# Scientific American.

## OCTOBER 6, 1900.

#### RECENTLY PATENTED INVENTIONS. Electrical Apparatus.

TROLLEY.-WILLIAM A. DAGGETT, Vineland, N. J. The object of the invention is to provide a trolley which will have a yielding connection with the wire, whereby the usual pounding or jumping is avoided, thereby pre venting the disconnection of the trolley and the conse quent cutting out of the lights and power. To attain this end the inventor employs a spring-yielding connection between the frame in which the trolley rotates and the trolley-pole.

CIRCUIT-CONTROLLER.-CHARLES C. WEBSTER. Asbury Park, N. J. This controller is designed to be used in connection with electrically-illuminated signs and can be readily adjusted or changed to direct a current to the lamps forming the respective letters of the sign in any desired order or combination. The arrangement consists of a series of fixed contacts connected with the lamps, and a rotary part provided with contact-lugs which complete the proper circuits when turned into engagement with the fixed contacts.

#### Mechanical Devices.

WATER-WHEEL.-JOHN W. TAYLOR MANUFACT-URING COMPANY, Mt. Holly, N. J. The inventor's improvements pertain more particularly to very sensitive gates, so arranged exteriorly to the wheel and chute-box and so supported as to work without friction and wear with the parts inclosed by the gates. By a novel con-struction and arrangement of parts the gate is operated simultaneously in opposite directions lengthwise of the chute-boxes and wheels proper.

MACHINE FOR MAKING BRIQUETS FOR TEST-ING PURPOSES .- THOMAS MILLER, JR., Manhattan, New York city. The machine forms briquets f om cement, plaster, or other material for testing purposes. These briquets are uniform in size, density and strength. By means of such briquets the breaking strain or crushg resistance of different brands of cement material. or the relative breaking strans and crushing resistance of different materials can readily be ascertained.

#### Railway Contrivances.

CAR-BRAKE LEVER. - JOSEPH C. WESTERFIELD, Arlington, and HARRY S. CHINNOCK, JR., Belleville N. J. In setting brakes hard, it is the usual practice to employ a hand-lever in the form of a wooden stick in serted in the spokes of the hand-wheel. This proceeding is somewhat dangerous, because the lever may slip. Such lovers, moreover, are only too easily lost. The in vention provides a brake-lever as a permanent attachment to the brake-rod, thus avoiding the dangers and difficulties mentioned. This lever is so connected with the rod that it may swing out of the way when not in use.

TRAIN-INDICATOR.-WILLIAM M. SIX and OLIVER R. DAILY, Lebauon, Ind. From the back of the case in which the indicator mechanism is contained, the operator can manipulate the indicating devices which are constructed and adapted to expose at the front of the case the number of the train, the time when such train is due and information whether or no the train is on time, and if late, to what extent.

BOTTLE.-GEORGE W. VOUGHT, Queens, New York city. The bottle is of the non-refillable class. The inntor has devised a cheap and simple valve-mechanism which can be applied to bottles of the ordinary shape and which is designed to prevent the illegal re-filling of a bottle. The mechanism in question is so made that a wire cannot be inserted through the neck to unseat the valve.

COMBINED SAFETY ANDIRONS AND SCREEN. -ISAAC W. SULLIVAN, Laxsonville, Tenn. The combined fire-scre n and andirons are so arranged that each furnishes a support for the other, the andirons being adapted for lateral adjustment and for convenient de tachment. The screen is of woven wire, and to its inner side, hooks are attached. A curved supporting-bar. adapted to rest upon the floor, is loosely engaged by the hooks. The front ends of the andirons are detachably supported on the horizontal portion of the bar.

#### Miscellaneous Inventions.

BURIAL CASKET.-PHILIP HERBOLD, JR., Galion Ohio. This casket has a false bottom above, spaced apart from the bottom forming a recess for the cap or lid. A side is hinged to the bottom and is adjustable to positions to cover or to expose the opening to the cap or lid containing the recess

PACKAGE FOR MEDICINES, ETC. - LUTHER E. MOORE, Marietta, Georgia. Each section of the package is composed of an outer layer of coarse fibrous material. and an inner layer of a smooth firm surface with an intervening sheet of cement impervious to heat and sealing mixture. The mixture will penetrate the tackage as far as the outer layer, but will be checked by the cement, which confines the saturation to the outer coat, and re duces the degree of heat to which the contents of the age are subjected. For salts, powders, and granu lations of an effervencent nature easily injured by atmospheric conditions, by heat, or by contact with acids or alkalies, this invention will be a perfect protector.

this gripper and the bar, and a latch engages the free end of the bar to hold it.

APPAREL-SHIRT.-SAMUEL A. ISRAEL, Manhattan New York city. The invention makes an improve ment in shirt-bosoms which are provided with flanges for holding detachable or false bosoms in place. The bosom-shirt has a retaining-flange provided with a slit or guideway at the lower end. A supplemental removable bosom is adapted to fit under the flange, and is provided with a tab which passes through the guide-

NON-REFILLABLE BOTTLE. - WILTON A. and THOMAS A. HALL, Fernandina, Fla. This bottle be-longs to that class in which valves open outward. This permits the outflow of liquid and prevents an inflow. A valve formed of elastic material and puckered at the opening so as normally to close it, works with a plunger which serves to open it when the bottom is turned downward, but which will not act to open the valve when the bottle is in an upri ht position. This prevents its refilling.

PROCESS OF MAKING PHOSPHOR-TIN.-GEORGE BERTHOLD, Great Falls, Mont. Phosphor-tin is made by subjecting a charge of tin, charcoal, and phosphorus while held in a crucible and nnder the exclusion of air. to the action of heat in a furnace to cause the tin to mel and absorb a portion of the phosphorus. This forms the phosphor-tin to be used with copper to make castings of phosphor-bronze. There is no danger to the operator. as this method avoids to a great extent the formation of the obnoxious fumes which generally arise in the manufacture of phosphor-bronze.

WATER-CLOSET BOWL. - CHARLES SCHIFFLIN, Manhattan, New York city. In this invention the overflow of the bowl is completely prevented. At the same time the bowl is kept from getting foul. All obnoxious sewer-gases are trapped. The mechanism consists of a water inlet, a main trap as au outlet for the bowl, a water-distributing channel in communication with the inlet, and an annular overflow-channel above the distributing-channel. All the parts are integral with the bowl.

GAGE FOR CROSSCUT-SAWS .- JOSEPH MORIN Seattle, Wash. A former invention of Mr. Morin's has been improved upon in this contrivance which provides a device in connection with saw-gages for measuring and testing the raker or chisel teeth of crosscut-saws in swaging the saws. Also a device in connection with a saw-gage for holding a chilled metal plate having a slot large enough to admit a raker-tooth immovable with reference to the body of the gage, and below the points of the cutting-teeth, making the points of each rakertooth the same length; and also a device for holding a file fixed with its face at an accurate angle with the blade of the saw for jointing the cutting-teeth. A smooth frictionless surface in a perfect plane rests on the cutting teeth when gaging raker-teeth for swaging, and a trans verse section of this plane is at right angles with the saw-blade when swaging.

BREAD-RAISING APPARATUS-JOHN D. BELL. Arcadia, Kans. On the main box is a hinged lid having an aperture. This box is removably seated on a legged stand. There is a smaller raising-box with a lid thereon, and a removable partition in the raisingbox. Ledges on the main box and raising-box support the latter centrally within the main box. A deflector-plate is in the main box below the raising-box and over an aperture in the bottom of the former. A casing hung from the bottom of the main box incloses the aperture, wherein is placed a lamp adapted to transmit heat into the air-space between the boxes. A gasjet or an electric heating medium can also be used.

#### Designs.

BELT.-LOUIS SANDERS, Brooklyn, New York city. The novel feature of the design is a panel embossed and offset from the waist-band.

BABY-COMFORTER. - CHRISTIAN W. MEINECKE Jersey City, N. J. The device consists of a nipple, the base of which is below a shield. The base below the shield has an annular rib formation at the upper end of a pad, the nipple constituting a portion of the pad.

BOTTLE.-MORITZ RHEINAURE, Manhattan, New York city. The bottle consists of two connected V shaped members provided with a common threaded neck.

ANTI-RATTLER.-FENTON E. JUDSON, Autigo, Wis This patentee gives a new shape to the bearing block employed in connection with wire anti-raitlers to obtain a better connection with the spring wire and a more efficient pressure on the thill.

Note.-Copies of any of these patents can 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.

#### NEW BOOKS, ETC.

BLUE PRINT MAKING. EMBRACING DI-RECTIONS FOR CONSTRUCTING THE PRINTING FRAME, PREPARING THE PAPER AND MAKING PRINTS OF VA-

Business and Personal.	Carriage corner iron, E Carrier. See Luggage Carving machine, E. L
Marine Iron Works. Chicago. Catalogue free.	Case. See Sign and she Case or cabinet, J. R. I Cash register, A. Frede
For mining engines. J.S. Mundy, Newark, N.J.	Casting plant, M. M. Su Chains, manufacture o
"U.S." Metal Polish. Indianapolis. Samples free.	Checking or uncheckin Chemical apparatus, P.
Yankee Notions. Waterbury Button Co., Waterb'y, Ct.	Chest, tool. M. Beaudin Chuck, Smith & Covent
Handle & Spoke Mchy. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.	Churn, F. H. Boggess, Chute, coal wagon deliv Cigar box, W. M. Williu Cleaner. See Broom co
Machinery designed and constructed. Gear cutting. The Garvin Machine Co., Spring and Varick Sts., N. Y.	Closet. See Water close Cloth cutter, C. F. Spar Cloth of changeable col
The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Ma- chine Company. Foot of East 138th Street, New York.	C. H. Hope Clutch and brake, A. E. Coal digger, W. T. Gin Coal bandling and cru Suppes
The best book for electricians and beginners in elec- tricity is " Experimental Science," by Geo. M. Hopkins. By mail, \$4. Munn & Co., publishers, 361 Broadway, N. Y.	Compartment box, W. Conveyer dumping mec Conveyer loading mech Corner strip or bead, F Coupling. See Car or
37 Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.	Thill coupling, Crank hanger, J. E. Rol Crate fastening, S. M. I Crayon making machin Cream ripening appara Cream separator, F. W.
Le coles & Lueries	Creahar, See Ore crusi Crusher, See Ore crusi Cuprammonium soluti et al. Cycle crank upechanism Cycle frame joint, J. R. Digester, E. G. Murphy Digger, See Coal digge Display device, panora: Display tray, N. B. & K Door, automatically op
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#### HINTS TO CORRESPONDENTS.

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 furn.
Bu yers 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 renuenration.
Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(7970) G. N. S. asks: Would cottoncovered wire do for the secondary coil described in SUP-PLEMENT, No. 160 ? Of course silk is a better insulator, but would the difference amount to very much ? By answering oblige a constant reader. A. The reason silk covered wire is used in an induction coil is that the covering is thinner and takes less room. The object is to have as many turns as possible in the space given to the secondary.

(7971) W. E. F. asks: How can l make the best and cheapest lining to use in a reservoir dug in a side hill of sand and gravel, to hold about 20,000 gallons, not over 31/2 feet deep? Will freezing injure it if empty in winter ? A. The cheapest way to line a shallow reservoir is to tamp a clay and sand puddle all over the bottom and sides, not less than one foot thick. It can be made in two layers of half a foot each to great advantage in preventing seepage seams by lapping the work. The sand and clay should be mixed in equal parts, stiff and well rammed. When finished, the whole surface should be covered with clean gravel. Freezing will not injure it.

## INDEX OF INVENTIONS For which Letters Patent of the United States were Issued

### for the Week Ending SEPTEMBER 25, 1900,

## AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Bedsteads, casting metallic, G. H. Williams. Bell, A. B. Hunn... Bicycle, F. J. Stallings. Bicycle, interlocking, O. I. Straub. Bicycle speed mechanism, J. A. Cardinell..... Bit. See Bridle bit. Bleaching process, J. & E. F. Pullman... Bolies See Steam boiler. 658,718 658,674

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I	Bridle bit J. L. Lee	Journal bearing. G. A. Scheener
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