

lime may be washed out if the cement is sufficiently pervious, more being formed by fresh sea water attacking the lime until the latter is destroyed. It is generally agreed that the better the cement is mixed and placed, with especial view to the density of its surface and impermeability, the less it will be attacked by sea water, more or less regardless of its analysis, the only important consideration of the latter being that its hydraulic index should be high, i. e., percentage of lime low.

NEW BOOKS, ETC.

A HANDBOOK OF SMALL TOOLS. By Erik Oberg. New York: John Wiley & Sons, 1909. 517 large 12mo. pp.; 282 illustrations; cloth. Price, \$3.

In the present multiplication of books on all sorts of subjects it is comparatively rarely that one comes across a new publication the subject of which has not already been treated, less comprehensively or less thoroughly or simply earlier, but the present work seems to fill not a "long-felt want" so much as a recently arisen and hitherto unfilled want. The rapid development of highly automatic machine tools and the use of high speeds facilitated by improvements in steel have developed entirely new requirements in the way of tools and the author endeavors to provide instructions in the best modern practice for the benefit of the tool-maker, draftsman, foreman, and shop superintendent. The book is practical and to the point, simple in language, and well suited to the class for which it is particularly intended. The new developments above referred to require more instruction in what tools to make than in how to do it, the latter being generally easily thought out by a good workman, and the author therefore gives his attention primarily to the former. The book is full of useful tables and data for tool making and for those interested in the formulae by which those data are calculated and other simple mathematics are given. The authenticity and originality of the work is sufficiently demonstrated by the fact that it represents the practice of one of the largest and most advanced tool-making firms in the country with which the author was associated for several years.

HOW IT IS DONE: OR, VICTORIES OF THE ENGINEER. By Archibald Williams. New York: Thomas Nelson & Sons, 1908. 12mo.; cloth; pp. 484; 268 ill. Price, \$1.25.

In this book the author has described in simple language how the great engineering feats of the world have been accomplished. Among the subjects treated are railroad engineering, the building of a big ship, bridge building (including an account of suspension and cantilever bridges and detailed descriptions of the Forth Bridge, Blackwell's Island Bridge, and the collapse of the Quebec Bridge), the building of the new Croton Dam, curbing the Nile, notable reservoirs, Panama Canal, harbor works, tunnels and tunneling, mining and mines, power from falling water.

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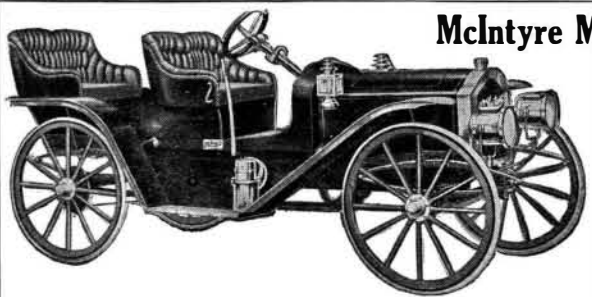
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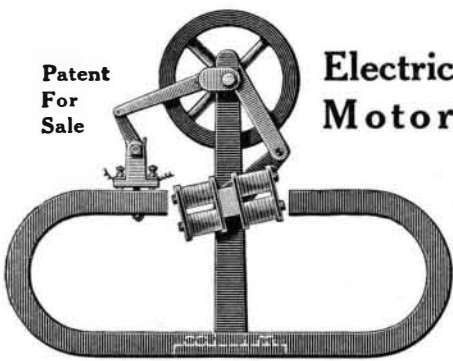
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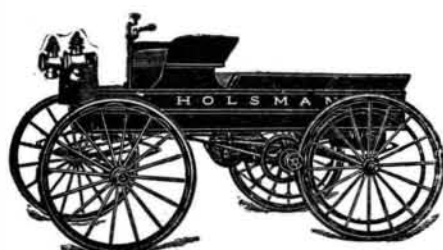
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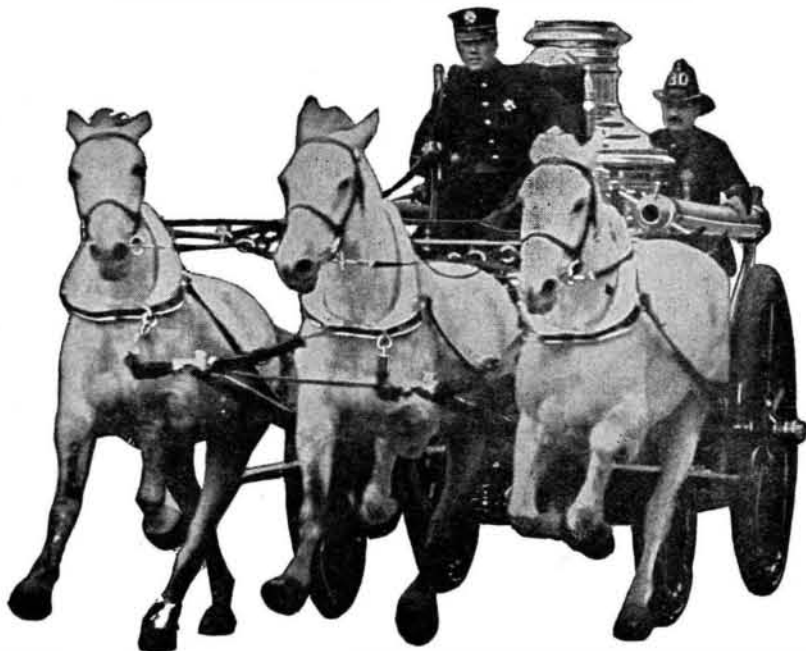
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SMALL HOUSE NUMBER of AMERICAN HOMES AND GARDENS

THE artistic and inexpensive house is the chief demand of the home seeker of to-day. For that reason the April, 1909, number of American Homes and Gardens will be a **SPECIAL SMALL HOUSE NUMBER.**

This issue will contain a vast amount of valuable information for the prospective home builder. It will tell him how to select a country site, how the various rooms of the house should be planned; the style of architecture in which the house should be designed; the material of which it may be built; the kind of plumbing fixtures to be used; the heating system to be selected; the choice of the hangings for the walls, doors and windows; appropriate furniture for the home; the interior decoration of the home; and the laying out of the grounds surrounding the house, as well as the planting of them.

THE ARTISTIC EXPRESSION OF THE SMALL HOUSE is well explained in an article by Francis Durando Nichols, illustrated with fifty engravings showing exterior and interior views and floor plans of a group of model houses of small size and small cost.

PLUMBING FOR A SMALL COUNTRY HOUSE, by John A. Gade, is a very important subject. No part of a house needs greater attention than the laundry, kitchen and bath room. Hence the economic and convenient placing of the plumbing fixtures, the kind to use, and the cost of the same are matters of interest to all prospective home builders.

THE MAKING OF AN IRIS GARDEN, by Samuel Howe, is an illustrated article showing how a swamp or lowland can be developed and transformed into a beautiful iris garden.

DECORATIVE FEATURES IN THE SMALL HOME, by Alice M. Kellogg, presents in a brief way with ten illustrations artistic schemes of covering the floors and walls of the house, harmonious and appropriate hangings for the doors and windows, with numerous suggestions for the decorating of the various rooms of the house.

A GROUP OF MODEL MOTOR HOUSES FOR THE SMALL COUNTRY PLACE, by Ralph de Martin, forms two pages of illustrations and sets forth the best designs for a small motor house suitable for the accommodation of one motor car and with sufficient space for a work bench.

HOME-MADE NOVELTIES FOR THE COUNTRY HOUSE, by Mabel Tuke Priestman, treats of the conversion of unlikely things into useful articles, and the illustrations show the results.

THE EVOLUTION OF THE SMALL HOUSE PLAN, by Joy Wheeler Dow, is an important article by a well-known architect on the economic planning of a small house, costing from \$2,500 to \$5,000. The plan and the arrangement of the rooms is the first thought given to the house and is one in which the layman should be most interested.

A FORMAL GARDEN AND PERGOLA, DESIGNED BY AN AMATEUR, by Alexander R. Holli-day, informs the reader how an amateur planned and laid out his garden and how he built his pergola. Illustrated with plans and a set of drawings.

PROPER FURNITURE FOR THE SMALL HOUSE, by Esther Singleton, with illustrations showing the artistic and appropriate furniture for the house, and the proper position in which it is to be placed, together with an accurate treatment of the fireplace and mantel.

THE USE OF CONCRETE IN THE BUILDING OF A SMALL COUNTRY HOUSE, by Benjamin Howes, is a timely and comparatively new subject, and is one in which much interest is shown at the present moment. The article is profusely illustrated with fifty engravings showing exterior and interior views and floor plans of small houses of various styles of architecture in which concrete is used with artistic results.

THE HEATING APPARATUS FOR THE SMALL COUNTRY HOUSE, by Allyn Frogner, is the title of an article treating in a practical manner one of the most important features of a small country house. How to heat and what is the cost? That is a question which has been well answered for the three respective systems of hot air, steam heat and hot water.

PROBLEMS IN PLANNING THE GROUNDS OF A SMALL COUNTRY PLACE, by Charles D. Lay, Mr. Lay has explained in a very concise form how the grounds around a small country place may be planted at a very low cost, and enumerates the best and most effective shrubs and plants to be used.

This **SMALL HOUSE NUMBER** will contain 165 illustrations covering 52 pages, which will be enclosed in a striking colored cover.

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SEALED PROPOSALS

Notice to Contractors.

SEALED PROPOSALS for Power House, Coal Pocket, S. Trestle and Conduit. Construction including plumbing, also conduit for Acute Hospital, Construction including steam piping, at the Hudson River State Hospital, Poughkeepsie, N. Y., will be received by the State Commission in Lunacy, at the Capitol, Albany, N. Y., up to 3 o'clock P. M., on March 24th, 1909, when they will be opened and read publicly.

Proposals shall be accompanied by certified check in the sum of \$2,000 for the Power House, Coal Pocket, Trestle and Conduit, and certified check in the sum of \$500 for the Conduit for Acute Hospital, and the contractors to whom the awards are made will be required to furnish surety company's bonds in the sum of \$25,000 for the Power House, and \$5,000 for the Conduit for Acute Hospital. The right is reserved to reject any and all bids.

Drawings and specifications may be consulted and blank form of proposals obtained at the Hudson River State Hospital, Poughkeepsie, N. Y., and at office of the State Architect, Complete sets of plans and specifications will be furnished to prospective bidders upon reasonable notice to, and in the discretion of the State Architect, Franklin B. Ware, Albany, N. Y.

NOTE.—The work for the Power House does not include boilers or other equipment. T. E. MCGARR, Secretary, State Commission in Lunacy.

Dated Albany, N. Y., 26th day of Feb., 1909.

Notice to Contractors.

SEALED PROPOSALS for Power House, Coal Pocket and Conduits construction, including plumbing and electric work, and for Laundry building, construction, including heating, plumbing and electric work, at the Kings Park State Hospital, Kings Park, N. Y., will be received by the State Commission in Lunacy at the Capitol, Albany, N. Y., up to 3 o'clock P. M., on March 24, 1909, when they will be opened and read publicly.

Proposals shall be accompanied by certified check in the sum of \$2,000 each for the Power House and Laundry, and the contractors to whom the awards are made will be required to furnish surety company's bonds in the sum of \$25,000 for the Power House and \$5,000 for the Laundry. The right is reserved to reject any and all bids.

Drawings and specifications may be consulted and blank forms of proposals obtained at the Kings Park State Hospital, Kings Park, N. Y., at the office of the State Commission in Lunacy, Room 5212, 1 Madison Avenue, New York City, and at the office of the State Architect, Complete sets of plans and specifications will be furnished to prospective bidders upon reasonable notice to, and in the discretion of the State Architect, Franklin B. Ware, Albany, N. Y.

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"Car-Ro-Thymol," for a liquid antiseptic compound Car-Ro-Thymol Co.	14,699
"Carter's Dental Outfit," for toothache drops, E. W. Carter	14,700
"Edelweiss Fruhstuck Kasehen," for cheese, S. Van Koning	14,697
"El Converso," for cigars, Moehle Lithographic Co.	14,692
"Golden Hour," for stories, Florida Havana Cigar Co.	14,693
"Hires' Household Extract," for root beer extract, Charles E. Hires Co.	14,694
"Klean Cloth Hand Kerchiefs," for handkerchiefs, P. J. Crystal	14,704
"Nanabee Foot Powder," for foot powder, L. N. McCleer	14,701
"Occo-Nut Chew," for nut flavored candy chews, W. B. McCoy Co.	14,696
"Pussy," for cigars, K. H. Jacobs	14,691
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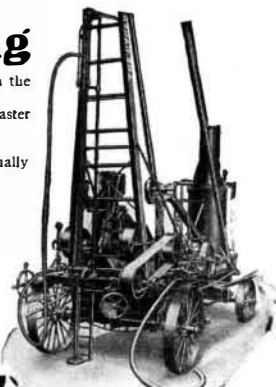
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