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From the Architectural League of 1915.

MEMORIAL FIGURE: KARL BITTER, SCULPTOR.

CRAFTSMA PUBLISHED MONTHLY BY THE CRAFTSMAN PUBLISHING CO. THIRTY-EIGHTH AND THIRTY-NINTH STREETS. NEW YORK CITY GUSTAV STICKLEY, Editor MARY FANTON ROBERTS, Managing Editor VOLUME XXVIII Contents for April, 1915 NUMBER 1 MEMORIAL FIGURE: Karl Bitter, Sculptor Frontispiece JOHN RUSKIN'S IDEAL OF HOME ARCHITECTURE DOES THE SUCCESS OF COUNTRY LIFE DEPEND UPON THE ARCHITECT? Back to the Land with Comfortable Homes 4 Illustrated THE SOUL OF THE GARDEN . . By Mary Fanton Roberts 19 Illustrated WILD SHRUBS IN SPRINGTIME: Their Value in Home Gardens Illustrated 26 By Eloise Roorbach THE TOY THEATER: A Children's Playhouse where Fairy Tales Come True Illustrated 36 By Peter Newton . . FOR A MAN MAY BUILD HIS HOUSE" By Will Levington Comfort 42 I KNOW THAT APRIL'S COME AGAIN: A POEM By Grace Hazard Conkling 47 . "THE CITY OF LAKES AND GARDENS:" Civic Progress in Minneapolis Illustrated By E. C. Hillweg 48 OUR FEATHERED CRAFTSMEN OF THE AIR By Florence Boyce Davis 58 Illustrated ARBORS AS ARCHITECTURAL FEATURES OF THE GARDEN: Their Practical and Poetic Purpose 64 . Illustrated "GARDENS IN STONES:" Their Place in the Landscape: How to Plant Them 71Illustrated ARCHITECTURAL BEAUTY IN THE CIVIC GATEWAY OF TODAY 78 Illustrated OLD FARMHOUSES OF THE CHESAPEAKE: Their Message Illustrated By William Draper Brinckloe 92 YOUR OWN HOME: NUMBER FIVE: Beauty Through Architectural Details 100 Illustrated AMONG THE CRAFTSMEN Illustrating the Craftsman Idea of Home Comfort in Bungalow and Cottage 108 "A Home of My Own:" How It Grew . By Eleanor P. Baldwin . 114 Illustrated Books About the Dwelling House Compiled by Esther Matson 122 Fire Resistance and Economy in Stucco Construction By H. B. McMaster 125 "The Order of the Bath:" Comfort and Hygiene in the Modern Bathroom . 126 Illustrated Respect for the Kitchen . 129Illustrated The Choice of a Heating System for Your Home: By Charles Hart Nichols, Consulting Mechanical Engineer 132 Comfort and Efficiency in Windows and Screens 136Illustrated "Four Winds' Ranch," A Danish House in Dakota . By Helen Moore 138 Garden-Making in The Craftsman Building 140 . . All manuscripts sent to THE CRAFTSMAN for consideration must be accompanied by return postage. A stamped addressed envelope is the most satisfactory plan. All changes of address should reach us on or before the twenty-fifth of the second month preceding the date of publication. For example, to change an address for June, word should be sent to us by April twenty-fifth. Subscribers should not fail to give their old address when requesting a change of address. Back numbers 35 cents each. Issues previous to 1912, 50 cents each. Canadian postage 50 cents extra. Foreign postage \$1.20 extra. 25 CENTS A COPY: \$3.00 A YEAR Chicago Office:

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"THIS OUR FATHERS DID FOR US:" RUS-KIN'S IDEAL OF HOME ARCHITECTURE



OR the Architectural Number of THE CRAFTSMAN, surely no introduction can be more fitting than the following words by one of the world's greatest philosophers and writers upon this important theme. For in them we find expressed our own point of view not only about architecture but about life:

"I would have," said Ruskin, "our ordinary dwelling houses built to last, and built to be lovely; as rich and full of pleasantness as may be, within and without. . . with such differences as might suit and express each man's character and occupation, and partly his history. . . When we build, let us think that we build for ever. Let it not be for present delight, nor for the present use alone; let it be such work as our descendants will thank us for. and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say as they look upon the labor and wrought substance of them, 'See! this our fathers did for us.' For, indeed, the greatest glory of a building is not in its stones, nor in its gold. Its glory is in its age, and in that deep sense of voicefulness, of stern watching, of mysterious sympathy, nay, even of approval or condemnation, which we feel in walls that have long been washed by the passing waves of humanity. . . And it is not until a building has assumed this character, till it has been entrusted with the fame, and hallowed by the deeds of men, till its walls have been witnesses of suffering, and its pillars rise out of the shades of death, that its existence can be gifted with language and life.

"For that period, then, we must build; not, indeed, refusing to ourselves the delight of present completion. . . but taking care that we sacrifice no enduring quality, and that the building shall not depend for its impressiveness upon anything that is perishable. . . And when houses are thus built, we may have that true domestic architecture, the beginning of all others, which does not disdain to treat with respect and thoughtfulness the smaller habitation as well as the large."

DOES THE SUCCESS OF COUNTRY LIFE DE-PEND UPON THE ARCHITECT? BACK TO THE LAND WITH COMFORTABLE HOMES



MERSON'S criticism of cities was that they "give not the human senses room enough." And turning to the free spaces and living beauties of nature, he says, "I am taught the poorness of our invention, the ugliness of towns and palaces. Art and luxury have early learned that they must work as enhancement and sequel to this original beauty. I am overinstructed

for my return. . . . I am grown expensive and sophisticated. I can no longer live without elegance, but a countryman shall be master of my revels. He who knows the most, he who knows what sweets and virtues are in the ground, the water, the plants, the heavens, and how to come at these enchantments.—is the rich and



A CHARMING COUNTRY HOME DESIGNED FOR A GENTLY SLOPING HILL SITE: THE HOUSE OF H. W. CHAPPELL, ESQ., NEW CANAAN, CONN.: MURPHY AND DANA, ARCHITECTS.

royal man. Only as far as the masters of the world have called in nature to their aid can they reach the height in magnificence. This is the meaning of their hanging gardens, villas, garden-houses, islands, parks and preserves."

John Burroughs has expressed much the same idea in one of his kindly, contemplative books. "I have thought," he says, "that a good test of civilization, perhaps one of the best, is country life. Where country life is safe and enjoyable, where many of the conveniences and appliances of the town are joined to the large freedom and large benefits of the country, a high state of civilization pre-

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LOOKING OUT TO THE GARDEN FROM THE HOUSE OF MRS. W. R. THOMPSON AT WATCH HILL, R. I.: AN EXQUISITE DE-TAIL OF THE ARCHITECTURE OF THIS BEAUTIFUL ESTATE REVEALING A GLIMPSE OF A GARDEN THAT CARRIES THE ROMANCE OF THE OLD WORLD: GROSVENOR ATTER-BURY AND J. R. TOMPKINS, ARCHITECTS.

vails. . . Truly, man made the city, and after he became sufficiently civilized, not afraid of solitude, and knew on what terms to live with nature, God promoted him to life in the country. . . The best and most hopeful feature in any people is undoubtedly the instinct that leads them to the country and to take root there,"

We in America are beginning to appreciate the truth of this. And having once tasted the comfort and culture of the cities, we too find that we can no longer "live without elegance." We may be philosophers and poets in our love of the country, in our desire for outdoor freedom and our





PROPOSED RESIDENCE FOR MR. F. L. UPJOHN, HUNTINGTON, L. I., SHOWING A MOST INTERESTING USE OF BRICK WITH DELIGHTFUL WINDOW ARRANGEMENT: OSWALD C. HERING AND DOUGLAS FITCH ARE THE ARCHITECTS WHO DESIGNED THIS ATTRACTIVE HOME.

appreciation of the land; but when it comes to the actual test, many of us are loth to face rural existence unless we can take with us most of the conveniences and some of the luxuries for which the city has become synonymous. The crude simplicity in the farm life of our forefathers no longer satisfies us. Our standards of material well-being have changed, our demands have increased. The suburban or country home, if it is to establish a fresh hold on our affections, must combine the charms of a natural environment with the efficiency and comfort of city life.

Moreover—and this is by no means an afterthought—such a home must also fulfil our æsthetic needs. The preceding generations, being more concerned with the practical than with the artistic side of existence, may have been able to tolerate the bare, unlovely farmhouses, the barn-like cottages and formal, unfriendly mansions that we find scattered here and there over our countryside. But today we insist upon something more. If we are to turn the tide of progress outward from the cities, if we are to seek release from our cramped streets and darkened windows and find health and happiness among the fields and woods and in gardens of our own making, then it must be with the assurance that our new home and those of our neighbors not only will be in a beautiful environment but will be beautiful in themselves from an architectural point of view.

To accomplish, as individuals and as a nation, this wonderful return to country living, we must look to the architect. In his skill and sympathetic vision, even more than in our own eager desires, lies the successful solution of this great modern problem. He must help us to shake ourselves free from the shackles of city environment and traditions, and emerge from the narrow chrysalis of our walledin lives into a freer and more wholesome existence. Only through his technical knowledge and wise coöperation can we hope to achieve the sort of homes that will make rural life really worth while.

An important rôle, therefore, will undoubtedly be played by the architect during the next few years, in furthering to success the country-life movement. His mission is indeed a vital one, for when country homes are made both convenient and æsthetically satisfying, when architectural loveliness is found not merely in the rare, isolated dwelling but in whole groups and colonies of homes, country living will be invested with a new charm. The old discomforts, the bareness and social isolation that for so long have marred our rural life, will give place to an atmosphere of comfort, interest and congeniality. The arts of gardening and farming will begin once more to take their rightful and dignified place among the people—for many of those who have tasted the independence and

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Hewitt & Bottomley, Architects.

THE PICTURESQUE ENTRANCE TO THE HOME OF MRS. JAMES M. TOWN-SEND, MILL NECK, L. I.—AN OLD-FASHIONED FARMHOUSE THAT HAS BEEN SYMPATHETICALLY AND BEAUTIFULLY REMODELED INTO A MOD-ERN HOME: THE SIMPLE WOODEN SEATS AND ARCHED DOORWAY EM-PHASIZE THE HOSPITABLE AIR OF THIS FRIENDLY BUILDING.





Hewitt & Bottomley, Architects.

FULL LENGTH VIEW OF MRS. TOWNSEND'S HOUSE ON LONG ISLAND, SHOWING HOW THE ORIGINAL SIMPLICITY OF THE DE-SIGN HAS BEEN RETAINED IN THE REMODELING.

SITTING ROOM AND STAIRCASE IN MRS. TOWNSEND'S HOUSE: THE INTERIOR HAS BEEN KEPT IN SENSITIVE HARMONY WITH THE BUILDING ITSELF, BOTH IN ARRANGEMENT AND FITTING.



Peabody, Wilson & Brown, Architects.

THE PEABODY HOME AT WESTBURY, LONG ISLAND, WHICH CARRIES THE EFFECT OF THE SIMPLEST COLONIAL STYLE: A HOUSE ESPECIALLY SUITED TO LOW-LYING LAND WITH ITS RUSTIC PERGOLA AND WIDE, HIGH PORCH.

NORTH VIEW OF MR. PEABODY'S HOUSE, SHOWING LOW, INTERESTING SHRUB PLANTING ALONG THE FOUNDATION LINE.



A LOVELY CORNER IN THE WESTBURY GARDEN, SHOWING DETAIL OF TERRACE AND CEMENT WALL: THE WALL IS ESPECIALLY WORTH NOTICING, AS THE FEELING FOR SECLUSION IS AT LAST BEGINNING TO COME TO THE AMERICAN HOME-MAKER AND THIS OFFERS INTERESTING SUGGESTION FOR THE BUILDER.

A LONG, PLEASANT LIVING ROOM IN MR. PEABODY'S HOME WHICH SEEMS TO REPEAT THE ARCHITEC-TURAL SIMPLICITY AND SPACIOUSNESS OF THE EXTERIOR EFFECT. wholesomeness of country life will gradually cut loose from city ties and develop their own resources through the cultivation of the land. At the same time, those who still prefer or need to rely upon the city as a means of livelihood, will find, in increased efficiency of transportation, a means of doing so without expending too much time, money and energy in traveling to and fro. And meantime the children will be reaping, in health and pleasure, the daily benefit of transplanting from a city to a country environment.

We, with our city-bound senses, find it difficult to grasp the full meaning of such a movement—its value to individual families and to the nation as a whole. We seem to have left it largely to the poets—those ever-listening children of Nature whom even the cities cannot stifle or spoil—to feel and express this longing for the outdoor world, this great human hunger for wide spaces and growing things.

"I have need of the sky,

I have business with the grass;

I will up and get me away where the hawk is wheeling Lone and high.

And the slow clouds go by.

I will get me away to the waters that glass

The clouds as they pass.

I will get me away to the woods."

Thus sang Richard Hovey; and again-

"Praise be to you, O hills, that you can breathe

Into our souls the secret of your power!"

We are apt to forget the value of a simple, natural environment, so accustomed have we grown to estimating our wealth in material factors, and counting our homes fortunate for their richness of furnishing or their accessibility to theaters and shops.

We need a poet like William Vaughn Moody to remind us of ".... the many-voiced earth.

The chanting of the old religious trees,

Rustle of far-off waters, woven sounds

Of small and multitudinous lives awake,

Peopling the grasses and the pools with joy,

Uttering their meaning to the mystic night!"

TURNING, however, from the poetic to the practical—though the gulf between them is not nearly so wide or deep as we are apt to think, especially in this instance—let us see how our American architects are stimulating this general growing interest in Nature and outdoor living, and helping the home-makers to find architectural as well as natural beauty in suburban and country places.

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At this season, we always turn with enthusiasm to the annual exhibition of the New York Architectural League. And this year one of its most significant phases is to be found in the photographs, sketches and plans of country and suburban domestic architecture, a number of which we have selected for reproduction here. The designers, having solved satisfactorily the various problems of the interior, have also succeeded, as the illustrations show, in combining with practical arrangement a very definite structural interest. In each case the exterior reveals an admirable feeling for harmony of proportions and grace of line in roof and walls. The placing of the main entrance and approach, the grouping of the windows and dormers, the location of the chimneys—in short, every feature of the exterior is apparently the result of thoughtful study and sympathetic handling of the materials and plans.

Not only are these homes attractive from the standpoint of architecture, but they show in most cases an intimate and harmonious treatment of the grounds with relation to the building. Architect and gardener seem to have worked in unison, with the result that the houses are brought into close relation with their natural surroundings and the transition between man's creative work and Nature's original beauty is made as gentle and logical as possible.

To what extent the owners of these lovely homes contributed their own suggestions and ideas in the working out of the designs of house and garden, we do not know; but the chances are that they coöperated fairly closely with their architects, for American homebuilders are taking more and more a personal interest in this important undertaking—a fact which partially accounts for the growing individuality of our architecture, both in small cottages and bungalows and in the larger and more elaborate residences.

The Chappell residence, on the first page, is a good instance of symmetrical design combined with a decorative handling of details. In this roomy, homelike building, the chief attractions of the exterior lie in the corner porches and balconies, the smaller balcony that hoods the front entrance, the small-paned windows and long, simple roof lines. Worth noting, too, are the tall slim shrubs that counterbalance the horizontal lines and echo those of the well-placed chimneys.

An attractive way to handle field-stone columns and arches in a porch is shown in detail on page five. There is a cloisterlike simplicity about the design that breathes an Old World spirit; and yet it is perfectly in keeping with a modern American home in which the materials are used with beauty of texture, form and line.

Elizabethan inspiration is felt in the next picture—the Van



Peabody, Wilson & Brown, Architects.

HOUSE FOR MR. G. W. BACON WHICH SHOWS A CHARMING METHOD OF ENRICHING A VERY SIMPLE EXTERIOR BY INTRODUCING A CIRCULAR COLONIAL PORCH PLACED ON A CIRCULAR BRICK FOUNDATION: THE BALCONY IS FINISHED WITH A LATTICE FENCE, OVER WHICH VINES COULD BE DRAPED.

THE KITCHEN WING OF MR. BACON'S RESIDENCE: A LOVELY STONE BUILDING WITH A PICTURESQUE OLD DUTCH DOOR GIVING THE EFFECT OF HAVING BEEN THE ORIGINAL FARMHOUSE ON THE ESTATE.



Charles I. Berg, Architect.

TWO VIEWS OF THE HOME OF MRS. H. H. SEVIER, OYSTER BAY, L. I.: THESE PHOTOGRAPHS WERE TAKEN FROM A VERY INTERESTING MODEL MADE OF THE HOUSE AND GROUNDS, AND REVEAL AN UNUSUAL PLAN FOR A HOUSE WITH THE UTMOST SIMPLICITY OF CONSTRUCTION SUITED TO LOW COUNTRY: DELIGHTFUL DETAIL FEATURES ARE INTRODUCED SUCH AS THE HALF-COURT IDEA ENDING IN A CLOISTER, THE BEAUTIFUL ARCHED PORTE COCHÈRE, THE GROUPING OF WINDOWS, THE STAIRWAY LEADING UP TO THE HILL SIDE TO THE HOUSE, RECESSED PORCHES AND THE TURRET WITH ITS GROUPS OF WINDOWS, GIVING A VIEW OF THE BAY.



GARDENER'S COTTAGE ON THE ESTATE OF LATHROP BROWN, ESQ., ST. JAMES, L. I., SHOWS A CHARMING DESIGN FOR A SIMPLE COUNTRY DWELLING WHERE SECLU-SION IS FURNISHED IN A LIVING GARDEN BY THE USE OF LATTICE, OUTSIDE OF WHICH IS HIGH PLANTING.

AN INTERESTING DESIGN FOR THE SIMPLE LIBRARY AT COLD SPRING HARBOR, L. I.



Peabody, Wilson & Brown, Architects.

EUGENIC RECORD OFFICE FOR CARNEGIE INSTITUTE, COLD SPRING HARBOR, L. I., SHOWING A WELL THOUGHT OUT AND DECORATIVE USE OF BRICK AS AN ORNAMENTAL FEATURE FOR A CONCRETE STRUCTURE.

A DETAIL OF THE RECORD OFFICE IN WHICH THE BRICK DECORATION IS ACCENTUATED IN THE PILLARS.

Rensselaer house. The entrance arch, the windows, gables and occasional use of half-timber are all reminiscent of the English manor type of that period; but the design does not seem forced or overpretentious for its environment, or unsuited to modern ways of living. In fact, it is a particularly satisfactory adaptation of this style to American needs.

The classic influence of the Colonial is found next, in the inviting, old-fashioned entrance to the Townsend home—a farmhouse on Long Island which has been skilfully and sympathetically remodeled by Hewitt and Bottomley. Nothing could be simpler than the rough stone steps, the shingled walls and roof and shuttered windows, while the entrance itself and wooden seats are both dignified and restrained in their design. Yet the impression of the whole, framed between the tree-trunks and softened by vines, is that of genuine hospitality and quiet, homelike beauty. This same restful air pervades the whole exterior as well as the rooms within, as may be guessed by a glance at the two other views shown on page eight.

A more modern adaptation of the Colonial style is seen in the house at Westbury, designed by Peabody, Wilson and Brown. The curve of the entrance arch is seen again in the eyebrow windows in the roof, and in the window at the right, while another decorative touch is found in the woodwork of railings and lattice. A detail of the garden porch is shown at the top of page ten, which discloses a charming handling of light woodwork, trellis and brick floor, linked to the garden by rustic pergolas. An idea of the spacious and substantial comfort of the interior is given in another photograph. The beamed ceiling, built-in bookshelves, china cabinet and window-seat are all in excellent keeping with this type of home.

The Bacon home, of which a glimpse of the semi-circular entrance porch is seen, is designed by the same architects. The use of brick and stone in the steps, the decorative treatment of columns and balcony, and the use of shrubs and flowers against the house make a very attractive approach. Equally interesting, in its way, is the stone kitchen, which has the solid simplicity that characterizes Dutch Colonial architecture.

Quite a different type is presented in the house designed by Charles I. Berg for Mrs. H. H. Sevier at Oyster Bay, the model of which was exhibited at the League. The two views of this, on page fourteen, reveal a most attractive handling of concrete and tile, and the cloistered central court, which recalls the old Florentine courtyards, proves a delightful way of bringing house and garden into close relation. This semi-sheltered spot is in fact becoming a definite characteristic of a certain class of American architecture,

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VIEW OF THE HOUSE OF MRS. W. R. THOMPSON THROUGH ONE OF THE GREAT STONE ARCHES, SHOWING PICTURESQUE CONSTRUCTION AND BEAUTIFUL PLANT-ING: GROSVENOR ATTERBURY AND J. R. TOMPKINS, ARCHITECTS.

being found especially in California bungalow homes. But, as our builders are discovering, there is no reason why its pleasures should be limited to the southern and southwestern climate, for in the East, even toward the North, there are sufficient warm months to make it worth while to include in one's home a partially enclosed court of this kind. It is even possible to plan the house so that the court may be protected by glass roof and windows during the winter.

The gardener's cottage on the Brown estate, St. James, Long Island, is a pleasant modern adaptation of the old Colonial, hippedroof farmhouse style. [Although walls and roof are

shingled, the variation in coloring, the contrasting tone of the shutters, the sheltered doorway and the latticework give sufficient variety,



SHOWING THE VERY PICTURESQUE EFFECT TO BE GAINED BY DESIGNING HOUSES IN A BLOCK: HERE WE ARE SHOWING TWO DETACHED AND FOUR BLOCK HOUSES AT THE FOREST HILLS GARDENS: DESIGNED BY GROSVENOR ATTERBURY.

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while the trim grass and low barberry border, the carefully placed evergreens and little garden at the left help to knit the cottage to its surroundings.

While the next three photographs of the Library and Eugenic Record Office at Cold Spring Harbor, can hardly be classed as domestic architecture, nevertheless their general design and the decorative handling of structural detail may prove valuable in suggestions to the home-maker who is interested in brick and concrete construction. The detail of the arched porch shows an exceptionally rich combination of these materials.

An unusually charming example of group architecture is seen in the illustration, on page eighteen, consisting of two detached and four block houses, designed by Grosvenor Atterbury for the Sage Founda-



HOUSE FOR C. P. KITCHEL, ESQ., ENGLEWOOD, N. J., IN WHICH THE PICTURESQUE EFFECT IS GAINED LARGELY BY UNUSUALLY BEAUTIFUL GROUPING OF WINDOWS AND PERFECTLY PROPORTIONED ROOF LINES: MURPHY AND DANA, ARCHITECTS.

tion Homes Company at Forest Hills Gardens. The eye finds equal pleasure in the symmetry of the group as a whole and in the delightful irregularity of contour and varied detail in the individual buildings.

Another detail of picturesque stone construction by Mr. Atterbury, and a sketch of a house for C. P. Kitchel by Murphy and Dana, in which the small-paned windows, pointed gables and handling of stucco and timber suggest the English influence again—these complete our illustrations. Needless to say, they are not the only beautiful examples of modern country and suburban architecture displayed in the League galleries; but they suffice to indicate the general current trend in this significant phase of American progress.

THE SOUL OF THE GARDEN: BY MARY FANTON ROBERTS

A Garden is a lovesome thing, Got wot! Rose plot, fringed pool, ferned grot, The veriest school of Peace; and yet the fool contends that God is not— Not God! in Gardens! when the eve is cool? Nay, but I have a sign: 'Tis very sure God walks in mine.

THOMAS EDWARD BROWN.



HINK of the loveliest gardens you have ever known, and at once you hear water dripping in fountain basins or trickling over shallow beds of glistening pebbles, or you see still pools fringed with marsh grasses or resting clear and green in concrete basins edged with lovely flower de luce and lilies of all kinds; you will remember the hidden fountain in the Luxem-

bourg Gardens and the lost green pool at Swetzingen, you will think of the jade stream in the queen's garden of Holland, you will recall the mysterious, silent, deep water in the Florida glades; you may even think, as I always do with affection, of little storm pools in the garden of your childhood where the birds fluttered in the early morning after the rain and the autumn winds carried scarlet sailboats from the treetops.

To many of us real rest and peace in a garden must always be synonymous with water, with fountain or pool or little stream; and the lovely old phrase "He leadeth me beside the still waters," will ever mean the leading of a friend to peace and comfort.

Because of geographic and financial limitations some of us must have our gardens "where constant feet may not trace the woods and lawns by living streams," where even the murmuring wave of fountain spray is denied us, and yet we may still be possessed of the soul that needs the glimmer and life of moving waters for perfect joy. Recent garden making in America has taught us how possible it is in every kind of a garden, however limited in space, to have the happiness of seeing "the green mantle of a standing pool." We have only to put a few days' labor in digging, find a builder to lay and make neat the surface of a concrete basin and then a plumber who will tell the size of the pipe, and how it may be laid and connected with the general water supply. Indeed all of this work can be done by the men and the boys of the house in consultation with the autocratic builder and plumber, and the women of the household can furnish the green mantle around the standing pool by studying the history of water gardens that will flourish in their particular climate and soil.

It is a wonderful thing to plan the building of such a pool. First of all there is the question of placing it in the most romantic spot, and here the imagination of the family is brought into play. Of



Photographs by Jessie Tarbox Beals.

A CIRCULAR POOL AND FOUNTAIN IN A HEDGED GARDEN ON THE ESTATE OF MRS. JAMES W. RHODES, ARDMORE, PA.

AN INTERESTINGLY CONSTRUCTED DOUBLE POOL, ALSO IN THE GARDEN OF MRS. RHODES, SHOWING EXCELLENT PLANT-ING OF FLOWERS BOTH IN THE POOLS AND BORDERING THEM.



A SMALL AND IN-TIMATE POOL IN THE COZY CORNER OF MRS. RHODES' GARDEN AT ARD-MORE, PA.: THIS LITTLE SKETCHY WATER BED IS ALMOST HID-DEN UNDER THE LOVELY PLANTING OF FERNS AND FLOW-ER DE LUCE : IN THE CENTER IS A NAÏVE FOUNTAIN THROW-ING UP A SILVERY SPRAY AND NEARBY ARE COMFORTABLE CHAIRS AND A WORK TABLE : A SPOT FOR WARM SUMMER AFTERNOONS FOR THE HAPPINESS OF A WRITER OR A POET.

ABOVE IS A CONCRETE POOL WITH PLANTING ABOUT IT SO MAN-AGED THAT IT IS BROUGHT INTO MOST INTIMATE RELATION WITH THE DWELLING : LOVELY GLIMPSES ARE TO BE CAUGHT OF ITS FRESHNESS AND BEAUTY FROM THE WINDOWS AND PORCHES : FROM A PHOTOGRAPH OF HORACE SELLERS' GARDEN, AT ARD-MORE, PA.





A BEAUTIFUL DESIGN FOR A LONG POOL EDGING A LAWN AND BORDERING A FLOWER GARDEN ON THE ESTATE OF DR. PERCY TURNURE, AT KATONAH, N. Y.: THE STEPS AT ONE END OF THIS POOL AND THE FIGURE AT THE OTHER END GIVE AN INTERESTING VARIETY IN CONSTRUCTION, AND THE PLANTING OF ALL KINDS OF WATER FLOWERS ALONG THE CONCRETE BORDER IS A LESSON FOR THE MAKER OF GARDEN POOLS.



A CHARMING SCHEME FOR AN APPROACH TO A CONCRETE POOL: THIS WIDE, GRASS-GROWN PATHWAY IS MADE OF MOHAWK SLATE CUT IN IRREGULAR SIZES AND SO FRINGED WITH GRASS AS TO SUGGEST A WALK IN A CENTURY-OLD GARDEN: THE BEAUTY OF THIS APPROACH IS FURTHER ENHANCED BY THE RICH PLANTING OF LILIES AND LOW-GROWING SHRUBS ON EITHER SIDE. course at times a pool must be placed in the center of a lawn, as a practical water supply for hose and reservoir, or at the end of a garden path a concrete basin may project out a few feet, hinting at pleasure and peace at the journey's end. But the real lover of the fringed pool will not be content with any such obvious arrangement as this, will even insist that the practical side of it is not to be considered, and that the pool must be hidden away under a group of shade trees, in the end of a rose garden, or at the edge of the woods with shade all about it and lovely flowers to border it and a concrete bench nearby where the dreamer may rest and find spiritual peace.

For a very little pool in a small home garden the loveliest "green mantle" to be found is the wood ferns with the wood wild flowers that grow in marshy places, flower de luce always, and fringed gentian if the pool is in a shady spot. The cardinal flower is a lovely sight with its flaming petals bursting above a bed of ferns, then close to the ground the forget-me-not loves the cool, damp soil and sends out delicate tendrils over the concrete border of the pool. Turtlehead and mimulus can also be planted with the ferns, and back of these, if the pool rests near the edge of the woods, such shrubs as the azalea will blossom with lovely spring fragrance, and the dogwood, viscosa, laurel, magnolia, all will furnish a sympathetic background and flourish with deep appreciation of the moisture that should belong to such a spot. Of course the soil planted about a concrete pool must either be brought from the woods, or it must be a rich compost of loam and leaf mold. And when the dry summer days come, the watering of the little pool garden must never be forgotten at twilight.

F a large space is under consideration and the restful pool cuts a rose garden in two or circles a bed of heliotrope or is the great square at the end of a pathway then the actual planting of the flowers in the pool itself must be considered. Soil can be put directly on the floor of a concrete basin to the depth of about one foot, or shallow boxes and tubs filled with earth, holding plants of different species, can be set in. If the season is long enough, lotus should be planted in the pool, and the different water-lilies, water hyacinths and poppies, water snow phlox, crowfoot, spearwort, plantain, all will grow and bear lovely bloom on the surface of the pool if even a little attention is given to their planting and care. Water-lilies are of course the easiest variety of water-flower to grow. But once the enthusiastic lily grower starts, the French and the American hybrids are sure to find their way into this pool and after them the royal blue lily of Zanzibar and the equally notable variety from Australia.

(Continued on page 124)



A CAPTION IS HARDLY NECES-SARY FOR THIS LOVELY FLOWER-ING BRANCH. FOR EVERY AMERICAN KNOWS BY HEART THE DOG-WOOD OF EARLY SPRINGTIME. THE Cornus Florida: ALL THE PHOTO-GRAPHS OF FLOWERING SPRING SHRUBS PRE-SENTED IN THE TEXT OF THIS ARTICLE ARE BY THE NEW ENG-LAND FLOWER LOVER AND ART-IST, EDWIN HALE LINCOLN.

WILD SHRUBS IN SPRINGTIME: THEIR VALUE IN HOME GARDENS: BY ELOISE ROORBACH



HE first bluebird flying on swift azure wings from the south, alighting for a moment on lawn and tree to sing the glad tidings of the coming of the spring, is no more welcome a sight than the first flowers that, bursting through winter's sheathes, poise with bright, fluttering flower-wings among the branches of our garden shrubs. How miraculously they rush into

place upon the tip of every branch, encouraging the still sleep-heavy leaves to awake from their winter's nap and sally forth into the joyous newborn world. How cheerily they relieve our impatience and repay us for the dreary days of the winter's waiting. They are the most generous of our garden denizens, the first to receive consideration of the garden architect.

Shrubs are unquestionably the most important factors for garden construction. We can better do without the myriad colonies of delicate and brilliant flowers that draw our eyes downward like the violet, and those that lift our gaze upward like the flowering trees and luxuriant vines, than be without the shrubs, those friendly plants

WILD SHRUBS IN SPRINGTIME

that meet us on our own plane, shoulder to shoulder, neither above nor below our easy range of vision, but on the level of our eyes. They are the landscape architect's chief material for informal and formal displays; they form the background for the herbaceous flowers, soften the severity of tree groups, break up the sharp angles of houses and make them look at home in gardens; they grow rapidly, some blooming so abundantly there is often hardly a chance for leaves, and living year after year after once established. They are easily propagated and the variety so diversified and innumerable that no soil exists but could be made to grow some lovely flowering shrub. Once the soil and climatic condition is determined, shrubs best fitted to it can be selected. For bleak, windy, sunny side of house, for sandy, clay, light or heavy soil, for the north or for the south, beautiful shrubs are to be had, *r*easonable of price, easy of culture; for all the shrubs native to our country are now to be had from florists without

the necessity of takin'g a long or perhaps expensive trip to their native haunts for a doubtful transferring to our own gardens. Of course it is much pleasanter to select our stock from the wild woods than from the city florist, but it is not always convenient to do so.

Shrubs native to the locality should be given preference over all others when planning a garden, because the chances of failure will be lessened. Their natur'al manner of growth should be studied. Some cannot endure without strong 'sun, others need subdued light



THE AMERICAN ELDER WHICH FLOWERS SO WIDELY OVER ALL THE NEW ENGLAND HILLS IN EARLY SPRING: Sambucus Canadensis.

WILD SHRUBS IN SPRINGTIME

of groves, but all must be permitted to provide their own winter protection in their own way, that is, to hide the ground above their roots with a thick covering of their own leaves. Gardeners with a trim, tidy turn of mind are apt to rake away fallen leaves, instead of permitting them to lie where they give needed protection of warmth. Even in summer they should be left undisturbed because they conserve the moisture and fertilize the ground.

IN massed planting of shrubs, color of blossoms and leaf must be carefully chosen. They must not be planted so closely that their natural form of growth is restricted and individuality destroyed. Pruning must be done with light, experienced hand. Those that form buds in the fall should be trimmed just after flowering time is over, that is, unless a liberal picking has rendered pruning unnecessary. Those that bloom on new wood should only be pruned in winter.

Like Cinderella among the ashes is the shadbush. Wrapped in ashy gray robes, tipped with scarlet as though the live coals of summer still smoldered, it lives the winter through unnoticed, until April like a fairy godmother, touches it with the wand of the south wind and transforms it into the loveliest guest of the woodland spring frolic. In the twinkling of an eye it doffs its gray garments, tips every twig with fluttering, white flower-wings, joins in the merry-making for a brief hour and at the stroke of May becomes swiftly invisible save for the purplish berries—tokens like Cinderella's slipper—of its brief presence. Harbinger of spring indeed it is, more reliable than almanac or official weather report.

The reason for its strange name is that it blooms just about the time the shad runs up the rivers. Amelanchiers, or shadbush, as it is more commonly known, should be grown in our gardens for many reasons. The colors of the unfolding sheaves are lovely as an orchid—silver gray, flashed with flame. The bracks and pod scales of some species are bright scarlet. It is one of the earliest of all shrubs to flower, so early in fact, the white blossoms which cover the bush as suddenly as a flurry of snow, sometimes get caught in a genuine snowstorm. The foliage becomes yellow in the fall, which with the purple berries, makes a conspicuous and beautiful shrub. But the best reason of all for growing the shadbush is that the berries are favorites with the birds. Where the shadbush fruits, birds will always be found.

By the time the amelanchiers have shown their faith in the coming summer by donning the white robes of spring, the cornels are ready to dapple the fresh, green, woodland firmament with silver flowerstars. No finer flower display is made the season through than the



Photograph by Edwin Hale Lincoln.

A BRANCH OF AMELANCHIERS OR SHADBUSH, WHICH BEARS THIS EXTRAORDINARY NAME BECAUSE IT BLOSSOMS IN NEW ENGLAND JUST THE SEASON WHEN THE SHAD BEGIN TO RUN UP THE INLAND RIVERS: THE COLORS OF THE UNFOLDING LEAVES ARE AS LOVELY AS AN ORCHID, SILVER GRAY FLASHED WITH SCARLET. PART OF THE BEAUTY OF OUR SPRINGTIME IS THE VIBURNUM, COMMONLY KNOWN AS THE HOBBLEBUSH OR WAYFARING TREE, THE HIGHBUSH CRANBERRY AND THE GUELDER ROSE : IN THE CULTIVATED FORM IT IS SEEN IN OUR NEW ENGLAND GARDENS AS THE SNOW-BALL: ALMOST EVERY VARIETY WILL FLOURISH ALONG OUR EASTERN COAST.







FOR PLANTING THIS SHRUB AS A BACKGROUND IN YOUR GARDEN, FOR IT NOT ONLY FLINGS OUT LOVELY WHITE CLUSTERS OF BLOS-SOMS IN APRIL, BUT IN THE FALL IT FLAMES LIKE A BURNING BUSH : VARIETIES CAN BE SELECTED WHICH WILL STAND THE RIGORS OF THE NORTH, THE SALTY AIR OF THE SEACOAST, THE HEAT OF THE SOUTH : IT WILL FLOURISH ON SANDY HILLSIDES AND IN THE MOST EXPOSED EDGE OF THE GARDEN, SO THAT IT REALLY APPEALS TO MORE GARDENERS THAN ALMOST ANY OTHER INDIGEN-OUS SHRUB.

THERE IS A DOUBLE REASON

Photographs by Edwin Hale Lincoln.



A SPRAY OF THE GRACEFUL BLOSSOMS OF THE RED-OSIER DOG-WOOD IS SHOWN AT THE LEFT, WHILE BELOW IS SEEN THE FRUIT OF THE SAME SHRUB.

OTHER LOVELY SPRING SHRUB, HAS THE CHARMING HABIT OF COLORING BRANCHES AND STEMS ALIKE A BRIGHT, PUR-PLISH RED, AND THIS HAP-PENS THROUGH THE GRAY SEASON WHEN GARDENS SO MUCH NEED COLOR: FOR-TUNATELY FOR THE GARDEN THE STEMS STAY A LOVELY COLOR THROUGH THE COLD MONTHS, ADDING IMMENSELY TO THE DECORATIVE EFFECT OF A WINTER SCENE: IN ADDITION TO THE SPRING BEAUTY OF THE OSIER DOG-WOOD AND THE BRILLIANT BERRIES OF THE FALL, THIS BUSH FURNISHES FOOD FOR THE BIRDS AT A SEASON WHEN THE WOLF APPEARS AT THE NEST.



Photographs by Edwin Hale Lincoln.



Photograph by Edwin Hale Lincoln.

THIS APRIL FLOWERING NATIVE SHRUB, THE WILD BLACK CURRANT, CAN BE USED MUCH AS WE DO THE BARBERRY, THAT IS AS A HEDGE BESIDE LONG PATHS OR AS A BASE FOR PLANTING NEAR THE HOUSE: IT IS SEEN IN LARGE ESTATES AS A COVERING FOR STONE WALLS, IS VERY HARDY, A RAPID GROWER AND THRIVES IN ANY SOIL. glorious spring constellations of the cornels. They fill the woods with a sense of heavenly light, as though the world was a holy place, its brightness radiating from the wings of these celestial flower messengers. Like a true benefactor they bestow beauty generously. Given half a chance they will grow in a garden by a wall as well as in wild places by rushing streams. They are beautiful in each stage of development, and no imported shrub should be allowed to drive them from our affections.

The blossoms of the cornels, better known as dogwood, rush into place on the bare stems long before the leaves have even thought of bursting their sheaves-one of the reasons for their light, unearthly fairy charms. By the time the leaves have shaken out their green folds the blossoms have begun to fade somewhat, though they cling to the stem with great tenacity for a long time. The flower is generally four-petaled, the different species varying greatly in size, and borne in loose graceful symes. Cornus Florida has an especial call on our appreciation, for it grows into a regular tree in size, and our blossoming trees are none too numerous. This is extremely hardy and rarely beautiful. The red-osier dogwood has the charming trick of coloring branches and stems a bright purplish red through the gray season when gardens so much need enlivening color, losing it somewhat when the blossoms appear. Its fine-latticed red stems are an invaluable addition to the decorative aspect of a winter garden. The dogwood should be used in park plantings for it makes a splendid showing at all seasons of the year. For rich color of stems, wealth of blossoms, glory of fall leaves, and bounty of food for winter birds it cannot be too highly recommended.

LOSELY allied with these is the viburnum, commonly known as the hobble-bush or wayfaring tree, highbush cranberry or Guelder rose. Being of an irregular and unusual grace it works in to advantage with shrubs of severe or pronounced outlines. It is an adjuster and harmonizer that gardeners appreciate to the The flowers grow in flat symes and are hydrangea-like in full. appearance. It is of hardy growth, its great leaves beautifully and deeply veined. In its cultivated form it has long been known to our gardens as the snowball. Many are its forms and names and characteristics. In spring it imitates the snowdrift, in fall it flames like a burning bush. Varieties can be selected which will stand the rigors of the north, the salty air of the sea-coast, the heat of the south. Viburnum cassinoides is for the south, viburnum acerifolium for sandy hillsides, viburnum alnifolium for the north. Almost every variety will flourish in the vicinity of New York.

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WILD SHRUBS IN SPRINGTIME



Another April flowering shrub native to our country that should be used in our gardens, especially in the planting of large estates, is the American elder (Sambucus racemosa), which grows to a height of from two to twelve feet. It does well in rocky places, dry woods, warm fields, sunny roadways. It blooms much earlier than its showier relative, the Sambucus canadensis, or sweet elder familiar to our northern and New England roadways. It is so universal a friend that we are apt to overlook its great beauty, but what a loss its

THE DWARF DOGWOOD AND CRESTED SHIELD FERN FORM A LOVELY CONTRAST IN A GARDEN PATCH ON AN APRIL DAY.

spreading clusters of white stars and drooping bunches of purple or red berries would be from our roadways and pastures! Every child of New England knows and loves the elder. Our grandmothers knew its worth, as all old-fashioned gardens testify. They loved its wild beauty of form, delicate clusters of flowers, and the brewing of elderberry wine, almost a lost art now, was an accomplishment of value in their days. Between our appreciation of this juicy fruit for puddings and pies and the birds' need and joy of it for food, we have reason enough for having elders in our gardens. They are suitable for a planting by the kitchen door, in the corner of a fence and among a mixed border for a drive. The sweet elder does not blossom until June or July, so both varieties must be used to give extended blossoming effect. The florists list eight or more varieties all white of blossom, but differing markedly in color of berries and shade of leaf, which range from bright yellow to a rich deep green.
WILD SHRUBS IN SPRINGTIME

A NOTHER April flowering native shrub that should be cultivated is the wild currant. It can be used much as the barberry is, that is in long paths, as a hedge or at the base of a house. *Ribes prostratum*, a variety with trailing or prostrate, thornless stems, heart-shaped leaves, green, bell-shaped flowers, could be used in large estates as covering for a stone wall or a backing for informal rock gardens, but it does not do well under strict cultivation. Our garden currant, *ribes rubrum*, is said to be of European origin. The mountain currant, *ribes Alpine*, is one of the best of the flowering currants. It forms a vast, upright-growing bush, its flowers are yellow and it will grow in a dry soil where other shrubs do but moderately. A variety of this, the *ribes aureum*, also having a yellow flower is good for a shrubbery border, for it is very hardy, of rapid growth and thrives in almost any soil.

All the wild currants provide excellent food for the birds. The flowers are pink, yellow or greenish white and the fruit red, yellow, white and black. So here is rich variety from which to make suitable choice. The wild currant of the west is tall and willowy, for it forms part of a luxuriant undergrowth and the long slender flower racemes hang like pink shells thickly, from every tiniest branch. Out west one discovers this wild, beautiful thing by its perfume. Its fragrance is noticed first and can be traced as easily as following a visible trail to its abiding place many rods away.

The silver-berried eleagnus flowers in April if the season be an early one. Though the blossom is inconspicuous, it is much valued for its silver bark and shining ovoid berries.

The yellow-belled forsythia, though often counted among our native shrubs, is not strictly a native, but an escape; but it seems to belong to our wild flowering shrubs, so bright, sunshiny and gracious it is. Myriads of yellow bells hung from graceful arching branches ring out the tidings of the coming of April long before the leaves appear. Its most effective planting is against the dark background of evergreens or of houses. The rhodora or *azalea canadensis* is the only native azalea that blossoms in April.



THE TOY THEATER: A CHILDREN'S PLAY-HOUSE WHERE FAIRY TALES COME TRUE: BY PETER NEWTON

"We know just where the fairies live and we can show you true; If you'll be patient we will give the fairy lore to you. We know just what the fairies do, we've all their charms and arts, For fairy joys and frolics too are hid in children's hearts."



HE theater is one of the most potent factors of our complex civilization. And yet, strange to say, until recently we have quite overlooked its most important use, its greatest opportunity for pleasure and benefitnamely, in the amusement and education of children. If we instil in the boys and girls of today a love of the

beautiful and an active appreciation of that which is wholesome and pure, we may be sure that the theater of the future will reflect those ideals. Here and there we have dramatized a fairy tale like "Cinderella" or "The Sleeping Beauty;" or we have transformed into juvenile drama or picturesque tableaux some familiar Bible story or famous historical event, but these productions have been few and far between. A real theater, devoted solely to the children's interests, is still to come.

And it is coming—soon! For a Toy Theater is shortly to appear in New York.

The playhouse is to be built in West Forty-Seventh Street, just off Fifth Avenue, and it will have a seating capacity of five hundred. As the home of dramatic entertainment for children, the Toy Theater has been designed with their ideals and aspirations and



their point of view in mind. The very name suggests the mysterious and the make-believe, which all little people love. And the architects, F. Burrall Hoffman, Jr., and Harry Creighton Ingalls, have been particularly happy in their handling of the design. They seem to have

The Tea Room spirit of a children's theater where

THE FRONT ELEVATION OF THE TOY THEATER THAT IS SOON TO BE BUILT IN NEW YORK.

magical stories will come to life.

The street front, suggesting some Old World building in a Mediæval town, hints at the wonders to be found within. What child—or what grownup, for that matter could resist the inclination to enter the low portal and explore the realms of fairyland that must surely lie beyond!

The auditorium is worked out in simple Gothic columns and beams, with twelve panels depicting, in processional form, the History of Magic and fairy lore in general. On one side of the entrance there will be "The Fairy Queen," and on the other "The Pied Piper of Hamelin," while the curtain will show a street fair in an ancient town, with a conjuror in his booth entertaining a crowd of gaping vokels.

On the second floor

will be found a tea room for the serving of refreshments, and withdrawing rooms for patrons. These rooms, together with the playground on the roof, have been designed by Helen Speer, who has treated them in a manner wholly delightful and with a colorful con-

THE TOY THEATER



A GROUP OF BUILDINGS ON THE CHILDREN'S STREET IN NEW YORK: DESIGNED BY PETER NEWTON.

ception of design which gives them a typically childlike air.

The third floor will be used as the administrative offices, and up in the peak of the roof will bethe study of the Managing Director—a highv a u l t e d, tapestried chamber, in



Grotesque Gothic of the thirteenth century. Here on a cold winter's night, as the clock strikes twelve, one can well imagine many an elfin shape and fairy shadow scurrying from the books in which they dwell, to sit in a wide circle before the hearth and discuss with the director a forthcoming fairy play for their friends, the children. Or one can picture them scrambling up the narrow stair with him to the overhanging balcony, looking down into the shadowy corners of the study where old Stuffed Owl and Black Wooden Cat hold midnight conferences, peering into the workshop where the magical apparatus is thought out and constructed, or looking through the leaded panes at the playground bathed in moonlight, with winding path and peasant's cot and castle tall among the trees.

THE theater proper will run parallel with the street at the rear of the property, which is eighty by one hundred feet. The lobby will run from the auditorium to the street and have a frontage of twenty feet. Along the front of the property and in keeping with the Toy Theater front, there will be three little five-story buildings, shown on page thirty-eight, all devoted to the interests of children.

Here will be a toy shop, a book store, a photographic studio for children, a salon for dancing classes, a hall with a stage for amateur

THE TOY THEATER



the stories of the Arabian Nights and the fairy tales of Mediæval Europe, not to mention the classic myths of ancient Greece, have all been drawn upon in the treatment of this children's wonderland. It will indeed be a magic spot in the great busy city—a place where all that is beautiful in childish song and verse will be visible, and where children of all ages may, like Alice down the rabbit hole, wander to their heart's content among the things they love to read about and find them really, truly, true!

In this little Toy Theater there will be presented for the children playlets in which magic craft will work out the marvelous happenings of the fairy tales, folk lore and legends. Motion pictures of suitable sort will also be shown, so that youngsters may see those which, from an educational standpoint, will be pleasing and instructive, without having to sit through those which they should not see. There will also be plays suitable for young people who are not quite grown up, such as the adventures of Ivanhoe, William Tell, Columbus and other historical characters, as well as playlets of illusion like "The Pipes o"

dramatic societies, and various other juvenile features. In fact, the whole property will suggest a little street in "Hamelin Town in Brunswick, by famous Hanover City"-a veritable fairyland! Beside the doorways will be funny little Noah's Ark trees on flat stands, and on each side of the gateway to one of the shops, a wonderful red, white and black wooden soldier will be on guard-because, of course, anyone who does not believe in hobgoblins, fairies and other tiny folk cannot enter here.

Fairy lore from the mystic sagas of the Norsemen in the time of the Druids,



THE TOY THEATER

Pan," "Captain Kidd," "Napoleon in Egypt" and "The Juggler of Touraine."

One can imagine how eagerly the youthful audience will watch these little plays and tableaux of fact and fiction, and with what breathless suspense and childish glee they will behold the marvels of magicians, witches, elves and other wonder-folk. How happy they will be to see fairy tales come true before their eyes, to behold giants in seven-league boots striding across the landscape, tiny dwarfs hiding their treasures in some mountain cave, gallant knights rescuing fair damsels in distress, and fairy godmothers appearing at just the crucial moment with gifts of magic for some fortunate protégé! And how much more interesting and real the history books and geographies will seem, when upon the stage appear the familiar personages of the past and the picturesque people and costumes of foreign lands!

The Toy Theater will fill a definite place in the movement for the education of children along broader and more interesting lines,



THE HISTORY OF MAGIC: A MURAL DECORATION FOR TOY THEATER.

and its influence for good should be very great. With this little playhouse in New York, as a center where writers, painters, musicians, conjurors and actors may all work together to produce a perfect children's drama, the idea may very soon become widespread. The "movies" will contribute their share toward the work by reproducing for general distribution the productions of the Toy Theater.

The cornerstone of the building, which is soon to be laid, will bear an inscription dedicating it to the children of all countries and climes. For it is hoped that this little theater will prove to be the inspiration of many more Toy Theaters where the children of all peoples may gather to enjoy the tales which have come to them down through the ages—theaters where everything sweet and lovely may be instilled in their minds, that they may be the better equipped, when they too have become "grown-ups," to keep their ideals unsullied by the grosser facts of life.

... FOR A MAN MAY BUILD HIS HOUSE:" BY WILL LEVINGTON COMFORT



T was an ancient brick-yard that faced the south on Lake Erie, with a most comfortable little town lying against the rear horizon. Also it was a bluff not without nobility, especially from the eye of a swimmer. I first saw it in August in dry weather and did not know that a bunker crop of frogs had been harvested that spring, from the deep grass-covered hollows

formed by the removal of clay for the brick-business long ago. There was a good forage on the mounds, which I did not appreciate at the time. The fact is those mounds were formed of pure dark loam, as fine a soil as anywhere in the Lake country.

Those of the dim eyes say that once upon a time an orchard and brick house stood on a bluff in front of the brick-yard, on a natural point, but that the Lake had nibbled and nibbled, finally digesting the property, fruit trees, brick house and all.

I could well believe it when the first storm came. An east wind brought for three days steady deluges of high water that wore down the shore-line almost visibly. A week later came a west wind that enfiladed, so that what remained of the little point was caught in a cross-play of the weathers. If some one did not intervene, the brickyard site would follow the orchard—that was clear.

Three or four times the owner came to see me. We had rejoiced in a little rented cottage somewhat farther down the shore, rejoiced in owning nothing, yet having the whole. . . . Thoreau in his daily westward migrations studied it all with the same critical delight, and found his abode where others did not care to follow. But we look twice at the spot whereon we choose to build our house, and the second look is not so free and innocent. . . Yet a man may build his house. Thoreau had no little brood coming up, and I doubted many times, even in moments of austere admiration, if he wouldn't have lived longer, had there been a woman about to nourish She would have insisted upon a better roof, at least. him. . I told the neighbor-man I would buy the brick-yard, if he didn't stop pestering me about it. He smiled and came once too often.

The day before, standing upon that height of land (not too near the edge, for it looked high in those days) I had looked across the Lake, at one with it all, a friendly voyager of the skies and comrade of the yarrow and the daisy. I remember the long grass of the hollows, the peculiar soft bloom of it, and what a place it was to dream until one became part of the solution of sunshine and tinted immensity.

So I lost the universe for a bit of bluff on the Lake shore. When

the east wind came I saw with proprietary alarm the point wearing away. That which colored the Lake was fine rose-clay and it was mine, bought by the front-foot. . . . A man may build his house, if he can also forget it.

E VERYONE who came along told me how to save the point. For weeks they came. Heavy driftwood was placed in times of peace, so that the sand would be trapped in storm. No one failed me in advice, but the east wind made match-wood of all arrangements. . . . The high water would wash and weaken the base, and in the heaviness of the rains the bulk of earth above would fall—only to be carried out again by the waves. The base had to be saved if a natural slope was ever to be secured. Farther down the shore I noted one day that a row of boulders placed at right angles with the shore, had formed a small point, and that a clump of willows behind had retained it. This was a bit of advice that had not come so authoritatively in words. I followed the cue, and rolled up rocks now like an ancient Peruvian. It was a little jetty, that looked like a lot of labor to a city man, and it remained as it was for several days. One morning I came forth in lashing weather-and rubbed my eyes, for the jetty was not in sight. It was covered with a foot of sand, and the clay was dry at the base. A day's work with a team after that in low water, snaking the big boulders into line with a chain-a sixty-foot jetty by sundown, built on top of the baby spine I had poked together. No man ever spent a few dollars more profitably. Even these stones were covered in time, and there was over a yard of sand buttressing the base of the clay and thinning out on the slope of shore to the end of the stones. Later when building, I took a hundred yards of sand from the east side of the stone jetty, and it was all brought back by the next storm. . . . Now the fall had come, and nothing had been done above on the bluff.

I had begun to have visions of a Spanish house there, having seen one that I could not forget somewhere in Luzon. A north-country house should have a summer heart, which is a fountain, and a winter heart which is a fireplace. I wanted both. The thought of it became clearer and clearer—a blend of patio and broad hearth—running water and red firelight—built of stone and decorated with ivy. A stone house with a roof of wired glass over a patio paved with brick; the area sunken slightly from the entrance; a balcony stretching around above connecting the bedrooms, and rimmed with a broad shelf of oak, to hold the palms, urns, ferns and winter plants.

All this in a grove of elms, as I saw it—and there wasn't a tree on the place.

Meanwhile there had to be a workshop to finance the main dream. That was built in the fall, after the reverse was put on the devouring conditions of the shore. A stone study sixteen by twenty-three feet, built about a chimney—faced stone in and out, windows barred for the vines, six-inch beams to hold a low gable roof, and a damper in the chimney; desk and door of oak, wooden pegs to cover the screw-insets, a few rugs, a few books, and the magic of firelight in the stone cave—a Mediterranean vision of curving shore to the east, and the southern door overhanging the Lake—to the suspense of distance and southern constellations.

I laugh at this—it sounds so pompous and costly—but it is the shop of a very poor man. The whole lake-frontage cost no more than a city lot; and with sand on the beach, and stone on the shore and fields, it all came to be as cheaply as a wooden cabin—indeed it had to. That winter the elms were put out—a few six-inch trunks, brought with their own earth frozen to them—a specimen of oak, walnut, hickory (so hard to move), a few maples—but an elm overtone was the plan, and clump of priestly pines near the stable. These are still in the revulsions of transition; their beauty is yet to be. Time brings that, as it will smoke the beams, clothe the stone-work in vines, establish the roses and wistaria on the southern exposure, slope and mellow and put the bloom over all.

S mentioned, I had seen the property first in August. The hollows were idealized into sunken gardens, while the mason was building the stone study. We returned in April-and the bluff was like a string of lakes. The garden in the rear had been plowed wrong. Rows of asparagus were lanes of still water, the roots cut off from their supply of air. Moreover, the frogs commented in concert upon my comings and goings. . . . I set about the salvage alone, and as I worked the thoughts came. Do you know the suction of clay? the weight of adhering clay to a shovel? You can lift a stone and drop it, but the substance goes out of a city man's nerve when you lift a shovel of clay and find it united in a stubborn bond to the instrument. I went back to the typewriter, and tried to keep up with the gang of ditchers who came and tilled the entire piece. It was like healing the sick to see the water go off, but a bad day for the frogs in the ponds where the bricks had been made.

"You'll be surprised at the change in the land which this tilling will make in one season," the boss told me. "It will turn over next corn-planting time like a heap of ashes."

That's the general remark. Good land turns over like a heap of ashes. There was a great satisfaction in using the simile myself. I told it at the table when some people from the city—rear-yard horticulturists—had come out to visit us. "Tilling deepens the loam," I said blandly. "It lets the land breathe. The ground turns over like a heap of ashes."

It caught on. I fancied it would be sprung along the city blocks in due course. Thus a story passes or a song.

Somewhere in the past ages, I've had something to do with stonework. This came to me first with a poignant thrill when I found myself in the presence of the Chinese Wall a few years ago. Illusion or not, it seemed as if there were ancient psychic scars across my back —as if I had helped in that building, and under the lash, too. So it came about, as I watched the mason at work on the stone study I had to try it myself after he was safely out of the way. A stone stable came of this emotion the next summer.

Now with the tilling and the planting, the stone study and stable, the installation of water and trees, and payments on the land, I concluded that I might begin on that winter and summer dream of a house—in about nineteen hundred and twenty-three. . . But I had been seeing it too clearly. So clear a thought literally draws the particles of matter together. A stranger happened along and said:

"When I get tired and discouraged again, I'm coming out here and take another look at your little stone study."

I asked him in. He was eager to know who designed the shop. I told him that the different city attics I had worked in were responsible. He found this interesting. Finally I told him about the dream that I hoped some time to come true out yonder among the young elms—the old father fireplace and all its young relations, the brickpaved porches, the bedrooms strung on a balcony under a roof of glass, the brick-paved patio below and the fountain of stonework in the center. . . As he was a very good listener, I took another breath and finished the picture—to the sleeping porch that would overhang the bluff, the casement windows, and the red tiles that would dip down over the stonework, even to the bins for potatoes and apples in the basement.

"That's very good," he said. "I'm an architect of Chicago. I believe I can draw it up for you."

When a thing happens like that, I invariably draw the suspicion that it was intended to be so. . . . Anyway I had to have plans. . . . When they came from Chicago, I shoved the date of building ahead to nineteen hundred and thirty, and turned with a sigh to the typewriter. . . . Several days afterward there was a tap at the study door in the drowsiest part of the afternoon. A contractor and his friend, the lumberman, were interested to know if I contemplated building. Very positively I said not—so positively that the subject was changed. The next day I met the contractor who said he was sorry to hear of my decision, since the lumberman had come with the idea of financing the stone house, but was a bit delicate about it, the way I spoke.

This was information of the most obtruding sort. . . . One of my most trusted friends once said to me, looking up from a workbench in his own cellar:

"When I started to build I went in debt just as far as they would let me."

He had one of the prettiest places I ever saw—of a poor man's kind, and spent all the best hours of his life making it lovelier.

"And it's all paid for?" I asked.

He smiled. "No-not by a good deal less than half."

"But suppose something would happen that you couldn't finish paying for it?"

"Well, then I've had a mighty good time doing it for the other fellow."

That was not to be forgotten.

So I went down to the shore with the lumberman, and we sat on the sand under a pine tree. . . On the way home I arranged for excavation and the foundation masonry. . . I'm not going to tell you how to build a house, because I don't know. I doubt if ever a house was built with a finer sense of detachment on the part of the nominal owner. . . It is there. I sat with my back to it. When they consulted me, I referred to the dream which the architect had pinned to matter in the form of many blue-prints.

It is there, shortly to be entered. The family regards it as the future home. One by one the different sets of workmen have come and gone, but I am in a daze. The lumberman outlined a plan by which the years would automatically restore me to my own, but I have not been able to see clearly how these things are done. I did not look for the bit of Lake shore bluff; I did not look for the architect nor for the money—and yet the stones are there.

The old Spanish house in Luzon is quite as real to me. It was in that shadowy interior that I first saw the tropical heart of a human habitation. But there was no wired glass; its roof was the sky. . . . I remember the stars, the palms and the running water. A woman stood there by the fountain one night—mantilla, dark eyes and falling water. It was there in the palm foliage that I plighted my troth to the patio. . . It is here—sunken area, paved with ruddy brick, the gurgle of water among the stones! Of one fact, I am sure: If the lumberman doesn't move in, we will.

I KNOW THAT APRIL'S COME AGAIN



I KNOW THAT APRIL'S COME AGAIN: BY GRACE HAZARD CONKLING

HENEVER Mamacita's room Is sweet with rose or orange bloom, And there is never any rain, I know that April's come again.

What April is I cannot say, Nor why it makes me feel this way— And everybody feels the same!— All purry, warm, and glad I came!

It's when the garden is so full Of secrets vague and wonderful: It's how the jasmine buds unfold, And why green oranges turn gold.

I know that when old Pablo goes To clip the vine and prune the rose And spade the beds, it's all to make The garden neat, for April's sake.

I know it gets here on the night When the magnolia tree turns white. I always feel when April's there, Though I can't see it anywhere. A Combination of Hanging Garden and Department Store in Minneapolis.

"THE CITY OF LAKES AND GARDENS:" CIVIC PROGRESS IN MINNEAP-OLIS: BY E. C. HILLWEG

K EATS, when he sang the joy of beauty, was ridiculed by the critics and unnoticed by the people. Ruskin, voicing the same theme, likewise received small attention from the British public. He first tried to coax them, and that failing, sought to scourge them into an appreciation of beauty according to his vision and interpretation of it. The

capitalists of his time were too busy amassing wealth to heed his call. Yet today, strangely enough, amid our even more strenuous life and increased business activities, a new era is dawning—an era of which Keats and Ruskin only dreamed. Cities, towns and villages all over our land appear to be awakening to an actual realization of the meaning and value of art, education and beauty. And nowhere is this more evident than in Minneapolis, the commercial metropolis of the American Northwest.

Through its Civic and Commerce Association, its various woman's clubs, its Garden Club, more than a hundred improvement societies and other organizations, it is making rapid civic progress. These bodies, working in coöperation or in emulation, are developing the city in a remarkable way. Instead of spending vast sums in the making of artificial lakes, as many cities have had to do, Minneapolis has been able to devote

its energies to making parks lovely natural lakes, creeks And the results are charming.

city area is given to all used as play ed by signs of "keep-And every foot of tified by expert is devoted to the the people,—a true

One of the most improve park FIGHTH S construction of a vard, beginning at Loring of the city, and making most attractive park and lake built with the idea of provid from its very beginning to the as a smooth roadway for tour the avenue is afforded by a as an outdoor exhibit by the and Ornamental Horticultur tion in nineteen thirteen. The a most important part of the

Farther on the drive passes where handsome homes, flowers delight the eye on all lakes within the city limits is boulevard as one advances. recently connected by water enough to make a tour of the night, you may easily imagine land—so festive an atmo thousands of flashing lights, band music and gaily dressed by the people for all the

Minnehaha Creek, a picsource in Lake Minnetonka, vard shortly after the For several miles the drive picturesque stream, giving creek itself and the hills and and boulevards around the and other waterways. One-tenth of the entire

parks, which are grounds, unrestrictoff-the-grass." water-front, beaulandscape artists, use and pleasure of democracy indeed. notable recent ments has been the splendid boule-

Park, almost in the heart a wide circle through the

regions. This boulevard was ing pleasing views and vistas last mile of its course, as well ing. A charming glimpse from garden of rare flowers installed Society of American Florists ists at the time of its convengarden has since been made regular city park system.

through a residential section, smooth lawns and bright sides. Each of the four large to be seen in turn from the Three of the lakes have been ways, and if you are fortunate boulevard on a summer's yourself in a sort of fairysphere is created by the darting canoes, strains of people, a city made beautiful people.

turesque stream having its is overtaken by the bouleparkway leaves the lake. follows the windings of this one an excellent view of the fields beyond. The boulevard follows the course of this waterway to the Falls of Minnehaha, the most widely known and most celebrated attraction of the Northwest. Here one may

"See the Minnehaha Gleaming, glancing through the branches,

As one hears the Laughing Water

From behind its screen of branches;

Where the Falls of Minnehaha

Flash and gleam among the oak-trees,

Laugh and leap into the valley."

Below the Falls the creek dashes down a deep glen and soon joins the Mississippi River. Falls, glen, and creek, all make a part of Minnehaha Park, through which the boulevard continues. In this locality also may be seen historic Fort Snelling, and its Old Round Tower, a relic of Indian warfare days.

From the Falls the parkway follows the course of the Mississippi River to the University of Minnesota, with its extensive campus and fine buildings, and thence to St. Anthony Falls. These, however, are now so completely surrounded by the world's greatest flour mills, and so hidden from view by the artificial structures that use their energy for the purpose of man, that they are practically lost to the view of the casual observer. The great dusty mills are now the chief attraction of this district. The boulevard then joins the paved streets of the city in the milling section, and thus completes its thirtytwo mile course.

Glenwood Park, on the outskirts of the city, embraces nearly six hundred acres, and has been developed recently into a somewhat unique pleasure place. The entire tract is in a thoroughly wild state, and it is the plan of the Park Board to keep it always just as it is, merely developing the drives to and around it, and improving its botanical garden of wild flowers. The garden, numerous small lakes, moranic hills, and trees and vines of every description make this park a spot of great interest to the student of botany and the lover of nature. Eloise Butler, the present curator of the wild flowers, in her last report to the Park Board, writes of the garden as follows:

"Nine hundred and ninety-three plants have been added to the garden the past season, seventy-three species of which were newcomers, several of them rare and long sought for. Within a space of twenty acres, may be seen in an hour what would be impossible to find in traversing the State for several days. More and more birds, feeling secure from molestation, and attracted by the abundance of water and the vine-tangled coverts, find sanctuary in the garden."

The boasted trees of Minneapolis have been maintained largely



ONE OF THE LAKES AROUND WHICH A PARK HAS BEEN DEVEL-OPED IN MINNEAPOLIS WITH TOWER OF CHURCH IN THE DISTANCE. CORNER IN A ROSE GARDEN MAINTAINED BY THE MINNEAPOLIS PARK BOARD AT LAKE HARRIET.



OUTSIDE OF A GREENHOUSE OWNED BY THE MINNEAPOLIS PARK BOARD WHERE ANNUAL EXHIBITIONS ARE HELD. THE MINNEAPOLIS PARK BOARD GROW THREE HUNDRED VARIETIES OF CHRYSANTHEMUMS FOR THEIR ANNUAL SHOW EVERY YEAR. DECORATING THE HOTEL WINDOWS IN MINNEAPOLIS: A SCHEME WHICH CAN BE ENLARGED INTO THE DECORAT-ING OF ALL FORMAL WINDOWS IN EVERY PUBLIC BUILDING IN EVERY CITY: IT IS NOT ONLY A PLEASURE TO THE PASSERBY BUT A GOOD BUSINESS INVESTMENT.





A VIEW OF THE WINDOWS OF A BIG OFFICE BUILDING IN MINNEAPOLIS DECORATED WITH CHARMING GRACE: BRILLIANT FLOWERS ARE GROWN IN THE DURABLE BOXES AND LONG VINES ARE LEFT TO FLOAT OVER THE SIDES OF THE BUILDING, BLOWING ABOUT IN THE WIND IN SUCH A FASHION AS TO GIVE AN AIR OF DELICACY AND GRACE TO THE MOST CONVENTIONAL PUBLIC ARCHI-TECTURE.



A PART OF THE EXHIBITION GARDEN PLANTED IN MINNEAPOLIS BY THE SOCIETY OF AMERICAN FLORISTS: NOW MAINTAINED AS A PERMANENT FEATURE OF THE PARK SYSTEM.

A VIEW OF THE EXHIBITION GARDEN AT THE TIME OF THE NATIONAL GARDEN CONVEN-TION IN MINNEAPOLIS. by the Park Board. On request from any individual, the park commissioners will plant trees on any block in the city and maintain them for five years at a trifling cost. The citizens have gladly availed themselves of the opportunity this arrangement gives them for providing attractive surroundings for their homes. The plan also has secured uniformity and successful growth of the trees. Miles and miles of the streets of Minneapolis have been developed into beautiful shady thoroughfares under this system, and a considerable number of natural groves in different parts of the city have been saved to enhance the charm of the neighboring homes.

An annual chrysanthemum show is now conducted by the Park Board. The last show was attended by nearly twenty thousand persons, and four thousand pot-grown plants in three hundred and fifty varieties were displayed. These flowers are sent to the various hospitals and charitable institutions of the city after the close of the show. A rose garden also has been installed within the last few years at Lake Harriet, and this garden may be seen from the boulevard already described.

The new Central High School is equipped with a greenhouse and an outdoor garden of one and a half acres, these outdoor and indoor gardens being used in connection with the classes in botany and interior decoration. The pupils themselves plant the outdoor garden and care for it in spring and autumn when school is in session. This is the only school in the city at present directly identified with the general garden movement, which is conducted under the direction of the Garden Club.

The Civic and Commerce Association, through the financial support and coöperation of the business men of the city, has installed within the last three years the now famous "Hanging Gardens of Minneapolis." Last spring one thousand five hundred feet of window boxes were put up by the business firms in the downtown district, and one hundred and five lamp-posts were topped with vines and flowers. Within the past three years, from May until the middle of October or later, the "hanging gardens" have been in full bloom, brightening every corner and offering in the business section a reminder of the beauties surrounding it.

THE most popular flowers used are: geraniums in all colors, daisies, cannas, petunias and hydrangeas. These are artistically combined with several varieties of foliage plants, ferns and rinca vines. Some of the most beautiful window-boxes, however, contain only bright red geraniums and rinca vines, which are particularly effective on the large, dark brick buildings.

THE CITY OF LAKES AND GARDENS

Though the movement has been directed by the Civic and Commerce Association, each business man has been encouraged to carry out his own ideas in the decorations. Beautiful tub plants and bay trees have been used in connection with window-boxes and lamp-post decorations, and some establishments have secured effects that would delight an artist's eye. Indeed, all the citizens have taken hold of the garden movement with energy and vigor, and one sees flower gardens in many windows. The enterprise even reached the factory section, where the grounds and flowers surrounding most of the manufacturing institutions are as beautiful as can be found in the parks.

Through the influence of "The Hanging Gardens of Minneapolis," every man, woman and child has been made to feel a pride and pleasure in the beauty of the city, and not a few have been inspired to plant gardens of their own. The educational value of the "hanging gardens" and vacant-lot gardens installed by the Garden Club, is hard to estimate. The impression of the gardens on a stranger in the city is well shown by quoting a few lines from Edward Hungerford, writing of his first visit to Minneapolis:

"I distinctly recall upon that July night the cluster lights up and down Nicollet Avenue. Each bore a great flower-box, warm and summer-like with a brightness of geraniums. In the windows of the large stores that line the avenue were more window-boxes, up to their seventh and eighth floors. The entire effect was distinct from that of any other town that I have ever seen."

The cluster lights mentioned by Mr. Hungerford are a part of the city's regular lighting system, which owes its existence to the activities of the Civic and Commerce Association. This Association has also promoted a number of other movements for civic improvement. Through its Heights of Buildings Committee it has secured an ordinance limiting the heights of buildings in this city to twelve stories, or about one hundred and eighty feet. This was done after an exhaustive study of conditions in other cities had been made.

THE Housing Committee has set on foot a movement for stamping out the tenement evil before it develops into the slum menace. It brought the whole matter of housing in Minneapolis vividly to the attention of the business men of the city, by showing them at one of the fortnightly luncheons numerous stereopticon views of the worst tenements of the city. Pictures of dark, unsanitary alleys, revolting interior conditions and neglected children were exhibited to these busy men, who had never dreamed such conditions could exist in their own fair city. One now hears rumors of a one-thousand-acre tract of land that may be acquired and developed for the homes of workingmen. Perhaps this is only a dream of the housing enthusiasts, but sometimes dreams come true. The preparation of a housing code, representing the world's best principles of housing is another accomplishment of this committee.

When plans were made for the building of a new bridge across the Mississippi River in the heart of the milling district, the Association used its influence so tellingly to arouse public sentiment in favor of a monumental structure, that the bridge when completed will be as notable for its architectural beauty as for its utility. Civic betterment and community interest is the watchword of the Civic and Commerce Association, and by means of its fortnightly luncheon meetings, the business men of the entire city are put in touch with matters of vital interest to all the people. City planning, smoke abatement and clean-up campaigns are only a few of the subjects receiving attention from this Association. By securing speakers enthusiastic and thoroughly familiar with these activities, the Association is able to enlist the support of the most representative men of the city.

Other organizations contributing to the artistic development of the city, are the Minneapolis Symphony Orchestra, pronounced by the critics as one of the great symphony orchestras of the world; the Society of Fine Arts, maintaining a school of art and providing lectures and exhibits in the Public Library; the Handicraft Guild, which maintains regular exhibits of choice hand-wrought articles, and the Thursday Musical, bringing artists of note to the community every season. Through these earnest efforts all the people are being given an opportunity to cultivate a taste for the best in art and music, and a chance to develop their talents in this direction. The extensive work of the University of Minnesota also is contributing largely to a more general educational development.

Five or six years ago, Minneapolis had achieved greatness as a commercial center, and with its natural lakes and parks, it was undeniably an attractive city; but the changes wrought within the last few years have made this "City of Lakes and Gardens" a center of art and culture in the Northwest.





OUR FEATHERED CRAFTSMEN OF THE AIR: BY FLORENCE BOYCE DAVIS



FRIENDLY chipping sparrow began it by building in the woodbine, and taking threads from my workbasket to weave into her foundation; then robin redbreast staked a claim at the other end of the portico, and into the walls of her mud-plastered dwelling worked a lace cuff and a scrap of a letter. After this, who could help prying into the secrets

of the craft?

Coming home in late autumn, bearing the birds' nests we have secured on our walk, we are met on the street by a New England housewife who raises her hands and her voice:

"Mercy on us! what are you going to do with all that trash? Birds' nests? Catbird's nest? Redwing—I never knew there was any difference. A bird's nest is a bird's nest to me. But what are you going to do with them?"

When we tell her that some of these very nests we have watched since the builder placed the first stick; that we have been back repeatedly during the nesting season to keep run of the household, and record it in our notebook; that now that the birds have moved out, the nests are to grace an alcove given over to a bird-nest collection in our front hall, she looks at us, and the expression in her eyes is as suggestive as if she had tapped her forehead and shaken her head. But we go on home with our treasures, the scent of damp leaf mold and the sound of a little brook back in the woods still with us.

When we began collecting birds' nests we made a few simple rules which we have kept to the letter: no eggs were to be removed from nests; no nests taken until abandoned by the rightful owners; no bird made to feel we were its enemy. We would be decent collectors, not thieves.

Among many things that we have learned about the feathered craftsmen, one is that almost every little builder shows individuality in constructing its nest. Families adhere to family rules so far as

size, shape, and placing of the nest go, but each builder works into her house characteristics peculiar to herself, far more than do you and I who depend on a hired architect for ideas. Few male birds assist in building the nest, though some of them, I



feel sure, insist this baltimore oriole architect evidently left a latchstring to on being "boss." The nest, which is woven of twine and lined with horsehair.

A pair of bluebirds have, for several seasons, occupied a box in our portico, and I have never seen the master do anything more important in constructing the nest than to go into the box now and then, look things over, and bring out a small root or a feather and drop it on the ground. His pomposity is quite amusing, though I don't believe he has the least idea how a nest should be built. Each fall we clean out the box, and one spring we put in straws and cotton wool, thinking it would help the work along to find building material on



the spot. No, indeed! Mrs. Blue did not like our timber, and cleaned out every scrap we had put in before she set about real nest-making.

An artistic temperament was evident in a bustling chebec who saddled her neston a limb in our neighbor's orchard. She

THE OVENBIRD'S NEST BUILT IN THE LOVELIEST SPOT IN THE GARDEN.



A REDWING'S NEST LIGHTLY POISED IN A PICTURESQUE BRUSH OF CATTAIL GONE TO SEED.

the family resemblance was strong, but when they came to build nests we found they differed in character. One was an artist, one

a slattern, and one a thief. The artist set a neat cup in the woodbine, worked a bit of lace into her foundation, plastered the inside smoothly and then lined it with soft grasses. The slattern put coarse materials together up in the elm, plastered it carelessly, and laid her blue eggs on a bare floor where she had not even spread a grass rug or a feather. The thief built in the maple, and came to grief; something broke her eggs and discouraged her so that she abantook twine that we had put out for the birds, frayed out each piece with her beak, and decorated the outside of her nest with! it, so that it looked like a ball of white fringe caught up in the apple tree.

This catering to appearances seems to be strong with the vireos. Their nests-always hung on wishbone-shaped branches—show great variety in manner of decoration; some are embellished with birch-bark. some neatly covered with lichens or skeleton leaves. and one which we had the good fortune to see just after it was completed, was extravagantly draped with pale spiders' webs.

Three pairs of robins nested on our premises last season. The three females looked as if they might have been sisters,



A SONG SPARROW'S NEST IN A NETWORK OF THORNS.



doned the situation. When we took down the nest an odd little bunch of roots, much finer than the rest of the foundation, attracted our attention. We found it to be a chipping sparrow's nest which the builder had set her house upon.

Red-winged blackbirds are such a clannish lot that they seem to have but one plan for building—one key will unlock all doors in their neighborhood. During a drought we went through the swamp and

found many old homes among the cattails, all of reeds and grasses, built about a foot above the ground, and all looking alike. Occasionally a cattail that had gone to seed made the situation picturesque.

It is quite likely that birds do not choose locations with a view to their artistic features, but sometimes we wonder how a nest came to be situated so charmingly. An ovenbird's nest which we found in late autumn was set on the ground under clumps of marginal and spinulose shield-ferns, and a prettier spot could not have been found. We stumbled upon the nest quite by chance, after searching for it all spring and summer and being cajoled over the woods by the male's

insistent, "Teacher, teacher, teacher." I know now the little rogue was leading us away from his hidden treasure, and I doubt not the mistress

A KINGBIRD'S NEST FASHIONED BY AN EXPERT CRAFTSMAN.

sat in her "oven" and laughed over our stupidity. The nest looked like a small mound of dead leaves; it was six inches high, eight inches wide, with an oval opening at the side three inches across. The lining was of fine roots; some dry leaves were woven in, but more were piled loosely on top so that its concealment was perfect. Since it had served its purpose, we gladly carried it home in our basket.

Two other chosen locations which would make one almost believe there are birds with an eye for beauty, were those of a veery and a kingbird. The veery's home was in the base of a great ostrich fern that grew near the river. The fern had fifteen green sterile fronds that stood five feet high, and eleven fertile fronds two feet high, the whole spreading outward, shuttlecock fashion, and making a receptacle for the pretty nest which was made of fine roots and grasses, with a foundation of dead leaves six inches deep. When fall came and the veeries were gone, though frost had killed the sterile fronds, the brown fertile ones stood erect, and we took up the fern, nest and all, without deranging its architecture.

The kingbird's nest was in an old apple tree up in the pasture. The tree's branches were gnarled and twisted by many years of rough weather until it was an ideal of rustic beauty. On one limb, Mother Kingbird had fastened one of the trimmest nests I have ever seen, built of roots and twine, and set off with tufts of cotton wool which seemed to have been added more for ornament than for use. One long white twine was left loose—for a latchstring.

Farther up in the pasture, thorn bushes—which are favorite nesting sites with song sparrows—were cut down during the nesting season. One little brown matron whose home was destroyed, immediately set about building another in a thorn bush that lay on its side. We wondered how she could fly in and out without impaling herself on the thorns.

None of our nests shows greater bird wisdom than that of the Baltimore oriole who built in our neighbor's elm. We had noticed the pair when they arrived, and began house-building in great haste. A branch of our maple was first chosen and several strings were carried up there, but evidently something about it did not suit Mistress Oriole, for she removed the strings to the elm where she finally built. I was standing on the back portico when she came into the yard, looked up at me, and jabbered inquiringly. I interpreted her talk as a plea for strings, so I hung several pieces of twine, each about four feet long, over the pulley clothesline, and ran it out four or five feet from where I stood. She saw it at once but hesitated. Finally she flew up on the barn roof, then dropped down onto the clothesline



AN ARCH OF LIGHT AND GRACEFUL DESIGN THAT GIVES A STRONG SUPPORT TO THE RAMBLER AND PARADISE ROSES AND CASTS OVER ITS SURROUNDINGS SUMMER'S SUBTLE AND ALLURING SPELL.



From photograph by Mary H. Northend.

AN EXTREMELY WELL-BUILT ARCHITECTURAL ARBOR IN A NEW ENGLAND GARDEN: A SENSE OF SECLUSION IS GIVEN BY THE LATTICE WORK AT THE SIDES AND AT THE END: VINES TRAILING OVER THE LATTICE AND OVER THE ARCHED TOP COMPLETE THE CHARM AND INTIMACY: SUCH AN ARBOR AS THIS HAS A DISTINCT ARCHITECTURAL VALUE IN A GARDEN, CONNECTING THE HOUSE WITH NATURE IN A FORMAL, YET FRIENDLY MANNER.



From photograph by Mary H. Northend.

NO MORE FRIENDLY APPROACH TO THE HOUSE CAN BE DEVISED THAN THE ARCHITECTURAL ARBOR: IN THE WINTER EVEN WITHOUT VINES IT IS GRACEFUL AND APPROPRIATE, WHILE IN THE SUM-MER TIME WITH ROSES BLOOMING ABOUT IT AND FLOWERING VINES CASTING TO THE WIND STREAM-ERS OF FRAGRANCE IT IS AN INVITATION TO THE HOME BEYOND, MORE ENTICING THAN WORDS.



A VERY WELL PLANNED ARCHITECTURAL ARBOR AND SEATS COMBINED: AT THE END OF A GARDEN PATH THIS IS A MOST ATTRACTIVE PLAN, GIVING A SENSE OF ARCHITECTURAL BEAUTY AS WELL AS A PLACE IN WHICH TO REST AND ENJOY THE LOVELY PATHWAY LEADING TO IT. AN EXTREMELY INTERESTING FORMAL COVERED SEAT, SO SIMPLE AND SO WELL PLANNED THAT THE EFFECT IS QUITE GREEK.

and chattering menacingly at me, hopped and teetered along the line toward the string. She picked up one piece, flew into the apple tree, and stopped to adjust it in her beak; then she was off over the barn. She left the twine on a branch of the elm, and came back for more. When she had several there she began to weave her basket. During the day I put out fifteen pieces of twine, and all but three were up in the elm at nightfall; the three that were rejected were colored She worked several days weaving the twine bag, and then twine. one morning she appeared with horsehair in her beak for the lining. I watched through my bird glass while she poised on the edge of the nest, called softly, "Here, here, here, here," to her handsome mate who was never far away, and dived into the bag out of sight. It was thirty minutes before she came out to fly away, though in the meantime she had been out twice, perched on the edge of the nest, looked down at her work, and then hopped back in to fasten a loose end.

We kept an eye on the nest all summer; heard querulous calls, that sounded like young goslings teasing to be brooded, when there were babies in the bag; and then after the family grew up and left the neighborhood, we added the nest to our collection. It is a wonderful nest. It measures seven inches in length, the circumference of the bag twelve inches, the diameter of the opening at the top less than two inches. The twine we contributed, which must have measured fifty feet or more, is intricately woven, and so firmly knotted and tied around the branches that the nest was securely braced. One long twine was fastened by one end, but seems not to have been needed. Possibly the oriole, like the kingbird, left it for a latchstring.



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ARBORS AS ARCHITECTURAL FEATURES OF THE GARDEN: THEIR PRACTICAL AND POETIC PURPOSE



INE-CLAD arbors and garden bowers seem always invested with an atmosphere of fragrance and romance. Perhaps it is because they are so picturesque in themselves that one cannot think of them or behold them without awakening tender memories or stirring the imagination. Our affection for them is partly reminiscent and personal, and partly flavored with literary

and historic associations. The drapery of the vines, the sweetness of the blossoms and the trembling lights and shadows of these garden retreats—whether in the warm sunshine of a summer afternoon or the paler hours of moonlight—remind us of those Old World bowers of which the poets sang, where many a fair lady and gallant lover held their tryst in the days "when knighthood was in flower." And even in this newer land, our latticed, leafy shelters still seem haunted by the ghosts of long ago.

King James the First of Scotland, during his imprisonment at Windsor, spoke of arbors in his poem, the "King's Quhair," which is supposed to be a description of the garden beneath his prison window.

"Now was there made, fast by the Towris wall, A Garden fair;—and in the corners set An Arbour green, with wandis long and small Railed about, and so with trees set, Was all the place and Hawthorne hedges knet, That lyf was none walking there forbye That might within scarce any wight espy.

So thick the boughes and the leaves green Beshaded all the Alleys that there were, And mids of every arbour might be seen The sharpe greene sweet Juniper Growing so fair with branches here and there, That as it seemed to a lyf without, The boughes spread the arbour all about."

The arbors in the famous garden at Hampton Court are likewise mentioned by Cavendish in his metrical "Life of Wolsey"—

"My Garden sweet, enclosed with walles strong, Embanked with benches to sytt and take my rest— The knots, so enknetted, it cannot be exprest,

With Arbours and alyes so pleasant and so dulce." Indeed, Elizabethan and later writers, both in prose and verse, 64

ARBORS AS ARCHITECTURAL FEATURES

seem to have felt the enchantment of those stately English gardens and their bowers, nor have they failed to appreciate the humbler charms of many a cottage dooryard.

Owing, no doubt, to the perennial human interest which has imbued their architectural and horticultural qualities with such engaging, mellow charm, arbors have found their way into the legend and literature of every age. One of the most celebrated of these retreats was that built by Henry the Second for the Fair Rosamund, at Woodstock, where the preceding Henry had made the first English park. The bower was placed "in the center of a labyrinth and entirely concealed from view, being only to be found by one knowing the secret."

In a recent book on "Garden Planning," W. S. Rogers defines the modern arbor in the following fashion: "This term may be understood to describe such structures as are designed to give shade by means of the foliage they support. They are in no sense weatherproof, being merely skeleton structures of light woodwork. They may be built of larch nailed together, or of light, sawn oak quartering joined by galvanized screws. Ready-made iron wirework arbors are rarely in good taste, and are bad supports on which to train living plants. The simpler the design the better, but, seeing that all parts are exposed to the weather, the materials and construction should be such as will ensure a fair amount of durability."

Although this writer goes on to say that trellis seems unsuited to an arbor, though often used in the construction, we must admit that we cannot share his opinion. True, trellis "requires to be painted to make it durable," but surely paint is not necessarily "inconsistent with a good effect in an arbor." In fact, when it repeats in its note of cream, white or green, the color of the house trim or of other garden structures, the effect is apt to be very decorative. The narrow latticework presents a pleasing variation among the more solid timbers of the design. It seems to fairly coax the vines to weave their stems and tendrils in and out over its surface, while through the openings, half concealed and half revealed, one catches tiny glimpses of the garden beauties beyond.

So endless are the ways in which arbors may be contrived that one could fill a bulky volume with illustrations, for each differs in structure, covering and placing from the rest. We are, however, showing here five typical examples of modern wooden arbors which may serve as suggestions to those who are planning some such shelter for their garden entrance or walk.

The first illustration shows a simple arch with quaintly pointed

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roof, and unlike most structures of this sort the sides are merely horizontal strips, without any suggestion of lattice. They serve their purpose, however, and the effect of the whole is very pleasing.

In the second photograph is seen a long and arch-roofed arbor sheltering a brick-paved walk. The heavy timbers above are used in the manner of a pergola covering, and are lightened below by the introduction of latticework, the whole forming a frame for a delightful vista which terminates appropriately in the inviting wooden seat at the end. At the same time, on each side of this sequestered walk, one has pleasant pictures of the surrounding garden.

Next comes a simple archway above entrance steps, and here are used two pairs of square white columns linked by cross-strips and joined above by a curved roof. The structure would have been more in harmony with the house if the pillars had been round, like those of the porch; but, aside from this, the effect is very gracious.

The fourth view discloses an arched arbor with seats that are a part of the structure, and although it is shown before the vines have attained any noticeable height one can easily anticipate its beauty. Softened by foliage, this latticed bower will form a charming terminus for the grass pathway that leads between clumps of flowers from the distant house.

As an adjunct to the tennis court, the arbor proves particularly welcome, for it affords a sun-sheltered spot where spectators may sit and watch the game, as well as a pleasant retreat for the players during intervals of rest. It may also serve as a delightful place for afternoon tea, or as an outdoor playroom for the children. Such an arbor we are showing in the last photograph. From the brick floor rise white turned pillars, supporting a pergola roof, while along one side and at the ends are low wooden panels with latticework above. The built-in seats with their curved ends form part of the construction, and between them are left spaces for potted shrubs. With the addition of a few vines, this arbor would prove a picturesque as well as a practical garden shelter.


"GARDENS IN STONES": THEIR PLACE IN THE LANDSCAPE: HOW TO PLANT THEM



HE moraine garden of the Alps, or of our own rugged Sierra and Rocky Mountains should be visited by every one who appreciates the beauty of stones in the garden. Before the garden-builder chisels or splits a single lichen-covered rock to embed it in cramped, abnormal position in walls, in foundations or in garden devices of any kind he should have the

fullest perception of its natural beauty, of its added æsthetic value when allowed to retain individuality. "Sermons in stones" are certainly wonderfully inspiring for whoever has ears to hear or eyes to see. Such object lessons as are furnished by the trail of a glacier, by the pastures of New England, and the headlands of our coast are better than any course of lectures or service at the drafting board.

There is nothing more exquisitely lovely in all the outdoor world than fragile flowers growing at the foot of a rocky boulder. The sentient, evanescent blossom of but a few days' brightness, vibrant to every passing breeze in contrast with the æons-old insentient gray boulder, stirs the imagination of every lover of beauty. To the poet such fine relation of extremes suggests sonnets to youth and age, to soul and matter; to the artist it is an inspiration in color harmonies; to the designer, the elusive, long-sought-for motive; to the landscape architect an impulse for a wandering, informal garden, a graceful, impromptu place such as Nature herself might have made; to the architect it is a revelation of the power of light and shade, for without its shadow the flower against the rock would be without half its charm. Shadows must be reckoned with in architectural beauty.

A rock garden is one of the most satisfactory mediums for garden display. It is not necessarily a level bit of ground scattered over with boulders, joined together with flowers, or a pyramidal heap of rocks bristling with opuntia. One of its most attractive forms is as a wall of loosely laid rocks and the interstices filled with earth and planted to Alpines that blossom freely, cascading like fragrant rivulets of color from top to bottom. On the shady side can be some of the myriad rock-loving ferns and such flowers as the stone-crop, saxifrage, trilliums; on the sunny side may be had the purple or white rock cress, spreading evergreen candytuft and lovely white star-wort columbine. Some snapdragons love to hang head downward, so also do some campanulas. Nasturtiums trail or climb-no position can stop their jubilant joy of blossoming. Lineria and wild pinks fill in small gaps, and mesanbryantheum will wreathe the whole wall with starry pinkish masses of bloom. Rambling roses do better if allowed to trail downward over a wall than if forced up a trellis.

Here and there vines should be given unhampered way to break up regularity. In the shade, plant shooting star, snow-in-summer, mist flower, Jacob's ladder, violets, mountain spurge, plantain lily, rock cress, crane's-bill, false goat's beard, bloodroot, bluebells. At the foot of the sunny side of the wall have rosemary, lavendar, acanthus, amaryllis, delphinium and anemone in groups or clumps rather than in solid phalanxes, sea lavender, sea pink, thymus, creeping phlox, golden tuft, Iceland poppy, opuntia, Stokes' aster, sweet-william, sweet alyssum, stone crop, blue sage, bugleweed, candytuft, crocus, columbine, Edelweiss, forget-me-not, foxglove, campanula, creeping leadwort.

A charming wall treatment is given in one of the accompanying photographs with a little pool and fountain. This idea could be carried out in country estates where a little brooklet or tiny spring could be diverted and made to drip over a slightly hollowed boulder or a mossy log into a pebble-lined pool. It is a very easy thing to accomplish; add a few more azaleas, rhododendrons, dogwood, flowering currant or such native shrubbery as may be had, set out iris bulbs, transplant ferns and other woodland plants and encourage the wild vines to weave all together naturally. A strict line should be drawn between formal and informal treatment of wall gardens. If the rocks are used as border of pool or brook in an informal garden they should be laid as naturally as possible and if cement must be used let it be invisible or covered charitably by nameless little growing things.

FOR the rock garden simulating wild pastures there must be full sunshine, for the woodland or cloister garden there must be shade, and a little brook if possible, but both must have good draining and the loose open grouping of rocks. The preparation of an artificially made bed must be a thorough one. Cinders, broken brick, etc., should be laid on the bottom, then the large boulders arranged after a well considered plan, and smaller ones placed with an appearance of carelessness among them. Avoid placing of split rocks in full sight, for they proclaim artificiality all too plainly. Rocks dug out of the ground should not be left in a position that exposes the side discolored by long contact with the soil.

A suggestion of value is contained in another photograph—that of the natural ledge with a rustic tea-house. Hollows and crevices of a ledge filled with earth form ideal conditions for many of the Alpine flowers which cannot exist without food derived from disintegrating granite or limestone. The chief danger in such a ledge planting is in selection of flowers for some Alpines are particular as to



THE ENTRANCE TO A GARDEN MADE RUGGEDLY PICTURESQUE BY A WISE USE OF STONE IN BORDER AND URN, HALF HIDDEN BY AND IN INTERESTING CONTRAST WITH MASSES OF LIVING GREEN: A GARDEN SUGGESTING HISTORY AND HAPPINESS.



A STONE STAIRWAY CONVERTED INTO A STONE GARDEN BY PROFUSE PLANTING IN BOXES: A MASS OF TRAILING VINES OVER THE BOXES WOULD PERHAPS GIVE AN ADDED GRACE TO THIS PICTURESQUE APPROACH: IN ANY GARDEN A COMBINATION OF FRAGILE VINES AND RUGGED STONES GIVES PIQUANT CONTRAST.



A STONE GARDEN DEVELOPED ABOUT A RUSTIC TEA HOUSE: ALPINE FLOWERS WOULD FLOURISH HERE AS WELL AS POP-PIES, ANEMONES AND HYBRID PINKS.



A STONE GARDEN PLANTED TO HOLD THE ORIGINAL BEAUTY OF THE HILLSIDE PASTURE.

THE PLANTING OF A WILD HILL SLOPE TO GRACE A FLIGHT OF STONE STEPS LEADING TO THE HOUSE.

limestone or granite. However, the majority of them will thrive in almost any condition and a gayer, brighter, hardier, more accommodating family of flowers is not to be found in all the world than the Alpines. Poppies love granite soil, so do gentians, anemones and certain lychnis, primulas, hybrid pinks; house leeks will lodge on barren edges where nothing else will thrive. If water can be made to trickle slowly over the ledge finding its own way to the grassy bench below, then the moisture loving sun-crops, trilliums, irises can be had to complete the variety.

Another opportunity for use of rocks and flowers together is suggested in the two photographs of the stairway. Wherever possible the native wild flowers should be used as we have so often insisted, not only because they are acclimated, but because foreign importations look so palpably alien to the place. In constructing a stairway care should be taken not to make the steps of equal height and depth. Skip a step occasionally in favor of a tiny resting place of grass or moss. Again the effect as a whole must be kept constantly in mind, for a group of stones may be irreproachable from one viewpoint and utterly unsightly from another. In both these photographs the use of ferns is especially to be commended.

Where rock and water garden meet there are countless other beautiful flowers to give grace and color to the margin—arum, umbrella plant, giant reed, iris, marsh marigold, pitcher plant, Brookline, sweet flag, papyrus, pickerel weed, rushes, spotted calla, watercress. These flowers as well as many ferns will grow wherever water seeps, at the border of brooks or at the edge of a natural bog. Once started these flowers continue in beauty as in the wild state. Rocks taken from the woods covered with moss and lichens should be had for the brookside if possible. If not, transplanted sheets of moss or turf filled with nameless little green trailing things should be substituted, pushed into the crevices of rocks and given chance to spread.

A few bulbs of wild lilies set judiciously, a few little plants carefully lifted from their home by the wild-wood spring and a few seeds gathered on a summer's walk and scattered again by the margins of the garden's brooklet, will form the nucleus of a rocky dell fit for the abode of elves and fairies. No careful designing can take precedence in the strife for beauty of Nature's informal methods of massing color in one corner, laying carpets of shaded green leaves, interlacing branches or flower stalks, of placing a delicate flower against the foil of a rough stone, of forming all lonesome plants into one graceful whole. A rock garden does not have to be remade each year. It attends to its own needs after once started with the occasional addition of some especially desired plant.



STATION SQUARE · •RAILROAD · STATION · STORES · AND · APARTMENTS ·

ARCHITECTURAL BEAUTY IN THE CIVIC GATEWAY OF TODAY



HE entrance to a city has been from the earliest days a point of the utmost importance, in the eyes of citizen, architect and military engineer. In times of war it played a vital part in defence, according as it withstood or succumbed to the besieging forces of the enemy. Equally significant was its meaning in periods of peace, when it became the nucleus of social and

commercial activity. Especially was this the case in Eastern lands, where the "gate" was—and still is in many places—the center of civic life. Here was the most important market-place, the common meeting ground where people gathered to buy and sell, to receive and exchange the news of the day. Here also was the place of justice and audience, transferred later to the gate of the ruler's palace, and this official dignity is still preserved in the title of the seat of government at Constantinople—translated from the Turkish as "The Sublime Porte."

Very different from those olden gates are the entrances to our modern towns and cities. Our buildings are for commerce rather than for fortification. The spirit and methods of peaceful industry, travel and traffic have supplanted those of warfare—in America, at least. Twentieth century science and invention have revolutionized our means of transportation, and developed to an amazing point of efficiency our building and engineering arts. And one of the most important of these changes has been the evolution of railroad architecture.



THE RAILROAD STATION, THE MODERN "GATEWAY OF THE CITY," HAS CALLED FORTH DURING THE LAST FEW YEARS THE GENIUS OF SOME OF OUR BEST ARCHITECTS: ONE OF THE MOST PICTURESQUE RAILROAD STATIONS EVER BUILT IN THE VICINITY OF NEW YORK IS THAT AT FOREST HILLS GARDENS, DESIGNED BY GROSVENOR ATTERBURY: THE DETAIL OF THE SOUTH ENTRANCE, SHOWN HERE, GIVES SOME IMPRESSION OF THE DECORA-TIVE WAY IN WHICH THE STEPS AND BUILDINGS ARE HANDLED, AND THE FRIENDLY EFFECT THAT HAS BEEN GAINED BY THE INFORMAL PLANTING OF SHRUBS AND VINES, WHICH LINK THE STRUCTURE SO CHARMINGLY WITH ITS SURROUNDINGS.



ENTRANCE TO THE LACKAWANNA STATION AT MONTCLAIR: THE GENERAL DESIGN AND PROPORTIONS OF THE BUILDING AND THE DECORATIVE WAY IN WHICH THE DETAILS HAVE BEEN TREATED, MAKE THIS AN UNUSUALLY ATTRACTIVE DEPOT: F. J. NIES, ARCHITECT.



THE SIMPLE, PLEASING LITTLE STATION AT POCONO SUMMIT, PENNSYLVANIA, SHOWS HOW REAL STRUCTURAL CHARM CAN BE ATTAINED BY THE USE OF CONCRETE WITH COLORED TILE INLAY, CAPPED BY A TILE ROOF: THIS STATION, DESIGNED BY F. J. NIES, IS ON THE LACKAWANNA ROAD.

PASSENGER DEPOT ON THE "SUNSET ROUTE," AT SAN ANTONIO, TEXAS, WHICH REVEALS A USE OF CONCRETE, TILE AND DECORATIVE BRICK ARCHES QUITE IN KEEPING WITH THE GENERAL CHARAC-TERISTICS OF THE ARCHITECTURE OF THE SOUTHWEST.



THE TINY COUNTRY STATION, SO LONG NEGLECTED, IS NOW RECEIVING ITS PROPER ARCHITECTURAL CARE: THE TWO PICTURED HERE—CASTLE CRAG AND SHASTA SPRINGS, BOTH ON THE SOUTHERN PACIFIC ROAD—ARE CHARMING EXAMPLES OF RUSTIC CONSTRUCTION, IN HARMONY WITH WOOD-LAND SURROUNDINGS.

France was the first country that made any attempt to combine beauty with efficiency in railroad stations, and for a long time those in Paris were the models for all other countries, as the movement spread. The *Gare d'Orléans*, it may be noted, was the first railroad station of any size in which trains were brought by electric power into the city.

Within recent years, however, America has awakened to the importance of this phase of architectural engineering. As the network of shining steel has spread across our continent, like a huge cobweb, binding the cities, towns and villages by closer social and commercial ties, infusing new life into the rural districts, and cementing the interests of East and West, our stations have swiftly grown in number, size and significance. At first they were utilitarian only, mere offices and shelters that served a practical end, built with little regard for beauty. Then, with the need for swifter and more extensive transportation, newer and more efficient methods took the place of the old-fashioned ways, and the construction of the stations as well as of the locomotives, cars and tracks became more scientific. The growth of cities, the increase in population, the growing bulk of traffic, involved problems of a more complex nature, the solution of which called forth all the genius of architect and engineer-until today, the erection of a successful city terminal represents an achievement of the greatest civic importance as well as the highest artistic Some idea of the magnitude of the problems presented may be skill. gained from the fact that the final plans of the Grand Central Terminal in New York were not completed for ten years—so many alterations and improvements were needed to keep pace with new developments in this many-sided art.

Along with such practical railroad progress in America has come another important change. Architectural beauty has also been evolved. This has been due partly to the efforts of individual architects and real estate companies, and partly to the general awakening of public interest in city planning and civic improvement. The station and its grounds and likewise the railroad bridges have received æsthetic as well as technical consideration; their value as architectural and landscape features has been realized; their possibilities for artistic and harmonious treatment have been studied, both separately and with relation to the surrounding buildings and grounds. The result has been the erection of stations and bridges and the planting of station gardens which have added definite beauty and value to the community.

It is significant, too, to note that this progress has not been limited merely to the large city stations and the big terminals, which,



as modern civic "gateways," naturally lend themselves to impressive and dignified design. The smaller towns have also contributed their share in the movement and even in the rural districts where only the humblest plat-

TYPICAL OF CALIFORNIA IS THIS ARTISTIC STATION AT BURLINGAME, DE- where only the signed for the southern pacific company. humblest plat-

form and ticket-office and the simplest form of shelter are necessary, we find structures that possess delightfully picturesque quality, quite in keeping with their natural environment.

In the case of the larger stations and terminals, some of the finest architectural designs have been made possible chiefly by the changes in modern methods of transportation. For instance, the substitution of electricity for steam has entirely modified the type of both plan and station design, making for greater beauty as well as efficiency, safety, convenience and cleanliness. Grand Central Station, as it exists today, would not have been practicable except for the electrification of the railroads coming into New York. This



VINE-CLAD COURT OF THE BURLINGAME DEPOT: A FRIENDLY, SHELTERED SPOT THAT SEEMS TO INVITE THE TRAVELER TO LINGER AND REST BENEATH ITS PLEASANT SHADE.



AT TUCSON, ARIZONA, STANDS THIS DIGNIFIED AND PLEASING BUILDING, WHICH, WHILE FULFILL-ING ITS PRACTICAL PURPOSE AS A SOUTHERN PACIFIC STATION, ADDS A DEFINITE ARCHITECTURAL VALUE TO THE PLACE.

has made possible an arrangement of superimposed tracks which enables the traffic to be managed in layers, permitting the handling of twice as many people on the same area of ground. In this terminal there are as many as forty-seven operating tracks on one level, all within reasonable access of passengers; whereas the largest terminals existing for steam traction have about thirty-two tracks, which cover so much area that it takes one sometimes ten or fifteen minutes to reach one's train. The terminal at Washington, and South Station, Boston, both of which are developed as far as possible for steam, are examples of this inconvenience.

The elimination of grade crossings has also been an important factor in the development of stations, large and small. The oldfashioned station on one side of the tracks, with its platform at the track level, which necessitated both the trouble of climbing into and out of the car, and often the danger of crossing the tracks to reach a train, is no longer deemed consistent with modern standards of comfort and safety. The grade crossing is being succeeded by elevated tracks made accessible through a subway or connected by an overhead bridge; or a form of construction is used in which the station itself is built on a bridge and the platforms and tracks below are reached by stairs or elevators. The other difficulty is being avoided by constructing the platforms and floors of the cars at the same height, so that instead of climbing up and down, one simply steps from car to platform or vice versa at a uniform level. This is a great advantage not only to the traveling public but also to the railroads, as it means greater swiftness as well as convenience and safety, and consequently greater economy in handling traffic.

W. Symmes Richardson—of the firm of McKim, Mead and White, architects of the Pennsylvania Station—speaking recently of modern developments in railroad architecture, pointed out that it was in this station that the raised platform was used for the first time in America to any extent, the whole equipment having been changed in order to make this possible. "The Pennsylvania Station," he added, "is the first in this country in which incoming and outgoing traffic has been separated, although this has long been recognized as the ideal abroad. And here it is divided not only to different sides of the station but to different levels."

In addition to electrification, elimination of grade crossings, improvements in cars and application of "safety first" principles, another important factor has influenced the progress of modern railroad architecture—namely, the public interest in civic buildings, and the demand for greater beauty in country and town. To this general feeling the railroad companies and their architects have splendidly responded, in many instances taking the initiative and setting an example for the community which has inspired its future development along attractive architectural lines.

Some idea of the dignity and classic beauty that have been achieved in our big city stations and terminals, the more informal and friendly quality of those in smaller towns, and the picturesque air of the little wayside woodland stations, may be gathered from the illustrations that we are presenting here. And it is worth remembering that these are only a very few examples chosen from among the many successful and beautiful structures that are to be found throughout the country.

A glance at these photographs reveals not only a wise handling of design and materials, but also an interesting adaptation of each building to the general character of climate and environment, and the type of local architecture that prevails. And although in the case of the larger stations no attempt at landscape treatment has been possible, owing to already congested city conditions, the small suburban and rural structures show a tendency to beautify the buildings by vines and gardens.

One of the most charming examples of this is the Southern Pacific depot at Burlingame, which, with its simple arches and tiled roof, is a typical piece of Southwestern architecture. The stucco walls are half hidden, on the side of the court, by luxuriantly growing, semi-tropical foliage that adds a delightfully informal and appealing touch to the charm of the building.

Another instance of the effective way in which vines and shrubs may contribute to the attractiveness of a station and its approach, is to be found in the detail view of the Forest Hills Gardens station

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PASSENGER DEPOT AT SANTA BARBARA, CALIFORNIA, ON THE SOUTHERN PACIFIC ROAD, WHICH RE-VEALS A BEAUTIFUL USE OF CONCRETE IN THE ARCHED AND CLOISTERLIKE SHELTER, WHICH IS SO TYPICAL OF THIS SECTION OF THE COUNTRY.

SYMMETRICAL DESIGN, A DECORATIVE TREATMENT OF BRICK AND AN EFFECTIVE PLANNING OF THE GROUNDS CHARACTERIZE THE LACKAWANNA STATION AT MORRISTOWN, NEW JERSEY, SHOWN IN THE LOWER PHOTOGRAPH: F. J. NIES, ARCHITECT.

THE GRAND CEN-TRAL TERMINAL IN NEW YORK HAS BEEN CALLED "A MONUMENTAL GATEWAY TO AMER-ICA'S GREATEST CITY," AND WELL DOES IT MERIT THE TITLE: THROUGH THE COÖPERATION OF ARCHITECT AND ENGINEER, BEAUTY AND STATELINESS AS WELL AS A HIGH DEGREE OF EFFI-CIENCY HAVE BEEN ACHIEVED: THE VAST PROPORTIONS OF THE BUILDING AND THE MANY DECORATIVE DETAILS REVEAL EQUALLY A WISE AND SYMPA-THETIC HANDLING OF THIS GREAT WORK OF CIVIC ARCHITECTURE.





INTERIOR OF THE GRAND CENTRAL TERMINAL, ONE OF THE MOST RE-MARKABLE ACHIEVEMENTS IN MODERN RAILROAD ARCHITECTURE: THIS IMMENSE HALL, WITH ITS GIGANTIC COLUMNS AND ARCHES AND ITS BLUE, STARRED VAULT, FORMS A FITTING ENTRANCE TO THE HEART OF THE METROPOLIS: WARREN AND WETMORE, ARCHITECTS.





PASSENGER STATION AT MINNEAPOLIS, ON THE GREAT NORTHERN ROAD, SHOWING AN EXCELLENT ADAPTATION OF CLASSIC ARCHITECTURAL PRINCIPLES TO MODERN NEEDS: CHARLES S. FROST, ARCHITECT.

A MORE FORMAL STATION OF BRICK, ON THE SOUTHERN PACIFIC ROAD, AT BERKELEY, CALIFORNIA, IN WHICH SIMPLE PILLARS LIGHTEN THE SOLID AIR OF THE DESIGN.



THE LOFTY CENTRAL HALL IN THE PENNSYLVANIA STATION, NEW YORK, WHICH SHOWS AN UN-USUALLY SKILFUL ADAPTATION OF CLASSIC PILLARS AND ARCHES TO THE NEEDS OF MODERN CIVIC ARCHITECTURE: ONE OF THE MOST STRIKING FEATURES OF THIS INTERIOR CONSISTS IN THE HUGE DECORATIVE MAPS WHICH ADD COLOR TO THE WALLS.

EXTERIOR OF THE PENNSYLVANIA STATION, REVEALING AN ADMIRABLE HANDLING OF THE IMMENSE PROPORTIONS OF THE BUILDING AND THE LONG COLONNADE: MCKIM, MEAD AND WHITE, ARCHITECTS.

on Long Island. This building, designed by Grosvenor Atterbury, presented—even before the foliage and flowers were planted—a remarkably artistic structure, with its picturesque concrete stairways and terraces, the covered bridge that linked it so quaintly to the buildings on the other side of the square, and the nearby fountain of simple design that added such a friendly note to the general neighborly atmosphere. And now that the graceful lines and mellow colored surfaces of walls and posts and parapets are still farther softened and enriched by clinging vines, trailing blossoms and velvety masses of shrubbery, the appearance of the whole is more suggestive of some gracious, peaceful Old World spot than of a recent suburban development only a few minutes ride from our busy metropolis.

The small rustic stations, such as those at Castle Crag and Shasta Springs, evidently need no gardens to make them beautiful, for the surrounding woodlands offer sufficient greenery. The simple structures, with their firm log posts and wide-eaved, shingle roofs, and their equally simple seats beneath the shade, seem quite at home in the rustic environment—their brown tones echoing the living trunks and branches in the background, and forming a pleasant contrast against the varying green of shrubs and trees.

Just as interesting in its way, is the use of concrete for small town and suburban stations. The one at Forest Hills Gardens we have already mentioned, and the building at Pocono Summit, though much smaller and simpler, likewise shows a satisfactory handling of this material in combination with a tiled roof. The use of rounded pillars in conjunction with heavier square posts is somewhat unusual, and the insertion of colored tiles in the surface of these posts and between the doors and windows also adds a note of distinction. The hanging and bracket lanterns—which are too small to be noticeable in the reproduction—indicate a careful thought for harmony of detail.

Turning to the larger and more pretentious types of railroad architecture, we find a tendency toward the employment of classic design, both as to the general form and the minor structural and ornamental features. This is only natural, for the larger a building, the more it seems to belong in the field of civic architecture, and a great railroad terminal devoted to the public service lends itself naturally to a dignified, impressive classic form. To quote Mr. Richardson again: "Any building which is successfully designed and worthy of note should express as far as possible, and in an attractive and beautiful manner, its use in its external appearance; and, architecturally, an ideal station would be a building of monumental and beautiful character, forming a suitable gateway to a large city, *(Continued on page 117.)*

OLD FARMHOUSES OF THE CHESAPEAKE: THEIR MESSAGE: BY WILLIAM DRAPER BRINCKLOE



HE Eastern Shore" folks call it; that flat, fertile stretch of land spread a hundred-odd miles along the eastern side of the Chesapeake from Havre de Grace on the Susquehanna to Tangier Island off the Pocomoke. Oysters and crabs for the catching; razorbacks, canvas-backs, diamond-backs, corn and redripe tomatoes by the "bugeye"-load! But better than

these grosser joys, is the wondrous beauty of the water fronts, where the little salt fiords and creeks wander up into the pastures and woodlands. No malarious marshes or dreary sand-dunes, but fields and old forest trees sweeping down to the very touch of the tides.

Back in the seventeenth century, Lord Baltimore brought out his Catholic Englishmen to settle these shores; but a steady stream of Quakers and Church-of-England folk soon overflowed the first immigrants. The land was fat and good; the Indians friendly; the climate mild.

Colonial farm life on the Eastern shore of Maryland was a far softer, smoother thing than in the more northern colonies, with Iroquois, witches and bitter winters to make life hard and dour!

And so, scattered all along the eastern waters of the Chesapeake,



FIGURE 2-A: A PICTURESQUE FARM COTTAGE IN KENT ISLAND, QUEEN ANNE CO., MARYLAND: ITS FURTHER DEVELOPMENT IS SHOWN ON THE FOLLOWING PAGE AND THE IMPROVEMENT IN FLOOR PLAN ON PAGE 119.



FIGURE 2-B: IMPROVED PLAN OF THE KENT ISLAND COTTAGE WITH LONGER KITCHEN, ADDITIONAL BEDROOMS, A SECOND BATH AND STORAGE: BRINCKLOE AND CANNING, INC., ARCHITECTS.

we find the little farm homes of these early Marylanders; homes that reflect the simple, pleasant life of the builders. Wonderfully interesting and suggestive, are these low-set farm cottages, and they have a very definite message to us, if we will heed it. For they are simple, straightforward, and free from all affectation; depending for their effect solely on proportion, symmetry and balance.

They are distinctly American, developed under conditions of climate and social life very similar to our own today. By studying the several types and adjusting them to our fuller modern needs, we shall get something most satisfactory and attractive; far better than much of the forced, exotic stuff we so often see.

Figure 1-A is a most interesting old farm cottage, built of brick, as were all the Eastern shore farmsteads; the porch is a somewhat later addition, but very skilfully worked in, nevertheless. All the very early homes of these colonists were copied more or less directly, from porchless English cottages; and the builders didn't realize, at first, the very great difference between the cool, moist climate of the Old Country, and the hot tropical summers of Maryland. The stuffy little bedrooms, with their tiny port-holes of windows, show this; veritable torture-chambers on an August night!



FIGURE 1-B: SHOWING THE COLONIAL COTTAGE ENLARGED AND ADJUSTED TO MODERN STANDARDS OF COMFORT: FLOOR PLAN ON PAGE 119: BRINCKLOE AND CANNING, INC., ARCHITECTS.



FIGURE 3-B: SKETCH OF THE EARLY GAMBREL ROOF COTTAGE WITH THE ENLARGED KITCHEN, MORE SUBSTANTIAL PORCH AND BETTER SPACING OF BEDROOMS: FLOOR PLAN ON PAGE 120: BRINCK-LOE AND CANNING, INC., ARCHITECTS.





FIGURE 1-A: AN OLD FARM COTTAGE BUILT OF BRICK ON THE EASTERN SHORE OF MARYLAND: PICTURESQUE BUT LACKING PRACTICALLY EVERY CONVENIENCE: ON PAGE 96 IS THE MODERN PLAN BY MR. BRINCKLOE, AND THE FLOOR PLAN IS ON PAGE 119.

FIGURE 3-A: A TYPE OF COTTAGE WHICH DEVELOPED IN THE SOUTH IN THE EIGHTEENTH CEN-TURY: ONE OF THE FIRST EXAMPLES OF THE USE OF THE GAMBREL ROOF: ON THE OPPOSITE PAGE IS MR. BRINCKLOE'S IDEAL TO WHICH THIS COTTAGE COULD BE RAISED BY A THOUGHTFUL ARCHI-TECT AND PRACTICAL BUILDER: FLOOR PLAN SHOWN ON PAGE 120.



FIGURE 4-A: TWO VIEWS OF ANOTHER INTERESTING EXAMPLE OF THE SOUTHERN COTTAGE WITH GAMBREL ROOF: THESE PHOTOGRAPHS ARE FROM AN EIGHTEENTH CENTURY HOUSE AT DOVEY BRIDGE, MARYLAND: ON THE NEXT PAGE IS SHOWN MR. BRINCKLOE'S DEVELOPMENT OF THIS RATHER SIMPLE HOME INTO A COMFORTABLE MODERN COTTAGE WITH GOOD-SIZED LIVING ROOM, DINING ROOM, FOUR BEDROOMS AND A SPACIOUS BATH: FLOOR PLANS TO BE FOUND ON PAGES 119 AND 120.



FIGURE 4-A: SHOWING IMPROVED MODEL.

Therefore, we must give better bedroom service; and the most convenient scheme is shown in Figure 1-B. A big living room fills the center of the first floor, with ample windows front and rear; a good-sized bedroom, with adjoining bath, uses up the right end of this story. Above, are three more bedrooms, and another bath; ranges of wide, low "Dutch" dormers give the needed light and air. Indeed, this sort of dormer seems to suit the sweep of the roof somewhat better than the peaked dormers of the old design.

Dining room, kitchen and pantry are at the left of the first floor; front stairs run up from the living room, meeting the kitchen stairs on the first landing, above the pantry.

The porch posts are made much sturdier, and various other small refinements of design are carried out; but the general proportions of the house are most carefully conserved.

Figure 2-A, from Kent Island, Queen Anne County, is a similar type, so far as the original house goes; but the porch added later is quite different. The frame kitchen too, is an afterthought of some fifty years; the colonists had come to realize the comfort and convenience of keeping the kitchen with its heat, smells and flies, outside the main house. The general proportions are excellent, but the porch is too small and too low with its eaves chopping into the windows on



FIGURE 5-A: THE MOST ATTRACTIVE OF ALL THE SOUTHERN COTTAGES WHICH MR. BRINCKLOE HAS PHOTOGRAPHED IN MARYLAND: RENDERED SO, NOT BY THE ORIGINAL DESIGN BUT BY PICTURESQUE ADDITIONS AND BY THE PLANTING OF VINES IN THE DECORATIVE FASHION SO POPULAR THROUGH-OUT SOUTHERN FRANCE.

either side. So, we work up a somewhat larger porch, with open terraces on either side; quite a good scheme, this.

The original plan was extremely simple—just one central hall, with living room and dining room on either hand, kitchen off to the left, two bedrooms and a hall room above. But we need another bedroom; so (Figure 2-B) we lengthen out the kitchen wing, shift the



SECOND VIEW OF FIGURE 5-A, SHOWING PORCH AND INTERESTING ROOF.

dining room and living room about somewhat, and thus get space for a large bedroom and bath, on the first floor. Upstairs, we have two good bedrooms, a second bath, and a storage room; though the bath may be omitted and a sewing room worked in, if desired.

So far we've been dealing with seventeenth century cottages; but along in the eighteenth, a new type developed—the gambrel roof (Figure 3-A). A purely American development, this; it seems to have been worked out simultaneously by the Puritans of New England, the Dutchmen of New York and New Jersey, the Swedes of Delaware, and Lord Baltimore's English Colonists of Maryland. A half-dozen more or less fanciful reasons have been given for its



THE DEVELOPMENT OF THE HOUSE SHOWN IN FIGURE 5-A ADDS MUCH TO THE COMFORT AND CHARM OF LIVING IN THE COTTAGE, BUT SEEMS TO HAVE LESSENED A LITTLE THE BEAUTY WHICH AGE AND CHANCE CONFER UPON THE ORIGINAL DWELLING: FLOOR PLAN SHOWN ON PAGE 121: BRINCKLOE AND CANNING, INC., ARCHITECTS.

birth, but the real reason seems just this: the colonists needed bigger, better, and cooler bedrooms to their story-and-a-half homes, and the gambrel-roof was the only practical solution. Figure 3-A is a typical example; though the ramshackle frame kitchen and the lowroofed front porch are obviously later additions.

A gambrel roof is a most pleasing thing when skilfully designed; but if an amateur meddles with it, the result is quite apt to be horrible beyond words! A few degrees too much or too little in the slant of one or the other roof-members; a few feet too long or too short, (Continued on page 119.)

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YOUR OWN HOME: NUMBER FIVE: BEAUTY THROUGH ARCHITECTURAL DETAILS



HE first spiritual want of barbarous man," said Carlyle, "is decoration." The crude tracings on the walls of prehistoric caves, the carved weapons of the Paleolithic warrior, the bead necklace of the savage and the feather head-dress of the Indian—all show the beginning of the æsthetic impulse. This impulse grew partly from vague superstitions and partly from

a dawning appreciation of the rhythm of color, form and line, and was bound up later with the service of religion, developing finally into the wider channels of handicrafts, architecture and the arts. And it is this artistic urge, this passionate, personal longing for the beautiful, this instinctive need for the expression of ideals, that is the inspiration of all good workmanship.

Only since architecture became impersonal, wholesale, commercialized, do we find it losing its individuality, its æsthetic appeal. So long as it was intimate to the lives of the people, it was bound to hold a certain decorative quality, an element of sympathy and loveliness. For, as Renan says, "Man makes beauty of that which he loves." Unless we care for a thing, it does not occur to us to beautify it. On the other hand, if it is *our own*, the very fact of possession seems an incentive to beautification, to some form of self-expression through art.

For this reason, when we begin to demand a more personal environment—when we are no longer content to live first in one, then in another rented apartment or house—when we insist upon building our own homes and embodying in them our own ideas of comfort and of beauty—only then may we expect to find our architecture flowering into new and lovely forms. *Your own home*—in those words, and all the personal interest and enthusiasm they imply, lies the key to successful domestic architecture.

It is for this quality of individuality that we have selected the illustrations of house and garden features for the present article and it is in such details that the art impulse of designer and owner finds freest play. For, after the general plan and style have been determined upon, after the materials for the main construction have been chosen, the matter of the architectural details can be considered. There are so many features that lend themselves to picturesque treatment, and so many different ways in which the commonest materials and most prosaic elements can be given distinction and charm.

It is not necessary, in achieving this, to increase materially the cost of construction. Often the most delightful effects can be obTHE MOST BEAUTI-FUL EFFECTS IN OUR MODERN HOME ARCHITECTURE ARE OFTEN OBTAINED IN THE SIMPLEST FASH-10N-THROUGH A SYMPATHETIC HAN-DLING OF STRUCTURAL MATERIALS AND AN UNDERSTANDING OF HARMONY IN PRO-PORTION, LINE, TEX-TURE AND COLORING: THE PHOTOGRAPH AT THE RIGHT SUGGESTS HOW MUCH CHARM IS POSSIBLE IN A STUCCO BUILDING WITH TILED ROOF: THE ROUGH PLAS-TERED SURFACE OF THE WALLS, THE QUAINT HOODED DOORWAY, THE WIDE EAVES AND PRIM LIT-TLE DORMERS GIVE THE PLACE A DELIGHT-FULLY HOMELIKE APPEARANCE.





Photographs by Jessie Tarbox Beals.

THE STAIR-CASE IS ONE OF THE MOST ADAPTABLE DETAILS OF THE HOME INTERIOR, FROM AN ARCHITEC-TURAL STANDPOINT, AND LENDS ITSELF TO ALL SORTS OF UNIQUE DESIGNS: WE ARE SHOWING HERE AN ESPECIALLY INTERESTING CONSTRUC-TION.



EVEN THE PLAINEST HOUSE CAN BE MADE ATTRACTIVE BY A CAREFUL TREATMENT OF THE WIN-DOWS: IN THE UPPER PICTURE IS SUGGESTED AN UNUSUALLY DECORATIVE WAY TO DESIGN THE SUNROOM EXTERIOR: THE LATTICED EFFECT IS REPEATED IN THE OTHER WINDOWS AND IN THE SIMPLE TRELLISES: IN THE LOWER VIEW THE OLD-FASHIONED BEAUTY OF DIAMOND PANES IS REVEALED, IN COMBINATION WITH SHINGLED WALLS.



NOW THAT HOUSE AND GROUNDS ARE BEING PLANNED IN SUCH CLOSE HARMONY, THE GARDEN WALL MAY BE CONSIDERED AMONG THE ARCHITECTURAL DETAILS OF THE HOME: THE ONE ILLUS-TRATED HERE IS AN EXCEPTIONALLY PICTURESQUE EXAMPLE OF ROUGH STONE, CONCRETE AND TILE.

ENTRANCE AND PORTE COCHÈRE IN WHICH BRICK, CONCRETE AND SPANISH TILES HAVE BEEN ADMIR-ABLY COMBINED: THE EVERGREENS BESIDE THE STEPS, THE SHELTERED RECESS OF THE PORCH AND THE DIAMOND-PANED WINDOWS ABOVE ADD TO THE HOSPITABLE ATMOSPHERE OF THE APPROACH.



TWO SUCCESSFUL INSTANCES OF MODERN STAIRCASE DESIGN WITH COLONIAL INSPIRATION: IN THE UPPER PICTURE THE BEAUTIFUL LIGHTING SCHEME IS NOTICEABLE: THE LIGHT WOODWORK IN BOTH INSTANCES IS USED IN A WAY THAT MAKES IT A REALLY ARTISTIC ASSET OF THE INTERIOR.

BEAUTY IN ARCHITECTURAL DETAIL

tained simply by using materials in a decorative and unusual way, both as to color and design. In fact, the most satisfying results and the most appealing beauty are usually gained, not by applied ornament—or, as somebody once expressed it, "the kind of architecture that you *nail on*," but by an interesting and sympathetic handling of the practical structural parts.

Of course, it is possible to leave all these matters to the judgment of your architect, and rely upon his superior technique and experience to obtain beauty of detail for your home. But no matter how great his wisdom, how excellent his taste, the result will lack individuality —or rather, it will express *his* individuality, *his* standard of architectural beauty, instead of your own. On the other hand, if you give each point your personal thought and attention, and discuss with him the most practical way of carrying out your ideas, your home, when finished, will hold infinitely more significance in both a material and spiritual sense. Naturally, such effort on your part will require careful study of many technical points; but the pleasure of the task and the lasting satisfaction of the outcome will more than repay you for the effort.

CUPPOSE, for instance, that your house is to be of brick. There are the questions of color, texture, bond and mortar joints to be considered. Besides the ordinary terra cotta, the colors run from deepest purple to palest buff, with dozens of intermediate shades and tones between. The texture ranges from the smoothest to the roughest surface; today architects are inclining toward the use of the rough-faced variety, since its irregular surface refracts the light in such a manner that a certain atmospheric quality is obtained for even the plainest wall. The bond or pattern in which the brick is laid, also proves an important factor in the general effect. whether one chooses the plain running bond, the more decorative Dutch, English or Flemish, or the still more definitely ornamental surface of geometric patterns, it is usually well to vary the colors of the brick, especially in large surfaces. Header rows in steps and window sills, and above the foundation, and soldier rows at the heads of the windows, will emphasize the main structural lines, while additional interest may be given by a decorative frieze below the eaves or medallions in the wall above the entrance and between window groups.

The width of the joints, the coloring, texture and handling of the mortar should also receive consideration. Rough mortar, from half to three-quarters of an inch thick, a little lighter or darker than the brick, and left with "rough-cut flush" or raked-out joint, gives

BEAUTY IN ARCHITECTURAL DETAIL

a wall an air of mellowness, anticipating the irregular surface that years of weathering bring.

Brick may be combined very effectively with other materials such as stucco or field stone, and an edging of brick around a cement porch floor or around the stucco panels of a sunroom wall, proves very attractive. Colored tiles, in vivid or subdued tones, with either a bright or a dull glaze, are also being used with a faint echo of the richness that characterizes the buildings of the Orient. The tiles add to the beauty of a brick wall, and are even more striking when inlaid in the gray or buff surface of concrete. Field stone, selected for irregularity of shape and variety of coloring, and laid with wide, rough mortar joints, is also a source of much architectural beauty, while the lighter construction of shingles, clapboards and the timbers used in roof, gable and porch are all capable of interesting handling.

The roof of a home is likewise full of possibilities for artistic treatment, whether it be of shingle, tile, slate or composition sheet roofing. Its slope and contour as well as the material and coloring should be carefully thought out, and the home-maker should remember especially that wide eaves, dormers, and hooded entrances and windows, invariably give the place a sheltering, homelike air.

Chimneys, if well placed and of ample dimensions, may also contribute to the general attractiveness of the exterior, especially if they are built in an outside wall—although this is not so economical from the standpoint of heat conservation. They may serve, moreover, to give a touch of variety as to materials. For instance, if the house is of brick on a stone foundation, a stone chimney would be in keeping; or the chimney might be of stone in the lower portion, merging gradually into brick about half-way up.

A NOTHER architectural detail that deserves proper regard as to placing, materials and design, is the front entrance. A generous-sized, sturdy door of oak or chestnut, with simple paneling, lightened perhaps by small panes in the upper half, and flanked by long narrow casements giving light to hall or coat closets within, holds out a pleasant invitation to the visitor, especially if potted shrubs or vines are added on each side, and a friendly lantern is hung overhead. The shelter of a hood or porch roof will emphasize the suggestion of hospitality. A Dutch door also gives a quaint and solid look to an entrance, and is in keeping with the simple bungalow style.

The design, grouping and placing of the windows should be studied with relation to each other and to the house as a whole, for they are important features. The plainest house may be made
BEAUTY IN ARCHITECTURAL DETAIL

attractive by using small-paned casements set in well-balanced groups of twos and threes. Nor need this be done at the sacrifice of interior beauty or comfort, for as a rule the better the windows appear from the exterior, the more satisfactory they are within. Great variety is possible, moreover, in the design—the size, shape and arrangement of the panes, in both the casement and the double-hung type. A large central pane with long, small-paned windows at each side, makes an attractive unit, while the diamond-shaped panes, that recall the picturesque manors and cottages of the Elizabethan era, give a graceful, latticelike touch to the walls.

The architectural features of the interior—the chimneypieces, staircase, woodwork and built-in fittings—also are important. Their design will be suggested largely by the character of the house. For a Colonial house, chimneypieces of white or cream enameled wood of appropriate classic design are usually most suitable, although brick may be introduced if a warmer note of color is desired. For a field-stone house, a chimneypiece of the same material or of concrete is usually in keeping, while, in a concrete or brick house, either of these materials may be used with good effect, alone or combined, or brightened by colored tiles in chimneypiece or hearth.

The staircase should be planned with comfortable breadth and with steps that are easy of ascent; its woodwork should be in harmony with the other woodwork of the interior. Indeed, if the stairs are visible from the living room and dining room, their design, finish and color will set the keynote for the rest of the woodwork. But this leads us from the architectural field into the domain of cabinetwork. Enough has been said to give the prospective home-builder an impression of the varied possibilities for beauty that are presented by the structural details of the new abode, and if such hints, together with the illustrations, may serve as helpful finger-posts along this alluring pathway, they will have fulfilled their aim.





ILLUSTRATING THE CRAFTS-MAN IDEA OF HOME COMFORT IN BUNGALOW AND COTTAGE

NE of the greatest pleasures of life," wrote John Burroughs, in a chapter on the "Roof-Tree," "is to build a house for one's self. . I notice how eager all men are in building their houses, how they linger about them, even about the proposed sites. When the cellar is being dug, they want to take a hand in it; the earth evidently looks a little different, a little more friendly and congenial than other earth. When the foundation walls are up and the first floor is rudely sketched by rough timbers, I see them walking from one imaginary room to another, or sitting long and long, wrapped in sweet reverie, upon the naked joist. It is a favorite pastime to go there of a Sun-

day afternoon and linger fondly about; they take their friends or their neighbors and climb the skeleton stairs and look out the vacant windows, and pass in and out of the just sketched doorways. How long the house is a-finishing! The heart moves in long before the workmen move out."

Almost one might say that the heart moves in even before the mason and the carpenter have begun their actual work of construction. While the plans are still on the draughting board, while the arrangement of the rooms and all their intimate homelike details are being worked out, the proud, prospective owner is already, in imagination, enjoying the comfort of the cozy fireside, the airy shelter of the vine-clad porch, and all the longed-for conveniences of the neat, well-appointed kitchen. The house may be still only a few lines and figures upon paper; but it possesses all the de-

> lights of anticipated pleasure, of a dream that is at last coming true.





Gustav Stickley, Architect.

CRAFTSMAN BUNGALOW OF STUCCO AND SHINGLE, NO. 205: A COMFORTABLE, ROOMY HOME PLANNED FOR THE NEEDS OF A FAMILY OF FIVE OR SIX PEOPLE AND A MAID: THE PLANS PROVIDE FOR THREE BEDROOMS ON THE FIRST FLOOR AND TWO UPSTAIRS, WITH PLENTY OF ATTIC SPACE FOR STORAGE: ALTHOUGH THE BUNGALOW IS DESIGNED FOR A WIDE SUBURBAN OR COUNTRY SITE, IT COULD BE ADAPTED TO A NARROWER LOT BY MAKING THE DINING ROOM AND PORCH FACE THE FRONT AND HAVING THE ENTRANCE ON THE SIDE.



Gustav Stickley, Architect.

THIS SIMPLE CRAFTSMAN HOUSE, NO. 206, POSSESSES MANY PRACTICAL AND PLEASANT FEATURES: LIKE THE PRECEDING DESIGN, IT IS PLANNED WITH STUCCO WALLS AND SHINGLED ROOF, THOUGH QUITE DIFFERENT IN CONSTRUCTION AND ARRANGEMENT: THE SHELTERED PORCH WHICH CAN BE GLASSED IN FOR THE WINTER, MAKES AN INVITING ENTRANCE, AND THE LITTLE BALCONY TUCKED INTO THE GABLE ABOVE ADDS A TOUCH OF COZINESS: THE MAID'S QUARTERS ARE ON THE FIRST FLOOR, LEAVING ROOM FOR THREE BEDROOMS, SEWING ROOM AND STORAGE SPACE ABOVE.

THE CRAFTSMAN IDEA OF HOME COMFORT

A sympathetic architect naturally shares with the owner something of this enthusiasm, this satisfaction that always attaches so keenly to the materializing of a longcherished ideal. And even when the house is not being designed for one particular family, but as a general suggestion, adaptable to various home-builders and their needs, the architect nevertheless has a sense of definite personal interest. Every nook and corner, every detail of the arrangement and fittings, is planned to meet some actual need, so that by the time the drawings are completed, not only the house itself but its projected site and hypothetical tenants seem almost a reality.

In designing the two Craftsman houses that we publish each month, we find ourselves considering each point in their layout and design with just this personal interest for the well-being of those who may eventually build and live in them. In the house and bungalow presented here we have tried to embody as much comfort and convenience as was possible in the given space, combined with an economical form of construction. And the plans will prove, we hope, of service to many home-makers who contemplate building a country or suburban bungalow or cottage of the size and general arrangement shown.

B UNGALOW No. 205 is designed for stucco on metal lath with roof of shingles, and concrete or wooden pillars are used for the pergola, which forms such a pleasant feature of the approach. Both the construction and the interior treatment are somewhat unusual. The combination of terrace, curved corner pergola and sheltered porch is particularly attractive. The porch, which is accessible from the living and dining rooms, is built with a parapet and is covered by the main roof, so that it may be glassed in for the winter as a sunroom, if the owner desires. It is also sufficiently shut away from the entrance to afford a secluded spot for outdoor living.

A small recessed porch, hooded by a projection of the roof, shelters the front door, which opens into an entrance hall that is practically a part of the living room. closet for hats and coats is provided here. The living room has two double casements in the front wall, and single ones on the side, with a glass door between, so that the room will be sufficiently light in spite of the porch and pergola. A very practical fea-ture is the fireside seat, which we have planned to be constructed with a hinged lid and a separate box for fuel inside, the box being really a sort of dumb waiter that can be operated from the cellar, so that the firewood and logs can be hauled up and kept under the seat.

The dining room should be light and pleasant, with its wide window groups, and its glass door opening onto the porch, affording a full-length glimpse of the pergola, vines and flower-boxes. A long pantry equipped with two dressers, and having space for the icebox beneath the window, is provided between dining room and kitchen, and the latter is light, fairly large and con-





TWO-STORY COTTAGE NO. 206 : FIRST FLOOR PLAN.

planting of vines and by a flower-box along the parapet.

The rest of the floor plan is devoted to the three bedrooms and bathroom. These are separated from the front of the house

and from the kitchen by a hall that is lighted by a window overlooking the rear porch. There is a linen closet in the hall and good-sized closets in the bedrooms.

On the next floor are two bedrooms and bathroom, with dormer and gable windows, and storage space is provided beneath the remainder of the roof. In case two maids are kept, this upper story will of course be used as the servants' quarters, and can be reached from the kitchen, which has access to the stairs. But in case there is only one maid, and the other bedroom is needed for a member of the family or for a guest, the door between the lower hall and the staircase may also be used, to save passing through the kitchen. Otherwise. this door could be kept locked, to simplify the arrangement—for, as a rule, the fewer doors there are in one's home, the more convenient and comfortable it proves. The cellar stairs, which descend beneath

this staircase, are accessible from the pantry.

Naturally, in a bungalow of this type, many little modifications are possible to adapt it to different needs. For example, if there are a good many in the family, and it seems advisable to have a larger living room, this can be accomplished by omitting the small recessed porch—or rather building a projecting porch to shelter the doorway—and making the space now marked "porch" and "entrance" a part of the living room.

C RAFTSMAN Cottage No. 206 is also of stucco on metal lath with shingled roof, but the design and interior arrangement are quite different from the preceding home. The entrance is made inviting by the well-sheltered porch and the little recessed balcony overhead. The former, it will be noticed on the

plan, has an extension at the right which forms the entrance, and this construction makes it comparatively easy to glass in the porch for a winter sunroom, or to screen it for the summer.

The hall is large and light, with a coat closet at the left, the staircase nearby, a



TWO-STORY COTTAGE NO. 206: SECOND FLOOR PLAN.

wide opening into the living room and a passage through to the kitchen, enabling the maid to go upstairs or answer the front door without passing through the dining and living rooms.

These rooms occupy the whole side of the house, separated only by the short, low partitions, so that an effect of spaciousness is gained for the interior. The open fireplace and the generous window groups on three sides insure an air of cheerfulness.

In addition to the dressers and other equipment in the kitchen there is a pantry with plenty of shelf room and space for the ice-box against the outside wall, where it may be filled through a door onto the porch. This porch also may be screened or glazed according to the season. Maid's room and bath are provided on this floor, leaving the entire second floor free for family use.

Here are three bedrooms and bathroom, sewing room and balcony, and also a goodsized place for storage. Plenty of closets are planned, the one in the rear bedroom being especially large and lighted by a small window. A convenient feature is the dumbwaiter, which is installed beside the stairs, and which runs from the cellar to the second floor. This is made with two sides open, so that it may be accessible from the kitchen and from the second floor hall.

As in the case of the bungalow, the plan is capable of modification to meet individual requirements. The sewing room, for instance, could be turned into a bedroom if an extra one were necessary, and if the storage room were not needed for that purpose it could be fitted up as a playroom for the children.

A southern or southeastern exposure would be most suitable for this house, while the bungalow would be most satisfactory facing the southeast.

PREPARING THE GARDEN SOIL

"WHEN is the proper time for preparing to plant one's garden?" According to the United States Department of Agriculture's specialist, in the spring, as soon as the soil has dried so that a handful when grasped in the hand and gripped by the fingers will slowly fall apart upon being released, it is in a fit mechanical condition to prepare for planting. Clay or heavy soils should never be worked while wet. More injury may be done by this than can be overcome in several years of careful culture. When the soil is found dry, as described above, the upper three inches should be made fine by the use of the hoe and steel-tooth rake; all rubbish, stones, and clods should be removed and the surface made even, somewhat compact, and as level as possible. It may then be marked off for planting.

Much of the soil in the average backyard is not only poor in plant food and deficient in decaying vegetable matter, but it is hard and unyielding. However, such is the basis which many a housewife or child has to use for the making of a garden. Teachers who plan school gardens for their pupils also have similar conditions to meet. Therefore, in order to get good results, careful attention must be given to the preparation of the soil.

Soils which are naturally moist are likely to be sour, and so not in the best condition for the crop. Whether sour or not, it will be well to have the pupils test them, which can be done as follows: Secure from a drug store a piece of blue litmus paper; then take a handful of the soil slightly moistened and place the paper on it. If the soil is sour, the paper will turn red. To correct such a condition lime should be used. Cover the ground with a thin coat of air-slaked lime, which can probably be secured near-by at small cost, and work this in well. The lime, while not a plant food, will correct the acidity and will improve the physical condition of the soil.

If the soil is clayey or a stiff clay loam, and the location is in a section where severe freezing occurs, give the area a heavy dressing of decomposed manure in the autumn. And before freezing weather sets in, spade the land, turn the manure under, and leave the soil in a rough, lumpy condition so as to secure the benefit of the digestive action of the winter freezes in reducing the soils. This should be repeated annually in the North. If the soil is light and sandy, a mulch of manure may be spread over it in the fall, and the spading delayed until spring.

In localities where the soil does not freeze, the manure may be applied in the autumn and the soil repeatedly spaded during the winter whenever it is dry enough to be worked. The beneficial effects of freezing in the North can to some extent be attained by repeated spadings in the South. The one general precaution which should always be observed is never to stir the soil while it is wet.

"A HOME OF MY OWN"



"A HOME OF MY OWN:" HOW IT GREW: BY ELEANOR P. BALDWIN

O many of us "a home of my own" seems the key to Happyland; but some of us forget that it is not so much money and the purchasable services of architects and decorators that in truth make a home, as quiet listening to one's own ideals and gentle obedience to one's own circumstances, limited though they be. Like happiness, beauty is elusive. But in homebuilding, the roots of beauty are to be found deeply and permanently in use and adaptation-use in so far that the home must serve well the needs of those who are to dwell in it, and adaptation not only to those needs but also to the size, shape and location of the building spot; further, of material used in the construction of the building, which should express its environment and belong in every way to it. Such a home is "Waxahatchie," a bungalow on the heights southeast of the congested center of Portland, Ore. It belongs to Mr. and Mrs. Wilford A. Shahan, craftspeople, and came into being in this wise.

In the early half of 1905, when the City of Roses was just arriving at something like self-consciousness and a sense of its own beauties and possibilities, the Lewis and Clark fair was incubating. Houses were hard to get for moderate rates, so the Sha-

WAXAHATCHIE, DAVENPORT STREET SIDE, SHOWING LIVING-ROOM WINDOWS AND CHIMNEY, BASEMENT ENTRANCE, CURVED STAIRWAY LEADING TO "ROUND ROOM," ALSO USABLE ROOF AND SHELTERING TREES AT RIGHT.

hans, upon arriving, decided literally to pitch their tent and be independent of rentlords. This they did on the present site of Waxahatchie. Once settled in their cloth house, they began transforming it into a bungalow, a transformation which proceeded by leisurely stages as circumstances frowned or favored. In money the Shahans were not rich; their wealth was of a more stable character than that, in clever brains, deft hands and artistic souls. Father. mother and daughter planned and worked. calling in as little outside help as possible, stopping when funds were low, going on as the family exchequer swelled. Mrs. Shahan savs:

"One whole summer, while our bank account grew, the windows were encased in muslin and curtains of burlap hung in the doorways. Happy days, for the house was taking on an air of hospitality, so much so that the dogs would sometimes troop through in the night, showing their approval of a place without troublesome doors; but we knew they were friendly guardians, knowing more than they could tell."

For the moral bracing of any timid homebuilder who fears the criticism some pet idea may receive from the uncomprehending stranger, Mrs. Shahan's experience will

"A HOME OF MY OWN"



WAXAHATCHIE, SHOWING FRONT ENTRANCE, PERGOLA ROOF, LAWNS WITH GLIMPSE OF WALK LEADING TO UPPER LAWN: ALSO DAVENPORT STREET SIDE OF HOUSE.

prove heartening. She says that "in all these years of growth, of planning and building, we tried first to please ourselves, learning early in the adventure to adhere to our own plans," though suggestions, criticisms, adverse and otherwise, were placed

generously, even lavishly, at their disposal, one person going so far as to pronounce the house "an abortion," and later, when it was finished, declaring with equal sincerity that it was "a dream."

What work the Shahans were obliged to



PERGOLA AT NORTHEAST ANGLE OF HOUSE, SHOWN AT LEFT OF FRONT ENTRANCE: MRS. SHAHAN STANDING NEAR SIDE ENTRANCE.

"A HOME OF MY OWN"



THE WOMAN WHO HELPED TO PLAN THE HOUSE AND PLANT THE GARDEN STANDING IN THE DOORWAY.

hire was "day-work." Supervision of construction fell to Mrs. Shahan's lot, and she soon learned to select able and obedient workmen who would do as they were told, a most important requisite when the unusual is being attempted. Sometimes moods of discouragement attacked these builders. and Mrs. Shahan says: "Feeling discouraged, I would register a vow never again to build a house over my head, but it is a very sure way of beating the game if you have the ability and staying qualities. My daughter and I did the planning and sketching; my husband all the masonry. We feel that our experience would be invaluable if we were ever to build another home: but as no commercialism enters into the making of such a home, the heartbreaking part is in ever having to give up what is so much your very own.

The building lot was an irregular hillside patch, roughly triangular in shape, its base facing Davenport street and the south. But the artistic sense of the Shahans was equal to this situation. To them it was clear that the ordinary, conventional, angular wooden dwelling house, with one or two orderly protuberances here and there, would be little short of a crime on such a lot. Their house, they felt, must grow naturally and easily up out of its location, be a sort of crown and complement for it. Wood and stone were the building materials chosen because they are a part of the environment. The mason work is of native stones, selected by Mr. Shahan for their delicate veining and coloring.

The exterior view of the Davenport street side presents the wide windows of the living room, the massive stonework of the great chimney and fireplace, the little curved staircase winding its way to the "round room," which curves away from the dining room, opening into the east room belonging to Mr. Shahan, with its fireplace and sunny windows. The front entrance, with its deep porch, commands a view of both Elizabeth and Davenport streets, while to the north, at the left, is the vine-covered pergola, at the back of which is the stonework which marks the limit of the Shahan domain on that side. The pergola, upon which a side entrance opens, is a sheltered, hidden place of greenery, shade and coolness on the From this fairy warmest summer day. nook, close to the wall, runs a narrow path to the open court at the east, on which the kitchen door opens. This is also secluded, formed by an angle in the building. Here you will see the cluster of trees around which the house grew, leaving them plenty of room to grow. These trees shade not only the little court and the kitchen door but the roof resort, with its built-in seats.

ARCHITECTÜRAL BEAUTY IN THE |CIVIC GATEWAY OF TODAY

(Continued from page 91.)

is to be found in the detail view of the Forest Hills Gardens station on Long Island. This building, designed by Grosvenor Atterbury, presented-even before the foliage and flowers were planted-a remarkably artistic structure, with its picturesque concrete stairways and terraces, the covered bridge that linked it so quaintly to the buildings on the other side of the square, and the nearby fountain of simple design that added such a friendly note to the general neighborly atmosphere. And now that the graceful lines and mellow-colored surfaces of walls and posts and parapets are still farther softened and enriched by clinging vines, trailing blossoms and velvety masses of shrubbery, the appearance of the whole is more suggestive of some gracious, peaceful. Old World spot than of a recent suburban development only a few minutes' ride from our busy metropolis.

The small rustic stations, such as those at Castle Crag and Shasta Springs, evidently need no gardens to make them beautiful, for the surrounding woodlands offer sufficient greenery. The simple structures, with their firm log posts and wide-eaved, shingled roofs, and their equally simple seats beneath the shade, seem quite at home in the rustic environment—their brown tones echoing the living trunks and branches in the background, and forming a pleasant contrast against the varying green of shrubs and trees.

Just as interesting, in its way, is the use of concrete for small town and suburban stations. The one at Forest Hills Gardens we have already mentioned, and the building at Pocono Summit, though much smaller and simpler, likewise shows a satisfactory handling of this material in com-The use of bination with the tiled roof. rounded pillars in conjunction with heavier square posts is somewhat unusual, and the insertion of colored tiles in the surface of these posts and between the doors and windows also adds a note of distinction. The hanging and bracket lanterns-which are too small to be noticeable in the reproduction-indicate a careful thought for harmony of detail.

Turning to the larger and more pretentious types of railroad architecture, we find a tendency toward the employment of classic design, both as to the general form and



MOUNTAIN STATION ON THE PENNSYLVANIA RAILROAD SHOWING A JUST COMPLETED NATURALISTIC PLANT-ING, MOST OF THE SHRUBS AND TREES HAVING BEEN TRANSPLANTED FROM THE WOODS IN THE NEIGHBOR-HOOD: THIS IS ONLY ONE OF MANY EXAMPLES OF HARMONIOUS TREATMENT OF BUILDING AND GROUNDS.

ARCHITECTURAL BEAUTY IN CIVIC GATEWAYS



the minor structural and ornamental fea-This is only natural, for the larger tures. a building, the more it seems to belong in the field of civic architecture, and a great railroad terminal devoted to the public service lends itself naturally to a dignified, impressive classic form. To quote Mr. Richardson again: "Any building which, is successfully designed and worthy of note should express as far as possible, and in an attractive and beautiful manner, its use in its external appearance; and, architecturally, an ideal station would be a building of monumental and beautiful character, forming a suitable gateway to a large city, and at the same time suggesting the idea of transportation and traffic."

The most imposing and monumental terminals in this country are those of Washington and New York, and among our illustrations will be found views of the Grand Central Terminal and the Pennsylvania Station, which give a faint idea of the colossal proportions and beautiful design of these structures. In each case the building, as a unit, has been handled in a broad, dignified manner, with well-balanced masses and harmoniously treated walls and openings, and with just enough decorative detail to give grace to the solid contours and severely simple lines. Different in design, but equally significant and impressive in its achievement, is the Pennsylvania Station. The classic colonnade, the immense entrances. the great central hall-the whole building, in fact, commands one's admiration for its beauty of proportion and excellence of detail, aside from its significance as a feat of architectural and engineering skill.

STATION AT WOODLAND, MASS., SHOWING ADMIRABLE GROUP PLANTING AND WISE USE OF NEARBY POND.

Though so vastly different from the gates of olden times, these stations have retained one characteristic feature. In their lofty halls and long arcades are to be found not only the familiar ticket, baggage, telegraph and telephone offices, newsstands and restaurants, but a wide variety of other shops in which the traveler can purchase almost every conceivable article of necessity or luxury-from books and flowers to Japanese kimonos and Persian rugs. In this, at least, we find an echo of the bazars and marketplaces that were clustered around the ancient city gates. And though the picturesque costumes and vivid colors, the sunlight and the blue skies of those Eastern scenes are lacking, those who have "eyes to see" may nevertheless find our great modern gateways rich in architectural beauty, human interest and romance.

In our appreciation of the comfort and convenience for which twentieth century transportation has become synonymous, and in our respect for the splendid work accomplished in this branch of civic building by the railroads, their architects and engineers, let us remember the workers whose actual labor carried forward to completion such gigantic undertakings, and made possible such architectural beauty. And lest we might perchance forget, let us lift our eyes sometimes to the words that are carved above a certain entrance in the Grand Central Terminal: "To all those who with head, heart and hand toiled in the construction of this monument to the public service, this is inscribed."

OLD MARYLAND FARMHOUSES



OLD MARYLAND FARM HOUSES

(Continued from page 99.)

and the mischief is done. So if you must design your own house without professional aid, keep away from the gambrel roof!

But, turn back to Figure 3-A PORCH again. The kitchen wing of the old building is utterly clumsy; so we re-design it. The old front porch is fairly good, but too low; we FIGURE raise the cornice to line up with the SECOND main house cornice, and cut off the FLOOR gingerbread brackets from the PLAN: posts. That reduces the center SEÉ PAGE 95. dormer somewhat, but makes no other change.

The plan is quite simple, since the gambrel roof gives us ample bedroom space in the second story, and we therefore don't



need any first-floor bedrooms. A central hall, with rooms on either side-that's the plan of both floors, as shown in Figs. 3-C, 3-D. Still, if one more bedroom is needed, it's very easy to run a living room, balancing the kitchen, on the right;

this gives a first-floor bedroom, with storeroom or sewing room above.

Figure 4-A is another type of the gambrel, an old house on the Choptank River, in Talbot County. Here we have something different: an interesting, L-shaped wing, at one end of the porch. The scheme is good, but the proportions are wrong; the wing is too high and narrow for the rest

of the building. So we widen this wing, and work out a few other little changes in the exterior; then we go at the (Figs. 4-B, 4-C, 4-D.) plan.

A rather more elaborate layout, this: living room, dining room, kitchen, pantry, den and toilet, on the first floor; four bedrooms



and bath on the second. The den may be used as a servant's bedroom with bath, if desired; and various other changes may be made.

PORCH

Finally, we come to Figure 5-A: "Otwell," the old Goldsborough mansion lying between Trippe's and Goldsborough Creeks, in Talbot County-wonderfully picturesque, with its jumble of additions; but a trifle ill-proportioned. Figs. 5-B, 5-C



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OLD MARYLAND FARMHOUSES



show the proper present-day development of this idea; a symmetrical, H-shaped plan, with large living room in the center, two bedrooms to the left, den and dining room

to the right, kitchen off in a wing to itself. I haven't shown the second story plan; in that there would be six or seven more bedrooms with several baths.

Naturally, none of these plans may exactly suit your need, but they can be readily worked in. My own home, for example, is somewhat like Figure 1-B, but I have a very satisfactory sleeping porch recessed into the roof at the front.

And so I might go on endless- FIGURE 3-D: ly, for there is no end of these de- SECOND lightful farmhouses on the "East- FLOOR ern Shore."



PLAN

N almost every part of America there are old farmhouses to be found, the property of people whom the hardships of the old country life have worn out or of people with the old frontier spirit still in their blood who have moved on to form new civiliza-Maine, indeed all In tions. through New England, in Penn-

sylvania, in New Jersey, in parts of New York State, as well as in the South, are these beautiful, simple old houses,-well planned, well constructed, with good outline, picturesque windows, and chimneys that do not smoke. Some of the most charming homes today are reconstructed farmhouses of the East.

The great advantage in remaking a house, instead of building it, is that there



to make mistakes youryou have self. and every opportunity of

mistakes of the origiobliterating the You start with nal owner and builder.

a good foundation, with good walls, houses built by people who needed comfort, who had no joy except in their own homes, who had to have an outlook over the hills or the meadows, and warmth for their bodies and sunlight for their spirits. If there are difficulties in these old houses it is mainly in the size of the rooms and the height of the ceiling; the former, however, can easily be adjusted, for these old houses are so well built that the changing of a partition does not mean any direct injury to the structure. As for the low ceilings, they help to keep rooms warm and cozy and if the plaster is taken off and the beautiful old beams revealed, cleaned and oiled, a certain

OLD MARYLAND FARMHOUSES



beauty of color and structure is given that few modern houses possess.

As a rule, in the most moderate-sized old farm and village houses there were too many rooms, the space was broken up. Either there was a vogue for many-roomed houses or else there were large families; also the old patriarchal feeling still existed and married sons and daughters came home to live with mother and father. But the tearing out of partitions, the bringing of rooms together even where the floors are on different levels often induces unusual outline and a certain picturesque quality that it is impossible to secure in the modern new house.

THE CRAFTSMAN has frequently recommended the careful study of old houses

to those of its subscribers who have written asking for advice about building. Also in our architectural rooms, we have more than once undertaken the remodeling of old houses, with results both satisfactory and attractive. It is not so difficult to add modern improvements where a complete renovation of a house is necessary. And quite wisely today the metropolitan people who are moving out to the country take with them the comforts which have seemed luxurious in rural life,-electric lights, and telephones and fireplace furnaces and model kitchen equipment.

Mr. Brinckloe's article on the old Maryland farmhouses which precedes this is a very interesting study in the reconstruction of old-time houses. He seems to have the ability to leave the old beauty and add the new comfort, making a combination in architecture which does away with all the ordinary objections to rural life. It was women who suffered most in the old way of living in the country, and today the architect who designs new houses or who makes over the old, must study the convenience of the mother and the housewife if he is to prove a success and if the movement toward the country is to progress as swiftly as we hope and as it should for the benefit of the nation. And judging from the results that have already been accomplished in this direction, there is every reason to believe that the future will see more and more beauty and comfort in our rural homes,



BOOKS ABOUT THE DWELLING-HOUSE

BOOKS ABOUT THE DWELL-ING-HOUSE: COMPILED BY ESTHER MATSON

LTHOUGH there are a number of excellent reference lists of works **L** on architecture and art in general, there are few or none of books which bear more specifically on the dwelling-house and its appurtenances. That is why the following little list is offered, trusting that it may prove helpful to those who are interested in any one of the many facets of the larger subject-the evolution, the history, the decoration, or the literature, of the house.

Far from attempting a list that should be in any wise exhaustive the idea has been merely to indicate some few of the books most likely to appeal to the mind of the layman who has neither time nor inclination to go into the so-called practice of architecture or any of its allied arts, but who none the less is interested in houses as homes, and has concern with these, moreover, from both the outside and the inside viewpoints.

As a matter of fact, nothing could be more striking-almost sensational-than the story of the evolution of the house, nothing more instructive and at the same time thrilling than the history of many a famous old mansion, nothing more significant of the relation between use and beauty than the tale of its decoration, and nothing more suggestive of the romance that makes us all akin than its literature.

The late Charles Eliot Norton once bemoaned the fact that there is so little pleasure in the lives of men generally. The fact is only too disconcerting to reflect upon, but here, at least, is opportunity offered us all to get veritable pleasure-neither costly nor too beguiling-in a study, however slight, of this minor but fascinating part of architecture and art-the home for human beings.

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THE SOUL OF THE GARDEN

(Continued from page 25.)

When planting hardy water-lilies remember that only those set in early spring, or as soon as their rhizomes appear, will give bloom the same year. Where the pool is set under a very shallow lawn or garden place it is well to sink rather deeper than is customary and build the cement so that scarcely any of the border of the basin is visible above the ground, and even the very slight edge should, to gain real beauty, be covered with myrtle or masses of forgetme-nots or pimpernel. A pool thus hidden in the heart of a blossoming garden will give a never-ending sense of joy, for with its actual beauty is the element of surprise and the added loveliness of the reflection of the various flowers in its still depths.

In one lovely garden in Long Island, the border of the basin of the pool is inset with green and blue Persian tiles. Yellow flowers and deep green shining vines grow to the edge of these tiles. The effect is exquisite beyond one's imagination almost. especially on clear golden days when the pool through reflection becomes almost the blue of the tiles themselves. These little pools

are filled with sea water which at twilight turns a wonderful deep green so that through the day, hour after hour, the color of the pool with its rich green border changes to suit the mood of the sun, the wind and the coming night. Perhaps the greatest form of loveliness furnished by the pool in this garden is the power to change in color from sunrise to sunset

In the West where there is such a love of water and such a scarcity of it, the setting of a pool at the end of a long pergola is a common occurrence. The pool, usually in green concrete with wonderful tropical flowers blooming all about it, brings a bit of the freshness of the river and the ocean to the inhabitant of the inland spaces of our western States. Of course in every enclosed plaza in the West or the Southwest where houses are built around garden plots in Oriental fashion, the living pool is an essential part of the garden space. Sometimes the water is drawn up through the fountains, falling on the flowers below in fresh, cool spray, but more often the still green pool is, as one sees it in the great and wonderful gardens of the Alhambra, a mirror for the sky and for every plant that blooms at the edge of the mossy basin.

FIRE RESISTANCE AND ECON-OMY IN STUCCO CONSTRUC-TION: BY H. B. McMASTER

THE features of construction offering the greatest fire hazard in dwellings are the combustible roof and the hollow wall made of inflammable materials. The horizontal openings, such as windows and doors, perhaps come next. No matter how well the outer walls of a house will resist fire, if the flames gain an entrance to the building the highly inflammable character of the contents insures speedy devastation-particularly if openings to the outside are also made in other parts of the house so that a fluelike condition is created. When this condition exists everything is favorable for a "big blaze;" especially is this so when the outer walls of adjoining buildings are made of materials which we are accustomed to assemble to kindle a fire.

If the outer walls of houses were built of non-burnable stuff, there would never come those periodic, widespread devastations of homes which result in such tragic loss of life and property. Were such walls of concrete, brick, tile or stucco, and the roofs of metal, concrete, tile or other incombustible covering, the possibility of conflagrations would be precluded.

Considerations of cost will prevent some home-builders from choosing the more expensive types of wall referred to. It is possible, however, to have a fire-resisting house with a non-combustible roof, which will not cost more than the house of frame with clapboards.

The home with plastered or stuccoed exterior—the kind that people of Shakespeare's day were wont to live in—is the type of construction that fills this requirement. There is an æsthetic quality, too, about its walls. The gray stucco is always in harmony with Nature's colors, and never loses its charm. It ages gracefully, growing more mellow with the weathering of years. Another point in its favor—a practical one—is that the insulating properties of a stucco wall are good, which means economy in fuel.

Stucco may be applied to brick or tile, but we are trying to decide on a house for the man of moderate means—a house that will resist fire, be low in cost, inexpensive in upkeep, and lasting in beauty.

A form of stucco construction that is ab-

solutely fireproof consists of steel framing, metal lath and cement plaster. And as the public awakens to a proper appreciation of the need of fire prevention, this type of house will become more popular—particularly with the lowering in cost that will come with improved methods of construction. But the most generally used form of stucco construction has been the following: 7_8 sheathing is applied to the studding; over this is laid waterproof paper; then furring strips are fastened, over which the metal lath is stapled, and the cement plaster is applied to the lath.



Octail Showing Section of Exterior Wall

About ten years ago a New England architect with an experimental turn of mind thought to leave out the sheathing. This resulted in a construction shown by the cross sectional drawing, in which plaster is applied to both sides of the metal The 2 by 4 studding is braced with lath. 2 by 3's. The expanded metal lath is stapled to the outside of the studs, with metal furring between, and the cement plaster is applied with stucco finish. Plaster is then applied to the inside of the metal lath so that it is thoroughly embedded. Metal lath is then used on the inside of the wall, after insulating material has been laid between the studs, and the inside plastering is applied. (Detailed specifications for this type of construction may be had on request.)

This architect had a number of imitators; the idea was carried out in the West. and time has demonstrated that this is the best way to build a stucco house on frame. The cost is so much lower than when sheathing is used that it is comparable with the ordinary clapboarded house. The fireresisting qualities are greater, the wall is more rigid, more sanitary, there is less wood to rot, and the metal is protected better from the elements because of the backplastering. It meets the requirements of the man who wants to spend anywhere from \$2,500 to \$10,000 for a dwelling house that will afford a large measure of protection from fire, to his family and neighbors, at the minimum of expense.

"THE ORDER OF THE BATH"

"THE ORDER OF THE BATH:" COMFORT AND HYGIENE IN THE MODERN BATHROOM

(Illustrations on this page furnished by Standard Sanitary Mfg. Co.)

THE bath has always played an important part in human history, whether one considered it from a hygienic, symbolic, social or architectural standpoint. In early times it was associated with spiritual as well as bodily purity, and bathing, among many of the peoples of antiquity-the Turks, Egyptians and Greeks, for instance—was practised as a religious rite. A curious example of this symbolism is still retained in the famous English "Order of the Bath," the ceremony of bathing having in olden days been part of the initiation into knighthood.

A bathroom containing a clay tub, we are

told, was found in the prehistoric palace at Tiryns, and Homer frequently refers to the warm bath as used for refreshment and as part

THE LITTLEST BABY OF TODAY BELONGS TO THE "ORDER OF THE BATH."

of the entertainment offered to an honored guest. The luxury of warm baths was especially developed at Athens, after the fifth century B. C., and, in addition to the private baths, public ones were provided, and others in connection with the gymnasia. Vapor, hot, plunge and douche baths were known to the Athenians, and swimming pools were also included in their equipment.

Among the Romans the popularity of the bath and the splendor of its architecture were

THE MODERN BABY.

even more pronounced. At one period the imperial thermæ became actually a literary and censocial for it ter.



contained not only the manifold luxuries connected with the gentle art of bathing, but also libraries. lecture rooms, gardens, porticoes, gymnasia, running tracks and other provisions for amusement, exercise and ease.

In Oriental countries likewise the ceremony of bathing was one of great importance, occupying a significant place in the daily lives



of the people, and EVEN A COLD PLUNGE IS the bath houses popular with little folks. to this day are

elaborate and beautiful places.

Europe, however, took many centuries to adopt this custom, and, although public baths were established in various places, they have never attained the importance of those of ancient times. But while there is so little general interest in public baths, either in Europe or America, the bathroom in the private home has made rapid strides during the last few years in the direction of hygiene and comfort. This is especially true in our own country, where the bathroom, even in the home of moderate circumstances, is becoming synonymous for convenience and sanitation. Indeed, it is planned with as much care as any room in the house, and the result, as the accompanying illustrations show, is worthy of even the ancient Greek and Roman traditions.

Fig. I is an example of the small type of bathroom which gives the maximum of bathing

THE MORNING BATH IS PLAYTIME FOR

"THE ORDER OF THE BATH"



FIGURE ONE: CORNER OF A VERY SIMPLE MODERN BATHROOM, SHOWING HYGIENIC FITTINGS THAT CAN BE KEPT CLEAN WITH A MINIMUM EXPENDITURE OF EFFORT.

facilities with the least possible equipment. The fixtures are so arranged as to give the greatest available floor space. A somewhat larger room is shown in Fig. 3; the walls are covered with green tile,

which makes an attractive background for the porcelain enameled fixtures. Fig. 4 shows a tiled alcove inclosing the almost indispensable shower. Note the builtin chest-of-drawers for towels, rubber caps, etc. Fig. 2 is a section of a bathroom which has a sitz bath installed—this is a small. inconspicuous feature, requiring little space, yet, on account of its hygienic, remedial value, no modern bathroom is entirely complete without it. Each of the four pictures illustrates a type of bathroom that may be installed in the average well-ordered home at moderate expense.

As with all other rooms, the general effect of the bathroom is dependent on its lighting—both natural and artificial. Art glass windows are so inexpensive that almost any home-builder can afford the cheerful note they add to the exterior of the house. They may be purchased in any locality by sending your window sash to a reliable dealer and having him fit it with glass of the design and color scheme you have selected. So much for the sunlight; the light at night is even more important. In behalf of service as well as appearance, do not, under any consideration, install cheap and common lighting fixtures. The appearance of really luxurious bathrooms may be impaired by the installation of lighting fixtures of a cheap grade, while the simplest bathroom may gain comfort and distinction by well-selected and wisely placed lights.

The location of the lights is very important and should be thoughtfully considered. It is a simple matter to say they should be placed where they are most needed, but their arrangement requires careful planning. For instance, a light at each side of the mirror over the lavatory is indis-

pensable, but in general the arrangement of the bathroom features must determine the location of other lights.

Whenever possible, tile should be selected for bathroom floors and walls, although, if



FIGURE TWO: EVERY DETAIL OF TH IS UP-TO-DATE BATHROOM COR-NER IS DESIGNED FOR THE UTMOST CONVENIENCE AND SANITA-TION: IT IS, IN FACT, A MODEL OF ITS KIND.

"THE ORDER OF THE BATH"



FIGURE THREE: LIGHT-COLORED, EASILY CLEANED WALLS, TILED FLOOR AND A WASHABLE RUG GIVE THE BATHROOM OF TODAY AN AIR OF DELIGHTFUL CLEANLINESS.

the strictest economy must be observed, a hardwood floor may be made to give satisfactory service. No wood floor should be used until every precaution has been taken to make it as nearly waterproof as possible. The wood should be carefully filled and oiled or waxed, and may be stained to suit the individual taste.

Whether a wood or tile wainscot is used, the wall above it should be canvased and finished with oil colors. Glazed tile paper may be used, but it costs as much as painting and is less durable.

As a color scheme, tints such as ivory, pale green, light buff or terra cotta are preferable to plain white, for they are more cheerful and just as sanitary.

A small artistic rug will add a final touch to the bathroom. Aside from its utility, the color gives a note of warmth to the room which should not be omitted.

The convenience and charm of the modern bathroom lies in its completeness of detail. In the old-fashioned bathroom, the installation of a bath, lavatory, shower and closet was considered all that was necessary, but in this age of sanitation the bathroom is not complete unless it includes towel bars and baskets, soap dishes, mirrors, medicine cabinets and all other accessories which add the last touch of daintiness and comfort.

With all these standards, there are the possibilities, of course, of infinite variation, and each bathroom may have the individual stamp that characterizes the rest of the house, whether it be part of an elaborate town mansion or a seaside bungalow.

This interest in the seemingly prosaic subject of plumbing and sanitary equipment is characteristic of our attitude today toward architectural and indeed many other problems. And it is characteristic also that in evolving the most efficient kind of fixtures and fittings, our manufacturers are striving not only to make them complete as to practical purposes, but also to design and finish them so that the bathroom will be harmonious as well as satisfactory in its furnishings.



FIGURE FOUR: SOMETIMES THE SHOWER-BATH CAN BE ARRANGED IN A RECESS, WITH BUILT-IN CLOSET AND DRAWERS NEARBY.

RESPECT FOR THE KITCHEN



RESPECT FOR THE KITCHEN

N the old Puritan days some "Masters of the House," uncompromising, severe, have been known to build the kitchen windows so high that their wives toiling at the kitchen sink could not waste their time gazing out those windows at passersby or be tempted to dream a bit at sight of white clouds drifting across the blue of the skv. They did not consider it seemly for housewives to lift longing eyes above their appointed household drudgery. A few of these high-windowed houses are still standing in New England as memorials of those austere days, but they are far outnumbered by those homey-looking houses built with kitchens generously supplied with low, wide windows, facing the main road, so that the wives and daughters could look out and keep in friendly touch with the comings and goings of the few neighbors. The main roads, in those early, pre-newspaper days, were important news mediums and well worth observing.

Of late years architects have experimented with the position of the kitchen in the home, trying it on the front of the house, making it equal with the drawing room in architectural importance, on the tip-top of THIS CHARMING DINING ROOM, FROM AN OLD NEW ENGLAND HOUSE, FURNISHES A DELIGHTFUL SUGGES-TION FOR THE FITTING UP OF ONE END OF A KITCHEN: IF THE WOODWORK WERE WHITE AND ALL THE DISHES BLUE AND WHITE, AND A BARE TABLE WERE USED, A KITCHEN MODELED ON THESE INNES WOULD BE A MOST SATISFACTORY PLACE.

the house instead of the basement, often giving it the advantage as to summiness and view over all the other rooms. And is there not reason for this? Should not the room where the housewife must spend the major part of her days be the cheeriest, most attractive room of the whole house? Californians, in their zeal for joy of living and comfort of working, have, in a measure, gone back to the Old World plan of having the kitchen the open center of the house. Many summer bungalows are built with but one large central room, with small rooms (practically but dressing rooms, for the porches are for sleeping out there) opening from it. This central living room has a kitchen at one end with dining table and china closets at the other end, a large fireplace in the center around which the family gather on cool evenings. This fireplace often does kitchen duty as well. Pots holding savory stews hung over cranes, Dutch ovens with bread slowly browning but add zest to the story-telling hour.

RESPECT FOR THE KITCHEN



A KITCHEN FITTED UP FOR LIGHT, COMFORT AND CONVENIENCE: THERE IS NOT A SUPERFLUOUS ARTICLE IN THE CORNER OF THIS ROOM, AND APPARENTLY NOTHING IS LEFT OUT THAT WILL CONTRIBUTE TO THE HOUSE-WIFE'S COMFORT.

One of our photographs shows the cozy possibilities of a room with dining table on one side and kitchen on the other. There is something very friendly and hospitable in such an unpretentious plan. The guest is made to feel at home—one of the family.



THIS PICTURE SHOWS THE VOGUE FOR THE "WHITE KITCHEN" WHICH IS A MOST SANITARY AS WELL AS ATTRACTIVE STYLE.

No secrets, as Thoreau says, are kept from him as to the way his meals are prepared, as though they were dark and fearful mysteries. Everything about this picture is homelike and simple, reminding one of a room in a story, where the windows are as pictures of sparkling seas and peaceful valleys, on the wall.

White kitchens that show every speck of dirt have superseded the old dark brown and slate gray kitchens that "would not show the dirt." Nowadays we want the dirt to show so that it m a y immediately be

RESPECT FOR THE KITCHEN



THIS CEILED-IN ROOM, WHATEVER MAY HAVE BEEN ITS ORIGINAL PURPOSE, SHOWS AN IDEAL ARRANGEMENT FOR THE CORNER OF A "LIVING-KITCHEN:" ALL THE FURNITURE IS SIMPLE AND IN GOOD STYLE: THE DRAPER-IES COULD BE WHITE OR BLUE AND WHITE.

whisked away. White enamel sinks set in white woodwork that can be kept clean easily, white muslin curtains at the window that can be boiled and kept immaculate, pretty white and blue or green or yellow linoleums on the floor that need but wiping instead of the old laborious once-a-week scrubbing, washable light colored rugs at sink and stove for comfort's sake, make the modern kitchen dainty as any bedroom.

Another of the photographs used in illustration of this article shows such a kitchen, fresh, clean, attractive, absolutely sanitary and the acme of convenience; builtin cabinets, cupboard, sinks and drawers for cutlery, linen, etc., make of this room a model of its kind. We easily imagine that just out of sight is a white refrigerator in which delightfully cooked desserts, appetizing salads, are in timely readiness, against instant demand. Every woman loves an attractive We know of one who bought a kitchen. house because the kitchen was fitted with glass shelves. Those glass shelves were the factors of power that decided her in favor of the house.

A modern kitchen is surely a marvel of convenience. Things are put within easy

reach; dishes almost wash themselves and slip back to their places on shelves without tiresome, long journeys to and fro; hot and cold water; porcelain sinks without sour, unsanitary joints, full of grease and dangerous germs; cabinets containing everything needful for the making of bread, pies and cakes in glass or porcelain jars that cannot rust and can be kept clean; large windows to let in plenty of fresh air and cheery sunshine; comfortable low chairs to sit in while preparing vegetables; a tall one at the sink to rest on while washing dishes; linoleum on the floor to deaden noise; tile walls for cleanliness-such arrangements in a kitchen leave little to be desired.

The fourth picture leaves one to think there is but a step from the place where food is prepared to the table where it is enjoyed—a simple, sensible, cozy, familiar arrangement. This suggests the first step toward efficiency, that of eliminating every non-essential, every unnecessary tool that adds to confusion and requires to be adjusted. Order is easily kept when things are few in number and each one serves some definite use. Cleanliness, convenience, simplicity are all found in the modern kitchen.

THE CHOICE OF A HEATING SYSTEM FOR YOUR HOME: BY CHARLES HART NICHOLS, CONSULTING MECHANICAL ENGINEER

HEN planning to build a house, it is advisable to have some idea of the advantages and disadvantages of the various systems of heating. For a system that gives satisfaction in one house often proves unsatisfactory in another, owing to different conditions. The size, location and exposure of the house and its various rooms, and the requirements of the occupants, are all determining factors.

When laying out a heating system, the amount of heat required must be figured after the kind of system has been determined; but in order that a better understanding of the different systems may be had, the conditions which govern the amount of heat required will be considered here first.

THE AMOUNT OF HEAT REQUIRED.

The amount of heat required in any room is exactly the amount which is being lost from that room, by radiation through windows and walls, and by leakage of air, either in or out, around the windows, through flues, opened doors, etc. A certain amount of leakage is essential for ventilation, and is also necessary to make hotair heating systems operate.

The amount of heat lost by radiation depends upon the area of the windows; thickness of the glass, whether single or double sash; area of doors, whether solid or sash; area, thickness, material and construction of exposed walls; area, material and construction of exposed roofs, ceilings and floors; points of the compass, and difference in temperature of the air on both sides of the walls, floors, doors and windows.

The amount of heat lost by leakage depends upon the area of clearance around windows and doors, the size and height of fireplace flues, size and location of other openings, points of the compass, velocity of the wind, and location as regards proximity to other buildings, etc.

In other words, the amount of heat required depends upon the exposure, and not upon the volume of the room. It is desirable, therefore, that a house be built with heat-resisting material and methods of construction, as heat saved means less heat to be supplied, not once, but every day.

THREE MAIN HEATING SYSTEMS.

There are three main systems of heating -by means of hot air, steam and hot water. These can be combined or modified into several other systems, more or less distinct. In a hot air system the air may be heated in a furnace, direct from the fuel, or may be heated by passing over radiators or coils containing steam or hot water. The air may enter the room because of the tendency of heated air to rise-that is, by gravity; or it may be forced or drawn into the room by a fan. The air may be taken entirely from outdoors, or may be partly or entirely recirculated from the rooms being heated.

HEATING BY STEAM.

In a steam system, the steam may be circulated through the piping and radiators at approximately atmospheric pressure, or may be circulated at a pressure below or above atmosphere. When below atmosphere, it is called a vapor, a vacuum, or a vapor-vacuum system, and the radiators may be placed in the rooms (direct radiation), or they may be placed in the cellar, and connected by ducts so that fresh air may be heated and then conveyed to the rooms (indirect radiation); or they may be placed in the rooms and so arranged that air from outdoors may pass over them also and become heated (directindirect radiation).

THE HOT-WATER SYSTEM.

In a hot water system the water may flow by gravity or be forced through the piping by a pump. In either case the radiators may be placed as direct, indirect, or directindirect radiation, the same as with steam.

As before stated, a certain amount of fresh air for ventilation is necessary, and in most cases the leakage around windows and doors will be sufficient, with occasional opening of doors and windows. In a hot air system, either by means of a furnace or indirect steam or hot water radiation, ventilation in a large quantity is obtained, provided that the air already in the rooms can escape. A fireplace flue is the best means of obtaining this result, but loose or slightly opened windows will also do.

HOT-AIR SYSTEM.

The gravity furnace hot air system has as the principal advantage, besides the ventilation, a low cost of installation, and as disadvantages, a greater cost of operation than with steam or hot water, and an uncertainty in the heating of rooms on the windward side of the house. The low cost of installation is due to the simplicity of the furnace and flues. The high cost of operation is due to the fact that enough heat must be supplied to raise the temperature of the fresh air used from that of outdoors to the temperature of the rooms, besides supplying enough additional heat to make up the losses from the rooms. This cost of operation will be lowered from 10 per cent. to 30 per cent., if part of the air delivered to the rooms is recirculated to the furnace at the room temperature, thereby saving the cost of heating that amount of outside air to the temperature of the room. This will, however, increase the cost of installation from 10 per cent. to 30 per cent.

The greatest disadvantage of this system is the uncertain heating due to the direction of the wind, which will blow into the rooms on the windward side and prevent the heated air from entering, while on the leeward side the wind will cause an excessive amount of the heated air to enter the rooms and pass out of the windows, before being cooled to the room temperature. This uneven heating can be partially overcome by the use of tight storm sash on the windward side, with the doors between the rooms open, so that the heated air, after being cooled, will pass through the windows of the rooms on the leeward side. On this account, it is better to locate the furnace near the windward side of the building, as the shorter lengths of the flues will favor these colder windward rooms.

Some Items of Expense.

A steam direct radiation system will cost about 25 per cent. more to install, and about 35 per cent. less to operate, than a hot air furnace system, and a hot water direct radiation system will cost about 30 per cent. more to install, and about 25 per cent. less to operate, than a steam direct radiation system, or about 65 per cent. more to install and 50 per cent. less to operate than a hot air furnace system. Both of these systems consist of radiators and pipes, but, as the temperature of the hot water is less than that of the steam, the radiators for

hot water must be larger than for steam, and therefore the piping must also be larger. Separate supply and return pipes to the radiators are required for hot water, and are sometimes desirable for steam, but usually one pipe is used for both supply and return between the mains in the cellar and the radiators. The two-pipe system will increase the cost of installation about 5 per cent. over the cost of the one-pipe system, or about 30 per cent. more than a furnace system.

In a steam system the temperature of the water in the boiler must be raised to 212 degrees before the steam is formed and begins to circulate; whereas in a hot water system the water will begin to circulate after a small rise in temperature, and, as the temperature rises higher, will circulate faster. For this reason the cost of operation in mild weather is less with hot water than with steam, but there is no difference in the cost of operation in cold weather, when either system must be operated at practically full capacity. This also gives the advantage that, in mild weather, a small amount of heat may be obtained from hot water, but not from steam when at atmospheric pressure or above, as the steam, when condensed to water, is still at 212 degrees.

THE VAPOR VACUUM.

To overcome this disadvantage of the steam system, a vapor or vacuum system is used, which circulates the steam at less than atmospheric pressure. The advantage is a slightly lower temperature of steam and therefore less heat, when desired in mild weather, at a less cost of operation. The disadvantage is increased cost of installation, due to special valves and air exhausters, and larger radiators, due to the lower temperature of the steam, unless the system is designed to be operated at atmospheric or higher pressure instead of a lower than atmospheric pressure, during the extreme cold weather. The increase in the cost of installation will be about 10 per cent. more than the cost of an ordinary steam system, or about 40 per cent. more than for a hot air furnace system, and the cost of operation will be about 15 per cent. less than an ordinary steam system, or about 45 per cent. less than a hot air furnace system.

When outdoor air is allowed to pass over either steam or hot water indirect radiators, before entering the room, the advantage of ventilation is obtained, but at the disadvantage of increased cost of installation and operation. This system is usually installed for the principal rooms, in connection with direct radiation in the other parts of the house, when the amount of ventilation desired is not sufficient for a separate hot air furnace. Another disadvantage of the indirect system is the danger that, when the radiator valves are closed, or, with hot water, when the boiler fire is banked at night with the resultant slow circulation of the water, if the cold air is not shut off also, the water in the radiators may freeze. The increase in cost will be about 35 per cent. for installation, and about 85 per cent. for operation, over direct radiation. whether steam, hot water or vapor, when all the heating is done by indirect, and a proportional percentage when part of the heating is done by direct radiation. Indirect radiation is a good system, but not an economical one, except when used for only one or two rooms.

DIRECT-INDIRECT RADIATORS.

Direct-indirect radiators have the advantage that in mild weather some ventilation may be obtained with the radiator that is only large enough to heat the room in cold weather without ventilation. But this means an increase in cost of installation of about 4 per cent., and an increase in the cost of operation of about 50 per cent., over the costs of direct radiation, except when used as direct radiation only, in very cold weather, when there will be no increase in the cost of operation.

If radiators, either steam or hot water, are placed behind grills or registers, or under seats or window sills, the efficiency of the radiators will be reduced, and larger radiators must be used in order to obtain the same amount of heat. If all the radiators are concealed behind grills or registers, the increase in cost of installation will be about 20 per cent. If under sills or seats, but not enclosed by grills, it will be increased about 6 per cent. over the cost of radiators set exposed in the room in the usual way-and a proportional amount if only part of the radiators are concealed. The cost of operation will be the same as though the radiators were not concealed.

POSITION OF RADIATORS.

The best position for radiators in the rooms is beneath the windows, which is the cold side of the rooms. Then the air, warmed by the radiators, will rise and mix with the air cooled by the windows, which will fall, the two making a mixture at approximately the temperature of the rooms. When it is not desirable to locate the radiators under the windows, on account of interference with long curtains, they should still be located on the exposed or cold side ot the rooms, because of the loss of heat through the exposed walls and windows.

When the rooms are heated by hot air, from either a furnace or indirect radiators. the air should enter the rooms on the warm side, or farthest from the windows. A circulation will then be maintained by the warmed air rising from the registers, passing across the ceiling, and falling in front of the windows-some of it escaping through the windows, or through doors into adjoining rooms, and some of it passing across the floor to rise again by being mixed with the warmer entering air. The registers should not, however, be so placed that the entering air will escape through fireplace flues before it has fallen past the cold windows, and given up its surplus heat.

Forced circulation of hot water, and forced ventilation, are not used in small or medium-sized houses, except where a number of houses are heated from one central plant, in which case forced circulation of hot water is frequently used instead of steam.

Automatic temperature control is sometimes used in house heating, as the operations necessary to maintain a given temperature, with the exception of putting coal on the fire, are automatically performed; but the cost of installation will be greatly increased, though the cost of operation will be slightly decreased. The boiler draft doors and dampers are sometimes automatically controlled by clock mechanism, so that the house may be warmed in the morning before the occupants arise.

CAPACITY OF BOILERS.

Boilers for both steam and hot water are usually rated by the number of square feet of direct radiation that the boilers are capable of supplying with steam at 218 degrees, or water at 180 degrees, when the temperature of the room is 70 degrees. This rated amount of radiation must include all piping as well as radiators, and should include also a small addition for inefficiency in the operation of the boiler. Allowance must also be made for the difference in efficiency between direct, indirect and direct-indirect radiation, and for all concealed radiators, etc., and for any other temperature of the steam, hot water, or the room. Additional allowance must be made if the boiler fire is to be used to supply domestic hot water, by the insertion of a water coil in the combustion chamber.

Most boilers are designed for large anthracite, the bigger boilers for egg size and the smaller boilers for stove size. There are also some boilers made for pea anthracite and for burning bituminous coal without smoke. The boilers for large coal are designed to hold enough to last seven or eight hours, with a thickness of coal of about 15 or 16 inches. If small coal is used, a smaller quantity only can be put in at one time, requiring more frequent firing, or a magazine holding eight hours' supply, which will feed the coal gradually to the fire bed, either automatically or by hand. The disadvantage of a magazine boiler for pea coal is that either the coal must be lifted to a magazine above the combustion chamber, to feed to the fire by gravity, or the coal must be pushed up into the fire from below by the attendant, at frequent intervals. The advantage of a boiler burning pea coal over a boiler burning stove or egg coal is the lower cost of the pea size, the amount of coal consumed being the same in both cases. Pea coal may be used in boilers without magazines if the proper grates have been provided, but the coal must be more frequently fired, and the bed of coal must be of less thickness, to permit sufficient air to pass through the coal for its combustion. Pea size cannot well be burned on a grate designed for large coal, on account of the wider spaces between the grate bars. In any boiler or furnace, the coal should never be above the bottom of the firing door, as a thicker bed of coal will prevent the air from passing through-in which case the boiler will not generate as much heat as when a smaller amount of coal is fired at one time, and fired more frequently.

It is economy to have all piping and hot air ducts in the cellar covered with a nonconducting covering, unless a warmed cellar is desired. as all heat thus saved means a corresponding saving of coal.

The percentages of increase or decrease in costs here given are approximate only, as prices will always vary with different houses, locations and contractors. It is always better to have the heating system designed by an engineer, who will figure all sizes of radiators, pipes and boiler, based upon the amount of heat lost, figured from the sizes of the exposed windows, walls, etc., so that all contractors will estimate upon the same basis. If this is not done, one contractor may estimate upon an installation larger than necessary, to be sure of the results in heating, and another may estimate upon an installation smaller than necessary, to be sure of getting the contract.

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Gustav Stickley, Editor.

Sworn to and subscribed before me this 19th day of March, 1915.

Fred A. Arwine,

(Seal)

Notary Public, No. 69, New York County. My commission expires March 30th, 1916.

IMPORTANCE OF GOOD WINDOWS AND SCREENS

COMFORT AND EFFICIENCY IN WINDOWS AND SCREENS

Illustrations furnished by courtesy of The Higgin Manufacturing Co.

N home-building, as in everything else, we are constantly discovering the importance of little things, the value of efficiency and accuracy in even the smallest details. And this is especially true of window construction. No matter how beautiful the windows of our home may be, in their design and placing with relation to exterior and interior walls, how charmingly draped with curtains or adorned with flower-boxes, their attractions count for very little unless certain mechanical purposes are fulfilled. And among those practical considerations may be mentioned such significant items as snugly fitting sashes and proper screen protection.

The value of good construction hardly needs to be emphasized. We have all suffered at some time or other from the discomforts of badly made windows which would work smoothly enough for a while and then suddenly would be seized by a malicious spirit, refusing to slide either up or down, yielding neither to force nor to persuasion, and exhausting the patience of everyone who tried to conquer their stub-We know how exasperating it bornness. is to be kept awake on a windy night by the rattling sound of an ill-fitting sash, which we strive at last to subdue by means of a clothes pin or a wedge of paper. And although we may scorn such trivial things as draughts, and pride ourselves on our



FIGURE ONE: CORNER OF WINDOW FITTED WITH METAL STRIPS THAT PREVENT RATTLING AND LEAK-AGE OF AIR, DUST AND NOISE INTO THE ROOM.

strong-minded attitude toward colds and other mortal ills, nevertheless we all feel that it is wiser to be on the safe side, to seek prevention rather than cure, and to have our windows made so that, while all possible ventilation is obtainable, there will be no leakage through cracks and

FIGURE TWO: VERTICAL SECTION THROUGH WINDOW SHOWING WEATHER STRIPS ON SASH AND FRAME AND ALSO ON THE MEET-ING RAILS.

FIGURE THREE: VERTI-CAL SECTION THROUGH BOTTOM OF I NWARD SWINGING CASEMENT WINDOW SHOWING TIGHT CONTACT BE-TWEEN METAL WEATH-ER STRIPS WHEN WIN-DOW IS CLOSED.







FIGURE FOUR: HORI-ZONTAL SECTION THROUGH HINGED POR-TION OF INWARD-SWINGING CASEMENT.

joints. The matter of screens is likewise of the utmost importance. Aside from the annoyance of having one's privacy invaded by such impertinent intruders as mosquitoes and flies, there is the danger which always attaches to these wingèd carriers of disease —a danger that has been widely emphasized of recent years through campaigns of the board of health and other medical authorities. And—as most of us have found, to our discomfort—a screen that does not fit tightly is almost as bad as no protection at all, while one that is difficult or awkward to adjust is a source of perpetual irritation.

Fortunately for the home-builder, these details of window construction and screening have been given expert attention during the last few years, and ways and means have been devised to insure the greatest

IMPORTANCE OF GOOD WINDOWS AND SCREENS



FIGURE FIVE: VERTICAL SECTION THROUGH OUTWARD - SWINGING CASEMENT WINDOW WITH METAL WEATHER STRIPS.

possible comfort, safety and ease of operation. But in order to install the most efficient kind

of windows and screens in one's home, a little investigation and study of the various forms of construction are needed. And the drawings presented here offer such an opportunity to those of our readers who are interested in this important question.

The first drawing shows how leakage around the window sash may be prevented. Usually, even in a well-fitted window, there is a space at least one-sixteenth of an inch wide between the sash and frame, through which cold air leaks into the room. This space, extending around the frame (a distance of about sixteen feet), is equal to an opening one inch wide and a foot long. If the sashes are loosely fitted, the space may be twice as much, which means proportionately greater draught and greater expense for heating to overcome the draught. In the sliding window construction shown in Figure 1, these objections are avoided by the provision of two metal weatherstrips, one of which is attached to the window frame with a tongue or raised portion that forms a track on which the sash The other strip—called the insert slides. -is made of light spring bronze and is inserted in a groove in the sash. The spring flanges of the insert contact with the tongue of the track and effectually seal the aperture.

An equally effective plan has been devised for the meeting rails, as will be seen by examining Figure 2. A heavy unyielding zinc strip is attached to



FIGURE SIX: CORNER OF ALL-METAL WINDOW SCREEN OF ESPECIALLY DURABLE CONSTRUC-TION. the lower rail of the upper sash in such manner as to contact with a yielding spring bronze strip on the upper rail of the lower sash. This closes up the space between the two sashes so that no air can leak through when the window is closed. Besides preventing leakage of air, it keeps out the dust and renders the street noises less noticeable within the room.

The inward-opening casement has long been a serious problem, the great question being how to make this window water-tight at the bottom. Figure 3 shows such a case-



FIGURE SEVEN: VERTICAL SECTION THROUGH WINDOW FITTED WITH METAL SCREEN AND WEATHER STRIPS.

ment fitted with the new kind of metal strips. Screwed to the sill is a brass piece with an insulating channel in the center and provided with a flange or insert which, when the window is closed, makes a tight contact with the zinc groove and its copper spring, rendering it impossible for air or water to leak through. Figure 4 shows the construction of this casement at the hinged side, where groove and insert insure a tight joint when the sash is closed.

Figure 5 illustrates a form of construction for an outward-swinging casement. A zinc plate is nailed to the sill so as to extend into a zinc strip fitted with a copper spring, and a spring strip is also used at the head.

One corner of a strong, neat and rust-

proof window screen is seen in Figure 6. This screen is made with an inside frame of quarter-inch round rod. The netting is carried around this frame and is held in place by the outside moldings, which keep it stretched tight. And as the netting is brought in contact with rounding surfaces only, there is no danger of it being cut by sharp edges. The outside moldings form a neat, narrow frame which, though strong, is not too rigid to prevent its conforming to any irregularities in the window frame. Being all metal, the screen does not shrink, swell, warp or twist as do those with wooden frames.

The screen is made with either steel, copper or bronze moldings, the steel frame being first thoroughly galvanized and finished in a hard enamel. Solid bronze wire cloth is used for the netting, as this is considered the most economical and durable. It is a special composition, rust-proof and practically indestructible, which does not require painting to preserve it, and hence allows for perfect ventilation. The wire is finished in a rich antique color. The standard screen is 14 mesh, or 14 openings to the inch; but for special work, or in the South, a finer mesh is often needed—16 or 18 mesh. For windows in laundries and other places from which it is necessary to exclude fine particles of dust, 24 to 40 mesh may be employed.

Figure 7 shows a vertical cross-section of a double-hung window fitted with one of these metal screens, which slides in the groove as indicated. This window is also made with the tightly locking weather strips previously described.

PLANTING NEW GROUNDS

A FEW well-chosen annual plants placed on newly graded grounds will do much to take the place of trees and shrubs until the latter may have time to grow, according to the U. S. Department of Agriculture's specialist. It is often a question in a new community where slow-growing vegetation has not had an opportunity, as to what may be done to make grounds seem less bare. A lawn can be made in a few weeks and its appearance may be greatly increased by the addition of a few wisely selected annuals.

The specialist suggests as particularly suited for this purpose the following plants, which may be grown in most parts of the United States: Tall foliage plants—castor bean, caladium, canna. Tall flowering plants—cosmos, scarlet sage, sunflowers. Border plants alternanthera, alyssum, ageratum, coleus. Medium-tall annual flowering plants—geranium, California poppy, Zinnia, marigold, aster, petunia, cockscomb, larkspur, nasturtium. Climbing annuals—cobæa scandens, moonflower, Japanese morning glory.

The general appearance of plants on the home grounds or in the garden is more or less dependent upon the condition of nearby lawns. Lawns are the foundation of all decorative planting.

Owing to the variety of soils which will be encountered and the special treatments which they need, only the broadest generalizations can be given here. For localities north of St. Louis, Mo., and Richmond, Va., lawns can be formed chiefly of bluegrass, redtop, and white clover. South of this point Bermuda grass and St. Augustine grass will have to be relied upon chiefly, although it is said that in some places alfalfa has been employed with good results.

The U. S. Department of Agriculture has a bulletin on "Lawn Soils and Lawns" (No. 494), and a bulletin on "Beautifying the Home Grounds" (No. 185), which will be sent to applicants as long as the supply lasts.

"FOUR WINDS' RANCH," A DANISH HOUSE IN DAKOTA: BY HELEN MOORE

"DOUBT it,' said the carpenter, and shed a bitter tear." In fact, he not only shed tears but actually gave up and left for parts unknown. How-

ever, I was sure the little hut could be built to fulfil the requirements of the homestead law as to a "habitable dwelling," even in the midst of the prairies, far from the luxuries of skilled labor. To revel in simple materials and to know that one could not become involved in the horrors of mill-turned gew-gaws, would be, I knew, a positive joy.

The suggestion contained in an article published in THE CRAFTSMAN on Scandinavian log huts, was the chief factor in the success of the home at "Four Winds' Ranch." Logs being unattainable, common fir timber such as is found in even the most primitive lumber yards, was used in their stead. The chief materials consisted of 2 by 4 and 2 by 6 timbers, roof sheathing, and shiplap to enclose the porch. The house

"FOUR WINDS' RANCH"



THE HOME-MADE HOUSE AT "FOUR WINDS' RANCH :" A SIMPLE PRAIRIE DWELLING, OF DANISH INSPIRATION, MADE OF FIR TIMBERS WITH SOD ROOF, AND COSTING ONLY \$200.

was 12 by 16 feet with a porch the length of the building and $6\frac{1}{2}$ feet wide, and the floor was made of shiplap laid on 2 by 6 joists set 16 inches apart.

This done, and the studding up, we were ready for the low-pitched rafters, which ran from the roof peak to the edge of the porch, where they were left exposed beyond the protecting sides. The same roof construction was used at the rear.

Roof sheathing, building paper and shingles completed the four walls outside, while the porch was enclosed by 8 inch shiplap running up and down. The openings were cut out with a keyhole saw, and the center of each coming on the edge of the boards made the work easy, obviating troublesome turns. The apertures were placed only sufficiently close to give light to the porch, the south window and door of the house. Then with the oblong open spaces between them, plenty of sunshine was admitted and the remainder of the enclosure kept the hot south wind from scorching too fiercely.

The roof, framed by 2 by 4 timbers placed at the outer edge, held a thick carpet of sod which was the crowning comfort both summer and winter. A layer of tar paper was put down over the roof sheathing, and the sod placed with the grass side down, making a difference of 10 degrees in the temperature of the room.

You enter the porch by pulling a string

and lifting a latch, and are admitted to a charmingly furnished outdoor room arranged for sleeping as well as for daytime enjoyment. A turn to the right, and you are in a veritable living room, where a stone fireplace is the keynote in color, being built of small, curiously formed boulders with dull green, pink and white agates embedded in them, giving the whole an appearance of the soft gray of the rolling hills and buttes where they were found.

The rough, sand-finished plastered walls were left in the natural color, while the rafters and under-side of the roof sheathing were whitewashed. The casement windows with their diamond-shaped panes were the only extravagance, but amply repaid the expenditure by breaking the monotonous view of rolling prairies. The inside trim was plain four-inch lumber, painted white; the hardware—a barn-door latch for the door, and small T-hinges for the windows.

The lumber yard furnished material for furniture, too. A settle was made with a linen-chest under the seat, convertible into a table by turning down the back, and the washstand was arranged to shut its contents out of sight. A long, low cupboard hid the cooking utensils and groceries.

The house cost the ridiculously low sum of two hundred dollars, which included the wages of a cow-puncher called in off the ranch to take the place of the departed carpenter.

GARDEN-MAKING IN THE CRAFTSMAN BUILDING



GARDEN-MAKING IN THE CRAFTSMAN BUILDING

F IRST of all there must be a definite plan, a vision if you prefer to call it, of your garden. Walk over the ground, study climatic conditions, and soil, take into account all your available time, facilities for work, experience, depth of purse, and reach a definite conclusion as to whether you wish a formal or informal garden, whether you wish to develop it slowly, adding a little stock each year, or complete the whole plan the first season. Details cannot of course be worked out until the imagination has leaped ahead and shown the way.

It is as impossible for an amateur to lay out a garden without the aid of a master gardener as it is for him to build a house without the help of an architect. True, he can make satisfactory floor plans and decide in a measure upon the way he wants the garden to be made, yet he must call upon expert aid in making the details upon which house or garden builders can work. Our ideal of service in home and garden making has always been to help people perfect *their own plans*, aid them in bringing them to maturity. In our home building, home furnishing and garden departments we give inquirers the benefit of our fuller experience, suggesting designs, color schemes, grouping, etc.

Trees, shrubs, plants, object to a continual rearrangement. A certain measure of transplanting they will endure cheerfully, but it is much to their advantage to plant them in the first place where they are to remain. It is both difficult and expensive to alter the line of paths, walks, driveways, change the position of rose arbor, lily pool or fountain. So whenever you are ready to plan a garden, why not visit our garden floor, consult with Mr. Hollender, in charge, who will give you the benefit of a full and varied experience in garden making. He will advise with you, thus saving you many mistakes, about formal or informal gardens upon rock, wall, or water; rose gardens, old-fashioned flowers, borders, shrubberies, as well as fruit and vegetable gardens.

