

## Recent American and Foreign Patents.

**Improved Child's Carriage.**

William Wuerz, New York city.—This carriage may be conveniently folded up into narrow compass after use. The invention consists in constructing the body and axles of the carriage of hinged sectional parts that may be folded up toward the central longitudinal axis of the carriage; each axle being made of two parts, an interior solid axle, and an outer hollow sectional part, which folds up by its sections on the withdrawal of the solid axle.

**Improved Sash Holder.**

Ripley R. Calkins, St. Joseph, Mo.—The invention consists of a screw bolt with a thumb wheel passing through the sash, and acting on a flanged and spring-acted clamping socket that is guided in a recess of the sash and a face ring of the same. The turning of the screw bolt in one direction carries the socket forward to project beyond the sash and bind firmly against the window casing, retaining the sash at any height, while the turning of the bolt in opposite direction releases the fastening socket.

**Improved Ventilating Barrel.**

E. B. Georgia, Clifton, Va.—The invention relates to a peculiar construction of barrel wherein fruits may be packed and transported long distances, and yet preserved with all their original flavor. It consists in perforating the staves with slots and forming a readily removable head, so that the fruit is aerated and the exhalations immediately carried off, while fruit may be entered or removed with great facility.

**Improved Electric Fire Alarm.**

Wilson E. Facer, Toronto, Can.—This invention relates to certain improvements in non-interfering electric fire alarms; and it consists in the combination with the bolt of the fire alarm box door of a mercury balance operated by the armature of a magnet, whereby the said door bolts of all the instruments except the operating one are locked to provide against any interference of signals. It also consists in the peculiar construction of a notched disk and transmitting lever whereby the alarm signals are sent through the said transmitting lever. It also further consists in the combination with the actuating mechanism of a centrifugal friction governor, to regulate the speed of the clock gearing, and in the peculiar construction and arrangement of auxiliary details forming secondary features of the invention.

**Improved Tobacco Knife.**

E. T. Shelton, Laurel Grove, Va.—The invention consists in a tobacco knife having a blade provided with a push cutting edge, a draw cut edge, and an intermediate blunt edge, by which previously topped tobacco may be conveniently split and cut off.

**Paper Lining for Metallic Shells of Cartridges.**

Baker D. Wilson, Shreveport, La.—This invention consists in a paper lining for the metallic loading shells for breech-loading shot guns; the object of which said lining is to hold the load in tightly, keep the powder dry, and preserve the shell.

**Improved Cracker Machine.**

Adam and John Exton, Trenton, N. J.—The invention relates to an improved means of docking and finishing crackers, and automatically transferring them to the backing pans.

**Improved Cracker Machine.**

Adam and John Exton, Trenton, N. J.—The object of this invention is to furnish an improved means for conveying or transferring crackers from the molding to a docking and finishing apparatus; and it consists in a horizontally reciprocating rock shaft provided with radial arms or fingers, which work in parallel grooves or channels, and serve to push and roll the molded crackers along to the tubes by which they are conducted to the docking apparatus.

**Improved Heel and Shank for Boots and Shoes.**

Henry Freiburg and Wm. Meyer, Quincy, Ill.—This invention relates to certain improvements in boots and shoes having wooden heels and shanks; and it consists in a shank and heel made of a single piece of wood with a rabbet and a triangular recess upon its upper front end, to which the leather sole is attached in such a manner as to make a stiff and durable connection for the two.

**Improved Windmill.**

Geo. Desbrough, Utica, N. Y.—The invention is an improvement in the class of windmills in which the wheel is arranged in the center of a fixed frame, and the access of the wind or blast thereto is controlled by slides or gates. The improvement relates to the arrangement of an annular rack or toothed ring adapted to reciprocate circularly, and flanged friction rollers for supporting and guiding the same, also slotted gates which are pivoted to said rack or ring, and partake of its movement so as to be simultaneously opened or closed.

**Improved Knitting Machine.**

Albert Tompkins and Ira Tompkins, Troy, N. Y.—The invention consists, first, in combining the take-up roll or rolls with a pair of gear wheels differing in size, and so connected with intermediate mechanism that the operation of drawing the fabric from the needles or cylinder will take place at constantly varying points, and thereby avoid the now common objection of having the draw of the take-up always at the same point relatively to the cam, or some similar device, which never varies its position. The invention also comprehends an improvement in the means of connecting and disconnecting the take-up roll with the gear wheels that operate it.

**Improved Thread Tension for Sewing Machines.**

John Reece, Stanstead, P. Q.—The invention relates to an improvement in the manner of controlling the supply of thread to the needles. At certain times in the formation of the stitch, a spring clamping device releases the thread entirely from all tension, except that unavoidably due to friction of the thread in the guide hooks, etc., which conduct it to the needle, and during the remainder of the time it holds the thread immovable. The invention also includes an adjustment of the clamping device for governing the time and force of the clamping action.

**Improved Hand Corn Planter.**

John Beers, Greenville, O.—The planter is carried or suspended vertically by either hand of the operator, and provided with a foot which, when the weight of the planter comes on it, pushes up the seed slide and opens the jaws that form the discharge mouth or passage. The jaws enter the earth and are opened, to allow the escape of seed, by means of a trip mechanism, of which the seed slide forms the chief element.

**Improved Electric Motor.**

Charles J. B. Gaume, Williamsburg, N. Y.—The invention consists in the frame or box armature, made with four, more or less, plain or concave sides, having half round or square enlargements formed upon their outer or inner surfaces. With this construction of armature, the engine, it is claimed, will run and do its work with a much smaller battery than is ordinarily required.

**Improved Spring Trace Carrier and Back Loop.**

William Davis, Petaluma, Cal.—The back loop terminates at each end in circular joint pieces which are attached to the back iron. This loop is curved upward. The back iron is curved to fit a pad, to which it is fastened. The lines of the harness may be drawn through trace loops,

**Improved Mousing Hooks.**

Nels. E. Johnsen and Samuel Adams, Chelsea, Mass.—This hook is moused securely when it is closed by a slide on the link of the hook, which is so fastened to the link that the hook is prevented from opening until the slide is moved.

**Improved Whiffletree Hook and Clip.**

Isaac N. Pyle, Decatur, Ind.—The clip is formed of two wire wrought metal rings, spread apart at one end and welded together at the other, to adapt it to different sizes of single trees. The hook is of twisted and doubled wire.

**Improved Hand-Protecting Attachment for Drills.**

William M. Hance, Dover, N. J.—In the body of an iron disk is formed a slot, the inner end of which terminates at the center of the disk, and is made of such a size as to fit upon the drill. In the outer part of the slot is placed a metal block, upon the inner side of which is formed a recess to receive a rubber block, and to its outer side is swiveled the forward end of a hand screw, which works in a screw hole in the said disk. When the disk is adjusted in place, the screw is turned forward, which forces the rubber block against the drill, so that the elasticity of the rubber may hold the disk from being jarred down by striking upon the drill with a hammer, and may bring said disk back to its place should it be struck. By this device the hand holding the drill will be protected from a miss blow, and from pieces of metal flying from the head of the drill.

**Improved Stone Cutter's Gage.**

Edwin R. Batchelder, Prospect, assignor to himself, Charles McLeod, of South Thomaston, and Thompson H. Murch and Henry J. Snow, Dix Island, Me.—This invention relates to an improved device to be used by stone cutters and carvers for facilitating the working of molding and carving, and also for ascertaining the different depth and angle of complicated members in carving in stone. The invention consists of an adjustable gage that is clamped to the tongue of a square, and capable of being set to any angle or depth of sinkage.

**Improved Washing Machine.**

Edward J. Robinson, Schenectady, N. Y.—This invention relates to the manner of attaching the journals of the cylinder and securing the same. The cylinder is revolved by means of a crank on one of the detachable journals. The latter are screwed into flanged plates cut into the ends of the cylinder. The journals and journal boxes, which are screwed into the box from the inside, and the screw nuts, through which the journals pass, may be removed at any time for the purpose of lubricating the journals or for taking the cylinder from the box.

**Improved Traction Engine.**

William H. Milliken, Sacramento, Cal.—In this machine the power can be applied to all the wheels, and they can at the same time be turned readily from right to left, and vice versa, for steering and for turning around. The body is mounted so that the weight will be equally distributed, and at all times borne on the wheels alike, no matter what irregularities there may be in the surface, and at the same time the connection is made by springs to obtain the necessary elastic support without the use of rubber. Each wheel is mounted on a short independent axle, which is supported in the lower end of a yoke extending up over the wheel, and pivoted vertically by its inner member to the body, so as to turn, and at the same time allow the body to rise and fall. The inner end of the axle is connected by a jointed section with a middle section having the driving wheel, and geared with the driving engines. For turning the wheels and axles laterally to steer the machine and to turn around. Rock levers draw the wheels together on one side, and force them apart on the other side, and thus direct the machine as desired. The second part of the invention is effected by the use of equalizing supports.

**Improved Machine for Sawing Staves.**

William Barber, Cape Vincent, assignor to himself and Lewis Parker, Lyme, N. Y.—An adjustable guide or gage, by which the thickness of the stave or other article sawn is regulated, is made with a projecting lip, so that the bearing will be in about the middle of the piece sawn. The cylinder saw of any diameter and width is revolved on a series of rollers. Each roller is made in two parts, the latter of which is adjustable on the arbor to suit the width of the saw. There are wings on the side of the adjustable roller, by means of which a current of air is produced for expelling the sawdust. It is claimed that, with this invention, staves of any length may be sawn, as well as moldings and other stuff for joiner or cabinet work, or other purposes, and that the stuff sawn off is pushed through the same as when sawn by the common circular saw.

**Improved Seed and Guano Distributer.**

Robert Sappelt, Springfield, N. Y.—The distributing drums are secured sidewise of each other on a lateral shaft, and are revolved by suitable gearing. They are thrown in and out of gear by a spring clutch of the wheel axle, which is connected, by operating lever mechanism, with the handles at the rear part, for producing the instant interruption of the revolving motion of the drums and the dropping of the seed. The lever mechanism is set by a rack arrangement of the handles in the required position for causing the throwing in and out of gear of the drum-revolving parts, and giving thereby the full control over the depositing of the seed and guano. A lateral frame is rigidly attached to the side pieces, for the purpose of supporting the seed-conveying guard plate, which is provided with separate spouts for the seed and guano, so that the same are not deposited at the same point, but at a short distance from each other.

**Improved Apparatus for Cutting Out Garments.**

Kenneth McKenzie, Hamilton, Canada.—There is a strong iron frame, similar to a printer's chase. The cutters are thin flexible strips of steel, similar to printer's rules, but with sharp edges. For cutting irregular forms, a kerf of the desired form is cut in a pattern block, of wood, with a band saw. The rules are then fitted into the kerf, and the block is secured in the chase by side and foot sticks, interfilling pieces, and wedges, in the same way as type are secured in a chase in making up a form. As thus constructed, the dies may be used upon an ordinary printing press, or upon any other kind of a press that has the requisite power.

**Improved Car and Carriage Heater.**

John Schmitt, Williamsburgh, N. Y.—This is a heater adapted to hang below a car or coach, and consists in a fire pot having a short pipe opening into a discharge pipe at one side of its outer casing, and held in position by springs.

**Improved Sugar Skimmer and Cooler.**

John L. Morgan, Savannah, Ga.—In the process of evaporating cane juice for manufacturing sugar, it is usual to have a hand whose special business it is to remove the scum from the boiler, and another to cool the contents and prevent overflow. The invention consists in a strainer, which is placed on the boiler, through which the boiling juice overflows, is cooled, and again descends, leaving the scum on the strainer, the strainer being suspended over the boiler from pulleys by cords attached thereto.

**Improved Water Wheel Gate.**

James M. Hart, Apple Grove, Va.—This invention consists in the combination of the chutes and cylindrical gate in one piece, so that the vertical adjustment of the chutes and gates delivers the water at full or partial gate, while the hanging of the chutes admits their turning in case of obstruction.

**Improved Clothes Dryer.**

Edwin S. Heath, North Hope, Pa.—Crooked hanging bars have holes in the ends, by which to hang upon pins in the wall. Cross bars are pivoted to the hanging bars at the projections of the crooks, to be held sufficiently far away from the wall for holding the clothes properly. The pivots allow the rack to be folded up compactly when it is put away.

**Improved Coupling for Thrashing Machines.**

Edwin Knock, Vermont, Ill.—Four balls are placed in separate cells of hemispherical form, and so loosely arranged that they can readily and freely revolve in all directions. These four balls are placed so that the shank of the coupling clevis is inserted between them. The advantage of this coupling is that it works with as little friction at an angle as when used on a level.

**Improved Rotary Cultivator and Chopper.**

George W. Fenley, Nacogdoches, Tex.—When the plows are desired to throw the soil to or from the center, standards are adjusted upon a shaft in V form, so that the two outer plows may strike the ground first, then the next two, and so on to the middle one. In chopping, the standards are adjusted upon the shaft at such a distance apart as to leave enough stalks for a stand between them when the machine is drawn across the rows. A lever projects into such a position that it may be conveniently reached and operated to raise and lower the rear end of the frame, and with it the plows, for convenience in passing obstructions, turning, etc. Caster wheels serve as gage wheels to regulate the depth to which the plows enter the ground.

**Improved Derrick for Stacking Hay.**

Henry John Hay, Omph Ghent, Ill.—A foot block sustains a pivoted upright shaft. The latter is further held up by braces, which may be adjusted to hold the shaft vertical, and to resist the side draft of the hay while being raised and swung over the stack. The derrick arm is composed of three bars, which may be adjusted at any desired height.

**Improved Machine for Pressing Horse Collar Pads.**

Arnold P. Mason, George Chamberlin, and Henry W. Chamberlin, Olean, N. Y., assignors to George Chamberlin & Son, same place.—This invention consists of screw-adjusted side jaws, sliding intermediate center piece, and a screw follower, corresponding in shape with the center piece to press the leather and sheet metal tree of the pads into shape thereon. Any size of pads may be pressed by inserting different sized center pieces and followers, and setting the jaws to the width of the same.

**Improved Gas Regulator.**

David P. Mayhew, Detroit, Mich.—This invention comprises a chamber receiving gas from the main, in which is an exit valve, which is balanced by a water valve, and is also connected by a lever and a couple of rods with another lever, having a counterpoise to be set according to the pressure wanted. The mechanism is arranged in relation to another water valve receiving the gas from the exit chamber, and acting upon the lever to close the exit valve whenever there is an excess of pressure in the exit chamber.

**Improved Method of Booking Gold Leaf.**

John Varley, New York city, assignor to Stephen Hickson, same place.—This method of booking gold leaf consists in applying each leaf to a perfectly dried sheet of tissue paper or other suitable backing, and then subjecting the same to heavy pressure. The gold leaf adheres intimately to the backing, and may be handled without difficulty, even by unskilled hands, being applied to the parts prepared by sizing to receive it by placing the leaf with the backing thereon, when the leaf will be retained and leave the backing on account of the great adhesiveness of the sizing.

**Improved Wind Wheel.**

John Julius Kimball, Naperville, Ill.—A stop bar is applied on the lee side of the buckets to hold them to the wind, and is controlled by a weighted lever, so as to serve as a regulator.

**Improved Die for Forming Horseshoe Calks.**

Leonard Prichard, Sweet Valley, Pa.—This is an improved die for forming, quickly and accurately, horseshoe calks of superior shape and quality. It has a base part to be secured in the anvil, and lateral top grooves, one for forming the shape and tapering base of the calk, the other for producing the central connecting spur.

**Improved Fence Post.**

John E. Warren, Westbrook, Me.—The standard is cast with upright extension arms, which are stiffened by outer flanges, which last support thereon a cast iron collar, that passes around the extension arms and studs for binding them rigidly together. The studs or half posts are made of such thickness that they fill, together with the intermediately placed rails, the space between the extension arms of the standard. The latter are extended to any desired height, and are made sloping or inclined at the outer sides, for securing a greater base, a better appearance, and, in connection with the collar, a rigid attachment of the whole wooden superstructure to the supporting standard.

**Improved Slate Cutting Machine.**

Thomas W. Parry, Danielsville, Pa.—A wing piece projects from the front, on a level with the top of the frame, in which are notches for receiving the back edges of the pieces of slate and squaring the same against the flange. The cutter plate is fastened to the top of the frame. The knife is attached to the end of a lever so as to cut with the cutter plate like a shears, and is composed partly of steel and partly of cast iron. A stand from the sill pieces of the frame is forked at its upper end to receive the cutting lever. The machine is operated by means of treadles connected with the lever at different points. The operator holds the piece of slate over the cutter plate, with its back edge resting in one of the notches, according to its width, and its straight side against the flange, which is at right angles with the cutter plate.

**Improved Trace Fastening for Whiffletrees.**

John L. Wingate, Mooers Forks, N. Y.—A thimble is made fast on the ends of the whiffletree and has a lug on the outer end. The thimble is stationary; and after the eye is slipped on it, a slot in the latter drops down from the lug, which securely confines the eye between the lug and a collar. In this position the eye plays freely on the thimble, the trace keeping it in position until the horse is detached from the vehicle, and then the eye is turned on the thimble till the slot and the lug correspond in position, when the eye is readily slipped off.

**Improved Combined Hames and Horse Collar.**

Ezra Stroud, Riceford, Minn.—At the neck the connection is made by a bow rod on each side of the hames, in the ends of which are holes, and also holes through the hames, which allow of an adjustment in width, and also in height, to fit the size of the horse.

**Improved Saw Filing Machine.**

William B. Bizzell, La Grange, N. C., assignor to himself and W. H. Hardee, same place.—This invention is an improvement on the saw-filing machine patented to the same inventor, July 1, 1873, which consists mainly of a circular frame which moves along the bed frame in which the saw is clamped, and carries the saw frame above the saw to shift the file from tooth to tooth. The saw frame is capable of shifting around the circular frame to adjust the file to the angle of the teeth. The invention consists of a peculiar feeding gage by which to shift the file frame and the circular frame in which it rests along the saw to shift the file from tooth to tooth.