

Classified Advertisements

Advertising in this column is 75 cents a line. No less than four nor more than ten lines accepted. Count seven words to the line. All orders must be accompanied by a remittance. Further information sent on request.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. There is no charge for this service. **In every case it is necessary to give the number of the inquiry.** Where manufacturers do not respond promptly the inquiry may be repeated.

MUNN & CO.

PATENTS FOR SALE.

HOT WATER CIRCULATOR.—Greatly economizes fuel. Outright or royalty. Quick circulation and regulation to any distance on any hot water heating system. Address A. E. Crowhurst, Humber Bay, Ontario, Can.

Inquiry No. 8868.—Wanted to buy nickeloid for buttons.

FOR SALE.—Outright or on royalty, U. S. and Canadian patent on spiral punch. A long felt want filled for the operators of machinery. All interested in an instrument with unlimited field and great demand, write for particulars, claims, drawings, and any information desired, to Harry C. Roberts, Rowland, N. C.

Inquiry No. 8908.—For a dealer in tapes and cords for Venetian blinds.

FOR SALE or on royalty, U. S. patent No. 908,845. Lift strap for recumbent patents. Address R. Box 773, N. Y.

Inquiry No. 8918.—For manufacturers of "Wydt's Electro-Catalytic Sparking Plug."

FOR SALE.

FOR SALE.—Specialty for manufacturers. Dental boss holder, patented May 1908. For further particulars apply direct to inventor, T. A. Tubbs, Seattle, Wash., care H. S. Emerson Company.

Inquiry No. 8921.—For the manufacturers of gilt paper.

HELP WANTED.

MECHANICAL ENGINEER wanted for charge of designing and drafting office for large engineering works. Give experience. Address Canada Foundry Company, Ltd., 212 King St. West, Toronto, Canada.

Inquiry No. 8922.—Wanted the address of Worthington Boiler Co.

YOUNG MAN, graduate of some school in mechanical engineering, for position in woodworking plant in small Tennessee town. Good opportunity for advancement. State experience, if any, and salary. Answer "Position," Box 773, New York.

Inquiry No. 8928.—For the manufacturers of a steam rotary excavator as described in the Scientific American of December 12, 1908, page 347.

PARTNERS WANTED.

PARTNER WANTED with small capital to promote several patents. F. Feldra, 69 Congress St., Jersey City.

Inquiry No. 8931.—For parties who manufacture the Western Stump Borer for boring stumps.

LISTS OF MANUFACTURERS.

COMPLETE LISTS of manufacturers in all lines supplied at short notice at moderate rates. Small and special lists compiled to order at various prices. Estimates should be obtained in advance. Address Munn & Co., List Department, Box 773, New York.

Inquiry No. 8941.—For manufacturers of machinery for making fly screens.

A LIST of 1,500 mining and consulting engineers on cards. A very valuable list for circularizing, etc. Price \$15.00. Address Munn & Co., List Department, Box 773, New York.

Inquiry No. 8960.—For the address of the Windsor Mfg. Co., manufacturers of waterproof collars and cuffs.

Inquiry No. 8966.—Wanted the address of the Cohendet Motor Co.

Inquiry No. 8969.—Wanted machines that make accordion dress plating (steam).

Inquiry No. 8974.—For address of firms interested in fishing reels.

Inquiry No. 8977.—For manufacturers of machinery for manufacturing denatured alcohol.

Inquiry No. 8978.—Wanted the address of manufacturers of dry pans or crushers to grind sand for plastering and cement works.

Inquiry No. 8980.—For the address of manufacturers of mortars and pestles that are used by druggists.

Inquiry No. 8984.—Wanted the address of the manufacturers of Cypress wash tubs.

Inquiry No. 8986.—Wanted to buy crown and flint glasses for telescope objectives.

Inquiry No. 8987.—Wanted the manufacturers of the Van Winkle, Woods & Sons, and the Weber power meters.

Inquiry No. 8990. For information regarding shoes not made of leather but similar to the same and are as durable.

Inquiry No. 8995.—Wanted to buy round and oval glass paper weights, such as are used for mounting photographs.

Inquiry No. 8996.—Wanted addresses of manufacturers of machinery for working orange wood manure sticks.

Inquiry No. 8997.—Wanted the address of the manufacturers of bread or cake boxes.

Inquiry No. 8999.—For manufacturers of combined clothes and clothes pin receptacle.

Inquiry No. 9000. Wanted, a combined appliance for holding hats, coats and umbrellas safely and securely.

Inquiry No. 9001.—For the address of progressive manufacturers of fruit jars.

Inquiry No. 9002.—For the address of the Varley Duplex Magnet Co., or anyone making and designing special electro magnets.

Inquiry No. 9003.—For the address of parties who make "Invar" or other metals having a low coefficient of expansion.



Kindly write queries on separate sheets when writing about other matters, such as patents, subscriptions, books, etc. This will facilitate answering your questions. Be sure and give full name and address on every sheet.

Full hints to correspondents were printed at the head of this column in the issue of March 13th or will be sent by mail on request.

(12111) C. B. says: Will you kindly inform me as to the principle of the "electrolytic detector" used in wireless telegraphy? A. If an electrolytic detector has a small electro-motive force applied to it by a shunted cell of battery, the electrodes become polarized, and the current is reduced practically to zero. When oscillations are sent through the cell in this condition, they destroy the polarization of the small electrode, and the current suddenly increases, but it returns to its former small value when the oscillations cease. This explanation, with a full discussion of the subject, you may find in Fleming's "Elementary Radio-telegraphy and Radio-telephony," which we send for \$2.

(12112) T. F. Van W. says: Can you tell me if the specific gravity of the moon is known, and if so, how it compares with that of the earth? A. The density of the moon is 0.61 that of the earth. One of the best determinations of the density of the earth is 5.527, reached by Boys in 1894. This would make the specific gravity of the moon to be 3.37.

(12113) C. S. says: 1. If we take two jars of equal inside diameter, and fill both with equal quantities of alcohol and leave one jar open, but close the other with a cover, with only a small opening through which the vapor can escape, will the alcohol evaporate in the same time from both jars, all other conditions being equal? A. The evaporation of any liquid takes place more slowly out of a bottle with a small mouth than out of one with a large mouth. 2. Does reflected sunlight differ in any way from direct sunlight? That is, will a plant grow as well if exposed to reflected as to direct sunlight, and will reflected light kill certain bacteria, as well and quickly as direct sunlight? A. Ordinarily reflected light differs in no respect from the same light before reflection. The spectrum of moonlight is simply a fainter spectrum of sunlight. Any effect which direct light can produce will be produced by reflected light, except for the loss in brightness by reflection. 3. Does sunlight lose in intensity if reflected by a clear mirror? A. There is no perfect reflector. Light is lost by reflecting it from any mirror whatever. A metal mirror will reflect about 6/10 of the light which strikes it perpendicularly, and a mercury mirror about 75/100. The loss is larger if the light strikes the mirror obliquely.

(12114) R. J. T. asks: On April 22nd the A-Z's, a club of six young men, held a spirited meeting at the home of one of its members. The topic under discussion was "Resolved that, if a tree falls in the forest and there is no animate being present, there is no sound." After the discussion, the judges awarded their decision to the negative, merely on the merits of the debate, however, not on the merits of the question. Not being satisfied on the merits of the question, however, as brought out in the material presented, the club would like to ask that you answer it in your paper. A. The answer to your question depends upon the definition of the word "sound" applied to the argument. In most dictionaries two definitions are given: 1. A sensation produced through the organs of hearing. In this sense if there are no human or animal brains present to receive this sensation through the organs of hearing, there is no sound. 2. The physical causes of such sensation: waves of alternate compression and rarefaction passing through any substance, solid, liquid, or gaseous, but especially through the atmosphere. The sound waves are produced by the fall of the tree, whether or not there are organs of hearing present to receive them, and consequently in this sense sound is made though unheard.

(12115) J. R. D. says: May I ask your opinion re the following? What is the correct size and length of stove pipe to give a strong draft to a stove of the following dimensions? Diameter 6 feet, height to top of stove 3 feet, beyond that height a sloping dome about 4 feet, terminating in a stove pipe. At present I have a 10-inch stove pipe about 12 feet long. Draft below is supplied by leaving open the irregularities in the ground. The stove is intended to aid in burning out stumps, the idea being to bore and light the stump in the usual way and then place the stove over it to give a strong draft and suction, so that the roots as well as the stump would burn clean out. At present, with the stove pipe as mentioned it does not appear to make much difference nor make the bored stump burn any longer than without it. Is the stove pipe too small for such dimensions? If properly proportioned, even if not successful in burning out the roots, it should make a very fierce

fire by the draft and suction, which is not the case. A. We should not say that the dimensions of your stove pipe could be usefully increased, or that combustion of the stumps would be more complete if the draft were increased. If we correctly understand your method of burning the stumps, a stage must be reached at which combustion can only be from the inside outward, especially when nearing the roots, after which the flame would have to travel against the draft, and the latter would be unlikely to help it. Such a method of destroying stumps must be slow at the best, as a block of solid wood would soon be covered with ash and consumed material, leaving no inflammable surface exposed to the flames.

NEW BOOKS, ETC.

FISH STORIES. By Charles F. Holder and David Starr Jordan. New York: Henry Holt & Co., 1909. 336 pages. Price, \$1.75 net.

Prof. C. F. Holder is one of the oldest contributors to the SCIENTIFIC AMERICAN and he is well known to our readers. Prof. David Starr Jordan is president of Stanford University and is a well-known ichthyologist. The authors are perhaps two of the most prominent amateur and professional students of fish in the country, and this volume tells their unusual fish exploits and their best fish stories. It is a delightful miscellany, telling about the strangest kind of fish with a strictly scientific description which melts almost imperceptibly into accounts of personal adventure. Unlike most fish stories they have a strong foundation in fact. It is a book which we can commend to the general reader as well as those who are slaves of the rod.

CHARACTERS AND EVENTS OF ROMAN HISTORY FROM CAESAR TO NERO. By Guglielmo Ferrero. New York: G. P. Putnam's Sons, 1909. 8vo.; 275 pages. Price, \$2.50 net.

The present work, which is very handsomely printed and bound, consists of a series of studies of the great men and great women of ancient Rome, and critical moments and events in Roman history. Among the people and subjects treated are "Corruption" in Roman History, the Legend of Antony and Cleopatra, Nero, the Relation of the Conquest of Gaul to the Development of Modern France, Julia and Tiberius, Wine in Roman History, and Roman History and Modern Education. Interesting, entertaining, picturesque, full of pregnant ideas, this volume of Prof. Ferrero's is sure to find an absorbed audience that will be richly rewarded for the close attention they will give it.

BIRDS OF THE WORLD. A Popular Account. By Frank H. Knowlton, Ph.D. With a chapter on the Anatomy of Birds by Prof. Frederick A. Lucas. The whole edited by Root Ridgway. New York: Henry Holt & Co., 1909. Quarto; 872 pages; 16 colored plates, 236 illustrations. Price, \$7.

There has been a great popular awakening in recent years in relation to our birds. It is only necessary to pay a visit to the American Museum of Natural History in New York to see evidences of the growth of this movement. The magnificent exhibits which are to be found in this building have done much to awaken interest in birds, as has also the work of the Audubon society. The widespread nature teaching in our schools is also responsible for the increased interest in ornithology. Few of those who turn to the country either for recreation or for permanent residence have an inclination or desire to become professional ornithologists, but they have wished to know at least the names and facts in the life history of the birds that they see constantly about them. To supply this demand for popular information a large number of works have been written, and their extensive circulation proves that they have filled a real want; but most of these are more or less local in their scope, only a few treating of the birds of the whole world, so that the time seems ripe for a work of moderate size in a single volume which would set forth in non-technical language the salient facts regarding the birds of the world. The author has attempted to prepare such a work, and he has succeeded admirably in his task. The illustrations are excellent and numerous. The colored plates are well executed. It is a book which should be in every library, as well as in every school library. The book is a portly one, and is handsomely bound.

MENDELISM. By R. C. Punnett. American Edition with Preface by Gaylord Wilshire. New York: Wilshire Book Company, 1909.

This is the second edition of a popular work on Mendelism which has won for itself a deservedly high place in current popular scientific literature. Why Mr. Wilshire should have burdened the book with a Socialistic Preface is more than we can understand. It is a far cry from Mendelism to Socialism.

LES PLANÈTES ET LEUR ORIGINE. By Ch. André. Paris: Gauthier-Villars, 1909. 285 pp. Price, 8 francs.

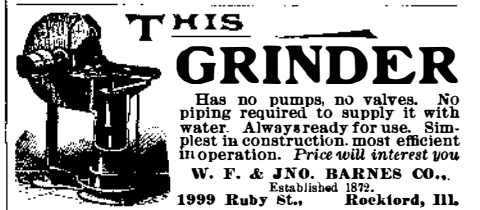
M. André's book is divided into three parts, in which the planets, satellites, and the formation of the planetary system respectively are described. Among the striking features of the



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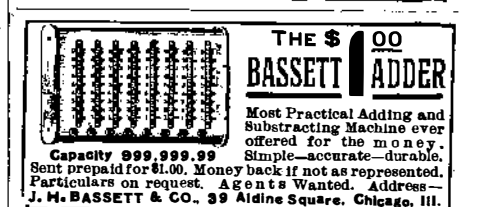
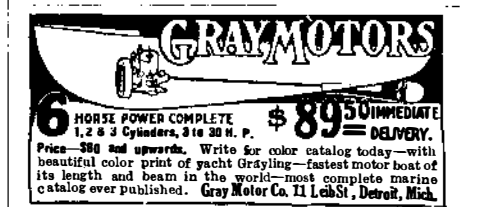
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ICE YACHT BUILDING.—COMPLETE details for the construction of Ice Yachts, with many illustrations, are contained in SUPPLEMENT NOS. 624, 1154, 1197 and 1253. Each number gives plans of a different boat. Price 10 cents each. For sale by Munn & Co. and by all newsdealers.

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THIS is a practical work, treating clearly and concisely modern processes for the heating, annealing, forging, welding, hardening and tempering of steel, making it a book of great value to toolmakers and metal-working mechanics in general. Special directions are given for the successful hardening and tempering of steel tools of all descriptions, including milling cutters, taps, thread dies, reamers, hollow mills, punches and dies and various metal-working tools, shear blades, saws, fine cutters and other implements of steel, both large and small. The uses to which the leading brands of steel may be adapted are discussed, and their treatment for working under different conditions explained; also special methods for the hardening and tempering of special brands. A chapter on case-hardening is also included.

The American Steel Worker
By E. R. MARKHAM
Size 5 1/2 x 8 inches. 367 pages. 163 illustrations. Price \$2.50 postpaid
THIS is a standard work on selecting, annealing, hardening and tempering all grades of steel, by an acknowledged authority. The author has had twenty-five years' practical experience in steel-working, during which time he has collected much of the material for this book. Careful instructions are given for every detail of every tool. Among the subjects treated are, the selection of steel to meet various requirements; how to tell steel when you see it; reasons for different steels; how to treat steel in the making of small tools, taps, reamers, drills, milling cutters; hardening and tempering dies; pack-hardening; case-hardening; annealing; heating apparatus; mixtures and baths, the best kind, and why; and in fact everything that a steel-worker would want to know is contained in this book.

OUR SPECIAL OFFER: The price of these books is \$2.50 each, but when the two volumes are ordered from us at one time, we send them prepaid to any address in the world on receipt of \$4.00.

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