

Founded by Mathew Carey, 1785.

HENRY CAREY BAIRD & CO. INDUSTRIAL PUBLISHERS, BOOKSELLERS & IMPORTERS 810 Walnut St., Philadelphia, Pa., U. S. A.

Our New and Revised Catalogue of Practical and Scientific Books, 42 pages, 5 vols., complete to Oct. 1, 1899, and our other Catalogues and Circulars, the whole covering every branch of Science applied to the Arts, sent free and free of postage to any one in any part of the world who will furnish his address.

McClure's Magazine a Year a Copy \$1.00

WITH better facilities and larger connections than ever before, we can promise for the Magazine during the coming year, increased interest and distinction in both its reading matter and its illustrations. In the December number appears, with beautiful pictures, reproduced partly in color, the introduction and the prologue to The Life of the Master.

By the Rev. John Watson, D. D. Author of "THE MIND OF THE MASTER," "BE-SIDE THE BONNIE BRIER BUSH," etc. Known widely as a writer of genial, wholesome stories, Dr. Watson is even better known as a Christian preacher and a writer of inspiring religious and devotional books. He relates the story of the deeds and speech of the Master reverently, and with a special regard to its interest and value for men as men, rather than as theologians and historians. The "Life" will be largely illustrated in color from special paintings.

OTHER FEATURES. Lieut. Peary's Adventures. Lieut. Peary has been in the Arctic during the past year, and intends to remain there until he can reach the Pole. He has written a description of his visit to Gen. Greely's quarters at Fort Conger for the January number. Other papers will follow.

RUDYARD KIPLING will contribute timely poems and short stories from time to time during the coming year. ANTHONY HOPE has written a new novel of great power, which will shortly be begun in McClure's. It is a pure love story, and undoubtedly the best thing he has ever done.

MARK TWAIN has written several papers for coming numbers. "My Boyhood Dreams" will appear in the January number. BRET HARTE has contributed "A Jack and Jill of the Sierras" to next year's budget of short stories. It is written in his old-time fascinating style.

SHORT STORIES. We have accumulated an unusually strong collection of short stories. A series of stories of prison life, beginning in February, will prove particularly striking. The New Volume begins with the November number.

The S. S. McCURE CO., Publishers, 135 E. 25th Street, New York City.

Roper's New Engineer's Handy-Book for STEAM ENGINEERS and ELECTRICIANS.

Thoroughly revised, rewritten and much enlarged by EDWIN R. KELLEN, M. E., and J. A. VYON, W. P. K. E., Ex-President of the Electrical Section of the Franklin Institute. Embracing all the recent improvements in the Steam Engine and giving full instructions for the CARE and MANAGEMENT of an ELECTRICAL PLANT. Nearly 900 pages, 325 illustrations, over 700 main subjects, 222 tables, and 645 questions most likely to be asked when under examination before being licensed as an engineer. Full leather, gilt edges, pocketbook style. \$3.50. DAVID MCKAY, Publisher, 1022 Market St., Philadelphia, Pa. Send for Circular.

Why So Many Die. It would be appalling to know in round numbers how many millions of young chickens die from different causes known to so few of the hundreds of thousands of poultry raisers.

TO ASSURE SUCCESS and learn how to prevent the big losses so common in poultry raising it is only necessary to own a copy of Practical Poultry Culture which will start you right and keep you right. Tells everything the beginner should know, and aids the experienced in a hundred ways. It consists of 150 pages of up-to-date poultry lore from the pens of practical and experienced hands. Endorsed by all leading poultry authorities and editors of poultry publications. Don't be satisfied until you get it. It will both make and save you money. Price 35 cents by mail postage paid, or 50 cents including a year's subscription to the AGRICULTURAL EPITOMIST a monthly publication of sterling value and indispensable to the Up-to-date Farmer, Gardener, Live Stock and Poultry Raiser. Regular subscription price, 50 cents. Address EPITOMIST PUB. CO., Indianapolis, Ind.

Acetylene Burners. A new burner for STEREOPTICONS. Highest C. P. possible. State Line Talc Co., Chattanooga, Tenn.

WE EXCEL AND UNDERSSELL ALL! Electric Carriage Lights, \$3.95; 15 Telephones, complete, \$9.95; Telegraph Outfits, \$2.25; 25 Medical Batteries, \$3.95; Battery Table Lamps, \$3.00; Electric Bell, \$2.95; Electric Necktie Lights, \$2.75; Miniature Electric Lamps, \$3.00. Agents Wanted. Send for New Catalogue, just out. OHIO ELECTRIC WORKS, Cleveland, Ohio. Headquarters for Electric Novelties, Supplies, Books.

Table listing various mechanical parts and their prices, including typewriter copy holder attachment, typewriting machine, valves, and wheels.

Table listing various designs and their prices, including bicycle seat post, boiler or kettle, broom rack, and various fasteners.

Table listing various trade marks and their prices, including abrasive material, apparatus, biscuits, and various tools and machinery.

Table listing various labels and their prices, including Arrow Brand, Eau Sublime, and various medicinal preparations.

Table listing various prints and their prices, including Never Rip-Em, Sunrays Disinfectant, and various eradicators.

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 10 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway, New York. Special rates will be given where a large number of copies are desired at one time.

Remington Typewriter. Absolutely Reliable Always. STANDS THE TEST OF CONSTANT SERVICE. Wyckoff, Seamans & Benedict, 327 Broadway, New York.

FOR SALE Two Steam Engines built by The Watts & Campbell Co., of Newark, N. J. Each engine consists of 2 horizontal condensing Corliss Engines coupled to one shaft, with a vertical air pump driven from crank pin. The smaller engine has two 28 in. cylinders, 60 in. stroke. Belt wheel is 25 ft. dia by 91 in. face. Gross weight of engine is about 202,000 lbs. The larger engine has two 32 in. cylinders, 60 in. stroke. Belt wheel is 26 ft. diameter by 114 in. face. Gross weight is about 247,000 lbs. These engines are to be taken out to make room for others of greater power. They can be seen in operation now, and will probably be ready for delivery about February, 1900. Apply to The Clark Thread Co., P. O. Box 154, Newark, N. J.

FOR SALE—One 20 horse power horizontal, tubular boiler with pumps, inspirator, heaters, etc., and one Armington & Simms 50 horse power engine, all in first class condition. Addr. H. L. M. C. Box 773, New York.

50 YEARS' EXPERIENCE PATENTS TRADE MARKS DESIGNS COPYRIGHTS & C. Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the Scientific American. A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers. MUNN & Co., 361 Broadway, New York. Branch Office, 625 F St., Washington, D. C.

D. L. HOLDEN 1336 BEACH ST. PHILADELPHIA PA. SOLE MANUFACTURER REGEALD ICE MACHINES SEE FIRST PAGE SCIENTIFIC AMERICAN SEPT. 2, 1899.

\$3 a Day Sure Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once. SOYAL MANUFACTURING CO., Box 411, DETROIT, MICH.

Universal Incubators and Brooders lead and are appreciated everywhere, produce more birds, produce them laws closely followed, bring the best illustrated catalogue. Address E. W. ANDREWS INCUBATOR CO., Box 3, ELMIRA, N. Y.

MODELS & EXPERIMENTAL WORK. Inventions developed. Special Machinery. E. V. Baillard, 106 Liberty St., New York.

MODELS & EXPERIMENTAL WORK. CATALOGUES FREE. UNION MODEL WORKS & GEARS 193 CLARK CHICAGO.

GRINDING MILLS FOR ALL PURPOSES. Bogar's Patent Universal Eccentric Mill. Address J. S. & G. F. SIMPSON, 28 Rodney Street, Brooklyn, N. Y.

LIGHT MANUFACTURING & EXPERIMENTAL WORK. SHEET METAL STAMPING - PUNCHES & DIES. AUTOMOBILES AND PARTS FOR SAME. SPECIAL MACHINERY. INQUIRIES SOLICITED. DT TO KONIGSLOW - 45 MICHIGAN ST. CLEVELAND, O.

PALMER Stationary and Marine Gasoline Engines and Launches, Motor Wagon Engines, Pumping Engines. Send for catalog. PALMER BROS., MIANUS, CONN.

D'AMOUR & LITTLEDALE MACHINE CO. 130 WORTH ST. NEW YORK. Machinery, Tools, Patterns, Models.

VOLNEY W. MASON & CO., Friction Pulleys, Glutches & Elevators PROVIDENCE R. I.

MONTREAL, Canada-- CLEMENT & CLEMENT CO., Ltd., Manufacturers of light and accurate machinery. Models and experimental work developed. Inventions marketed on royalties or otherwise. Protect your Canadian Patents by manufacturing in Canada.

The Owners of a large, well known, well equipped METALWORKING PLANT (Germany), with ample financial means and large premises, desire to communicate with well recommended American Manufacturers, whose product, if manufactured in Germany under able management, would meet with success there. Machine Tool Manufacturers and Makers of Special Machinery preferred. Best References. Address, giving detailed information. N. Z., 2435, Annoncen Expedition, Rudolf Mosse, Berlin, S. W. 19.

PROPOSALS. COMMISSION NEW EAST RIVER BRIDGE, City of New York. NOTICE TO CONTRACTORS. November 9, 1899.

Proposals will be received by the Commissioners of the New East River Bridge, at their office, at No. 49 Chambers Street, in the Borough of Manhattan, in the City of New York, at two o'clock in the afternoon of the 7th DAY OF DECEMBER, 1899, endorsed "Proposals for Construction of Steel Cables, Suspenders, etc., of the New East River Bridge," for furnishing the materials for and constructing the steel cables, suspenders, cable bands, coverings, sheaves and their appurtenances of the New East River Bridge, in accordance with the proposed form of contract and the drawings and specifications therefor. All bids shall be enclosed in sealed envelopes, addressed to Lewis Nixon, President of the Board of Commissioners of the New East River Bridge, and presented to him on that day and at that hour at said office, and such bids will be opened in public meeting by the said Commissioners on that day at two o'clock in the afternoon.

Copies of the specifications and the general drawings for the work, with the proposed forms for the bid, bond and contract, may be seen and further information will be given at the office of the Chief Engineer, No. 31 Broadway, Borough of Brooklyn, City of New York, on and after the 13th day of November, 1899. The Commissioners require that all bidders shall carefully examine the specifications, drawings and proposed form of contract, in order that no question as to their meaning may arise hereafter. It must be distinctly understood that no changes in the specifications, materials or the workmanship will be allowed, and that the specifications will be adhered to strictly.

The contract is to be completely performed within ten months after the cable saddles are set in place upon the steel towers of the bridge. Proposals will be made upon a form provided therefor, and only those proposals will be considered which are complete, in proper form, comply with the requirements herein stated, and are offered by parties of known reputation, experience and responsibility. Each bidder will be required to deposit, with his proposal, in the office of the Commissioners, a certified check for \$12,000, payable to the order of Julian D. Fairchild, as Treasurer of the New East River Bridge Commissioners, as security for the execution by him of the contract and the giving of the required bond, if his bid is accepted, within two weeks after notice of the acceptance of his bid.

The Contractor will be required to give a bond in the penal sum of \$400,000, in the form annexed to the proposed form of contract, with an approved surety company doing business in the City of New York, conditioned for the prompt and faithful performance of the contract and its covenants and the work thereunder. As by far the greater part of this work can be executed only by bridge establishments of the first class, bids will be received only from such parties as have the requisite plant and facilities which have been in successful operation on work of similar character for at least one year. The bidders must be, in the opinion of the Commissioners, fully qualified both by experience and in appliances to execute work of this character and importance according to the highest standard of such work at the present time. The Commissioners reserve the right to reject any and all of the proposals offered, and to accept any proposal offered.

LEWIS NIXON, President. JAMES D. BELL, Secretary.

LIQUID AIR PATENT FOR SALE. R. E. Chism, Apartado 2085, Mexico City, Mexico.

TURBINES Send for Circular "M." JAS. LEFFEL & CO., Springfield, Ohio, U. S. A.

ICE MACHINES, Corliss Engines, Brewers' and Bottlers' Machinery. THE VILTER MFG. CO., 899 Clinton Street, Milwaukee, Wis.

Investors and Capitalists! I desire to place patent No. 528 on royalty. It takes the lead of all others. For particulars addr., Martin V. B. Grubb, Baldwin, Ind.

NEWS DIRECT FROM HEAVEN! The most wonderful and instructive book ever published. 453 pages. Price 50 cts., sent postage paid. Address, WM. H. ALDEN, 2129 Chestnut St., Philadelphia, Pa.

GAS & GASOLINE ENGINES WATER MOTORS BACKUS WATER MOTOR CO. NEWARK N. J. U. S. A.

MAGICAL apparatus, scientific novelties, parlor tricks free. Complete catalogue with 600 engravings, 20c. Martinka & Co., Mrs., 433 Sixth Ave., N. Y.

NOVELTIES & PATENTED ARTICLES Manufactured by Contract. Punching Dies, Special Machinery. E. Konigsloew & Bro., 181 Seneca St., Cleveland, O.

YOU CAN MAKE \$100 A WEEK! OWN YOUR OWN SHOW COMPLETE OUTFIT - \$100. LIFE MOTION FILMS & MACHINES. GREAT PASSION PLAY & 500 OTHER SUBJECTS. ILLUSTRATED CATALOGUES FREE. S. LUBIN, LARGEST MFR. PHILADELPHIA, P. A.

PERFORATED METALS EVERY DESCRIPTION BY THE HARRINGTON & KING PERFORATING CO. CHICAGO 225 N. UNION ST.