PLUMBING.

WATER CLOSET. H. H. Kendrick, Fulton, N. Y. October 4 .....	771,254
WATER CLOSET. W. F. Barnes, Rockford, Ill. October 25 .....	773,183
WASHBASIN FIXTURE AND BASIN. C. H. Moore, New York, N. Y. October 25 .....	773,408

TOOLS.

ADJUSTABLE STAIR SQUARE. H. H. Bellville, Detroit, Mich. October 4 .....	771,225
SHINGLING GAGE. J. J. Knox, Los Angeles, Cal. October 18 .....	772,521
SHINGLE CUTTER. M. Knapp, Enid, Okla. October 25 .....	773,397



### A MENAGE IN MADRID.

THERE is a good deal said nowadays, remarks a contributor to an English paper, about the "dirtiness of Spaniards." No doubt there are many in the land who justify that reputation—there are in all countries. Take a crowd of the "great unwashed" from, say, London, and not many will live up to any other description.

But to my own experience in sunny Spain. In justice to many kind friends there, who could have given points to a Yorkshire housewife, I should like to mention a few good customs that we in England might well follow with advantage.

I will take the home of my friend Manuela, as it was on the smallest scale.

She and her husband lived in a flat not five minutes' walk from the Puerta del Sol, in Madrid. It was a charming little place, consisting of only eight rooms, for which I believe they paid annually a sum equivalent to about thirty pounds. They kept one servant, Juana, the most attentive, devoted handmaid I have ever met, and, moreover, the only domestic I have come across in any country who resolutely declined a "tip" and meant it. The floors were tiled throughout with, I think, white marble and black slate, and were regularly washed once a day. The walls were of some sort of very highly polished white cement with colored borders, and were wiped over with a wet cloth every fortnight as each room was cleaned.

The beds—very good woolen ones on spring mattresses—were thoroughly aired each day, and the dusting was never "slipped."

Of course there was no fireplace in any of the rooms, which lightened the work considerably.

The kitchen—a tiny place—I admired immensely. The stove, of iron and white tiles, always shone spotlessly, so did the pans and earthenware cooking pots. The two wooden tables were as white as a daily scrubbing with chloride of lime and plenty of "elbow grease" could make them. There were three white porcelain sinks at different levels, with shelves at either end, on which were kept sand, lemon, and soap, all three being plentifully used for scouring and cleansing.

The sinks were kept rigidly to their different purposes. Glass and silver were washed in the highest one, china in the second, and pans, etc., in the lowest one. Over them was the draining shelf, where the pots were put immediately after washing, to be polished later with a clean towel. The delft rack had a clean muslin curtain before it to keep off the flies. I was there seven weeks and never saw a badly-washed article.

In conclusion, I should like to say a word for the Spanish servants. Juana was no such great exception. In my three years' stay in Spain I came across many excellent workers. My friend helped with the beds, dusted her room, and looked after the principal dishes at dinner and supper; some of these, by the by, were both delicious and economical. Apart from these items, Juana, a girl of twenty-two or twenty-three, did the entire work of the house, and could be trusted to do it well. Her wages were ten pounds per annum.

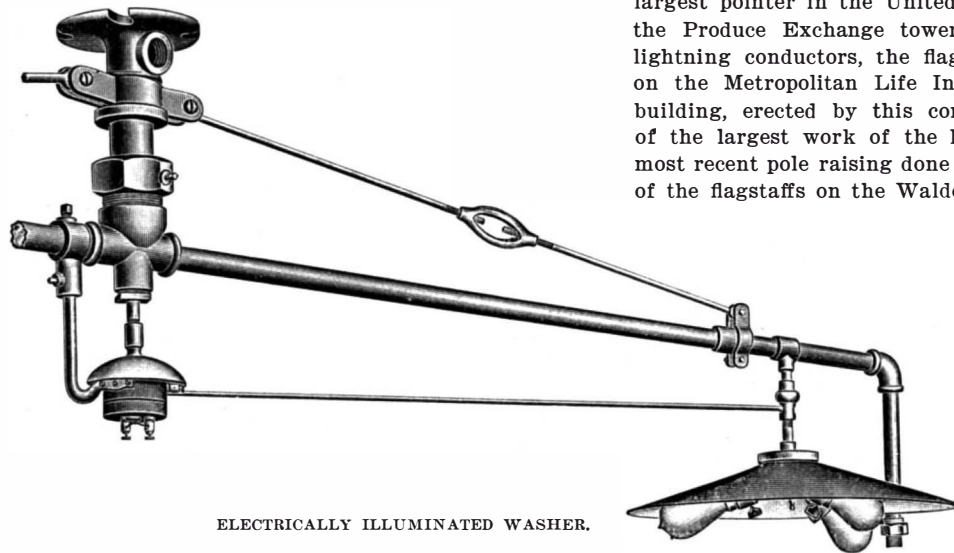
### MR. KIPLING AND THE AUTOMOBILE.

MR. RUDYARD KIPLING has come out into the lime-light as the chief prophet of the automobile, says Floral Life. It would seem as though this very fascinating machine hardly needed the advocacy of so zealous a defendant, but it is nevertheless a fact that, in many quarters, the automobile no longer has the friends it ought to have. Its opponents are, of course, chiefly those who do not own a machine or have never ridden in one. It is easy to trace the origin of their discontent; but quite a formidable list of ex-automobile owners can even now be made up, and this is increasing every day. Mr. Kipling's hymn of praise may, therefore, have been put forth at the critical moment. It began with his beautiful story, entitled "They," which appeared in Scribner's Magazine recently. The automobile is very far from being the central theme of this remarkable story, but it plays a very important part in it. And now he has written a letter which has been printed in an English book on automobiling, in which he boldly defends the automobile as a promoter of temperance! This, surely, is very novel ground on which to plead for the automobile and more of it, but he certainly makes out his case. A horse, he points out, has sufficient intelligence to take his driver home even if that person is in a most befuddled condition and quite unable to hold the reins. The automobile, on the other hand, requires a keen eye, a firm hand and quite undivided attention. What more need be said? Truly, the cause of temperance is making marvelous progress in these enlightened days. Only a month or so ago a very distinguished prelate "dedicated" a public drinking place that temperance may spread forth throughout the land; and now Mr. Kipling shows how a very popular sport, which is apt to be affected by drinking men, actually turns them from strong drink! Obviously the temperance campaign is making weighty progress and taking on quite new aspects.

## Publishers' Department

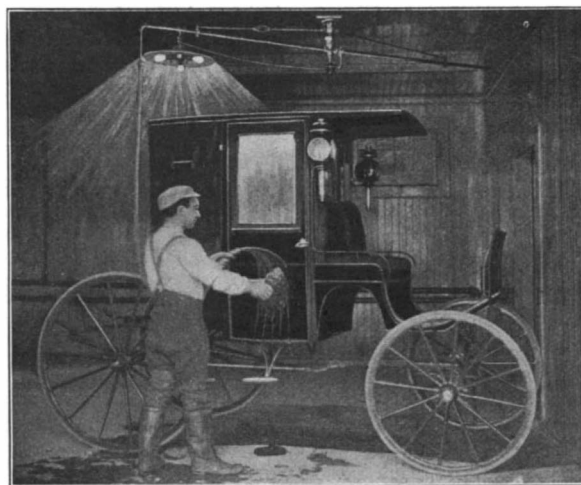
### OVERHEAD VEHICLE WASHERS.

THE accompanying illustration shows an apparatus for which is claimed the distinction of being the only illuminated washer on the market. It represents a "Superior No. 2," for use with electricity, and marks the latest improvement in this article as made by the Vehicle Specialty Company, of Hartford, Connecticut. The other illuminated washer made by the same manufacturer is called the Superior No. 1, and is adapted for use with gas. These safe, simple, and reliable washers are fully protected by patents, and are carefully constructed. The pipes and braces are made of wrought iron; the pipe fittings of malleable iron,



ELECTRICALLY ILLUMINATED WASHER.

the revolving joint of brass. The finish is of red enameled paint, and the connections are intended for three-quarter inch pipe. Note the heavy construction of the head, which is made of cast brass. The revolving joint is specially constructed, and long service has proved its capacity for absolute tightness. The braces are particularly strong, and will keep the machine in line and allow perfect freedom of joint work. The second engraving represented herewith is taken from a photograph of a washer, No. 2, in operation in a darkened stable. Manifestly, the light is easily and fully thrown where needed. The device is secured to the ceiling and makes a complete circling of the vehicle, requiring only about ten feet of hose. The arms extend four and one-half feet from the center. A great advantage lies in the accommodating length of the hose, which can not in any way bother the user by getting in his way. It can not be trodden upon nor run over, is easily drained and kept dry and will last for years. An operator can readily and efficiently wash a vehicle in one-quarter of the time and much better than by the old methods. The light thrown is so



THE WASHER IN USE.

searching that dirt the most harmful and most difficult to see is cleaned with ordinary care. No grit sticks to the hose to scratch very fine carriages. The device is always ready for use, saves time, hose, annoyance; reduces labor, polishing, and water cost. This company also manufactures the plain overhead vehicle washer, without illumination, called the "Excelsior," and a water cut-off for hose, known as the "Simplicity." The cut-off is a neat, simple, and strong device to be set into the hose near its end, and by a slight turn of the sleeve the water is turned on or off. It saves trouble, prevents a waste of water, and has no pro-

jecting pins or levers to catch or get broken. It is very valuable for masons' use in buildings, for lawn hose, and any place where hose is used and water is liable to be left running. The understanding is that each machine is guaranteed for perfect workmanship and material, and capacity for accurate results with fair usage. The washers are a necessity for all owners of horses, or motor carriages. The address: No. 32 Union Place, Hartford, Connecticut.

### FLAG POLES, WEATHER VANES, RODS, ETC.

THE business of D. Dorendorf, successor to the well known C. H. Lilly, so many years at No. 44 Centre Street, New York, has removed to No. 145 in the same street. Mr. Dorendorf is a manufacturer of copper weather vanes, copper cable lightning conductors, flagpoles, ornamental copper and iron work, ladders of all sorts and sizes, and is known for his skill in general rigging, raising flagpoles, and gilding in all its branches. To illustrate with a few examples the work done in this line, we may mention his manufacturing and placing the vane of the New York Post Office, the largest pointer in the United States; the flagpole on the Produce Exchange tower, and the copper cable lightning conductors, the flagpole, and weather vane on the Metropolitan Life Insurance Company's new building, erected by this constructor, are specimens of the largest work of the kind in the world. The most recent pole raising done by Mr. Dorendorf is that of the flagstaffs on the Waldorf-Astoria, one of which

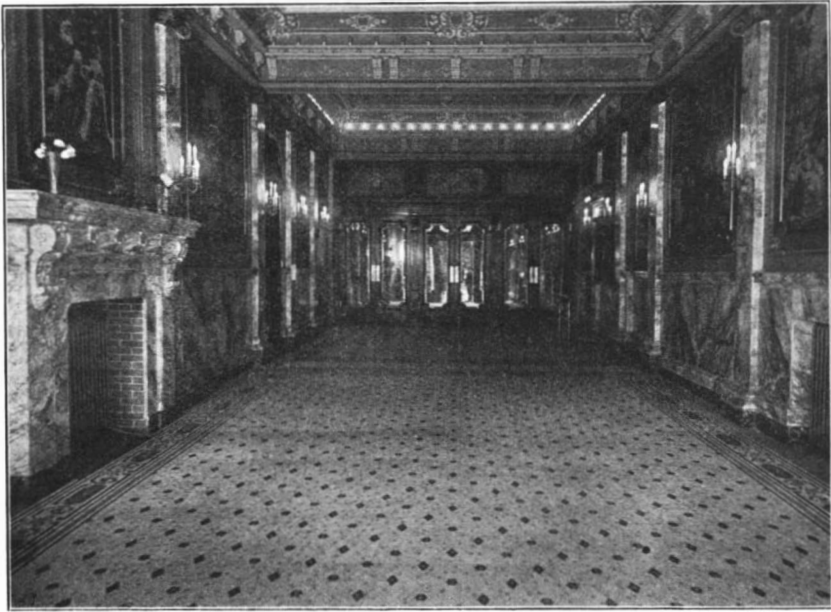
replaces the old rotten one and is seventy-five feet high; two on the Metropolitan Life Insurance Company's building, each seventy-five feet high, and a sixty-five foot pole on the New York Stock Exchange. Lightning rods were also put on these buildings. With improved capacity

for store and office matters and a spar yard and factory in Brooklyn, this old established house is in better shape than ever to attend promptly to orders that are difficult to execute at smaller plants.

### RUBLAIN AND CERAMIC MOSAIC TILE FLOORINGS.

THE tile and ceramic mosaic used in the side walls, ceilings, and floors of the Trenton Potteries Company's exhibit at the St. Louis Exposition were made by the Trent Tile Company, Trenton, N. J. Although reaching a high grade of efficiency and a very attractive appearance, they are in no sense to be taken or considered as exhibition tile—that is, they were not especially made for exposition purposes, but are the ordinary commercial tile made and shipped daily by the company. So far as the tile work of the exhibit is concerned, it is a fair representation of high-class tile work, and is what should be demanded by all persons contracting for or purchasing tile work. From this standpoint critical examination is invited. All of the tile and ceramic mosaic work shown in the General Display section and bath rooms are examples of the present and usual methods employed in setting or laying tile. An instance of ceramic mosaic tile flooring is shown in the accompanying illustration. The large space covered is the main corridor of one of the finest playhouses in the United States, the Trent Theater, at Trenton. The leading qualities are artistic beauty, great durability, and fireproofness. There is no focal point as a center of an artistic scheme, but the whole possesses a very fascinating example of the perspective effect of rows of patterns having a right regard for principles of proportion, enclosed in ornamental borders. The variations from the type shown are unlimited, and the succession of harmonious forms have opportunities in this material that are adapted to any area of space or style of interior architecture. The mosaics are made in all colors known to the potter's art. The first process in their manufacture is to subject the component materials to a pressure of one hundred tons to the square inch; the next step is to burn them at a temperature of three thousand degrees. The resulting product is hard, dense, and non-absorbent, and can not be scratched by the hardest steel tool or file. The heat at which they are burned makes all the colors everlasting. They can not fade, and time and wear increase and heighten their beauty. "Clay is one of the most beautiful possessions of nature," and the consummate achievement of the tilewright's craft is the result of prolonged and thoughtful labor to make this material the most indestructible of the practical arts, and to reach the utmost purity and simplicity of which color is capable. All this is seen in the forty centuries of its known endurance, in its particular or varied tint management; and the satisfaction given by its lovely surface is increased as its quality of last-





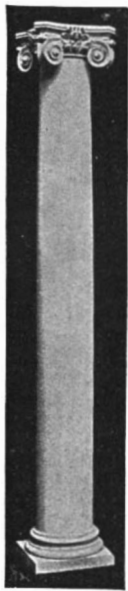
CERAMIC MOSAIC TILE FLOOR.

ingness is realized. To what degree the dash of delicacy of coloring will be attained by the technical potter, no one would be so unwise as to hazard a prediction. Glazes and colors long supposed to be impossible to obtain and produce through the potters' kiln no longer present difficulties. The art potter, being able to produce a large variety of colors, has immeasurably broadened the field for the use of burned and glazed clay, so that he may well say, "All things seem possible." Of the many productions covering a wide range of decoration and utility in tile, the company makes non-crazing della Robbia glazed tile for walls and fireplaces in twenty-five choice colorings. Dull finish fireplace and wall tile, plain or embossed, in fifteen colors as soft and velvety as rose leaves. Enamel tile, plain and embossed, in one hundred and eighteen colors and one hundred and twenty-eight onyx effects. Sanitary wall tile, including bases, caps, trimmers, door trims, plinth blocks, stops, angles, and reducers. Hand-painted tile effects in Royal Worcester, Sèvres and Dresden finish, solid gold or bronze-faced tile, old ivory tints with or without gold Palissy and gold Posterish effects, Delft hand-painted, white or ivory glazed, traced with gold, bright or burnished, or traced with colors. Iridescent lustered tile in rock or plain surface. Decorations in Palissy, Posterish, and Intaglio designs. Della Robbia glazed ceramics for wall or fireplace work. Tile for furniture and counter fronts. Marbleized tile in ten colors. Terra Vitra, all sizes and shapes, in dull or bright glazes. Glazed and vitreous tile for refrigerators, etc. Vitreous aseptic tile. Vitreous ceramic mosaic in all colors, sizes, and shapes. In addition, many specialties. The tile par excellence for the future is L'Art Nouveau, which is made in della Robbia and dull glazes. A great and distinctive feature of the Trent Tile Company's output is "Rublain," now extensively used in the construction of the floors of modern and up-to-date buildings, both public and private. Rubber and porcelain make the combination. The rubber used is of the best quality, and the porcelain is nothing more or less than ceramic mosaics. It is made by combining, by hydraulic pressure and heat, the rubber and ceramic mosaics. In the manufacture, the several colored mosaics are assembled to produce the design required. The rubber is then employed, and by the process of manufacture it is forced into all the interstices between the mosaics, at the same time spreading a sheet of rubber one-eighth of an inch thick on the under side of the design, the result being a ceramic mosaic design in which rubber has supplanted Portland cement. By the process, the mosaics are thoroughly secured and fastened. In adhesive properties the rubber is preeminently qualified to do its part in the problem of perfect flooring. Every design known to the ceramic worker can be produced in "Rublain." It is practically indestructible; in color effects and patterns its field is unlimited. It can be made either a temporary or a permanent floor, and can be laid by a person of ordinary skill without creating dirt, confusion, or inconvenience in sections of a room not worked upon. No odors come from the rubber composition, and a good feature of this floor is the deadened sound the layer of rubber gives and the carpet-like tread experienced in traversing its surface. It can be laid on any foundation, old or new wooden floors, or upon concrete; in fact, it can be put down as readily and easily as oilcloth or linoleum. When additions are required to rublain flooring, they can be furnished, and the new can not be distinguished from the old. Rublain will not show any change by traffic or use, and the various designs, simple and plain, Bagdad, Daghestan or Wilton rug effects are declared to be set to stay indefinitely, and constitute an ideal floor for steamboats, yachts, steamships, vessels, sleeping-cars, railway passenger cars, etc. The firm is in a position to do the designing for flooring without extra cost, the

intention being to encourage originality by avoiding servile following its catalogue samples. In a future article we hope to be able to treat the subject of tile for wainscoting and the della Robbia glazes with the fulness and definition their importance calls for. At present we may say that tile as a wainscoting material for wall work is attracting particular attention, standing, as it does, for artistic elegance, rich coloring, beauty, brilliancy and durability; and the della Robbia glazes are also especially suitable for wall work, as they do not craze; and while having a sheen, do not have sufficient gloss to destroy the color effect, no matter in what light they may be placed. The office and works of the Trenton Tile Company are at Trenton, N. J.

#### LOCK-JOINT STAVED AND TURNED COLUMNS.

THE originators of the "Lock Joint Stave" are the Hartmann Bros. Manufacturing Company, of Mount Vernon, N. Y. It is called the Koll patent lock joint, now so well known to the trade. The first illustration inserted herewith shows a plain column with composite angular Ionic cap, Attic base, and the opposing presentation is that of a fluted column of the same style of architecture. The third is an engraving of a section of the columns mentioned, and indicates why they can not come apart. A beautifully pictured catalogue, issued recently by this firm, is copiously illustrated with half tones, representing columns, caps, and bases of the important classic column types. An exquisite array of caps, brackets, and consoles add to the pictorial value of the publication. The catalogue also gains in charming effects by views of per-

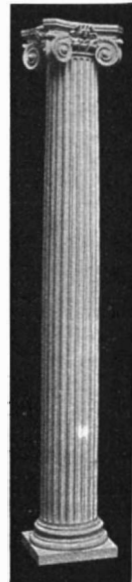


PLAIN COLUMN.



SECTION OF COLUMN.

golas, and in displays of practical construction by well selected specimens of buildings, in which the columns are freely used. The columns, in addition to their supremely correct form and beauty of sculpture imitation, are rated as positively standing the test of



FLUTED COLUMN.

time, as thousands now in exposed or interior use will show. No blocking or inside form is required in any of the shafts, as the stock used is of sufficient thickness and the joint is permanent and secure enough to support the shaft and the superimposed load, furnishing a column as well as a cap and base that is hollow throughout and ready for introduction of either timber or iron column, that may be found necessary to carry any unusual load. The staves, after being thoroughly heated in the steam-box, are rapidly glued with a brush and placed in forms and immediately clamped with specially devised clamps placed on the shaft at intervals of eighteen inches, thereby insuring as perfect a union as hot glue and powerful pressure can secure. The clamping up process is complete before the stock is cold, which is a very important feature. All columns made under Koll patents are made in the Hartmann factories, every shaft being turned in the lathe, thereby securing the proper entasis. All columns and pilasters are fluted by means of a fluting machine of the firm's design. The proper width of fillet between flutes and depth of flute are obtained automatically. All flutes are stopped, by means of an attachment, at low cost; the expense of doing this part by hand accounts for its absence on many columns offered to the trade. For an intimate description of many other important features of construction, the literature issued by this company will be found very practical; for instance, on lock joint columns where they are used for surrounding iron columns or supporting timbers; on wood caps and bases; on centering caps and bases; on dowering for caps; on composition caps; on carved caps; and on material for columns. In reference to hardwoods, columns are furnished built of the various hard or

soft woods for interior or exterior use, the method of construction permitting the use of the more expensive woods. The firm has been compelled to add additional floor space to the extent of 8,000 square feet during the past year, and it is devoting one-half of this increased area to the manufacture of "Compo" (Staff) capitals, brackets, moldings, etc. This permits the furnishing of columns and pilasters complete with ornamental capitals, thereby saving all delay in shipment. To our readers interested in sun-dials, circular No. 11 will be found very instructive. This attractive and useful instrument is made in various styles and mounted on handsome pedestals. Without it no country home is now complete. The Western factory is in Chicago, Ill.; Eastern factories, Nos. 428-438 West Lincoln Avenue, Mount Vernon, N. Y., and the New York office, No. 1123 Broadway.

#### FIREPLACES, MANTELS, GRILLES, ETC.

ANY one about to build a home or make improvements in a dwelling will find the fireplaces, mantels, grilles, etc., mentioned and shown in this article worthy of consideration. They are artistic in design, correct in proportions, and are undoubtedly adapted to form a part



MAHOGANIZED BIRCH MANTEL.

very contributory to the interior beautification of the modern house. The two mantels and the grille piece are specimens of work direct from the factory, and clearly shown by the engravings. The larger mantel is a golden oak or mahogany birch, selected lumber, seven feet high and five feet wide, and fitted with a 36 x 18 inch French bevel mirror. Beautiful columns and capitals add to the structural grace and strength. The smaller mantel is made of solid oak, 78 inches high by 54 or 60 inches wide. It has a 24 x 14 inch mirror. Each mantel is charmingly tiled around the grate. Reception halls, parlors, dining-rooms, living-rooms, and libraries are made more delightful by these handsome mantels. They are made in such a large variety of sizes, fittings, color effects, and styles, that it is almost positive that the piece needed to harmonize with the woodwork and other details of the room in question can be furnished by the maker, William F. Ostendorf, the well known Philadelphia house. If the very finest sort of mantels are required, one will there find a line



SOLID OAK MANTEL.



GRILLE.

so handsomely carved and elaborately finished as to be pronounced perfect masterpieces of highly skilled workmanship; and on the other hand, the necessary attention is given the lower grades so as to give the very best value for the prices of the economically inclined. One of the exquisite features of household decoration furnished by this establishment is the beautiful grille work, a specimen of which is inserted herewith in the engraving. Grilles are generally held to possess an unsurpassed quality in the direction of setting off the appearance of doorways, window tops, and arches. Not only are the shapes and patterns attractive and decorative, but they are continually playing a part in response to the many changes of light and shade that go in day and night in a room. It is understood that the manufacturer reports an increasing public taste for articles of this nature, and claims this is a result of their suitability to the fancies and needs of refinement in color forms and utilities that furnish a home. In addition to manufacturing mantels, fireplaces, and grilles, the factory is rushed to turn out tiles for floors and walls of bathrooms, kitchens, vestibules, etc. Its products also are slate laundry tubs, gas grates, fire sets, fenders, marbleized slate wainscoting for vestibules, bathrooms, halls, etc. Division screens and special grilles are made to order. Send to the maker, No. 2417 North Broad Street, Philadelphia, Pa., and a copy of his well illustrated catalogue will be sent free.

#### WOODWORKING MACHINERY.

THE fire which recently damaged one of the Fay erecting shops of the great Fay & Egan Woodworking Machinery plant at Cincinnati, Ohio, will prove to show no detriment nor delay in filling their orders as usual. A large part of the force of men employed in these shops has already resumed work, and the remainder has been transferred to the Egan shops, and the regular work continued as if nothing of the kind had occurred. Provision for just such a possibility had been provided for under the perfect system by which this company is handled.



# Index to Scientific American Building Monthly.

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Articles marked \* are illustrated.

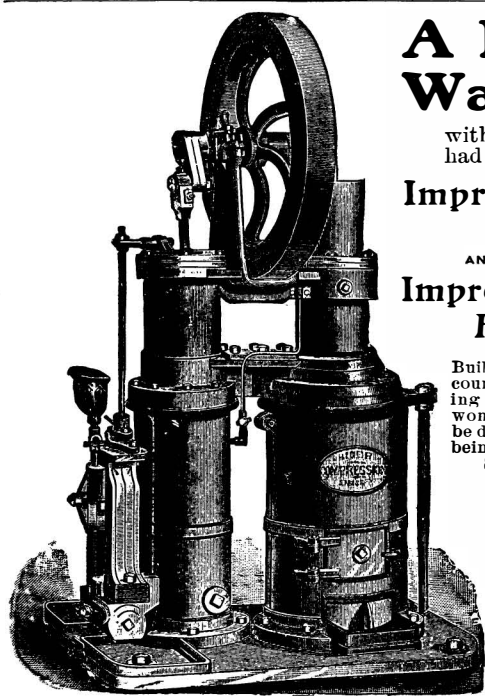
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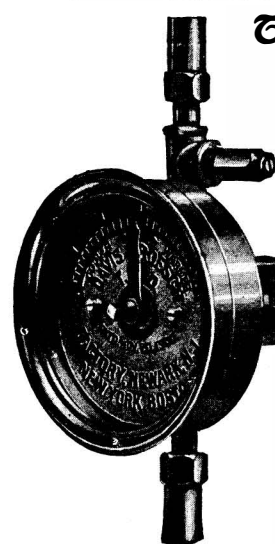
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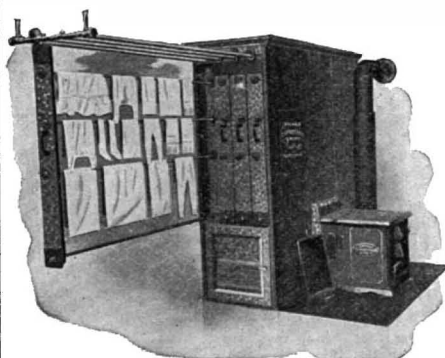
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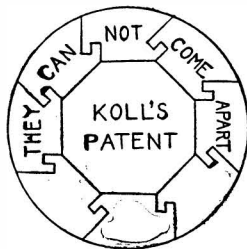
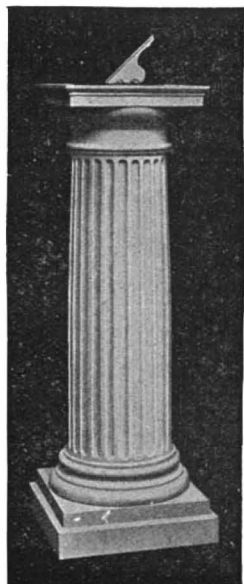
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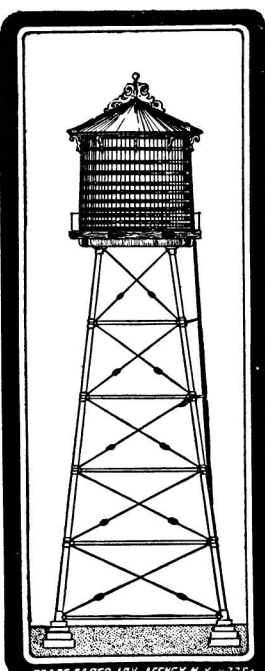
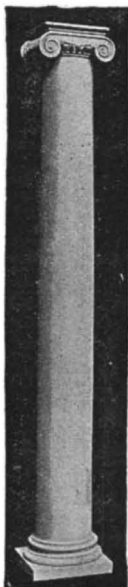
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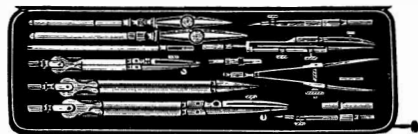


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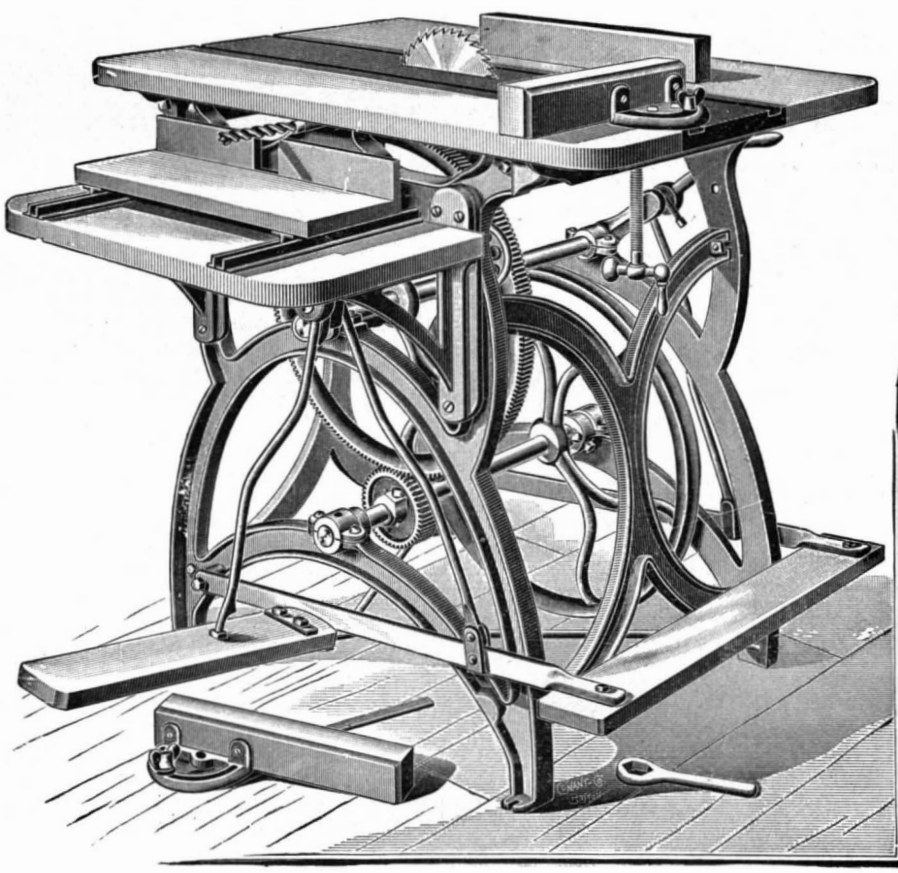
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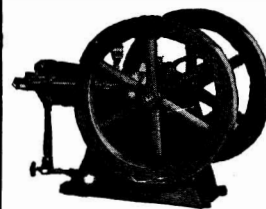
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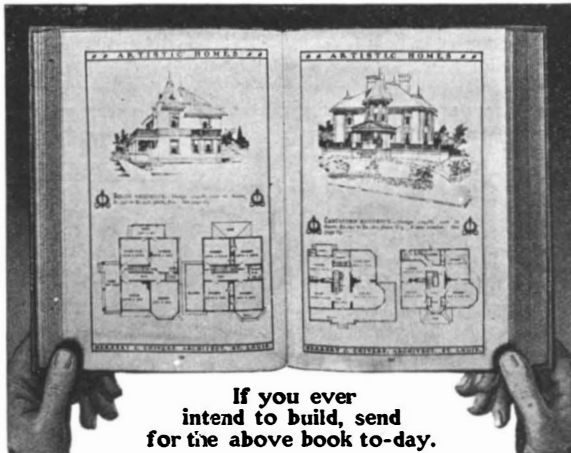
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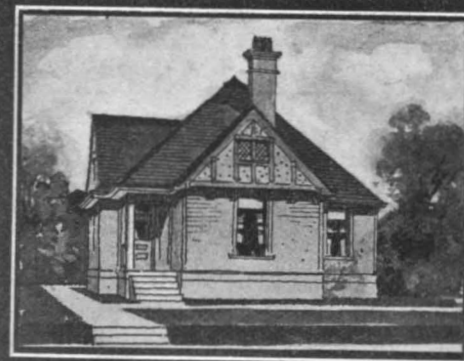
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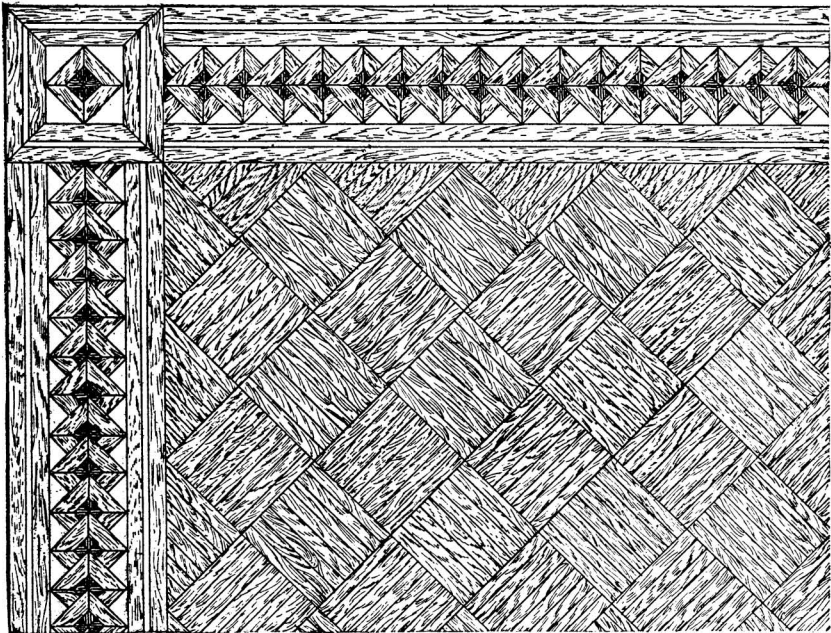
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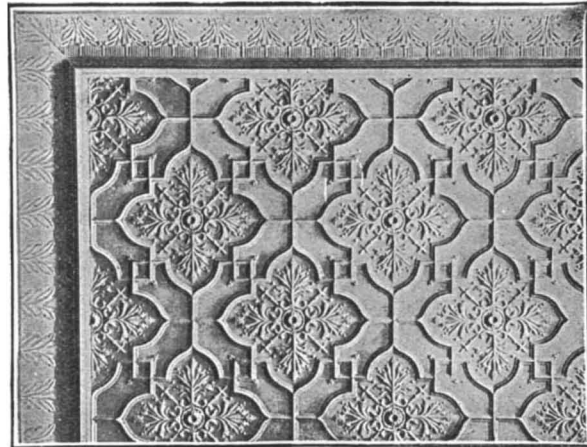
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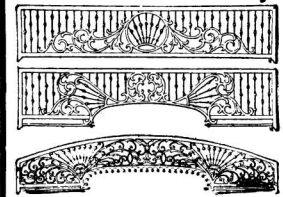
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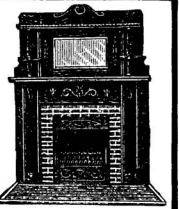
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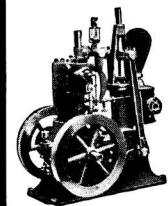
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