



HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.

(10535) R. L. M. asks for a remedy for incrustations of boilers. Remedies that have been adopted with more or less success for boiler incrustation: 1. Potatoes, 1-50 weight of water, prevent adherence of scale.

(10536) D. N. asks how to straighten saws. A. You can straighten band saws in the following manner: Put the saw on to the machine and under tension, just as it is to be used.

(10537) J. M. W. asks how to true grindstones. A. Drive at a moderate speed and true up with a rod of 1/2 inch or 3/4 inch iron, or better, a piece of tube.

(10538) W. F. I. asks for colors for druggists' show bottles. A. Amber—Dragon's blood, in coarse powder, 1 part; oil of vitriol, 4 parts.

gelatine, 1 drachm. boiling water, 2 ounces; solution of potassa, 2 pints. Dissolve the copper salt in the water, and the gelatine in the boiling water.

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NEW BOOKS, ETC.

PHOTOGRAPHIC STUDIOS AND DARK ROOMS. With Numerous Engravings and Diagrams. By Paul N. Hasluck. Philadelphia: David McKay. 16mo.; cloth; 100 pages. Price, 50 cents.

A comprehensive digest of the information on the construction of photographic studios and dark rooms, that has appeared from time to time in the weekly journal Work.

STAR REDUCTIONS. By W. Ernest Cooke. Perth, West Australia: Perth Observatory.

A description of a new method for the reduction of star places from apparent to mean positions and the opposite.

DISEASES OF SWINE. With Special Reference to the Preventive Measures of Disease. By Robert A. Craig. New York: The Orange Judd Company. Illustrated; 12mo.; cloth; 191 pages. Price, 75 cents.

There is great need for a short treatise on the diseases of hogs, since the literature on the subject is very scattered. Mr. Craig understands his subject thoroughly, and handles it in a simple and satisfactory manner.

PROFITABLE DAIRYING. A Practical Guide to Successful Dairy Management. By C. L. Peck. New York: Orange Judd Company. 12mo.; cloth; 174 pages; illustrated. Price, 75 cents.

A thoroughly practical work dealing with dairying from the modern intensive standpoint. The chapter devoted to "Dairy Breeds" is most interesting.

THE STEEL SQUARE AS A CALCULATING MACHINE. By Albert Fair. New York: The Industrial Publication Company. 12mo.; cloth; 81 pages; illustrated. Price, 50 cents.

The steel square is one of the most widely known tools in existence, yet few of its users are familiar with its possibilities in the broader sense. Mr. Fair's book contains directions on how to test the accuracy of the square, how to use it with the best results, and how to solve a number of difficult problems by its aid.

THE TECHNICAL YEAR BOOK. 1907. Edited by Arthur C. Kelly and Charles Weekes. London: Percival Marshall & Co. 16mo.; pocket size; 399 pages. Price, \$2.

A very handy little volume of miscellaneous information; rather more interesting, perhaps, than useful as a pocket reference book. Its value in the United States is limited by the fact that much of the data is purely British in character, and does not apply here.

FOOD MATERIALS AND THEIR ADULTERATIONS. By Ellen H. Richards. Final edition revised and rewritten. Boston: Whitcomb & Barrows. 12mo.; cloth; 176 pages. Price, \$1.

The conditions which made the "Pure Food Law" a necessity could never have arisen had it not been for the ignorance and indifference of the buying public.

food will be a rare exception. Her book covers all the important aspects of the case clearly and broadly, making a treatise that is neither too simple nor too technical.

MECHANICAL ENGINEERING MATERIALS. Their Properties and Treatment in Construction. By Edward C. R. Marks. New and enlarged edition. Manchester, England: The Technical Publishing Company. 98 pages. Price, \$1.

A book midway between the average work on metallurgy and the average work on mechanical engineering. It gives in concise and handy form practical information on the characteristics and capabilities of the materials more generally used in mechanical engineering.

SQUABS FOR PROFIT. A Practical Treatise on the Raising of Squabs from the Egg to the Market. Being a Handbook for the Beginner and a Guide for the Experienced Breeder. By William E. Rice and William E. Cox. New York: The Orange Judd Company. Illustrated; 16mo.; cloth; 117 pages. Price, 50 cents.

Squab raising is far from the easy pastime it may appear to be upon first consideration. There are a thousand and one little details that one must attend to with the greatest attention to achieve success.

THE STEEL SQUARE AND ITS USES. In two volumes. Edited under the supervision of William A. Radford, assisted by Alfred E. Woods and William Reuther. New York: Industrial Publication Company. 8vo.; cloth; 500 pages; illustrated. Price, \$2.

A complete and systematic treatise on the steel square, in which the principles are given in plain language, so arranged as to be readily available for reference. The text is arranged in progressive chapters with a full list of the contents of each chapter at its head.

WELLCOME'S PHOTOGRAPHIC EXPOSURE RECORD AND DIARY FOR 1907.

This little book, neatly and tastefully printed and bound, seems to us a very compact compendium of photographic knowledge, giving as it does excellent information on exposures at home and abroad, besides tables which give the speeds of over 200 plates and films.

ETHER. A Theory of the Nature of Ether and of Its Place in the Universe. By Hugh Woods. London: The Electrician Printing and Publishing Company, Ltd. 8vo.; cloth; 100 pages. Price, \$2.

The spirit of modern science is made up of two apparently diametrically opposed influences—the one seeking to establish relations between sets of phenomena by experimental research, the other endeavoring to form foundations for this research by logical use of the imagination.

SYNOPSIS OF MINERAL CHARACTERS. Alphabetically arranged for Laboratory and Field Use. By Ralph W. Richards. New York: John Wiley & Sons. 16mo.; 99 pages; leather. Price, \$1.25 net.

An alphabetical list of minerals and their characteristics and of mineralogical terms. It is bound in such form as to make an excellent reference book for use with determination tables in field work.

A SHORT COURSE ON DIFFERENT EQUATIONS. By Donald Francis Campbell. New York: The Macmillan Company. 16mo.; cloth; 96 pages. Price, 90 cents.

Only to those who have a knowledge of the fundamentals of the calculus will Dr. Campbell's textbook prove serviceable. It is far too advanced for beginners, and of rather too limited a scope for the student who wishes a broad view of the subject.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending May 14, 1907.

AND EACH BEARING THAT DATE

(See note at end of list about copies of these patents.)

Table listing various inventions with their patent numbers and dates, such as 'Account register, Staples & Potter' and 'Advertising means, co-operative, J. H. Reohr'.