

Recent American and Foreign Patents.

Improved Thill Tug.

Dewitt C. Bassett, Cambria Mills, Mich.—This invention relates to means for supporting the thills of a vehicle, and furnishing, at the same time, a convenient mode of attachment for the saddle, breeching strap, and girth. The thill tug consists of a two part tube and a tube containing loops for the saddle, breeching, and girth straps arranged loosely thereon.

Improved Asphaltic Cement Tank.

Tobias New, New York City.—This invention relates to the residuum of coal tar, now used for roofing, paving, and vault covers. As soon as sufficiently cool, this residuum is placed usually in barrels, wherein it soon solidifies, and from which it can only be removed by their destruction, while the cooling and reheating impairs its quality. The present invention is a tank in which this valuable cement may be offered to the trade with all its original qualities, and without any necessity for the destruction of the package that contains it. The tank or metallic barrel is made airtight, to prevent the evaporation of the valuable adhesive properties of the cement, and, in conjunction with the inner lining, which is a non conductor of heat, to prevent the escape of calorific. The asphaltic cement is drawn from the still into these barrels or packages, which are then transferred to a chamber, kept always at a suitable temperature, and there held in readiness to be supplied to the trade. During transportation from one locality to another, a small fire is maintained in a central furnace, but only sufficient to make up for the heat that will very slowly escape from the airtight and heat-protected package.

Improved Potato Planter.

Jonathan R. Phelps, Chatam, N. Y.—This invention consists of a cutter on a hollow rotating dropping drum at the bottom of the hopper, in such relation with the passage to the dropping tube that the potatoes, settling down upon the disk, through the hole in the hopper, will be cut off in sufficient quantity for the seed of one hill and delivered into the passage to the tube. The invention also consists of a discharger combined with the cutter and the disk, so as to force out any of the cut pieces that may lodge in the throat between the cutter and the disk, and deliver them into the passage to the tube. The invention also consists of a spring pusher, combined with the cutter, to push the cut pieces into the passage.

Improved Washing Machine.

Elbridge Marshall, Toronto, Kan.—The clothes are placed in a box, between a grooved side and a vertical beater, the top closed down, and a sufficient quantity of water added thereto. A lever is then worked up and down, which produces a reciprocating motion of the beater by the action of toggle levers, and thereby the rubbing, pressing, and squeezing of the clothes till they are perfectly cleaned. This machine may also be used for pressing lard, by putting the lard in a bag between the beater and the side, and placing it in an inclined position for the clear lard to run off.

Improved Cotton Bale Tie.

Leopold Well, 211 West 51st Street, New York City.—This invention consists of one or more transverse slots through the end portions of the band or hoop, through one or more of which slots, in each end portion, a flat metal pin or key is passed, the two end portions being overlapped. In the case of a bale, the key will merely extend along the hoop or band, between the latter and the bale, so as to be secured by the pressure of the bale. The key has a head to prevent it from passing through; and, if needed, it may be bent or indented with a punch, to secure it from working out. The inventor's object is to provide a bale tie of undiminished strength, and to do away with the necessity of making bends in the band to fasten it. The invention can also be applied to barrel hoops, etc.

Improved Running Gear for Carriages.

Daniel Hutchinson, of Hannibal, Mo.—The object of this invention is mainly to provide light vehicles with a platform gearing, by which the construction of the sustaining parts can be made lighter, and the upturning of the body of the carriage prevented, as the front wheels are made to turn freely below the same. The invention consists in substituting for the king bolt a disk turning in an outer surrounding sleeve, which carries the front spring of the carriage, and the springs connecting the step brace of the same. The dispensing with the perch and stays equalizes the additional weight of the step brace and disk pivot.

Improved Magazine Fire Arm.

Frank P. Peace, Marysville, and James W. D. Williams, Knoxville Tenn.—This invention consists of a magazine chamber on each side of the barrel, with a transversely reciprocating block behind them for taking the cartridges from said chambers alternately and presenting them to the barrel, also for removing the shells to a discharger. The block is worked by a crank shaft and connecting rod set in motion by a trigger wheel, which is turned far enough each time it is pulled for firing to effect one movement of the block, which brings the cartridge into position just before the hammer falls. The object is to provide a simple and efficient repeating arm, which can be loaded and fired by simply pulling the trigger.

Improved Bed Warmer.

Job Crockett, Portsmouth, N. H.—This invention consists of a flat circular metallic bed warmer, to be filled with hot water, which is provided with a screw plug fitting hermetically into a screw seat. The latter is arranged with notches for allowing every drop of water to be extracted from the inside, both plug and seat projecting to the inside of the pan, being flush with the outer surface.

Improved Machine for Sampling Ores and other Material.

John Collom, Idaho Springs, Col. Ter.—This invention consists of a small short spout which is slowly and regularly moved at intervals under the mouth of a spout or trough, through which the substance to be sampled is caused to run, receiving a certain portion of the said substance, and diverting it from the regular course into a sample box. The proportion of the substance taken to the whole mass is determined by the proportion which the said short spout or receiver bears to the length of the circuit it travels, in the greater portion of which it is not passing the spout. The object is to obtain, from crushed ore, grain, and other substances, samples representing an average as to quality, and the proportionate weight.

Improved Railway Switch.

Carl Naucke, Jr., Magdeburg, Germany.—The object of this invention is to provide a switch mechanism, in connection with the common railroad signal switch, by which the correct position of the switch rail may be obtained by the locomotive engineer, even if the switch is wrongly set by accident or mistake, permitting thereby a full control of the switches by the same without slackening speed, and increased safety against accidents arising from misplaced switches. The invention consists in providing the pivoted switch rails with an attachment plate. This connects, by bell crank levers, with a link-shaped pivoted rod, operated and guided in such manner that the attachment plate and switch rails are moved whenever a latch connection of the link-shaped rod with a longitudinal lever rod, which locks into the sliding switch bar, is released by the action of an inclined lever of the locomotive on the roller of a weighted crank of the locking lever rod. The detaching of the lever rod from the sliding bar is thus produced, and the switch rails are thereby carried into position for the train.

Improved Bevel Sawing Machine.

George S. Grier, Milford, Del.—This invention consists in combining a vertically reciprocating saw with a canting frame, rack ring and pinion, and feed table, having arc bars supported in concavities of the uprights, whereby the whole machine is rendered much more convenient, and its products are caused to exhibit a more thorough, workmanlike, and uniform appearance.

Improved Loom Temple.

John C. Thickins, Washington Mills, N. Y.—This invention consists of a wheel for the weighted strap of a loom temple, provided with a ratchet and pawl arranged to allow the wheel to turn freely when the weight goes down. The weight is free to exert all its force without any loss by friction, and the wheel is prevented from turning when the strap is pulled up. By this means the influence of the friction of the strap on the wheel, to the weight for holding the fabric outstretched against the tendency of the tension of the warp to contract it, is increased.

Improved Railway Rail.

George O. Kunkle, Zieglerville, Pa.—The cap rail is so shaped that its head overlaps that of the base rail, passing then along its side, and being curved at the inner corner of the base, so as to slip easily along the base rail, and be easily removed and replaced. The base rail is first placed in position, being produced to correspond with the cap rail, with rounded head and forward projecting lower corner. The cap rail is then placed with its outer edge under the chair recess, and slid along the base rail till the head overlaps the base rail, resting fully thereon. Both the upper and lower rails may be removed and substituted very quickly, and without drawing a spike. The wear is confined almost entirely to the upper rail, which may be made of steel, the lower of iron. A chair may be used on every tie, or on alternate ties, as desired.

Improved Machine for Gunning Saws.

Thomas S. Jackson, La Grange, Tex.—A slotted stand or socket is adjustably connected with the bed plate. This slotted stand resembles the tool socket of a turning lathe, and it is made adjustable in a similar manner. An arm extends horizontally at a right angle from the shank, which latter is placed in the socket stand. To one side of this arm is attached, on a horizontal arbor, a face gear wheel. The emery wheel is made fast on another arbor, which is supported by the arm, and has upon it a pinion with which the gear wheel engages. A rapid revolving motion is given the emery wheel by revolving the gear wheel. The machine may be operated by hand or by motive power, and is made to gum or dress the teeth of a saw without the use of files, and in the most expeditious manner.

Improved Dental Plugger.

George H. Chance, Salem, Oregon.—Heretofore the metal points of the instruments used by dentists in filling teeth with gold have been exclusively of steel. The above inventor uses gold rendered of suitable hardness by alloy. The advantages claimed are prevention of electrical action from the contact of the steel tool and the gold filling. Second, obviating the danger of minute particles of steel remaining in the filling, forming a center of oxidation. Third, in preventing undue force being used, to the detriment of the operation and pain of the patient, the pliability of the gold point being such that it will bend before an excessive blow, while sufficiently hard for all practical purposes.

Improved Inside Blind.

John H. Voorhees, Williamsburgh, N. Y., assignor to Hardy and Voorhees, of same place.—To one end of the shutter roller is attached a pulley around which is passed an endless belt which also passes around a small pulley on the casing, and by means of which the shutter is wound upon and unwound from the roller. The pulley is recessed to receive the spring, which is coiled around the pivot of the roller. The inner end of the spring has an eye formed upon it, which is slipped over a pin attached to the pulley. The outer end of the spring has an eye which connects with a lever, which, by a pin and a series of holes in its arm, may be adjusted as desired. The tension of the spring is regulated by turning the lever around its pivot. The spring is so arranged as to be wound up by the descent of the shutter, and to be fully unwound up when the said shutter has been fully lowered. By this arrangement, the spring increases in strength as the shutter descends, so as to be always about equal to the weight to be supported, so as to always balance the said weight, and thus enable the shutter to be raised and lowered with a very slight outlay of power.

Compensating Attachment for Flour Packing Machines.

Lewis Creveling, Akron, O.—This invention consists in the connection of a strong spiral spring with the shaft from which the barrel platform is suspended, and with a hollow cog wheel, which is guided by a projecting rim in the base plate of the casing, and adjusted to any degree of tension of the spring by means of a pinion with check pawl and crank, as required for the different purposes for which the packer is used. The increasing weight of the barrel or sack to be packed will be compensated by the increased tension of the spiral spring on the shaft, so that the process of packing continues uniformly from beginning to end, the platform returning then easily into elevated position for filling the next barrel.

Improved Fountain Ink Pad for Hand Stamps.

Francis J. Coutant, New York City.—In passing up and down through the top of the ink tank, a certain amount of friction is required to keep the ribbon tightly strained across the pad. This is accomplished by means of elastic valves, one of which is stationary. The other is gripped between metallic plates, and moved so as to press the valve against the ribbon by means of finger screws, which move in slots in the top of the tank. There is a plate at one end of the tank, through which the screws pass, which plate is forced up and the screws moved laterally by cam levers. Finger screws at the other end are attached to an angle plate, and produce the same result in a different manner. With this fountain pad the quantity of ink carried up by the ribbon is always the same, and cannot be varied except by compressing the ribbon between the valves.

Improved Mitering Machine.

John Henry Rowland, Denver, Col. Ter.—This invention consists of a saw guide and plane guide for controlling the saw and plane in cutting off and smoothing the wood sticks. There are a couple of shifting stops and a scale for a guide, by which to adjust the stops against which the wood pieces are held for sawing bevels of any angle, right or left. The support for said stops is jointed to the saw and plane guide so as to be adjusted around its major axis, and at right angles to the direction in which the shifting stops change the angles of the miters for making the latter splayed.

Improved Bevel Sawing Machine.

George S. Grier, Milford, Del.—This invention consists in a saw beveling machine with a ratchet on each end of the table, the teeth of the two being inclined reversely from the middle; an adjustable frame placed transversely across a sawing machine table; in combining with an adjustable pointer, connected and moving with the table of a stationary scale plate, having a vertical row of notations and a series of notated arc rows. These improvements are specially adapted to facilitate the preparation of ship timber and the cutting of irregular forms.

Improved Grading Attachment for Levels.

Dr. John Thornley, Charlottesville, Va.—This invention is an improvement upon the grading level for which letters patent No. 143,942 were granted to the same inventor, dated October 21, 1873, and it consists in so constructing and arranging the adjusting graduated bar and its sliding extension piece that a single screw secures them in the desired position, either extended or retracted, and whereby they may be locked together at their respective outer and inner ends by a spring and shoulder connection; and in the combination of said adjusting bar with a piece which is hinged to the under side of the level.

Improved Piston Packing.

Andrew J. Isler, Brownsville, Pa.—This invention relates to means whereby wedges may be applied, in a novel and useful manner, to the spring packing of a piston, and to means whereby the screws that fasten the follower to the piston head may be fastened by nuts on the outside, while the heads of the bolts are located on the inside of the piston head.

Improved Wood Stove Heater.

John C. Frazier, West Alexander, Pa.—This invention consists in making a wood stove with an upper and lower division, the former enlarged and projecting over the latter to receive a hot air chamber, which is provided with two registers, one opening into a pipe leading to the room above, while the other opens into the room in which the wood stove is located.

Improved Safety Attachment for Pocket Books.

John Trout, Omaha, Neb.—This invention consists of a long flap a little wider than the length of bank notes, with one or more elastic straps or cords extending across from edge to edge on the inside, and attached at their ends to the edges of the flap to secure the bank notes, which are to be placed under the straps, and then rolled or folded up in the flap. There is also a safety fastening for attaching the book to the clothing, so as to retain it in case of an attempt to pick it out of the pocket. This fastening is a notched stud pin projecting from a base plate, attached to the clothing and passing through a plate on the book, behind which is a spring catch engaging the said notched pin, so as to hold it until released by pushing the catch out of the notch by a thumb bit provided for the purpose. The fastening is also applicable for securing other pocket articles.

Improved Combined Plow, Scraper, and Chopper.

Hezekiah W. Rumpfelt, South Point, N. C.—To the beam, a little in front of the standard, is attached a second standard, which carries a scraper for barring off the plants. Suitable gearing on the forward part of the beam rotates a longitudinal shaft which revolves in bearings in arms attached to the beam. To the shaft are attached two knives, the shanks of which are made of such a length that the knives may be in proper position to chop the plants.

Improved Moccasin.

George F. Parker, St. Stephen's, Canada.—The sole piece is made of an elliptical form, and sufficiently wide and long to form a seam with upper and heel piece, which slopes from the leg seam in opposite directions toward heel and toe, and is at some distance above the tread face. The protuberance of seam is brought upon the outside, to make a smooth surface on the inside. The upper of the sole has a tongue and side projections, to and under which is sewn the front piece, the latter being made to overlap the heel piece and rear leg piece to which it is sewn. By constructing the boot of pieces that are thus shaped and fitted together, a very comfortable and durable moccasin is obtained, while the leather can be cut to more advantage and with greater economy.

Improved Band Pulley.

Edwin Sanford, Hartford, Conn.—This invention consists in making the lagging of pulleys of one rubber or leather strap, at intervals and at each end thickened to enter recesses in the rim of the pulley, secured by screws passing up through the wheel rim thereinto, whereby it will be no longer necessary to take down shaft and remove pulley whenever the lagging needs repair or replacement, but simply to unfasten the screws.

Improved Piston Rod Packing.

Charles H. Fuller, Akron, Ohio, assignor to himself and Edmund W. Deacon, of same place.—An outside casing of rubber is surrounded by covering of canvas. A coil of hempen rope is filled with pulverized soapstone, and with a second rope of rubber cloth is wound around a mandrel of wood of the size of the piston rod, alternately, and then surrounded by the casing. The whole is finally cut off square, so as to fill the stuffing box. In this manner the packing is prepared for use, and may be placed around the piston rod by cutting it open longitudinally, either parallel or obliquely with the piston rod. The packing is elastic, and is made to hug the rod by screwing down the gland. The rubber casing keeps the coils in place, and the soap stone, combined with the hemp, prevents friction.

Improved Thill Coupling.

Bernard H. Wessel, Cincinnati, Ohio, assignor to himself and George H. Groot, of same place.—The object of this invention is to facilitate the changing of the shafts of a carriage to pole and vice versa. It consists of a coupling which is attached to the shafts or pole, and applied directly through the axle or by means of clips and clip plate, and held thereon by a screw or equivalent, together with a rubber cushion. The device also consists in changing the shackle or coupling at the axle, instead of removing the bolt (as is usually done) that passes through the eye of shaft or pole.

Improved Furrow Scraper.

Frederick G. Thurston, New York City, assignor to M. Ma Del Gado and Joaquin Liera, same place.—The scraper plate has its forward edge made straight and beveled to cause it to enter the ground readily. The middle rear part is cut away, to cause the soil taken up by the end parts of said plate to pass into the furrow to be filled. The plate is made of such a length as to cross the furrow and rest upon the ridges at its sides. The soil taken up by the end parts of the plate, encountering upwardly projecting flanges which incline to the rear, passes inwardly, and drops through a notch in the rear part of the plate into the furrow.

Improved Car Coupling.

Harbert K. Forbis, Danville, Ky.—The draw bars hook together side by side. They are fitted at the rear end in a hanger, and secured, by a key, with a strong buffer spring. This hanger is suspended from a strong plate, pivoted to the car bottom to swing laterally, and allow the draw head the necessary sidewise movements. At the front end of this plate is a stud projecting down each side of the draw bar, to insure the alignment of the one with the other, so that the draw bar will not cramp in the hanger when bumping. A cap on either draw bar slides along in front of the hooked end of the draw bar of the other car, and locks the hooks together. A cap is arranged to be forced back by the end of the draw bar when coupling, and forward after the hooks have engaged, by a spring. It has a bend, and is fitted on an inclined rest, so as to slide obliquely against the hook, and be constantly pressed thereon to insure the hooks against working apart, and to prevent rattling. For uncoupling, the caps are drawn back by a cord, which may be conducted to a lever upon the platform.

Improved Stalk Puller.

Cadwallader Heacock, Trinity, Tex.—The wooden handle of the instrument is inserted in eyes in the upper end and middle part of a metallic bar. The upper part of the latter, between the eyes for the handle, has a curve formed in it to serve as a fulcrum. The part of the bar in front of the end of the handle is nearly parallel with the same, and has a fluke formed upon its side, and projecting to the rearward at an acute angle. The adjacent edges of the fluke and body of the bar are beveled upon the lowerside, to cause said edges to take a firmer hold upon the stalk to be pulled. The end of the bar forms a hook for throwing the pulled stalks together into windrows. In using the instrument, the fluke is passed around the stalk near the ground, and the instrument is drawn back to bring the said stalk as far as possible into the angle. The bow sliding upon the ground enables this to be done easily. The handle is then pressed downward, and the bow serving as a fulcrum, the stalk is drawn from the ground.

Improved Station Indicator.

Michael Farnan and Samuel W. McPherson, New York City.—A pawl lever is pivoted between pawls, so that a movement of it in one direction turns one of two rollers, and a movement of it in the other direction turns the other. To this pawl are connected cords which pass through the ears. A belt passes over the rollers, and has marked upon it the names of the stations. By pulling the cord, which connects with a separate indicator in each car, the brakeman may quickly change the name exhibited. A bell is arranged to sound whenever the belt is shifted.

Improved Combined Cultivator, Stalk Cutter, Harrow, and Corn Planter.

Matthew Green, Walker Station, Mo.—This apparatus is used as a cultivator and stalk cutter combined across the rows. The cutters run on each side of the young plants, and throw up the earth to the adjoining rows by the front plows, while the rear plows open the earth between them. The stalk cutters serve for the purpose of cutting the stalks, and also as fenders for protecting the young corn from being loosened by the tearing up of the stalks, and preventing injury by the falling of heavy clouds upon them. After the first plowing, the auxiliary front plows are taken off, and placed on the side beams after the rear plows have been taken off, changing both front and rear plows, so as to throw the earth toward the corn, and produce the covering up of the weeds. For harrowing, the plows are taken off, and the ground smoothed for seed planting, each at the proper time.

Improved Spike Auger.

Roland O. Arbour and Joseph Arbour, Baton Rouge, La.—In the center of the auger longitudinal hole is bored, in the upper part of which is cut a screw thread. A guide, consisting of a straight bar of steel or iron, is made to nicely fit the hole, and is provided with a screw thread to engage with the female screw of the auger. The outer end of this guide is provided with points, which engage with indentations in the head of the spike, previously made with a punch. As the auger is revolved the guide remains stationary, and the auger will screw into it and cut an annular hole around the spike. The points of the guide being embedded in the head of the spike, the auger is pressed against the wood sufficiently to keep the guide in place. When the auger has passed through the plank it is removed, and then the guide is hidden in the auger, and is extracted by applying the end of the punch which acts as a plug wrench on spurs, and turning the guide round and unscrews it, when the operation may be repeated on another spike, and so on until the plank is released. This auger may be made of any size, so as to suit any sized spikes, and is an expeditious way to release the plank from a vessel in case of repairs or for other purposes.