RECENTLY PATENTED INVENTIONS. Engineering.

ROTARY ENGINE. - Horace J. McLoed. Louisiana, Mo. This invention provides an engine having high and low pressure cylinders, each containing a piston with radially movable wings, and with steam passages leading fromone to the other. The pistons arecarried on hollow shafts, one shaft serving as a steam supply and the other as a steam exhaust, the first piston having passages leading from the steam supply to the periphery of the piston, and also a passage leading to the remaining piston, whereby the latter may be driven by the exhaust steam from the first piston.

HOT WATER AND STEAM BOILER. Eugene S. Manny, Montreal, Canada. This invention affords a vertical sectional boiler of simple and inexpensive construction, adapted for use as a hot water or steam boiler, and designed to secure a perfect circulation of both heat and water. The water sections are located between the fire pot and dome, and the intermediate and lower sections have central fire openings over the fire pot, with return and offtake openings for the products of combustion at their sides, the crown section being provided only with offtake openings for the products of combustion communicating with those of the lower water sections and with the dome.

Bailway Appliances.

CAR COUPLING.—Christopher Dutchburn, Highfield, Canada. According to this invention pins and links used as a coupling are operated by means of rock shafts mounted at the ends of the cars and extending to the sides, obviating the necessity of trainmen passing between the cars. A ledge extends out from one side of the throat of the coupling head, and a plate sliding horizontally through the coupling head supports a pin out of the throat, while a wing pivoted to the outer side of the coupling head is attached to the plate, the ledge overhanging the wing, and a spring pressing the wing to hold the plate inward. A transverse shaft carries cams to lift the links, the pushing of a link into an opposing coupling allowing the pin to drop into engagement therewith.

Electrical.

TELEGRAPHIC SIGNAL.—James Nicolson, Buenos Ayres, Argentina. To simplify telegraphic messages, especially in long distance submarine work, and also to facilitate heliography, and render mistakes less likely in connection with special code words, this inventor has patented a system according to which the vowels and accented vowels are made by an uneven number of elementary motions, or dots and dashes, and the consonants by an even number. The inventor has likewise copyrighted, in this country and England, a code book especially advantageous for transmitting cipher dispatches.

Mining, Etc.

MINING DRILL AND CHANNEL CUTTER. -John P. Paynter, Topeka, Kan. This invention covers an improvement on a former patented invention of the same inventor, providing a new drill and cutter arranged to cut a narrow opening or slot in a seam or underneath the coal, and remove the cuttings from the seam, to enable the miner to easily wedge or break down the coal above. The frame of the device travels on a single track, and is adapted to swing sidewise and up and down with the track as a fulcrum, in combination with an air-operated motor and flexible connections, while the frame carries an outwardly extending cutting arm having radial teeth, behind which is a spoils conveyor.

CATCHING WASTE PRODUCTS FROM LEAD SMELTERS .- John B. Sergeant, Joplin, Mo. Leadnig from the lead smeltery to the smoke stack, according to this invention, is a special form of trail or conduit in which is introduced a perforated pipe arranged to eject a spray of cold air into the gaseous current through the trail for cooling the gaseous products of the smeltery and causing them to settle and precipitate. The cooling of the fumes and waste products in the manner provided for is designed to condense and throw down all the metallic substances while allowing the gases to escape.

Mechanical,

WRENCH.-Jacob S. Haye and Francis M. Humphrey, Pendleton, Or. This wrench has a tubular shank provided with guideways and with longitudinal spring tongues having teeth or projections at their free ends, while a longitudinally sliding handle section is provided with a shaft having rows of serrations, and so journaled that it may be turned to set the serrations into and out of engagement with the spring tongues, thereby facilitating the adjustment and locking of the sliding jaw in any desired position.

COMBINED WRENCH AND NIPPERS. -John Rosendahl, Delhi, Minn. For use especially in connection with carriages and other vehicles, this tool is made with two levers to swing toward and from each other, and carrying racks which serve to actuate a ratchet wrench, and also have edge portions which form nippers. The two levers are pivoted on a frame in which is mounted a shaft carrying a gear wheel meshing with the rack bar carried by each lever, while a second gear wheel, loose on the shaft, meshes with a ratchet disk fixed to the shaft, there being a revolubly mounted wrench head driven from the second gear.

TOOL HANDLE.-Hugo A. Zeckendorf, Tucson, Arizona Territory. This invention provides a handle designed to be self-locking when placed on the tool, the handle being more firmly locked on the tool. such as hammer or ax, according to the more violent use of the tool. A transverse opening is made from side to side in the eve of the tool, and the handle is made with a tapering slot from its outer end, forming a wedge-shaped socket, with larger inner end, in which a wedge is inserted when the handle is placed on the tool, the wedge being secured in place by keys passed through the transverse

PLANE.-John N. Schneider, Mendota,

the bit is automatically retired from its cutting position during the back stroke, a novel mechanism being also provided for the adjustment of the bit, which may be regulated while in use without removing the hands from the handle. The bit stock is pivoted in the plane stock and the handle is designed by its rotation to regulate the adjustment of the bit stock, and to automatically throw the bit into operative or inoperative positions as the pres sure is directed to propel or retract the plane.

LUBRICATOR.—Carl Geier, Oberlangenbielau, Prussia, Germany. To supply a lubricant to machinery in motion, making the supply dependent on the speed of the parts, is the object of this invention, which provides means for regularly supplying the lubricant, and to operate an alarm when the supply in the storage tank has become nearly exhausted. Within a lubricator tank connected by suitable channels with the machinery to be lubricated is a float, the latter being so arranged in connection with a hammer and bell that, as the float nears the bottom of the tank, the hammer will be caused to continuously strike the bell.

Agricultural.

GRAIN LIFTER FOR MOWING MA CHINES.—Wilhelm Jager, Kankendorf, Germany. To secure the reliable and uniform operation of the cutters of mowers and harvesters, this invention provides devices to raise the stalks to an approximately upright position, in case they have been bowed down by rain or wind, thus enabling them to be cut as near the ground as possible. On the stubble side of the cutter is a lifting arm extending lengthwise of the machine, and rakes to gather the cut grain are pivotally connected to supports adapted to travel over the arm, chains connecting the free ends of the supports to the rakes to limit the move ment of the supports.

Miscellaneous.

INDICATOR FOR OIL WELLS.-Oliver H. Burdett, New Athens, Ohio. For use in weak wells, and more especially for indicating the direction of an oil pool from the well, to enable the operator to drill a second well accurately into the oil source, this invention provides devices to be let into and removed from the first weak well to indicate the direction of flow of the oil. The indicator comprises a perforated casing in which are arranged one or more vanes to be acted on by the flow of the oil, the casing also holding a compass and means for locking the vanes and the needle of the compass in position.

FENCE.—Emil M. Korka, Adrian, Mich. According to this improvement, while the horizontal or strand wires are securely fastened to the posts or pickets, ample provision is made to allow for the expansion and contraction of the strand wires without damage to the posts. The strand wires are formed with three bends at each post, and a lock made of a single piece of spring wire is bent to form end loops and transverse hooks, the strand wire extending through the loops, around the post and around the hooks, thus allowing the strand wire to readily expand and contract without affecting its fastening to

TRACTION WHEEL -Adam and John Smith, Blissville, Ill. For traction engines or similar vehicles this invention provides a wheel with mud shoes and a simple means for automatically moving the shoes into position relatively to the rim of the wheel to serve as teeth in mud or soft roads, the shoes being mov able into the rim of the wheel while traveling over hard roads or bridges. The shoes are pivoted in recesses ex tending through the rim of the wheel, rock shafts mounted in frames secured to the spokes of the wheel having connection with the shoes, while holding arms extended from the shoes are adapted to be engaged by tappet fingers to move the shoes in or out.

LIFEBOAT. - Edwin Verburg, Grand Rapids, Mich. The hull of this beat has the usual life. boat form, with water tanks along its sides and air chambers at the stem and stern, and is provided with a sectional centerboard; but, instead of being propelled by oars, the boat is provided with a screw propeller which rotates in an opening at the rear of the centerboard, the propeller shaft having a universal joint connection with a driving shaft on which is a bevel gear engaging with bevel gears on a countershaft, to propel t he boat forward or backward, there being at each side of the trunk a series of connected crank shafts ope ated by foot pedals similar to those of a bicycle. Provision is made for eight operators, four on each side, and all facing the direction in which the boat is to be propelled.

Box Former.-John C. Titus, Norfolk, Va. This invention covers an improvement in machines for making boxes for holding berries, grapes, etc., providing novel constructions and combinations of parts to permit the proper presentation of opposite end and side portions of the box to the stapling devices. The former is made with a slideway having opposite end former having a plate with end-bearing portions and a connecting slot, the center turning and sliding in the slot to bring the respective portions of the box in proper position to the staple-setting devices

CHECK SPRING.-Fred B Walker, San Antonio, Texas. To prevent sudden pulls on a horse's mouth and also to lessen undue tension on the several parts of the harness, this inventor provides a check spring formed of a single piece of wire into a spring coil, one end having an eye for attaching the check rein and the other end an eye for connection with a terret. The end of the terret eye terminates in a loop which extends through the coil and straddles the shank of the rein eve, to limit its outward movement, the return member of the loop having its end extended over the terret eye to form a guard therefor.

CUTTING AND STAMPING CIGARS. Bernard Sheldon, Brooklyn, N. Y. To print or stamp upon a cigar and cut off its ends, according to this invention, the cutting and stamping mechanism are conected and operate together, the cigar being held firmly PLANE.—John N. Schneider, Mendota, on the table by a clamp, but so as not to injure the recent practice in his profession, as well as the standard lill. In hand planes this invention affords a tool in which cigar. The type with which the cigar is stamped extends tables and formulæ always needed for reference.

matically carried over the opening when the clamp is released, preventing any trimmings from the cigar falling on the stamp.

CORSET CLASP.-William W. Lasker, Brooklyn, N. Y. 'To facilitate fastening the front meet ing edges of corsets, according to this invention, one of the stays is made with beaded lugs and the other with clasp sections comprising pairs of guide plates, movable through which are clasp bars, the plates having slots to receive the heads of the lugs, and the bars being moved automatically when the stays are forced together with the lugs in the slots. The clasp cannot be accidentally released, but facilitates the ready fastening and unfastening of the corset.

POCKET BOOK. - Frederick Hasselberger, Newark, N. J. This pocket book, when opened, has a flat-bottomed compartment, thus rendering coins placed in it more accessible. The side walls are composed of or contain stiffening material, and the lining is so fitted that when the pocket book is opened the bottom portion of the lining rises toward the top to form a broad, level surface

TEA OR COFFEE POT.—Leonard L. Dick, Boston, Mass. The covers and handles of tea and coffee pots are, according to this invention, made adjustable, to be locked in position when in use, and therefore less liable to breakage than is ordinarily the case. At the side of the pot are vertically arranged lugs with holes therein to receive the top and bottom of the handle, a spring holding the handle in such locking engagement, and on the under side of the cover are springpressed bars passing through slots in the cover and adapted to engage a flange in the under side of the top opening of the pot.

STORE OR COUNTER STOOL.—Albert R. Milner, Canton, O. According to this invention, a bracket secured to the base of a counter is provided with an opening in which is pivoted the lower end of a curved arm, to the top of which is attached a stool, adapted to be swung out a suitable distance to afford a comfortable seat in front of the counter, or to be swung inward under the front edge of the counter to be out of the way when not in use, a stop in the bracket limiting the outward movement of the stool arm and a spring holding it turned under the edge of the counter

CRATE.-John F. East, Norfolk, Va. For the ventilation of berry and other crates, especially those handled in refrigerator cars, this invention provides a ventilated elastic bottom having side bars projecting downward and forming an air space, the bars being recessed or rabbeted to receive the uprights and rails, and the bottom strips being spaced apart corresponding with the spaces between the cups in the crate, while the base bars are seated in the sill bars. The crate is designed to be as strong as the ordinary heavy solid bottom crate.

Invalid's Chair.-Juana G. Yznaga, Brownsville, Texas. This chair has arms projecting forwardly over the seat, pillars resting on the seat supporting the outer portions of the arms, while a table composed of end and top plates is attached to the chair in a manner adapted to support dishes, books or any kind of work. A drawer is also provided for the reception of small articles, and posts extended upward from the table and connected by a cross bar form a rest for books and also a support for skeins of yarn to be wound. A foot rest attachment is readily added or removed.

Designs.

THILL COUPLING PLATE. - Charles T. Redfield, Glenhaven, N. Y. The body section of this plate is curved and has an opening containing a tongue, there being end members at an angle to the body, one of the members being longer than the other and having a reverse curve.

Puzzle Box. -- Ernest F. Elmberg, Chicago, Ill. This design comprises a rectangular base with a border at its edges, and with partitions of peculiar form and disposition, forming irregular mazes.

COVERS FOR POCKET BOOKS OR CARD CASES .- John Mehl, Jr., Jersey City, N. J. Five design patents in the same line have been issued to this inventor the first one of which is for depressed or intaglio delineations, forming a diamond panel at the center of the cover, with quadrantal corner panels, and segmental panels and small diamond panels between the corner and the central panels. The second design comprises embossed angular corner panels and groups of radiating depressed or intaglio lines, the lines of each group being converged at different panels. A third design has two embossed corner panels, each with straight outer edges and an inner edge formed with scallops meeting at the center of the panels Another design has embossed corner panels with straight outer edges at angles to each other and a waved inner edge connecting the outer edges end of the cover, the inner edge of the panel having a bead and compound curved lines extending to opposite sides of the cover.

Note.- Copies of any of the above patents will be furnished by Munn & Co. for 10 cents each. Please send name of the patentee, title of invention, and date

NEW BOOKS, ETC.

WHITTAKER'S MECHANICAL ENGINEER'S POCKET BOOK. By Philip R. Bjorling. New York: The Macmillan Company. Pp. 877. Price \$1.75.

A great fund of carefully selected information likely to be at any time needed by the mechanical engineer is here presented in neat and compact form, printed in good sized, clear type, and well arranged for ready reference, a material aid to which is furnished in a good index. An engineer who wishes to keep up with the times will find in this hand book much matter relative to the more

"A BRIEF FOR THE CIGARETTE."

BY CYRUS ALDRICH

The paper cigarette, against which so much has been said and written, has an able champion in W. H. Garrison, whose address on the subject before the Medico-Legal Society at its last meeting attracted considerable attention. The current issue of the Medico-Legal Journal contains the full text of this paper, entitled "A Brief for the Cigarette," and in it Mr. Garrison has brought a strong array of facts to shatter, what he termed, the "unreasonable prejudice which at present exists against the paper cigarette," and was certain that the investigations of professional men of science would only em phasize the results at which he had arrived.

The annual output of cigarettes for 1897, he said, was four thousand millions, and if it is the malign and wicked thing which its opponents claim it to be, its manufacture and sale should be suppressed as dangerous to the public

Apparently all the agitation against the fragrant cigarette was born in prejudice like that other similar fiction, "chloroforming" or "poisoning from canned meat."

Prof. H. W. Wiley, chief chemist of the United States Department of Agriculture, at Washington, analyzing that brand of American cigarettes which is used by more than one-half the cigarette smokers of the country, finds that a cigarette is made of 1.0926 grains of tobacco enveloped in a wrapper of paper weighing 0.038 grain. In other words, one pound of tobacco will furnish fillers for 416 cigarettes and one pound of cigarette paper witl serve to envelop 12,000 of these fillers. One twenty sixth of an ounce of tobacco in a paper one by three inches in size and weighing seven one hundredths of an ounce is a cigarette. Just tobacco and paper!

What kind of tobacco? Prof. Willis G. Tucker, of the Albany Medical College, and analyst of the State Board of Health, says in his ninth annual report:

"Cigarettes are generally made from tobacco of good quality. Sensational statements that they are prepared from the filthiest tobacco and dirtiest refuse are not worthy credence, and can be easily refuted."

Prof. Wiley says that in many samples purchased in the open market he failed to find any trace of arsenic or onium or any of its active principles. Prof. Tucker prepared for his work of analysis by searching the medical text books and journals, and couldn't find even a statement that these foreign substances were employed. Dr. F. G. Payne, State Chemist of Georgia; Profs. Robert and Albert M. Peter, of Lexington, Ky.; Prof. James Dewar, of Cambridge: William Odling, of the University of Oxford; and C. Meymott Tity. of "Forensic Medicine," London Hospital, join with those named in pronouncing the American cigarette free from

Then comes the third bugaboo-that of inhalation of the smoke: which called forth an answer from Sir Henry Thompson, who said that the cigarette was the least injurious form of smoking, and Meyer Dutch wrote that "the inhaled smoke rarely passes beyond the bronchi, very little ever entering the air vesicles."

Thus science lavs another robust falsehood in the dust. The cigarette smoker may henceforth enjoy his rings of moke in peace of mind.

Business and Personal.

line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

Marine Iron Works. Chicago. Catalogue free. "U. S." Metal Polish. Indianapolis. Samples free. Gasoline Brazing Forge, Turner Brass Works. Chicago Yankee Notions. Waterbury Button Co., Waterb'y, Ct. Handle & Spoke Mchy. Ober Lathe Co., Chagrin Falls, O. Power Hammers manuf'd by Jenkins & Lingle, Belle-

Ferracute Machine Company, Bridgeton, New Jersey. make a specialty of Minting Machinery.

Improved Bicycle Machinery of every description. The Garvin Machine Co., Spring and Varick Sts., N. Concrete Houses -- cheaper than brick, superior to stone. "Ransome," 757 Monadnock Block, Chicago.

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.



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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 wisbing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

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Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on eccipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(7331) D. H. A. writes: Please explain the derivation of one volt = 10^8 dynes, one ohm = 10^9 ergs, and one ampere $=\frac{1}{10}$ abs. unit. Now, don't refer

me to Hopkins' "Experimental Science" or Thompson's "Dynamo Electric Machinery," as I have both, and they both fail to give an explanation. Don't

be afraid of giving any calculus or mathematics, as I am a graduate of the course in civil engineering of Cornell University. A. Your inquiry regarding the value of the volt, ohm and ampere in C. G. S. units does not come within the scope of either of the valuable practical works you name, viz., Hopkins' "Experimental Science" or Thompson's "Dynamo Machinery." As well go to a cook book for the theory of digestion. The C. E. course in Cornell gives the answertoyour question in second term, Sophomore year. You might have learned it then. Both our time and space are too valuable to give elementary instruction in the theory of electricity. We refer you to "The Elements of Physics," by Prof. Edward L. Nichols, of Cornell, Vol. 2, " Electricity and Magnetism," price \$1.50; "Absolute Measurements in Electricity and Magnetism," Gray; larger edition in 2 vols., price \$9.50. "Treatise on Electricity and Magnetism," J. Clerk Maxwell; 2 vols.; price \$8. This should be read with "Notes on Recent Researches in Electricity and Magnetism," by J. J. Thompson; price \$4.50; as this last is a sequel to Prof. Maxwell's book. We may point out the fact that your statement of the question is not correct. The volt is not equal to any number of dynes; but 1 volt = 108 absolute units of difference of potential, or E. M. F., and I absolute unit of difference of potential exists between two points when it requires 1 erg of work to bring 1 unit of + electricity from one point to the other against the electric force. You make a similar error of statement regarding the ohm Your definition of 1 ampere is correct, since

1 ampere = $\frac{1 \text{ volt}}{1 \text{ ohm}} = \frac{10^8}{10^9} = \frac{1}{10}$ - = 10 -1.

The books named above give, as you request, the mathe matical treatment of the subject, and are the best to be had in English.

TO INVENTORS.

An experience of nearly fifty years, and the preparation of more than one hundred thousand applications for patentsat home and abroad, enable us to understand the laws and practice on both continents, and to possess unequaled 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 Granted

JANUARY 25, 1898,

AND EACH BEARING THAT DATE.

(See note at end of list about copies of these patents.)

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Beating engine bed plate, Maxfield & Lovejoy. 537,895 Bed, O. S. Foster	Automatic brake, A. McGlathery	598,000
Beating engine bed plate, Maxfield & Lovejoy. 537,895 Bed, O. S. Foster	Axle box lld, car, N. H. Davis	597,800
Beating engine bed plate, Maxfield & Lovejoy. 537,895 Bed, O. S. Foster	Axle, lubricating, G. M. Mather	597,910 597,798
Beating engine bed plate, Maxfield & Lovejoy. 537,895 Bed, O. S. Foster	Battery grids, manufacture of storage, W. W.	
Bicycle Support, C. W. Rogers	Beating engine bed plate, Maxfield & Lovejoy	597,885
Bicycle Support, C. W. Rogers	Bed, O. S. Foster Bedclothes clamp, L. M. Lownes	597,899 597,805
Bicycle Support, C. W. Rogers	Bedstead, L. Coburn	597,876
Bicycle Support, C. W. Rogers	Bicycle, W. J. Pugh	598,058
Bicycle Support, C. W. Rogers	Bicycle alarm, F. J. Heilborn	597,829
Bicycle Support, C. W. Rogers	Bicycle brake and alarm, A. M. Schutz	597,863
Bicycle Support, C. W. Rogers	Bicycle dress guard, E. P. Turner	597,867
Bicycle Support, C. W. Rogers	Bicycle gear, differential, Conen & Wolf ereck Bicycle handle bar, adjustable, E. S. Hall	597.801
Bicycle Support, C. W. Rogers	Bicycle lamp holder, J. W. Bragger	597,947
Bicycle Support, C. W. Rogers	Bicycle racks, electrically actuated lock for, Wal-	507.004
Book holder, A. C. Bisbee	Bicycle stand, E. H. Webster	598,040
Book holder, A. C. Bisbee	Bicycle support, C. W. Rogers	598,009
Book holder, A. C. Bisbee	Boiler furnace, T. Weinhart	598,061
Book holder, A. C. Bisbee	preventing escape of steam from, L. M. V.	
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Blanc	597.810
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Book marker, leaf holder, and paper knife, com-	001,102
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Boot or shoe rack, S. L. Saunders	597,862
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Bottle, antireflling, L. Felumb	597,898 597,767
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Bottle stopper, E. T. Knight	597,852
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Bottle stopper, G. Koch Bottle stopper remover, E. R. Buhrman	598,050 597,874
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Bottles, stoppering device for preventing refilling Midson & Schroeder	507 002
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Bridge, draw, W. L. Sampson.	598.012
Burial casket shipping case, C. O. Forbis. Button, tack fastened. Shipley & Hyde 598,022. Camera, roll holding. E. P. Pasquier 598,022. Can opener. W. R. Gluyas 597,757. Can opener. E. S. Lefter 597,757. Can opener. F. S. Lefter 597,758. Can opener. rotary. W. Gregson 598,055. Can cell opener. F. S. Lefter 597,758. Can cell opener. F. S. Lefter 597,811. Can coupling. C. A. Bull 597,981. Car brake, emergency. P. Casey. Jr 597,891. Car brake, emergency. P. Casey. Jr 597,732. Car coupling. J. P. Runkel 597,732. Car coupling. J. P. Strahle 597,732. Car coupling. J. P. Strahle 597,732. Car fender, automatic. W. B. & W. H. Heywood 597,831. Car safeguard express, J. Lamborg 597,831. Car safeguard express, J. Lamborg 597,831. Car safety fender, street, W. B. Heywood 598,038. Car brake funder, street, W. B. Heywood 598,038. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,782. Car safeguard express, J. Lamborg 597,831. Cas brake funder, street, W. B. Heywood 598,038. Cas hegister, A. C. Hansen 597,976. Cash register, D. A. Green 597,976. Cash register, A. C. Hansen 597,976. Cash register, A. C. Hansen 597,976. Caster gray tool, W. E. Severance 597,976. Cathering tool, W. E. Severance 588,042. Churn, N. E. Ferrell 597,773.	Brush holder, scrubbing, W. Putman	598.008
Burial casket shipping case, C. O. Forbis. 597,712 Button, tack fastened, Shipley & Hyde 598,022, 589,022 Camera, roll holding, E. P. Pasquier 598,025, 589,022 Can opener, W. R. Gluyas 597,768 Can opener, E. S. Lefter 597,768 Can opener, rotary, W. Gregson 598,065 Canceler and postmarker, stamp, Holmes & Milam 597,891 Cane, etc., device for transporting and weighing, A. S. Hallidie 597,804 Car and locomotive replacer, G. A. Buili 597,804 Car brake, emergency, P. Casey, Jr 597,813 Car brake, emergency, P. Casey, Jr 597,813 Car brake, street or railway, J. A. Hughes 597,772 Car coupling, J. P. Runkel 597,792 Car fender, H. C. Spangler 597,832 Car fender, automatic, W. R. & W. H. Heywood 597,832 Car safety fender, street, W. B. Heywood 597,831 Carbon protector, F. O. Clapp 597,832 Car safety fender, street, W. B. Heywood 598,087 Carbon protector, F. O. Clapp 597,762 Card teeth grinding apparatus, E. Schweine- ficisch 698,015 Cash register, D. A. Green 598,015 Cash register, D. Hensey 597,976 Cattle guard, J.	Burglar alarm system, electric, C. Coleman. 598,049,	598,063
A. S. Hallidie	Burial casket shipping case, C. O. Forbis	597,714
A. S. Hallidie	Camera, roll holding, E. P. Pasquier	597,857
A. S. Hallidie	Can opener, W. R. Gluyas	597,768 597,724
A. S. Hallidie	Can opener, rotary, W. Gregson	598,065
Car and locomotive replacer, G. A. Bull 597,951 Car brake, emergency, P. Casey, Jr. 597,813 Car brake, street or railway, J. A. Hughes 597,732 Car coupling, J. P. Runkel 597,861 Car coupling, J. F. Strahle 597,798 Car fender, H. C. Spangler 597,884 Car fender, automatic, W. B. & W. H. Heywood 588,088 Car fender, street, J. F. Baker 597,396 Car safety fender, street, W. B. Heywood 598,087 Carboy protector, F. O. Clapp 597,760 Card teeth grinding apparatus, E. Schweinfeisch 598,015 Cash register, D. A. Green 597,976 Catle guard, J. Hensey 597,976 Centering tool, W. E. Severance 598,018 Churn M. V. Olinger 597,796 Churn M. V. Olinger 597,796	carret of the state of the stat	
Car brake, emergency, P. Casey, Jr. 597,712 Car brake, street or railway, J. A. Hughes. 597,772 Car coupling, J. P. Runkel 597,792 Car coupling, J. F. Strahle. 597,792 Car fender, H. C. Spangler 597,894 Car fender, automatic, W. B. & W. H. Heywood. 589,098 Car fender, automatic, W. B. & W. H. Heywood. 597,821 Car safety fender, street, J. Lamborg. 597,821 Carboy protector, F. O. Clapp. 597,762 Carboy protector, F. O. Clapp. 598,076 Card teeth grinding apparatus, E. Schweinefieisch. 598,015 Cash register, D. A. Green. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 588,018 Chair. See Invalid chair. Revolving chair. 588,018 Churn, N. E. Ferrell. 597,790 Churn M. V. Olinger. 597,790	Car and locomotive replacer, G. A. Bull	597,951
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	Car brake, emergency, P. Casey, Jr	597,813 597,772
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	Car coupling, J. P. Runkel	597.861
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	Car fender, H.C. Spangler	597,864
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	Car fender, automatic, W. F. & W. H. Heywood. Car fender, street, J. F. Baker	598,068 597,936
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	Car safeguard, express, J. Lamborg	597,821
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	Carboy protector, F.O. Clapp	597,760
Cash register, A. Green. 597,973 Cash register, A. C. Hansen. 597,976 Cattle guard, J. Hensey. 597,976 Centering tool, W. E. Severance. 598,018 Chair. See Invalid chair. Revolving chair. Chronograph, Wildermann & Mond. 598,042 Churn, N. E. Ferrell. 597,976 Churn, W. V. Olinger. 597,736	fleisch E. Schweine-	598,015
Churn, N. E. Ferrell. 597,970 Churn, M. V. Olinger 597,970	Cash register, D. A. Green	597,973
Churn, N. E. Ferrell. 597,970 Churn, M. V. Olinger 597,970	Cattle guard, J. Hensey	597,977
Churn, N. E. Ferrell. 597,970 Churn, M. V. Olinger 597,970	Chair. See Invalid chair. Revolving chair.	990,018
Churn M. V. Olinger. 597,736		
Cagar box, W. A. Stickney	Churn, M. V. Olinger.	597,736
Cigar Dox, W. A. Stickney	et al.	597,905
Clock center arbor, T. W. R. McCabe. 588,085 Clock, pneumatic, A. L. Hahl. 588,086 Clothes liue pulley, S. S. Fairman 591,765 Clothing boiler, W. P. Rylander 588,011 Cock, gage, F. A. Huert. 597,966 Cock rotary plug, G. E. Martin. 597,788 Cock, safety gas, J. Dunlop. 597,878 Cock, safety gas, J. Dunlop. 597,878 Collapsuble stand, D. A. Lindsey Combination lock, J. T. Eldridge. 597,985 Collapsuble stand, D. A. Lindsey Combination lock, J. T. Eldridge. 597,712 Consecutive view apparatus, H. Casler. 597,759 Conveying apparatus, L. D. Castle. 597,837, 597,838 Cooking fixing or sterilliging by steam H. Hiv.	Cleaner. See Cotton cleaner. Dish cleaner.	597,791
Ciothes liue pulley, S. S. Fairman 99175 Clothang boiler, W. P. Rylander 982 Clothang boiler, W. P. Rylander 982 Clothang boiler, W. P. Rylander 982 Clothang 1982 Clothang 1982 Clothang 1983 Clothan	Clock center arbor, T. W. R. McCabe	598,055
cock, rotary plug, G. E. Martin. 597,396 Cock, rotary plug, G. E. Martin. 597,396 Cock, rotary plug, G. E. Martin. 597,897 Coin controlled machine, H. T. Emeis. 597,895 Collapsible stand, D. A. Lindsey. 597,895 Combination lock, J. T. Eldridge. 597,712 Consecutive view apparatus, H. Casler. 597,894 Conveying apparatus, L. D. Castle. 597,837 Cooking drying or sterilizing by steam H Hir	Clothes liue pulley, S. S. Fairman	597,765
Cock, rotary plug, G. E. Martin. 597,728 Cock, safety gas, J. Dunlop. 597,897 Coin controlled machine, H. T. Emeis. 597,895 Collapsible stand, D. A. Lindsey. 597,895 Combination lock, J. T. Eldridge. 597,712 Consecutive view apparatus, H. Casler. 597,759 Conveyer, bucket, A. J. Frith Conveying apparatus, L. D. Castle. 597,837, 597,838 Conviging apparatus, L. D. Castle. 597,837, 597,838	Cock, gage, F. A. Huett	597,906
Coin controlled machine, H. T. Emeis. 997,855 Collapsible stand, D. A. Lindsey. 597,854 Combination lock, J. T. Eldridge. 597,712 Consecutive view apparatus, H. Casler. 597,759 Conveyer, bucket, A. J. Frith. 597,834 Conveying apparatus, L. D. Castle. 597,837, 597,838 Cooking drying or sterilizing by steem H Hir	Cock, rotary plug, G. E. Martin	597,728 597,897
Combination lock, J. T. Eldridge	Coin controlled machine, H. T. Emeis.	597,965
Consecutive view apparatus, H. Casler. 597.759 Conveyer, bucket, A. J. Frith. 597.834 Conveying apparatus, L. D. Castle. 597.837, 597.838 Cooking drying or sterilizing by steam H. Hig.	Combination lock, J. T. Eldridge	597,854 597,712
Conveying apparatus, L. D. Castle	Consecutive view apparatus, H. Casler	597,759 597,844
	Conveying apparatus, L. D. Castle597,837,	597,838

Cotton cleaner and condenser, unt, H. W. South-	597,96 7 597,751	Por Pre Pri
Cotton gin, roller, F. I. Montgomery	597,751 597,999 597,739	Pri Pri Pri
Counter seat, J. P. Prentiss. Coupling. See Car coupling. Pipe coupling. Yoke coupling. Cultivating machine, corn, W. Evert. Cultivator, E. A. Ovenshire. Cultivator and planter, C. B. Webster. Cupboard, wind ow. R. Ives. Curd agitator, G. D. Pohl. Curtain pole support, adjustable, • E. Wagener Curtain pole r. I. W. Monrett	597,817 598,057 598,039	Pul
Cupboard, window, B. Ives. Curd agitator, G. D. Pohl. Curtain pole support, adjustable. E. Wagener Curtain roller, J. W. Morneth Cutter forming machine, O. L. Noble. Cycle, S. E. French Cycle canopy, L. D. Goodwin Cycle driving mechanism, J. Dredge Decorticating apparatus, J. M. MacDonald. Disb cleaner, M. D. Colbath Disinfectant holder, D. N. Calkins Disinfecting apparatus, F. Carman Disinfecting apparatus, F. Carman Disinfecting apparatus, F. Carman Districting Jack, H. Heer, Jr. Door check, A. J. Johnston. Door check, A. J. Johnston. Door check, pneumatic, W. K. Henry Doofock, precording, E. L. Smith Door or transom stop, H. C. Chaplin Drawers, J. A. Scriven. Dust pan, H. Kohlmyer Divelng, etc., apparatus for, L. Hwass	597,718 597,859 598,036 597,730	Rac Rac Rac
Cutter forming machine, O. L. Noble	598,002 597,843 597,845	Rai
Cycle driving mechanism, J. Dredge Decorticating apparatus, J. M. MacDonald Dish cleaner, M. D. Colbath	597,963 597,993 597,957 597,811	Rai Rai Rai Rei
Disinfecting apparatus, F. Carman. Disinfecting apparatus, E. D. Lewis. Ditching jack, H. Heer, Jr.	597,894 598,053 597,849	Reg
Door check, A. J. Johnston. Door check and closer, F. T. Russell. Door check, pneumatic, W. K. Henry	597.881 598,010 597,715	Ros Ros
Door or transom stop, H. C. Chaplin. Drainage trap, E. Martin. Drawers, J. A. Scriven.	597,895 597,822 597,747	Ro Ro
Drawers, J. A. Scriven Dust pan, H. Kohlmyer Dyelng, etc., apparatus for, L. Hwass. D gatufi, black substantive cotton, M. H. Isler. Eaves trough ends, implement for forming, W. W. Warren. Electric cable, Smith & Granville. Electric furnace, C. S. Bradley. Electric furnace, W. S. Horry. Electric furnace, W. S. Horry. Electric switch, J. L. Hinds. Electric switch, J. E. Hinds. Electrica distribution system, H. Linton. Engine, Eee Explosion engine. Explosive engine. Gas engine. Rock drill engine. Rotary engine.	597,986 597,716 597,983	Ru Sav Sca Sca
W. Warren Electric cable, Smith & Granville. Electric furnace, C. S. Bradley	597.924 597.790 597,945	Sea Sea Sea
Electric furnace, W. S. Horry	. 597,880 . 597,985 . 597,979 . 598,001	Sev Sev Sha
Electrical distribution system, H. Linton Engine. See Explosion engine. Explosive engine. Gas engine. Rock drill engine. Rotary	597,855	Shi
engine. Envelope, safety. A. & W. Grupe. Explosive engine, S. Rolfe. Explosive engine, E. D. Strong. Eyeglasses, W. N. Blanchard. Faucet, A. B. Edmands. Feeder, steam boiler, J. Kirkwood. Fence machine, wire, J. W. Allen. Fence post, R. Oliver. Fender. See Car fender. Car safety fender. Filtering apparatus, C. Prevet. Firearm, box magazine, T. C. Johnson.	597,974 597,860 597,921	Sig Sip Siz Sk
Eyeglasses, W. N. Blanchard	. 597,941 . 597,842 . 597,884 . 597,931	Ska
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Fuse. safety, L. A. Ferguson		Sta Sta Sta Sta
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Gas administering apparatus, Johnston & Brown Gas administering apparatus, P. Ring Gas, apparatus for producing acetylene, R. F	e 597,719 . 597,781	Sto Sto Sur Sw
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Grain binder, C. S. Sharp. Grain binder, C. S. Sharp. Grain self binders, elevator for, J. J. Guidinger, Grain self binders, elevator for, J. J. Guidinger, Grain shocking machine, G. S. Bingham. Gramophone, A. C. Clark. Gynecological instrument, Kroning & Bensel Hat brim curls, machine for forming, J. Redwa	597,847 597,703 597,875 597,988	Ty U
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Hitching post, E. J. Sellers	598,017 598,060	Ve
Honeycomb foundations, machine for makin artificial, E. B. Weed. Hub and box, vehicle, H. W. Denham. Hub locking device, wheel, I. F. Bassford. Hub, wheel, I. A. Weston. Ice cream freezer, F. M. Snook. Ice tongs, D. R. Cotner. Invalid chair, convertible, J. A. Crandall. Jack. See Ditching jack. Lifting jack.	597,757 598,041 597,918	WWW
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Lemon pulp remover and strainer, C. Hunt Level, plumb, H. S. Minot. Lifting jack, D. T. Hill	597,987 597,851 597,886 597,850	B
Jambs, ight retracting and me, vyrighter for incandescent, Dunlap & Quain. Lantern ighting attachment, R. D. Gregg. Lantern, miner s, H. J. Delzell. Lantern, signal, M. E. Wells. Last, O. A. Miller. Last, C. H. Saunders. Last, C. H. Saunders. Last, C. H. Saunders. Last, C. H. Saunders. Last, Dot, P. Kelley. Laundry fork, F. K. Krabach. Lemon pulp remover and strainer, C. Hunt. Level, plumb, H. S. Minot. Lifting jack, D. P. Hill. Lock, See Combination lock. Door lock. Permutation lock. Locking bolt, N. R. Shults. Loom for cross weaving, I. E. Palmer. Loom, band, J. M. Deen. Lubricator, J. W. Graham Lubricator, J. W. Graham Machine shop plant, P. W. Gates. Maganifying glass, E. Bausch. Mal pouch, J. Herring.	1- 597,748 597,856	: 1
Loom, band, J. M. Deen. Lubricator, J. W. Graham. Lubricator, W. F. Scheffer.	597,763 597,903 598,013	GN
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Nut lock. Parks & Shelley Oil cup, W. S. Wilson Oils, purifying and refining California petroleur E. A. Starke	597,737 598,044 n, 597,920	M
É. A. Starke Padlock, permutation, O.C. Hines. Paint, A. T. Hall. Paper box. F. C. Stettler. Pasteboard boxes, machine for manufacturin	597,986 597,776 598,032	M R D T
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17 33 75 88	Tub. See Grant Cub. Typewriting machine keyboard, E. B. Kirby. Typewriting machine keyboard, E. B. Kirby. Urbrella, N. Illoway. Urbrell	1 voltage
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