

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

LAMP BURNER.—This invention relates to improvements in that class of burners in which an Argand flame is produced by two flat wicks confined by an exterior tube around a central wick tube, through which air is supplied from below, an outer tube being also employed to regulate the flame by raising or lowering, while the wick remains stationary. An improved construction and arrangement is employed whereby the burner is made more economical and efficient than those now in use. Invented by Seabury B. Platt, of Derby, Conn.

FRICTION CLUTCH.—This is a new friction dog to be used in all catch or clutch boxes of cotton, woolen, and other machinery. A friction spring is applied to the loose sleeve and dog that operate the pawl, so that by the spring the dog will be carried to the same side toward which the shaft is turning, to let the pawl act in the same direction. When the motion of the shaft is reversed the dog will be swung to the other side, to reverse also the action of the pawl or throw the same entirely out of gear. William C. Burch and George D. Oatley, of Gloucester, N. J., are the inventors.

DISCHARGE APPARATUS FOR OIL TANKS, GRAIN CARS, ETC.—A series of holes is cut in the bottom or lower end of a hollow stem for the purpose of allowing the liquid or grain to pass out through the hollow stem and the discharge or hole in corresponding casting at the bottom of the tank, when the hollow stem is raised sufficiently to bring the holes above the top of the discharge casting, the discharge or escape of the liquid or grain being cut off when the hollow stem is screwed down into the thread or screw in the discharge casting. This arrangement of the hollow perforated and screw threaded lower end of the tube, with the casting, is employed in preference to the valves heretofore used, because it can be opened, although frozen up, by water lodging upon the inside of the tank when empty, which prevents the opening of the valves. Invented by W. J. Brundred, of Oil City, Pa.

FENCE.—This improved fence, invented by Henry Deyoe, of Machias, N. Y., consists in metal posts formed by two rods of iron, hooked under opposite sides of a stone or metal base, and shaped above it so as to rise side by side, and be clamped firmly together by a ring, to which posts the panels, permanently built together, are suspended at the ends on right-angled hooks projecting from rings placed on the posts by slipping down from the top, and secured at any point by keys. The vertical parts of these hooks are made to extend sufficiently from the posts to receive the ends of two panels or a board thereof, the one lapping the other, and a key may be used or tightening them up.

HORSEHAY RAKE.—The invention connects the rake to the frame of the truck by leather or other flexible straps, made fast at one end to the rake frame, as shown, and at the other end to the blocks or bars, pivoted to the frame so as to oscillate vertically. The rake is drawn by these connections, which allow the requisite lateral and vertical play of the parts, due to the uneven surface. The front cross bar of the rake is connected to a block or foot lever, pivoted near the front of the truck frame, by a cord or chain, which works over a guide or pulley for lifting the rake off the ground; and the handles of the rake are connected with a hand lever, pivoted to the frame by a bar and rod, by which the rake handles may be raised to cause the points of the teeth to catch in the ground to turn thereto; or, by lifting the handles at the same time, the front of the frame is lifted by a lever and cord or chain, the rake will be lifted wholly off the ground. M. W. Trescott, of North Canaan, Conn., is the inventor.

PLOW.—John Thomas Story, of Magnolia, Ark., has invented a plow for general farm work, the construction and arrangement of handles, beam, standard, and braces, in relation to each other, and the mold board and land side, admitting of a number of peculiar adjustments, by means of which the handles can be brought into any desired position, the plow beam can be swung on a pivot into a suitable position and locked therein, and the plowshare can be put into suitable position.

ROTARY ENGINE.—A circular case, with a thick rim, has in its inner wall four concave spaces, divided by projections, the inner faces of which lie in a true circle, coinciding with the face of a disk or drum, and have circular grooves extending across the rim, in which are placed cylindrical metal pieces, intended to bear against the rim of a disk for preventing the escape of steam from one space to another. They are pressed against the said disk by steam admitted to grooves behind them through the small holes. Being cylindrical, and the friction of their contact with the disk being greater than that of the contact with the walls of the grooves, they will revolve, and thereby wear less than if stationary, and the resistance to the disk will be less. There are as many exhaust ports as there are projections and cavities, and each is placed a little in advance of a projection. A recess is formed in the radial wall near the outer end, into which the steam port opens. The steam chest is placed on the outside of the end plate of the case. It has as many ports as there are recesses in the case. The steam or compressed air acts upon radially advancing and retreating blocks or buckets. Benjamin I. Henderson, of Salem, Mass., is the inventor.

WATER HEATER.—A water heater for green houses and other purposes has been invented by John Lynch, of Boston, Mass., which consists of a general construction and arrangement of parts whereby the water is made to surround the fire box in a thin sheet, entering cells formed in the fire box, and the hollow back or bridge wall absorbing heat from a very extended surface, and economizing fuel. By the connection of two pipes, a perfect circulation is maintained.

CARRIAGE AXLE.—This is a sleeve-bearing and lynch pin device, so arranged that, it is claimed, the axle is cheaper and more easily made than the common axle, is more cheaply repaired when broken, and the axle can be more readily handled in the fire. It also can be cut to the required length at once, thus saving the trouble of welding.

LET-OFF MECHANISM.—This is a friction apparatus to regulate the letting off of yarn from the yarn bearers of looms. A metallic strap lined with leather and the leather lined with cloth overlapping the leather, is made to draw down, over and upon the yarn beam, by means of a lever and spring attachment which can be adjusted while the loom is in motion. The leather and cloth lining serve to adapt the friction strap to unevenness in the surface of the beam, and thereby render the action uniform. Invented by George Bailey, of Putnam, Conn.

BED BOTTOM.—Robert V. Jenks and William Allen Miller, of Paterson, N. J.—This bed bottom is so constructed that the head part may be raised and held at any desired elevation. The bottom of the bed is formed of strips of webbing placed longitudinally, and at the head of the bed is attached to the pivoted part of the framework, a roller with ratchet wheel and pawl whereby the webbing may be stretched tight and kept strained. The tension of the webbing is what supports the pivoted section in an inclined position when raised, it being braced in the opposite direction by a cord wound about a belaying cleat in the side rail.

ADJUSTABLE MIRRORS.—This invention consists in a novel method of raising, lowering, arranging, and suspending one mirror, or when desired, two mirrors, so that a person may see at the same time the front and back of the head and bust, a great convenience in hair dressing. The glasses are, by the devices employed, easily adjusted to suit various heights of stature, and to allow the person to sit if desired. It is the invention of George S. Roberts, of Meredith Village, N. H.

WASHING MACHINE.—Francis M. Ellis, of Galva, Ill.—In this machine, a half cylinder tub, pivoted at the center, is made to oscillate by a handle. The tub contains a corrugated or ribbed board, which is moved with the tub. The clothes are squeezed between this board and a series of vertical fixed bars attached to the upper framework of the machine. It also comprises a rubbing apron for hand work, suitable covers, etc.

CAR COUPLING.—This is a simple and, we judge, effective device which obviates all necessity of entering between cars to couple or uncouple them. The draw head is bifurcated, the bifurcations embracing the coupling pin. A coupling hook is pivoted to the draw head, and is forced radially and horizontally towards the pin by means of a suitable spring. The end of this hook is inclined, so that the pin forces it back when the cars come to-

gether, until the pin passes the angle of the hook, when the latter is forced behind the pin by the action of the spring. A cord or chain attached to the hook extends back obliquely to a vertical shaft which rises through the platform of the car. A hand wheel placed on the top of this shaft is turned whenever it is desired to uncouple the car, and winds up the chain and draws back the hook from its engagement with the coupling pin. If it be desired to keep the car from coupling again, the shaft is held from turning back by a ratchet and pawl arrangement, similar to that ordinarily used on brakes. Invented by Eugene Campbell, of Medusa, N. Y.

REPEATING ORDNANCE.—Alfred H. Townsend, of Georgetown, Colorado Territory, has invented a gun constructed to throw numerous balls from different barrels. The breech piece consists of two plates having perforations which register with each other to receive the cartridge. At the point of junction of the two plates, passages are formed, connecting the chambers, to communicate the fire from one barrel to another. The barrels are made independent and arranged one upon another in diagonal planes. A plate, placed between the breech piece and the barrel, has corresponding perforations. The barrels are placed in two divisions, one on each side of a central line, and each inclined reversely thereto. The breech piece is held detachably by a spring. The cap communicates with only one of the chambers, which, being fired, ignites in succession, at very minute intervals, the entire series through the passages above described, whereby the inventor claims to obtain a succession of weak recoils instead of the violent shock sustained by an exactly simultaneous discharge. The piece being discharged, the balls are projected slightly divergent from the principal axis of the gun. The breech piece is then withdrawn and another charged one substituted, the admission of air, during the change, acting to cool the gun and expel gases.

STEAM PUMP AND FIRE ENGINE.—James W. Whitaker, of Kenosha, Wis.—The general principle of this invention is the raising of water into a vacuum caused by first filling a chamber with steam and then condensing the steam. The water which rises to fill the vacuum is then forcibly expelled by steam pressure. There are two chambers so adjusted as to discharge alternately into a receiving tank, from whence issues a nozzle through which the water is continuously expelled. The admission and condensing of the steam are effected through the aid of a four way cock or valve caused to act automatically by floats which, through double cranked rods, operate a weighted lever attached to the valve stem.

PISTON FOR PUMPS AND STEAM ENGINES.—A new arrangement of slides is worked by steam to turn a crossed ring which, acting on wedge-shaped noses of the expansion ring, spreads the latter, and thus enlarges the piston. A sleeve with radial arms is fitted loosely on the piston, the ends of the arms meeting the inner inclined surfaces of the wedge shaped noses. A block secured to the inner face of a piston head has small piston chambers formed therein, and the small pistons contained therein are caused to press upon one of the radial arms of the sleeve, thus forcing it partially around and causing the ends of the radial arms to press against the noses on the expansion ring. Steam is admitted behind the pistons through small slots. There is also a spring by which the piston may be permanently expanded in its primary adjustment. Invented by John Adam Huss, of Bowling Green, Ky., assignor to the Bowling Green Improved Cylinder and Pump-Packing Co., of the same place.

ANGULAR STRAP HINGE.—This is a new way of applying a support to the vertex of an angular hinge strap, where the sharp turn is apt to strain the fibers of the metal and allow it to be readily fractured. It consists in striking up the metal inwardly where the angle is to be formed. There may be two or more corrugations if desired, but for ordinary strap hinges or brackets, one is usually found sufficient to give the bend or angle the required degree of strength. By his mode, the inventor claims, a strap hinge may be made of ordinary band iron in the most inexpensive manner and still be of superior strength and durability. Charles F. Hawley, inventor, Kansas City, Mo.

HAIRPINS.—This invention consists in the application of knobs or enlargements to the ends of the prongs, the object of which is to retain them in the hair more securely than they can be without said knobs, as they are now made; also, to prevent them from cutting or puncturing the skin, as the pins do when made in the common way, sometimes much to the injury of the wearer, by reason of the poisonous action of the metal, or substances adhering to it, upon the scalp. Invented by Edward Hewitt and John McAuliffe, New York city.

CLOTHES DRYER.—John Johnson, of Perry, Ill., has invented a clothes dryer, which consists in a number of arms jointed to sleeves sliding up and down a notched shaft or post in such a way that pawls or toes on the inner ends of the arms will engage in the notches when the arms are extended horizontally, and hold the said arms in an extended position on the post; and, by lifting the outer ends, the toes will be disengaged, and the sleeves will slide down below a rack surrounding the post, which holds the arms in a compact bundle around the shaft.

CLOTHES DRYER.—A central standard or bar, has holes to receive hooks or nails by means of which the frame may be suspended from a wall or other support. To this central standard are hinged semicircular blocks, and to each of the blocks are pivoted the inner ends of four (more or less) bars, in such a way as to have a free lateral movement upon the blocks. The bars are arranged in sets, and the outer ends of each set of bars are pivoted to a vertical bar, in such a way as to have a free vertical movement. By this construction the frame is capable of being folded. John K. Derby, of Jamestown, N. Y.

HYDRAULIC MOTOR.—This consists in a vibrating blade or piston in a closed case, an induction port and exhaust port on each of two opposite sides, with valves or gates, and automatic apparatus for working the valves from the crank shaft, which is operated by the shaft of the vibrating blade. Other arrangements of valve operating gear may be employed, the essential part of the invention being the arrangement of the case, blade, and valves. Invented by Volney Kromer, of Grand Rapids, Mich., assignor to himself and Warren T. Reaser, of same place.

WHARF BOAT.—A movable bridge extends from the top of, or a trestle way on, the bank, to a tower rising from the deck of a wharf boat, having numerous platforms on one side, one above another, and floors within corresponding with them, on which platforms the end of the bridge may be suspended, and may be shifted from one to another as the water changes, to maintain it in a level position, or nearly so; the said tower also having suitable hoisting and lowering gear for transferring the freight from the boat to the bridge, and vice versa. This apparatus is well calculated for use on the Western rivers where the banks are changeable by the action of the water, and permanent apparatus cannot well be maintained. Invented by Edwin W. Halliday, of Columbus, Ky.

ROLLER AND MARKER FOR PLANTING.—Invented by Frederick Roth and Bernhard Fürst, of Lacon, Ill.—This invention is an improvement in rollers and markers, and consists in a frame which is so constructed that the rear ends of its side bars act as shoes or runners to support the machine when the marking device is elevated from the ground. Thus, there is no necessity of providing wheels or other means of support beside the main frame of the machine, as in the case of other combined rollers and markers which have a jointed tongue; which last is regarded as a valuable adjunct, for otherwise, upon ground full of inequalities, the markers would be at times pressed deeply into the earth, and at others lifted completely out of it, thus frustrating in a measure, the useful purpose of the machine.

CURRENT WHEELS.—The buckets or floats are hinged to the outer ends of the arms and swing back toward the shaft, so that on the lower side, where the water acts on them, they are supported by the arms, and thereby receive the force of the water; but on the upper and retiring side, in case the water be higher than the shaft, they will swing away from the arms. When they come down to take the water, they are prevented from swinging outward by the action of the water. This wheel may be wholly immersed in the water and secured to the bottom of the stream, or it may be at the surface. The gate consists of a semicircular or nearly semicircular case, having closed ends, pivoted to the supports of the wheel in the axis, so as to swing around the wheel, in opening and closing. For operating it, it has curved slots in each head, with toothed racks in which pinions work, the pinions being actuated by suitable mechanism. Invented by William Tuder, of Mofettown, Texas.

PROPELLER.—John S. Stites, Baltimore, Md.—This invention relates to the method of propelling vessels by means of pistons, working in cylinders placed within the vessel and passing through the bottom thereof, said cylinders being open at their lower ends, so as to admit water by the action of the pistons, against which the propulsion of the vessel is effected.

ROLLER SKATE.—Allen T. Covell, San Leandro, Cal.—This invention is an improvement in devices for operating roller skates, whereby the front and rear set of rollers are simultaneously adjusted for describing circles of greater or less radius. The invention is, more particularly, an improvement on the skate patented to Hiram Robbins, May 10, 1870, whereby the weight and number of parts are lessened, and their strength increased.

APPARATUS FOR FASTENING PULLEY AND WHEEL HUBS TO SHAFTS.—Edward G. Shortt, Carthage, N. Y.—This invention consists in a hub, provided with an eccentric bore, and combined with wedges running lengthwise of the hub, and curved and tapering in cross sections, and with a key which fits between the wider edges or heads of the curved wedges, within the hub which key, when driven into the hub, causes the wedges to clamp and center the axle.

METALLIC TILES FOR ROOFS.—Cornelis G. Van Pappelendam, of Charles-town, Iowa.—The principle of this improvement consists in forming a covered channel between two ridges and two tiles to exclude water. The tiles are made of galvanized iron or other suitable metal, and may be struck up out of sheet metal, or cast, as may be desired. They are made square or diamond shape, and placed diagonally upon the roof or wall. Upon each upper edge of the tiles are formed two upwardly projecting ridges, about three eighths of an inch in height, the ridges running along the two edges of the tiles, and the second ridge being parallel with, and at a little distance from, the outer ridge so as to form a channel between them. Upon the under side of the two lower edges is formed a single downwardly projecting ridge. The side angles of the tiles are cut off, and they are arranged upon the roof, so that the downwardly projecting ridges of each upper tile are placed below and embrace the upwardly projecting ridges of the adjacent edges of two tiles. By this construction it will be impossible for water or wind to beat in and pass above the three ridges. Upon the body of the tiles may be struck up or otherwise formed, an ornament, in the shape of a tassel flower, or other suitable device. This ornament strengthens the tiles and prevents them from being rolled up by the wind, and, at the same time, adds greatly to the beauty of the roof or wall.

WATCHMAKER'S GAGING TOOL.—This is a simple and widely applicable tool for watchmakers, whereby glasses, mainsprings, arbors, wheels, and other parts of watches may be gaged. It is impossible to give a clear idea of the details of the instrument in a notice like this, but we regard the tool as likely to meet with great favor, and prove a very useful adjunct to the present outfit of the watchmaker's table. It is the invention of Theodore Noel, of Memphis, Tenn.

Official List of Patents.

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FOR THE WEEK ENDING JUNE 20, 1871.

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- 116,002.—HINGE.—R. Adams, Southwark, Great Britain.
- 116,003.—CORN PLANTER.—P. H. Altstatt, Clark Co., Ind.
- 116,004.—VACUUM CUP.—Wm. Amer, Janesville, Wis.
- 116,005.—WHIFFLETREE.—J. R. Ames, Chest Township, Pa.
- 116,006.—FASTENING.—S. D. Arnold, North Britain, Conn.
- 116,007.—STEAM BOILER.—J. B. Atwater, Geneva, Ill.
- 116,008.—SOAP.—I. D. Balch, Cambridge, Mass.
- 116,009.—SASH HOLDER.—R. R. Ball, West Meriden, Conn.
- 116,110.—DOOR.—B. F. Barker, Belfast, Me.
- 116,111.—BLANK MACHINE.—E. Bartholomew, Mill Hall, Pa.
- 116,012.—DIE.—H. M. Beecher, Plantsville, Conn.
- 116,013.—BED CLOTHES RETAINER.—J. Birkenhead, Canton, Ms.
- 116,014.—MILKMAN'S SIGNAL.—E. B. Blake, Tarrytown, N. Y.
- 116,015.—EARTH CLOSET.—W. J. Bradshaw, Cleveland, O.
- 116,016.—BRICK KILN.—S. C. Brewer, Water Valley, Miss.
- 116,017.—ANIMAL TRAP.—W. W. Brigg, Home, Tenn.
- 116,018.—OFFICE INDICATOR.—Lewis Burger, Chicago, Ill.
- 116,019.—STEAM ENGINE.—G. F. Burkhardt, Boston, Mass.
- 116,020.—PAPER PULP.—J. Campbell, Chatham Village, N. Y.
- 116,021.—TELEGRAPH-WIRE COUPLING.—A. Cary, New York city.
- 116,022.—ROTARY ENGINE.—Warren Case, Troy, Ill.
- 116,023.—SEAT.—Daniel Christian, Chagrin Falls, Ohio.
- 116,024.—FERRY BOAT.—Henry Clowry, Gallatin, Tenn.
- 116,025.—WATER ELEVATOR.—R. F. Cline, W. H. Down, New York.
- 116,026.—CIGAR MACHINE.—S. L. Cole, Brooklyn, N. Y.
- 116,027.—BAND KNIFE.—F. Coulon, Rockford, Ill.
- 116,028.—HARNES BUCKLE.—T. Crakes, Mishawaka, Ind.
- 116,029.—KNIFE SCOURER.—D. Crowell, Jr., Yarmouth Port, Ms.
- 116,030.—SCRUBBING BRUSH.—W. Devines, Williamsburg, N. Y.
- 116,031.—STEAM ENGINE.—A. L. Dewey, Westfield, Mass.
- 116,032.—WOOL DRYER.—J. M. Dick, Buffalo, N. Y.
- 116,033.—STRAW CUTTER.—J. H. Dickinson, Chocopee Falls, Ms.
- 116,034.—CLOTHES-LINE HOLDER.—E. Dingman, Liverpool, N. Y.
- 116,035.—TEA-KETTLE COVER.—Zehrab Dixon, Bristol, Ill.
- 116,036.—COAL SCUTTLE.—Edgar Eltinge, Kingston, N. Y.
- 116,037.—HARVESTER.—Joel Farrington, Corry, Pa.
- 116,038.—GEARING FOR HARVESTER.—J. Farrington, Corry, Pa.
- 116,039.—PULP ENGINE.—M. R. Fletcher, Boston, Mass.
- 116,040.—TREADLE.—A. Fontayne, Cincinnati, Ohio.
- 116,041.—EXTINGUISHER.—D. M. Ford, J. A. Kley, Chicago, Ill.
- 116,042.—GATE LATCH.—C. W. Fox, St. Louis, Mo.
- 116,043.—FERMENTING MASH.—C. H. Frings, Centreton, Mo.
- 116,044.—FERMENTING TANK.—C. H. Frings, Centreton, Mo.
- 116,045.—BEDPLATE FOR PULP ENGINE.—P. Frost, Medfield, Ms.
- 116,046.—NAIL PLATE AND SHEET STRIPS.—J. Frowen, E. Hemmings J. Sheldon, Niles, Ohio.
- 116,047.—SURVEYING INSTRUMENT.—R. F. George, Palmyra, Va.
- 116,048.—PLOW.—M. L. Gibbs, Canton, Ohio.
- 116,049.—VENTILATOR.—H. A. Gouge, Brooklyn, N. Y.
- 116,050.—FELLY CLIP.—David Grim, Pittsburgh, Pa.
- 116,051.—ENGINE.—Thomas Hanson, New York city.
- 116,052.—TRACE LOCK.—G. L. Hart, New Britain, Conn.
- 116,053.—COOLING BEER.—J. M. Heiss, Baltimore, Md.
- 116,054.—GAS LIGHTER.—F. Heyl, P. Diehl, E. New York, N. Y.
- 116,055.—TEARING UP LEATHER.—E. S. Hidden, Millburn, N. J.
- 116,056.—SEWING MACHINE.—E. L. Howard, Malden, Mass.