

RECENTLY PATENTED INVENTIONS.

Electrical.

BATTERY.—Frank M. Bell, New York City. This invention provides a primary battery with low internal resistance and high voltage and amperage, and in which the negative plate may be recharged when exhausted. The battery has a negative plate formed of a lead grill filled with peroxide of lead and provided with a perforated protecting covering of insulating material and amalgamated zinc positive plates suspended on opposite sides of the negative plate, the negative and positive plates being immersed in an electrolyte, preferably composed of water, sulphuric acid and bisulphate of mercury. This battery generates no fumes, deposits no sediment, and there are no creeping salts.

ELECTRIC CONDUCTOR.—Gorham Gray, Boston, Mass. This conductor is of metal formed with longitudinal and transverse grooves, leaving a core of hard metal and projections of softer metal. The outer surfaces of the projections are corrugated, or formed with transverse grooves, and the metal surrounding the core between adjacent sets of projections is also formed with ridges.

Mechanical.

WOOD TURNING MACHINE.—William T. Jones, New Westminster, Canada. This invention is for a machine for turning fish net floats, providing for sawing the proper length of wood from the strip and then automatically forcing it into position for turning. The machine has a series of fixed cutters, a rotary block carrier to move the blocks against the cutters, means for rotating the blocks, a saw for severing the block from the strip, a reciprocating frame to operate a boring tool, and other novel features.

PRINTING PRESS DELIVERY ATTACHMENT.—Mark N. Cormack, New York City. This invention provides an attachment for web printing presses, designed to deliver a folded sheet free from the smut or smear occasioned by the contact of the freshly printed sheet with the folder and delivery surface, also enabling the printer to readily inspect the work to discover any imperfect folding, blotches, etc., and to allow the ink to set before passing the sheets into the receiving box. The sheets are kept separate to allow the air to reach the entire surface and insure a rapid drying of the ink.

ENDLESS BAND.—Leedham Binns, Philadelphia, Pa. This is an improvement on a formerly patented invention of the same inventor, providing a band for use as a driving belt for mill spindles, the band being very durable and strong and having its terminal portions united in such manner as to render the band of approximately uniform thickness throughout. It is essentially a plaited tubular band containing a filling terminating a suitable distance from the ends to permit of interlacing the ends, this also rendering the band more durable than a band with a thickened joint.

MOTOR FOR VEHICLES.—James M. Trotter, Alma, Cal. This invention provides a motor designed for auxiliary propulsion, arranged to form a brake and to accumulate power during the travel of a drawn or propelled car, wagon or other vehicle on a down grade, and to utilize this power for propelling purposes when going up hill, etc. The invention comprises an air compressor and compressed air reservoir connected with an air motor, and swinging wheels being adapted to be alternately thrown into engagement with the wheels on the vehicle axle.

WELL DRILLING MACHINE.—Francis R. Yearlan, Kinard, Ill. This is a machine of comparatively light construction, adapting it to be conveniently moved from place to place on wheels, and in which considerable power may be economically obtained. The frame is mounted on wheels and supports walking beams whose ends are connected by a head block having openings for a rope, a crank shaft having bearings in the frame, and there being connecting rods between the walking beams and the cranks. During transportation the walking beams and derrick are swung down on the frame.

Miscellaneous.

AERIAL MACHINE.—Jacob D. Graybill, New Orleans, La. This machine comprises a gas holder and a car located within the framework of the gas holder, while an air or vacuum chamber protects the car from gas on the front, back and top. It also has a cross shaft on which are ball-balanced crank arms, the latter being used to operate wings at the sides, the wings being also adapted for use as sails when not employed to propel the machine, the wings being independently adjustable. The gas chamber is preferably designed to hold ten thousand cubic feet of gas, and the machine may be propelled by a light gas, air or electric engine.

MACHINE FOR MEASURING CLOTH, PAPER, ETC.—George W. Hyde, Richfield Springs, N. Y. This machine is designed to conveniently unwind a desired length of material from an original roll and wind up the measured length into a roll for the customer. The machine comprises a supporting frame, a swinging rod carrying the roll of material, a winding up spindle detachably mounted in the frame, a measuring roller mounted between the rod and spindle, a lever pivoted at one end in which one of the journals of the measuring roller is mounted, with other novel features.

GRAPHOSCOPE.—Laurance H. Cohen, New York City. In this graphoscope the pictures may be viewed either in panoramic form or singly, the invention providing means for quickly placing in position rollers to which may be attached the tape, sheet or belt carrying the pictures, means being also provided for turning either of the rollers so that the pictures may be wound readily from the right hand to the left hand roller and back, each roller having an independent rotating device. The lens is so mounted on the frame as to be quickly and easily adjustable toward and from a picture, remaining firmly in adjusted position, while it may be entirely removed from the frame when desired.

JOURNAL BEARING FOR TRUCKS.—

John E. Rogers, Dendron, Va. This is a box or bearing for small trucks, and especially for dry kiln trucks, consisting of a body or face plate and cylindrical box projecting laterally therefrom, with its outer end closed, while a broad base lip or flange projects laterally from the lower edge of the plate, parallel to the box, all constructed integrally of cast metal. The bearing is held in place without the aid of screws, bolts or nails, a hole being bored in the inner face of the beams and the bearing forced to place, which it retains by friction with the wood and the end thrust of the wheel axle.

CAN SOLDERING MACHINE.—Theodore L. Phelps, Brewster, N. Y. This machine has a table turning on a column, a number of mandrels moving with the table, a fixed table also carried by the column and two soldering irons held by the fixed table, while there are means on the fixed table for moving the irons toward and from each other, and radially with reference to the axis of the moving table. The machine is comparatively simple and inexpensive and automatically solders the overlapping edges of the body, automatically holding the can in position to be soldered, and discharging the soldered body from the mandrel on which it is carried.

VEHICLE SHAFT.—Francois D. Bernier, Paris, France. In draught poles for vehicles, this invention is designed to diminish the liability to breakage in case the horse should fall, to this end employing a joint of novel construction, located on the tongue between the eye which receives the end of the holdback strap and the iron to which is secured the back strap of the harness. The construction between these points is thus made yielding to a large extent, so that the shaft is practically unbreakable.

FOLDING BATH AND WASH TUB.—Hermann J. Gies, Peterborough, N. H. This is a combination device of simple and durable construction, taking up but little space when folded and not in use, and which may be readily converted into a wash tub or bath tub, as desired. The casing is pivoted to the base a short distance from one end, one of the pivots being tubular, and there is in the casing a tub with removable partition dividing it into two parts, a pipe leading from the bottom of each compartment to the tubular pivot, one of the pipes being in the chamber of the casing, while a spring-pressed door is hinged to the bottom of the tub at its pivoted end.

KEY GUARD.—Addison J. Lyon, Mount Vernon, N. Y. According to this invention a spring-controlled stop is carried by a support on one side of the keyhole to normally extend across the keyhole, the stop being movable at right angles to swing away from the keyhole and admit of the insertion of a key, while the spring returns the stop to its normal position afterward. The device is readily applicable to any form of lock, and is so made that when applied to a mortised lock the door will not be mutilated, the device being also entirely concealed by the escutcheon.

DUMB WAITER SAFETY CLUTCH.—Charles B. Cox, New York City. To securely hold the cage in place in case of the breaking of the supporting rope or cable, this invention provides for a vertical rod fixed in the shaft, a casing secured on the cage being formed with a guideway for the rod, while a clamping device journaled in the casing is adapted to engage the rod and clamp it to the casing, a spring plate being connected with the clamping device and attached to the cage, and a staple being adjustably held on the spring plate and connected with the supporting rope.

BANJO BELL.—Albert H. Jarvis and William J. McLean, New York City. A shallow bell formed of resonant material, according to this invention, is adapted to be placed between the head of the banjo and the continuation of the neck. The bell is placed beneath the bridge of the banjo and has a comparatively large opening in its small end, or it may also have the annular section forming the sides of the bell perforated to assist in the emission of the sound waves. The device may be readily attached to or detached from a banjo, being designed to make the tones clearer and more distinct, the tone or timbre of the notes varying according to the material used.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co. for 10 cents each. Please send name of the patentee, title of invention, and date of this paper.

NEW BOOKS, ETC.

HOURS WITH THE GHOSTS; OR, NINETEENTH CENTURY WITCHCRAFT. Illustrated investigations into the phenomena of spiritualism and theosophy. By Henry Ridgely Evans. Chicago: Laird & Lee. 1897. Pp. 297. Price \$1.

The present work is by the author of the introduction to our book, "Magic: Stage Illusions and Scientific Diversions, Including Trick Photography." It is an admirable expose of the devices of the pretended mediums and charlatans, with fullest evidence furnished as to their trickery. There has been a large number of works published upon this subject but most of them have been trifling, catchpenny affairs. The present book is a work of another order and will appeal to all who are interested in the occult. The illustrations are of great interest, revealing as they do the secrets of rope tying, slate writing, materializations, spirit photography, etc. The first part of the book is devoted to spiritualism and the second part to Madame Blavatsky and the theosophists. This is one of the best accounts ever published of Madame Blavatsky's life and work. It contains a synopsis of the theosophist's doctrines and sketch of the successors of the famous Russian priestess, with a bibliography of works on the subject. The author has had sittings with many famous mediums of this country and Europe, but has seen little to convince him of the fact of spirit communication. The slate tests and so-called materializations have invariably been frauds, and the author can be congratulated for the excellent way in which he unmasks these impostors. The book is well printed and is handsomely bound in Holliston cloth.

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

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The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.
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Notes & Queries

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.

(7230) J. D. asks: 1. Is removal of superfluous hair by electricity successful? A. Yes. 2. How many volts and amperes are usually required? A. About 6 cells of carbon zinc battery. 3. Is the puncture of the hair follicle by a needle carrying the current sufficient? A. Yes. See page 538. "Medical and Surgical Electricity," by Beard and Rockwell, price \$5.50 by mail.

(7231) W. D. S. asks (1) how to make an electromagnet to lift 75 to 100 pounds 5 inches, with 500 volts, 10 amperes, and use the coil and plunger style. A. The plunger should have the sectional area of 2.5 square inches. A round bar 1.8 inches in diameter will have this area. It should be 18 inches long. The coil requires 2,400 turns of No. 9 B & S copper wire. 2. How to drill a hole in a piece of hardened steel. A. Use a new drill. Sharpen it, then heat it to a low red and plunge it in a solution of zinc chloride (ordinary soldering fluid). If the drill requires sharpening, always re-harden after sharpening. 3. The price of S. P. Thompson's "Electromagnet." A. Silvanus P. Thompson's "The Electromagnet and Electromagnetic Mechanism" is \$6.

TO INVENTORS.

An experience of nearly fifty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unique facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

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NOVEMBER 2, 1897,

AND EACH BEARING THAT DATE.

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