

ENGINEERING INVENTIONS.

A fish plate fastening machine has been patented by Mr. Joseph H. N. Guilford, of Whigham, Ga.

A car coupling has been patented by Messrs. Clement Leidy and Charles E. Green, of Angus, Ohio.

A railroad tie has been patented by Messrs. Lee O. Vanderbilt and Milton E. Campney, of Muskegon, Mich.

AGRICULTURAL INVENTIONS.

A seed drill has been patented by Messrs. James J. Sweat, George H. Sweat, and Francis V. Sweat, of Conyersville, Tenn.

A combined hay and stock rack has been patented by Messrs. Jonas H. Hittle and Aurin D. Davis, of Mackinaw, Ill.

MISCELLANEOUS INVENTIONS.

A leather working machine has been patented by Mr. John A. Panton, of Quincy, Mass.

A soldering pan has been patented by Mr. Thomas Leslie, of Brooklyn, N. Y.

A portable fire escape has been patented by Mr. Hermann Wettstein, of Harvard, Ill.

A nut lock has been patented by Mr. Aaron C. Vaughan, of Shane's Crossing, Ohio.

A gate has been patented by Mr. Chas. L. Burden, of Gun City, Mo.

An automatic stove damper has been patented by Mr. Daniel J. Dunn, of West Fitchburg, Mass.

A fork forming machine has been patented by Mr. Philippe Denery Dupont, of Summerville, Vt.

A fire escape ladder has been patented by Mr. Joseph Barnett, of New York city.

Improvements in the walls of buildings and other structures form the subject of a patent issued to Mr. William H. Orr, of Carlisle, Ind.

A drum cover has been patented by Mr. George W. Brown, of New York city.

adapted to be drawn over the drum, and is more especially designed to protect the drum in stormy weather.

A coupling device for sand points in drive wells has been patented by Messrs. Charley F. Lang and Orlando C. Stafford, of Rising City, Neb.

A lock has been patented by Messrs. Thomas Donahue, James Roche, Willard T. Goodwin, and William W. Cone, of Terryville, Conn.

A lamp attachment has been patented by Messrs. Charles P. Bynon and James Stewart, Jr., of Yonkers, N. Y.

A darning attachment for sewing machines has been patented by Mr. Frederick W. Stewart, of Oswego, N. Y.

A windmill has been patented by Mr. Joseph Benoit, of New Braunfels, Tex.

An attachment for pants has been patented by Mr. John J. Neubert, of Rochester, N. Y.

A die for fifth wheel heads has been patented by Mr. Nicholas Eccles, of Auburn, N. Y.

A breeching attachment for vehicles has been patented by Mr. John C. Williams, of Aurora, Wis.

A chimney cap has been patented by Mr. Theodore J. Steen, of Oakland, Neb.

A burial apparatus has been patented by Mr. Marshal Chastain, of Moulton, Iowa.

A portable dark room for photographers has been patented by Mr. William W. Walker, of Williamsport, Pa.

A gluing table has been patented by Messrs. James H. Clemons, of Dolgeville, and Joseph W. Bower, of Stratford, N. Y.

A cherry pitting machine has been patented by Mr. James McVicker, of Caldwell, N. J.

An apparatus for rectifying spirits and spirituous liquors by electricity has been patented by Mr. Thomas E. Atkinson, of San Francisco, Cal.

Adapted to be drawn over the drum, and is more especially designed to protect the drum in stormy weather.

Business and Personal.

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

To Patentees.

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The Best Upright Hammers run by belt are made by W. P. Duncan & Co., Bellefonte, Penna.

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Experimental Machinery Perfected, Machinery Patterns, Light Forgings, etc. Tolhurst Machine Works, Troy, N. Y.

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Stationary, Marine, Portable, and Locomotive Boilers a specialty. Lake Erie Boiler Works, Buffalo, N. Y.

Wanted.—Patented articles or machinery to manufacture and introduce. Lexington Mfg. Co., Lexington, Ky. "How to Keep Boilers Clean." Book sent free by James F. Hotchkiss, 85 John St., New York.

Mills, Engines, and Boilers for all purposes and of every description. Send for circulars. Newell Universal Mill Co., 10 Barclay Street, N. Y.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. For Power & Economy, Alcott's Turbine, Mt. Holly, N. J. Steam Boilers, Rotary Bleachers, Wrought Iron Turn Tables, Plate Iron Work. Tippet & Wood, Easton, Pa.

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.

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C. B. Rogers & Co., Norwich, Conn., Wood Working Machinery of every kind. See adv., page 142.

Stephens' Pat. Bench Vices and Planer Chucks. See adv., p. 140.

Curtis Pressure Regulator and Steam Trap. See p. 153.

Woodwork'g Mach'y, Rollstone Mach. Co. Adv., p. 157.

We are sole manufacturers of the Fibrous Asbestos Removable Pipe and Boiler Coverings. We make pure asbestos goods of all kinds. The Chalmers-Spence Co., 419 East 8th Street, New York.

Hoisting Engines, Friction Clutch Pulleys, Cut-off Couplings. D. Frisbie & Co., Philadelphia, Pa.

Emerson's Book of Saws free. Reduced prices for 1885. 50,000 Sawyers and Lumbermen. Address Emerson, Smith & Co., Limited, Beaver Falls, Pa.

Hydraulic, Piston, Valve Rod, and all kinds of Steam and Water Packing. Greene, Tweed & Co., 118 Chambers St., N. Y.

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Solid and Shell Reamers, durable and efficient. Pratt & Whitney Co., Hartford, Conn.

Blake's Patent Belt Studs are the strongest and best fastening for Leather or Rubber Belts. Greene, Tweed & Co., N. Y.

For best low price Planer and Machy, and latest improved Sash, Door, and Blind Machinery, send for catalogue to Rowley & Hermance, Williamsport, Pa.

The Voltaic Belt Co., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles.

Split Pulleys at low prices, and of same strength and appearance as Whole Pulleys. Yocum & Son's Shafting Works. Drinker St., Philadelphia, Pa.

Nickel Plating.—Sole manufacturers cast nickel anodes, pure nickel salts, polishing compositions, etc. Complete outfit for plating, etc. Hanson, Van Winkle & Co., Newark, N. J., and 92 and 94 Liberty St., New York.

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.

(1) M. J. B.—The metric system is not the standard in the United States. You will not become a machinist by reading books.

(2) E. F. W.—SUPPLEMENT No. 160 will give you an idea of the construction of an induction coil such as you want.

(3) W. H. C. asks: What is the cheapest and simplest method of measuring resistances up to say 100 ohms? A. There is nothing cheaper than a rheostat and galvanometer.

(4) H. C. C. asks a simple recipe for preparing hop bitters.

Table with ingredients and measurements: A. Hops..... 2 oz., Dandelion..... 2 "., Gentian..... 2 "., Chamomiles..... 2 "., Stillingia..... 2 "., Orange peel..... 2 "., Alcohol..... 77 fl. oz., Water..... 77 "., Simple sirup..... 12 ".

Exhaust the drugs with the alcohol and water, and add the simple sirup. The cordial is a pleasant preparation, which is said to resemble the patented Hop Bitters.

(5) H. H. W.—Thunder is the sound resulting from an atmospheric electric discharge known as lightning. The duration of a flash of lightning is altogether too small to be determined by mere visual observation, though the sound is often prolonged for several seconds.

(6) G. F. J. writes: I have got a buggy that I keep in a barn where I have got three horses also. The varnish on the buggy becomes of a sulphur color.

(7) J. V. S. asks: 1. Is the attraction of a magnet increased by the number of coils of wire that surround the magnet? A. Yes, up to a certain limit; but the current must be adapted to the winding to secure a maximum result.

(8) M. B. asks: What is the best thing to do with a seasoned round piece of hickory about 3 inches in diameter, 1 foot long, to make it keep its round, true shape year after year? A. Boil in linseed oil.