creased, so that the motion of the pump is accelerated nation is effected is kept at a low temperature by ice. and the steam boiler is supplied with water according to the quantity of steam used.

The inventor of this feed water regulator is Rudolph Berg, of Pittsburg, Pa.

NAGEL'S PROCESS FOR THE MANUFACTURE OF CAMPHOR.—Early in the present century it was known that a product sometimes called "artificial camphor" could be produced in the laboratory, by passing hydrochloric acid through turpentine until the latter was saturated. The product, however, was not camphor, nor artificial camphor, but a hydrochlorinated terpene. It has lately been discovered that camphor can be made from hydrochlorinated terpene, and it is possible to produce camphor artificially on a commer-

Oskar Nagel, of Vienna, Austria-Hungary, has invented a patented process in which hydrochlorinated terpene is converted into true camphor. In carrying out this invention, the inventor employs anhydrous hydrochloric acid and anhydrous turpentine; but a slight departure from the absolutely anhydrous state in either of the materials named does not cause a failure in the process. Hydrochloric acid gas is first produced and dried, and the turpentine, which may be any pure commercial article, is made by adding calcium chloride, which absorbs the water, and which is settled by filtration.

The anhydrous hydrochloric acid gas is passed through the turpentine until the saturation point is reached. During the passage of the gas through the turpentine both are cooled by a refrigerating agent, such as ice and salt. When the point of saturation is reached there is found in the vessel in which the operation has been carried on a crystalline substance and a heavy liquid. The latter is pumped off and filtered to obtain the crystals held in solution. These crystals with the crystalline precipitate are the hydrochlorinated terpene. These crystals are recrystallized with benzine or washed with alcohol; then the inventor mixes the same with lime, using about three parts by weight of crystals to one of lime; then distilling and producing camphene, and first a by-product, calcium chloride. The camphene is then treated with nitric acid under moderate heat, thus freeing the oxygen, which is taken up by the camphene, the product being camphor.

The apparatus by means of which the camphor is made is illustrated by the cut which shows the tank, A, in which is formed the hydrochloric acid gas, the heavy products being deposited in the tank, C. The gas then passes through the worm, D', which is cooled by water. It is then discharged into the closed tank, F. In this tank the moisture is condensed and separated from the gas and the dried gas passes off through the abutments which are on diametrically opposite sides of tank, G, containing calcium chloride. The gas is then the cylinder. Steam is admitted through ports, I, J, passed into the tank, H, which is provided with an inner tank containing the turpentine. In this tank haust passes out through ports, R, S. The pistons are the combination of the hydrochloric acid gas with the packed and the abutments are provided with packing

The gas escaping from the turpentine in this tank is introduced in the same manner into the turpentine contained in the tank, H'. After the crystals are formed in the turpentine and precipitated, they are transferred to a vessel, J (shown in the lower figure), and the lime is added. The mixture is then distilled, the gas passing off through the pipe, K, to the worm in the vessel, M, where it is cooled.

The product at this stage of the process is camphene (C₁₀H₁₀). This camphene is then treated in the vessel, N, by adding thereto nitric acid. Other oxidizers may be employed in place of nitric acid. The result of this process is a body of crystals which may be compressed into a solid, and which is the same as the natural camphor found in commerce.

BROOKE'S CIGAR LIGHTER is designed to act as a shield for the end of a cigar while the match is introduced and the cigar is being lighted.

It consists of two similar halves stamped from sheet metal and fastened together with a rivet to form a chamber, into which the end of the cigar is inserted and which shields the flame of the match so as to prevent it from being extinguished.

This invention is due to Isaac Brooke, of Pottstown, Pa.

MORRIS' BALL PULVERIZER. - The machine shown in the engraving was invented by Mr. William L. Morris, of Cleveland, O., and is designed for pulverizing rock and ores carrying deposits of precious metals. In the upper part of the casing there is a circular channel or track, 9, in which are placed balls, 10, which are caused to roll around on the track by the carrier, mounted loosely on a vertical shaft so that it will not turn on the shaft, while it is capable of adapting itself to the work to be done.

The top of the carrier is provided with a disk, 19, on which the ore is delivered. When the shaft is revolved, the carrier, which rests upon the balls, causes the ball to travel around the ball track, and the material fed to the machine and thrown outwardly by centrifugal force is pulverized by the combined action of gravity and centrifugal force. The material pulverized drops into the chute, 29, and is delivered at the side of the machine. The spiral springs hold the driver down to its work.

FLEISCHER'S ROTARY ENGINE.—In this engine the piston consists of a cylindrical carrier, F, having three radial guides containing pistons, each having a rod extending inward and provided on the inner end with an arm carrying a roller which runs in the cam, E, and serves to keep the pistons in contact with the inner surface of the cylinder throughout the entire revolution of the engine, and to carry the pistons over the and valves, K and K¹, in the abutments, and the ex-

by means of the valves, K and K1. Mr. Richard J. Fleischer, of Milwaukee, Wisconsin, is the inventor of this engine.

BARRETT'S HYDROCARBON BURNER. - In this burner an oil feed pipe, C, is inclosed by the steam pipe, A2, and a retort, F, extending outwardly, and is made in the form of a coil, upon the end of which is placed a burner, G, having a flaring mouth reaching under the retort, F. Steam issuing from the pipe, A⁹, atomizes the hydrocarbon and passes it through the retort, the mixture being in condition to burn as it issues from the burner, G. The inventor of this burner is S. A. Barrett, of San Bernardino, Cal.

KERSTEN'S BOTTLE WASHER.—This machine consists of a disk carrying a number of pins projecting from the face thereof at an angle, the disks being mounted on a shaft and arranged to rotate in a tank filled with a cleansing solution. On the front of the tank at one side is arranged a guideboard which engages the butt ends of the bottles as they move downward into the liquid, and the tank is of such a width as to prevent the bottles from sliding off the pins during the time they are traveling through the liquid in the tank. As the bottles descend into the liquid they readily fill, and as they rise upon the opposite side they discharge the cleansing liquid back into the tank. The bottles are removed from the pins as soon as they emerge from the sterilizing liquid.

The engraving shows front and side views of this machine, which has been patented in the United States and several foreign countries by Emil Kersten, of Richmond, Va.,

SEUFERT'S CAN WASHING MACHINE.—The rubber feed pipe, C, carries the filled cans forward under the cover. E. while the cans are acted upon by the brushes. F, F', mounted on endless chains and running in opposite directions. By means of this arrangement the cans are turned around several times in their passage through the machine. It is almost unnecessary to say that the cans and brushes are submerged in a cleansing liquid during the operation of washing. Guards are provided for preventing the water from splashing.

This invention was recently patented by F. A. Seufert, of The Dalles, Oregon.

MARCHAUT & DORMOY'S VALVE.—The annexed engraving represents an improved valve designed for draining the water of condensation from a steam pipe,

On the end of the steam pipe is secured a thick flange, which receives bolts passing through the flange of the adjacent section. The bottom of the thick flange is formed of an enlargement into which is screwed an outlet or discharge pipe, having at its upper end a valve seat, and in the top of the same flange is a threaded opening above which is arranged a stuffing box. The valve is screwed into the opening, and the valve stem extends across the diameter of the pipe and holds the valve formed on the end thereof in contact with the valve seat. The valve stem is turned by the hand wheel when it is desired to open or close the valve. turpentine is effected. The tank in which the combi- at H, H. Steam can be cut off at any desired point The inventors of this valve reside in Bordeaux, France.

RECENTLY PATENTED INVENTIONS. Engineering.

CONDENSER.—Albert Hoberecht, Ensenada, Mexico. For locomotives and other engines, distilleries, and wherever it is necessary to condense steam or vapors, this inventor has devised a condenser with cold air tube extending centrally through its body and water offtake within the flue, around which are cooling chambers having perforated portions, there being lateral air tubes and baffle plates. The condenser is de signed to save the water now passing off in the exhaust and permit its use over and over again. The body of the condenser is divided into sections by the baffle plates, with an annular perforated air chamber in each section, the sir chambers and baffle plates being preferably arranged in series.

SIGHT FEED LUBRICATOR. - Alexander Λ . De Witt, New York City. The reservoir forming a portion of this lubricator is connected at its lower end with the lower portion of the sight feed tube, there being a check valve between the feed tube and reservoir and opening toward the feed tube, and a plunger in the reservoir to regulate the height of the liquid in the feed tube. Any desired pressure may be applied upon the column of liquid in the reservoir, to make the feed of reserve column in a measure automatic, and the liquid may be readily discharged whenever desired from both the reservoir and the sight tube.

TOOL FOR STONE PLANERS.—Charles A. Thomson. Kearney, N. J. This is a tool for forming a corrugated or tooled surface at right angles to the travel of a planing machine, and is attachable to the ordinary tool head, to which the body of the device is bolted. Its lower portion has recesses to receive a camcarrying shaft actuated by a flexible shaft connected with any convenient revolving shaft, and the body of the device has guides for the movement of a reciprocating plate to which is bolted the cutting tool, the plate having lugs embracing the cams, whereby the motion of the plate will be positive in both directions. The cutting tool may be of any width necessary to cover the surface of the stone operated upon, and the device may be attached to a tool head adapted to work on the side of the stone as well as on top.

Agricultural.

CORN HARVESTER.—James L. Hart, Grenola, Kansas. This is a machine which may be at- | closing of the valves to the return pipes.

tached to a lumber wagon or similar vehicle, when its cutting and directing apparatus will be fastened to the under side of the wagon bed in front of the hind wheels, and the dropping mechanism to the lower end of the wagon body. The machine automatically cuts the stalks which are received on a dumping platform and delivered | prevent unauthorized persons from tampering with the npon the ground when a sufficient quantity has been cut, the stalks being carried out of the path of the ground wheels. The machine may be accommodated to rows of different widths.

Miscellaneous.

HARDENING RAILS.—Harry C. Clement. New York City. To secure a more thorough and uniform hardening of rails this inventor provides a hardening tank having passage for the rail and a sprinkling device, a cooling tank having an entrance for the rail. which is received by carriages traveling on the tank transversely of the track of the hardening tank. Water is sprinkled against the head only of the heated rail, the rail being inverted so that as the water heated by contact falls away its place is supplied by fresh, cool water, and the hardened rail, while still inverted, having its head immersed in water.

HEATING AND V TUS .- William L. White, Princeton, Ind. According to this invention a jacket or casing surrounds a fire box or furnace proper, and is separated from it by a space for the air to be heated and passed into living rooms, the casing being made and supported independent of the fire box, and an outer casing surrounding the inner one, being attached to its cornice and supported at the base independently. The fire box and its casing may be used alone, the outer casing constituting an independent ventilating attachment which may be easily and quickly bolted in place or removed.

RADIATOR.—Augustus Eichhorn, Orange, N. J. To make an easily adjustable hot water radiator, for varying the degree of heat thrown off, this inventor employs a series of radiating loops communicating at each end, excepting one loop which has its lower end shut off from communication with the contiguous loops and its upper end in communication with them. This loop communicates at its lower end with a water feed pipe, and each end loop communicates with a return nine, the latter nines being valve-controlled and having air vents. The loops on each side of the feed may be thrown in and out of action by the opening or

R. Vinzent, Salem, Oregon. This is a lock of simple and durable construction, which permits of many combinations, is inexpensive to manufacture, and is arranged to enable the owner to readily change the combinations to lock. The lock has a sleeve with longitudinal slot from which lead transverse recesses, tumblers turning on the sleeve having recesses registering with the slot, while a bolt engaging the sleeve has lugs engaging the slot. At the end of the shell is a graduation enabling the owner to bring the several tumblers into proper position for opening the lock.

SIPHON HEAD.—Emil Stahl, Hoboken, N. J. In heads to be attached to mineral water bottles or others where the waters are charged with gas, according to this invention, the head is so constructed that an excess of gas in the bottle, rendering it liable to explode will cause the valve to open sufficiently to discharge the excess, thus rendering the bottle safe. The valve is spring-controlled and is located over and normally closes the outlet. It has a body portion sliding in the upper portion of the head, and is raised by a removable lever provided with a shoulder at the intersection of the head with the body, adapted to engage the valve body.

CARINET FOR BLANKS Kinsel, George A. Hunter and Seth B. Nolley, Dallas, fixed part, and ou the base is a short post from which Texas. For use in hotels, post offices and other public extend a series of arms each carrying a slidable spring places, this inventor has devised a cabinet for stationery, having a compartment with discharge opening at one end, a false bottom with spring beneath it, and a spring detainer having a pointed free end which presses the stationery, thus serving to prevent withdrawal of the sheet underlying the top one. The cabinet also has a similar envelope compartment, permitting the removal of envelopes singly as required.

STORM APRON CASE FOR VEHICLES.-William Fetzer, Sheldon, Iowa. This casing is preferably formed of carpet or similar material, its lower edge secured to a transverse strip upon the floor, which is adapted also to serve as a rest for the heel, while a suitable number of short straps secured to the front body of the vehicle are adapted to buckle with longer straps extending upward from the floor strip to hold the serve as a boot rug when the apron is in service.

LAMP WICK RAISING OR LOWERING DEVICE.-William C. Quiggle, Pine Station, Pa. To enable a person to readily raise or lower a wick with

PERMUTATION PADLOCK. — Theodore provides a device of which the shaft or spindle extends on both sides of the lamp, there being at each end a head for turning the shaft, and each head having teeth, the teeth of the two heads standing in the same direction. As one places the fingers on the head, the direction of the teeth indicate the way in which the head should be turned to raise or lower the wick.

> FIRE KINDLER. - Nicoll MacDonald. Mount Oliver, Pa. This is a kindler designed to produce a strong flame for about fifteen minutes, and then be come a glowing mass for about fifteen minutes more, or until entirely consumed. It is made in the form of a hollow brick with detachable base section and transverse partitions, of pulped paper, sawdust and pulverized coal, and, after moulding and haking in an oven, it is saturated with a combustible compound, which preferably consists of a specified mixture of coal tar, crude petroleum and resin. A surface binding solution of flour, resin and water closes the pores and gives the article a glossy surface.

> HAT HOLDER.—Julia Egan, Savannah. Ga. To securely hold a hat in a trunk or box, preventing the hat from being crushed or otherwise injured, this inventor provides a holder readily adjustable for hate of different sizes. It consists of a base adapted to clamp adapted to engage the hat brim and hold the hat in place. When the device is not in use, the arms may be removed from the post and folded to take up but

ROCKER.—Joseph S. Byrnes, Brooklyn, N. Y. This is a device for use on chairs, bicycle saddies, etc., and consists of a base made in three sections and having a curved top, while a rail curved in an opposite direction to the top of the base is adapted to ride on it. On the under side of the central fixed section of the base is a lug to be screwed on the bicycle saddle post. and each of the two side sections is connected by a hinge to the central section. The rail, connected to the saddle, as it rocks forward on the top surface of the base, draws the rear section upward, swinging on its hinge, and when the rail rocks rearwardly the front seccasing in place over the folded apron. The casing may tion of the base swings upward, the rail being always permanently connected with the base, and the rail and seat readily following the movement of the rider's

MEAT HANGER. — Joseph Beaulieu, either hand, from either side of a lamp, this inventor Hot Springs, Ark, A device especially adapted for

Conductor or ground wire attachment, earth, H.
M. Crane.....

hanging bacon is provided by this invention, one which will hold the meat without mutilation and permit it to be sliced uniformly. It is preferably made of steel wire in two sections, one section having a loop, one side of which is free, and forms a pin capable of engaging with the meat, while the second section is capable of being joined to the first section to hold the mest between the

SHIRT.—Bennett Berenstein, New York City. A sleeve piece, according to this invention, extends beyond the armholes and forms the sleeves, extending also over the shoulder and down the back and front, being stitched adjacent to the armholes and at its lower front and rear edges, the central portion forming a bosom and reinforce for the back and shoulders of

WHISTLE DRUM.—Orville R. Noble, Granville, Mass. On the inside of the shell of a drum, according to this invention, a small casing is secured by an eyelet, thus forming an air passage to the inside of the casing, on an annular shoulder in which is secured a whistle. The whistle is so supported as not to be damaged or injured by a child, and the beating of the drum causes a whistling sound to be produced.

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JULY, 1897.-(No. 141.)

TABLE OF CONTENTS.

- No. 1. Perspective elevation, in colors, and floor plans of a Colonial residence at Overbrook, Pa. A unique design. Mr. Thomas P. Lonsdale, architect, Philadelphia, Pa.
- No. 2. Colorial house at Richmond Hill, N. Y., recently erected at a cost of \$4,200. Perspective view and floor plans. An attractive and pleasing design. Architects, Messrs. Haugaard Brothers, Richmond Hill, N. Y.
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- No. 5. "Wyandauk," the country residence of Lieut. Morton at Southampton, Long Island. A mos excellent design in the Colonial style. Two perspective elevations and floor plans. Mr. James B. Lord, architect, New York City.
- No. 6. A modern dwelling at Binghamton, N. Y., re cently erected for Mr. William Mannis at a cost of \$3,000 complete. A good example of a suburbau house. Two perspective elevations and floor plans. Messrs. T. Q. Lacey & Son, Binghamton, N. Y., architects.
- No. 7. A Colonial residence at Ardmore, Pa., recently erected for Dr. Louis O. Lusson. Perspective elevation and floor plans. Mesers. Boyd & Boyd, architects, Philadelphia, Pa.
- No. 8. A Colonial residence at Bensonhurst, Long Island, recently erected for Mr. Thomas A. Ritson. Two perspective elevations and floor plans A handsome design. Architects, Messrs. Parfitt Brothers, Brooklyn, N. Y.
- No. 9. A residence at West Chester, Pa., recently erected for Dr. S. Hagerty. Perspective elevation and floor plans. A design with many excellent features. Mr. Edward S. Paxson, architect, Philadelphia.
- No. 10. A residence at Attleboro, Mass., erected for E. P. Clafin, Esq., at a cost of \$5,500 complete An artistic and pleasing design. Messrs. George F. Barber & Company, architects, Knoxville Tenn.
- No. 11. Perspective and interior view of the Walhalla of Ratisbon on the Danube. A costly reproduc tion of the Parthenon at Athens. This temple was erected at a cost of about \$6,000,000, and is devoted entirely to the display of busts of distinguished Germans.
- No. 12. Design for a "cozy corner."
- No. 18. View of the library of Mr. Henry L. Hotchkiss, New Haven, Conn.
- No. 14. Miscellar eous Contents: Fatalities to workmen -Scaffolding.-Lime water in freezing weather. -How to make a cheap greenhouse.-Making floors warm.-Inexpensive country homes. Improved sash lock, illustrated.—An improved door hanger, illustrated .- A novel wood working 1 machine, illustrated. - Gray bricks. -Dixon's silica graphite paint.-A convenient gage for carpenters and builders, illustrated.

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(7172) W. J. C. asks: Will you kindly inform writer how to plate a round globe outside the same as a looking glass? Have failed to find any receipt. A. You will have to coat your globe with silver on the inside. If you coat it on the outside, it will have a matte surface. The following are directions for silvering glass globes :

Nitrate of silver	1	oz.
Distilled water	8	**
Alcohol	8	**
Ammonia sufficient, or about	1	44
Grape sugar	2	66

Dissolve the nitrate of silver in the water, add amnonia in a quantity just sufficient to redissolve the precipitate formed at first, add the alcohol, allow it to rest four or five hours and filter. The grape sugar is dis solved separately in 1 ounce of water, and added to the silver solution at the moment of using. The glass globes being perfectly cleaned, the solution is poured into them, and the globes are turned on all sides in front of a moderate fire, so that the liquid touches every part alike. The coating is done in a few minutes, when the excess of liquid is to be removed and the globe washed with distilled water first, and lastly with alcohol. The success of the operation depends in a great degree on the cleanness of the surface of the glass to be silvered; the slight est speck of dust or grease spot is sure to show. A good way to clean the globes would be to wash them with a warm solution of soda, then with dilute nitric acid, and lastly with alcohol, care being taken not touch with the fingers any part of the globes which is intended to be sil-

(7173) A. H. G. says: Will you kindly give me the recipe for making the composition that takes fire by merely putting a drop of water on it? What I have reference to is an article sold on the streets, that looks like strips of cardboard, and ali you have to do is to tear a piece off and wet it to obtain a light. Can it be made in a form that can be painted on, or cardboard or paper dipped into it? A. The substance you refer to is undoubtedly metallic sodium which is cut in thin strips. It flames violently on coming in contact with We do not consider its use safe. It could pro bably be used only in strips or chips.

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THE LOCOMOTIVE: ITS FAILURES AND REMEDIES. By Thomas Pearce. Fourth edition. Revised and enlarged. . Wolverhampton: Thomas Pearce, 25 Ewins Street, Stafford Road. 1897. Pp. 96. Price \$1.

To any locomotive engineer who has a true scientific interest in his business this work, largely in the form of a catechism, which details the English practice, would be, we should imagine, of very great interest. We cannot but believe that merely as an, illustration of the methods

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

JUNE 29, 1897,	Di Di
AND EACH BEARING THAT DATE. $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$	Di Di Di
[See note at end of list about copies of these patents.]	EEEE
Alarm. See Bicycle alarm. Time alarm.	E
Artist's folding frame, F. Schweiger 585,588 Atomizer air forcing device, F. J. Mitchell 585,220 Auditory instrument attachment. J. H. Kellogg 585,525	EEE
Auger, earth, J. P. Swofford	E
Barber's chair, E. Berninghaus	E
H. C. Reagan, Jr. 585,229 Battery. See Secondary battery. Bearing, ball, J. E. Higdon. 585,574	E
Bearing, end of thi use, w. In Everanu	E
Bed pan, T. Elsfeld 585,349 Bed, sofa, C. F. Streit 585,366 Bedstead L. Palmer 585,399	Fa Fa
Bell, bicycle, L. A. Sanford	Fi Fi
Bicycle alarm, F. Madden 585,529 Bicycle attachment, D. R. Saunders 585,288	F
Bicycle brake, Humphrey & Murdock 585,328	Fe
Bicycle driving and steering mechanism, H. B. Trickler	FFFF
Bicycle handle bar, adjustable, E. M. Winfrey. 585,495 i Bicycle lock, M. Gessler	
Bicycle rest, Nielson & Beguelin. 585,283 Bicycle saddle, J. Hartman. 585,571 Bicycle stool and pouch, combined, G. A. Shaw. 585,485	
Bicycle support, R. G. Bailey 383,486 Bicycle support, M. J. Guthrie 585,338 Bicycle support for beginners A. H. Pellen 585,538	
Ricycle wheel, D. R. C. Deville	F1
Bicycles etc., lantern or other carrier for, F. K.	Fı Fı
Binder, cip. A. M. Bogle. 583,423 Bird trap, live, R. S. Elliott. 585,263 Bit brace, S. McClellan. 586,531 Blost formers B. H. Tophyno 588,907	F
Blind, window, E. S. Lathrop. 585,273 Block. See Snap block. Bobbin, separable, J. W. Foster. 585,199	FFGG
	G
Book binder, 1 Riebel, Jr	GGGG
Book, manifolding memorandum, T. McDowell. 585,334 Book, sales, W. H. Howard. 585,440 Boot or shoe protector, A. V. Campbell. 585,554 Boot or shoe protector, M. V. Dood, 585,554	GGGG
Bottle filling apparatus, J. H. Fahrney	G
Pottle non realishie W H Williams 605 252	G G
Bottle, non-refilling, J. H. Doerr	G
Brace. See bit brace.	H
Bracket. See Lamp bracket. L ntern bracket.	HHHH
brake. Vehicle brake. Brazing apparatus, J. C. Dupee	甘田田田
Profler gas F A Longwith 585 821	日日日
Buggy top connection, R. C. Bartlett 585,550 Burgiar alarm system, W. T. Arnold 585,171 Burner. See Refuse burner.	H
Button, C. H. Long	H
Calculating apparatus, W. H. Foss. 585,536 Calipers, G. R. Clarke 585,184 Can. See Oil can. 585,032	H
Cans, etc., device for securing, W. MacNeece 585,583 Canceling machine, stamp, S. Crane 585,231 Canceling machine, S. Crane 585,235	In In In
Car brake, McGuire & Hubbard. 585,223 Ca roupling, D. D. Martin. 585,586 Car coupling, T. H. Walsh. 586,323	I
Car door catch, Edgar & Sebring. 585,189 Car draught rigging, W. Case. 585,639 Car fender, W. H. Knight. 585,340	J
Car underframe, F. H. Rapley 585,405 Car wheel, J. T. Jones 585,524 Car wheel specified T. T. Jones 585,524	K
Card punching machine, J. Shaw	L
Cash register, F. L. Fuller	L
Chair. See Barber's chair. Folding chair. Rock- ing chair. Chair, H. W. Bolens	L
Checkrein stop, C. W. Pomroy	L
Ct share C H Donla	L
Zeise	L
Clock, electric tower, Wurmb & Baumann . 585,349 Clock, electric tower, Wurmb & Baumann . 585,349 Clock . See Sanitary clock	L
Cloth cutter, A. C. Sohlander. 585,291 Cloth cutting machine, P. C. Morse 585,279 Clothes drief C. Price 586,292	L
Cock float, ball, F. C. Rockwell	
Doyer. 585,515 Coin assorting and ejecting apparatus, combined, F. S. D. Scott. Combined F. S. D. Scott. 585,633	L
Condensing system, W. P. Skiffington	

Conrection, I. Allegretti. Copy holder, automatic, F. J. Benscoter Copying book, press, Sullivan & Lounsbury Cotton distributer and cleaner, A. B. Carter Cotton press, S. Z. Hall	585,367 585,430
Coupling. See Car coupling. Thill coupling. Cranberry picker. J. S. Washburn.	585,300 585,455
Copying book, press, Sullivan & Lounsbury. Cotton distributer and cleaner, A. B. Carter. Cotton press, S. Z. Hall. Coupling, See Car coupling. Thill coupling. Crane, overhead traveling, W. H. Morgan. Crate, folding egg, C. Bath. Crushing machine, M. G. Bunnell. Crushing machine, M. J. Elichhorn. Crushing machine, M. J. Elichhorn. Crushing machine, Elichhorn & Bunnell. Culinary stock and making same, J. McFadyen. Cultivator, G. G. Gross Citivator riding attachment, E. C. Willeford. Cupoia or furnace breast, G. W. Moore. Curtain stretcher, folding, S. E. Reeder. State. See Cigar cutter. Cloth cutter. Rotary cutter. Stalk cutter. Cut terhead, S. J. Shimer (reissue)	585,277 585,575 585,534
Crushing machine, M. G. Bunnell Crushing machine, M. J. Bichhorn Crushing machine. Eichborn & Bunnell	585,182 585,190 585,191
Culinary stock and making same, J. McFadyen Cultivator, G. G. Gross Eltivator riding attachment, E. C. Willeford	585,395 585,569 585,547
Cupoia or furnace breast, G. W. Moore	585,275 585,593
cutter. Stalk cutter. Cut terhead, S. J. Shimer (reissue)11,616, Cycle case, W. A. Quackenboss	11,617 585,448
Cycle saddle support. C. B. Jones et al	585,213 585,519 585,494
Detector. See Ground detector. Direct acting engine. W. D. Hooker. Dish tray, O. Sutherlund. Dishfecting apparatus, A. G. Hunter. Disk mill, H. & G. Rose. Display rack, G. M. Jordan. Display stand, Leech & Crowl. Display stand, Leech & Crowl. Dissolving key for oxyhydrogen lights, E. Unger Door hanger, V. M. Moore. Dough raising cabinet and drier, D. M. Merryman.	585,630 585,410 585,627
Disk mill, H. & G. Rose. Display rack, G. M. Jordan. Display stand, Leech & Crowl	585,627 585,536 585,360 585,215
Dissolving key for oxyhydrogen lights, E. Unger Door hanger, V. M. Moore	585,360 585,215 585,298 585,276
Draught door adjuster, W. Wewers	585,608
Drying apparatus, cylinder, T. S. Crane	585,378 585,384 585,307
Electric accumulator system, H. B. Cox Electric contact device, S. H. Stahl Electric heater. G. B. Fralev	585,620 585,293 585,309
Electric heater, Fraley & Paulson. Electric heater, alternating current, G. B. Fra- ley	585,311 585,310
Electric machine, dynamo, G. E. Dorman Electric meter, F. P. Cox Electric metering apparatus, F. P. Cox	585,379 585,257 585,258
ley to heater, alternating current, G. B. Pra- Electric meter, F. P. Cox. Electric metering apparatus, F. P. Cox. Electric motor, C. Lindberg. Electric motor circuit controller, H. H. Cutler. 585,511.	585,527 585,512
Electric wire circuit breaker, A. J. Clark. Electrolytical diaphragm, C. Kellner. Elevator guide, W. A. McCool.	585,507 585,387 585,222
Electric wire circuit breaker, A. J. Clark. Electrolytical diaphragm, C. Kellner. Elevator guide, W. A. McCool. Engine, See Direct acting engine. Explosive engine. Fluid pressure engine. Explosive Locomotive engine. Rotary engine. Engraving mechine Eston & Goodnow	505 00+
Engraving machine, Eston & Goodnow Envelope, J. M. Plimbton Explosive engine, W. E. Gibbon Eyeglasses, J. Cottet, Fils	585,478 585,434 585,434
Fans, screen attachment for suction or exhaust	383,230
M. R. Davis	585,188 585,224
Faucet F Cuttonhorg	11,615 585,327 585,618
Kenne tightener, wire, A. Carpenter Kenne machine, hand, W. W. Barker Fenne tension device, wire, Stowell & Terry Fennes wire support, H. N. Sheek. Fennes, tool for applying brace wires in wire, E.	585,420 585,241 585,345
Fences, tool for applying brace wires in wire, E. Redmond. Fifth wheel, vehicle, W. F. Kramer	585,535
Redmond Fifth wheel, vehicle, W. F. Kramer File, bill, W. F. Ordway. Filter and purifier, combined, T. D. McClary. Filter, water, A. Aufrichtig. Fishing line snood and cork holder, A. A. Free-	585,581 585,397 585,281 585,497
Fluid pressure engine. W. H. Knight	585,564 585,319
Flux distributing machine, E. Wildi	585,493 585,400 585,207
Fork. See Pitchfork. Frame. See Artist's folding frame. Quilting frame.	,
Freight transferring apparatus, McCabe & Anderson. Furnace. See Blast furnace. Ore roasting fur-	585,221
Furnace charging apparatus, blast, Rotthoff &	585,572
Furnace draught apparatus, R. Gosling	585,596 585,644
F. H. Daniels Furnace grate, J. A. Busam Furnace lock bearer, P. Maddocks	585,622 585,428 585,361
Game apparatus, F. M. Arcner. Game apparatus, W. R. Harrison. Game counter, F. E. Zerrahn.	585,312 585,302
Furnace for heating ingots, billets, blooms, etc., F. H. Daniels	585,504 585,601 585,625
Gate. See Farm gate. Tilting gate.	585,400
Gate, W. H. Palmer. Gate, B. P. Stedman. Georging for counting shafts, friction, F. Singro	585,240
Gearing for coupling shafts, friction, F. Singre Generator. See Lamp gas generator. Steam generator.	585,240 585,539
Gearing for coupling shafts, friction, F. Singre Generator. See Lamp gas generator. Steam generator. Glass vessels, machine for making, R. & R. Good, Jr Globe or shade holding device, T. Walsh.	585,539
Gearing for coupling shafts, friction, F. Singre Generator. See Lamp gas generator. Steam generator. Glass vessels, machine for making, R. & R. Good, Jr Globe or shade holding device, T. Walsh, Glucose or sugar from starch, manufacture of.	585,539 585,409 585,606
Gearing for coupling shafts, friction, F. Singre Generator. See Lamp gas generator. Steam generator. Glass vessels, machine for making, R. & R. Good, Jr Globe or shade holding device, T. Walsh, Glucose or sugar from starch, manufacture of.	585,539 585,409 585,606
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Gearing for coupling shafts, friction, F. Singre Generator. See Lamp gas generator. Steam generator. Glass vessels, machine for making, R. & R. Good, Jr Globe or shade holding device, T. Walsh. Glucose or sugar from starch, manufacture of, C. Pope. Gluing press, A. Dolge. Gold from ore, chlorination process of obtaining, J. J. Storer et al. Ground detector, E. W. Rice, Jr. Hackling machine, A. Marshall. Handle. See Detachable handle.	585,240 585,539 585,400 585,606 585,285 585,285 585,285 585,287 585,287 585,217
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Gearing for coupling shafts, friction, F. Singre Generator. See Lamp gas generator. Steam generator. Glass vessels, machine for making, R. & R. Good, Jr Globe or shade holding device, T. Walsh. Glucose or sugar from starch, manufacture of, C. Pope. Gluing press, A. Dolge. Gold from ore, chlorination process of obtaining, J. J. Storer et al. Ground detector, E. W. Rice, Jr. Hackling machine, A. Marshall. Handle. See Detachable handle.	585,240 585,539 585,400 585,606 585,285 585,285 585,285 585,287 585,287 585,217
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Generator. See Lamp gas generator. Steam generator. See Jamp gas generator. Steam generator. See Jamp gas generator. Steam generator. Glass vessels, machine for making, R. & R. Good, J. G. Gluing press. A Dolge. Gluing press. A Dolge. Gold from ore. chlorination process of obtaining. J. Storer et al. Ground detector, E. W. Rice, Jr. Hackling machine, A. Marshall. Handle. See Detachable handle. Harness, safety trip for hanging, T. H. Waterhouse	585, 419 585, 419 585, 419 585, 419 585, 419 585, 585 585, 585 585, 285 585, 285 585, 285 585, 285 585, 285 585, 285 585, 317 585, 413 585, 413 585, 413 585, 315 585, 317 585, 413 585, 317 585, 318 585, 317 585, 318 585, 317 585, 318 585, 3
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