

Improved Washing Machine.

Elias M. Hodgson, Stanhope, N. J.—This invention is an improvement in the class of washing machines having a fixed and swinging or vibrating presser board. The improvement relates to the construction of the face of the presser board, the same being grooved longitudinally and transversely to form rectangular projections or blocks, and perforations being formed in the grooves in such a manner that, when the boards come together, the blocks of one board will strike against those of the other, and the horizontal and vertical grooves in one board will come opposite those in the other, and the water be expressed through the holes.

Improved Loom for Weaving Piled Fabrics.

Edward Pickford, New Brunswick, N. J.—For withdrawing the wires used in weaving pile fabrics, a hook is provided with a guard on one side of it to wear against the side of the wire head, to which the wire is attached, to prevent the hook from shifting so far over as to engage the next wire at the same time, and to insure the hook against shifting in the other direction, so as to slip off from the head of the wire. The face of the hook, and also the face of the shoulder of the plate or head of the wire with which the hook engages, is made like a half dovetail, beveled, and relatively arranged with the guard so that they are locked together, and all liability to disconnect during the operation of withdrawing the wire is avoided.

Improved Rotary Churn.

George Walker, Whitley's Point, Ill.—In this invention, the dasher shaft the vertical ribs and inversely inclined arms. By this arrangement, as it is revolved forward, the tendency is to force downward the milk, which, by the bottom and sides of the churn and by the angles between said bottom sides, is thrown into violent agitation, bringing the butter in a very short time. The churn body can be readily detached and set in a tub of cold water to cool the milk in warm weather, and in cold weather it can be set in a tub of warm water, or upon the stove, to warm the milk, thus enabling the milk to be readily brought to the proper temperature.

Improved Lubricator.

Henry V. Aiken, Gibsonburg, Pa.—In this invention, a large drip cup is arranged on the standard of the lubricator, below the middle oil chamber to secure the drip from above, whether escaping from the blow-off cock leaking or overflowing from the reservoir; the object being to economize the oil and prevent it from soiling the engine. For packing the cocks, a flexible packing jacket is provided, arranged with a tubular follower which is pressed firmly against a washer by a cap to pack it oil tight against the cock; and inside the follower is a spring, to press it snugly into its seat, but not so as to bind.

Improved Musical Instrument.

Marsena Cannon, Salt Lake City, Utah Territory.—This invention is an improvement in the class of musical instruments provided with coiled wires arranged to be struck by hammers, and thus act as substitutes for the wire strings usually employed in pianos. The improvement consists, mainly, in the arrangement of keys and coiled wires, so that the former act on the latter directly, or without the aid of intermediate mechanism.

Improved Hatchway.

George Follett and Adolphus Brummel, Brooklyn, N. Y.—This invention consists of an arrangement of gearing, in connection with sliding hatchway covers, whereby the elevator carriage is caused to automatically open the way for passing through and to close it after passing, so that all danger of accidents by falling through open hatchways will be avoided, and the keeping of them closed to prevent draft in case of fire will be insured. The essential feature of the invention is one or more toothed wheels on opposite sides of the elevator way next to the guides in which the elevator runs, gearing with the sliding door by a rack or racks, and a rack or racks on the top of the elevator carriage, which connect with said wheel or wheels sufficiently in advance of the carriage to throw the door or doors open by the time the carriage rises to the passage, and corresponding rack or racks on the lower end of the carriage connecting with the wheel or wheels, as soon as the carriage arrives above the passage, in such manner as to reverse the action and shut the way.

Improved Water Wheel.

Samuel T. Teachout, Troy, N. Y., assignor to himself and Joel C. Peck, of same place.—This invention consists in a guide rim with annular recess, and in combining flaring flanges with the buckets. An annular flange or rim projects downward from the under side of the top plate as far from the periphery of the disk as the width of the upper part of the buckets. At a point about half way from top to bottom, this flange turns from the vertical line, forming an inverted frustrum of a hollow cone. The buckets are attached there to this flange and flare outward to the lower ends, making a considerable increase in the width. The upper parts of these buckets are so inclined to the radial lines of the wheel as to range at right angles to the line in which the water moves, in passing through the spaces between the guides so as to get the best results from the impact; and, as to width, they are in such proportion to the spaces between the guides that the water does not spread laterally in coming against them, by which no loss is incurred on that account. By the widening of the lower parts of the buckets, a greater quantity of water can be discharged with buckets of the same pitch or angle than could otherwise be, by which the capacity of any wheel will be considerably increased after the limit in the width of the buckets has been reached, said limit being about one seventh of the diameter.

Improved Carriage Spring.

Thomas Murgatroyd, Hiawatha, Kansas.—This invention consists in improved means for re-enforcing carriage springs. The frame of the carriage is composed of two longitudinal curved rods, laterally connected by metallic cross pieces. The mainsprings, consisting of three or more pairs, are placed longitudinally between the parallel rods and connected with the cross pieces by loops and links. Every pair of springs is applied to wooden seat rests, on which the body of the wagon rests. For the purpose of strengthening and stiffening mainsprings, every corresponding pair is connected about half way between the links and rests by horizontal brace springs, which are applied to the mainsprings by means of buckles and pins. The buckles are fastened to the mainsprings in such a manner that the larger part of the same is placed on the upper side of the springs, and perforated ears are bent under at right angles downward for the reception of links or pins. Into the latter are linked the brace springs by means of upturned loop-like bends. Resting centrally on the bracesprings and fastened to them is the cross piece, of wood or other material, which furnishes, by means of vertical rods applied to the outer seat rests, additional supports to the body of the carriage, and by brace rods to the middle rest piece of the same. The foot rest of the body of the carriage is furthermore braced by two or more metal rods, which are applied by screws or otherwise to the lower side of the cross piece, and are adjustable thereon.

Improved Breech Loading Fire Arm.

Agostino Marelli, Milan, Italy, assignor of one half his right to Sante Marelli, of same place.—This invention refers to a breech loading fire arm for rapid firing. The operator places his finger on a guard lever under the piece, bringing it down, when the breech block is moved so as to open the breech of the barrel, thus permitting the extraction of the exploded cartridge and the insertion of a new one. The hammer being caught by a tooth on a projecting stationary appendage is turned on a pivot, thereby compressing a spring, when it is caught by the nose of the trigger; thus the downward motion of the guard cocks the gun, and consequently, after a fresh cartridge is introduced and the guard replaced, the trigger may be pulled, when the firing of the gun takes place. By the former of these movements, the breech block is placed again behind the barrel breech; and by the latter the hammer, being freed from the trigger stop, is thrown forward by the spring and strikes the fulminate in the cartridge. The exploded cartridge is extracted by the down motion of the guard through two angular levers placed in grooves of the box sides and capable of turning on a pivot. In order to ascertain at any time from a mere outside inspection whether the arm contains the cartridge and the hammer is cocked, two indicative pointers are used.

Improved Bed Bottom.

Edwin L. Brockett, Nelson, Ohio.—This invention consists in constructing a compound slat without any additional spring, and supporting it upon a continuous crank wire at the head and foot so as to form a neat, cheap, and comfortable bed bottom.

Improved Shoe Last.

Jno. A. Hechenbach & Anton Haertle, Mayville, Wis.—This invention relates to the spring lock bolt that fastens together two sections of a last, and consists in the application thereto of two plates and a hook whereby it becomes unnecessary to cut so near to the upper surface of the last, to make the bolt so long, or to use the ordinary transverse pin by which the last hook is enabled to unlock the sections.

Improved Tin Roof.

Patrick Wall, Allegheny, Pa.—This invention consists in corrugated tin sheeting for roofs, with a plain and smooth portion near each edge, whereby the lap and joints between adjacent sheets may be easily and conveniently made, while the corrugations give the desired stiffness and strength, allow for contraction and expansion, and avoid the tendency of the metal to buckle.

Improved Boot and Shoe Packing Case.

Matthew Kuhler, La Moille, Ill.—This invention consists of a case, rectangular and oblong in form, and provided with a series of transverse shelves or partitions placed at such distances apart as will form a series of compartments adapted to accommodate medium or large size books. Each of the compartments thus formed is subdivided into two compartments by means of an inclined partition which is so arranged that the cubical space of the compartments on one side of it equals in the aggregate that of the compartments on the other side. On one side of the partition, the smallest or shortest compartment is at the bottom of the case and the largest at the top, while on the other side the arrangement is reversed, the smallest compartment being at the top and the largest at the bottom. Thus constructed, the box answers as a shipping and packing case in which the boots or shoes cannot become disarranged or abraded by friction against each other, and in which the salesman can select the size he requires without the loss of a moment's time.

Improved Tanning Compound.

John B. Hite, Guyandotte, West Va.—This invention relates to means for preventing the formation of an incrustation upon the surface of leather which is being tanned, whereby it is often rendered hard, inflexible, and, to a great extent, impermeable to the tannic acid. This invention causes the hide to become rapidly saturated with the tanning liquid, thoroughly softened, and also rendered tough.

Compound for Destroying the Cotton Worm.

William B. Royall, Brenham, Texas.—This invention relates to compounds for killing bugs and insects that infest, eat and damage the leaves of growing vegetation. It consists in combining a poisoned adhesive and a diffusive ingredient in one and the same compound.

Improved Electro-Magnetic Telegraph.

George D'Infeville, New York city.—The invention consists mainly in so connecting a telegraph apparatus at two stations that messages may be sent simultaneously from opposite directions over the same wire, and also at different times. There is one main wire between two stations, connected with similar poles of the two batteries. When one of these batteries alone is set in action by the depression of the key near it the current passes from it over the wire; when the other battery only is brought into play the current will pass in the opposite direction over the same wire. Thus far all is plain. Now comes into play the invention, which allows the transmission of messages simultaneously in opposite directions over the same wire—not the transmission of simultaneous opposite currents, but of messages. This object is obtained by so connecting the local battery with the relay at each station that it will be set to work and give an impulse to the sounder by the cessation of the current over the main wire. The operator will thereby be enabled to receive a message partly by the main current, if uninterrupted, partly by the induced current when the main is interrupted. Thus, if two parties, A, B, telegraph each other, at once, over the same wire, and both depress the keys at once, A will, by B's local induced current, receive a signal as long as B depresses his key; as soon as A raises his key, B's being still depressed, the main current from B's station will go to A and continue the signal, the same as the local gave it to him before. The same will be the effect on B's side. While both keys were depressed, B too received a signal by his local, which was put in action by the very absence of the main current toward him; and he too will receive signals, viz. main current, when B raises his key from the main wire. In other words, the local current is in action when the main wire is interrupted, and gives, therefore, a sort of negative message—that is to say, it records at one station the interruptions of the main current produced by the attempt to send a main current from the other station, but only records such interruptions when the same are occasioned by a simultaneous depression of both main keys. Thus simultaneous messages can be sent in opposite directions over the same wire. When the main current only is started at one station, both relays will be magnetized so as not to allow the local batteries to come into play.

Improved Trunk Catch.

Henry C. Faber, Utica, N. Y.—This invention has for its object to furnish an improved catch to take the place of straps usually employed for holding the cover or lid down to the body of the trunk to relieve the lock from having to sustain the strain. It consists of an improved trunk catch formed by the combination with each other of a top plate provided with a tongue having a slot formed in it, a bottom plate having a wide transverse slot into which is fitted a bar which is hinged at one end, and is provided with a spring at said hinged end to throw it open when unfastened, a spring, and a latch with a spring attached. Upon the inner side of the free end of the hinged bar is formed a catch hook, to enter a notch in the latch and fasten the said bar when closed down. The latch is bent to pass around the lower end of the tongue, and its lower end is pivoted to the lower plate. It is held up by a spring attached to the plate. A stem which passes through a slot in the side flange of the plate is attached to or formed upon the upper end of the latch and has a thumb piece formed upon its outer end for convenience in operating the latch to release the bar. Upon the inner side of the hinged bar is formed a lug to pass through the tongue and thus fasten the parts together.

Improved Corn Planter.

Daniel F. Taft, New Bedford, Mass.—This invention consists in the improvement of corn planters. The seed hopper is secured to the rear side of the axle. To the bottom of the hopper is pivoted or hinged the forward end of the spout, which is curved downward and rearward, and in which is formed the hole through which the seed escapes to the ground. To the spout, a little in front of the discharge opening, is attached the standard of the plow for opening a furrow to receive the seed. The rear side of the standard of the plow is concaved, to adapt it to serve as a channel to guide the seed to the furrow. The standards of the covering plows are attached adjustably to the sides of the rear end of the spout, so that they may be adjusted to cover the seed to a greater or less depth, as may be desired. Arms are attached to the rear end of the spout to which are pivoted the wheel by which the soil is pressed down upon the seed. One part of the face of the wheel is so formed as to mark the hills. The dropping slide moves back and forth in the rear part of the spout to drop the seed. The rear part of the slide, made with an offset, is connected with the arm, so that the said arm may serve as a guide to the slide in its movements. A pin at each revolution of the wheel strikes against this offset and moves the slide forward. As soon as the slide is released from the pin it is moved back by a spring. By suitable arrangement of shafts and gear wheels or equivalent cranks, the two wheels will be made to revolve exactly alike, so that the hills will be planted directly opposite each other, enabling the planting to be done in accurate check rows.

Improved Wheel Plow.

Isaac E. Green, Gillespie, Ill.—This invention consists in the improvement of wheel plows. In connection with the usual mechanism, a pendent standard and guide are arranged under the axle and combined with a two barred plow beam. By this construction, by operating a lever, the plow may be easily raised from the ground for convenience in turning or passing from place to place. The lower end of the standard passes through a slot in the frame, and is secured in place by a wedge key driven through it below the said frame. All the parts by which the plow is connected with the frame may be moved laterally toward or from the furrow wheel to adapt the machine to be used with a two three or four horse team, as may be required.

Improved Hub Band for Vehicle Wheel.

George H. Johnson, Bridgeport, Conn.—This invention consists in the improvement of trimming bands for wheel hubs. The iron band of the outer end of the hub of the carriage wheel, to which the ornamental trimming band of ductile metal is to be applied, is cylindrical, or it may be of flaring or bell shaped form. A cylindrical band of brass or other soft fine metal capable of being spun and of being polished brightly is formed so as to fit in the iron band, and is provided with a collar at the inner end, the collar being made to fit against the end of the hub. At the outer end of this band it is provided with a flange, bending back parallel with the part to fit on the outside of the iron band, making a deep annular groove. To attach the band to the inner surface of the main part, also the outer surface of the flange, is coated with a solution of Spanish whiting to protect it from the solder or other composition for uniting the bands, and then dipped in a bath of melted tin metal, to coat the surfaces to be united with the iron band. A coat of solder is next applied. The two parts are then placed together, melted solder is poured into the cavity, which fills the said cavity and rises up between the flange and the iron band, and unites with the coated surfaces of each, and secures them firmly together.

Improved Railroad Frog.

James Brahn, Jersey City, N. J.—This invention has for its object to furnish an improved railway frog, made of ordinary rails. Bars, which extend along the sides of the point and between said sides and blocks of wood or metal, are secured in place by bolts, that pass through the said point, its supporting blocks and the guard rails and also by rivets. At or near the extreme end of the point the ends of the bars are bent outward, and bolted to the guard rails that connect the rails of the track with the rails of the frog, and are made U shaped, their bend being toward the frog. Each of the U shaped bars is secured in place by one long bolt that passes through it near its bend, through the rails of the frog, and through the outer bars of the joints. The arms of the U shaped bars are secured to the rails and to the outer bars. The U shaped bars thus act as fish plates in forming the joints, and they also act as braces to hold the rails in their proper relative positions.

Improved Stock for Drilling or Tapping Instruments.

George Bunch, Bonnot's Mill, Mo.—The object of this invention is to furnish a convenient device by which nuts may be rigidly placed on and taken off the bolts; also for the purpose of threading nuts and bolts, and for similar purposes. The invention consists of a forked handle frame, having applied between its prongs a cog wheel set in motion by a crank, and meshing into a pinion placed on a hollow cylindrical shaft, with two projecting trunnion heads which are applied to the nuts or, by insertion in dies, thread the nuts or bolts. By setting the crank in motion in the direction required, the nuts may be loosened or tightened, or the bolts or nuts threaded.

Improved Running Gear for Carriages.

Rufus Kline and Robert M. Jack, Pottstown, Pa., assignors of one third their right to Fortunato G. Pompei, of same place.—In this invention, the main part of the axle is formed of the inverted U shaped bar, arched in the middle. Spindles or journals, made of separate short bars, with a shank behind a collar, are adapted to fit in the ends of the bar. A thin plate extends from collar to collar under the part, and is either welded to the shanks of the spindles or fastened by a stud pin and socket and a clip. This bar or plate is so adjusted as to length that it holds the collars firmly against the ends of the main part of the axle, and its tensile strength is brought to the aid of the main part of the axle in support of the load. The bars of the perch or reach, of which there may be one or more, are made in the same form in cross section as the part of the axle, employing filling pieces at the ends, welded in to attach the clips for connecting the bars to the axle and the bolster. The bolster is also made of an inverted U shaped bar of the same kind as employed for the axle and the reach, with thin flat plate upon the bottom fastened to it by clips.

Improved Self-measuring Oil Tank.

Jacob Schalk, Jr., Guttenberg, N. J.—The invention consists in the improvement of self-measuring oil tanks. A number of measuring compartments are filled from a tank in any convenient manner by means of a tube or tubes, or the liquid may be discharged into one compartment and run from that into the others. When any one of the compartments is emptied or drawn off, a suitably arranged valve may be raised to fill it, so that they may all be kept full and ready at all times. By this arrangement the exact quantity required is always measured out and ready for being drawn off, and may be drawn into measuring vessels or directly into the vessel of the customer. In the bottom of the opening is a drip pan, the cover of which is perforated. The tank is made preferably of wood lined with metal, and presents a neat and handsome appearance.

Improved Knife Cleaner.

Timothy Gingras and Louis Gingras, Buffalo, N. Y.—The object of this invention is to furnish a practical instrument for families, boarding houses, and hotels, by the use of which knives and forks may be quickly cleaned without dust. An outercase is connected by screws and suitable brackets to the wall. An inner box is made movable therein and may be taken out to be used on a table. A drawer and button contains the polishing powder. Above the drawer is a horizontal board divided into two parts by a projecting piece, to which are applied lids fitting exactly into the parts of the board. The inner sides of the lids as well as of the board are lined with strong buff leather pieces glued and riveted to them, so as to adhere rigidly thereto. The polishing powder, with moistening material, is placed on one side and dry polishing powder on the other. The knives are placed between the leather surfaces and first rubbed in the moistened powder slightly, then in the dry powder till perfectly clean and polished. The box is slightly drawn open, so that the escaping powder may drop therein. The lids are not closed when forks are polished, the rubbing of their prongs being sufficient.

Improved Turning Lathe for Wood.

Anderson R. Park, Columbia, Texas.—This invention consists in the improvement of machines for turning saddle trees. The work and pattern carrying spindles are mounted in the heads of a slide, and they are coupled, detachably, with the shaft, which is splined in an endless lengthwise through its driving wheel to move forward and back with the slide, also to turn the spindle. Between the housings the said spindle carries the different patterns used for controlling the action of the cutter wheel through the medium of the guide wheel, the said guide wheel and cutter disk being both mounted on the shaft, which is mounted in the swinging end of the frame which is mounted at the lower end in the axis of the driving shaft. The blanks or pieces of wood to be dressed are carried between the face plate and the tail center on suitable carrier plates or forms, either attached to the said face plate or fitted on an elongation of the spindle, and differing in form according to the different kinds of work to be done.

Improved Sample Holder for Displaying Boots, etc.

Jacob Closs, Decatur, Ind.—The object of this invention is to supply to the trade a sample holder by which shoes and other samples may be exhibited on the outside of the boxes containing the goods, to be easily attached and detached, and holding the samples firmly thereon. The invention consists of a spring holder of strong wire, bent in such a manner that the same can be rigidly connected to the box, and at the same time the samples quickly be placed on the holder or be taken off, the spring action preventing any accidental detaching of the samples.

Improved Breech Loading Fire Arm.

James Aston, of Hythe, England.—This invention relates to that class of breech loading fire arms which are provided with vertically sliding breech blocks; and the principal feature consists in the provision of devices for cocking the hammer ready for firing simultaneously with the descent of the breech block. The devices employed for accomplishing this result consist of a bifurcated claw lever, located within the breech chamber, and provided with a swivel or forked stirrup at its rear end, which engages with a hooked rear prolongation of the hammer, so that, when said claw lever is depressed by means of an external lever handle applied to its fulcrum pin the breech block will be lowered for exposing the rear of the barrel, and the hammer brought to a full cock by means of the stirrup on the claw lever, in which position it is retained until the breech block is elevated when it is disengaged for exploding the charge by means of the ordinary trigger.