

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

ROLLER BEARING FOR CAR JOURNALS.

—William J. Tripp, New York City. This bearing comprises collars held on the journal and a series of rings forming ball races with the collars, the outermost ring being held against movement while the other rings are free to move toward the outerring; balls are held in the races and sectional rings carry pivots for the balls to turn on. An adjustable dust cap is held on the inner end of the box and engaging the innermost ring, to adjust the several rings in their relation to each other and to the balls.

DUMPING CAR.—John A. Hughes, Honolulu, Hawaii. A car which may be employed in any railway work, but which has been devised by the inventor mainly for use on sugar plantations, to transport cane to the mill, etc., is the subject of this patent, the principal object being the discharging of the car by power, saving the labor of a number of men. The platform is mounted to rock laterally in either direction on the truck frame, and at each side, somewhat inward from the edge, the platform is provided with two hinge sections. Attached to each side of the rocking platform are two hooks adapted to be engaged by a lifting power, as by means of a wire rope from a hoisting drum. The stakes are, by a special arrangement, easily removed.

Electrical.

FUSE HOLDER AND CUT OUT.—Harry A. Lewis, Norristown, Pa.

The invention covered by this patent comprises an improvement on a former similar patented invention of the same inventor, for a device to be arranged in the line wire to relieve the building or other place to which the wire leads from the danger of a strong or excessively charged current, by breaking the current and diverting the electric fluid from the building. A circuit breaker has a spring-pressed lever adapted to make contact with an arm connected with the line wire, while another lever has a shoulder adapted to lock the first lever in contact position, and a thermostat having a fixed tube at one end presses at its other end on the second lever, a coil of wire forming part of the line extending into the tube.

PROPELLING AND STEERING BARGES.

—Alba D. Archibald, Covington, Ky. To supply a positive steering force at the head of a tow, under the direct and immediate control of the pilot on the propelling steamer, this invention provides for equipping the propeller with a dynamo electric machine to be connected with one or more steering and propelling craft on each side of the fleet of barges near the front, and connected to and flanking the fleet. The steering craft are each equipped with an electric motor and a propelling screw driven thereby, and the motors are connected by movable circuit wires passing rearwardly over the barges to the propeller, to suitable switches and rheostats in the pilot house, enabling the entire power of the dynamo to be used to push or pull the head of the fleet to the right or left.

Bicycles, Etc.

TIRE.—William D. Snow, New Milford, N. J.

A tire which changes automatically from a pneumatic to a cushion tire, in case of puncture, has been devised by this inventor. Resting in the usual rim is a solid cushion portion, oval in cross section, and from each side edge of this portion projects a resilient lug or flange to which is attached by cement or other means a flexible pneumatic portion, adapted to be distended by forcing air into the tire, the side flanges then forming part of the distended portion of the tire. In case of a puncture, the outer portion collapses and is brought down by reversed position of the side flanges into contact with the cushion portion, forming a cushion tire.

BRAKE.—Frank J. Coombs, Columbia Falls, Montana. This invention is for a brake mechanism in connection with the pedal shaft and sprocket wheel, the brake being set to braking position by back pressure on the pedals, the device also permitting the sprocket rim to rotate freely while the pedals are at rest. According to the improvement shoes are adapted to be forced against the interior of the sprocket rim, and the locking mechanism thereof is connected with a sliding block in a tubular handle bar, the hand grip having a cam portion engaging a cam portion of the block.

Agricultural.

PLANTER.—John S. Earhart and Charles Miller, Millersville, Ill.

A triple row planter, devised by these inventors, is designed to increase the capacity of the ordinary planter about one-half. According to the improvement, the central or middle row planting mechanism is in a measure independent of the end planting mechanism, and the connection with the frame is such that the central planting mechanism may travel over uneven land without affecting the end planting devices. Means are also provided for regulating the depth of planting of the corn or other seed by the middle planter, and thereby indirectly controlling the depth at which the seed shall be deposited by the end planters.

STAKE FOR PLANTS OR FLOWERS.—Theron N. Parker, Brooklyn, N. Y.

This device comprises a plurality of separable members, formed of wire, the lower ends of the legs having anchors of substantially triangular form. A lower main member is in the form of a frame at the top, with open loops which receive the legs of an upper member, while a still higher member may be connected with the stake by means of legs having hooked lower ends, the whole forming a readily adjustable, inexpensive framework, for the support of a plant of any required height, the members of the stake being readily separated and put together.

VEHICLE SEAT.—John Q. Black, Lone Rock, Wis. This invention provides a seat especially adapted for agricultural machinery, affording a seat designed to prevent the careening of the machine from throwing the operator from his seat. The improvement comprises a standard plate whose upper end is bent to form a table, and the seat has on its lower surface a

longitudinal convex rib forming a rocker adapted to rest on the table, there being means whereby the seat proper is held within the lower surface of the rib bearing on the table so as to rock from side to side. The rider, with his feet on the foot board, is able to balance himself readily on the seat and is not liable to be fatigued on account of a cramped and uncomfortable position due to the tilting of the machine.

Mining, Etc.

TREATMENT OF GOLD AND SILVER ORES.—Joachim H. Burfeind, Salt Lake City, Utah.

This invention is for a method of treating the cyanide product or precipitate containing the precious metals, instead of melting it in crucibles with fluxes, resulting in great loss from volatilization, and producing very impure bullion, while very impure products have to be shipped to refining works. The method consists in subjecting the product, with a suitable amount of water, to a current of sulphurous acid for about ten hours, the product being agitated by a stirrer; after settling and drawing off the liquor, strong sulphuric acid is applied, after which water is added and the mixture is boiled, the method being designed to produce bullion about 950 fine.

Miscellaneous.

CAN OPENER.—Walter A. Simond, Tilton, N. H.

This is a device of the central pivot type, having but few parts and with a cutter which may be readily adjusted to open cans of different diameters, the cutter always opening the can top at the same distance from the side edge, whether the can be large or small. On the stem of the handle slides a yoke with guide spur engaging the outer side face of the can, and within the yoke is a hub carrying a disk cutter.

INKSTAND.—William L. Stewart, Wilmerding, Pa.

This invention relates to a fountain type of inkstand, providing one that is simple and inexpensive, and in which the ink is not likely to evaporate. The fount is in the form of a bottle, and the original bottle containing the ink may be used therefor. The neck portion is extended into an ink cup and has a tubular stopper of cork or soft rubber, a valve closing the inner end of the opening through the stopper, while a stem extends from the valve through the opening in the stopper and is adapted to engage against the bottom of the ink cup, the valve closing when the bottle is lifted from the ink cup.

ELEVATOR CLUTCH AND BRAKE.—William Weismantel, New York City.

To hold an elevator from dropping should the hoisting apparatus give way, and stop the elevator, in case of accident, before it attains a dangerous speed, this inventor employs a fixed rack attached to the building at one side of the elevator well, into which meshes a pinion journaled on the elevator cage, a ratchet wheel normally engaged by a pawl being connected to the pinion, but with means for disengaging it at will. A friction cylinder is also connected to the pinion in such manner as to provide means for lowering the elevator in case it becomes stopped between landings.

SAFE.—Wilhelm Kock, Cincinnati, O.

In putting together the plates of a safe door, to render it difficult to detach them from each other with dynamite or by the use of tools, this inventor flanges the edges of the built-up plates at right angles to their body, and each pair is secured by bolts passing from the inside through the flanges of the inner plate and into the flange of the one next outside, while boltwork is secured by bolts screwing into flanges parallel with the front face of the door.

LIQUID VESSEL.—George W. Brown, Williamsburg, Pa.

To retain the solid matter in a vessel from which the liquid is being poured, this inventor places inwardly projecting pins or lugs on the inner surface of the vessel near its top, and provides a skeleton cover adapted to be placed and to rotate between the lugs, such cover having its periphery broken at different points and having downwardly projecting flanges. Used in connection with a suitably adapted drinking vessel or tumbler, it will retain the ice, lemon skins, or other materials forming a portion of the liquid, or the device may be used in cooking vessels to retain solid matter while the liquid is being poured off.

AUTOMATIC PHOTOGRAPHIC APPARATUS.—Margarita Mann (administratrix of Charles Mann, deceased), New York City.

Information to be had of N. Torres, 76 University Place, New York City. This patent is for an improvement on formerly patented coin-operated photographic apparatus, and comprises a camera, with lens, shutter, plate compartments, and gripping device below a plate receptacle and adapted to hold a plate in the field of the lens, while a motor operates the lens, shutter, the plate receptacle, and a bath carriage sliding beneath the camera, the carriage having compartments for a developing compound, a fixing compound, and a washing compound, there being also means for delivering the exposed plate from the bath carriage to the exterior of the apparatus. The invention provides for complete control of the time of exposure, and of development and delivery of the finished picture, the apparatus being operated by a motor, and being automatic in every movement when power is once applied.

PICTURE FRAME.—Gothelf M. Seidel, Easthampton, Mass.

A frame made of sheet metal or sheet material is provided by this invention, according to which the top, bottom and sides have pockets at their rear lower edges, the body of the frame being bent upon itself to form the front member of the pocket, while the rear member extends down parallel with the main portion of the frame, the pockets holding the picture, glass and backing. The frame is durable and inexpensive, and is designed to prevent dust or insects from getting into any of the parts or injuring the picture. Instead of the usual screw eyes for hanging, openings are made in the frame to receive hooks or like suspension devices.

VENTILATOR.—Thomas R. Harper, Wheeling, Mo.

To carry off bad air from rooms and steam and odors from kitchens, according to this invention, a hollow foot piece or bowl is placed on the heater or range and adapted for simple connection with the

smoke pipe, there being side openings in the foot piece and a draught tube extending upward from it to a spider connected with a funnel in the ceiling, a discharge tube leading from the funnel to a flue or other outlet. There is a coupling in the draught tube by which it may be lengthened or shortened to fit ceilings of different heights, and a valve for regulating the draught, and the invention covers various features providing for the ready and simple application of the improvement, including also its use in rooms where a fire is not usually kept.

VESSEL SCRAPER.—Nicholas Gilroy, New York City.

To facilitate cleaning the interior of metal kettles, pots and similar vessels from rust, scale, etc., this scraper comprises a frame having a hand piece, and in which is held a beveled gear and pinion rotated by a crank to revolve a shaft on whose lower end is a spring head formed of spirally coiled wire, the spirals growing less in diameter toward the bottom. Loosely surrounding the head are looped rings, the head thus forming a cone-shaped basket, the rings acting as scrapers when the head is rotated by operating the crank, the head being moved around from place to place until the whole interior of the vessel has been cleaned.

LEMON JUICE EXTRACTOR.—Nicholas Gilroy, New York City.

This device consists of two pivotally connected hand levers, one of which supports a juice cup in which is a dome-shaped support, while the other is connected with a concaved plunger having a scalloped edge by means of a spirally grooved stem extending through an opening in the lever, a spring surrounding the stem and bearing at one end on the lever and at the other end on the plunger. The plunger rotates as it moves down, so that the juice is extracted from the lemon by a rubbing motion designed to avoid taking out the bitter principle of the skin to mingle with the juice.

POCKET BOOK.—Bernhard Wilentshik, New York City.

In addition to the usual functions of a pocket book, this invention provides a pocket book which is also adapted to carry a comb, looking glass and other articles. It has a change pocket and a front and back pocket with their mouths adjacent to each other, and both having hinge connections at their mouth ends with the opposite sides of the change pocket, while the adjacent faces of the pockets are provided with auxiliary pockets, loops, etc., for carrying various articles.

COAT HOLDER.—Robert J. Stuart, New Hamburg, N. Y.

This is a device for holding a coat out in position to be put on by the wearer. It consists of two pairs of spring-held clamps whose fingers are adapted to engage the coat collar, one-half of each clamp set being fixed to the ends of a horizontal pipe and the other half to a bar lying in the pipe, while a lever is attached to the bar and connected by a cord with a treadle. The coat is secured in the clamping fingers by operating the treadle and is released in a similar manner, the device being fixed at the proper height.

FINGER NAIL TRIMMER.—William J. Sloan, East Liverpool, O.

This is a device preferably combined with a lead pencil to form a rubber tip holder and a binding for the pencil, the pencil being used as a handle to facilitate using the trimmer in filing the nails. The nail trimmer consists of a metallic tube adapted to fit on the pencil and carry an eraser at its other end, the tube having elongated longitudinal depressions, the faces of which are provided with teeth to engage the finger nails.

BOTTLE AND CLOSING CAP.—Alfred Rodgers and George Peden, Johnstown, Pa.

According to this invention, the bottle is made with a neck having tapering lower portion, above which is a shoulder and straight smaller portion, there being through the latter two opposite registering openings. A cap of glass fits down over the tapering portion of the neck, above which the cap is internally recessed, forming an inner peripheral shoulder. The cork being inserted in the neck to a point below the shoulder, a spring is passed through the registering openings in the sides of the neck, over the cork, and the cap is forced down over the inwardly pressed ends of the spring, when the cap and cork cannot be removed without breaking the cap.

JAR SEALING DEVICE.—John Schies, Anderson, Ind.

The neck of the jar, according to this invention, has an outwardly and upwardly extending marginal flange, with an inner face affording an annular seat for the cover, whose upper side has circular ribs and oppositely arranged recesses adapted to receive portions of a T-shaped clamping device of spring material, whose outer extremities engage the neck of the jar. Between the flange of the cover and the flange of the jar a washer may be interposed, or the fastening clamp may be omitted and the trough around the cover edge be filled with cement.

BILLIARD CUE.—Romeo Ghezzi and Ferdinando Bertocini, New York City.

According to this invention, the tip is preferably made of leather, with an annular groove just below its side edges, where the base portion is adapted to be sufficiently compressed to pass within a notched flange of a ferrule or cap to be secured on the end of the stick, the base of the tip being hammered to form a rivet head on the under side of the flange and preventing the tip from turning in the ferrule. The latter has transverse notches under the tip surface, in which are placed threads whose ends extend beyond the ferrule and form wedges to assist in holding the ferrule firmly in place when driven onto the end of the stick, both tip and ferrule being thus quickly and firmly secured in position.

MUSTACHE SHAPER.—Paul S. Ferdy, San Francisco, Cal.

This is a device adapted to press and hold the mustache firmly against the face, after the mustache has been spread in proper shape, the device thus holding the mustache in position for a desired period of time, or overnight. It consists of a band of flexible material of two layers, between which the mustache ends are received, the layers being united by stitching in the middle, and there being at the ends of the band elastic loops to pass over the ears.

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NEW BOOKS, ETC.

PRACTICAL ICE MAKING AND REFRIGERATING. A plain, common sense series of papers on the construction and operation of ice making and refrigerating plants and machinery. By Eugene T. Skinkle. Chicago: H. S. Rich & Company. 1897. Pp. 235. Price, cloth, \$1.50; leather, \$2.

The present work is a most practical and timely one. Until a short time ago there was absolutely no literature on the subject worthy of the name, but now, thanks very largely to our excellent contemporary *Ice and Refrigeration*, of Chicago, we have some practical books upon this much neglected subject. This book deals with cooling surfaces and circulation, the construction and piping of brine tanks, the ammonia compressor, oil injection, suggestions to engineers, operating instructions, compressor equipment, ammonia condensers, ice making, distillation of water, etc. There is an appendix containing most valuable tables. The book contains a few illustrations.

RAILWAY TECHNICAL VOCABULARY. French, English and American terms. With 22 tables. By Lucien Serrailier. London: Whittaker & Company. New York: Macmillan & Company. 1897. Pp. 222. Price \$3.

This is a most valuable work; railroad terms are comparatively modern; many terms have been coined in each country. Some international nomenclature is needed which will give the technical equivalents of these terms in each language. These considerations have led the author to compile this vocabulary, confining himself to French, English and American terms. He has adopted a method of classification by grouping the terms according to the subject matter. This arrangement is really preferable to the ordinary alphabetical way, as the constituent parts of the appliances can thus be placed under the head of such appliances and synonymous terms can be shown together. The book will prove of the greatest possible value to all who are engaged in railroad work in any important capacity.

STATISTISCHE ZUSAMMENSTELLUNGEN UBER BLEI, KUPFER, ZINK, ZINN, SILBER, NICKEL, UND ALUMINIUM. Von der Metallgesellschaft, nebst Technischen Bericht von der Metallurgischen Gesellschaft a. G., Frankfurt am Main. 1897. Pp. 78.

THE CHLORINATION PROCESS. By E. B. Wilson, E. M. New York: John Wiley & Sons. Pp. 125. Price \$1.50.

The leaching of gold ores by chlorine solutions has proved among the most effective of methods of comparatively recent introduction for enlarging the yield and reducing the cost of modern gold mining, and the process and the kinds of ore where it may be most advantageously employed are now pretty well understood among those who have followed up the literature of the trade on the subject. To a large number interested in the mining business, however, the matter is by no means clear and free from technicalities, and to all such this little book is calculated to prove extremely valuable.

PICTURE RIBBONS. By C. Francis Jenkins. Washington, D. C. Pp. 54. Price \$5.

The demand for a more explicit knowledge of the manufacture of picture ribbons for the production of photographic images in rapid sequence, in such a way that they may be reproduced to the eye and thus convey the sense of motion, is the reason for the publication of this work. The old way was to put the images on the face of a revolving disk, which on account of its limited area could not contain as many glimpses of a moving object as is now obtainable by the use of a narrow continuous strip of celluloid, to which is applied the name of picture ribbon. Mr. Jenkins in this book describes in clear language the operation of the machine camera for making the pictures in the first instance, and the subsequent steps afterward, using for illustrations photographic pictures of the apparatus itself, so that any unskilled person familiar with the ordinary process of photography may, by following the directions described, succeed reasonably well in making a series of pictures himself. In the back portion of the book are several formulas for the successful treatment of the film. On one page is a list of the fifty different names by which this style of machine is called, and is of itself a curious feature of the development of ribbon photography. We think the book is likely to be very useful and especially valuable to photographers interested in chrono-photography.