

Founded by Mathew Carey, 1785.

A House in touch with Three Centuries.

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, 94 pages, 800; a Catalogue of Books on Metallurgy, Mining, Prospecting, Mineralogy, Geology, Assaying, Analysis, etc.; a Catalogue of Books on Steam and the Steam Engine, Machinery, etc.; a Catalogue of Books on Sanitary Science, Gas Fitting, Plumbing, etc., and our other Catalogues and Circulars, the whole covering every branch of Science applied to the Arts, sent free and free of postage to anyone in any part of the world who will furnish his address.

Columbia Electric and Gasoline Automobiles present the most perfect combination of the arts of vehicle and motor building. The body and furnishings of each COLUMBIA, no less than its locomotive parts, reflect the best ideas of the best designers, and the highest order of skilled workmanship.

Write To-day for a Dean Boiler Tube Cleaner for a free trial.



After trying it, if you wish to buy, we will guarantee the cleaner to at least pay for itself in six months' use or refund your money.

WM. B. PIERCE CO., 319 Washington Street, Buffalo, N. Y.

THE INTERNAL WORK OF THE WIND. By S. L. LANSLEY. A painstaking discussion by the leading authorities on aerodynamics, of a subject of value to all interested in aerodynamics.

IF YOU NEED A GOOD OILSTONE

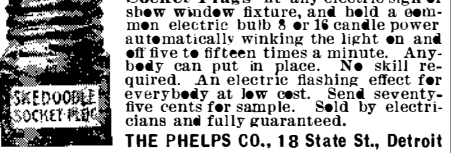


Try an INDIA. Guaranteed to give satisfaction or money returned.

Table with columns for Size, By Mail, Price. Includes items like 8x2x1, 1x2x1.

THE PIKE MFG. CO., PIKE, N. H. New York Store, 151 Chambers Street

SKEDOODLE Socket Plugs fit any electric sign or show window fixture, and hold a common electric bulb.



THE PHELPS CO., 18 State St., Detroit

This Tool is Polished and Nickel Plated

You Cannot Stumble at Any Step of the Temple

In measuring with this combination Triple-Beam Roller Gauge, a great convenience and a labor saver for single, double or triple measurements.

GOODELL-PRATT COMPANY Greenfield, Mass.

50 Years' Experience

PATENTS Trade Marks, Designs, Copyrights, Etc.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable.

Scientific American A handsomely illustrated weekly. Largest circulation of any scientific journal.

MUNN & CO., 361 Broadway, New York Branch Office 625 F St. Washington, D. C.

Table listing various items and prices: Paper weight, Paulson & Heinbockel, 37,010; Rug, A. W. Bosch, 37,013; etc.

TRADE MARKS.

Table listing trade marks and prices: Bitters, Carmeliter Stomach Bitters Co., 42,890; Bolts, their parts and appliances, expansion, Star Expansion Bolt Co., 42,908; etc.

LABELS.

Table listing labels and prices: "Banner Phenyle," for phenyl, Great Western Oil Co., 11,192; "Bu Ke," for tea, A. Lubarsky, 11,182; etc.

PRINTS.

Table listing prints and prices: "Berlin Shape," for eyeglasses and spectacles, F. J. Rief, 1,016; etc.

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, provided the name and number of the patent desired and the date be given.

PERFORATED METALS FOR ALL USES. MADE AS REQUIRED. HARRINGTON & KING PERFORATING CO., CHICAGO.

Roof Leak? Elliott's Durable Asphalt Coating. (Is composed of pure Utah Asphalt, prepared Linseed-Oil and Pine Creosote) applied on an old leaky shingle, tin or felt roof will make it absolutely waterproof.

EASIER TO ROW ABSOLUTELY SAFE Mullins Unsinkable Steel Pleasure Boats. Write to-day for free catalogue.

CAST STEEL PIPES. W. H. MULLINS, 384 Depot St., Salem Ohio

SPECIAL MANUFACTURING. DIES AND STAMPINGS TO ORDER. THE GLOBE MACHINE & STAMPING CO., 970 HAMILTON ST., CLEVELAND, OHIO.

ICE MACHINES. Corliss Engines, Brewers' and Butters' Machinery. THE VILTER MFG. CO., 809 Clinton St., Milwaukee, Wis.

CHEMICAL EXAMINATIONS OF ALL KINDS. DR. H. C. STEFFEL, Bissell Block, Pittsburgh, Pa.

MODELS & CATARACTS FREE. UNION MODEL WORKS 193 CLARK CHICAGO.

MODELS & EXPERIMENTAL WORK. Inventions developed. Special Machinery. E. V. BAILLARD, Fox Bldg., Franklin Square, New York.

DRYING MACHINES. S. E. WARD, Hannibal, Mo.

MODEL AND EXPERIMENTAL WORK. Electrical and Mechanical Instruments. Small Machinery. EDWARD KLEINSCHMIDT, 82 W. Broadway, New York.

MODELS CHICAGO MODEL WORKS 179 E. Madison St., Chicago, Ill. Established 1897. Write for Catalogue of Model Supplies.

BUILDERS OF Special Machinery. Models. Experimental work. Inventions developed. THE PENN-SADLER MACH. CO., Hartford, Conn.

Dies, Tools, Models and Special Machinery. Metal Specialties and Stamping Manufacturers. HOEFT & MOORE, Chicago, U. S. A.

We Manufacture on Contract Anything Mechanical in Any Metal. MICHIGAN NOVELTY WORKS, Kalamazoo, Mich.

WANTED - TWENTY SKILLED MACHINE Draftsmen at \$100 per diem. A competitive examination will be held about August 2d at the Washington Navy Yard.

THE STATE UNIVERSITY OF IOWA SCHOOL OF APPLIED SCIENCE, Iowa City, Iowa. High grade courses in ENGINEERING.

"How to Successfully Operate a Gas or Gasoline Engine." This book is the latest and the "Last Word" on the subject. Pocket Edition. Price Fifty Cents.

SAVE MONEY and appear neat by wearing M. & M. Rubber Collars. They never get hot or turn yellow.

HARDWARE SPECIALTIES Contract Manufacturers and will market articles of merit. LORIMER MFG. CO., 153 S. Jefferson St., Chicago, Ill.

SPLITDORF SPARK COILS 25 VANDEWATER ST. N.Y.

MECHANICAL MANUFACTURERS wishing to establish branch in New York City, can be represented by NATIONAL SUPPLY CO., 835 Broadway, N. Y.

TYPEWRITER HEADQUARTERS 339 Broadway, New York, and all makes under half-price. Don't buy before sending for samples of writing, prices, exchange and unimpaired first-class condition. Dealers supplied.