

## MECHANICAL INVENTIONS.

A bearing for spindles of spinning machines has been patented by Mr. Albert R. Sherman, of Pawucket, R. I. This invention combines with the spinning bolster and case a ball or detachable stiff vertical supporting pin with free lateral movement, the pin or ball stepped at its lower end in the bottom of the bolster case, and the oil cushion between the bolster case and the bolster being preserved in the plane of the whirl.

## AGRICULTURAL INVENTIONS.

A combined corn planter and fertilizer distributor has been patented by Mr. William Cassill, of Hamden Junction, Ohio. This invention covers improvements on a former patented invention of the same inventor, making the machine more convenient in use and more reliable in operation.

A check row corn planter has been patented by Mr. Stephen E. Williams, of Rockport, Mo. The frame is mounted on a stationary axle with rotating wheels, and hinged to it is a frame with rotating axle and fixed drive wheels, so the drive wheels can be raised from the ground; there are also hinged marker bars which can be readily raised and lowered.

A corn harvester has been patented by Mr. John E. Smith, of Wilmington, Del. The cutters are arranged to cut two rows of corn at one passage across the field, the outer cutter, or the one most remote from the team, being in advance of the inner one, there being also an evener chain for bringing the but ends of the two rows of stalks together to be bound as fast as they are cut.

A harrow attachment for plows forms the subject of a patent issued to Mr. Enoch Calvin Eaton, of Pinckneyville, Ill. An obtuse angled bar carrying teeth on its outer arm is so combined with a turn plow, another bar bent at both ends having teeth adapted to work rearwardly, as to form a harrow rigidly attached to the plow beam, to pulverize and level the soil, cutting down the high parts of the furrow slice and filling the low places.

## MISCELLANEOUS INVENTIONS.

An oil filter has been patented by Mr. Daniel S. Neiman, of Fargo, Dakota Ter. It is a tank with a funnel at its upper end and a series of shelves with layers of charcoal, lime, and woolen cloth, with a steam coil surrounding the lower end of the funnel.

A hair spring regulating pin for watches has been patented by Mr. George F. Johnson, of Aurora, Ill. In combination with the regulator and its pins is a spring, so attached and arranged as to close by its tension on or against the under or exposed ends of the regulator pins.

A paper box machine has been patented by Mr. Maurice Marques, of New York city. There are male and female cutting dies, with expanding plates, and means for operating them, so the paper box may be formed of a single blank cut from a sheet of pasteboard or other suitable material.

A pump has been patented by Mr. Luis G. Careaga y Saenz, of Puebla, Mexico. It is a double piston pump, with rigid piston disk and rod arranged eccentrically, with a segmental plate attached to the disk and rod, a flanged imperforate rubber plate, and various other novel features.

A clock striking mechanism has been patented by Mr. Lucien Diacon, of Chaska, Minn. The object of this invention is to simplify the construction and reduce the cost of clocks intended to strike the hours and their subdivisions, as well as prevent their becoming easily disarranged.

A horse detacher has been patented by Messrs. John E. Stevenson and Joseph Forsyth, of Brighton, Tenn. This is an improved contrivance of trace hooks and means for unhooking the traces therefrom, to provide simple and efficient means of escape from the horses when they become uncontrollable.

A line throwing gun has been patented by Mr. Jeremiah Williams, of Hartford, Ky. There are side openings in the barrel about the middle of its length, and there is a cone held to turn on the barrel on which the line secured to the dart is held, the dart having a wad held on its butt end by a screw.

A distributing roller for mucilage, gum, etc., has been patented by Mr. Joseph A. Conwell, of Vineland, N. J. This invention consists of a roller with an annular groove at each end inclined inward from the rim toward the central axis, making pockets for the mucilage flowing down the ends of the roller.

A plumb bob has been patented by Mr. George Morrison, of Elmira, N. Y. In its upper hollow portion is a spring barrel gearing with a pinion on a shaft, a reel being mounted on the shaft with its periphery notched for the engagement of a spring pawl for holding the reel at any desired point.

A nut for carriage axles has been patented by Mr. Robert M. Pierson, of Mayesville, S. C. The nut is hollow, with adjustable covers for taking up the endwise wear of the axle box in the hubs of carriage wheels, and it has a locking device for maintaining the hollow nut and core in any given relation to each other.

A paperhanger's table has been patented by Mr. Lewis A. Young, of Stanstead, Quebec, Canada. This invention combines, with a frame, means for trimming the edges of the paper, for distributing the paste, and an endless conveyer belt upon which the paper is conducted after having been supplied with paste.

A chain pump has been patented by Mr. George W. Derrick, of Centerville, Ore. This invention covers a special combination of parts to lessen the friction and wear upon rubber buckets, and also to allow the well pipe to be readily cleared of sediment and the water to be easily discharged from its upper part to prevent freezing.

A circular saw lifter has been patented by Mr. William G. Baumgardner, of Filer City, Mich. It is a yoke with a handle pivoted on each of its parallel bars, with a cam lug on one side of the pivot adapting the two handles to form gripping bars, between which the toothed edge of the saw may be inserted, so as to be gripped and held firmly.

A hand truck has been patented by Mr. Joseph Annin, of Brooklyn, N. Y. The truck frame is of cast iron, with jaws cast in one piece therewith, and having parallel extensions for receiving clamping bolts, the handles having sockets or clamping jaws for securing them tightly, and so they may be conveniently attached and removed.

An automatic safety brake for horse powers has been patented by Mr. William L. Remington, of Meriden, Conn. This invention consists principally of a system of levers applied to the ordinary brake lever in such manner that a downward movement of the main horizontal lever of the system will shove forward the brake lever and apply the brake.

A safe has been patented by Messrs. John W. Johnston, of Richmond, Va., and J. H. Rogers, of Washington, D. C. An envelope is made to cover the entire safe, the envelope being wholly or partially adjustable, with means for adjusting, and an electro magnetic locking device for precluding the movement of the envelope except within certain intervals of time.

A carpet fastener has been patented by Mr. James A. Waters, of New York city. A hooked clamp plate is employed, journaled in suitable blocks or standards, and acted upon by springs, for grasping and holding the edge of the carpet, so the carpets may be held without injury and easily taken up and replaced, avoiding the use of tacks, hooks, etc.

A rope supporter for hay and other carriers has been patented by Mr. Richard Tennant, Jr., of Woodland, Wis. It is made with a pulley to receive the rope, bars, and wheels to carry the pulley, and spring catches to engage with the carrier, preventing the rope from sagging, and lessening the space traveled by the horse at each trip.

A mowing machine knife has been patented by Mr. John M. Hamblin, of South Union, Ky. This invention provides a light, strong serviceable knife bar and knives, which may be worked a long time without excessive gumming and with little power, and which will allow of a quick, easy, and accurate sharpening of the knives when dulled.

A door banger has been patented by Mr. George H. Burrows, of Somerville, Mass. It is made with a traveling bar with a longitudinal slot to receive the wheel, and long rabbits in its lower side to receive and travel upon the journals of the wheel, the improvement being especially applicable to car doors, though useful for other purposes.

A hoot or shoe polishing machine has been patented by Mr. Arthur A. Sparks, of Trenton, N. J. It consists of a frame mounted loosely on a shaft and carrying revolving brushes, which may be swung around to the work by turning the frame in vertical plane, the brushes being revolved by belts leading from a fixed pulley on the shaft.

A spoon bowl has been patented by Mr. Henry Nickolds, Sr., of Taunton, Mass. The bowl of this spoon by this construction, instead of having a sharp edge, has its margin bent outward or extended in the manner of a flange, or made with what is styled a returned edge, so it will present a more smooth and agreeable surface to the upper lip.

A pole attachment for wagons has been patented by Messrs. Alfred T. Hawk and Joseph W. Scott, of Preston, Ohio. It is made with a socket bar secured to the hounds at the forward side of the axle by clips, and a socket bar secured to the forward part of the bounds by a keeper, and properly strengthened by brace rods, so two poles can be readily applied to the wagon.

A washing machine has been patented by Mr. Merritt W. Palmer, of Holland, Mich. This invention covers certain improvements in clothes washers where the water is forced through the clothes by air being compressed in the vessel, a valve admitting air but preventing its escape, the up and down movement of the washer effectively acting to force soapy water through the clothes.

A belt clamp has been patented by Mr. Eleazer Ainsworth, of Wilmington, Del. Clamp bars are provided with convex sides facing each other, the bars having grooves in the ends increasing in depth from the outer to the inner edges, to permit inclining the clamp bars to the screw rods, the invention being an improvement on a former patented invention of the same inventor.

A marker for weather boards, flooring, and jambs has been patented by Mr. John Hamm, of Memphis, Kansas. It consists of a rule formed of two strips of wood, connected together at one end by a hinge and at the opposite end by a transverse screw, each strip having a short arm, and each side of the rule a standard with a shouldered projection, with other novel features.

A saw mill head block has been patented by Mr. Robison W. Shelbourne, of Blandville, Ky. There is a wheel with shaft gearing with the log setting shaft, a rising and falling rail adapted for contact with the wheel, an apparatus for actuating an endwise movable bar, and other novel features, to effect in an improved way the manipulation of the log in presenting it to the saw.

A cotton gin breast has been patented by Messrs. William F. Smith and William W. Adams, of Ozark, Ark. There is a suitably supported flexible breast back comprising one or more belts armed with strips upon the exterior sides, and driving wheels encompassed by the belts, with other novel features, to facilitate the passage of the cotton to the saws, prevent breaking or stopping the roll, and afford increased facility for ginning wet cotton.

A folding skeleton gun stock has been patented by Mr. Frederick Schwatka, of Vancouver Barracks, Washington Ter. The skeleton extension is pivoted to swing upon a smaller stock of gun or pistol, and arranged so that when closed it fits underneath the stock; there is also a spiral articulated construction of the skeleton stock, with fastenings for it closed and extended, securing great compactness and providing for a large extension of the stock.

A numbering attachment for printing presses forms the subject of four patents issued to Mr. Albert R. Baker, of Indianapolis, Ind. The press has an additional cylinder, with numbering heads properly mounted therein, and appropriate mechanism for operating them, the cylinder being in such relation to the regular cylinder that the numbers in the numbering heads will come in contact with the paper thereon as the cylinders revolve, with various other novel features.

A wheelbarrow has been patented by Mr. Joseph Annin, of Brooklyn, N. Y. The body can, by means of clamps, be secured to the handles at any desired distance from the wheel, and a stiff flanged brace sustains the tray in its normal shape, so the barrow can be used in carrying burning coals about gas works, melted refuse about iron works, etc. The same inventor has also obtained another patent covering an improved metal wheelbarrow tray, with two angular side and end pieces, forming a flaring body, riveted together with the bottom.

A belt fastener forms the subject of two patents issued to Mr. George W. Southwick, of Southwick, Mass. It consists of a rigid plate with prongs and eyes on both edges, the longitudinal axes being parallel with the edges from which the prongs project, so the strain is distributed over the plate in all its positions; also, if the belt begins to rip, an additional plate may be fastened on the belt, and the loops connected with the other, the object being to unite the ends of driving belts, so they need not be adjusted and tightened as often as with the usual lacing.

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AMERICAN NEWSPAPER ANNUAL. N. W. Ayer & Son, Philadelphia.

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THE PRACTICE OF ORE DRESSING IN EUROPE. By Wheaton B. Kunhardt. John Wiley & Sons, New York.

AN IMPORTANT QUESTION IN METEOROLOGY. By Charles A. L. Totten. John Wiley & Sons, New York.

THE THEORY OF DEFLECTIONS AND OF LATITUDES AND DEPARTURES. By Isaac W. Smith, C. E. D. Van Nostrand, New York.

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