

## RECENTLY PATENTED INVENTIONS.

## Mechanical Devices.

**CRANE.**—LEONARD S. FLECKENSTEIN, Easton, Md. The inventor has devised an improvement in cranes which rotate around a central axis and are provided with means for throwing the constantly-running power mechanism into and out of action by means of a hand-lever. The upper crane-post is provided with a bearing which is also a bearing for the drive-shaft. By reason of this arrangement the driven shaft, ordinarily arranged in the center of the post, can be more easily set and kept vertical. The inventor has further combined in one simple mechanism, means for governing the hoisting when the power is applied, and means for utilizing the ordinary hand-chain whenever desired.

**SEPARATOR.**—JENS ANDERSON, Walla Walla, Wash. The separator is a grain-separator in which a shaking-screen and a blast of air are conjointly used. The grain, fed upon top sieves, is sifted through. The chaff and other impurities are blown off into caps and out through fan-boxes, the grain undergoing a continual sifting as it gravitates from one sieve to the other. The grain finally passes into troughs, and then, if desired, onto chute-boards, according to the adjustments of the parts of the apparatus. These adjustments depend upon the character of the material which is treated, and the kind of separation desired.

**VENDING-MACHINE.**—FALDO DI MARCO, Bronx, New York city. The vending-machine is designed to sell two kinds of goods. In the machine but a single handle is employed, by the rotation of which to the left or to the right the machine is made to deliver one or the other kind of goods.

## Vehicles and Their Accessories.

**HAND-TRUCK.**—SAMUEL C. B. HEISS and GEORGE RICARDO, Hackensack, N. J. The inventor provides a new hand-truck having roller-bearings to insure light draft and to give long life to the parts. The wheels and the roller-bearings can be very cheaply constructed and the several parts readily assembled, so that the cost of the truck is not materially increased over that of the ordinary hand-truck now in use.

**PNEUMATIC SPRING FOR VEHICLES.**—WILLIAM W. HUMPHREYS, Sheffield, Ill. The simple and effective pneumatic springs devised by the inventor are of cushion form and are supported on the running-gears of a vehicle and in turn support the vehicle body, such springs being designed to absorb the shocks sustained by the vehicle. The elastic cushions are of elongated form, and are inflatable.

**TRUCK.**—ROBERT S. SCHOELCH, Shelbyville, Ind. The hand-truck has two sections pivotally connected together. The sections are arranged one above the other. The lower section carries an axle provided with wheels. The axle itself is located at the front part of the truck; and a strut is attached to the upper section in position to engage the axle so as to limit the forward movement of the upper section. Heavy objects can be more easily handled with this truck than has hitherto been possible.

## Railway Appliances.

**TELLTALE FOR RAIL-BONDS.**—JAMES A. EMERY, Atlanta, Ga. The invention relates to telltales for bonds or electrical connections between rails of electric railways. It is the practice to place the bonds of joints between the fish-plates and the rails, so that they are often entirely hidden, and so that it is therefore necessary to remove a fish-plate or a number of fish-plates before the bond can be located. By means of this telltale, the presence of every bond in a new track can be absolutely ascertained.

## Miscellaneous.

**ATTACHMENT FOR MITER-BOXES.**—WILLIAM POTTER, Manhattan, New York city. This simple attachment is adapted to guide and fix the angle of a saw when miters are to be cut. A perfect miter-box can be obtained by attaching the tool to the upright sections of two boards secured at right angles to each other, the tool spanning a cut in the upright section of the box. A simple means is provided whereby the guides for the saw can be locked at any angle to a perpendicular line, thus permitting the tool to be used for the accurate cutting of miters of different degrees of inclination.

**BELT-STRAP.**—ARTHUR D. THOMAS and IRVING R. PIERSON, Manhattan, New York city. The purpose of this invention is to provide a belt-strap which can be readily attached to or detached from the trousers. The end portions of the strap are turned inwardly under the main or middle portion of the strap and parallel therewith. Removable fastening devices secure the ends of the strap to the trousers, these fastening devices being covered and hidden by the middle portion of the strap.

**BOWLING-BALL.**—ARTHUR B. PICKETT, Union City, Ohio. Bowling-balls are ordinarily made of wood, composition, or other material or covered with rubber and have their finger-holes lined with a bushing or sleeve of hard or elastic material. Such balls are liable to chip at the bushing; thus rendering

the ball useless. The present invention provides a ball having a bushing of a non-elastic material and an interposed bushing of elastic material between the walls of the socket and the outer wall of the inner lining. The elastic bushing thus provided protects the edge of the finger-hole so that breaking or splitting of the ball is, to a large extent, avoided.

**CABINET-CASE FOR MERCHANDISE.**—ALBERT R. BROWN, Erwin, Tenn. The cabinet-case holds bolts, screws, and other small articles. The case has as great a capacity as possible, considering the space occupied. Drawers of varying sizes are provided for the different goods, or the different sizes of the same kind of goods. When removed the drawers can be returned only in their proper places. Longer drawers can be used than is possible with other cases.

**COMPOUND FOR POULTICES, ETC.**—CHARLES M. FORD, Box 152, Denver, Col. Most pathogenic processes depend to a great extent upon the presence of water, the removal of which, in many cases, promotes the cure of the diseased parts. This compound is designed to absorb the watery secretions, and has, moreover, valuable anodyne and antiseptic qualities.

**PENCIL-SHARPENER.**—MICHAEL S. FORTUNATI, Brooklyn, New York city. The device is so constructed that the blade is located over a reservoir and that the shavings from the pencil are received therein. A file or rough surface is provided independent of the sharpener, by which the lead is pointed.

**DUMB-WAITER.**—EMMIT W. VAN FLEET, Galena, Ohio. The dumb-waiter is to be used in private houses as well as in hotels, restaurants, etc. To a floor having a hatch a guide-frame is secured. In the frame the dumb-waiter runs. A box-like inclosure is provided for the dumb-waiter, which inclosure completely surrounds the dumb-waiter and thus normally excludes the outer air. The inclosure is suspended over the frame but is fixed in position and provided with doors for access to the dumb-waiter. A refrigerating-chamber is also provided.

**AUXILIARY VALVE FOR HYDRANTS.**—WILLIAM H. BAKER, Trenton, N. J. It has been customary in fire-plugs to run the feed-pipe from the supply main in the street directly to the plug without any stop-valve in the feed-pipe. In order to repair the fire-plug or hydrant it was necessary to turn off the water at the intersection of adjacent streets, thus shutting off the water for a block around. The defect has been partially overcome by the insertion of a key-valve in the street between the supply main and the plug, which key-valve is contained in a valve-box built up to the surface of the street. This valve-box is an eyesore and must be frequently repaired. By the auxiliary valve forming the subject of this invention all these defects are obviated.

**NOZZLE.**—THOMAS F. BURKE, Riverdale, Bronx, New York city. This nozzle can be applied to any hose and is especially adapted to be carried by a fireman as he enters a burning building. When the hose to which the nozzle is attached, is connected with the force-pump of an engine, and air is supplied through the nozzle by the pump, the nozzle will distribute the air in the compartment entered by the fireman and will force the smoke away so as to permit him to breathe.

**DENTISTRY.**—DANIEL P. TANCO, Kingston, Jamaica. This invention relates to a system of dentistry in which the false teeth are fastened in place by purely mechanical means. A bridge-piece is employed having openings through which are projected the headed pins attached to the teeth, and these headed pins are held in place by locking-pins, which are engaged with the pins and fastened to the bridge, thus preventing the displacement of the teeth.

**LOOSE-LEAF BINDER.**—ROBERT G. WOODWARD, Manhattan, New York city. The binder comprises a hollow back open at the front. Posts within the back are adapted to be engaged by slots in the leaves to be inserted. A clamping device within the back, clamps the leaves, the clamping device being mounted to slide on the posts. An actuating mechanism opens and closes the clamping device, which mechanism comprises screw-roads journaled in the hollow back, a shaft under the control of the operator, and a gearing connecting the shaft with the screw-roads in order simultaneously to rotate the screw-roads upon turning the shaft. The clamping device can be very quickly opened and closed to receive the loose leaves.

## Designs.

**SADDLE-TREE HORN.**—HENRY C. STEEL, Nashville, Tenn. The saddle-tree-horn is of the type used by ranchmen in the West for carrying lariats, and is provided with special means for securing the horn to the saddle proper.

**PEN AND PENCIL-HOLDER.**—EUGENE S. DEVLIN, Port Richmond, Richmond, New York city. The leading feature of the design is an open-ring body, the terminals of which cross each other and are bowed in opposite directions to form an oval space.

**NOTE.**—Copies of any of these patents will 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.

## Business and Personal Wants.

**READ THIS COLUMN CAREFULLY.**—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send your name and address to the party desiring the information. In every case it is necessary to give the number of the inquiry. **MUNN & CO.**

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**Inquiry No. 666.**—For manufacturers of stereotyping outfits and novelties.

"C. S." Metal Polish. Indianapolis. Samples free.

**Inquiry No. 667.**—For manufacturers of dog powers.

**WATER WHEELS.** Alcott & Co., Mt. Holly, N. J.

**Inquiry No. 668.**—For manufacturers of aluminum articles.

**Yankee Notions.** Waterbury Button Co., Waterbury, Ct.

**Inquiry No. 669.**—For manufacturers of pipe wrenches.

**Turbines.**—James Leffel & Co., Springfield, Ohio, U.S.A.

**Inquiry No. 670.**—For manufacturers of carriages.

**Dies & Special Machinery.** Amer. Hdw. Mfg. Co., Ottawa, Ill.

**Inquiry No. 671.**—For manufacturers of brick presses.

**Handle & Spoke Mch.** Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

**Inquiry No. 672.**—For manufacturers of chair bottoms.

**Sheet Metal Stamping:** difficult forms a specialty. The Crosby Company, Buffalo, N. Y.

**Inquiry No. 673.**—For parties to manufacture an iron batter mixer.

**Sawmill machinery and outfits** manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.

**Inquiry No. 674.**—For machines for cutting green corn for canneries.

**Rigs that Run.** Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo.

**Inquiry No. 675.**—For parties to manufacture a backband buckle.

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**Ten days' trial** given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city.

**Inquiry No. 677.**—For manufacturers of special bevel gears.

**SAWMILLS.**—With variable friction feed. Send for Catalogue B. Geo. S. Comstock, Mechanicsburg, Pa.

**Inquiry No. 678.**—For manufacturers of one-leaf single piece tapered carriage springs.

**Kester Electric Mfg Co's.** Self-fluxing solder saves labor, strong non-corrosive joints, without acid, Chicago, Ill.

**Inquiry No. 679.**—For manufacturers of machines for making wood pins for telegraph and telephone purposes.

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**Inquiry No. 680.**—For nozzles for feeding steam boilers with crude petroleum as fuel.

**FOR SALE.**—A Winton motor for 1900; run less than one thousand miles. A. Ward Chamberlin, 57 West 66th Street, New York.

**Inquiry No. 681.**—For manufacturers of armature disks.

**For Sale.** Foundry and Machine Shop, doing a good business, in a fine locality, at a great sacrifice. Address Foundry, Box 773, New York.

**Inquiry No. 682.**—For speed indicators for automobiles.

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.

**Inquiry No. 683.**—For manufacturers of expansion bolts.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4. Munn & Co., publishers, 361 Broadway, N. Y.

**Inquiry No. 684.**—For manufacturers of small motors.

**Sheet Metal Novelties, Articles and Stampings** of all sizes. Tools and dies manufactured on contract. Address Standard Stamping Co., Cor. 7th & Hudson Sts., Buffalo, N. Y. U. S. A.

**Inquiry No. 685.**—For manufacturers of oil well boring outfits.

**WANTED.**—A young energetic man, who is familiar with the construction and making of Gas Engines. State experience, salary expected and references. C. J. W., Box 773, N. Y.

**Inquiry No. 686.**—For machinery for finishing and polishing "Mrs. Pott's" sad irons.

**WANTED.**—Competent foreman for draughting room. State full particulars as to present employment, experience, etc. Address J. M. Birmingham, Supt. Columbia Bicycle Factory, Hartford, Conn.

**Inquiry No. 687.**—Wanted at once about 250 feet second-hand wire rope or cable for guy rods  $\frac{1}{2}$  to  $\frac{3}{4}$  inch.

**FOR SALE.**—United States Patent No. 563,627. Envelope printing or addressing press. This valuable patent can be secured at a very low figure. Address E. J. Decker Co., 30 South Clinton St., Chicago, Ill.

**Inquiry No. 688.**—For wholesale dealers in photo jewelry supplies.

**WANTED.**—Shop Manager. An experienced, thoroughly competent and trustworthy man as office manager, cashier, etc. Moderate salary with opportunity for advancement. Address with full particulars, experience, age, salary now received, etc., Cashier, Box 773, N. Y.

**Inquiry No. 689.**—For lathes for making match splits and toothpicks.

**WANTED.**—Assistant to Superintendent. Bright young man, technical graduate, as assistant to superintendent in manufacturing plant. Light machinery. Must be agreeable, thorough, painstaking and moderate in expectations. Address in full detail, Assistant, Box 773, N. Y.

**Inquiry No. 690.**—For the present address of the manufacturer of the "Baltimore Jobber."

**WANTED.**—Assistant Superintendent. An assistant superintendent or chief foreman in the manufacture of light machinery. Good shop and agreeable surroundings. Must be young, experienced and progressive. Give full particulars, age, present compensation, etc. Address Progressive, Box 773, N. Y.

**Inquiry No. 691.**—For manufacturers of water meters.

**WANTED.**—Shop Superintendent. A thoroughly capable man in good shop manufacturing a regular line of light machinery. Must possess all-around qualifications and be a business superintendent rather than a technical one. Moderate compensation and permanency. Address with full detail, salary expected, etc., Superintendent, Box 773, N. Y.

**Inquiry No. 692.**—For parties to make sprocket wheels to order.

**WANTED.**—Assistant Superintendent. An assistant superintendent or chief foreman in a model new plant. Must be experienced in light engine work and preferably electrical and pumping machinery as well. Must be well informed, progressive and capable of handling men successfully. Address fully, stating age, compensation expected, etc., Machinery, Box 773, N. Y.

**Inquiry No. 693.**—For manufacturers of hay baling presses.

**WANTED.**—Sales Manager. Engines, power plants, etc. An educated, agreeable, progressive man, familiar with power trade and conditions, steam and electrical, capable of catalogue composition and fulfilling general sales requirements, desiring to ally himself with a new concern where demonstrated worth will count to his future advantage. A good opportunity for the right man. Address in confidence, giving full qualifications, salary received and expected, Sales, Box 773, N. Y.

**Inquiry No. 694.**—For manufacturers of burners for acetylene gas.

**WANTED.**—To purchase articles adapted to the mail-order business. Must have merit; must be cheap. Give full particulars. Room 546, No. 11 Broadway, New York.

**Inquiry No. 695.**—For welding furnaces adapted for dropping shears.

**Inquiry No. 696.**—For jappanning ovens adapted for jappanning shears.

**Inquiry No. 697.**—For manufacturers of toilet articles for the silverware trade, such as nail files, button hooks, curling irons, etc.

**Inquiry No. 698.**—For manufacturers of wooden outer dishes and wood and paper pie plates.

**Inquiry No. 699.**—Wanted to purchase from some plant that has gone out of business cabinet workers' benches and factory trucks.

**Inquiry No. 700.**—For manufacturers of thermostats.

**Inquiry No. 701.**—For parties willing to manufacture small electrical device composed entirely of fiber and brass.

**Inquiry No. 702.**—For steel punches for making embossed plates of medals, such as are used on cigar box labels.

**Inquiry No. 703.**—For device for placing over the nose to prevent dust.

**Inquiry No. 704.**—For striping wheels for use in carriage painting.

**Inquiry No. 705.**—For competent engineers and designers to make a set of drawings from which to build a fore and aft compound engine.

**Inquiry No. 706.**—For an automobile for carrying about eight passengers.

**Inquiry No. 707.**—For parties to make a bottle towel holder.

**Inquiry No. 708.**—For manufacturers outside of the trust who can lithograph tin plates.

**Inquiry No. 709.**—For manufacturers who can furnish full equipment for making small boxes and tin cans.

**Inquiry No. 710.**—For dealers in steel 16 and 17 gage of different lengths and widths.

**Inquiry No. 711.**—For manufacturers of novelties for the mail order business.

**Inquiry No. 712.**—For dealers in second-hand gasoline engines of 2 to 4 h. p.

**Inquiry No. 713.**—For manufacturers of carpet cleaning machinery.

**Inquiry No. 714.**—For parties in compressing coal dust into brick form for fuel purposes.

## Notes &amp; 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.

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**Books** referred to promptly supplied on receipt of price.

**Minerals** sent for examination should be distinctly marked or labeled.

(8187) W. B. Y. asks: How is the horse power of an electric engine found? A. The power of an electric motor is calculated for the watts in its output of current. A watt is the unit of electrical power, and is produced by one ampere working at a pressure of one volt. Of these 746 are equal to one horse power, or 33,000 foot-pounds per minute. If you would measure the electrical horse power of any motor, measure the voltage and the number of amperes flowing. Multiply these together and divide the product by 746. This gives the horse power at the brushes.

(8188) B. M. asks: Up to what distance can the induction coil described in "Experimental Science" be used as a transmitter for wireless telegraphy? What size should the balls of the oscillator be? A. We cannot say definitely to what distance the induction coil to which you refer can transmit signals, but suppose that it should work at a distance of several miles. The balls used are about four inches in diameter.

(8189) C. R. H. asks: 1. What would be the best for the brushes on a Wimshurst machine with two glasses, sixteen inches in diameter? A. Tinsel such as is used for gilt embroidery, only be careful to get that which

is made of metal and not of paper. 2. How long a spark should such a machine give when the electrode? A. About six inches. 3. How many pounds pressure to the square inch should you have in a three horse power gasoline engine to be able to get it to start? A. The gasoline engine should turn over with from 10 to 15 pounds pressure. If you start it with an explosion, you may have from 100 to 200 pounds pressure per square inch.

(8190) S. A. S. asks: 1. When magnetic storms on the earth cause electric currents to flow over telegraph wires, in what direction do the currents flow, from north to south, south to north, east to west, or west to east, and do the currents always flow in the same direction? A. The idea of direction in an electric current is wholly conventional. We say it flows from positive to negative as a convenience. No one knows in which direction it does flow. It is just as likely that it flows the other way, from negative to positive. The same is true of lightning. It may descend from the clouds to the earth or ascend, for all that we can see or know. When magnetic storms prevail it is not possible to ascribe direction to the force which works a telegraph instrument. 2. What is the average potential, and strength of current, or do such currents vary greatly in strength? A. In a magnetic storm the effect of the change of magnetic intensity is to produce an electric current in the wires of a telegraph or telephone circuit, which may be strong enough to enable messages to be sent without a battery. We have no figures of their potential at hand. The potential of the air fluctuates several hundred volts either way, and when a thunderstorm is approaching, it changes rapidly and capriciously, even reversing its sign in a few minutes. Current from such potential is a very minute quantity. 3. What is the duration of such currents? A. These phenomena may last for hours, or for a few minutes only. 4. About what is the electrical resistance of the human body? A. Anything up to perhaps 5,000 ohms, varying with the person and his condition. Under any moderate voltage the current strength which can flow through a person is very little. 5. About what strength of current is necessary to give a person a moderate shock? A. It is the voltage which determines the shock. A pressure of 100 volts will give a slight pricking sensation; 200 will be disagreeable; 500 may be dangerous; while anything above is very likely to be fatal.

(8191) E. M. J. asks: I have some hard rubber slides to photographic plate holders. I want to etch a part of the surface so as to be able to write upon it with a lead pencil and to erase the same. Can you tell me how to do it in your column? A. Rubbing the surface with fine emery paper will form a matt surface which will take a pencil mark.

(8192) D. E. G. asks: I have a 500-volt current, with which I wish to run one strong arc light. Could you advise me, in the next issue of your valuable paper, how to do this? A. Your 500 volts will suffice for 10 arc lights, and if you use it for one the remaining 450 volts above what one lamp can use must be disposed of in a rheostat. You will require about 2,200 feet of No. 12 B. & S. German silver wire for such a rheostat.

(8193) F. C. H. writes: Near here two telephone lines cross, and what is said over one can be heard on the other line. Please tell me whether the speech is transmitted through the air or through the ground. A. The electric waves act from one line across the other through the air, in the same manner as the waves are transmitted in wireless telegraphy. It is called "cross talk," and is remedied by a metallic return wire, twisted around the other wire of its own circuit.

## INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending May 14, 1901, AND EACH BEARING THAT DATE.

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

Adding machine, P. Hubert.....	674,267
Advertising device or toy, C. Lechtman.....	673,959
Alkali cyanides, making, C. Moldenbauer.....	673,962
Alkaline amides, making, Ewen & Pfleger.....	674,295
Amalgamating and concentrating apparatus, J. H. Lancaster.....	674,299
Ankle and arch support, combined, M. Mitchell.....	674,066
Ash ejector, H. See.....	674,021
Autograph recorder, R. P. Link.....	674,209
Automatic lubricator, H. W. Simms.....	674,126
Automatic switch, D. A. & J. W. Duff.....	674,236
Automobile boiler burner, F. A. Reynolds.....	673,961
Baking preparation, W. D. Patten.....	674,140
Balance, automatic letter, J. C. de Janisch.....	674,206
Bailing press, J. W. Rakestraw.....	674,039
Battery cell, E. Tiquet.....	674,106
Bearing dust protector, bicycle, J. E. Ragsdale.....	674,015
Bearing, roller, J. A. Perkins.....	674,122
Bed brace, J. D. King.....	674,241
Bed or couch, C. H. Foster.....	673,945
Bedstead fastening, Gilham & Souder.....	673,947
Belt, A. I. Deming.....	673,979
Benzaldehyde, making nitro and chlor, Oppermann & Fette.....	673,887
Bicycle attachment, Eastman & Sayer.....	674,082
Bicycle brake, M. L. Nichols.....	674,279
Binder for loose ledger leaves, E. Axthelm.....	674,152
Blank and blank book, shipping, G. E. Felch.....	674,058
Boiler circulation, R. Knappick.....	674,270
Bolt cutter and nut splitter, A. Hoak.....	674,088
Bolting or separating machine, R. A. Stubbs.....	674,286
Bottle, Lillard & Walker.....	674,172
Bottle, measuring and registering, L. R. Winnebock.....	674,230

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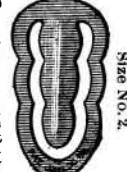
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LONDON, E. C., 10-12 Broad St.

Bottle, non-refillable, C. D. Leonard.....	673,915
Bottle, non-refillable, J. J. Pollock.....	674,250
Bottles, etc., detector device for, E. J. Brown.....	674,053
Brake beam, metallic, T. M. Bell.....	674,255
Brake operating device, C. W. Betz.....	673,894
Brake system, accelerating, F. Burger.....	673,975
Brick carrier, J. H. Zirkel.....	673,937
Brick kiln, J. C. Boss.....	673,896
Brick or tile covering for beams, B. Jacquart.....	674,089
Brick ring, nose, L. H. Saxton.....	674,285
Bridge, bascule, J. W. Page.....	673,923
Bridge, E. R. Wethered.....	674,048
Brooder, J. von der Kammer.....	674,090
Brush, hair, R. J. Montgomery.....	674,120
Bundling apparatus, Wisburn & Buhle.....	674,148
Bung extractor, J. Cathriner.....	674,133
Butter making device, R. K. Emily.....	674,200
Button, detachable, A. Johnson.....	674,006
Calculating device, C. S. Labofish.....	673,877
Cane and umbrella, combined, R. Waples, Jr.....	674,288
Canteen, A. Hobercht.....	673,954
Caoutchouc, apparatus for vulcanizing articles of, H. Hamet.....	674,000
Car, convertible dump, S. Hart.....	674,087
Car coupling, M. J. Carter.....	673,898
Car coupling, D. W. Alderman.....	673,938
Car doors, operating gear for hopper bottom, J. Simonton.....	674,223
Car fender, A. W. Lindsey.....	674,340
Car, freight, A. Hager.....	674,357
Car replacer, A. J. Michel.....	673,883
Car side bearing, railway, E. Cliff.....	673,998
Car step extension, H. A. Paquette.....	674,249
Car step, railway, J. A. Kratz.....	674,033
Carriage, child's, A. Woodward.....	674,349
Carriage, compressed air locomotive, J. T. F. Conti.....	673,978
Carriage spring, S. R. Bailey.....	673,994
Case or cabinet, A. G. Clappitt.....	673,976
Casting apparatus, ingot, A. J. Lustig.....	674,341
Casting sockets for mortises, chill for, G. M. Clark.....	673,899
Cattle unbiting and door opening device, Dry & Kutz.....	674,081
Cement pipes, method of and manufacture of, C. J. Kiehlberg.....	674,296
Cereals, preparation of rye or like, A. Bardet.....	673,995
Chain wrench, W. H. Brock.....	674,194
Chimney cap, S. N. Le Count.....	674,360
Chisel tip cutter, C. W. B. Molony.....	674,212
Clamping device, G. N. Paiser et al.....	674,215
Clock winding mechanism, electric, V. Odquist.....	674,280
Closet traps, soil pipes, etc., appliance for removing obstructions from, A. T. Cooper.....	674,197
Cloth doubling machine, J. E. Windle.....	674,229
Clothes drier, W. E. Knapp.....	674,310
Clothes line, reel, portable, P. Johnson.....	674,271
Clutch, E. M. Phillips.....	673,907
Clutch, friction, H. A. Hecker.....	673,924
Coke oven, regenerative, F. W. C. Schnie-wind.....	673,928
Color changing and signaling device, Baker & Fox.....	673,893
Column, J. A. Ohman.....	674,304
Comb cleaner, T. J. Aurand.....	674,111
Compressing fibrous or other material, apparatus for, J. T. Cowley.....	673,860
Condensing rig, S. Orr.....	674,214
Condenser and aerator, combined steam, A. Hobercht.....	673,984
Conveyer, F. C. Durant.....	674,353
Conveying apparatus, E. N. Trump.....	674,346
Counter, boring & chitwood.....	674,158
Counter shaft, S. W. Wardwell.....	674,326
Cover for vessels, removable, J. & W. B. Lang.....	673,957
Cream whipping machine, P. Montani.....	674,174
Crematory, refuse, W. Risley.....	674,319
Cultivator replanter attachment, J. W. Gronewold.....	674,205
Current motor, polyphase alternating, B. G. Lamme.....	673,911
Currycomb, E. G. Kubler.....	673,876
Currycomb, C. H. Obey.....	674,038
Currycomb and handle therefor, T. J. Peters.....	674,306
Curtain, fixer, A. Harris.....	673,870
Cuspidor for railway cars, C. H. Kenney.....	673,986
Cycle, G. Rusconi-Clerici.....	674,196
Cycle saddle, A. Cuthbert.....	674,199
Dispensing apparatus, J. H. Nolan.....	673,922
Display rack, C. H. Snively.....	674,069
Ditch stop, E. M. Johnson.....	674,314
Doubletree, W. E. Lawhorn.....	673,879
Draft bar construction for rolling stock, W. E. Wilder.....	674,328
Draft equalizer, S. C. Anderson.....	674,252
Draining device, S. H. Bolling.....	674,192
Drier, J. Waterhouse.....	674,309
Drum, heating, Horsley & Rountree.....	673,905
Dye and making same, brown, G. Link.....	674,137
Ear muff, C. M. Knight.....	674,272
Easel support, R. Hartman.....	673,904
Egg carrier, D. B. Replogle.....	674,123
Electric battery, D. H. Darling, Jr.....	673,900
Electric cabinet, J. D. Gonchar.....	673,903
Electric heater, C. Robinson.....	674,124
Electric lighting system, A. J. Wurtz.....	673,935
Electric switch, Chesney & Smith.....	674,076
Electric switch, J. C. de Janisch.....	674,207
Electrical conductor, asymmetrical, L. W. Hildburgh.....	673,952
Electrical contact device, M. Robinson.....	674,018
Electrical distribution system, B. G. Lamme.....	673,912
Electromagnetic motor, L. H. Eschbach.....	673,980
Electromedical battery, coin controlled, J. G. Hartman.....	674,336
Elevator. See Inclined elevator.	
Elevator and dump, combined, J. S. Healea.....	674,238
Embroidering machine work carrier, W. N. Parkes.....	674,014
Embroidery needle book and skein holder, art, M. P. Quinn.....	674,307
End gate, wagon, F. F. Sebring.....	674,320
Engine, N. Verret.....	674,047
Engines, electric igniter for explosive, W. G. Stolz.....	674,030
Engines, mixer and vaporizer for gas, J. Eckhard.....	673,901
Engines, sparks for gas, J. G. Snyder.....	674,027
Envelop, M. H. Jones.....	674,007
Envelop, mailing, W. C. Dunn.....	673,864
Evaporator, E. M. Bellinger.....	673,972
Excavating machine, J. H. McKee.....	673,920
Excelsior making machine, E. J. Stewart.....	674,070
Exhibiting advertisements, etc., apparatus for, J. Schiele.....	674,020
Exhibiting device, C. E. Lucke.....	674,211
Expansion bolt, D. W. Bennett.....	674,074
Explosive and making same, Blumen & Aspinwall.....	674,159
Explosives, making, Blumen & Aspinwall.....	674,292
Extractor. See Bung extractor.	
Eyeglasses or spectacles, G. F. Applegate.....	674,051
Fabric, J. A. Scharwath.....	674,219
Fan and motor, water actuated, H. C. Kennedy.....	674,167
Faucet for commingling fluids, A. A. Schratz.....	674,188
Faucet, self-closing, D. M. Bredin.....	673,897
Feed water heater, F. E. Kenney.....	674,339
Fence making machine, wire, J. M. Stucker.....	674,103
Fence post, W. A. Dickey.....	673,862
Fence post, L. H. Barry.....	674,221
Fence, rail and rider, R. E. Grant.....	674,204
Fertilizer distributor, E. C. Smith.....	674,186
Field roller and harrow, combined, C. S. Lehman.....	674,300
File cutting machine, A. Weed.....	674,144
Filling and weighing apparatus, F. J. Englen.....	674,201
Filter, oil, P. M. Knopp.....	674,063
Filtering system, J. C. Henderson.....	673,888
Firearm breech loading, C. A. Sachs.....	674,284
Fire escape, Curtis & Bolter.....	673,942
Fire hose reel, J. H. Sullivan.....	674,045
Fishing, waterproofed line used for, J. E. Hyde.....	673,955
Flood gate, W. Gruner.....	673,950
Flower holder, R. Kift.....	674,116
Flue scraper, L. Rollins.....	673,967
Fluid motor power registering mechanism, R. W. Eaton.....	674,311

(Continued on page 333)

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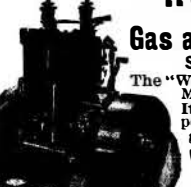
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