

Recent American and Foreign Patents.

Improved Vibrating Propeller.

Charles P. Macowitzky, Corpus Christi, Tex.—This invention is an improvement on the propellers for which the same inventor obtained previous letters patent, and it relates to the arrangement of the sliding frame, to which the paddles are pivoted, with relation to the side or shell of the boat or other vessel, and to the rack bar by which the paddles are vibrated. By reversing the paddles upon one side, the vessel may be turned in a very small space—almost upon her axis. A vessel with this system of propulsion will be enabled to avail herself of winds, and go under sail entirely, if so desired.

Improved Wheel Plow.

William Dickie, Gillespie, Ill.—This invention is a wheel plow in which novel devices are provided to allow of its being easily raised from and lowered to the ground, adjusted to work at any desired depth in the ground, and to run level whatever may be the depth of the furrow being plowed, and when both wheels are running upon the unplowed land.

Improved Cooking Stove.

Edwin O. Brinckerhoff, New York city.—In this stove, by suitable arrangements of flues and dampers, the products of combustion are caused to pass over the top, back, bottom, front, and sides of the oven, so that the said oven will be heated evenly and thoroughly with the least possible amount of fuel.

Improved Car Coupling.

Charles Surplice, Ludington, Mich.—Levers are provided by means of which the drawheads are moved laterally, and there are scroll springs at the back ends of the drawheads, which give them flexibility. The drawheads are allowed to rise by means of wedge-shaped keys, which are operated by levers. The other ends of these levers work beneath the horizontal bars and on horizontal levers, and are so held in any position. The keys work under angular plates which limit the lateral movement of the drawhead. Arms on the ends of shafts raise the hooks by levers at the front ends of the coupling. The coupling bar is made to engage with the hooks. This coupling bar is retained in a horizontal position by the shape of the cavity in the drawhead and the form of the hook, so that the cars will couple automatically when they come together.

Improved Wood Sawing Machine.

Henry Filley and Alanson D. Wood, Hersey, Mich.—By an ingenious application of cams, arranged alternately with reversed curves on the driving pulley, two double motions of the saw are made to one revolution of the driving pulley. The cross head is connected to an endless rope, which passes over pulleys and is connected to a hand lever, which is used to raise and lower the saw by moving the cord up and down. This lever is also used to press the saw into the work, and is provided with a cord and weight for applying the pressure.

Improved Vibrating Propeller.

Clement Theobald, Elliston Station, Ky.—This is a submerged incased propeller, consisting of reciprocating bars arranged under the water on each side of boat, and provided with a series of short hinged side paddles. The forward stroke of the slide boards throws the paddles sideways along the boat, and on cushioning springs, so as to offer hardly a resistance to the water, while the return stroke throws them on the braces into position for producing the propulsion of the boat.

Improved Auger.

Charles F. King, Covington, Pa.—This auger has a detachable cutter head, which may be readily replaced when injured, and which allows the use of the auger with cutters of various sizes. The detachable cutter head is placed over the screw point, and connected by grooves with dovetailed side recesses, fastening the screws to the lips of the auger.

Improved Automatic Pumping Engine.

Hiram S. Maxim, New York city.—The construction of the fire chamber is such as to leave a thin stratum of water all around the sides, so that the formation of steam will begin very soon after the fire has been started. The fire pot is made in the shape of a short tube open at both ends, and in its lower part is placed the perforated burner, which is secured to the end of a supply pipe, through which the combustible is introduced. When the pressure in the boiler increases, a diaphragm is raised against the weight of a block, and the force of a spring closes a valve more or less, according to the amount of pressure in the boiler and vessel. A small hole is drilled through the valve to enable enough of the combustible to always pass through to support a small flame, and thus prevent the flame from being extinguished by the closing of the valve, so that, as the valve again opens upon the diminution of the pressure, the flame will immediately increase, the formation of steam being thus increased and diminished automatically. With the steam pipe is connected a four-way casting, with the inlet and outlet arms of which are connected the parts of the said steam pipe. With the upper arm of the casting is connected a safety valve. With the fourth arm of the casting is connected the throttle valve. The pump is attached to the frame work upon the side opposite to the engine, is single-acting, and the water escapes from it through the valve chamber into the four-way casting, with one arm of which the discharge pipe is connected. Other ingenious devices are provided to ensure constant oiling and a steady flow of water, and to regulate the feed.

Improved Railway Switch.

Samuel T. Dutton, Worcester, England.—This invention provides a means for rigidly securing the facing points of switches, to prevent the possibility of the points being fouled by the opening of both tongues at one time. The switches are made from twenty to twenty-two feet in length, and are connected and moved separately, in such manner that only one tongue can be moved at a time. The switch is connected to the single rod by cranks at two or more places in its length, thereby holding the switch firmly and equally against the stock rail at different points. To secure the facing tongue close up to the rail, at the point of each tongue is placed a cam, moving on a stud on the point chair, each cam being connected to and moved by the oppositeswitch. It follows that, when either of the switch tongues is opened, it will cause the other tongue, which then becomes the facing switch, to be secured in its place, and, as the open or free switch cannot be closed while a train is passing or standing in them, the facing switch thereby remains secured.

Improved Well Drilling Machine.

John E. B. Morgan and Henry Kelly, Osage, Iowa.—The most over which the rope for working the drill rod goes can be readily folded down on the frame, for convenience in storing and moving. Devices are provided, so contrived that the rope can be let out at any time, as the drill descends, without stopping the machine. Whenever it is required to raise the drill rod out of the well for pumping it out, the power employed for working it may be employed therefor merely by throwing in the clutch; and when the clutch is thrown in gear, the stop lever arrests the drill-operating lever and holds it, so that the drill ceases working while being raised.

Improved Combined Roller and Harrow.

William W. Anderson, Wartrace, Tenn.—When the machine is drawn forward, cutters cut in pieces stalks and weeds and cultivate the wheat, while rollers will roll it, leaving the ground smooth for the harvester. When only a roller is required, the machine is turned, so that only the rollers will touch the ground.

Improved Lawn Mower.

Leonard G. Youngs, Morris, Ill., assignor to himself and Richard Hughes, same place.—This invention relates particularly to the construction of the axle and ratchet lever for vertically adjusting the frame and hand guide bar of the machine, and also to the connection of the finger bar with the frame, to adapt the former to be raised entirely off the ground when the machine is to be moved from one point or place to another.

Improved Railway Axle Boxes.

C. A. Hussey, New York city.—The first invention is designed to prevent the entrance of dust and sand into the axle boxes of railroad trucks, and thereby prevent the heating and wearing of the journals and brasses over them. This is accomplished by means of leather packing, arranged to form a tight connection from the box against the wheel, so that the lubricating fluid may be poured into the box, to allow the journal to run in oil. The invention does away with the old dust plate and the cotton waste packed in beneath the journal. The axle box is made shorter, smaller, and consequently lighter and cheaper than the common box, while it accomplishes the object in the most perfect manner, that is, the complete lubrication of the journal and its consequent protection from heating and wearing. Mr. Hussey has also another invention, which is an improved method of preserving the journals and brasses of railroad axle bearings from heating and wearing. This is accomplished by producing a circulation of water or other liquid through the brass or box, which receives all the friction of the journal. The brass of the axle is chambered out in any suitable manner, and elastic tubes are connected therewith for conducting and discharging the water to and from the brass. A lively current of water is produced from an elevated reservoir, which keeps the brass and journal at a low temperature. The ordinary absorbent (cotton waste) may be used in axle boxes having this cooling current applied to the brasses with safety from heating and wearing. Both inventions have been patented through the Scientific American Patent Agency in Canada, England, and most of the countries on the continent, and one of our leading railroads is about to adopt one or both improvements in their cars.

Improved Drawbar and Buffer.

Charles Billmeyer, York, Pa.—This invention relates to novel means for reinforcing and sustaining the ordinary transverse car springs to which the drawbars are attached, and consists in combining three springs with the same beam, bolt, and nut.

Improved Gin Saw Sharpener.

Josiah Mizell and John Revel, Colerain, N. C.—This invention relates to machines for sharpening the teeth of a series of saws arranged upon the same shaft, the object being to direct the feed of the rotary file from one tooth to another while the same sharpener is thus adapted to saws of different diameter, and the saw that is being sharpened is steadily centered between the legs.

Improved Vapor Bath.

John Becker and William D. Hoffman, Sigourney, Iowa.—This invention relates to a mode of using electricity as a vehicle, in connection with steam, for the introduction of medical remedies through the pores of the skin. The invention consists in arranging the evaporation pan in such a way as to afford a general or special delivery of the vapor; in the use of doubly adjustable electrodes, and in providing the bath closet with a tube that has an internal conductor and binding screw.

Improved Gas Cooking Apparatus.

Thomas Peacock, of Wood Green, and John C. Peacock, of Finbury Park Road, England.—This is a simple arrangement of metallic casings, in which the air necessary to support combustion, after passing through holes in the internal casing of the door, is conveyed to gas jets, and the heated products circulate all around the oven, and finally make their exit, cooling as they descend, through holes into the flue to the chimney. The back of the apparatus is formed with a double casing, with intermediate space forming the flue. The gas jets in the door are enclosed in a small separate case, which is open at the top.

Improved Cart Brake.

Justus B. Mead, Jr., Darien, Conn.—This invention consists of brakes for the wheels of a two-wheeled vehicle, arranged on the box independently of the shafts, so that they will turn around with the wheels and be utilized for tilting the box when the cart is backing up to the place to dump. The invention also consists of the brakes pivoted to the sides of the box, one to each wheel, and connected in a peculiar manner to one lever, whereby both may be operated by it.

Improved Extension Ladder and Fire Escape.

Abraham Oberndorf, Jr., and Ernest Frank, Baltimore, Md.—This invention relates to certain improvements in fire escapes, and it consists in the combination of friction wheels, ratchet tramways, and guide blocks, with the four corner posts of separate and independent stories, which slide into each other after the manner of a telescope. It also consists in the combination of horizontal swinging bars and vertical rods, with detents which fit in the ratchet teeth and support the stories, for the purpose of affording means for operating the stories. The invention also further consists in the combination with hoisting pulleys of a windlass consisting of separate and independent barrels, corresponding in number to the number of the movable stories, which rest upon a core or shaft, or revolve with the same by means of a clutch wheel and spline, as may be desired.

Improved Hay and Cotton Press.

William C. Banks, Como, Miss.—This invention relates to certain improvements in cotton presses, and it consists in the peculiar construction and arrangement of the devices for adjusting the follower block and its pivoted supporting bar in its position to one side of the box, for the purpose of obviating the obstruction usually afforded by the same when the box is being filled. It also consists in the peculiar form of the box, which has increasing transverse dimensions as it tapers from the mouth to the place where the bale is compressed.

Improved Safety Catch for Elevating Carriages.

Henry Opperman and Alexander Black, Steubenville, Ohio.—This invention relates to the cages in which men and materials are transferred to and from the inside of a mine, the object being to provide a safety attachment by which danger from the breakage of a rope or other part of the holding device will be surely and effectually prevented.

Improved Sight Protector.

M. H. Mendenhall, Wabash, Ind.—The object of this invention is to provide an improved device for use in reading by the aid of artificial light. The same consists in a lamp-containing box, or case, cut away at one side and provided with a pivoted or hinged plate for deflecting the light, the latter being adjustable and adapted to be clamped or secured at various angles. The rays of light may be concentrated and practically increased in power; or their amount and direction may be varied at will, by changing the position of the pivoted deflector. The eyes of the reader are at the same time protected from light and heat. The device is adapted for general use, and particularly with sewing machines.

Improved Shingle-Dressing Machine.

Samuel M. King, Lancaster, Pa.—This invention consists in novel and very effectual means whereby both sides of a shingle may be planed and faced smooth by a single operation, thus greatly lessening the cost of manufacturing the article.

Improved Wash Stand.

William Schwarz, New York city.—This wash stand has a lid to which is hinged a looking glass. There is also a water receptacle and basin, a blacking stand, which may be drawn out at will, and a convenient drawer. The whole, when closed up, presents the appearance of a bureau.

Improved Sail for Vessels.

James C. Nichols, New York city.—This invention consists in combining, with the gaff of a fore-and-aft sail, an independent sail, connected with the mast by means of a jackstay and rings, and adapted to be furled to the gaff.

Improved Engine for Rock Drills.

James Brandon and Albert W. Trankle, New York city.—Steam passages connect each end of the cylinder with the steam chest, and enable the piston to be reciprocated. This piston has annular grooves connected by longitudinal grooves. The channel ways thus formed between these heads connect with channels and with the live steam chamber. There is, in consequence of this relative construction, an equilibrium of steam pressure always maintained on both sides of the pistons, except just before the heads reach the limit of their throw. The steam is momentarily cut off and serves to reverse the position of the pistons and the valve.

Improved Alarm Combination Lock.

Henry W. Dilg, Portland, Oregon, assignor to himself and William Zimmerman, same place.—In this lock, the tumblers are provided with false and true slots, which are not radial to the center, but in line with a prolongation of the pins or tongues of the main bolt. A spring hammer with alarm bell is connected with the tumbler wheel, and set by a stud, in connection with alarm tumblers, so that any attempt at opening the lock without setting them to their combination will be indicated by the continued ringing of the bell.

Improved Medicated Bath Apparatus.

Jean Joseph Louis Brémond and Paul Alexis Ernest Brémond, Paris, France.—The object of this invention is to provide a means for the cutaneous application of medicines for the purpose of healing diseases. It consists in an airtight chamber, provided with means of ingress and egress, and having a hole through the top, through which the patient's head protrudes, the said chamber being lined with such material as is not likely to be affected by the corrosive action of the medicines. At one end of the chamber, near the top, is an enclosed place, provided with sliding doors, in which rests a vessel containing the medicated solution, and in the bottom of said vessel rests one leg of a glass siphon, about one sixteenth of an inch in diameter. The other leg passes down the inside of the chamber, and communicates inside with a funnel-shaped mouth, at right angles with a steam pipe, after the manner of an atomizer.

Improved Clevis.

Leander Ellsworth Smith, Dixon, Ill., assignor to Theron Cumins, Henry T. Noble, and Orris B. Dodge, of same place.—This is a simple double hook and cast stud which serves to brace the plow clevis and to allow of its speedy lateral adjustment.

Improved Locking Latch.

Henry Rogers, Eureka, Cal., assignor of one half his right to Hiram Allen Haskins.—The novel feature in this lock is that the simple throwing over of an eccentric from one side to the other releases or locks the main bolt, which is still farther secured, without any possibility of being tampered with from the outside, by a knob bolt, which slides in a slot of the inner face plate, and enters a recess of the eccentric, when the same is thrown into position for locking the main bolt.

Improved Table Hinge.

Andrew Grimm, Union Hill, N. J.—This is a novel combination, with a table having a hinged leaf, of a hinge having its pintle directly under the leaf joint. One wing is screwed to the leaf, while the other is formed in the shape of a slide piece, which moves in a recessed casing screwed to the table. This is acted on by chambered springs of a suitable strength, while the leaf is rested on a projecting shoulder of the casing.

Improved Wagon Spring Seat.

John Griffith, Bellefonte, Pa.—This consists in the attachment of strong supporting standards to the sides of the wagon, and the connection of the standards by a pivoted clip with torsionally acting springs that are securely applied to the seat by central and side socket clamps.

Improved Stop Valve.

John Demarest, Mott Haven, N. Y., assignor to the J. L. Mott iron works of New York city.—This is a combination of annularly-grooved valve and pipe, the former having a large upper and a comparatively small lower flange, while the latter has an enlargement or seat with a packing ring. By this relative construction of pipe and valve the ring is carried down by the piston, so that it remains between the valve body and the pipe, making a perfectly watertight joint. When, however, the piston is withdrawn, the lower flange raises this packing ring, and allows it to clasp the body of valve.

Improved Car Ventilator.

Franklin N. Clark, Wellington, Ohio.—This ventilator is attached to a plate of metal which is fitted into the window, and inside the latter supports a water reservoir. An expandable air receiver is placed outside the window. The reservoir receives the air from the air receiver tube, and discharges the same by an inside pipe, the latter having an annular funnel-shaped orifice. The effect is to purify the air admitted.

Improved Tongue Ring for Neck Yokes.

Seth D. Bingham, Maumee City, Ohio.—The invention consists in a tongue ring for neck yokes formed of the leather covers and a metal plate. The upper ends of the plate and of one part of the cover are left free to be passed around the neck yoke and to be secured by rivets. By this construction the rings may be made and applied to any neck yoke.

Improved Plow.

Chauncey M. Van Every, Bronson, Mich.—There is a horizontal plate on the top of the plow standard, and a plate attached to the beam. The latter plate has dowel pins to hold it strongly against being turned horizontally on the beam, and it has near one end a concave and under-cut flange with vertical notches, in which corresponding points on the end of the standard plate fit. The beam plate is rounded and fitted in a concave and under-cut shoulder of the standard plate, all so that, when both plates are attached to the beam by a single bolt, the plow will be firmly but detachably secured, so that it can be shifted readily at any time to alter the lead of the beam.

Improved Leather-Scalloping Machine.

Isaac P. Hall, Miamisburg, Ohio.—A roller is made of a length equal to the breadth of the strip of leather to be operated upon, and in its face are formed two zigzag grooves having the form of the required scallop, and in which are placed two small blocks, which serve as knife-holders, and which slide along the grooves as the roller is revolved. To the sliding blocks are pivoted the ends of two rods, the other ends of which receive pins attached to a bracket, which is secured to the bench. To the sliding blocks are attached knives which project upward, so as to enter zigzag grooves in another roller, which is made to overlap the ends of the roller first mentioned. The rollers may be made of various lengths, according to the breadth of the leather strips to be operated upon.