

## Recent American and Foreign Patents.

## NEW HOUSEHOLD ARTICLES.

## IMPROVED CLOTHES LINE PROP.

Christian C. Schwaner, Winterset, Iowa.—The upper ends of the prop pieces are slotted for the purpose of forming a groove, for retaining the clothes line, which is stretched across the props in any suitable manner. The legs of props may be spread to bring the line down to the convenient altitude for fastening the clothes thereon.

## IMPROVED SAD IRON.

Albert L. Parcell, Oneonta, N. Y.—The handle is provided with one rigid hooked standard and one jointed standard, the hook terminating the lower part of the latter. The hooks enter eyes on the back of the iron, and are bound by moving a cam on the jointed standard.

## IMPROVED BREAD CUTTER.

Maurice Walsh, Sillery Cove, and Maurice Ahearn, Ottawa, Canada.—This device includes a knife frame, provided with a projecting arm engaging in the notch or fork of the pivoted swinging gage piece, for lifting the same out of the way, to allow a removal of the cut pieces. The downward or cutting stroke of the knife throws the gage out of the way for dropping the slice in the basket or other receptacle. The invention has been entered for exhibition at the Centennial.

## IMPROVED PROCESS OF PRESERVING FRUIT.

John F. Bassford, New York city.—This invention consists in preparing fruit by mixing water and starch with the fruit when in the form of preserves. The seeds, pits, or stems are removed, and the fruit is put in a kettle, and sugar added, according to the tartness of the fruit. The fruit and sugar are then boiled for fifteen minutes, more or less, and to one quart of the preserved fruit is added one quart of water, and the whole is brought to a boil. An ounce of starch is then added to each quart of the diluted fruit, the starch being first wet in enough cold water to reduce it to a thin paste. The mixture is then stirred for two or three minutes, to thoroughly mix it, the stirring being continued until the foam disappears. The fruit is then ready for use when cold.

## NEW MECHANICAL AND ENGINEERING INVENTIONS.

## IMPROVED PAPER DRYING MACHINE.

Culver S. Clark, New York city.—This inventor aims to provide for paper manufacturers an improved machine for drying sized and unsized paper in a rapid and superior manner. He proposes suitably arranged casings, through which the continuous sheet of paper is conveyed by feeding and carrying cylinders made of open rods, to expose the paper at top and bottom sides to hot air drafts thrown thereon from blowers or fans in the same direction in which the paper is traveling. The continuous action of the air blasts on both sides of the wet paper traveling through the casing produces the even and uniform drying of the same. The air blasts also assist the easy forward motion of the paper over the carrying cylinders, and prevent any sticking of the paper thereon.

## IMPROVED SAFETY AND RELIEF VALVE.

John William Melling, Birkett Bank, Wigan, Eng.—In ordinary safety valves, the lift, and consequently the orifice for the escape of steam, is very limited, more particularly with high pressures. The present invention aims to obviate this defect by making the valve and seat with two faces, and by exposing only a part of the area of the valve to the pressure of the steam when the valve is closed. When the blowing-off point is reached and the valve is slightly raised, the steam escapes in the ordinary way through one of the faces, and is admitted under the other face, thus acting on a greater area. The steam that is admitted under the second portion of the valve is allowed to escape through a hole in the valve.

## IMPROVED GAGE ATTACHMENT TO WOOD BORING MACHINES.

George S. Hudson, Ellisburg, N. Y.—This is an improved gage, which is adjusted upon the bed of an ordinary horizontal boring machine into the exact position to the bit required by the work. A block slides in either direction from the center of the back piece of the table, through whose central aperture the bit passes, and is held in position by a double spring pawl, which engages either adjustable lugs or rack teeth, according as the holes are to be made at irregular or variable distance from each other. The stuff is fed in accurate manner to the bit or auger, and thereby a superior fit at a saving of time and labor obtained.

## IMPROVED SAW GUMMER.

John W. Parker and Thomas Parker, Chicago, Ill.—This is an improvement in the class of gummers whose cutter shaft bearing is adjustable in a slotted way, which is in turn adjustable around a fixed axis located on a lower portion of a circular frame that is provided with clamps to adapt it for attachment to a saw blade. The novel feature consists in means for automatically interrupting the feed of the cutter shaft and producing reciprocation of the same simultaneously with its rotation.

## IMPROVED VIBRATING PROPELLER.

John D. Cornell, Jersey City, N. J.—This inventor proposes two sets of paddles, carried on pivots at their upper ends in horizontal frames, located under and partly in the bottom of the vessel between two keels. They are carried backward and forward by cranks. The paddles swing up nearly horizontal, and move partly edgewise against the water when going forward, and swing down vertically and move sidewise against it when going back. This is claimed to give the necessary area of propelling surface, with much simpler apparatus than the common paddle wheels and screws.

## IMPROVED LINING FOR MACHING BEARINGS.

Lebbeus W. Lathrop and Theodore A. Weber, New York city.—This is an anti-friction cloth, either canvas, silk, or any other woven fabric, or paper or skins. Upon it is spread an even covering of anti-friction material composed of graphite and sugar, and the sheets so covered are passed between compressing rolls, the upper one of which is heated sufficiently to soften and spread out, and at the same time condense and unite the compound, and press it on or into the sheets to effect the requisite adhesion. The sheets are then used as linings for bearings.

## IMPROVED UPRIGHT TUBULAR BOILER.

Nathan C. Heaton, New York city, assignor to Ward B. Snyder, same place.—This relates mainly to a cap for an interior boiler and its casing, which cap is attached by a screw-threaded flange. An illustration of the boiler will be found on page 371, volume XXXIII.

## IMPROVED VALVE INDICATOR.

John S. Wallace, Brettland, O.—This inventor proposes a stem connected to the valve and projecting out through one end of the steam chest, and carrying a pointer along an indicator scale, by which to set the valve without opening the steam chest.

## IMPROVED ADDING MACHINE.

Dennis L. R. Butt, Pilot Point, Texas.—This is an ingenious combination of a toothed wheel with suitable mechanism, by adjustments of which sums in simple or compound addition may be quickly calculated.

## IMPROVED RAILROAD RAIL.

George H. Mayer, Jr., Shamokin, Pa.—This relates to an improved railway rail that may be relaid without drawing a single spike, preserving thereby the cross ties and producing a saving of iron. It consists of a base rail with top rail resting on a square seat at the side, and overlapping the curved top of the same, to be retained thereon by fastening bolts and nuts.

## IMPROVED FLOCK-WASHING MACHINE.

Asa C. Bussell, Great Barrington, Mass., assignor to Parley A. Russell, same place, and Clinton H. Blake, New York city.—This is an apparatus for separating the flock from the water as it escapes from the washer, and preserving the flock, while allowing the water to flow away. It is formed of an outer box, made with an open top, and provided with a discharge opening at its bottom. There is an inner box, made smaller than the outer box, with open bottom and top, supported with its lower edge a little above the bottom, and its upper edge a little above the top of the said outer box, having the space between it and the outer box at one end separated from the spaces between the sides of said boxes. There is also a screen at said end, in combination with the discharge spout of the washer.

## IMPROVED MACHINE FOR FINISHING HORSESHOE NAILS.

Harry A. Wills, Chicago, Ill., assignor to Julia A. Wills, same place, and Lucy S. Kingsland, Burlington, Vt.—In order to return the sheared blanks from the shearing die into the carrier again, to be afterward carried to point-beveling dies to be beveled, a pusher or follower is provided, in connection with the shearing die, which follows close behind the punch when it withdraws, and pushes the nail immediately after it is sheared back into the notch of the carrier. In order to prevent the blanks from turning in the trimming die, or while moving from or back into the carrier, another new feature is added in the shape of a little vibrating guider, with a slot on the under side, so arranged that, just before the blank comes to rest in front of the shearing dies, the head will pass into the slot, which will hold the blank from turning.

## IMPROVED SCREW CUTTING DIE.

Virginius J. Reece, Greenfield, Mass.—This invention consists of a die which has a spreading pin inserted at the split part of the circumference, and an adjusting screw passing through the edge of the die to bear at right angles on the pin. The one adjusting screw and pin takes the place of four set screws heretofore used, so that the number of screws and die holders is reduced, and thereby the cost for die stock and die diminished.

## IMPROVED HORSESHOE CALKING VISE.

William Weaver, Greenwich, N. Y.—This relates mainly to a new arrangement of a cam, which connects with a treadle and serves to lock the vise. The invention is strong and simple in construction.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED WHIFFLETREE FASTENING

Hannibal R. Jackson, La Fayette, Ind., assignor to himself and Thomas J. Roads, same place.—This is a new way of detachably fastening the whiffletree of vehicles to the double tree; and it consists in a plate having a rearwardly opening T-shaped groove, with enlarged end, in combination with a second plate attached to the whiffletree, having a pivot provided with a head.

## IMPROVED FIRE PLACE.

Robert Thompson, Stapleton, N. Y.—A forward-projecting angular part or shelf of the wall, made of bricks or metal plates, forms, in connection with the front wall, an air chamber, which is supplied with cold air by suitable air flues from the outside. The apex of the angular rear wall is below the angle of the fire wall, and approaches close to the same, so as to form a narrow air flue, that connects the lower part with the upper part of the air chamber, and throws, by the lower inclined part of the shelf, the cold air directly on the heated fire plate.

## NEW CHEMICAL AND MISCELLANEOUS INVENTIONS.

## IMPROVED BAG FASTENER.

Charles W. Harvey, Waterloo, Iowa.—The invention relates to a mode of securing the end of a bag's string fastener without making a tie, the latter being liable either to work loose or draw into a knot, thus occasioning waste of contents or loss of time. The invention consists in loosely journaling upon a screw bolt a pair of stiff metallic disks, inclined and adjustable toward each other, one being placed on the inside and the other on the outside of the bag. The string is thus held by its own compressibility between the bag and outer disk.

## IMPROVED SHAVING CUP.

Philipp Schauble and Louis Dohm, Elizabeth, N. J.—In order to hold the soap in shaving cups so that it will not come out when the cups are washed, the above inventors propose making a screw thread in the lower part of the cup, and a similar thread in the soap. The soap can then easily be screwed in place by a simple key.

## IMPROVED NECK TIE FASTENER.

Johann Washner, New York city, assignor to Daniel Richter, of same place.—This device has a hook at one end for catching over the collar band. The other end is arranged to pass through holes in the neck tie, bend over, and, by being pressed back, fasten thereto. In the center is a coiled spring to give the requisite elasticity. The three portions may be worked out of one piece of metal without break.

## IMPROVED COMBINED CLEAT AND HAWSER CLAMP.

Ferdinand W. Hofele, New York city.—In docking a vessel it frequently happens that the full length of a hawser is let run out because a sufficient hold cannot be had as it nears its end; and to obviate this difficulty, this inventor has constructed a cleat, having a clamp set within it, by which the end of the hawser may be gripped and held secure until released by the person in charge.

## IMPROVED FENCE.

William A. Couch, Hannibal, Mo.—This relates particularly to the construction of a detachable batten to the panels of the fence, which may be readily detached by simply turning buttons to a position parallel to the rails.

## IMPROVED WIRE FENCE BARB.

Henry N. Frestress, Dunleith, Ill.—This consists in barbs formed by cutting thin sheet metal into diamond form, slitting them from the acute angles nearly to the center, and bending the prongs at each end at an angle with each other to adapt them to be twisted into a two-strand wire cord.

## COMBINED TWINE CUTTER, LETTER OPENER, AND STAMP MOISTENER.

John Eitel, Sacramento, Cal.—The invention consists of a pair of small scissors, which are protected within an operating guard spring, to which, also, a spring device for attaching it to the ball of twine, a letter-opening knife, and a pivoted sponge holder, for moistening the stamp, are applied.

## IMPROVED ABDOMINAL CORSET.

Cathrine A. Griswold, New York city.—This is an improved abdominal corset, which combines, with a perfect fit, a comfortable support for the abdomen, so as to relieve the same from any strain or drawing, and throw the weight of the same on the shoulders.

## IMPROVED MARINERS' LOG.

George E. Elliott, St. Andrews, Can.—This is an improved mariners' log, which registers correctly the speed of a vessel without requiring any particular skill in its use or special calculations. It consists of a concave disk or drag, that acts with greater or lesser force, according to the speed of the vessel, on a rack bar and spring, which moves, by suitable actuating gearing, the index hand along a face dial. The index hand is retained by a ratchet and pawl, for reading off the log, and returned to its position by a tension spring on releasing the pawl.

## IMPROVED LIFE PRESERVER.

Beall Hempstead, Little Rock, Ark.—This life preserver is made of wood, in sections, connected and hinged to each other by rubber strips, and provided with a rubber band around the waist, and with rubber strips around the neck, waist, and arm holes.

## IMPROVED BASE BALL BASE.

John C. O'Neill, St. Louis, Mo.—This is a case or box, with sockets for elastic columns that support a cap plate, having corresponding sockets. The fact of the runners having touched the base is announced by the sound of a bell, caused by the depression of the cap plate.

## IMPROVED VENT.

Edward R. Behlers, St. Louis, Mo.—This is an improved vent that is closed perfectly airtight at all times, but supplies air as soon as the faucet is turned. It consists of a rubber tube, which is supported by an interior spiral spring, and fitted, by a perforated closing knob, into a receiving tube, that communicates by a downward extending tube driven into the bung or barrel with the interior of the same. A slit in the rubber tube, above the connecting tube, supplies the air on opening the faucet, closing airtight on shutting the same.

## IMPROVED AUTOMATIC LIGHTER FOR GAS BURNERS.

Henry D. Stockwell and Albert R. Weiss, Brooklyn, N. Y.—This invention consists in the connection of the gas cock with a ribbon-feeding slide piece, and a spring hammer operated thereby. The burner socket, magazine guide, and anvil are cast of one piece, to which the fulminate ribbon, slide piece, and hammer are applied, so as to feed the ribbon, and ignite, simultaneously, one of the pellets by the opening of the gas cock.

## IMPROVED ORE CONCENTRATOR.

John Longmaid, Bingham, Utah Ter.—The object of this invention is to separate ores from worthless substances with which they may be mixed, by causing such minerals, in a finely powdered condition, to flow, by means of water, over a large revolving table, fixed at a certain inclination, and washing the same by means of a thin sheet of water, and finally discharging the washed ore at the lower portion of the table by means of jets of clean water.

## IMPROVED FAUCET.

Willis L. Brownell, Brooklyn, N. Y.—In this faucet a valve acts upon a cam portion of a lever shaft in such manner that the latter is turned automatically when the lever or handle is relieved of (hand) pressure, thus allowing the valve to close tightly on its seat. There is also a short rigid tube to deliver the water into the hollow valve, and to act as a support or guide for the same when open, and a new arrangement of combined stop and packing disk on the lever shaft.

## IMPROVED REIN HOLDER.

George W. Miller, Constitution, Pa.—This is an improved rein rest for attachment to the dashboard of vehicles, so constructed as to prevent the horse from throwing his tail over the reins, and to prevent the reins from falling to the ground should they be accidentally dropped. It may be turned down out of the way when not required for use.

## IMPROVED HARNESS SADDLE.

John W. Schwaner, New York city.—This relates to an improved construction of wrought iron harness saddles. The new features are a wrought iron bed plate, cut out into proper shape, struck up into proper form, and provided with holes, strengthening corrugations, and recesses for the back band loops; a wrought iron seat plate cut out into proper shape, struck up into proper form, and provided with the strengthening rib and other arrangements, in combination with the bed plate; and salient angles formed upon the side edges of the seat plate, to be bent down over the side edges of the wooden seat block.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED CORN UNCOVERER.

Hugh H. Gilchrist, Swan Creek, assignor of one half his right to John J. Worden, Youngstown, Ill.—This consists of a plate which is to be attached to the sole of the plowman's shoe, and which carries a bar having several prongs or fingers. This arrangement enables the plowman to uncover the corn that has been covered or partly covered by the soil thrown by the plow or cultivator, and straighten it up, freeing its leaves from the soil.

## IMPROVED GANG PLOW.

Timothy M. Shaw, Lebanon, Tenn.—In this device are the following new features: First, a frame composed of two curved beams, each provided with a shovel or plow, and adjustably connected at their front ends, so that one shovel or plow may be set in rear of the other. Second, said frame is provided with handles, which are adjustable correspondingly with themselves. Third, the beams and handles are connected by two sets of transverse parallel bars, made separately adjustable as to length, and connected to said beams and handles by means of universal joints or couplings. The result of this combination and arrangement of parts is that the handles may be adjusted so as to remain opposite each other, and the plow beams will at the same time be held rigidly connected whatever be the adjustment of the plows, whether in gang or one or both inclined from a vertical, to take more or less into the side of ridges, while cultivating between the rows of growing crops.

## IMPROVED RICE MORTAR.

Nathaniel O. Tilton, Savannah, Ga.—This rice-cleaning machine has a reciprocating pestle, and is used for separating the thin skin or film which remains on the grain after the hull or rough outside shell has been removed. The new feature is an open centrally located ring, which gives increased friction, and causes the rice to clean in less time.

## IMPROVED CHURN DASHER.

John R. Underwood, Nelsonville, Ohio.—On the dasher shaft are two sets of bars, arrayed radially to the axis of the shaft and placed one above the other. The lower sides of the bars are concave, so that when the dasher is forced down the bars enter the milk with the recesses filled with air, and the air and milk are forced out through holes in the sides of the bars toward the sides of the churn, throwing the milk into violent agitation, and bringing the butter in a very short time.