RECENTLY PATENTED INVENTIONS. Electrical Devices.

ELECTRICAL FUSE.—A. G. FAY, Highland Park, Ill. The fuse is for use in blasting, the more particular purpose being to protect the materials and containing shells of the fuse against moisture. To this end the invention relates to the addition of an outer shell and a filling, the size of the diameter of the outer shell being slightly reduced at one end therefor for sharpening the effect of detonation of

Of General Interest.

BOAT.-F. M. THOMPSON, East Liverpool, patent is a vertically rocking rudder or tailplate, the movement of which causes the prow of the boat to rise and fall in the water to a degree desired. To overcome any suction and break up formation of vacuum at the plate the latter is made hollow and means are provided of the plate and in rear of the propellers for

CRATE .- D. F. PAYNE, Corpus Christi, Texas. The invention relates to crates used for shipping, the more particular purpose being to provide a type of crate which may be folded readily when not in use, and provided with top and bottom members detachable from other portions of the crate and adapted to be sprung into position for the purpose of holding them into position.

WINDOW.-H. MORTENSON, New York, N. Y. This invention is an improved window, in in two from the interior. which either the upper or lower sliding sash COMBINATION TOOL.—W. J. TWEEDALE, may be turned end for end and brought in-Saginaw, Mich. The intention in this case is accessible for washing or other purposes, and if desired.

RECORD-HOLDER .- W. T. Long, Sumner, Wash. The object here is to provide a holder bit. arranged to accurately and securely hold the record in central position, to accommodate records of different sizes, to compensate for variations of the inside diameter of the records, to hold the record against accidental shifting in an axial direction and to allow placing it conveniently in position on the holder or removing it therefrom.

EMBALMING APPARATUS .-- J. E. COPPOLA, Mexico, Mexico. An object in this invention oven to be kept constantly filled. is to provide a simple apparatus capable of with trocars or needles for injecting the fluid under pressure into a cadaver.

FLASK FOR FORMING GATED MOLDS. C. W. Blue, Montgomery, Ala. This invensiderable distance with ease and which can be tion provides a construction of flasks wherein equally as well read in the daylight. the gated molds may be formed in tiers, and the pattern members withdrawn therefrom; provides flasks wherein the cores may be in serted from the outside of the flask and held to be mounted in tiers and arranged to accommodate molds of various sizes.

DRY SEPARATOR .- R. R. SNOWDEN, Houston, Texas. The invention relates to mills, and fluids such as oil and the like. When one galthe object is to provide a separator more especially designed for treating crushed phosphate rock and other materials so that the material in a revoluble screen is subjected to alternate brushing and jarring actions, to thoroughly plete revolution. separate the valuable material from the extraneous matter.

SCREEN.-C. J. JEWETT, Fort Smith, Ark. The invention relates to screens which may be for used for clay, coal, or other materials, and an object is to provide a screen with adjustable screen bars, and means to move the bars to predetermined distances from each other. Means prevent the material from becoming clogged between the screen bars.

DAMPER-REGULATOR .- R. P. MITCHELL and R. V. Brawley, Statesville, N. C. A spring ship having an aeroplane and a balloon or gas is adjusted to retain a disk against predetermined pressure in the boiler. Means permit the cylinder to exhaust, but should the presexceed predetermined value, means are provided to close or partially close the damper in accordance with the excess of pressure. A or chamber having means for regulating tem-knots with half the horse-power required to et a dis inlet opening to the pipe, but when pressure falls, means permit the cylinder to exhaust, the piston to move downwardly, to allow a weight to swing the damper into open posi-

PARALLEL-RULER.-F. W. STERLING Chicago, Ill. The invention appertains to drafting instruments, and its purpose is to provide a new and improved parallel ruler, more especially designed for the use of mavigators and other persons, to permit them to accurately and quickly transfer parallel lines when translating courses on a chart.

CIGAR-PERFORATOR.—E. F. HALL, Fowler. Cal. The improvement is in that class of perforators which are provided with a series of opposite points or prickers pivoted and arranged convergently in such manner that when the tip of a cigar is pressed down between them they enter the same and thus form lateral holes which assist in producing an easy draft. I fluid to a greater or less degree, and has had

Chicago, Ill. The inventor provides a device will permit of the use of as many cylinders as in which good ventilation is secured, while at desired.

the same time the vent lating opening is shaded without the necessity of using a projecting awning or other similar device. He provides a device which while permiting good ventilation prevents the rain or snow from entering while the device is in use.

Hardware,

WRENCH.-W. A. PRATT, Stamford, Conn. This wrench is adapted for screwing up or unscrewing caps or jars and other packages, and for loosening the caps from the rubber or other packing rings, it being adjusted for gripping objects of various sizes, and having handled V-shaped jaws pivotally connected Ohio. Among the characteristic features of this with each other at their ends and a supplementary jaw adjustably and removably attached to one of the jaws to co-act with the opposite jaw.

WOODWORKER'S PLANE.-J. H. BROWN, Boston, Mass. The intention here is to pro vide for a plane that facilitates the exact ad to discharge air, into and through. Horizontal justment of the cutter bit laterally and longirudders or vertical axes are provided in front tudinally in the throat of the plane stock enable the quick and exact graduation for size of the throat opening in the stock, provide means for clamping the cutter bit when adjusted in the throat opening.

TUBE-CUTTER .- O. R. YOUNG, Riverhead, N. Y. The invention is useful for various different purposes, and particularly in facilitating the removal of defective tubes in a boiler or similar tubular structure. In a boiler access cannot easily be had to the exterior of the tube and some difficulty is experienced in removing the tube unless it be cut

COMBINATION TOOL-W. J. TWEEDALE, ward in the lower portion of the window to provide a wrench of ordinary construction, frame, where the outside of the sash is easily with attachments whereby it may be used as a pipe wrench or a drill, or a turning lathe, a ventilating space between the sashes provided and for many other purposes. The handle may slip out of the extreme end of the shank so as to give room between the jaws for the drill

Heating and Lighting.

CORE-OVEN .- J. J. JOHNSON, Newark, N. J. The invention relates particularly to core ovens used for drying or baking cores used in molding. The object is to produce an oven which will be simple in construction, the temperature which can be nicely regulated, and which will have a construction which will enable the

ILLUMINATING SIGN .- J. F. DRUAR, Bufholding the liquid and compressed air in a falo, N. Y. This invention relates to advertis-reservoir, and devices for connecting the same ing signs such as those hung out in front of ing signs such as those hung out in front of stores or shops to indicate the business done therein. An object is to provide an illuminated sign which can be read at night from a con-

Machines and Mechanical Devices.

COMPUTING-PUMP .- S. G. WISE and J. E. firmly in position; and provides a flask adapted TROYER, JR., Gas City, and J. E. SMISOR, Marion, Ind. The invention refers to com-puting pumps, and more particularly to pumps designed to be used in dispensing and selling lon of fluid is pumped by the pumping mechanism, one gallon is registered by the computing mechanism. When one gallon has been forced through the casing, the dial has made a com-

> VENDING-MACHINE .- F. A. SLICHTER, Kansas City, Mo. The aim of the inventor is to provide a machine more especially designed use in stores and other places, and arranged to allow convenient delivery of the merchandise in predetermined quantities, without danger of packing and obstructing the rapid flow of the merchandise, such as seeds of various kinds.

cisco, Cal. An object here is to provide a bag connected therewith, together with an improved steadying means. A further object given speed varies so much with the lines of is to provide a balloon composed of one or the boat. For instance, a 700-ton yacht with taken the task of historian upon a scale of more separate gas bags inclosed within a shell fine lines might be driven at a speed of 10 perature. The propellers may be caused to rogive the same speed to a cargo boat of the tate horizontally or vertically.

FEED MECHANISM FOR BORING-MA CHINES.—A. FREY, Schöftland, Switzerland. The inventor provides a mechanism capable of being quickly changed for use as a hand feed or an automatic feed, and arranged to permit convenient changing of the gearing so that the feed mechanism for feeding the boring tool may be run at any desired speed according to the nature of the rock to be bored.

Prime Movers and Their Accessories.

ROTARY ENGINE .- F. O. BIBLE, Wilkinsourg, Pa. In this case the inventor's desire is to produce an engine in which the various parts are designed to permit of exact adjustment for controlling the motive fluid to permit of utilizing the expansive force of the WINDOW-VENTILATOR.—G. W. STEIN, in view the construction of an engine which

Railways and Their Accessories.

SAFETY SWITCH-LOCK .- A. HADDOCK and A. SCHMITT, New York, N. Y. An object here is to provide a lock which can be used in con- of three nominal 10-knot boats of 700 tons nection with various switch systems and block signal systems without interfering with the knowledge, is 9 tons per day. The horse-power operations thereof, and which serve to lock a of these ranges from 400 to 600 and averages switch either open or closed as set by the switchman, so that the switch cannot be accidentally displaced while a train is approaching the switch or passing over the same.

LOCOMOTIVE-HEADLIGHT.—I. L. WADE and W. L. SMITH, Roanoke, Va. In the present patent the invention is an improvement in that class of locomotive headlights which are bivoted ical consumption. and so connected with the front truck as to be turned with the latter in passing around readily detached when required.

SNOW PLOW.—C. A. BELLEUD, Fairdale, N. D. The object here is to produce a snow plow which will effectively operate to cut the snow from the railroad track and eject it at the side. In its general construction the plow comprises a pair of cutter wheels which are mounted at a forward point, and behind these cutter wheels an apron is provided which assists in throwing the snow rearwardly into a drum, from which it is discharged laterally, or at right angles to the track.

Pertaining to Recreation.

SOCKET POST FOR SUPPORTING CRO-QUET ARCHES.—H. B. COLLIER, Prairie Grove, Ark. The purpose of this inventor is to provide novel details of construction for a greater distance at a lower speed, at a higher socket post, which adapt it in pairs for a speed the coal consumption increases very secure embedment in the ground at suitable points in upright positions, and for the convenient insertion of the limbs of a croquet arch thereinto, and thus afford stable support to the arch in a vertical plane and permit the removal of the arch.

Pertaining to Vehicles.

AUTOMOBILE-PROTECTOR.—D. F. ARM-STRONG, Groton, Conn. The invention relates more particularly to protectors such as are adapted to be arranged on the steering posts of automobiles to protect the drivers. It can be easily secured to the steering column of an automobile, and fitted with either a transparent or a translucent shield to protect the driver.

WHEEL.-L. Y. LEON, San Juan, Porto Rico The invention relates to wheels for general use, the more particular purpose being to provide a wheel suitable for a road vehicle, and having a considerable degree of resilience due to the type of springs employed within the wheel and to the manner in which they are mounted and kept in position.

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



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sheet.
Full hints to correspondents were printed at the head of this colu n in the issue of March 13th or will be sent by mail on request.

like to get an approximate idea of the amount acle for the guidance of the Magi. of coal burned by the average ocean-going vessel of 700 tons net registry, drawing from 9 to 15 feet, that is to say, the amount of coal per hour burned in producing a speed of from 10 to 15 knots. A. It is impossible for us to give a reply to your question equally AIR-SHIP .-- A. E. G. LUBKE, San Fran- accurate and general for all cases, for the reason that coal consumption per horse-power varies so much with the efficiency of both engines and boilers, and horse-power for a same displacement; and, as the boiler and feature giving these authorities in the text. engines of the yacht might easily have 50 per The completed work will be divided into five cent higher efficiency (say 30 per cent effi-parts, The first three parts, here offered are ciency as compared with 20 per cent) the yacht might make the same speed as the cargo hoat with one-third of the latter's coal consumption. or other achievement of the navy prior to Again, every steamship has its maximum econ- January 1st, 1907. The remainder of the omical speed; and whereas a given quantity work may be considered as supplementary. This omical speed; and whereas a given quantity of coal may drive it a little greater distance at a lower speed, any attempt to drive it at a higher speed will cause an increase of coal consumption out of all proportion to the increase of speed gained. There might therefore be a great difference between coal consumption at 10 and at 15 knots, and a boat of which the former was the economical speed might be unable to achieve the latter with any reasonable coal consumption, if at all. Although you only ask for an approximate idea, we must therefore make this reservation to show you gives a new point of view, and serves to bring how widely an average figure may vary from into relief certain features which are apt to be that of your particular case. If you gave tonnage, economical speed, and horse-power, we Although the battles of the Nile and Copencould give a fairly close figure for average hagen receive adequate notice, the Battle of lines, but knowing neither lines nor horse- Trafalgar naturally takes the first place. Mr.

power, the chances of wide disparity are multiplied. With the foregoing reservation, we may say that the average coal consumption displacement in actual service, within our 500, which represents 1.5 pound of coal per hour per horse-power, which is good marine practice for any except the most efficient multiple-expansion engines. Only one of those boats has ever been, or could be, driven at 15 knots, and that was as an experiment, and necessitated a consumption of 3,750 pounds of coal an hour, or nearly five times the econom-

(12128) N. V. V. says: Being a concurves. The headlight, yoke and arms may be stant reader of the SCIENTIFIC AMERICAN, I take the liberty to ask you the following question: If it takes 10 tons of coal to run a locomotive 100 miles in 10 hours, how much coal would it take to run the same engine the same distance in 5 hours? I claim that, as based upon the mechanical rule, what you gain in speed you lose in power, it ought to be about the same amount. A. It is impossible to answer your question exactly without a great deal more detail as to the locomotive, the load hauled, etc., but speaking generally, the fuel consumption is likely to increase out of all proportion to the speed, if the latter is increased above the economical speed of the en-Each engine has a certain maximum gine. speed at which it can haul a given load economically; and whereas with a given quantity of coal it can haul the same load a much more rapidly than the speed. For instance, an engine burning 1,930 pounds of coal per hour at a speed of 40 miles per hour uses 3,400 pounds per hour in hauling the same train 60 miles per hour, nearly doubling the coal consumption for a 50 per cent increase of speed, and 3,920 pounds at 70 miles per hour. These are figures from an actual test, the coal consumption varying directly with the horsepower expended. In your case, however, 10 miles an hour is not likely to be the economical speed of the locomotive and it is probable that it could cover 100 miles in 5 hours with the same or very little more coal than it would take to cover the same distance in 10 hours.

NEW BOOKS, ETC.

ASTRONOMY OF THE BIBLE. mentary Commentary on the Astronomical References of the Holy Scripture. By E. Walter Maunder, F.R.A.S. New York: Mitchell Kennerly, 1909. 34 ill.

Mr. Maunder's attitude toward the celestial miracles of the Bible does not differ essentially from that of the average non-astronomical Christian. He frankly regards the Bible as an inspired utterance. Although he does not hesitate to present the scientific theories which have been advanced to account for such miracles as Joshua's Long Day, the Dial of Ahaz, and the Star of Bethiehem, he is more prone to consider them as divine portents rather than as ordinary astronomical occurrences. He constantly reminds us that the Scriptures were not intended to teach us the physical sciences, for which reason, in his opinion, it is almost futile to offer scientific explanations of Biblical miracles. In the case of the Star of Bethlehem, for example, Mr. Maunder is inclined to accept the miracle; and although he presents the usual theories of a conjunction of planets, a comet, and a nova, to account for the apparition, he regards the (12127) A. C. Co. asks: We would Star of Bethlehem as a specially devised mir-

STATISTICAL AND CHRONOLOGICAL HISTORY of THE UNITED STATES NAVY, 1775-1907. By Robert Wilden Nesser, Fellow of Yale College. In two volumes. The Macmillan Company, Quarto; 650 pp. Price, \$12 1909.

In spite of the many books that have been written on the history of the United States navy, it is the opinion of the author that the record is yet incomplete. Hence he has underresearch and completeness that leave nothing to be desired; going back as far as possible to the original au parts. The first three parts, here offered, are complete in themselves, and contain data concerning every engagement, capture, expedition, is a monumental work carried out with great fidelity.

NELSON AND OTHER NAVAL STUDIES. By James R. Thursfield, M.A. New York: E. P. Dutton & Co. 374 pp. Price, \$4.

Unlike so much of the literature of the life of Nelson, the present work was written by a civilian. The fact of his reviewing the life of a naval officer from the outside, as it were, overlooked by the professional naval

interest for American readers, because so large a portion is devoted to an appreciative survey of the achievements of John Paul Jones. Mr Thursfield is the first English writer of prom inence to remove the stigma which was attached to Jones's name by the calumnious writers of his day, and reveal him as the admirable character that he was. One of the most valuable chapters is that in which full justice is done to Admiral Duncan, the hero of Camperdown, whose exploits and general professional ability seem never to have received adequate recognition until late in his career.

SECOND APPENDIX TO THE SIXTH EDITION OF DANA'S SYSTEM OF MINERALOGY. By Edward S. Dana and William E. Ford. New York: John Wiley & Sons, 1909. 8vo.; 114 pp. Price, John Wiley & **\$1.**50.

During the ten years of mineralogical investigation which this appendix covers, a large amount of material has been published. An evidence of this is to be found in the two hundred new names which are given in the classified list in the introduction. About sixty of these new names on account of the completeness of their descriptions seem to have a warrant for their acceptance as new species. The other names are either of imperfectly described minerals or variety names of well-recognized species. The descriptions of the new species included in this book are given concisely but completely. It was found, however, impracticable to follow the plan adopted in the System and the First Appendix of recalculating all the angles and crystal constants of the new species. This has been done in a few cases, but in the majority of the descriptions the figures of the authors have been accepted without verification. In the cases of some of the new species with complex crystals it has been impossible to give the complete lists of the forms identified upon them. The method followed has been to give the more common and prominent forms and to indicate the number of those not listed.

THE MAKING OF SPECIES. By Douglas Dewar, B.A., and Frank Finn, B.A. New York: John Lane Company, 1909. 8vo.; 400 pp. Price, \$2.50, postage extra.

The authors' aim in writing this book has been twofold. In the first place, they have attempted to place before the general public in simple language a true statement of the present position of biological science, and in the second place they have endeavored to furnish the scientific men of the day with food for reflection. As the British nation seems to be slowly but surely losing, through its conservatism, the commercial supremacy it had the good fortune to gain during the last century, so is it losing, through the unwillingness of any of her scientific men to keep abreast of the times, that scientific supremacy which she gained in the middle of the last century by the labors of Charles Darwin and Alfred Russell Wallace. It is not among Englishmen but among Americans and Continentals that the world has to look for advanced scientific ideas. The authors fear that this book will come as a rude shock to many scientific men. What they attack is not Darwinism, but that which is erroneously -called Neo-Darwinism. Neo-Darwinism is a pathological growth on Darwinism which, we fear, can be removed only by a surgical operation. The book is a beautifully printed one and will doubtless interest all naturalists.

THE ELEMENTARY PRINCIPLES OF INDUS-TRIAL DRAWING. By George Jepson. Oblong 12mo.; 28 pp.; 11 plates. The aim of this little book is to present the

subject of industrial drawing, so that a student after he has become familiar with its contents, will have mastered all the essential principles as applied to mechanical and architectural drawing. While the book presents all the principles of industrial drawing, it is not a graded course of lessons, although if desired an elementary or more advanced course can be compiled from its contents. The author is an instructor in descriptive geometry, machine drawing, and shop work in the Massachusetts Normal Art School, and was for many years master of the Evening Science School of the city of Boston. The book appears to be an excellent one.

HENDRICKS'S COMMERCIAL REGISTER OF THE UNITED STATES FOR BUYERS AND SELLERS. New York: Samuel E. Hendricks Company, 1909. Quarto; 1220 pp. Price, \$10.

This is the eighteenth annual edition of Hendricks's Commercial Register of the United States. It is a complete and reliable annual index of industries, containing over 350,000 names and addresses of buyers and 33,000 business classifications. Full lists are given of manufacturers and dealers in everything employed in the manufacture of material, machinery, and apparatus used in these vast industries, from the raw material to the manufactured article and from the producer to the consumer. It is indispensable as a work of

Thursfield's idea of the plan of attack at reference for the architect, engineer, contrac-Prafalgar differs somewhat from those com- tor, manufacturer, jobber, retailer, exporter, monly accepted; but after reading what he has purchasing agent, and for the railroad mato say, the impression is deepened that at chine shop, foundry, mill, factory, mine, and Trafalgar, as in many other fights of that day, plantation. We have occasion to use several the plan of battle as outlined before the fight copies of this book, and was answers a vast was greatly modified to suit the exigencies of number of our inquiries for manufacturers. the hour. This work will possess a particular It is a book which we can thoroughly com-

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[Car squeeze, C. H. Dempsey	936,523 936,686	. Fi
with to or	Cars, supplemental wheel for motor, A. E. Whitney	936,750	F1 F1
in-	Carbureter, K. Maybach Card holder, O. A. Bremer Carnet fastaner stair W. A. Price	936,337 936,756 936,940	Fi F1
thts ign	Card holder, O. A. Bremer Carpet fastener, stair, W. A. Price Carpet securing means, M. A. V. Odel Carrier. See Garment carrier.	936,347	Fi M
nta-	Casting machine. Sees & Christianson.	830,842	F
and	Casting metal pots, etc., mold for, J. Power Cattle guard, G. W. Youngs	936,939 936,974	F)
All Our			Fo Fo
on	Child's chair, J. E. Wallace	936,644	Fo
nte;	Churn, J. Middlebrook	936,400. 936,921	F
ork	Circuit for propagating wave forms. D. C.		F:
c,	Mem shall T D Pannawall	936,560 936,352	Ft
	Closet seat, R. Gunton	936,714 936,424	Fu
NS	Clock, J. Petrillo Closet seat, R. Gunton Cloth cutting machine, A. H. De Voe Clothesline holder, P. Curran Clothesline prop, W. F. Briggs Clutch electric control, friction, H. M. Aber-	936,982	Ga
,	nethy	936,284 936,805	Ga Ga
	nethy Coat, R. E. Peary Coating metallic surfaces, C. J. Kirk Cock, ball, H. S. Rumsey Cock, safety, Swimmer & Neelen Coffee free from coffein obtaining K. H.	936,637 936,742	Ga Ga
	conce: aree from cancin, obtaining, it.	1	G:
	Combination and bath fitting, Martin &	936,622	G
ATB	Commutator brush, V. G. Apple	936,791 936,692	G
tenta.]	McFarland	936,652 936,563	Ga Ga
36,752 36,344	Concrete burial vaults, mold for casting, C. M. Brown	936,861	G:
36,303 36,415	M. Brown Concrete mixing machine, W. M. Ewing Concrete railway tie, J. P. Donovan Concrete railway ties, apparatus for mold-	936,428	Ge G
36,609 36,813	Concrete railway ties, apparatus for molding, J. P. Donovan. Concrete steel constructions, fixture support for, L. P. Alford	937,026	G
36,932 36,934	Concrete walls, mold construction for, J. Mueller	936,798	G1
36,916 36,783	Concrete work in the water, building, E. H.	936,638	Gı
36,824 36,429 36,836	Controller, automatic, F. R. Fishback	936,397 936,878 936,745	G1
36,611	Condenser, J. Anderson Controller, automatic, F. R. Fishback Conveyer, B. M. Steele Conveyer, C. W. Levalley Cooking utensil, F. A. Musser. Copper from cuprous residues, recovery of,	936,917 936,343	GI
36,315 36,737	Copper from cuprous residues, recovery of, D. Crispo	936,762 936,693	G
36,503	D. Crispo Cotton chopper, A. D. Baker Crate and protector, W. T. Claycomb Crate, foldable shipping, E. C. Rollins.	936,984 936,946	Go
36,350 36,595	Crate, folding shipping, J. B. Porter et al.	936,696 936,735	Gi Gi
36,86 0 36,740 36,882	Cream dipper, A. C. Butts, Jr	936,608 936,761	Gr Gr Gr
36,918 36,680	Crystallizers, stirrer for, Crozier & Dyer Cuff shaper, S. M. Cole Cultivator, D. F. Deppe Cultivator, H. B. Reynolds Cultivator, F. Upshaw Cultivators and other agriculural imple-	936,765 936,943	G
36,780 36,817		936,961	Gi Gi
36,393 36,485	Simpson Current motor elternating F Fichhers	936,823 936,615	H
36,753 36,739	Curtain fastener, J. Grizzell		H
36,874 36,827	hoe & Taylor	936,387	H
36,897 36,958	Cuspidor, Gregory & Shumway	936,774 936,888	H
36,604 36,670	Cutlery polisher, P. E. Shee Cutting shears, J. R. Searight	936,371 936,574	H
36,297 36,887	Damper for furnaces, C. G. Atwater Defibrating machine. J. S. Gillica	936,288 936,995	н
36,532 36,830	Dental apparatus, A. Jameson Dental instrument, W. H. Manning	936,539 936, 732	H
36,814 36,746	Dispensing container, J. L. Parmenter Dispensing machine. C. M. Jawall	936,808 936,906	H
36,328	Display apparatus, H. M. Webster Display rack, J. H. Best	936,497 936,855	표
36,614 36,891 37,001	Curtain roller and curtain pole support, extensible combined, J. W. Thoreau. Cuspidor, Gregory & Shumway. Cuspidor, W. J. Helm Cutlery polisher, P. E. Shee Cutting shears, J. R. Searight Cycle attachment, motor, H. T. Adams. Damper for furnaces, C. G. Atwater. Defibrating machine, J. S. Gillies. Dental apparatus, A. Jameson Dental instrument, W. H. Manning. Dental press, F. O. Jaques, Jr. Dispensing container, O. L. Parmenter. Display apparatus, H. M. Webster. Display rack, J. H. Best Dividers, proportional, A. L. Black. Doog fastener, emergency exit, J. E. Hankins	936,857 936,784	HHH
86,308			H
36,769 36,312 36,632	Dough forming machin, G. H. Petri,	936,805	HH
36,904 36,442	Draft gear, H. T. Krakau	936,547 936, 2 98	H
36,571 36, 65 1 36,412	Draft gear, H. T. Krakau Driving and controlling device, W. A. Brauer Dust pan, convertible, A. S. Epperson. Dye and making same, orange to red tet- raga. A. Schedler	936,990	Ic Ic Ic
3 ,755 36,448	Dye, azo, Jansen & Neelmeler	936,321 936,456	Ic
36,936 36,504 36,662	Dye, azo, O. Schmidt	936,951 936,410 936,305	Ic
3 6 ,810	Electric circuit controller and interrupter, C. A. Tucker Electric circuit interrupter, H. R. Stuart	-	Ig In
36,551 36,955	Electric drill, Duntley & Kimman	936,870	In In In
36,330	Electric switch, H. D. Grinnell Electric wiring, molding for, W. H. G. Kirkpatrick Electrical circuit breaker, C. Aalborg.	936,775	In In
36,576 36,467 36,203	Kirkpatrick Electrical circuit breaker, C. Aalborg Electrical coll M. C. Byninghi	936,639 936,594 936,460	In Ja
36,293 36,860	Electrical discharge apparatus, N. J. Neall- Electrical distribution system, F. G. Beetem	936,656 937,018	Jo
36,678 36,515	Electrical oscillations, receiving system for high frequ ncy, F. K. Vreeland	938,684	Jo Jo
36,7 2 5 36,8 41 36,986	Scheuble	936,950	Ju
36,40 2 37,021	A. Lacke	936,329 936,724	K
36,357 36,905	Electroplating objects, mechanical arrange- ment for, W. Pfanhauser Electrotype molds, preparing, G. E. Dunton Elevating and loading mechanism, W. W.	936,472 936,871	Kı
36,453 36,957	Brower	936.517	K
36,920 37.019	Embossing and printing, simultaneously, G.	936,285	La La
36,699 36,948	Engine frame, internal combustion, 12 W.	936,335	La La
36.565	Noyes	936,558 936,700	La

Engines, beating roll for refining, E. A.	936,964 936,540
explosive. Miller & Metcalf	938 705
Envelop, N. J. Macdonald Explosions, apparatus for utilizing energy derived from, W. H. Smyth	936,677
Explosions, apparatus for utilizing energy derived from, W. H. Smyth. Explosive engine, W. J. Wright. Extension table, E. Tyden. 936,494, Fan. Spring, D. Roberti Feed bag, N. P. Abel Feed device, J. H. Adams Fence post, C. M. Reed Fertilizers, making solid, B. F. Halvorsen. Fifth wheel, J. A. Burrell Films or fiakes, making metallic, T. A. Edison	936,972 936,586
Feed device, J. H. Adams	936,975 937,017
Fertilizers, making solid, B. F. Halvorsen. Fifth wheel, J. A. Burrell	936,562 936,317 936,983
Films or flakes, making metallic, T. A. Edison	936,525
Fire alarm, automatic, C. D. Miller	936,923 936,385 936,487
Fire extinguisher, D. H. Conkling	936,985
Fire extinguisher, D. H. Conkling Fire extinguishing apparatus, automatic alarm device for, Henley & Crowder Fire extinguishing syringe, A. Hruby Firearms, combined firing pin and ejector for, J. D. Pedersen Fish stringer device, W. G. Callender Flanging machine, J. Brenzinger Flower pot stand, P. Foy Fine plug and ferrule, combination, J. H.	936,889 936, 32 0
for, J. D. Pedersen Fish stringer device, W. G. Callender	936,806 936,701
Flower pot stand, P. Foy	
Fine plug and ferrule, combination, J. H. Gillon Flushing device for water closet tanks, J. F. Young	936,444
Flushing device for water closet tanks, J. F. Young Flushing tank, automatic, Friel & Crusoe. Folding machine, Adams & Wallace. Folding mechanism, S. G. Goss. Folding seat, portable, Wilckerling & Rediske Fotboard, A. Krutsinger Forming die, I. H. Hill. Flush handling apparatus, fluid, R. S. Mitchell	936,709 936,506
Folding mechanism, S. G. Goss	936,710
Footboard, A. Krussinger	936,786 936,999
Mitchell Fundel, J. F. Beatty Furthce for uniformly heating metals, W.	936,470 936,511
Furthce for uniformly heating metals, W. N. Best	
Furnace or forge, W. Scrimgeour, Jr. Futnaces, flue and valve system for regen- trative, J. B. McKennan.	936,573 936,931
Futive, J. B. McKennan Furnaces, plant for heating the gas and air for combustion in gas, O. Zahn Gage roll support, C. E. Marsh Game apparatus, W. Kruse Game apparatus, J. Stern, reissue Garbage receptacle, M. Carlucci Garment carrier, O. Rangnow Gas and air. mechanism for the production gas and air. mechanism for the production.	936,844
Game apparatus, W. Kruse	936,785 13,025
Garbage receptacle, M. Carlucci Garment carrier, O. Rangnow Gas and air mechanism for the production	936,702 936,811
Gas and air, mechanism for the production of a constant mixture of, F. W. Wolff. Gas burner, W. V. D. Kelley	937,01 6 937,00 2
Gas impressed liquids expected for dis-	936,721 936, 3 18
Gas producer, R. B. Kernohan	936,462 936,636 936,290
Gate, J. W. Hawkins	936,719 936,738
Gate, W. E. Robinson Gear cutting machine attachment, E. J. Flather	936,812
Father Gearing, J. W. Belyeu Gearing, J. S. Smart Generators, sludge faucet for carbide gas, F. L. H. Sims Glass, apparatus for making sheet or plate, J. I. Cherthyropt	936,291 936,376
Glass, apparatus for making sheet or plate.	936,375
Class and I	000,002
Glass method and apparatus for making	936,880
Glass articles, machine for making hollow, P. T. Slevert Glass machine, wire, N. Franzen. Glass, method and apparatus for making wire, J. J. Quertinmont Glass, process and apparatus for making wire, J. J. Quertinmont Glass tube cutter, C. E. Skinner. Glove pocket, Fields & Seblin. Gold dredges, collecting means for, T. J. Barbour	936,663 936,665
Glass tube cutter, C. E. Skinner	936.674 936,437
Gold dredges, collecting means for, T. J. Barbour Golf club bag, F. C. Breakspear Grain drill, L. E. Robey Grain spout, C. L. Gardner Graphothone, T. H. Macdonald Grease cup, compression, L. W. Durst. Grinding machine, A. C. Warner. Grinding milling cutters or similar tools, machine for. P. A. Kustner. Grinding pan, Middleton & Cobbe.	936 609
Grain spout, C. L. Gardner	936,741 936,772 936,970
Graphophone, T. H. Macdonald Grease cup, compression, L. W. Durst	936.646 936.872
Grinding machine, A. C. Warner Grinding milling cutters or similar tools, machine for. P. A. Kustner	937,035 936.915
Grinding pan, Middleton & Cobbe. Gun, E. H. Searle Guns, hand grip for, F. A. Freeman Hammer, power, W. Graham	936.794 936.369
Hanmer, power. W. Graham	936,528 936.316 936,797
Harness and warp stop motion, combination,	936,847
Anner & Marnel Harvester, pea A. McMahon Harvester, potato, J. Lood Hat brim press to form welt edges, C. E. Sackett Hat hook, A. M. Hortenbach Hay gatherer, N. Fryman Hay retainer, C. H. Whitney Heat, means for utilizing solar, M. L. Severy	936,733 936,333
Sackett	936,364 936,899
Hay gatherer, N. Fryman	936,621 936,500
Severy	937 ,013
worth Hide supporting device, H. S. Crombie Hoe seeder, L. A. Sandee	936,295 936,522 936,366
Holst, portable, Klaus & Gudlent	936,911 936,777
Horn, H. J. Kingsley	936,671 936,910 936,966
Horseshoe calk, J. E. Dolan	936,988 936,496
Hose coupling, A. A. Hill	936,627 936,886
Hose support, J. W. Fitz Gerald	936,488 936,440
Strong Lee cream freezer, Thomson & Schmitt	937,029 936,384
Ice device for cutting plate, R. H. Kirk Ice making and harvesting apparatus, plate, D. J. Havenstrite	936,452
Severy worth Heels, making boot and shoe, W. P. Bos- worth Hide supporting device, H. S. Crombie. Hoe's seeder, L. A. Sandoe Holst, portable. Klaus & Gudient. Holder, I. Herzfelder Holding attachment, G. P. Schmidt. Horn, H. J. Kingsley Horses, ice creeper for, I. R. Whisler. Horses, ice creeper for, I. R. Whisler. Horse coupling, N. M. Rosendahl. Hose coupling, N. M. Rosendahl. Hose coupling, E. J. Hannold Hose coupling, E. J. Hannold Hose support, J. W. Fitz Gerald Hot air register, E. C. Fox Hypodermic medication, means for, B. G. Strong Lee cream freezer, Thomson & Schmitt. Ice, device for cutting plate, R. H. Kirk. Ice making and harvesting apparatus, plate, D. J. Havenstrite Loe, manufacturing and harvesting, R. J. Berryman 1936,978, Ice, manufacture of artificial, R. J. Berry- man Igniters or sparkers, timer for, H. Rose.	936,979
man	936,977 936,564
Implement holder, S. C. Lawlor	936,460 936,914 936,287
man Igniters or sparkers, timer for, H. Rose Implement holder, S. C. Lawlor Incubator electric alarm, C. L. Kulp. Index compiling device, W. A. Antilotti. Induction motor, S. R. Bergman Induction motor. C. Robinson Insulator, electric, J. A. Wells Internal combustion engine, E. Chapman Jar holder, W. J. McCallum Jars, device for releasing the caps or covers for glass fruit. G. E. Searing.	936,292 936,360 936,840
Internal combustion engine, E. Chapman Jar holder, W. J. McCallum	936,840 936,409 936,927
Jars, device for releasing the caps or covers for glass fruit, G. E. Searing	936,575 936,678
for glass fruit, G. E. Searing Journal box, J. G. Smith Journal boxes, means for packing waste in, L. Condti	936,455
L. C. Condit Junction, wall, floor or other box, D. Conlan, Jr. Reel block, H. Smoke Kilns, disintegrating and removing annular	936,704 936,705
Keel block, H. Smoke	936,676
Salamanders in nodulizing, A. Brautigam Knife, K. J. Wilson	936,592 936,441
Knob, glass, G. W. Graham Knockdown box, R. A. Simpson Lacing hook making machine, H. H. Eaton Lacing hook or stud setting machine, H. H.	936.533 936.484 936.430
Lacing hook making machine, H. H. Eaton Lacing hook or stud setting machine, H. H. Eaton	936,431
Eaton Ladder, F. L. Union Ladder and ironing board, combined step, L. King Lamp, M. I. Cohen	936.909
Lamp. M. I. Cohen	936,521