

ENGINEERING INVENTIONS.

A valve gear for direct acting steam pumps has been patented by Mr. John C. Dear, of Indianapolis, Ind. This invention consists of an auxiliary piston which carries the main valve of auxiliary valve and ports, and connections for imparting a long and adjustable stroke to the auxiliary valve.

An automatic waste valve for engine cylinders has been patented by Mr. Warren R. Townsend, of Grand Rapids, Mich. It is made to be closed by the steam pressure and to open by a spring when the boiler pressure is cut off from the cylinder, the valve remaining wide open when the engine is at rest, thereby allowing free escape of water.

A railway switch has been patented by Mr. David H. Valentine, of Brooklyn, N. Y. This invention consists of a triangular switch beam having independent sides for a portion of its length and provided with a block secured between its sides at the larger end, the object being to provide a practical railway switch without a frog.

A locomotive pilot has been patented by Mr. Frank B. Hoels, of Buffalo, N. Y. The frame is heavier and larger than usual, and there is an elastic covering supported over it, consisting of coiled springs arranged to receive any shock of collision lengthwise, so the springs will cushion the blow, and obstacles will be easily lifted and thrown aside from the track.

The fastening of fish plates of railway rail joints forms the subject of four different patents issued to Mr. Thomas A. Davies, of New York city. This invention is to make a tight bearing joint that will give and take and hold the fish plates with a uniform bearing against the rails, and the invention in part consists in the use of a spring metallic washer with a hole in its center, curved in the form of a section of hollow cylinder, and with the greatest thickness of metal opposite the bolt hole in the line of the center of the cylinder, whereby a uniform elasticity will be given to all parts of the washer. Two of the patents are for combination of parts and the use of angular springs, in connection with the rivets or bolts of the joint, whereby the wear will be constantly taken up, and the joint held firm, while another patent covers fish plates with a flange on their inner sides near their upper edges, combined with the rails, spring washers, etc., whereby the joints will be held rigidly in line both laterally and horizontally.

AGRICULTURAL INVENTIONS.

A plow has been patented by Mr. William H. Hodgson, of Winona, Minn. There is an extension of the short bar back of the joint where the landside plate joins the share, in a recess in the landside, the bar being securely held by the bolts that hold the landside plate, thereby keeping the point of the share in place and serving to make a very strong short bar plow.

MISCELLANEOUS INVENTIONS.

A spring bed bottom has been patented by Mr. John R. Dehn, of Pittsville, Pa. It is composed of slotted plates, coiled and straight wires, and connecting links, in combination with rollers for tightening up the bottom, avoiding the use of a separate form for holding the bed bottom.

A hoop or band for barrels and other like receptacles has been patented by Mr. James W. Weston, of New York city. It consists of a looped hoop or banding wire, made of a single strand, the loops being of sufficient size to receive the staves of nails, but not to allow the heads to pass through.

A stalk cutter has been patented by Mr. James K. Patterson, of Grete, Neb. It cuts with a reciprocating action, thus preventing clogging, and the knife is so arranged that in case of its striking a stone or other solid object it would yield therein, while the machine is strong, cheap to build, and easy to handle.

A base for cheese covers has been patented by Mr. John R. Kock, of New York city. It has an annular groove with lining, in which water can be kept for the flange of the cover to rest in, thus preventing a water seal, to prevent the cheese enclosed from becoming dry.

A fire kindler has been patented by Mr. John Mel, of Baltimore, Md. It is formed solely of fire clay, so burned during a period of six or seven days as to be sufficiently porous to carry enough oil to accomplish the purpose, but sufficiently strong to withstand intense heat, which allows of its being left in the fire, but does not impair its adaptability for future use.

A spring take up for wax thread sewing machines has been patented by Messrs. Cornelius Drum and William Wyker, of Jefferson City, Mo. The device is made in the form of an attachment to be applied to the head of the machine, and is adjustable to suit the size of thread used and the length of stitch to be made.

A saw set has been patented by Mr. John A. Burbywick, of Atlantic City, N. J. It is to be operated in the manner of a pair of nippers by means of pivoted handles, one handle having a clamp for holding the saw and the other handle operating an adjustable rotary disk by which the teeth is bent down upon an anvil.

A boneblack drier has been patented by Mr. Edward P. Eastwick, of New York city. By this invention steam is used instead of a current of air, the steam being superheated by waste gases from the kiln; the vapors emitted from the drier are likewise conducted into a condenser, where the latent heat may be utilized, and thus promote economy in the operation.

A breastpin watch has been patented by Mr. Daniel Goldsmith, of New York city. The watch is held on a breastpin in such a manner that it can be connected with the pin by means of a flexible or folding device adapted to be contained within or behind the pin, and when the watch is withdrawn the device is extended or lengthened.

A pantalon protector has been patented by Mr. Franklin R. Hogeboom, of Brooklyn, N. Y.

It is a flat plate or strip, with attached hooks, adapted to lie under cover of the rear portion of the bottom hem of the pantalon leg, the hooks projecting above the hem to engage with an upper portion of the cloth, to prevent such part from trailing in the mud.

A swimming shoe has been patented by Mr. John A. Couper, of Marietta, Ga. Combined with a foot plate are apertured lugs projecting from the bottom, a rod held on the lugs, with wings on the rod, so that when the swimmer strikes out the wings swing open and offer much resistance to the water, but when the foot is drawn forward the wings swing together.

A folding ladder has been patented by Mr. John Ready, of Littleton, N. H. Combined with hinged ladder sections are spring catches and notched blocks for holding the sections in line, making a ladder which can be folded compactly, erected and adjusted for use easily and rapidly, and will be stiff and rigid.

A grip for ice shavers has been patented by Mr. Harry G. Cornell, of Dayton, O. It is formed of a metal plate secured on a block and having two downwardly curved jaws which have teeth on their ends for gripping a block of ice, making a holder to retain a piece of ice while sliding it over a planer to shave the ice into small chips.

An improved style of roofing has been patented by Mr. Charles H. Starr, of Longsight, Ind. It is more especially designed for railway cars, etc., and to allow of free expansion and contraction, there being gutters in spaces between the roof boards, spanned by roofing plates with downturned flanges, cap plates spanning the gutters and overlapping the roofing plates.

A cistern and tank cleaner has been patented by Mr. Raymond B. Scudder, of New Orleans, La. The pressure of the water or liquid in the cistern or tank is used for driving out the sediment through the cleaner, the latter having a fixed position of rotation for a scraper, so as to clean out the undesirable collection on the bottom of the receptacle.

A pocket has been patented by Lily F. Roberts, of Kentucky Town, Texas. It is a watch pocket for the use of ladies and others, of sheet metal, lined with soft material, and provided with a pin by which it may be attached to a garment, the pocket being neat and durable, and such as can be engraved or enameled or otherwise ornamented.

A window bead fastener has been patented by Mr. Charles R. Nelson, of New York city. A specially devised slotted box or thumb is used in connection either with a flat or round headed screw, with sometimes a roughened washer to prevent slip after adjustment, to maintain the requisite fit or tightness of the sash.

A window sash has been patented by Mr. Henry Yolk, of Chicago, Ill. This invention covers a device for pivoting sash and connecting them to sliding side rails, consisting of a plate with screw holes and a headed pin formed solid therewith, so the sash may be swung vertically and at a greater or less angle to the side rails.

A steam radiator has been patented by Messrs. Juan B. Avel and John Chapman, of Brooklyn, N. Y. This invention consists principally in the employment of independent tubes for coupling the steam pipes to the steam chambers, whereby any of the pipes may be removed from the radiator without disturbing the other pipes.

A rotary blower has been patented by Mr. Isaac D. Weaver, of Lebanon, Pa. By this invention it is sought to avoid the loss due to the rise and fall of the valves, and the waste in the clearance spaces in the cylinder and passages, in order to obtain compression in better advantage than can be effected with the common reciprocating compressors.

A stirrup has been patented by Mr. Ephraim M. Turner, of Fort Worth, Texas. The frame of the stirrup has an upper tubular cross tie in open communication through the sides, and serving for attachment of the stirrup strap, with other special features, intended to give the rider's foot a firm hold on the stirrup in the ordinary course of riding.

A folding ladder has been patented by Messrs. August Bornmann and Emil Eckhardt, of Brooklyn, N. Y. It consists of pivoted side links, rings pivoted in every second joint of the links, and blocks applied to the joints and formed with shoulders or offsets, to prevent the links from opening beyond a straight line outward.

A check rein swivel has been patented by Mr. Jacob Johnson, of Ashland, Neb. This invention relates to improved connections for driving reins, and covers a U-shaped metal piece, with the ends of its prongs united by a cross piece, on which a sleeve is mounted loosely, and around which a strap is passed connecting with the bit, with other novel details.

An animal catcher has been patented by Mr. William Ramon, of Kemma, Neb. It has a hook head fixed to a handle, a pivoted catch lever with right angular arms, and with a projection which locks into the teeth of a spring pressed jaw when the catch lever swings around to incline an animal's leg between it and the hook head.

A guard for steamboat paddle wheels has been patented by Mr. John Murphy, of Brooklyn, N. Y. It consists of semicircular side pieces mounted loosely on the shaft at opposite sides, with wires between the pieces to form a guard or cage for receiving or protecting the lower half of the wheel, and preventing damage from ice or other floating substances.

A whip has been patented by Mr. Ephraim M. Turner, of Fort Worth, Texas. It is more particularly intended for stock farmers, the body or core consisting of cotton or other vegetable fibrous material, with wire wrapped about or incorporated therewith, combined with a vulcanized rubber covering, there being a metallic or other rigid handle.

A rein holder has been patented by Mr. Frank S. Osborn, of East Sharon, Pa. A frame is adapted to be secured to one edge of a dash board, inclined, and having jaws, a rod, and connecting jaws, with a rubber block behind the rod within the frame, so that when herein fastened to the dashboard the reins will be

secretly held, but can be easily pulled in the direction from the horse.

An oil filter has been patented by Mr. Daniel S. Neiman, of Fargo, Dakota Ter. Combined with a tank having filtering material is a series of strainers placed one above another in the tank, and partitions, the strainers being slanted alternately in opposite directions, a coiled steam pipe being also used, the object being to cleanse oil which has been used for lubricating.

An extension trestle has been patented by Mr. Henry H. Childers, of Louisville, Ky. This invention provides means for supporting the portion of long timbers, planks, etc., which extend beyond the tables of saw benches, mortising machines, etc., when being worked, the trestle being readily adjustable to the height required to support the work, and easily lowered out of the way.

A photographic printing apparatus has been patented by Messrs. William Hill and Thomas R. Wilson, of Salt Lake City, Utah Ter. A multi-faceted cylinder or polyhedral drum is combined with a negative holder of peculiar construction, with checkwork for causing an intermittent rotation of the cylinder, to act automatically to feed the sensitive paper and remove the pictures when printed.

A lifting jack has been patented by Messrs. George S. and James M. Bowling, of Clarksville, Tenn. Its base has a notched slot with post fitted to turn and slide therein, engaging the notches in the slot, with a lifting lever pivoted to the post and having a notch to engage the axle or other object to be lifted, the device being especially applicable for raising the axles of vehicles for greasing or repair.

A ventilator has been patented by Mr. Reinhold E. Henniges, of Cleveland, Ohio. Combined with a metal frame having a slot, and adapted to be set in a recess of the window sash, is a valve, pivoted at its lower edge and having an arm projecting rearwardly through the slot, with cords extending back through the recess and down the inner side of the window, for opening and closing the air valve.

A sash fastener has been patented by Mr. Reinhold E. Henniges, of Cleveland, Ohio. The box with the pinion is so arranged that it is adapted for attachment to the top rail of the lower sash, and both sashes may be raised and lowered simultaneously, or locked in any adjustment, or one may be raised or lowered alone, with which are also improved devices for locking and releasing the pinion.

A feeding mechanism for wool carding machines has been patented by Mr. Frank C. Babcock, of Dryden, N. Y. It is intended for feeding wool to first breaker cards, and to automatically increase in distance of movement, as required, to mat the wool evenly upon the feeding web or apron, and has a special mechanism for automatically changing and regulating the feed according to the running of the work.

A cash carrier has been patented by Mr. Robert E. Gibson, of Zanesville, Ohio. This invention provides means for passing cash boxes or other moving them from the inclined tracks with facility, and so that more than one box can be passed over the tracks at or near the same time, when cash boxes are thus made to travel by gravity between the salesman and cashier.

A bed plate for paper pulp engines has been patented by Mr. Frederick S. Taylor, of Rigelsville, N. J. It is of cast metal, with a series of inclined slots forming a series of inclined bars and a series of cross bars, intended to be less expensive to manufacture than ordinary bed plates, and so that the cutting or wearing parts when worn can be replaced at a small cost.

A thill coupling has been patented by Messrs. George H. Holzberg and Mathias J. Weickler, of Jeffersonville, Ind. This invention consists in a coupling hook provided with a downwardly projecting lug or tongue having a notch in its end for receiving the free end of a spring held on the axle eye, the construction being such as to prevent rattling and accidental uncoupling.

A fastening device for coffins has been patented by Mr. Solomon A. Argerbright, of Decatur, Ind. The invention consists principally of a dovetailed clutch of peculiar construction adapted to be placed in a recess made in the edge of the coffin to receive the head of a screw in the lid or cover, the coffin having several such catches and the lid several screws and a spring catch.

A burglar alarm has been patented by Mr. William Goldspon, of Lodi, Wis. It is made with a sliding block having an arm to engage with a pin upon an escapement wheel, the escapement of which carries a bell hammer, and which is driven by a spring connected with the casing, with other novel features, making a device that can be readily connected with a door knob or disconnected therefrom.

A fire escape and elevator has been patented by Mr. Charles R. S. Curtis, of Quincy, Ill. This invention provides means for stopping the carriage should the hoisting rope break, and for moving the carriage by hand power and holding it securely independently of the hoisting rope, also to prevent the fall of the carriage when operated by the hand gearing in case the operator by mistake disconnects the gearing.

A thread unwinder has been patented by Mr. Lyman R. Hopkins, of Brooklyn, N. Y. It is a simple mechanism to be placed upon a sewing machine table to hold a large stationary spool, and guide the thread in its passage from the spool to the needle bar, but is so made as to stop should the thread break, and thus prevent the thread from becoming entangled by the forward movement of the machine.

A gate has been patented by Mr. Paul T. Kuegel, of Albany, Wis. This invention relates to improvements in gates supported to slide on rollers journalled on a crane hinged to the gate post and adjustable at varying heights on the crane, so the gate may be swung fully open both ways, and the crane rollers so placed that the hands will not be caught and injured by them.

A burglar alarm has been patented by Mr. Morris Pratt, of Milton Junction, Wis. Combin-

ed with a frame is a shaft and cranks, a ball on one crank, a gong on the frame, a cord on the shaft, a weight on the cord, and a sliding latch or bolt on the frame, to which a cord is fastened extending to the doors and windows, the object being to simplify the construction of mechanical burglar alarms.

An ice hook has been patented by Messrs. George W. Palmer, of New York city, and George W. Kidder, of Staatsburg, N. Y. It is made with a handle strap having a socket, lugs, and apertures, with a clamping bolt for securing a detachable prong by a wedge key, so the prongs can be readily adjusted to adapt the ice hooks to be used by tall or short men.

A magic lantern has been patented by Messrs. Henry and George Davenport, of Soudersville, Pa. Combined with a box having a mirror on the inner surface of each end, and two mirrors on the inner surface of the front, there is a lens tube in the front and a picture holding slide on the back, making an improved apparatus for reflecting pictures on a screen or wall.

A case for copy books and copies has been patented by Mr. Daniel A. Radley, of Lawrenceburg, Mo. This invention is an improvement on a former patented invention of the same inventor, and furnishes a receptacle for writing materials and copy slips, with clamps and a hinged plate or tablet slated on the outer face, so the writing may be done by pen or pencil.

A dynamo electric machine has been patented by Mr. Jose M. Rivera, of Bogota, C. S. of Colombia. The object of this invention is to so construct machines that the armature can be rotated without the use of belts or gear wheels, and a greater or less number of machines can be coupled on one shaft, also to facilitate the winding of the armature and improve its general construction.

A quartz mill has been patented by Mr. Jacob G. Truss, of Elizabethtown, New Mexico. It consists of a tub having a circular trough in its bottom, a series of balls in said trough, a rotary plate or cover with groove corresponding to the trough and adapted to rotate on and with the balls, with a battery of stamps carried by the cover and dies for operating the stamps as the cover is revolved, the mill being made of detachable sections for convenient transportation.

A toy has been patented by Mr. Harmanus Zeydhoek, of Brooklyn, N. Y. It has a plate with holes to receive the operating springs or a pivot, and slots to receive wire gauze for inclosing a combustible compound, with a loose wire to enlarge the circle of fire, so the device may be operated as a sinner while being used as a buzz, without danger of setting the house or the operator on fire.

A wind engine has been patented by Messrs. David and William W. Shilling, of Troy, Ohio. This invention covers improvements in the frame and vane, in the spider for shifting and holding the vane in and out of the wind, and means for utilizing the power, either by rotary or reciprocating motion, through various novel features of construction and arrangement.

A pump for oil wells has been patented by Mr. James M. Sauner, of Bradford, Pa. The barrel has a lower plugged end, with a lateral opening below the valve chamber connecting with an external supplementary chamber also having a lower closed end, so made as to exclude gas, and that the pump will be less likely to take in sand than when the section is lower down and at the lower end of the barrel.

A gate hinge has been patented by Eugene A. Williams, of Des Moines, Iowa. The lower hinge is made with a swinging arm hinged to a plate attached to the gate post, and carrying a pin working in a socket cap attached to the lower rear corner of the gate, so the gate can be thrown out of plumb by moving the swinging arm, making a simple and durable self-opening gate.

A flaxseed separator has been patented by Mr. George Adams, of Sherburne, Minn. The frame has ends of unequal height with grille recesses in its top cross bars, there being a sliding frame in these recesses with parallel plates attached therein, with grooves, discharge spouts, a feed box, and other novel features, constituting a simple and convenient machine for separating mustard and other round seed from flaxseed.

A saw filing machine has been patented by Mr. John H. C. Winsor, of Lynchburg, Va. It has reciprocating file holding frames, with jaws for holding the saw, and means for automatically feeding the saw transversely to the files, the clamp or jaws for holding the saw being combined with a spring arm for pressing the jaws together during the time the files act on the saw, and automatically releasing the jaws during the time the files make the return stroke.

A tricycle has been patented by Mr. Thenophilus H. Paessler, of Malvern, Ohio. This invention covers improvements on a former patented invention of the same inventor relating to tricycles adapted to be propelled by either the feet or the hands of the rider, or by both working together. Another patent of the same inventor provides means for automatically returning the guide wheel in line when it is turned to either side, and means whereby the tricycle may have an extra set of propelling apparatus for the use of a second rider.

A structure for handling vicious animals, a stall, and a driveway for training horses are the subjects of three patents issued to Mr. Charles F. Shudell, of Fairfield, Neb. The first structure is designed more especially for handling the wild horses of the West, and consists principally of a lung chute built of parallel walls and made continuous to entrance chutes or pens, with separating gates for grading or separating out the animals to be trained. The stall is a novel construction for harnessing vicious horses and for yoking wild and vicious cattle preparatory to breaking horses and cattle, while the third invention relates to a circular driveway, and vehicles, wheelbarrows, etc., connected therewith, for training wild and vicious horses to the harness and saddle.