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The above are charges per agate line--about eight words per line. This notice shows the width of the line, and is set in agate type. Engravings may be set in advertisements at the same rate per agate line, by measurement, as the letter press. Advertisements must be received at Publication Office as early as Thursday morning to appear in the following week's issue.

Star Foot power
Lathes Automatic
Lathe Automatic
Cross feed
 9 and 11-inch Swing.
 New and Original Features
 Send for Catalogue B.
 Seneca Falls Mfg. Company,
 685 Water St., Seneca Falls, N. Y.

POWER & FOOT LATHES SHAPERS, PLANERS, DRILLS, MACHINE SHOP CUTTING TOOLS, AND SUPPLIES. CATALOGUE FREE. SEBASTIAN LATHÉ CO., 120 CULBERT ST., CINCINNATI, O.

STEAM STAMP Our patented steam stamp will crush ores more economically, cost less in time and money to install, and less for repairs than any other mill in existence. Equally well adapted for capitalists or prospectors use. Full information supplied by **CATES IRON WORKS, CHICAGO.**

EDGE TOOLS are often nearly ruined by using a grindstone not adapted to the work. Our quarries produce a large variety of grits suitable for grinding any tool. May we send you our Catalogue, which will give you some information? **GRAFTON STONE COMPANY, No. 80 River Street, Grafton, Ohio.**

FOR ALL SHAFT SIZES. Hub Roller Bearings
 NO WEAR. NO FRICTION.
 Rolls Accurately Guided in Parallel Lines.
 They Save Power, Oil, Time.
 They are the Best! Try them!
The Ball Bearing Co.,
 12 Watson St., Boston, Mass.

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 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.
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MUNN & CO., SOLICITORS OF PATENTS,
 361 BROADWAY NEW YORK.
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DESIGNS.

Alphabet, D. M. Moore..... 26,428
 Badge, T. A. Gerbig..... 26,420
 Bedstead, M. G. Merritt..... 26,450
 Bicycle handle, W. E. Blake..... 26,445
 Border plate, metallic, E. A. Langenbach..... 26,447
 Bottle, H. D. Williams..... 26,429
 Ceiling plate, metallic, E. A. Langenbach..... 26,446
 Chaffing dish, L. Wojdikow..... 26,431
 Chaffing dish stand, L. Wojdikow..... 26,432
 Cook for air brake pipes, angle, F. A. McArthur..... 26,441
 Coffee pot, L. Wojdikow..... 26,430
 Dish b, covered, G. C. Vogt..... 26,438
 Egg beater, G. H. Steele..... 26,438
 Forging machine frame, G. Saxon..... 26,440
 Indicator casing, H. G. Hess..... 26,426
 Mail packing machine guide, H. E. Waite..... 26,439
 Mandolin, E. N. Livernois..... 26,424
 Mirrors, etc., back and handle for, P. O. Dickinson..... 26,422
 Photographic card mount, P. J. Stuparich..... 26,427
 Plow handle or grip, L. L. Christian..... 26,444
 Stall floor support, J. M. Fiske..... 26,443
 Table, J. F. Ackley..... 26,443
 Toaster, L. Wojdikow..... 26,437
 Toy, J. Bruce..... 26,425
 Truck side bar, S. M. Curwen..... 26,442
 Violin, E. N. Livernois..... 26,423
 Watchcase, J. C. Dueber..... 26,421

TRADE MARKS.

Bicycles, Sterling Cycle Works..... 29,340
 Bicycles, tricycles, velocipedes, sundries, and all articles relating to a Bicycle business, Hibbard, Spencer, Bartlett & Company..... 29,341
 Cold cure and remedy for diseases of the throat, lungs and nasal organs, J. A. Swan..... 29,328
 Hosiery and gloves, Firm of M. S. Esche..... 29,327
 Oils, illuminating, Standard Oil Company of New York..... 29,327 to 29,337
 Paper, writing, G. H. Taylor..... 29,338
 Remedy, hog and cholera, Moore & Company..... 29,330
 Soap, C. F. Greenleaf..... 29,336
 Tobacco, H. B. Hunt..... 29,335
 Veterinary remedies, E. J. Sanderson & Company..... 29,329
 Whisky, Mellwood Distillery Company..... 29,334
 Wines and liquors, L. Schetter..... 29,331

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.

Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list, provided they are simple, at a cost of \$40 each. If complicated, the cost will be a little more. For full instructions address Munn & Co., 361 Broadway, New York. Other foreign patents may also be obtained.

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Lathes Automatic
Lathe Automatic
Cross feed
 9 and 11-inch Swing.
 New and Original Features
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 They Save Power, Oil, Time.
 They are the Best! Try them!
The Ball Bearing Co.,
 12 Watson St., Boston, Mass.

WORK SHOPS
 of Wood and Metal Workers, without steam power, equipped with **BARNES' FOOT POWER MACHINERY** allow lower bids on jobs, and give greater profit on the work. Machines sent on trial if desired. Catalogue Free.
W. F. & JOHN BARNES CO.,
 1999 RUBY ST., ROCKFORD, ILL.

Bolt Threading, Bolt Heading, and Nut Tapping MACHINERY.
 We are the leading manufacturers in our line.
 Send for complete Catalogue S. A., mailed free.
ACME MACHINERY CO.,
 Cleveland, Ohio, U. S. A.

Milling Machines and General Line of Machine Shop Tools.
Hill, Clarke & Co.,
 160 Oliver St., BOSTON.
 16 S. Canal St., Chicago.

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 OF EVERY DESCRIPTION FOR ALL USES
THE HARRINGTON & KING PERFORATING CO.
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 A story by the novelist Frank R. Stockton.
"Your Well and what will come out of it."
 By the
Pohlé Air Lift Pump
 Bulletins to tell you will be sent on application.
The Ingersoll-Sergeant Drill Co.,
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MEWER AUTOMATIC FEED DRILL
 An indispensable Labor Saver. Will feed, fine or coarse, at any angle, without pressure or loss of power. Warranted.
 For particulars, prices, etc., **MEWER TOOL CO.,**
 16 Elm St., Portland, Me., U. S. A.

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AIR COMPRESSORS
 SIMPLEST, MOST EFFICIENT and DURABLE.
RAND DRILL CO.
 Send for Catalogue. 100 Broadway, New York.

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 - of -
Iron, Brass and Copper Pipe
 ALL STYLES.
The NATIONAL PIPE BENDING CO.,
 152 River St., New Haven, Conn.

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Electricity To Electrical Workers,
 Mechanics; Mechanical and Architectural Drawing; Plumbing; Architecture; Mining; Civil Engineering in all Branches; Steam Engineering (Stat'y., loco. and Marine).
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Experimental & Model Work
 Circulars & advice free. Gardam & Son, 96 John St., N. Y.

Emery Grinding Machinery
Diamond Face Grinding Machine
 Designed to do grinding where small amount of stock is to be removed, and a flat face is required.
 Book 15 Free.
DIAMOND MACHINE CO.,
 Box 885, Providence, R. I.

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 The "Scientific American" says of the Book of Tools: "It is so excellently made up, and is full of such valuable information, that it fairly eclipses many works sold simply on their merits."
 "A Book of Tools" is our catalogue, 650 pages, over 2,000 illustrations of Machinery, Tools and Supplies of all kinds, and we will send a copy free post-paid to any address upon receipt of 25 cents in stamps to cover cost of postage and advertising.
CHAS. A. STRELINGER & CO.,
 Address Advertising Dept., Box 124, Detroit, Mich.

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 That Are Good--Not Cheap Things
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 Hundreds of similar cases may be cited affecting the apparatus of nearly all so-called competitors.
WESTERN TELEPHONE CONSTRUCTION CO.,
 250 South Clinton Street, Chicago
 The Largest Manufacturers of Telephones in the U. S.

I PRINT MY OWN
 Card, circulars, Press, with \$5 Make money printing for others. Our \$18 Press prints a newspaper. Type settings easy, printed rules. Send stamp for catalogue, presses and supplies, to the factory, **KELSEY & CO.,** Meriden, Conn.

We manufacture the "Pathlight" and "Scorcher" bicycle lamps and other bicycle sundries. We have a snug little plant and every facility for stamping, nickel-plating, and finishing small metal bicycle novelties in first-class style. For estimates, address The Place & Ferry Mfg. Co., 247 Centre Street, New York.

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THE DEFIANCE MACHINE WORKS
 PERRY ST., DEFIANCE, OHIO, U.S.A.
 MANUFACTURERS OF SPECIAL WOOD WORKING MACHINERY FOR HUBS, SPOKES, WHEELS, BENDING WAGON, CARRIAGE, SHAFT, POLE, NECK, YOKE, SINGLETREE, HANDLE & BARREL HOOP FACTORIES.
LARGEST LINE IN THE WORLD
SATISFACTION GUARANTEED.

Patent Carrying Track OVERHEAD TRAMWAY
 for Mills, Foundries, Machine Shops, or for Merchandise. Send for Book.
The Coburn Trolley Track Mfg. Co.,
 ... HOLYOKE, MASS. ...

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EXPERT MODEL MAKING
 19 E. MADISON ST. CHICAGO MODEL WORKS CHICAGO 67 W. WISCONSIN ST.

THE OBER LATHES
 For Turning Axe, Adze, Pick, Sledge, Hatchet, Hammer, Auger, File, Knife and Chisel Handles, Whiffletrees, Yokes, Spokes, Porch Spindles, Stair Balusters, Table and Chair Legs and other irregular work.
 Patented. Send for Circular A.
The Ober Lathé Co., Chagrin Falls, O., U.S.A.

NICKEL AND Electro-Plating Apparatus and Material.
Hanson & VanWinkle Co.,
 Newark, N. J., 186 Liberty St., N. Y., 35 & 37 S. Canal St., Chicago.

HYPNOTISM Sixty ways, \$5; my method, \$2. 100 page book, 10c. Occult Forces, 30c. Prof. Anderson, S. A. 17, Masonic Temple, Chicago

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