

## Recent American and Foreign Patents.

## NEW HOUSEHOLD INVENTIONS.

## IMPROVED COAL SCUTTLE.

William Richards, Woodhull, Ill.—This consists of a scoop or body of peculiar form, set angularly in a base piece or hoop, the object being to provide a scuttle which may be easily manufactured.

## IMPROVED IRONING TABLE.

Edward H. Caylor, West Elkton, O.—This ironing table is so constructed that it may be attached to a table, and may be supported at any desired height, may have a shirt board and a sleeve board attached to it. It is provided with a clothes-rack and a stand for the sad irons.

## IMPROVED DISH WARMER.

Nathan Clark, New York city.—In using this device, an iron plate is warmed to the desired temperature by being placed upon the stove, and is then inserted in a painted wooden holder. The dish to be kept warm is placed upon it, and the whole is then placed upon the table.

## IMPROVED TEA KETTLE.

Leonard A. White and George W. Lewin, North Dighton, Mass., assignors to themselves and Joseph B. Warner, of same place.—This invention consists of a laterally sliding and guided lid, secured in closed position by a spring catch of its handle to a lug of the kettle; and it consists, further, of flattened off parts or seats of the bottom, body, and spout of the kettle, to support the same in inclined position. The last mentioned device steadies the kettle, and facilitates the pouring of the contents, dispensing with the annoying lateral motion or oscillation of the kettle caused by the pivoted handle.

## IMPROVED CARPET SWEEPER.

Henry A. Gore, Goshen, and George W. Edgcomb, Lima, Ind.—This consists in a combination of levers with the driving wheels of the sweeper by means of which the said wheels are thrown into contact with an intermediate friction roller attached to the rotating brush when a downward pressure is exerted on the said driving wheels. The advantages claimed are that the device is noiseless in its operation and the automatic adjustment of the driving wheels insures a positive motion of the brush.

## IMPROVED COMPOUND VALVE FOR WASH BASINS, ETC.

Francis E. Kernochan, Pittsfield, Mass.—The object of this invention is to prevent sewer gas from escaping into the house through the discharge pipes of wash basins, bath tubs, water-closet basins, etc. It consists in the combination of two or more valves, fastened side by side upon a common support and operated by a single shaft, stem, or lever, the latter being made to pass through all the valves and open or close all of them at once by a part or whole revolution.

## NEW MISCELLANEOUS INVENTIONS.

## IMPROVED DEVICE FOR SECRET WRITING.

Alexander Berghold, New Ulm, Minn.—By this device or key, short messages can be written by a correspondent to another who has a device or key similarly constructed and arranged, by means of which the message can be promptly read and understood, or copied, but cannot be possibly understood by any other person not provided with the key, and this invention consists in an alphabet, the different letters of which are printed, engraved, or marked upon strips of metal, paper, etc., that are interchangeable, and can be transposed, one for the other, the strips having a perforation for each letter, through which a dot, puncture, or mark can be placed upon paper or other suitable material to indicate a special letter or symbol, according to the position that it occupies in the message. The inventor states that the apparatus measures about  $\frac{1}{2}$  by  $\frac{1}{4}$  inches by  $\frac{1}{2}$  inch thick, is made of metal, and can be sold for 50 cents, and that the use of it can be learnt in a few minutes.

## IMPROVED POCKET KNIFE.

William R. Rightor, Helena, Ark.—This design unites in a single knife case, together with the usual cutting blades, a detachable whetstone for sharpening the latter, and also a saw blade, having a right angular side rasping surface. The handle of the knife easily carries in one of its side pieces the independent whetstone, instead of the bone, ivory, or other piece usually secured fixedly therein, and this stone can be quickly used by turning back the saw blade, with its rear flange, and thus allowing the stone to be slid out from its supporting seat, and used independently of the handle.

## IMPROVED PARALLEL RULER.

Eugene J. Towne, North Dana, Mass., assignor to himself and J. W. Goodman, of same place.—This is an improved T-square that combines the advantage of a common and bevel square with a parallel ruler admitting parallel shading at any position of the blade in a convenient manner. There is also an adjustable blade, sliding by its head in a recessed guide-piece, attached to the drawing board. The guide piece carries in end brackets a longitudinal screw shaft that is operated by a thumb rest, ratchet, and pawl, and an adjustable stop device, so as to move the blade by a split locking nut at equal distances for parallel ruling.

## IMPROVED EXTENSIBLE SHAWL STRAP BAR.

Lyon Lewine, Brooklyn, N. Y.—This consists in a shawl strap bar so constructed as to be capable of extension and contraction to enable it to be adjusted to correspond in length with the length of the package to which it is to be applied. It is formed by the combination of the middle part, having T-grooves upon its lower side, and provided with the stop pins with end parts rabbeted upon their side edges, and provided with the longitudinal grooves.

## IMPROVED HAME FASTENER.

John C. Moore, Chicago, Ill., assignor to himself and James A. Doran, of same place.—This invention consists of a strap attached by a long loop to one hame section, and passed through a staple of the other hame section, being secured by an eccentric and toothed cam and lever. It is locked in position by a link running in the long loop, and retained by a spring in a groove of the lever.

## IMPROVED ADVERTISING DEVICE.

William A. Brice, London, England.—The object of this invention is to provide a mode of exhibiting advertisements automatically by the dropping of one or more coins in an aperture provided for the same, while at the same time the coins, after effecting their work, drop into the till or cash box placed underneath for their reception. The device was described and illustrated on p. 134, vol. 36.

## IMPROVED GRAIN DRYER.

José Guardiola, Chocóla, Guatemala.—By means of a machine, which we described and illustrated on p. 82, vol. 36, the grain or coffee is constantly agitated while it is subjected to the influence of hot air, which permeates the entire cylinder, the said apparatus being supplied with heated air by any of the ordinary well known means.

## IMPROVED QUILTING FRAME.

Frances M. Tousley, Lincoln, Neb.—This consists of a quilting frame composed of rails made of hinged pieces, that are stiffened at the joints by locking hook and eyes, and connected at the corners by flanged metallic seats and fastening thumb screws. By loosening the hooks of parallel rails the frame and quilt may be folded; by detaching the rails and loosening all the hooks the entire frame may be folded up.

## IMPROVED SHOE FASTENER.

William J. Brown, New York city.—This relates to shoe fasteners designed to take the place of the ordinary buckle or lacing; and it consists of a hasp attached to the flap of a shoe, and a double spring catch or bolt attached to the side of the shoe for engaging the hasp.

## IMPROVED SOAP COMPOSITION.

John W. Bartlett, Moline, Ill., assignor to himself and M. Witherell, of same place.—This is a machine soap, formed of rain water, pulverized lime, soapstone, carbonate of potash, chloride of lime, concentrated lye, golden machine oil, cotton seed oil, lard oil, and melted lard.

## IMPROVED STRAINER CUP.

Jacob W. Oberholtzer, Hiawatha, Kan.—This is an improved strainer cup, by which the patients may drink without raising their heads and spilling the contents, and by which toast water, beef tea, and other fluids may be strained before passing to the cup, without requiring an extra straining cloth for this purpose. The invention consists of a cup with small discharge spout at one end, and a detachable strainer section at the other end.

## IMPROVED AUTOMATIC RELIEF VALVE FOR CASKS.

Addison Smith, New York city.—This is an improved valve designed especially for casks containing beer and other fermenting liquids, but which may be used for other purposes. It is so constructed as to open and allow the inclosed gas to escape when the outward pressure rises above a certain point. It is easily adjusted to resist any desired pressure before opening.

## IMPROVED FIRE ESCAPE.

Jules A. Tixier, Brooklyn, N. Y.—This device consists of a frame which is firmly fitted in the window, and the upper part of which projects outward. In said upper part are cylinders, around which the two lowering ropes pass. Each rope carries a chair, and makes two or three turns around one of the cylinders. Both of the cylinders are acted upon by springs, so the ropes may be lowered with their load quite slowly.

## IMPROVED CIGAR BOX AND CIGAR BOX CATCH.

Ferdinand Hasselbach and Ernst Hasselbach, Brooklyn, N. Y.—The first invention relates to such an improvement in cigar boxes with hinged front sections that the lateral sides are retained rigidly in position when the cigars are packed and pressed into the boxes. The box has a hinged front part, which is connected to the sides by pivoted clasps fitting into the recesses of the front part for locking the same, and strengthening the sides against spreading in lateral direction. The second invention consists of a swinging hook, that is pivoted by a U-shaped strip into a cross slit or recess of the front wall of the cigar box, and arranged to engage the bent and recessed part of a top strip of the lid in a recess of the latter.

## IMPROVED VENTILATING FAUCET.

Ole H. Larson, Fort Dodge, Iowa.—This invention consists in a faucet in which the plug, and cylinder which contains it, are provided with an aperture for admitting air to a tube that runs lengthwise through the faucet to its inner end. A check valve is there provided which admits air to the cask when the faucet is opened, but prevents the exit of beer through the air pipe. The invention also consists in placing the plug of the faucet below its main body, so that, in driving the faucet into a cask, it will not become battered, so as to leak.

## IMPROVED SCHOOL SEAT.

James Page Clair, Philadelphia, Pa.—In this invention a lateral stud on the side of the short arm of the seat support works in a curved slot of the standard between rubber spring buffers at each end to relieve the shocks, and render the seat noiseless. The stud hooks around the wall of the slot to support the pivot.

## IMPROVED BOB SLED.

Alfred L. Needham and Edward Z. Needham, Farmington, Minn.—This bob sled is so constructed that it will readily adjust itself to any position required by the inequalities of the path, without undue strain upon any of its parts.

## IMPROVED FARE REGISTER.

William Stokes, New York city.—This is a device for indicating fares received on street cars. Each fare is indicated by a stationary hand on a revolving dial, together with the sound of a bell provided for such purpose, so that each passenger may have a check on the conductor.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED WATER CLOSET.

Michael J. McEwan, New York city.—This consists in the arrangement of a sliding valve at the bottom of a closet-bowl, for dropping the contents of the bowl into the trap, and for preventing the rising of effluvia from the trap or sewer below.

## IMPROVED WATER CLOSET.

George R. Kuhn, Brooklyn, N. Y.—Directly above the bowl is arranged a supplementary lid, which is preferably made of two semi-sections, that overlap at their meeting edges, and are lined with rubber to form a hermetically sealing joint. The connecting lever mechanism is provided with weights or springs, that serve to close the lid sections automatically as soon as the pressure on the seat or treadle is released. In this way escape of bad odors is prevented.

## IMPROVED CHIMNEY DAMPER.

Thomas Speed, Louisville, Ky.—This is an improved damper for the throat of a chimney at the top of a grate front, to enable the said throat to be nearly closed after the fire is fully kindled to prevent the warm air from the room from passing off up the chimney.

## IMPROVED APPARATUS FOR VENTILATING DRAIN PIPES, ETC.

Edward G. Banner, London, England.—This invention has for its object to prevent the passage of sewage gas into dwellings from soil pipes, drains, cesspools, or sewers. For this purpose a trap is placed at the lower end of the soil pipe, which latter is carried up to the top of the house, and there left open to form an inlet for fresh air; and to the soil pipe, just above the trap above mentioned, a ventilating pipe (which may be of smaller diameter than the soil pipe) is connected, which is also carried up to the top of the house, and has upon it a ventilating cowl, so constructed that the passage of a wind through it shall produce at all times a continuous current of air from the inlet through the soil pipe and out at the cowl; or, by a slight modification, the direction of the current of air in the soil pipe may be reversed by placing the ventilating cowl upon the top of the soil pipe itself, and providing an inlet of air to the soil pipe, just above the trap, or in the upper part of the trap itself.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED CULTIVATING PLOW.

Thomas T. McAllister and William W. McDonald, New Albany, Miss.—This implement is so placed as to straddle the row of corn or cotton plants, and thus cultivate the ground on each side thereof. Blocks run on the surface of the ground, and serve to push gradually toward the plants a portion of the earth loosened or thrown up by the colters, which work immediately in advance of them. The weeds and grass are covered by the earth thus thrown upon them, and their destruction thereby effected, while the earth immediately contiguous to the roots of the plants is not disturbed.

## IMPROVED PLOW.

Jacob Ruch, Mount Eaton, assignor to himself and William M. Johnston, Wilmot, O.—This plow is so constructed that it may be readily adjusted to work deeper or shallower in the ground, and to take and leave land, as may be desired. By loosening the nut upon the upper end of the bolt attached to the standard, the forward end of the plow beam may be raised and lowered to adjust the plow in the ground, as may be required. By a simple regulating of nuts the plow beam may be adjusted vertically or laterally.

## IMPROVED CHURN.

George W. Knapp, Arbuckle, W. Va.—Dasher rods are fixed to the dashers and connected to cranks diametrically arranged on the shaft by connecting rods. Said dashers are guided between grooved friction rollers. These rollers, at one side of the dasher rod, are supported by a hinged frame, by which they may be thrown back out of the way when the dashers are to be removed from the churn. When the frame is closed down on the cross piece that supports it, a catch is caused by the spring to engage with a pin in the cross piece.

## IMPROVED CIDER PRESS.

Russell C. Quinn, Texas Valley, N. Y.—The working of this invention is based on the principle of the endless chain, receiving continuous charges of pomace from the grinder for pressing and discharging the same without interruption. The chain carries a number of spring-acted sacks resting on slat bottoms and revolving in connection with a charging grinder, and with a simultaneously revolving follower belt. The device is guided in proper manner to register with the pomace sacks and press the juice on to an inclined spout below, while the end sacks are discharging their contents.

## IMPROVED SEED PLANTER.

Jacob R. Sample, Liberty, Miss., assignor to himself and William P. Anderson, of same place.—This machine is so constructed that it may be readily adjusted to plant corn, peas, and other smooth seeds, and to plant cotton seed and distribute fertilizers. The invention consists in the leather strap provided with the radial spikes or pins, in combination with the grooved dropping cylinder and the slotted lower end of the hopper. The pins pass through slots in the lower part of the hopper, so as to take hold of the fertilizer, drawing the same from the hopper, and allow the fertilizer to drop to the ground.

## IMPROVED HARVESTER.

Ole S. Knudson, Honston, Minn.—This machine is so constructed that it may be run at less speed than the ordinary machine, and may thus be more durable and of lighter draft. To the axle is attached the drive wheel, which by gear wheels actuates a shaft. The latter revolves in bearings attached to the frame, has a crank formed upon its middle part, and a weighted arm attached to its inner end. The crank and the weighted arm project in opposite directions to balance each other. The crank, by connecting rods and an elbow lever, communicates with the sickle bar. The arms of the lever are made of such a relative length that the sickles attached to the sickle bar may move through the space of, and cut the grain against, two of the fingers attached to the cutter bar, and the fingers hold the stalks until they are cut.

## IMPROVED PLOW.

Gideon Black, Dadeville, Ala., assignor to himself and John T. Moye, of same place.—This plow is so constructed that it may be readily adjusted to work deeper or shallower in the ground. The handles and braces move upon their pivots when the standard is adjusted, and will be held firmly in place when the standard is locked.

## IMPROVED TILTING GATE.

Isaac Brokaw, Litchfield, Ill.—This consists of a swinging and weighted gate that swings in fulcrums of the gate posts, and is opened or closed by a suitable cord arranged to withdraw a spring latch for raising the gate, and also to release a brake spring for lowering.

## IMPROVED SELF-ADJUSTING TREE SHIELD.

Almon Roff, Southport, Conn.—To prevent the millers from having access to the trees, this inventor incloses the lower part of the trunk with a sheet of lead bent around the tree, and made of such a length that its sides may overlap each other sufficiently to allow for two or three years' growth of the trees. The shield is coiled so closely around the trunk that the millers cannot pass down between it and the trees, and is kept from contact with the tree by thin strips of wood interposed between it and the said tree. As the tree grows, the lead will expand and so adjust itself.

## IMPROVED INSECT DESTROYER.

George B. Drum, Syracuse, Neb.—This consists in a vehicle containing a combined catching and destroying mechanism, to be drawn about the fields for the purpose of ridding them of noxious insects. The insects passing over a brush are drawn through rolls and killed, falling upon the ground. Wings are provided to catch the insects and prevent their flying over the machine and escaping.

## IMPROVED SEED PLANTER.

Benjamin F. Miller, Gatesville, Tex.—This is an improved machine for planting cotton, and also for planting corn and other smooth seed. New devices are included whereby the pitch of the plow may be changed as desired; and the ends of the beams of the covering plows are received in clevises attached to the ends of a bar which is secured to the frame.

## NEW MECHANICAL AND ENGINEERING INVENTIONS.

## IMPROVED STEAM TRAP AND BOILER FEEDER.

Bennett Vandecar, Canajoharie, and Henry V. Harper, Albany, N. Y.—This relates to floats to be used for controlling the supply of water to a tank or boiler. It consists of a float-ball having a tubular lever, provided with an outside connection for the escape of water that may sweat or condense in the ball. It also consists in a vent tube running through the tubular lever for the admission of air to the float ball, and also in an improved valve attached to the float lever for closing the inlet pipe of the tank or boiler.

## IMPROVED DOUBLE-ACTING PRESS.

Louis Prahar, New York city.—This is an improved foot motion press so constructed as to cut out a blank with the rearward motion of the foot lever, and, by the forward motion of said foot lever, to carry the said blank to a die and press it to the desired form.

## IMPROVED ROTARY ENGINE.

Robert W. Skirrow, Windsor, Conn.—This invention relates to the construction and arrangement of the valves and sliding abutments and the means for operating them. Said means consist in tappet arms keyed on rock shafts and eccentrics keyed on the shaft of the engine, and connected with the rock shafts by means of bars or rods. The tappet arms engage notches formed in the under side of the curved arms of the valves.

## IMPROVED MACHINE FOR GALVANIZING TERNE PLATES.

John D. Jones and John Gape, Audenried, Pa.—This consists of an iron receptacle for the melted metal, in which two sets of rollers are placed, which are actuated by a spur wheel, which meshes into pinions on the roller shafts. An inclined guide plate extends down to the rollers; this, together with a table between the sets of rollers, and an inclined guide plate beyond, forms a way on which the plates or hoops move into and out of the melted metal. Another pair of rollers is placed at the end of the last mentioned plate to remove the superfluous metal.