### 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, pre-erably composed of water, sulphuric acid and bisulphate of mercury. This battery generates no rumes, 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 corbetween 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 ATTACH-MENT.—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. Yearian, Rinard, 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 baving 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 fraine.

### 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 desig ed 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, PA-PER, 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 ay 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 de-

JOURNAL BEARING FOR TRUCKS. ohn 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 proecting 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

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 eve which receives the end of the holdback strar 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.-Herann J. Gies, Peterborough, N. H. This is a combina tion 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 springpressed door is hinged to the bottom of the tub at its

KEY GUARD.—Addison J. Lyon, Mount Vernon, N. Y. According to this invention a springcontrolled 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 hanjo, being designed to make the tones clearer and more distinct, the tone or timbre of the notes varying eccording 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, NINE-TRENTH CENTURY WITCHCRAFT. Il-lustrated investigations into the phenomena of spiritualism and theosephy. 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 presen 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 The first part of the book is devoted to spiritualism and the second part to Madame Blavatsky and the theo sophists. 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.

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(7230) J. D. asks: 1. Is removal of suerfluous 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

(7231) W. D. S. asks (1) how to make an electromagnet to lift 75 to 100 pounds 5 inches, with 500 volte, 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 tarns of No. 9 B & Scopper 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 reharden after sharpening. 3. The price of S. P. Thompson's "Electromagnet." A. Silvanus P. Thompson's "The Electromagnet and Electromagnetic Mechanism" is \$6.

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| See note at end of list about copies of these patents. |

Air or gas compressing apparatus, E. Hill	593,049
Alarm. See Boiler pressure indicating alarm.	0001040
Burglar alarm . Fire alarm.	
Arches, adjustable and removable center for, T.	
. M Clancy	503 083
. M. Clancy Arniature, magnet, H. M. Paine	592 917
Attaching device, L. C. Dillon	503 084
Auger, earth M. J. Stoffer	502 001
Aut oharp, J. J. Joyce	502 102
Autoharp, Roth & Joyce	500,100
Awning, M. F. Wiedemann	502 117
Awning support, window, W. Johnson	
Axle, ball bearing vehicle, Misner & Weightman	500,000
Axle lubricator, car, W. S. Haines	502,900
Bag. See Hand bag.	332,310
Dag. See right dag.	£00 140
Baling press, N. B. Wilder	593,148
Basket, E. H. Hargrave	592,778
Battery. See Electric battery. Galvanic battery.	***
Beach seat, E. Zietz	592,857
Bearing, ball, J. Naismith	593,113
Bedsteads, etc., means for adjusting head pieces	
of, F. E. J. Bruhn	592,925
Beer distributing apparatus, E. D. Case	
Belt governor, J. Quinn	592,827
Belt tightener, S. R. Forbess	593,090
Bicycle, M. Joseph	593, 101
Bicycle carrier, collapsible, Riley & Brown	. 592.830
Bicycle, convertible package carrying, I. B.	
Sanders	502 996
Bicycle frame, P. Ambiorn	592,750
Bicycle frame, P. Ambjorn. Bicycle fra e, N. Dahl	503 OA6
Bicycle guard, A. N. Heminger	592,907
Bicycle pedal attachment, W. Macy	592.801

Bicycle saddle, W. H. Kelly	593,103
Bicycle tool, J. R. Barker	592,783 592,859
Discolar and the standard of Contage	593,018 592,963
Bicycles, means for securing sprocket wheels to, O. E. Kenney. Billiard and diming table, combined, C. Stabl Blackboard, A. S. Teats Blinds, machine for making window, Griffin &	592,989 592,941 592,841
Blinds, machine for making window, Griffin & Copeland	592, 53
Copeland Boiler. See Steam boiler. Boiler pressure indicating alarm, J. J. Whittle-sey	592,856
Boller pressure indicating alarm, J. J. Whitte- sey Book and coupon ticket protector, mileage, A. Rosedale Book, check, M. P. Exline Book, theat, A. V. Bowker Book rest, W. H. Heath Book rest, G. K. Putnam Book, stenographer's note, B. F. Stuart Boots or shoes, shelf rack for holding, S. I. Saunders	593,125 592,929
Book index, A. V. Bowker	592,981 592,780 593,120
Book stenographer's note, B. F. Stuart Boots or shoes, shelf rack for holding, S. I.	592,893
Bottle, Quinn & Glesicke	593,085 593,058
Bottle, non-refillable, R. E. Alfred	592,754 593,117 502,940
Bottle, non-refillable, I. Shultes	593,129 592,879
Book, stenographer's note, B. F. Stuart.  Saunders. Bottle, W. S. Dresback. Bottle, Quinn & Glesicke. Bottle, Quinn & Glesicke. Bottle, Quinn & Glesicke. Bottle, non-refillable, R. E. Alfred	11,635
Broom handle or pole attachment, consisting of picture hanger, dust rag holder, and suspend-	500.155
Brush holder, L. L. Solem. Burglar alarm, T. H. Storts.	592,838 593,136
Burner. See Vapor burner. Button cleaning shield, metal, W. A. Valentine	593,176 592,894
Button drilling machine, J. S. Tarr	593,061 593,024 593,003
Cable bending appliance, F. E. Leonard	592,972 593,053
Cameras, multiplying attachment for photo-	593,121 593,010
Can holder for condensed milk cans, etc., W. E. S. Crane	592,934 593,044
Can opener, J. E. Youngblood	593,044 592,945 593,111 592,861
Car coupling, G. H. Lippmann	592,861 592,957 593,183 592,876
Car coupling, W. Stenger Car coupling, J. Timms	592,892 592,977 592,885
Car draught beam attachment, railway, M. J.	592,885 593,0 <b>9</b> 7
Car draught beam attachment, railway, M. J. Hoey. Car fender, T. H. Campbell. Car fender, W. R. Forbes. Car fender, H. W. Weiss. Car hand strap, Savage & Taylor. Car, railway, J. G. Lawler. Car, single rail railway, F. W. Dunton Car window, S. H. Boltz. Cars, electric mover for street, C. E. Emery. Cars, electric mover for street, C. Cars, estatchment for street	592,950 593,014 593,137
Car fender, H. W. Weiss. Car hand strap, Savage & Taylor	593,142 592,919
Car, rainway, J. Car wier	592,866 592,980
Cars, electric mosor for street, C. E. Emery Cars, switch operating attachment for street railway E. J. Bullock	592,965 592,862
Carousel, T. D. Holcomb. Carousel, A. Koehler.	592,870 593,177
Case. See Ticket case. Casket, H. T. Loomis.	592,799
Chair. See Revolving chair. Rocking chair. Chair, J. B. White	593,038 593,043
Chandelier attachment, F. Fisher. Checkrein holder, Gano & Stimmel. Cheese cutter. E. D. McLaughlin	592,771 593,048 592,817
Chimney and reflector therefor, O. Herrmann Chopper. See Cotton chopper. Chuck contering drill M. Johnson	593,096
Churn, S. T. Muffly Churn, J. J. Ryan, Churn Porton Starles & Spake	592,812 592,999
Car window, S. H. Boltz. Cars, electric moder for street, C. E. Emery. Cars, switch operating attachment for street railway, E. L. Bullock. Carousel, T. D. Holcomb. Carousel, A. Koehler. Carrier. See Parcel carrier. Case. See Ticket case. Casket, H. T. Loomis. Chair. See Revolving chair. Rocking chair. Chair, J. B. White. Chair mirror attachment, Cochran & Banks. Chandelier attachment, Checkrein holder, Gano & Stimmel. Cheese cutter, E. D. McLaughlin. Chimney and reflector therefor, O. Herrmann. Chopper. See Cotton chopper. Chuck, centering drill, M. Johnson. Churn, S. T. Muffly. Churn, J. J. Ryan. Churn motor, Staples & Spake. Cigarette machine, J. S. Detrick. Cigarette machine, J. S. Detrick. Cigarette machine, G. Geer. Circuit breaker, electromagnetic, Spruance & Waddell. Clamb. See Jeweler's clamp. Wire clap.	592,964 593,158
Waddell	593,167
Clothes drier, J. J. Bisel	592,770 592,079 592,969
Waddell Clamp. See Jeweler's clamp. Wire cla p. Clipper, har, P. Faracchio. Clothes drier, J. J. Bisel Clothes line support, W. R. Hanretty. Clothes pounder, W. R. Allen Coal, ore, etc machine for handling, R. Thew Coffee roasting apparatus, J. R. Okell Coin actuated apparatus, Alexander & Thompson	593,073 593,062 593,163
Coin actuated apparatus, Alexander & Thomp- Son	. 593,152 . 593,131
Compound engine, A. J. Pitkin	592,823 592,824
machine for, G. W. Huber.  Cooler. See Liquid cooler.  Corpor strip for buildings F. Woods	593,100
Cotton chopper, W. H. Taylor. Coupling. See Car coupling. Hose coupling. In-	593,002
tongue coupling. Steam and air brake coupling. Thill coupling. Windmill coupling.	f100 701
Crate, coll apsible, W. F. Wilson	592,944 593,022
Cream separator, centrifugal, E. G. N. Salenius. Cu ltivator, interchangeable, J. C. Nelson	593,180 593,032 592,818
Curtin and shade holder, window, J. H. Warner Curtin and shade holder, window, J. H. Warner Curt in rug. J. W. Leslie.	593,050 592,846 592,795
Cone rossung apparatus, J. R. Okeli. Coin actuated apparatus, C. Spiro. Son Coin controlled apparatus, C. Spiro. Compound engine, A. J. Pitkin. Compound engine, Pitkin & Sague. Cooler. See Liquid cooler. Corner strip for buildings, F. Woods. Cotton chopper, W. H. Taylor. Coupling. See Car coupling. Hose coupling. Insulating coupling. Pipe coupling. Shaft or tongue coupling. Steam and air brake coupling. Thill coupling. Windmill coupling. Cowl. A. Kuhn. Crate, collapsible, W. F. Wilson Crate, collapsible, W. F. Wilson Crate, packing or shipping, C. D. Naramor Crate, pack	
cutter. Cutter and grater, combined, E. E. Keller. Cutter head with self clearing bit, J. Kuehnle Cycle handle, L. M. Miller. Cycle stand and home trainer, H. T. Kingsbury. Damper, oven, A. A. Knights. Darning apparatus, E. C. Hunt. Digester, E. Meurer. Display apparatus for carpets, etc., S. Shillito Door securer, C. S. Whipple. Drier. See Clothes drier. Drier for 'grinted Sheets of paper, R. A. Freeman	. 593,(152 592,790 593 189
Cycle stand and home trainer, H. T. Kingsbury. Damper, oven, A. A. Knights.	. 593,105 . 592,789
Dental electrode, F. L. Morhard. Digester, E. Meurer.	. 592,878 . 592,875
Display apparatus for carpets, etc., S. Shillito Door securer, C. S. Whipple Drier. See Clothes drier.	592,854
D-111 G-1 M-142-1- 4-111	
Drill, C. D. Cutts. Dumb bell, J. N. Maingot. Electric battery, A. D. Wheeler. Electric conductor and connection and support therefor, W. McElroy. Electric currents, distribution board for, H. W. Shonnard.	. 593,056 . 592,858
therefor, W. McElroy.  Electric currents, distribution board for, H. W.	592,815
Electric diaphragm, N. Marchal Electric generator, chemical, H. K. Hess	. 592,889 . 592,882 592,782
Shonnard. Electric diaphragm, N. Marchal Electric generator, chemical, H. K. Hess. Electric fight fixture. F. B. Mason. Electrical transformer, N. Tesla. Electrically treating diseases, apparatus for, H. E. Waite. Electroytic apparatus. E. Motz.	592,805 . 5 3,138
E. Waite. Electrolytic apparatus, E. Motz.	. 592,844 . 592,973
Elevator, A. W. Cassady. Elevator attachment, L. Anderson.	. 592,982 . 592,756 . 593,772
Elevators, automatic device for operating hatch	. 593,772 1 592,933
Engine. See Compound engine. Gas engine Gas or oil motor engine. Rotary engine. Engine igniter. gas. F. C. Olin	. 592,881
Electrically treating diseases, apparatus for, if E. Waite Electrolytic apparatus, E. Motz Elevator. See Liquid elevator. Elevator attachment, I. Anderson Elevator attachment, I. Anderson Elevator safety catch, M. Fodor Elevators, automatic device for operating hatch covers for, H. Mattullath Engine. See Compound engine. Gas engine Gas or oil motor engine. Rotary engine. Engine igniter, gas, F. C. Olin Engraving machine, H. C. Schrader Eye shade, W. S. Bevan Fabrica, composition for renovating black, W. H	. 592,920 . 593,077
Isham	. 592,956 . 592,960 592,865
Normand etal	. 393,113
Felts or Wires, automatic guide for, J. E. Wether	. 092,714
bee Fence machine, wire, F. C. Noland Fence post, R. B. Robbins Fence tool, wire, G. P. Smith. Fence wire ratchet, W. H. Linton. Fender. See Car fender. Fortilizer distributor or seed planter A. R. El	. 592,114 . 592,997 . 592,836
Fence wire ratchet, W. H. Linton	. 592,798
more	* roo no*

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File or rasp, O. Olson.
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Firing pin, universal, F. H. Tichenor.
Flanging machine, E. Einfeldt.
Fluid distribution system, D. H. Maury, Jr..
Fluid pressure regulator, J. M. Foster.

(Continued on page 317)

592,921

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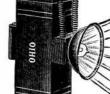




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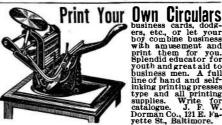


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