



**M. E. E., of Mo.**—We do not understand what you mean by converting centrifugal into centripetal force. In reply to your question whether a jointless arrangement for accomplishing it would be patentable, provided it was useful and new, we reply that any mechanical device which is novel and useful is patentable.

**N. A. M. H., of Pa.**—We have no idea that a constant electric current would prevent the deposit of paraffine. It could be easily tried.

**C. H., of Pa.**—If your engine yields six horse power with 100 revolutions per minute, and you increase the number of revolutions, maintaining the same pressure, you will increase the power in proportion; 160 revolutions will give you nine horse power.

**C. N. B., of R. I.**—You will find the best shingle machines illustrated in back numbers of the *SCIENTIFIC AMERICAN*, with address of parties there given.

**W. H. H., of Phila.**—Mr. H. C. Baird, No. 406 Walnut street, your city, can tell you all about works for scroll patterns.

**F. L. K., of Wis.**—You can obtain kalsomine, in the form of powder, from any dealer in paints and oils. You had better address D. F. Tieman & Co., N. Y., in relation to it.

**J. S., of Ill.**—Water in escaping from an opening in the vertical side of a vessel issues with a velocity just equal to that which would be acquired by a body falling from the surface of the water to a level with the opening. A body falling 9 feet acquires a velocity of about 23 feet per second. Water flowing at this velocity through a slit 50 by 2½ inches, would issue at the rate of 17 cubic feet per second, equal to 1,062 pounds. This falling 9 feet would give 9,568 foot-pounds per second, equal to 573,480 foot-pounds per minute. Divide by 33,000 and we have 17-horse power. From the contraction of the vein and the great waste of a flutter wheel it is not probable that you would realize even half of this, probably not more than 5 or 6-horse power.

**D. W., of Wis.**—During the descent of the stone to the center of the earth there would be a mass attracting it downward greater than the mass attracting it upward; its velocity would consequently be constantly accelerated till it reached the center, and the momentum thus acquired would carry it through to the opposite side.

**T. J. E., of Ill.**—Air at the surface of the earth is subjected to a pressure of about 15 pounds to the square inch; if a portion be confined and compressed into half the volume the pressure will be doubled. The pressure is in inverse proportion to the volume.

#### NOTICE TO SUBSCRIBERS.

The first five numbers of the present volume of the *SCIENTIFIC AMERICAN* being out of print, we shall commence the time of each new subscriber from the date of receipt of the order, unless the writer states specifically that he wishes such back numbers as can be furnished.

#### SPECIAL NOTICE TO INVENTORS.

The money receipts on account of patent business, which have heretofore been published in this column, and the notification of cases sent to the Patent Office, will for the present be discontinued. The receipt of specifications and money from inventors will be acknowledged promptly by mail.

#### Back Numbers and Volumes of the "Scientific American."

**VOLUME IV., VII. AND VOLUME XI. (NEW SERIES)** complete (bound) may be had at this office and from periodical dealers. Price, bound, \$3 00 per volume, by mail, \$3 75 which includes postage. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding. **VOLS. I, II., III., V., VI., VIII., IX. and X.** are out of print and cannot be supplied.

#### RATES OF ADVERTISING.

**TWENTY-FIVE CENTS** per line for each and every insertion, payable in advance. To enable all to understand how to calculate the amount they must send when they wish advertisements published we will explain that eight words average one line. Engravings will not be admitted into our advertising columns and, as heretofore, the publishers reserve to themselves the right to reject any advertisement they may deem objectionable.

**WOOD-WORKING MACHINES.**—ONE 24-IN. IRON Frame, Double Surface; one 6-inch Molding M., Improved Style; one Turning M.; one Scroll Saw; one Power Mortiser; one Boring M.; three Saw Benches; one Blind Boring M.; one Ellis Blind Slat M.; one Hub-mortising M., Etc. Address 17 3eow CHAS. H. SMITH, No. 135 North Third street Phila.

**CHEST OF TOOLS.**—WE HAVE FOR SALE ONE of Parr's Tool Chests—a very useful and complete article for a Mechanic, Farmer or Amateur. Price \$50. Address MUNN & CO., New York. 17 tf

**X. 1865. M.**—THE RECIPE TO MAKE THE "EVER-READY GLUE" sent on receipt of \$1. A certificate with each recipe, worth from \$2 to \$10, and something else. Address A. M. DUNLAP, Box No. 50, Candor, Pa. 1\*

**FLAX SEED.**—200 BUSHELS OF CLEAN SAPLING Flax seed for sowing, for sale, at \$4 50 per bushel, by HOMER FLAX MILLS, Homer, Cortland Co., N. Y. Parties wishing to order can remit through Wm. H. Babcock, Esq., U. S. Express Agent, Homer, N. Y. 17 2

**RABBITTONIAN PENMANSHIP.**—"THE MOST beautiful and scientific of systems. \* \* Magnificent, and worth \$5 instead of \$1 50.—[Jour. and Mess. "The latest invention and the best. By its aid any one twelve years old can make a first-class penman without schools or teachers."—[Chris. Herald.

"Beautiful copies for practice. The whole art of penmanship is fully explained and illustrated. To all mechanics and young men whose opportunities are limited this system will be found highly valuable, while for family use among children it is most useful. By its aid we think that almost any one may learn to write in good style, without an instructor."—[Scientific American.

"The best arranged and most scientific system extant."—M. J. Francisco, Pres. Business College. Gold medals to be awarded in July for the greatest improvement from these copies. The system complete, consisting of 90 copies, on card board slips, illustrated by 60 wood cuts and a chart, sent, post-paid, for \$1 50; 36 beautiful Rabbittonian Pens, prepaid, for 50c; one copy for 30c. The Penmanship and 72 pens for \$2. Unqualified inducements to Agents and Teachers. Address BABBITT & WILT, No. 37 Park Row, N. Y. 17 eowtf

**PARTIES IN AMERICA HAVING VALID LETTERS** Patent for Great Britain, and wishing to dispose of the same, or negotiate for royalty, may address CHARLES POMEROY BUTTON, Nos. 142 and 143 Chesapeake, London, England.

N. B. The object of this advertisement is to obtain control of a few meritorious inventions already patented in Great Britain, and no application from inventors will be entertained except their invention shall have been provisionally protected prior to the publication of the invention in America. For references apply to any Mercantile Association or Trade Protective Society in Great Britain. 12 13\*

**FOR SALE—ONE UPRIGHT ENGINE, SIX-HORSE** power. Will be sold at a reasonable figure if called for soon. Apply at office of JOHN TRAGESER, No. 53 Greene st., N. Y. 1\*

**FOR THE VINEYARD, ORCHARD, GARDEN, GRAPERY AND ORNAMENTAL GROUNDS.**—Twentieth Annual Volume of the *HORTICULTURIST*, 1865. \$2 50 per annum. Two specimen numbers sent for twenty-five cents. Vols. 1862, 1863, 1864, bound and post-paid, and Nos. 1865, \$3. 1, 7c royal octavo pages. 600 engravings. 1

**WOODWARD'S COUNTRY HOMES**, showing Designs and Plans for Houses of moderate cost, with Stables and Outbuildings, and manner of constructing Balloon frames. 12mo., cloth; 166 pages; 122 engravings. Price \$1 50 post paid. GEO. E. & F. W. WOODWARD, Publishers, No. 37 Park Row, New York. 1

**FOR SALE—SHAFTING, PULLEYS AND HANGERS** of all sizes; Engines from 20 to 150-horse power, with or without boilers; Marble Saw Gears, Track Iron, Trucks, Belting, Etc., at DAVIS'S MACHINERY YARD, Nos. 17 and 19 Morris street, Jersey City. 17 3

**WANTED—AGENTS.**—\$150 PER MONTH, TO SELL the Improved Common-sense Sewing Machine. The best and cheapest machine in use. Address A. GRANT & CO., 17 3\* Post-Office Block, Chicago, Ill.

**ICE SANDAL.**—PATENT RIGHTS FOR IMPROVED Ice Sandal, the best of all known heretofore. The whole or separate licenses for sale, by EDWARD FITZKI, No. 304 North Seventh street, Philadelphia, Pa. 1\*

**SAVE THE PIECES.**—FOR \$1 I WILL SEND TO any address the recipe for preparing the Diamond Cement, for mending all kinds of Queensware, Glassware, Wood and Leather; a superior article, easily prepared, and very saleable. Address E. S. WALKER, Battle Creek, Mich. 1\*

**ONE GOOD SECOND-HAND DANIELS PLANER,** 8 feet long, 24 inches wide, for sale, by THOMAS & CO., Worcester, Mass. 17 3\*

**INCrustATION.** W. C. Scott, Monmouth, Ill., says of Winans' Powder:—"Am well satisfied with it in every particular; it cleaned my boiler thoroughly and without apparent injury." 1\*

**WINANS' INCrustATION POWDER, NEW YORK,** thoroughly cleans a boiler, and without injury. Costs \$4 to \$8; keeps it clean at about 75 cents per week. 1\*

**SCALE IN STEAM BOILERS.**—WALCOTT, WHITE & Co., Jacksonville, Ill., says:—"Our boiler several years in use, without any antidote for scale. Your powder (Winans' Incrustation Powder, N. Y.), is making way with it very well. Send another 100 pounds." 1\*

**2,000 BOLTS PER DAY CAN BE MADE ON** our PATENT MACHINES. Also Rives and Spikes of all kinds. HARDWAY & SONS, St. Louis. 17 8\*

**REFERENCES.** Chouteau, Harrison & Valle, LaClede Rolling Mill. Collins & Holliday, Broadway Foundry. Marshall & Co., Western Foundry. John McCarty, Boggy Nail Mill. 17 8\*

**FOR SALE—ONE PAIR OF 3-FOOT FRENCH BURR** Millstone, Spindle and Fixtures, all complete, nearly new, warranted. Price \$200, delivered on car at Cambridge, N. Y. ALFRED WOODWORTH, North White Creek, New York. 17 2\*

**SCOTCH GLASS TUBES, STEAM AND WATER** GAGES FOR SALE. E. BROWN, No. 311 Walnut street, Philadelphia, Pa. 1

**MANUFACTURING PROPERTY FOR SALE.** THE CLINTON IRON COMPANY offer for sale the whole or a part of their SPRING AND AXLE FACTORY, situated in the Town of Clinton, Conn., on Long Island Sound, midway between New Haven and New London. The communication with New York is all that could be desired, either by railroad or water.

Said factory is on a desirable stream of water, with a pond covering some twenty acres, with a permanent stone dam, and a fall of water from twelve to fifteen feet. The main water wheel is nearly new, is seven feet diameter with eleven feet buckets. The machinery is in fair order, and the works are capable of turning off 300 tons each of Springs and Axles per annum. The buildings are large, and well calculated for the present business, or for the manufacture of other goods, it having been used formerly as a paper factory, and is well calculated for that purpose.

The main building is 25x57 feet, with a wing attached 24x60. The store house is 16x31 feet. There is also a small foundry. There will be sold with the above, if desired, a dwelling house and barn, and several building lots. For further information apply to STANARD, Agent, near the premises, WM. J. BUCK, No. 43 Broadway, N. Y., or, S. HIGGINS, Norwich. 1\*

**PETROLEUM.** Prof. H. DUSSAUCE, Chemist, is ready to furnish Plans of Oil Refineries and Drawings of Apparatus; Processes to Manufacture, Refine, Deodorize and Decolorize Petroleum, Recipes to Manufacture Lubricating Oils, Paraffine, Artificial Spirit of Turpentine, and Oil of Bitter Almonds, Colors of Coal Tar. Examination of Oil Lands and Analysis of Crude Oils, Reports on the same. Address New Lebanon, N. Y. 1\*

**WANTED—FIRST-CLASS MACHINISTS, AT OHIO** TOOL COMPANY'S WORKS, Columbus, Ohio. Eastern men accustomed to working on machinists' tools preferred. 1\*

**OFFICE OF ARMY CLOTHING AND EQUIPGE.** No. 602 BROADWAY, NEW YORK, APRIL 12, 1865. **SEALED PROPOSALS WILL BE RECEIVED AT** this office till WEDNESDAY, April 19, 1865, at 12 o'clock M., for Baling Blankets, from the 1st day of May next to the 1st day of November next, the contractor to furnish all material necessary to bale the blankets in a satisfactory manner to this department. The services to be performed in the buildings of this depot, the contractor to furnish the machinery.

Bidders will state the number of bales they can put up per week. Bids will be received at the same time, or Coopering Packing Boxes at this depot, from May to November next, the contractor to furnish hoops, nails, etc., and be prepared to cooper any and all boxes at the shortest notice. Bidders will state the number of boxes that can be coopered per day, and at what price per box.

Proposals must be accompanied by a proper guaranty, signed by at least two responsible parties, setting forth that if a contract is awarded to the party making the bid that he or they will enter into bonds for the faithful performance of the work. Further information can be had at this office.

The right is reserved to the United States to reject all bids deemed objectionable.

Proposals should be indorsed "Proposals for Baling Blankets," or "Proposals for Coopering," and addressed to Br. Brig.-Gen. D. H. VINTON, D. Q. M. Gen., New York City. 1

**FOR SALE—FOUR NEW ENGINE LATHES, VIZ.:** 12 ft. bed, 24 in. swing; 13 ft. bed, 20 in. swing; 7 ft. bed, 18 in. swing; 5½ ft. bed, 14 in. swing—all first class, and with screw and gear back; also a new upright drill, and two new iron planers—planes 7 feet by 24 in. and 5 ft. by 24 in. WELLS CHASE & GEHRMAN, No. 6 S. Howard street, Baltimore. 17 3\*

**DUTCHER'S PATENT LOOM TEMPLES, THOMPSON'S PATENT OIL CANS, ROBBIN'S PATENT SHUTTLE GUARDS** to prevent shuttles flying out. Address E. D. & G. DRAPER, 17 10\* Hopedale, Mass.

**CHIEF QUARTERMASTER'S OFFICE.** No. 1139 Girard street, Philadelphia Depot, April 12, 1865.

**SEALED PROPOSALS WILL BE RECEIVED AT** this office till WEDNESDAY, April 19, 1865, at 12 o'clock M., for immediate delivery at the Schuylkill Arsenal, in merchantable packages (cases to be made to conform to specifications at this office), 10,000 pairs Sewed Boots, No. 9 Army standard.

5,000 pairs Sewed Boots, No. 10 Army standard. 3,000 pairs Sewed Boots, No. 11 Army standard. 50,000 pairs Sewed Bootsoles, No. 9 Army standard. 8,000 pairs Sewed Bootsoles, No. 11 Army standard. 10,000 pairs Sewed Bootsoles, No. 12 Army standard. 5,000 pairs Sewed Bootsoles, No. 13 Army standard. 3,000 pairs Sewed Bootsoles, No. 14 Army standard. Bailing Rope, Army standard. Hospital Tent-poles, Army standard. 1-inch Cotton Webbing, for Canteen Straps, sample required.

Farmers offering goods should make separate proposals for each article offered, the quantity they propose to furnish, the price (to which should be written, both in words and figures), and conform to the terms of this advertisement, a copy of which should accompany each proposal. Samples of the standard articles required may be seen at this office.

Samples, when submitted, must be marked and numbered to correspond with the proposals; and the parties thereto must guarantee in the respect, equal to army standard, otherwise the proposals will not be considered. Bids will be opened on Wednesday, April 19, 1865, at 12 o'clock M., and bidders are requested to be present.

Each bid must be guaranteed by two responsible persons, whose signatures must be appended to the guaranty, and certified to as being good and sufficient security for the amount involved, by some public functionary of the United States.

All proposals should be made out on the regular forms, which will be furnished on application at this office. The right is reserved to reject any bid deemed unreasonable, and no bid from a defaulting contractor will be received.

Indorse envelopes "Proposals for (here insert the name of the article offered)," and address Colonel WILLIAM W. MCKIM, Chief Quartermaster, Philadelphia Depot. 1

**W. H. VAN GIESON, SUCCESSOR TO THE WATERBURY MACHINE CO.** builder of every description of Machinery and Machinists' Tools, Pin and Hook and Eye Machines, Metallic Cartridge Machinery, Double and Single-acting Power Presses, Foot Presses, Etc. of new and Improved Patterns. Inventors and artists invited to send (when so requested) in the most private and confidential manner all designs, Shop near the Depot, Waterbury, Conn. Terms, Cash on delivery. 17 12\*

**STEEL SAW MANUFACTURERS.—THE UNDERSIGNED** announces to all those engaged in above line of business that he has obtained Letters Patent of the United States as No. 46,996, for an entire new principle, construction and formation of a Forest Tree Lumber Saw, invaluable for its simplicity in sawing down any sized trees standing, and very beneficial to cord wood operators and army use. There is no possibility of said saw to break or to get out of order by such; labor is saved, economy produced and perfection obtained for said purpose. All farmers need such, therefore the first of such persons desirous with moderate capital to become interested in a fourth or half of the said patent, and to go to work without delay in manufacturing such saws for sale in all the States, may address me at this city—Washington, D. C., No. 411 Pennsylvania avenue. ROWLAND CROVELLEN, 17 2\* So e Patentee.

**FOR SALE—A ROTARY STEAM POWER PUNCHING** and Raising Press, with eight sets of dies complete, for tin box and can work. Address Box 848 Post-office, Philadelphia. 15 6\*

**NEW STEAM ENGINE FOR SALE—250 H. P., HORIZONTAL;** cylinder 6 feet stroke, 30 inch diameter. Built at the Burton Iron Works, N. Y., where it may be seen. Apply to A. & P. ROBERTS & CO., Philadelphia, Pa., WILLIAM LILLY, Mauch Chunk, Pa., THOMAS BARBER, Allentown, Pa., or HUBBARD & WHITTAKER, Brooklyn, N. Y. 15 12\*

**CAN I OBTAIN A PATENT?—FOR ADVICE AND** instructions address MUNN & CO., No. 37 Park Row, New York, for TWENTY YEARS Attorneys for American and Foreign Patents. Caveats and Patents quickly prepared. THE SCIENTIFIC AMERICAN, \$3 a year. 30,000 Patent Cases have been prepared by M. & Co.

**VALUABLE DISCOVERY.—IT HAS BEEN ASCERTAINED** that Railroad Ties may be preserved for a great length of time by the application to them of a composition discovered and lately patented by B. S. FOREMAN, Architect and Builder, at Morrison, Ill. 15 6\*

**NEEDLES.—SAND'S NEEDLE CO., MANUFACTURERS** of Machine Spring Needles. These needles are made by patented machinery, and consequently we claim a uniformity of spring which cannot be obtained in the ordinary way of making. Address, with two samples inclosed, SAND'S NEEDLE COMPANY, Laconia, N. H. 16 tf

**F. B. HUNT'S HOOSIER FODDER CUTTER—PATENTED** in the United States and Europe; the most popular cutter in use; it cuts with equal facility hay, straw and corn fodder; is simple and durable, and can be worked with ease by a boy of ten years, having the most simple and complete change of feed, cutting any length desired. This machine was patented Jan. 5, 1864, and was exhibited at twenty different State and County Fairs, at which it took 18 first and 2 second premiums. In each case, if failure to get the first premium the committees were divided—self-interest controlling the majority. Seldom has there anything become so suddenly popular and profitable as the Hoosier Fodder Cutter. All who have had any real experience or observation in the matter, pronounce it a fixed fact—a success beyond all controversy. Although it has been but a short time since this machine was introduced, it has been conclusively proven that the fodder from an acre of corn cut or chaffed by this machine is worth the entire cost of making the crop. Machines and shop fights to manufacture for sale by TOBIAS, LANE & CO., Richmond, Ind. 17 2\*