Recent American and Foreign Patents.

Improved Lathe Dog.

J. Henry Stimpson, St. Louis, Mo.—This invention relates to that class of lathe dogs in which are combined two serrated and slotted plates, each carrying a jaw, and clamped together and to the face plate of a lathe by a bolt. It consists in the application to the plates of serrations of such construction as to cause the jaws at all times, when force is applied, to be forced toward each other, and an improved construction and relative arrangement of the parts by which all torsional or twisting strain is obviated, by directing the force applied to close the jaws in planes that pass through and on both sides of the point of resistance.

Improved Drill Joint.

John H. Bauser, Parker's City, Pa.—By this device, the connection of the drill joint is strengthened without increasing the size of the coupling or joint, and also the breaking of the joint and consequent expense in removing the shaft is to some degree prevented. The adjacent ends of both parts are sufficiently enlarged for greater strength of the joint, and one part is provided with a threaded screw pin and a screw extension of smaller diameter. The socket of the adjoining part is recessed, threaded, and fitted for screws, securing, by means of the shoulders, a strong and intimate joint of parts.

Improved Smoke Stack and Spark Arrester.

J. Wellington Nesmith, Golden, Col. Ter.—This is a smoke stack and spark arrester for coal-burning locomotives, which will not only prevent the escape of sparks, but economize fuel. There is an inverted pot over the top of the flue, confined in any substantial manner. Attached thereto is a series of concentric flanges, forming (together) an open pyramid, surmounted by a cap, and the smoke stack has a diamond-shaped head. The entire products of combustion, as well as the exhaust steam, are discharged into the inverted pot, and from that downward; the sparks falling, and the smoke, steam, and gases rising.

Improved Car Coupling.

Harrison E. Smith, Portland, Oregon.—This car coupling consists of a drawhead with weighted horizontal jaws swinging on small pivot pins, and connected to the drawhead by a vertical fastening pin. The jaws are recessed for the enlarged conical head of the coupling link, and lock over the same by the action of a diametrical cam on shoulders of the rear parts of the jaws. The cam is keyed to a lateral shaft, turned into horizontal position for uncoupling by mechanism applied to the top or side of the car, and held in position for uncoupling by the hook end of a weighted pivoted lever, which catches over a lug of the cam shaft, releasing the lug by the concussion of the drawhead, and producing the instant coupling of the pins to the link head.

Improved Wagon Body.

Benjamin Rankin, Jeffersonville, O.—This is a strong and durable wagon body, which may be readily taken apart for unloading, or for the purpose of storage, while it is easily put up by any person, and forms a secure and rigid connection of the sides, end gates, and bottom parts. The detachable sides and end gates are firmly bound to the lateral bottom pieces by hinged hook bars of the same, swung in upward direction, and by stationary hook bars of the sides, in connection with a longitudinal side chain applied by screw bolts and cranks. For the purpose of discharging any load at once, without the use of a scoop, the cranks are released from the screw bolts, and the chains detached from the hook bars. The end gates are then taken off, and the sides raised out of their socket.

Improved Molding Machine.

William F. Wolf, Hollidaysburg, Pa.—This invention relates to an improvement in the means of connection between the treadle and the flanged balance wheel that is fixed horizontally on the bit stock or mandrel to which the molding cutter is attached. On the lower part of the mandrel is a griping clutch, which is carried forward or backward by a flanged pulley for turning the mandrel continuously in one direction by griping the flange of the balance wheel when it goes forward, and letting it go when it moves backward. This griping action is effected by the form of the clutch, which is a tube with radial arms, and has two exterior projections, one wedge-shaped or triangular, for engaging the notched inner side of the flange when the clutch moves in one direction, but not when moving oppositely, and the other projection, which is round or smooth, serving to hold the clutch in position to cause the engagement referred to.

Improved Printing Roll.

Franklin E. James, New York city.—This invention relates to fastening the figures of paper-printing rolls upon them, the rolls being made of lead or other soft metal. It consists of cutting or engraving the outlines of the figures upon the surface of the roll, and driving the brass pieces used to project said outlines above the surface sharply into the cuts. Said pieces are previously drawn down to a feather edge, to be caused to burr out on one or both the sides by being driven to the bottom of the cuts, so as to be forced into the walls of the cuts to secure them in the rolls without the expense of soldering, screwing, or pinning them.

Improved Lamp Bracket.

Charles H. King, Central Falls, R. I.—The main arm swings in any direction of the circle, and may be fastened by the base clamp to any object and under any inclination, while adjustable upper arms and basket regulate the hight and produce the horizontal position of the lamp. The flexibility of the bracket admits of its unlimited and useful application for the various purposes, and its easy detaching and storing away when not needed.

Improved Flood Fence.

David T. Deffenbaugh, Lilly Chapel, O.—This invention is an improvement in the class of flood gates whose lower fastenings are disengaged or loosened as the water rises, thus allowing the gates to swing out with the current. As the water rises, it raises the gate so as to unlatch latches which allow the gate to swing down with the current. Should, however, the panel not rise with the water, the pressure of the water against the upper part of said panel will cause said upper part to swing forward, which will draw the latches out of the catches, when the panel will swing down with the current.

Improved Faucet.

Lemen J. Birgler, Cincinnati, Ohio.—This is a faucet with vent attachment, for drawing off liquors from the barrel without the aid of a vent in the bung or other part of the barrel. The vent works automatically in connection with the opening and closing of the faucet. The faucet has a guide tube and sliding vent tube, and is provided at the inner end with a flexible rubber tube and floating valve, and with a second valve at the outer end, through which air is drawn into the barrel when the faucet is opened.

Improved Rein Holder.

John Royse, Dodd City, Tex.—This rein-holding device consists of a pivoted, vertically swinging cam or locking jaw and a frame constructed suitably for attachment to the dash board of a carriage. The two jaws are curved on corresponding or parallel lines, so that they bite the reins at every point between their opposing faces. The horizontal arrangement of the movable jaw economizes space, and conduces to strength.

Improved Fare Box.

William S. Clapp, Carmel, N. Y.—This invention consists of a double spout, composed of a tapering entrance spout, with a central wire running at some distance below the slit. A supplementary tapering spout incases the former, and the whole is formed of a blank of sheet metal made of one oblong piece with triangular side extensions and lateral slit, to be bent into shape and soldered at the connecting edges, and then applied to a fare, letter, or other box.

Improved Die for Making Nuts.

James Hervey Sternbergh, Reading, Pa.—The piece of metal is placed, in order to be compressed into shape, in a centrally perforated female die. A centrally perforated male die is made to fit the cavity, their perforations registering, so that the holing punch may pass freely through both. The nut has an angle-sided projection on the bottom, so as to lock to the washer which will be used with it. In order to accomplish this, the male die is made with an angular internal cavity, corresponding to the form of the projection.

Improved Compound Railroad Rail.

Isaac Thomas, Jackson, Mich.—This compound rail is formed of two parts or sections, which are confined together by keys. A beveled surface gives the head of the rail a good bearing, while the key holds the foot piece securely to its foundation. The key passes through holes punched in the parts of the web at suitable distances from each other, and stands at an angle of about forty-five degrees with the base, with its main bearings on the outside of the web, and on the top of the foot piece.

Improved Hydraulic Jack.

Edward Biddle, Carlin, Nev.—This is a convenient implement by which cross heads may be forced out of piston rods, bolts out of engine frames and cylinders, and similar work be done where only a small space is available for the application of the tool. The invention consists of a hydraulic jack, constructed of a piston or ram, with packed end sliding in a tube, being forced forward by the action of the liquid, which is compressed by a tightly packed piston fed forward by means of its screw bolt and a ratchet wrench in a tube, under right angles to the ram tube and connected therewith.

Improved Hemp Brake.

Thomas J. Dean and Montgomery W. Forward, Lawrence, Kan.—A carrier runs from under a stationary beater under the revolving beaters, and thus continually presents the flax hanging over the stationary beater to the revolving beaters, so that they have a more efficient action in the way of stripping the broken stalk from the fiber. The standards for the crushing rollers and the revolving beater are pivoted to the bed frame, and they are connected together by adjustable bars and braced, so that the revolving beaters and the stationary beaters can be adjusted relatively to each other, as required.

Improved Iron Bridge.

Andrew Burneson, Mansfield, O.—Two angle plates, of the same size, are fastened together at the edges by riveting them to angle bars, either with or without a flat plate between them. They are arranged in the bridge with the corners of the chord thus formed lying in a horizontal plane, resting the end against the vertical plate of the shoe, and on the bottom plate. The suspending rods are attached by a yoke, embracing the lower side, and bolted to another yoke on the top, and are thus connected without bolting through the chords, except at the flanges. A top chord is composed of two angle plates, secured together by angle bars and a flat plate. The suspension rods are secured to the flange of the chord by a yoke and yoke-shaped bolts. The braces are secured to the chord by angle ends and yoked bolts.

Improved Screen for Coal, Ores, etc.

Peter Hayden, New York city, and William B. Hayden, Columbus, Ohio.—This invention relates to a screen which is formed of parallel bars, rests on and is revolved by a series of rollers having stationary bearings in a suitable frame. The bars are secured to the rims by stud pins on each side, which enter notches in the side of some of the rims, while the bars enter inside radial longitudinal notches in the rims, and are held in place by a ring bolted on against the bars at one end. The rims are connected together by long rods with tubes on them, extending longitudinally between to keep them the requisite distance apart. This is a simple and economical mode of constructing the screen frame in sections, so that it can be lengthened or shortened by putting on or taking off sections. Part or all of the longitudinal screen bars are constructed with beveled inner edges, and so arranged that they will arrest thin pieces of slate as the screen rotates.

Improved Middlings Purifier.

George W. Dellinger, Ripon, Wis.—This consists of a series of horizontal circular sieves, one above another, on a hollow shaft, with a hopper or funnel below each sieve. A discharge gutter is placed at the periphery, and a fan blower is connected with lower end of the hollow shaft. All parts are so contrived that the air blows up through the sieves from below, and, together with the centrifugal action of the sieves, which have an oscillating motion, causes the light matters to pass off over the edges of the sieves to the gutter, while the heavier matters passing through the sieves are conducted by the hopper to the center of the next sieve below, in a manner calculated to be very efficient in separating the impure matters from those suitable for regrinding.

Improved Trunk.

Thomas J. Massic, Arrington, Va.—This invention relates to mounting or suspending a cylindrical trunk on trunnions so as to revolve within a shell, and to providing the inner trunk with hinged loops for supporting it when removed from the shell or trunk case.

Improved Throttle Valve.

Ethan A. Gates, Burlingame, Kan., assignor of one half his right to Sanford R. Leonard.—The packing is an elastic ring cut longitudinally, and confined between the shoulder of the valve and below the nut at the top, and is made to snugly fit the valve cylinder. This packing ring is expanded by means of a wedge. A chamber in the shell, around the cylinder, is provided with three ports on the sides of the valve. When the valve is on its seat these ports are closed, and when the valve is raised the steam passes through the ports into the chamber, and is discharged into the steam pipe attached to the shell. An oil tube passes down through the shell, and delivers oil to lubricate the valve. This valve is balanced by the pressure of steam upon its sides, so that it works up and down with out undue friction, and always works steam tight.

Improved Water Wheel.

Frederick W. Tuerk, Jr., Berlin, Can.—This is an improved water wheel which may be run with a very low head of water, which shall be free from back pressure and waste, and will thus utilize almost the entire force of the water. The invention consists in curved and pivoted buckets, having shaped recesses in its rim. Wedge-shaped recesses are also formed in the rim of the wheel beneath the upper part of the buckets. There are curved slots in the partition plate and two sets of openings. With this construction, when the water is admitted through the chute, it flows through the one set of openings, being guided by a ring flange, and enters the wedge shaped recesses. It thus forces the buckets outward, so that the water that enters through the other set of openings may strike against the buckets and drive the wheel forward. As each bucket enters an enlargement of the case, the water flows past them and strikes against the rear sides of the flanges or chutes, and is thrown back against the forward side of the buckets, closing them before they can strike against the said flanges or chutes.

Improved Ventilator Register.

Henry A. Gouge, New York city.—This ventilator register allows the air to enter the ventilating flue in a body, instead of being broken up into small streams, so that it may enter the flue in a compact current. A plate is supported on posts in front of the register, and its distance therefrom may be adjusted as desired. Inside the register is a valve hinged at its lower side and supported by a cord and weight so that it will stay in any position in which it is placed.

Improved Car Step.

José Medina, Cordova, Spain, at present residing in New York city. Office 62 Water street.—Each step is so arranged that by moving a hand lever the conductor can raise it or turn it on hinges so as to cap over the edge of the platform. On the entrance or exit of the passenger, the step is lowered, and the weight of the person, acting on suitable levers, moves spring pawls and through them a ratchet wheel governing a dial above the car door, which registers the fact. In addition to their office of operating the registering apparatus, the steps prevent passengers getting on or off the cars at will, whereby many accidents are avoided. They are also a check on the conductor, since a failure to raise the steps while the car is in motion would be considered equivalent to an attempt to defraud the railroad company.

Improvement in Mounting and Setting Guns.

James L. Avery, Madison Court House, Fla., assignor to Walter E. Avery, same place.—This invention is a spring gun for setting to be discharged by game or by burglars; and it comprises a stand for holding the gun, with a holder and clamp for attaching the gun to the stand. There is a breech piece of a peculiar construction, whereon the lock is mounted, adapted for attaching to any gun; and a batting trigger for causing the game to fire the gun by its efforts to get the bait. The lock is provided with means for causing it to pull hard or easily.

Improved Vehicle Spring.

Robert Walker, Harrisville, O.—This is an improvement on the carriage pring for which letters patent were granted to same inventor Decembers 9, 1873. The ends of an elliptic spring are connected by yokes around which open oval springs are passed. The latter are kept in place by projections on the yokes, and to one end of each is attached a block for the other end to strike against. There are also curved springs, the centers of which are attached to the centers of the upper and lower parts of the elliptic spring, and the ends of which rest upon the arms of the oval springs. These are slotted to receive bolts, by which they are kept in place laterally, while being allowed to slide longitudinally when the spring is put under pressure.

Improved Furniture Caster.

Cevedra B. Sheldon, New York city.—This invention relates to the construction of the socket for fitting in the furniture leg to receive the spindle of the caster wheel. It consists of the lower part of the socket, particularly the flange or collar which fits against the furniture leg, and having the chamber or channel for the anti-friction balls formed of a disk of sheet metal stamped in the shape required. The upper portion is formed of a plate of metal bent up in a tube and connected to the disk. This socket is to be used instead of the ordinary cast metal sockets, when deeper ones are required than can well be made in one piece of sheet metal by stamping or pressing the flange and the socket in one.

Improved Chair.

William W. Crawford, Delaware, O.—This is constructed in a strong and neat manner, and made more comfortable by giving greater play to the feet. The arms are supported, back of the front legs, by separate supporting pieces connecting the side rounds or stretchers and seat.

Improved Horseshoe.

Luther W. Griswold, Marshalltown, Iowa.—The object of this invention is to so construct horseshoes that they can be readily put on and taken off the horse's hoof without nailing or resorting to the blacksmith; and it consists of a shoe made in two parts, which are fastened together by means of dovetails at the heel and a screw at the toe. By turning down the screw the shoe is securely fastened, and may be tightened at any time by putting a cloth or rubber cushion beneath the foot. By loosening the screw the shoe is readily removed.

Improved Gun Sight.

Samuel W. Johnson, Newton, Mass.—A hollow cavity is made with a file in the bottom in the front face of the sight, surrounding the sight opening, or above or below, or on two opposite sides of it. The end of a match or other phosphorescent compound is revolved in the cavity, with sufficient pressure to scrape off enough of the phosphorus to partially illuminate the sight, so that it can be seen in the dark.

Improved Windmill.

Jacob L. Rust, Millersburg, Ill., assignor to himself and Oliver A. Bridgford, same place.—This invention is provided with a regulating device which begins to operate when the wind strikes the face of the wheel and side vane with such force that the action of the weight on the same is overcome, throwing thereby the wheel back toward the main vane. The greater the power of the wind, the smaller becomes the angle between the wheel and the main vane, till the same assumes at last a position parallel to the wheel. The wheel turns thereby more and more the outer edge of its wings toward the wind, so that its effect on the wheel is not increased, but the speed of the wheel kept up at a regular rate. When the wind diminishes, the weight carries the main vane gradually back in its old position, regulating thus the speed of the wheel in a simple and effective manner.

Improved Car Coupling.

Philip Oswald, Smithsburg, Md.—This invention relates to certain improvements in car couplings, and is a new and improved arrangement that is adapted to the construction of any of the ordinary cars, is simple in design, substantial in its construction, and possesses, in consequence of the same, great durability. It consists of a drawbar having upon its front end an abutment which acts as a buffer and an inclined hook over which a link passes when the coupling is effected, and upon its rear end a downwardly extending lug. Said abutment has behind it a cushion of rubber held between the same and the bumping sill of the car, and the said lug of the drawbar presses against a rubber cushion in front of it, the same being disposed inside a clevis-shaped piece just in the rear of the bumping sill and securely bolted to the framework of the car upon the sides. Said drawbar has upon each side a flange, upon which rest longitudinal plates attached to the framework, by means of which the drawbar is fastened to the same.

Improved Scissors.

Horace S. Breeden, Barry, Ill.—A double shouldered catch is pivoted in a recess of one blade so that it may readily turn around in a small arc. On the other blade a projection is formed which rests on the shoulders of the catch, on one when the blades are closed and on the other when they are open. In order to hold the catch and projection locked, either when the blades are closed or open, a small spring is attached to the inside of the power arm of the lever blade, and caused to rest against the surface of the catch.

Improved Gate.

William Flynn, Scotland, Mo.—This gate is made in two parts which are connected together and move simultaneously, one to the right and the other to the left. These are provided with truck wheels, on which they move back and forth on the top of a foundation. By suitable devices, on applying power to either part of the gate, the parts will move to either open or close.

Improved Sun Dial.

George Mehr, Philadelphia, Pa.—This invention relates to a novel construction and notation of dial by which the correct time of day may be exhibited by the sun in a position inclined toward and convenient to the passer-by on the streets and thoroughfares of cities and towns, enabling all without difficulty or delay to perceive the solar time.

Improved Car Brake.

John E. Worthman, Mobile, Ala.—This invention has in view to connect all the brakes of a train with a mechanism on the tender or on the truck of any car. It consists in the mode of tripping the spring pawl which locks the brakes, so that the latter will be at once allowed to assume a position out of contact with the wheels. It also consists in a novel mode of automatically ungearing a drum-winding worm wheel or pinion with an endless worm or screw which rotates it, so that the brake lever will be locked at a given point and the brakes operated with a given pressure.

Improved Saw Swage.

Alonzo G. Rouse, Jacksonville, Fla.—Through the stock at the bottom of the recess are passed two transverse pins made of steel, one of which is perfectly round. The other pin has one flat side, and is so arranged that the same may be at such an angle with the inclined end of the recess as the inclination or taper of the tooth may require. The point of the saw tooth is placed between the pins, and blows with the hammer upon the stock will cause the pins to form small transverse grooves in the sides of the tooth. The swage is then adjusted to bring the point of the tooth between the inclined side of the flat ended pin and the inclined end of the recess, when one or more blows will bring the point of said tooth to the proper form, obliterating the grooves formed by the pins and finishing the point.

Improved Soda Water Bottle Stopper.

Horace S. Carley, New York city, assignor to himself and Samuel W Saxton, same place.—This is an elliptical nozzle of a bottle for soda water with a seat at the inner end of the inside for a valve and a stopper of equivalent form, made of light material which will float on the liquid. A self-closing stopper is thus obtained that can readily be put in and taken out of the bottle to facilitate the cleaning.

Improved Means for Propelling Canal Boats.

John R. Parks, Tolono, Ill.—This consists of an elevated toothed guide bar hung over the canal, for carrying a sliding clutch and pawl. It is connected, by a lever rod, with a crank of the driving shaft of an engine placed in a boat, so that the forward part of the crank shaft rotation moves the sliding clutch, while, by the rear part of the crank shaft rotation, together with the action of the pawl, the boat is propelled in a forward direction.