

## NEW MECHANICAL AND ENGINEERING INVENTIONS.

## IMPROVED KEY BOARD FOR TYPE WRITER.

Philander Deming, Albany, N. Y.—The object of this invention is to improve writing machines where a stenotypic key is employed; and it consists in using a divisor bar with key board, so as to permit the instant working of the key from any part of the board, the said bar being weighted and pivoted or spring-carried, so as to rise and fall like a key, and arranged diagonally, midway, around, or otherwise with respect to the keys. It is also to be connected with the stenotypic key, either permanently or by a swing button.

## IMPROVED APPARATUS FOR LOADING WAGONS.

Anderson Taylor, Fairville, Mo.—This invention relates to that class of elevators which are used to raise heavy articles for loading wagons; and it consists in a lever supported on suitable frame work, to the shorter end of which a platform is suspended, and the longer end engages with a ratchet, the whole so arranged that a heavy article placed on the platform may be raised to the required height, when it will be retained by the ratchet.

## IMPROVED GRATE FOR BRICK KILN.

Alfred Hall, Perth Amboy, N. J.—This invention consists in a hinged front section of a grate, which takes the place of the ordinary dead plate and door, so arranged as to be capable of being lowered into a horizontal position when the kiln is charged, but may be readily raised into an inclined position, so as to partially close the mouth of the kiln. The advantage claimed for the invention is that the fire may be readily cleaned without lowering the grate, thus avoiding the admission of a volume of cold air, also obviating the exposure of the fireman to the intense heat—a thing which is inevitable when doors are used. Another advantage is that the quantity of air admitted to the kiln through and above the grate is such as to permit the kiln to burn evenly from front to rear, effecting a saving in time and fuel, and producing brick of a uniform color and quality.

## IMPROVED LOCKWORK ATTACHMENT FOR CLOCK.

John W. Williams, New York city.—The object of this invention is to improve the construction of the works of striking clocks in such a way that the hands may be turned back to set the clock without injuring the works. It consists in the stop pin, attached to the frame, in combination with the lever and the cam that trip the striking mechanism. To the frame is attached a stop pin for the lever to rest against to prevent its forward end from being pressed inward toward a post when a cam is passing over it, and which would prevent it from being again operated to release the striking mechanism.

## IMPROVED CRATE FOR SEWING MACHINE.

Andrew J. Callahan, Palmyra, Ill.—This invention consists of a cage or crate for sewing machines and the like, constructed to be taken apart and packed in compact form for return, and having braces and binding screws to maintain it in the shape for containing the machine.

## IMPROVED CAR COUPLING.

William L. Nuckols, Millville, Mo.—This coupling is an improvement in the class known as automatic; and the feature of novelty is the means for holding the link at various angles, to adapt it to enter the drawheads of other cars of the same or different height, and engage with a pivoted coupling pin or other equivalent device, and thus couple two cars together. The bumper heads have long tapering cavities, and a double incline is formed on or attached to the floor thereof. The L-shaped coupling pin has trunnions and is held in place by dogs. When in the vertical position, the pin abuts the end walls of the slots in the top portion and floor of the drawheads, and is thus enabled to withstand the strain to which it is necessarily subjected by applied traction. In the rear corner of the coupling pin is formed a notch, for convenience in raising it in uncoupling the cars; or a ring may be attached to it, to receive a chain or rod for uncoupling.

## IMPROVED MOTIVE POWER.

Adam Graner, New Orleans, La.—This invention consists in combining a driveshaft, counter shaft, and saw shaft, the latter provided with a roll arranged thereunder. The crank for turning the driving shaft by hand has a handle, to which is attached a connecting rod which, at the lower end, connects with a foot treadle, so that the operator may work with both. It is also proposed to apply these drivers to both ends of the driving shaft in practice.

## IMPROVED FEED WATER HEATER AND FILTER.

Samuel A. Shoaff, Pennville, Ind.—This invention relates to a feed water heater and filter, in which the water is first thoroughly heated up by steam while passing in a tortuous course through the heater, so as to deposit the lime and then convey the water to the filtering receptacle below, where the water is conducted through the compartments without being agitated by the steam. It consists of a feed water heater arranged above a filter, the heater being made of inclined sections, with lateral steam tubes or passages that extend alternately from one side to some distance of the other side, to conduct the water around the same. The water is conveyed through a connecting pipe to the filter, that is provided with entrance and exit chambers and filtering compartments, separated by vertical partitions having alternate openings at the top or bottom.

## IMPROVED CAR AXLE BOX.

George W. Miltimore, Janesville, Wis.—This invention relates to improvements in that class of car axles in which a stationary inner and a revolutionary outer wheel, carrying axle or sleeve, are employed, so that the lubrication of the journal box from the oil reservoir is accomplished, to the exclusion of dust, the drip oil collected, and the journal box allowed to oscillate on the stationary axle to conform itself to a true bearing throughout, according to the spring of the axle produced by the weight of the car. The lubrication of the car axle is accomplished in an economical manner, and the wearing out of the journal box is diminished by distributing the friction throughout the length and circumference of the box, in consequence of the oscillating motion of the journal boxes.

## IMPROVED RAILWAY SIGNAL.

James E. McCarty, Cold Spring, N. Y.—This invention is an improved signaling device for railroad tracks, by which the track tender or the automatic action of the train can readily set a torpedo signal to warn the trains in either direction of the danger ahead, and make them proceed cautiously, or stop until the cause of danger is ascertained and removed. It consists of a torpedo-setting and signaling device that is operated by wire connection with suitable ratchet and pawl devices at some distance from the danger signal, or at intermediate points, or by suitable mechanism worked by the train itself.

## IMPROVED FANNING MILL.

Charles Saunders, Cape Vincent, N. Y.—The chief features of this invention are an improved feed apparatus, and arrangement of chaffing, screening, and separating shoes independently of each other, for regulating each according to its needs, and for working them so as to counteract the shocks of one by the other; and also of adjusting contrivances for regulating the inclination of the screens.

## IMPROVED COMBINED LIQUID PUMP AND FUNNEL.

Henry A. Guignon, Cory, Pa.—This invention is an improved pump and funnel, by which the liquids may readily be drawn out of the barrel and the waste liquid returned back to the same; and it consists of a pump passing through a bung into the barrel, the bung being recessed and connected by a pipe with a funnel and grate for conveying the waste liquid back into the barrel. The pump may be readily detached from the bung, when desired to be used without the funnel, for pumping the contents of one barrel into another, and for other purposes.

## IMPROVED COMPOSITION RUBBER FOR MILLSTONES.

John H. Miller, Mount Union, Pa.—This improved burr millstone rubber consists of soft fire clay, about 9 parts; silver sand, 1 part; and ground emery, 4-100 parts, prepared as follows: The fire clay is first ground; the silver sand and emery are then added, and a sufficient quantity of water to mix and prepare the mass for molding; it is molded into the form required, and dried and baked. The object is to make a rubber for smoothing and truing the face and working out the furrows of millstones that will be more efficient and less liable to glaze than the burr rubbers commonly used.

## IMPROVED GAS REGULATOR.

Charles C. Place, Somerville, Mass.—This invention is intended to furnish an improved device for attachment to a gas pipe to check the pressure of the gas and purify it before it is allowed to pass to the burners. It consists in the combination of a T pipe, provided with the cap and the filtering box, with the lower part of a gas regulator for purifying the gas introduced into said regulator, and in the gas regulator formed by the combination with each other of the lower part, provided with the shoulder, the middle part provided with the V-shaped ring flange to receive quicksilver, the cap, the lower plate, the weighted plate, and the valve and its adjusting rod.

## IMPROVED CAR REPLACER.

Henry C. Hosier and John L. Watkins, Sugar Notch, Pa.—The object of this invention is to replace engines, box cars, freight cars, etc., upon a track in cases of wreck and other accidents. A bar has the forward part made with a base something like the base of an ordinary rail, and the rear part is made without a base, so that it may lie close to the rail, and with its rear end overlapping the said rail. A hook clamp is so formed as to hook over the head of a rail, and have one end or arm rest upon the base of said rail. The clamp is swiveled to the end of the bar so that it may be turned to adapt the bar to be placed upon the outer side of either rail of the track. The bar is made about ten feet long, and is inclined or beveled off, to enable the wheels to pass upon it readily. The rear part of the bar is connected with the rail by rods, the inner ends of which have hooks formed upon them, to hook upon the head of the rail. The outer ends of the rods pass through holes in the bar, and have holes formed through them to receive keys by which the said bar is secured in place upon the said rods. Another bar is placed between the rails of the track. This bar is made about six feet long, has its forward end beveled off or inclined, and is connected with the rail by hook rods and keys. When the engine or car is entirely off the track, a latch or false frog is used. The latch is an iron bar of suitable length and strength, the ends of which are beveled off upon their upper sides, and have U clamps attached to their lower sides. The latch is placed upon the rail diagonally. The U clamp of the outer end of the latch is hooked upon the end of a piece of rail in the same way. In this case, the first mentioned bar should be lengthened by another piece of rail. It is not possible to give a clear idea of the operation of this device without engravings.

## NEW CHEMICAL AND MISCELLANEOUS INVENTIONS.

## IMPROVED COAL BASKET.

Charles Hager, Watertown, assignor to Albert H. Bullard, Lewis, N. Y.—This invention consists in constructing a portion of each end of a coal basket of sheet metal, and in the substitution thereof for a portion of the splints of which these baskets are now made, the object being to make those parts which are subject to most wear and are exposed to the fire, and thus liable to burn out when the baskets are used for feeding furnaces, more durable, and it also makes them freer to discharge the coal, as it slides off the metal easier than from the wooden splints. The common baskets give out in the splint parts by wear, or by burning out when the baskets are used for feeding fires, while the other parts are still good, making a considerable amount of waste, which is avoided by this improvement, which makes the baskets as durable in that part as in any other.

## IMPROVED MUCILAGE HOLDER.

Joseph Vincent Browne, New York city, assignor to himself and George W. Ross, Magog, Canada.—This is a mucilage bottle having a sponge on the top of the cork, and a hole through the cork for supplying the sponge with mucilage, to use the sponge for applying it; and it consists of a cap for the cork and sponge, having a vent in the top to be used for forcing the mucilage into the sponge when a large supply is wanted, by closing the vent by the finger placed over it, or other means, and compressing air in the bottle by quickly putting on the cap, and then opening the vent to let the air escape, when it forces some of the mucilage along with it into the sponge. The cork has a shoulder fitting on the top of the bottle, to prevent it from being pressed into the bottle too far, and to facilitate the removal of it for refilling the bottle. The bottle is designed to lay on the side to prevent the mucilage from draining back into the bottle, and it has a round bottom to prevent it from sitting upright.

## IMPROVED LUBRICATING COMPOUND.

Jasper G. Upper, St. Thomas, Canada.—The object of this invention is to furnish an improved lubricator for the journals of cars, steamboats, and machinery, to keep them from heating and to cool them when hot. It consists in the lubricator, formed of tallow, rosin, salt, sulphur, and plumbago, in certain proportions and combined in a certain manner.

## IMPROVED HALTER.

John Cronin, Boston, Mass.—This is a contrivance for making a halter for horses more simple and adjustable, and without so many rings, loops, and buckles, etc., as common halters have. The invention consists of check straps, arranged in a ring, forming a loop for the nose, instead of connecting with a ring at each cheek, to which the nose piece also connects, making the halter much cheaper, and so that, by taking up or letting out the straps, they and the nose piece will be adjusted alike for large or small horses.

## IMPROVED DESSERT COMPOSITION.

Leopold Schopp, New York city.—The object of this invention is to prepare an article of food from cocoa nuts, to be used as a dessert. It relates more specially to such a composition for cocoa nut drops, by which they will preserve the flavor and richness of the nut for an indefinite time without being liable to become rancid and stale, as do the present cocoa nut preparations. It consists of a mixture of purified or desiccated cocoa nut and cocoa nut oil, with the substances commonly used in the manufacture of cocoa nut articles.

## IMPROVED METHOD OF FILLING TEETH.

Romalders Noble, Brunswick, Ga.—This invention consists of capping a filling of amalgam, or other material which is soft when put in the cavity and hardens readily, by a cap of fine rolled gold, having notched or dental or headed pins, or other anchorages, which is pressed into the filling while in a soft state, so as to be secured when the filling hardens, and thus securely hold the cap.

## IMPROVED SLEEVE BUTTON.

Thomas W. F. Smitten, Brooklyn, N. Y.—This invention consists in bending the shank of a disk sleeve button to one side, and joining to the end thereof a latch provided with a toe extending rearwardly beyond its pivot. The pivoted latch has a short arm beyond the pivot, to act as a toe on the cuff to prevent it from swinging open, said protection being sufficiently short to allow the latch to swing open by a little pressure when the button is to be taken out.

## IMPROVED FRUIT DRYER.

Samuel W. Hope, Dover, Del.—This invention relates to a drying chamber having two compartments, each provided with an elevator or hoisting apparatus, and communicating, by means of an opening in the partition, through which trays of fruit may be slid from one elevator on to the other, and thus passed from the first compartment, in which the moisture is mainly eliminated from the fruit, to the second compartment, where the drying process is perfected. The invention further relates to the construction of the elevators in detachable sections. The trays of fruit are first placed in the left hand compartment, and when the moisture has been mainly eliminated they are slid into the second or right hand compartment, where the drying process is carried to completion, in an atmosphere containing far less moisture than the first.

## IMPROVED SHOE.

Martin R. Bodkin, Jersey City, N. J.—Heretofore the practice has been to provide such shoes with a single row of buttons and a single folding flap, having a corresponding number of buttonholes, or with two rows of buttons and two folding flaps. In both cases, however, the edge of the flaps is subject to rapid wear by reason of friction with the bottom of the pants, and is also liable to be torn in the operation of buttoning, and to be otherwise abraded or injured. According to this invention, a single row of buttons is attached to the tongue or center piece of the shoe, and each of the two flaps is provided with buttonholes, and likewise so formed and attached to the shoe as to adapt it to be buttoned under or over the other flap. Hence, when the edge of one flap is worn, abraded, or otherwise injured, it may be buttoned under the other flap, which, not having been subject to wear, is fresh and new in appearance.

## IMPROVED HARNESS PAD.

Miram V. Longworth, Delphos, O.—The object of this invention is to save labor and lessen the cost in making harness pads, while, at the same time, producing neat, strong, and durable pads. The upper side of the pad is covered with a leather plate. Two metal plates are interposed between the saddle strap and the leather plate, and extend from the lower end of said plate, or from near said lower end, nearly to the water hook. The side edges of the plates may be bent upward at the side edges of the strap to keep the said strap from being drawn out of place. To the lower ends of the plates are attached, or upon them are formed, loops or rings to which are attached the straps to which the belly band straps and the straps that support the traces are connected, so that the movements of the traces cannot cause the pad to work upon and chafe the horse's back.

## IMPROVED FAUCET.

Hilar Ohnmacht and Robert Weiss, New Orleans, La.—This is an improved faucet for beer and other barrels, by which they may be tapped with great facility without loss of liquid, and by which the driving in of the faucets and consequent damage to the barrel heads, and the use of the casks, will be dispensed with. It consists of a solid plug screwed into the bushing of the faucet hole, and provided with a smaller turning plug, having a curved exit channel that communicates with a similar channel of the cylindrical plug, so as to connect and disconnect the channels, and thereby close or open the faucet.

## IMPROVED HAWSER CLAMP.

William H. McGill and Frederick Bowen, Angelica, Pa.—This invention relates to an improved rope socket of strong and substantial construction, and consists of wedge-shaped clamp pieces binding on the rope, and of wedge keys and pins that lock the clamp pieces in the socket. The clamp pieces are firmly locked by the wedge keys, firmly driven in between the socket and clamp pieces, and fastened by lateral pins passed through guide holes of the sockets. The rope is thus rigidly fastened to the socket without danger of getting detached therefrom.

## IMPROVED CARTRIDGE-LOADING IMPLEMENT.

William W. Arnold, Rushville, Ind.—This invention relates to that class of instruments which are used in loading and capping metallic cartridges, and it consists of a lever combined with other devices, making a convenient instrument for loading and capping metallic cartridges, and for removing cartridges from the gun; also, for removing the spent cap from the cartridge. The manner of using the instrument is as follows: In filling cartridges, the head is used to force the powder and wads home. Caps are placed on the cartridge by placing the cartridge shell in a ring, putting the cap on the anvil of the cartridge, and forcing it down with the lever. After a cartridge has been discharged, it may be removed from the gun by placing the hooks on the flange at the end of the shell, and drawing it out by the ring or lever. The spent cap is removed from the cartridge shell by forcing the pin against it from the inside of the shell, the head serving as a guide, insuring its entrance at the cap aperture.

## NEW TEXTILE MACHINERY.

## IMPROVED PAPER COP TUBES.

John McCausland, Providence, R. I.—This invention consists as a new article of manufacture in the particular construction of a paper cop tube, made in the form of a cylinder of uniform diameter, and having a bushing of wood located in the upper end, directly at the edges and flush with the same.

## IMPROVED CARDING MACHINE.

James C. Ryan, Amesbury, Mass.—This invention consists of an attachment to carding machines, for making nubbed and clouded or imitation printed yarn, the same being intermittent feed rollers, a knife for holding back the yarn or sliver, and a wipe roll, by which the yarn is supplied to the doffer of the carding machine, and there combined with the stock, forming the groundwork of the yarn. This machine will make nubbed yarn with the webs any distance apart, provided it be geared so that the speed may be varied, the sliver being fed in full size when the knife is raised, and checked back and stretched when the knife is closed on the feed roller. It will also make clouded or imitation printed yarn of different colors, as many different colors as may be desired being employed, and being separated from each other by passing through different guide eyes. For making clouded yarn, the knife will be taken out when the attachment is not wanted.