

**ENGINEERING INVENTIONS.**

A steam boiler has been patented by Mr. Samuel P. Hedges, of Greenport, N. Y. It has vertical and horizontal cylinders with inlet and blow-off pipes, and with projecting pipes having interior circulation pipes, whereby steam will be generated quickly, and all the parts are easily accessible.

An axle box lid has been patented by Mr. John C. Albrecht, of Columbus, Ga. The axle box has beveled end and vertical side grooves, and the inclined lid has side flanges, the object being to provide a lid which will always be oil tight when closed, and which can be easily opened and locked in the open position.

A hoisting machine has been patented by Mr. Cornele G. Ross, of Rutland, Vt. This invention covers contrivances for unwinding or overhauling the rope of the drum more rapidly than it can ordinarily be done, to economize time when working in deep mines, quarries, etc., where considerable length of rope is required.

A clamp plate for railroad rails has been patented by Mr. Thomas J. Bash, of Lexington, Ky. This invention covers improvements on former patented inventions of the same inventor, and covers a plate adapted to be placed upon the cross tie and flange of a railroad rail, combined with interlocking bolts inserted in the plate and cross tie parallel with the rail.

A dredger has been patented by Mr. Geo. A. Callanan, of New Comerstown, Ohio. The invention covers improved contrivances for working a scoop for dredging out canals and rivers by a derrick and boom erected on the bank, and floats from which to guide and control the scoop, with improvements in its construction for regulating its dip.

A car wheel has been patented by Mr. William H. Herbertson, of Brownsville, Pa. The invention covers more especially an improved device for oiling axles of coal cars, there being a central oil cavity in the wheel, and inclined bars adapted to rest against the surface of the axle, the contrivance saving time and labor, and all waste of lubricating material being obviated.

A base burning steam boiler has been patented by Mr. Micheal E. Herbert, of St. Joseph, Mo. It is an upright boiler, with a downwardly projecting annular chamber at its outer periphery, and a similar chamber at the point where it encompasses the fuel magazine, with other novel features, giving a great extent of heating surface without the complication of a great number of flues.

An automatic hydraulic signaling apparatus for railways has been patented by Mr. Frederick W. Malcolm, of Cincinnati, O. The apparatus is constructed with a hinged bar, a signaling post, and a slotted semaphore arm, the bar being connected to the arm by a piston and piston chamber, an air chamber with a perforated valve, pipes connecting the air chamber with a piston chamber, etc., so the semaphore arm will be displayed by the expansion of air compressed by the weight of the advancing train.

**MECHANICAL INVENTIONS.**

A lathe dog has been patented by Mr. Samuel N. Silver, of Auburn, Me. Combined with the face plate of a lathe is a casting or plate with jaws and receiving a set screw from the face plate, an apertured plate being held between the jaws, while the set screw serves as a pivot for the apertured plate, with various other novel features.

Watchmakers' pliers are the subject of a patent issued to Mr. Calvin W. Little, of Denver, Col. The invention covers a novel construction, one of the jaws being flattened to a chisel edge and slotted, and the other made longer and having beyond the end of the lower jaw a bearing for the watch face, the whole being designed to facilitate the removal of the hands from a watch without straining or twisting the hands or the shaft to which they are applied.

**AGRICULTURAL INVENTIONS.**

A peanut planter has been patented by Mr. Christopher C. Boykin, of Ivor, Va. The invention covers a combination with slides having cups, of adjustable plates adapted to be set nearer to or farther from the same, to regulate the capacity of the cups, with various other novel features to improve wheeled planters for planting peanuts, peas, or other seeds.

A cultivating harrow has been patented by Mr. Joyeux Collins, of Tyro, Ark. This invention covers a novel construction, so the harrow can be drawn along a row of plants to cultivate both sides at the same time, or the space between two rows, so as to cultivate their adjacent sides at the same time, the side parts of the harrow, in either case, adjusting themselves to the inclination of the sides of the ridges.

**MISCELLANEOUS INVENTIONS.**

A fire kindler has been patented by Mr. George C. Kiesewetter, of Hoboken, N. J. The invention covers a composition of matter in specified proportions, made into cakes, consisting of resin, benzine, water, caustic soda, raw oil, nitrate of lead, sulphate of magnesia, etc.

A wire fence has been patented by Mr. Richard B. Combs, of Cincinnati, Ohio. The invention covers a combination of improved wire straining and fastening devices, improved post brace for wire fences, with novel support for the wires, and other special features in design and construction.

A cabbage slicer has been patented by Mr. Theodore A. Cook, of Brooklyn, N. Y. The knives have a double action, making the device do its work very rapidly, and an eccentric lever is so arranged that it is very easy to operate, making a machine that is cheap, durable, and practical for its purpose.

A hand loop for driving reins has been patented by Messrs. Charles E. Rand and Francis H. Audley, of New York city. The invention covers a series of hand loops, with an end loop, slides, and keep-

ers for securing the hand loops to a driving rein, and readily adjusting them upon the rein.

Scenery for theatrical plays is the subject of a patent issued to Mr. Frank L. Rees, of Bridgeport, Conn. This invention covers such an arrangement of partitions as to enable the actors to appear in five different apartments, each of which is exposed to the view of the audience at the same time.

A hay elevator and carrier has been patented by Mr. Abner J. Burbank, of Harvard, Ill. The invention combines with a weighted lever and stop a curved arm and catch, and various other novel features to enable the carrier to be run in either direction, the locking and tripping gear being simple and efficient.

An oil cup faucet has been patented by Mr. John S. McGuire, of Centerville, N. J. In combination with a screw neck is a spout, an apertured plate with a washer, and a screw cap with a valve plate, thus providing a cap for closing the spouts of oil cans, and one which also serves as a faucet.

A vehicle spring has been patented by Mr. George B. Malette, of Watkins, N. Y. It is a device of corrugated or serpentine anti-friction spring, with novel devices for so connecting with the vehicle that the body of the latter will always be depressed equally without reference to the locality of the load.

A bill or letter file has been patented by Mr. Michael B. Hurly, of Quebec, Canada. This invention relates to bill files formed with a wire stringer having jointed ends, on which bills or letters are strung after being punctured by the wire, for which purpose a device of novel construction is provided.

A method of securing heels to rubber boots has been patented by Mr. Alfred V. B. Carlisle, of New Brunswick, N. J. The method consists in applying the heel to the outsole, inserting screws through the outsole into the heel, and then connecting the outsole and heel to the body of the boot and vulcanizing the same, so that the screws will be wholly embedded in rubber.

A buck for beer coolers has been patented by Mr. Frank T. Cladek, of Rahway, N. J. The invention covers an improved swing beer buck for refrigerators used for holding beer on tap, the buck being adapted to be swung out of the refrigerator for facilitating the labor of placing the keg of beer in and removing the empty keg.

A thill loop for harness has been patented by Mr. Alexander C. Davison, of Jefferson City, Mo. It consists of a metallic core, with an anti-friction supporting roller at its lower end, with various novel devices for greater convenience in attaching and detaching the hold back strap, besides being cheap and durable.

A protector for harness saddle skirts has been patented by Mr. Ephraim K. Dennis, of New Bedford, Mass. The protector is made with a cushion having a nut in its back, and a screw for securing the cushion to the back strap, to keep the latter out of contact with the saddle skirt, and thus prevent the latter from being chafed and marred.

A paper or letter box has been patented by Mr. Harry Stocks, of Lowell, Mass. The invention consists in a box with a side opening and a slot in its bottom, the edges of the slot being turned inward to form flanges, the box being held to the door or casing in such manner that the side opening is closed when the door is closed.

An improved perpetual calendar has been patented by Mr. Thomas A. Bereman, of Mount Pleasant, Iowa. The object of this invention is to show at a glance the different days of the month on which any day of the week occurs, the device to be easily changed to give the same information relative to any month of any past or future year.

An inner sole for boots and shoes has been patented by Mr. Albert G. Gardner, of Portsmouth, O. It is flexible, and has a flexible filling in its center, whereby the "brace" is taken out of the inner sole against the outer sole without damaging the wear, a heavier outer sole may be used, and a more flexible boot or shoe is obtained.

A hot bed sash has been patented by Mr. Charles J. Asimus, of Guttenberg, N. J. The invention covers a novel construction of the mullions or strips dividing the contiguous glasses of the frame, and the means for supporting and holding them, so in case of the rotting or breaking of the mullions or strips they can be readily removed and replaced without disturbing the frame.

A twine holder has been patented by Mr. Reuben Melvin, of Cincinnati, O. In combination with the receptacle for the ball of twine is a band or cord with a weight at one end and a ring or eye at the opposite end, through which the free end of the twine is passed, making a device by which the end of the twine is kept out of the way, but can at all times be reached easily.

A wheel for roller skates has been patented by Mr. Edward F. Johnson, of Jersey City, N. J. The wheel is a combination of saucer-shaped side plates, central block, and leather rim, the latter serving both as felly and tire to the wheel, although instead of leather rubber or other flexible material may be used, making a wheel that is light and cheap, but strong and durable.

A mould and mould hoisting apparatus for building concrete walls has been patented by Mr. Thomas W. Carrico, of San Antonio, Texas. The invention consists in a mould in which a course of the wall can be formed, and in devices for raising the mould for the formation of another course, the construction being novel, and such as will facilitate building operations.

A tobacco mould has been patented by Mr. James M. Gaston, of Louisville, Ky. The invention covers improvements in the construction of moulds, for more readily adjusting them to plugs of different sizes, and also a contrivance for arranging several series of moulds and followers in frames, the series being readily lifted apart after pressing, to facilitate removing the plugs and refilling.

A draught equalizer has been patented by Mr. Benjamin W. Sutherland, of Fillmore, Minn. The

invention covers a novel construction and combination of parts, whereby the draught upon a three horse team is perfectly equalized, the horses are allowed to travel close up to both sides of the pole, side draught is prevented, and the evenness is supported from the ground, with other advantages.

A fire escape has been patented by Mr. Don Juan Arnold, of Brownville, Neb. There is a special combination of cord, drum, high speed brake wheel, brake, and governor, with any approved form of sling, and other devices and attachments, whereby either goods or persons may be lowered from a burning building, the machine being attached near a window, and made ready for use by simply throwing out a rope.

A fire kindler has been patented by Mr. Eugene J. Dunbar, of Romulus, Mich. The invention consists of a coal or carbon kindling made with an exterior film of hard, smooth, resinous matter that incloses the coal or carbon and prevents soiling, but is readily inflammable; this improved kindling has been used for the firing of locomotives, and is obtaining much favor for domestic use.

A device for truing grindstones has been patented by Mr. Chester A. Weller, of New York city. A rigid bed carries a nut plate and screw, a frame sliding in ways and carrying housings, a shaft journaled in the housings having cutter disks with intermediate elastic spaces, with other devices of novel design and combination, for dressing stones by traversing rotary cutters across their faces.

A trunk lock has been patented by Mr. Mortimer C. Ogden, of Brooklyn, N. Y. The lock casing has a raised part with a rim, the mechanism being entirely within the raised part, and not projecting beyond the inner surface of the rim or flanges, the object being to provide a lock which can be secured on the outer surface of the trunk, without the necessity of mortising or cutting the surface of the trunk.

A steam generator has been patented by Mr. James W. Bailey, of Monmouth, Ill. This invention is designed more particularly for steam heating purposes, and covers a novel sectional arrangement whereby the circulation of the water diminishes at a distance from the fire when the fire is low, while steam is still generated near the fire more effectively than it would otherwise be.

A fishing machine has been patented by Mr. Thornton F. Williams, of Cascade Locks, Ore. A wheel with revolving dip nets is mounted on a scow, the supports being arranged on an extension at the stern, and the nets having double inclined chutes for discharging the fish out of each end of the wheel and conveying them into the hold of the scow, the wheel arms having buckets for rotating the nets.

A coffee roaster has been patented by Mr. Napoleon B. Powell, of Versailles, Ill. This invention covers improvements on a former patent issued to the same inventor, the feet that support the shaft and cylinder being so connected by an extensible bar and clamping screw that the roaster will be held from longitudinal movement in the stove oven, and the cylinder can be readily detached from its supports.

A combined fifteen ball pool rack and spotter has been patented by Mr. William A. Tea, of Clyde, Ohio. This invention relates to improvements on a former patented invention of the same inventor, and consists in the construction and arrangement of the parts of the rack, and of the trough or conduit attached to it, and in the attachment of the triangle for spotting, whereby the balls may be accurately and automatically spotted.

A paddle wheel has been patented by Mr. Andrew S. Morrison, of Portland, Ore. This invention provides a wheel which automatically adjusts itself according to the current, the paddles being on two circular frames, of which the inner one is rigidly mounted on the shaft and the outer one is mounted loosely, so that when the pressure is greater on the outer ends of the paddles they will be inclined accordingly.

A heel for rubber boots or shoes has been patented by Mr. Walter Southwick, of New York city. The invention relates to that class of heels where an outer plate of rubber, leather, wood, or roughened metal is used to protect the heel, and prevent the wearer from slipping on ice; the heel is made very firm and strong, is of novel construction, and cannot by any common usage be detached from the bottom or sole of the boot or shoe.

A curve for portable railroads has been patented by Mr. George W. Thomas, of Fuselier Home Place, La. This invention is an improvement on a former patented invention of the same inventor, and consists of two curved rails united by ties, on each end of which curved rail a tongue is hinged; the curve thus formed being placed on a crossing, the tongues are inclined from the ends of the curved rails to the surface of the regular track.

**Common Sense Chairs.**

Several years ago, about the time Mr. F. A. Sinclair commenced the manufacture of his now world wide known chairs, at Mottville, N. Y., he sent to the office of this paper specimens of his several styles of manufacture. Those first sent have passed away, but others have been ordered from time to time from Mr. Sinclair's manufactory, and the result is that we have had the Common Sense chairs in constant use for many years, and for the piazza, hall, sitting room, or parlor of a country house we know of no kind of seat so comfortable and satisfactory to the user as the Sinclair chair. From a small beginning Mr. Sinclair has built up a very large business, and has added to the production of chairs the manufacture of settees and other seats of double cane or ash splints all mounted in hard wood frames. For hotels and country boarding houses, the Common Sense chairs and settees of Mr. Sinclair are not surpassed by any other class of goods, and parties furnishing country houses and desiring inexpensive, comfortable, and durable furniture will do well to write to Mr. F. A. Sinclair, at Mottville, N. Y., for a copy of his hand book, which contains illustrations of the various articles he manufactures, with a schedule of prices.

**Rendering Paper Uninflammable.**

Gaspard Meyer, of Paris, France, obtained a U. S. patent July 3, 1883, for rendering paper incombustible, by the adding to the pulp while in process of manufacture into paper, asbestos fiber, mica, flint silicium pulverized, or any other silicate. Mr. Lara, who represents the patentee, has recently arrived in New York for the purpose of introducing the invention in this country, and a few days ago he made some experiments at State Island before representatives of the fire department and a number of gentlemen, who had been invited to witness his exhibition. A small, dry, pine wood building was constructed, the walls and rafters of which were covered with the incombustible paper. After the fire had been kindled the heat was intensified by frequent injection of petroleum and incandescent masses of tar, all of which the building withstood, much to the gratification of those who witnessed the experiment.

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