

### RECENTLY PATENTED INVENTIONS. Electrical Devices.

**BURGLAR-ALARM RELAY-DROP.**—D. D. FRIEDMAN, New York, N. Y. This invention relates to certain improvements in relay drops especially useful in burglar alarm systems and relates more particularly to a new and improved means whereby the armature of an electro-magnet may be locked in position upon the breaking or closing of the circuit.

**TROLLEY-POLE CATCHER.**—J. H. WALKER, Lexington, Ky. In this case the invention is an improvement in trolley pole catchers, and particularly in that class of such devices illustrated by Mr. Walker's former patent, and the present invention relates to certain improvements in the track rail and in the carrier operating thereon. In operation, many advantages are secured in manipulating the trolley pole.

### Of Interest to Farmers.

**COTTON-CULTIVATOR.**—R. H. PURNELL, Rosedale, Miss. This cotton cultivator is of simple and inexpensive construction and the cultivator devices proper are adapted for reversal on a beam so that the implement may be used for scraping the sides of a cotton row or for ridging the same by throwing dirt toward the plants, as conditions may require.

**POULTRY-FOUNTAIN.**—C. F. GILL, La Harpe, Ill. The purpose in this improvement is to provide a drinking fountain for poultry comprising a tank, a tray and means for holding the tank fast to the tray, yet admitting of a ready separation of said parts, the attaching means also serving as a handle whereby to facilitate the ready removal of the device from place to place.

### Of General Interest.

**TUBULAR WELL-PLUNGER.**—E. R. LOCKWOOD, Pratt, Kan. The invention refers particularly to improvements in a device for holding the plunger valve open to permit water to pass through the plunger when it is withdrawn from the well tube, the object being to provide a device for this purpose that will be simple in construction and that will positively hold the valve open.

**PUNCH.**—S. BOISSEAU, Richmond, Va. The object of the inventor is to provide a construction whereby to simplify the work of those using punches, especially railway ticket agents, by combining in one instrument a series of punches so that the ticket agent may make the several punches in a ticket without putting one punch down and taking another up, and also provide guides to aid lining up the tickets so they may be punched severally at the correct points.

**ANIMAL-POKE.**—A. WILLIMAN, Washington, Mass. The design of the improvements in this poke or collar is to prevent an animal from passing its head through a wire fence or the like with the intent of passing bodily through the fence. Under ordinary conditions it will not injure the animal, but will slightly penetrate the animal's shoulders should it attempt to break through a fence.

**GOODS-HANDLER.**—E. E. WELCH, Springdale, Ark. In this instance the invention pertains to goods handlers for lifting boxes from shelves located above hand-reach, and has for its object a peculiar, novel and improved device of the character stated, which in addition to its general novelty, shall be inexpensive to manufacture.

**CONVEYER SYSTEM.**—J. H. SHAY, Wallace, La. The various objects of the inventor are attained by providing the double block with a peculiarly arranged idler sheave which is located between the two sheaves of the block and separates the skidding and outhaul lines. He also provides a swivel connection between the two lines and interposes swivels into sections of the lines in certain positions so as to prevent disadvantage from the twisting or turning of the lines.

**REINFORCED CONCRETE ARCH.**—H. M. RUSSELL, Jr., Wheeling, W. Va. The object in this case is to provide a concrete arch reinforced by steel or other material, and arranged to reduce the thickness of the arch to a minimum and still contain wholly within the concrete body the straight reinforcing metallic members, located in such a manner as to take up tensile stresses in the most efficient manner.

**SEA-ANCHOR.**—F. ROUTE, Honolulu, Hawaii. The invention refers primarily to a sea anchor or drag, fitted with a peculiarly arranged oil reservoir by means of which not only may the vessel's head be kept to the wind while lying to, but oil distributed to windward of the vessel, thus breaking the seas and enabling the vessel to ride out a gale with comparative ease.

**AERIAL VESSEL.**—T. ORGREN, San Diego, Cal. The purpose in this invention is to provide an aerial vessel of light construction, in which folding aeroplanes are employed in conjunction with a gas-containing cylinder, and further to provide a gas reservoir having valved connection with the cylinder, which reservoir when the valve is open automatically maintains a uniform and constant pressure of gas in the cylinder.

**PAPER-FILE.**—C. F. McBE, Athens, Ohio. In the present patent the invention is an improvement in interchangeable and permanent files for holding papers, and is especially designed for filing railroad tariffs and expense

bill receipts, but which may be used for any other desired purpose. Its index sheets may be employed to great advantage in filing the above-named tariffs and receipts.

**NON-REFILLABLE BOTTLE.**—H. O. McCURR, Baltimore, Md. The bottle has a new form of valve closure or stopper which permits the overflow of the liquid contents, but effectually prevents inflow of liquids. The stopper is so constructed and secured in the bottle neck that it cannot be removed therefrom, while the valves are so protected that it is impossible to reach them with an inserted tool or instrument.

**ERASER FOR TYPE-WRITERS.**—E. C. McFADDEN, Short Hills, N. J. This eraser is designed to render writing invisible as produced by the machine, without the need of rubbing it from the paper, as is the usual practice, but effecting the erasing by reproducing coincident therewith the characters desired to be erased and in an ink of the same color as the background of the paper or other material on which the characters appear.

**ORE-MILL.**—J. JOHNSON, Mesa, Ariz. Ter. This mill is intended and adapted for crushing, grinding, and thus pulverizing ore and other substances, and belongs to the class distinguished by a toothed, or armed, cylinder or shaft, rotating in fixed bearings, and a greatly enlarged drum, or cylinder, inclosing such cylinder or shaft, and revolving around it by the impact or friction of the two.

**DISPLAY-SHELVING.**—R. T. JOYCE, Mount Airy, N. C. The invention pertains to improvements in shelving used more especially in hardware stores wherein the shelving is arranged in the form of compartments to hold the various articles of hardware, and has for its object to provide an attachment for displaying samples of the articles contained in each compartment and also for indicating the condition, or rather quantity of stock on hand.

**LABEL-PASTER.**—G. N. BYL and J. KOEHLER, Jersey City, N. J. The purpose of the improvement is to provide an economic device for applying labels in quantities to an adhesive surface and so distribute the labels on the surface that while the labels lie close to each other, one will be independent of the other, and to accomplish the work systematically and with dispatch.

**MARKER.**—C. BECKMANN, New York, N. Y. This invention has reference to a marker or marking device adapted to be used by tailors or artisans for marking or laying out work. The object of the improvement is to produce a device which is simple in construction and which may be operated readily to produce a clear and well defined mark.

**WEIGHING-SCOOP.**—F. C. HOWE, El Paso, Texas. This scoop is for use in stores or similar places in selling products such as flour, sugar, etc. The weighing mechanism in connection with the scoop accurately indicates the weight. The handle is provided with a light which may be lit at will, so as to enable one using the scoop to illuminate the surroundings, in dark closets or under similar conditions.

### Hardware.

**PERMUTATION-PADLOCK.**—M. J. O'LEARY, Chickasha, Ind. Ter. The invention relates to improvements in permutation padlocks and has for its object to produce a padlock of the type set forth, which shall be simple, efficient, and one which can be readily operated and the combinations (of which a great number may be used) changed at will in a simple manner without dismembering the component parts.

**STAY-BOLT CUTTER.**—E. T. STRONG, Urbana, Ill. The improvement refers to boiler-maker's implements, and its object is to provide a cutter arranged to permit of conveniently and quickly cutting the stay bolt inside of the sheet, to facilitate removal of a worn-out fire-box of a locomotive or other boiler, and without first requiring the removal of the back sheet of the boiler.

**CLAMP FOR BASIN-COCKS.**—T. L. CECIL, Coldwater, Mich. The invention is an improvement in clamps for basin cocks or faucets and has for an object, among others, to provide an efficient and simple locking means to positively prevent the cock from becoming detached from the basin, yet to allow the ready removal of the cock, without difficulty.

### Heating and Lighting.

**AUTOMATIC SAFETY-BURNER.**—N. WISE, New York, N. Y. The object of the inventor is to produce a gas burner adapted to be used for illuminating or heating purposes, and which is constructed in such a way that, if the flame becomes extinguished by accident without the gas having been turned off, the burner will automatically shut off the flow of gas.

### Household Utilities.

**PAN-SUPPORT.**—R. P. COOK, Hastings, Mich. Generally stated, the invention consists of clamping jaws with suitable operating handles adapted to be applied to the pan handle and adjusted thereon, to bring a base plate carried by them in the same plane with the bottom of the pan, thereby forming a support from the handle slightly spaced from the pan, making it impossible to accidentally turn the pan over.

**BED-BOTTOM.**—G. BEZANGER, Boston, Mass. The object of this invention is to provide a device which may be applied to beds or couches

of the common type without change or alteration in the same, and which affords means for raising or elevating the mattress at different points and in different degrees. It is especially useful in connection with beds and the like, intended for use of invalids or those having physical disabilities.

### Machines and Mechanical Devices.

**CHANGEABLE DRIVE-GEAR.**—J. WIECHMANN, Albany, N. Y. The invention relates to the transmission of power, and its object is to provide a drive gear, arranged to insure an easy yet powerful transmission of power from one shaft to another, and to allow convenient and quick change of speed and reversal of the motion without danger and shock to the connected parts.

**DITCHING-MACHINE.**—W. UMSTEAD, Jerseytown, Pa. The purpose in this case is to improve upon the ditching machine for which Letters Patent were formerly granted to Mr. Umstead, whereby the point of the plow is given downward curve at its working end, rendering it more effective in service, and ground entrance more gradual, and further making the point detachable and providing a long flat surface for the working face of the plow at the point, and imparting a twist to the plow where the point joins the mold-board section in order to start the ground to the section to be moved along by the cleaning wing at the surface of the ditch.

**TYPE-WRITING MACHINE.**—R. REIN, Sebastianstrasse 14, Berlin, Germany. In accordance with this invention several defects are obviated. To this end the device for releasing the locking pawl is positively connected with the operating lever in a certain manner. The arrangement is such that the disengagement of the pawl is effected by means of a special manipulation of the lever carrying the operating pawl, for example in such a manner that this lever is displaced from its position of repose in the direction opposite to that in which it is moved for line spacing. By this arrangement many advantages of great importance in the use of the machine are obtained.

**CARPET-BEATER.**—O. O'HALLORAN, New York, N. Y. This portable beater is especially adapted to be operated by hand. One of the purposes of the inventor is to so construct the device that in operation beater arms of opposing series will be automatically and intermittently raised and permitted to drop under spring control, thus whipping a carpet in the same manner as practised by hand.

**SOAP CUTTING AND PRESSING MACHINE.**—H. W. McEWEN, Chicago, Ill. The invention comprises an improved machine for cutting long bars of soap into short sections and pressing each of said sections into a regular sized cake. The object is to produce a device which is automatic in its operation and which carries on all the necessary steps in their regular sequence without the aid of or attention of a skilled operator.

### Prime Movers and Their Accessories.

**VALVE-GEAR.**—H. LENTZ, 123 Kurfürstendamm, Halensee, near Berlin, Germany. The object of the inventor is to provide means for obtaining an additional opening of the exhaust valve during the period of compression when starting the motor. The means for diminishing the counter-pressure consist in a movable boss arranged in the reciprocating distributor containing the valve, which boss rocks with the distributor, being pressed toward the interior of the distributor by the spring and caused to project by the displacement of an axial wedge or an equivalent part, in order to act upon the exhaust member.

**ROTARY ENGINE.**—F. R. BUSSARD, Hays, Kan. In the present patent the invention has reference to improvements in rotary engines, the object being the provision of a rotary engine of simple construction, and that may be operated by an economical amount of steam used expansively, or by direct pressure from the boiler.

### Railways and Their Accessories.

**SWITCH.**—W. J. McKEWEN, Philadelphia, Pa. In carrying out the present invention which has reference to switches designed to be used in connection with motor cars, the inventor has for his object in view the provision of means adapted to hold a switch point locked firmly in position when adjusted.

### Pertaining to Recreation.

**AMUSEMENT DEVICE.**—W. T. WATSON, Vancouver, British Columbia, Canada. The object of the invention is to provide means whereby the car-carrying wheel moves around in a circle with the supporting platform, but whereby the wheel is caused to continuously rotate in opposite direction. This produces an unusual motion. The invention relates to improvements over the device disclosed and claimed in a former application by Mr. Watson. This inventor has secured a patent on another amusement device, its object being to increase the movement imparted to the cars making the movements diverse and confusing, thus increasing the interest of passengers. This end he attains by causing the wheel or wheels not only to revolve on their own axes, but to move bodily in a circle or other fixed path.

**FIGURE TOY.**—A. R. REIHNG, Toledo, O. The invention is an improvement particularly

in toy fowls or birds, and the object is to provide a construction in connection with a toy representation of a hen and a spring for causing the same to rise from its nest, of means for restraining the action of the spring, and egg delivery devices operated from said restraining means.

### Pertaining to Vehicles.

**SPRING-WHEEL.**—W. O. TUBBS, Lubbock, Texas. The invention pertains to improvements in wheels for vehicles, its object being to reduce jar and produce a wheel which shall be cheap and efficient. Pneumatic tires generally used on vehicles, such as automobiles, are costly and extremely liable to puncture and other damage, to repair which involves considerable time and expense. The improvements of Mr. Tubbs overcome the above objections.

**MANUFACTURE AND APPLICATION OF RUBBER TIRES TO WHEEL-RIMS.**—I. W. GILES, New Bedford, and C. W. TOBEY, Fairhaven, Mass. In this case the invention has reference to the manufacture and application of rubber tires to wheel-rims, the object of the improvement being to provide a method whereby rubber tires may be quickly and securely attached to wheel-rims without the use of the tools commonly used for that purpose.

**RUBBER-TIRE FASTENER.**—I. W. GILES, New Bedford, and C. W. TOBEY, Fairhaven, Mass. These patentees employ circular rods embracing the rubber tire at the metallic tire. At intervals the rods pass through eyes formed on the ends of a turn buckle device extending crosswise of the tire and which may be adjusted by a wrench to tighten or loosen the clamp rods.

**EXTENSIBLE WAGON.**—E. RIEDINGER, New York, N. Y. In the patent of Mr. Riedinger the invention has reference to wagons, and the object of the improvement is the provision of a construction for the body which will enable the same to be extended when desired and locked to the extended position.

**BICYCLE.**—H. GARZA, Monterey, Nuevo Leon, Mexico. An auxiliary propelling mechanism is actuated by the swinging of the outer section of the handle-bar, it being evident that when the section is swung forwardly the gear wheel will be rotated and when the section is swung rearwardly the pawl will slip idly over the ratchet teeth. Rotation of horizontal gear wheel is imparted through a gear wheel to the sprocket wheel and by a chain and other sprocket wheel to the rear wheel.

**LINING FOR PNEUMATIC TIRES AND OTHER PNEUMATIC ARTICLES.**—F. PETMECKY, Austin, Texas. In the present patent the object of the invention is the provision of a new and improved lining for pneumatic tires and other pneumatic rubber articles, and arranged to immediately, efficiently, permanently and quickly heal or close a rupture in the article.

**WAGON-GEAR.**—W. A. MURRAY, Sanford, Fla. The object of the invention is to provide a wagon gear combining maximum strength and lightness and durability with adaptability for economy in manufacture. Draft and other strains are applied to the axle at various points throughout its length, so that a smaller and lighter axle may be employed than is usual in this class of wagon gear.

**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.



### HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(10524) C. F. G. asks: Will you kindly give in your Notes and Queries column a process for preserving botanical specimens unchanged in color and form? A. There is no liquid which will preserve all botanical specimens unchanged in color and form. Fungi cannot be preserved without loss of color by any means, whatever. A weak solution of formalin, say one or two per cent, will act as well as any.

(10525) J. B. writes: Referring to the solution of a problem in SCIENTIFIC AMERICAN, March 16, 1907, page 239, number of answer 10439, P. A. O., I would say that I cannot understand why you make such an elaborate statement to show the best mathemati-