

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

LAWN MOWER.—S. L. BENSON, Chicago, Ill. The inventor claims as his object the provision of a mower having no parts liable to get out of order, and that will operate to cut grass quickly and evenly without clogging the blades. As it moves forward the cams cause a rapid and short reciprocation of the cutters in opposite directions, making short and powerful strokes. As the drive comes directly on the cutting-blades, loss of power or of motion is prevented.

PLOW AND CULTIVATOR.—J. D. KELLEY, Downing, Texas. This claim is on an improvement in plows and cultivators, and the invention relates particularly to the construction of sweeps, whereby more or less soil may be applied and which may be adjusted to manipulate the soil as desired and when desired to operate as a harrow. The sweeps being removable, the same set can be used on different plows and cultivators.

Electrical Improvements.

TELEPHONE SYSTEM.—T. PAUL, Yorkton, N. W. Territories, Canada. By the adoption of certain means Mr. Paul avoids several objectionable features of other systems that greatly impede the voice-currents. Ringing up is accomplished with great ease by the operator and telephone connections are rapidly made. This increases the number of subscribers that a single operator can handle. A great commercial advantage is derived by the use of simple and well-known instruments, which provides for a ready installation.

DESK FOR X-RAY APPARATUS OR THE LIKE.—H. R. SMITH, Altoona, Penn. The reference of this invention is to a desk suitable for housing electrical apparatus having currents of high potential—such, for instance, as Ruhmkorff coils, oscillators, etc.—and which is particularly suitable for instruments used in X-ray work, as well as wireless-telegraphic instruments, etc.

Engineering Improvements.

AUTOMATIC WATER-FEED REGULATOR FOR STEAM-BOILERS.—G. WEANT, Mannington, W. Va. The improvement is well adapted for the automatic control of the feed of water into a steam-boiler, so as to maintain the water at a desired height therein, the apparatus operating with equal efficiency when feed-water is supplied to the steam-generator either by gravity from an elevated tank or under pressure from a water-main, a feed-pump, inspirator, or injector.

Hardware.

FLOOR AND HARDWOOD SCRAPER.—J. R. PRICE, Fond du Lac, Wis. The purpose is to so construct the scraper that it will preserve the fingers from injury, and can be efficiently used in corners and upon moldings without removing the handle. Another purpose of the invention is to have the scraper drawn toward the operator instead of being pushed forward in operation. In this way the power is better applied and the handler works from the finished surface, thus preventing injury thereto and readily showing whether the work is even and perfect.

HINGE.—J. GAMACHE, Van Nest, N. Y. This form of hinge may be easily applied to the frame or casing and to the blind. It may be used on any kind of blinds—that is, on "flush" blinds, in connection with blind-stops, or it may be used on blinds not equipped with blind-stops and which are hinged on top of the casings outside of the stops. A leaf spring is secured in place by the same screws which fasten one leaf member. The other member is provided with means to securely hold the blind in its open position, and to so engage the spring that there is practically no strain on it in the closed position of the blind.

MINER'S TOOL.—A. V. DES MOINEAUX, Silverplume, Col. The particular purpose in this invention is to improve on the implement patented by Mr. Des Moineaux in 1902. The present tool is provided with a powder-lance which is adapted to be held firmly against slipping in its projected or retracted positions, whereby it combines in a compact and simple form the devices required in preparing a blasting charge.

CARPENTER'S PLANE.—J. W. KIRBY, Butte, Mont. This invention relates to carpenters' planes; and it consists, more specifically stated, of new and improved roller attachments involving novel details of construction, whereby frictional contact with the board being planed is materially reduced and thereby rendering less effort necessary to shove it with the bit cutting than is required where the whole under surface of the plane is in rubbing contact with the board.

NUT-WRENCH.—H. E. ANDREW, Endicott, Wash. This tool belongs to the class employed for turning nuts and bolts, etc., particularly of a kind embodying a ratchet-wheel and pawl as operative elements. The object is to adapt the device for use as a right-hand or a left-hand wrench, and affords means for a quick change in adjustment so that it may be used in either direction for screwing up or removing nuts from bolts or studs.

AWL.—J. P. BRADY, Brooklyn, N. Y. Mr. Brady in the present improvement provides a tool especially designed for the use of shoe-

makers, harness-makers, and other mechanics, and arranged to contain an awl, the awl when not in use being concealable in the handle of the tool. The device is simple and furnishes a workman with a knife and an awl which may be brought into use as desired.

Heating and Lighting Apparatus.

ACETYLENE-GAS GENERATOR.—C. W. METCALF, San Diego, Cal. This generator may be classified as belonging to machines for generating gas from calcium carbide, the object being to provide one of simple construction and operating automatically to feed the carbide. When a certain amount of gas shall have passed into the gasometer, means are provided for automatically shutting off the supply of calcium carbide. As the gas passes out of the gasometer to a certain extent a valve will be operated to admit a fresh supply of calcium carbide to the generator.

OIL-BURNER.—C. W. SIEVERT, Los Angeles, Cal. The principal purpose of this improvement is to adapt an oil-burner to domestic stoves, particularly cooking-stoves; and to this end the invention comprises certain novel features of construction fitting the burner to a fire-box of a cooking-stove or range.

Mechanical Devices.

SPEED-CHANGING AND CLUTCH MECHANISM FOR MOTOR-VEHICLES.—L. RENAULT, Paris, France. Comprised in this mechanism is the combination with a motor-shaft of a high-speed gear directly driven by the shaft, a low-speed gear consisting of a series of gear-wheels caused to engage by lateral shifting movements, and means including a single rack and a spur-pinion interposable between the gear-wheels and the speed-changing wheels for producing backward travel.

SASH-STILE PLOWING AND BORING MACHINE.—A. A. LOETSCHER, Dubuque, Iowa. This machine is adapted to plow and bore the stiles used in window-sashes to attach the cords to the sashes for hanging the weights thereto. Preferably it is placed alongside of a mortising machine, so that when taking the stiles away from the mortiser, the plowing and boring may be done at the same time without extra cost or help. No exertion is needed in pushing the stiles toward the cutters. This is done by feed mechanism.

REVERSIBLE WINCH-HEAD.—J. G. DELANEY, New York, N. Y. The invention in this case relates to an improvement in devices for connecting a reversible winch-head with a non-reversible rotating member of a hoisting engine or other apparatus, so that the winch-head may be reversed in direction. The device may also be employed to drive an ordinary drum.

MILL FOR GRINDING.—J. C. WEGERF, Rawreth Rectory, Battlesbridge, England. In this case the improvement relates to pan-and-roller mills of that kind wherein the grinding-rollers are set skewwise or with their axes non-radial to the axis of the pan and, as well as the pan, are positively driven, so as to thereby cause a tearing or disruptive action to be exerted on the particles to be ground in addition to the usual crushing action.

CONVEYOR.—J. B. PITCHFORD, Randfontein, Transvaal, South Africa. The improvement belongs to that class of devices that convey pulp, tailings, river-sand, or the like to a place of discharge. The object is to provide, in connection with an endless conveyor or belt moving at a comparatively high rate of speed, a pump for loading the belt at the same velocity as the belt is travelling, thus resulting in equalizing the load and causing a uniform discharge.

GATE.—J. GRANGER, Springer, New Mex. This improvement refers more particularly to farm-gates, and the object is to provide a structure wherein two gates are mounted upon roller-bearings to slide to and from each other; also a mechanism adapted for attachment to the supporting-frame of the gates, so connected with the gates that, without dismantling, persons may open them upon approaching and close them after passing through, these operations being made by a simple downward pull upon one or the other end of an actuating-lever, which sets in play a train of gearing connected with the lever and the hanging gate supports.

Railway Improvements.

CAR-COUPLING.—C. E. LUCAS, McComb, Miss. The primary object in view is the provision in this case of an improved construction by which the knuckle may be adjusted to an open position for engagement by an approaching draw-head without requiring the brakeman to pass between the cars. By these means the coupling may be done automatically, and the device can be uncoupled or it can be set for such automatic coupling without danger to the brakeman.

RAILWAY-TIE.—W. C. KIRKLAND, New Orleans, La. Certain novel improvements in railway cross-ties are provided in this invention. The ties are made of a combination of concrete, expanded or woven metallic rods, wooden or equivalent resilient blocks, cement, and hollow metal cases enclosing the cement. The tie possesses great strength, resists excessive pressure and strains, is unaffected by heat, cold or the elements, is easily and quickly repaired, and obviates the use of bolts and nuts for fastening the rail.

Vehicles and Their Accessories.

SLED-KNEE.—F. O. STARK, Deer River, Minn. The object claimed in this invention is

the provision of a knee which in duplicate affords a reliable connection for the cross-beam of a bob-sled or other sled or sleigh with the sled runners, so as to permit a slight rocking movement and vertical play of the beam, to facilitate the starting of a loaded sleigh, and, furthermore, to permit the play between the two bob-sleds and the vehicle body in running over road-bed undulations.

VEHICLE-WHEEL.—M. J. CLARK, Chaparral, Arizona Ter. The wheel in this invention is of that order which relates to vehicle-wheels having spring-spokes to give the desired resiliency to the wheels and the vehicle. The object is to provide a new and improved vehicle-wheel which is simple and durable in construction and arranged to insure easy and comfortable riding when traveling over rough roads.

VEHICLE-COUPLING.—D. A. DICKINSON, Quitman, Ga. The invention relates to an improvement in couplings for vehicles, and has for its object the provision of a coupling device for the front and rear running-gear of a vehicle, which is simple, consists of few parts, and is applicable to any ordinary vehicle, new or old, and one which requires no oiling of the parts.

Miscellaneous.

PURSE OR THE LIKE.—ANNIE IRONS, Attleboro, Mass. The invention provides a purse or the like made up of chains of both the soldered and unsoldered links. The chains are so arranged as to form a meshed chain fabric, made up in one direction by finished chains which are connected with each other at intervals by connecting-links.

FLY-SCREEN.—S. C. DANIEL, Gas City, Indiana. The object in view in this improvement is to furnish a screen that shall in addition to serving the usual purpose of excluding flies and other insects, also serve as a means of allowing egress of all kinds of insects that may be in a room. The screen and frame may be made any size or shape to fit any door or window.

MUSIC-SATCHEL.—R. E. TROGNITZ, San Diego, Cal. This invention has for its object the provision of a bag or satchel in which the papers or sheet-music may be placed or kept in a flat condition—that is, without rolling or folding them. It is furnished with flaps or portions which may be readily adjusted to permit sheets to be added or removed from the bag, yet retaining those therein snugly and tightly in position.

MARKING IMPLEMENT.—G. A. McALPINE, Newport News, Va. The aim of the inventor in this little device is to provide a novel marking implement for defining circles on plate metal to indicate where perforations are to be made in the metal, and thus enable the metal sheet to be accurately punched to receive rivets or for other purposes.

SYSTEM OF SHELVING.—J. HARRISON, Lincoln, Neb. The system of shelving devised by Mr. Harrison bears more particularly on the kind used for stores, cabinets, and furniture of various sorts. In operation, the transverse supports are put in position, and the shelving is mounted upon them directly. In adjusting the relative height of a shelf, use a thicker support or a plurality of supports nested together.

MECHANICAL TOY.—J. FLAHERTY, New York, N. Y. According to this invention the body of the toy is made to represent a snake and is formed of several joined sections, so that by independently moving them the toy may be given the sinuous appearance of a moving snake. A forked tongue represents fangs. This is moved rapidly back and forward as the snake moves, so as to give the impression of a snake advancing to strike. Clockwork or other motive devices are contained in the body to propel the toy.

FRUIT-JAR.—D. G. CARPENTER, Highview, N. Y. One object of Mr. Carpenter is to furnish a closure easily and securely closed in an air-tight manner, one capable of the important advantage of being easily and quickly opened by a very slight effort, thus overcoming one of the objections to existing styles of jars. Another object is to have the closure remain attached to the vessel and capable of swinging out of the way of the cover.

CARTRIDGE-CASE.—A. BARRALLON, St. Etienne, Loire, France. This device may be classified as relating to cases for containing the projectiles in cartridges for firearms of all kinds and calibers, including mitrailleuses and cannons of small caliber. The case is made of plastic material, of which the base is preferably celluloid, in combination with inert material, such as sienna, earth or other pulverulent material.

SIPHON-FILLING APPARATUS.—L. P. SETZLER, Kansas City, Mo. This device is adapted for filling siphon-bottles from tanks containing carbonated liquids, and drawing the liquids off into receptacles. The leading objects are, first, to dispose of the "sniff"—the liquid remaining in the spout after the bottle is filled—and, second, to enable excess gases to be exhausted from the siphon-bottle during the filling thereof.

BED-SLAT.—V. T. GRABS, King, N. C. In this case the invention has reference to a new and improved fastener for bed-slats, the object in view being to insure that the slat will be held with absolute security and yet to avoid so increasing the cost of the bed as to render the use of the improvement undesirable.

NON-REFILLABLE BOTTLE.—J. C. ROSENKRANZ, Brooklyn, N. Y. When the bottle is filled, a valve is placed in position therein and then the stopper is introduced and locked in the mouth portion of the neck and an auxiliary stopper is fitted in the opening of a glass stopper. When liquid is to be poured, the auxiliary stopper is removed, and as the mouth is turned downward the valve unseats and engages with the bottom of the glass stopper. The liquid from the bottle then passes through the slots in the stopper to its recessed portion and thence to the opening in the glass stopper.

WATERING APPARATUS.—J. R. GOODWIN and W. C. BROWNE, Savannah, Ga. In general effect this device is entirely automatic, the tank of the apparatus filling itself every day and turning on the water of the supply-pipe for a predetermined period, so that the water may be used elsewhere. The tank acts not only as a motor for automatically turning water on and off for some other part of the premises, but may act as a waterer for plants in its immediate vicinity.

METALLIC LATH.—V. MOESLEIN, New York, N. Y. This lath is produced from a blank in the form of a piece of sheet metal provided with spaced rows of slots. Each of the slots produced in the blank forms a pair of tongues arranged so that they are equally distributed over the sheet-metal lath, to support the plaster uniformly. In making the sheet-metal lath suitable cutters and dies are used and by these means the tongues do not interfere with each other when struck up by the dies.

TOY CAP-PISTOL.—W. J. TURNBULL, New Orleans, La. The purpose in this device is to provide a rapid-fire toy cap-pistol of effective construction, and further to provide a construction which can be operated as rapidly as the finger can be drawn back and forth and wherein the feed of the cap-tape will be positive and uninterruptedly responsive.

SCALE.—J. H. CARR, Dubuque, Iowa. Mr. Carr's improvement relates to scales for weighing small articles, such as letters, the scales being especially adapted for use in connection with a part or member of a bottle, package or container of any kind. The object is to supply an article which may be used advantageously on bottles, etc., such as on ink-bottles, the scales affording a convenient means for weighing letters and small articles.

GAME APPARATUS.—F. F. HONECK, Chicago, Ill. The intention of the designer is to provide a new and improved parlor-game apparatus, illustrative of the game of base-ball. The apparatus is provided with a game-board in the form of a shallow tray having a central compartment, representing a base-ball field. It also comprises two sets of contrasting pegs, and dice, with means for throwing the dice and scoring the play. The game can be played by two or more persons.

GAME-BOARD.—H. BUSCH and A. JAEGER, Brooklyn, N. Y. A new game is provided by this invention which is not only interesting, but also requires a considerable amount of skill in playing. The game is called the "Blue and Gray." A novel construction of board is used on which movable devices or men are employed, representing soldiers of opposing armies.

SUBMARINE BOAT.—H. H. MORRELL, New Suffolk, N. Y. The primary object of the invention is to provide certain useful improvements in submarine boats whereby a convenient means is afforded for the escape of the occupants in case the boat becomes disabled and incapable of rising to the surface, these means also permitting a diver or other person to leave the boat for investigation or other purposes.

OUTSIDE-SASH-SECURING DEVICE.—W. M. REELY, Missoula, Mont. In the present invention the object is to provide an efficient sash-fastener which will permit the sash to be readily put in place and secured from the inside, thereby dispensing with ladders on the outside of the building, and also avoiding marring of the window-frame with screws, hooks, or the like.

WATER-BOILER, SKIMMER, AND OIL-SEPARATOR.—W. H. JOHNSON, Waco, Texas. Mr. Johnson's invention is in the nature of a new and improved means for automatically skimming and separating oil and other impurities from steam condensations and for reboiling the impure waters, so as to separate the oil and other impurities therefrom, whereby to render the waters pure and clear, and especially adapted for making artificial ice.

PROCESS OF COOLING, DRYING, AND PURIFYING AIR.—W. L. MOORE, Washington, D. C. Prof. Moore in this invention provides a process for cooling, drying, and purifying the air in houses, railway-coaches, hospitals, hotels, and other places and for the keeping of meats, produce and the like. The process comprehends the steps of progressively cooling air by subjecting it first to the temperature of melting ice and then to the lower temperature of a freezing mixture, whereby the fall of the air by gravity is so energized as to stimulate its active movement without forcing apparatus, the air being progressively cooled and dried and made to flow with the acceleration due to such cooling.

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.