

# SCIENTIFIC AMERICAN

## Building Monthly.

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ENTRANCE TO "BLAIRSDENE," THE ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.—See page 113.  
MR. THOMAS HASTINGS, ARCHITECT. MR. JAMES S. GREENLEAF, LANDSCAPE ARCHITECT.

# SCIENTIFIC AMERICAN BUILDING MONTHLY

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

## MONTHLY COMMENT.

A GOOD many years ago, when Mr. James Fergusson wrote his History of Architecture—a book which long maintained a special value as the most exhaustive treatise in English, a rank that, in some respects, it still holds—he calmly stated that the opera house was the only new type of building that modern conditions had contributed to the art of architecture. This statement has long since passed into the category to which unfulfilled prophecies and improperly buttressed statements belong, and if it were not for the fact that his book is still in general circulation the remark would doubtless long since have been forgotten. The truth is, new buildings and new types of buildings are being brought forth almost daily by the changing conditions of modern life. Many of these are complex structures, and some, as stations for the generation of electric power, are mammoth edifices, covering much ground and involving many complicated structural and engineering problems in their making. It is significant of the times, perhaps, that a number of such buildings have been erected by engineers before architects awoke to the fact that extensive building operations are being carried out without their supervision. The relations between architects and engineers in such matters have never yet been determined to the satisfaction of either party. The point of view of the engineer is, in a tolerably strict sense, utility; the point of view of the architect is artistic treatment of exposed surfaces. The engineer will probably claim that the architect is an unnecessary expense, since much of his ornament means increased cost, which has no structural advantage. The architect, on the other hand, will point to structures erected by engineers as miracles of ugliness. And in this, most unfortunately, the architect is generally right.

The relations between architect and engineer are becoming so closely related that the time must arrive when the relations of each profession to great building enterprises must be definitely determined and fixed. When this period does come it will be to the great advantage of the helpless public, which is compelled to view the structures erected in public places.

It is an indisputable fact that buildings can not be hid. The bigger they are, the more they are seen. Engineering structures are often of the largest size, and therefore have a very pronounced quality of visibility. But their utility is no excuse for their ugliness or their offensiveness. If architecture as an art were generally appreciated and valued by the public at large, there would be such an outcry against vast, ugly structures that a standard of beauty would be rigidly insisted upon. And this does not mean the stringing of ornament on the outside of a building; it means giving to structures the grace of form and plan that utility requires, and the treatment of exterior surfaces in a way that would give them distinction and interest.

Interest in building is not obtained by adding on extraneous ornament, but by putting good solid thought into the work and treating the utilitarian questions of design in an intelligible and artistic manner. This means a good deal of work for the architect and perhaps fewer jobs during the year. But most people have to work hard for their living. Why should the architect be the exception to the rule?

A gentleman who is well known as the owner and proprietor of a series of newspapers published in the leading cities of the country, and who has been making an active canvass for the exalted office of President of the United States, prints in one of his daily sheets the agreeable suggestion that small houses should be exempt from taxation. The house owner in general will doubtless naturally exclaim, Why not exempt all houses? This is one of those specious ideas which have only to be stated to make clear their own inherent defects. It is, of course, a delightful suggestion, since the payment of taxes of any sort is one of those burdens that many people spend much time in avoiding. But it borders so close on class legislation that there is no likelihood of such a proposal, if put into form of law, meeting constitutional requirements. House owning, in a legitimate way, should be encouraged, but exemption from taxation is not the way in which to do it. For if small houses, why not small pieces of land? And, in fact, the very paper that is arguing for tax-free houses calmly asks for a similar exemption for small farmers. It would, perhaps, be as reasonable to ask for the remission of all taxes.

## THE ASSOCIATIONS OF HOUSES.

THE Americans dearly love a house or a place with a deep historical or personal association. We do not always honor our great men in their lifetime, nor are we always aware of the significance of the events we are directly concerned with; but once let fame settle on a person or place, and the Americans, as a people, will flock to it in boundless admiration. Witness, for example, the thousands of Americans who have worshiped at the shrine in Stratford-upon-Avon. Witness, if you please, the multitudes who stand agape at the monuments in Westminster Abbey. Witness again, if you will, the crowds who stand bareheaded in Independence Hall and in Faneuil Hall.

The interest that clusters around buildings and places because of personal and historic interest is by no means limited to the people of our own land and nation. The French, the Germans, the Italians, and other peoples of continental Europe, to say nothing of the English themselves, are worshipers at the same shrine of history and of memory. In some respects the continentals exceed us, for we have not yet got to the point at which we placard the exterior of buildings because certain foreigners have abided within. No less than two dwelling places of Benjamin Franklin are so marked in Paris, and examples of similar compliments to great men abound in many places of Europe. The French are very genuine in their regard for historical associations, yet the marking of temporary residences of foreigners may be but a compliment to their present-day fellow countrymen. Certainly the American who may never have taken the trouble to visit the burial place of Franklin in the quiet old Quaker graveyard in Philadelphia will feel a thrill when he discovers the Franklin inscriptions in Paris.

Our own national life has been so brief, as nations go—and as we may trust to go ourselves—that our historic buildings are of the scantiest number. The birthplace of any great or distinguished man, the house in which he has lived, the room in which he has thought out his work and labored into immortality, the place in which he has died—all these are spots of interest, of varying interest, it is true, dependent upon the man and his work, but still of interest to those to whom he and his labor have counted. But so rapid are the changes in our American towns and cities that the buildings with interesting personal associations are very apt to be swept away in the inexorable march of progress and before we have become entirely aware of the greatness that has been born and lived beside us.

It is disheartening to the patriotic and historically minded citizen to visit a progressive small American city of any considerable age. One looks for old buildings in old places, and, as the old buildings in America have many distinctive charms, one looks not only for structures of historic interest, but for those of genuine architectural merit. It is not until one has found one's search fruitless that the stubborn fact dawns upon one that as the town has centered around its beginning spot, that is the place of places that would first be touched by modern improvements. In very many cases the old buildings have disappeared before the present generation, with all its lively interest in the past and its work, has awakened to the fact that of outward, visible signs we have too few.

But if our national memorials are scant, of places of personal interest we have an abundance. The home of every man should be to him the spot around which the finest memories cluster. Home is a sacred place. In the harsh, cruel wording of the law it may be one's castle; but in the true concept of the family life it is the shrine around which all that is best worth having in this world centers and develops.

The sentimental side of the house is, in truth, a most important one. Houses are viewed as creations of architecture, as real estate investments, as places to pass away time in that can not well be spent elsewhere; and, doubtless, many persons imagine that in one or another of these view points the utmost satisfaction is derived. Very likely it is; but the utmost of house satisfaction can not be obtained within such narrow limits. Houses are unquestionably subject to review from the architectural point of view. They are naturally matters of investment interest; and it appears to be an unquestioned fact that, to many, they are unavoidable resting places, without the delights and joys of the great world without. But the persons who look at houses from these and similar points of view quite fail to realize their utmost value or to appreciate what the house may be and is to those who have built up a true home within it.

And the home life can not properly be divorced from the building itself. The plan, the shape and size of the rooms, the conjunction of the various apartments, the placing of a favorite window, the aspect one views from a favorite spot, the color of the walls, the hangings, the furniture, the pictures, the bric-à-brac—all count and help in making up the home and in influencing the inmates. That some persons are more sensitive to such influences than others is but human; but because all can not rise to such sentimental appreciations is no reason at all for suppressing such interest. On the contrary, it is the best of reasons for developing and furthering the sentimental aspect of the house.

The sentimental side of the house is its purely human interest; or, to put the statement in other words, it is the interest given to the house by the human beings who live in it. And the longer one lives in a house the more pronounced this feeling will become. One does not need to perform great deeds within a dwelling to give it interest. One does not need to be a distinguished writer, or an accomplished artist, or a notable statesman, or a profound student, or to be a marked man in any sense, to give interest to a house. For the sentimental aspect of the house is a purely personal affair. It is concerned with the living inhabitants, not with the outsider or the traveler who passes by in the night. It is a feeling that is developed by what is, not by what is done. It is a personal, introspective, undefinable quality that is felt, and not seen, albeit mortar and brick, plaster and stone, paper and carpets, furniture and decorations influence and develop it.

The associations that cluster, and cluster naturally, around a house, may be the happy possession of every householder. Not all to the same extent, because some of us are more sensitive to certain influences than others; not all in the same way, for some will feel things that others do not; but the more one tries to get out of a building as a building, the more pleasure one will find in life, and the more one will realize of his opportunities.

Distinction may be given to certain houses because of certain distinguished occupants or of certain distinguished deeds that may have been wrought within them. This is something quite different from the associations that one should feel in one's own home. We can not all make our homes distinguished in the true sense of the word, in the larger sense, in relation to the outer world; but there is not one of us but can absorb some inspiring suggestions from the associations of one's surroundings, and especially of the surroundings of one's own creation which we call the home. If that be impossible, then clearly there is something the matter with just these things and with ourselves. The personal element may be difficult to change and better; the home surroundings may, at times, seem equally difficult to improve, but the effort can be made. Try to view the house itself as a help in the humanizing of life.



## TALKS WITH ARCHITECTS

BY BARR FERREE.

## MR. THOMAS HASTINGS AND "BLAIRSDEN," THE ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.

ANY one that cares to know it is quite welcome to the intelligence that I have a very special and partial regard for Mr. Thomas Hastings, of the most eminent architectural firm of Carrère & Hastings. I use the words "most eminent" advisedly, for truly, of no other group of architects, actively engaged in the practise of their noble profession, is the phrase so applicable. Professional triumph after professional triumph have come to these able and accomplished gentlemen, until, only yesterday—so rapidly does time move—were they appointed architects to complete the Capitol of the United States at Washington; or, to speak more exactly, they were awarded an opportunity which seems definitely certain to give them this splendid reward for professional ability.

That they are no ordinary men—John M. Carrère

Mr. Carrère should happen to see this article and wonder why I left him out. One is apt to think of Mr. Hastings as the designing member of the firm, and to a very large extent this is true; but no one familiar with the conduct of architectural partnerships can ignore the fact that the work produced by several men in partnership is rightly and literally a joint product, for which all concerned in the production are responsible.

I had not had the pleasure of seeing Mr. Hastings since the agreeable time when he had acted as my cicerone to the house of Mr. Flagler at Palm Beach, which I had the pleasure of describing in the columns of the BUILDING MONTHLY some months ago. That he had left a client in his bureau—or should I say atelier?—it is sometimes difficult to know just what word to use in referring to Beaux Arts architects—did not surprise me, although it was some personal gratification; for the practise of Carrère & Hastings is so large that I should imagine that the times when either one or the other of the firm was not closeted with a client

of approaches in such a way as to permit easy access and artistic planning of roads, walks, and terraces. This, of course, involves no difficulties if ample funds and time are allowed, and that Mr. Hastings accomplished this task in an exceedingly beautiful manner by the use of diagonal roadways is exactly what might have been expected.

A little lake in the foreground is entirely surrounded by Mr. Blair's property. The roadway to the house approaches a pergola built above it; then turns at a sharp angle, zigzag fashion, and passes in a straight line before the house and terraced garden, to a point considerably beyond the former, where it makes another turn at a sharp right angle, and the visitor is immediately before an entrance way, lined with four rows of superb trees, through the central path of which is a stream of water. This forms the formal approach to the house; on the upper side the area is enclosed within a wall; on the lower side, which overlooks the view below, is a balustrade. The trees are immense, and have all been brought here for the adornment of



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OUTDOOR LOUNGING-ROOM—"BLAIRSDEN," THE ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.

and Thomas Hastings—must be thoroughly apparent to every one who has watched their rise to fame, now about to be assured in one of the greatest opportunities open to living architects. So recently as twelve or fifteen years ago they were well nigh disheartened by many successive failures in competitions, which seemed inexplicable after their first great success as young architects in the magnificent hotels at St. Augustine. And then the tide turned, as it must always turn toward merit which has opportunity, and one success followed another, until to-day their name is known throughout the breadth of the land as the creators of some of the most important buildings in America, as designers of fine originality, as creators of sturdy workmanship, of sound construction, of refined art. Both these men would doubtless tell you that whatever success they have had has been due to their training in the famous Ecole des Beaux Arts in Paris; but, as a matter of fact, it lies much closer home than this, and is distinctly due, and most unmistakably, to their own personalities and their really artistic sensibilities.

I began by frankly stating my personal admiration for Mr. Hastings, and I must hasten to add that I have a similar regard for Mr. Carrère. I mention this lest

would be very few and far apart. Happy, happy men, and thrice fortunate architects to be so situated!

Photographs and drawings were quickly produced, and in a short time Mr. Hastings had made clear to me his own conception of this beautiful place. Blairsdene is a considerable property, of about three hundred acres, between Far Hills and Bernardsville, N. J. It is in the midst of the mountains of Somerset County, a locality that has rapidly grown into favor among wealthy New Yorkers as a place for country residences, and which is already distinguished by several notable dwellings, of which Mr. Blair's house is one of the most recent.

The building of a large house in a mountain region is a task that involves many difficulties. I may immediately disregard questions of transportation and material: these are mechanical matters which are readily solved by that most useful of modern commodities—money, and of that, in this case, there was no stint. But the architectural and artistic problems are not slight, and these were the first questions which the architect had to consider. Briefly stated, the fundamental proposition in this case was the building of a large house on an elevated site, and the arrangement

this spot. They are nearly a hundred in number, and constitute one of the most striking features of this great estate.

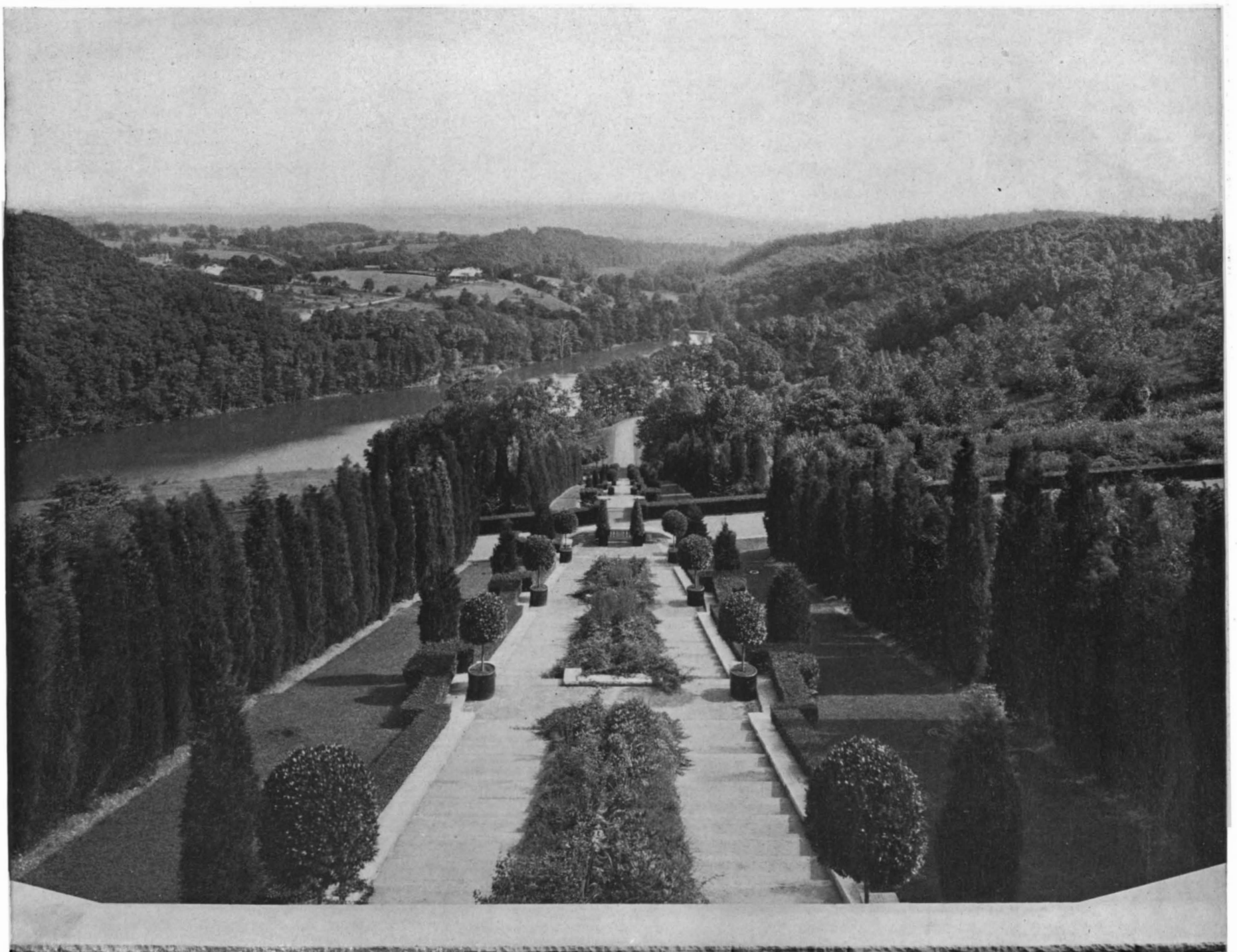
The house is built of red brick and Indiana limestone, and is designed in the style of Louis XIII. It is two stories in height, with a third story in the high, pyramidal roof. As a whole it is simple and stately, the main doorway being contained within an ornamental stone framework, supporting a low pediment, carried by double pilasters. The general plan is rectangular, with projecting wings at each end, the shorter side facing the entrance roadway, and the longer overlooking the valley immediately below and the hills beyond.

The spacious interior is extremely elegant, with reception-room, library, drawing-room, breakfast-room, dining-room, and music-room opening out of the great central hall. The hall, with its ornamental staircase, is entirely of Caen stone. The dining-room, at the end of the hall, is paneled throughout with oak and has a coffered ceiling. The hangings are green and gold, and the carving on the oak is also gilded, with a very successful introduction of color. The library is in Italian walnut, and, like the dining-room, is wholly

(Concluded on page 120.)

# SCIENTIFIC AMERICAN

Building Monthly.



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THE TERRACE GARDEN AT "BLAIRSDEN," ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.

No. 224

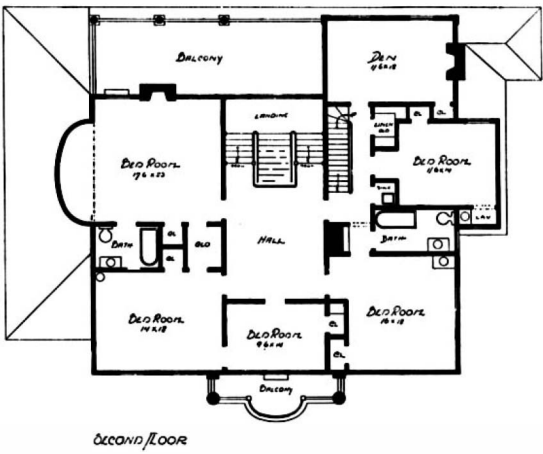
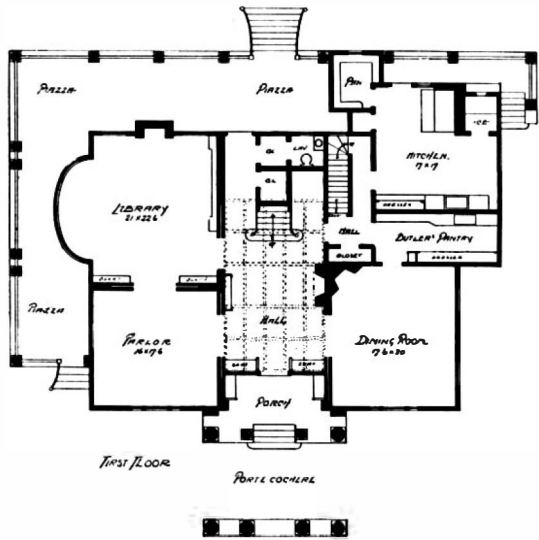
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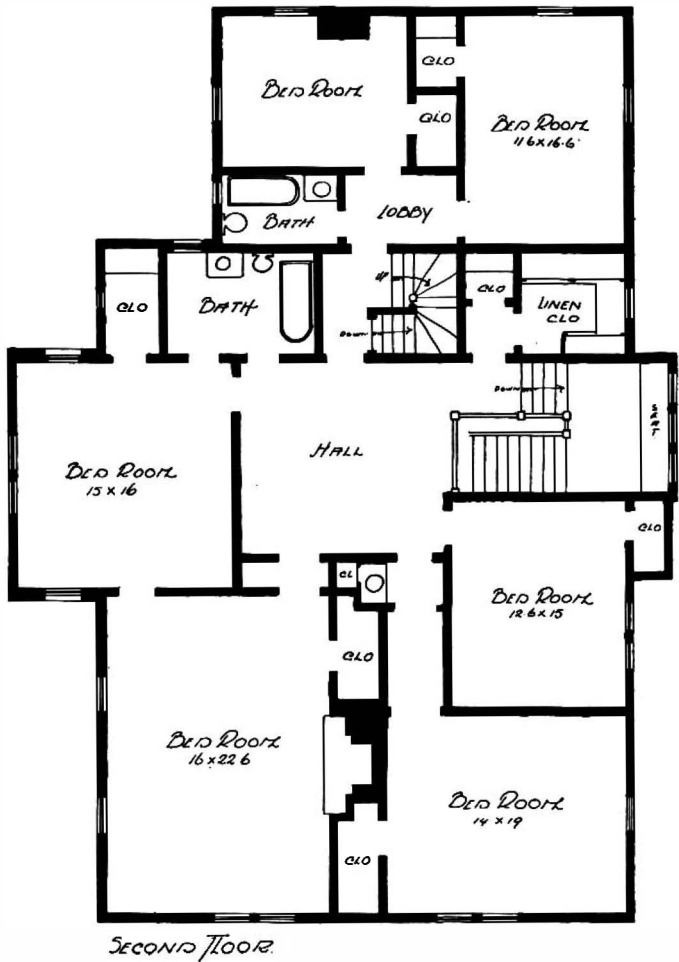
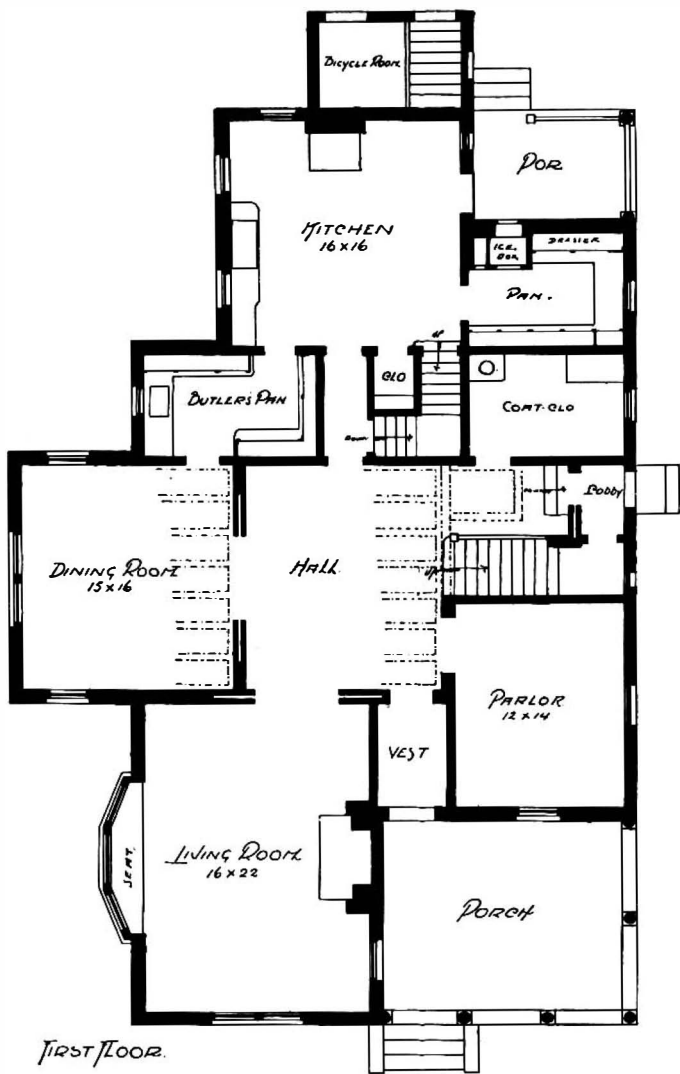
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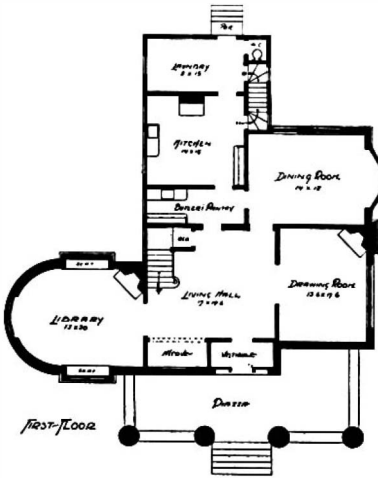
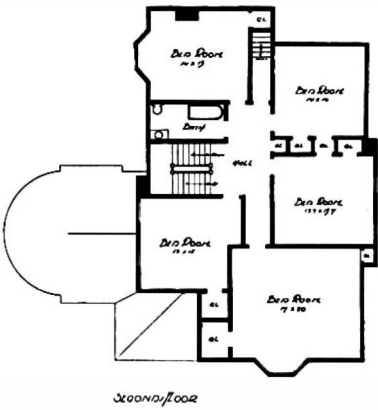


RESIDENCE OF THE REV. CHARLES H. BUCK, YONKERS, N. Y.—See page 127.  
MR. G. HOWARD CHAMBERLAIN, ARCHITECT.

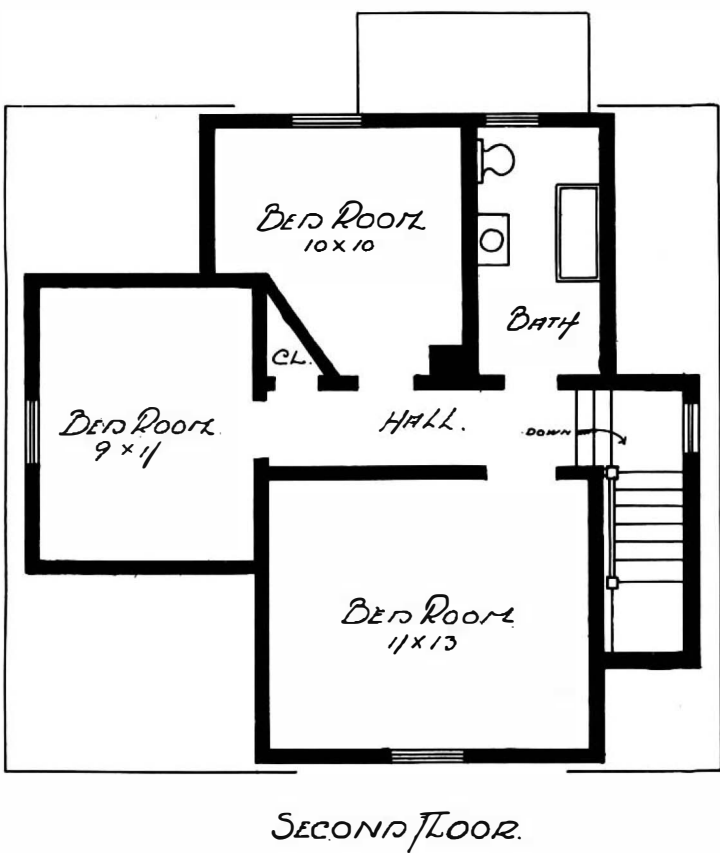
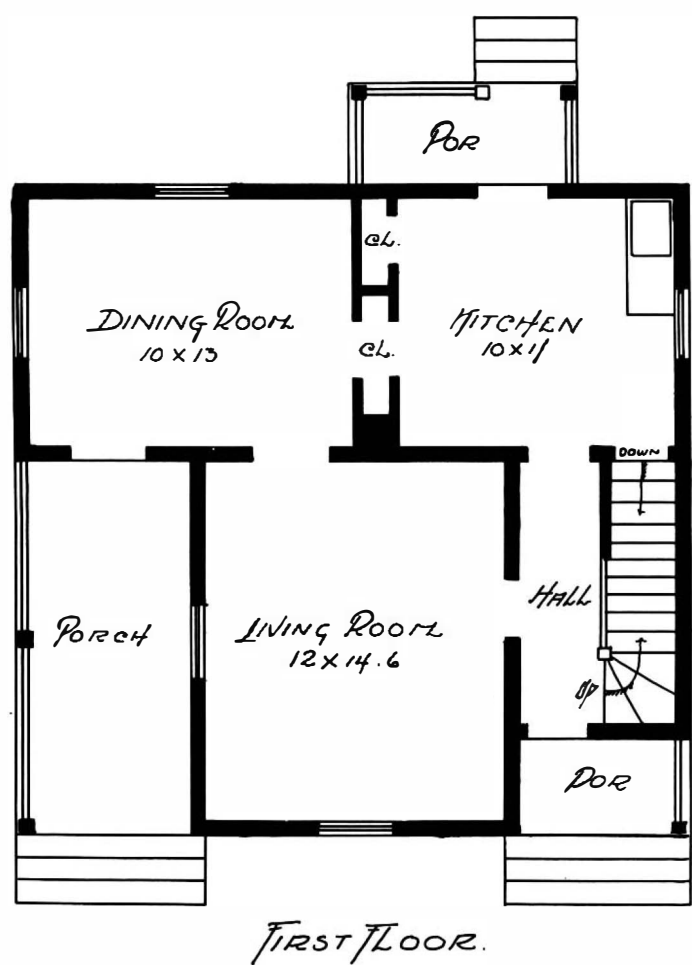


RESIDENCE OF E. M. COATS, ESQ., SPRINGFIELD, MASS.—See page 128.  
MR. G. WOOD TAYLOR, ARCHITECT.





A HOUSE AT ESSEX FELLS, N. J.—See page 126.  
MR. LAURENCE VISSCHER BOYD, ARCHITECT.



A COTTAGE AT WOODMERE, L. I.—See page 127.  
MR. FRANK COTTOR, ARCHITECT.





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THE HOUSE SEEN FROM THE LOWER GROUNDS.



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THE ENCLOSED GARDEN AND PERGOLA.

"BLAIRSDEN," THE ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.—See page 113.  
MR. THOMAS HASTINGS, ARCHITECT. MR. JAMES S. GREENLEAF, LANDSCAPE ARCHITECT.





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DINING-ROOM.

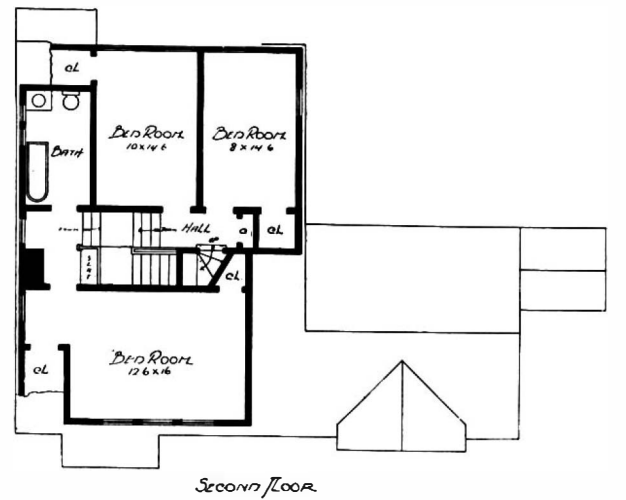
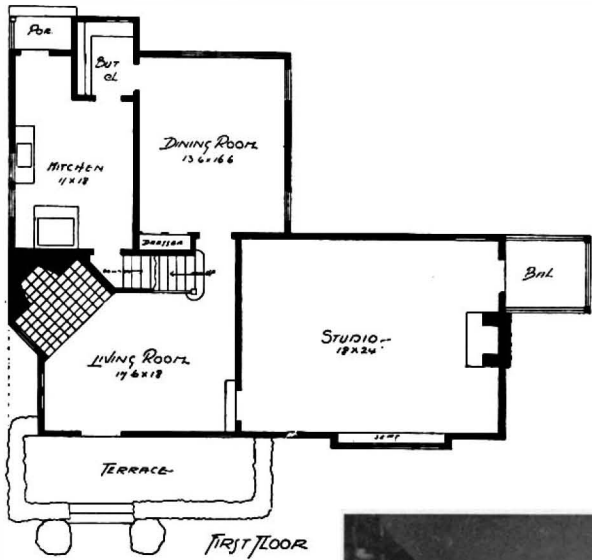


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LIVING-ROOM.

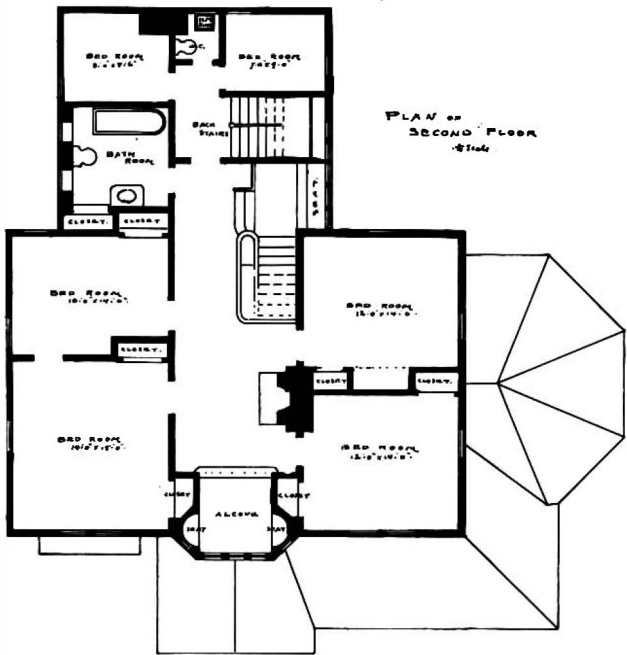
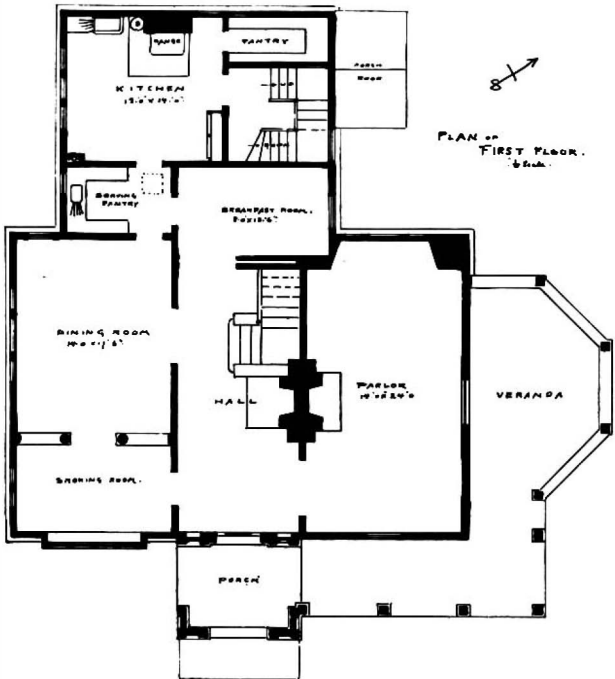
“BLAIRSDEN,” THE ESTATE OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.—See page 113.  
MR. THOMAS HASTINGS, ARCHITECT.





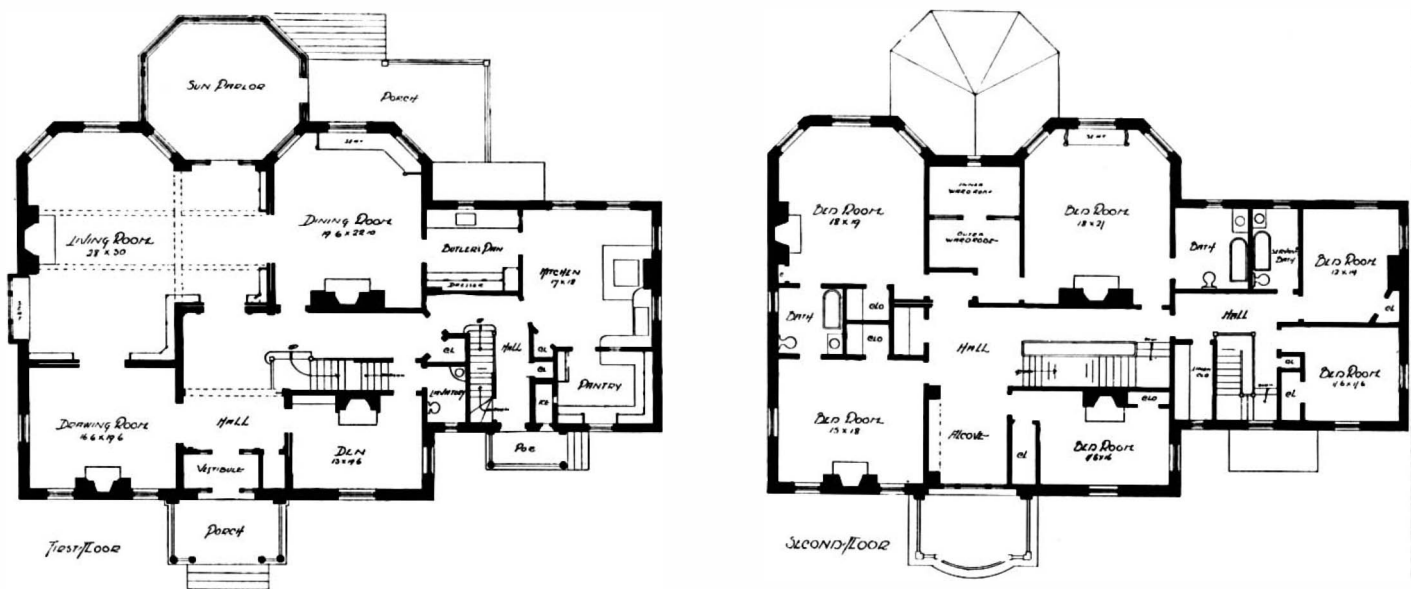
THE STUDIO.

AN ARTIST'S STUDIO AT LEONIA, N. J.—See page 126.  
MR. EATON, ARCHITECT.



RESIDENCE OF SAMUEL A. MEEKS, ESQ., AT PROSPECT AVENUE, HACKENSACK, N. J.—See page 127.  
MR. HENRY S. IHNNEN, ARCHITECT.





RESIDENCE OF FRANKLIN C. PAYSON, ESQ., AT PORTLAND, ME.—See page 127.  
MR. JOHN CALVIN STEVENS, ARCHITECT.





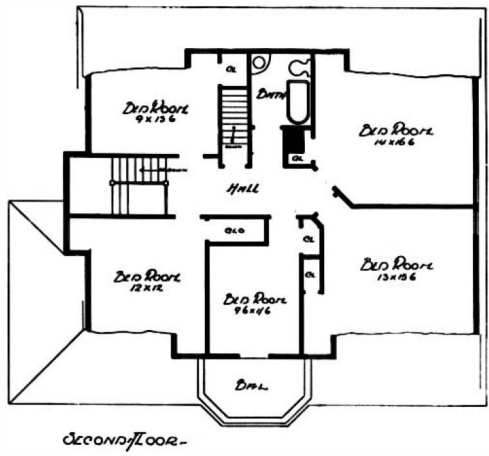
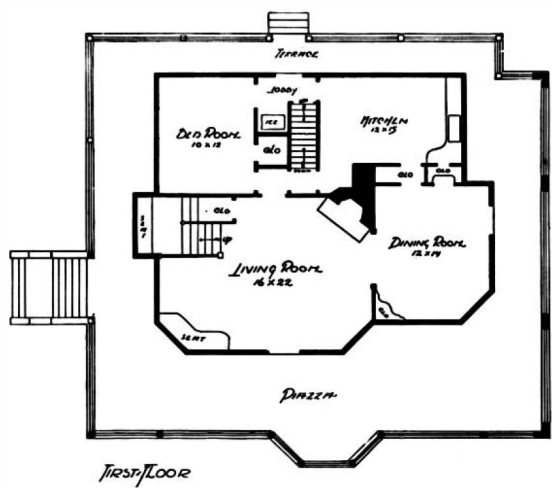
LIVING-ROOM.



DINING-ROOM.

RESIDENCE OF FRANKLIN C. PAYSON, ESQ., AT PORTLAND, ME.—See page 127.  
MR. JOHN CALVIN STEVENS, ARCHITECT.





A SUMMER COTTAGE AT DELANO PARK, CAPE ELIZABETH, ME.—See page 128.  
MR. JOHN CALVIN STEVENS, ARCHITECT.





A CITY GARDEN, NEW HAVEN, CONN.—See page 128.  
MR. CHARLES W. LEAVITT, JR., LANDSCAPE ARCHITECT.



**MR. THOMAS HASTINGS AND "BLAIRSDEN," THE ESTATE  
OF C. LEDYARD BLAIR, ESQ., BERNARDSVILLE, N. J.**

(Concluded from page 113.)

paneled. The ceiling is plaster, and the mantel of marble. The tone of the living-room is gray. This is a charming room, delightfully finished with the decorative materials taken from an old drawing-room in Second Avenue, New York, the fine decorative features of a fine old New York room being thus utilized in this modern New Jersey home. The billiard-room is treated in the Renaissance style with good detail.

The upper floors of the house are given over to bedrooms, arranged singly and en suite, and with many bathrooms. Bright, cheerful colors are used in the bedrooms, and a tour through the upper parts of the house presents a succession of pleasant pictures admirably arranged for the comfort and convenience of the many guests who frequently throng this delightful home.

The elevation of the house on a hill side, and the necessary building of terraces, on which to support it,

house is the center of a great estate, with stables, carriage houses, farm house, dairy, and other essentials of a like nature. Mr. Blair is particularly addicted to horses, and the finest possible accommodations have been provided for his blooded stock. A record of this fine house and its grounds would be incomplete that failed to mention Mr. James S. Greenleaf as the landscape architect of the estate.

**AN ARTIST'S STUDIO.**

THE artist's studio illustrated on pages 120 and 127 has been erected for F. W. Peters, Esq., at Leonia, N. J. The illustrations presented show what can be done in a combination of an artist's studio with family quarters, and thereby forming a unique idea for suburban uses, and making a most complete and harmonious whole. Mr. Peters, in creating this design, has demonstrated what a little thought can do in producing a simple and yet an attractive building, such as is now presented for consideration for those of artistic and literary pursuits who desire a building of this char-

small porch, which is enclosed with glass in winter. The dining-room is also trimmed with yellow pine, and is painted a mustard yellow, while the walls are treated in harmony. There is a china closet, with leaded glass doors, built in, and also a beamed ceiling. The kitchen is wainscoted, and is furnished with all the best conveniences.

The second story contains three bedrooms, closets, and a bathroom; the latter wainscoted to the height of five feet and painted ivory white, and contains porcelain fixtures and nickelplated plumbing. The bedrooms are treated also with ivory white paint, while the walls of each are treated artistically in colors. The cellar contains the servants' quarters, with bath and servants' hall, also furnace room, fuel rooms, etc. The late Mr. Eaton, of Leonia, N. J., was the architect.

**A HOUSE AT ESSEX FELS, N. J.**

THE illustrations on page 116 present a house built for Messrs. Wendel and Treat, at Essex Fells, N. J. The underpinning and the first story, up to the first



THE HALL AND STAIRCASE—RESIDENCE OF F. C. PAYSON, ESQ., AT PORTLAND, ME.—See page 127.

provide some additional space below the main floor, which has been put to good use. Here is a squash court, a plunge, and Turkish bath, and Mr. Blair's lounging-room.

Like all great country houses, Blairsdén is amply provided with sumptuous gardens and grounds. Viewed from below, the house is supported by a great stone terrace, with double flights of steps. The space thus created forms a species of open court before the house, and is treated with lawns and paths and decorated with many bay trees. From the stone terrace descend the great terraced gardens of the estate, closely lined with trees, and treated in a formal way, a superb approach, by which the traveler on foot may approach the house.

At the further end of the house, from the entrance doorway, is a pergola leading to an outdoor lounging-room, a unique apartment, with brick walls, open arches, high wooden roof, and a fireplace, a spot not only agreeable with all the agreeableness of good taste, but from which truly sumptuous views can be had of the surrounding country. Within, and behind the connecting pergola, is a small enclosed flower garden court.

One need hardly be told, I should imagine, that the

acter in one of the many suburbs of the metropolis. The underpinning and the terrace at the front are built of field stone laid up at random. The superstructure, of wood, is covered with matched sheathing, good building paper, and then cedar shingles, which are stained a soft brown color. The trimmings are painted a bottle green. The gables, dormer windows, and studio window are covered with stucco, which is pebble dashed. The roof is covered with shingles and is stained a dull green.

The entrance is into a large living-hall, which is trimmed with yellow pine and finished with forest green treatment. The floor beams are exposed to view and the walls have a battened wainscoting. The staircase is of simple, but attractive, character, and the fireplace in the ingle nook is faced with red brick laid in white mortar, and provided with a wooden shelf. The floor of the ingle nook is paved with 8 x 12 inch brick of special make.

The studio is trimmed with yellow pine and is finished in forest green. It has an attractive paneled seat in the studio window, and an open fireplace built of cobble stone, with a brick arch and a hearth of the same. A door at the left of the fireplace opens onto a

story windows, and also the balustrade to the piazza, are built of field stone laid up at random with wide mortar joints. The columns of the piazza are also built of similar stone. The remainder of the first story is covered with stucco, which is pebble-dashed and tinted a deep yellow. The second and third stories are of wood, and the exterior is covered with shingles, which are stained a deep brown color. The roof is covered with shingles and is stained green. The trimmings are painted bottle green. Dimensions: Front, 56 ft.; side, 52 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft.

The living-hall is entered through a vestibule, with a broad doorway, with windows on either side. This vestibule and hall are trimmed with antique oak, and the latter contains an alcove at the side of vestibule which is furnished with a seat, and it has also an ornamental staircase turned out of oak.

The drawing-room is trimmed with white pine and is treated with white enamel. It has an open fireplace, furnished with white enamel tile facings and hearth and a mantel of Colonial style.

The library is trimmed with antique oak, and it has

a fireplace built of brick, with the facings and a hearth of the same, and a mantel. An attractive feature of this room is the circular form at one end and two window bays with seats which are placed opposite each other. The dining-room is trimmed with oak, and it has a plate rack at the height of seven feet. The butler's pantry, kitchen, and laundry are fitted up with all the best modern conveniences.

The second floor is trimmed with white pine and is treated with china white. It contains a large open hall, five bedrooms, and a bathroom, furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the servant rooms and bath, two bedrooms, and a trunk room. A cellar, cemented, contains the heating apparatus, fuel rooms, etc. Mr. Laurence Visscher Boyd, architect, Harrison Building, Philadelphia, Pa.

#### RESIDENCE OF FRANKLIN C. PAYSON, ESQ., AT PORTLAND, MAINE.

On pages 122, 123, and 126 will be found illustrations of the residence of Franklin C. Payson, Esq., at Portland, Maine. The building is constructed from grade with red brick laid in white mortar and with Flemish bond. The chimneys are treated likewise. The gables are covered with slate, and the roof is also covered with slate. All the detail throughout is Colonial, and the porches, cornice, and all exposed woodwork are treated with white paint. The blinds are painted bottle green. Dimensions: Front, 78 ft. 8 in.; side 46 ft., exclusive of porch and sun-parlor.

The vestibule has a tiled floor and a paneled wall. The hall is trimmed with pine and treated with white enamel. It has a paneled wainscoting, which extends around the hall, up the staircase, and around the second story hall. The staircase hall is separated from the entrance hall by an archway, supported on fluted pilasters and columns with Ionic capitals placed on paneled bases. The staircase is of an ornamental character, with white enameled balusters, posts, and risers, and mahogany rail and treads. At the side of the staircase there is an ornamental seat of white enamel treatment with mahogany arms. The drawing-room is treated with white enamel, and has an open fireplace furnished with white enameled tiling and a mantel of Colonial style. The den is treated with Flemish brown, and has a book case built in on one side of the fireplace. This open fireplace is built of brick, and has a quaint little mantel with cabinets, etc.

The living-room is trimmed with oak, and is finished in Flemish brown. The ceiling is heavily beamed, and the walls have a paneled wainscoting, except where the book cases are built in, and which occupy mostly the entire wall space. These book cases have leaded glass windows. The recessed window at the side of fireplace, with its paneled seat, book cases over same, and window glazed with leaded glass, forms an attractive feature. The broad open fireplace has a tiled facing and hearth, and a mantel shelf supported on corbel brackets over which there is a painted panel; on either side of the fireplace there are fluted pilasters, which rise and form the framework of the picture.

The dining-room is trimmed with white pine treated with white enamel, and the whole treatment is old Colonial. It has a paneled wainscoting to the height of four feet, and a wooden cornice. The broad, open fireplace has a tiled facing and hearth and a massive, broad mantel with columns, etc. The dining-room, and also the living-room, open onto the sun parlor, which is enclosed with glass and is furnished with a tiled floor. The butler's pantry is fitted up with sink, drawers, cupboards, etc. The kitchen and its dependencies, the immense pantry, rear hall, and stairway are furnished with all the best modern conveniences. The lavatory is conveniently placed.

The second story is trimmed with white pine and is treated with white enamel. This floor contains a large open hall, four bedrooms, and two bathrooms, and also

two servant bedrooms and bath. Each bedroom is provided with ample closets, well fitted up, and there are also two linen closets. The bathrooms are paved and wainscoted with white enamel tile, and are fitted with porcelain fixtures and exposed nickelplated plumbing. A novel feature of this floor is the clothes closet with the outer and inner compartments.

The third floor contains a billiard room, three bedrooms, and bath, and a trunk room. The cemented cellar contains a laundry, heating apparatus, fuel room, cold storage, etc. Mr. John Calvin Stevens, architect, Oxford Building, Portland, Maine.

#### RESIDENCE OF THE REV. CHARLES H. BUCK, YONKERS, N. Y.

The illustrations on page 114 present the residence of the Rev. Charles H. Buck, at Yonkers, N. Y. The design is in the style of the Georgian period. The house has a portico at the front, supported on fluted Corinthian columns. The underpinning is built of rock-faced blue stone laid up ashlar, and the superstructure is of wood. The first story up to the window sills is paneled and painted white; the remainder of the building is covered with an eight-inch clapboard, painted a deep Colonial yellow, and the quoins at the corners and the columns, cornice, and all trimmings are painted white. The roof is covered with cypress shingles and left to finish natural. The portico at the front is sup-



HALL AND INGLE-NOOK IN THE STUDIO OF F. W. PETERS, ESQ., LEONIA, N. J.—See page 126.

ported on columns made by the Hartmann Bros. Mfg. Co. Dimensions: Front, 63 ft.; side, 51 ft., exclusive of piazza and porte-cochère. Height of ceilings: Cellar, 8 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft. 6 in.

The hall is a central one, extending the entire depth of house, and is trimmed with quartered oak. It has a paneled wainscoting and a beamed ceiling. The fireplace has tiled facings and a hearth and a mantel of oak with column. The staircase starts with a central run to a broad landing, from which the stairs divide and rise in either direction. The parlor is trimmed with cherry, and also the library; the latter has book cases built in, and an open fireplace with mantel facings and hearth, and a mantel of cherry with overmantel. The dining-room is trimmed with quartered oak, and it has a paneled wainscoting and an open fireplace with tile trimmings and mantel. The butler's pantry is trimmed with yellow pine, and is furnished with sink, drawers, dresser, etc. The kitchen is also trimmed with yellow pine, and it has a sink, dresser, pot closet, store pantry, ice box, and range.

The second floor is trimmed with cypress and is finished natural. This floor contains five bedrooms, den, linen closet, and two bathrooms. The den is provided with an open fireplace. The bathrooms are treated with china white enamel, and are furnished with porcelain fixtures and exposed nickelplated plumbing. There are two guest rooms, two servant bedrooms, and servants' bath, and also two trunk rooms on the third floor. The cellar contains a large laundry, toilet room, cold storage, furnace room, fuel room, and an open cellar. Mr. G. Howard Chamberlain, architect, 1181 Broadway, New York.

#### A COTTAGE AT WOODMERE, L. I.

The illustration shown on page 117 presents a cottage built by the Woodmere Land Association for the station agent at Woodmere, Long Island. The cottage presents an attractive appearance, and is constructed with a stone foundation, while the building above, of wood, is covered with stucco from grade to peak, and which is of a soft gray color. The sash and trimmings are painted a soft brown color. The roof is covered with shingles and left to weather finish naturally. Dimensions: Front, 27 ft.; side, 27 ft., exclusive of porch. Height of ceilings: Cellar, 7 ft.; first story, 8 ft. 6 in.; second, 8 ft.

The interior arrangement is most excellent, and is trimmed throughout with white pine treated with white paint. The first floor contains a hall with an ornamental staircase, a living-room, dining-room, and kitchen, with well fitted closets, sink, range, etc.

The second floor contains three bedrooms and a bathroom, the latter furnished with porcelain fixtures and exposed plumbing. The cellar is cemented, and it contains fuel rooms, cold storage room, etc. Mr. Frank Cottor, architect, Woodmere, Long Island.

#### RESIDENCE OF SAMUEL A. MEEKS, ESQ., AT PROSPECT AVENUE, HACKENSACK, N. J.

On page 121 will be found illustrations of a residence of Samuel A. Meeks, Esq., at Prospect Avenue, Hackensack, N. J. The foundation is built of stone, and the

underpinning is constructed of terra cotta brick. The superstructure, of wood, is covered on the exterior framework with matched sheathing, good building paper, and cypress shingles, which are left to weather finish naturally, while the trimmings are painted a dull gray green color. The roof is covered with shingles. Dimensions: Front, 41 ft.; side, 48 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft. 6 in.; second, 8 ft. 6 in.; third, 8 ft.

The interior throughout is trimmed with white pine. There is a central hall, which is treated in a grayish green color, and contains an open fireplace furnished with tiled facings and hearth and a mantel, and also an ornamental staircase with broad platforms and treads.

The parlor is treated in old ivory white and gold, and it has an open

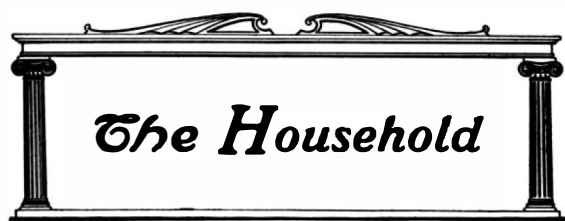
fireplace with tiled facings and hearth and mantel in harmony. The dining and smoking-rooms occupy the opposite side of the house, and each is separated one from the other by columns supported on paneled bases. Both rooms are treated with a gray blue color. A butler's pantry is complete in itself, and connecting with the butler's pantry, and at the rear of the hall, there is a breakfast room. The kitchen and its dependencies are fitted up complete with all the modern improvements. These apartments and butler's pantry are trimmed with North Carolina pine.

The second floor is treated with colors with harmonious effects, and contains a large open hall with fireplace and an alcove with seats, four bedrooms, bathroom, linen closets, and two servant bedrooms, with private stairway. The third floor is one open attic, providing ample storage space. Rooms could be provided on this floor if desired. The bathrooms are wainscoted and treated with white enamel paint, and are furnished with porcelain fixtures and exposed nickelplated plumbing. A cemented cellar contains a laundry, heating apparatus, cold storage, etc. Mr. Henry S. Ihnen, architect, 119 Columbia Avenue, Jersey City Heights, Jersey City, N. J.

#### COVERED BROOMS.

A COVERED broom is a genuine boon to a tired housewife. These covers should be made in bag fashion, fitted over the brush part of the broom, and tied on somewhat closely with a string run in the upper hem. These should be made of cotton flannel of dark color, the best being dark gray, red, or any shade that does not creak.





### SUMMER CURTAINS.

THE topic of summer curtains is an annual delight. Hosts of new suggestions are poured forth each spring and early summer, and the curtain shops are filled with new models, many of them exceedingly light and delicate.

Japanese reed curtains, while no novelty, seem to have a special vogue this year. They come in so many different varieties of patterns and combinations of color that it is possible to match any scheme of furnishing.

More serviceable, points out a recent writer, are the Austrian prints. The foundation is cotton, and upon this appear figures in dark red or green, the fabric making an excellent drapery for doorways if considered too pronounced for curtain use.

Dainty to a degree are the curtains of bobbinet bordered with an applique of French cretonne roses and foliage in natural hues. Curtains such as these cost about \$15 a pair, and if the roses are not desired some other floral decoration may be substituted, morning glories making an admirable decoration. For a summer cottage curtains of cretonne and bobbinet are to be recommended.

There is nothing new to be said about *bonne femme* curtains. They hold their own, as they have for some seasons past, the straight effect drapery of this kind being preferred by many housewives to the full shirred curtain. These curtains are fashioned of point d'esprit with a little lace or applique to relieve the severity, and finished with a deep frill.

Scotch madras has been for many years the householders' standby for drapery purposes. Now there is a French madras that is making a successful bid for fashionable patronage. The usual run of colorings are green and brown and ecru blended in that artistic fashion that is characteristic of French productions.

The stained glass curtain is in particular demand. These inexpensive cottons are an admirable substitute for the real thing, and for the country home hall window or in the den or sitting-room they are particularly well suited.

Decidedly picturesque, if not exactly a novelty in the drapery line, is a deep green net, resembling mosquito netting, only finer, and bordered with an applique of madras in harmonizing coloring.

The curtain of *Italienne file* is one of the most expensive window draperies in the modish list. Because of its cost and its beauty it is allowed to hang perfectly straight. The groundwork of cream net is inset with geometric and floral designs in white, the two tones producing a charming effect.

### STRAW MATTING AND GRASS FURNISHINGS.

THE artistic styles in Chinese and Japanese mattings, says the Furniture Trade Review, lend themselves to any number of uses aside from floor covering. Tables, fancy chairs, divans, settees, footrests, cushions, paper racks, and many kindred articles are made of them in combination with shaded bamboo, so extensively used this season. These mattings are cool looking and are largely introduced in wall coverings, entire rooms being covered with them and paneled off with shaded split bamboo. They are most effectively used for the lower finishing of walls, ceilings, and friezes, being barred off into lattice work of irregular and odd shapes with the bamboo, with the remaining part of the wall of burlap or prairie grass matting in solid colorings.

Prairie grass rugs and mattings are notably handsome, reminding one of rag carpeting in weave, the moss green shades being the most popular. This matting also lends itself artistically to wall covering. In the furniture line hat racks, hall seats, odd boxes, music racks, and tables, in fact, most things in furniture, are made from it and are selling well.

How much the world is expected to live out of doors this summer is suggested by the range of porch furnishings seen in the shops. Ease and comfort is the keynote. Porch sofas, divans, and settees show a wide range of shapes, and are suggestive of extreme comfort for out of door life, many being fitted at ends with small table arrangements of spacious basket receptacles large enough for any number of newspapers, magazines, fans, writing materials, etc. Some of the most attractive and inviting of these sofas are made of rattan or wicker in shades of dark green, with upholstered cushions or headrests of striped red and green cushion materials, red and green being the color combination in these goods this season. Some of the more elaborate corner seats of rattan are constructed with very high odd shaped backs, with shelves placed here and there or all around sufficiently large to hold a miniature summer library within easy access.

Lawn tables and the shelved portable English tea table are having good sale. These, with the many table arrangements seen on divans, make the serving of refreshments easy. Fancy tables of quaint designs are fitted with any number of shelves and pockets for the numerous porch trinkets; in fact, pockets and shelves are the striking features of much of the summer furniture.

Screens have been selling well, some of the best sellers being made of burlap or leather, with plain frames of weathered oak or shades of dull green, with wood top panels about one foot in width, decorated with burnt and stained designs representing English coaching scenes, Dutch scenes, and Indian canoeing and hunting scenes.

Summer porch pillows are of large variety, and pretty pillows are shown in fancy Japanese cloths of quaint designs, cretonnes and embroidered burlaps.

### A SUMMER COTTAGE AT DELANO PARK, CAPE ELIZABETH, MAINE.

THE summer cottage which is illustrated on page 124 has been erected for Dr. Swasey, at Delano Park, Cape Elizabeth, Maine. It has a broad, spacious piazza and large living-rooms, and is built on cedar posts with stone footings. The entire structure is enclosed with matched stuff and is then covered with white cedar shingles, left to weather finish. The trimmings are painted gray. The roof is covered with shingles and is stained a moss green. Dimensions: Front, 37 ft. 6 in.; side, 29 ft. 6 in., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 9 ft.; second, 8 ft. 6 in.

There is no plaster throughout the interior of the house—the walls, partitions, and ceilings are ceiled up with yellow pine; the floor beams are exposed to view, and also the under side of the upper floor. The living and dining-rooms are wainscoted, and the partition between the two rooms is built of battens to the height of seven feet; the opening above is filled in with ornamental brackets. The entire woodwork is stained and finished in Flemish brown. The open fireplace is built of rockfaced gray stone, with the facings of the same rising and supporting a mantel shelf with brackets; the hearth is laid with brick. There are two paneled seats and an ornamental staircase rising out of the living-room.

The kitchen and pantry are fitted complete, and the lobby is large enough to admit ice box. There is one bedroom on this floor and five bedrooms on the second floor, besides ample closet room, and a bathroom furnished with porcelain fixtures and exposed nickelplated plumbing. A cellar, under part of the house, forms ample space for storage and fuel. Mr. John Calvin Stevens, architect, Oxford Building, Portland, Maine.

### RESIDENCE OF E. M. COATS, ESQ., AT SPRINGFIELD, MASS.

THE illustrations shown on page 115 present the residence of E. M. Coats, Esq., at Springfield, Mass. The underpinning and the first story are built of red brick laid with wide mortar joints. The second story is covered with shingles and is stained a soft brown color. The third story is half-timbered, with the spaces filled in with stucco. The beams and all exterior woodwork are of cypress stained a soft brown color. The roof is covered with shingles. Dimensions: Front, 44 ft. 6 in.; side, 65 ft., exclusive of piazza. Height of ceilings: Cellar, 7 ft.; first story, 10 ft.; second, 9 ft.; third, 8 ft.

The hall, vestibule, living and dining-rooms are trimmed with quartered oak. The vestibule has a tiled floor, and also the front porch has a similar floor; the former has a paneled wainscoting to the ceiling. The hall has a paneled wainscoting to the ceiling, which is beamed, forming panels which are filled in with wood. The staircase is an ornamental one, under which there is a side entrance. The parlor is trimmed with mahogany, and it has a wooden cornice.

The living-room has a paneled wainscoting four feet in height, and a bay window with paneled seat, and an open fireplace faced with carved limestone and a richly carved mantel to the ceiling.

The dining-room has a paneled wainscoting to the ceiling, and a ceiling beamed, forming panels. The butler's pantry is fitted with bowl, drawers, dressers, etc. The kitchen and its dependencies are trimmed with ash and are furnished with all the best modern conveniences. The kitchen has a marble wainscoting 4 ft. 6 in. in height.

The second story is trimmed with birch, and has six bedrooms and two bathrooms; the latter have marble wainscotings and tiled floors, and porcelain fixtures and exposed plumbing, all nickelplated. The third floor contains three bedrooms, bathroom, and trunk room. The cellar contains a laundry, the heating apparatus, fuel rooms, and a storage room. Mr. G. Wood Taylor, architect, 425 Main Street, Springfield, Mass.



### A CITY GARDEN.

THE word "garden" is so very generally applied to a considerable space that the value of the city garden and its capability for decorative effect are apt to be overlooked. As a matter of fact, however, the city garden is a very important affair, and the more crowded the city, the smaller the garden, the greater its value in relieving the monotonous effect of built-up portions.

A city garden, if properly treated, is, indeed, a thing of beauty, always well worth cultivating and amply repaying any labor put upon it. In the largest cities, such as New York, Philadelphia, Boston, and other well built up communities, the city garden, as a place of some interest, is too rare to have definite qualities of its own. In smaller communities, where more land is available and where the houses do not crowd each other too closely, it can be very beautifully treated.

Such a garden is that attached to the residence of Mr. Rutherford Trowbridge, in New Haven, Conn., illustrated on page 125. This has been treated by a landscape architect, and, although the materials employed—the simple walks, the graceful fountain, the beds of plants and flowers—are of modest form, the whole result is very fine and of the utmost interest. The garden is, of course, restricted in area, but a very happy use has been made of all the space.

Mr. Charles W. Leavitt, Jr., 16 Cortlandt Street, was the landscape architect of these grounds.

### THE PRIVACY OF ESTATES.

A RECENT writer has commented on the fact—which has certainly been observed by thousands of travelers—that one may travel through England by rail for many miles without so much as a sight of the house-top of the great country residences that abound in that land of great houses. The reason is obvious, for most of the older great houses were built long before the advent of railroads; they were built in the midst of large parks and without regard to their proximity to towns. In America different conditions prevail, and, although no great house is here built close to a railroad, the distances between stations and houses are seldom so considerable as in England.

But even in America the tendency to build the house in the midst of large grounds is becoming more and more marked, and the grounds themselves are becoming more and more to be the chief part of great estates that are visible to the traveler. This, of course, is a public loss, especially when the really decorative grounds are only immediately adjoining the house. It should be remembered, however, that great houses and great estates are brought into existence solely for the benefit of the persons who live in them. The right to build where and how one pleases has not yet been disputed in rural districts.

There is another difference between great estates in England and America that is worthy of comment. This is the freedom that is often accorded to strangers abroad to visit the grounds and often the houses of large property owners, while in this country such privileges are so seldom granted to the public as to be quite marked when they are. It is largely due to training and sentiment. The English public appreciates the advantages of visiting private grounds and conducts itself in an orderly manner. The American public might be just as appreciative, but it certainly would not be as careful. No one can blame a man who has spent a fortune in planting and developing a great estate in wishing to preserve it intact. If the American public has not advantages the English public has in this respect, it has only itself to blame. We need a little more cultivation of the rights of others, and of the rights of rich men before we can have the full value of their personal contributions to the art of building and of garden making.

### LAWN MAKING.

A MODERATELY rich soil is essential to a good lawn, because grass needs a great deal of nourishment. If the nourishment is not already in the soil, it must be supplied in the form of fertilizers. The proper fertilizer to use is a study by itself. Important as this food question is, it receives in most cases only casual attention. That is one reason why grass does not grow as it is expected to.

The topsoil should be broken up so finely that in a handful there are few lumps of any size, and the subsoil should also be broken up. This is chiefly to secure perfect drainage for the grass, and is a part of lawn-making which is almost invariably slighted. As a rule, the subsoil is left undisturbed, so that water may collect there to the detriment of the tender roots.

## Furnishings

### THE SUMMER HOUSE.

SIMPLICITY is the keynote of comfort in summer, says a daily paper. One-half of the pleasure that people derive from going to the country is in the novel simplicity of their surroundings in the country house—the plain-surfaced furniture, the homely floor coverings or honest bare boards, clean scoured; the lack of formality and the pleasant impression of screened doors that exclude insects but allow free views and ventilation. A good deal of this grateful, unpretentious atmosphere can be secured in the city house in summer if the housewife takes a little pains.

Stair coverings for summer use are in grades from inexpensive drugget up to the finest imported matting. Any sort is a welcome change from the carpeting which has been down all winter. An unmatted stairway is agreeable in summer if the wood is of such character that it can be stained and made presentable, but uncovered stairways, if much used, are noisy. So a strip of matting is the best arrangement.

In place of heavy portieres there are to be had good cotton draperies of glazed, silken surface that shed the dirt, are cool in color and suggestion, and moreover can be washed when necessary.

Curtains should be done away with. Even those of the sheerest lace, while pleasant to see, help to exclude the air. Curtainless windows protected with pretty shades and awnings are a becoming summer scheme, half curtains of muslin being substituted for the long flowing draperies at the bedroom windows.

Figured rugs and carpets and figured tapestries help to make a room look smaller—an undesirable effect in warm weather. The new cotton mixture rugs and art squares of fine grade and also matting rugs come in charming shades of green and wood colors, simple in groundwork with effective borders. In summer floor coverings the housewife has a wider variety of artistic designs to choose from at moderate cost than was ever previously offered. The additional comfort and the saving of wear to the winter carpets and rugs are ample compensation for the trouble and expense of substitution.

In the summer city home room doors should be left open as much as possible, and screens should be substituted for portieres whenever practicable, as they provide a lighter, more graceful effect. The screens, of simple framing filled in with bead paneling similar to the bead curtains, afford a cool, shimmering aspect, and at the same time are serviceable.

Charming screens are to had in green wickerwork or with panels of plaited twine, substantial enough to last for years, yet light and graceful to look upon. Besides these there are screens fashioned with linen, holland and denim panels, useful and comely.

In putting the drawing room furniture in summer dress not only the standing furniture, but the couch cushions and the headrests, should be cased in slips. The florid embroidery and rich garniture on these many cushions, which are so welcome an addition in winter, are distasteful in summer. In material for making slip covers there is now a wide choice of patterns. Many creditable substitutes for linen and holland are in the market, some of glazed surface cotton of cream or ivory ground, lined and striped in delicate tints. When covers of this character are used, the cushion slips can be similar, or else made in an all-over color to match the hue of the stripe in the furniture covers.

The wealthy folks with a half dozen homes to choose from are furnishing summer apartments for themselves after the homelike Old World models, in unvarnished Swedish and Norwegian woods, furnishings almost entirely bare of ornament and refreshing in effect.

Many gilded surfaces in mirror or picture frames are unsuitable for summer. They should be veiled in some fabric that resists dust, and any excess of silver or plated ware should be packed away, and china and glass substituted, thus avoiding the labor in polishing silver.

A skilful boarding housekeeper uptown, in New York, has a very rational mode of summer housekeeping. Every room is either matted or else provided with simple rugs on the hard floor. And ample screens are available, in order that doors can be left open at night. The stairs are matted.

By the middle of May all the awnings were up. Not a curtain was at any window except the sash curtains to supplement the shades at the bedroom and bathroom windows. The drawing-rooms were shrouded in linen, couches, chairs, cushions, entire. All superfluous ornaments were packed away, and the house, from entrance to roof, offers a tranquil, new-made aspect.

## The Foreign House

### DOMESTIC LIFE IN PANAMA.

As all eyes are now turned on Panama, a picture of the domestic life of Panama, given by a returned traveler, reproduced from the Tribune, is sure to be of interest.

The gentlewomen of Panama, according to this observer, are, in common with other Colombians, graceful in movement and charming in manner. The houses of the rich are large and often open on a central court, luxuriant with vines and flowers. Some of these courts are protected by awnings in the sunny hours, and some of them have perfumed fountains which are utilized for baths. But, truth to tell, the Colombians do not favor much bathing. An American girl was advised that her frequent use of water would ruin her complexion. Her friends daubed their faces and occasionally their necks with a little aguardiente, a sort of cane rum, and dried them with tiny lace-trimmed towels. The rooms do not usually contain much furniture, but are decked with a wealth of tropical flowers of exquisite fragrance. A rare plant of the orchid family bears the Flower of the Holy Ghost. The petals are of an alabaster white, and within them appears a miniature chapel of alabaster, containing a dove with drooping wings, the stamens and pistils producing the resemblance to the dove form. Other beautiful orchids abound.

Little upholstered furniture is used and the floors are tiled. In the sala, or parlor, is a double row of wicker rocking chairs down the center, and when a hostess receives she and her guests rock continually while they chat. The Colombians are a hospitable people and receive strangers cordially. It is customary for a stranger to send cards to those whose acquaintance he desires, and etiquette demands that the recipients of the cards call within a few days.

The dining tables of the rich are spread with fine linen and set with handsome cut glass and china. Among their beverages, in addition to wines, are cebada, barley water; orchada, which contains almond juice and sugar; agrass, the juice of unripe grapes; naranjada, orangeade, and a preparation of chocolate thick as gruel. A dish for invalids is sopa de pan; a raw egg is broken upon a slice of toast and a beef broth is poured over it. A breakfast often consists of several courses; for instance, fruit, poached eggs with stewed tomatoes and rice; fish, chops fried in eggs and herbs, and a tortilla con seso, brain omelette; sweet potatoes or other vegetable and coffee. Saffron is a favorite flavoring for soup. Chicken or game pies contain a variety of vegetables, hard boiled eggs, and other ingredients. A common dish among the poor is a stew called sin coche. Another standby is rice and red beans. Rice cooked in lard with a little tasado, dried beef, for a relish, is a tidbit among the lower classes. The flesh of the iguana, a species of land lizard, is regarded as a delicacy, and is said to resemble chicken. The natives slit the sides of living female iguanas and take from them strings of eggs as large as plums. They hang these eggs in the sun and dry them for future consumption.

The huts of the poor are of logs, with bamboo plaited sides and mud filled chinks. The windows have wooden shutters, but no glass. Sleeping places are bamboo benches with hide thrown over them, or hammocks woven by the women. Gourds of various shapes and sizes do duty for dishes, spoons, and knives. Chairs and benches are hollowed logs of wood. But the peons get their living easily and enjoy life well. They delight in music and dancing, and women as well as men are smokers. Cock fighting is a favorite amusement.

The peasant women are usually barefooted and bare-headed, with mantillas for special occasions. Their dress is a short skirt and bodice, or an ample, frilled, low-necked garment called a pollera. Even the poorer classes are bedecked with jewelry. The pearls of the Gulf are very fine, and the jewelers of Panama make beautiful necklaces, bracelets, etc., of finest gold threads, into which pearls are woven. Women of the upper classes take little exercise in the open air. When a family is in mourning the women frequently remain within doors for months behind closed blinds.

THE bedroom candle depends upon the style of its holder for becoming an interesting accessory to the smaller furnishings of the chamber. The tin candlesticks covered with enamel paint and the colored china are the least expensive for cottage rooms. Hand-painted work may be introduced on fine white china candlesticks.

## New Books

### AMERICAN RENAISSANCE.

AMERICAN RENAISSANCE: A REVIEW OF DOMESTIC ARCHITECTURE. By Joy Wheeler Dow. New York: William T. Comstock, 1904. Pp. 182; 96 plates. Price, \$4.00.

Mr. Dow has written an agreeable and entertaining book. Moreover, he has produced a useful one, since every book which directs attention to the important subject of domestic architecture is welcome. He writes engagingly and well; he has something to say, and he says it in a way that is sure to attract attention. As much of what he says is very decidedly to the point, his book is one of real value.

The author follows the historical treatment of the growth of American domestic architecture in a topical manner. His point of view is both critical and historical, and he reverts to present day conditions in an exceedingly happy manner that brings out the real lesson which should be drawn from past achievements in the art of domestic building.

The potent charm of good old work is very real to Mr. Dow, as it must be to every intelligent man who views it in the right spirit, which is clearly that of admiration. But he very rightly points out that, because an old piece of work may be fine, we must not imagine that we can instantly translate it into modern work with any assurance of good results. This is a point too often overlooked by the copiers and adopters who pass as architects in the present day and generation, who too often reproduce forms and detail without, in any way, reproducing the spirit. That Mr. Dow writes from a very high ethical standpoint is apparent from his statement that "the profession of architecture, even more than that of the ministry, should be entered without hope of much financial gain." In these days, when every architect is striving to accomplish as much as he can, because, forsooth, his bank account may be so much the greater, it is refreshing to find an architect putting forth such noble sentiments.

The book has been given a very handsome dress by the publisher, and is beautifully illustrated with ninety-six half tone plates, which include many illustrations of good domestic work, past and present. As the book is a review of American domestic architecture, the illustrations of old work naturally predominate, and of the modern illustrations not a few are brought forward as the unhappy efforts of current methods as compared with the more honest and more artistic work of the past. Most of the examples of old work are buildings not well known; they have been selected with the utmost care and discretion and constitute a fine collection of the finest examples of American domestic architecture which is really architecture this country can show.

### HOW TO MAKE A FLOWER GARDEN.

HOW TO MAKE A FLOWER GARDEN. A Manual of Practical Information and Suggestions. New York: Doubleday, Page & Co., 1903. Pp. 370. Price, \$1.60, net.

This book, which appears without an editor's name, is made up of a host of articles, notes, and miscellaneous contributions apparently garnered from periodical literature. It is sumptuously illustrated, and most abundantly, and published at a price obviously below its value.

The contents of the book, being drawn from many sources, is necessarily of varied value: a note on pergolas, on page 107, is singularly pointless and without informing or suggestive value. But, as a whole, it is brimful of information, and is filled with suggestions and ideas, most of which are both helpful and inspiring. The garden lover will here find animated descriptions of notable gardens; the amateur, about to start in garden work, will find abundant suggestions of what to do and how to do it; the owner of present gardens will be helped and benefited by the many notes of others engaged in the same beautiful work. The book is enriched with two appendices of special practical value. One is a special list of flowers based upon the color and season of bloom, the height of the plant, the kind of soil, the conditions of shade or sunshine, the resistance to frost, and other qualifications. The final appendix is composed of brief directions for cultivating a hundred and fifty of the commonest flowers, chiefly annuals and perennials. These two chapters are crowded with practical information of the most valuable kind.

THE decorative value of books is now generally recognized, but a book's value depends on its contents, not on its cover.



## Sanitation

### TYPHOID AND SUMMER HOMES.

DRINKING water, milk, and shellfish, particularly where they are in the least exposed to decayed vegetable or animal matter, says a contemporary, are the common carriers of the fever germs. Typhoid may lurk in the coolest wells, in stables of the most thrifty farmer, and will flourish in salt water beds where oysters of exceeding flavor grow. It takes life where it is least expected. Ties and associations that have bound families to old homes for years have been severed in a week's outbreak of fever, but epidemics like those which ravaged Ithaca, N. Y., and Butler, Pa., must happen before the public realizes the menace that lies in unwholesome sanitary surroundings.

"A member of a well-known New York family came to me last fall," said a former health commissioner of that city, "very much worried because of sickness in his family which had been diagnosed as typhoid, and as the family had spent the summer at his country place the disease must have been contracted there. This he could not believe, because the house and out-buildings had been inspected by a sanitary engineer when they were built, and it was his boast that the place was as perfect as money could make it.

"Upon examination I found that the main drain of the house was an iron pipe, the joints of which had never been sealed. The drain passed close to the well that supplied the family with drinking water, and the ground that surrounded it was soaked with sewage. Consequently, all that was needed to produce the epidemic of typhoid here was to have some person who had been exposed to typhoid come to the house and stay a few days. This was exactly what happened. The owner of the place would not believe my report until he was shown the analysis of the water, and then we took immediate steps to have the drain rebuilt and the well filled up.

"Recently a man who was about to lease a country place near New York asked me to look the property over, and make a report on its sanitary conditions. The place had been unoccupied for three years. Two days were spent in examining the plumbing, the roof, and the cellars, the water supply both outside and in, the ventilation, and the heating apparatus. The house passed inspection, but the water supply in this case was contaminated even worse than the other. In order to reduce the danger, a revision of the whole drainage system was necessary. The agents named an extravagant sum for the rental, and laughed when they were asked to make alterations as shown by the report of the sanitary experts. My client did not take the piece, but I understood somebody who did not know as much about it as he did snapped it up."

The chemist who gave the above information has under examination in his laboratories at present samples of the water supply of two towns in New York State. One collection of bottles comes from a system of artesian wells that are to supply a reservoir. It took only a preliminary examination to inform the town authorities that the samples produced were not satisfactory. Upon the expert's advice the well diggers have been ordered to go deeper.

Arranged in a long white row on another table were samples of milk from farmers outside the city and from dairy companies in town. All had been sent in for analysis. Some of them were to be delivered monthly for the chemist's examination and report, the dairy companies watching for impurities in their supply and the farmers keeping account of the "give" of the herds. Where the tests show a decrease in the weight of cream the system is such that in each stable the particular cow whose record has fallen off can be found and disposed of. Prices for milk are not so high that dairymen can afford cows that do not pay for their keep.

The danger of infection of food products is now, no doubt, realized by the public authorities, especially in the large towns and cities where so much produce is bought and sold upon the streets. In the laboratory above referred to the sanitary experts are engaged at present in drawing up an entirely new sanitary code and a system of official inspection for a neighboring city where the population has rapidly outgrown the old regulations of its so-called Board of Health.

VARIOUS colored cements can be produced by incorporating certain metallic oxides or metallic salts directly with the ground raw materials used in the manufacture of Portland cement, and then burning the resulting mixture in the usual manner. A small quantity of chromic oxide, for example, added to the raw cement mixture will produce a green colored cement.

## The Flat

### A DAINY INTERIOR.

IN a certain inexpensive flat in New York, says a daily paper, occupied by a woman of original ideas and artistic tastes, there are some unusual furnishing features. For instance, the hall is used as a dining-room, as the occupant of the flat uses the dining-room for a morning-room. This hall is octagonal in shape, and has a passage leading out of it. It is not perfectly light, but is only used at night, as my lady has her morning coffee and rolls in her little morning-room and is seldom home at the luncheon hour.

The walls—which consist chiefly of doors—are white—white woodwork and white distemper. Where the doors are not more than one foot apart, the space between them is filled with slips of looking-glass, which gives the impression of so many glimpses into unexplored rooms, and takes away much of the shut-in impression of the little rounded space. There is just room enough on one side for a Chippendale carving-table—which does duty for a sideboard—and the chairs and table are Queen Anne—the former covered in white horsehair, the latter round, with a carved edge, cabriole legs, and paw feet, none of which beauties is hidden by a tablecloth.

The floor is of light wood, and has a perfectly plain, soft scarlet rug in the center, and a big golden leather screen shuts off the front door, so that if any belated visitors arrive during dinner they don't even catch a glimpse of the mis-en-scène! Which, by the way, is exceedingly pretty, lit up by the rose-shaded electric light hanging from a slender iron chain just above the dinner table.

The three small bedrooms have creamy matting on the floors, over which are thrown rugs woven by hand in one of the arts and crafts schools. The window draperies are of white muslin and of lattice cloth, the former close to the panes, the latter hanging in straight, full folds from window tops to sill. The lattice cloth is white with a colored figure to match the tone of the rugs. The furniture in one room is of white enamel, in another of green ash, and in the third of bird's-eye maple. The walls are hung with white paper, powdered with single roses, the roses matching in color the general color scheme of the room—in the white room, red roses, (red rug, etc.); in the green ash room, yellow roses; in the maple room, pink roses. Each bed has an eiderdown quilt, with a flowered center and a plain-colored border.

The kitchen is quite a gem. It is almost as small and compact as a ship cabin. The walls are papered with a white-tiled paper, varnished with spirit varnish (which prevents it turning yellow and makes it also washable), parquet linoleum, and tables and dresser, all painted white and fitted with sheets of beveled plate-glass. It is as smart and bright as a new pin.

### FLATS IN CHICAGO.

DURING the last ten years, says a Chicago paper, Chicagoans have shown a more pronounced tendency to forsake houses for flats than the people of any American city, except San Francisco. In 1890 of all dwellings in Chicago 60.4 per cent. were inhabited by one family; 22.4 per cent. by two families, 17.1 by three or more families. There was an average of 1.7 per cent. families to each dwelling. In 1900 the percentage of dwellings inhabited by one family had decreased to 53.7, and the percentage of those inhabited by two families had increased to 26.6, and of those occupied by three or more to 19.7. There was an average of 1.9 families to each dwelling.

Only 44.8 per cent. of New Yorkers occupy houses, while Philadelphia, on the other hand, merits its title of the city of homes. In 1890, 92.8 per cent. of its families lived in houses, while in 1900 the proportion had increased to 93.1—a remarkable showing for such a big city and a still more remarkable tendency.

What the rule is about the concentration of people in flats, hotels, or tenements is difficult to ascertain. New York's crowding may be well explained by lack of room, but Chicago is not troubled in that way. It must be in a large degree fashion which produces in a city the tendency from houses to flats, or vice versa. A young couple get married at a time when most of their friends live in flats. When they set up house-keeping they are apt to fall in with the prevailing tendency. In a different city they would have followed a different custom.

CRAMPED living has become habitual to many persons through the popularity of flats. Condensed space requires condensed furniture. Modern furniture makers have been quick to seize on such possibilities.

## 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.

VENTILATING BUILDING BLOCK. R. L. Underwood, Fostoria, Ohio. April 5.....	756,300
TILE FOR WALL FINISH. W. K. Gore, Chicago, Ill. April 5.....	756,622
GLASS FACED BRICK OR BUILDING BLOCK. J. H. Leighton, Akron, Ohio. April 12.....	756,971
BUILDING BLOCK. R. T. Frost, Dows, Iowa. April 12.....	757,033
SUPPORT FOR SLATES OR TILES ON ROOFS. P. Duchemin, Thury-Harcourt, France. April 12.....	757,285
SUBSTITUTE FOR TILING. E. Reizenstein, Waltham, Mass. April 19.....	757,840

### CARPENTRY.

WINDOW SASH. R. Adams, London, England. April 5.....	756,552
LATTICE WORK STRUCTURE. R. C. Layton, New York, N. Y. April 12.....	756,861
WINDOW. J. Frye, Toronto, Canada. April 19.....	757,865

### CONSTRUCTION.

STAVE COLUMN. J. S. Miller, Fort Wayne, Ind. April 5.....	756,261
CONSTRUCTION OF JOISTS, GIRDERS, OR THE LIKE. J. D. Carey, Cleveland, Ohio. April 5.....	756,471
DEVICE FOR ERECTING BUILDINGS OUT OF PLASTIC MATERIALS. W. Harrison, Grand Rapids, Mich. April 5.....	756,629
FLASHING. J. H. Munroe, Newark, N. J. April 5.....	756,684
PARTITION FOR BUILDINGS. D. H. Watts, Jr., Philadelphia, Pa. April 5.....	756,749
ROOF FOR BUILDINGS. Wilder and Vanderveen, Grand Rapids, Mich. April 5.....	756,756
WALL FACING FOR DAMPROOFING. W. Zaisser, New York, N. Y. April 12.....	756,926
PLASTER BOARD. H. E. Sharp, Hartford, Conn. April 12.....	757,060
DEVICE FOR ATTACHING FLEXIBLE MATERIAL TO ROOFS AND SIDES OF BUILDINGS. F. S. Howard, Lombard, Ill. April 12.....	757,193
WALL FURNING. J. H. Nicholson, New York, N. Y. April 19.....	757,489
TENT COTTAGE. A. M. Holmes, Denver, Col. April 19.....	758,033
BAR FOR STRENGTHENING CEMENT FLOORS OR CONCRETE. J. F. Golding, New York, N. Y. April 26.....	758,061
SIDEWALK. E. A. Langenbach, Canton, Ohio. April 26.....	758,184
METALLIC COLUMN. E. Ohnstrand, Jamestown, N. Y. April 26.....	758,331
BRICK FOR THE CONSTRUCTION OF ARCHES. S. H. Clarke, Minehead, England. April 26.....	758,417
BUILDING CONSTRUCTION. G. A. Behrend, San Francisco, Cal. April 26.....	758,500
CONSTRUCTION OF FLOORS, PARTITIONS, OR THE LIKE. V. Moeslein, Weehawken, N. J. April 26.....	758,555
FLOOR OF CEILING. W. N. Wight, New York, N. Y. April 26.....	758,577

### ELEVATORS.

DOOR FOR ELEVATOR WELLS. J. Pashkin, New York, N. Y. April 5.....	756,524
ELEVATOR SAFETY APPLIANCE. S. H. McCarroll, Providence, R. I. April 5.....	756,685
ELEVATOR. G. Thalen, Brooklyn, N. Y. April 5.....	756,735
SAFETY DEVICE FOR ELEVATORS. M. E. Baldwin, Yonkers, N. Y. April 12.....	756,811
ELEVATOR. M. Gigler, Reserve Townships, Pa. April 12.....	757,108
SAFETY ATTACHMENT FOR ELEVATORS. G. G. Little, St. Louis, Mo. April 12.....	757,324
SAFETY DEVICE FOR ELEVATORS. C. W. Pollock, Corinth, Miss. April 26.....	758,470

### FIREPROOFING AND FIRE EXTINGUISHMENT.

FIREPROOF BUILDING CONSTRUCTION. G. A. Turnbull, Chicago, Ill. April 19.....	757,519
FIREPROOF DOOR. F. A. Howell, New York, N. Y. April 26.....	758,316
FIRE EXTINGUISHING APPARATUS. E. W. Hicks, Cynthiaana, Ky. April 26.....	758,362

### HARDWARE.

LOCK. P. Tropp, Berlin, Germany. April 5.....	756,434
SASH BOLT. Arens and Teich, New Britain, Conn. April 5.....	756,453
SASH FASTENER. A. Arens, New Britain, Conn. April 5.....	756,559
SASH LOCK. C. W. Randall, Lockport, N. Y. April 5.....	756,799
SASH FASTENER. James A. Long, Spokane, Wash. April 12.....	757,209
AUTOMATIC SASH LOCK. C. S. Barnard, Bridgeport, Conn. April 12.....	757,249
LOCK. J. S. Campbell, London, England. April 12.....	757,265
HINGE. J. W. Skilton, Daytona, Fla. April 19.....	757,784
LOCK. J. Szucs, Turtlecreek, Pa. April 26.....	758,392
SASH FASTENER. F. B. Clapp, Kenosha, Wis. April 26.....	758,416

### HEATING AND VENTILATION.

RADIATOR. R. Barrett, Palmyra, N. Y. April 5.....	756,202
HEATING APPARATUS. C. Garlick, Geneva, N. Y. April 5.....	756,351
VENTILATOR. L. M. Wood, Topeka, Kan. April 5.....	756,762
HEATER. W. W. Woods, Springfield, Mo. April 5.....	756,763
VENT FOR STEAM RADIATORS. W. W. Lower, Keystone, W. Va. April 5.....	756,794
WINDOW VENTILATOR. H. C. Kidwell, Washington, D. C. April 12.....	757,201
DOUBLE CURRENT VENTILATOR. H. I. M. Ross, Dunedin, N. Z. April 12.....	757,348
VENTILATOR. C. A. Withers, Augusta, Ga. April 19.....	757,534

### MISCELLANEOUS.

ROLLING SHUTTER. W. B. Gervais, Chicago, Ill. April 12.....	757,106
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### PLUMBING.

BALL COCK FOR TANKS. F. C. Smith, New Bedford, Mass. April 5.....	756,538
WASTE CONTROL FOR PLUMBING FIXTURES. E. L. Angell, New York, N. Y. April 26.....	758,040
FLUSHING TANK. F. Findeisen, Chicago, Ill. April 26.....	758,307
FLUSHING TANK. B. Walker, Jr., Austin, Texas. April 26.....	758,396

### TOOLS.

HIP ROOF FRAMING SQUARE. W. J. Davis, Washington, D. C. April 5.....	756,594
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## Publishers' Department

### FAIENCE.

ITALY'S sphere of influence, so broad in many of the arts, is incontestable at least in "Formal Gardens." Whatever the extent of "our acre," the character of its soil, the surface contours, or the lines of the mansion thereon; whether the genius of nature throws around the plot a temporary waste or a relief seating of rich dark background, the unrivaled finished Italian garden must be the feature, the nub of the whole ground scheme of beautification. In this country we live at a time when the right principles of form and proportion are getting fairly well understood and in many cases put into notable achievement. So true is this growth that in the past five years the formal garden has become popular to the extent of looking as if every country place laid out with the idea of beauty must now have it, and, pergolas, and terraces, all of which are creations from the Italian, and, good ones, since they give a thoroughly satisfying method of adding dignity, embellishment, and grace. Marble has been used almost entirely for the columns, fountains, seats, and other pieces necessary to the completeness of the garden. A few innovators are employing cement and artificial stone, but will others be bold enough to think of turning to "faience"? Faience comes from the Italian, and it seems strange that it has not been considered in connection with formal gardens, unless the free use of lovely white marble has made it appear extra-prohibitive to introduce tint novelties. How satisfactorily the Della Robias used it! And their work stands to-day as marvels in the world of artistic production. With "faience" you can get color: and preciousness of color that holds the gloss of unvanishing refinement or the soft finishes of dullness. In the pergolas, for instance, how much more satisfying would be the result if, instead of all white columns, there should be used columns of white, with a touch of soft green at the capital. How well it would harmonize with the pinks, greens and reds of nature's coloring! How easy it would then be seen that, with all the exquisite reaches of the Italian taste, it has been too pervasive with its white, the result of the fondness for its favorite marble! "Faience" can be made into columns, seats, sun-dials, tables, or any of the pieces necessary for the formal garden decoration, and, instead of all white, the blues, greens, browns, and yellows may be worked harmoniously into the scheme of nature's tinting. Knowing "faience" to be a standard material for ornamental work, we have looked up its qualifications for the purpose of giving our readers hints on the output, that might lead to further investigation. A prominent firm, the Hartford Faience Company, informs us that it has "reached the threshold of perfection in the production of architectural faience," and that it is in a position to offer suggestions about its adaptability to formal gardens, and also practical points about its utility, durability and economy. The address is Hartford, Conn.

### ROOFING.

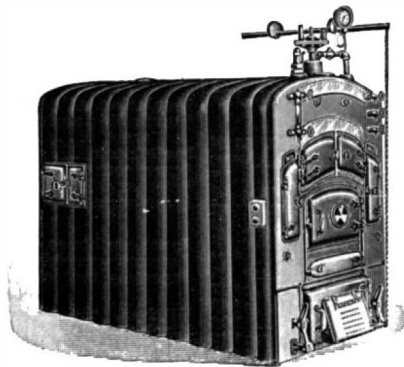
It is earnestly to be wished that cases of illegal appropriation of the merits earned by manufacturers for their goods could be more thoroughly prevented. Parties may do a large amount of advertising, produce a great quantity of material and create a universal satisfaction by sane and commendable habits of industry, and in time find that unscrupulous competitors are putting upon the market very inferior imitations of their outputs under names which are calculated to deceive the public. Taking the ground that this method of deception should be noticed wherever spotted, we can but regret the occasionality of notice and protest in relation to this phase of piracy. We have at times been called upon to give that note of warning which is so acceptable to those bearing the burden of this peculiar grievance. A case in point we are familiar with is that of a roofing product. Poor material is known to have been made so as to take advantage of the great demand established by the owners of the brand called "Flintkote Roofing," and to such an extent as to compel the true manufacturers to make it known that hereafter its roofing will be known as "Rex Flintkote Roofing." J. A. & W. Bird & Company, the manufacturers, announce that hereafter their advertising matter, and the wrappers on their rolls, will all bear the new trademark, the imprint of a boy with a roll of roofing in his arms. Write to the above firm, No. 45 India Street, Boston, Mass., for full particulars about this excellent roofing, all imitators and infringers of which will be prosecuted to the full extent of the law. The company has offices in five other cities: New Orleans, St. Louis, Chicago, Montreal, and New York.

### MODERN STEAM AND HOT-WATER HEATING.

THE various systems of modern heating now stand in full character and capacity equal with any of the important accomplishments fairly well secured in making living more healthy, economic, and comfortable. That some are inferior to others is obvious, and the reasons are bound to be thrashed out more than ever at a time following the persistent hold of the recent winter temperature. The coldest winters experienced generally, since the different methods of heating have been inaugurated, are not, as a rule, followed by an immediate warm one, and the lessons learned during the last cold period will give an incentive to inquiry as to the best means to make improvements to meet the next. Until the correct heater be found, the words monumental or frigid failure will be judged not too severe when hurled at a poor heating device, whatever the circumstances are that pile up to militate against good service. There are many causes, some unseen, outside of the heater that do this, but there are systems of heating that can overcome them. Of these, steam and hot-water heating are now very widely held to be unsurpassed. Comparatively few people, however, are aware of all the many great advantages enjoyed by the use of a system that may be briefly enumerated as follows:

First.—The heat derived from a steam or hot-water system is thoroughly healthy—the air of the rooms being heated by contact with the radiators, and, consequently, not becoming a mixture of coal gas, dust, and smoke. Second.—It is possible to thoroughly distribute the heat—thus enabling an evenness of warmth and uniformity of temperature to be maintained throughout the building. Third.—An efficient and properly installed steam or hot-water apparatus requires little care and attention. It is safe, durable, simple in operation, and the average housewife or servant girl can easily attend to the management.

Finally, great economy of fuel is obtained by use of these systems, the saving in fuel often averaging from 25 to 33 1-3 per cent. This fact alone should appeal strongly to the prudent and thinking house owner, as



NEW SECTIONAL BOILER.

it will be apparent that the first cost of the system will be entirely saved in a few years' time. We present in our columns an illustration of the Furman New Sectional Boiler, for steam and hot-water, manufactured by the Herendeen Manufacturing Company, Geneva, New York. We believe this boiler represents an unsurpassed and most efficient type of boiler construction for heating purposes, and we suggest and commend an investigation of its merits by all who are interested in this most important question of healthful and economical heating. The company above named will be pleased to send, free upon request, its descriptive literature.

We suggest the choice catalogue on Furman Boilers, twenty-fifth edition, 1904. It is superbly printed on highly calendered paper, and the illustrations are as perfect a bit of work as the half-tone can produce for mechanical purposes. The written matter is such a terse and luminous exposition of the construction of boilers and their use that any interested reader should be able to critically study them with a facility and complete understanding of their superior points and accomplishments. These practically self-cleaning boilers are now made in over two hundred different styles and sizes, embracing sectional, portable, and brick-set types. A sufficient number of these types and their accessories are shown in the catalogue, together with rules and limitations on ordering them, that will give the seeker after steam and hot-water heating just the knowledge that is needed to prepare in time for the next cold season. The Herendeen Manufacturing Company was established in 1868, and, besides the boilers under notice, makes radiators and steam and water supplies. Branch offices are at No. 39 Oliver Street, Boston, Mass., and No. 39 Cortlandt Street, New York, N. Y., General office and works, Wagner Street, Geneva, N. Y.

### ACETYLENE BURNERS.

WE desire to call the attention of our readers to the fact that a recent and very interesting decision has been handed down by Judge Townsend, of the United States Court of Appeals, of the City of New York. The

decision was published on March 23, 1904, and it sustains the lower courts in support of the Patent No. 589,342, which covers a process of using air in connection with acetylene gas for illuminating purposes. This is a broad patent and has been broadly sustained. The decision is very important, and was rendered in favor of the State Line Manufacturing Company, of Chattanooga, Tenn. This company are the sole licensees in the United States under the patent, and it is with considerable pleasure that we chronicle the victory. When a cause invoking a judicial judgment is fairly decided, the right interpretation gives confidence to the owners of patent rights that is a substantial encouragement to business enterprise. The company manufactures the D. M. Steward's patent acetylene burners, and has agencies established in leading foreign countries. A particular feature of its output is the well known "Wonder" acetylene burner. The State Line Manufacturing Company has an Eastern and export office at No. 107 Chambers Street, New York; a Chicago office at No. 57 Washington Street.

### BUILDING IN CUBA.

THE majority of the houses in Cuba, points out a contemporary, requiring skilled labor, are built of brick or of a cement and rubble composition called mamposteria. Stone is used in some of the more pretentious city edifices. Frame buildings are to be found occasionally in the suburbs of the larger towns, especially in the summer resorts near Cienfuegos, Santiago, and other coast places. While of modest dimensions, these are frequently well built. The wooden buildings, common in the country and smaller towns, are usually of very crude construction. In a few of the older and less progressive towns, adobe or wattle construction is even now being used. Most of the country people of Cuba reside in palm-bark huts, which are made and repaired by the occupant without the employment of hired labor. Consequently the number of men engaged professionally in the building trades is not relatively a large percentage of the population of the island.

According to the census statistics, there are less than half as many masons as carpenters in Cuba. There are also many men employed on buildings as masons' helpers who do not rank as members of the trade. The best trained workman in a community is often a black man, and frequently when houses are being erected or repairs made in Havana and its vicinity, the foreman in charge of the work is a full-blooded negro, while many of the men under him are whites or mulattoes.

Construction is not accurate, and traditional methods, forms, plans, and design are used to such an extent as to make one Cuban building appear very much like another. The massiveness of the masonry, while often explained as necessary to withstand tropical storms or earthquakes, is really due to the inferiority of the materials employed, the lack of knowledge of structural economics on the part of builders, and an unevenness in the skill of workmen that makes it necessary to allow a large margin for possible errors in the work.

Skilled bricklayers receive from two dollars to three dollars a day in Spanish silver. Apprentices are paid about half that amount. A good man can lay—parallel or in any of the imperfect bonds in common use—300 to 350 bricks a day. These bricks measure 11½ in. by 5½ in. by 3½ in., so that about 40 cubic feet of wall is considered a normal day's task. Hod carriers and other helpers receive about seventy-five cents a day.

The laying of roof tiles is not considered a separate branch of the trade—unfortunately for the people who live under them—and is usually done by the same men who build the walls. Plastering over lath is not practised in Cuba, and there is little or no hard finishing. Exterior brickwork is always cemented over.

### HERCULANEUM.

COMPARED with the neighboring buried city of Pompeii, Herculaneum has been comparatively neglected by the excavator and archeologist. Since the first attempt recorded in the days of Charles III. to dig over the site of the theater, only partial excavations, and these in a modest and tentative manner, have been made—in 1828, 1837, 1853, 1869, and 1875. But it has now been decided, at the suggestion of Dr. Charles Waldstein and Mr. Shoobridge, to appoint a central managing committee in Rome for the purpose of fully exploring the site. Herculaneum, both from its past history and from the objects hitherto found there, gives promise of being a far richer field of excavation than Pompeii. Owing to the fact that the town of Resina was built over the site, no excavation on a large or comprehensive scale has ever been attempted. There is now, however, every hope that the great cost involved, owing to the magnitude of the work, may be successfully met.—Building News and Engineering Journal.



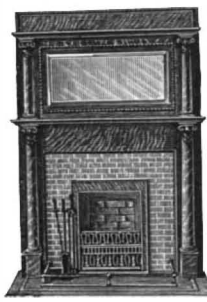
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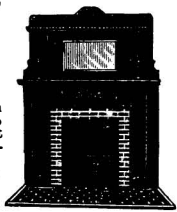
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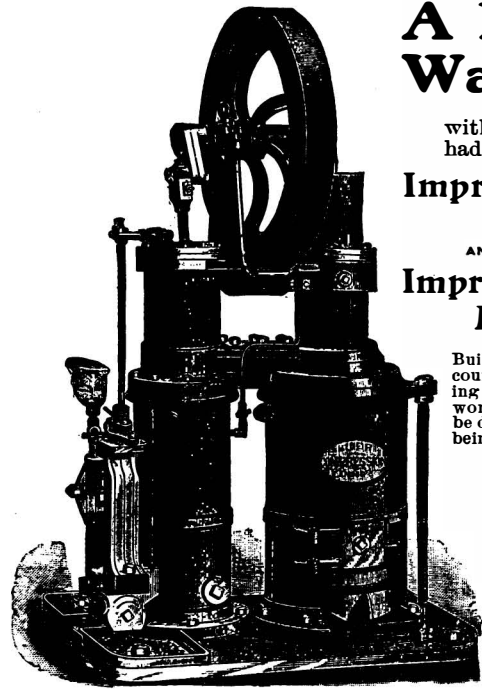
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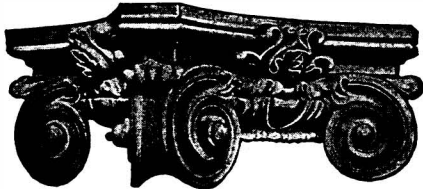
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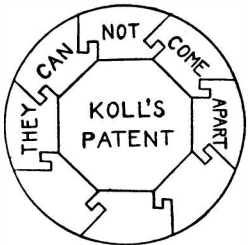


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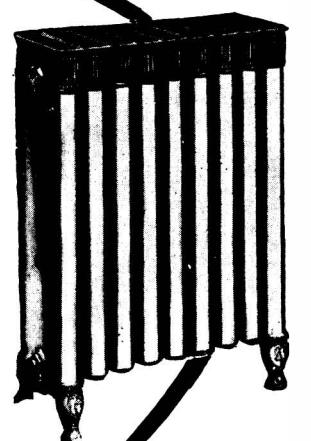
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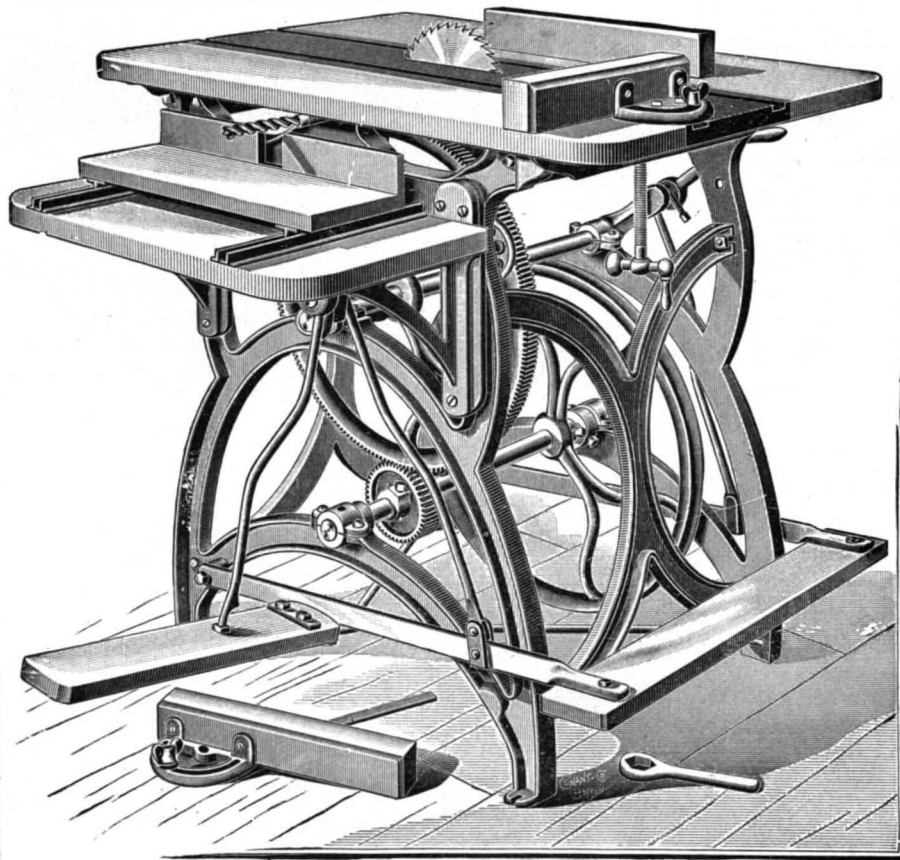
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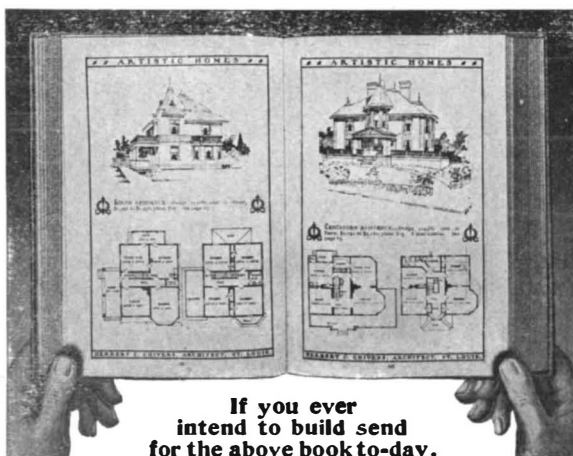
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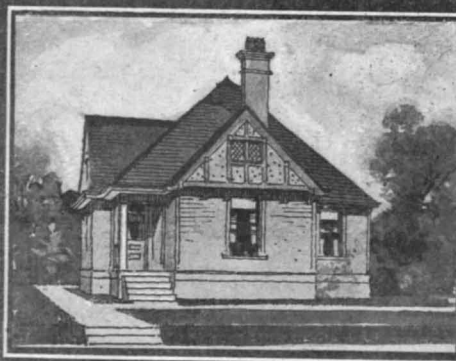
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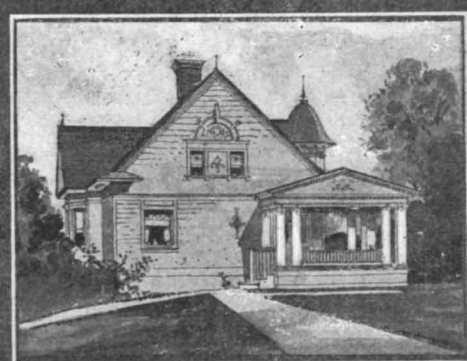
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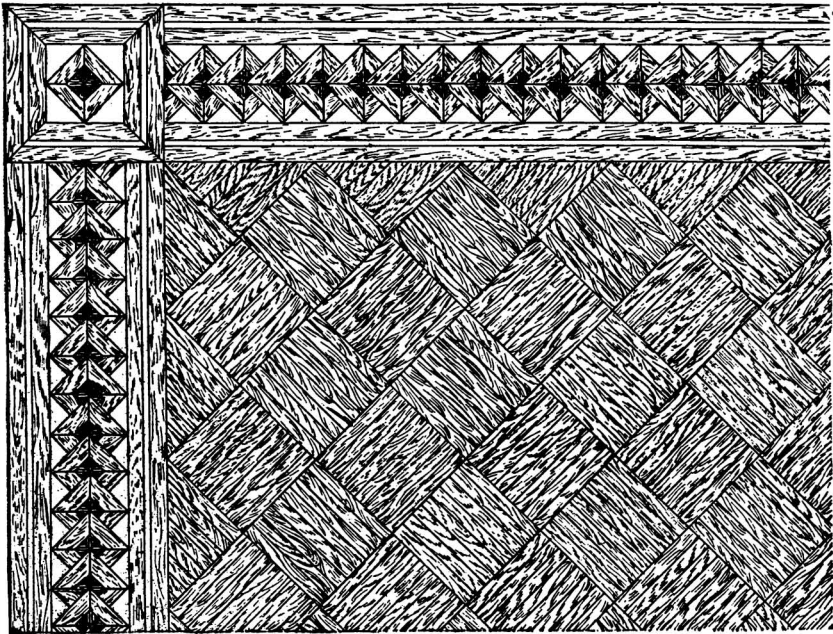
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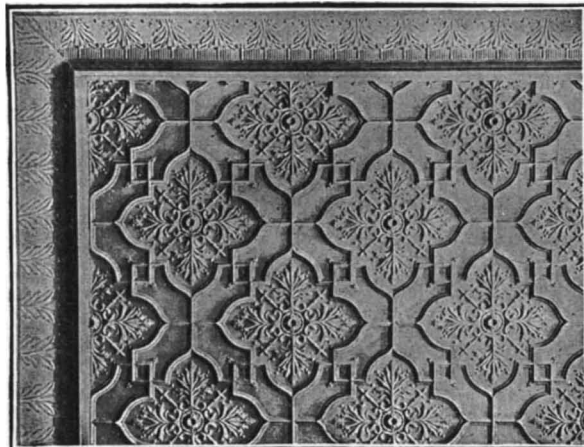
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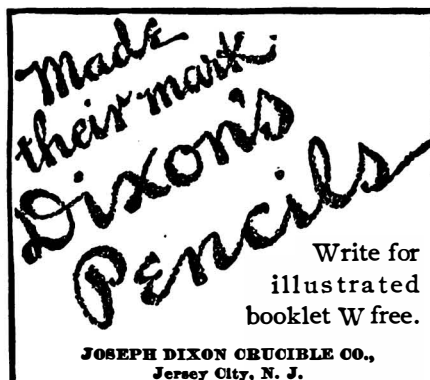
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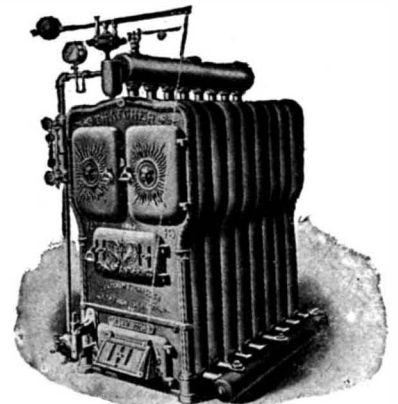
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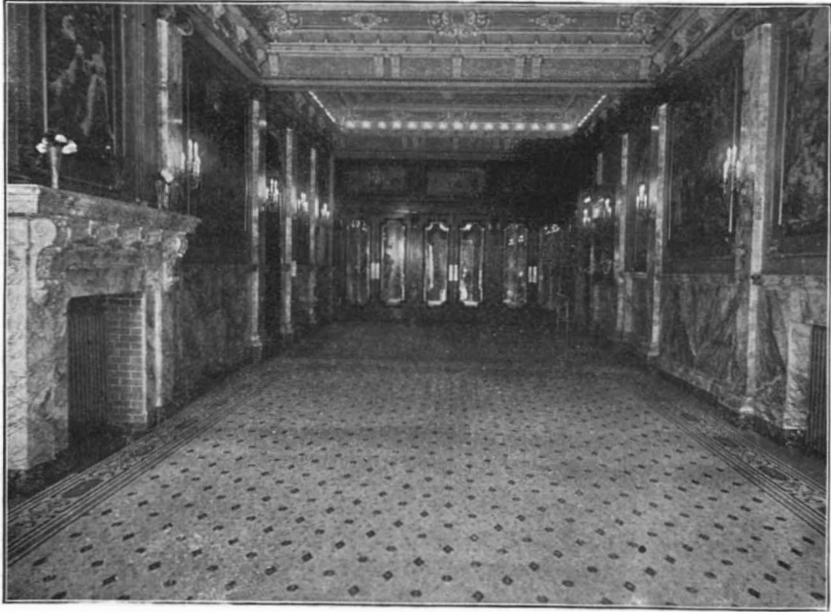
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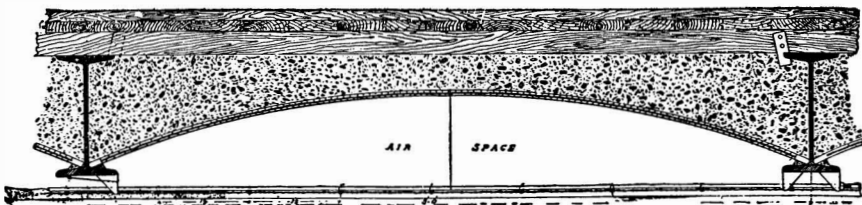
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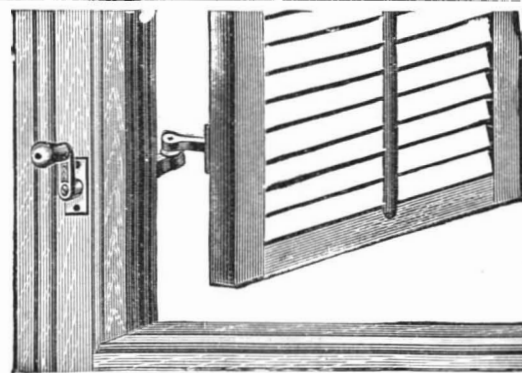


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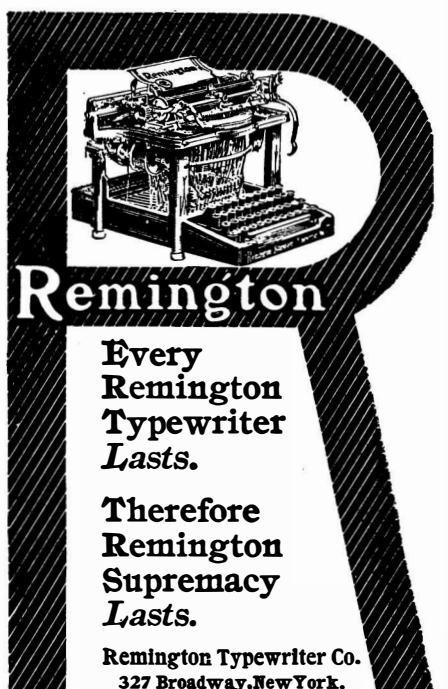
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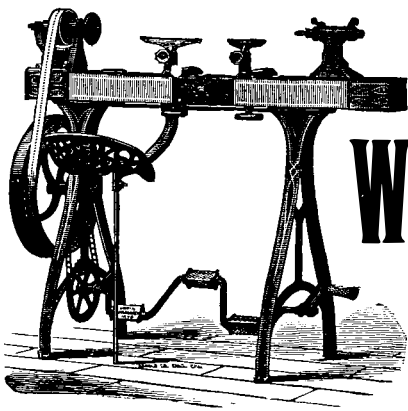
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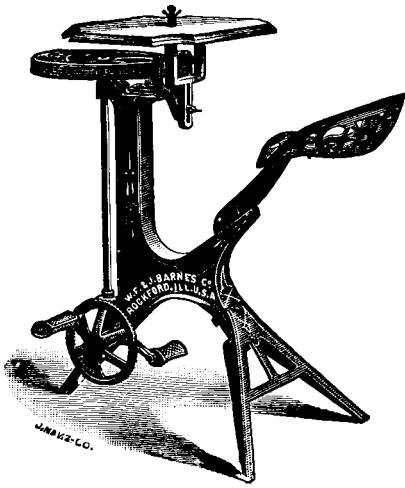
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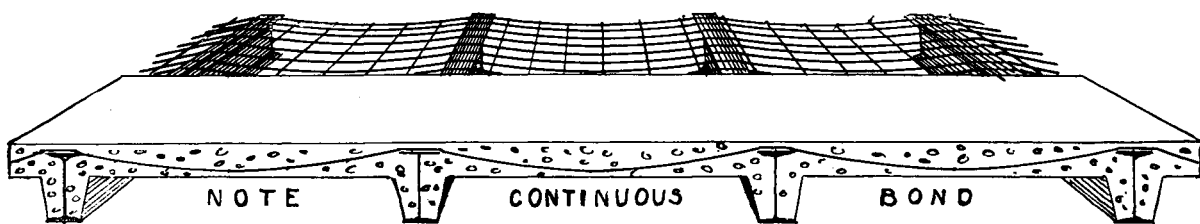


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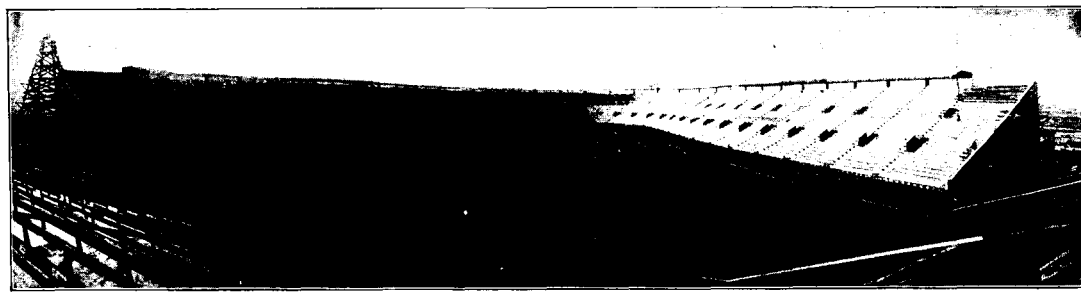


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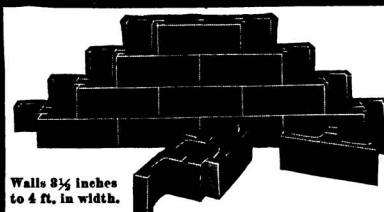
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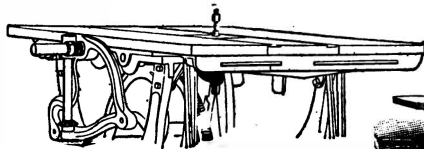
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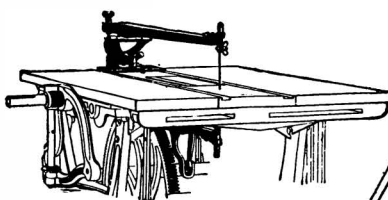
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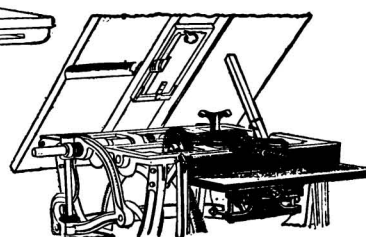
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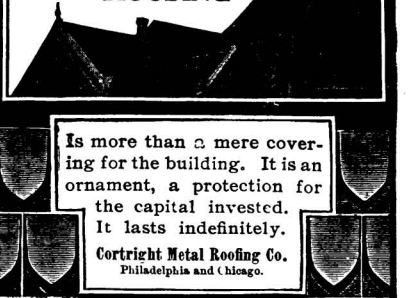
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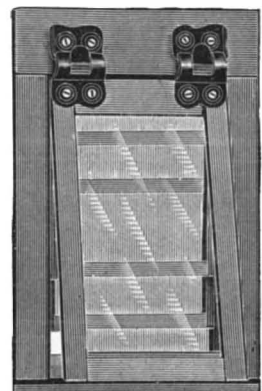
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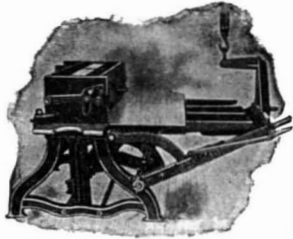
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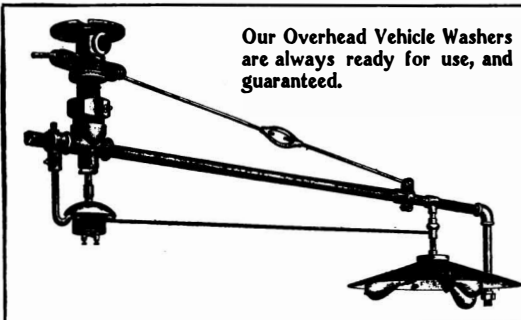
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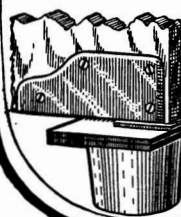
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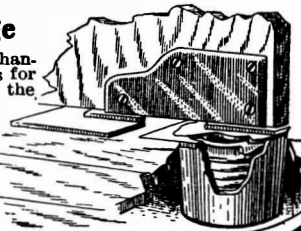


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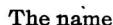
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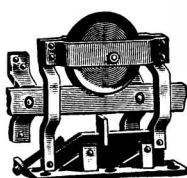
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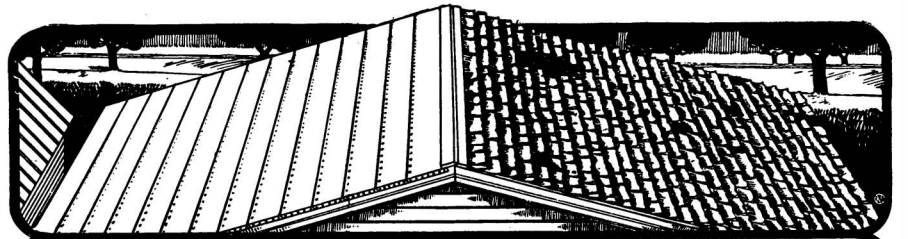
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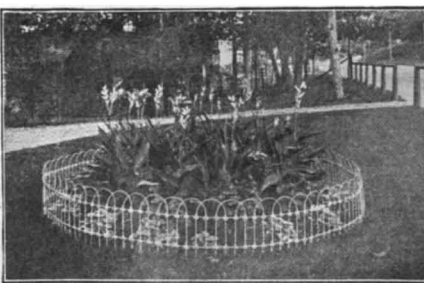
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