

## ENGINEERING INVENTIONS.

A motor has been patented by Mr. George W. Wimpee, of Summerville, Ga. Combined with the reciprocating piston rod of a steam or gas engine and the main crank and connecting rod of the motor are lazy tongs or compound levers arranged to increase the throw of the connecting rod, and thus permit of a longer crank and increased leverage.

An anti-dead-center crank has been patented by Mr. Thomas C. Thomas, of Salt Lake City, Utah Ter. The invention consists of a crank arm connected by a crank pin with an arm carrying an adjustable plate held at right angles to the crank arm, and carrying a second crank pin, for transmitting power with little loss and avoiding any dead centers.

A gas motor engine has been patented by Mr. Hugh Williams, of Stockport, Chester County, England. It has charging and power cylinders of different diameters, with pistons operating as a single piston, mixed gas and air being compressed into a reservoir by the charging cylinder, and flowing thence into the power cylinder, where it is further compressed by the power piston before explosion, duplicate engines being employed coupled to one shaft.

## AGRICULTURAL INVENTIONS.

A corn shocker has been patented by Mr. Edward F. Evans, of Wamego, Kansas. This invention covers novel features of construction intended to simplify the device, so that it may be readily carried from shock to shock and conveniently placed for use by one person, and the shock readily compressed and tied, without danger of tilting or overturning it.

A spring attachment for agricultural implements has been patented by Mr. Charles R. Hartman, of Vincennes, Ind. It is for use where one or more plows, shovels, or gangs are to be lifted from the ground by the action of the spring while turning the implement at the end of the row, or to assist the operator in guiding the machine, the invention covering a novel construction and combination of parts therefor.

## MISCELLANEOUS INVENTIONS.

A draught lever has been patented by Mr. Frederick R. Webster, of Nashua, N. H. This invention provides a novel construction of a simple apparatus, whereby a railway rail and heavy timbers may be expeditiously and conveniently moved without injury thereto, and with slight exertion on the part of the operator.

A chopping knife and slicer has been patented by Mr. Harvey W. Bridgman, of Lyons, Kansas. The handle has a transverse opening and a slicing blade across one end of the opening, there being secured to the handle a shank having three arms, each one of which carries a curved blade with converging taper ends.

A cuff holder has been patented by Mr. Benjamin F. Walker, of Warren, Pa. It is applicable to both men's and women's apparel, and has a spring clamp with terminally dentated pivoted jaws, a spring keeping the jaws closed on the cuff, while there is a safety pin for attaching the cuff holder to the sleeve of the coat or dress.

A watch case pendant has been patented by Mr. Frederick W. Schimmel, of Murray, Idaho Ter. This invention covers a novel construction and arrangement of parts in a watch pendant and push pin, designed to exclude dust and moisture, and also providing means for holding the pendant bow securely in the pendant.

A vacuum apparatus has been patented by Mr. Otto Bielmann, of Jersey City, N. J. It is for crystallizing sugar, and consists of a vacuum pan of polygonal form, having a shell tapering toward the ends, and mounted to rotate on fixed heads held on a shaft or spindle, through which steam is supplied to a coil in the middle of the pan.

A combined step ladder and chair has been patented by Mr. Phillip Braun, of Los Angeles, Cal. This invention covers a novel construction and combination of parts designed to provide a convenient and ornamental piece of furniture, simple, light, and durable, which may be readily converted from a chair into a step ladder and vice versa.

An electric insulator peg has been patented by Mr. William E. Joslin, of South Scituate, R. I. It is made of wood, with threaded head and tapering neck, the shank forming a smooth non-shouldered continuation of the neck, making a peg which is strong without being unduly stiff, and affords no room for water to lie around the shank.

A grain dumping device has been patented by Messrs. James P. and John R. Sevier, of Opel, Mo. It is a combined grain carrier and elevator, designed to enable one unaided to conveniently transport a load of grain, elevate it, and discharge it into a storage or other bin without the necessity of handling the grain, as with a scoop.

A sash holder has been patented by Messrs. George K. Snyder and Commodore P. Fisher, of Clay Centre, Kan. It consists of a rod with reversely screw-threaded ends engaging a plate and a bracket screwed to the window frame, with other novel features, making a simple device for securing the sash at any desired point, and securely locking it when closed.

A screw propeller has been patented by Mr. Alfred Conrad, of Patchogue, N. Y. The propeller is made with an elongated tapering hub, fitted by its axial bore on a screw shaft, and having a single continuous perpendicular helical integral flange, which gradually increases in diameter from the smaller to the larger end of the hub.

A draught equalizer has been patented by Mr. William Cazier, of Waveland, Kansas. It is designed to equally distribute the strain when three animals are attached to a vehicle or plow in connection with which the equalizer is employed, its construction being such that draught animals will be held very close to the plow, implement, or vehicle.

A chemical stove has been patented by Mr. William M. Conway, of Baltimore, Md. It is designed for affording heat by slaking quicklime with water, having one or more pans for the lime arranged within a cylinder, in connection with a charger and a water tank, whereby a high temperature can be readily maintained with but little care and labor.

An improvement in suspenders forms the subject of a patent issued to Mr. Victor Dubreuil, of New York City. This invention covers a novel construction and arrangement of the several parts, making a suspender designed to fit the body of the wearer, without inconvenience, the article having but few parts and being simply made.

A conical wheel has been patented by Mr. Aaron Twyman, of Pullman, Ill. It has its circumference radically conical, and provided at its center with a journal bearing, the surface of which is concentric and parallel with the outer peripheral surface of the wheel, whereby to present a bearing surface at right angles to the resultant of the pressure upon the wheel.

A paper bag holder has been patented by Mr. James Cochran, of Custer City, Dakota Ter. It consists of a number of U-shaped sections or slides fitted together and varying in height and width, the bags being held horizontally in the several sections and projecting beyond each end so that the user is enabled to remove the bags from either end of the holder.

A micrometer scale has been patented by Mr. Edmund Jones, of Cold Spring Harbor, N. Y. It has a straight edge with a longitudinal scale and a lateral extension with a transverse scale, a gauge being mounted to work on this extension on a transverse guide, with other novel features, to facilitate measuring or plotting distances.

A hair tonic has been patented by Mr. William T. Wallace, of Troy, Texas. It is made of tincture of cantharides, oil of cocoa, castor oil, ammonia solution, alcohol, bay rum, borax, flowers of sulphur, oil of bergamot, and other ingredients, and is designed to prevent hair from falling out and promote its growth where the follicles are not dead.

An album has been patented by Mr. Felix Reifschneider, of Brooklyn, N. Y. It is a book in which the leaves form photographic mounts, and are readily attachable and detachable, being designed for the use of photographic amateurs, the photographs being pasted in and afterward varnished, without damaging in any way their means of attachment.

A vehicle brake has been patented by Mr. Andrew W. Lane, of Susanville, Cal. It is constructed with novel-shaped side clips, each having an overhanging flange or lip, one clip being adapted to be permanently bolted to a brake bar, and the other being adjustable, whereby blocks of almost any thickness may be conveniently clamped to place to act as shoes.

A nut lock has been patented by Mr. Wiley S. Keyes, of Verona, Miss. It is especially designed for use in connection with railroad rails and fish bars, the improvement consisting in a polygonal bolt screw-threaded upon one end to receive the nut and to receive a key which fits in a recess in the nut longitudinally of the bolt to bear upon one of its flattened surfaces.

A plaque or panel has been patented by Mr. Edward De Planque, of Hoboken, N. J. It is formed of two sheets of canvas or duck united by a mixture of glue, whitening, and pulverized wood, with a sheet of paper fastened to one of the sheets of canvas or duck, and the sheet of paper having a coating of whitening and glue, on which the painting or drawing is produced.

A velocipede has been patented by Mr. George Kibbe, of Amsterdam, N. Y. This invention covers a novel form of pedal levers and driving mechanism, with a peculiar construction and arrangement of the steering head and cross bar, to render the propulsion of velocipedes easier, and provide for a convenient variation of the effective driving force in accordance with the resistance to be overcome.

A buckle has been patented by Mr. Luther C. Voorhees, of New York City. It is made of plate or sheet metal, and has a lower hook and closing spring or tongue integral with the frame or body of the buckle, which has parallel slots one above the other, and a row of teeth along the marginal portion of one of the slots for the passage of the web or strap to which the buckle is to be applied.

An automatic vehicle brake has been patented by Messrs. Linford E. Van Antwerp and Morgan L. Norton, of Susquehanna, Pa. It has stirrups carrying brake shoes pivotally connected with a sliding brake beam, a suitably supported and arranged spring bearing against the stirrups, with other novel features, to slacken the speed or stop a forwardly running vehicle, while allowing it to back freely.

A fish hook has been patented by Mr. George Smith, of Brooklyn, N. Y. It is made of spring wire bent upon itself to form a double shank, the two ends bent out to form the hooks, a sleeve being held to slide upon the double shank in such a way that a fish drawing upon the hooks will cause the shank to slide through the sleeve, when the shank with the hooks at its ends will expand in the mouth of the fish.

A rotating trolling device for ships' logs has been patented by Mr. Oscar Kustel, of San Francisco, Cal. It consists of a plate twisted and having its longitudinal margins bent in reverse directions, forming curved flanges, with a wire secured on opposite sides of the plate along the longitudinal edges

by the flanges, the rotator having at its forward end a rounded eye or loop through which the drag line is fastened.

A process of treating native soda has been patented by Mr. Laurence F. J. Wrinkle, of Virginia City, Nevada. It is a novel method of treating natural soda from alkaline lakes, whereby the bicarbonate is saved, and the crystal soda obtained free from sand, and to a larger extent from salt and sulphate, the process being less expensive than that heretofore followed.

A tanning process has been patented by Mr. Charles H. Perrin, of Jefferson City, Mo. It consists in first deplating the hides or skins, then steeping them in an infusion of black sage brush in water first heated to a high temperature and afterward allowed to stand and partially cool, stirring them subsequently at intervals, such process being also applicable for treating hides or skins before the hair or wool is removed.

A vehicle axle has been patented by Mr. La Fayette T. Wever, of Sopchoppy, Fla. It is enlarged and exteriorly threaded at its ends, with a longitudinal aperture having a thread of coarser pitch, a threaded spindle adapted to enter the aperture, with a plain collar in front of the thread, and an interiorly threaded flanged sleeve sliding upon the spindle and locking the spindle and axle, making the axle strong at its union with the spindle, the latter being readily removable in case of breakage.

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## TABLE OF CONTENTS.

1. Elegant plate in colors of a dwelling at Glen Ridge, N. J., with floor plans, sheet of details, etc. Cost, eight thousand five hundred dollars.
2. Plate in colors of a fire engine house of moderate cost. Details and floor plans.
3. Perspective view and floor plans of a residence at Black Rock, Conn. Cost, six thousand dollars.
4. Sketch of an uptown block of attractive residences, New York City.
5. Floor plans and perspective elevation of two Queen Anne cottages, lately completed at Bath Beach, Long Island. Cost, four thousand dollars each.
6. Design and floor plans for a two thousand dollar house lately built at Bridgeport, Conn.
7. Perspective and floor plans of an attractive residence lately built at Bridgeport, Conn. Cost, two thousand eight hundred dollars.
8. A six hundred dollar cottage built lately at Bridgeport, Conn. Perspective and floor plans.
9. Plans and perspective view of a seaside cottage lately erected at Bath Beach, Long Island. Cost, three thousand five hundred dollars.
10. Engraving and floor plans of a neat little double house lately erected at Bridgeport, Conn., costing one thousand eight hundred dollars.
11. A country residence in France. Perspective and plans.
12. Engraving of the palatial stables of Mr. D. Edgar Crouse, Syracuse, N. Y.
13. Plans and perspective for a carriage house, barn, etc. Cost, two thousand two hundred dollars.
14. Elevation and floor plans for a double house costing complete four thousand two hundred dollars.
15. New Congregational Church at Beckenham, Kent, England.
16. Page of designs of New England residences.

Miscellaneous contents: Vegetable glue.—Fourth of July fires.—The slag water closet.—Rust in water pipes.—Laying out the joints of an elliptical vault, illustrated.—The tulip and other trees.—Architectural school houses.—Hanging baskets.—To estimate the power of a stream.—Manufacturing progress in the South.—How to grow quinces.—Mixed wheats.—New ceiling for the Assembly chamber of the New York State Capitol.—Transplanting large pines.—Galveston artesian wells.—Poisonous wall paper and carpets.—The testing of Portland cement.—The humming bird.—Manila hemp in plaster.—A perfect hen house.—Examination questions for plumbers.—Road improvements.—The "Patten" metallic shingles and siding plates, illustrated.—The pool of Bethesda.—Carl Pfeiffer.—Creosote wood preserving stains.—House heating by hot water circulation, illustrated.—Ohio's largest poplar.—Mortar.—Irrigating wheels.—Liquid fish glue.

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