

Advertisements.

Inside Page, each insertion . . . 75 cents a line. Back Page, each insertion . . . \$1.00 a line. The above are charges per agate line—about eight words per line.

USE ADAMANT WALL PLASTER

It is Hard, Dense, and Adhesive. Does not crack or crack. It is impervious to wind, water, and disease germs. It dries in a few hours. It can be applied in any kind of weather. It is in general use. Licenses granted for the mixing, using, and selling.

STEREOTYPING; THE PLASTER AND Paper Processes.—Composition and preparation of the mould, the best alloys of metal and proper degree of heat, trimming and mending the plate, etc. A minute description of both processes, with numerous illustrations. A paper of great interest to every printer.

Lathe advertisement featuring an image of a lathe and text: 'Screw Cutting LATHES', 'Seneca Falls Mfg. Co., 695 Water St., Seneca Falls, N. Y.'

The Sebastian-May Co. advertisement for 'Improved Screw Cutting Power LATHES', 'Drill Presses, Chucks, Drills, Dies, and Machinists' and Amateurs' Outfits.'

ADVERTISING SPECIALTIES! Inventors can sell us outright or have manufactured on royalty, inventions of novelty or utility that can be used for advertising. Correspondence invited.

GATES ROCK & ORE BREAKER advertisement: 'Capacity up to 200 tons per hour. Has produced more ballast, road metal, and broken more ore than all other Breakers combined.'

ROCK DRILLS AIR COMPRESSORS, MINING AND QUARRYING MACHINERY, Ingersoll-Sergeant Drill Co. No. 10 PARK PLACE, NEW YORK.

ROCK DRILLS AIR COMPRESSORS & GENERAL MACHINERY FOR MINING, TUNNELING, QUARRY & RAILROAD WORK. RAND DRILL CO. 23 PARK PLACE NEW YORK.

TO BUSINESS MEN The value of the SCIENTIFIC AMERICAN as an advertising medium cannot be overestimated. Its circulation is many times greater than that of any similar journal now published.

DROP FORGINGS FINISHED TOOLS BILLINGS & SPENCER CO. HARTFORD CONN.

ON GAS ENGINES.—A VALUABLE paper by F. Delmare, aboutville, touching upon the history of gas motors in general, and describing in detail the "Simplex" engine invented by the author and Mr. Malandri.

THE DAIMLER MOTOR THE DAIMLER MOTOR CO. is prepared to furnish 1, 2, and 4 Horse Power GAS or PETROLEUM MOTORS for all Industrial Purposes.

Barrel, Keg, Hoghead AND STAVE MACHINERY. Over 50 varieties manufactured by E. & B. HOLMES, BUFFALO, N. Y.

1891 GREGORY'S SEED CATALOGUE THE PUBLIC WANT their seed fresh and true. Would they not be most likely to obtain such by buying directly from the grower?

1891 \$3 PRINTING PRESS Do all your own printing. Save money. Catalogue for two stamps. Kelsey & Co., Meriden, Conn.

INVENTIONS WORKED OUT. Drawings and Models made. Perfect safety to inventors assured. All kinds first-class lathe, planer, and bench work.

THE SMITH PREMIER TYPEWRITER Important Improvements. All the Essential Features greatly perfected. The Most Reliable in Alignment. Easiest Running and Most Silent.

MANAGEMENT OF SILK WORMS IN China.—A valuable and comprehensive paper translated from the Chinese of Tsou Tsu Tang, by Robert Kliese.

THE FRED'K CRANE CHEMICAL CO. SHORT HILLS, N. J.—BOX 91A.—ZAPONS, BRUSH & DIP, LACQUERS, VARNISH, SHELLS, BLACKS, BRILLIANT & DEAD.

BIT BORES SMOOTH ROUND, OVAL, and SQUARE HOLES. Mortising Core Boxes, etc. Invaluable to Carpenters, Cabinet and Pattern Makers.

NATIONAL STEEL TUBE CLEANER RANKS THE HIGHEST Endorsed by the best Engineers.

A NEW CATALOGUE OF VALUABLE PAPERS Contained in SCIENTIFIC AMERICAN SUPPLEMENT, sent free of charge to any address.

ALANSON CARY MANUFACTURER OF FLAT STEEL SPRINGS OF EVERY DESCRIPTION 240 & 242 W. 29TH ST. NEW-YORK

HOW TO MAKE DYNAMO ELECTRIC Machines.—By Geo. M. Hopkins. With drawings to scale and full directions for constructing dynamos of different sizes.

Caligraph LIFE-SHORT-WRITE WAY Address: The American Writing Machine Co., Hartford, Conn.; New York Office, 237 Broadway.

NEW YORK TRADE SCHOOLS—Description of the New York Trade Schools which were established nine years ago for the purpose of giving instructions to young men in certain trades, and to young women in such trades as improve themselves.

THE "FISHKILL" CORLISS ENGINE COMBINING A MAXIMUM OF ECONOMY, EFFICIENCY, AND DURABILITY. Fishkill Landing Machine Co., Fishkill-on-Hudson, N. Y.

TYPEWRITERS ALL MAKES NEW & SECOND HAND—BOUGHT, SOLD AND EXCHANGED. NATIONAL TYPEWRITER EXCHANGE ANYWHERE IN THE U.S. GET OUR PRICES BEFORE THE U.S. GET OUR PRICES BEFORE.

CATALOGUES FREE TO ANY ADDRESS TOOLS OF ALL KINDS GOODNOW-NIGHTMAN BOSTON

ICE-HOUSE AND REFRIGERATOR. Directions and Dimensions for construction, with one illustration of cold house for preserving fruit from season to season.

STEVENS PATENT SPRING SCREW THREAD CALIPERS Ideal, No. 64. Price, by mail, postpaid.

PATENTED NOVELTIES of merit sold by the manufacturer of inventor, H. B. HARPER & SON, Office Rooms, 9 & 10 Exchange Bldg, 131 Van Buren St. Chicago.

THE PENNA. DIAMOND DRILL & MFG. CO. BIRDSBORO, PA., Builders of High Class Steam Engines, Diamond Drilling and General Machinery.

Steam! Steam! Quality Higher, Price Lower. For Strictly Cash, Complete Fixtures except Stack. 2-Horse Eureka Boiler and Engine, - \$145

THE FRED'K CRANE CHEMICAL CO. SHORT HILLS, N. J.—BOX 91A.—ZAPONS, BRUSH & DIP, LACQUERS, VARNISH, SHELLS, BLACKS, BRILLIANT & DEAD.

DEVELOPMENT OF AMERICAN Blast Furnaces, with special reference to large Yields.—By James Gayley.

Portable GASOLINE Engines For Threshing Machines, Hay Presses, Corn Shellers, Pile Drivers, Well Diggers, &c., our newest and latest Engine a little wonder and a giant to work.

GYMNASTICS FOR GIRLS.—AN interesting account of the course of instruction given at the Berkeley Athletic Club for Ladies.

COMPLETE STEAM PUMP 10 SIZES FROM \$7 TO \$75 FOR WATER SUPPLY TANKS, FIRE PUMPS & ETC. WRITE FOR PRICES AND DESCRIPTIVE CIRCULARS

RAILWAY & STEAM FITTERS SUPPLIES Rue's Little Giant Injector. SCREW JACKS, STURTEVANT BLOWERS, &c. JOHN S. ERQUHART, 46 Cortlandt St., N. Y.

ELECTRICAL! Just out. Finely finished and Effective Desk Fan Motor. Continuous High Speed with Primary Battery. Motor and Battery, \$10.00.

THE PHELPS BURGALAR ALARM Size 6 1/2 by 2 1/2 inches. Portable, Mechanical, Durable, and Cheap.

STEREOTYPING.—A VALUABLE series of lectures by Thomas Bolas, discussing the most recent methods in this branch of typography. With 23 illustrations.

LIGHTNING WELL-SINKING MACHINERY MANUFACTURERS. Hydraulic, Jetting, Revolving, Artesian, Diamond Prospecting Tools, Engines, Boilers, Wind Mills, Pumps.

OIL WELL SUPPLY CO. Ltd. 91 & 92 WATER STREET, Pittsburgh, Pa., Manufacturers of everything needed for ARTESIAN WELLS.

A HYDRAULIC OR JET-PROPELLED Steam Lifeboat.—Description of a naval lifeboat propelled by a jet of water, with full details and account of the main features of construction and of the trials made of it for maneuvering power.

ARTESIAN Wells, Oil and Gas Wells, drilled by contract to any depth, from 60 to 3000 feet. We also manufacture and furnish everything required to drill and complete same.

CUSHMAN CHUCKS Complete line for all uses shown in new illustrated catalogue, free to all.

A BOON TO THE DEAF! Osgood's No. 1 Hearing Horn is the only instrument that will help the deaf.

CLARK'S Ventilating and Drying FANS. Light Running, Adjustable Blades, Self-Oiling Bearings.

HUNTER'S LIGHTNING SIFTER & MIXER The best in use for Sifting and Mixing Baking Powder, Flour, Drugs, Plasters, Fertilizers, and all kinds of Powders.

KOCH'S DISCOVERIES.—A FULL ACCOUNT of Dr. Koch's remedy for tuberculosis, the method of using it, etc. With 9 illustrations.

AIR BRUSH Awarded by Franklin Institute as a legitimate Art Tool. Available to crayon and water color portrait artists and draughtsmen.

The Best Mechanical Help An inventor, investigator or experimenter can have is a great machine shop, whose business is (first) to do regular work, and (second) to help develop ideas.

STEEL ALPHABETS. Brands, Seals, Steel Stencil Cutting Dies, Soap Moulds, Brass Stamps, etc. J. M. STUTZMAN, Manufacturer, 181 William St., N. Y.

Useful Books! Manufacturers, Agriculturists, Chemists, Engineers, Mechanics, Builders, men of leisure, and professional men, of all classes, need good books in the line of their respective callings.