

## Recent American and Foreign Patents.

## NEW MECHANICAL AND ENGINEERING INVENTIONS.

## IMPROVED DIE FOR MAKING WASHERS.

Jacob Greenwald, Buffalo, N. Y., assignor to himself and William L. Wallace of same place.—This is a die for cutting washers and similar articles at one operation, being intended to be used with a common drop press or punch. The invention consists in making the movable die in two sections that are screwed together, and attaching the central punch by shank and screw nut to the lower section.

## IMPROVED WINDLASS WATER ELEVATOR.

Ezra M. Robords, Hutchinson, Kan.—This is an improved apparatus for raising water from wells by wind wheels or other power. It is so constructed that two buckets may be raised and lowered alternately, while the power moves continuously in the same direction.

## IMPROVED RUBY PIN INSERTER FOR WATCH MAKERS.

Carl H. E. Bechert, Oroville, Cal.—This is a new form of spring nippers for inserting ruby pins in the rollers of lever watches.

## IMPROVED WINDMILL.

William Ford, Great Bend, Kan.—This is a novel contrivance of the wind wheel, whereby the fans are self-adjusting to the wind, and the wheel is kept to the wind without a tail vane. It also consists of a contrivance of apparatus for automatically regulating the speed of the wheel.

## IMPROVED ELECTROMAGNETIC CAR BRAKES.

Philip V. Conover, Keatchie, La.—This consists in the employment of an electric helix and a sliding piston in connection with the ordinary car brake mechanism.

## IMPROVED FIREMAN'S ELEVATING LADDER.

Berthold Huber, Brooklyn, E. D., N. Y.—This is an improved extension ladder, which may be raised vertically or inclined at any desired angle. It is constructed on the lazy tongs principle, the sides being brought together and the apparatus extended, by said sides being connected to two toothed sections which are turned by hand-crank gearing.

## IMPROVED MACHINE FOR MAKING CORES.

William J. Reagan, Pottstown, Pa.—This consists of a revolving stand, to which a number of core boxes of different diameters are hinged, the length of the cores being determined by adjustable pistons carrying the core-supporting vent pins.

## IMPROVED SCREW-CUTTING MACHINE.

Charles W. Roberts, Cohoes, N. Y., assignor to Norman W. Frost, of same place.—The object of this invention is to improve the construction of the machine known as the C. W. Roberts pipe-cutting and threading machine and vise, so as to make it more convenient in use and more effective in operation. It embodies a number of useful and novel improvements, mainly in construction, which it is hardly possible to describe without the aid of drawings.

## IMPROVED FEED MECHANISM FOR THREAD WINDING.

Ambrose Giraudat, Neuve (Norwood P. O.), N. J.—This is an ingenious machine for winding threads for making stems for artificial flowers, and for other uses. It winds the threads regularly and at equal distances apart, or at a greater or less distance as may be desired.

## IMPROVED RAILROAD RAIL CHAIR.

John L. Rahmsteck and Charles W. Rahmsteck, Rahway, N. J.—In this device a movable plate is made to fit between the rails and the inner surface of a lock flange, and is provided with toes and wedges, constructed and arranged to operate in connection with each other.

## FRICTIONAL GEARING.

Moses Ray, Valley Grove, West Va.—This invention relates to the transmission of power to machinery through smooth-faced friction wheels, and consists in arranging the shaft that drives the machinery in bearings that are held forward with greater or less pressure, according to the character of the work, while it will yield to any undue strain to avoid fracture or injury to any part of the machinery.

## IMPROVED METAL-CUTTING MACHINE.

Jacob Schofield and Joseph Stevens, Newton, Ia.—This machine is for shearing off pieces of iron of different thickness, and comprehends two cutting jaws, of which the lower jaw is adjustable to different heights, while the upper jaw is brought down by suitable lever power.

## IMPROVED MACHINE FOR MAKING TWIST DRILLS.

Edward S. Taber, New Bedford, Mass.—This is a machine for making twist drills with increasing pitch or inclination of the grooves. It consists of a graduated cam combined with the mandrel which advances the blank along and revolves it to the cutters, which causes the advance of the mandrel to increase in speed as the work progresses, and thus increases the pitch.

## IMPROVED MIDDINGS SEPARATOR.

Joseph P. Reel and Andrew J. Seyler, Cedarville, Ill.—This invention comprises a reel in which the fine middlings are first separated from the light coarse matters to be discharged, and air blast apparatus and sieves for separating the remaining middlings from the residue passing out of the tail of the reel.

## IMPROVED HOSE COUPLING.

George W. Price, San Francisco, Cal.—This invention consists of a tapered ring outside of the hose, said ring screwing into one of the parts of the coupling over another tapered ring inside the hose, so as to bind the hose and thus attach it to the coupling. There is also a kind of detachable hinge joint at one side of the coupling, and sliding keys and hoods at the other side, for fastening the two parts of the coupling.

## IMPROVED CUT-OFF FOR WATER CONDUCTORS.

William P. Myer, Terre Haute, Ind.—This cut-off is adapted for leaders of buildings. It is easily shifted to direct the water into one or the other of the discharge pipes, and will always indicate in what position the shifting spout may be set.

## IMPROVED FEED WATER HEATER.

Samuel N. Hartwell, Wollaston Hights, Mass.—This consists mainly in the combination of a feed water heater with a grease condenser, through which the exhaust steam is passed, the steam then being drawn to the heating chamber, to which the feed water is conducted in a spray through a coiled pipe with perforated end. The air which accumulates in the heating chamber is drawn off by an air pipe leading to a flue.

## IMPROVED CAR COUPLING.

Martin V. Remaly and Joseph F. Kinnard, Kittanning, Pa.—This car coupling couples readily without the stepping in of the attendant. It consists of a drawhead having a central bottom rib, with side openings or recesses for the coupling link to swing therein. The coupling link rests, by a central cross piece, on the rib, and couples with a pivoted hook of the drawhead of the adjoining car.

## IMPROVED TOOTH-PICK MACHINE.

Leonard Anderson, Painesville, O.—This invention consists of a couple of veneer cutters, one on each of the two opposite sides of the mandrel carrying the rotating block, and a splitting wheel for splitting the veneers into picks. The latter is geared with the mandrel which revolves the block in such a manner that the cutting and the splitting wheel move up to the block in the same measure that it is reduced by the cutters, thus automatically cutting the blocks into picks, without further attention, after the block is put on the mandrel.

## IMPROVED STOP WATCH.

Henri A. Lugin, New York city.—This invention consists, first, of a quartersecond hand and its dial, located on the top of the watch movement instead of the face, whereby the hand can be geared with less complication of machinery than when located on the other side; second, of a minute hand located on the same side of the movement and at one side of the center post, so as not to interfere with the quarter second, in combination with a short section of a dial to be used, if necessary, for counting minutes; third, of the adjusting lever, for shifting the quarter second back to the starting point, also arranged for shifting the minute hand back at the same time.

## IMPROVED MACHINERY FOR DRESSING LEATHER.

Harrison D. Chamberlin and Justus P. Luther, Berlin, Wis.—This is an improved machine for scouring leather when taken from the vat, and substitutes machine labor for the tedious process of scouring by hand by means of a machine. It is a combination of the stones and brushes applied to pivoted arms of a revolving shaft. Guide rings or weights hold the stones and brushes to their work.

## IMPROVED HAIR-HEADING MACHINE.

Ella J. Crosby, Sabula, Iowa.—This is a rubber-covered base piece, in connection with an adjustable assorting piece, that swings above the base piece and heads the hair by friction therewith.

## IMPROVED WINDMILL REGULATOR.

Solomon Vermilya, Plain View, Minn.—This is an improved regulator for windmills, and consists of a friction pulley operated by a fulcrumed and weighted lever in connection with a governor, the pulley operating a windlass that throws the wheel in and out of the wind.

## IMPROVED LIFTING JACK.

John B. Fayette and Lorenzo Meeker, Oswego, N. Y.—This improves the construction of the lifting jack, for which letters patent were granted to same inventors, July 13, 1875, so as to give it a greater range and a greater accuracy of adjustment. When a movable tube standard has been adjusted at the proper height, it is locked in place by turning an eccentric. This construction enables the jack to be accurately adjusted to any desired height.

## IMPROVED EARTH AUGER.

Oscar Rust, Macon, Mo.—This improvement relates, first, to the form of cross section of the body of the auger, whereby the draft or force required to operate it is reduced; and, secondly, to the construction of the head of the auger, and parts connected therewith, whereby it is adapted to slide up and down on the boring shaft, so that it may be removed from the well or hole without raising the shaft, and whereby also certain other advantages are attained in practical operation of the auger. It is an improvement on letters patent granted on August 3, 1875, to the same inventor.

## NEW TEXTILE MACHINERY.

## IMPROVED FULLING MILL.

Joel M. Baldwin, Evans' Mills, N. Y.—This improvement in fulling mills consists, essentially, of a shaft running through a middle opening in the hammer heads, and working them by an eccentric in said opening. By this, space is economized, the mill can run faster, and the contrivance can be located above the floor. The improvement also consists of a construction of the box and frame in part of metal, making a more permanent mill.

## IMPROVE WARP TENSION REGULATOR.

Alexander M. Fyfe, Cornwall, Canada.—This is an improvement in the class of warp tension regulators in which the roll over which the warp passes from the warp beam, is arranged to be shifted in position, corresponding to the beat of the lathe, by means of levers connected with the latter. By the arrangement the roll will move toward the harness when the lathe swings back after beating up, and at the same time the shed opens; and when the shed closes the roll will move back again as the beat-up takes place, thus relieving the warp of undue strain by the shed, and at the same time making uniform tension.

## NEW CHEMICAL AND MISCELLANEOUS INVENTIONS.

## IMPROVED BARBED FENCE WIRE AND BARB FORMER.

William H. Jayne and James H. Hill, Boone, Iowa.—The first is an improved four-pointed fence barb, composed of two pieces of wire bent into the form of a U, from opposite sides of the fence wire, in such a way that the bend of each piece may be between the arms of the other. The arms are bent down upon and around the said fence wire, leaving the four points projecting in opposite directions. The same inventors have also devised and improved a fence barb former, which is an improvement on a similar device for which letters patent were granted to them January 18, 1876. The invention consists in an improved barb, four slotted disks, and the three handles, connected together and operating so as suitably bend the wire.

## IMPROVED WIRE FENCE TIGHTENER.

William F. Daniels, Lime Spring, Iowa.—In using the device a bar is hooked upon the wire, and a cylinder is put in in such a way that the wire to be tightened may pass into its slot between the arms of the bar. The cylinder is then turned, winding the wire around it, until the said wire has been drawn to the desired tension, where it is held by a pawl and ratchet wheel.

## IMPROVED TOY BOX.

Joseph Kayser, New York city.—This is a box for candies, collars, and other purposes, which produces, by the opening and closing of the drawer, a change of pictures on the top part of the box.

## IMPROVED GLAZED PLAID PAPER.

John F. Marsh, Springfield, Mass., assignor to Springfield Glazed Paper Company, of same place.—This is a new method of manufacturing glazed plaid paper, consisting of the following steps consecutively performed, namely, coating the paper with an ordinary glazing preparation, ruling the glazed surfaces in suitable colors and designs, and finishing or glazing the coated and ruled surface by polishing or pressing the same.

## IMPROVED COFFEE SHELLER.

José A. Mosquera, Caracas, Venezuela.—This is a machine for shelling coffee in a rapid manner, so that the beans are freed from the shells or pods without being crushed or broken. It consists of a grooved and notched revolving cylinder that breaks the shells in connection with suitable knives. The lower separating knife is placed nearer to the cylinder than the upper breaking knife.

## IMPROVED BAYONET.

Samuel W. Hill, Pittsburgh, Pa.—This is a ramrod and bayonet combined in one device, and so constructed that it serves for both purposes equally as well as the ordinary ramrod and bayonet do for their respective purposes.

## IMPROVED MIRROR.

Henry Goldberg, Herkimer, N. Y.—This is a reflecting mirror, suspended from the ceiling by means of straps attached to the sides of the frame, passing over pulleys on the ceiling and attached to a single adjusting strap. It can be conveniently manipulated by a person standing between the ordinary mirror and the suspended reflecting mirror.

## IMPROVED REVOLVING SCRAPER.

Edward Huber, Marion, O.—This invention consists in inwardly curved upward extensions formed upon the rear ends of the sides of the scraper, and in an apron attached to the cross bar of the handles to overlap the back. The extensions rest upon the earth when the scraper is tipped over, to prevent the earth from being scraped up by the back. The apron prevents the earth from slipping over said back.

## IMPROVED CAKE CUTTER.

James Collins, Central City, Col. Ter.—This consists of a cutter with a central sliding and spring-acting part for forming and cutting, simultaneously with the outer part, the article to be produced.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED VENTILATING CAR.

Edward C. Ibbotson, Chelsea, Mass.—Diaphragms of wire are placed beneath the portion of the roof which extends over the platform. Above the diaphragms are chambers which communicate with the interior of the car, and also with cowls on the roof. The air enters under the diaphragms and escapes by the cowls.

## IMPROVED GATE.

Emerson Lyon, Stoughton, Mass.—This gate is suspended on rollers, attached to hangers from an upper cross bar. For the passage of wide or high loads the gate is pushed back, so that it and the bar are balanced upon a post, and the gate and bar are then swung around upon the pivot of the post into a position parallel with the roadway.

## NEW HOUSEHOLD ARTICLES.

## IMPROVED DISH CLEANER.

Robert W. Chappell and Isaac Mayfield, Spencer, Ind.—This invention consists in connecting a chamber for holding the dishes or other articles with the upper part of a pump cylinder by a pipe, and with the water tank by a spout; also, in using a gate and rack in connection with the dish chamber.

## IMPROVED STEAM COOKING APPARATUS.

Stillman Wilkins and James D. Murphy, Abingdon, Ill.—This consists of a series of traps, through which pass concentric tubes. When the cooking is to be wet the bottom of the section is made flat, and the part of the tube above said bottom is close, or made without perforations. When the cooking is to be dry, the bottom of the section is concaved, and the part of the tube above said bottom is perforated, so that the water of condensation may flow down through the said tube. Any desired number of sections or trays may be used, and the upper section or tray is provided with a conical cover, which brings the steam to the center.

## IMPROVED STOVE PIPE THIMBLE.

Charles Inward, Riceville, Iowa.—This is an improved thimble for connecting a stove pipe with a chimney, or with a wall or ceiling through which it passes. It is formed of an inner part, provided with the collars, and an outer part, made in halves. One half is made in one piece with the inner part, and the other part is hinged at one edge to the edge of the first half, and secured at its other edge by a hand screw and lugs.

## IMPROVED CLOTHES WRINGER.

Samuel F. Leach, Chelsea, Mass.—This is an improvement in the clothes wringers formed of two elastic rolls arranged to work in frictional contact and rotate in opposite directions. The object is to reduce the friction incident to the use of such wringers in consequence of the pressure of the springs. To this end a pair of spiral springs is applied at each end of the rolls, and they are connected at their upper ends with a cross bar carrying small friction rolls, which are mounted in a small frame and bear on the journal of the upper roll. The journals of the lower roll are supported on similar friction rolls.

## IMPROVED STEP LADDER.

John Calvin Blauvelt, Blauveltville, N. Y.—This mainly relates to an improved construction, whereby a step ladder may be readily adjusted for use as a ladder, without it being necessary to turn it away from the wall or other object.

## IMPROVED METHOD OF MAKING TEA AND COFFEE.

Jonathan Miller, Himrod's, N. Y.—This invention relates to a new method of preparing decoctions or infusions of tea, coffee, etc., and it consists in the method of filling a tight and unyielding chamber full of the ground coffee or tea, and then passing the hot water through the same, whereby the expansion of the grains consequent upon the absorption of the water produces a considerable pressure, which, in the unyielding chamber, fills up the little interstices or channels between the grains, thereby preventing the fine dust or pulverized portions of the coffee from being washed through and compelling the water to permeate the pores of the coffee grains in its passage through: the said expansion in the filled chamber acting in the nature of a press, so that the bulk of the coffee is held in a solid mass below the supernatant water.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED FRUIT PICKERS' BASKET.

Orville W. Odell, Woodhull, N. Y.—This is a bucket so constructed that the picker can lower it and empty the fruit without coming down from the tree and without injuring the fruit. The novel features consist in arrangements for allowing the bottom to open and the fruit to escape.

## IMPROVED CULTIVATOR.

Casper Oehrlein, St. Paul, Minn.—This invention may be adapted as a furrow opener, to make furrows for the reception of the seed, and rakes may be attached to it for cultivating potatoes, by loosening the soil and tearing up weeds.

## IMPROVED CHECK ROW PLANTER.

Joseph Rothchild, Shelbyville, Ky.—In this machine are embodied new and ingenious devices for dropping the seed at a greater or less distance apart, the adjustments of which are effected by a simple lever motion.

## IMPROVED WHIFFLETREE ATTACHMENT FOR PLOWS.

Thomas B. Baldwin, Troy, Pa.—This consists of the roller commonly connected to the plow beam, for gaging the depth of the furrow. It also holds up the whiffletrees and the traces, and prevents the horses from stepping out of the traces.