RECENTLY PATENTED INVENTIONS. Pertaining to Apparel.

SUPPORT FOR GARMENT-HANGERS.—FANNIE WOLF, New York, N. Y. This support is adapted to be secured beneath a shelf or within a wardrobe, showcase, or the like. The invention relates more particularly to a carrier in which a plurality of rods are used, one being longitudinally movable in respect to the overhead support, and another of the rods being carried by the first-mentioned one and also longitudinally movable in respect thereto, so that the support may be extended to its full length out from beneath the overhead support.

Electrical Devices.

TROLLEY-GUARD .- S. G. WILCOX, North Adams, Mass. The guard is in the form of a spring-pressed slidable plate, nominally extending across the top of the trolley wheel, to prevent it from leaving the trolley wire, the plate down the trolley pole.

IGNITION APPARATUS. - G. HANIQUET Longbeach, Cal. It is sought in this invention to provide means for retaining a thin lubricating oil within a circuit closer. In addition the invention comprehends mechanism for reducing particularly to a grate in which the grate bars the electrical arcking as the contact shoe are utilized as conduits for the delivery of air leaves the contact bar. It further contemiunder pressure to the burning material. An ob-

INSULATOR.—P. S. DUMBOLTON and F. the other bars and without inte Franz, Burke, Iowa. The invention is more delivery of air through the latter. particularly an improvement in insulators mounted on spiral wire coils which are suitably attached to a supporting screw pin. It is adapted for lateral oscillation, so that it may be used without danger of breaking, as is often is formed of two sections movable in respect the case with insulators so fixed on their supports as to be incapable of yielding to jar or vibration.

INDUCTOR-DYNAMO.-G. A. COLMAN, Seattle, Wash. The more particular purpose of the cover. inventor is to produce a dynamo having a minimum of wearing parts and without brushes, collectors, or commutators. It relates to the construction of a high-speed rotor having generally the form of a smooth disk made entirely of solid metal, yet heterogeneous as to the magnetic properties.

Of Interest to Farmers.

CULTIVATOR ATTACHMENT. — D. B. Browning, Morrison, Okla. In operation the fender is supported by the hanger arm and the $runner \ is \ adjusted \ a \ sufficient \ distance \ below$ the edge of the blade to prevent the soil thrown up by the plows from covering the plants, while permitting some soil to be thrown toward the plants at the roots. Engagement of the runner with the ground prevents the fender being moved out of place by the soil thrown up by the plow. The runner also permits the fender to fall in with the inequalities of the ground, so as to protect the plants, even when they occupy a lower level than the wheels.

Of General Interest.

TARGET-HOLDER.—C. P. WORRELL, Zanesville, Ohio. The object of this inventor is to provide in connection with the front of the box, clamping strips to bind the edges of the target and laterally adjustable to stretch the target out, and a member closing the rear of the box to check the shot or bullets, the member being preferably in the form of a separable metal plate.

ENVELOP.—L. C. VAN RIPER, New York, N. Y. The envelop has an ungummed flap which may be held within a pocket, or removed therefrom in order to allow the contents to be inspected by postal authorities. It is provided with the ordinary gummed flap, intended to be a sealed envelop, and yet allow the same to be sent through the mail at the postage rates required for unsealed matter.

FIRE-ESCAPE.—R. W. SCHWEIMLER, Louisville, Ky. Here the intention is to provide a device in which a person may be safely transported to the ground from an elevation quickly but without injury. It provides an inclined covered chute of zigzag construction. The user is conveyed to the ground while sliding in a sitting posture.

SCREEN.-F. J. REMBUSCH. Shelbyville. Ind. In this instance the invention pertains to screens, the more particular purpose being to provide a screen which offers a total obstruction to the passage of light through it, and in this manner improves the distinctness, clearness, and brilliancy of images thrown upon the

SUBMARINE MINE.—A. P. BROOMELL, York, Pa. This invention relates to mines in which a mine is connected by a line with an anchor with means for paying out the line and for checking the paying out, so that when the mine and attached anchor are thrown overboard the mine will float as the anchor de scends, and as it approaches the bottom it operates to draw the mine below the surface to an extent proportioned to the length of the gage line connected with the anchor.

EXTENSION-BOLT .- F. H. CRUMP, Los Angeles, Cal. This improvement provides an extensible formed bolt in which the solid bolt proper has a threaded engagement with a hol-

bers relatively to each other. Further extension of the bolt within reasonable limits may be made by interposing additional threaded

Hardware.

FAUCET.-W. F. ODEN, Ophir, Utah. The faucet is arranged to permit the operator to quickly change the position of the working parts for opening the faucet to the full extent for the removal of a mixture of solid and liquid material or for discharging a mixture of solid and liquid material through a desired sized spout or for completely closing the faucet.

LOCKING DEVICE FOR AWNING CORDS OR STRAPS .- S. ASCH, New York, N. Y. This invention is for use in preventing mischievous children having access to awning cords. Means are provided for inclosing and locking up the readily passing the trolley wire hanger, and lower portion of the cord or strap at the point the arrangement permitting withdrawing of the where it is attached. By means of a key access plate by the operator, at the same time pulling may be had to the interior so as to adjust the awning when desired.

Heating and Lighting.

FURNACE-GRATE.-W. J. THOMAS, Salt are utilized as conduits for the delivery of air plates slowing down the speed of the circuit ject is to so construct the parts that any one closer shaft, as compared with the main shaft. the other bars and without interrupting the

> COMBINED MATCH-BOX AND CÍGAR-CUTTER .- E. OLDENBUSCH, New York, N. Y. The box is adapted to receive a card or package of detachably connected friction matches. It to each other and one so formed as to frictionally retain the package or card of matches in engagement therewith, independently of the other section of the box which constitutes the

Household Utilities.

COMBINATION CHAIR AND IRONING-BOARD .- Rose Hufft, care of C. C. Harrell, Port Arthur, Texas. An object of this invention is to provide a device which in its normal form constitutes a chair, and which can easily be changed from the normal form into a stand, such as a table, ironing board, or the like. The invention effects economy of space in a house

CUSPIDOR .- M. D. GREEN, Flora, Ill. This cuspidor may be hermetically sealed for sterilizing purposes. An object is to provide one having a removable receptacle therein and also means whereby a sterilizing or cleansing fluid may be applied thereto. A series of cuspidors may be cleansed and sterilized simultaneously.

WINDOW-SCREEN.—E. T. PETERS, Lincoln, Neb. The invention comprises a combination a casement having sash grooves, and pockets in its head and sill, the pocket in the head being in alinement with the upper sash of the receiving groove and the one in the sill in alinement with the lower sash, both slidable in the groove of a screen resting on the upper sash, and movable into and out of the head pocket, a screen detachably connected with the lower sash, and movable into and out of the sill pocket, said pocket having a pan with slidable sections, the lower section being provided with an outlet.

TABLE-SLIDE.—L. A. WIEDEMAN, Louis ville, Ky. In this slide the two side pieces are fastened to the respective halves of the table, while the central portion is fastened to the center leg; when the sides are pulled apart the side pieces will slide relatively to the center piece, the latter remaining practically in normal position. The table may be extended until the stop members of the slides engage the end top members on the central portion. ing leaves may then be inserted and will rest upon the upper parts of the slide.

Machines and Mechanical Devices.

ADDRESSING-MACHINE.-T. E. PLATER, Monett, Mo. This inventor seeks to provide the machine with cutting mechanism for severing the strip bearing the addresses, and also seeks the provision of means for moistening the strip immediately before it is cut, the strip being provided with a gummed surface to cause the portions severed to adhere to the articles to be addressed.

PORTABLE CONCRETE-MIXER. — C. W. OVERTURF, Dumont, Iowa. One object here is to provide a device in which the time during which the materials are subjected to the mixing process may be varied at will of the oper-This is done by means of a mixing cylinder through which the materials pass and which can be inclined to a greater or lesser degree, thereby increasing or decreasing the rate of travel of the charge therethrough.

CASH-REGISTER ATTACHMENT.—J. COSBY, Richmond, Va. The present invention includes a device operated on and by a key coupler which in turn operates upon the inter mediate parts to effect a movement of the advertising mechanism, which may be operated step by step to expose successively the succeeding faces or inscriptions upon the cylinder.

GLASS-MOLDING MACHINE.—W. J. MIL-

ened by turning the first two mentioned memigiven an intermittent rotary movement through part with such ordinary astronomical facts as mechanism including cylinders, and the patentee provides an improved valve arrangement for controlling all the different mechanisms incidental to the several operations of the machine.

Prime Movers and Their Accessories.

REVERSING TURBINE.—H. T. WERBER, being rotated in either direction. The invention resides in the construction of the rotor, side drives the rotor in one direction, and on the other side drives it in the opposite di-

Railways and Their Accessories.

SIGNALING DEVICE.-W. P. SMITH, El Paso, Texas. In its present embodiment, the invention combrises a plurality of levers arranged to display signals or be housed within a casing, and mechanism whereby the levers may be locked in either position, and also means for locking the operating mechanism. Said locking mechanism may be controlled from Lake City, Utah. The invention relates more the cab or other locality occupied by the operator.

> GRAIN-CAR DOOR .- J. F. McGLENN, Harvey, N. D. In operation blocks are engaged with their respective plates, after which the door is positioned, and hinged plates are turned into position against the edges of methods of transmission. the door's inner face, and locked by pins. ELEMENTS OF TRANSPORT When the car is to be unloaded the blocks are removed, and the door's lower section swings outward. After enough of the load has passed outwardly to relieve the pressure on the upper section, the entire door is removed and suspended by hooks.

SWITCH-ROD .- E. W. Brown, Grenada, Miss. This invention pertains to adjustable switch rods for railroad track switches. intention is to provide a switch rod having shoulders against which the flanges of the switch points may be firmly held, thus preventing any lateral movement of the points.

RAILWAY-TIE. — E. BUTCHER, Chanute, Kan. The object in this instance is to provide a construction for ties which facilitates railway construction; provide a construction which may be in part or wholly renewed and re-used; provide a construction which lends itself to varying conditions of railroad construction, while being standard in form; and provide a construction which cushions the roadbed and allows for leveling the same.

FASTENING DEVICE FOR INCANDES-CENT BODIES.—E. STEIL, 26 Winterfeld Street, Berlin, Germany. The invention pertains to means for fixing the incandescent body and its accessory, such as a projecting basket, on the burner head or to the frame of a gas lamp for the illumination of railway carriages, in connection with which the device is especially intended to be used.

Pertaining to Vehicles.

VEHICLE-CUSHION .- J. E. MOSEMAN, Donaldsonville, La. The object of this inventor is to provide a device wherein a pneumatic cushion is interposed between the body of the vehicle and the axle. The cushion may also be used with railway chairs, the legs of the chair resting upon the upper bar, and the lower bar being secured to the floor.

GRIP-THREAD FOR VEHICLE-WHEELS. F. HOLAN, Niobrara, Neb. This invention refers to attachment for the rim of a vehicle wheel for the purpose of enabling it to grip house telephony is described at length, as well the road-bed. An object is to provide a construction for the device which is simple and pheric electricity. Interesting is a discussion which can be readily attached when desired to

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.

NEW BOOKS, ETC.

TEXT BOOK OF THE HISTORY OF ARCHITEC-TURE. By A. D. F. Hamlin, A.N., Professor of Architecture, Columbia University. Eighth edition. New York: Longmans, Green & Co., 1909. 12mo.; pp. 467; 235 illustrations. Price, \$2.

In this work Prof. Hamlin has presented an admirably concise sketch of the various periods and styles of architecture, and has briefly criticised the more important works of each period or style. Despite the fact that extreme condensation in presenting the leading facts has been necessary, the work gives a very comprehensive view of the development of architecture. Not the least valuable feature of the work is the manner in which technical terms are defined and explained, together with a where it is impossible to avoid them. The book glossary at the end. Good judgment has been is thoroughly up-to-date, including the latest shown in the selection of the illustrations.

Moon. By Sir Robert S. Ball, LL.D., Co-ordinate Geometry. By H. B. Fine F.R.S. London: Society for Promotand H. D. Thompson. 300 pp.; ing Christian Knowledge, 1909. 16mo.; pp. 192. Price, \$1.

This is a reprint of the second edition of "Time and Tide," which consisted originally

so that the bolt may be shortened or length- which a table carries a series of molds and is lar presumes an acquaintance on the reader's may be contained in a work on so difficult a subject of comprehension as the tides. If we have any objection whatever to offer against this admirable work, it is simply that it is not what is now called up-to-date. In other words, we find the subject of solid tides on the earth, that is, the displacement of the earth's crust itself, not dealt with. It seems to us, in view of Dr. Hecker's recent experimental investiga-New York, N. Y. The turbine is capable of tions of this subject and his convincing proof of Sir George Darwin's theoretical estimate of the "pull" on the solid earth, that it might have been wise to incorporate in this reprint which enables it to be driven by steam adhave been wise to incorporate in this reprint mitted on either side. Admitting it on one these later investigations. As it is, however, the book covers the subject well and lucidly.

TWENTY-FIVE YEARS OF ROPE DRIVING. Mishawaka, Ind.: Dodge Manufactur-ing Company, 1909. Quarto.

It is not the usual practice of this journal to review in its columns trade publications or catalogues. In this particular instance an exception must be made because of the character of the work which lies before us. It is not only an example of admirable printing but a good piece of technical compilation. In the 103 pages of this book much solid engineering information is given as well as an occasional useful table. The material on Features of the American System of Rope Driving, Rope Drive Designs, American vs. English System, and Mechanical Power Transmission, is particularly good because it seems to state very fairly the main differences between two widely

ELEMENTS OF TRANSPORTATION. By Emery R. Johnson, Ph.D. New York and London: D. Appleton & Company, 1909. 12mo.; 360 pages. Price, \$1.50.

This is a valuable discussion of steam raiload, electric railway, and ocean and inland water transportation. The author is Professor of Transportation and Commerce in the Uniersity of Pennsylvania. It has given us great pleasure to review in a short period two other books by Mr. Johnson, viz.: "American Railway Transportation" and "Ocean and Inland Water Transportation." The volume before this is fully as interesting, and these three books should be in the library of every person who wishes to keep fully apace with the times. The author's vast experience has enabled him to handle the subject in a masterly manner. The maps are particularly valuable, many of them being printed in both red and black, showing the increase in mileage at various periods, and also the maps showing the various socalled "routes."

DIE HAUS- UND HOTEL-TELEGRAPHIE UND TELEPHONIE. Von O. Canter. Dritte, gänzlich neubearbeitete Auflage. Von Paul Riemenschneider. 153 illustrations. Octavo. Vienna: A. Hartleben, 1909.

The book which lies before us has passed into its third edition. It is a text book for those electricians who are concerned with the installation of house telephone and telegraph systems. Since such electricians are not always technically trained men, the author begins the book with the usual popular discussion of the cause and effect of the galvanic current, electro-magnetism, and induction. Then follows a description of the apparatus employed, which description is as exhaustive as possible, and deals with the underlying theories of each part thoroughly. After a discussion of the simple and most common house telegraph appacatus, namely, alarms of various constructions, with their accompanying circuits, we find discussion of annunciator systems and telephone and microphone inventions. The subject of as suitable protective devices against atmosof tell-tale door contacts, clock contacts, fire alarms, etc. After describing the material necessary for the installation of a house telephone or telegraph system, the author passes to the manner of installing the systems described, and testing methods for the detection of injured portions. The estimates of cost given would hardly apply in this country, but serve the purpose at least of showing the relative value of different parts.

THE FORCE OF THE WIND. By Herbert Chatley. 80 pp.; 12mo.; ill. with diagrams. London: Charles Griffin & Co., 1909. Imported by Lippin-cott. Price, \$1.25.

We find in this little book collected and

correlated methods of calculation of wind stresses and wind power which we have often sought with difficulty from scattered formulæ in engineering pocket books and text books, and believe that it will fill a long felt want among engineers who have to deal with wind load on structures and similar problems. The formulæ, many of which are derived by the author, are as simple as moderate accuracy will permit, and calculus methods are introduced only results obtained by Lanchester and Eiffel, and Time and Tide. A Romance of the is throughout clear and practical.

and H. D. Thompson. 300 pp.; 12mo.; 9 plates. New York: The Macmillan Company, 1909. Price, \$1.60.

In this book the several conic sections are low internally threaded cylindrical member and ler, Coffeyville, Kan. This invention relates of a series of lectures delivered before the treated early and in some detail, partly because an outer casing or sleeve surrounding the two, to semi-automatic glass molding machines in London Institution. The book although popular of the value of a knowledge of their more imtreated early and in some detail, partly because

vantage, when presenting the analytic method to the student, of applying it in the first instance in the systematic study of a few in. The discovery of these documents is due to Dr teresting curves. In deference to usage, a chapter on the circle is introduced immediately after that on the straight line; but, if experience is to be trusted, it is better in a first course to proced from the straight line directly to the parabola, so that, as early as possible, the student may get the impression which comes from seeing a method employed in the investigation of new material. The part of the book devoted to solid geometry is more extended than is customary in elementary textbooks; but it is desirable that the material tiny. The illustrations include no portrait of here given should be easily accessible to stu- Hudson, since the author is satisfied that no book, the present work follows the fortunate Outside of the new documentary evidence above modern tendency toward the practical and referred to, the narrative of Hudson's life is forms as good a treatise upon the subject as a condensation of the facts that have been possible for the non-collegiate student. possible for the non-collegiate student.

A MANUAL OF PRACTICAL ASSAYING. By the late H. van F. Furman. vised and enlarged by W. D. Pardoe.
497 pp.; 8vo. New York: John
Wiley & Sons, 1909. Price, \$3.

MACHINE SHOP DRAWINGS.
Drawings, Making Shop
and Laying Out Work.

This standard work on assaying has, in the (sixth) edition, been thoroughly revised and brought up-to-date. The chapters on zinc, water, and coal analyses have been rewritten, and minor changes have been made in certain to those who do not thoroughly understand parts due to the description of new methods. Because of their increasing importance commercially, chapters have been added on the assay of telluride ores, tungsten, molybdenum, and vanadium. On the latter important subjects the reputation of the work as one of the leading text-books on the subject has been completely maintained and the usefulness of the

sign of Heavy Framing. By H. S. Jacoby. 368 pp.; 8vo.; 6 folding plates and 34 full-page ill. New York: John Wiley & Sons, 1909. able one for the purpose, being used. STRUCTURAL DETAILS. Elements of De-Price, \$2.25.

The title of this volume corresponds to a course of instruction conducted by the author in the College of Civil Engineering in Cornell University during the past nineteen years. In this course the students receive their first in- readers of the Scientific American that we struction in the application of the principles of mechanics to the design of the details of structures. Experience has shown that in mention, and about sixteen of the best essays many respects problems involving timber construction are better adapted for this purpose than if confined to structural steel. It may appear at first as if too much attention to pare an introduction of considerable length, in details is given in the examples on the design which the subject of the fourth dimension of joints, beams, and trusses. The author be-will be simply and lucidly discussed. The book lieves, however, that the importance of careful will be ready about the latter part of December study of every detail can only thus be properly emphasized. In practice it seems to be the exception rather than the rule to give the same attention to details of timber structures as to those of steel. In the interest of sound engineering practice it is essential that all connections and details have the same degree of security as the framed members. In several articles the order of design is given in full, with a view of economizing the time of the student, and of promoting systematic habits in making the computations required, these objects being regarded as important elements in efficient engineering education and practice. Whereas the book is intended for college use, much of it is so written as to be intelligible without the mathematics involved and valuable to the practical carpenter or builder desirous that his work shall be on sound principles or interested in the theory upon which are founded the rules of his practice.

THE INTERNAL COMBUSTION ENGINE. By H. E. Wimperis. 320 pp.; 8vo.; fully ill. New York: D. Van Nostrand Company, 1909. Price, \$3.

This is the first treatise on gas, gasoline engines we have seen which goes as thoroughly into the subject both theoretically and practically as do the best text-books on the steam engine. The author traces the energy that drives our engines all the way from solar heat and molecular action to the uses to which the modern internal combustion engine is applied, covering sufficiently the laws of thermodynamics, the chemistry of combustion and explosion, the best design in gas engines and producers, and oil and gasoline en-The final chapter on gasoline engine efficiency and rating is the best we have seen on this much debated question, and is in so far practical and helpful to the amateur and the sportsman as to discuss the modification of accepted ratings which should be made in hillclimbing and other automobile competitions.

HENRY HUDSON. A Brief Statement of His Aims and Achievements. By Thomas A. Janvier. To which is added a newly discovered partial record, now first published, of the trial of the mutineers by whom he and others were abandoned to their death. New York and London: Harper & Bros. 148 pp.; 12 ill.; 16mo. Price, 75 cents.

The Hudson-Fulton Celebration has aroused keen interest in the life of one of the most romantic characters among the explorers and navigators of the sixteenth and seventeenth centuries. The book before us is divided into two parts, the first consisting of a brief sketch of the life of Henry Hudson, and the second

portant properties, partly because of the ad- dealing with newly-discovered documents. The latter have remained neglected for three centuries, and are here published for the first time R. G. Marston, M.A., as a result of a search in the Record Office in London. The story of the trial is of great interest, but of little satisfaction, inasmuch as we are ignorant of what punishment, if any, was inflicted upon the muti-neers of the "Discovery." The importance of these documents is that they establish the fact (until now not established) that the mutineers were brought to trial, and that they embody a sworn testament, hitherto unproduced, of six members of Hudson's crew concerning the mu-Although intended as a college text. authentic portrait of the man is in existence phers, notably Purchas, Gerritz, Van Meteren Asher, Murphy, Brodhead, and Read.

> Drawings, Making Shop Sketches and Laying Out Work. By Fred H. Colvin, A.S.M.E., F.I. New York: McGraw, Hill Book Company, 1909. 16mo.; 139 pp. Price, \$1.

This little book is intended to be a help the reading of drawings, rather than an attempt to teach drawing in itself. It shows how seen and unseen portions are represented. , the use of full and dotted lines, the way in which different views are drawn, and how to study them all so as to secure a correct idea of the shape of the piece represented. Many actual examples are given from the drawing room practice of the leading shops in this country, and the meaning of each carefully

A Book of Fourth-Dimension Essays.

The subject of the fourth dimension seems to have aroused so much interest among the have decided to publish in book form the prize essay, the three essays that received honorable which were submitted in the recent Fourth Di mension Contest. The entire collection will be edited by Prof. H. P. Manning, who will pre-

Legal Notices

PATENTS

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A Free Opinion as to the probable patentability of an invention will be readily given to any inventor furnishing us with a model or sketch and a brief description of the device in question. All communications are strictly confidential. Our Hand-Book on Patents will be sent free on request.

Ours is the Oldest agency for securing patents it was established over sixty years ago.

MUNN & CO., 361 Broadway, New York Branch Office, 626 F St., Washington, D. C.

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Book mark, line guide, and pencil holder, combined, M. E. Smoot	Exercising machine, L. S. Hackney 937.795
mel	Exhibition apparatus, R. C. Adams. 937,981 Explosion engine, F. H. Treat. 938,401 Eyeglass chain reel, O. B. Wedell. 938,359 Fabrics and other materials, apparatus for
Bottling machine, liquid. F. W. Jacob 938,413	Eyeglass chain reel, O. B. Wedell 938,359 Fabrics and other materials, apparatus for
Bottling machine, liquid, F. W. Jacob 938,240 Brake head, adjustable, W. E. Fowler, Jr 937,930 Brick, facing, J. N. McQuern	impregnating, E. W. Strohn 937,889 Fastening, H. E. Percival 938,073
Brick setting trame. R. C. Penneld 937.955	
Brick, vitrified paving, K. Langenbeck. 937,822 Brush, F. W. Riehl 938,275	fion, J. J. Moriarty
Brush, cloth steaming, Svoboda & Kopecky 938,089	Feeder, poultry, J. R. Ryan 938,342
Brush, cloth steaming, Svoboda & Kopecky. 938,089 Brush, fountain paint, O. Anderson. 938,362 Bucket, collapsible, D. M. Orcutt. 938,431	Feeder, poultry, J. R. Ryan 938,342 Feeding and watering device, A. C. Marson 937,947 Fence machine, wire, J. W., P. W., and W. 937,968
Building construction, E. D. Martin 938,393	Hence machine, wire, J. W., P. W., and W. H. Sommer
Burner attachment, F. J. Farr. 937,989 Button making machine, A. C. Jones. 938,150 Cable hauling apparatus, F. Shaw 938,174 Cable thimble, O. E. Strehlow 938,086 Cable thimble, O. E. Strehlow 938,086	H. Sommer 937,968 Fence post mold, P. J. Haas 937,793 Fence post or stay P. Arondt 938, 296
Cable hauling apparatus, F. Shaw 938,174	Fence post or stay, P. Arendt
Calking tool, right and left. A. Serfoss 938,086	Filtering and washing the filtered material,
Calking tool, right and left, A. Serfoss 938,173 Camphene, preparation of, O. L. A. Dubosc 937,928 Can testing machine C. B. McDonald 938,165	Filtering apparatus, C. W. Schultze 938,279
Can testing machine, C. B. McDonald	Filtering apparatus, C. W. Schultze. 938,279 Fire box, W. D. Boyce 938,036 Flag or signal, G. W. Dallimore. 938,221 Float ball and float valve connection, A. E.
Car coupling, S. W. Wright	rioat ball and float valve connection, A. E. Noonan
Car coupling operating mechanism, automatic, E. Turney, reissue	Noonan
Car door hanger, freight, A. O. Banks 937,751	Flushing apparatus, E. Opperman 938,018
Car fender, Bruce & Coutts 938,209 Car mover, W. McLeish 938,328 Car, passenger railway, J. H. E. Branson 938,328 Car pipe line coupling, P. A. Senecal 937,874	Flushing apparatus, C. A. Wulf 938,195 Forge and furnace, W. N. Best 938,111 Form gage, E. R. Sextone 938,280
Car, passenger railway, J. H. E. Branson 938,037	Form gage, E. R. Sextone
Car rack, P. N. Landine	Freezing plate, R. H. Kirk
Cars, traveling ladder for sleening, S. M.	Fruit gatherer, C. G. Hannah
Niblack	Fruit picker, C. Virgin 938,355
Carousel, A. J. Smith 938,283	Frost overcoming means, Hardinge & Pagel. 937,952 Fruit package, J. A. Hilliker 937,805 Fruit picker, C. Virgin 938,355 Furnace charging apparatus, blast, F. H. Crockard 938,411
Carousel power mechanism, H. B. Auchy 937,750 Carpet end binder, aisle, E. Posson 938,170	
Carpet end binder, aisle, E. Posson	Game board, R. A. Hallock
T. Hamilton 938,230	Garbage receptacle, M. Cullen 937,772
Cart, dump, L. H. & A. Young	
ing O. J. Savers 937.964	Gas air heater, F. S. Lamson. 937,821 Gas burner, T. S. Philpott 938,019 Gas burner, T. S. Philpott 938,019
Catch, safety, A. J. Thurstans 938,090	Gas burner, F. T. Todd 938,182 Gas burner, A. Holtman 938,423
Catch, holdfast spring, T. Morris 938,267 Catch, safety, A. J. Thurstans 938,090 Cattle guard, C. L. Wilcox 938,032 Chain wrench, C. E. Bonner 937,917 Cite strain of E. Schuler 937,917	Gas fixture safety connection, D. Tangney 937,891 Gate, W. B. Homer
Onair attachment. F. Schuiz 330.112	Gear cutting machine, T. C. Dill 938,304 Gears, adjustable device for yieldingly hold-
Charm and trimming, E. S. Goddard 937,932 Cheese cutting apparatus, L. J. Kunick 938,063	ing beveled, E. J. Loring 937,831
Chuck, S. T. Lewis	Gearing, power transmission and reversing, Crane & King
Circuit breaker, automatic, J. N. Kelman 938,324 Circuit closing and breaking device for elec-	Crane & King
trically operated annunciators, etc., A.	Balley 937,912
May	mechanism for, H. Douchamp 938,305
Clasp, L. S. Murdock	Glass, making wire, C. J. Jungers 938,385
Clothes line fastener, A. Bertram938,110 Clothes line reel and stretcher, M. Kerri-	Governor, engine, S. S. Hall 937.993
gan 900,000	Henry 938.323
Clothes pin, reinforced, G. Langgons 937,823 Clothes wringer, Walther & Scherer 938,358	Grate shaker, W. J. Simpson
Clutch and governor, combined, F. E. Parker. 937,851 Clutch, frictional, W. H. Haggard 938,317	Grinder for cutter bars, G. B. Hudson 937,939 Grinding device, interior, J. R. Keller 938,387
Coaster and bottle opener, E. A. Parker 937,850	Grinding machine, saw tooth, W. H. Lucas. 938,159
Coaster and bottle opener, E. A. Parker. 937,850 Cock, stop and waste, W. H. Smith. 938,442 Colter, plow, W. J. Wieder. 938,097 Column clamp, A. H. Schwerd, Jr. 938,344	Grinding machine, saw tooth, W. H. Lucas. 938,159 Grinding mill, F. Nolte 937,950 Grooving machine cutter head, H. B. Ross. 937,962 Guns and rifles, magazine lock for take
Column clamp, A. H. Schwerd, Jr 938.344 Comb. E. Caldwell 938.040	Guns and rifles, magazine lock for take down repeating shot, F. Hardy 937,934
Comb, E. Caldwell 938,040 Combing machine feeding device, Heilman J. C. A. Wenning 938,189	Hair growing device, Daggett & Slinghart. 938,335
Composing machine, record strip, Bancroft &	Hammer nail holding attachment, P. Carls-
Indahl 938 298	907
Composition of matter, Rowe & Howard 937,869 Computing device, J. S. Dinkelspiel 938,222 Concrete building making machine, A. S.	Harrow, E. D. Orton
Merriett 938,010	I m⊕nd
Concrete for the construction of fireproof buildings, fiber, G. Rosenleaf 937,868	Harvester, beet, F. C. Harding 937,994 Harvester, corn, B. E. Reed 938,335
Concrete nost, reinforced, P. J. Hass 937.794	
Condiment holder, A. Hitt	Hat frame machine, Hoppe & Becker. 938,380 Hat guard, C. H. Shaw 938,281 Hat pin, I. M. Savit 938,277 Hat sweat band, N. R. Marshman 938,008 Hay carrier, J. Ney 937,846
Converter starting device, vapor, P. H.	Hat sweat band, N. R. Marshman 938,277
Thomas	Hay carrier, J. Ney
Carpenter 938,121 Cooler. See Milk cooler.	Hay rake and stacker, combined, C. A. Rob-
Cooper See Milk Cooler. Copper from raw unroasted ores and other products, extraction of, G. Schneider 937,965	Hay tedder, A. Dobey 938,129 Heater, W. G. Glenn 937,788 Heating apparatus, E. B. Smith 937,879
Copying machine cutting device, Zeiss &	Heating apparatus, E. B. Smith 937,788
Rudet	Hillge, gate, A. Higgills 931,804
Corn tester, seed, C. E. Twamley, reissue 13,031	1 Han O T Curret 027'027
Corner staying machine, W. F. Morse 937,840 Corset, K. V. Tojetti 938,353	Horizontal boiler, D. A. Beyl
Cotton gin, E. L. Peterson 937,856 Cotton gin, W. D. Doremus 938,224 Couch, A. H. Keller 938,244	Horseshoe calk, J. C. Schneider
Couch, A. H. Keller	Horseshoe calk, J. C. Schneider. 938,343 Hose and pipe coupling, E. Marek. 937,833 Hose coupling, F. Vlach. 938,095 Hose coupling, J. H. Towne. 938,183
Crate, collapsible, Smith & Cosgrove 937,880 Crate, collapsible, Cosgrove & Smith 938,041	
Orate, 101cing, S. W. Banks, Jr	Hub fastener, T. J. Cupstid
Creel and kit, combined, Wakefield & Harter 938,293	Lange
Crate, folding, S. W. Banks, Jr	French 937,990
Cultivator, automatic adjustable, W. L. Logan 938,391	Impression apparatus, L. Huffman
Culvert, metal, Sicklesteel & Ballard 937.876	Incubator, E. A. Maisch 938,260
Curtain fracket, J. D. Sullivan 938,088	W. Wetheria
Cuspidor, McDermott & Mory	Incubator, metallic, F. C. Perkins 938,271 Indicator. See Test indicator.
liguit for hoisting and lowering boats. A.	I Inculator bracket E. V. Brown 937 984
Delivery apparatus, E. T. von Knopke 938,446	Insulator for electric lines, strain, E. E. Rose
Welin 938,447, 938,447 Delivery apparatus, E. T. von Knopke 938,932 Detergent, J. Pearson 938,332 Detonator, electric, G. A. Allen 938,203	Insulator, strain, Varney & Rose
Die for Dressing wheels and like shanes. A.	I Insulator strain C. L. Roldman 938 409
K. Andrews 987.748 Dining table, self waiting, L. E. Johnston 988.242 Dish washer M. L. Cronch 937.926	Internal combustion engine. 3. V. Rice, 31. 937,802 Ions, process and apparatus for the production of, L. I. Blake
Dish washer, M. L. Crouch 937,926 Dish washer, S. A. Latta 938,000	Iron. J. Marchek
Dish washing machine, A. M. Hauberg 937,937 Display rack and storage frame, E. E.	I Ironing board shirt holding mechanism, R.
Baker	Irrigating device, N. E. Austin
Baker 938.367 Door and window pattern, A. W. Koerner. 937.816 Door closure, K. W. Gale. 938.467 Door construction, sliding, B. K. Hussey. 937.816	Jaw tool, pivoted, G. H. Powell. 938,334
Door nanger, r. J. S. Miery 908.209	H Kinefoscone E L. Aiken 927.746
Door operating mechanism, H. Rowntree 937.870 Door operating mechanism, G. Mazzolini 938,068	Knife blade, A. A. Vignos