RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

FEED DEVICE FOR THRESHING-MACHINES.—JOHN F. WELCH, Braman, Oklahoma Ty. The feed device is constructed so that, after the band-cutters have acted upon the bands, the bundles of straw will be thoroughly shaken up, loosened, or separated, and delivered in that condition to the cylinder and concave without danger of "slugging" the cylinder. A series of knives is arranged in opposition to the teeth of the cylinder. The knives correspond in number, and, as a whole, in position, to a row of cylinder teeth. The knives serve to render the bands of the bundles into fragments before the bands are taken up by the cylinder.

COUPLING-FRAME. — SAMUEL C. ROCK, Quincy, Pa. The coupling-frame is to be used on threshing and other heavy machines and in connection with traction-engines. A novel construction of coupling-frame is provided for use between the machine and the engine, and by which the position of the parts can be quickly adjusted in order to back the machine into a barn-door or through any other narrow opening.

COTTON-CHOPPER. — GEORGE BERRINGER, Blanco, Texas. The invention is an improvement in cotton-choppers in which a device in the nature of a hoe-blade is attached to a lever-arm adapted to swing vertically, whereby it chops out some of the standing cotton plants as the machine advances, thus leaving the plants in bunches as desired. The present invention provides simple and ingenious improvements in the driving mechanism.

Drying Apparatus.

FRUIT-DRIER.—WILLIAM A. CATES, Fisher, Wash. This improved fruit-drier is of such construction that the application of heat from the entrance of the fruit or other substance into the drier to its removal therefrom is gradual. The discharge of the currents of hot air into the drying-chamber can be easily regulated to suit particular requirements.

HEATER.—JAMES A. DEZELL, Kingston, Ala. The heater is particularly applicable to lumber and other driers. The construction comprises inclined steam-pipes from which connection-pipes rise. Heads are located at the upper ends of the connection-pipes; and inclined tubes closed at their upper ends are connected with the heads. Steam passes through the inclined-tubes, the connection-pipes, and the heads, to the inclined-tubes, which act in the same manner as the sections of a radiator. Any condensation product flows down the inclined-tubes to the head, and to the connection-pipes, thus reaching the inclined main steam-pipe and passing to a water track.

Engineering Improvements.

BOILER.—CORNELIUS J. CRONIN, Youngstown, Ohio. The boiler is a water-tube boiler in which the water-carrying pipes are so disposed that they will be more effectively subjected to the action of the furnace fire, whereby the efficiency of the boiler is augmented. In order to increase the capacity of the boiler additional tubes arranged in layers are supplied. A convenient means for cleaning the tubes and removing defective tubes is provided.

ENGINE-SHAFT. — JAMES L. CLAYLAND, Fort Smith, Ark. The ordinary crank-shaft has but two points where full power is exerted and two "dead" points or centers where no power is applied. In the present invention the reciprocating motion of two pistons is applied to two spirally-grooved shafts through the medium of rotatable sleeves or hollow cylinders carrying a device which engages the spiral grooves. This arrangement is particularly applicable to marine and other engines as a substitute for ordinary crank-shafts.

COMPOUND ENGINE VALVE.—SWEENEY MUNSON, Alliance, Neb. The object of the invention is to provide a valve and corresponding parts which can be used in connection with compound engines, and which will, at the same time, combine extreme simplicity with certainty of action. The valve can be completely balanced, so that very little power is required to move it.

Mechanical Devices.

MACHINE FOR BENDING SHEET-METAL PLATES.—AUGUST SWOBODA and HERMANN ROTHE, Berlin, Germany. The present invention relates to a sheet-metal bending machine, the object of which is to bend sheet-metal plates in two different directions. The machine is principally adapted for the treatment of metal plates intended for use in the manufacture of cups or curved flanges for the bells or domes of gas holders.

MACHINE FOR CUTTING PATTERNS.—JAMES SULLIVAN, Manhattan, New York city. A knife is used in connection with a feed and is given a vertical movement, the knife being so secured and the machine so constructed that the point of the knife will not rise above the feed. The machine has a presser-foot and a feed so arranged that the knife can be employed for cutting fabric in any desired number of layers along the outline of any desired pattern.

WINDMILL-POWER. — CARL OBERLANDER, Arastra, Colo. Mr. Oberlander has devised improvements in windmill-power or mechanism, which mechanism is of such design that it can be quickly thrown into and out of operative position. Furthermore, the operation of the mechanism is such that there will be no lost motion.

MIXER AND KNEADER.—LOUIS COHNHOFF, Mattapan, Mass. The machine is intended for mixing and kneading dough. The construction consists of a pan to which rotary motion is given; a pestle mounted to swing on a crosshead; a shaft; and an eccentric on the shaft, the eccentric and crosshead being connected. By means of the pestle a batch of dough of large size can be quickly kneaded.

GRASS-UPROOTER.—DAVID N. PHILLIPS, Whittington, Ontario, Can. The invention provides a compact, light, and durable machine designed to uproot deep-rooted buffalo, twitch, or quack grass and to deliver it free from dirt in windrows at the rear of the machine. The machine is under the complete control of the driver, and will not become clogged by stones. The machine may likewise be effectually employed for digging potatoes and freeing them from earth.

TUCKING-GUIDE FOR SEWING-MACHINES.—RUSSELL C. JOHNSON, Cincinnati, Ohio. Tucking-guides are sometimes made in one piece. Where they are bent to form the guide-flange they have a rounded surface, so that when the tucker is fastened to the bed-plate of the machine the cloth slips under the tucker, resulting in an uneven tuck. Furthermore, a one-piece tucker cannot be adjusted to the different feeds and feet of various machines. The present invention obviates these difficulties by providing a tucker made in two sections, adjustable relatively to each other.

TENSION DEVICE FOR KNITTING MACHINES.—GEORGE W. RUTH, Norristown, Pa. The invention relates to a device especially adapted to circular knitting-machines, by which device the web is drawn uniformly from the needles. A steady and regular tension on the web is thus secured with the result that more effective work is produced.

AUTOMATIC WEIGHING-MACHINE.—ALBERT ARTHUR, East Pittsburg, Pa. The object of the invention is to provide simple automatic mechanism for weighing granular material. A tilting-trough is pivoted within a receptacle and is equipped with a shiftable partition. A flexible connection permits the trough to have a certain amount of play independently of the partition when the trough changes its position. The partition subdivides the trough into compartments, in one of which the material is adapted to accumulate in such a way that its weight is imposed on that side of the trough which is to be forced downward by the load when the latter reaches a predetermined quantity.

EMBOSSING-MACHINE. — FREDERICK J. ALBRECHT, Manhattan, New York city. This apparatus is capable of embossing work quickly and effectively. The peculiar construction of the apparatus includes a die at each side of a vertical feed-roller, so that both dies can be worked simultaneously against strips of material driven by the feed-roller in opposite directions.

AXLE-SHAPING MACHINE.—DEFIANCE MACHINE WORKS, Defiance, Ohio. Mr. George A. Ensign, whose inventions we frequently have occasion to notice in these columns, recently devised a new and improved axle-shaping machine for the Defiance Machine Works. The machine is especially designed for the use of wagon and truck builders for turning the ends of wooden axles to the proper size and shape, and for fitting the interior of either large or small metallic axle-skeins. The machine is arranged to give the desired gather to the axle-ends and to prevent a tendency to twist or spring the bed out of alinement, and to insure an uncramped movement of the working parts, thereby increasing the capacity of the machine and raising the quality of the work.

STOP-WATCH.—SAM GOLDFADEN, Manhattan, New York city. The inventor has provided a construction by which a start, stop, and fly-back seconds-hand can be readily fitted to time-keeping watches, thus adapting such watches for timing horse races. The construction is simple and is adapted for attachment to ordinary watches, even of the cheapest grades.

Railway Appliances.

BALLAST CONVEYER AND LEVELER.—GREEN F. SPURLIN, Camden, Ala. The invention relates to means for transferring sand and ballast from cars on a railroad-track to fill in the spaces between cross-ties and also for leveling the filling material. The device provided for this purpose permits the convenient conveyance and discharge of the ballast from an ordinary platform-car at each side, between the track-rails. A ballast-leveling device co-acts with the conveyer to complete the ballasting of the roadbed at one operation.

CAR COUPLING—MARK A. BROWN, Douglas, Ga. The invention relates to a device comprising a pivoted coupling-head and a coupling proper. The drawhead is provided with a beveled surface; and upon the drawhead a coupling-head is pivoted centrally. Upon the coupling-head a radially movable member is pivoted eccentrically. The arrangement is such that the path of the radially-movable member is partially bounded by the beveled surface, whereby the entire structure is rendered compact and strong.

Vehicles and Their Accessories.

BRAKE.—THOMAS G. BLATCH, Hazleton, Pa. The brake is more especially designed for use on steam-carriages. The construction comprises a brake-band suspended from its middle, provided with loose ends and bent into cylindrical form. Radial brackets having arc-shaped bases are mounted upon these free ends. A lever provided with a bent portion is pivoted directly upon the extreme outer end of one of the brackets; and a link is pivoted upon the extreme outer end of the other bracket and upon the lever. The arrangement is such that in applying the brake the link and the bent portion of the lever move toward each other and toward a common dead center.

PNEUMATIC TIRE PROTECTOR.—CLARENCE G. DINSMORE, Staatsburg, N. Y. This protector for the inner tube of a double pneumatic tire is designed to prevent deflation by puncture. The protector is designed for use in double-tube tires employed on the wheels of automobiles, bicycles, and other vehicles. A shield is interposed between the outer and inner tube. The ends of the shield overlap and are free to permit a yielding movement lengthwise. Outwardly-extended flanges of the shield are arranged to embed themselves in the material of the outer tube to hold the shield in place.

BICYCLE SUPPORT. — VICTOR M. GABRIELLE, Daytona, Fla. The invention provides an improved fastening by which to prevent the front wheel from turning when the bicycle is supported in idle position. A clasp embraces the frame bar of the bicycle; and to this clasp a supporting bar is pivoted. Wheel-fastening devices are employed comprising a clasp embracing the post of the bicycle; a bolt connecting the ends of the clasp and a bracket carried by the bolt and arranged to form a support for the swinging end of the bicycle support.

DRIVING GEAR.—CHARLES M. LEECH and SEYMOUR D. EVANS, Lima, Ohio. The invention is a frictional gearing for use on automobile vehicles, and also on marine vessels. Beveled friction-wheels are mounted to turn with a drive-shaft, which friction-wheels can be slid on the drive-shaft. A second shaft is disposed transversely to the drive-shaft and is arranged to slide on and rotate in its bearings. To this second shaft a friction-wheel is fastened, which is adapted to be engaged by either of the first-named friction-wheels. By means of a gear mounted on the second shaft the movement transmitted by the friction-wheels can be imparted to other elements.

WHEEL-FASTENER. — AUREN M. BEEBE, Banner, Ill. The invention provides a simple device by means of which a wheel can be quickly fastened to its axle or released therefrom. The use of the usual nuts, which are liable to become loose, is obviated. The axle has an annular channel at its end in which segmental locking-plates pivoted to the wheel-hub are to be engaged. Links extend from the free end of the plates and are operated by a crank to move the plates in the desired position.

Tools and Apparatus for Special Purposes.

FLUE CUTTER.—CHARLES A. SWANSON, Kinbrae, Minn. The tool is to be employed for the removal of tubes or flues from boilers by cutting the body of the flue loose from its ends that are secured in the flue-sheets. The present flue-cutter is a practical device of novel construction, effective in service, and adapted to cut off flues or tubes which vary considerably in diameter.

SCRAPER.—MORITZ M. MÜLLER, Bronx, New York city. Mr. Müller has provided the hook which truckmen commonly employ in handling dry goods cases, with a scraper to remove printed matter which has been marked on the case, and with a claw to remove nails.

FORMER FOR AIR-CHAMBERS FOR DENTAL PLATES.—LOUIS ARNDT, Jersey City, N. J. By means of this invention offsets can be produced directly upon a dental mold or cast of the mouth for the purpose of producing air-chambers and lateral-chambers in a plate for artificial teeth. The form is conveniently applied to the main cast and manipulated by one hand.

KNIFE AND SCISSORS SHARPENER.—CHARLES A. PAYNE, St. Paul, Minn. The invention embodies blades set at an angle to each other, so as to dispose their scraping edges for engagement with the sides of a knife or scissors blade to sharpen the edges. Novel details of construction have been invented to adapt the device for very effective service.

NAIL CUTTER AND FILE.—EMIL FORQUIGNON, Manhattan, New York city. The finger-nail cutter and file has a pair of cutters curved reversely to the edge of the nail to be cut. The cutters are pivotally connected with each other. A file is hinged on one of the cutters and is adapted to engage the other cutter to close it.

Miscellaneous Inventions.

HOOF-PAD.—JOHN CAMPBELL, Manhattan, New York city. The invention relates to a hoof-pad especially adapted for horses having corns. These corns in most instances form around the frog of the hoof, and the present invention provides a form of pad which will relieve a hoof afflicted in the manner mentioned, by placing the weight and concussion on the heel and frog of the hoof.

PROCESS OF MAKING SODIUM AMALGAM.—EUGENE B. SMART, Florence, Colo. Paraffin is heated to its melting point and to that of the alkali metal. The metal is then added to the melted paraffin and the heat continued until all the metal is heated. The amount of paraffin employed is sufficient to cover the metal when both are melted. Mercury is then added to the melted mixture of paraffin and the metal, and the paraffin is then decanted.

SAFETY-RAZOR.—ALBERT L. SILBERSTEIN, Manhattan, New York city. The blade can be readily and accurately inserted relatively to the guard and can be held in position whether it be thick or thin, worn out or new, without requiring adjustment of the parts. The guard and the casing can be easily cleaned.

EXPANSION-JOINT. — RALPH E. VAIL, Mount Vernon, Ohio. The invention is particularly applicable to pipe-lines. The expansion-joint connects the adjacent ends of two pipes with each other, and is arranged to allow free expansion and contraction of the line without danger of leakage. In case of a leak or break, the pipe is cut in two at the enlarged portion; and then the expansion-joint is placed in position on the adjacent pipe ends.

BUNG.—RUDOLPH SPAHN, Brooklyn, N. Y. The bung is provided with a sort of clack or valve which normally closes to prevent the escape of liquid from the cask. but which opens under the pressure of a spigot or other instrument inserted in the valve. The present invention insures the closing action of the valve.

CUSHION FOR SHOE-HEELS. — LOUIS SCHWARZ, Jersey City, N. J. The purpose of the invention is to provide a cushion for shoe-heels which will be as effective as a rubber heel, but which will enable the lower lifts of the heel to come in contact with the ground. The cushion is so constructed that it rests between the sole and the top lift of the heel, or the main and insole.

HAT-SHADE.—WILLIAM A. HAYWOOD, Denver, Colo. The shade consists of a frame formed of two pairs of bars, the members of which pairs are pivotally connected between their ends. The pairs of bars are pivoted together at their inner adjacent ends. A side bar is located at the side of each pair and extends outwardly. A fabric covers the bars. The shade protects the wearer from the sun, and its construction is such that it can be readily folded when not in use.

CURRYCOMB.—SAMUEL B. FELTY, Penbrook, Pa. After a few minutes' work the ordinary currycomb becomes clogged with hair and dandruff, so that it must be cleaned at the expense of some time and labor. The present invention avoids this disadvantage by providing a single plate which has serrated edges and which is held on the handle so that it lies, when at work, at but a slight inclination to the surface to be cleaned. With such an instrument it is impossible to clog the teeth to any great extent; and the accumulations which do form can be readily dislodged by jarring the comb in the usual manner.

GARBAGE-HOLDING ATTACHMENT FOR SINKS.—CHARLEY E. COX, 4821 North Clark Street, Chicago, Ill. This sink-attachment is not only trapped against gases or odors from the main or sewer, but is also trapped at the top against gases and odors arising from the liquid held in the attachment itself. The construction is such that the several parts can be disassembled and easily cleaned.

Designs.

BELT.—LOUIS SANDERS, Brooklyn, New York city. The leading feature of this belt is to be found in upper and lower parallel bands and an independent plaited strap carried between the bands. A space intervenes the contiguous edges of the central and outer members.

PLOWSHARE-LAY.—WILLIAM GIBSON, JR., Wolseley, Assiniboia, N. W. T., Canada. The plowshare consists of a body portion having its opposite edges convergent and meeting at the lower end in an inclined curve. These opposite edges are longitudinally-curved inward and meet at the upper end with a reduced portion of the shank. By reason of this peculiar construction the lays can be kept in stock so that it is not necessary to go to a blacksmith to repair a plow.

SHOE-SOLE.—JOHN S. BUSKY, New York city. The leading feature of the design consists in lateral projections at the junction of sides of the shank with the heel. These projections extend out from the side planes of the heel.

BELT.—BERNHARD WILENTSHIK, Manhattan, New York city. The belt is composed of a band of single pieces resembling leaves.

PEN-HOLDER.—NELS JACOBSON, Rib Lake, Wis. The essential features of the design are to be found in an indentation in the top of the pen-holder, an indentation in the side and rearward of the first indentation, and an indentation at the side opposite the second indentation and lying slightly forward of the first indentation. These indentations fit the fingers so that the pen can be firmly grasped.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.