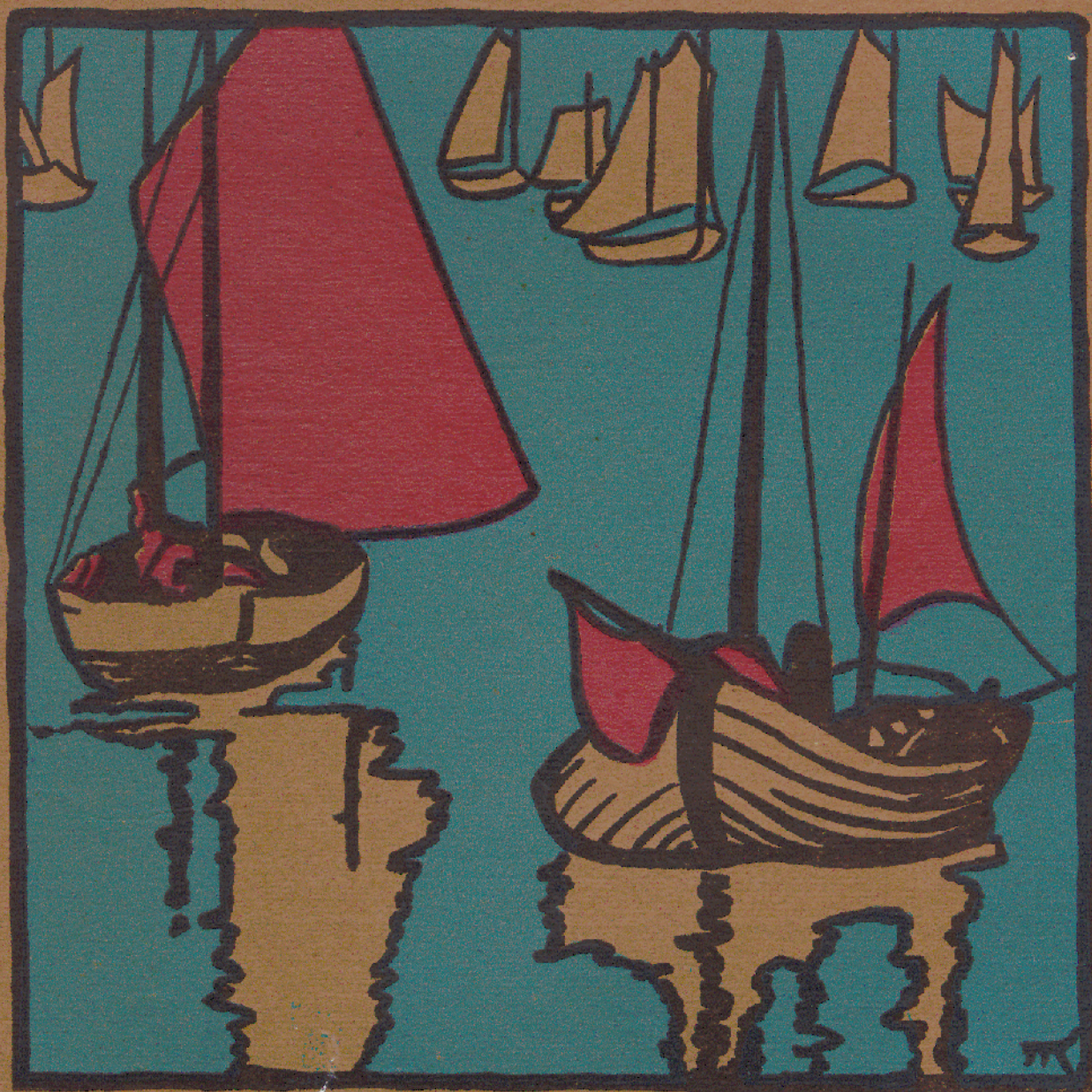


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CHILDREN AS GUARDIANS OF THE BIRDS.

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The Craftsman ideal calls for a beautiful roof—a durable roof—and a roof that gives maximum service at minimum cost.

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GUSTAV STICKLEY, Editor

MARY FANTON ROBERTS, Managing Editor

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VOLUME XXIV

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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 October word should be sent to us by August twenty-fifth.

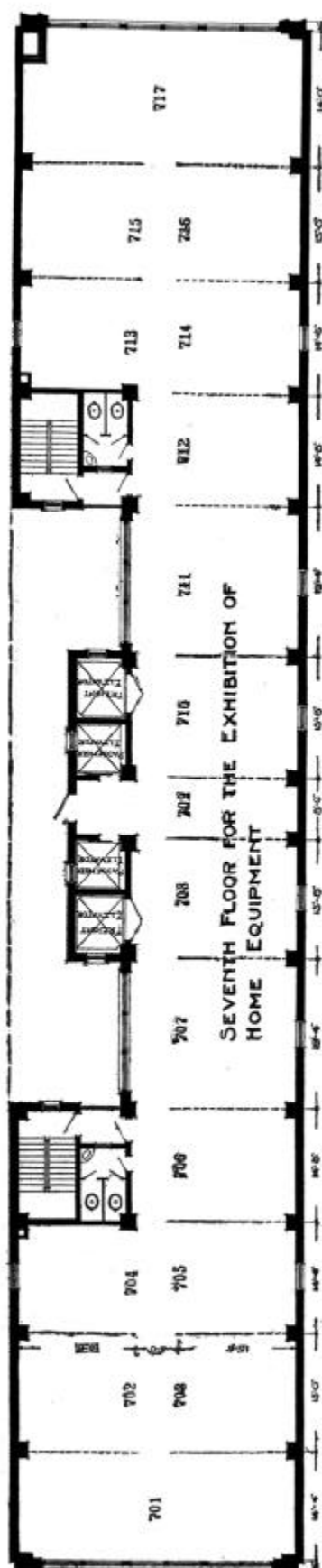
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THE 9TH FLOOR

of the new 12-story Craftsman Building will be devoted to "*Building Materials and Construction*" exhibits in *The Craftsman Permanent Homebuilders' Exposition*,—the marketplace for homebuilders and home-lovers in the shopping centre of America (38th—39th Sts.—Fifth Ave.). Manufacturers and distributors of the following will exhibit on this floor (applications are invited for the few remaining spaces):

Cement
Hollow Tile
Concrete Construction Forms
Metal Lath
Brick
Building Woods
(Cypress, Chestnut, Oak,
Pine, Red Gum, Maple,
etc.)
Wall Board

Tile and Faience
Flooring
(Composition, Tile, Cork,
etc.)
Roofing
(Tile, Slate, Shingle, Com-
position)
Waterproofing
(Compounds and Coatings)
Fireplaces
Hardwood Doors

THE 8TH FLOOR

in the Permanent Homebuilders' Exposition will be devoted to "*Interior Decoration*." Space on this floor has been sold more rapidly than on any other, and manufacturers of any of the following materials who desire space are urged to apply for it immediately:

Paints
Stains
Varnishes
Enamels
Flat Wall Finishes
White Lead

Wall Coverings—
Papers,
Burlaps,
Fabrics, etc.
Wood Panels for Wainscoting
Parquet Floors

THE 7TH FLOOR

in the Permanent Homebuilders' Exposition will be devoted to exhibits of "*Home Equipment*," by which is meant chiefly the larger appliances that are essential to comfort and sanitation in the modern home. So far as possible these appliances will be shown in their proper home setting—in many cases in actual operation. Space on this floor is open to manufacturers of the following:

Heating Apparatus
Plumbing Fixtures
Lighting Equipment
Wiring Devices and Fixtures
Vacuum Cleaners
(Stationary and Portable)
Automatic Gas Water Heaters
Water Filters

Hardware
Window Screens
Ranges
Refrigerators
Kitchen Cabinets
Incinerators
Electrical Devices for the Home

THE 6TH FLOOR

in the Permanent Homebuilders' Exposition will be devoted to equipment for "*The Garden and Grounds*." The

Water Supply Systems
Lighting Plants
Sewage Disposal Systems
Garbage Receivers
Tools and Work-benches
Lawn Mowers
Spraying Equipment

1 Homebuilders' Exposition will be devoted to "Home Furnishing." The exhibits on this floor will be for the most part in the form of model furnished rooms, complete in every detail. Manufacturers who wish to take advantage of this unique plan should correspond with us at once, as many of the exhibits are now being arranged by coöperation between two or more exhibitors. The exhibits on this floor will comprise the following:

Draperies, Linens, etc.
Silverware, Glassware, China
Paintings, Casts, Pottery
Arts and Crafts

Space in the Exposition is being rapidly allotted, and interested manufacturers are urged to write to us at once. Complete Prospectus and floor plans sent on request.

41 West 34th St., New York 18



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USING PAINT



LOOKING DOWN BROADWAY
By John Marin, Impressionist, 1913

Paint is used for different purposes. Some use paint as you see it in the picture on the left. This is a picture from City Hall Square, N. Y., looking down Broadway and is called the impressionist style in the art of painting. The other is a picture of the same sub-



LOOKING DOWN BROADWAY
By Picabo, Cubist, 1913

ject and is the cubist idea of painting.

You probably do not know enough about these styles of art to say that they are good or bad and unless you are an expert you are supposed to say nothing.

If, however, you own a city or country house, stable or garage you would not employ an impressionist or a cubist to paint it. You would want an honest old fashioned painter to do the job and you would want the best paint to be had in the market.

Our A. P. PRODUCTS are just this kind. They are honestly made, they wear well and the color holds and you have a wide selection for a harmonious color scheme.

When the work is all done your house looks like a house and not an odious jumble of color like the above illustrated paintings.

Write us your needs and let us help you with suggestions.

THE ATLAS PAINT COMPANY

101 PARK AVENUE

NEW YORK

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They come in Bundles Ready-To-Lay

Stained any color you can possibly desire.

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STANDARD STAINED SHINGLE COMPANY
Sole Originators and Manufacturers

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CRAFTSMAN ADVERTISING DEPARTMENT



A Craftsman Living-Room

The Craftsman furniture and furnishings shown in the above photograph consist of the following (all of the furniture, of course, is fumed oak):

- The Reclining Chair** is No. 369, with adjustable back, and spring seat cushion. Back 40 in. high, seat 15 in. high, 23 in. wide, 27 in. deep. With soft leather cushions, \$42.00; sheepskin cushions **\$37.00**
- The Table** (a favorite style for libraries and living-rooms, also dining-rooms) is No. 631 $\frac{1}{2}$, six feet long and three feet wide. Made also (No. 631) eight feet long and four feet wide. Both models 30 in. high. Price of No. 631, \$70.00; No. 631 $\frac{1}{2}$ **\$48.00**
- The Settle** is No. 210, 7 ft. long, seat 34 in. deep and 16 in. high, back 36 in. high. Spring seat cushion of soft leather. **\$96.50**
(Pillows extra, sheepskin, each, \$8.00; soft leather, each, \$10.00).
- The Bookcase** is No. 715, with one door, and stationary shelves on line with mullions. 56 in. high, 36 in. wide, 13 in. deep. **\$30.00**
- The Rug** is a Donegal Rug, woven to order in Ireland, and obtainable in any of several designs and color schemes which harmonize especially well with Craftsman furnishings. Made of high-grade wool, in any size desired, in two weights; regular weight, \$13.50 per sq. yd.; heavy weight. **\$17.50** per sq. yd.
- The Footstool** is No. 302, hard leather top, 5 in. high, 12 in. square. **\$2.50**
- The Umbrella Stand** is No. 54, 29 in. high, 12 in. square, with copper pan. **\$5.00**
- The Fire Set** is No. 138, consisting of stand, shovel, poker and tongs, all in wrought iron, complete. **\$15.50**

Send for Catalogues describing complete line of Craftsman Furnishings.



GUSTAV STICKLEY, THE CRAFTSMAN

29 W. 34th St.
NEW YORK

468 Boylston St.
BOSTON

1512 H. St., N. W.
WASHINGTON



Kindly mention The Craftsman

CRAFTSMAN ADVERTISING DEPARTMENT



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ROOKWOOD POTTERY COMPANY, Cincinnati, Ohio
Architects Building, N. E. Cor. 40th and Park Ave., New York



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This book, which we gladly send on request, will be of interest and an aid to all jewelry craft workers.

Collections of gems sent on receipt of a reference.

ESPOSITER, VARNI CO.

Dept. G 47 John Street, New York

Going into Camp?
Then You Will Need The
Carborundum
Sportsman's Sharpening
Stone in Your Outfit.



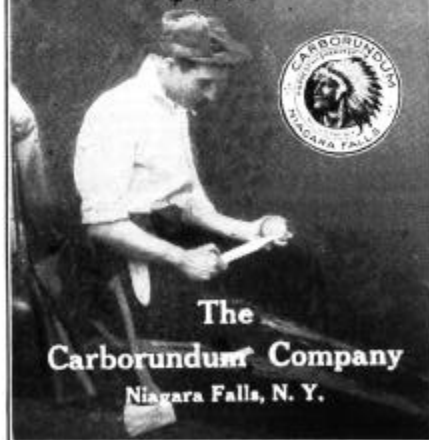
It's a great little stone for sharpening your camp knives, hatchets, axes—for pointing gaffs, hooks, etc.—for any sharpening need in the camp or on the trail.

Furnished in neat leather case with belt loop.—Like all Carborundum Stones, it cuts quick—it's made from Carborundum, the hardest and sharpest material known.

Get one of these little stones—you will find it mighty handy.

Your hardware dealer has them complete in case

\$1.00



The
Carborundum Company

Niagara Falls, N. Y.

Kindly mention The Craftsman

THE CRAFTSMAN'S BLUE LIST OF SCHOOLS



THE selection of the right school for a boy or girl, or the best school for a special training, is often a difficult problem and should not be decided hastily. *The Craftsman Service Department* will be glad to help on receipt of full information regarding the applicant's wishes and requirements.

The schools listed below maintain a high standard of efficiency and character, and CRAFTSMAN readers may place full confidence in their announcements.



A School of World-Wide Reputation for Constructive and Practical Training.

700 Acres Out of Doors

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*Your Boy's Summer!
Have You Planned It?*

Is he to have a sane, progressive holiday, or a wasteful quarter of a year? Investigate Interlaken's resources; participation in real farming; caring for horses, cattle, hogs, sheep; lawns, gardens, orchard, timber; swimming, canoeing, fishing, baseball, tennis; working out individual projects in the perfectly-appointed shops—all this and more.

Pure Water Excellent Food Beautiful Dining Hall
Healthful Locality Comfortable Rooms Permanent Tents

Terms: \$60 a month, June 15th to September 1st.

Boys enter at any time and eligible for the summer courses.

Interlaken also offers Summer Courses in:

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B. Walton Turner, Principal

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A School with an Enviably Record of Results as Shown by Successful Graduates.

MACKENZIE SCHOOL

DOBBS FERRY-ON-HUDSON

This School embodies the results of a careful study of secondary education in this country and Europe. The unusually high-class patronage and the unusual results in the individual records of its graduates in American colleges, testify to the great care and liberality used in the selection and retention of its body of teachers. Write for list of patrons and results of college entrance examinations and careers of boys after leaving the School.

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DR. FREDERIC MARTIN TOWNSEND.

TERMS: \$600 a year.

A Delightful School for Girls Where They Can Enjoy All the Advantages of the City.

The GARDNER SCHOOL

for Girls

607 FIFTH AVENUE, NEW YORK

A school that provides a delightful home for girls, where they can enjoy all the advantages of the city. Regular and advanced special courses. Unexcelled opportunities for the study of music. Riding, Skating, Tennis, Swimming, Dancing, etc.

MISS L. ELTINGE and MISS M. E. MASLAND, Principals

Kindly mention The Craftsman

THE CRAFTSMAN'S BLUE LIST OF SCHOOLS

The Repton School Will Take a Personal Interest in "Making a Man" Out of Your Boy

Selecting a school for your son

is not like buying a house. If you make a mistake in the latter case it can easily be rectified, but if you make a mistake in selecting a school, and your son is placed where he is unsuited to his environment, or fails to get the individual attention which he requires, not only may he lose the advantages he should have, but his personality and character may be affected adversely throughout his future life.

If you are unfamiliar with a school which you are investigating, the best assistance you can have is to hear directly from the parents who have sent boys to the school. We offer ample evidence of this nature. These two instances are typical:

A boy attended the Repton School for six years, and the Repton Summer Camp for seven seasons; a younger brother attended the Camp for four seasons; another brother for two. Their father has just recommended six of his friends to send their boys to Repton Camp.

A boy who was very delicate joined the School in the Fall. His father was so pleased with the remarkable physical and mental development that was shown at the end of one year that he recommended five of his friends to send their boys.

Repton takes forty boys and prepares them for their College Entrance, beginning with a Primary Class. Special attention is paid to younger boys. A particular advantage of Repton is the fact that the boys *share the home life* of the Principals. The advantages of this plan are appreciated by those who have experienced it, as is witnessed by the fact that 13 per cent. of our boys have been in the school from six to seven years. The school was founded in 1906, and in this short time has attained an enviable distinction among schools for boys. Illustrated catalogue and full information on request. Mention THE CRAFTSMAN when you write.

REPTON SCHOOL

TARRYTOWN-ON-HUDSON, NEW YORK

Summer Camp, June 30th-September 1st, Croton Point, Lake Champlain, New York

Enjoys a Distinguished Patronage.

Mrs. Dow's School For Girls

For circular address

Mrs. Mary E. Dow, Principal,
Briarcliff Manor, N.Y.
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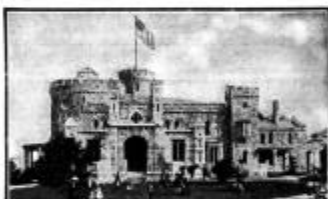
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HERE is a vast difference between going to school and getting an education. The first is comparatively an easy process: the other can never be bought, is never marked off by grades or years, and never featured by matriculation or graduation. Abraham Lincoln's schooling was limited, but his education was one to be envied. A pitched pine torch may have given more glow to his library of three books than a silvered electrolier casting its rays over a five-mile bookshelf. Pilgrim's Progress, Paradise Lost and the Bible read and reread may have carried him further on the pathway of scholarship than some present, predigested learning transmitted by zealous teachers hypodermically to unresponsive patients.

You are in doubt! You see the beautiful school buildings of today and compare them with the log schoolhouse of yesterday. On the one hand you see the Carnegieized library, and on the other a little pile of books religiously kept in paper covers and doled out on special occasions. You regard the modern gymnasium and swimming pool as a paradise within walls when compared with the swimming hole by the overhanging willows. You observe the splendid laboratories with their tools, utensils and chemicals vastly superior to the home shops, the kitchens, and the farms of the early days.

And then you believe that you have confounded the Progressive; but remember he is not comparing buildings of concrete with those of logs. He simply questions whether the modern school can do, unaided, as much for the child as did the log schoolhouse reinforced by the home, the church and the work of the community. He is wondering whether a raft of reading material, lightly skimmed, can take the place of a few books—bought by self-denial, guarded zealously, digested thoroughly. He asks you whether technical information of

THE NEW EDUCATION

the laboratory unaccompanied by actual work in the field, kitchen or garden can really develop efficiency. He would remind you that a year of daily tasks assigned by the necessities of the occupational home, a year of living with a God-fearing parentage, a year of wholesome civic environment, all supplemented by a three months' schooling could and did do more toward educating children than the five hour a day, five day in the week, one hundred and sixty day in the year sort of schooling which is unaccompanied by duties in a modern home—a home more or less unoccupational and often unsupplemented by a community life of social integrity.

The Progressive insists that education is a year by year progress—that it initiates its work at the first breath of a life, and ends it only at the last fluttering of the heart. He insists that it is not alone the affair of the school and the teacher, not alone the question of books, notes and examinations, not alone the material results of a tax levied for school purposes. Rather he contends that every factor in the community which makes for the increase of human wealth has a part in the educative process, from the home task performed by willing young hearts to the writing of the daily theme expressing within cloistered halls a human experience.

THE Progressive submits the following platform and asks you to enrol with him in forwarding his ideals of education: here are his seven planks. First:—Health of body is absolutely necessary in the educative process and no amount of mere fact-teaching from the physiology text will overcome the sins of the parents, the careless habits of a home, or the low-living standards of a community. The child has the right to be well born. The Progressive is enough of a scientific farmer to realize that environment has much to do with the quality of the breed, and he would have you believe in the laws of heredity and environment in the rearing of children at least to the extent that you base your judgment in the selection of thoroughbred cattle. He would have you keep in mind that human beings need pure food, sanitary houses, clean streets, and that the greed of food purveyors, ignorance of housewives and grafting of public officials are not satisfactory excuses for the weakened constitutions of growing children. He would have you think of an education which makes for health. He asks you to consider whether the outside label of canned vegetables always tells the inside story, whether the typhoid fly and the garbage heap are on speaking terms, whether the local water supply is free from contamination, whether playgrounds are available to children, and a score of other conditions dealing with agencies making for a strong, clean physical being.

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Second:—The Progressive calls for an education in socialized character. This does not mean a new text-book or a new department in the curriculum. Rather it means a new treatment of old subject matter—a treatment which will depart from the old notion that the student himself was the chief beneficiary of culture or learning, that he was to sit on one end of the plank of learning, the professor on the other end and that they were to tilt up and down for the benefit of each other. Rather would he have teachers and students grouped together, *interpreting human experience in the light of human needs for the purpose of rendering human service*. This training cannot be given by the schools alone. They cannot be held entirely responsible for the development of a right personal and social character. As a matter of fact, it is a poor school that does not secure more obedience to law and order, more respect to the rights of others, than is expressed by these same pupils outside of school when supposedly under the guidance of parental and civic care. The Progressive expects to see no great increase in the character efficiency of youth until the community of adults recognizes that it must set a standard at the firesides, in the market-places, in the legislative halls.

THIRD:—The Progressive expects that the people will be educated in citizenship—not a citizenship as expressed by party lines or party dictation or political expediency, not a citizenship which goes once a year to the ballot booth as a complete expression of civic duty. In this industrial age a new type of citizenship is demanded, and an education for a personal expression of citizenship apart from that of socialized citizenship is not meeting the present needs. School courses in civics, lectures on Australian ballot systems, or historical surveys of political parties are far afield from the present requirements of training for an expression of true, socialized citizenship. The editorial page of the metropolitan journal, the programme of the farmers' institute, the labor union meeting, even sometimes the legislative hall, offer more expressions of modern conceptions of citizenship in a democracy than historical facts, maps of artillery lines of past wars or dates of kings offered in history courses.

Fourth:—The Progressive requests an examination of the validity of the present purpose existing in the minds of many parents in sending their children to school. Many a parent is making a personal sacrifice in order that his "child may receive an education and not have to work as hard as I have worked." In other words, education seems to be some scheme for getting away from work. The parent expects, by some sleight-of-hand performance, that his offspring through the possession of a school certificate will be able to step into

THE NEW EDUCATION

the world and obtain immediate entrée into the shining band of successes. To master the countersign depends upon the attitude of the student and parent toward the educative process, upon the methods employed in the school and upon influences at work outside of the school. If a mother takes away from her pampered daughter certain home responsibilities, if a father says "John is a student now and of course, cannot be expected to help me," if the school directly or even subtly gives the impression that it occupies a position of superiority over such common things as business, industry, home or farm, if the student believes the school to be a place where he may disport himself before being condemned to a life of hard labor—then the Progressive states most emphatically that such points of view do not contribute to education for right citizenship.

The world asks of its school graduate, "What can you do and how well can you do it?" It does not ask him what he can remember about what others have done. It does not seek his average percentages. It does not presume to even question the subject matter which he has studied. All it asks is, "What have you to offer as your contribution to the world's work today?"

Education instead of being a scheme to avoid work or to make work easy is rather a plan for preparing people to perform service, and the only way to obtain effective training for service is to perform it while in training. Reciting the deeds of others in school buildings, with a non-occupational existence outside of school walls, dodging school responsibilities on a sixty per cent. passing-mark basis when life demands one hundred per cent. efficiency, the personal illusion that study is necessarily training—all these things must pass away before the Progressive in education will believe that parents are justified in feeling that their children are receiving an "education" by going to school.

FIFTH:—The Progressive believes that the schools should be open for eleven months during the year and that the educative process should be carried on for twelve months. He sees no valid objection to the child receiving less schooling than herein designated provided the training in school is supplemented by that of the home, the farm or the shop. He realizes that no general statement of a time limit for the working out of a schooling process will suffice in a complicated civilization. His present criticism is that educational practice now concerns itself entirely with a school affair, and that the public is led to believe that the schoolhouse is a place in which to get an education, and that holidays, vacations and hours outside of school are periods of recuperation held sacred to rest for the important and

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exhausting school process. A greater educational fallacy never came out of the mind of man.

We are on the wrong track in advocating the present system of all-day schools for a uniform number of days, for all children, with emphasis laid upon the work which goes on in the school and accompanying divorcement from the work which goes on outside of school hours, or that which goes on after the child has gone to work. It is perfectly possible before the child has gone to work to establish a relationship between the home and the school, and another relationship between the shop, or farm and the school after the child has gone to work. The schooling process must necessarily be an adjunct to the activities outside of the school and it is absurd to force activities upon the school which it can never successfully carry on.

The introduction into the school of vocational subjects, such as manual training, cooking, sewing and agriculture calls for a very close coöperation between the school, the home and the community. We are apt to believe that we have made an educational advance when we lay out a vocational course of study, purchase equipment and secure teachers. Mother no longer shows Susan how to bake bread or to cut out a shirt-waist. Father no longer need give John any work to do, such as repairing the fence or putting up a shelf, for, of course, the school will teach these things. Undoubtedly the school can teach the girl better than can the mother about the chemistry of food, food composition, sanitation and some facts of personal hygiene. Undoubtedly the school can teach a boy to read a drawing and to make a dove-tailed joint better than can the average father. Unquestionably the teacher of agriculture can give better lessons on soils, balanced rations, and fertilizers than can a farmer who has not kept up with the times. These subjects, however, are not taught in the school merely that girls may cook better or boys become expert carpenters or successful farmers. The greatest benefit results from such training when girls imbibe a right attitude toward home-making, boys the right attitude toward the business of farming, or the following of a trade. The purpose of this instruction is avowedly to train young people to feel, to think, and to work, not merely to give them a little hand-skill, or to permit them to indulge in a few platitudes about the dignity of labor.

While the Progressive believes that the high school should teach scientific agriculture, vocational handwork, household arts, he does not believe in wasting the time of young people of secondary age in plain sewing, mere mixing of ingredients, making tabourets, and digging in the school garden unless these subjects have a scientific treatment in the school and are supplemented by home practice. A school-

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teacher might discuss the menu for a family of four, and develop a lesson plan. The girl, before she is given school credit for this experience, should report on her home work when she has carried out the lesson. A boy might well study the methods of tree-grafting, but if the lesson ends there, its value is lost.

Vocational work can have vitality, and we are in danger of making it pedantic. Instead of the incentive to prepare a real meal in a real home, we imagine by the directions of the book that there is a family of four. Instead of having the incentive of a real orchard that needs trimming and pruning, we take a book, a blackboard, an imaginary saw, and remove pictorial limbs from a pictorial tree. We delude ourselves into thinking we are advancing in educational methods if we develop a school laboratory and set up a few tools and apparatus. It is not easy to provide realities. These can be found only in real homes, real orchards and amid normal incentives of real life. The only way to make school work real is to tie it up with useful work.

THE Progressive believes in the extended use of school "plants" for the benefit of adults as well as children, and for broader purposes than now generally conceded. He is convinced that the schoolhouse can be made to conserve, unify and uphold the community by becoming a meeting place for both the civic and social life of the neighborhood. By bringing together the whole community for civic discussion in a common meeting place that is the property of all, the tendency toward violence in the settlement of economic problems would be lessened. In America we have the choice of using bombs or of using brains; of setting off dynamite or of setting off debate. Our civic, social, educational, recreational center should be the organ through which a better informed, more intelligent, more socially conscious electorate be able to voice its desires.

Intellectually such a center could serve the people by housing traveling exhibits of pictures and works of art,—traveling libraries and correspondence courses in arts and crafts touching the vocational life of the people. Such a center would indicate to the farmer new applications of science; to the automatic machine worker, through evening technical schools, it should give a renewed intellectual vigor; to the man at the tread-mill of industry or to the girl behind the counter it should give intellectual stimulus, while for the farmer's wife in the hour of her mental inertia it should provide a reading course in sanitation or home decoration.

In ways of recreation, the civic center could touch the lives of the people. The Progressive pictures a municipal or village concert awakening the dormant spirit harnessed to a grasping commercialism.

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He sees a graphophone, a talking and moving picture machine in the community school with an audience of adults and children feeling the impulse which comes from the presentation of wholesome, entertaining and thought-provoking record material. The Progressive asks, "How much longer are we to leave to private enterprise the entertainment of our people? Are we always to pay theatrical trusts for amusement from trivial comedies or hackneyed melodrama? Are we always to have attendance upon operas and high types of music confined to those who can pay for a stall or box? Have the people of the open country absolutely lost all power of amusing themselves, and must they discard the homely but truly representative entertainments drawn from their daily activities and substitute a manufactured article imported from a metropolis, often devised by a partnership of the devil and the dollar? Have the foreigners of the city lost their native dances, folk-songs and simple, natural amusements? Are they about to Edisonize their recreative faculties and theater-trust an idealism which once produced a Garibaldi, a Kossuth and a Michaelangelo?" These are questions which the Progressive raises and on the answer rests our hope of a vocational and recreational life—a life increasing in length because of more material wealth and a corresponding shortening of hours given over to labor.

SIXTH:—The Progressive has one contention that will not be downed. We are told that vocational training is to be given to pupils who are unsuccessful with other studies, on the assumption that such children are hand-minded while those who successfully master the present book-schooling are obviously book-minded. But the Progressive will tell you that but few normal children are book-minded, and that the child who can make his grades year by year without a bit of stumbling, who can be successfully covered by a course of study unrelated to his experience, and apart from his environment, who can be trained by memorizing the other fellow's doings, is after all a most unusual and even abnormal child. It is a race heritage to make things, to grow things, to live with living things, hence contact with nature should be expressed in the educative process of all children.

The Progressive decidedly objects to that educational practice which would limit hand training, nature study, household arts and all constructive work to the intellectually lame; those deaf to mere information teaching, those blind to the printed page. He particularly rebels at the present practice of forcing monastical education upon the adolescent youth, at a period of deep-seated desire to do things, to be a part of the work-a-day world. It is impossible to get into the brain

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except through the avenues of the five senses. If you do not believe that usually a boy expresses pedagogical nature in the schoolroom and his own child nature outside, just watch him on a ball field—active, vivacious, inquisitive, seeking information, assuming responsibility, exercising team play, and then see him at school, a weary, shrinking sort of creature, repeating with his lips someone else's thoughts in someone else's words.

The Progressive objects to the introduction of vocational training for the sake of holding children in school. The prevailing opinion is that we should add a little vocational training and let the present subject matter and method of treatment stand. "If elementary education of city children," the Progressive says, "is apart from race heritage, child nature and needs, then the only procedure is to improve it—not by adding vocational training as an inducement to eat the educational diet—but by improving the quality of the ingredients and changing the proportions in which they are served." Vocational training has a purpose, but it is not simply to perform the function primarily the duty of general education.

SEVENTH:—Finally the Progressive believes in two great divisions of the educative process; one he would call the "way in" education—an education practically common to all pupils, dealing in the elements of citizenship, studies of language, history, geography, a training in the rudiments of arithmetic and elementary science, an appreciation of nature, music and the decorative arts, a training in hand-skill with its correlative development of mentality. This education to be given to pupils before they leave school at the age of sixteen, by the combined efforts of the home, the environment and the schoolhouse.

The other phase of education he would call the "way out" education. It is specifically adapted to individual needs—vocational in a narrow sense, social in their broadest interpretation—given informally as well as formally through every social, educational and civic agency whose good works in any way can contribute to that educative process which will make people after they have gone to work, more contented, more efficient, more open-minded, and better citizens of an industrial democracy.

Such a programme is truly American. It is not copied from the class versus caste educational system of Germany, or the culture versus chattel civilization of Greece, or the gentleman versus peasant system of France, or the Oxford versus London slum plan of England. It is based upon a democracy of equality in educational opportunity. The State is to do everything in its power to make the child able to

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meet the physical and mental emergencies of life adequately, to make him acquainted with Mother Earth and her generous bounty by actual work on the soil, to make him happy in labor, to assist him in learning to use the eye and hand in useful yet beautiful craft work, to bring him to the point of enjoying that character building which comes only with actual participation in the processes of feeling, seeing, thinking, doing, to help him discover his aptitudes and interests and send him on the road to a vocation with some knowledge of its direction and some proficiency in following it.

Let us assume that the child has now left school. He is on the road. It is long, confusing, with many turns and pitfalls. It is filled with automatic machines, business systems, new inventions displacing the labor of his hands. It has monotony, competition, unrest. It has the burden of long hours, low wages and industrial diseases. Its milestones are confusing signals, signs and beckonings.

The State again seeks its opportunity. It now offers the chance for the individual to find his "way out." It has its part-time school where the youth may learn the technique of a new process, where the farmer may have the best interpretation of the last word in scientific farming, where the housewife may learn of labor-saving devices. It has its evening schools for further instruction in the technique of the craft or for the intellectual progress of the saleswoman, the machine-tender, the day laborer. It has its correspondence courses where the coal shoveler may study between the firings of the boiler, where the lonely signal operator may receive his first lessons in the mysterious force which his levers direct. It has its summer courses for the farmer's boy who has the leisure which awaits the coming of the spring. It has its municipal theater, its civic center, its people's gymnasium, its playgrounds and parks to amuse a worn out mind, to build up a tired body and reclaim a lost soul.



THE EDUCATION OF CHILDREN IN THE SCHOOL GARDENS OF LOS ANGELES: BY MARY RICHARDS GRAY

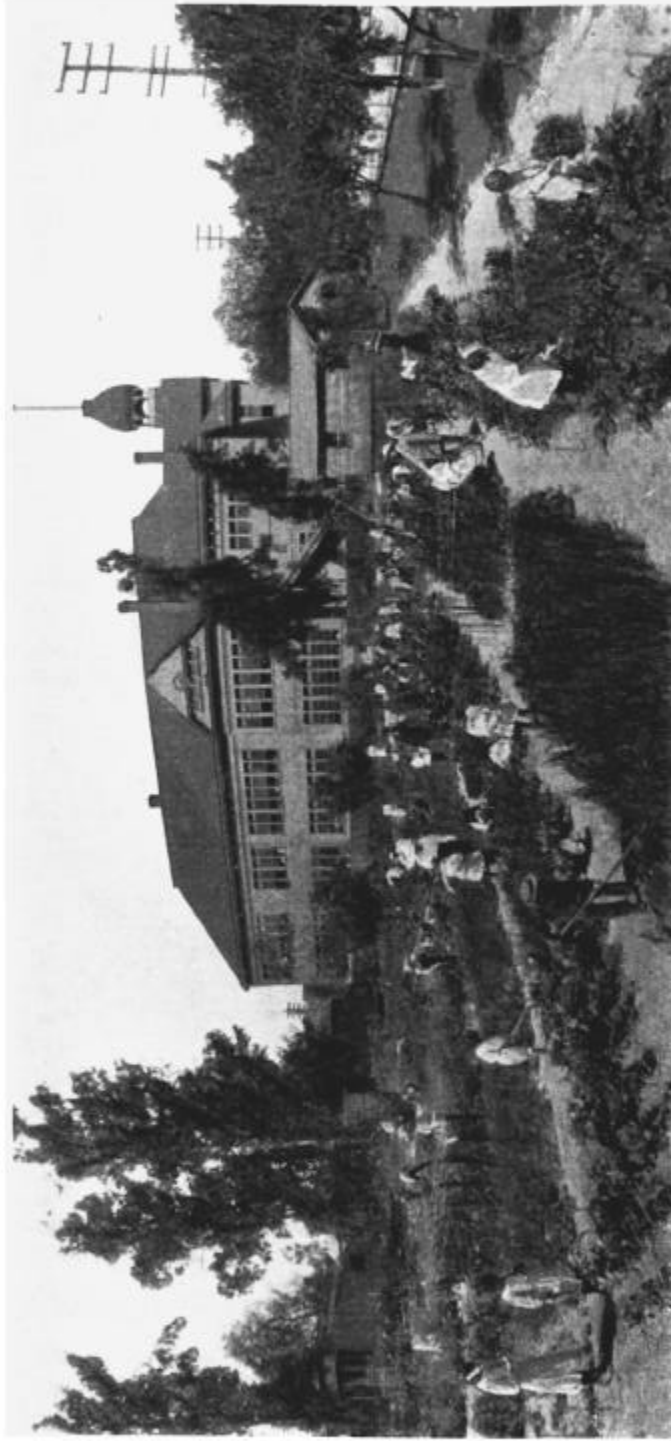


LOS ANGELES blooms like the rose because seventy thousand schoolchildren are doing real gardening both at school and at home. To say that the city has the most beautiful school gardens in the world is to state the matter somewhat forcibly, when one thinks of those in Denmark, Holland, Prussia and France where elementary agriculture has been a compulsory study for years. Yet a semitropical climate performs wonders. Of two hundred schools one half has large gardens in full operation; all the others have them in varying stages of organization ranging from landscape features for the school grounds to fully metamorphosed vacant lots. As until now ground for gardens has not been deemed a necessary part of the school equipment, only the very newest, like the State Normal, provide the required space. However, vacant lots abound and owners are willing to have them pressed into this service. For

“A garden is a lovesome thing, Got wot!
Rose plot, fringed pool,
Fern’d grot—the veriest school of peace.”

Gardening took its place in the school curriculum three years ago when Mrs. Marie Aloysius Larkey was appointed special teacher of agriculture, going into the task single-handed. After a time she was given a trained assistant; but not until September, nineteen hundred and twelve, did the Board of Education see fit to establish a fully equipped department for this work. Now there is a superintendent, four assistant superintendents, and a few special teachers. In view of the fact that the teaching of the subject is likely to become obligatory throughout the State all teachers not certificated are preparing to become regularly qualified. Agriculture in Los Angeles ranks with reading and spelling.

Mrs. Larkey's first efforts were spent on the East Seventh Street School, in one of the few squalid districts of the city in which the majority of people do not own their own homes and have no gardens. Adjoining the school she secured a vacant lot one hundred feet square given over to weeds and trash. Around it, within a radius of a few blocks, planing mills, factories, car barns, railway switches and round houses hummed with business, and the gas works filled the air with noxious odors. Nothing about the lot in any way suggested the environment of a garden. That, however, did not matter. Other problems more serious than merely physical environment faced this



A PHOTOGRAPH OF THE EAST SEVENTH STREET SCHOOL IN LOS ANGELES: THIS IS ONE OF THE PRIZE GARDENS OF THE CITY AND THE ENERGY WITH WHICH THE CHILDREN ARE WORKING SEEMS TO MERIT EVERY POSSIBLE REWARD.



A GLIMPSE OF THE KINDERGARTEN SCHOOL GARDENERS WORKING EAGERLY FOR A PRIZE.

THIS IS ONE SECTION OF THE HORTICULTURAL GROUP OF THE GARDENA AGRICULTURAL HIGH SCHOOL IN LOS ANGELES, A SCHOOL DESIGNED TO DEVELOP THE CHARACTER OF BOYS AND GIRLS.



BOYS AT WORK IN A "SLAT" HOUSE OF
ONE OF THE LOS ANGELES HIGH SCHOOLS.
BUSY CORNER OF A GARDEN IN THE GAR-
DENA AGRICULTURAL HIGH SCHOOL.



A SCHOOL GARDEN IN THE RUSSIAN QUARTER OF LOS ANGELES PLANTED ALONG ONE SIDE OF A PLAYGROUND, A GROUP OF BOYS BEGINNING THE ATTACK ON AN UGLY STRETCH OF CITY GROUND WHICH WILL FLOWER OUT INTO A BEAUTIFUL GARDEN.

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capable woman—the actual task of battling with climatic conditions, untrained teachers, and pupils who did not know a spade from a hoe, a weed from a valuable plant.

LOS ANGELES is a land of little rain, semitropical and at the same time semiarid. The normal rainfall of about sixteen inches comes down usually in a few torrential storms during the winter when all vegetation grows luxuriantly; during the rest of the year not a drop of rain falls. There is little precipitation in the form of dew, and fog from the ocean twenty miles away cannot be depended upon. In many places the soil is adobe that bakes almost like brick, in other spots, heavy sand through which water drains as through a sieve. At all times more or less irrigation is required. At the Seventh Street School the seven hundred pupils representing many nationalities as well as colors were without any experience in gardening; likewise the teachers who had to learn the gentle art and teach it at the same time. All told the field of action was not one in which every prospect pleased and only man was vile.

For the Herculean task undertaken help came from many quarters—the city, the Board of Education, Women's Clubs, individuals, the press. The city offered to cart away all trash, to pipe the lot and furnish water gratis; the Board gave supplies, and donations of seeds and plants poured in. In squads of one hundred Mrs. Larkey led her forces out into the field to clean up, accomplishing the task in a few days. The plowing and piping took a little longer. Then from each room she took the pupils in turn out with their teachers and assigned them to places for community work, even finding a good-sized corner for the kindergartners. About this time another specialist, Miss Merle Smith of the Lowthorne School of Landscape Gardening, Groton, Massachusetts, who had had experience in teaching gardening in college settlements joined Mrs. Larkey. Together the two pioneered helping teachers and pupils, repeating the Seventh Street experience over and over again in every part of the city. After about a year Miss Smith was regularly assigned to take charge of the gardening at Seventh Street, where both parents and pupils clamored for her instruction. Mothers who could not join in the work wheeled their baby carts up along the fences and took in knowledge in tabloid snatches while their infants slept and their older children hoed and weeded. Next, continuation classes that ran on until five o'clock daily were organized, but even these failed to satisfy the demand, consequently an unsightly lot seven hundred by two hundred feet wide was secured. The front half was cultivated, the back half left untouched. Through the middle a trench was dug and in it sunflowers were

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planted that grew to rival Jack's beanstalk, towering fully ten feet above the lovely garden and the dump heap—an object lesson in before and after applying work.

These gardens Miss Smith entered in a nation-wide contest conducted by one of the magazines and secured first prize—a framed certificate stating the terms of the award and a Nature Library published in sixteen volumes. The pupils attempted to grow only the most ordinary of small vegetables and hardy flowers. They were careful to arrange all beds symmetrically, to keep all lines straight and true, to choose for each plant the part of the garden best suited to its needs, to give to each individual plot as well as to the whole a beautiful massing of blossoms and foliage. Simple as were the gardens, one with a screen of towering sunflowers at the back and bank of moon-flowers at the front, another with an attractive strip of lawn; their size, location and beauty attracted a great deal of attention. In the contests they won on neatness, style of arrangement, perfection of products and general excellence.

THE curriculum for the grades calls merely for the beginning of this work. The Gardena Agricultural High School, the one high school of the city, specializing in Agriculture, continues with the advanced courses; though at present its work is largely elementary as it has been in full operation as a special school less than three years. The garden for this school is a farm of twenty acres completely outfitted with laboratories, slat houses, hot beds, flower beds, kitchen gardens and orchards affording the students training for all of the vocations that have to do with the raising of plants. Notwithstanding, here as in the grades, gardening is considered from the viewpoint of effective manual training, as an opportunity to inculcate a love of work and to build character rather than the mere acquisition of scientific facts. First, last and always the aim and object of gardening in these schools, whether in the grades or the high school, is character-building.

Coöperating with the Board of Education, the Women's Clubs of Los Angeles having for their object the improvement of civic conditions have recently joined forces to aid the garden movement. Through their efforts one large seed house has published a pamphlet called "Hints for a Beautiful City," and distributed it gratis. This circular gives simple directions for cleaning up yards and vacant lots, for planting and caring for gardens, etc. These clubs in different districts of the city are individually offering prizes for all kinds of contests. Everyone is finding something to do. Enthusiasm runs high. Los Angeles bids fair soon to be a fit abode for the celestial visitors from whom it takes its name!

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The first question invariably asked about the gardens concerns the disposition made of the produce and flowers, as if the production and possible financial gain were the chief aim and object of the work. In several schools the cooking department serves a luncheon for teachers and pupils. Some of the garden vegetables are used for these lunches; more, for the regular cooking lessons, when each girl is privileged to eat what she cooks. The rest are divided among the pupils and taken home. In individual gardens the young gardener disposes of his produce as he chooses. The flowers go to the children who take them home, to sick friends or hospitals. At the Gardena High School some boys have made a little money by selling their vegetables. Never under any circumstance is a thing wasted; nor is stress ever laid on financial gains from school gardens. With seventy thousand pupils home consumption solves the question.

As far as the teachers are concerned, they find this gardening the most delightful occupation the school affords. It helps to keep discipline, develops the children physically, creates a love for work and a desire to have more attractive homes. But of greater interest than all this is the attitude of the child toward the mysteries of Nature, the question of the explainable and the unexplainable.

Betimes the teacher chances upon things neither unexplainable nor mysterious, just queer; as when she found a negro boy catching earth worms and putting them in a bottle.

"What are you doing, Buster?"

"Ah is ketchin' angle wuhms fur gra'mammy."

"What for?"

"Dey cuahs ammonia."

"Who said so?"

"Gra'mammy."

"So?"

"Yes'm. Ah knows. Dey gives out a brown juice and she jes' rubs dat on huhsef an' it cuahs her. Ah has saw huh do it. Ah knows," and he rolled his big eyes in a convincing way.

However, when all is done and said it is the mystery element in gardening that holds children as well as grown-ups enthralled; the oft repeated experience of the kindergartner resting on her hoe gazing at a tropical growth of coxcomb and puzzling her brains as to how anything so marvelous grew from one seed. Los Angeles dreams a dream of a City Beautiful in which each child of her population shall have a garden in which to grow and develop like the wonderful flowers of the Southland. Slowly yet surely her dream is coming true!

GLENS AND GARDENS OF HUDSON RIVER ESTATES, WHEREIN MAN HAS BEEN NATURE'S ASSISTANT GARDENER: BY ALICE LOUNSBERRY



HERE is a strip of land in America that rivals in point of beauty some of the most famous in the world. With all its loveliness it is too secluded to be widely known and its appeal is mostly to the few who possess homes along its elevations and to the happy ones that come and go as occasions offer. From the west bank of the Hudson River this favored bit of country rises steeply and forms in the region of Newburgh a high plateau broken by ridges and cliffs, undulations and ravines, many of them crowned with a verdant growth bespeaking unusual fertility. Here trees of colossal stature are seen, of a size and symmetry to make them distinctive throughout the northeastern part of America. Nor are hemlock groves infrequent; often these trees seek the edges of the ravines or glens, haunts they love full well and stretch out over them their boughs of featherlike foliage,

The intimate charm of this land lies in its deeply hidden glens and its gardens, the latter causing the visitor to search for them, piquing thereby his interest and adding to his pleasure when they are found. Indeed there is nothing flamboyantly evident about either these glens or gardens, while each one is possessed of a marked individuality, revealing its purpose, its ideals, awakening a rich and abundant interest.

The naturalistic quality of these glens is unmarred; the water trickling along their base is intercepted by rocks piled so as to form dashing falls or else so dispersed as to impede the steady flow of the water, causing it to gurgle in its uncertainty and haste.

Nature in her slow moving, often determined, way has taught many lessons to men, not the least potent of which is that she can be aided in even her best endeavors. Whether her beauty becomes intensified or marred in the process depends upon the mind of the person who changes her surfaces in an attempt to bring her closer to human ideals. He who attempts this work must either have studied deeply, accumulating thereby a fund of technical skill, or he must have so profound a love for Nature as to apprehend her impulses. His eye moreover must be the seeing one, appraising him instantly when his work is that which benefits, or warning him, when unworthy.

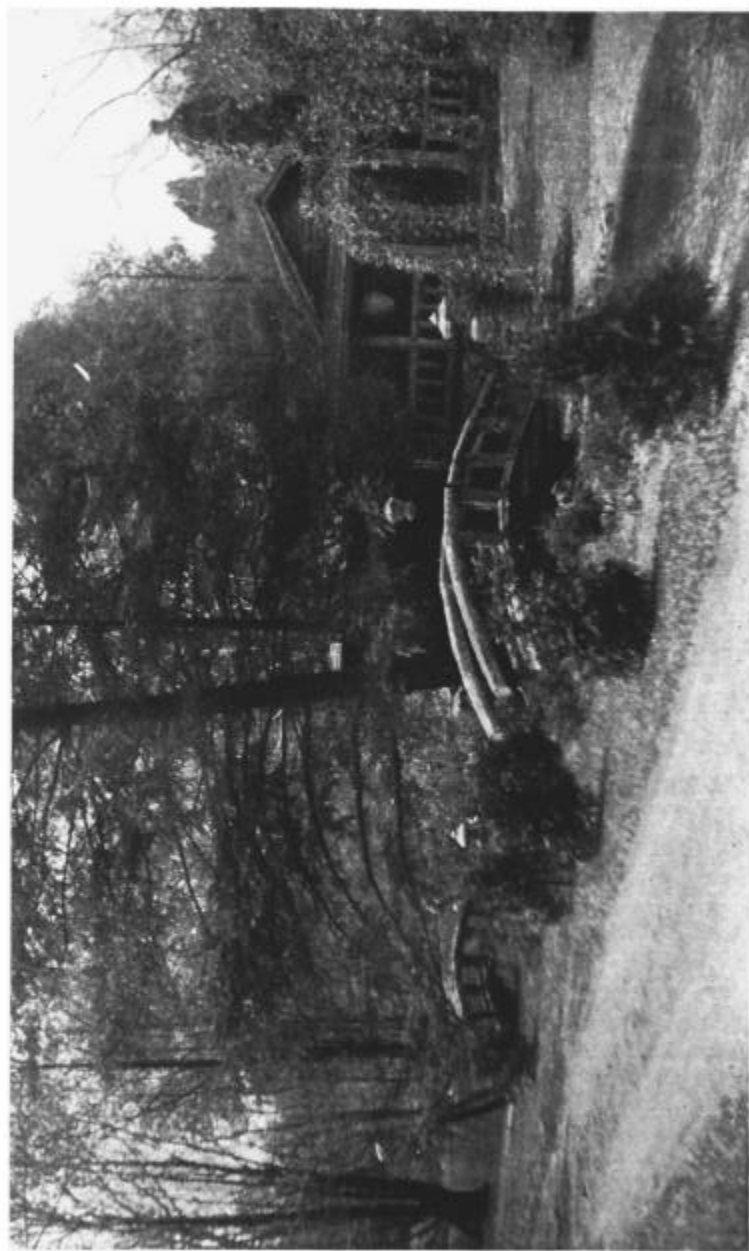
One glen passing through a beautiful Hudson River estate has had given to it the look of human occupancy by the skilful touch of one sensing inevitably the spirit of Nature. Her wildness has been tamed



WITHIN THE ARBOR THAT FORMS A LONG SHADED WALK IN MRS. RAMSDELL'S GARDEN ON THE HUDSON: THE ARBOR SUN-RIDDEN AND HUNG WITH FRAGRANT BUNCHES OF WISTARIA BLOOM.



THE LOG HOUSE THAT GIVES THE HUMAN NOTE TO MR. JOHN A. STAPLES' GLEN IN HIS ESTATE ON THE HUDSON: A LOG HOUSE FITTING ITS LANDSCAPE AS COMPLETELY AS THE NEST OF A BIRD IN A TREE, THE POND BEFORE IT ADDING TO THE PLACIDITY OF THE SCENE.



A VIEW FARTHER UP THE GLEN WHERE THE BRIDGES ARE SEEN
SPANNING THE STREAM BEFORE IT REACHES THE POND: THE
HEMLOCK TREE THE MAGNIFICENT INDIVIDUAL OF THE SCENE.

THE GLEN OF MR. STAPLES' WHEREIN WATER FALLS AND SPLASHES AMID ROCKS AND BRAKES WHILE HOLDING ITS DETERMINED WAY: A BIT OF NATURALISTIC PLANTING THAT GIVES THE CHARM OF WILDNESS FOUND MOSTLY IN PLACES FAR AWAY FROM HUMAN HABITATIONS: IN THE DISTANCE A PEEP OF THE LOG HOUSE IS GAINED, INDICATING THAT THE SPOT IS NOT LEFT ENTIRELY O'NIGHTS TO THE SCREECH OWL OR BY DAYS TO SQUIRRELS, THE LATTER HERE LIVING NATURAL LIVES TRANSFORMING OLD CROWS' NESTS INTO AIR CASTLES FOR WINTER OCCUPANCY AND SEEKING THEIR OWN FOOD RATHER THAN BEING STUFFED BY CHILDREN WITH PEANUTS AS THEIR CITY RELATIVES, PERVEATED BY PARK CIVILIZATION.



A MORE GENTLE APPEARING PART OF THE SAME STREAM, LESS MADCAP AND WILD BUT EQUALLY DETERMINED: THE PLANTING OF THE SIDE BANKS INDICATING THE MASTER HAND OF THE OWNER: THERE IS NO MORE VALUABLE CONCEIT IN NATURALISTIC PLANTING THAN THE LEVELING NOW AND THEN OF A SURFACE, SINCE PLACIDITY IS THUS GIVEN TO A SCENE, WHICH IS AS VALUABLE IN QUALITY AS DEEP SHADOWS IN A PICTURE.

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increasing thereby her powers of captivation, drawing her closer to human comprehension. This narrow valley that from an elevation winds downward, harboring a sparkling stream, has had provided for its water a separate outlet. A dam has been constructed and part of the stored-up water directed so as to pass through a separate flue, purifying it meantime of any refuse material and turning it into another channel. The flood water, through pursuance of this plan, is left to pass on its way unhindered, while a stream is provided for the center of a strip of naturalistic planting.

THE first step in beautification of this stretch of earth, which was once a dump heap, was begun in the imagination, depicting it as a landscape wildly free in grace yet sufficiently civilized to offer the sweet solace of companionship. Native rocks have been piled one upon another as if upheaved in some primeval eruption; falls have been made to appear steep and daring and the planting of tender green things has taken away any look of harshness. In places, the side slopes, approaching the rocky edges of the stream have been cleared in placid, lawnlike fashion; a conception which when helped along with a shrub or two, perhaps a lantern hung from the bough of a tree, produces a pleasing contrast with the more naturalistic borders of the stream.

Rustic bridges span this stream indicating gradually the way to the point where it expands into a good-sized pond, bordered with willows and other trees. Standing high against one of the sides of this pond is seen the final touch of the owner's hand, expressing the keynote of man's desire, a place of shelter and repose. Here a large log house sinks snugly into the landscape. It is very commodious, consisting of two good-sized rooms and a veranda stretched across the front and one of the sides. Once within this house, it seems as if a human note had been sounded in the heart of Nature. The outlook is wild yet restful; the seclusion unmarred gives no hint of loneliness: here one loses all sense of the effort that has been expended to bring this planting ground to its present state of rustic beauty.

Still the owner of the place says modestly: "There is nothing here to see as yet; nothing out of the ordinary; nothing that could not have been done by any man." He begs the onlooker to wait before passing judgment until the many things in his mind have materialized, until the pines that he has planted on the elevated ground at the side of the log house shall have grown sufficiently to give to the scene the cool dark sense of forest intenseness and to shut in still more completely from the outer world this bit of humanized nature.

Here one may believe that Nature has her moods. On fête days,

GLENS AND GARDENS ON THE HUDSON

when the house is hung with lanterns and the bridges bedecked with sprays of flowering shrubs, she loses completely the somberness that holds her in its embrace when clad in the garb of winter. At all times the lanterns give to the surroundings a suggestion of the poetic treatment associated with Japan.

This glen in its specialized arrangement is brilliant in various tones of green. At the time of the writer's visit there were no colored flowers about nor was their absence felt; rather one sensed the sweetness of a chaste bit of nature far away from the trodden paths of men, sought perchance by the scarlet tanager, a few shy orchids and overhung with the mystic boughs of the hemlock.

THE place adjoining this one has also a glen supplied with the water that passes first by the log house and the large pond, returning later to the main stream from which it was diverted. But this next estate rests not alone on its glen for attractiveness. It has at some distance from the house a garden, hidden from the casual visitor, which when revealed proves to be a spot of unusual picturesqueness, of breadth of situation and of enticing arrangement in its growth of luxuriant flowers. A side slope of the hill provides the resting-place for the garden proper, the selection of which was an act of judgment on the part of its mistress, since those laid out flatly under the sun have never the same charm as when a certain grade makes necessary the placing of steps leading from one part of the planting to another.

The feature here that at once appeals to the visitor is that the length of this garden is traversed and crossed and recrossed at right angles by broad rustic arbors covered in springtime with the incomparable bloom of the wistaria vine. The floors of these long arbors are paved with red brick, a pleasant material for the feet to tread upon, one which dries quickly after showers, and is easily kept clean. In fact the impression received on entering this garden by way of its arbors is similar to that upon entering one of the most beautiful, if not the loveliest, of the famous gardens of Algiers. At all times the occupants of the garden, as well as its visitors, have shaded walks wherein they may find protection, and whence they can view the garden at many angles, resting meantime should the heat of the midsummer day, or other reason, cause them to feel weary. These long rustic arbors, not too heavily covered with vines, but lightly so that their individuality is seen and a pleasing quality of shade preserved, give to the garden a sense of proportion and dignity which renders definite the whole planting ground.

The upper garden from mid-June until July is almost exclusively



THE CENTRAL POINT IN THE CIRCULAR GARDEN OF MRS. BEALS',
WHEREIN NATURE IS SEEN TO HAVE SHAPED A SPOT ADMIR-
ABLY ADAPTED FOR EMBELLISHMENT.

A LONG RUSTIC ARBOR, WISTARIA COVERED,
WHICH RUNS THE FULL LENGTH OF THE
UPPER AND LOWER GARDENS OF THE HUD-
SON RIVER ESTATE OF MR. J. A. P. RAMS-
DELL: AN ARBOR IN WHICH IT IS PLEAS-
ANT TO LINGER WHEN THE SUN OF
MIDDAY HOLDS FULL SWAY OR WHEN
THE TWILIGHT ACCENTUATES THE
SCENT OF THE FLOWERS AND
SETS MOTHS AND BUTTER-
FLY LOVERS ON THE
WING.



A CENTRAL POINT IN THE GARDEN OF
CANTERBURY-BELLS AGLOW WITH ITS
MYRIAD OF BLOSSOMS AND SHOWING THAT
ITS SECLUSION IS SECURED BY A GUARD
OF SURROUNDING TREES; ITS BRILLIANCY
IN NO WAY DIMMED SINCE ITS OPENNESS
TO THE SKY IS UNOBSTRUCTED: WHILE
VIBRANT WITH BLOOM FROM EARLY
SPRING UNTIL FROST, THIS PART OF THE
GARDEN IS AT NO TIME MORE SUBTLY
BEAUTIFUL THAN DURING THE REIGN
OF THE CANTERBURY-BELLS.



THE UPPER PORTION OF THE GARDEN OF CANTERBURY-BELLS LYING LIKE A MAMMOTH RING ON THE
GROUND AND SUGGESTING ITS ELEVATION BY THE VIEW THAT IS GAINED OVER THE ARBOR, AND
BEYOND THE RIVER TO THE HILLS OF THE FARTHER SIDE.

ANOTHER SECTION IN THE GARDEN OF MRS. BEALS: A SEMICIRCULAR SEAT IN THE SHADE OF THE DISTANCE OFFERING A SUGGESTION OF REPOSE: A SECTION MOREOVER SHOWING THAT THE WHEEL-LIKE EFFECT OF THE GARDEN IS ADMIRABLY INTERRUPTED HERE AND BROKEN THERE BY GROUPS OF EXQUISITE PLANTING ABOVE WHICH, IN TURN, TOWER MAGNIFICENT TREES: ABOUT THIS GARDEN THERE IS THE CHARM OF DEFINED PURPOSE: BEHIND IT THERE IS SUFFICIENT AGE TO GIVE IT AN APPARENT STEADFASTNESS OF PURPOSE AND TO CO-ORDINATE ITS MAGNETIC INDIVIDUALITY.



A GLIMPSE FROM OUTSIDE THE WISTARIA COVERED ARBOR LEADING THE EYE OVER MUCH SPACE, AND OPENING TO THE IMAGINATION A FIELD FOR STRAYING: TALL PLANTS ALONG THIS OUTSIDE VISTA INDICATE THAT A COMPANY OF HOLLY-HOCKS WITH DOUBLE FLOWERS AND SATIN SHEEN WILL COMMAND THE SITUATION LATER: NO BETTER BACKGROUND PLANTS COULD HERE HAVE BEEN CHOSEN THAN THESE NOBLE INDIVIDUALS, SHARING WITH TALL LILIES THE ABILITY TO MAKE LANDSCAPE PICTURES.



THE POINT IN THE ROCK GARDEN OF MRS. RAMSDELL WHENCE THE WATER FALLS INTO THE BED OF THE STREAM, THE GROUND HAVING BEEN RAISED TO GIVE A NATURALISTIC SETTING AND THE BANKS OF THE STREAMS SO PLANTED WITH ROCKS AND SHRUBS AS TO CARRY OUT THIS DESIRED EFFECT: AN ENCHANTING BIT OF GROUND ABOUT WHICH TO LINGER AND WHICH IT SEEMS DIFFICULT TO REALIZE WAS MERELY A BIT OF BALD UN-INTERESTING PROPERTY BARELY TWO YEARS AGO: IT SUGGESTS AT PRESENT A NATURAL VALLEY THROUGH WHICH THE PURPOSE OF NATURE WOULD DEMAND JUST SUCH A CHASTE AND DELICATE APPEARING STREAM: THE FINGER OF TIME ALONE IS NEEDED TO GIVE IT THE INCOMPARABLE GRACE OF THE WILD.



THE REST HOUSE IN THE ROCK GARDEN, THE FALLS BEHIND IT AND THE SLENDER STREAM ENCIRCLING IT AT THE SIDE AND SLIPPING AWAY IN ITS IMMEDIATE FOREGROUND.

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of Canterbury-bells, the tall well-filled stalk of a foxglove rising among them now and then in spirelike fashion. But these plants are quite different from the Canterbury-bells seen in the greater number of gardens. They are so large, their stalks so amply filled with bells mammoth in size and pluri-colored that they inspire a dream of sprites and fairies, of deep-toned musical notes clamoring overhead. Indeed should there be a fairy in the land, it would be well for him to lose no time in seeking this garden; here he might gambol as nowhere else, might drink such draughts of dew from the turned-down bells as his tiny body could scarcely hold, here he might feel himself at home, remaining a mystery to the rest of the world.

THESE Canterbury-bells not only equal, but are infinitely more perfect than those seen in the majority of gardens in England, the land *par excellence* of these flowers. The message they cast on the wind is that they have had excellent care. As is known to garden lovers, Canterbury-bells are biennials being in the same class as foxgloves. They should be sown early in April, many aver, transplanted in mid-July to a spot where they can grow with absolute freedom and planted into their permanent places where they are to bloom the following year between the twentieth of September and the first of October.

In order to see them even approaching the remarkable perfection that they show in this especial garden they should be well fertilized during the growing season, the soil about their base kept well stirred so that moisture will be conserved and at seasons of drought and during their period of bloom they should be watered plentifully. The bringing of Canterbury-bells to perfection is an art which frequently evades the purely technical gardener: it requires at least the supervision of one who loves them,—of one who above all else finds contentment in a garden. Another charm of this planting ground of Canterbury-bells is that it appears to lose its upper outline in a semicircle, gently defined against the sloping ground. The shape of the garden therefore accelerates the beauty of the flowers rather than giving them, as often happens, something to fight against.

The lower garden, separated from the one of Canterbury-bells by the long arbor is at this particular season aglow in tones of soft pink, heliotrope and deep blue, azure tones in harmony with the river, the distant hills and the softly clinging mist riding the summer air. Here and there delphiniums, extraordinary in size and bearing stalks of flowers infinitely deeper in tone than the water of the river, rise as striking accents in this gay scene which proclaims inevitably the possibilities of the floral world.

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Roses are not forgotten in this garden. They have their own well chosen place and will at a later time be entirely enclosed by a rustic fence on which will be trained varieties of the hybrid climbing roses holding their bloom longer than those which gave grace to many old-fashioned gardens. These rose vines, in fact, will be so trained along the fence that they will form festoons and loops of roses all about their special enclosure.

One of the reasons perchance that a garden has for its owner a lasting interest is that it is never finished. No matter to what height of perfection it attains, there is always for the ambitious a higher peak to scale a little farther on; there is always something that must be done with the return of spring or autumn. The interest never flags in a garden wherein the work has been well started. It is only in those that are unsound from the foundation and in which results are invariably different from those expected that the interest is soon worn out and the patience exhausted.

After walking through this garden and acquiring what insight into it one may upon a short acquaintance it would seem that it had run the gamut of surprises, even though the principle one is yet unrevealed.

ABOVE this garden and at its side there was to be seen two years ago a vacant strip of uninteresting property belonging to an individual whose buildings marred the outlook on the estate. The mistress of the garden determined to gain it for her own and to transform it in such a way as to throw into relief the highly cultivated planting of the garden alive with the best that nature has to offer. A landscape architect declared boldly that what she wished to do was among the impossibles.

Then the mistress of the garden remembered that her neighbor had already proved himself an artist in the disposal of rocks, since he had placed them in his own glen until it appeared as if molded by Dame Nature herself in her finest mood. But before even the genius with rocks can place them advantageously the landscape must be prepared to receive them. They cannot be thrown down, haphazard, on a barren field. Nature in strewing her rocks over the surface of the globe has in every case been supplied with full and sufficient reasons, violent reasons oftentimes, but still those that were indisputable.

This cleared property was first graded, the earth dug out to form a narrow valley and then piled so as to form an elevation from where it was imagined a sufficient amount of water might be stored to flood its base. The bed of this glen was later defined with cement, covered with blue clay, hidden in turn with rough gravel. Water was raised

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artificially to the top of the high point of this elevation, that the glen might be flooded at will. This, however, is one of the secrets of the garden, a secret nevertheless that when divulged illustrates the ability of man to drink deeply of Nature's wisdom and to make many of her ways his own. Each rock that forms the foundation for the waterfall, each one that borders the banks of the stream has been brought here and set in its place. These rocks besides have been well selected. They appear to be, as doubtless they are, centuries old, weather-beaten, entirely happy in their new surroundings.

Myrtle has been used in plenty to cover the banks, softening their edges. Almost threadlike this stream becomes before expanding again and losing itself somewhere in the region of the lower and lyrically beautiful garden. A forceful, yet gentle bit of landscape making is hereby presented, one that in size and breadth of treatment would impress even a Japanese specialist of renown.

Another garden that holds its own in this section of the country where Nature acts as an inspiration to the inhabitants, makes through its situation an instant appeal to the beholder. The plateau on which it is built seems to have been planned especially, for it is circular in outline, and the flower beds and paths are laid out somewhat as the spokes of a wheel. In these beds grow flowers of many colors giving an unconventional so-called "old-fashioned" effect that appeals strongly to the sentiment. Here covering the arbor is seen the old rose dubbed "seven sisters" putting out its elfinlike white bloom in heavy masses, and here, beyond and apart from the garden, are trees that touch the highest point of perfection, miracles of nature, linking the sky with the earth.



SHOTTERY GARDENS AND ITS WORKERS: BY FRANCES TOBEY



THE hawthorn hedges are flaunting their berries in vivid scarlet against the leaden August skies, as I walk "across the fields to Ann," obeying this time the lure of twentieth century service rather than of sixteenth century romance. The charm of the ancient Hathaway homestead, in its fragrant garden, has its oldtime pull upon me; but today I resolutely follow the direct path into the village, and stop before another thatched cottage, alluringly screened with a riot of rose and lavender. A sign high over the gate emboldens me to explore: "Tapestry Studio." I open the little gate and pass under the sign into the bewilderingly intimate garden.

It is a holiday (when, on an occasion of my interest in work, was it not a holiday in England?) and spinning-wheel and loom are silent in the Weaving School for Physically Defective Girls, which shows its products in this charming home of Mrs. Olive Bailey. Neither in the studio here nor in the school, a little farther on in the village, do I see groups of workers. One girl only (are all days the same to her?) sits before a large frame and with deft fingers draws wools into a complex design which will one day be a rug of velvety pile. This worker is blind, deaf and dumb. She has a book of Braille open on her lap, from which she gleans her design. She has her colors in separate boxes, and most accurately does she blend them in a rich, glowing pattern. Her rugs are always valuable, I am told; she cannot be dissuaded from weaving them very close and thick and firm; when a more loosely woven piece of work, at lower price, is desired, another must fill the order.

I am permitted to see bits of representative work; but because most of the products are made to order, special pieces for special places, there is little on exhibition at any one time. There are a few rugs, simple and serviceable, and there are linens woven by the girls. The central art is tapestry making. Here, range is permitted in individual design, with results that vary in excellence. Often new patterns show intelligent combination and variation of old units; sometimes fancy runs riot in new fields. Probably the adaptation of the art in most extensive demand is the reproduction in colors of coats of arms, heraldic devices, symbols, in response to orders from home, school, or club. About twenty young women are now in residence here, all of whom are being trained in arts whereby they may command independence.

The aim of the Weaving School has been, since its initiation in eighteen hundred and ninety-two, "to employ the waste energy of



THE TAPESTRY WORKSHOP IN SHUTTER GARDENS :
WITH BEAUTY ENCOMPASSING THE WORKERS.



THE GIRLS LOVE TO WORK OUT OF DOORS IN SHOT-
TERY GARDENS: AND WHO CAN DECIDE HOW GREATLY
NATURE INSPIRES AND GUIDES THE WORKERS?



"THE LAVENDER HOUSE," AND THE GARDEN
WHERE "CELIA" GROWS HER LAVENDER AND
ROSES: WITHIN SHE BINDS RARE BOOKS.



RICH TAPESTRIES ARE WOVEN IN THE "TAPESTRY HOUSE,"
AND THE THREADS FOR THE LOOM ARE SPUN ON OLD
SPINNING WHEELS AMIDST COLORFUL SURROUNDINGS.

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the nation as far as girls and women are concerned, in educational and remunerative work." Its primary care is for girls hampered by crippling physical conditions. By instructing them in textile arts, in thorough courses during three years, it enables them to make a living. The school seeks also to introduce such arts into the lives of unemployed women of rural districts. Herein it is a part of that reactionary impulse of the past few decades which has brought loom and spinning-wheel back into an occasional cottage in remote dale and quiet village of England.

The courses of training take cognizance of several types of students: girls who aspire to become teachers of textile arts; home workers; resident weavers at the school; blind girls in training at carpet weaving, and the weaving of tweeds; crippled girls who may become skilled in tapestry and carpet making and mending; deaf-mute girls who are learning the higher branches of shuttle weaving.

The Weaving School had its earliest setting in London, where it carried on its work in Regent Street, eighteen hundred and ninety-two and ninety-three, and for several years thereafter in Bond Street. From eighteen hundred and ninety-eight to nineteen hundred and four, the principal part of the school was established at Bushey, Herts. Since nineteen hundred and four it has enriched its life and extended its influence from quiet little Shotton, Stratford-on-Avon. Here, without blare of trumpets, with no detaining hand upon the procession of the nations that streams past its door when the tourist season is at the height, it fosters its fine ideals of the sacredness of loving labor of the hands and the dignity of economic independence. Here it welcomes to a comfortable hostel, in a pleasant garden, the frail little sisters for whom heavy domestic service or crushing grind of factory work would be quick death; the maimed and broken ones whose hands may yet work the healing miracle of beauty; the darkened eyes and stopped ears that must find compensation in sharpened acuteness of sister senses.

Its resources are open to education committees and committees of institutions and schools which may desire to give their apprentices or technical scholars further training of a higher industrial nature.

THE ideals of the Weaving School have found ready and appreciative recognition in England. Similar work has been adopted in inebriate homes, as that of Reigate; in schools for the blind, such as those at Nottingham and Brighton; in lunatic asylums, as the one at Richmond, near Dublin, and in schools for cripples, as in Birmingham.

The school at Shotton is certified by the local Government board,

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and some of the pupils receiving its tuition are wards of the Government. It receives a yearly grant from the board of education, and has, besides, a list of noble patrons, including dukes and marquises, earls and lords.

Besides equipping for the race in the economic world a number of girls who else had started unequally fitted, the school has fostered the vitality of other delicate one who have later gone into domestic service, as more suited for its scope of activity.

If I were to determine for one of these little handicapped sisters the most wholesome and restorative of destinies, it would be that she should be set in an English garden to tend it. These girls are set in a garden, and their fingers are trained in the creation of flowers of beauty.

But other Shottory gardens there are that shelter and adorn creative effort and achievement. A few steps from the Tapestry Studio I come upon the Lavender House, where "Celia" welcomes me in her fragrant Lavender Walk. Here are lavender and violet flowers in sweetly disordered luxuriance. I pass through the fragrance into a pleasant studio.

Here the principal art is book-binding—a fitting art to grow in a lavender garden. Exquisite little volumes in antique vellum or in finely tooled leather speak of intelligent hands which have caressed into beauty the stolidest of stuffs. Even the dainty end-papers are hand-colored. The Shakespeare Hand Press, of Stratford, here finds framing for some of the best of its work.

About the studio are bits of needlework, chiefly reproductions of Mediæval appliqué designs.

I select a *Cymbeline* in mottled green leather and a *Rosalind* in soft old blue suede. Then I pay a few sixpences for some little vials of lavender water and violet water, the distilled essence of the garden's spirit, and turn away across the fields, leaving behind in the gloaming the brooding peace of Shottory gardens.



CHILDREN AS GUARDIANS OF THE BIRDS:
PRACTICAL SUGGESTIONS FOR FEEDING
AND HOUSING OUR FRIENDS OF THE AIR:
BY T. GILBERT PEARSON



THE day before Christmas, nineteen hundred and twelve, several inches of snow fell over much of New York and adjacent States. In a certain little New England village children gathered that Christmas eve with their parents about the big Christmas tree that stood by the platform in the schoolhouse. Although this was a very happy occasion, it possessed no element particularly novel, and there would be little reason for relating the circumstance but for the unusual occurrences about this schoolhouse on the following morning.

This day was still and clear, greatly to the enjoyment of some millions of people. It may have been perhaps a quarter before nine when the janitor arrived to open the school building, as prearranged. He found no less than a dozen children grouped about the door, impatiently awaiting his appearance. The floor was strewn with trampled fragments of gay papers and bits of bright colored ribbon and strings which eager fingers had torn from numerous presents the evening before. This disorder, however, did not disturb the children. When they had gathered before, it had been for the purpose of receiving presents; now they had come with the purpose of bestowing presents and, if one may believe the janitor, they were at this time even more happy and excited than they had been on Christmas eve.

By nine o'clock the room was nearly filled and, under the direction of the teacher, the Christmas tree was taken down and with the combined strength of the janitor and several of the larger boys it was dragged out of the schoolhouse and across the playground to the edge of an adjoining grove. Here it was again set up and, by means of a few guy wires, held firmly in position no matter which way the wind might blow. Then the packages which the children had brought were opened and the presents tied all over the evergreen boughs.

Did anyone ever see a tree loaded down with such a peculiar assortment of good things? There must have been twenty pieces of suet tied to the limbs. There were fragments of fat, oily pork. Two children brought cocoanuts, in the side of which holes an inch or more in diameter had been cut. There were crackers and dog biscuits, and many brown doughnuts swung in the breeze. Then the janitor got a box from some place and set it under the tree. On this was poured no less than half a peck of cracked corn, millet seed, wheat and other

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small grain. Then the children joined hands and danced around the tree and sang:

"Snowbird, nuthatch or chickadee-dee

Come little birds to your Christmas tree."

The birds came, not at once, but as soon as they discovered the treat which had been spread for them. Perhaps an hour later, some children who still remained, while peeping through the schoolhouse window, were greatly delighted to see two black-capped chickadees alight in the tree and, after hopping excitedly about for a little while, begin to pick daintily at the suet. On many occasions during the holidays which followed the children came to the school-yard and were frequently rewarded by seeing some of their little feathered friends in the act of enjoying the unprecedented bounty.

When the school-days began again, the teacher found it necessary to make a rule that the children should not look out of the west windows during the study hour. Much of the food had now disappeared and, as a mark of high favor and reward for merit, the teacher appointed two children each week to keep the tree larder supplied. Never did the children lose interest in this remarkable undertaking; and an abundance of food was supplied until the first hooded spathe of the skunk cabbage pushed its way up through the dead leaves by the brook, and the shouts of the first spring robins began to ring in the air.

MANY were the things which the children learned about the birds by this simple device. They found that not only did the chickadees eat suet, but that it was also enjoyed by the nuthatches and downy woodpeckers, and once they discovered a hairy woodpecker at the tree. The downy also showed a fondness for the marrow and fragments of cracked bones. He would cling to the cocoanut, too, and eat of the white meat through the hole in the side. The snowbirds and later fox sparrows came daily to feast on the seeds and the crisp crumbs of the dog biscuits. To prevent squirrels and blue jays from carrying off the chunks of suet, the children wound them about with a network of wire or a crumpled piece of coarse wire netting.

Watching these birds from day to day developed in the pupils a desire to learn more about the habits and activities of the bird world in general, so when the warm days of spring came the wise teacher formed her pupils into a Junior Audubon Class and supplied them with the colored pictures of many native birds. One result was that when school closed late in June several dozen children had not only developed an intense and intelligent interest in bird study, but inci-

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dentally had acquired many facts tending to show the very great value which birds are to mankind.

Aside from the knowledge which the children gained and the softening effect which kindness to the birds had upon their own natures, there is another important aspect of the matter, and it is to this that I call particular attention. The wild birds which were the recipients of the pupils' favors profited very greatly. The food which they were thus able to get was in no sense simply extra dainties. Snow and sleet had covered and buried from sight their natural food supply, and the provisions which the children furnished were of the same substantial assistance that flour and bacon would be to a destitute family.

Let no one be deceived into thinking that birds have at all times an abundance of food. All wild creatures in northern latitudes have their seasons of famine. On ten thousand estates throughout the North, whenever for a long spell snow and sleet covers the earth, little birds, emaciated through lack of food, fall from the trees during the bitter winter nights. How easily much of this suffering and death might be avoided if the wealthy children and poor children, too, would only place within reach of the birds some of the scraps of food which are ordinarily discarded!

One way in which birds may be greatly increased in numbers about a place is to provide suitable nesting places for them. Birds will only be found in numbers in spring or early summer where they can find a spot to make a cradle for their young. Birds that build their nest on the ground, in shrubbery, or among the branches of trees, usually find accommodations without difficulty. But what of the birds that lay their eggs in the hollows of trees? Throughout many of the northern and middle States, nesting places for this group of birds are annually becoming more difficult to find. Not only have the forests largely passed away, but many of the artificial groves are unsuited for the abode of these birds.

Not long ago, I visited a large estate which contained not less than twenty acres of woodland. Here I found every dead tree had been felled and every dead limb had been removed, and even the hollows in the older trees had been filled with cement. There was not a dead piece of wood anywhere in which a woodpecker could dig its nest, nor was there a knot-hole left for the accommodation of a screech owl sparrow-hawk, tree-swallow, nuthatch, titmouse or bluebird. This estate was very beautiful, very complete, very conventional, and lacked nothing in the way of comfort and convenience for the wealthy non-bird-loving man and his friends. There were some birds on the place—bobolinks and sparrows in the meadows, robins and goldfinches on the lawn and jays, vireos, warblers and others in the grove.

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But where were the screech owls which should have been there to catch the meadow mice, or the sparrow-hawks that would have eaten the grasshoppers, or the chickadees, nuthatches and woodpeckers that would have gleaned from the boles and limbs of trees many a bark-boring beetle and leaf-eating caterpillar?

THE teacher in the New England schoolhouse knew how hard it was for the hole-nesting birds which visited the Christmas tree to find proper lodgings when the impulse of spring awakened in them the nesting instinct. She talked about this to her pupils and they were instantly aroused to a desire to relieve the local situation. They did not have money with which to purchase the practical von Berlepsch nesting boxes, but this was not at all necessary. A number of the larger boys volunteered to place in position artificial nesting holes which they would themselves make at home. It did not take much work to do this and comparatively little skill was required. Some old boards, a few nails and a little exercise with a saw and hammer and a large auger with which to bore holes were all that were needed. Within a week dozens of these hand-made nesting boxes were hidden in the trees and resting on poles throughout the outskirts of the village.

It is safe to say that when the local bird scouts make their full reports this summer it will be found that a goodly number of these boxes were occupied by birds which but for the home-inducement offered would have gone on to settle in more congenial regions.

This is a work which thousands of schoolboys all over the country, brimming with energy and ever ready to respond to calls for some useful, healthy line of out-of-door endeavor, could easily be induced to undertake. Parents and teachers might, with very small effort, encourage the boys under their care to make and put up boxes. Detailed descriptions as to how these should be constructed, together with many illustrations of completed boxes, may be found in a bulletin recently issued by the National Association of Audubon Societies, nineteen hundred and seventy-four Broadway, New York City. These are sold at five cents each or twenty-five cents a dozen, to cover the cost of publication.

Nests should always be made from old weather-beaten material, as bright fresh boards give a suggestion of newness entirely different from the old knot-holes and decayed openings in trees so much beloved by birds. Recently the writer received a photograph of seven fine bird boxes made by the boys of a bird class in Brooklyn, Michigan, from sections of an old wooden pump. Even boot legs, oil cans and hollow limbs can be utilized in bird architecture.

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There is another exceedingly practical way in which children may be of service to the birds, to which comparatively little attention seems to have been given. Birds must have water, and it is a fact well known to ornithologists that in regions where water is plentiful there bird life abounds. In the swamps there are more birds than in the well-drained woods or fields. I have traveled for twenty miles across the deserts of Mexico and never seen a bird, and yet when we reached the dry bed of a river, with its small water holes here and there, birds appeared as if by magic.

It does not take much effort to build a rustic drinking fountain, and these are greatly appreciated by the birds even if streams are to be found in the neighborhood. A bowl or pan on a post raised a few feet above the reach of cats will bring birds to your lawn or garden. These receptacles should be refilled every day or two. I know a lady who is in the habit of sprinkling her flowers with a garden hose. Every afternoon while thus engaged a little house wren, whose nest is nearby, comes and flies repeatedly into the spray to enjoy the cooling bath.

If sufficient water for drinking is not available in dry seasons the birds are often forced to adopt other methods of procuring the liquid their systems require. In some of the fertile valleys of California, fruit-growers are much annoyed by the depredations which birds make on the ripening fruit. The outcry against them has been so great that bills have been repeatedly introduced in the Legislature to take protection from them and to make it legal to shoot these feathered benefactors. The Government sent an expert some time ago to study these conditions and to ascertain if possible why it is that birds which are of no particular damage to fruit-growers elsewhere should here be such a nuisance. His investigations developed the significant fact that it was simply a case of scarcity of water. The bills pending in the Legislature were promptly killed by the law-makers and fruit-growers were encouraged to provide watering places for the birds.

RECENTLY strong Junior Audubon Society Classes for bird study and bird protection have been developed in the schools of Memphis, Tennessee. Unfortunately that Southern State has never yet made financial provision for supporting an adequate system of game wardens to enforce bird protective laws. As is to be expected, therefore, in many parts of the State comparatively little attention is paid to the killing of birds by men and boys who are not always careful what they shoot. These Junior Audubon boys thought something ought to be done about it in their neighborhood. They began to scout the outskirts of the city on a still hunt for gunners. Before long the

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illegal hunters began to find themselves the hunted ones and the wiser of them soon stopped shooting after the season had closed and discontinued their practice of killing song birds which the law was supposed to protect. Be it known that there are not many men who have the hardihood to violate laws—even game laws—when they know that they are likely to be haled into court, where half a dozen sturdy boys stand ready to point accusing fingers at them.

Many Italians and other foreign laborers shoot any kind of a bird that flies if they get an opportunity. These rustic ornithopages know nothing of game laws and are naturally glad to secure cheap bird meat, regardless of the species. In some States the Game Commissions and the Audubon Societies print a digest of the game laws on linen posters which can be secured for the asking. These contain, in short, crisp sentences concise statements of just what birds it is lawful to kill and when they may be shot. The printing is done in English and also in Italian. Teachers may readily get supplies of these, and in what better way could boy scouts employ their time when in a cross-country hike than by taking some of these posters along and tacking them to trees or fence posts where all hunters may see and read the law. Some years ago the writer caused several thousand of these cloth notices to be posted in regions much frequented by shooters in one of our southern States and the decrease in illegal hunting was immediately apparent.

On one occasion I heard a great man say "He who plants a tree is a benefactor to his race." It is equally true that he who plants a shrub or tree that bears wild fruit is a benefactor to the birds as well as to mankind. If the writer had his way he would encourage every child, who has the opportunity, to plant in advantageous places about the home, trees, vines and shrubs that would give natural food to the wild birds. Here is a list of some of those I would have him set out: huckleberry, blackberry, pokeberry, black haws, sumac and chokeberry. Every now and then I would ask him to transplant to a better situation a persimmon, the rich fruit of which is so much enjoyed by the wild life of the fields and grove.



GOING HOME: BY HELEN R. GUTMANN



HE autumn gale driving the fallen leaves before it had also driven from the street all those who could possibly find shelter. It was a quiet business street and few lights shone on the wet pavements. Only the synagogue, relic of former times, standing among the taller buildings, was lighted. In the lull of the storm, the voice of the Rabbi could be heard intoning the Sabbath evening service.

Slowly through the street, came a man; an observer might have thought him drunk as he staggered along, now almost falling, now standing at some street corner as if dazed. But his face was flushed with fever and not with drink. He was trembling in the cold as with ague for he wore no outer coat and his feet were slippered. His gray hair was uncovered by hat or cap. So had he escaped from the eyes of a negligent nurse and from his stately house peopled only with servants. But he realized neither cold nor storm. He was again a boy of this district, used to hunger, cold and storm, as he had been forty years before. The once well known neighborhood was no longer familiar; the tenements had given place to tall business houses, but he did not notice the change. He sought in a vague, troubled way, the tenement he had once called "home." To his fevered mind, forty years of toil were gone; forty years of joy and sorrow, of prosperity and even great wealth; forty lonely years were blotted out by the nearing hand of Death and the boy longed for home.

As he stood confused and helpless, searching for the home that, years ago, had been destroyed to make room for encroaching business, a familiar sound caught his ear. In the lull of the storm, the Rabbi could still be heard intoning the Sabbath evening service from the dimly lighted synagogue. The faith, for forty years neglected and forgotten, returned. The boy was going to the synagogue; he remembered that he had always done so on Friday night. He took his seat in the darkest corner of the place; he heard but little of prayer or sermon; he neither rose nor sat down with the congregation. Only one phrase of Hebrew repeated itself in his fast numbing brain: "*Schma Ysroel Adonai Elohen, Adonai Echod*"; "Hear, O Israel, the Lord, thy God, the Lord is One." These words were the text of the sermon, but the boy of forty years ago heard the Rabbi only as he pronounced: "These glorious words, this battle-cry of Israel has not been for times of strife or battle alone, not alone for praise of God; they are the words with which every true Jew desires to enter into the presence of God; they are the death-bed confession, dear to every Jewish heart, while to him who has left the fold, and wandered into strange paths, who dying, wishes again to enter into the religion of his Fathers, how dear, how

WHITE HEPATICA

doubly dear, are the words 'Hear, O Israel, the Lord, our God, the Lord is One!'"

And the words echoed on through his stilling brain, these words and others for forty years unthought of and forgotten: "Who is like unto Thee among the Mighty, O Lord? Who is like unto Thee? Glorious in holiness, extolled in praises, working wonders."

The service ended, the benediction was spoken, the congregation filed slowly out, exchanging the Sabbath-day greetings, "Peace be unto you, unto you, Peace."

Yet the boy did not move, and the Rabbi bending over him, in the partial darkness, saw the bent head and the slowly moving lips. Seeing, he understood, and to the slowly repeated words, "*Schma Ysroel Adonai Elohen, Adonai Echod*," the tired boy went Home.

WHITE HEPATICA

I WAS hastening along the shrieking, swarming street. I dodged the dirty children, shrank from the terrible voices—shrill and hoarse,—loathed the uncouth actions, the vulgar words, the whole ugly bedlam. "Well for the world," I thought, "if the sordid swarm could be effaced at a single stroke!"

Just then I noticed a little, silent girl seated in a baby-carriage near a doorway. Though poorly clad and belonging evidently to that neighborhood, she was as fair and fresh as the first spring blossom.

Her eyes rested on a group of screaming children at play, and over her face hovered a heavenly smile. It was a Madonna smile, or that of an infant Christ. The little one saw no stain; she heard no jangle. She was aware only of fellow-children in goodly number, of children at their sport; she loved them.

I blessed her for that wonderful, sweet smile!

GERTRUDE M. POTWIN.

EDUCATING THE INSTITUTIONAL CHILD: RIGHT LABOR AS THE GREAT FACTOR IN DEVELOPING YOUTH: BY ARTHUR D. DEAN



“THE institution exists for the child—not the child for the institution,” said Dr. Reeder of the New York Orphan Asylum at the recent conference in New York City of fellow workers in institutional management. Comparatively speaking this is a new basis of reasoning and would result in a revolution in institutions caring for the delinquent and dependent children if the methods implied in his epigrammatic statements were actually to be generally followed. The old method of dealing with such children has been to confine their schooling to the limits of four brick walls and their play to a walled-in yard. A later type extended the pedagogical space enough to provide some hand-working tools in a basement room. They tore down the walls surrounding the buildings and built an iron fence in order that the inmates might gaze through the pickets upon the world’s activities, but it never seemed to occur to this type of institution to bring these activities through the fence into the life of the institutional child.

Once in a while one comes across an institution that believes it is concerned with something besides the remodeling of walls of bricks and mortar, installing benches and tools, or imitating in its book-work the methods of the regular public schools. It is not strange that one always finds in such an institution a real man who has his human charges doing real work; who brings about a unity of relationship between the studies of the schoolroom and occupational work, who knits together the daily experiences of the child and his instruction, who recognizes that the growing child is motor-minded as well as mental-minded, who believes that habits of industry, thrift and responsibility are developed only through the exercise of these functions and not merely through preachments or text-books.

The child-labor problem in our factories is nothing compared to the lack of labor for the children not in the factory. Children in many institutions and in many schools are suffering from brain dizziness and the only safeguard is to give them something to do—to create a balance between the motor and mental expression.

The activities of the ordinary schoolroom are not sufficient; adding the play element as play, is not enough; adding to the curriculum occupational work in the form of manual training is not playing all the cards in the educational pack. But bring books, recreation and occupation together in such a way that work becomes as vital as play, that facts from books become a part of the occupational work, that

DEVELOPING CHILDREN THROUGH RIGHT WORK

occupational work becomes a phase of book-work, and we have unity in our institutional activities.

The better institutions for dependent children are becoming real homes and real schools. Not the kind of a home that we give a penned chicken, where for instance the child is made even more dependent by a process of institutional care which feeds, cloths and shelters him without involving any labor on his part or any share in responsibility; not the kind of schooling where the child covers a course of study in mere fact-knowledge—or should I say is covered by such a course—but rather a home of the older order where each member was a productive unit working toward a common end—or still better a new school of the new order which substitutes for fact-teaching such subject matter as is within the experience and environment of the child and which will really assist in developing a disciplined mind and body.

THESE new institutions are no longer feeding pens or classrooms or ledger account books. They are no longer automatic machines for producing machine-made youth. Rather they are little communities in themselves, taking in at the outer gate unfortunate children, quantities of food supplies, clothing and building material, and through a process of assimilation and development, sending out into the world a human product more fortunate and far more independent than when it entered. Literally the institution exists for its child citizens. Such institutions have a great advantage over the public schools. Even the best of the latter can never be more than coöperating agencies between the home which furnishes the best of food, clothing and shelter as well as the developing occupations, and the school which furnishes the best of correlated book instruction. But unfortunately hardly a home today furnishes any developing occupations. City flats, tenements, steam-heated apartments, package-prepared food and fire-escape yards offer nothing in the way of home opportunities for occupations. We adults may be able to stand the window-garden agriculture and tin roof sky-lines, but children cannot. It is inherent in the race to touch other beings through a labor done in common, for a common purpose, which each individual recognizes as being worth while. And to throw a sop to this race instinct by providing a little manual-training work, artificial by its very nature and its method of treatment is to insult that splendid God-given heritage which through the ages has done the natural things which concern the race in a natural way.

The Mediæval type of institutional management in dealing with occupational work considers that the child is there to support the institution; that he is to work in the fields merely to grow the food ma-



THESE BOYS AT THE ORPHANAGE AT HASTINGS-ON-THE-HUD-
SON ARE WORKING: THE RABBITS ARE THEIR CARE, TO FEED
AND TEND, KEEP HEALTHY AND SELL FOR A PROFIT: EACH
BOY GETS HIS BEST DEVELOPMENT FROM THE LABOR.



THESE BOYS AT THE HASTINGS' HOME ARE GRADING THE SCHOOL GROUNDS, AND THEY LIKE DOING IT: THEIR WORK IS MAKING THE PLACE MORE BEAUTIFUL FOR THEMSELVES AND OTHERS: IT IS MAKING THEM STRONGER AND HEALTHIER, AND ABOVE ALL, THROUGH WISE USEFUL LABOR, THEY ARE LEARNING WHAT INDEPENDENCE MEANS.



AT THE BERKSHIRE FARM SCHOOL THE BOYS SPRAY THE TREES, AND KNOW AT A GLANCE THE DESTRUCTIVE INSECTS: THEY STUDY ABOUT TREES AND THEIR CARE IN THE CLASS-ROOM, AND PRACTICE CARING FOR THEM IN THE OR-CHARDS: THEY MARKET THE CROPS THEY RAISE, AND ARE INTERESTED IN LEARNING THE "BUSINESS" OF FARMING.



THE BERKSHIRE FARM BOYS HARVESTING ICE FOR SCHOOL USE.

A CHICKEN HOUSE AT THE FARM SCHOOL, BUILT BY THE BOYS WHO RAISE AND MARKET CHICKENS.

DEVELOPING CHILDREN THROUGH RIGHT WORK

terials; to work in the kitchen and the stable as a drudge while the manager of the institution presides over all as a little imitation of a real lord of the manor, directing, as in the Middle Ages, his humble vassals to do his bidding.

A later type, realizing that the former was cruel, uneducative and undeveloping, went to the other extreme. It assumed that children were to be stall fed. This was just another type of child exploitation, except that on its surface it was more human. Here it was proposed that the institution was to have cooks for the cooking, cobblers for the cobbling, farmers for the farming, dish-washers for the dish-washing and—books, books, books, for the children. In short, the institution was to imitate the modern unoccupational home and the modern fact-teaching school.

THEN came the Vision and the Man. He said, "To cure dependency we must create independency; the institution must be an ideal social organism. As a city might take its raw material entering its gates and develop a human material, so a community school might be self-sustaining: (He did not say 'self-supporting.') that out of such an educative process the individual member of the institution could be made to see and feel his human relationship: to know that he was a useful and essential part of the whole social organism, doing useful work for useful ends, learning useful things for a human developing purpose."

One sees that a man working with such a vision takes his ideas neither from the Middle Ages of vassalism nor from imperial paternalism, that such a man is working solely toward an institution representative of Democracy.

Niebecker of Glen Mills, Barnabas of Lincolndale, Briggs of Industry, Hilliard of Berkshire Farm, George of Republic fame, Hinckley of Good Will Farm, Reeder of Hastings-on-Hudson are among the Democrats of institutional directors, for they have seen that education is a twenty-four hour a day process, that development of health, character, capacity and skill begins with the dawn of day and extends to the early morning of the following day, that the airy, sanitary bedroom, pure food, simple furnishings, instructors who are neither guards nor caretakers, but always teachers and *comrades in work*, together with productive labor, wholesome play, correlated book and occupational studies make for a real American citizenship.

There are two types of institutional directors and boards of trustees—those who believe in child labor and those who believe in the labor of children. The former should be made to see that the child does not exist to support the institution or the office force, that it is no

DEVELOPING CHILDREN THROUGH RIGHT WORK

easing of a guilty conscience to add a little manual training or to add trade courses in cobbling and tailoring (which when followed later in industry make the child dependent rather than independent) or to add a sawdust garden and call it agriculture. It is not buildings, or equipment, or books, or courses that make effective institutions; it is the way in which human and material wealth is related toward a social purpose making young men and women economically, socially, and morally *interdependent*.

REEDER, in his book, "How Two Hundred Children Live," gives us the cue. An ice pond is to be built. Its concrete bottom is to be used for ice skating and for ice cutting. It is a community job. It is a schoolroom problem, for there is the mathematics of earth material taken out and the cement material put in. Then there is the composition and description to be written.—An incubator is to be set up. The testing of the eggs, the percentage of hatch, the temperature to be considered, the chickens to be fed, the poultry to be dressed, the accounts to be kept. And again, the description of processes to be written.—A little girl is to make a dress. She must go to the store and buy the material, cut and fit it. Yes, and best of all wear the product of her own labor. She sketches out the design and plans the color scheme. And again the composition.—A new building is being erected. Every boy is alert with interest and desire to help. Each boy knows the four brands of bricks, the kind of lathing, the types of sewer traps, the system of drainage, and again, the written description.—The little boy is to have an Easter hyacinth. He mixes the soil, buries the bulb, transplants it, forces it in the hothouse, paints it in the drawing room, smells it in his bedroom, and writes it up in the schoolroom.—A boy falls in the ball field and breaks his arm. The doctor is called, and so are the other boys. The damaged arm is put into shape before the children and we have a lesson in Red Cross Aid "hot off the bat."

But there are other Reederers and the number is growing. At Canaan, N. Y., Four Corners (symbolic of the work as Hilliard touches the four corners of a square deal for the boy) is the Berkshire Farm School. The boys have built a poultry plant, a model dairy, a hog pen. They spray the trees and know the bugs. They know them because they study about them with a classroom teacher, look them up in the library, find them on the trees. They have their own private chicken business. They market from their own individual plots as well as work in the community garden. They issue a school paper, are its editors, devils, printers and subscription agents.

After all, the educational world does move. A beginning has been

MIDSUMMER

made for the orphans and for the delinquents. The State institutions for the blind and the insane are seeing the educational value of labor. Tuskegee and Hampton are giving national education to those of negro blood. It is well that we do so much for all these people. Some day we may all awaken to the fact that to be born unfortunate or to have misfortune come upon us is but to have the opportunity for participating in the best education, and then we shall ask, "If the best is none too good for these people is it any too good for all—rich, poor, sane and insane, normal and abnormal, regular or backward?" And then we shall say that labor as a factor in the education process cannot always be ignored and that "education is teaching a fellow to work or it is no good."

MIDSUMMER

IT was the time of shade and shine;
The roses pale as death
Poured on the wind a fire divine—
The spikenard of their breath!

The locusts chirped in monotone;
The toad in garb of rust
Monarch of silence on a stone
Ruled in a world of dust.

The birds were songless in the trees,
But in the blue above
The butterflies danced on the breeze
Like aeroplanes of love.

There was a rapture in the air
Caressing as a boon.
For high and low and everywhere
The year was at the noon!

EDWARD WILBUR MASON.

IRONWORK IN WAR AND PEACE, ART AND SCIENCE: EXAMPLES OF THE WORK OF COLONIAL CRAFTSMEN



HE 'perils that environ men that meddle with cold iron' are many; but those who attempt to control hot iron are also to be respected, when they achieve an artistic result with this unsympathetic metal." So writes Julia deWolf Addison in "Arts and Crafts in the Middle Ages." And she quotes Bartholomew's book "On the Properties of Things," in which he quaintly remarks: "Though iron cometh of the earth, yet it is most hard and sad, and therefore with beating and smiting it suppresseth and dilateth all other metal, and maketh it stretch on length and on breadth."

"Unfortunately," says the author first quoted, "'Rust hath corrupted' many interesting antiquities in iron, so that only a limited number of specimens of this metal have come down to us from very early times. One of the earliest in England is a gravestone of cast metal, of the date thirteen hundred and fifty. It is decorated with a cross, and has the epitaph, 'Pray for the soul of Joan Collins.'"

The history of ironwork, however, harks back to a date much earlier than the year when poor Joan's soul anticipated its need of prayer. In fact, we find the first traces of the use of this interesting metal in the prehistoric Age of Iron which succeeded those of Stone and Bronze. Authorities seem to agree, though, that the iron used by our primitive forefathers for their weapons of war and chase was not mined from the earth but was gathered from its surface, and consisted of the remains of meteorites which had fallen from "extra-terrestrial regions."

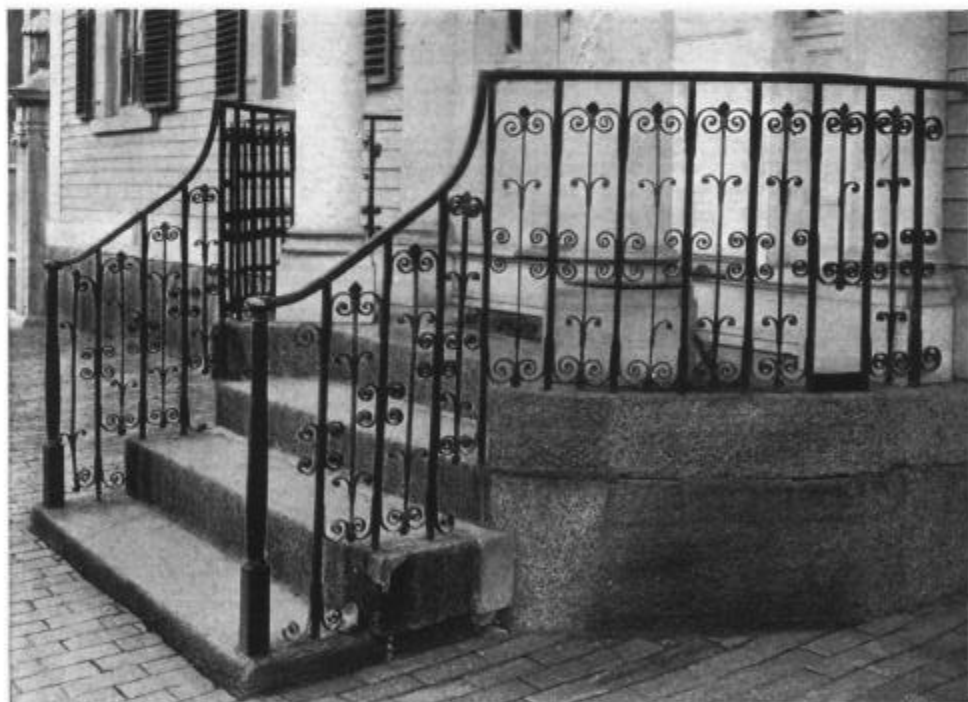
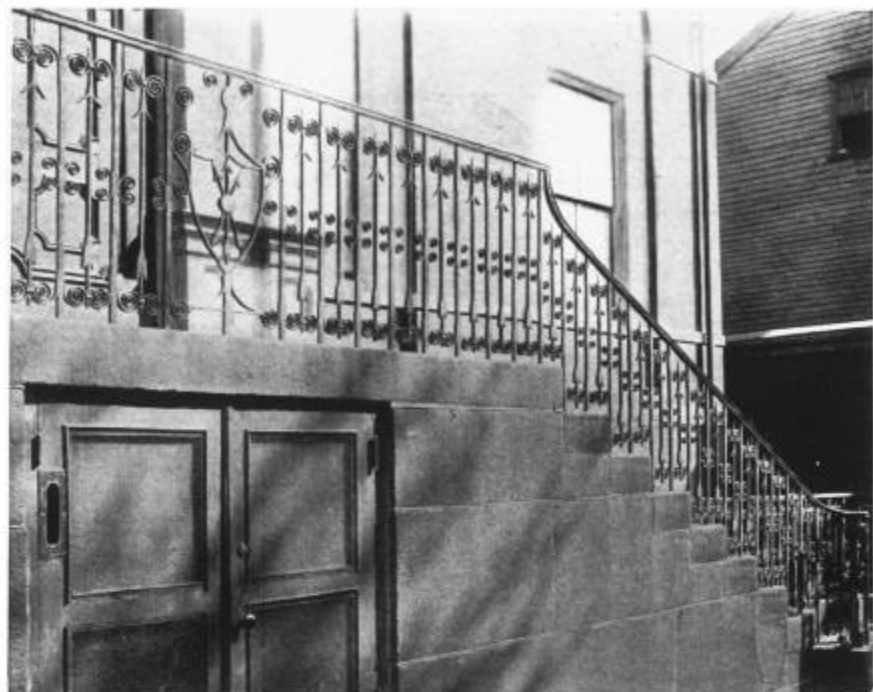
Although iron is now known as one of the most abundant of metals, it was once considered very rare. The Homeric poems speak of it as something so precious that it was stored in the chambers of the rich, and we hear of a lump of iron being offered as a prize in the olden games.

The most ancient specimens of iron are said to be those from Egyptian and Assyrian ruins. The Egyptians gave it the name of *ba-en-pet*, "the celestial metal"—except one school which regarded iron as contaminating those who used it with a taint that would even cling to them in a future life! One wonders how such a strange superstition originated, and whether it had anything to do with the metal's susceptibility to rust.

Iron was used in ancient Greece and India, but it was not until the establishment of the Roman Empire that its use became general



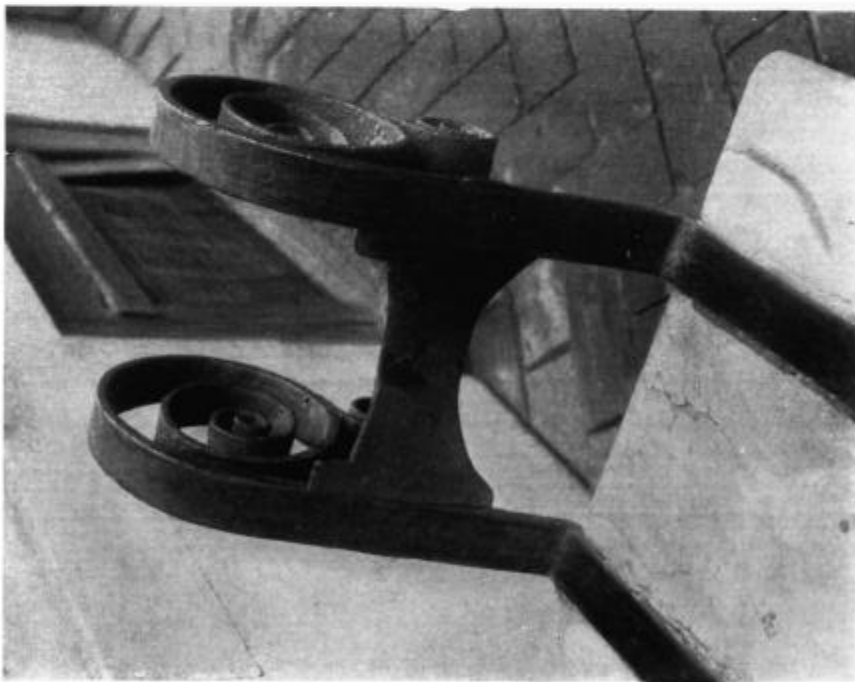
COLONIAL WROUGHT-IRON GATE AT THE ENTRANCE TO
THE MENNONITE MEETING-HOUSE IN GERMANTOWN, PA.,
SHOWING A SIMPLE AND GRACEFUL USE OF SCROLLS



WROUGHT-IRON BALUSTRADES AND STAIR-RAILS OF COLONIAL TIMES, THE DELICACY OF WHICH ARE IN INTERESTING CONTRAST TO THE STURDY STONE STEPS.



A COLONIAL ENTRANCE THAT SHOWS AN UN-
USUALLY INTRICATE HANDLING OF WROUGHT
IRON IN BOTH RAILINGS AND GATE.



TWO STURDY COLONIAL WROUGHT-IRON DOOR-
SCRAPERS THAT ARE DECORATIVE IN DESIGN,
SHOWING A MOST EFFECTIVE USE OF SCROLLS.

THE CRAFT OF THE BLACKSMITH

in civilized Europe. The Romans, as Lord Avebury pointed out, had been so long accustomed to the use of iron swords that one of their names for a sword was "ferrum." While the Roman invasion of Britain may have stimulated iron-working in that country, yet the conquerors did not introduce the metal, for Julius Caesar found that the natives were already using iron in their swords, spears, hooks and scythes with a skill that indicated long familiarity.

JULIA ADDISON, speaking of the ornamentation of swords during the Middle Ages, remarks that "ever since fifteen hundred and ten it is a curious fact that the decorations of swords have been designed to be examined when the sword hangs with the point down; the earlier ornament was adapted to being seen at its best when the sword was held upright, as in action. Perhaps the later theory of decoration is more sensible, for it is certain that neither a warrior nor his opponent could have occasion to admire fine decoration at a time when the sword was drawn!"

England, France and Spain show interesting specimens of iron-work not only in armor and other accoutrements of war, but also in the more peaceful realm of architecture—in the hinges of doors and chests, in brackets, balconies, stair ramps, balustrades, grilles, locks and keys, door knockers, inn signs and weather-cocks. A collection of engravings published by Charles Schmid of Paris, under the title "French Ironwork during the Seventeenth and Eighteenth Centuries," shows to what heights of beauty the art attained beneath the inspiration and skilful, loving hands of those long-departed craftsmen whose work still lives.

Speaking of the craft of the blacksmith, in his wonderfully illustrated book on English Ironwork, J. Starkie Gardner says: "The salient characteristic is that his chief operations are hurried; he may ponder and think over important works, but once undertaken he must strike while the iron is hot, the heat and glare in his eyes, amidst showers of sparks, while the telling blows are delivered by assistant hammermen. His results under such conditions cannot fail to be more or less impressionist, and hence perhaps they appeal so strongly to the artistic sense. The interior of the smithy, though dark and grimy, seems dear to the poetic mind, and the work begets a spirit of sturdy independence in its votaries. The craft itself is fascinating not only from its antiquity and primitive methods, but in the importance of its results. Indeed, the art as practiced now can differ but little from that of the far-off days of fabled Cyclops, Thor or Vulcan, and the tools used by St. Dunstan, said to be preserved at Mayfield, hardly differ from those of today."

THE CRAFT OF THE BLACKSMITHS

St. Dunstan was the patron saint of goldsmiths and blacksmiths. He was born in the year nine hundred and twenty-five, lived in Glastonbury and was a most industrious monk, being not only a metal worker but a scholar and musician. Although he was a favorite at the court of King Edmund, Dunstan's cleverness evidently made him enemies as well as friends, for many legends are handed down to us telling of his dealings with the Evil One. The powers of darkness seem to have given him annoyance as well as help, however, for when he was working at his forge and the demon happened to provoke him,

"St. Dunstan, so the story goes,
Once pulled the devil by the nose
With red hot tongs which made him roar
That he was heard three miles or more."

BACK in the olden days when the safety of home and castle depended on the strength of walls and entrances as well as on the courage of the inmates, we find "massive oaken gates, bolted and barred and studded with iron," while walls with iron gates also encircled the courts and gardens for privacy and protection. As the centuries passed by and the Feudal days with their warlike customs were outgrown, ironwork came to be used for its decorative qualities rather than for purposes of fortification, and we find gates with scrolls and leaves and ornamental grilles taking the place of the more solid work of earlier days.

Speaking of gates, it is interesting to note that the word hinge comes from the Saxon *hengen*, to hang. The primitive hinges were sometimes sockets cut in stone, but as these were rather clumsy, iron came to be used instead. Then strap hinges of wrought iron were developed, and were used especially in churches—the common citadels of refuge—for they strengthened the doors against the invasion of marauders, prevented the wood from warping and at the same time afforded an opportunity for decoration. Thus, out of the simple strap hinges grew the innumerable designs that characterize the Mediæval ironwork.

With the discovery and colonization of America and the gradual building up of New-World architecture and industries, something of the spirit of the European craftsmen naturally came to us across the sea, and as iron was found to be plentiful it was used in many ways, both practical and decorative. We are illustrating here a few examples of ironwork used in our own Colonial days—garden gates and railings, stair ramps, balustrades and door-scrapers. Like most work of that period, they are comparatively simple in design, yet saved from austerity by the slender grace of their scrolls.

TWO PLAYS: BY MARGUERITE WILKINSON

THE TRAGEDY

THERE are those who long to grow but can scarcely buy food to sustain life.

There are those who would design a garment of perfect beauty, but must needs struggle to cover nakedness.

There are those who long to sing, but may not even speak while they toil.

There are those who would declare a vision if they were given the time to see it, whose eyes are rivetted and held to grim and unlovely tasks.

There are those who would gladly beget and bear helpful children if they did not need to bear the burden of helpless kindred.

There are those who would educate us all if they were not poorly paid to teach hundreds.

There are those who would preach God if they were not kept busy serving tables.

There are those who would live clean and true if they had not been born in filth and dishonor.

This is the tragedy of life enacted moment by moment, never yet interrupted. Some of us do not even see it. All of us permit it to go on.

THE COMEDY

THERE are those who give alms of their substance, daily, who could not earn a living.

There are those wearing priceless raiment which they could not design or fashion, or pay for by their own toil.

There are those who claim the right to sing in parlors songs that they have never truly heard.

There are those critical of visions which they have only seen with dull eyes of the flesh.

There are those wilfully barren and unproductive who would show laboring men and women how to serve their families.

There are those who would be willing to stand high in the schools if education could be purchased without price.

There are those who find consolation in thoughts of the love of God, who yet have no part or lot in the love of friends.

There are those who, by purchasing women, think they have bought the allegiance of love.

There are a few who would be very poor indeed if others had not enriched them gratuitously.

This is the comedy of life, playing night and day throughout the world. All of us see it, but few laugh.



MORE CRAFTSMAN BUNGALOWS FOR COUNTRY AND SUBURBAN HOME-BUILDERS

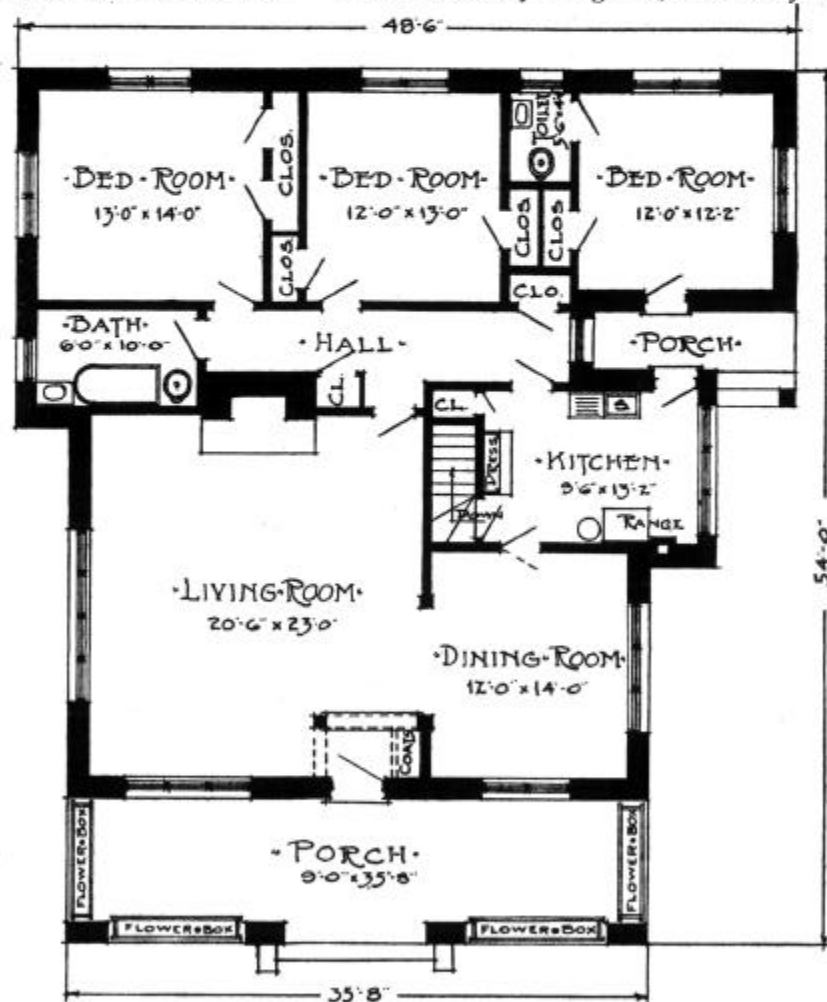
AS the months go by we are having more and more requests for simple bungalow designs—five- and six-room homes, suitable for suburban

or country surroundings, with the kind of plans that will combine homelike comfort with economy of construction. And especially these prospective home-builders want all their rooms on one floor, so that one maid can do the work easily; while in many cases the arrangement must be so simple that the housewife can dispense with outside help altogether.

We have already designed and published in THE CRAFTSMAN a great many bungalows along these practical lines, but there seems almost no limit to the possibilities of variety in bungalow planning—not variety merely for its own sake,

but to meet different local conditions and different family needs. And so, realizing that the more designs we publish, the more helpful we can be in aiding our friends to select or work out their own ideal plans, we are presenting two more this month.

If we have overestimated the popularity of the one-story bungalow, and many of

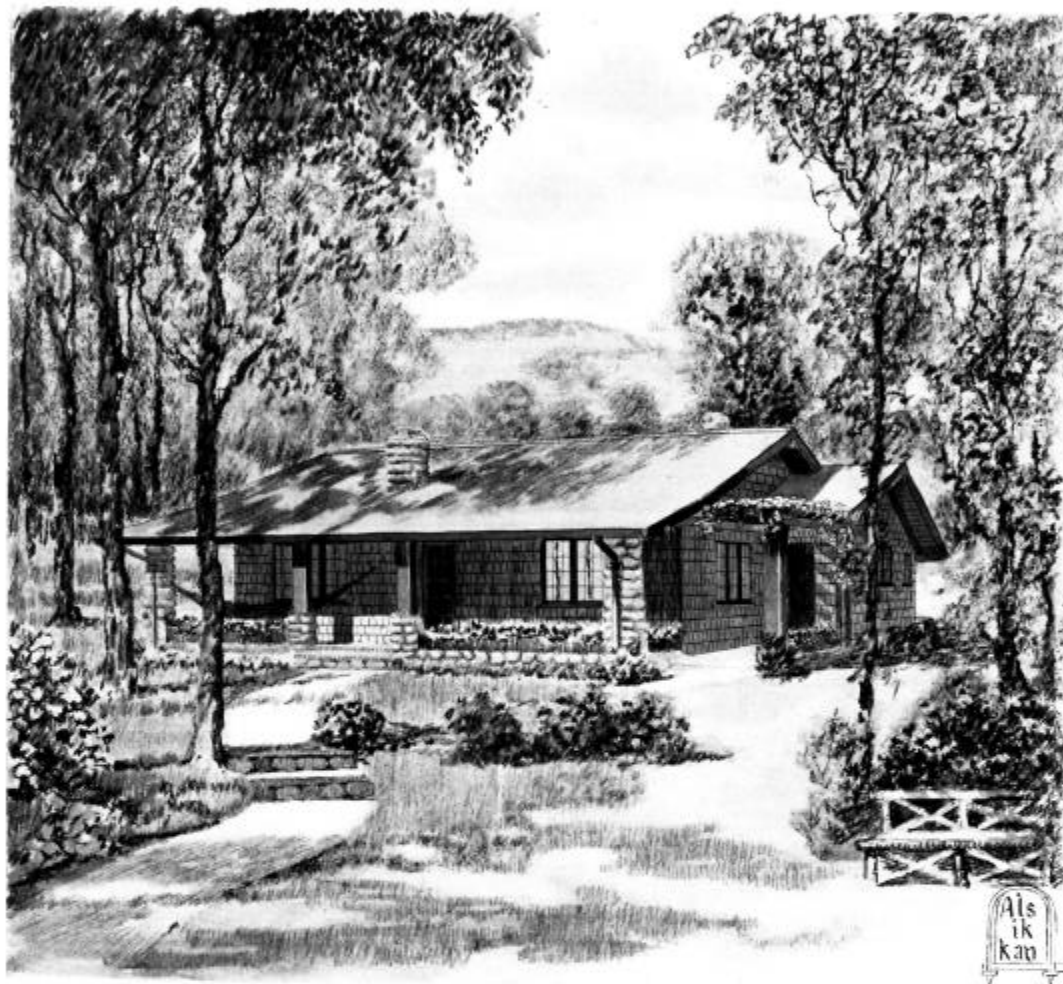


CRAFTSMAN BUNGALOW, NO. 167: FLOOR PLAN.



Gustav Stickley, Architect.

SIX-ROOM CRAFTSMAN BUNGALOW OF FIELD STONE, WITH
LONG PORCH AND COMPACT HOMELIKE INTERIOR: NO. 167.



Gustav Stickley, Architect.

FIVE-ROOM CRAFTSMAN BUNGALOW OF STONE AND SHINGLES, PLANNED FOR SIMPLE HOUSEKEEPING: NO. 168.

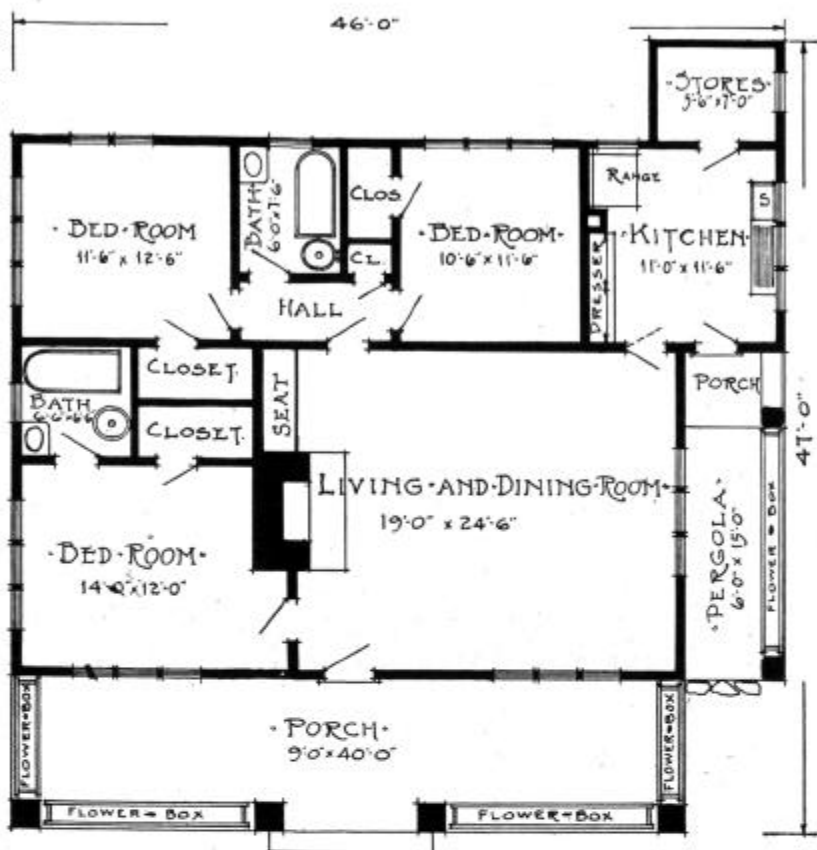
BUNGALOWS WITH LARGE LIVING ROOMS

our readers are interested in other types, we shall be only too glad to hear from them personally, so that in future we may work up other plans that will be useful to them. For the more closely we get in touch and the more familiar we become with the needs and ideals of those whom our magazine reaches, the better able we shall be to help them through its pages in molding those ideals into realities.

The bungalows illustrated here are planned for country spots and will look equally well among the woods or mountains, beside a lake or stream, or near the shore. They may be built for summer homes and furnished with a few simple, durable belongings, or they may be built and furnished to live in all the year round. Probably most people will prefer to use them for permanent homes, as they are roomy and well equipped, planned for the greatest possible family comfort both for indoor and outdoor living.

While especially adapted, as we have said, to a more or less rural environment, many home-builders whose occupations make it necessary for them to be within easy reach of the city, may prefer to build these bungalows on suburban lots. And in this case we would lay emphasis upon the need of care in choosing the location; for such low, simple dwellings as those we have pictured here will not appear to advantage unless the houses around them are very similar in style. Needless to add, the more garden space there is, and the more rugged and irregular the ground, the greater possibility of achieving picturesque results.

The plan of the first bungalow, No. 167, was worked out for one of our clients who



FLOOR PLAN: CRAFTSMAN BUNGALOW NO. 168.

wanted us to design him a summer home. There is plenty of field stone where he intends to build, and as he is particularly fond of this material he decided to use it as much as possible in the construction. Accordingly, we have shown stone walls and stone pillars for the porch, with shingles in the gables and roof.

If others wish to build from this design and field stone does not happen to be available in their locality, brick, concrete or shingles may be used instead. If built of brick, either brick or wood pillars would be most appropriate for the porch; if of concrete, square concrete posts or turned wood columns would be in keeping; and if of shingles, hewn log posts would add to the rustic air. In any case, we would suggest that the gables be of different material from the main walls, to give a little variety and to emphasize the low effect of the exterior.

The porch floors are of cement, and we have indicated wooden flower-boxes between the pillars, as they will give a little privacy and will help to link the house and garden together.

BUNGALOWS WITH LARGE LIVING ROOMS

From the front porch one steps into a small vestibule which provides a place for coats and screens the rooms from draughts from the front door. The living room is well lighted by groups of small-paned casements on two sides, and there is plenty of room for comfortable chairs and settles to be grouped about the open fireplace at the farther end.

A wide opening on the right leads to the dining room, which, although only 12 by 14 feet, will be quite large enough for a family of three or four people and their guests.

The kitchen is just behind, with the cellar stairs on the left beside the built-in dresser, and a broom closet in the corner. The sink and range are not far from the windows, and a door at the rear leads out onto the small porch from which the maid's bedroom opens. The latter is large and well lighted by windows on two sides, and in addition to the closet there is a private toilet. This arrangement separates the service portion of the bungalow from the rest, giving the maid her own little home, as it were, secluded from the family rooms.

It will also be noticed that the arrangement of this narrow porch permits the placing of a window in the right-hand end of the long hall which separates the family bedrooms and bathroom from the rest of the plan.

As the space beneath the roof is merely ventilated by louvres in the gables and is not intended to be used for storage, we have provided as many closets as possible—two small closets in the hall, two in the middle bedroom and a single long one in the room on the left.

It would be a good plan to install a Craftsman fireplace in the living room of this bungalow, for this would keep the rooms at a comfortable temperature during much of the spring and fall without lighting the cellar furnace.

THE second bungalow, No. 168, is not quite as large as the first, and is entirely different in arrangement and construction. We have shown the walls covered with shingles, the roof with composition sheet roofing, while field stone is used for the foundation and end pillars of the front porch, as well as for the chimneys. For the pillars on each side of the entrance, however, we have used wood, for this forms an intermediate link between the textures of the rough stonework and smooth roof. Wood pillars are also used for the

pergola porch at the side. As in the preceding bungalow, we have indicated flower-boxes between the pillars, set on the cement floor.

The entrance door opens directly into the big main room, which is living and dining room combined. A coat closet may be provided across the right-hand corner, and if the owner prefers to have the entrance nearer to the closet and farther from the fireplace, the arrangement of the front windows and door may be reversed.

A fireside seat is built in on one side of the chimneypiece, and this end of the room will naturally be furnished as a general living room, while the dining table and sideboard will be placed over toward the right, near the kitchen.

The pergola porch at the side will be a convenient place for outdoor meals, for it is accessible from the kitchen. The latter has windows at the side and rear, which ensure plenty of light at the range and sink; a long dresser is built on the left, and there is a large closet for stores at the back, lighted by a window on the side.

If the owner wishes to build this bungalow with a cellar, the right-hand portion of the plan may be excavated and the kitchen rearranged to make room for the stairs. In this case the laundry may be in the cellar; otherwise, wash trays may be placed in the kitchen, or the closet at the back, which we have marked "stores" may be used as a laundry and a door arranged to open directly into the back garden.

The bedrooms should prove especially convenient, for they afford that privacy which is so desirable in a one-story home. The owner's room, large and light, with its private bathroom and big closet, opens out of the living room, while the two other bedrooms are separated from the rest of the plan by a small hall.

The bungalow, as it stands now, would be suitable for a small family, where the mistress wished to do her own work; but it could be readily adapted to accommodate a maid by making the right-hand rear bedroom open from the kitchen instead of the hall.

IN building the two bungalows which we have shown here, the question of the exterior color scheme will naturally be an important one and will depend on the nature of the landscape or neighboring houses and the owner's taste. If the first bungalow is built of field stone, as we have

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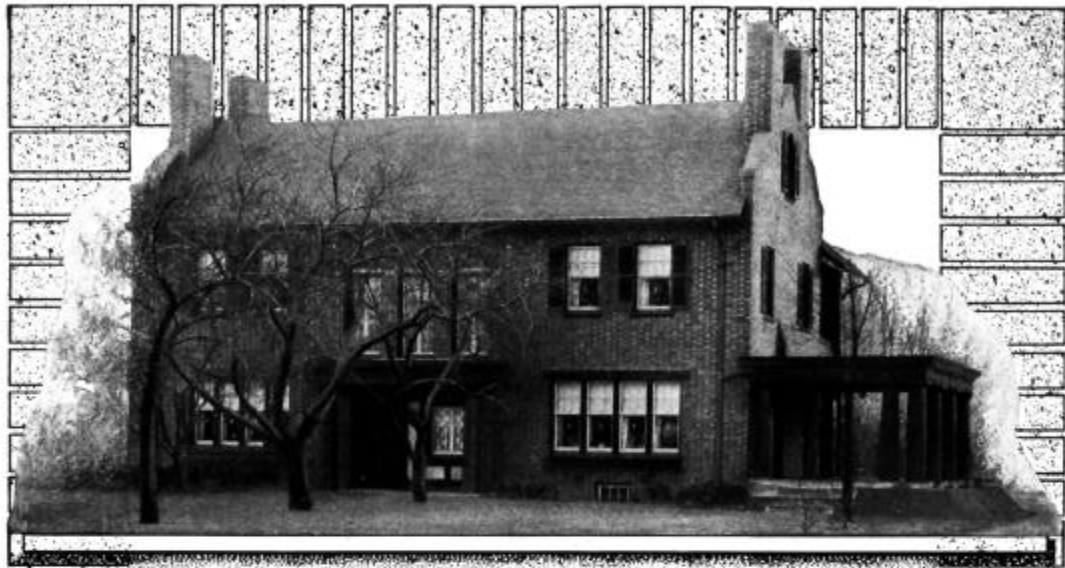
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THE INVASIONS OF THE BARK-BEETLE

shown, the varied tones of the stone will give interest of color and texture to the walls and porch, which may be brightened by light green flower-boxes, door and window trim and white sash. A deep moss-green in the gables and reddish brown for the shingles of the roof will be in keeping, especially if the building is set among woodland surroundings.

The second bungalow will probably look well if the shingled walls are stained light golden brown and the roof is olive green. The trim and flower-boxes may also be green and the sash cream or white.

THE BARK-BEETLE RELENTLESS IN ITS ATTACK ON HICKORY NUT TREES THROUGHOUT THEIR RANGE

WHEN the scourge of the elm beetle passed over the trees of the northeastern United States there was general lamentation; and scarcely was there a slight abatement of the trouble when the chestnuts fell under an insidious fungus blight even more terrible and uncontrollable in its devastations. And while many veterans fell, the hickory trees beside and about them also succumbed to their own particular grievance, although in so much less spectacular a fashion than the chestnuts that its seriousness was not, at first, widely recognized.

The bark-beetle is responsible for the great loss that has in the last few years occurred among the hickory trees throughout their entire range. Giants of the forest, as well as noble specimens of parks and lawns have fallen, depriving in a short time the landscape of objects having required many years to bring them to a state of symmetrical development. It is now difficult to find among old hickory trees many that are free from this insect. The young trees—that is, those which are from three to five inches in diameter, can stand the onslaughts of these beetles far better than those which have lived longer.

July and August are the months when the work of the bark-beetle is most readily detected, since the leaves of the trees then die prematurely, and either fall to the ground or remain in a half dead and withered condition on the branches, producing a look of disease both melancholy and unsightly.

At the base of the petiole of each leaf,

the beetle, it can be clearly seen, has made a small cavity from where he feeds to his heart's content on the buds and soft tissues of the smaller branches. As soon as a high wind passes over the leaves, thus weakened, they naturally fall to the ground. It is, however, in the attack of these beetles on the main stem or branches of the trees that the greatest damage is manifest, often deadly in result.

When, in June or July, the bark-beetles enter the hickory, the males are bent on securing food, the females dominated by the desire to lay their eggs, an act which they contrive to do in the main stem or larger branches. Galleries, as systematic and well arranged as those of Gibraltar are engineered directly under the bark, and in cases where a large number of insects is present the result is that the entire stem of the tree is girdled.

Since no more satisfactory means of combating this pest has yet been found, owners of hickory trees that show signs of being infected by the bark-beetle should at once cut them down, even though the loss of the shade and companionship of the tree is deeply regretted.

To many this appears as a lamentable thing to do, yet it is one recommended by the Department of Agriculture in Washington as the most efficacious method of reducing the number of these insects. It should be done between October and May, that the insects can be caught as it were in a trap before being able to emerge. During the summer and autumn or whenever it becomes evident that a tree is infested it should be marked for felling in the winter or oncoming spring and the infested parts so treated that there is no likelihood of any beetles remaining alive. In most cases the wood and bark of such trees are used for fuel. Spraying in connection with the bark-beetle has shown no particular results.

Woodpeckers are natural enemies of the bark-beetle, as also are ichneumon-flies, the latter taking the unchristianlike means of depositing their eggs within the bodies of the beetles and of thus killing them before they have had a chance to emerge and pursue their own processes of destruction. Woodpeckers, however, are much less subtle, merely seeking the beetles as they bore into the bark of the tree and transforming them quickly into trifling morsels of nourishment. Their skill in this matter stands strongly as an argument in favor of their preservation.

ECONOMY AND BEAUTY IN CONCRETE

CONCRETE HOUSES: THEIR POSSIBILITIES OF ECONOMY AND PICTURESQUENESS: BY HARVEY WHIPPLE

THE importance of concrete as a modern building material is becoming every day more evident, and the success of its future more assured. There are many reasons for its steadily growing popularity. In the first place, concrete is especially welcome in this country on account of our decreasing timber supply. It is proof against fire, a barrier against summer's heat and winter's

cold; it is solid, sanitary and economical, and is affected by time only in that the years add to its strength. Moreover, in addition to its practical qualities, concrete lends itself readily to interesting and varied architectural designs.

The term "concrete house" ordinarily conveys no definite idea of the nature of the construction, because the name "concrete" is often used loosely or misapplied. The reference may be to a monolithic or so-called "poured concrete" house, to a house built of concrete block, or to one having merely a covering of concrete stucco over almost any kind of wall.

Concrete houses are sometimes carelessly called *cement houses*.

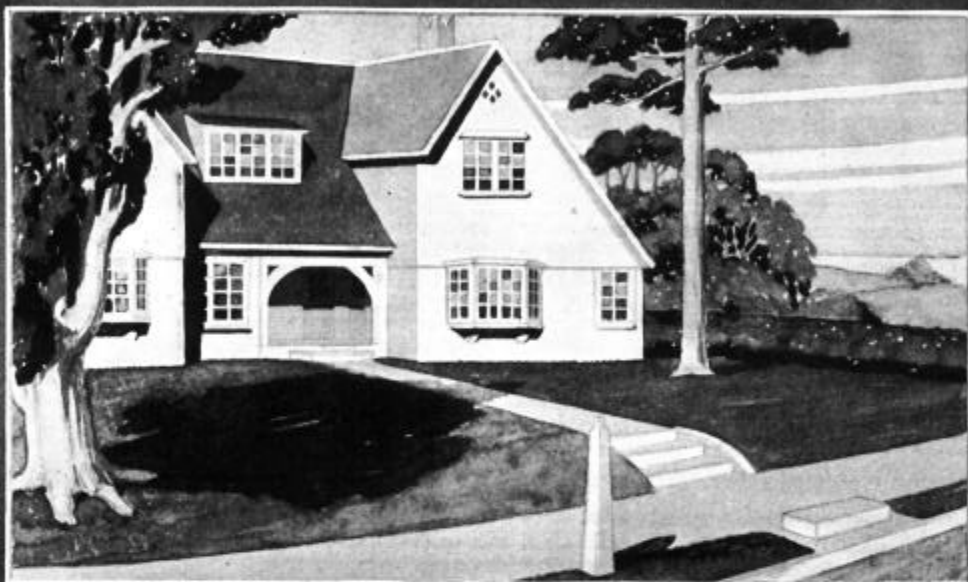
Probably this is because Portland cement, though proportionately small in quantity as compared with the other constituents, is nevertheless an essential part. Yet it is no more proper to call a concrete house a cement house than to designate a wooden house as a nail house, simply because nails are used to hold it together; or to call a wood mosaic table-top a glue table because the pieces of wood happen to be held by glue. Portland cement is mineral glue. When it is mixed with sand and stone and water, the water sets up an action in the cement which renders it jellylike and then crystalline in formation, so that all the parts of the mixture are knit firmly into a single piece of concrete.

Portland cement is a very fine powder, so fine (at least that which comes up to United States government specifications) that 92 per cent. of it will pass a sieve hav-



Illustration, courtesy Oswald C. Hering and Douglass Fitch, Architects.

THIS HOUSE IS BUILT OF CONCRETE HOLLOW TILE AND RECEIVED A STUCCO COAT IN WHICH THERE IS A "DRY-DASH" OF CHIPS OF WHITE MARBLE, BLUE STONE AND YELLOW PEBBLES. IT COULD BE BUILT IN THE VICINITY OF NEW YORK FOR ABOUT \$8,000.



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ECONOMY AND BEAUTY IN CONCRETE



A MONOLITHIC CONCRETE STRUCTURE, BUILT IN A SUBURB OF CHICAGO, WALTER BURLEY GRIFFIN, ARCHITECT.

ing 10,000 meshes to the square inch, and 75 per cent. will pass a sieve having 40,000 meshes to the square inch. It is made by crushing and then burning in kilns at intense heat, certain definite mineral substances, containing lime and silica, and then grinding the resulting clinker to the powder mentioned. Its value as cementitious material lies in the fact that the addition of water in proper proportions forms the jelly and then the crystals in the action called "setting," which continues for several years, the mass constantly becoming harder.

Besides Portland cement, the other ingredients of concrete are sand, together with pebbles or crushed stone. All these materials should be thoroughly mixed and they should be so graded as to size and so proportioned in quantities that the resulting mass will be dense. The idea is that, by proper grading, the sand fills up all the spaces in and around the stones, and the cement in turn fills up all the spaces around the grains of sand, coating thoroughly every particle in the mixture. In the ideal condition all voids would thus be filled. Water should be used

in the mixture in sufficient quantity to develop thoroughly the cementitious quality of the cement.

MONOLITHIC CONSTRUCTION. — The use of concrete which is most radically different from all other types of construction, the use which has developed the most interesting problems and which is inspiring the architectural conceptions most apart from the beaten path, is monolithic concrete. The



SOME VERY ROUGH STUCCO IS SHOWN ON THE WALL OF THIS HOUSE AND IN THE FOREGROUND A CONCRETE SUNDIAL — HOME-MADE — USING AN OLD MILLSTONE COVERED WITH STUCCO FOR A BASE.

ECONOMY AND BEAUTY IN CONCRETE



THIS HOUSE, 30 FEET BY 48 FEET IN PLAN, BUILT OF CONCRETE AND FRAME, IS IN A SUBURB OF PITTSBURGH. IT WAS DESIGNED AND BUILT BY W. H. PARRISH FOR \$4,600.

manner of its utilization may be likened to casting a huge mold of jelly. In building a house the mold may be set up for casting the concrete in layers or for almost if not quite the entire house. When the concrete is poured (if made wet) or dumped and tamped (if made with less water) in the forms which make walls, floors, beams, columns and so on, it will be held in the desired shape until it has "set." The forms are then taken down—stripped—or the mold taken apart, and behold there is a house, in one piece, as though chiseled from a gigantic block of stone. In molding this house a small quantity of steel has been used, usually in the form of rods, because while concrete has great compressive strength, its combination with steel is required to develop great tensile strength such as is required in beams and floors. This use of steel and concrete together makes reinforced concrete.

In monolithic concrete construction or mass construction it is a common sight to see buildings under way where forms either of steel plates or wooden planks are set up inside and outside of what is to be a wall, below what is to be a floor and around what is to be a column. If of wooden planks these forms are held by cleats and braces, built so secure as to resist the pressure of the concrete which they must sustain until it has set. If steel forms are used, and there are various systems of this kind, the unit plates are clamped, wired, bolted, clipped or otherwise held in place. Some of these plates are not unlike big shallow baking pans and the edges which make the

sides of the pans are clamped together, the pans being set up edgewise.

Steel panels, made in such units as to be interchangeable in building up forms, are more economical than wood, because they can be used over and over again on structures with entirely different plans. Wood forms are more economical for working out special features and intricate castings which are not frequently to be repeated

on the same or another work.

Another method in monolithic construction is in the use of a mold box, open at top and bottom and at one end, which makes a small section of wall at one time. A drier mixture is used than in ordinary monolithic construction, so that after the mixture is well tamped in place, the box can be taken away or rather moved along and another section of wall cast. The apparatus is



CONCRETE VASES CAST IN GLUE MOLDS FOR ORNAMENTS AT GARDEN ENTRANCE.

THE PROPER METHOD OF FINISHING FLOORS: BY HERBERT F. JOHNSON



It is generally conceded that oak makes the ideal floor as it is very hard, takes a beautiful polish, and lends itself to all styles of decoration. The cost of this wood has been rapidly increasing for the last decade, making it necessary for many to use softer, less expensive woods, such as pine, birch, cypress, etc., and if these woods are properly finished they will prove not only satisfactory but very beautiful. I give you herewith a brief outline of the proper method of finishing both hard and soft wood floors:

FOR A NATURAL FINISH

Where wood is to be finished in its natural color, apply a coat of Johnson's Natural Paste Wood Filler No. 10. This will fill the grain and pores of the wood, making a hard, even surface upon which to apply the finish. The Filler should be allowed to harden over night—then apply two coats of Johnson's Prepared Wax with a cloth, polishing each coat well with a weighted brush.

I do not recommend the use of varnish upon floors as it is bound to show every scratch and heel-print, and it is very difficult to keep varnished floors in good condition, as worn spots cannot be touched up without going over the whole floor. Wax not only gives a more beautiful and artistic finish than varnish, but it is easy to keep waxed floors in perfect shape with very little care, and worn places such as door-ways, stair-treads, etc., can be refinished without refinishing the entire floor.



FOR COLORED EFFECTS

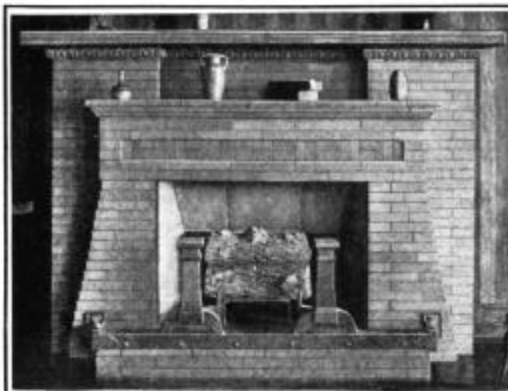
Where floors are to be finished in color, apply a coat of Johnson's Wood Dye the desired shade directly upon the wood. This will dry in fifteen or twenty minutes and the floor should then be finished with two coats of Johnson's Prepared Wax, each coat being well polished with a weighted brush.

For oak, chestnut, and other open grained woods, I recommend the use of a coat of Johnson's Dark Paste Wood Filler No. 30 over the Dye and then two coats of Prepared Wax, as open-grained woods really require a filler.

In this short space it is impossible to go very much into detail but if those interested will drop me a line at the address below, I shall be very glad to give full information on the finishing of all wood—floors, woodwork, and furniture, and shall be very glad to mail all interested parties a copy of "The Proper Treatment for Floors, Woodwork and Furniture," booklet edition F-8 which gives full information on this subject.

Write me in care of S. C. Johnson & Son, Wood Finishing Authorities, Racine, Wisconsin.





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ECONOMY AND BEAUTY IN CONCRETE

constructed with a core in the center of the box so that two walls are built up at one time with an air space which is continuous up and down and all around. The section cast at each operation is less than a foot high, and when one circuit of the wall has been made the apparatus is raised one tier, set on top of the concrete cast at the starting place and another tier begun. The wall is left with a rough surface to which a finish of stucco is readily applied.

CONCRETE BLOCK.—A growing use of concrete is in the form of pre-cast units—chief among which is the concrete block. While monolithic concrete construction gives us a new medium in building houses, factories, warehouses and other buildings, as well as sewers, silos, sidewalks, pavements, dams and bridges, concrete in its unit form is not new in any particular, so far as methods of construction are concerned. The development of mass construction is demanding a new architecture and new field methods, but concrete block may immediately be utilized with the skill that for a long time has been a part of stone masonry construction. Concrete block is nothing but manufactured building stone. While in this aspect it is nothing new, it does open up entirely new possibilities in unit construction.

Concrete units are made either in an established factory or in an improvised plant at the scene of the building operations. Construction with concrete units differs from that with natural stone in the important feature that the former can be reinforced with steel so that they have great tensile as well as compressive strength. Concrete blocks for ordinary wall construction are not reinforced, but besides blocks there are beams, slabs, sills, lintels and other structural members for spans which are not possible with natural stone except where arch forms are utilized.



CONCRETE BLOCK COTTAGES WITH FRAME ROOFS BUILT FOR PORTLAND CEMENT PLANT EMPLOYEES IN A COLORADO TOWN AT A COST OF \$1,500 EACH.



THE OUTER WALLS OF THIS HOUSE AT ALBANY, N. Y., CONSIST OF TWO 4-INCH CONCRETE WALLS WITH A 4-INCH AIR SPACE: IT WAS DESIGNED BY CHARLES R. SELKIRK, ARCHITECT, AND BUILT BY C. R. KNAPP.

The possibilities with concrete stone lie in the fact that it is not quarried, nor gathered from the fields like hardheads; it is not cut to fit but is cast to fit—man-made out of a very wide range of raw materials. This difference between cutting and molding stone has been at the bottom of much lively discussion of aesthetics, and the early products were so crude that many architects would have none of them.

A simple mold box of five boards, the bottom one for a pallet, will suffice to make good concrete block. But as such equipment does not make for rapid and economical operation, many different block machines have been devised and manufactured, some to work by hand and some power-operated. They vary not only in the means of operation but in the shapes and dimensions of the blocks produced. To save material, to lessen the weight and at the same time to introduce into walls the insulating value of air space, many mold boxes are designed with cores to produce hollow blocks—some of them with the air spaces so great and the webs so thin as to make them more like tiles than blocks. Some of the blocks have the hollows so provided as to produce only vertical ducts in the wall; other blocks come from the machine in two pieces, tied through the air space with metal strands; others are made in two entirely separate pieces so designed as to have projecting webs of concrete which tie an outer to an inner wall and thus by “staggering” in laying them in the wall provide a continuous

ECONOMY AND BEAUTY IN CONCRETE

air space up and down and all around. In the rapid operation of a block machine, it is necessary of course that the mixture be made sufficiently dry so that after the concrete has been pressed, tamped and "struck off" at the top of the mold, the blocks can be removed at once on a pallet and put away to "cure." Such blocks should be kept out of sun and wind and in a moist condition, either by sprinkling or in curing rooms where low-pressure, very moist steam is supplied. Blocks which are cured by sprinkling under ordinary atmospheric conditions require some time to become sufficiently hard to use, but with the moist air of a steam room and its temperature around 100 degrees, curing is very rapid and the blocks frequently are as hard in two or three days as in as many weeks under the other conditions.

Other apparatus which consists merely of multiple molds is used in making blocks with a very wet mixture, the molds not being removed until the concrete has taken its first set. Molds for special pieces of concrete also are made of sand, as in iron molding, or of plaster or even of glue. Glue molds are used when the piece to be cast has deep lines of relief with considerable undercut. The glue mold, being flexible, pulls out and away from these depressions when the concrete has become hard.

Not until the last few years have architects taken hold of concrete block with any great degree of enthusiasm. Many have proclaimed it the best and cheapest building unit. Yet while many saw future possibilities, not a few were at first unwilling to accept concrete block as they found it.

Nothing but a superior building unit could have survived the displeasure which the early manufacture and use of concrete blocks occasioned among the architects. The machinery with which to make them was cheap and was frequently exploited as a means of easy money. "Factories" where concrete blocks were made were frequently only sheds beside gravel banks. A skimping of Portland cement in the mixture was only one of the early errors of ignorance and greed. Unskilful persons found it easy to set themselves up in the manufacture of concrete block and the products could be sold so cheap that it was not difficult to find indiscriminating buyers. Many of these block makers had not only a very limited knowledge of the proper grading, proportioning and mixing of materials and

curing of products, but they were equally ignorant of the possibilities of æsthetic quality in building units such as they tried to make. The result was that absurd forms and surface finishes were common.


Many of such absurdities were the result of the ease with which concrete could be molded. Putterers in the plastic material found it so obedient to their wishes that they cast it—turning at once to imitation—to look like every conceivable form of masonry construction; they tried to make it look like everything but what it was.

One of the most absurd and most generally adopted of these imitations was the rock-face block—cast to look like, or at least something like, pitched stone. And this was the rock on which the whole industry came near to splitting. The beauty of pitched stone, that is, natural pitched stone, is in the fact that no two pieces ever look alike. The cutter cannot make them alike. The grain of the stone gives the surface. When a wall of such stone is laid up it has variety. It affords a play of light in no two places just the same. Unless the block manufacturers had a different face plate for every piece going into a structure they could not get the same result no matter how perfect was every other feature of the operations. As a matter of fact they usually had only a few different plates.

Such early errors were really more the fault of the manufacturers of the equipment than of its users. Conditions have changed. Not only have methods been perfected but higher architectural ideals now prevail.

The concrete house may then be either of monolithic construction, unit construction or, according to popular usage, it may be of stucco. As a matter of fact a stucco house is not a concrete house, unless the concrete stucco has been applied over walls of monolithic concrete or concrete units, and in such cases the name of the structural part and not its mere covering should designate the type of the work. In most cases a stucco house is merely a frame house, built much the same as a house which is to have an outer covering of clapboards, except that metal lath is applied over the sheathing, usually being nailed or stapled to furring strips, placed vertically over the sheathing. Thus the stucco is not a structural material, being supported by the wall or frame to which it is attached. That stucco makes a frame

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ECONOMY AND BEAUTY IN CONCRETE

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Costs.—In estimating roughly the costs of concrete houses there are three entirely different types of construction to be considered.

Despite some isolated instances to the contrary, a house cannot be built under any ordinary conditions as cheaply as of wood. To cite the few exceptions as anything but exceptions to the rule is not only to deceive the public but is to urge concrete for the least of its advantages. The error has been in confounding economy with cheapness. Good concrete *may not* be cheap but it will invariably be economical. Too much stress upon the matter of making it cheap has sometimes left room for an interrogation after *economy*. People are glad to consider a material that lessens waste and repair and wards off many of the dangers that beset homes, a material that opens up the possibility of making homesteads out of houses and, by giving Nature the scope and time to make it a part of herself, creating atmosphere and harmony.

The use of stone, brick and wood in the construction of dwellings is something so ancient as to be accepted as a matter of fact, and steel, aside from the phenomena of skyscrapers has never appealed so strongly to the popular imagination. It has served admirably as a skeleton, when adequately protected, and as a skeleton has been covered with the flesh and skin of other building materials.

Popular interest in the use of concrete for dwelling-house construction was aroused by the announcement a few years ago that Thomas A. Edison was at work upon a set of metal molds in which a whole house might be very cheaply made. The idea somehow got abroad that a roomy, comfortable, fireproof, timeproof and storm-defying house might be built after the Edison idea for a thousand dollars. It was to be made in one piece, cast all at one operation, with walls, floors, roof, stairs and all, a solid monolith, and accomplished with amazing economy.

While all this may yet be true, the immediate effect of such a popular idea was disappointment. There is a great deal of difference in cost between individual houses—even though of modest size—and houses built at wholesale in one enterprise to solve some community housing problem. In a community which offered abundant and

readily obtainable concrete materials, where every facility of equipment was available, it might be possible with a set of metal molds to build a row of similar houses at somewhere near the thousand dollar mark for each dwelling.

An experiment in solving a housing problem for an English manufacturing corporation resulted in building a cottage 27 feet by 30 feet in plan, with solid concrete walls and flat reinforced concrete roof for less than \$450 complete in every particular. Concrete cottages—a group of them—20 feet by 36 feet in plan, were built recently in Oklahoma for \$2,000 each. These cottages had large open porches and stairways leading to concrete roofs with parapets. Cost data kept by a building corporation using its own metal forms and with expert supervision in erecting a group of houses in a suburb of an Eastern city, reports a cost for one-story concrete cottages of \$5.40 per cubic yard—this with cement costing \$1.50 per barrel, gravel at \$1.50 per cubic yard and sand at \$1.20 per yard. With a wall six inches thick this means a cost of 10 cents per square foot of wall. Another corporation using its own metal forms in the middle west reports a cost of 16 cents per square foot of 12-inch wall. Two-story concrete houses with six rooms and bath—concrete throughout walls, partitions and floors, with flat roofs and parapets—are reported to have cost less than \$3,000 each when built as part of an extensive community enterprise conducted by a large corporation in Indiana. Twenty two-family houses, each half of each double dwelling having three rooms downstairs and three upstairs, and built entirely of cinder concrete (cement, sand and cinders) were erected in a Pennsylvania mining community at a reported cost of \$2,500 for each building or \$1,250 for each dwelling. These houses were built facing a hollow square, which was to serve as a park and playground, and the concreting outfit was mounted on cars which traveled on rails around this square. This all makes for economical operation.

One important thing must be considered in concrete construction. The scene of the operation is not merely a scene of assembling as with other materials; it is a scene also of manufacturing. The raw ingredients are brought to the site. Costs are thus less readily standardized. There may be a difference of two hundred per cent. in

ECONOMY AND BEAUTY IN CONCRETE

the cost of Portland cement between two localities. In one place the gravel may be had for the hauling. In another place it may cost \$2.00 per cubic yard; in still another locality it might be the good fortune of the enterprise to excavate the gravel on the site of the work.

The cost of concrete, however, should not be compared with the cost of wood, which is inflammable. Neither should the all-concrete house, which is proof against fire inside and out, be compared as to cost with a house which has brick walls or tile walls or stone walls and wooden floors. Concrete houses are not the cheapest. They are the cheapest fireproof houses and they are oftentimes much cheaper than other types of construction which are fireproof only so far as their walls are concerned. Better even than that is the fact that concrete houses will be cheaper: First, when form systems are more fully perfected; when concreting equipment is devised for economical operation on small undertakings; and, second, when architects study the characteristics of concrete and design houses which lend themselves properly to that material.

The use of concrete is comparatively new. The first barrel of Portland cement was not made in this country until in the seventies, and only within comparatively few years has its use been entirely without suspicion. It will not be long before even small contractors can equip themselves to build concrete houses at very low cost, because many engineers are devoting themselves to the problem. Many beautiful and excellent concrete houses of individual types already have been built throughout the land, yet no standard of cost has been established and every work must be considered in the light of an exception unless the conditions of construction and supervision are identical.

The foregoing estimates of cost refer to monolithic concrete. Concrete block is without doubt the cheapest building unit, but it should be considered in comparison with brick and stone, not with wood upon one hand and monolithic concrete on the other. The cost of stucco houses using metal lath over frame construction probably may safely be said to lie somewhere between 5 per cent. and 20 per cent. more than all wood construction.

ARCHITECTURAL TREATMENTS.—Without some remarkable development not now

foreseen, probably the greatest architectural novelty in residence construction entailed by the exclusive use of concrete is the flat roof. This eliminates some attractive architectural treatments of which we are fond chiefly through association. Yet the flat roof brings its advantages; it makes the roof a usable feature of the dwelling. Although concrete has been successfully used in gables and steep slopes such as frame construction has given us (the concrete being reinforced and covered with whatever roofing units are desired) such construction is not economical, because forms for such work are not readily set up and because concrete is not adapted to the same kind of expression as wooden framework. There seems to be a growing opinion that the roof of the all-concrete house should be flat, and that this is the best architectural treatment because it employs a natural use of the concrete with no straining after effects which are not in keeping with the material.

Concrete construction has developed new ideas in cornices and parapets and in features which lend a distinct and pleasing appearance, in view of the availability of the roof area for at least partial occupancy. This should prove popular in a day of growing belief in the efficacy of the out of doors. So, after all, new interest is added to the skyline and what may have seemed objectionable because of its novelty will come to be understood and appreciated. There can be no good architectural development which has not clearly and definitely followed the natural use suggested by the particular characteristics of a material.

The treatment of concrete surfaces is something only beginning to be generally evident. In a world that provides such variety of color and texture for the gratification of individual tastes, it is not to be wondered at that many people dislike what they have termed the cold, dull, gray of concrete. There are others who find nothing more beautiful as a background for the vines and shrubs and trees which are the furnishings and draperies of nature. Yet those who hold the former view need not forego concrete. Gray is, after all, the color of cement—not necessarily the color of concrete. Concrete is to be had in greater variety of color, tone and texture than is possible with any natural building unit, because in the making of concrete, materials are available which could not be

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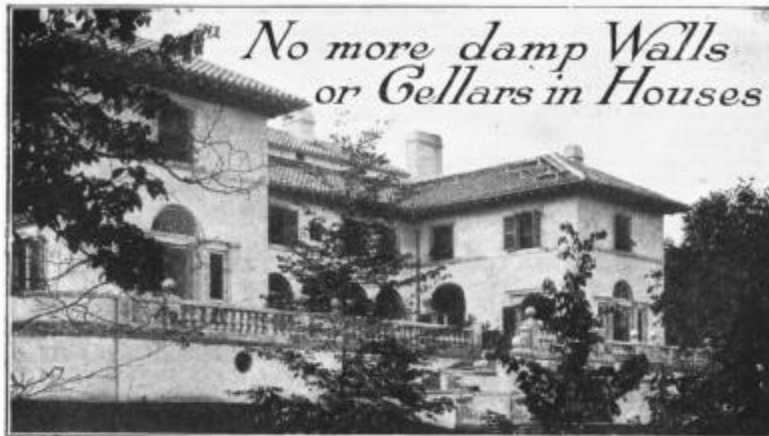
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SELF HELP THROUGH GOVERNMENT

used in their natural condition. A concrete surface may be colored; there are special paints for the purpose. It may be given a coat of stucco, either in a smooth trowel finish or in a float finish containing either the common gray or the more expensive white Portland cement. It may be given a rough-cast stucco finish in almost any degree of roughness desired. Skilful workers can throw from a paddle a mixture of mortar containing pebbles, thereby producing a rough texture with delightful high lights and shades. Still another stucco treatment is with what is called a dry-dash. In this treatment pebbles or stone chips of specially selected colors may be thrown into a fresh mortar coat, and being only partially embedded, their natural beauty remains exposed.

Wonderful progress has been made in the manufacture of concrete stone. While at first the besetting idea in block factories was to produce an imitation of some stone unit, the inherent possibilities of concrete have long since become assertive, and the manufacturer now offers, not a make-believe stone but a real block of concrete, with beauties distinctly its own. All those possibilities in surface treatment which belong to monolithic construction are also possible with blocks and still other possibilities are added. The block maker has a world of mineral aggregates from which to choose, to produce a desired effect. You may have your concrete block made to order; have it cast according to the architect's detail and specification; have the color and texture controlled in the making as is not possible with natural stone and yet have it tooled after manufacture just as natural stone has been tooled. Natural stone is taken as Nature provides. Concrete stone is the consummation of man's art and skill in combining the raw mineral aggregates which Nature has put at his disposal. Much natural stone is injured in appearance by exposure to the weather because it is highly absorptive. While much poor, porous concrete stone has been made, methods are now so perfected that concrete stone can be made so dense as to absorb almost no disruptive and discoloring moisture.

Whether in the use of monolithic concrete or unit concrete, the architect has in this new material a medium for his skill and the owner a realization of permanence and comfort. The architect has an opportunity for the richest ornamentation or for the

most effective of simple treatments—and all these at less cost than for any other enduring construction.

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We, the undersigned, petition our Congressmen to consider a bill at the present congress making provision for such use of the postal savings deposits.

To members of the League: Please use your influence in having this petition reprinted in local papers and send a marked copy to the secretary.

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CARE OF THE GARDEN IN MIDSUMMER

CARE OF THE VEGETABLE GARDEN IN MIDSUMMER: BY E. I. FARRINGTON

WEEEDS and bugs are the bane of the garden-maker. But someone has said that weeds serve at least one useful purpose—they make cultivation of the soil imperative, and this is of the greatest benefit to the plant. Doubtless this is true, and the time spent in rooting up pigweed and purslane is never wasted. The ground should be continually stirred, however, even though not a weed can be found in it. A good hoeing in midsummer is worth as much as a shower in any garden. In fact, the man who cultivates his garden most faithfully in a dry season harvests the best crops.

The moisture in the earth is constantly rising to the surface and being evaporated, and the more compact the soil, the more rapidly this evaporation takes place. If the top soil is very loose comparatively little moisture escapes. That is the reason why cultivation is so important; it breaks up the soil and forms a dust blanket which



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keeps the moisture in the earth just below the surface, where the growing plants can make use of it. It is especially necessary to get out the hoe or the wheel cultivator after a rain, as soon as the ground has become dry enough to make cultivation possible. Otherwise the sun will quickly bake the earth into a hard crust and much of the rainfall that finds lodgment in the soil will be lost.

The wheel hoe or cultivator is of great value in a garden, for it saves both time and energy. A tool known as the scuffle hoe is also useful, if the soil is light, and it costs but little. Many amateurs overlook the importance of keeping garden tools sharp. It is much easier to work with sharp tools. Even the common hoe should be filed often on the under side and should be kept bright all over. Then it will cut easily and the soil will not adhere to the blade. It is a waste of time and strength to use a dirty or rusty hoe and lift half a pound of earth every time it is raised. Some weeding will have to be done by hand, if root crops, especially onions, are grown. It is impossible to raise this vege-

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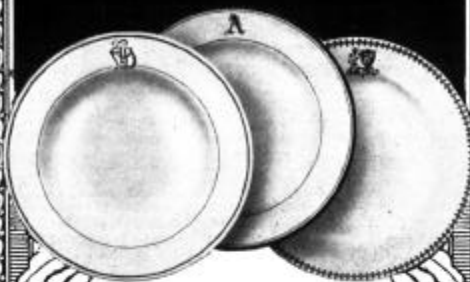
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CARE OF THE GARDEN IN MIDSUMMER

table with any degree of success unless the ground is kept clean. Careful attention is needed at first to keep young carrots, parsnips and celery free of weeds. As the seeds of long-season crops are rather slow to germinate, it is always wise to sow a few radish seeds along with them. These come up very quickly and will mark the rows so that they may be effectively weeded.

As to bugs, only constant vigilance will get the best of them. It really is not a difficult task to keep vegetables from being devoured by pests if the gardener does not wait until the damage has been done before getting to work. Cut-worms often cause a heavy loss early in the season. A good way to circumvent these pests is to supply each plant with a stiff paper collar pressed an inch or more below the surface of the ground. Sometimes a climbing variety of cut-worm will get over the barrier, but usually the collar affords sufficient protection.

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will guard cucumbers and melons from the attacks of the striped beetle, and if all plants are dusted with soot, ashes or plaster they will generally be protected from the ravages of different kinds of flies and other insects. A covered tin can with holes punched in the bottom makes an efficient duster.

Hellebore is a safe poison to use in the garden and should be dusted on currant bushes after the fruit begins to form and on cabbage plants which have begun to

head. It may be mixed with a little flour to make it stick well and applied when the dew is on the leaves, or it may be sprayed on the plants, one ounce of the poison being used to two gallons of water. When the cabbage plants are small, arsenate of lead may be used as a spray. This is the standard poison for garden and orchard use and has displaced Paris green to a great extent. It must be applied with caution, though, if there are children about. All



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CARE OF THE GARDEN IN MIDSUMMER



A COFFEE CAN FOR A "DUSTER."

these remedies may be secured ready for use in seed stores, and most of the seedsmen also sell preparations which are not poisonous to human beings and which are satisfactory for general garden purposes.

The onion maggot may be routed with kerosene, a cupful being used to saturate a bucketful of dry sand, and a handful of sand so treated should be placed close to the base of each plant.

To capture the malodorous squash bug place shingles on the ground near the plants. These insects like some such protection and in the morning may be found in large numbers under the shingles. It is hardly necessary to say what should be done after they have been located. They are so sluggish in the early morning that no difficulty is encountered in carrying out any fell purpose.

The potato bug is an annual visitant in most sections, although happily it does not appear in such appallingly large numbers as a few years ago, when its coming usually spelled ruin for potato crops everywhere. There is an excellent way of dealing with this bug at the same time that the vines are treated for blight, which often

attacks them. The standard remedy for this plant disease is Bordeaux mixture, and the seedsmen now sell a preparation which combines this mixture with arsenate of lead. This should be used as a spray and the bugs will be vanquished and the potato vines saved from blight by the same operation. There are also other remedies which may be dusted on and which are desirable to use when the number of plants is small.

Oftentimes the plants in both the vegetable and flower gardens need extra feeding by the time the middle of summer comes. To meet this need nitrate of soda may be applied in small doses, perhaps a teaspoonful at the base of each plant, care being taken that it does not touch the plant itself, for it burns. Pulverized sheep manure is sometimes used, and it is especially desirable for small gardens in cities and towns, for it is concentrated and easy to handle. The seedsmen sell it.

One of the best ways to give additional plant food is to apply manure water once a week. Abroad, this form of fertilizer is considered of the greatest value, and many gardeners here use it freely also. It is easily prepared by filling a cloth bag with manure and suspending it in a barrel or tub of water. When the water is used it should be diluted to about the color of weak tea. Sheep manure may be substituted for ordinary manure, if the latter is not easily obtained, as is often the case in thickly settled communities.

An excellent way to administer this liquid manure is to sink tin cans into the ground close to the plants, several holes having first been punched in the sides of the cans near the bottom. When the manure water is put into the cans it is carried directly to the roots where it is needed and none of it is lost. This is a good plan to follow in watering plants if the water has to be carried, so that not a drop is wasted.

In the well-managed garden, seed sowing is not confined to spring, for by planting one crop between another and starting a new crop as soon as one is harvested, the ground may be utilized the whole season through. In fact, this is the only way to make the most of a kitchen garden.

String and wax beans are hot-weather plants. They grow quickly and July is none too late to plant them. Refugee is an excellent bean for midsummer sowing, being more tender than most other kinds

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CARE OF THE GARDEN IN MIDSUMMER

when sown late, and yielding enormously. Stringless green pod is another good variety for midseason planting.

Beets will give good crops of greens and still leave many roots that may be stored for winter use. It is not necessary to thin beets to the extent that some people advise, and the best thinning is done by pulling out the little beets with the green tops for immediate use. Crosby's Egyptian is a good variety to plant.

Late cabbage may be set out in July and will have ample time to mature. Copenhagen is a new sort which gave satisfaction last season and for which much is promised. Danish ballhead is commonly grown, but there is no better cabbage for the garden than the succulent Savoy.

Many varieties of lettuce will not grow well in hot weather and all kinds do best if they can be shaded with strips of muslin fastened to stakes or in some other way, and given plenty of water. In fact, there is not much use trying to grow crisp lettuce in summer unless the plants can be watered freely. Salamander, as its name implies, stands the hot weather well. Deacon is a good head lettuce and black-headed Simpson is a desirable curly sort.

Successive plantings of sweet corn should be made so that the supply will last all through the summer. Peep-o'-day and golden bantam are excellent varieties, because they mature rapidly. They may be planted closer together than the tall-growing sorts, and need thorough cultivation, as well as plenty of fertilizer at the start. Corn tastes best if eaten as soon as gathered. The old saying has it, "Have the water boiling before you start for the corn patch." It is much the same with peas; they quickly lose their sweetness and delicate flavor. It is possible to get a scattering crop of peas from a late sowing, but this vegetable does not thrive in hot weather.

Midsummer is plenty early enough for planting winter turnips, which may well go in ground previously occupied by peas or some other early crop. White egg is an excellent variety. Spinach is another vegetable that may be planted at the same time and will help to keep the ground productive. It will be ready for the table early the following spring, for it is exceedingly hardy, needing only a covering of a little straw or other litter in the fall. Prickly spinach is a satisfactory variety.

The wise garden-maker will apportion his plot carefully so that one crop will follow another naturally. He will also grow such vegetables as radishes and lettuce wherever he may happen to have a little space, rather than giving over a definite amount of ground to them. They can just as well go around the edges and between such crops as cabbage and cauliflower, which must grow a long time before occupying all the space allotted to them. There is a certain degree of satisfaction in exercising ingenuity in an endeavor to make the garden yield all that can be produced from it, which is much more than the average amateur gardener realizes.

In fact, ingenuity is the salt of the garden builder. When sprinkled about among difficulties it opens up things astonishingly, there being no end to achievements once its employment is begun. It is, of course, ingenuity that waylays the unsuspecting mole, innocently traversing his underground galleries; it is ingenuity that plants the garden with every favorite vegetable of every member of the family and thus avoids all accusations of partiality.

Of course, there are certain hard and fast rules that can be applied to moles, and wire fences can be erected at considerable expense to keep the neighborhood chickens from devouring a crop of ripe tomatoes in a single morning; policemen are supposed to have power over pilfering Italians. But over the small boy eternal vigilance loses its force. He cannot be treated like the cut-worm, his movements controlled with a paper collar.

To one garden builder ingenuity suggested that he take the boys of the neighborhood into his confidence, treating them with a specialized kind of Christian charity. He put up a sign reading: "All boys are welcome to this garden." The sign he had used the previous year had stated that trespassing was absolutely forbidden. His garden in consequence had been stripped of its best-grown fruits and vegetables.

Those reading the sign, "All boys are welcome to this garden," looked at each other, poked each other in the ribs and turned away, declaring that they had not been born late the previous night and were not to be taken in so easily. Probably there were man traps set for them in the garden. In any case why should they worry about the sign; there were other gardens not far away?

CONCERNING THE EASY CHAIR

CONCERNING THE EASY CHAIR: BY JAMES THOMSON

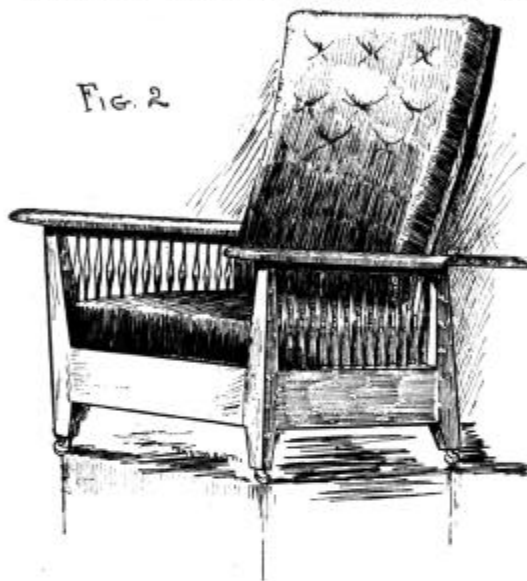
TO speak of an uncomfortable "easy chair" sounds paradoxical but it is an actuality all too common. It doubtless has befallen some reader to slump down into an apparently comfortable armchair only to discover in due time that its appearance belied it; the humps all in the wrong place, with a tendency to slip forward that could be overcome only with difficulty.

In chair construction there are certain fundamentals which if ignored render all else of small moment. Nor need it require appeal to an upholsterer's art in order that a lounging chair may give to the weary human frame the maximum of comfort. For evidence, witness the fine old chair of the eighteenth century, belonging to the so-called Georgian period.

The spindle-back Windsor chairs of an early period exemplify this fact as do also other hollow-seated examples of Colonial ancestry. In some such specimens the seat—fashioned from a two and a half inch block of wood—is modeled to conform with the human form. Not only does the seat incline downward toward the rear, but starting from a level at the front, it is curved out so that at its thinnest part, the rear, it is no more than half an inch thick. Pro-

vided the spindle-back be given the proper slope, this chair, quite regardless of the absence of upholstery, cannot be other than comfortable.

Such satisfying examples were a product of evolution: they did not have inception in one mind nor was perfection attained in a single endeavor. The old-time chair-maker did not sit down with pencil in hand and design the article as it has come to us.



AN AMERICAN MODEL OF A MORRIS CHAIR.



DESIGN USED IN THE ORIGINAL MORRIS CHAIR.

Rather did he feel his way, and many no doubt were his failures, a circumstance which we are apt to overlook. A chair at that period was virtually built around the man that was to sit in it; hence the satisfactory result. Even after partial completion improving work continued, succeeding generations whittling away to a good purpose; so that wherever there was a hump that gave discomfort it was doomed to eventual removal.

Thus was perfection attained in the chairs of Colonial times and though the resultant product was often rude, disclosing the tool marks of the worker, it conformed admirably to the intended purpose. As much cannot be said of innumerable pretentious modern chairs. In this connection it should be recalled that the Public Library of Boston is provided with reading chairs made after the Windsor pattern. These were the choice of the eminent architects of the building who themselves could devise nothing better for the purpose.

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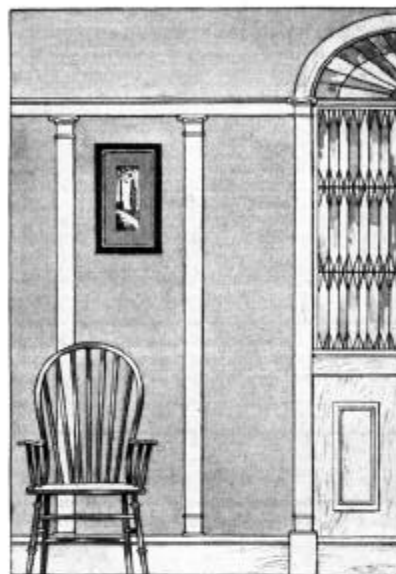
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Send for illustrated booklet, telling all about this new type of home construction.

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CONCERNING THE EASY CHAIR

There are people so habituated to ill-fitting footwear that only with difficulty can they conceive of any other kind. There are those who in getting a reasonable degree of



AN INVITING TYPE, TIPPING BACKWARD.

comfort from a lounging chair are slow to believe that much more might be had were there but a trifling alteration in its shape. We are apt to bear uncomplainingly with the imperfect article when under the impression that no better is possible. Nor are we likely to realize this truth unless the superior article is brought into competition with the imperfect.

Our ancestors probably had small inkling of the truth as regards the chimneyless whale-oil lamps they were accustomed to use, until something superior offered. They must have been surprised indeed when the French watchmaker Argand demonstrated the improvement following the placing of a tubular chimney of glass over the flaming wick.

Take a glance at masculine America in its hours of ease! How sits the American red-blooded man when, unfettered by convention, he is free to choose his position? With chair tipped so that it rests on the back legs alone; he virtually takes his ease on the small of his back. Why this undignified position? East, west, north, south men thus sit, having found in the posture the maximum of comfort with a minimum of effort. As the seat dips down at the rear the tendency of the body is ever backward. When it can go no farther it brings up

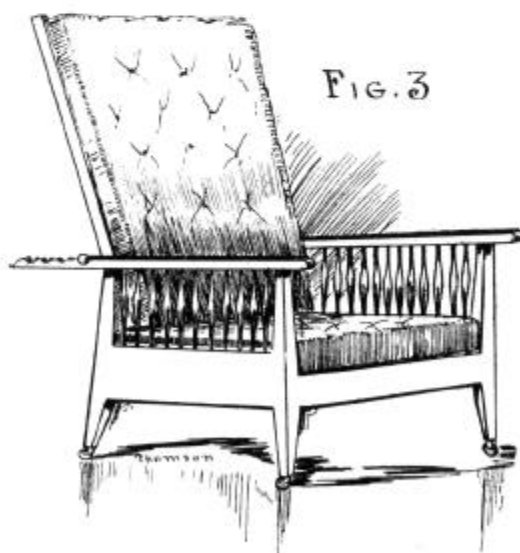
against the back of the chair. The whole man is thus rested for the reason that the body is supported at its weakest part, i. e., the small of the back.

Suppose that instead of the downward, rearward dip the seat should be horizontal, which is to say parallel with the floor. In that case the sitter would no more be impelled backward, but rather forward, nor would his back be fully rested. The fact is, the sitter would have all he could do to keep himself from sliding forward; and the greater the departure of the chair-back from the perpendicular the more would the body tend forward.

Now this is precisely the condition affecting the larger portion of the so-called Morris chairs. The generality have seats parallel, or nearly so, with the floor. Given a horizontal seat and cushions covered with so slippery a material as leather, and the tendency of the human sitter must ever be forward. Instead of absolute relaxation, a virtual slumping down as if of inert body, effort is required to keep from sliding to the front. This effort may be quite unconscious on the part of the sitter, nevertheless it is exercised, becoming in the case of an invalid of serious import.

All this is subject to remedy by the simple expedient of dropping the seat a couple of inches at the rear. In the original Morris chair (figure 1) the seat was thus depressed, but in process of time this fact has for one reason or another been overlooked.

In the early seventies of the last century



A GIVER OF COMFORT.

CONCERNING THE EASY CHAIR

the first chair of the Morris type came the way of the writer. It was the property of a cultivated Bostonian who had just imported it from the decorative establishment of William Morris of London, England. Admiring friends of the owner had duplicates made, so that in the course of time a number of similar chairs were to be met with in the houses of well-to-do Bostonians. This original Morris chair was of ebonized wood, such being very fashionable at that period. It is shown in figure 1.

From time to time variations from the original model were seen. The novel features of the chair were such as appealed to manufacturers, but in order to please the multitude more ornate designs were necessary. They came in abundant measure, so that before a decade had passed there was not much left of the original model but the hinged back. By 1880 the design had almost wholly degenerated.

Fortunately in the early eighties an eminent Boston designer, while holding to Morris tradition as regards the hinged adjustable-at-will back, produced an admirable chair on entirely new lines. This chair has been the model upon which innumerable chairs of like character have been based, and is depicted in figures 2 and 3.

Though designed on simple lines and void of decoration it is an expensive chair to build because of the absence of rectangular joints. The joints are all on a bevel, as can be seen by consulting the drawing. But when the pattern began to be copied the bevel joints were done away with, by which procedure the most essential feature, the rearward droop of the seat, was abolished. Also were the number of spindles reduced a few at a time until there came to the front an individual more venturesome than the rest, as in figure 4, eliminating them entirely.

All this of course was done in the interest of cheapening the product, in process of which considerable may be done and the public be none the wiser. We start a Morris chair with sixteen spindles to a side, and not one customer in a dozen discovers the difference when some "cheapener" cuts the number in half. Given general similitude to the original, and the average person will deem them practically the same.

Now for comfort-giving qualities the chair shown in figure 4 cannot compare with its progenitor as depicted in figures 2 and 3, nor even in appearance does it seem



A POOR IMITATION OF THE MORRIS STYLE.

so comfortable. The chairs shown in 1, 2 and 3 extend an invitation to us to come and take our ease, something which the other does not do.

As regards relaxation, Anna Payson Call in "Power through Repose" has this to say: "Do you hold yourself on the chair or does the chair hold you? When you are subject to the laws of gravitation give up to them and feel their strength."

Excellent advice, but in order to follow it one must first have a chair into which one may virtually "slump" and where one may remain quiescent without exerting a particle of muscular effort. This one most assuredly cannot do, save as the seat has a downward rearward slope which the generality of lounging chairs certainly have not. It is astonishing to find such faultily designed chairs even in hospitals.

As a giver of comfort the chair depicted in figure 4 cannot begin to compare with those shown in figures 2 and 3 nor in appearance is such the case. Still by the advertisement in which the former is exploited one is led to believe otherwise.

When a Morris chair is not constructed in accordance with the plans herein advocated resource may be had to a cushion, made some two inches higher at the front than at the back. Any appreciable slope is better than no slope at all; but whenever possible the difference between back and front should be two inches. The back legs may be shortened and all the legs beveled if this will not destroy the balance.



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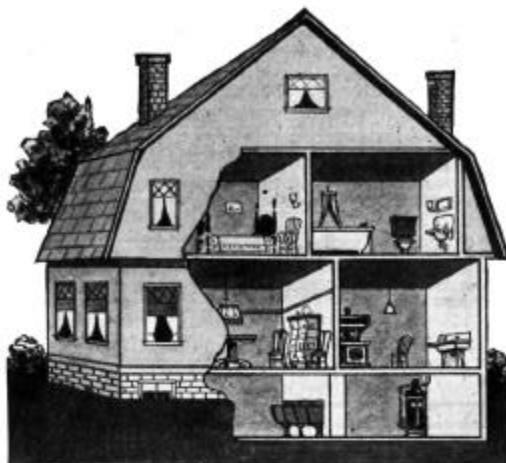
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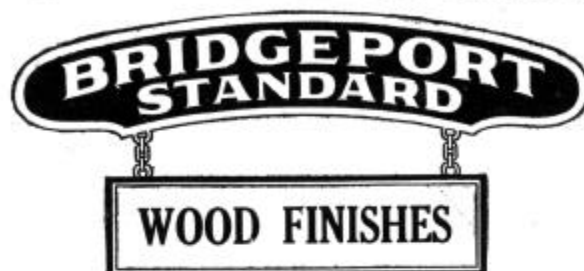
Write for our book and tell us how many hot water faucets you have, and we will let you know what size heater you need, and what it will cost:

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For then it is too late, and the toll of disease and doctor's charges is heavy. And you will wonder why you hadn't listened to friendly warnings, taken counsel of prudence, and installed an efficient filter that would have stood guard in your home against the dangers of infected water.

It is doubtful whether you have a right to expose yourself, your home, your children, to these dangers. Your family physician will tell you that even if the water in your house comes from the purest, most sparkling of mountain streams, you are not absolutely safe unless you filter it in your own home. More than one frightful epidemic has been spread by the drinking of "pure spring water."

But your physician will add the warning that a cheap, unreliable filter is worse than none at all,—it will do more harm than good—and he is right. Only when you have a filter like the Paddock Double Filter,—a filter that invariably filters your water twice—that will turn the product of the worst lake or river in America into a pure, limpid stream—a filter that has stood the severest of tests in hospitals, large industrial plants, and private dwellings;—only with a filter like the Paddock in your home can you feel absolutely safe.

Write immediately, while you feel the seriousness of it, and ask for full information about the Paddock.

ATLANTIC FILTER CO., 312 White Bldg., BUFFALO, N. Y.

Kindly mention The Craftsman

NEW TYPE OF GERMAN ARCHITECTURE

A GLIMPSE OF GERMAN ARCHITECTURE THAT SHOWS BOTH BEAUTY AND SIMPLICITY

IT is refreshing to find among the examples of modern German architecture anything so simple and unpretentious as the buildings which we are reproducing here from *Moderne Bauformen*. They seem to have been untouched, somehow, by the Secession spirit. In fact, one feels that the architect has consciously or unconsciously drawn his inspiration from English rather than German sources, and the result is an Old-World quaintness without eccentricity.

In the magazine from which these illustrations have been taken we found no word as to the purpose and location of the buildings, the nature of the materials or the architect's name. But the three largest views, one surmises, are photographs of a big, roomy country house—or it might even be an inn—while the first small one seems to be the gate-keeper's lodge or possibly the stable. Stone and cement appear to have been used in the walls, while the roof is evidently thatched.

At first glance it is the roof that holds one's attention with its broad, rather steep slope and varied angles, broken by little



ONE CORNER OF THE BUILDING SHOWN ON PAGE 548, SHOWING THE USE OF STONE IN THE FOUNDATION AND CIRCULAR WALL.



ENTRANCE STEPS AND LODGE THAT ARE IN HARMONY BOTH WITH THE RUGGED LANDSCAPE AND THE ARCHITECTURE OF THE LARGER BUILDING SHOWN BELOW.

towers and chimneys and small slanting dormers whose windows peep out at the passerby from their thatched covering like tiny eyes. In the daytime the white sash and small square panes give a suggestion of latticework among the plain surfaces of walls and roof; while at night, with the soft glow of lamps and flicker of candles, one can imagine how merrily those same windows must twinkle through the dark, telling of festive gatherings or quiet restfulness within.

One of the most interesting points about these buildings is their air of harmony with the surrounding landscape. "Contentment" seems to be spelled in every line. The roof has just the sort of slope and breadth that makes it look at peace against its green background of wooded mountain, and the stone that has been used in the foundation and in the circular wall at one corner proclaims close kinship with the rugged site.

A building like this would look well from practically any point of view, far or near. Seen from below its gabled roofs and towers would crown the hillside and point up to the heights beyond—a sort of half-way stopping place between the valley and the mountains. Seen from its own grounds it would present new interest of detail, mass and line at every angle; and if one could look down upon it from the distant mountain top, its generous sloping roof would

NEW TYPE OF GERMAN ARCHITECTURE



THE BROAD SLOPING ROOF AND TINY DORMERS OF THIS GERMAN HOMESTEAD REMIND ONE SOMEWHAT OF AN OLD ENGLISH FARMHOUSE.

probably remind one of a hen mothering with careful wings her brood of chicks.

There is an air of hospitality about the place that is reminiscent of some old English farmhouse. You feel it in the inviting width of the entrance steps, in the welcoming arch that protects the ample doorway, in the wide-flung shutters of the casement windows and in the friendly shelter of the roof.

And you wonder a good deal about the interior—for unfortunately no views of it were shown in *Moderne Bauformen*. The outside views suggest big friendly rooms with sturdy woodwork—beamed ceilings and solid, comfortable furniture—in short, the kind of place that radiates an atmosphere of good living and homelike charm.

Only one criticism comes to mind in studying these illustrations—namely, the windows seem a trifle small and few for so large a building. This is especially noticeable in the upper stories, and one feels that perhaps the bedrooms are

not quite so light and well-ventilated as fresh-air enthusiasts would want them. Even if the greatest part of the space beneath the broad, steep slope of the roof is devoted to attic storage, would it not have been more convenient if a few more casements had been provided?

However, these are merely conjectures, made perforce without knowledge of the floor plans. Besides, in all probability the folks who live there would

laugh at such criticism and say they are out of doors most of the day.

At any rate, whatever imperfections a critical eye may discover, the fact remains that American architects may learn some needed lessons from these German friends. They may note the wisdom of sturdy construction and simple lines; they may feel the appealing charm of surfaces that lack all trace of meaningless ornament or affectation, and the restfulness of proportions that satisfy the eye. And they may remember that these are qualities that will help make any building a "thing of beauty," be it in the Old World or the New.



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MORE PLANS FOR NEW CRAFTSMAN BUILDING

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MORE PLANS FOR THE NEW CRAFTSMAN BUILDING

DEVELOPMENT OF THE CRAFTSMAN MOVEMENT.

AS we are about to move into the new Craftsman Building I naturally find myself thinking quite a good deal about the development of THE CRAFTSMAN movement, how it started and what it has grown into. And I have come to the conclusion that its success is accounted for by the fact that its development has been a normal one. It has never been forced in any way. We have never planned any fresh departure for the sake of novelty. We have tried to avoid a self-conscious picturesqueness, and in all ways from the beginning we have moved along in channels that were sincere and natural and simple. Where we have branched out or grown greater it has been because people needed the kind of help that an increased Craftsman service could give them.

For instance, it did not occur to me to build houses until our subscribers came to me and asked for homes in harmony with Craftsman furniture, homes that were simple and durable and planned for genuine comfort, just as the Craftsman furniture has been from the beginning. And then when the Craftsman home took its place as a practical architecture for the people, the need for the Craftsman fireplace developed. I found that people who were interested in our kind of architecture felt the need in their homes of the fireplace corner, the hearth that was the center of family life. The giving up of the fireplace in the modern home has come about largely as a matter of economy. Many families who would be glad of the peace and the comfort of the fireplace have not been able to plan for it in their house-building. There seemed to be but one solution for this and that was a fireplace that would give all the comfort and joy of the glowing hearth and at the same time meet the economical problem of furnishing heat for the entire house. The success of this fireplace has proved to us that people are waiting and eager for any development in home construction and furnishing that can give them a combination of comfort and economy.

INCREASE IN HOME-BUILDING.

In its way the new Craftsman Building is just as direct a development of the Crafts-

man movement as our architecture and our Fireplace Furnace. In our experience the time had come when people wanted the opportunity of planning their own homes along lines of economy, beauty and durability. We felt on every hand a desire among people to own their own homes and to know the best way to build them, that is to say, to know about the construction of them in the fullest and most complete fashion. It seemed as though in a way the Craftsman movement and the Craftsman service may have helped along this rejuvenation of the home instinct in America; we certainly hope so, for we have always felt that a nation without homes could not be a happy nation, nor long a successful and powerful one. And so when more and more people came to us asking advice about the building of their homes, about not only the plan, but the building materials, the furnishings, the fittings, the garden arrangement, we felt that the only way in which such a problem could be met was a home-building center where people could come together from all over the country and could find all the information about home-making that could be brought under one roof.

We found that our friends who wanted to build homes were growing wiser in the questions they asked and in the information they sought. They were no longer contented to have an architect give them a finished plan and a builder hand them a finished house that no more represented their taste in life than it would that of any other home-seeker. The home-builder of today has a fresh point of view about what his house must be. In the first place, it is not being built for a day; it is being built for himself and his family and his heirs forever, and he wants to know everything that he can find out about home-making that will help him to invest his money to the best advantage in buying ground and building a house. This of course includes a careful examination of all the varieties of modern building materials, as well as the best methods of construction.

THE INDIVIDUAL HOME.

The brick industry has developed amazingly in the last few years and there is a wide range of selection for the man who wants the brick house. And so it is important that in making his choice he should have a chance to study the brick world. The same is true if he expects to build of

MORE PLANS FOR NEW CRAFTSMAN BUILDING

concrete. There are different methods of concrete construction suited to different countries and climates and styles of architecture. The home-builder should have his choice so that he gets the material best adapted to his site and structure. Then when we come to the questions of plumbing and roof coverings, wall finishings and sanitary details for bathroom and for kitchen, furniture that suits his house and his income, all the new and beautiful fabrics and fittings, the range of choice is almost beyond calculation, and yet for each man there is the inevitable thing that his house and his taste demand. To study the vast number of materials for house building and furnishing scattered over the country would require a great outlay of strength and time and money. And that is why it has seemed to me that a center of interest for the home-makers, a building that carried permanent home-building exhibitions should prove not only a logical outcome of the Craftsman movement, but a phase of progress that would be of the greatest value to prospective builders the world over.

I have made a careful study of this condition and I feel that I have attained a fairly wide knowledge of what the average home-builder today has in mind when he starts to create his own home. A large and intimate correspondence with CRAFTSMAN subscribers on the question of home-building has brought before me the needs of many intelligent people in this country, people of taste, often of means and with a very real understanding of beauty in relation to home life. In arranging for a permanent building exhibition in the Craftsman Building my aim is to present in the seven floors given up to the purpose the widest range of practical building materials, fittings and furnishings. And in addition to this, methods of building construction will be shown, as well as miniature buildings; various kinds of economical household devices will be in operation; in fact, all phases of home-building and home living will receive as complete an exposition as our experience and knowledge will be able to present. I have in previous articles spoken of my own draughting room in the building for the planning of Craftsman architecture; here also my friends will be made welcome and advice will be given to those contemplating the putting up of their own houses, so that they may carry out their own ideas as successfully as possible.

LECTURES ON HOME-BUILDING.

Having decided to establish a home center in the new Craftsman Building, and finding that the idea is meeting with very real favor, it has occurred to me I should go a step further, that in addition to showing people all the various kinds of materials from which to select for home-building, houses in process of construction from these materials, and even finished models, I should provide an opportunity for *instruction* about home-building and country living. My present plan is to arrange a course of lectures, the first half of the lecture time being given to the lecturer to present his subject with interesting illustrations, and the latter half of the time to be at the service of the audience. People attending these lectures will be at liberty to ask questions of the lecturer, to discuss matters of importance with each other, in fact, to use their part of the time in such a way that they will get the utmost information possible. I am hoping in these lecture courses to cover so far as possible all the various fields of inquiry that would present themselves to men and women about to build a home or to remodel or refit an old home. I shall plan to have the lecturers take up in turn not only the various building materials of the day, but questions of building sites and land values; garden making will be taken up in detail, small gardens and large gardens, for pleasure and for profit; home hygiene will be a special study and questions of domestic economy will be presented in the most practical fashion.

Perhaps the most important subject that will be treated will be the question of country living. I feel that many of us have been getting at this matter of "back to the soil" far too vaguely. We have imagined that all that was necessary was the selling of city property, the finding of a farm and a liking for rural life. This is not true. It is essential that there should be some preparation for country living, just as there must be for city living. People must know all about the section of the country to which they are going, and they must know whether they are suited to grapple with all the problems that are inherent in country life. It is essential that they should study into the question of farming or gardening in a small way or the cultivation of orchards. In other words, wisdom must be brought to bear upon any exodus to the country if it is to be a success. It is only a good thing for

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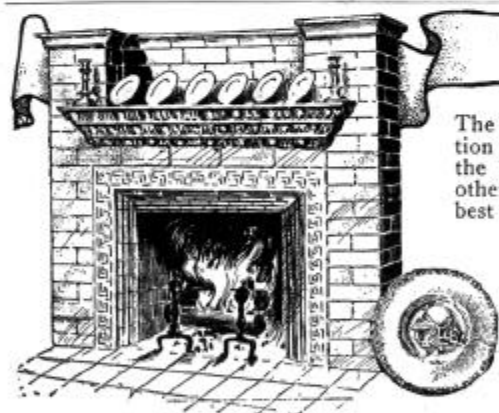
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HOME FURNISHING AND DECORATION

people to get back to the land if they get back there safely and sanely, and we shall hope through our lecture room and our library and our home-building exhibition to help people to do this. We feel that all this haphazard talk about country life is likely to undo much of the good that has come in recent years from opening our eyes to the benefits of rural living under proper conditions. Here in the Craftsman Building we want to make no mistake. We do not intend to take up the question of country living in order to exploit any phase of it. We only want to make clear the kind of things that are good in country life for the people suited to lead that existence, and then we want to help people to lead it in the wisest happiest fashion.

We shall be most interested to receive letters from our readers suggesting topics for these lecture courses or suggesting lecturers for certain topics. In the past we have received so much help and inspiration from the interest of our subscribers in the Craftsman movement that we are certain that those who will take the trouble to give us further advice along these lines will confer a lasting benefit upon us and upon others who are interested with us in the progress of this idea.

THE HOME-BUILDERS' LIBRARY.

In addition to the lecture rooms of the Craftsman Building we shall have a very complete library on home-making. Books on farming, country property, agriculture, chicken raising, landscape gardening and gardening for profit, home and school hygiene, domestic science, home industries and so on will be found in this library, all written by experts in their line. We intend this to be the fullest home-making library, if possible, in the world. We shall be glad if our friends will recommend to us books that they feel we ought to have on these shelves. In fact, now that we are going into the new building, we cannot have too much advice from our old subscribers. We must in a way depend upon them to help us to realize in this new structure the complete home-building center which we have had as an ideal.

It is absolutely necessary that every department in the Craftsman Building should be closely related to every other in order to secure a wise coöperative system of help for the public, and we feel with this venture, as we have always felt in the past with others, that the cement that we need is the interest

of our readers. For a long time, of course, we shall be merely testing out our ideals in this building. I have always found that the only way to make sure that an ideal was worth converting into a standard of life was to test it out practically. I did this with my furniture; I did it with my architecture when I first began to build houses. Later, as the question of heating interested me, I tested out the Craftsman Fireplace. I became interested in farming and have made many tests out at Craftsman Farms. In the same way when I wanted to know about vegetables and fruits and flowers I began to raise them in my gardens. Now the time has come when it is necessary for me to test out my ideal of the democratic American home and I have planned the Permanent Home-Builders' Exhibition for this purpose.

HOME FURNISHING AND DECORATION IN THE CRAFTSMAN MAGAZINE AND CRAFTSMAN BUILDING

PRACTICALLY every home-maker today recognizes the far-reaching influence of environment upon human life and happiness, and especially the influence of that vital factor—color. For, by some mysterious process of nature which the scientist may analyze and still leave unexplained, color passing through the eyes of the body seems to reach the eyes of the soul. From our early childhood on through the years, so long as sight lasts, color remains one of our most fruitful sources of delight, and its wise use in home and garden, in fact in every phase of work and art, affords endless possibilities of beauty and inspiration.

Realizing that the importance of this subject can hardly be overestimated, I have tried, from the very beginning of the Craftsman movement, not only to bring real color harmony into my own home and into the furnishings and interiors I have designed, but also to be of practical help to other home-makers who were working along these lines.

Naturally, as I branched out from the making of furniture into the planning and building of houses and the publishing of THE CRAFTSMAN magazine, people all over the country who were in sympathy with my ideals wrote me in regard to their own problems of home-making—problems that ranged from the buying of land and planting of the garden, to the building, furnishing and decorating of the house itself.

HOME FURNISHING AND DECORATION

They wanted my advice about the arrangement and exposure of their rooms, the finishing of their woodwork, the building of their fireplaces, the construction of their built-in fittings, the placing of their lighting fixtures, the coloring of their walls and draperies—and a hundred other small but important details that go to make up the sum total of the home environment.

In reply to these letters I tried always to give my readers not merely theoretical advice, but practical suggestions founded on my own actual experience. And whenever any new question came up with which I was not thoroughly familiar—such, for instance, as a new method of staining wood, a fresh combination of textures or colors or a new form of building construction—I made it a point to investigate the matter thoroughly, and base my reply upon the result of practical test and experiment.

Very often friends and readers would call at the office to consult my experts about the various subjects on which they needed technical advice. And whenever possible I have always tried to greet my visitors personally, to talk over with them their plans and help them work out their ideas of home-making in the most satisfactory way.

This service which I have tried to render in the past seems small, however, compared with what I hope to render in the near future, upon the opening of the Craftsman Building. In this new home, where all our varied activities will center, the visitor will find a Permanent Home-Builders' Exposition and our own furnishing and decorating department. Here they will be able to see actual interiors, complete in every detail as to woodwork, wall coverings, draperies, furniture, lighting fixtures, rugs and all the other fittings that add to the comfort and friendly atmosphere of the home. They will find not merely abstract color schemes and illustrations, but the actual objects and materials, used with due regard to the requirements of good taste and economy. We shall thus be able to save our friends much tiresome search and experiment, and to assist them in selecting the sort of furnishings, fixtures and colors that will combine beauty with convenience and still be within their means.

Those who live in New York and its suburbs or who are visiting here, can call and talk over their problems with our experts in person, enjoying all the comforts and conveniences of the new building;

while those who live at a distance can rely upon equally careful attention through the mail and through the columns of the magazine. For we shall of course publish each month in *THE CRAFTSMAN* illustrations, articles and items of general interest that may suggest themselves in the course of this work.

We want our readers in every part of the world to feel that this department of *THE CRAFTSMAN* is at their personal service, and to coöperate with us in making it a success. We want them to write to us about their homes and furnishings, tell us about the problems of interior decoration or equipment which confront them, and ask our advice on any questions of design, color scheme and arrangement on which they need aid. No matter what it may be—the selection of a wall-paper or tint, the choice of material for casement curtains, the texture, design and color of a rug, the arrangement of lighting fixtures or the equipment of a model kitchen or bathroom—we shall be glad to give them the benefit of our own technical knowledge and experience.

The best plan is to send us a blue print or sketch of the floor plan, indicating the particular room or rooms about which our advice is wanted. The points of the compass should be noted on the plan, so that we may suggest color schemes that will be suitable for the exposure of the rooms, and preferences as to colors, materials or furnishings should be set forth. We should also be advised what furnishings the owner already has, what new ones are desired and how much money can be spent.

We will then study the plan carefully, and will suggest what seems to us the most practical and homelike arrangement.

And in making these suggestions and sending samples of materials and colors, we shall not confine ourselves to Craftsman products, but shall recommend whatever other articles we believe to be well made, interesting and appropriate for the purpose.

Nor do we wish to limit the scope of this department to the subjects outlined above. We shall be glad to take up any point that may interest our readers—from exterior paints and shingle stains to interior furnishings, colorings and equipment. And finally, we want every subscriber who reads this editorial to feel free to write us on any problem of home-making in which we might be of help.

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GUSTAV STICKLEY, THE CRAFTSMAN

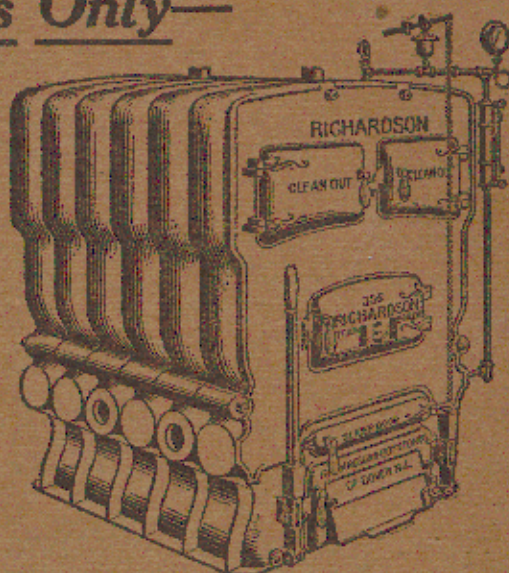
29 WEST 34th STREET

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If We Made Boilers Only—

we might be tempted—as exclusive manufacturers of boilers invariably are—to proclaim loudly that any other heating apparatus was a poor choice for anybody's house. If we were on the other side of the fence, making warm air heaters only, it wouldn't be at all surprising if we threw stones now and then at other methods. And we've all become so used to this that we fail to realize that a good deal of time is being wasted that might much better be devoted to the real problem that concerns the public—what is the most suitable heating plant in each particular case, and how should it be installed so as to meet the requirements *fully* and *economically*.



That is the problem we have been studying without let-up for seventy-five years,—

and the accumulated experience of these many years, coupled with our absolute impartiality on the question of which heating system to choose, since we supply all three, leads us to believe that there are very few manufacturers to whom you can quite as *safely* entrust your heating problem as you can to us. In that belief we are strengthened by the numberless times we have been obliged to advise tearing out other heating plants and substituting ours—not so much, perhaps, because the boiler or the warm air heater was a poor one to begin with, but chiefly because it had been unsuited to the given conditions.

You may be running that risk yourself. Better not take any chances. Your heating problem won't be helped by prejudices in favor of one system or another. If you come to us with your heating problem, you will find that we haven't any prejudices to begin with—and if you lay aside yours, we'll get together in very short order, and advise you concerning a heating plant that will be *painstakingly* or *economically* fitted to your particular needs, and one you can depend upon to heat your house more adequately and more *cheaply* than any other system you could get.



RICHARDSON & BOYNTON CO.

Manufacturers of "Richardson" Boilers
and "Perfect" Warm Air Heaters

NEW YORK, 31 W. 51st Street
BOSTON, 51 Portland Street
PHILADELPHIA, 1197 Arch Street

CHICAGO, 66 E. Lake Street
KANSAS CITY, 301 E. 10th Street
MINNEAPOLIS, 928 Security Bldg.

By the way, don't rush your heating plans through at the last minute—don't decide in haste and repent at leisure. Come to us early, and give us enough time to study your problem.