

RECENTLY PATENTED INVENTIONS.

Electrical Apparatus.

POTENTIAL-REGULATOR.—R. A. PHILIP, Seattle, Wash. In a constant-potential circuit for the distribution of electricity it is necessary to keep the average potential of the different mains as nearly constant as possible. The customary way of doing this is to select some particular point which is assumed to be a fair representative of the average condition of the circuit and from this point to run pilot-wires back to an indicating device at the station. In this invention, however, a group of pilot wires are used in such a way that instead of presenting the potential at some particular point the voltage indicated is proportionate to the average at several points of the system. This minimizes the liability of the general potential being injuriously affected by local disturbances.

TELEPHONE-CIRCUIT.—G. E. GOODHEAD, Winchester, Ill. The circuit is so arranged as to practically prevent a party at an intermediate station from hearing the conversation between parties at other instruments. By a simple arrangement the released receiver-hook automatically changes the circuit, cutting out the instrument on the line in a direction opposite to central and forming the circuit from the ground through the telephone box to the central.

COLLECTION-RECORDING MECHANISM.—G. F. DE GROOT and I. L. THOMPSON, Morristown, N. J. The device provides for recording at a post-office the collection of mail matter from the street boxes. The mechanism is electrically controlled and operates upon the opening of a letter-box to record on a strip of paper the number of the collector, the number of the box, and the date and hour of collection. Provision is made for locking and releasing the letter-box door at stated intervals.

Engineering Improvements.

SPARKING PLUG.—C. A. MEZGER, Brooklyn, N. Y. This sparking plug is so arranged as to prevent sooty formations within the cylinder of an internal combustion engine from accumulating around the sparking points in such manner as to short-circuit the igniter. The parts are so arranged that the current would have to make a long path through the soot in order to effect a short circuit, which, owing to the poor conducting qualities of the soot, would be practically impossible.

Machines and Mechanical Devices.

CIGARETTE-MACHINE.—J. C. HANSEN-ELLEHAMMER, Istedgade 99, Copenhagen, Denmark. This invention affords a new device for filling the cigarette tubes in a cigarette-machine with tobacco. The filling is effected by screwing into the cylinder a thin, screw-shaped wire, then by means of this wire introducing the tobacco-cylinder into the paper tube, and finally unscrewing said wire from the completed cigarette. The movement of the device is capable of such adjustment that the wire may be introduced even in finely cut tobacco without in any way damaging the tobacco-cylinder.

BURGLAR-ALARM FOR SAFES.—I. J. EMORY, Waverly, Ohio. Means are provided for automatically sounding an alarm when any unauthorized person approaches the safe with the object of surreptitiously opening the same. A protected passageway to the door of the safe is provided, also means for holding the devices inoperative during business hours, or when the alarm-actuating mechanism is to be set in condition for service.

XYLOPHONE-PLAYER.—F. R. GOOLMAN, Binghamton, N. Y. The purpose of the invention is to provide a mechanism for playing on xylophones which may be relied upon to perform the functions for which it is intended. In order to play a xylophone properly it is necessary to strike the bars of the instrument one stroke for short notes, and a succession of strokes for sustained notes. This mechanism is so constructed that such results will be invariably obtained when required.

TOOL-HOLDER.—C. F. PRESTON, Chicago, Ill. This tool-holder is especially designed for use in lathes, planers, and other metal-working machines. It is arranged to adjustably hold a cutting tool with an even bearing on the top and bottom to prevent undue vibration and render the tool as solid as an ordinary forged-steel tool. The tool is held without the use of set screws or other objectionable projections.

Railway Contrivances.

PROCESS OF RECONSTRUCTING RAILROAD-RAILS.—V. T. LYNCH, Chicago, Ill. This invention enables the ordinary flanged rail to be cheaply transformed into a grooved rail without taking it up from the tracks. The edge of the flange is first swaged or upset, and metal is then run into a mold which extends along the flange of the rail and into which the flange projects, so that when the mold is removed the rail is left with a second tread running alongside the ball of the rail and forming a groove therein.

Vehicles and Their Accessories.

VEHICLE-BODY.—J. E. and C. B. Brown, Bradford, Pa. The invention provides an improved construction for a vehicle-body which

is adapted to greatly strengthen the body where the parts are secured together, and also dispenses with the use of screws and short plugs usually employed for the attachment of parts of the body, which frequently become loose or produce defacement of the finished exterior of the body.

WAGON-BODY.—J. W. FINCH, Leland, Miss. The invention relates to improvements in separable wagon bodies. The body consists of two parts which can be readily and with ease taken apart by one person, leaving the bottom resting on a running gear; thus adapting the vehicle to purposes where a box-like body could not be used to the same advantage.

DUMPING VEHICLE.—H. F. SHEPARD, Brooklyn, N. Y. Mr. Shepard has invented a dumping-wagon which is provided with an inclined bed-frame down which, when released, the body will slide by gravity to dumping position. A simple means is provided for releasing the tail-board from the body while dumping.

HORSE-HOPPLE.—M. KLEIN, Denver, Colo. This device, which is of simple construction, is designed to be carried by a horse and forms an effective means by which a horse may be instantly stopped or checked should he attempt to run away when used in harness or under saddle. The hopple may also be used as a hitching device so as to hitch a horse without the use of a hitching-post or weights.

Miscellaneous Inventions.

SLEEVE-HOLDER.—H. G. CARPENTER, Westbend, Iowa. The sleeve-holder is in the form of a spring-band or clasp for preventing sleeves of shirts, coats, or other light garments from slipping on the arm of the wearer. The edges of the band are provided with a series of notches which catch and hold the shirt more securely than would be practicable with a band having smooth edges.

COVER FOR TUMBLERS OR OTHER VESSELS.—F. L. JOHNSON, Richmond, Va. The object of this invention is to provide a simple and effective cover for cups, goblets, tumblers, etc., which will effectually cover the same, and prevent ingress of air, odors, dust, germs, insects, etc., and which at the same time serves the purpose of a spoon-holder.

ARMOR.—J. J. PINDAK, Chicago, Ill. Mr. Pindak has invented an improved armor for the sides of war vessels, turrets, and other devices to be protected against projectiles. The armor is of such construction as to be readily applied or removed and is so arranged as to break the force of the projectile and distribute the impact over a large area.

STIRRUP.—W. H. AUGHEY and W. CLIFTON, Billings, Mont. The stirrup permits a quick and convenient change adjustment whereby it may be raised or lowered to suit different riders and also be readily adjusted to throw the weight imposed upon it either upon the ankles of the rider or away from them.

BASKET HANDLE.—M. TUCKER, Brocton, N. Y. The invention relates to a handle for baskets, particularly those used for grapes and like food, which not only serves as a means for carrying the basket, but also as a clamp for holding the top in place.

NON-REFILLABLE BOTTLE.—J. ZANGEL, Battlecreek, Mich. The neck of the bottle is provided with a casing having a valve. A spring normally holds the valve closed, and a weighted ball having flexible connection with the valve is employed to open the same on tilting the bottle.

RUBBER BOOT OR SHOE.—J. L. PERRY, Auburn, R. I. The heel portion is strengthened or re-enforced to such an extent as to prevent the bending down, and doubling up, and the consequent breaking of the heel back, as so frequently happens with rubber boots and shoes now made.

TOY OR GAME APPARATUS.—C. H. BXTON, Neenah, Wis. The device not only affords amusement but also provides practice in digital dexterity. It involves two round rods, hinged together and so arranged that upon certain manipulation the ball may be caused to roll up the rods when inclined.

RECOIL PAD FOR GUNS.—J. R. WINTERS, Clinton, Mo. The invention is an improvement in recoil pads for guns, and has for an object to simplify such constructions, to avoid any substantial length of the stock, and to provide a novel arrangement of the filling tube by which the pneumatic pad is filled, as well as to provide a cover for the pad.

DISPLAY DEVICE.—J. K. ONEY, Huntington, W. Va. Mr. Oney affords an improvement in display devices, being in the nature of a simple construction which can be readily applied to a window or door frame to support an arm or bar for carrying a sign or other indicating means for advertising or like purposes.

TOBACCO-PIPE.—A. K. BOWMAN, Pittsburg, Pa. The pipe is provided with a woven tube through which the smoke passes and which will divide up the smoke into fine particles to collect from it the suspended poisonous substances; this will also cool the smoke. Any liquid that accumulates in the stem or mouthpiece will be absorbed by pads provided for that purpose.

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PATENT FOR SALE.—Setting instrument patented March 18, 1902. Every machinist needs one. Used for different purposes. Send for circular. Morris Chamberlain, Bartley, N. J.

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Inquiry No. 2751.—For manufacturers of portable lamps burning kerosene.

Inquiry No. 2752.—For makers of broom machinery.

Inquiry No. 2753.—For manufacturers of marine pipe boilers for launches.

INDEX OF INVENTIONS.

For which Letters Patent of the United States were Issued for the Week Ending June 3, 1902, AND EACH BEARING THAT DATE. [See note at end of list about copies of these patents.]

Table listing various inventions and their patent numbers, including items like acids, air brake apparatus, bicycle driving mechanism, and many others.

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"Pretzinger's Catarrh Balm," for catarrh remedy, R. Pretzinger & Bro.	513
"Schmidt Bros. Co., Chicago," for paints and hardware, Schmidt Bros. Co.	515

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1893, will be furnished from this office for 10 cents, provided the name and number of the patent desired and the date be given. Address Munn & Co., 361 Broadway, New York.

Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list. For terms and further particulars address Munn & Co., 361 Broadway, New York.

NEW BOOKS.

VELOCITY DIAGRAMS. THEIR CONSTRUCTION AND THEIR USES. By Charles William MacCord, A.M., Sc.D. New York: John Wiley & Sons. London: Chapman & Hall, Ltd. 1901. 8vo. Pp. iii-116. Price \$1.50.

In effect this treatise is an abstract of a series of lectures forming a part of the course of instruction at the Stevens Institute of Technology, and explains the principles of the common and convenient graphic processes of determining the direction and velocity of the motion of a point, whether that motion be constant or variable. The book is intended for those who may wish to study the subject without an instructor, as well as for classroom use. The figures, eighty-three in number, are very clear and the description of the processes lucid, rendering the work valuable for self-instruction.

ELECTRIC POWER TRANSMISSION. A PRACTICAL TREATISE FOR PRACTICAL MEN. By Louis Bell, Ph.D. New York: Electrical World and Engineer. 1901. 8vo. Pp. 632.

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