

RECENTLY PATENTED INVENTIONS.

Engineering.

ROTARY ENGINE.—John F. McGlen, Howle, South Dakota. In this engine a cylindrical casing is divided to form two chambers or cylinders in which separate pistons rotate together, there being two inlet and two exhaust ports for each compartment, and other duplicate attachments, forming practically two engines on a common shaft. At diagonally opposite points the piston has wings that work in annular spaces or steam chambers, in which are radially sliding abutments, which are moved alternately in slots in the casing, there being four steam passages leading from the throttle valve downward to conduct steam to the sides of the abutments. By reversing the throttle valve and the exhaust valves the rotation of the pistons and the engine as a whole will be reversed. There is no "dead point" in the engine, steam pressure being always on one, and, during a good part of the time, on both wings.

AUTOMATIC BOILER FEEDER.—George Johnson and Murphy F. Smith, Allentown, Pa. According to this invention a float-controlled piston carries a valve for admitting and shutting off the water to and from the boiler, the device being of simple and durable construction and designed to automatically keep the water in the boiler at a normal level. In case the pump does not act, or the water supply to the valve casing connecting with the boiler is interrupted, an alarm is operated to notify the engineer.

Railway Appliances.

REFRIGERATOR CAR.—Berthold E. Meyer, William I. Bodine and Christopher E. Rule, Springfield, Mo. To facilitate loading refrigerator cars without causing an undue waste of ice, this invention provides a car of novel construction, the car being divided into compartments designed to protect the refrigerating medium during the time when the car doors are open. The car has at each end refrigerating compartments forming ice bunkers, which run over the refrigerating compartments and down their outer ends, and closing the inner side of each compartment is a removable wall having two hinged sections, the contiguous edges of which are recessed, two doors being hinged within the recesses, while a bracket is carried by each section of the wall in which slides a gate having two hinge-connected sections. When the car doors are open, communication with the ice bunkers is closed, but when the car doors are closed, communication is opened direct with the ice bunkers to the center of the car.

Electrical.

AUTOMATIC CUT OUT.—Henry F. Blackwell, Jr., Brooklyn, N. Y. This invention relates to fuse holders to be placed in an electric circuit to automatically cut out the line in cases of excessive load. It comprises a spring-yielding arm forming a conductor and a link formed of sections joined with fusible solder, one end of the link being connected to the arm and its other end being connected to a part insulated from the arm, while a carbon point in the circuit engages with the link. The device is designed to be quick and positive in action, to effectively prevent the burning out of instruments.

Bicycles, Etc.

CHAIN GEAR CASING.—Horace W. Dover, Northampton, England. A case which may be easily applied to and detached from the chain gearing of a bicycle is provided by this invention, the case being divided at the plane of the crank and driving wheel axles into halves, which are so united that, while insuring a dust proof closure, the casing may be taken off for cleaning, oiling or repairs, and refixed in position with great facility. At its forward end the case itself fits around the bottom bracket and crank shaft, and at the rear hub provision is made for maintaining a dust-tight closure, while admitting of adjustment of the driving chain.

BICYCLE SHOULDER BRACE.—David T. Singleton, Willard, Ga. To enable a rider to apply greater force to the pedals than that due to his weight is the principal object of this invention, the brace comprising wide padded hooks, which extend over the shoulders, the longer front ends of the hooks having attached bars and a horizontal adjustable section from which depends a plate and hook for connection with a strap by which connection is made with the horizontal bar of a bicycle frame. The device is designed to be worn under the coat and vest, and the hook connecting the brace proper with the machine is automatically detachable when the rider dismounts or in case he should be thrown from the machine.

SPROCKET CHAIN.—Salvador Pastor, Paris, France. This chain, while especially applicable to bicycles, tricycles, etc., is also adapted for various mechanical applications. It has a special arrangement of link joints, the links being jointed together by an eccentric hinge joint in such a manner that the effective length of a link will be less in the parts of the chain which are in a straight line than in the parts which are curved. Each link has at one end a cammed portion and at the other end a roller on which a cammed portion rolls, whereby the positions of the links relative to each other are changed according to the position of the chain.

Elevators, Etc.

ELEVATOR SAFETY DEVICE.—John T. Taylor, New York City. Two patents have been granted this inventor for novel means for manually operating the safety clutch of a passenger or freight elevator, the improved construction facilitating the application of the clutch when the car descends too fast and the automatic apparatus fails to work. A rope normally traveling with the car is operatively connected with a normally inactive stop mechanism, while a stationary taut rope extending through the car carries a spring cushion adapted to be engaged by a clamp on the first rope at any time when the operator in the car depresses a lever. According to one of the patents an electromechanical apparatus causes the operation of the clamping segments from means within the car, and under the immediate control of the conductor.

AUTOMATIC STOP FOR HOISTS.—Francis H. Kohlbraker, Shamokin, Pa. This invention relates to an improved mechanism for stopping hoists or cages in vertical shafts or slopes to prevent their being hoisted above a certain point, thus obviating the possibility of wrecking the cage or a part of the hoisting mechanism. It comprises a power operated brake and a weighted valve-operating lever operating the valves of the engine and the brake, a tripping lever normally holding the valve-operating lever out of action, while a lever in the path of the hoist is connected with the tripping lever. The device is so located that it will not be operated if the hoist stops at the proper point, but comes into operation only when the hoist travels beyond its fixed limit.

Mechanical.

WINDING MACHINE.—Chauncey A. Cornell and Elmer S. Robison, Pittsfield, Mass. This is a machine more especially designed for winding wall paper or other endless material into rolls of any desired length, the machine working automatically and being adjustable to wind rolls of different lengths. An intermittently revolving frame carries a series of winding rollers, each adapted to receive paper in its turn, and means for rotating a roller at a time to wind up a desired length of paper when the frame is at a standstill, the feed mechanism automatically stopping when the frame is rotated, or being actuated when one of the rollers is in position to receive the paper.

TONGS.—Canly D. Eames, Worcester, Mass. These tongs are made with a changeable fulcrum to permit the operator to give a fine adjustment to peculiarly formed jaws, to cause the latter to properly grip small or large objects, but one hand being required to manipulate the lever handles to open or close the jaws. One of the lever handles has a rigid pivot with laterally projecting portion entering a slot in the other handle, the slot being formed with recess in one of its walls adapted to be engaged by the projecting portion of the pivot.

Agricultural.

PLANTER AND FERTILIZER DISTRIBUTER.—Joseph W. Terry, Brewton, Ala. This is a light, strong and inexpensive machine, designed to open a furrow and deposit in it a fertilizing material, sow any kind of seed in any quantity and cover the seed, rolling the ground and leaving the land in good position to be cultivated, the cultivation being afterward effected by bringing into action other parts of the machine, by which a growing crop may be fertilized and cultivated in a most efficient manner. The machine may also be used for sowing seed broadcast, if desired.

HOLDING SHOVELS ON CULTIVATOR SHANKS.—Vesper A. Gleason, South Riverside, Cal. To facilitate attaching the teeth or shovels to the cultivator standard or beam is the object of this invention, according to which an adjustable wedge or key, with a spring-locking device attached to its shank, is adapted to engage the slotted shovel shank, there being means for holding the wedge or key at the desired adjustment. By simply lifting a pawl the key may be moved into and out of engagement with the shanks of the shovels, the work being accomplished in the time one would ordinarily be looking for a wrench. The key is also adapted for use in securing plow points and shares in position.

REMOVING PITH FROM STALKS.—George R. Sherwood, Kearney, Neb. As stalks free from pith afford a valuable food which may be fed directly to stock, while ordinarily the stalks cannot be advantageously so used except for a short distance from the tip, this inventor has devised a machine for removing the pith in a simple and efficient manner. As the stalks are fed to the feed rollers, they pass a splitting knife by which they are divided into halves, when they are received by guide plates at the rear of which are spring-pressed pressure plates co-operating with pith-removing wheels, a conveyor receiving and discharging the pith at the side of the machine.

PORTABLE GRAIN ELEVATOR.—Isaac A. Milton, Bigelow, Minn. To lessen the labor of the farmer in moving grain from the thrasher to the granary, and save a large amount of manual labor, is the object of this invention, according to which the body of the elevator consists of a hopper supported in a wheeled frame, the elevator folding down when not in use, but being so constructed that it will receive and elevate grain through a valved opening when the leg is set up or inclined. When a horse power is used to drive the elevator carrier, it may be economically driven by detaching the team from the wagon and attaching it to the horse power.

SAUSAGE MEAT CHOPPER.—Alexander S. Stewart, Neche, North Dakota. To cut meat fine for sausages and other purposes, this inventor provides a mechanism whereby the knives have a rocking reciprocating movement, the knives being readily adjustable, and means being provided whereby any desired pressure may be given to the knives. When the knives encounter a bone or other hard substance they yield correspondingly, and provision is made to prevent the clogging of the knives by the meat.

Miscellaneous.

NON-REFILLABLE BOTTLE.—Otto G. Ogden, Louisville, Ky. According to this invention, a simple and inexpensive valve mechanism is fitted in the neck of the bottle to allow the free outward passage of the original contents of the bottle, but prevents its refilling. The bottle neck has an inner annular channel, into which expands a spring or locking ring on the valve casing, holding the latter in position, and in the casing is a plug guard having enlarged end portions provided with outlet ports, a regulating valve being pivoted to the outer end of the guard and the valve being wholly within the bottle neck. The lower end of the valve casing has a central opening controlled by a flap valve, which cannot be reached by a wire or other instrument to open an inlet passage.

CASH REGISTER.—Horace Bradt and Jefferson Kindleberger, San Diego, Cal. To facilitate

registering the amount of current sales, and to add the amount so that the total may be seen at the close of the day or at any time desired, is the object of this invention, which provides a machine with but few parts and of simple construction, which discloses to the purchaser the sum paid, and also registers the number of times the lid of the casing shall have been opened, or the cash drawer opened. A duplicating memorandum strip is also provided in connection with the casing of the machine, and an alarm is sounded when the cash drawer is opened, if desired.

VENTILATED BARREL.—Wilmer B. East, Norfolk, Va. This invention provides a barrel for the transportation of fruit, vegetables, etc., made of a novel form of veneer blanks, the barrel having its sides composed of inner and outer sheets provided with diagonal slits. The inner and outer layers are arranged with their slits reversed, the slits of one inclining in one direction and those of the other in the opposite direction, the slits of one layer or sheet crossing those of the other. The slits do not extend out to either edge of the blank, the edge portions being left unsevered and forming the chimes of the barrel, which is provided at its ends with inner and outer hoops.

SHOE PROTECTOR.—John O. Sharpless, Fairhaven, Wash. To protect and save from wear a boot or shoe at the vamp or sides when the wearer is coasting, this invention provides a shield having a marginal flange engaging the bottom of the sole, spring wires extending from the upper edge of the shield down under the shank, where they are crossed and brought to engagement up over the back of the quarter at the rear of the heel, thereby effectually holding the shield upon the shoe, but permitting of its convenient detachment when desired.

KNIFE.—Victor M. Fowler, Acton, Mass. This is a cheap and inexpensive knife for slicing bread and cake or slicing vegetables, etc. To the handle is attached a frame from which extends the blade, the handle also carrying an adjustable guide arm parallel with the blade. The guide arm extends slightly below the cutting edge of the blade, and is adapted to be placed with its inner face against the face of the bread or other article to be sliced to guide the knife edge so as to cut a slice of the desired thickness. Where the guide arm is made shorter than the knife blade, the outer end of the latter is adapted for paring, coring, etc.

STEAM COOKER.—Lewis F. Culver, Harvey, Ill. This is a cooking apparatus designed to require but a low degree of heat, and in which the steam is condensed so that a small quantity of water will suffice by being used over and over, the water in the reservoir being used, not only as a supply for the boiler, but as a condenser through which all the steam generated must afterward pass. The reservoir is located alongside the body or steaming chamber, there being means for protecting the bottom of the reservoir from heat, and connections between the reservoir and steaming chamber. The cooker has double walls forming insulated sides, preferably packed with non-heat-conducting material.

DISH CLEANER.—Charles Fellows, Pittsburg, Pa. According to this invention, an elongated tank is divided into a main washing compartment and a supplemental rinsing compartment, there being in the bottom of the tank a steam coil, and in its top edges bearings from which, in the washing compartment, are suspended swinging hangers carrying a basket in which the dishes to be washed are placed. One of the hangers is connected by a piston with a crank disk outside of the tank at one end, whereby the basket may be reciprocated in the tank by any suitable power until the dishes have been washed, when the basket is lifted out, with its dishes, and submerged in the rinsing compartment.

GARMENT HANGER.—Peter Cummings and Michael Wankel, Canajoharie, N. Y. This device has a fastening block to be secured by screws to a base block, and from the fastening block spring loops adapted to support a coat extend downward and outward, while two additional upper loops extend downward and outward, the device being especially designed for holding hats and coats.

BATHING SUIT.—Jesse W. D. Davis, Lampasas, Texas. This suit comprises a skirt of waterproof material, having openings for the ingress of water, a diaphragm in its lower portion having openings for the egress of water, while straps hold the diaphragm in conical form. The suit is inexpensive, effectually prevents exposure of the person, may be easily and quickly dried and will not cling to the bather.

Designs.

HOE.—Frank H. Foster, Honolulu, Hawaii. The side edges of this hoe, near the eye which receives the handle, have elongated teeth, while the front of the blade presents a broad surface with un-toothed side edges.

HAIR-PIN.—Victor F. and Marguerite Maishof, New York City. The legs of this hair-pin are round, and throughout the length of each is a series of depressions, forming longitudinal undulating surfaces.

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

NEW BOOKS, ETC.

INFORMATION RELATING TO DRAWINGS TO ACCOMPANY APPLICATIONS FOR PATENTS IN ALL THE PRINCIPAL COUNTRIES. Washington, D. C.: The Norris Peters Company. Pp. 32. Third edition, 8vo.

The company are contractors with the United States Patent Office for the Official Gazette, copies of drawings of patents, trade marks and designs. It contains two reproductions of United States patent drawings on linnaea fabric and Bristol board. It also gives all of the countries in which patents are issued, with the rules and regulations regarding the drawings for patents. It gives valuable information in concise form.

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Notes & 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.

(7393) W. K. W. asks: 1. Why is belted governor objectionable in regulating speed of dynamo engine? A. A belted governor is not reliable. The belt creeps irregularly under variation of speed in the governor and has unequal tension from variation in the moisture of the engine room. It is also liable to slip and more liable to accident than gear-driven governors. 2. Give in detail the precautions necessary, in running an electric lighting plant, to maintain the efficiency of the plant, as to economy and regularity of output. A. Crocker & Wheeler's "Care and Management of Dynamos and Motors" will furnish you information. Price \$1 by mail. 3. Should it become necessary to reverse the direction of rotation of the armature because of the location of the dynamo, describe what steps would be necessary. A. See pages 44 and 45 of book referred to above under 2. The cases are too many to reprint. Many dynamos, but not all, may be run in the opposite direction by simply reversing the brushes.

(7394) C. W. M. asks: 1. What is the meaning of consequent poles as applied to a dynamo? A. A dynamo has consequent poles when the field poles are so wound that two south or two north poles are formed next each other. This is always the case in dynamos with four field coils so placed that two connect with and magnetize one pole piece and the other two in the same way magnetize the other. 2. What is meant by the term unipolar dynamo? Can there be existent one magnetic pole without the other? A. The name unipolar was given to machines which produce a continuous current without a commutator. There is no such thing existing separately as a single magnetic pole. The word applied to a dynamo is a misnomer. These machines have gone out of use. Their voltage was low and they could only be used for electroplating. In these machines a coil or other movable conductor slides around one pole of a magnet and cuts the magnetic lines in a continuous manner without reversals of the induced current. Faraday's disk is such a machine. See Silvanus P. Thompson's "Electricity and Magnetism," sections 469 and 227.

(7395) A. K. D. writes: 1. I have made the 8 light dynamo described in SUPPLEMENT, No. 100, which works well with a few exceptions. One is it sparks quite a little at the brushes, using 3/4 inch carbon brushes. A. A very common cause of sparking at commutator is that the brushes are not set at the proper point. Rotate to different position and find point of least sparking. Dynamo troubles are well treated in Crocker & Wheeler's "Practical Management of Dynamos and Motors," price \$1 by mail. It is a book indispensable to any one having charge of a dynamo. 2. The other is, if I put about 20 ohms resistance between one brush and field (of No. 36 copper wire, which is all I had at hand) it will burn out for me. This, of course, I think is too fine. Now, if wire will do for a resistance, what size and how much must I use? Also, how can I prevent that sparking? Have connected it up as described under diagram No. 18. A. Your field resistance must have a wire heavy enough to carry the current. Copper wire is scarcely suited to this use. Iron or German silver should be employed. About 10 ohms are required for the field regulator in your case. Use No. 12 iron wire. This is about 1,200 feet. 3. Cannot the dynamo be wound, or perhaps only the armature, to give off a 110 volt current? How many lamps, and what amperage would it be? A. For 110 volts: Wind armature with No. 34 A. W. G. copper wire. 35 turns to

each of the 24 coils. The same field can be used with an external resistance of 75 ohms as a regulator. 4. I have also made one cell of storage battery, called a practical storage battery by P. B. Warwick; made it just as described by the writer. Used asbestos between the plates about three-sixteenths inch. The battery is to have passed through it a current of 10 amperes for 48 hours, then to be finished. Have only had chance to pass that current through for a few hours, in which time enough was accumulated to ring a bell even two hours after I stopped, but finally it would disappear. Now, is there something wrong with the battery or is it likely to do that as long as it has not the forty eight hour treatment, or will it do it even after that? A. You have not yet formed the plates of your storage cell. This is done by charging for a long time and then discharging. This repeated several times brings the material into a condition for use. Follow carefully the directions given in the book you are using. You cannot otherwise expect success.

(7396) L. G. S. writes: 1. In reading the directions for making motor, No. 641 SCIENTIFIC AMERICAN SUPPLEMENT, it says in one place to use No. 18 cotton covered copper magnet wire for armature coils and in the dimension list it says No. 16 for both armature and field coils. Which is right? A. No. 18 is the correct size for armature of motor No. 641. The same size of wire is not employed on both field and armature. That of the armature is the finer, so as to get more turns in the spaces for the coils. 2. Can this motor be made or transformed into a dynamo, and how? A. Such a motor is a dynamo. If run by power up to the speed at which it turns as a motor, it will yield a current about the same as turns it as a motor. 3. I have a copy of "Experimental Science," by Hopkins, at hand, or, at least, in the public library. Is there a battery described in this book that will run the motor? A. The plunging bichromate battery is intended for this purpose. It is fully described in "Experimental Science" and in SCIENTIFIC AMERICAN SUPPLEMENT, No. 792, price 10 cents by mail. 4. Can you give me the number of any SCIENTIFIC AMERICAN or SCIENTIFIC AMERICAN SUPPLEMENT describing and with directions for constructing an electroplating outfit or process? A. See SCIENTIFIC AMERICAN SUPPLEMENT, Nos. 310, 1032, 1078; Watts' "Electrometallurgy," \$1; Bonney's "Electroplater's Handbook," \$1.20.

(7397) R. S. C. asks: Which conveys the most electricity, a tube or a rod, provided the diameters are the same? Our text books state that electricity resides merely on the surface of a body. According to that theory, the teacher holds that the quantity would be the same, while some of the pupils think that, as there is an outer and an inner surface to a common tube, the tube would convey the most. Would not a tube be the same, if cut and rolled out, as a plate, it having two surfaces? Or is the theory given in our text books (Wells and Coolidge) false? A. Your people seem to be talking about different things without knowing it. An electric current, as from a battery, or electric light dynamo, flowing through a wire uses all the metal inside and outside. A tube will not carry this as well as a solid rod of same size. Far from it. But an electric charge, as from rubbed paper, cat skin or a Holtz machine, is only on the surface of the metallic conductor, where it is held by the insulation, since it is self-repellent, and therefore only a thin layer of metal is needed to hold it. Cover a non-conductor with tin foil and it will hold as heavy a charge as if it were a solid ball. Lightning acts in the same way, and in its awful speed does not penetrate the metal rod over which it rushes. A tube or small wire is usually better than a heavy rod for a lightning conductor, though this is not the whole reason why.

(7398) J. T. C. asks: 1. What is ebonite? A. It is the same as hard rubber. 2. Is ebonite better than plate glass to use for plates of machine? I wish to use two plates 16 inches diameter. A. It may be rotated more rapidly than glass without breaking. 3. Would 1/4 inch thick, 16 inches diameter hard rubber plates be the best kind I could get to construct this machine? A. It would be strong enough.

(7399) C. C. A. asks: 1. How much wire would it take to wind field core, also armature? A. For field use No. 26 A. W. G. single cotton covered wire, 700 feet, about 5 1/2 pounds. For armature use No. 18 A. W. G., 100 feet, about 1/2 pound. 2. In the small 20 light Edison dynamo armature are the end washers (or flanges) to be of brass or iron? A. The end washers or flanges for armatures should not be of iron, in order to prevent the eddy currents from completing a circuit through them.

(7400) F. J. H. asks: 1. Will you kindly say what I can use as most impervious insulation of magnetism? A. The only substance which will act as a screen for magnetism is iron. Surround a space with a thick shield of iron and magnetism cannot penetrate it. 2. An ordinary horse shoe magnet made from 1/2 x 1 inch bar, if, beginning 1/2 inch from the ends of the prongs, they are tapered to 1/4 x 1 inch, will the magnetic power remain unchanged? A. A magnet is stronger, that is, will hold up more, when it is tapered to its ends.

(7401) P. K. & Company write: Kindly furnish us with a recipe or formula for making a cement suitable for use in an aquarium. A. Linseed oil, 3 ounces; tar, 4 ounces; resin, 1 pound; melt together over a gentle fire. If too much oil is used, the cement will run down the angles of the aquarium; to obviate this it should be tested before using by allowing a small quantity to cool under water; if not found sufficiently firm, allow it to simmer longer or add more tar and resin. The cement should be poured in the corners of the aquarium while warm (not hot). This cement is pliable, and is not poisonous.

(7402) J. B. asks: If I run electric wires through trees, and the limbs rub the covering off the wires, and when it rains the water lies on the wire on the bark, will it injure the tree, or will it reduce the power in the electric light in the lamps? A. Electric light wires should not be allowed to rub against any tree, post or anything else so as to remove the insulation. The leakage is a loss, even if no other harm is done. In wet weather, if the line is an arc light line of high potential, or carries an alternating current, a person coming in contact with such a tree or post might receive a severe shock.

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DEFIANCE MACHINE WORKS. BUILDERS OF HUB, SPOKE, WHEEL, BENDING, WAGON, CARRIAGE AND HOOP MACHINERY. SEND FOR CATALOGUE

INDEX OF INVENTIONS For which Letters Patent of the United States were Granted APRIL 5, 1898, AND EACH BEARING THAT DATE. (See note at end of list about copies of these patents.)

Table listing inventions with patent numbers and names. Includes: Agricultural implement, H. C. Milburn; Air and steam brake coupling, automatic, W. J. Fuchs; Albumen preparation soluble in water, Bauer & Busch; Ash receiver, safety, S. M. Smith; Axle lubricator, car, S. Austin; Baling press, cotton, F. L. Dyer; Ball seat, wine barrel, F. E. Holt; Band cutter and feeder, J. F. Hodgen; Banjo, J. Brandt; Barrel cleaner, C. Kaestner; Barrel filling apparatus, W. Hartmann; Barrel lining, J. Berg; Basket making machine, E. Reed; Bath cabinet, portable, R. M. Irwin; Bath gown, H. & H. E. Law; Bathing suit, M. M. Shepard; Bearing, antifriction, C. B. Hobron; Bearing, for cycles or velocipedes, ball, W. W. Tucker; Beef roaster, F. Michel; Beeves, machine for splitting, H. H. Young; Bicycle, R. C. Fay; Bicycle, J. F. Murphy; Bicycle, etc., H. N. Will; Bicycle canopy, C. M. McDonald; Bicycle chain driving device, automatic, E. Fay; Bicycle fork side, E. Ivins; Bicycle handle bar, H. H. Johnson; Bicycle handle bar, E. W. McCreedy; Bicycle handle bar, adjustable, F. Johnson; Bicycle lock, F. C. McDonald; Bicycle luggage carrier, C. J. Brown; Bicycle package carrier, G. G. Clapham; Bicycle saddle clamp, J. A. Hunt; Bicycles, etc., mechanism for indicating travel of, W. E. Stubbs; Billiard cue tip fastener, P. B. Tarver; Binder, temporary, J. R. Barrett; Block, See Pillow block; Boiler for steam heating apparatus, H. J. Spencer; Boiler furnace, F. F. Parsons; Boiler signal, steam, Bechtel & Fritz; Bolt, See Seal bolt; Bottle, H. Weil; Bottle, W. Wilson; Bottle attachment, A. C. Smith; Bottle holder adjustable nursing, G. W. McCollom; Bottle stopper, A. Backhaus; Bottles, etc., means for preventing fraud in connection with contents of, G. H. Grapes; Bowling alley, E. Brooks; Box, See Brix; Box, See Lunch box; Brace, See Frame brace; Bracket, See Tree prop bracket; Brake, See Dumb waiter brake, Sewing machine brake, Wagon brake; Brake gear slack adjuster, G. M. 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