

RECENTLY PATENTED INVENTIONS.

Engineering Improvements.

CARBURETER FOR EXPLOSION-ENGINES.—HUBERT C. RAY, Visalia, Cal. The carbureter comprises an exhaust-heated carbureting-tank and engine-heated air-supply discharging beneath the oil in the carbureter. An engine-supply pipe connects the carbureter and engine. A combined oil-supply and surplus-gas condenser is also provided consisting of a tank having a pipe for conveying oil to the carbureter, and a pipe leading from the gas-space of the carbureter to beneath the oil-level in the supply-tank and provided with a safety-valve. With this carbureter crude oils can be used instead of refined petroleum or gasoline.

Mechanical Devices.

AUTOMATIC CAGE-REST.—MARTIN HORST, North Lawrence, Ohio. The object of the invention is to provide a new and improved cage-rest which is simple in construction and automatic in operation, moving instantly into an active position in order safely to support the cage at the top of a shaft or mine. The invention comprises supports for the cage and mechanism controlled by the cage and connected with the supports to hold the latter in open position in its ascent. The supports immediately move into a closed position when the cage has passed above them.

ELEVATOR.—PARLEY D. ROOT, Wakefield, R. I. Safety-doors for shafts have been devised, and a novel car which travels in the shaft. The doors at the floors of the shaft and the door in the elevator are independently mounted and yet so arranged that, while both sets of doors are closed, the car can freely pass up and down the shaft. When, however, the car is stopped at a floor and its door is opened, the door in the shaft at that floor will be simultaneously opened; for the two doors will at that time be brought into interlocking engagement, and one will operate with the other. The car cannot move up or down when a door is open.

CULINARY MASHER AND STRAINER.—RICHARD F. HAYES, Manhattan, New York city. This device can be attached to any suitable support, and by its means food can be quickly mashed and soups clarified. The device is so constructed that the sieves through which the material is to be pressed can be conveniently changed to suit the different conditions of material to be treated and that the device can be operated with the use of but one hand. The parts can be easily disconnected and cleaned.

TYPE-WRITER.—ROBERT J. MINER, Greenwich, Conn., and WILLIS E. MINER, Roselle, N. J. This machine is a typewriter for perforation, so that by the ordinary manipulation of the keys a stencil-sheet can be formed from which any desired number of copies can be taken by means of an inked roller, the ink being forced through the perforations to the paper beneath. The machine is therefore particularly useful in railway offices, where a large number of way-bills or the like are required. Either the stencil-type or the ordinary type for printing can be operated by a single bank of keys.

Miscellaneous Inventions.

GOLD-UNDERGLAZED CERAMIC DECORATION.—GEORGE W. TOOKER, 48 Murray Street, Manhattan, New York city. The purpose of this invention is to apply gold decoration to porcelain and glassware so that it will resist the action of alkaline and abrasive substances and will last as long almost as the article to which it is applied. On the china or glassware precipitate of gold is first applied. The article is then fired and the gold surfaces burnished. A glaze is then applied to the gold surfaces and the article again fired at a temperature lower than that of the previous firing. The glaze is now fused and the gold made a corporate part of the ware. The inventor states that the glaze is impervious to alkaline substances and proof against abrasion. This invention is applicable to the following: Household and fancy china, toilet ware, bath tubs, wash basins, water closets, tiling, false teeth, glass ware, etc.

FOUNTAIN-PEN.—CARL J. RENZ, Manhattan, New York city. The invention is so conceived that the pen can be partially or entirely drawn within or without the nozzle by means of a key at one end of the barrel, to vary or entirely cut off the flow of ink. An independent metal feed is employed as an upper or an under feed. The barrel is provided with a piston and stem, the latter having a screw connection with the barrel. The stem has a pen-carriage head which serves as a valve for the socket or nozzle, whereby when the piston is moved in one direction the ink is drawn by suction into the barrel from the pen, and when moved in another direction the ink is forced from the barrel to the pen.

Designs.

FLASK.—JEREMIAH QUINLAN, Manhattan, New York city. The design consists of a flask which in general contour and appearance resembles a shirt.

MARINE PROPELLER.—CARL RONDELL, Stillwater, Minn. The principal features of this design are, first, the arrangement of the radial propeller-blades in a spiral line around a cylindrical hub, and, secondly, the form of the blades, the same being concavo-convex and straight on their entering or cutting edges and convex on their opposite ones.

TEAPOT.—AUSTIN F. JACKSON, Taunton, Mass. This patent is for an ornamental design for a teapot, involving a scroll-work center piece, and floreated and foliated sprays, including daisies, wild roses, and a conventional rosebud.

SAW-SET AND GAGE.—LEWIS VALENTINE, Claquato, Wash. The device is particularly adapted for setting cross-cut saws. An oval handle is adapted to be held in the hand while supporting the device with three of its face projections against a saw-blade so that the fourth projection may gage the angle or lateral inclination of a saw-tooth, and also while the flat end of the device is held against a saw-tooth when the latter is struck with a hammer, for giving it more or less inclination.

NOTE.—Copies of any of these patents can be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

Business and Personal.

Marine Iron Works. Chicago. Catalogue free. For hoisting engines. J. S. Mundy, Newark, N. J. "U. S." Metal Polish. Indianapolis. Samples free. Yankee Notions. Waterbury Button Co., Waterbury, Ct. Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Book "Dies and Die-making," \$1, postpaid. J. L. Lucas, Bridgeport, Ct. Send for index sheet.

Gear Cutting of every description accurately done. The Garvin Machine Co., Spring and Varick Sts., N. Y.

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.

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.

Mexican Government Contracts, Concessions, Railways, Lands, Mines, Patents, etc. Address Ernesto Chavero, Attorney at Law, Member of the Mexican Federal Congress. 3d Colon 1020, P. O. Box 149, Mexico City, Mexico.

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

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.

(7985) R. N. T. writes: In my home I have two long distance telephones in series; one is a wall and the other a desk phone. When I wish to use my desk phone, I short-circuit the wall phone by means of a switch that I have before me, and I have observed that the mere act of closing that switch calls central. Can you tell me why? Because of the novelty connected with it and because of its convenience, I use the switch entirely, instead of the generator, for calling central. A. We suppose your telephones are always in connection electrically with the central office, so that the call bell may be rung when you are wanted. When you shift the switch over for the purpose of cutting out the wall instrument and cutting in the desk telephone, you break and make again the connection with the central office. This of course gives a signal at the office, just as if you had broken and made the circuit for the purpose of giving a signal.

(7986) R. P. A. asks: Have you the plans for a small motor to be run with about 12 to 18 volts? A. See SUPPLEMENT, No. 641, price ten cents, for the plans of a motor which can be made cheaply and is just what you want.

NEW BOOKS, ETC.

DIE EISENKONSTRUKTIONEN DER INGENIEUR-HOCHBAUEN. Ein Lehrbuch zum Gebrauche an Technischen Hochschulen und in der Praxis. Von Max Foerster. Third Part. Post Octavo. Illustrated. Leipzig: Wilhelm Engelmann. New York: Gustav E. Stechert, 9 East Sixteenth Street, 1900.

The third part of Prof. Foerster's admirable text-book is devoted to a very thorough discussion of trussed and arched roofs. The clearness and exhaustiveness which characterize Prof. Foerster's work have been more than once mentioned in our reviews of previous parts. This third part fully attains the high standard set in the beginning.

A COMPLETE METRICAL RECKONER. South Omaha, Neb.: Herinann Brothers, 16mo. Pp. 208.

The book is divided into sections from 1 to 100. Folding manila cards at the front and back are turned into place so that any figure from 1 to 100 appears in an aperture which is cut in the card. It is by this means made easy to read off from the calculated weights and measures the exact weight or quantity. The result is a very handy metrical reckoner. In going from the metrical system to the ordinary the card on the right-hand side of the book is used.

PHOTOMETRICAL MEASUREMENTS AND MANUAL FOR THE GENERAL PRACTICE OF PHOTOMETRY. With Special Reference to the Photometry of Arc and Incandescent Lights. By Wilbur M. Stine, Ph.D. New York: The Macmillan Company, 1900. 16mo. Pp. 270. Price \$1.60.

The rapid extension of the practice of photometrical measurements in this country, and the general interest in standards of illuminating power and allied subjects, evidenced by frequent contributions to technical periodicals and by papers read before the various associations, has been the occasion for the preparation of this work. The author has produced a most valuable treatise, which will meet the requirements of a large number of readers. The explanations are lucid, and it is well illustrated by engravings and diagrams.

TO INVENTORS.

An experience of over fifty years, and the preparation of more than one hundred standard applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled 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.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending

OCTOBER 23, 1900,

AND EACH BEARING THAT DATE.

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

Table listing inventions with patent numbers. Includes items like: Adding machine, A. Hoch... 660,108; Adhesive composition and making same, W. V. Carter... 660,144; Advertising automaton, C. T. Bradshaw... 660,485; Alarm, See Refrigerator pan alarm... 660,229; Anneling and oxidizing metal sheets or plates, Parr & Sheldon... 660,583; Assorting case, portable and collapsible, M. S. Field... 660,541; Awl, sewing, H. U. Bradt... 660,413; Axles, sand shield and truss for vehicle, H. Keller... 660,254; Band cutter, J. S. Manly... 660,195; Battery, See Electric battery. Thermo electric battery... 660,228; Battery plate or element, storage, E. A. Sperry... 660,324; Bearing, ball, R. Bull... 660,324; Bedstead, R. R. Blaine... 660,206; Bedstead, fastening, A. S. Myers... 660,196; Belts, etc., shifter for, G. W. Peirce... 660,454; Bicycle, C. H. Metz... 660,448; Bicycle gear, compound, H. Dyer... 660,547; Bicycle gearing, C. H. Metz... 660,449; Bicycle pump, self-supporting, R. N. Hatch... 660,509; Bicycle saddle, O. S. Harmon... 660,215; Bicycle saddle body, A. F. & W. Meisselbach, Jr... 660,281; Bicycle seat post, J. B. Weir... 660,285; Bicycles, etc., seat for, E. W. Walker... 660,132; Block, See Building block. Pulley block... 660,357; Bolt, rotating, E. J. Schuchheim... 660,357; Board, See Panel board... 660,252; Boat or floating device, collapsible, J. Gutknecht... 660,429; Boiler, See Steam boiler. Water tube boiler... 660,258; Boiler, P. W. Hanford... 660,429; Boiler, S. Lanceskes... 660,258; Boiler safety device, steam, J. H. Bullard... 660,358; Bolt spring fastener, S. C. Ball... 660,206; Bookbinding, J. McGraw... 660,304; Book rest, adjustable, Davis & Hall... 660,148; Bottle, J. B. Taveron... 660,404; Bottle capping machine, C. G. Bauer... 660,322; Bottle, dentifrice, Hilsenberg & Loper... 660,435; Bottle for containing liquids or gases under high pressure, J. B. Dice... 660,326; Bottle stopper, J. R. Dice... 660,150; Bottle stopper, J. Kowsky... 660,515; Bowling alley, portable, A. J. Rollert... 660,400; Box, See Fruit box. Letter box... 660,171; Boxes, caris, or similar articles, support for, G. D. Snider... 660,171; Brake, See Electric brake. Vehicle brake... 660,187; Brick machine, W. P. Grath... 660,188; Brick Press, C. H. Horton... 660,110; Buckle, W. P. Gelabert... 660,544; Building block, A. J. Delke... 660,419; Bulkhead and door, J. H. Hund... 660,436; Burner, See Gas burner. Vapor burner... 660,127; Cable roads, sheave for, L. Frohner... 660,500; Calcium carbide cartridge, G. G. Smith... 660,170; Calling apparatus, individual, W. F. Homman... 660,439; Can filling machine, J. E. Goodlett... 660,101; Can filling machine, J. E. Goodlett... 660,101; Car coupling, C. E. C. Eley... 660,491; Car coupling, S. Geoghegan... 660,503; Car coupling, A. E. Mills... 660,520; Car coupling, automatic, J. Edwards... 660,432; Carbon sheet holder, F. A. Bartelmez... 660,142; Carriage, convertible, E. R. Briggs... 660,524; Carriage shifting device, H. E. Payne... 660,333; Cartridge clip, temporary, T. C. Johnson... 660,377; Case, See Assorting case... 660,369; Casting making apparatus, W. W. Doolittle... 660,369; Catalaminal appliance, Moberg & Brady... 660,495; Cattle grooming machine, Yost & Smith... 660,138; Cement and steel construction, F. Melber... 660,518; Cesspool or drain, floor, J. Tucker... 660,348; Chair, See Reclining chair... 660,175; Cheese cabinet, W. Brown... 660,246; Chuck, W. Parsons... 660,121; Churn, J. M. Goss... 660,425; Churn, Johnston & McDonald... 660,112; Churn, W. B. Mitchell... 660,450; Churn, O. A. Morrow... 660,521; Churn dasher, E. R. Franklin... 660,155; Cigar cutting machine, J. L. Yoder... 660,517; Cigar making machine, G. W. A. Hankey... 660,297; Circuit breaker and closer, automatic, Watzel & Shekell... 660,134; Clamp, See Hose clamp... 660,286; Clay pipe molding die, M. J. Bannon... 660,286; Clip, See Wire rope and bucket clip... 660,312; Clock, program, A. J. Reams... 660,312; Clock, self-winding electric, A. J. Madden... 660,385; Closet, See Collapsible closet... 660,286; Cutch, Ball & Corbett... 660,450; Coke oven, E. A. Babbage... 660,450; Collapsible closet, H. M. Fessenden... 660,344; Collar, apparel, H. J. Strickland... 660,383; Collar, program, A. J. Reams... 660,312; Condensing apparatus, portable, J. D. Lance... 660,257; Conveyor, G. W. Metastie... 660,451; Cooking utensil lid, M. E. Konkle... 6 0 443; Cotton press, W. T. Bessonet... 660,243; Couch, C. F. Thayer... 660,347; Coupling, See Car coupling. Hose coupling... 660,286; Cover holder, vessel, G. Gordon... 660,424; Crane, soaking pit, S. T. Wellman et al... 660,477; Crank paddle, H. A. A. Martens... 660,290; Crucible shaker, W. S. Mather... 660,387; Cultivator, W. S. Graham... 660,103; Cultivator, corn, S. D. McGuard... 660,118; Cultivator hoe, spring, M. K. Noaker... 660,276; Curtain fixture, Titus & McMains... 660,405; Cuspidor, M. Weinberger... 660,135; Cutter, See Mat cutter... 660,286; Cycle motor, G. D. Green... 660,216; Cyclist's brace and back support, W. C. Humphrey... 660,172; Dental cuspidor, H. J. Tarr... 660,411; Dental plugger, R. Blum... 660,137; Derrick, portable farm, G. Wenzelmann... 660,137; Die press, E. W. Sisby... 660,126; Dish cleaning apparatus, A. Roseale... 660,314; Disinfecting and deodorizing apparatus, C. Freese... 660,543; Display rack and sample case, combined wall paper, E. C. Kithian... 660,157; Door check, A. Arens... 660,240; Dowel pin, tile or brick, O. C. Pixley... 660,305; Drafting implement, tailors, A. N. Rosenbloom... 660,355; Drawer money, S. C. Anderson... 660,355; Drier, See Grain drier. Hop drier... 660,278; Dry pan, E. Smith... 660,354; Drilling kiln, A. Anderson... 660,249; Drill, See Rock drill... 660,402; Dyeing apparatus, N. L. Smith... 660,233; Ear, apparatus for treating diseases of the, R. Watson... 660,513; Egg beater and churn, J. M. C. Jones... 660,375; Electric battery, F. K. Irving... 660,457; Electric brake, F. E. Case... 660,340; Electric circuit, safety cut-out for, Sachs... 660,340; Electric machine slot wedge, dynamo, H. G. Reist... 660,459; Electric machines, regulating dynamo, C. P. Steinmetz... 660,534; Electric motor, T. A. Edison... 660,293; Electric motor wheel, C. E. Ishills... 660,217; Electric shaver, J. W. Richards... 660,396; Electric shock machine, coin controlled, B. M. Davis... 660,539;

Table listing inventions with patent numbers. Includes items like: Electrical distribution system, C. I. Young... 660,320; Elevator and carrier, E. C. Berghofer... 660,207; End gate, C. S. Wright... 660,479; Engine, See Reversible engine. Rotary explosive engine, S. Holmes... 660,160; Engine, I. S. Holmes... 660,338; Engine, petroleum or like internal combustion, G. H. Rogers... 660,339; Engines shut-off mechanism, T. D. Milca... 660,519; Engines, distributing mechanism for steam or other fluid pressure, C. Boujour... 660,412; Engines, gasifying apparatus for explosive, F. Durr... 660,292; Etching metal, C. Mueller... 660,262; Extractor, See Shell extractor... 660,323; Farm gate, W. Braden... 660,247; Farm gate, B. A. Fisher... 660,247; Fastening eye, garment, E. M. Lesser... 660,300; Faucet, N. H. P. Francis... 660,086; Feed water regulator, C. B. Edwards... 660,294; Fence machine, G. W. S. Bell... 660,267; Filter, W. Dorval... 660,151; Firearm, breech loading, F. Hochbrunn... 660,437; Firearm cover or sight guard, C. Candrian... 660,361; Firearms, safety device for triggers and hammer, J. Kalina... 660,378; Fire hose nozzle, B. C. Crane... 660,147; Fireproof door, J. W. Rapp... 660,223; Fireproof window, McFarland & Larkin... 660,117; Firing shovel, H. W. Crowther... 660,527; Folding machine, A. M. Fletcher... 660,328; Folding machine, rotary, W. Spalckhaver... 660,343; Fruit box or basket, H. O. Little... 660,446; Fruit packing form, S. L. Casella... 660,362; Fuel, apparatus for feeding fine, H. B. Pruden... 660,458; Furnace, See Straw burning furnace... 660,274; Furnace, automatic air feeding apparatus for, F. Pintner... 660,456; Furnaces, tool for charging plates into, P. C. Paterson... 660,198; Furniture swell front, F. O. Anderson... 660,088; Fuse igniter, J. T. Nagle... 660,220; Fuse safety, A. M. Fletcher... 660,328; Gage, See Tire pressure gage... 660,341; Gage, C. F. Winslow... 660,176; Game recorder, W. H. Levings... 660,384; Garment hanger, J. Schoenberg... 660,316; Gas burner, incandescent, G. W. Seebach... 660,488; Gas generator, acetylene, Keller & Rehm... 660,514; Gas generator, acetylene, G. Swinnerton... 660,345; Gas generator, acetylene, J. F. Swinnerton... 660,345; Gas meter, prepayment, Whitlam & Large... 660,344; Gas washer, J. F. Swinnerton... 660,346; Gate, See End gate. Farm gate. Water gate... 660,106; Gate spring, J. L. Gross... 660,106; Gearing stop, mechanism, W. I. Whitehurst... 660,351; Generator, See Gas generator... 660,345; Glue and products resulting therefrom, making, J. L. Kelsey... 660,379; Governing and controlling marine or other engines, apparatus for, E. A. Sperry... 660,318; Grain drier, Werner & Hiltker... 660,407; Grain separator, J. B. Pedrick... 660,219; Grain separator, J. B. Pedrick... 660,219; Grappling iron, F. F. McClintic... 660,489; Grinding machine, M. W. Neuens... 660,389; Gun barrel, W. S. Evans... 660,418; Guns, elevating and ramming apparatus for turret or barbette, Dawson et al... 660,418; Guns, machine for loading feed belts for machine, J. M. Browning... 660,244; Guns, shell extractor and ejector for breakdown, P. W. Southgate... 660,227; Hair cutting and combing device, combination, G. W. Anderson... 660,238; Hanger, See Garment hanger... 660,494; Harvester, cotton, A. Levedahl... 660,531; Harvesting machine, W. H. Traphagen... 660,280; Hat, apparel, A. L. Johnson... 660,529; Heater, K. J. Foley... 660,371; Heater, J. J. Harby... 660,405; Hoisting apparatus, Herzog & Martin... 660,427; Hoof pad, W. Hallanan... 660,427; Hoof pad retainer, W. F. Waite... 660,536; Hook, See Whitetree hook... 660,408; Hop drier, A. Wolf... 660,408; Horse blanket, H. Carth... 660,265; Horseshoe, soft tread, E. E. Evans... 660,493; Hose clamp, Bunte & Scrimgeour... 660,245; Hose coupling, D. Smith... 660,225; Hub, ball bearing, P. F. Seabauer... 660,467; Hydraulic apparatus safety device, F. Lambert... 660,388; Hydraulic motor, Trussell & Sawtelle... 660,151; Hydraulic press, G. A. Sauer... 660,394; Ice cream freezer, Horn & Smith... 660,109; Incandescent bodies, manufacturing, R. Langhans... 660,114; Incandescent mantle support, T. S. Fuller... 660,501; Indicator, See Temperature indicator... 660,309; Indicator, C. L. Clarke... 660,268; Injector, N. B. Dodge... 660,182; Insulating electric conductors, N. Tesla (reissue) J. G. Henderson... 660,271; Insulator, See Windmill insulator... 660,131; Ironing machine, edge, W. H. Rickey... 660,277; Jack, See Lifting jack... 660,421; Jaw wrench, sliding, J. H. Flanagan... 660,421; Joint, See Rail joint... 660,532; Journal bearing, J. D. McRae... 660,526; Knob, guard combination, C. E. Flinder... 660,295; Knives, See Drying knives... 660,259; Knitting stockings, Huettig & Schlossmann... 660,374; Knob attachment, Lomax & Tomlinson... 660,259; Knobs or picture hanging nails, device for fixing, banks or screw stems in handle, S. Kribs... 660,444; Kroylich, treating, C. O. Doremus et al... 660,241; Lace up, shoe, B. Benoit... 660,241; Lamp, carbureting, J. C. Peden... 660,222; Lamp, electric arc, J. Rathbone... 660,393; Lamp, incandescent oil, J. C. C. Read... 660,311; Lamp receptacle, incandescent, P. H. Fielding... 660,154; Lamps, manufacture of incandescent electric, W. L. Voigt... 660,475; Last, F. E. Abbott... 660,321; Last, J. E. Tilt... 660,273; Latch, M. Sutton... 660,408; Latch, gate, G. W. Randall... 660,392; Latch, gate, L. M. Smyth... 660,226; Lathes tool, F. O. Jacques, Jr... 660,376; Ledger, perforated, C. V. Henkel... 660,329; Letter box, A. L. Henry... 660,329; Life preserving float, S. German... 660,504; Life saving corset, C. O. Dutton... 660,420; Lift, telescopic, Bulock & Donnelly... 660,091; Lifter, See Plate or pan lifter... 660,507; Lifting jack, J. T. Harby... 660,313; Linotype machine, electric, A. W. Storm... 660,263; Liquid drawing apparatus, effervescent, J. Nagel-dinger... 660,164; Liquid drawing device, effervescent, J. Nagel-dinger... 660,164; Liquid separator, centrifugal, D. H. Burrell... 660,380; Lock, See Vehicle wheellock... 660,230; Lock, J. J. Treat... 660,230; Locomotive, W. P. Henszey... 660,433; Loom, A. Insinger... 660,441; Loom feed, W. F. Luther... 660,162; Lozenge cutting machine, F. Rossback... 660,461; Lubricator, See Windmill lubricator... 660,131; Mail bag catcher and deliverer, Preston & McKinster... 660,122; Mains and means for forming same, branch connection for water, H. H. Burritt... 660,526; Mains, method of and means for forming branch connections with water, H. H. Burritt... 660,526; Mangle, L. J. Lindbeck... 660,381; Mantle support, G. O. Miller... 660,330; Mat cutter, C. C. Durkel... 660,211; Match composition, J. Craveri... 660,366; Match dipping machine, Anderson & Everson... 660,467; Match igniting composition, J. Craveri... 660,365; Mattrer or cushion, air, A. Sawtelle... 660,486; Merry-go-round, E. P. Schmitt... 660,168; Metal bending or curving machine, J. N. Gibson... 660,505; Meter, See Electric meter. Gas meter... 660,372; Microscope, R. L. Fuerle... 660,372; Milling machine, G. Richter... 660,200; Mining machine, J. Herzler et al... 660,434; Molds, apparatus for drawing patterns from, J. H. B. Bryan... 660,289; Mop wringer, L. W. Richardson... 660,201; Motor, See Hydraulic motor. Rotary explosive motor... 660,502; Motor control system, A. S. Garfield... 660,502; Mower, O. L. Ervin... 660,153; Mower attachment, lawn, L. W. Pelletreau... 660,455; Music leaf turner, R. Hammond... 660,428; Musical instrument tone modulating device, E. Klaber... 660,381; Neck and shoulder, A. E. Grant... 660,104; Necktie retainer, J. C. Watson... 660,133; Nut lock, Post & Grise... 660,457; Oat erader, F. E. Walsh... 660,222; Ordnance and projectiles, manufacture of, J. A. Potter... 660,221; Ore leaching apparatus, J. A. Fleming... 660,498; Ore separator, J. P. Smith... 660,342;

(Continued on page 285)