RECENTLY PATENTED INVENTIONS. Agricultural Implements.

HAY-RACK .- H. P. Vogler, Waterville, Kans. The hay-rack is so constructed that the front wheels of the wagon on which it is placed may be turned short without danger of cutting the rack. The rack is further constructed so that it will not upset as readily as the ordinary rack, for it has a firm bear ing upon the running gear of the vehicle.

Engineering Improvements.

HYDROCARBON-OIL ENGINE. - D. Briggs, Evart, Mich. The object of this invention is to provide an engine of simple construction in which the heat of the cylinder is utilized to vaporize the fuel and to heat the mixing air. The hydrocarbon oil is conducted around the cylinder in a spiral tube. Before it reaches the air-mixing chamber it becomes highly heated. After being mixed with air it is exploded by a suitable igniter placed in the cylinder near the top.

SPRAY-PUMP FOR EXPLOSIVE-ENGINES. —J. T. METCALFE, Quincy, Pa. The invention relates to explosive engines in which successive charges of liquid hydrocarbon are first vaporized and mixed with air and then caused to explode. The particular objects of this invention are to make a suitable pump and appropriate connections for use in mechanism of this kind and also to cushion the rebound of the valve used to prevent the retrogression of gases upon the cylinder after each explosion.

FEEDER.—G. M. HILGER, Chicago, Ill. This feeder is adapted for use on boilers, open feed water heaters and the like, and is arranged to feed the liquid compound drop by drop into the feed water to prevent the formation of scales in the boiler.

PUMP .-- O. J. BRACKNEY, Butler, Pa. This pump is of simple construction, having no projections such as collars and the like on its outer side, so that it may be readily inserted in a well, or withdrawn therefrom. vention provides a simple means for fastening the inlet valve in place, whereby it may easily removed or inserted without the use of a pipe wrench or similar tool.

EXHAUST MECHANISM.—T. D. motives. It consists of the main exhaust flue and an auxiliary exhaust flue opening in its lower end at one side of the main flue and gradually enlarging circumferentially around this main flue above its lower inlet end. Means are provided for controlling the auxillary flue so that by opening the flue the ex-haust is relieved of considerable back pressure.

TIRE-HEATER.-H. J. HENGEVELD, Savannah, Ga., and A. E. ADAMS, High Springs, The tire-heater is adapted for use in heating tires of locomotives, to permit their removal when worn without requiring the reheater forms a burner ring which encircles the tire and secures a rapid heating thereof.

Machines and Mechanical Devices.

VOTING-MACHINE .- G. W. LAPRADE, Sago, Va. By this invention, Mr. Laprade provides means whereby the voter may print the names of the different candidates he wishes to vote for on the ballot sheet, which is arranged in the form of a strip wide enough to contain in one line the names of all the candidates to be voted for in the election. Means under the control of the judges of the election are provided for advancing the ballot sheet, which means are also arranged to operate the inking brush and further to operate a register, so that the number of voters that cast their bal- J. lots can be determined at any time.

MARKING-MACHINE.-R. N. Moody, Abergoods. It comprises one or more type wheels. which may be set at any combination de the heater to an individual room without dansired, and certain devices for inking the type ger of the air being fouled with obnoxious and impressing the characters on the articles to be marked.

DRIVING DEVICE FOR SHAFTS.—J. HOLTHAUS, Hillen, Germany. The driving de-vice is more especially designed for revoluble that when a boom and gaff sail is hauled shafts having lengthwise vertical movement. on the wind, the part of the sail nearest the The invention is arranged to prevent or reduce undesirable friction to a minimum and to alare the only parts which actually exercise a low any desired pressure to be exerted length- propelling effect on the vessel. The other parts wise of the shaft without interfering with the action of the driving device.

Miscellaneous Inventions.

GRATE.-T. H. Lucas, Minneapolis, Minn. Difficulty has been experienced in burning fine and crumbling fuel, such as peat, sawdust, pea coal and the like, from the fact that the fine particles fall unconsumed through the grate whenever an attempt is made to remove the ashes, thus wasting a large quantity of fuel. The purpose of this invention is to provide a grate capable of retaining all fuel until consumed to ashes and then to remove the ashes without interfering with the unconsumed fuel.

ROTTLE-STOPPER.-JOHN HEARD, Strathroy, Canada. The bedy portion of the stopper | Norg.-Copies of any of these patents will be conical plug which is drawn upward by suit- Please state the name of the patentee, title of able attachments, thereby expanding the lower the invention, and date of this paper.

end of the body so that it will fit tightly in the

PROTECTIVE TUMBLING-HOOD SHIPS' HATCHES .- J. BERGESEN, New York, N. Y. The hood is conical in shape and mounted at its apex by a ball and socket joint Because of this fastening the hood under pressure of the wind will tumble in the direction of the wind, so that that portion of the hatch facing the direction of the wind is closed by the hood, while the rest of the hatch is open to permit ventilation. Means are provided for lowering the hood and effectually sealing the hatch whenever desired.

FISHING DEVICE .- J. SEILER, South Nor walk, Conn. The invention relates to a pe culiar gang-hook fishing device adapted either for bottom or surface fishing. The hooks project radially from a body portion, and the line is connected to a shank plvoted on the central part of the body portion. When a fish takes the bait the line is drawn up sharply and the hook which engages the fish is allowed to stand still relatively to the other part of the apparatus, the body portion then tilting relatively to the shank of the device. This enables the hook effectively to engage and im pale the fish.

CALENDAR .- M. LICHTER, New York, N. Y The calendar consists of a plate having pairs of slots through which strips of flexible ma terial with the proper letters and numbers thereon are passed. These strips are treated to curl or roll up, so that when unrolled the ends are passed through the slots and imme diately curl or roll up on the back of the plate, drawing the front portion of the sheets taut. The curled-up ends not only form means for drawing the displayed portion of the sheets in taut condition, but also form handles for the operator to conveniently take hold of when adjusting the strips.

PAPER-FASTENER .- H. TRENCHARD, JR. Brooklyn, N. Y. The fastener comprises an eyelet adapted to be engaged through the back of an envelope and fingers extending from opposite sides of the eyelet adapted to be passed through the flap of the envelope and turned outward and downward thereon. The material between the openings in the flap forms a cover for the eyelet.

FLAT BRUSH.—W. H. HUMPHREY, New York, N. Y. The invention relates to brushes Savannah, Ga. The invention is an improvement in exhaust mechanism for use on locochanics, and provides an improvement in flat brushes whereby the bristles are resiliently supported at the front and rear faces of the brush to insure proper flexing of the bristles when the brush is in use and at the same time allowing free flow of the paint, varnish or other material.

ROLL.-J. P. LANGE, Passaic, N. J. The device comprises a number of semi-circular sections placed together, edge to edge, so as to form wheel members. Endless bands of resilient material encircle these wheel members in such manner as to hold them together and also to hold together the oppositely dismoval of the wheel. In construction the tire posed semi-circular sections in each wheel member. Longitudinal rods run entirely through the roll and short bolts secure together the semi-circular sections of each of the wheel members.

> NOTE-BOOK .- A. L. HOLTON, Norfolk, Va. The invention is an improvement in tablets in the form of note-books, and especially in books of such character designed for use by stenographers in taking notes. The base-plate of the note-book can be conveniently removed from the baseboard and turned end for end, this being especially desirable when the stenographer has written through the book on one side of the sheets and desires to readjust the book to the baseboard so as to write upon the other side of the sheets.

AIR-HEATER.—A. H. LOVEJOY, Gallia, N. This improved air-heater is arranged to utilize the fuel to the fullest advantage and to heat the air and conduct the same in a deen, Wash. This machine is especially useful perfectly pure state into the rooms to be as a device for marking linen and laundry conduit extends from the air-inlet duct through gases and dust.

> SAIL FOR MARINE VESSELS .- R. LUND QUIST, Laguna, de Terminos, Mexico. The merely lie across the course of the wind and tend to heel or tilt the vessel. In this invention provision is made for slacking away a portion of the sail thus avoiding this tilting

> GRANULATING ATTACHMENT FOR SALT-SHAKERS .- J. A. MOLLER, JR., New York, N. Y. This invention provides an agitator made of spring wire adapted to be attached to the inside surface of a cap for a salt-shaker. The agitator is so constructed as to extend within the body of the shaker and serves to hold the cap in place without resorting to a thread. Furthermore, its construction is such that upon the slightest turn of the cap forward or backward it will break up or granulate the salt which may have become clogged.

recessed at its lower end and receives a furnished by Munn & Co. for ten cents each.

Business and Personal Wants. INDEX OF INVENTIONS

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 you the name and address of the party desiring the mformation. In every case it is necessary to give the number of the inquiry. MUNN & CO.

Marine Iron Works. Chicago. Catalogue free. Inquiry No. 2754.—For makers of bag-sawing nachines.

Autos.-Duryea Power Co., Reading, Pa.

Inquiry No. 2755. For manufacturers of water ending slot machines. "U.S." Metal Polish. Indianapolis. Samples free

Inquiry No. 2756.—For parties to manufacture a uttonhole cutter. WATER WHEELS. Alcott & Co., Mt. Holly, N. J.

Inquiry No. 2757.—For makers of diving suits and bmarine apparatus.

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

Inquiry No. 2758.—For makers of copper, brass rateel lightning rods. Sawmill machinery and outfits manufactured by the

Lane Mfg. Co., Box 13 Montpelier, Vt. Inquiry No. 2759.—For makers of the Little Giant wood planer, ora combination planer and jointer. Sheet, bar, rod or wire, cut, formed, any shape.

Metal Stamping Company, Niagara Falls, N. Y Inquiry No. 2760.—For manufacturers of spring motors.

We design and build special and automatic machinery for all purposes. The Amstutz-Osborn Company, Cleve-

ınd, Ohio. Inquiry No. 2761.—For dealers in automatic machinery for cutting small brass wheels, such as are used in clocks.

Special and Automatic Machines built to drawings on contract. The Garvin Machine Co., 149 Varick, cor. Spring Streets., N. Y.

Inquiry No. 2762.—For manufacturers of combination engine and boiler 4 or 5 h. p., the "Porcupine" preferred.

Manufacturers of patent articles, dies, stamping tools, light machinery. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 2763.-For dealers in essential oils.

Vegetable and fruit-canning machinery wanted. Manufacturers please address with full particulars F. S. Wertz, 319 Franklin St., Reading, Pa.

Inquiry No. 2764.—For makers of match-making machinery.

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. 2765.—For dealers in the "Finger Cork Screw," which folds up into a shell-shaped wood handle, or something similar.

IDEAS DEVELOPED.—Designing, draughting machine work for inventors and others. Charles E. Hadley, 584 Hudson Street, New York.

Inquiry No. 2766.—For a machine for tacking or knotting comfortables or quilts.

Young man, of exceptional mechanical ability, with capital, desires partnership in established manufacturing business. Address "Capital," Box 773, New York.

Inquiry No. 2767.—For makers of machines for rolling and gluing tubes for fire works, such as cannon crackers, Roman candles, etc.

Patents developed and manufactured, dies, special tools, metal stamping and screw machine work. Metal Novelty Works Co., 43-47 S. Canal St., Chicago.

Inquiry No. 2768.—For makers of bobbin turning machinery.

Press work done at short notice. Blanking and drawing our specialty. Estimates cheerfully furnished. Tools for all work made on premises if desired. Copper, brass and nickel plating. Correspondence solicited. Acme Ball-Bearing Caster Co., Chappaqua, N. Y.

Inquiry No. 2769.-For parties to manufacture a bolt of special design.

FOR SALE.-" McMechan's Lightning Rotary Bath Brush," just invented. Can take a full bath, except arms and face, from 3 to 5 minutes. Can bathe back with perfect ease. Price for United States ten thousand dollars and royalty. For information enclose stamp. Wm. A. McMechan, St. Clairsville, Ohio.

Inquiry No. 2770.—For dealers in second-hand or ew horizontal boring mills for boring out dynamo

Send for new and complete catalogue of and other Books for sale by Munn & Co., 351 Broadway. New York. Free on application.

Inquiry No. 2771.—For dealers in the "Domestic Still."

Inquiry No. 2772.—For dealers in stationary steam boilers fed by kerosene or coal oil instead of

Inquiry No. 2773.—For makers of brass bushings ith graphite pressed therein taking the place of oil as

Inquiry No. 2774.—For the manufacturers of the Portable Ice Machine" formerly made by the Lewis

Inquiry No. 2775.—For dealers in telegraph and telephone supplies, also static machines.

Inquiry No. 2776.—For manufacturers of small east iron specialties, such as toy engines, etc.

Inquiry No. 2777.—For the address of a ship-building or ship windlass company in Canada. Inquiry No. 2778.—For a partner to help build and patent an improved flying machine.

Inquiry No. 2779 .- For dealers in celluloid novel-

Inquiry No. 2780.-For manufacturers of auto-

Inquiry No. 2781.—For makers of horizontal wind mills.

Inquiry No. 2782.—For wholesale dealers in old iron, metal and rubber Inquiry No. 2783.—For makers of brass finger

Inquiry No. 2784.—For manufacturers of hygrometers.

Inquiry No. 2785.—For dealers in materials for covering shingles to prevent leaking.

Inquiry No. 2786.—For manufacturers of turbine

Inquiry No. 2787.—For machinery for packing reserved provisions.

Inquiry No. 2788.—For dealers in armature toothed punchings. Inquiry No. 2789.—For complete commutators or tegmenta for small machines.

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

AND EACH BEARING THAT DATL.

[See note at end of list about copies of these patents,

ı		
١	Acids, making phthalic and benzoic, A. Bischier	702,171
ı	Adding machine, E. Fitch	702,052
١	Adding machine, E. Fitch Air brake, D. Beemer. Air brake, automatic, G. T. Woods. Air ship, H. B. Van Voorhis. Air superheater or carbureter, H. M. Mc-Call Album, loose leaf, R. F. Oberteuffer. Alpha-ionone, making, Chuit & Bachofen. Amalgamating apparatus, M. Bloume. Antimony, treatment of ores and materials containing, J. P. Van der Ploeg. Arch, support, brick, H. B. Strake Axle, E. Klein Axle lubricating attachment, car, G. W. Decker	702,052 701,988 701,981
ı	Air superheater or carbureter, H. M. Mc-	702,120
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ı	Antimony, treatment of ores and materials containing, J. P. Van der Ploeg	702,153
ı	Arch, support, brick, H. B. Strake	701,960 7 0 2,101
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ı	Decker Band cutter and feeder, P. Swenson Bar bell, A. Calvert Bathing tub. H. Schulze	102.104
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١	W. Morrison	701,916
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ı	Bean sorting machine feeding device, A. T. Ferrell Bed brace, W. D. Newman Bed rail, E. G. Lundquist Bedstead connecting joint, J. R. Konetsky Beef holder, H. Widdowson Belt apparatus, conveyer, A. M. Acklin Bicycle, A. B. Titus	701,864 701,923
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ı	Bicycle package carrier, T. H. Edmonds	702,292
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ı	Boiler, J. F. Rose	701,939 702,255
١	Book, deposit credit, C. T. Inman.	702,255
ı	A. O. & E. R. Kittredge	$\begin{array}{c} 702,012 \\ 702,397 \end{array}$
١	Beef holder, H. Widdowson. Belt apparatus, conveyer, A. M. Acklin. Belt apparatus, conveyer, A. M. Acklin. Bicycle fan attachment, P. E. Hannum. Bicycle package carrier, T. H. Edmonds. Binder, temporary, J. H. Parkes. Binocular glasses, G. Fecker. Board. See Ironing board. Boiler, J. F. Rose Boil lock, H. A. Stockman. 702,254. Book deposit credit, C. T. Inman. Book section having wide and narrow leaves, A. O. & E. R. Kittredge. Book support, J. H. Leuba. Bottle for aerated liquids, D. Tognarini. Bottle, non-refillable, U. S. Alz. Bottle, non-refillable, G. Ferguson. Bottle washing machine, F. X. Spitznagel. Bottle washing machine, F. X. Spitznagel. Bottle washing machine, J. Kayser.	701,968
ı	Bottle, non-refillable, G. Ferguson	701,987 702,●00
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	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cape car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, railway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. C. Nelson. Car draft beam, J. K. Evans Car door fastening mining, J. H. Watt. Car fender, E. A. Samele Car tool box, hand, L. Larson. Car ventilator, P. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McCorman Carpet stretcher, F. L. Kidd. Cartridge, W. E. Hayner. Cartridge, W. E. Hayner. Cartridge loading machine, metallic, G. M. Peters	702,261 702,358 702,918 702,138 702,138 702,107 702,107 701,837 701,920 702,189 702,189 702,189 702,189 702,189 702,378 701,945 701,945 702,378 702,378 702,323 702,222 702,208
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cape car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, railway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. C. Nelson. Car draft beam, J. K. Evans Car door fastening mining, J. H. Watt. Car fender, E. A. Samele Car tool box, hand, L. Larson. Car ventilator, P. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McCorman Carpet stretcher, F. L. Kidd. Cartridge, W. E. Hayner. Cartridge, W. E. Hayner. Cartridge loading machine, metallic, G. M. Peters	702,261 702,358 702,018 702,138 702,228 702,1096 702,376 701,837 701,920 702,189 702,189 702,189 702,378 701,900 702,378 701,900 702,323 701,900 702,208 702,208
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cape car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, rallway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. C. Nelson. Car door fastening, mining, J. H. Watt. Car fender, E. A. Samele. Car tool box, hand, L. Larson. Car ventilator, F. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McGorman. Carpet stretcher, F. L. Kidd. Cartridge, W. E. Hayner. Carbung machine, E. R. Lochman. Case. See Measuring case. Cash register, R. P. Thompson (reissue). Casting apparatus, H. H. Franklin. Cement making, G. C. Jorden.	702,261 702,358 702,018 702,138 702,228 702,1096 702,376 701,837 701,920 702,189 702,189 702,189 702,378 701,900 702,378 701,900 702,323 701,900 702,208 702,208
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke Cans, machine for manufacturing soldered, H. B. Williams Cane car unloading machine, H. Froehlich. Cap baster, S. P. Bush Car bolster, R. P. Bush Car bolster, railway, G. C. Murray. Car coupling, J. A. Chubb Car coupling, J. A. Chubb Car draft beam, J. K. Evans Car draft beam, J. H. Watt Car fender, E. A. Samele Car tool box, hand, L. Larson Car ventilator, P. B. Hole Carbureter, Roemisch & Orre. Card, playing, K. Frederickson Carpet fabric, ingrain, J. O. McGorman. Carpet stretcher, F. L. Kidd. Cartridge, W. E. Hayner. Cartving machine, E. R. Lochman. Case. See Measuring case. Cash register, R. P. Thompson (reissue). Casting apparatus, H. H. Franklin Cement, making, F. G. Jordan Chemicals in electric furnaces, producing, Chemicals in electric furnaces, producing,	702,261 702,358 702,918 702,138 702,128 702,107 702,096 702,376 701,837 701,920 702,189 702,189 702,323 701,920 702,208 702,181 701,900 702,194 702,009 702,194 702,009 702,194 702,009
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cane car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, rallway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. C. Nelson. Car door fastening, mining, J. H. Watt. Car fender, E. A. Samele. Car tool box, hand, L. Larson. Car ventilator, P. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McGorman. Carpet fabric, ingrain, J. O. McGorman. Carpet fatridge, W. E. Hayner. Cartridge, W. E. Hayner. Cartridge loading machine, metallic, G. M. Peters Carburge loading machine, metallic, G. M. Peters Caring machine, E. R. Lochman. Case. See Measuring case. Cash register, R. P. Thompson (reissue). Casting apparatus, H. H. Franklin. Cement, making, F. G. Jordan. Chair, A. J. Morley. Cheese cutter, E. Niggil	702,261 702,358 702,018 702,138 702,228 702,1096 702,376 701,837 701,920 702,189 702,189 702,189 702,378 701,900 702,378 701,900 702,323 701,900 702,208 702,208
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cane car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, rallway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. C. Nelson. Car door fastening, mining, J. H. Watt. Car fender, E. A. Samele. Car tool box, hand, L. Larson. Car ventilator, P. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McGorman. Carpet fabric, ingrain, J. O. McGorman. Carpet fatridge, W. E. Hayner. Cartridge, W. E. Hayner. Cartridge loading machine, metallic, G. M. Peters Carburge loading machine, metallic, G. M. Peters Caring machine, E. R. Lochman. Case. See Measuring case. Cash register, R. P. Thompson (reissue). Casting apparatus, H. H. Franklin. Cement, making, F. G. Jordan. Chair, A. J. Morley. Cheese cutter, E. Niggil	702,261 702,358 702,418 702,138 702,218 702,216 702,2096 702,376 701,920 701,920 701,920 701,920 701,920 701,930 701,930 701,930 701,930 702,378 702,298 702,298 702,298 702,202 702,194 702,194 702,194 702,194 702,194 702,194
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cane car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, rallway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. C. Nelson. Car door fastening, mining, J. H. Watt. Car fender, E. A. Samele. Car tool box, hand, L. Larson. Car ventilator, P. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McGorman. Carpet fabric, ingrain, J. O. McGorman. Carpet fatridge, W. E. Hayner. Cartridge, W. E. Hayner. Cartridge loading machine, metallic, G. M. Peters Carburge loading machine, metallic, G. M. Peters Caring machine, E. R. Lochman. Case. See Measuring case. Cash register, R. P. Thompson (reissue). Casting apparatus, H. H. Franklin. Cement, making, F. G. Jordan. Chair, A. J. Morley. Cheese cutter, E. Niggil	702,261 702,358 702,418 702,218 702,228 702,228 702,396 701,920 702,376 701,920 702,393 701,900 701,900 701,900 702,378 702,233 702,222 702,208 702,20
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach Can heading machine, F. M. Leavitt Can opener, W. C. Meyncke. Cans, machine for manufacturing soldered, H. B. Williams Cane car unloading machine, H. Froehlich. Cap machine, hemmed, L. A. Norton. Car bolster, S. P. Bush. Car bolster, railway, G. C. Murray. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car coupling, J. A. Chubb. Car door fastening, mining, J. H. Watt. Car fender, E. A. Samele. Car door fastening, mining, J. H. Watt. Car fender, E. A. Samele. Car tool box, hand, L. Larson. Car ventilator, P. B. Hole. Carbureter, Roemisch & Orre. Card, playing, K. Frederickson. Carpet fabric, ingrain, J. O. McGorman Carpet stretcher, F. L. Kidd. Cartridge, W. E. Hayner. Carbing machine, E. R. Lochman. Case. See Measuring case. Cash register, R. P. Thompson (reissue). Casting apparatus, H. H. Franklin Cement, making, F. G. Jordan Chemicals in electric furnaces, producing, E. R. Taylor. Chock, R. A. Boockhoop. Cigar, exhibiting and vending apparatus, coin-controlled, D. M. Winans. Cigarette machine, J. C. Hansen-Ellehammer	702,261 702,358 702,918 702,218 702,218 702,128 702,128 702,128 702,128 702,128 702,139 702,139 702,139 702,139 702,139 702,139 702,139 702,139 702,139 702,139 702,139 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,018 702,138 702,138 702,138 702,296 702,376 701,920 702,189 702,189 702,189 702,298 702,292 702,208 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,180 702,180 702,182 702,202 702,208
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,018 702,138 702,128 702,1096 702,376 701,837 701,920 702,189 702,289 702,289 702,289 702,292 702,208 702,194 702,206 702,209 702,209 702,209 702,209 702,209 702,209
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,918 702,218 702,228 702,1096 701,837 701,920 702,239 702,239 702,265 701,907 701,907 701,907 702,109
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,918 702,218 702,228 702,1096 701,837 701,920 702,239 702,239 702,265 701,907 701,907 701,907 702,109
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,918 702,138 702,128 702,1096 702,376 701,920 702,139 701,920 702,139 702,233 701,945 701,945 701,945 702,248 702,129 702,131 701,903 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 701,973 702,182 702,182 702,182 702,182 702,182 702,206 701,978 702,299 701,977 701,953 702,192 701,977 701,953 702,192 701,977 701,953 702,192 701,977 701,953 702,192 701,977 701,953 702,192 701,977 701,953
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,018 702,018 702,138 702,228 702,1096 701,937 701,937 701,937 701,937 701,940 702,139 702,139 702,139 702,139 702,139 702,131
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,018 702,018 702,138 702,228 702,1096 701,937 701,937 701,937 701,937 701,940 702,139 702,139 702,139 702,139 702,139 702,131
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,418 702,138 702,218 702,228 702,128 702,128 702,233 701,920 701,920 701,920 701,920 702,139 702,139 702,138 702,234 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 702,138 701,938 702,138 701,938 702,138 701,938 702,138 701,938 702,138 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938 701,938
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,018 702,138 702,228 702,1096 702,376 701,920 701,937 701,920 702,139 702,239 702,265 701,945 701,945 701,945 702,129 701,953
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,218 702,218 702,228 702,096 701,837 701,920 702,239 702,265 701,907 701,903 702,208 702,208 702,2194 702,2194 702,192 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,903 701,904 702,302 702,301 702,302 702,301 702,302 702,301 702,201 702,201 702,201
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,918 702,138 702,138 702,138 702,293 701,920 702,376 701,920 702,337 701,920 702,338 701,945 702,328 702,208 702,131 701,903 702,328 702,194 702,328 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,903 701,904 701,903 702,190 702,200 702,301 701,904 701,904 701,800 701,904 701,904 701,904 701,904 701,904 701,904 701,904 701,904 701,907 702,109
	Camera, photographic, A. D. Davis	702,261 702,358 702,018 702,138 702,128 702,138 702,138 702,138 701,920 701,837 701,920 701,937 701,900 702,139 702,232 702,208 702,151 701,905 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 701,903 702,194 701,903 702,194 701,903 702,194 701,904 701,904 702,194 702,190 702,190 702,190 702,190 702,190 702,190 702,190 702,190 702,190 702,190 702,190 702,190 702,190 701,904 701,904 701,904 701,907 702,190 702,101 702,201 702,301 702,102 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,101 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,301 702,302 702,101
	Camera, photographic, A. D. Davis	702,261 702,358 702,918 702,218 702,228 702,239 701,926 702,239 701,926 701,927 701,937 701,937 701,938 702,234 702,194
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,918 702,218 702,218 702,228 702,239 701,922 701,937 701,937 701,937 701,937 702,138 702,234 702,138
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,018 702,138 702,128 702,1096 702,376 701,920 701,937 701,920 701,937 701,920 702,239 702,265 701,945 701,945 701,945 702,323 702,228 702,128 701,963 701,963 701,963 702,129 701,963 701,963 702,128 701,963 702,128 701,963 702,128 701,963 702,128 701,963 702,128 701,963 702,128 701,963 702,128 701,963
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,918 702,218 702,218 702,228 702,239 701,922 701,937 701,937 701,937 701,937 702,138 702,232 702,234 702,138 702,138 703,232 702,234 702,138 703,232 704,232 705,238 705,238 706,232 707,238 707,938
	Camera, photographic, A. D. Davis	702,261 702,358 702,2358 702,238 702,228 702,267 702,096 702,376 701,902 701,902 701,903 702,233 702,228 702,208 702,151 701,903 702,104
	Camera, photographic, A. D. Davis Camera support, W. A. Marbach	702,261 702,358 702,358 702,238 702,228 702,267 702,096 702,376 701,932 701,932 701,932 701,933 702,233 702,233 702,234 702,188 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,188 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,189 701,903 702,191 702,193 701,904 701,904 701,805 702,182 702,209 701,904 701,805 702,191 701,903 701,904 701,805 702,191 701,903 701,904 701,805 702,191 701,904 701,805 702,191 701,904 701,805 702,191 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,115 701,969 702,314 702,444
	Camera, photographic, A. D. Davis	702,261 702,358 702,358 702,238 702,228 702,267 702,096 702,376 701,932 701,932 701,932 701,933 702,233 702,233 702,234 702,188 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,188 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,189 701,903 702,191 702,193 701,904 701,904 701,805 702,182 702,209 701,904 701,805 702,191 701,903 701,904 701,805 702,191 701,903 701,904 701,805 702,191 701,904 701,805 702,191 701,904 701,805 702,191 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,115 701,969 702,314 702,444
	Camera, photographic, A. D. Davis	702,261 702,358 702,358 702,238 702,228 702,267 702,096 702,376 701,932 701,932 701,932 701,933 702,233 702,233 702,234 702,188 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,188 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,189 702,189 701,903 702,191 702,193 701,904 701,904 701,805 702,182 702,209 701,904 701,805 702,191 701,903 701,904 701,805 702,191 701,903 701,904 701,805 702,191 701,904 701,805 702,191 701,904 701,805 702,191 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,191 702,302 701,904 701,805 702,115 701,969 702,314 702,444
	Camera, photographic, A. D. Davis	702,261 702,358 702,918 702,138 702,218 702,228 702,166 701,837 701,926 702,239 702,265 701,907 701,903 12,000 702,194 702,195 701,903
	Camera, photographic, A. D. Davis	702,261 702,358 702,918 702,218 702,228 702,239 701,926 701,937 701,937 701,937 702,138 702,237 702,138 702,238 702,238 702,238 702,238 702,238 702,238 702,238 702,238 702,338 703,338 704,898 702,199 702,191 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 702,194 701,938 701,938 701,938 701,940 702,302 702,102 702,102 702,102 703,002 704 704 705 705 706 707 707 707 707 707 707 707 707 707
	Camera, photographic, A. D. Davis	702,261 702,358 702,018 702,018 702,218 702,228 702,239 701,930 701,930 701,930 701,930 702,239 702,231 702,231 702,231 702,231 702,331 703,331 704,331 705,331 706,331 707,331 708,33