

Table listing various items such as Railway crossing signal, Vapor burner, Vegetable cutter, Vehicle wheel, etc., with corresponding page numbers.

Table listing items such as Watch balances, Water closet, Water gas, etc., with corresponding page numbers.

DESIGNS.

Table listing designs such as Carpet, E. A. Crowe, Carpet, A. Danby, etc., with corresponding page numbers.

TRADE MARKS.

Table listing trade marks such as Biscuits, W. G. Wilson, Books, pamphlets, catalogues, etc., with corresponding page numbers.

Advertisements.

Inside Page, each insertion --- 75 cents a line. Back Page, each insertion --- \$1.00 a line. (About eight words to a line.)

ARE YOU SHORT OF WATER. Our method challenges investigation. Our machinery is portable, operated by horse or steam power.

THE RIDER COMPRESSION PUMPING ENGINE. (Hot Air) for city or country residences where it is required to raise a supply of water.

WANTED, in good order, a second-hand Shaper, 15 in. stroke, or a Planer, 26 in. x 6 ft. Apply to KAMPE BROS., 114 Centre St., New York.

ELECTRIC LIGHT TELEPHONE & TELEGRAPH SUPPLIES. WALLACE DIAMOND THE ELECTRICAL SUPPLY CO. 109 LIBERTY ST. NEW YORK

MACHINISTS' TOOLS, New and Improved Patterns. IRON PLANERS A SPECIALTY. Oesterlein & Bernhardt, Cincinnati, O.

NUT TAPPING MACHINE. DURRELL'S PATENT. No. 1 Machine, 900 lb., 7 spindles. Capacity of 7 spindles, 8,000 per 10 hours.

PAYNE'S AUTOMATIC ENGINES. Spark Arrester. Established 1840. Reliable, durable, and economical, will furnish a horse power with one-third less fuel and water than any other engine.

THE MEDART PATENT WROUGHT RIM PULLEY, MADE BY McMURRAY & STOUGHTON, HARTFORD, CONN.

TOOLS. TAPS, DIES, CRANKS, DRILLS, VISES, MACHINES, SCREWS, LATHES, FILES, STEEL STUDS, STUBS.

Electrical Test Instruments, MANUFACTURED BY ELLIOTT BROS., LONDON. From stock, or ordered direct.

THE ELECTRICAL SUPPLY CO., Sole Agents for the United States, 109 LIBERTY ST., NEW YORK.

Leffel Water Wheels, With Important Improvements. 11,000 IN SUCCESSFUL OPERATION. FINE NEW PAMPHLET FOR 1883.

ADDRESS OF DR. C. W. SIEMENS AT THE Recent Meeting of the British Association. An interesting review of the progress made in theoretical and applied science.

BUFFALO FORGE CO. POWER & HAND BLOWERS, BUFFALO, N. Y.

FEED WATER HEATERS. THE BEST AND CHEAPEST IN THE MARKET. Warranted to heat water by exhaust steam from 200° to 212° Fahrenheit.

WITHERBY, RUGG & RICHARDSON. Manufacturers of Patent Wood Working Machinery of every description. Facilities unsurpassed. Shop formerly occupied by R. Ball & Co., Worcester, Mass.

CARY & MOEN. STEEL WIRE OF EVERY DESCRIPTION & STEEL SPRINGS. 234 W. 29. ST. NEW YORK CITY

MACHINISTS' TOOLS. NEW AND IMPROVED PATTERNS. Send for new illustrated catalogue. Lathes, Planers, Drills, &c. NEW HAVEN MANUFACTURING CO., New Haven, Conn.

REMINGTON TYPE-WRITER. Warranted. Satisfaction guaranteed. Type-Writer Supplies. Send for circulars. Address E. REMINGTON & SONS, Manufacturers, or WYCKOFF, SEAMANS & BENEDICT, Sole Agents, 281 and 283 Broadway, New York.

MALLEABLE AND FINE GRAY IRON ALSO STEEL CASTINGS FROM SPECIAL PATTERNS. THOMAS DEVLIN & CO. LEHIGH AVE & AMERICAN ST. PHILA.

WATCHMAKERS. Before buying lathes, see the "Whitcomb," made by AMERICAN WATCH TOOL CO., Waltham, Mass.

J. A. FAY & CO. Cincinnati, Ohio, U.S.A. WOOD WORKING MACHINERY. Embracing nearly 300 different tools for use in various shops.

DEAFENING. FIRE AND VERMIN PROOF. Sample and Circular Free by mail. U. S. MINERAL WOOL CO., 22 Courtlandt St., N. Y.

CATALOGUES FREE TO ANY ADDRESS. GEARS AND PARTS OF MODELS. GOODNOW & WIGHTMAN BOSTON.

VOLNEY W. MASON & CO., FRICTION PULLEYS, CLUTCHES, and ELEVATORS, PROVIDENCE, R. I.

PLANING AND MATCHING MACHINE. C. B. ROGERS & CO., NEW YORK, N. Y.

Special Machines for Car Work, and the latest improved Wood Working Machinery of all kinds.

TIGHT & SLACK BARREL MACHINERY. A SPECIALTY OF JOHN GREENWOOD & CO. ROCHESTER, N. Y.

BUSINESS.—An old established Grain Cradle Business and Business Stand to lease. Nearly all the material for the present season on hand.

SPRAY FEED WATER PURIFIER FOR STEAM BOILERS. U.S. & FOREIGN PATENTS.

INTERNATIONAL Electric Exhibition, VIENNA, 1883.

The Commission of the International Electric Exhibition in Vienna, 1883, gives due notice to the public that this Exhibition is to take place in the course of this year, to be opened on the 1st August and to be closed on the 31st October.

SEND TO LONDON BERRY & ORTON PHILADELPHIA FOR THE BEST BAND SAW BLADE

PATENTS.

MESSRS. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN, continue to examine Improvements, and to act as Solicitors of Patents for Inventors. In this line of business they have had thirty-eight years' experience.