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Scientific American Supplement 997 contains an article by Spencer Newberry in which practical notes on the proper preparation of concrete are given.

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Scientific American Supplements 1547 and 1548 give a resume in which the various systems of reinforced concrete construction are discussed and illustrated.

Scientific American Supplement 1564 contains an article by Lewis A. Hicks, in which the merits and defects of reinforced concrete are analyzed.

Scientific American Supplement 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

Scientific American Supplement 1573 contains an article by Louis H. Gibson on the principles of success in concrete block manufacture, illustrated.

Scientific American Supplement 1574 discusses steel for reinforced concrete.

Scientific American Supplements 1575, 1576, and 1577 contain a paper by Philip L. Wormley, Jr., on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts.

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**NEW BOOKS, ETC.**

**RAILROAD STRUCTURES AND ESTIMATES.** By J. W. Orrock, C.E. New York: John Wiley & Sons, 1909. 8vo.; 270 pp.; 93 figures. Price, \$4 net.

Under the title of Railroad Structures and Estimates, the intention is to cover in brief and concise form the numerous subjects that enter into the Engineer's Estimates of Railroad Building, for the purpose of ready reference, as to general construction and cost, on a business rather than a technical basis. As it is impossible to give the data to suit all conditions, the weights, quantities, and cost are given in detail in most instances, and may be varied as desired.

**FRAMING.** By William A. Radford. Assisted by Alfred S. Johnson, A.M., Ph.D., and Bernard L. Johnson, B.S. Chicago: The Radford Architectural Company. New York: Industrial Book Company. 12mo.; 388 pp. Price, \$1.

To the carpenter especially, and to all others interested in wood in a structural way, this is a most important subject. The framing of a building has been likened to the skeleton of the human body. It is important that it be put together properly and connected up in the right way. The whole stability and success of the edifice depend on the strength and proper arrangement of the supporting frame. The present work is divided into four heads: (1) Timber framing for houses; (2) barn framing; (3) framing of factories, stores, and public buildings; (4) miscellaneous framing, including strength of timbers and the principles of truss construction. The work, accordingly, will be taken up in this order. In some cases certain subjects of an introductory or explanatory nature will be discussed, although, strictly speaking, they are no part of "framing" and possibly are not done by the carpenter. Yet a knowledge of them will add to the carpenter's equipment, and will help him to do his work more intelligently.

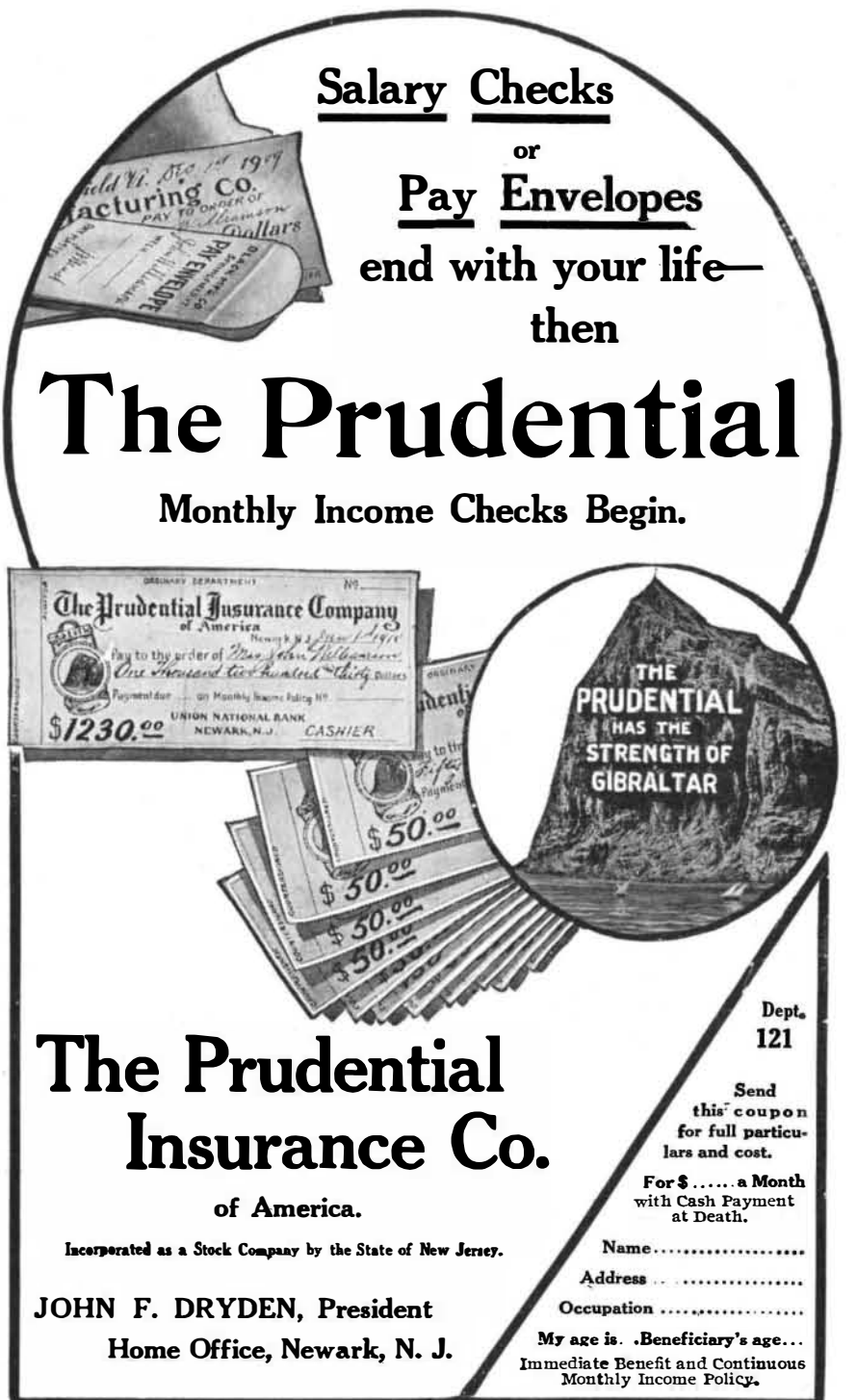
**METAL SPINNING.** Practical Instructions in a Fascinating Art. By Fred D. Crawshaw, M.D. Chicago: Popular Mechanics, 1909. 18mo.; 72 pp. Price, 25 cents.

Like so many of the other old-time crafts, the one of metal spinning has partially gone into disuse because of commercial competition and the failure of the younger generation of men to familiarize themselves with the hand-work of their fathers. In the United States it is only in the larger cities that one finds an artisan who does metal spinning. When such a person is found, he is usually occupied in producing forms out of thin metal that require great care in making and are difficult to produce with the stamp or press. It is believed in some circles, particularly among metal spinners, that the pressing and stamping of metal can never fully take the place of spinning it. The object of this book is to assist amateurs in an interesting art, and also give practical metal spinners additional instruction.

**THE SCIENTIFIC AMERICAN BOY AT SCHOOL.** By A. Russell Bond. New York: Munn & Co., Inc., 1909. Pp. 338. Price, \$2.

One of the most interesting and helpful of recent books for boys was "The Scientific American Boy," by the accomplished author of the present volume, in which was described the adventures of a youth of mechanical turn of mind with his companions in a vacation season. Mr. Bond now carries the story further, places his hero in boarding school, and invites his readers to enjoy his later adventures, and profit by them as well. It is pre-eminently a boy's book for boys, for boys with sound bodies and healthy minds, who like to be out of doors and making things with their hands—just the kind of boys one reads about and would like to have or know, but who sometimes seem rather scarce when one scans the list of one's boy acquaintances. Mr. Bond has been more fortunate than some of us, for his boys are fine young chaps, full of life and vigor and endowed with mechanical turns of mind that must have given some of their elders pause. But at all events they are not prigs, but good, wholesome boys of the right sort; and if one does not meet them in the streets every day, it is good to know there are such young people and to read about them in Mr. Bond's agreeable pages. The book is not at all a history of school life, but might be scientifically described as an essay on surplus energy. It deals, not with what the boys did in school hours, but what they did outside of them. These, of course, are the real hours of a boy's life, the time in which he is free and unrestrained, in which he seeks to please himself and work off some of that boy energy that is sometimes not always so appreciated by his elders as it might be. So the book brims over with good nature and ingenuity and with the breath of outdoor activity. If the mechanical performances of these young fellows seem sometimes a bit audacious, we may rest assured, with the author's certificate, that they never did anything boys of real earnestness and ingenuity could not have accomplished. The careful parent may perhaps be disposed to pause a little at the flying machine, but—read Mr. Bond and find out what happened. The book is agreeably written with a fine sympathy for boy life and boy activity. It abounds in practical ideas and suggestions, and will prove a veritable boon to the parent

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who wishes to interest his boy in the value of thinking and doing. The numerous illustrations are extraordinarily helpful and practical.

HANDY MAN'S WORKSHOP AND LABORATORY. Compiled and edited by A. Russell Bond. New York: Munn & Co., Inc., 1909. Pp. 467. Price, \$2.

This is a book of first-rate importance and interest, and is a notable contribution to practical work from the office of the SCIENTIFIC AMERICAN. It is a book that not only aims to be practical, but which is practical from cover to cover. It is a collection of ideas and methods, of ways to do things, of what to do and how to do it as proposed, tried out and tested by resourceful men, both amateur and professional. It contains, in short, upward of a thousand ingenious "kinks," ideas, and hints, useful to the household, attractive to the mechanic, and interesting to everyone who loves to tinker and make articles of use and value, or in whom the spirit of experimentation is inbred. Unlike many books of this kind, however, this is no collection of scientific experiments. In fact, it is not an experimental book at all, but a treatise of useful things. It is not concerned with theory, but with fact. It deals, not with what will give curious results, but with achievements of real value and utility. And this it does, in the most direct way possible. The descriptions of methods are concise and clear, and at every point they are supplemented with drawings and diagrams, many of which are in the form of working drawings that show, in a very precise and definite way, just what to do, and how to do it. There are 370 such illustrations in the book, very clearly drawn and lettered, and illustrations that illustrate in the best sense of the word. The origin of the book is a department established some time ago in the SCIENTIFIC AMERICAN, devoted to the interests of the "Handy Man." A flood of suggestions poured in from a multitude of sources, and the best of these have been reproduced in the present volume. It is, however, in no sense a reprint from the SCIENTIFIC AMERICAN, since much of its contents is now printed for the first time. Mr. Bond has devised a book that will very successfully appeal to a very wide circle. The amateur workman is attracted by the opening chapter on fitting up a workshop. Both he and the professional mechanic will find a host of suggestions on the greatest diversity of topics in the next chapter on Shop Kinks. Both again will be interested in the very valuable chapter on the soldering of metals and the preparation of solders and soldering agents. Here is a long list of formulas for solders of tried and tested accuracy. The professional mechanic is especially appealed to in the fourth chapter on the Handy Man in the Factory, while still another class of readers will be interested in the fifth chapter on the Experimental Laboratory. Electricity is very fully treated in the sixth chapter, and the householder will find a wealth of suggestion in the numerous devices described in the seventh. The sportsman will be helped with the hints of the eighth chapter, while the final chapter on flying machines is of the greatest possible present-day interest. It is, in short, a book of the widest general interest, and both editor and publisher are to be heartily congratulated on the success obtained in this very valuable publication.

CONCRETE POTTERY AND GARDEN FURNITURE. By Ralph C. Davison. New York: Munn & Co., Inc., 1909. Pp. 196. Price, \$1.50.

The publishers' statement that this is a new book on a new subject is very true. Neither concrete pottery nor concrete garden furniture is in itself new; but a book dealing with their making by the amateur has not heretofore been published, and hence this volume amply supports the claim of novelty made for it. Readers of American Homes and Gardens have already acquired some familiarity with Mr. Davison's guidance in this fascinating art, and while the articles he contributed to these pages have been reproduced in this book, they have been given a new form and much new and additional matter has been added to them. The illustrations have been greatly increased in number, and the whole given the form of a practical handbook. Books on handicraft of any kind are apt to fail, more or less, in the inadequacy of their directions. The author, too, often knows so well what to do and how to do it as not to realize that those who have not followed the work before may not quite follow what are supposed to be careful directions. Mr. Davison has been fully alive to this misfortune in books of this kind, and has, therefore, taken especial pains to make his descriptions most accurate and detailed. No other method is, of course, really feasible; but it is seldom this sort of thing has been so well done as in his pages. The careful text is supplemented with illustrations as carefully made and lettered, so that the book is a genuine handbook of craftwork, thoroughly practical in every part, and admirably adapted to its special purpose of explaining every portion of the work involved in the production of the various articles described. Mr. Davison has opened up quite a new field for the amateur. The materials required are abundant and cheap; the methods, in the simpler pieces at least, easy and devoid of difficulties. And the work is not only pleasant, but the results are agreeable and decorative. The author thoroughly knows and understands his subject, and has the gift of imparting his knowledge to his readers.



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