WEIGH-CRANE.—E. SCHENCK, Darmstadt, Germany. The invention adapts the jib of the crane to act as the weigh-beam and arranges the chain, cable, or the like to pass through the rotary point or fulcrum of the jib before reaching the drum. This avoids the accuracy of the machine being affected by the chain, cable or the like, running to the drum. By the swinging of this lever no movement of chain or cable is occasioned in the pulling direction, and no disturbing frictional resistances are set up.

BELL-RINGING MOTOR.—C. SIMON, Avilla, Ind. This device automatically rings a bell. The invention is expected to be useful in many connections, but has its greatest utility when used as an attachment for ringing a locomotive bell. The object is to produce a device which is simple in construction and which will be operated from a moving part of the machinery of a locomotive.

SELF-ACTING SPINNING-MULE.—J. H. RYALLS, Charlottesville, Va. Mr. Ryalls' invention is embodied in improved means for locking pawls when released from a ratchet wheel, leaving the gearing free. The sole purpose is to lock the weighted and counterbalanced lever when required. When the lever is forced down and locked the pawls are out of engagement with the ratchet wheel, and when the locking device is tripped, the cone releases the pawls and thus leaves the connected gear free to rotate.

WASHING-MACHINE.—C. E. MITCHELL, Fort Payne, Ala. The object of the invention is to provide means by which clothes may be quickly and thoroughly washed and without danger of tearing or damaging the finest fabrics. Clothing first passes from the water to disks, so that the water is partly pressed out between the disks and drum and returns to the tub, and then as the clothing passes between the drum and roller the dirt is scrubbed out.

FAN ATTACHMENT FOR SEWING-MACHINES.—S. E. HARTMANN, New York, N. Y. The invention pertains to improvements in sewing-machines, and more particularly to an improved fan attachment for use in connection with power-operated machines, whereby the fan may be continuously operated directly from the power shaft independent of the machine proper.

COMPRESSED-AIR WATER ELEVATOR.—F. ALLISON, Chattanooga, Tenn. In this invention twin chambers, or cylinders, are submerged in water, or otherwise adapted to be filled automatically with water under greater or less pressure, and air under pressure is admitted alternately to the chambers or cylinders so as to expel the contents of one chamber as the other fills. The novelty is embodied in the construction and arrangement of automatic valve mechanism, air cylinders and pistons slidable therein; also air pipes connecting chambers and their passages, and an automatic device for holding one of the valves temporarily in the position into which it is thrown.

Musical Devices.

MUSIC-TUNER.—J. F. YOUNG and E. L. BRENNAN, Morristown, N. J. The object of the improvement is to produce a device simple in construction, and which will operate substantially automatically to turn the leaves of the music, and further to provide such an arrangement as will enable the leaves to be returned to their normal condition when the piece is to be played a second time.

HARMONICA.—W. B. YATES, Alviso, Cal. The improvement is in harmonicas or mouth organs. The object is to arrange the harmonica music scale into separate distinct octaves. The instrument provides a perfected mouth harmonica, perfect in octave, harmonic, diatonic, and numeral progression, and capable of producing a greater variety of music than those instruments now in use.

Prime Movers and Their Accessories.

MEANS FOR PACKING VALVE-RODS OR SHAFTS UNDER PRESSURE.—O. E. LEIB and E. B. WITTE, Trenton, N. J. The invention refers to new means whereby a fluid may be prevented from escaping by a valve rod, a shaft, or other rotating or reciprocating member while the ordinary packing is being replaced or other parts being repaired. The object is to so construct the rod and the bushing within which the packing is seated that by a longitudinal movement of the rod a tight joint may be effected entirely independent of original packing, and this joint firmly held until the original packing is readjusted or replaced.

VALVE.—B. V. CONSTANTINOV, New York, N. Y. In this patent the invention relates to improvements in valves for water, steam, or like pipes, and the object is to so arrange a pressure-actuated valve that it will open uniformly throughout the circumference, thus permitting of an even and uninterrupted flow of liquid around the valve.

GAS-ENGINE SYSTEM.—J. L. TATE, Jersey City, N. J. The object in this case is to provide means for cooling the cylinder of the engine by the circulation of cold air through the jacket, thus eliminating the water jacket commonly used and avoiding the necessity of maintaining a constant supply of cooling water. Further, to provide means for utilizing the heat of exhaust gases from the engine and converting this waste heat into mechanical energy.

REVERSING-VALVE FOR STEAM-ENGINES.—W. A. FLOWERS, Aberdeen, Wash. In the present patent the invention is an improvement in reversing valves and particularly for steam-engines of that class in which a steam-chest is dispensed with, the cylinder being provided with small longitudinal bores to receive rocking valves that control admission and exhaust of steam.

ROTARY VALVE FOR STEAM-ENGINES.—W. A. FLOWERS, Aberdeen, Wash. This invention has reference to steam engines, and more particularly to the means employed for controlling the admission and exhaust of steam from the piston cylinder. It provides a single rotary valve operated from the crankshaft and adapted to be oscillated by a cam or eccentric located thereon. Also improved means whereby the engine may be more easily reversed and controlled.

PRODUCTION OF FLUID FOR POWER.—F. MILLER, Turin, Via S. Anselmo 1, Italy. According to the present invention liquid fuel, such as for instance benzin, is mixed with and led to burn into a receptacle wherein water comes in close contact with the burning mixture whereby it is vaporized, so that the fluid under pressure, composed of vaporized water, and the gases generated by the combustion of the fuel with air, is produced which can be utilized for working power machines.

INTERNAL-COMBUSTION ENGINE.—H. A. W. DRECHSLER, Männedorf, Switzerland. This invention relates to engines of the two-cycle type and is intended to provide certain improvements in the means of compressing the explosive charge, and delivering it to the cylinder. Means are also provided whereby the time of admission of the gas to the cylinder may be controlled, rather than the time of ignition, thus permitting of the use of platinum or the like as the igniter. Provision is made for the escape of exhaust gas through the piston rod after the main exhaust port has been closed.

Railways and Their Accessories.

CAR-FENDER.—S. ISHII, New York, N. Y. This patent discloses a fender in which canvas is stretched over a frame of special construction and portions of the canvas being preferably folded back and forth on itself, a multifold giving the desired strength. At the front of the fender rollers are mounted to rotate in approximately horizontal planes and around these a leather strap or belt extends to increase the protective means afforded by the fender.

BRAKE.—N. J. CLUTE, Schenectady, N. Y. This invention relates to brakes, and it is particularly useful in connection with devices of this class used upon railway or other cars. The object is to provide a brake which can be manually controlled and which utilizes the movements of the wheels to set the brakes. Means provide for setting the brake instantly, or gradually and smoothly.

MAIL-BAG CATCHER.—T. E. SHEFFEY, Decatur, Ala. The invention pertains more particularly to that class of devices adapted to be secured at the door of mail cars to engage a bag located adjacent to the track and to hold it when a train is moving, whereby the mail can be taken aboard the mail car without stopping the train. An object is to provide a catcher having a movable laterally extended fork rod for engaging the bag, and means for securing the fork rod in different positions.

MINE-CAR AXLE.—C. A. KELLER, Rosedale, Ind. One purpose of the invention is to provide a form of axle especially adapted for application to mine and similar cars, the construction of the axle being such that the wheels may freely revolve without rubbing against the sides of the body of the car even under the roughest conditions of use, and so that the body will be prevented from shifting on the axle.

RAILWAY-SWITCH.—T. J. BURKE, New Orleans, La. By raising a hand lever the horizontal plate may be placed at any height to enable it to pass over obstructions in the path of the car and when the lever is set vertically a shaft and the above mentioned plate will be held locked in raised position, the lever being engaged by a spring catch secured in the platform guard. This is the normal position of the lever when the switch-operating mechanism is out of use; and the lever may be instantly lowered and shifted laterally so as to lower and rotate the shaft as required to operate the switch in one operation.

Pertaining to Recreation.

POLYCYCLE.—J. MÜLLER, New York, N. Y. The invention relates to polycycles, and the object is to produce a skate which is adapted to be operated by a movement of one's foot. A further object is to provide a construction which is simple, not likely to get out of order, and which will enable the polycycle to be steered.

FISHING-FLOAT.—W. N. SIMMONS, Pass Christian, Miss. The invention has reference to an improved float or barb for use on fishing lines, and the object thereof is to provide means by which the same may be securely held to the line at any desired point and whereby it may be easily and quickly adjusted thereon.

Pertaining to Vehicles.

AXLE.—G. G. SMITH, Binghamton, N. Y. In this invention the improvement is designed to overcome the disadvantages in the common form of axle now in use. It overcomes some present objectionable features by forming the spindle of the axle angular in cross section, preferably tapering, and covering it with a removable, cylindrical thimble which may be replaced when it becomes loose from wear.

WHEEL.—H. F. BROADHURST, 7 Barnstap Mansions, Rosebery avenue, London, E. C., England. The object here is to provide a spring road-wheel for vehicles, the invention being specially (although not exclusively) designed to provide a construction whereby a wheel having a broad tread may be capable of always maintaining contact with the roadway across virtually the entire width of the tread of the wheel, notwithstanding that the plane of the wheel-rim may not be perpendicular to the surface of the roadway.

FOLDING VEHICLE.—R. J. EHLERS, New York, N. Y. The invention pertains to baby carriages, go-carts and similar vehicles, and the object is to provide a vehicle, arranged to securely hold the parts in position when extended, and to allow quick changing of the vehicle from an extended to a folding position and vice versa, the vehicle when folded forming an exceedingly compact flat parcel, which can be conveniently carried about or stored in a small space, or packed into a suit case, trunk, or the like.

HANDLE-BAR.—C. ALTENBURGER, Chicago, Ill. The invention relates to improvements in handle bars for bicycles or the like, the object being to provide a bar so constructed as to have the required rigidity for steering purposes, but to yield vertically under pressure, thus relieving the rider's arms from the strain or jar incident to a rigid bar.

WHIFFLETREE.—P. L. VINSON, Newbern, N. C. The invention pertains to spring whiffletrees, the object being to cause the moving strain to be transmitted to the body of the vehicle and sudden strains on the shoulders of the horses and on the vehicle prevented. In use with a double team where a pair of whiffletrees are used attached to a doubletree, the latter may also be made as an elliptic spring and the spring whiffletrees hung to each end thereof.

MOTOR-VEHICLE.—C. MESSICK, JR., Hackensack, N. J. The invention relates to devices for operating a motor bicycle through the pedal mechanism. One purpose is to provide a spark-control for the motor, operated by back-pedaling, or by hand, which will reduce the speed more or less, or permit it to travel at full speed, which control when placed in position to drive the motor at low speed will yet permit it to continue running while the brake section is in intermediate or coasting position, or in actual braking position. Releasable means are provided by pedaling for maintaining the coasting or other positions of the device against the main spring.

END-GATE.—A. ROBERTS, Damar, Kan. The invention relates to an improvement in end gates of vehicles and particularly to means for securing the same in working position. The gate may be placed in vertical position, when it performs the function of an end-gate, or it may be supported in an inclined position, when it is adapted for use as a shovel-board in loading a wagon.

Designs.

DESIGN FOR A BARBER'S SIGN.—J. C. SMITH, Marion, Ind. In this design, a triangular upright sheet metal casting has alternating bands of red, white, and blue painted transversely across the sides, with rows of lenses seated in the bands and of the same color as the bands, which lenses are to be illuminated from a lamp or other source of light within the casing.

DESIGN FOR A CLOCK-STAND OR SIMILAR ARTICLE.—C. G. CANIVET, JR., New York, N. Y. In this stand design the center is a circle for the reception of the clock or other article. From this circle there is a slope to the base of stand, the slope being ornamented with sitting and reclining figures of nude children amidst fruit, leaves, and draperies.

DESIGN FOR AN ADVERTISING DEVICE.—H. F. C. SOELLNER, New York, N. Y. The ornamental design in this instance consists of a light skeleton open-work frame representing the form of a very plain but graceful bottle. A shield occupies the usual place for a label on a bottle.

DESIGN FOR A PORTABLE STANDARD FOR LIGHTING-FIXTURES.—H. T. HOWELL, Woodside, N. Y. In this portable standard for lighting fixtures the top of the column has a fluted edge. Under this the standard takes a bulb form and then is straight half way down, when it gradually broadens. The flanged base is very broad, making the design very graceful and substantial. Leaves reach up the standard about two-thirds the length.

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.

Notes and Queries.

HINTS TO CORRESPONDENTS.

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 wishing 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.
Scientific American Supplements referred to may be had at the office. Price 10 cents each.
Books referred to promptly supplied on receipt of price.
Minerals sent for examination should be distinctly marked or labeled.

(10609) C. L. T. asks how to exterminate mites. A. Mix together 10 parts of naphthalene, 10 parts of phenic acid, 5 of camphor, 5 of lemon oil, 2 of thyme oil, 2 of oil of lavender, and 2 of the oil of juniper, in 500 parts of pure alcohol.

(10610) M. T. F. asks for a paste for cleaning gloves. A. Take 4 parts of water and dissolve in it 3 parts of soft soap to which add 1-16 of a part of oil of lemon, and make a paste of desired consistency by adding a sufficient quantity of prepared chalk. This paste is particularly suitable to kid gloves.

(10611) J. N. T. asks for a blue ink for writing upon glass. A. In 150 parts of alcohol dissolve 20 parts of rosin, and add to this drop by drop, stirring continuously, a solution of 35 parts of borax in 250 parts of water. This being accomplished, dissolve in the solution sufficient methylene blue to give it the desired tint.

(10612) J. B. W. asks for ironing preparations. A. Ironing wax: Melt carefully together Japan wax 200, paraffine 200, stearic acid 100, and pour into mold, pass the hot flat iron over this mass, which causes the iron to slide better and the laundered work to become glossy. Laundry gloss: Heat potassium carbonate 15, spirit 100, stearic acid 15, and water 200, until the mass is uniform, thin with hot water 650, and stir until cool. Scent with oil of lavender as desired.

(10613) C. L. asks how to remove oil spots from leather. A. To remove oil stains from leather, dab the spot carefully with spirits of sal-ammoniac, and after allowing it to act for awhile, wash with clean water. This treatment may have to be repeated a few times, taking care, however, not to injure the color of the leather. Sometimes the spot may be removed very simply by spreading the place rather thickly with butter, letting this act for a few hours. Next scrape off the butter with the point of a knife, and rinse the stain with soap and lukewarm water.

(10614) M. E. E. asks for a formula for waterproof glue for cardboard. A. Melt together equal parts of good pitch and guttapercha; of this take 9 parts, and add to it 3 parts of boiled linseed oil and 1½ parts of litharge. Place this over the fire and stir it till all the ingredients are intimately mixed. It may be diluted with a little benzine or oil of turpentine, and must be warm when used.

(10615) J. G. B. asks for a formula for Japan bronze. A. The formulæ that we give below contain a large percentage of lead, which greatly improves the patina. The ingredients and the ratio of their parts for three sorts of modern Japanese bronze follow: 1. Copper 81.62 per cent, tin 4.61 per cent, lead 10.21 per cent. 2. Copper 76.60 per cent, tin 4.38 per cent, lead 11.88 per cent, zinc 6.53 per cent. 3. Copper 88.55 per cent, tin 2.42 per cent, lead 4.72 per cent, zinc 3.20 per cent. Sometimes a little antimony is added just before casting, and such a composition would be represented more nearly by this formula: 4. Copper 68.25 per cent, tin 5.47 per cent, zinc 8.88 per cent, lead 17.06 per cent, antimony 0.34 per cent.

(10616) J. G. B. asks how to cement celluloid. A. If celluloid is to be warmed only sufficiently to be able to bend it, then a bath in boiling water will do. In steam at 120 deg. C., however, it becomes so soft that it may be easily kneaded like dough, so that one may even imbed in it metal, wood, or any similar material. If it be intended to soften it to solubility, the celluloid must then be scraped fine and macerated in 90 per cent alcohol, whereupon it takes on the character of cement and may be used to join broken pieces of celluloid together. Solutions of celluloid may be prepared: 1. With 5 grammes of celluloid in 16 grammes each of amyl acetate, acetone, and sulphuric ether. 2. With 10 grammes of celluloid in 30 grammes each of sulphuric ether, acetone, amyl acetate, and 4 grammes camphor. 3. With 5 grammes celluloid in 50 grammes alcohol and 5 grammes camphor. 4. With 5 grammes celluloid in 50 grammes amyl acetate. 5. With 5 grammes celluloid in 25 grammes amyl acetate and 25 grammes acetone. It is often desirable to

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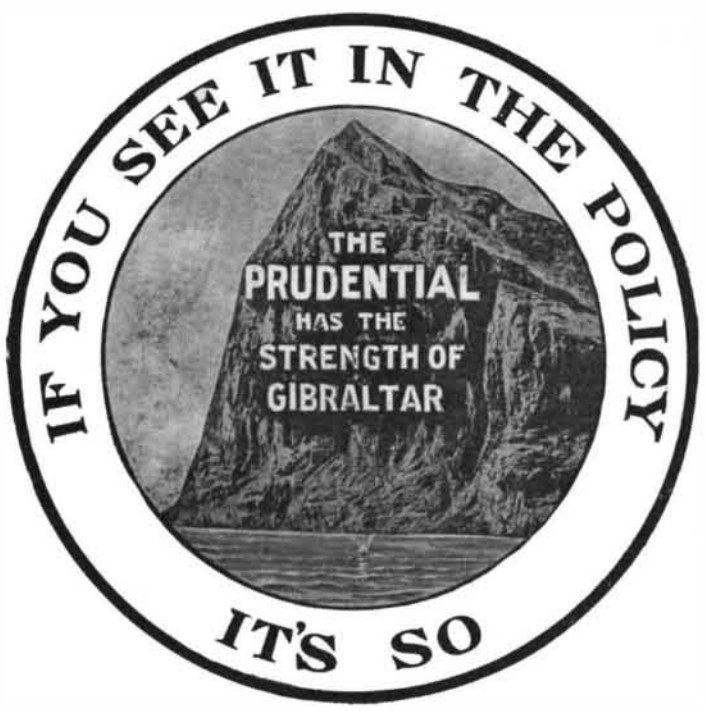

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soften celluloid so that it will not break when hammered. Dipping it in water warmed to 40 deg. C. will suffice for this. Any factory will furnish soft celluloid if ordered in sufficiently large quantities to pay.

NEW BOOKS, ETC.

RUMFORD FIREPLACES, AND HOW THEY ARE MADE. By G. Curtis Gillespie, M.E., architect. New York: William T. Comstock. One 12mo. vol.; cloth. Price, $2.

This work, based on the original Rumford essays, which are given in full with the original drawings, is an elaborately illustrated essay on fireplaces, ancient and modern, and their fixtures. The author has given much study to this subject, not as a mere dilettante, but as a practical worker. As an architect of experience in the construction of residences he has found a great demand for fireplaces on the part of owners, but a lack of ability on the part of mechanics to construct them on lines that were at once artistic and efficient. In this respect the book follows carefully in its drawings and descriptions the technical treatment necessary to secure the best results. He claims that Rumford discovered the form and proportions best suited to insure good heating, and that no later designer has been able to compete with him. This portion of the book will be read with much interest by the architect, the mason, and the heating engineer. While elaborately illustrated and containing many designs for mantels, fireplaces, and their accessories, which will render it valuable to the decorative designer, the book is thoroughly practical and the diagrams and drawings can be worked up into actual fireplaces which will not only adorn but heat the rooms they are in without blinding the eyes of their occupants with smoke.

CONCRETE STEEL BUILDINGS. Being a Companion Volume to the Treatise on Concrete Steel. By W. N. Twelvetrees. London and New York: The Macmillan Company. With 331 illustrations. 12mo.; cloth; 408 pages. Price, $3.25.

A presentation of detailed particulars of buildings in concrete designed for different uses in Great Britain, on the Continent, and in America. The works chosen are variously noteworthy, some for their size, some for their strength, and others for the manner in which difficult problems have been solved. All of the buildings show the adaptability of concrete to structural requirements of every description.

PRACTICAL METAL TURNING. A Handbook for Machinists, Technical Students, and Amateurs. By Joseph G. Horner. Illustrated with 488 engravings. New York: The Norman W. Henley Publishing Company. 8vo.; cloth; 404 pages. Price, $3.50.

In this work little is said of the lathe itself, preference being given to the practice of turning rather than to lathe design, a wide subject, undergoing rapid changes. Although it would be a hopeless task to attempt to treat the subject exhaustively in one small volume, few matters of importance seem to have been omitted. The principles and practice in the different branches are considered, and well illustrated. All the different kinds of chucks of usual form as well as some less usual ones, are shown. The important section devoted to modern turret practice is a feature of the book; boring is another subject which is fully treated; and the chapter on tool holders illustrates a large number of types. Screw-cutting is discussed at reasonable length. The last chapter contains a generous body of information relating to high-speed steels and their work.

NOTES ON CONSTRUCTION IN MILD STEEL. By Henry Fidler. With illustrations from working drawings, diagrams, and tables. London and New York: Longmans, Green & Co. 8vo.; cloth; 448 pages. Price, $5.

The object of this work is to bridge the gap that often occurs between the carefully calculated stress-sheet or correctly drawn graphic diagram and the completion of a working drawing which will successfully pass the ordeal of criticism in the girder maker's or bridge or roof builder's yard. No attempt has been made to treat the subject from the point of applied mechanics as ordinarily understood, nor are the theories of construction or the calculations of building or engineering structures referred to, except as may be required incidentally in connection with the legitimate subject matter. The great range of the topics of which the notes treat, however, and the severe limitations which are necessarily imposed, form an excuse for the apparent insufficiency of discussion.

WATER WORKS MANAGEMENT AND MAINTENANCE. By Winfred D. Hubbard and Wynkoop Kreisted. New York: John Wiley & Sons. 8vo.; cloth; 429 pages. Price, $4.

The maintenance and operation of a system of water works is often believed to be a purely business proposition, requiring generally a business management. Regarded in a broad and comprehensive sense, this view may be correct, but a far-seeing business manager will not overlook the purely technical or scientific considerations which are of necessity involved in the management of a modern water works system. The selection of a water supply drawn from an unpolluted source is highly desirable, and inspires the confidence of the public in the management of water works. This confidence, however, may be also secured in a water drawn from polluted sources, provided the water be properly purified for use. It is the object of this work to present all the problems of water works management, both of systems where the water is drawn from polluted and from unpolluted sources. Its scope is broad, even dealing with the legal aspect of the case, and with the financial management of the properties.

ARMATURE CONSTRUCTION. By H. M. Hobart and A. G. Ellis. With 420 illustrations, including numerous colored diagrams. London and New York: The Macmillan Company. 8vo.; cloth; 348 pages, Price, $4.50.

The design and manufacture of dynamo-electric machinery is so extensive a subject, that it cannot be handled in a single treatise with sufficient comprehensiveness. The present work deals with the subject from a constructional and practical standpoint rather than from a designing and calculating standpoint. The theoretical and designing elements have not been allowed to predominate, and are only inserted in so far as they facilitate an intelligent appreciation of the various methods and points encountered in the construction. A novelty which makes the figures much more readily followed is the introduction of colored diagrams in the study of polyphase windings and multiplex continuous current windings. Although to a mind which is continually dealing with such windings these colored diagrams are not so necessary, in the present case, however—where the desire is to reach those more or less unfamiliar with the subject—this innovation is a great assistance.

RAILROAD MEN'S CATECHISM. By Angus Sinclair. New York: Angus Sinclair Company. 16mo.; cloth; 216 pages. Price, $1.

This is a book which gives information that will be useful and acceptable to all classes of railroad men from the president to the newest brakeman. The questions are intended to impart information covering the entire practice of train operating, and to explain all details of mechanism. The questions and answers are the outcome of Sinclair's Locomotive Engine Running and Management, and are an enlarged code that grew up through many small forms, the best known having been the Questions and Answers prepared by the Traveling Engineers' Association.

SOUTHERN SHIPPER'S GUIDE DIRECTORY. A List of the Shippers of Foodstuffs in the Southern States. Houston, Texas: Thomas-Willson Publishing Company. 8vo.; cloth; 300 pages.

ANNALS OF THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE. Edward C. Pickering, Director. Vol. LII. Part I. Eclipses of Jupiter's Satellites. 1878-1903. Cambridge, Mass.: Published by the Observatory.

HIGH ELECTROMOTIVE FORCE. Its Application to the Study of Powerful Electrical Discharges and to Spectrum Analysis. By John Trowbridge. Cambridge: John Wilson & Son, 1907. 185-215 pages; 3 plates.

INDEX OF INVENTIONS

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Bee knife, I. F. Sawyer	865,062
Beet dumping and screening apparatus, L. T. Carson	865,235
Bell, musical, J. C. Deagan	864,771
Bell, water tight electric, W. C. Hill	865,038
Belt holder, R. Braun	865,075
Billiard cue tip, detachable, V. Ajello	864,943
Binding post, E. H. Rollinson	865,211
Bisulfite liquor, tower for, J. Bishop	864,881
Block press, J. C. Fowler	864,839
Blue print drying machine, C F. Pease	865,057
Board. See Slicing board.	
Board, J. T. Ferres	864,775
Body heater, P. Stein	865,131
Boiler cleaner, J. W. Rietzke	865,270
Boiler tube or flue cleaner or scraper, steam, C. S. Dean	864,772
Bolt cutting machine, H. L. Fisher	864,964
Bolting machine, flour, T. W. Graham	865,346
Book mark, K. Erickson	865,092
Bookcase, D. Mapes	865,114
Boot bodies, apparatus for making felted, H. C. Richardson	864,916
Bottle, non-refillable, F. J. Davis	864,834
Bottle, non-refillable, O. Johnson	865,251
Bottle or jar closure, milk and cream, E. Braunfeldt	865,076
Bottle washing machine, B. E. Linfoot	865,192
Bottle washing machine, H W. Van Leir	865,217
Box, W. Straub	865,280
Box blank machine, E. Craig	864,955
Bracket, Kahn & Christ	864,847
Brick carrying vehicle, J. J. Gledhill	865,299
Broom, G. Brustle	865,293
Broom binder, N. Dionne	865,085
Brush, buffing and polishing, E. N. Gaudron	865,098
Brush holder, Fehler & McLaughlin	865,029
Brush, wire, J. Saltiel	864,922
Bucket or conveyer, W. F. Jones	865,045
Buffer, A. P. Olson	864,985
Buffer, friction, J. Nichols	865,054
builder's bracket, A. H. Danforth	865,017
Building blocks and artificial stone from plastic material, apparatus for forming, A. A. Pauly	865,266
Building construction, R. R. Candee	865,080
Building mold, J. D. Bickford	864,767
Building structure, H S. Gardner	865,336
Burner, A. G. Kaufman	865,183
Butter, determining the percentage of water in, G. E. Patrick	864,913
Buttonhole stitching machine, E. B. Allen	865,324
Camera focusing device, J. A. Dimock	864,773
Canning apparatus, L. L. Lawrence	865,190
Canopy bracket, H. H. Bowland	865,230
Car dumping cage, mine, G. Trotter	864,813
Car fender, C. Meyer	864,794
Car fender, H. M. Lambert	865,258
Car mover, J. R. Doty	865,087
Car roof, D. C. Ross	864,993
Car safety appliance, railway, J. T. Andrew	865,287
Car seat, auxiliar N. Joergensen	865,104
Car step, pivoted, R. M. Lamb	864,848
Cars, automatic electric gong ringing device for street, Fallek & Wolfe	864,961
Cars, etc., intermitting apparatus for cooling, C. F. Edson	865,172
Carbon brushes, means for attaching pigtails to, M. W. Robertson	865,059
Carbureter, A. F. Rockwell	865,060
Card folder, magazine, C. C. McPhee	864,984
Carding machine feeder, J. Stewart	864,933
Carpet sweeper, Deitch & Biddle	865,084
Casein and producing same, molding, L. H. Barnett	865,005
Cattle guard, V. A. Kelley	865,343
Chair and crib, combined, A. B. Nielsen	864,855
Charcoal kiln, C. D. Train	865,067
Charging mechanism, vertical, C. L. Taylor	864,936
Check-marking apparatus, Marston & Cummings	865,050
Chimney top, E. P. Doty	865,023
Chimney top or ventilator, C. Saunders	864,865
Choppers. See Meat chopper.	
Churn, J. L. Forbes	865,030
Cigarettes having tobacco wrappers, manufacture of, G. P. Butler	864,949
Cigars and all-tobacco cigarettes, manufacturing, G. P. Butler	864,948
Cigars, manufacture of, W. H. Butler	865,012
Circuit closer, automatic, H. G Pape	864,858
Classifier, S. L. Hague	865,301
Closet, C. E. Routh	864,994
Closure for containing vessels, J. Brenzinger	865,008
Clothes line fastener, C. C. Thompson	864,937
Clutch, F. H. & J. D. Bachman	865,154
Clutch for pencil holders, etc., A. A. Bowers	864,825
Clutch mechanism, B. M. W. Hanson	865,302
Coffee roaster, automatic, Mustonen & Nissinen	865,203
Coil winding tool, J. L. Moore	865,116
Coin cup, B. F. Tinsley	864,938
Collar fastening device, adjustable, F. H. Richards	864,989
Combustion apparatus, W. H. Ricker	865,209
Composition or concrete post, H. G. & J. W. Hays	865,179
Compressor, N. A. Christensen	865,015
Computing machine, J. E. Carroll	864,770
Concrete construction, A. A. Pauly	865,265
Concrete construction, reinforced, S. B. Zimmer	865,145
Concrete structure, reinforced, Boyle & Upton	865,231
Condensation preventer. E. O. Capen	865,081
Condenser, R. Schneider	864,925
Condenser and centrifugal vacuum pump, jet, B. Thoens	864,811
Conveyer strippper, S. Moe	865,263
Core, collapsible, W. C State	865,064
Cork cutting machine, H. F. Busch	865,345
Corn grader, C. Hunnicutt	864,894
Corset, G. Berggren	865,156
Coupling, G. Bach	865,153
Crane for carrying ladles, C. L. Taylor	864,935
Crate, knockdown, Minehart & Hunter	864,852
Crucible tapping arrangement, L. Heynemann	865,037
Culvert and bank-retainer, road, Isham & Miller	865,044
Current transformer, O. de Faria	865,093
Cutting machine, H. De Smith	865,020
Dashboard pocket, C. E. Glynn	865,031
Die stock, adjustable, B. Borden	865,157
Dish washing machine, A. Insinger	865,181
Disinfecting apparatus, W. H. Rose	865,061
Display cover, G. E. H. Richter	865,208
Display rack for metal bedsteads, H. L. Powell	865,268
Dividing head, L. Thiel	864,873
Door, combined storm and screen, S. J. Spicer	864,931
Door hanger, D. Doyen	865,089
Door operating mechanism, double sliding, C. Metterhausen	864,977
Doors, means for hanging laterally movable, J. L. Kail	865,046
Draft equalizer, J. H. Hardman	865,034
Drill socket or chuck, C. C. Roberts	864,992
Drilling machine, E. Aisleben	865,148
Drilling machine multiple drill attachment, H. J. Jaquith	865,249
Driving mechanism, H. L. Johnston	864,786
Dye, azo, Kahn & Kothe	865,252, 865,253
Dynamometer, F. Sellers	864,927
Egg desiccating apparatus, J. M. Hussey	865,342
Electric furnace, W. G. Clark	865,016
Electric generator, Weman & Larsson	865,068
Electric motors, connecting system for direct current, R. Brun	865,011
Electric wire clamp, E. W. Buffington	864,947
Electrical and other devices, receptacle for, R. Siegfried	864,930
Electrolysis, multiple needle holder for, E. W. Johnson	864,968
Elevated carrier, W. Louden	865,113
Elevating and conveying mechanism, A. R. Holmen	865,041
Elevator, C. R. Pratt	865,205
Elevator gate operating mechanism, J. E. W. Fogal	865,335
Elevator signaling apparatus, C. A. Reiners	864,915
Engine, G. Gray	865,099
Engine, J. Schaeffers	865,213
Engine lubricating means, internal combustion C. O. Heidstrom	865,101
Engine starter, explosive, J. B. Bartholomew	864,766
Engines, air supply means for explosive, A. Wagener	865,218
Engines, thermostatic regulator for explosive, H. Charles	864,831
Engineer's wrench, M. Schwendner	864,805
Etching, E. Spitzer	865,276
Explosive engine, A. E. Wolcott	864,818
Explosive engine H. Charles	864,830
Explosive engine, E. J. Woolf	864,877
Eyeglass nose guard, C. L. Howes	865,042
Eyeglasses, D. Woolf	865,284
Fabric. See Knitted fabric.	
Fan motor, rotary, W. C. Stevens	865,133
Fastenings, machine for inserting, L. A. Casgrain	864,951
Faucet, A. Koerber, et al	865,111
Faucet, A. Ullmann	865,216