

ENGINEERING INVENTIONS.

An oscillating engine has been patented by Mr. Douia C. Putnam, of Wayne Center, N. Y.

A traction engine has been patented by Mr. Benjamin S. Benson, of Baltimore, Md.

AGRICULTURAL INVENTIONS.

A grain separator has been patented by Messrs. Francis Wadsworth and Henry N. Prentice, of Venice, O.

A seed planter has been patented by Mr. Louis S. Flatau, of Pittsburg, Texas.

MISCELLANEOUS INVENTIONS.

A lemon squeezer has been patented by Mr. Sheridan S. Badger, of Chicago, Ill.

A fire escape has been patented by Annie M. Jeffers, of Chicago, Ill.

A pipe tongs has been patented by Mr. James J. Palmer, of Fall Brook, Pa.

A nail plate furnace has been patented by Mr. Simeon Bunn, of Belleville, Ill.

A reflector has been patented by Mr. James E. McLaughlin, of Portland, Oregon.

A tag making machine has been patented by Mr. Harner Denney, of Brooklyn, N. Y.

A motor has been patented by Mr. Jackson B. Miles, of Lincolnton, Ga.

A tongue support has been patented by Mr. Milo M. Russell, of Hayward, Wis.

A necktie fastener has been patented by Mr. Daniel T. Freese, of North Amherst, O.

A two wheeled vehicle has been patented by Messrs. William E. Davies and William C. Gayley, of Deringer, Pa.

A belt punch has been patented by Messrs. Henry Bouchy and J. Henry Bamberger, of Newark, N. J.

A metallic bayonet scabbard has been patented by Mr. James McKenney, of New York city.

A bellows has been patented by Mr. Jacob F. Weitzel, of Cincinnati, O.

grooves or pockets, while the bag or flexible portion has its edges inserted and held in these pockets, with various other novel features.

A broom holder has been patented by Mr. James F. Barringer, of Bennettsville, S. C.

A safety device for elevators has been patented by Mr. Peter Moran, of New Orleans, La.

A nutmeg grater has been patented by Mr. Albert L. Platt, of Bowling Green, Mo.

A land channeling roller has been patented by Mr. Robert H. Banks, of Fort Lewis, Col.

A sawing machine has been patented by Mr. Daniel W. Smith, of Long Lake, Mich.

NEW BOOKS AND PUBLICATIONS.

DYNAMO-ELECTRIC MACHINERY. By Silvanus P. Thompson. New York and London: E. & F. N. Spon.

This is a second and much enlarged edition of a volume published by the same author in 1884, which was itself based on the Cantor lectures of Professor Thompson before the Society of Arts, in 1882.

THE DETERMINATION OF ROCK-FORMING MINERALS. By Eugene Hussak. New York: John Wiley & Sons.

The authorized translation of this German work has been made by Dr. Erastus G. Smith, of Beloit College, Wis.

METHODS OF RESEARCH IN MICROSCOPICAL ANATOMY AND EMBRYOLOGY. By Charles O. Whitman. Boston: S. E. Cassino & Co.

This volume is intended for everyday use in the zoological laboratory, to secure uniformity in practice according to the best methods of investigation.

Received.

THE SCIENCE OF MIND APPLIED TO TEACHING. According to Phenological Methods. By U. J. Hoffman. New York: Fowler & Wells Company.

TECHNICAL VOCABULARY, ENGLISH AND GERMAN. By F. J. Wershoven and A. Van Kaven. Leipzig: F. A. Brockhaus.

THE PANAMA CANAL: ITS HISTORY, POLITICAL ASPECTS, AND FINANCIAL DIFFICULTIES. By J. C. Rodriguez. New York: Charles Scribner's Sons.

NEW YORK AGRICULTURAL EXPERIMENT STATION: Third Annual Report of the Board of Control, for 1884. Albany, N. Y.: Weed, Parsons & Co.

IOWA STATE BOARD OF HEALTH: Third Biennial Report, for fiscal period ending June 30, 1885. Des Moines: George E. Roberts.

CONSPIRACY: A Cuban Romance. By Adam Badeau. New York: R. Worthington.

A FARMER'S VIEW OF A PROTECTIVE TARIFF. By Isaac W. Griscom. Published by the author, Woodbury, N. J.

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line.

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And most important. Hallett & Co., Portland, Maine, can furnish you work that you can do at great profit, and live at home.

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For Sale.—The Steam Engine and Machine Works of the late William Munzer, including drawings, patterns, and tools for building Corliss and Baxter engines, brewers' machinery, and machinery generally.

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Watches demagnetized and shields applied, or recased in new dust proof and magnetism proof cases at reasonable rates. Send for descriptive circular.

Engineer competent to take charge of engine in large manufacturing establishment near New York. Must be good machinist and have first class references.

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Guarantee Chemical Co., 2130 Race St., Philadelphia, want the addresses of soluble blue manufacturers.

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Woodw'g. M'ch'y, Engines, and Boilers. Most complete stock in U. S. Prices to meet times. Send stamps for catalogues. Forsyth M. Co., Manchester, N. H.

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The Knowles Steam Pump Works, 44 Washington St., Boston, and 93 Liberty St., New York, have just issued a new catalogue, in which are many new and improved forms of Pumping Machinery of the single and duplex, steam and power type.

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Air Compressors, Rock Drills. J. Clayton, 43 Dey St., N. Y. Machinery for Light Manufacturing on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y.

Send for Monthly Machinery List to the George Place Machinery Company, 121 Chambers and 103 Reade Streets, New York.

If an invention has not been patented in the United States for more than one year, it may still be patented in Canada. Cost for Canadian patent, \$40. Various other foreign patents may also be obtained.

Supplement Catalogue.—Persons in pursuit of information of any special engineering, mechanical, or scientific subject, can have catalogue of contents of the SCIENTIFIC AMERICAN SUPPLEMENT sent to them free.

Presses & Dies. Ferracutie Mach. Co., Bridgeton, N. J. Guild & Garrison's Steam Pump Works, Brooklyn, N. Y. Steam Pumping Machinery of every description. Send for catalogue.

Cable Roads. Duplicate system. D. J. Miller, 234 Broadway, New York City, N. Y.

Wood Working Machinery. Full line. Williamsport Machine Co., "Limited," 110 W. 3d St., Williamsport, Pa. Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co. Box 423, Pottsville, Pa. See p. 46.

Hercules Lacing and Superior Leather Belting made by Page Belting Co., Concord, N. H. See adv. page 46. Planing and Matching Machines. All kinds Wood Working Machinery. C. B. Rogers & Co., Norwich, Conn.

Iron and Steel Wire, Wire Rope, Wire Rope Trams. Trenton Iron Company, Trenton, N. J. Bradley's Improved Cushioned Helve Hammer. New design. Sizes, 25 to 500 lb. Bradley & Co., Syracuse, N. Y.

Chucks—over 100 different kinds and sizes in stock. Specials made to order. Cushman Chuck Co., Hartford, Ct. Crescent Steel Tube Scrapers are made on scientific principles. Crescent Mfg. Co., Cleveland, Ohio.

Curtis Damper Regulator for draught and steam pressure in boilers. Curtis Regulator Works, Boston, Mass. The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

Hoisting Engines. D. Frisbie & Co., Philadelphia, Pa. Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N. Y. See illus. adv., p. 62.

English tanned Walrus Leather, Sea Lion, Oak, and Bull Neck Leather for Polishing. Greene, Tweed & Co., New York. Pays well on Small Investment.—Stereopticons, Magic Lanterns, and Views illustrating every subject for public exhibitions.

Lanterns for colleges, Sunday schools, and home amusements. 136 page illustrated catalogue free. McAllister, Manufacturing Optician, 49 Nassau St., N. Y.

Iron Planer, Lathe, Drill, and other machine tools of modern design. New Haven Mfg. Co., New Haven, Conn. Rubber Hose, Linen Hose, Rubber Sheet Packing, Empire Gum Core Packing, and all other kinds of steam packing. Greene, Tweed & Co., New York.

Manufacture of Soaps, Candles, Lubricants, and Glycerine. Illustrated. Price, \$4.00. E. & F. N. Spon, New York.

Machinists' Pattern Figures, Pattern Plates, and Letters. Vanderburgh, Wells & Co., 110 Fulton St., N. Y.

Ast nomical Telescopes, from 6' to largest size. Observatory Domes, all sizes. Warner & Swasey, Cleveland, O.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication.

References to former articles or answers should give date of paper and page or number of question.

Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and though we endeavor to reply to all, either by letter or in this department, each must take his turn.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Minerals sent for examination should be distinctly marked or labeled.

(1) P. H. desires a stain to imitate cherry. A. Rain water 3 quarts, annatto 4 ounces; boil in a copper kettle till the annatto is dissolved, then put in a piece of potash the size of a walnut; keep it on the fire about half an hour longer, and it is ready to bottle for use.

(2) W. C. writes: In making a red or yellow stain with dragon's blood or turmeric, I want to tone these colors with a black, soluble in alcohol. A. You can probably purchase an aniline black that is soluble in alcohol, or else use logwood.

(3) F. F. K.—Old zinc battery plates can be melted in an iron pot and cast into plates in moulding sand, or may be cast in an iron mould. Zinc melts just below a red heat. If the zincs have been amalgamated, you should avoid inhaling the fumes rising from the heated metal.

(4) J. W. B. desires a recipe for some fire-extinguishing liquid. A. One of the best solutions for the extinction of incipient fires consists of crude calcium chloride 20 parts, salt 5 parts, dissolved in water 75 parts. Keep at hand, and apply with a hand pump.

(5) E. E. G. asks how to make a leaf bluing. A. Use unsized paper and any of the following solutions: 1. Dissolve indigo sulphate in water and filter. 2. Dissolve good cotton blue in cold water. 3. Dissolve Prussian blue with one-eighth part of oxalic acid in water. 4. Dissolve Tieman's soluble blue in water with 2 per cent oxalic acid.

(6) A Subscriber asks how to make spirit varnish suitable for varnishing carved wood. A. Take 1 ounce copal and 1/2 ounce shellac; powder them well, and put them into a bottle or jar containing 1 quart alcohol. Place the mixture in a warm place and shake it occasionally until the gums are completely dissolved; and when strained the varnish will be ready for use.

(7) C. J. C. asks: What is cut glass, such as is sold by dealers? A dealer here has two berry dishes that look alike, prices \$1.00 and \$20.00. One he calls cut glass and the other an imitation, with rough surface. A. Any glassware that has been ground in facets and repolished is cut glass. The kind that you sketch is very expensive when cut.

(8) W. A. E. asks how India ink (liquid), such as is sold in the art supply stores, is made. A. Dissolve shellac in a hot aqueous solution of borax and rub up in this solution a fine quality of India ink. Or rub down genuine India ink with good black ink until it will flow easily from the pen. See ink erasers, in article on inks, in SCIENTIFIC AMERICAN SUPPLEMENT, No. 157.