

## ENGINEERING INVENTIONS.

A car brake has been patented by Mr. Charles E. Currie, of Butte, Montana Ter. It is adapted to be used by hand, and provides means whereby the hand shaft may be automatically locked at any point, or released by the operator's foot with ease as desired, the locking device being protected from dust and dirt.

A propeller has been patented by Mr. John Wooll, of San Francisco, Cal. This invention consists of the paddle traveling between ways or bars carried by a shaft, the paddle moving through said shaft and acted upon by a cam groove, to cause the paddle to perform its return movement with a minimum resistance to the water.

A car coupling has been patented by Mr. John C. Yeiser, of Junction City, Ky. This invention relates to car couplings in which the ordinary link and pin are used, and consists in improved means for holding the link in proper position for entering the drawhead of the opposite or approaching car without the necessity of an attendant going between the cars for the purpose of placing it.

A blow off for steam boilers has been patented by Mr. Stephen A. Moore, of Springfield, Ill. It consists of an exterior valved pipe, and an interior pipe connected thereto, having longitudinal straight slots on the lower and opposite sides of the center of an area not exceeding that of the valved pipe, to insure action in blowing out dirt and sediment throughout the length of the boiler.

A piston packing has been patented by Mr. Jackson Garrison, of Milnes, Va. This invention relates to pistons working where metallic rings are used for packing, the construction being specially devised so the packing rings may be readily adjusted to the degree of tightness necessary to make a perfect working fit, and to reset from time to time, as required by the wearing of the cylinder and the rings.

A feathering paddle wheel has been patented by Mr. John P. Hickey, of Washington, D. C. This invention covers special details of construction and combinations of parts for paddle wheels for steamboats, by which the paddles or floats are in position to press against the water as soon as they enter it, and continue in that position as long as they can produce any useful effect.

A car coupling has been patented by Messrs. Thomas T. and James M. Deavenport, of Okolona, Miss. The drawhead has at its front upwardly and inwardly inclined prongs, on which the link catches when the cars are coupled; in a slot in the bottom of the drawhead a link lifter is pivoted, which can be locked in place by a pawl mounted on a transverse shaft in the drawhead, the shaft having its end bent and a heavy weight thereon, which weight is connected by a chain with a lever pivoted on the end or top of the car.

## AGRICULTURAL INVENTIONS.

A potato digger has been patented by Mr. William H. Prentiss, of Calata, Ohio. Its construction is such that when the machine is drawn forward with the scoop in working condition the potatoes and soil are passed back upon bars, by the shaking of which the soil is liberated and the potatoes fall on the ground at the rear ready to be gathered.

A check rowing attachment for corn planters has been patented by Mr. William S. Reeve, of Edwardsport, Ind. It is made with a frame carrying a wheel with cams attached to its journals to operate unequal sliding rods connected by an equal armed lever, the longer rod connected with the seed dropping slide of a planter by an elbow lever, so the slide will be operated by the revolution of the wheel.

## MISCELLANEOUS INVENTIONS.

A fan attachment for elevators has been patented by Mr. Richard Marshall, of Brooklyn, N. Y. It consists principally of suitable gearing arranged to be revolved by the up and down movement of the elevator cage, to operate a fan at the top of the cage, and thus promote the comfort of the passengers.

A combined lapel vest and overshirt has been patented by Mr. Abe W. Mensor, of Jacksonville, Oregon. It provides different exposures of the bosoms and cuffs on its right and left hand sides, having duplicate bosoms and cuffs, whereby the same garment is made to answer different uses.

A safety vent for beer kegs has been patented by Mr. Niels Olson, of Perth Amboy, N. J. This invention covers a specially constructed safety vent and air pipe, to facilitate the drawing of the liquid from the keg and provide for the escape of the gases, so as to keep the liquid in fresh condition and avoid waste.

A ventilating cover has been patented by Mr. Ralph J. Smith, of San Marcos, Tex. A ventilating tube projects upward from the cover, with gauze on the upper end of the tube and a casing surrounding it, so the contents of vessels may be protected from dust, insects, etc., and at the same time be thoroughly ventilated.

A window blind slat holder has been patented by Mr. William Jensen, of Victoria, British Columbia. It is a single piece of wire bent to form an upright spring portion or arm and a horizontal spike portion adapted to be driven into the cross piece of a window blind, notches in the holder engaging with stops to hold the slats in any desired position.

A brake shoe clamp has been patented by Mr. Leander King, of Georgetown, Ohio. On the side edges of the brake block are clamps secured at the top and bottom, those parts of the clamps projecting from the face of the block being inclined toward each other and adapted to receive and hold the brake shoe between them.

A lubricating compound has been patented by Mr. Dyson D. Wass, of New York city. It is composed of paraffine, mineral oil, and talc, compounded in a specially described way, and to which alcohol may or may not be added, making a compound which is clean to use and does not gum up the parts of the machinery.

A wagon box has been patented by Mr. Jesse F. Ruhl, of Topeka, Kan. This invention covers a special construction and arrangement to hold the detachable sides of wagon boxes securely in place, and whereby a close and tight joint will be formed in such wagon boxes, to prevent grain, sand, etc., from working through.

A door closer has been patented by Mr. John McDonald, of Middletown, Ohio. Combined with a rotary bearing block, a crank shaft journaled therein, with a weight attached to one end, are means for connecting the crank shaft with a door, with other novel features, the device being such as can be made in one piece with the door hinge.

An apparatus for watering swine has been patented by Mr. Hermann H. Wempe, of Capoma, Kan. It is so constructed as to prevent the animals from lying down in the trough, and so that water may be conveniently supplied at will or automatically, the distinguishing feature being in the form and arrangement of the water receptacle.

A spring gear for vehicles has been patented by Mr. Benjamin P. Morrison, of Marion, Va. This invention consists in equalizing gear applied in connection with springs of the Concord pattern, the gear being inexpensive and durable, and such that by its use the usual perch side bars, axle beds, fifth wheel, bolster, and body loops are dispensed with.

An improvement in the manufacture of cut nails has been patented by Mr. John Young, of Wheeling, West Va. This invention provides a new form of die for shaping the nail about the head, so its strength will be re-enforced, and thus prevent the heads from being so frequently broken off in driving as has been the case heretofore.

A fence has been patented by Messrs. Andrew J. Russell and William M. Gooden, of London Bridge, Va. The object is to construct a strong fence without nails or screws, which shall be portable in finished sections and be easily and cheaply made, the stakes, rails, and posts for this purpose being wired together to form a rigid framework.

A saw clamp has been patented by Mr. A. Floyd Delafield, of Noroton, Conn. Combined with two bars and a screw for clamping them together and against the saw blade placed between them is a handle on which the clamp thus formed is held, making a device by which short pieces of saws may be used for sawing through pieces of metal or tubes.

A centrifugal ore filter has been patented by Mr. Thomas T. Eyre, of Carlisle, New Mexico. This invention covers a special construction and arrangement of parts to maintain centrifugal action in the semi-fluid ore until the valuable properties have been withdrawn, to introduce water, gaseous, and other fluids as may be required, and to discharge the valuable properties and the refuse matter from different outlets.

A cartridge belt has been patented by Mr. Willie P. Beach, of El Paso, Texas. This invention consists in the combination, with a belt, of a strap held on the same by upright metal fasteners and forming pockets on the belt, a cord being passed transversely through the several pockets, with other novel features, to form a simple, strong, and durable cartridge belt.

A shutter fastener has been patented by Mr. John Von Hollen, of Charleston, S. C. It consists in a shutter bolt made in two parts, screwed to each other, and having a conical head, behind which the latch bar on the shutter drops to lock the shutter open, the invention affording a wide range of adjustment of the extensible bolt catch with but few sizes of the bolt.

A shutter bolt has been patented by Mr. John Von Hollen, of Charleston, S. C. This invention consists in providing a collar near the inner conically headed end of the extensible catch of the bolt, the collar serving as a bearing for the inner end of the bolt in the hole made in the window frame or wall, for securing bars over closed window shutters or blinds, and for other purposes.

A drop light and chandelier has been patented by Mr. John Trigge, of Mount Vernon, N. Y. The chandelier has an extension or drop light with rack teeth engaging with cog wheels in a box, one of the wheels being connected by an automatic clutching device with a disk on which a brake spring or lever rests, to prevent the drop light from sliding down when once adjusted.

A powder keg discharge tube has been patented by Mr. Augustus H. Whitman, of Minersville, Pa. Combined with a tube having a flange around its lower end, and with a slot in its side, is an inner tube with a shoulder around its lower end, and with a side pin engaging with the slot in the outer tube, so the discharge tube can be snugly secured to the head of the powder keg, and readily detached.

An amalgam strainer has been patented by Mr. Jeremiah Kirby, of Marysville, Montana Ter. This invention provides a new kind of top for the funnel-shaped canvas bags used for separating quicksilver from gold and silver amalgam, so that when the canvas is worn it will not have to be cut off and resewed around the iron ring, but can be readily released and readjusted with a ring and thumb screws.

An upright-beater baling press has been patented by Mr. John J. Platt, of Rising Sun, Ind. It is made with one or more knives attached to the beater, to cut each feed into two or more parts as it is compressed by the beater, and thus form two or more small bales at one operation without any increase of labor over that required for a single large bale as heretofore formed in such presses.

A bridge has been patented by Mr. William O. Douglas, of Binghamton, N. Y. This invention combines a tension floor line chord with a strut brace, so that a point in the end post is rigidly fixed to resist the pull of the chords, and both flanges of the wind truss will always be in tension, the invention being more especially designed for parabolic truss bridges, to cheapen their cost and increase their efficiency.

A candlestick has been patented by Mr. Elijah Carpenter, of Lafayette, Oregon. Combined

with a candlestick having a stationary post and a sleeve to slide vertically therein there is a spring within the post, having a nib projecting through a hole in the post to bear against the inner face of the sleeve, thus supporting the candle in an upright position while burning, and serving as a handle by which it may be carried.

An aerial drop for explosives, to be used in connection with a suitable balloon, and its motion regulated by a time mechanism, has been patented by Mr. Moses L. S. Buckner, of Shelbyville, Ky. The propelling mechanism is on the clockwork principle, and the apparatus is set according to the course of the wind and the distance of the enemy, which it is expected can thus be reached at greater distances than explosives can now be thrown.

A top plate for bone black kilns has been patented by Mr. Edward P. Eastwick, of New York city. This invention consists principally in making all of the surfaces of the covering plates flaring or inclined toward the openings that direct the bone black into the retorts, preventing the lodgment thereon and obviating the necessity for sweeping the lodged bone black from time to time into the openings.

A draught regulator has been patented by Mr. George W. Lore, of Fayette, N. Y. It consists of a casing formed with two truncated hollow cone-sections united at their bases and having their truncated ends connected with the ends of the pipes, which extend into the cone sections only sufficient to unite them, and the bottom cone section having a series of apertures which can be closed by a valve.

A pill counter has been patented by Mr. David B. Moore, of St. Louis, Mo. It consists of a flat strip of wood or other material with perforations corresponding with the number of pills to be counted, with a trough which answers as a bottom for the pill cavities and as a discharging spout for guiding the pills into the box or package into which they are to be discharged.

An apparatus for delivering clean water into cisterns from roofs of buildings has been patented by Mr. Francois Sangan, of Thibodeaux, La. A water receiving vessel is located in the line of the pipe which discharges water into the main cistern, this vessel having a tapering neck and float valve, which rises and cuts off communication when the receiving vessel is full with the water first coming off the roof in a storm, after which the roof drainage flows into the main cistern.

A saw swage has been patented by Mr. Thomas Newnham, of Wainright, Ga. This invention provides a simple and efficient swage for setting the saw teeth from the under or throat edges, thereby insuring better working clearance of the teeth, and one which will set the teeth gradually, and by a rolling action of the swaging die, allowing hard or brittle saw teeth to be set without breaking or cracking their points.

A shoe fastening has been patented by Mr. Henry H. Rodman, of Wilkesbarre, Pa. The opening in the shoe is at the back of the heel, where the tongue is passed through clips in such a manner that as the tongue is drawn downward the rear of the shoe can be opened for the foot to enter, but when the shoe is to be closed the tongue is drawn upward through the clips, and straps projecting from one end of the tongue are passed around the ankle to fasten in front.

A tentering machine has been patented by Mr. Andrew McLean, of New York city. In combination with the guide roller and regulating roller and means for revolving them, are independent stretching and feeding wheels, so the main operative parts will not be revolved by positive power, but by frictional contact with the rollers of the wet or starched cloth being drawn through the machine by the cylinders of the drying machine, the differential movement of the surfaces of the rollers exerts a powerful action, and the cloth is properly stretched in all directions.

An improved lamp wick has been patented by Mr. Ives Lynd, of Troy, N. Y. It may be knit in an ordinary knitting machine, but is so designed as to form straight longitudinal ribs upon the sides of the wick, with intermediate passages, which extend the whole length of the wick, and are entirely unobstructed, so as to furnish continuous ducts or small tubes through which the oil is drawn freely to the blaze. The wick is cheaply made, and is intended to furnish the greatest possible amount of light from heavy as well as from light oils, the easy flow of oil to the flame preventing charring and crusting of the top of the wick, the latter being so porous that the oil is always fed abundantly enough to prevent this, a desideratum which has been much sought after of late. These wicks may also be used in oil reservoirs for conducting oil to journals, boxes, and bearings of all kinds to be lubricated.

## Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

All Scientific Books and App. cheap. School Electricity, N. Y.

Steamboats supplied with Pumps for every service by Valley Machine Works, Easthampton, Mass.

Machinery and Special tools of all kinds perfected. Interchangeable Tool Co., 313 North 2d St., Brooklyn, N. Y.

Send for Special List of Second-hand Machinery. Pond Machine Tool Co., Worcester, Mass.

Small Size Universal Milling Machine. Price, \$700, f.o.b. Best in the market. Send for circular. Brown & Sharpe Mfg. Co., Box 469, Providence, R. I.

"How to Keep Boilers Clean." Send your address for free 88 page book. Jas. C. Hotchkiss, 361 John St., N. Y.

Wanted.—Capital to manufacture sugar at one cent a pound. Address Collier Process, P. O. Box 775, N. Y.

The most complete catalogue of Scientific and Mechanical Books ever published will be sent free on application to Munn & Co., 361 Broadway, N. Y.

Pure Turkey Emery, English tanned Walrus, and Polishers' Supplies. Greene, Tweed & Co., N. Y.

Peck's Patent Drop Lifters can be attached to any drop. Beecher & Peck, New Haven, Conn.

Stephens' Patent Bench Vises are the best. See adv., p. 288.

\$2.50 buys a Keyless Drawer Lock that has not been picked. Miller Lock Works, Philadelphia, Pa.

Cars to face your course with speed and ease. At Alex. Beckers, Hoboken, N. J.

Shafting, Couplings, Hangers, Pulleys, Edison Shafting Mfg. Co., 86 Goerck St., N. Y. Send for catalogue and prices. Air Compressors, Rock Drills, Jas. Clayton, B'klyn, N. Y.

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

Iron Planer, Lathe, Drill, and other machine tools of modern design. New Haven Mfg. Co., New Haven, Conn.

The leading Non-conducting Covering for Boilers, Pipes, etc., is Wm. Berkefeld's Fossil Meal Composition:  $\frac{3}{4}$  inch thickness radiates less heat than any other covering does with two inches. Sold in dry state by the pound. Fossil Meal Co., 48 Cedar St., N. Y.

Every variety of Rubber Belting, Hose, Packing, Gaskets, Springs, Tubing, Rubber Covered Rollers, Deckle Straps, Printers' Blankets, manufactured by Boston Belting Co., 226 Devonshire St., Boston, and 70 Reade St., New York.

Brush Electric Arc Lights and Storage Batteries. Twenty thousand Arc Lights already sold. Our largest machine gives 65 Arc Lights with 45 horse power. Our Storage Battery is the only practical one in the market. Brush Electric Co., Cleveland, O.

Write to Munn & Co., 361 Broadway, N. Y., for catalogue of Scientific Books for sale by them.

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, 361 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.

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. For instructions address Munn & Co., SCIENTIFIC AMERICAN patent agency, 361 Broadway, New York.

Guild & Garrison's Steam Pump Works, Brooklyn, N. Y. Steam Pumping Machinery of every description. Send for catalogue.

Machinery for Light Manufacturing, on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y.

Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co., Box 423, Pottsville, Pa. See p. 254.

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.

For Steam and Power Pumping Machinery of Single and Duplex Pattern, embracing boiler feed, fire and low pressure pumps, independent condensing outfits, vacuum, hydraulic, artesian, and deep well pumps, air compressors, address Geo. F. Blake Mfg. Co., 44 Washington St., Boston; 97 Liberty St., N. Y. Send for catalogue.

Send for catalogue of Scientific Books for sale by Munn & Co., 361 Broadway, N. Y. Free on application.

Economy Belting for driving belts. Durable and cheap. Send for circular. Greene, Tweed & Co., N. Y.

C. B. Rogers & Co., Norwich, Conn., Wood Working Machinery of every kind. See adv., page 270.

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. The SUPPLEMENT contains lengthy articles embracing the whole range of engineering, mechanics, and physical science. Address Munn & Co., Publishers, New York.

Curtis Pressure Regulator and Steam Trap. See p. 285.

Woodwork'g Mach'y, Rollstone Mach. Co. Adv., p. 284.

Wood Working Machinery. Full line. Williamsport Machine Co., 110 W. 3d St., Williamsport, Pa., U. S. A.

Iron and Steel Drop Forgings of every description. Billings & Spencer Co., Hartford, Conn.

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.

Steam Hammers, Improved Hydraulic Jacks, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

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

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

A Handbook on the Teeth of Gears, \$1. Circular free. Gear Wheels and Gear Cutting. Send for Catalogue S. Geo. B. Grant, 66 Beverly Street, Boston, Mass. Barrel, Keg, Hogshead, Stave Mach'y. See adv. p. 270.

Wanted.—Patented articles or hardware specialties to manufacture on contract or to manufacture and place on the market. First-class facilities. Correspondence solicited. Address Hull Vapor Stove Co., Cleveland, Ohio.

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

Young Men! Read This! 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. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor, and manhood guaranteed. No risk is incurred, as thirty days' trial is allowed. Write them at once for illustrated pamphlet free.

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