

## Inventions Patented in England by Americans.

From March 26 to March 29, 1877, inclusive.

ANIMAL TRAP.—J. Martin, Palestine, Texas.  
 BRUSH.—H. Rosenthal, New York city.  
 FRICTION COUPLING.—T. A. Weston, Stamford, Conn.  
 FURNACE, ETC.—R. L. Walker, Boston, Mass.  
 HORSESHOE MACHINE.—J. A. Burden, Troy, N. Y.  
 KNITTING MACHINE.—W. H. Abel, Laconia, N. H.  
 LAMP.—L. H. Olmsted, Brooklyn, N. Y.  
 MAKING STEEL, ETC.—C. M. Nes, York, Pa.  
 RATCHET CLUTCH.—T. A. Weston, Stamford, Conn.  
 REFRIGERATOR, ETC.—J. Tiffany et al., Chicago, Ill.  
 SCREW-LIFTING JACK.—J. O. Joyce, Dayton, Ohio.  
 STOVE.—J. K. Dimmick et al., Cincinnati, Ohio.  
 VEHICLE WHEEL.—J. B. Sammis et al., New York city.  
 WHEEL SKATE.—C. W. Saladee, Wolcottville, Conn.

## Recent American and Foreign Patents.

## NEW MISCELLANEOUS INVENTIONS.

## IMPROVED CARD RACK.

James P. Lamoree, Canandaigua, N. Y.—This card rack is formed of a series of clamping strips or slats, connected in step shape at their thicker ends, so that the thinner spring ends extend one beyond the other, and form spaces for the storing of the cards.

## IMPROVED CHECK-REIN SPREAD AND ATTACHMENT.

Daniel Schoonmaker, Newark, N. J.—This consists of a rein-spread formed in one piece, of cast metal, which is attached to the ends of the check-rein straps, or is provided with loops running transversely to its body, in which case the strap may be continuous from one end of the bit to the other, simply passing through the loop of the spread. The spread is of such form as to be readily placed on, or removed from, the water-hook. The device further consists in a bolt having a head of peculiar form, to be applied to the saddle, to be used in place of the usual water-hook, in connection with the rein-spread.

## IMPROVED ADJUSTABLE HAT.

I. Ygnacio Cassiano, San Antonio, Tex.—The present invention is an improvement upon a former patent granted to same inventor December 2, 1873; and the object of the same is to furnish sectional bands for hats, so constructed as to leave the forehead of the wearer free, and so that the band may be adjusted to a larger or smaller head, and to fit closer or looser, as may be required, or, if desired, to cover the whole or part of the forehead.

## IMPROVED THILL COUPLING.

Thomas B. Farrell and Martin D. Borst, Cobleskill, N. Y.—This consists of a fork or yoke for receiving the thill irons, that fits into a socket attached to the axle by means of a clip. The said fork is provided with a rubber spring, that presses against the thill iron, and abuts upon a plate that rests against the socket. A nut is provided at the rear end of the fork, for drawing it into the socket and tightening the rubber spring.

## IMPROVED SHACKLE FOR CONVICTS.

Jay L. Quackenbush, Portland, Oregon.—This invention consists in the combination of hidden screws with the semi-cylindrical jaws of the half-ring parts of the shackle, having a screw thread cut upon their outer surface, and caps having a screw thread cut upon their inner surface. The key may be made with a fork to enter holes in the heads of the screws.

## IMPROVED BALE TIE.

Joseph H. Fisher, Chicago, Ill.—This consists in a buckle of peculiar construction, adapted to a metallic strap to which it is attached. A lever engages projections on the sides of the said buckle, and there is a hooked pawl for engaging holes in the bale band.

## IMPROVED PHOTOGRAPHIC PLATE HOLDER.

Charles L. Kempf, Brooklyn, N. Y.—This is an improved holder for photographic plates, so constructed as to enable the solution to be saved, and at the same time to protect the said frame from being destroyed by the solution. The double reversible corners are provided with a rabbet along their inclined edges, a groove along their lower flange, and other arrangements to adapt them to receive and carry off the solution. Tubes pass through the angles, and there is a curved solution bottle, provided with a mouth at each end, in combination with the recessed bottom bar of the frame, and with the two corners.

## IMPROVED FIRE ESCAPE.

Tobias Lyness and Joseph P. Dunne, New York city.—This consists of a crosspiece with spurred end cheeks, placed across the inside of a window casing, and having a rope ladder suspended from adjustable eyes. The rounds of the rope ladder are provided at the ends with brackets, and that part of the ladder which passes over the lower window is arranged with one or more crosspieces in place of the brackets. In case of fire, the main crosspiece is placed across the window casing, and the rope ladder, with the lower crosspieces, lowered from the window, after which the fire escape is ready for use.

## IMPROVED CARTRIDGE-LOADING IMPLEMENT.

James H. Dudley, Poughkeepsie, N. Y.—This instrument may be used as a rammer for loading, capping, removing an exploded cap, or for withdrawing a cartridge shell from a gun barrel, or the paper cylinder of a cartridge from a gun barrel should the metallic base-piece pull off. It may also be used for grooving a cartridge shell to prevent the charge from dropping out.

## IMPROVED THILL COUPLING.

James F. Hill, Fleetwood, Pa.—This is an improved thill coupling, by which the shafts may be readily shifted from one carriage to another. The invention consists of a shaft box or bearing, with hinged top attached by a clip to the axle. The center pin of the shaft attachment turns in the box, and is retained therein by a locking lever mechanism, that binds on a tongue of the cap.

## IMPROVED BAG FASTENER.

Henry Redden, New York city, assignor to Andrew M. Underhill, of same place.—The object of this invention is to improve the construction of the bag for which letters patent were granted to same inventor May 23, 1876, in such a way that its contents may be discharged readily and quickly, and which, when tied, will prevent any leakage. When the bag has been filled, the outer edges of two flaps are brought together, and the said flaps are rolled together within the mouth of the bag. The mouth of the bag is then drawn together over the flaps by cords. The apron is fastened on the inside near inner edge of hem, while the cord runs parallel to the hem, to allow the bag to be fastened quickly without sewing, and opened without cutting.

## IMPROVED CHAIR SEAT AND BACK.

Paul Rath, New York city.—The bottom of this chair seat is made preferably of a piece of pasteboard which is stamped by suitable machinery, so as to form a central opening; and a concave moulding, of suitable depth, extending around the opening. The sides of the pasteboard are turned down to form flanges by which the seat or back may be attached to the piece of furniture. The pasteboard is covered at both sides with canvas or other fabric, that passes across the center opening, so as to close the same and provide a flexible base for the seat. When the bottom is thus finished it is exposed, with a quantity of wadding or other stuffing, and with a loose leather or other covering, to the pressure of a powerful hydraulic or other press, by which the bulk of the wadding is reduced to smaller compass, and sufficient elasticity given to the same to furnish a soft and flexible seat.

## IMPROVED NECKTIE.

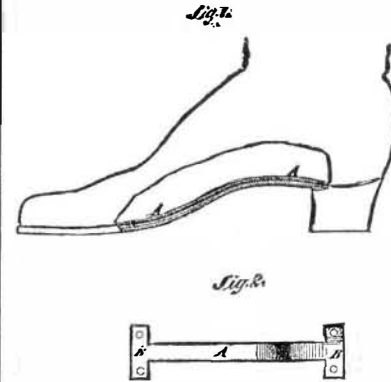
Robert Swenarton, Newtown, N. Y.—This consists of a slotted plate for receiving the collar button, which is provided with a barb or projecting point at each side for engaging the ends of the band that encircles the neck. The object of this invention is to provide a necktie that may be securely fastened, so that it cannot become accidentally loosened, and which is capable of being worn either with or without a band to encircle the neck.

## IMPROVED BUCKLE.

Benjamin F. Melton, Gainesville, Tex.—This consists of a buckle with fixed loop extending at the under side from the lateral tongue bar of the buckle. It may be manufactured quicker and cheaper than when the loop has to be sewed with the buckle to the strap end.

## IMPROVED SHANK SUPPORT FOR BOOTS AND SHOES.

George W. Wells, Black Hawk, Col.—The invention illustrated herewith is an improved spring for the soles of boots and shoes, so constructed as to prevent the soles from twisting or getting otherwise out of shape, while



giving great elasticity. A is the spring, which is made of steel, and of such a length as to extend from the heel to, or nearly to, the ball of the foot, and which is bent to give the desired arch to the sole. The spring, A, is made with a cross-head, B, at each end, as shown in Fig. 2. Through the ends of the cross-heads, B, are formed holes, to receive rivets for securing the said spring to the insole of the boot or shoe. The rivets have wide flat heads, to give them a firm hold upon the insole, and prevent them from hurting the feet of the wearer. This construction gives the springs great strength to recover themselves from a lateral twist or strain, and at the same time gives to the sole elasticity in walking. The inventor, who may be addressed as above, desires to contract for the manufacture of this device.

## IMPROVED MODE OF EXTINGUISHING FIRE, ETC.

Donald McLennan, West Green, assignor of one half his right to Mary Ann Davis, London, England.—This is an improvement in means for extinguishing fires by discharging water from stationary perforated tubes attached to the walls or ceilings of rooms, halls, etc., of buildings. The improvement relates particularly to the construction and arrangement of devices for turning on and shutting off water in the several rooms in which the perforated tubes are located. Each cock is operated by a connecting rod, elbow lever, and a pull rod. The several pull rods are arranged together, and extend downward by the side of the wall of the building, and are provided with suitable handles. By pulling any one or more of the rods, the water will be let on in the corresponding room or rooms.

## IMPROVED TRUNK CATCH.

Eliakim Rice, Cazenovia, N. Y.—This consists of a trunk catch made of three castings, provided with a spring, and capable of being put together without special fitting. It is so constructed that two dowels cast on the portion attached to the cover enter sockets formed in the part attached to the body of the trunk. The whole is arranged so that the parts may engage automatically, and may be readily disengaged.

## IMPROVED SMOKING PIPE.

Bengt A. Jonasson, Warren, Pa.—This is a folding smoking pipe whose joint consists of two rabbeted hollow half-spheres and an opening spring retainer. With this construction the mouthpiece can be turned down beneath the base, and the pipe thus reduced to small compass.

## IMPROVED WIRE FENCE.

Charles D. Johnson and Levi F. Johnston, Marshalltown, Iowa.—The post is made semi-circular in cross section, and slotted to adapt it for attachment of staples for supporting the wires. This form of post secures the desired combination of strength, lightness, and cheapness. The staples are formed of short lengths of wire whose ends are twisted together and project from the post, thus forming barbs which prevent cattle rubbing against the post.

## NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

## IMPROVED DUMPING WAGON.

Robert A. Reed, Hoboken, N. J.—This is an improved device for attachment to the frames or bodies of trucks, wagons, cars, etc., to facilitate their loading and unloading. The general construction is such that by operating a lever the forward end of the load is raised, so that it will readily slide off. When the load is arranged to be carried, swiveled crank screws are turned to force a crossbar down upon the load, and thus bind it in place.

## IMPROVED SASH BALANCE.

Adam Kolb and Charles Osberghaus, Sandusky, O.—This invention consists in combining, with pulleys, cord, and spring clutch, a rod pivoted to the clutch, and passing through a hole in the casting. The operation is as follows: When the bolt is withdrawn the lower sash may be moved upward, when the upper sash will move downward, the two sashes counterbalancing each other. If it is desired to lower the upper sash without raising the lower one, the free end of the connecting cord is drawn outward, thus drawing the clutch away from the cord by means of a rod. The cord is, at the same time, permitted to pass through an eye and between the pulleys, allowing the sash to drop.

## IMPROVED SASH FASTENER.

Henry Jones, East Saginaw, Mich.—This consists of a bearing piece, supported in a casting mortised into the window sash, and which is made to press with more or less force against the casing, according to the weight of the sash, by an adjustable volute spring. The device is capable of being locked by turning a button against the bearing piece when it has dropped into a notch provided in the casing for that purpose.

## IMPROVED SKY-LIGHT BAR.

Joseph Henry, Chicago, Ill., assignor to himself and R. Philip Gormully, of same place.—This consists of a sky-light bar formed with two gutters and two glass supports at both sides of the double center part, to which the cap is connected by flat bolts and fastening cross bolts or rivets. The glass supports are concaved for receiving the putty, while the double gutter forms an interior gutter for any leak-moisture of the bolts.

## NEW MECHANICAL AND ENGINEERING INVENTIONS.

## IMPROVED WINDMILL.

Elias Stata, Cape Vincent, N. Y., assignor to Mary E. Stata, of same place.—This consists in the combination of a hoop or shield and a governor with a vertical windmill, in such a way that the action of the governor applies a portion of the power of the mill to raise the said shield, exposing more or less of the wheel to the action of the wind, thus controlling its motion.

## IMPROVED SPIKE EXTRACTOR.

John A. Powell, California, Pa., assignor to himself and Jos. B. Crowthers, of same place.—This machine pulls the spikes without bending them, and is so constructed as to allow the operator to always stand within the track, so that the instrument can be used in cuts and tunnels. The arms of a clamp are pivoted to each other in such a position that their jaws may be opened enough to receive and grasp the head of a spike, which is then drawn by bearing down upon the free end of a lever.

## IMPROVED CAR COUPLING.

George W. Gomer, Sybertsville, Pa.—This coupling enables the cars to be coupled and uncoupled from their tops or sides, and have sufficient play to prevent binding when the cars pass around curves. By operating a lever to press a rod downward, bars will be pressed against the inner end of the link so as to raise the outer end of said link and drop it over the hook of the adjacent car. In the same way the link may be raised to uncouple the cars.

## IMPROVED CAKE MACHINE.

Daniel M. Holmes, New York city, assignor to J. Cutler Fuller, Orange, N. J., and Martha G. Holmes, New York city.—The object of this invention is to improve the construction of the machine for making cakes—such as jumbles, kisses, drops, macaroons, etc.—of soft dough, for which letters patent were issued to same inventor February 29, 1876. The invention consists in the combination of movable plungers with the hollow cutters, the cutter plate, and the dough box of a cake machine. The plungers serve to cut out the dough in suitable shapes. The machine contains considerable mechanism both novel and ingenious.

## IMPROVED ROD COUPLING.

William C. McClintock, Hooperston, Ill., assignor to himself and William B. Steele, Bernhart's Mills, Pa.—This consists in a rod or shaft having scarfed ends, upon which are formed alternate transverse recesses and projections, which are so proportioned that the projections of one section of shaft fit the recesses in the adjacent section. The adjoining ends of the sections are held together by a sliding sleeve, which is retained in place by a spring latch. The device is applicable to pumpsucker rods, and to shafts.

## IMPROVED LIFTING JACK.

Abram R. Hurst, Mechanicsburg, Pa.—This invention relates to an improvement in lifting jacks designed with a view to simplicity, ease of adjustment, and compactness of folding; and it consists in a stationary standard having a lift bar provided with laterally projecting teeth or pins, and arranged in guides or keepers to slide longitudinally upon the standard, in combination with a lever pivoted to the standard and having an oblong or elliptical camhead which is provided with a laterally projecting flange adapted to engage with the teeth of the lift bar to elevate the same, or to be disengaged therefrom.

## IMPROVED DEVICE FOR THROWING BELTS ON PULLEYS.

Robert Reinhard, Langendreer, Prussia.—The object of this invention is to provide a simple, cheap, and efficient device for applying broad or tightly stretched bands or belts to pulleys, and thereby avoiding the difficulty and danger incident to such operation when effected by hand in the usual way. The device consists of a spring clamp for holding the belt, and a screw clamp for attaching it to a pulley. The spring clamp projects radially at one side of the pulley rim, and the screw clamp is applied directly to one of the pulley spokes.

## IMPROVED WATER ELEVATOR.

Christian E. Lykke, Grand Island, Neb.—This improvement relates particularly to the form of the buckets, the construction of the chain whereby alternate links may be readily detached or separated to facilitate the attachment and removal of the buckets; also to the provision of fixed rollers journaled in a frame set in the well and serving to keep the chain distended; also to the use of a weighted stand or platform placed in the well to hold the chain taut.

## IMPROVED DEVICE FOR BALANCING FLYWHEELS, PULLEYS, ETC.

Charles Seymour, Defiance, O.—The pulley to be balanced is supported horizontally upon a vertical spindle having a yoke provided with arms which engage the spokes of the pulley, so that when the spindle is rotated the pulley partakes of its motion and assumes an inclination to the horizon corresponding to the extent to which one side overweighs the other. Weights are then attached to the lighter side to make the pulley assume a horizontal position.

## NEW AGRICULTURAL INVENTIONS.

## IMPROVED HOG TRAP.

Elijah K. Jenkins, Elkhorn Grove, Ill.—This is an improved trap for catching and holding hogs while ringing, castrating, and marking them; and the invention consists in the combination of hinged doors, connecting bars, spring, swinging gate, bent lever, and strap with the pen. In using the trap, the hogs, one at a time, are driven into the open rear end of the pen, and, seeking to pass through it, they push back the doors by forcing their heads through between them, which doors immediately close behind their ears, so that they cannot withdraw their heads, while the gate prevents them from passing any further, and they are thus held securely.

## IMPROVED COCKLE SEPARATOR.

Hermann Kurth, Milwaukee, Wis.—This machine belongs to that class of separators in which a revolving cylinder, having indented inner cavities, is made to catch the small impurities, such as cockle, foreign seed, dirt, etc., and to deliver them to a trough or pan which separates and carries them out of the cylinder apart from the clean grain. The main features of the improvement consist: First, in locating above the main indented cylinder one or more indented cylinders whose cavities or indentations are larger than those of the lower cylinder, the same being designed to separate the large wheat from the small wheat and impurities, and to take the place of sieves ordinarily employed for this purpose. Secondly, in constructing the cylinder with both indentations or cavities and perforations, which perforations are separate from and independent of the cavities and serve to effect the preliminary separation of the fine seed and dirt. Thirdly, in arranging the cylinders with one end free from, and the other end attached to, the central shaft, so as to work a conveyer and deliver cockle, etc., at opposite end of the cylinder from clean grain. Fourthly, improved construction of catch board, made automatically adjustable through hinges and provided with an adjustable flexible strip for removing cockle and impurities from cavities of cylinder and delivering them to trough. Fifthly, in the improved arrangement of the metal of the cylinder in forming the cavity, designed to increase the durability of the said cylinder.

## IMPROVED GRAIN BINDER.

Harvey Hull, West Exeter, N. Y.—This is a novel construction of grain binder, belonging to that class in which the sheaf is bound with a cord which is tied in a single bow knot. It consists generally in a set of pincers which, in tying the knot, operate somewhat after the manner of the human fingers. Prominent among its novel features is an arrangement for looping and holding the cord around the tying pincers in such a manner that the loop will not slip off while the knot is being tied, but will slip off after the knot is tied; the leading device being a spring catch which, operating simultaneously with the tying pincers, projects laterally from the pincers outside of the loop while the loop is being formed, but which recedes when the pincers close, to pull the cord through the loop, and thus permits the loop to slip off. Among other important features, also, is a spring arm for holding the cord while the knot is being tied, and a hook for drawing the knot well down to the bundle.