

RECENTLY PATENTED INVENTIONS.  
Electrical Devices.

**AUTOMATIC ALARM-TELEGRAPH.**—A. D. SHAW, New York, N. Y. The inventor's principal object is to provide an instrument so constructed that when it is set to sound an alarm whenever burglars break into a house supplied therewith the circuit connecting the instrument with the door or window or other opening will be kept open until the time of the entry of the burglar, thus obviating the waste of the battery by which the current which operates the instrument is furnished and preventing the instrument from becoming inoperative through exhaustion of the battery.

**ELECTRIC TEMPERATURE-ALARM.**—C. P. HEPLER, Smithton, Pa. The objects of this invention are to provide an alarm which will be adjustable, so that it may be set for any desired temperature, which will be entirely automatic in operation, and which will be useful to a large number of different kinds of manufacturers—for instance, distillers and brewers, bakers, confectioners, etc.

**THIRD RAIL.**—L. T. CRABTREE, Crandon, Wis. Mr. Crandon's invention has reference to third rails, his more particular object being to produce a third rail which is made in sections which are energized independently of each other, the only portion of the rail energized at a time being that immediately under the car.

**CONNECTION-BOX.**—E. R. LE MANQUAIS, New York, N. Y. The principal object of this invention, which relates to an outlet junction, cut-out, or connection-box for electrical wiring intended especially for buildings, is to form the box so that it may be constructed of parts which when kept continually on hand may be assembled two or more together to form a box of any size. This enables a contractor to quickly, cheaply, and conveniently assemble a box of the precise size necessary to the particular job on hand.

**AUTOMATIC ELECTRIC RAILWAY-SIGNAL.**—W. S. JACKSON, Hoboken, N. J. This invention refers to signals especially designed for use in connection with single-track trolley-railways whereon cars are adapted to travel in opposite directions on the same track, although the improved devices may by modification in the system be employed on double-track railroads and on other kinds of railways than trolley-roads. One purpose is to provide an improved form of semaphore-controlling mechanism by which a number of cars traveling in the same direction may be admitted to a "block" or section of the railway in order to meet unusual demands of traffic in one direction over the railway.

Of Interest to Farmers.

**TREE-PROTECTOR.**—J. A. PEROU, Los Angeles, Cal. The invention is especially applicable for use in growing eucalyptus-trees which are set out in great numbers for commercial purposes when very small and need protection against rabbits and other small animals until growth has attained the height of about two feet, after which the trees are seldom molested owing, probably, to increased bitterness of taste. When a plantation has reached this stage, the protectors can be taken away and used in other places.

**MOWER-BAR.**—O. R. COE, Windham, N. Y. The object in this case is to produce a mower-bar of simple form which is so constructed as to prevent injury to the knives. A special object has been to provide an arrangement which tends to reduce the force necessary to actuate the knives and also minimize the danger of clogging or choking the knife. The invention relates to mower or cutter-bars such as used in the construction of mowing-machines and harvesters.

Of General Interest.

**LACE-CARD.**—J. W. WOLFF, Ruralhall, N. C. Mr. Wolff's invention is an improvement in cards especially designed for application to lace already wound, although it may be employed in winding lace on the card. The improved card may be employed for holding ribbon, tape, and the like, and the clips used for fastening the ends of ribbons, tape, etc., as may be desired.

**SUPPORT.**—H. B. WENTWORTH, Middleboro, Mass. The invention relates to supports, and more particularly those adapted for use in connection with the horns of phonographs and the like. Its principal objects are to provide a simple and effective support which may be folded into compact form. When not in use the horn may be removed from the hook, the arms folded together until they are parallel to one another, and the head, standard, and base separated, the support then occupying but little space.

**WOVEN PILE FABRIC.**—H. SARAFIAN, Yonkers, N. Y. The object of the present invention is to provide a woven pile fabric in which the piles extend in one direction and a long pile can be used and at the same time an exceedingly-strong fabric can be readily produced on a loom of simple construction. The invention relates to woven pile fabrics such as shown and described in the Letters Patent of the United States formerly granted to Mr. Sarafian.

**APPARATUS FOR MAKING BISULFITE.**—G. A. STEBBINS, Watertown, N. Y. The bi-

sulfite liquor made by this apparatus is intended for use in conjunction with steam at high temperature for making wood-pulp and the like. The apparatus admits of general use, but is peculiarly applicable in instances where it is desired to pass the sulfurous gases through a basic solution so as to form the bisulfite liquor. The principal objects are to provide for cooling the gases and liquor during the process of its manufacture and to so distribute the gases as to expose a large surface thereof to the basic solution employed.

**SELF-ADJUSTING PUMP-PLUNGER.**—J. REID, New York, N. Y. The improvement relates to plungers having metal or fiber packing, and especially adapted for hot-water pumps in heating systems. One purpose is to so construct the plunger that it will always remain in the center of the water-cylinder of the pump, thereby providing a water-cushion between the outer periphery of the plunger and the inner surface of the cylinder, thus preventing any wear on the latter.

**APPARATUS FOR RAISING LIQUIDS FROM DEEP DRILLED WELLS.**—T. F. MORAN, DeYoung, and F. J. MOSER, Kane, Pa. This invention admits of general use, but is particularly adapted for service in deep drilled wells that have a small diameter and in which the liquid is comparatively shallow, frequently failing to afford necessary submergence to seal the air without forming the liquid into a column of sufficient height above the level of the liquid in the well, so that it can be raised "plunger-like" from the well to the surface of the earth by the rapid and violent action of the air at high pressure.

**DRAWING INSTRUMENT.**—J. HOFFMANN, New York, N. Y. In this instance the invention relates particularly to improvements in T-squares or right-line rules, an object being to provide a device of this character so constructed that it may be slid over a drawing without danger of blurring ink-lines that may not be dry, thus resulting in a saving of time in making drawings.

**VALVE.**—C. P. CARLIN, Chicago, Ill. Mr. Carlin's invention relates to improvements in pressure-actuated valves, the object being to provide a valve of this character having very few and simple parts not liable to get out of order and that may be made at a comparatively small cost. In case this valve is used with an upright pipe the spring may be omitted and the valve closed by gravity.

**GLASS-MOLD.**—J. F. BUZZY, Royersford, Pa. This mold is especially designed for molding glass insulators for wiring systems. Means are provided whereby a hole entirely through an article can be molded; also, means whereby another hole extending from the exterior surface of the article to the first hole can be efficiently formed. Also means for locking the mold parts together and for simultaneously unlocking the mold parts and withdrawing one of the cores are provided.

**ADJUSTABLE INDEXING-CLIP.**—C. C. SMITH, Exeter, Neb. In carrying out this improvement the object is to provide an article capable of being quickly attached to a leaf of a book or a card, the clip being so constructed that its biting edges shall tightly grasp the leaf in such manner that it cannot be accidentally dislodged or pulled therefrom and neighboring cards or leaves cannot accidentally slip under or catch thereon, yet said clip can be immediately removed from one sheet or card and placed upon another. Perhaps the most important use for the clips is in connection with books or card-files, where by their symbols, colors, shapes, or positions they designate different cards, leaves, or divisions, so that such may be immediately picked out or referred to without handling other cards, etc.

Heating and Lighting.

**HEATER.**—W. RICHTER, New York, N. Y. The improvement relates to stoves such as are used for heating purposes and employing gas, vapors, or other oil fuel; and its object is to provide a heater which is durable in construction and arranged to provide a large heating-surface in a comparatively small space and to produce a proper circulation of the air and thorough heating thereof.

Household Utilities.

**AWNING-LIFT.**—H. T. ADAMS, New York, N. Y. In this case the invention relates to awnings and admits of general use, but is peculiarly adapted for service in connection with awnings of the kind usually lifted at will by hand. The awning operates on the principle of a spring shade roller and is self-raising, the power of the hand being partially applied while the awning is being lowered. This enables a person to handle it with little exertion and lessens danger of an accident caused by the frame being dropped too suddenly into its lowest position. A comparatively heavy awning can be safely manipulated by a child.

**CLOSING DEVICE FOR WINDOWS.**—W. S. DOE, Jersey City, N. J. The object of this invention is to provide a new and improved device for automatically closing a window when it begins to rain. The device is very simple and durable in construction, is not liable to get out of order, and is always in proper position to immediately close the window when it begins to rain, so that the win-

dow is automatically closed. In combination with the window-closing device are means for controlling it, these means normally holding the device in an inactive position and being sensitive to hydroscopic changes for releasing the closing device.

**SINK-TRAP ATTACHMENT.**—A. SAVARD, Omaha, Neb. The aim of the inventor is to provide a simple kitchen-sink attachment whereby the solid matter can be flushed directly into the trap in opening a suitable lid and within which is held a receptacle adapted to catch the solid matter, which receptacle can be readily removed to be emptied at suitable times. By this means the sink may be always kept clean and sightly, and when desired to clean the sink a simple lid is raised to remove the garbage-collecting receptacle.

Machines and Mechanical Devices.

**INKING APPARATUS.**—F. E. KEMPF, Boston, Mass. The object of the present invention is to provide an inking apparatus arranged to insure an even and uniform distribution of the ink or color to permit of feeding more or less ink or color to the printing-cylinder for making a lighter or heavier impression. The present is a division of the application for Letters Patent of the United States for a multicolor printing press, formerly filed by Mr. Kempf.

**APPARATUS FOR RECOVERING MINERALS.**—F. S. PROUTY, San Francisco, Cal. One of the principal objects of the invention is to effect the recovery or separation of gold and other minerals from the detritus or mixtures of water and earthy matters containing the same without the employment of an amalgamating substance, as quicksilver, for that purpose and also to overcome numerous disadvantages and objections found to exist with other apparatus or means hitherto devised with like objects in view.

**VENDING-MACHINE.**—W. McC. MACK, West Buxton, Maine. The invention relates to improvements in coin-controlled machines for vending cigars or like articles; and the object is the provision of a machine having a simple means for preventing the operation of the machine by the insertion of a coin or other device other than the coin for which the machine is adapted, and, further, to so construct the device that only one cigar can be delivered at a time.

**PATTERN FOR CASTING GEAR-WHEELS.**—T. W. LOWE, Stockton, Cal. In this case the object of the invention is to provide a new and improved pattern for casting gear-wheels and gear-racks arranged to permit the formation of gear-wheel patterns of any desired diameter, shape of teeth, pitch, etc., to insure casting of properly-meshing gear-wheels in a very simple and economical manner and without the use of the expensive gear-wheel patterns now employed.

**MASSAGE APPARATUS.**—J. C. JOHANSEN, Osterbrogade 22, Copenhagen, Denmark. The present invention concerns a mechanical massage apparatus of special construction which makes it possible to use the apparatus for several different kinds of massage and which permits that the extent of the movement may easily be adjusted as required. When the invention is applied it is supposed to be affixed to an axle pliable when required, which rotates quickly, driven by a motor, a treading mechanism, or other power of transmission.

Prime Movers and Their Accessories.

**VALVE.**—J. J. DUNWOODY, New York, N. Y. This invention relates to valves, and more especially to valves designed, primarily, for use on steam-pipes, but adapted for use in conduits for any fluid which does not have corrosive action upon the cylinders of the valve. One object is to provide a valve which is so constructed that the gland or stuffing-box ordinarily employed around the valve-stem to prevent escape of steam or other fluid between the valve-stem and casing may be dispensed with without allowing any escape of steam around the stem. A gate seat may be applied for use in large power houses to prevent blowing out of the packing.

**LOW-WATER AND CIRCULATION ALARM FOR GASOLINE-ENGINES.**—J. SCHOPBACH, New York, N. Y. One purpose of the invention is to provide an electric alarm adapted for use in connection with the water-jacket of the cylinders of gasoline and like engines, which alarm will automatically act when the water in the tank is low and when circulation is impeded. Another is to provide a construction of alarm device for the purpose described which will be exceedingly simple and quick and positive in its action, economic and readily applied.

**TRACK-SANDER.**—A. B. POTTS, Chattanooga, Tenn. The object in this instance is to provide a sander arranged to permit of being readily changed from a pneumatic track-sander to a gravity track-sander to prevent clogging of sand in the passage from the sand-box to the track to give access to the interior of the sand-trap for conveniently cleaning the trap and removing obstructions.

**WATER-GAGE.**—J. O'CONNOR, New Orleans, La. The aim of the inventor is the provision of a gage for steam-boilers and the like which is not liable to break as ordinary glass gages,

and arranged to accurately show to the observing engineer the level of water in the boiler at all times irrespective whether the water is clear or contaminated with oil, sediment, and the like and liable to incrust or cover the inside of an ordinary glass tube and render reading of the glass gage difficult.

Railways and Their Accessories.

**DEVICE FOR OPERATING CAR-BRAKES.**—W. K. SMITH, Werris Creek, New South Wales, Australia. In this patent the invention relates to an appliance by means of which the air-brakes of a railway train can be independently applied by a signalman or other person. The essential feature of the improvement is an adjustable block which can be secured to the insides of the rails or to a sleeper, so arranged that it can be made to come into operative contact with a tap especially provided on an extension of the pipe of the engine air-brake.

**BRAKE.**—A. E. PETERS and E. E. GRAHAM, Cleveland, Ohio. The invention resides especially in the structure and organization of the gear for connecting the braking-drum with the axle or other mobile part of the car and also in the peculiar manner of connecting the motor-car with a trailer or trailers, so as to apply the brake simultaneously to all of the cars. It particularly relates to a brake adapted for railway-cars and employing as its operating power the momentum of the car.

**VESTIBULE-CAR.**—J. A. D'HEMECOURT, New Orleans, La. This invention relates to vestibules of cars, and more particularly to those which extend the full width of the car and have the space between the platform and outer door closed by a trap. In such a structure the ordinary practice is to operate this trap from the inside before opening and after closing the door, the preparation for egress and ingress requiring two distinct operations. The principal object is to furnish means for simultaneously operating the door and trap.

**COMBINED RAILWAY-CAR TRUCK AND FRAME.**—W. H. DIDLAK, Chrystalsprings, Miss. Mr. Didlake's intention in this improvement is to secure a greater degree of safety as regards the separation of the car-body from the trucks to give the car a steadier motion and more elasticity of springs, to secure an easier adjustment of the wheels to the truck in turning curves, to lighten the construction of the car, and to secure other advantages.

Pertaining to Vehicles.

**LOCK-SHOE.**—W. C. LARISON, Blossburg, Pa. The shoe is placed beneath the wheel and the chain attached to some portion of the vehicle, the side walls of a plate retaining it against movement laterally of the wheel. If the latter tends to slip or skid upon ice or inclined surfaces engaging projections will grip and tend to prevent this, their rounded form avoiding undue positive checking in vehicle's advance. If the wheel runs in the shoe, slipping under this action is avoided by the bringing of the rib teeth into contact with the supporting-surface, their sharp edges at once stopping this movement. Worn projections may be readily renewed, and fresh ones secured in place which renders other portions of the shoe practically indestructible.

**UNICYCLE.**—O. JENSEN, New York, N. Y. The invention relates to unicycles, and more particularly to those which are power-driven. It has for its principal objects the provision of a convenient and readily-controlled vehicle of this character. The tractive effect is secured by the forward movement of the weight of motor and rider within the wheel and there can be no slipping of the latter upon the ground. Therefore the machine operates successfully over any surface—such as ice, for example—and will climb grades, its capacity being only limited by the power of the motor. The main wheel's great diameter renders it useful over rough country, ordinary obstacles presenting but slight obstruction.

**TOY.**—W. C. SOULE, Savannah, N. Y. In this patent the invention refers to wheel toys; and the inventor's object in view is the provision of a toy of this character which shall be novel in construction and have power means which, when wound, will operate to propel the toy in one direction and automatically react, propelling it in the opposite direction.

**DRAFT ATTACHMENT FOR VEHICLES.**—G. H. KLUGEL, Thelmas, Minn. This invention relates to an attachment, which may be applied to any kind of a vehicle but is especially adapted to two-horse wagons and the like. The principal object is to provide means for preventing the jar and swinging of the tongue which occurs when one of the wheels meets an obstruction or is raised for any reason. An important feature is the provision of means for permitting the front axle to be swung upon its pivot and also to be swung vertically without bringing most of the strain upon one of the draft animals and also for equalizing the strain upon the animals when one tends to take a larger part of the load.

**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.