

## ENGINEERING INVENTIONS.

A locomotive fire box has been patented by Mr. Charles W. Hullings, of Burlington, N. J. An arched and detachable hollow baffle extends through the upper end of the fuel opening into the fire box, the interior of the baffle connected with the water section of the boiler, while it is of a shape designed to prevent cold air entering from striking the crown sheet.

A stove for heating railway cars has been patented by Mr. Edwin W. Luce, of Bolivar, N. Y. The fire pot of the stove is inclosed by a metal casing, a portion of which consists of a suspended drop section, which, in case of accident, is released, and drops to close the stove and prevent all escape of fire, even if the stove be upset or turned wholly upside down.

A gas engine speed regulator has been patented by Mr. John Bradley, of Philadelphia, Pa. This invention covers a novel construction and arrangement of parts in a device to be connected with the gas supply valve, whereby the supply of gas may be decreased to almost stop the engine when the power is not being used, but with which the engine may be enabled to gain full speed in less than half a minute.

## AGRICULTURAL INVENTIONS.

A potato planter has been patented by Mr. John H. Priestley, of Meriden, Iowa. It has a hopper-shaped seed box with downward projections and spouts, in connection with a coverer and marking bar, and other novel features, whereby potatoes may be planted rapidly, economically, and evenly, in straight rows.

A weed cutter has been patented by Mr. Gustavus Hauschild, of Topeka, Kansas. It is intended for use as an attachment to cultivators, as a substitute for some or all of the cultivator blades, to throw the weeds to or from growing plants, and cut them off above, at, or below the ground surface, also stirring the ground close to the plants.

## MISCELLANEOUS INVENTIONS.

A match making machine has been patented by Mr. Karl Peukert, of Durlach, Baden, Germany. It is for laying out the finished matches out of the dipping frames, placing the matches close together in good order with the heads all in one direction, and thus substituting machine for manual labor.

A combination pocket tool has been patented by Mr. William R. Buzzell, of Shelburne, Mass. The invention consists in a hollow handle provided with a tool-receiving socket, and having a pivoted cover adapted to hold the tools in the socket, and to confine them in the hollow of the handle.

A thread unwinder for sewing machines has been patented by Mr. Albert J. Hart, of Brooklyn, N. Y. This invention provides a novel spool frame, provided with a fier, so that the thread may be drawn off from the spool without revolving on a stud or spindle, whereby large spools may be used with any sewing machine and a uniform tension maintained.

A thread unwinder has been patented by Mr. Thomas Handley, of Willimantic, Conn. This invention provides a fier of simple and cheap construction capable of use with spools revolving at high speed, wherein the thread may be taken from the spool under uniform tension, and from either the top, bottom, or middle of the spool.

An ironing table has been patented by Mr. Samuel H. West, of New Orleans, La. It is designed to be mounted on the edge of a table, and has a swinging clamp and jointed brace, with spring for holding the brace open or closed, the construction being such that the piece to be ironed will be securely held or readily released.

A baling press has been patented by Mr. George Ertel, of Quincy, Ill. It is for baling hay, straw, and similar materials, by successive charges in the bale chamber, the invention providing a construction designed to secure the proper retraction of the plunger while pressing light, medium, or heavy bales in the same machine.

A thill coupling has been patented by Mr. Andrew J. Spicer, of Portland, Oregon. A clip clamping the carriage axle has a tapering dovetailed vertical groove, in which fits an arm jointed to the thill irons, a screw in the arm engaging the clip, the outer end of the screw having an eye and a strap attached to the axle.

A lamp shade has been patented by Mr. Louis Michael, of Leavenworth, Kansas. It is a device capable of adjustment to shade one part of a room while the rest is fully lighted, or it can be used as a reflector, while it is designed to be particularly useful in sick rooms, to protect the eyes of an invalid or infant.

A milk can has been patented by Mr. John H. Bassler, of Myerstown, Pa. The can has double walls, with a binding ring between having lateral projections, and a lid fitting on the binding ring, in connection with a detachable flanged capping ring, being intended to withstand the wear and tear of transportation and rough usage.

A nut lock has been patented by Mr. Hiram P. Pruim, of Grand Haven, Mich. This invention covers a washer having a projection engaging the nut, and a V-shaped key engaging the bolt and a projection on the washer, being a peculiarly constructed washer and locking pin, whereby the nut is prevented from becoming loosened on its bolt.

A shaft coupling has been patented by Mr. Robert J. Stuart, of New Hamburg, N. Y. The coupling frame has a central bridge or seat with double inclined ribs projecting from its inner wall, combined with two opposite wedges and screw bolts for drawing the wedges into the casing, making a coupling that is cheap and strong and easily applied and removed.

A process of dyeing has been patented by Mr. Thomas Holliday, of Huddersfield, England. It is for the dyeing of cotton or other vegetable fibers, in a raw or finished state, by the formation thereon of the colored products of the combination of the nitroso compounds of alpha or beta naphthol with metallic oxides, such as iron chrome and copper.

A burglar alarm has been patented by Mr. Thomas J. Brough, of Baltimore, Md. This invention covers a novel construction and combination of parts in an alarm which is simple in construction and may be applied in a variety of ways to various articles, portable articles as well as doors, windows, etc., and is designed to be produced at a very reasonable cost.

A bracket has been patented by Helen M. Humphrey, of Clayville, N. Y. It is made of a rod with clamping device and lazy tongs attached, in combination with an adjustable plate and set screw, being especially designed for shaving and toilet mirrors and adapted to be attached to a window or other convenient support, and readily foldable in small space.

A whiffletree coupling has been patented by Mr. Lafayette A. Melburn, of Denver, Col. Its construction is such that when the parts are adjusted to position for use, the clip serves as a brace to prevent forward tilting of the whiffletree, the clip being tightened by a nut to take up wear, so that there will be no looseness and rattling of the coupling.

An automatic fire lighter has been patented by Mr. Frank J. Berg, of Dubuque, Iowa. A novel mechanism is arranged in connection with a latch arm or bar fitted to an alarm clock, whereby, as the alarm is tripped, a match will be rubbed over a piece of sandpaper and dropped into paper prepared or other material for kindling a fire at the time set.

A medicated or tonic beer forms the subject of a patent issued to Mr. Moses H. Kluber, of Dodge City, Kansas. It is composed of malt, rye flour, calamus, spearmint, hops, alcohol, lemon extract, yeast, and other ingredients, compounded in certain proportions and made up in a manner specified, for a healthful, palatable, and not intoxicating drink.

A saw handle has been patented by Mr. George N. Clemson, of Middletown, N. Y. The saw blade has a nick in its back and a right-angled slot with vertical extension in its back, while the handle has a slot to receive the blade, with a transverse pin and bolt to engage the nick and slot of the blade, making an inexpensive and easily applied handle for long saws for cutting logs and timber.

A nut lock has been patented by Mr. William H. Van Wart, of Stonington, Conn. It is for preventing the accidental turning of the packing nuts of valves, and differs from a lock nut formerly patented by the same inventor, having an open or split ring adapted to be sprung on the bonnet shank of the valve, with a rigid arm projecting from the ring at one side to engage one of the flat sides of the packing nut.

A combination pool and billiard table has been patented by Mr. Richard L. Rink, of New York City. This invention provides a removable section of cushion rail for insertion at the pockets, whereby the ends of the cushions may be carried back to form the open pocket, or formed in a straight line as a carrom cushion, the invention covering novel features of construction and combination of parts.

A process of drawing on marble has been patented by Mr. Reuben Durrin, of Clay Centre, Kansas. It consists principally in soaking a thin sheet of marble in water, then applying the black—such as crayon sauce or ivory black—upon the dressed surface where the picture is to be drawn, and grinding or cutting away with pumice or other suitable material, until the shadows have the depth, shade, and grade desired.

A hame tug has been patented by Messrs. Stephen H. French and William J. Maltby, of Baird, Texas. This invention covers a tug having a chambered carrier with coiled spring, designed to take up slack when the team is standing or descending a grade, to enable the team to start the load without jerking, and to prevent the collars from working forward on the necks of horses, etc.

A grater has been patented by Flora Pollock, of Baltimore, Md. It is for lessening the labor of comminuting horse radish, cocanut, dry bread, etc., a can or hopper containing the grater proper, which is operated by a crank handle, while the frame holding the can has depending therefrom a ring or circular frame supporting a bowl or vessel to receive the grated substance.

A rotary pump has been patented by Mr. William B. Allyn, of Boston, Mass. This invention covers an improvement on a formerly patented invention of the same inventor, designed to avoid undue friction between the sliding abutment and the bearing surface of the slot receiving it, and to obviate the necessity of forcing an opening in the web of the piston, which is liable to become choked by sediment.

A tobacco hanger has been patented by Messrs. Thomas Y. and Leo J. Allen, of Skipwith, Va. It is made of wire, bent to form a loop of any desirable shape, with projecting, needle-pointed arms, the loops being adapted to go over the stick or bar, affording a means of hanging the tobacco whereby the breaking and tearing of the leaves is avoided in stripping them from the wires after curing.

A water cooler has been patented by Mr. Solomon Gluck, of Temple, Texas. It has an outer casing and central ice receptacle with perforated bottom surrounded by a water reservoir, with a packing of filtering material in the bottom, and other novel features, the arrangement being such that the water does not come in contact with the ice and the water is filtered before passing to the discharge faucet.

Boat construction forms the subject of a patent issued to Mr. Joseph H. Hunt, of West Troy, N. Y. The invention consists in constructing a boat at the bow and stern with upright timbers having beveled matched edges of such pitch as to conform to and shape the bow and stern lines, the end timbers being fastened

by spiking them through and through edgewise one to the other.

A retort gas furnace has been patented by Mr. Dudley D. Flemming, of Jersey City, N. J. Each bench is formed into two combustion chambers by means of a vertical partition wall, in connection with a generator of novel form, and other peculiar features, whereby, through a simple and inexpensive alteration of furnaces now used for direct firing, the advantages of more costly and elaborate regenerator furnaces may be obtained.

A rectifying column for the distillation of liquids and gases has been patented by Mr. Walter E. Colwell, of Cincinnati, Ohio. This invention covers a novel construction and arrangement of parts, whereby a reduced number of sections in the column suffices, increased facility is afforded for varying the capacity of the column, and economy is secured in the use of cooling water, in stills especially designed for the distillation of ammonia gas, and for producing concentrated solutions of ammoniacal salts.

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