

ENGINEERING INVENTIONS.

A friction coupling for shafts, toothed wheels, and pulleys has been patented by Mr. Franz Braun, of Berlin, Germany. The invention provides a novel construction and arrangement of parts, whereby shafts can be coupled and uncoupled very easily and rapidly, without causing stoppage of work or lateral pressure on bearings.

A noiseless steam nozzle has been patented by Mr. Carleton W. Nason, of Montclair, N. J. It has a slotted tube surrounded by a perforated casing packed with asbestos fiber, filling the intermediate space, so the steam must go through this fiber in passing into water, whereby all noises or water hammering is prevented.

A railway signal has been patented by Mr. William Hadden, of Brooklyn, N. Y. The invention makes a novel arrangement of the circuit in the "block" system by which the signals are operated on a closed circuit, and worked with equal facility from either end of the section automatically, or from any part of the line, by means of a switch of peculiar construction.

A car coupling has been patented by Mr. John C. Bryan, of Holly Springs, Ark. It combines, in connection with the drawhead, and a frame carrying the coupling pin, an arrangement of levers and retaining spring, making a novel mechanism for car coupling, automatic in its operation, and that may be actuated from the top or either side of the car.

A railroad switch stand has been patented by Mr. Charles H. Talmage, of Atchison, Kas. It is an improvement for what is known as the "three throw split switch," and there are gears connecting the two switch shafts with the shaft of an operating lever by a partly toothed wheel, so the two switches may be operated by the same hand lever, thus simplifying the apparatus and lessening the cost.

MECHANICAL INVENTIONS.

A machine for making wire or other solder has been patented by Messrs. Edmund L. Young and Lucius Dyer, of Millbridge, Me. In running or casting wire solder, the molten solder, by this invention, is run into grooves on a revolving mould and cooler, and is picked up therefrom and afterward reeled or otherwise delivered either as coiled wire, sticks, or as desired.

A machine for making coiled wire ferrules has been patented by Mr. Joseph Crowfoot, of Bridgeport, Conn. It has a mandrel revolved by suitable mechanism within a stationary band having an inclined upper edge to raise the wire as it is coiled and form a space for the next coil, with a jacket for supplying solder, and novel arrangement and construction to keep the mandrel cool and do rapid and efficient work.

AGRICULTURAL INVENTIONS.

A cultivator has been patented by Mr. Frederick L. Hilsabeck, of Shelbyville, Ill. This invention is designed to improve cultivators used for working on both sides of a row of plants, and has a runner device on which the cultivator may ride to carry the plows above ground.

A cotton seed planter and fertilizer distributor has been patented by Mr. Ge Hu Port, of Seventh District, Coweta County, Ga. It has a peculiar arrangement and construction of parts, so that the drive wheel rocks a feed wheel, and the bottom of the feed box is loose, so that a smaller or larger discharge may be arranged for as desired.

A straw stacker has been patented by Mr. Thomas Major, of Jackson Township, Clinton County, Ind. The object of the invention is to facilitate the adjusting, controlling, and moving of straw stackers, and promote efficiency in their working, the straw being received from the thrasher or separator upon the lower part of the carrier and discharged from the upper end upon the stack, the carrier being conveniently arranged for the increasing height of the stack, and the stacker turning laterally through nearly the arc of a semicircle.

MISCELLANEOUS INVENTIONS.

An improved swamp and grab hook has been patented by Mr. Albert M. Millard, of Wausau, Wis. It is a special form of hook for rolling logs on to croches in the forests, and for grabbing and pulling chains, skids, and other objects.

A game register and trump indicator has been patented by Mr. George W. Hyatt, of New York city. This invention provides a convenient means of keeping the score in games, and the points of each game, while at the same time indicating the trump of the game in progress.

An improved harness has been patented by Mr. Green Thompson, of New Salem, Ind. The object is specially to improve harness for working hay carriers and hoisting gear, and a rigid bar trace is provided which, with the other parts, wholly does away with the falling of the whiffletree.

An improved apparatus for utilizing wave power has been patented by Mr. Thomas Mayes, of Albany, N. Y. It is strong and simple, consisting of a dashboard suspended in a frame, and having a connecting rod for imparting motion either directly or by a crank to connected machinery.

A receiving telephone has been patented by Mr. Lyman W. Sutton, Jr., of Newton, N. J. The invention covers a magneto electric telephone consisting of the combination of a resonant magnetic tube, open at both ends, a magnet, and a helix, all in inductive relation to each other.

A folding baby carriage has been patented by Mr. Harry A. Jackson, of Brooklyn, N. Y. It is of special construction, whereby it may be folded compactly when not in use, and has a canopy attachment, or improved device for holding a sunshade in any desired position.

An improved bilge water alarm has been patented by Mr. George W. Gilmore, of Webster, Pa. The invention consists principally of a float and attach-

ed weight and screw for moving a drop weight or other object, to give an alarm when the water in the hull rises above a certain level.

An improved fire escape has been patented by Messrs. Otis G. Moore and Morris H. Marcus, of Edinburg, Pa. It provides for a chute of flexible material extending from a window to the ground, down which persons slide in escaping from fire, and the chute is made in sections to give it rather a zigzag shape.

An improved crutch has been patented by Mr. William H. D. Luakow, of La Porte City, Iowa. This invention provides for an extensible rod connected to the hand hold, so that, by a rotary adjustment there, the prod may be projected as a safeguard against slipping, or withdrawn when it is no longer required.

A folding egg case has been patented by Mr. Jesse J. De Berry, of Smithville, Mo. It occupies but little space when not in use, or when being returned to the shipper, as it can be compactly folded, but by the use of hinged side and end boards, and folding partitions, a practical case for shipping eggs and other articles to market is readily set up.

A screw driving mechanism for baling presses and other uses has been patented by Mr. Patrick Slattery, of Charleston, S. C. It is made with a box through which passes a screw with two nuts connected by two sets of gear wheels with an intermediate gear wheel, to which power is applied by a ratchet pawl lever.

A composition of matter for moulding fruits, fancy topped tables, birds, etc., has been patented by Elmina Brady, of Portlanville, N. Y. It consists of hard stone, common sand, slate stone, white sand, clam shells, common brick, charcoal, blue clay, water, and linseed oil, in certain proportions, prepared after a specific manner.

A road cart has been patented by Mr. Henry Horstop, of Rutherford, Cal. It has springs above and below the forward ends of the side bars, kept in place by staples attached to the thills, guide eyes on the side bars and yokes, so the unpleasant motion of the cart is prevented, and the cart can be readily adjusted for a large or small horse.

A button fly clamp has been patented by Mr. Isidor Feiber, of Nyack, N. Y. It facilitates the labor of scalloping shoe button lugs or flies, and avoids the necessity of making nail holes in the stock, there being a clamp and plate swiveled to an operating screw with pins for guiding the plate, cushions for protecting the pattern, etc.

An improved artificial stone has been patented by Mr. William Howell, of Philadelphia, Pa. The stone is adapted to be used for building, pavements, drain pipe, or plastering, and other uses, and is composed of a special preparation and combinations of muriatic acid, flour of sulphur, molasses, iron scale, sand, and cement.

A machine for stretching and removing fence wires has been patented by Mr. John N. Killough, of Aurora, Texas. It is a cheaply made and durable contrivance, affording material advantages for stretching wires along the fence posts, straining them taut while being fastened, and also for removing or changing them in resetting the fence.

A machine for cutting out garments has been patented by Mr. Solomon Rich, of Joplin, Mo. In combination with a cutting table is an endless flexible knife belt, against which belt cutter the material is advanced as it is cut, under a pressing roller to keep the material free from wrinkles or plaits, so that several patterns may be cut at once.

A watch regulator has been patented by Messrs. Ernest J. Roux and Louis U. Fatio, of Geneva, Switzerland. It is an improved device for adjusting the hair spring regulator very finely and accurately, for by turning a wheel the distance of one tooth the pointer is moved a distance so minute that it could not be similarly adjusted by hand.

A saw back has been patented by Mr. Thomas Beard, of Kokomo, Ind. The invention relates to improvements in constructing the common saw bucks to hold the wood firmly; plates are provided with coarse saw-shaped teeth secured to the saw buck, in combination with a toothed lever pivoted thereto, provided with springs and a foot treadle.

A permutation lock has been patented by Messrs. William B. Atkinson and John H. Foster, of Franklin, Ky. This invention relates to an improvement on a part of a lock patented by Mr. Atkinson in May, 1883, and consists in special means for adjusting the tumbler to throw it in and out of engagement with the ward wheels.

A dinner pail has been patented by Mr. William H. Carbaugh, of Columbus, O. The invention covers a particular construction and arrangement of parts, by which coffee may be kept in a tight pot, in an unobjectionable position, or can be removed for heating without leaving the pail uncovered; there is also a pan that may be used to hold or for heating food.

A fire escape and alarm has been patented by Mr. William S. French, of Jackson, Mich. A drum or roll is to be arranged in the cornice brackets for winding up a chain or similar ladder, the drum being held by a wheel and pawl, from which cords or wires extend to the different rooms, to be pulled from any one in case of fire, when an alarm will be sounded and the ladder let down.

An improved trunk has been patented by Mr. August Kroesing, of Berlin, Germany, assignor to Mr. E. Gustav Eschenhorn, 17 Neu Kolm, the same city. It is waterproof, and has buoyant wings to increase its buoyancy and stability, with eyes or rings for fastening ropes or holding signals, packing strips in the joints, and angle plates overlapping the cover and secured to the sides and ends of the bottom section.

A cut-out for telephones has been patented by Messrs. Austin Williams and Joseph M. Gannon, of Negaunee, Mich. It provides for a swinging board or strip with a series of metal strips connected with the line wires, the board so adjustable that its metal strips close the circuit between the line wires, or between those and the ground wires, so all lines may be cut out and grounded simultaneously.

A coal cleaner has been patented by Mr. William H. Shepherd, of Pittston, Pa. It is designed to separate slate from coal as the latter passes down the chutes from the grading screens, for which purpose stationary grate bars are placed in an opening in the chute body, alternated with movable grate bars, connected by cross bars with sliding rods, also connected with a rock shaft driven from a rotary crank shaft.

An improvement in rubber clothing has been patented by Mr. George Platt, of Butte, Montana. The object is to provide a complete suit that can be easily put on and off, and fit neatly and keep out the wet. The boots and trousers are combined, the latter having inner and outer flaps, while the coat also has two sets of flaps, with properly arranged buckles and straps, the trousers being suspended from the coat.

A process of making sirup and sugar from sorghum cane has been patented by Mr. Andrew J. Adamsom, of Sabetha, Kas. It consists in first roasting the cane to help eliminate green vegetable matter, then expressing the juice and filtering and boiling, thus getting a much purer sirup than by the usual method, one that will not sour so readily, and free from rank sorghum taste.

A carriage spring has been patented by Mr. Benjamin P. Morrison, of Abingdon, Va. The spring is very simple in construction, and can mostly be made in an ordinary blacksmith's shop, its design being such that the effect of a load on either of the supporting bars will depress the body alike from end to end, or the bars may be so connected that a load on any part will depress the whole bed equally.

A combined shovel and shield has been patented by Mr. John J. Holland, of New Orleans, La. The blade is detachable for use as a shield, the handle is formed in hollow sections, adapting it for the reception of small implements, a sling pouch is also provided for carrying the dismembered sections, and the whole is capable of quick and interchangeable adjustments for various uses.

An improved pipe coupling or joint has been patented by Mr. Robert M. Reilly, of Baltimore, Md. It provides for horseshoe pieces, each with lug and pins, inserted between collars opposite each other on the male portion of the pipe, and secured to the female portion by bolts through a flange, the whole to facilitate the turning of the pipe, for branch connection or pitch, without impairing the joints.

A single cable track railway has been patented by Mr. Joseph J. Clisham, of San Diego, Cal. It provides for a single wire, loosely hung between posts, and the wire passing once around the axis of a spool; cords from the ends of the axis connect with a cord attached to a balloon or kite, which the wind moves along, the basket or parcels to be carried to be attached to the spool.

A press for moulding glass has been patented by Messrs. Adrien A. and Leon A. Appert, of Paris, France. It is intended to use compressed air, or other suitable means, the system giving as strong a pressure as desired, acting rapidly or slowly as desired, giving regular pressure with shock, doing the work rapidly, and not calling for more than one workman, whatever the pressure and size of the piece.

A compressor for compressing bran and other substances into packages has been patented by Mr. Geury A. Chapman, of Strawberry Point, Iowa. By this invention bran may be compressed so its weight will be greater than that of an equal cubic measure of grain, but the strain in compression in no way comes on the sides or bottom of the sack, and the cover may be made fast while the bran is under compression.

An improved calf weaner has been patented by Mr. Max J. Ahlgrim, of Rose Lawn, Ind. The invention consists of a half muzzle, made of wire or other light material, which is hung over the calf's nose on pivots fastened in a halter at the cheeks. There are arms connected with the muzzle which extend down below the jaw, and these carry a weight which a little overbalances the muzzle above. The weaner is automatic, for when the calf lowers its head to feed, the muzzle will swing above its nose and so not interfere with its feeding, but when the calf raises its head up to suck its nose will move in the muzzle, which is also armed with barbs, thereby interfering with its getting hold of the teat. It is attached and detached by simply unbackling the halter.

NEW BOOKS AND PUBLICATIONS.

The "ART AGE," is the title of a handsome gotten up and beautifully printed monthly publication, issued by Arthur B. Turnure, 132 Nassau Street, New York city. It is designed to place before the trade and people of educated tastes generally, something in advance of what has yet been done in the way of artistic printing and book binding. As a contemporary says of it, *Art Age* is designed to become the organ of new and advanced ideas of art, as applied in all forms of printing and bookmaking.

SUGGESTIONS TO CHINA PAINTERS. By Miss M. Louise McLaughlin. Robert Clark & Co., Cincinnati.

The chapters on "Colors," "Preparing gold and silver for the decoration of porcelain," and "The use of metallic paints" are especially worth attention as giving a good deal of information in but few words. The book is illustrated with simple and artistic designs for plaques, vases, cups, etc., drawn by the author, accompanied by instructions as to colors to be used, treatment, etc.

A "RETAIL DRUGGIST'S DIARY AND WANT BOOK," published by Frederick Stearns & Company, manufacturing pharmacists, of Detroit, Mich., contains a great deal of information in very convenient form for daily use in the drug store. It has also, besides diary pages, a pharmaceutical catalogue of over 14,000 items, and an extended list of non-secret medicines.

A "CHEMISTS' AND DRUGGISTS' DIARY," published by the *Chemist and Druggist*, of London, contains a large amount of interesting matter for those in that business, besides being a convenient diary for use in the store.

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 at least as Thursday morning to appear in next issue.

Parchment.—Drawing and tracing papers, used to advantage for all tracings and for drawings to be copied by the "blue process." "Helios" blue process paper, the best paper for the purpose. Send for samples and price list. Keuffel & Esser, New York.

As there is an international agreement about the quality of Chinese tea and Brazilian coffee, so it is settled by all nations that the tobacco of the Golden Belt of North Carolina is par excellence the tobacco for the pipe or cigarette. In Blackwell's Durham Long Cut it is seen at its best. That brand preserves this celebrated tobacco in its natural purity, all its flavors and fragrances unimpaired.

Parties having original ideas in specialties and novelties, useful or ornamental, desiring to establish New York agents or to have same manufactured and placed successfully on the market, write or call upon H. J. Tenney & Co., 17 Bond Street, N. Y.

Best in the world. Patent chuck jaws, emery wheel machinery, and automatic machines to grind straight and sharp. Planer, veneer, logwood, leather, paper mill, plate, cottonseed and other long knives. Am. Twist Drill Co., Meredith, N. H. (Established 1865.)

Telescopes, etc. M. Tydemann, 9th and Linden Streets, Camden, N. J.

Quinn's device for stopping leaks in boiler tubes. Address S. M. Co., South Newmarket, N. H.

Nickel plating outfits \$10.00 upward, full directions. E. G. Ford, Ottawa, Ill.

"How to Keep Boilers Clean." Book sent free by James F. Hotchkiss, 86 John St. New York.

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

Pumps—Hand & Power, Boiler Pumps. The Goulds Mfg. Co., Seneca Falls, N. Y., & 15 Park Place, New York.

Fox's Corrugated Boiler Furnace, illus. p. 354. Hartmann, Le Doux & Maecker, sole agents, 134 Pearl St., N. Y.

For Freight and Passenger Elevators send to L. S. Graves & Son, Rochester, N. Y.

Best Squaring Shears, Tanners', and Cannery's Tools at Niagara Stamping and Tool Company, Buffalo, N. Y.

Lathes 14 in. swing, with and without back gears and screw. J. Birkenhead, Mansfield, Mass.

The Best.—The Duerber Watch Case.

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.

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

Lists 29, 30 & 31, describing 4,000 new and 2d-hand machines, ready for distribution. State just what machines wanted. Forsaith & Co., Manchester, N. H., & N. Y. city.

For Power & Economy, Alcott's Turbine, Mt. Holly, N. J. "Abbe" Bolt Forging Machines and "Palmer" Power Hammers a specialty. Forsaith & Co., Manchester, N. H.

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

Wanted.—Patented articles or machinery to make and introduce. Gaynor & Fitzgerald, New Haven, Conn.

Water purified for all purposes, from household supplies to those of largest cities, by the improved filters manufactured by the Newark Filtering Co., 177 Commerce St., Newark, N. J.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. Split Pulleys at low prices, and of same strength and appearance as Whole Pulleys. Yocom & Son's Shafting Works, Drinker St., Philadelphia, Pa.

Supplement Catalogue.—Persons in pursuit of information on 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.

Machinery for Light Manufacturing, on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y. Fossil Meal Composition, the leading non-conducting covering for boilers, pipes, etc. See adv., p. 62.

Straight Line Engine Co., Syracuse, N. Y. Best in design, materials, workmanship, governing; no packing. Curtis Pressure Regulator and Steam Trap. See p. 14.

Woodwork'g Mach'y. Rollstone Mach. Co. Adv., p. 14.

C. B. Rogers & Co., Norwich, Conn., Wood Working Machinery of every kind. See adv., page 14.

Lightning Screw Plates, Labor-saving. Tools, p. 12.

Ajax Metal Company, Phila. Clamer's Ajax Metals for railroad rolling mill, engine bearings, cocks, and valves. Steam Hammers, Improved Hydraulic Jacks, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

Emerson's 1884 Book of Saws. New matter 75,000. Free. Address Emerson, Smith & Co., Beaver Falls, Pa.

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

Gould & Eberhardt's Machinists' Tools. See adv., p. 46.

Railroad and Manufacturer's Supplies. Send for 1884 list and discounts, Greene, Tweed & Co., New York.

For Mill Mach'y & Mill Furnishing, see illus. adv. p. 44.

Barrel, Keg, Hothead, Stave Mach'y. See adv., p. 46.

Diamond Drills, J. Dickinson, 64 Nassau St., N. Y.

Magic Lanterns and Stereoscopes of all kinds and prices. Views illustrating every subject for public exhibitions. Sunday schools, colleges, and home entertainment. 116 page illustrated catalogue free. McAllister Manufacturing Optician, 49 Nassau St., New York.