

NEW BOOKS AND PUBLICATIONS.

ONE THOUSAND POINTERS FOR MACHINISTS AND ENGINEERS. By Charles McShane. Chicago: Griffin & Winters. Pages 342. Price \$1.50.

This book is by a practical machinist, and relates especially to work on locomotives. It is designed to be an efficient guide and teacher for the apprentice, and a ready reference book for the machinist, as it gives a digest of the points gained by a modern progressive machinist in a great variety of work during many years.

SEWERAGE AND SEWAGE DISPOSAL. By Henry Robinson, C.E. New York: Spon & Chamberlain. Pp. 192. Price \$3.50.

The author of this book is a well known English engineer who treats the subject from a thoroughly scientific standpoint. The work has chapters on House Drainage, River Pollution, Irrigation, Ensilage, Precipitation, Sewage Sludge, and Filtration. The book has elaborate calculations of flow in sewers, and of discharges and velocities in oval and circular sewers.

THE HOUSE WARMING MANUAL. Compiled by Sidney P. Johnston. Chicago: The American Artisan Press. Pp. 270. Price \$3.50.

This is a compilation of prize essays on the best method of heating a special house, the plans of which are given, by hot water, steam, and warm air. The different essays give dimensions of pipes and the location of the various parts of the apparatus, with detailed estimates of cost. One of the valuable points of the book is the discussion of the subject of ventilation.

BUILDING CONSTRUCTION AND SUPERINTENDENCE. By F. E. Kidder, architect. Part I, Mason's Work. Pp. 409. 8vo. 250 illustrations. Price \$4.

This is a carefully prepared, handsomely printed book, intended as a guide in selecting materials for architectural masonry and giving the most approved methods of doing the various kinds of work, the latter being largely the result of the author's observation and experience. It has numerous valuable tables and an excellent chapter on specifications. A second volume in preparation by the same publisher will treat of wood construction and finishing.

RUHKORFF INDUCTION COILS. By H. S. Norrie. New York: Spon & Chamberlain. Pp. 133. Price, paper 50 cents.

This is a handy little book designed to help the experimenter who desires to follow out some of the interesting phenomena which have recently assumed such importance in the electrical world. The construction and operation of the Ruhmkorff and Tesla coils are described, with chapters on contact breakers, condensers, spectrum analysis, currents in vacuo, primary and secondary batteries, etc., while the discussion of abstruse electrical theories is generally avoided.

MORRISON'S PRACTICAL ENGINEER AND MECHANIC'S GUIDE. By William A. Morrison. Boston: Published by the author. Pp. 144. Price \$1.

This is an especially useful little handbook for mechanics who have come up to fill positions as engineers, without having been especially educated therefor. The author has filled important positions as an engineer, and the information given in the book is largely from the accumulations of his many years of practical experience.

MECHANICAL DRAWING: A COURSE FOR EVENING SCHOOLS AND SELF INSTRUCTION. By Louis Rouillion. Boston: The Prang Educational Company. Pp. 86 and 29 sheets of drawings. Price \$1.25.

This is a most excellent and comprehensive work by the accomplished and highly successful professor of this specialty at the Pratt Institute, Brooklyn. The sheets and instructions cover the evening school work of two school terms of twenty-four weeks each, two or three evenings a week. The author has placed a good deal of valuable matter within small compass, and the style is so simple and direct that the youngest beginner will find no difficulty, with such help, in prosecuting the study of mechanical drawing.

MYTHS OF THE NEW WORLD. By Daniel G. Brinton. Philadelphia: David McKay. Pp. 360. Price \$2.

The author of this work, a professor of American archeology and linguistics in the University of Pennsylvania, has written a series of books on the language and literature and the state of knowledge among the natives of America before the Europeans came here, and is acknowledged to be one of the leading authorities in this field. The present book is "a study of an obscure portion of the intellectual history of our country," aided by the light obtained through such investigations, and is thus intended more for the thoughtful general reader than the antiquary.

THE WHITE PINE: A STUDY. By Gifford Pinchot and Henry S. Graves. New York: The Century Company. Pp. 102. Price \$1.

This excellently gotten up monograph on the most important lumbering tree in North America is primarily designed to hasten the general introduction of right methods of forest management. Mr. Pinchot has special qualifications for speaking to some purpose on the subject, as he has been a consulting forester at Mr. Vanderbilt's Biltmore Forest, in North Carolina. The naturalist will be pleased with the accuracy of detail and the commercial expert will be pleased with the valuable data given touching merchantable timber, etc.

A handsome catalogue has been issued by Pott's Shortland College, of Williamsport, Pa., of which John G. Henderson is principal and proprietor. It has some fine half tone illustrations, and sets forth in plain and simple form some of the most important things to be considered and sought after by those taking up stenography as a means of livelihood.

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The charge for insertion under this head is One Dollar a line for each insertion: about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

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Notes & Queries

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.

References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

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Minerals sent for examination should be distinctly marked or labeled.

(6964) M. O. asks a process for making a tooth soap like Wright's myrrh tooth soap, and the ingredients that enter into its manufacture. A. Vegetable Tonic tooth wash:

- Soap bark ground..... 2 lb.
Water..... 1 gal.
Add honey..... 4 oz.

Simmer in warm water several hours; let it stand overnight; strain through muslin. To the fluid product add an equal amount of alcohol in which has been dissolved:

- Gum myrrh..... 1 oz.
Oil teaberry..... 1 oz.
Color with red sanders, digest one week and filter.

(6965) C. E. P. says: Can you give me a receipt for a blonde solution that will bleach the hair white, and also one that will color it red? A. Gaseous chlorine and hydrogen peroxide are effectual agents in bleaching hair. The hair should be thoroughly cleaned, with a warm solution of soda, then washed with water. While moist it is put into a jar and chlorine gas introduced, until the air in the jar looks greenish. Allow it to stand for twenty-four hours, and if necessary repeat. We have no directions for coloring the hair red.

(6966) A. B. says: Can you give me formula of a compound fluid, which will plate all metals by rubbing it on with a soft rag. A. 1. Silver nitrate, 2 parts; salt, 2 parts; cream of tartar, 14 parts. Pulverize and mix. 2. For thin plating dissolve in 10 or 12 drops of water and add silver nitrate, 2 parts; potassium cyanide, 6 parts. Rub on the object.

(6967) W. L. M. writes: We have one telephone wire placed on telegraph poles four feet from telegraph wires, but our telephones repeat all messages excepting. What causes it, as there is no connection except wood? A. It is caused by induction, and may need through metallic circuit to overcome the trouble.

(6968) G. A. F. says: I have mention in Steele's "Fourteen Weeks in Chemistry" of fusible metal, an alloy composed of bismuth, lead, and tin. Can you give me the proportions of the respective metals? A. 1. D'Arcets: Bismuth, 8; lead, 5; tin, 3 parts. This melts below 212° Fah. 2. Walker's: Bismuth, 8; tin, 4; lead, 5 parts; antimony, 1 part. The metals should be repeatedly melted and poured into drops until they can be well mixed, previous to fusing them together. 3. Onion's: Lead, 3; tin, 2; bismuth, 5 parts. Melts at 197° Fah. 4. If to the latter, after removing it from the fire, one part of warm quicksilver be added, it will remain liquid at 170° Fah., and become a firm solid only at 140° Fah. 5. Another: Bismuth, 2; lead, 5; tin, 3 parts. Melts in boiling water. Nos. 1, 2, 3, and 5 are used to make toy spoons to surprise children by their melting in hot liquors. A little mercury (as in 4) may be added to lower their melting points. Nos. 1 and 2 are specially adapted for making electrotype moulds. French cliché moulds are made with the alloy No. 2. These alloys are also used to form pencils for writing, also as metal baths in the laboratory or for soft soldering joints.

No. 4 is also used for anatomical injections. Higher temperatures, for metal baths in laboratories, may be obtained by the following mixtures: 1 part tin and 2 parts lead melt at 441.5° Fah.; 1 part tin and 1 part lead melt at 371.7° Fah.; 2 parts tin and 1 part lead melt at 340° Fah.; 63 parts tin and 37 parts lead melt at 344.7° Fah.

TO INVENTORS.

An experience of nearly fifty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

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AND EACH BEARING THAT DATE.

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