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RECENTLY PATENTED INVENTIONS.
Electrical Devices.
TROLLEY.—J. H. CLARK, Urichsville, Ohio. The object of this invention, which relates to improvements in trolleys for electric-railway systems, is to provide a harp and combined oil and bearing boxes for the trolley-spindle so constructed that the boxes can be readily reversed from one harp member to the other to compensate for wear, and when the bearings in the boxes are worn out new ones may be placed in the harp.

Of Interest to Farmers.
HEEL-SLIDE FOR PLOWS.—E. M. TOUCHSTONE, Valdosta, Ga. It is sought by this invention to provide a novel form of heel which can be readily applied to any of the ordinary forms of plows, now commonly used—such, for instance, as the "Avery," the "Georgia ratchet," and any other form of plow-stock that works without a heel. The construction is simple, and in operation on the roughest land will hold the plow steady and the work easier for both plowman and horse.

Of General Interest.
SAW GAGE AND JOINTER.—T. OLSEN, Manistee, Mich. The object of the inventor is to provide a device readily adjustable and easily handled. In operating upon the cleaner-teeth the face plate is placed against the saw and the flanges engage on the top of the teeth, with the cleaner-tooth extended through a receiving slot. After filing one cleaner-tooth the device may be readily removed to the next. In top-jointing, flanges are placed against the blade of the saw and the file passed over tops of the teeth.

MEANS FOR ATTACHING BOILER-TUBES TO THE TUBE-SHEETS.—H. L. McCULLOUGH, Cropsey, Ill. In this patent the invention pertains to steam-boilers; and the purpose is to provide a new and improved means for attaching the boiler-tubes to the heads of the tube-sheets and arranged to prevent leakage due to unequal contraction and expansion of the tubes and the tube-sheets.

T-BOLT.—G. R. LANG, Cincinnati, Ohio. It is customary to clamp work upon planers, boring-mills, and other machine-tools by means of bolts having heads passing into T-slots in the surface of the bed. When different size or class of work is substituted for one previously used, these bolts have to be changed, and hunting new ones consumes time and is a great waste. Also when bolts of proper length are not on hand new ones are forged and threads turned upon them to receive the nut to be used. By means of a removable head for the bolt, which can be used with any length of bolt and not to be renewed, the inventor does away with above delays and forging.

FILTER.—T. LINKE, New York, N. Y. The intention in this case is to provide a filtering-faucet of simple construction so arranged that either filtered or unfiltered water may be discharged from it, that may be conveniently manipulated by a handle at the top, that may be readily disassembled for repairing without discharging water, and which has a novel arrangement of stone-cleaners.

PERMUTATION LOCKING DEVICE FOR LOCKETS.—O. KATZENBERGER, San Antonio, Texas. This improvement refers to locking devices for lockets such as are usually worn suspended from the neck of a person, and more particularly to such as are adapted to contain a miniature likeness or other valued souvenir, and its object is to provide a permutation device having a hinged lid, which will be adapted to secure the lid closed until the correct combination is attained by proper manipulation of working parts of the device.

METAL JOINTING.—M. H. BIGSBY, Monmouth, Ill. The invention refers to improvement in means for jointing or securing two metallic members, the object being to provide a simple means for connecting two metal numbers together while in a cold condition, the invention being particularly adapted to cold-rolled steel or finished metal designed to be plated or polished.

Heating and Lighting.
MANTLE FOR GAS-BURNERS.—A. H. SASSMAN, New York, N. Y. A mantle is provided by this invention especially adapted for use in connection with gas-burners used for heating purposes. The mantle so surrounds the burner as to direct the heat from the burner in concentrated form in an upward direction and at the same time is so far removed from the burner that the flame from the burner will create a suction, drawing up air between the mantle and burner, which is heated and conducted upward with the actual heat from the flame of the burner.

Machines and Mechanical Devices.
ELEVATOR.—A. KARRER, St. Joseph, Mo. The invention has reference to an elevator in which the car is moved by means of screws or worms climbing on corresponding racks, by which arrangement it is practically impossible for the car to drop through the shaft upon the breakage of some part of the machinery. Electric current is taken to the elevator mechanism by a trolley, and let out therefrom through another and its arm or pole.
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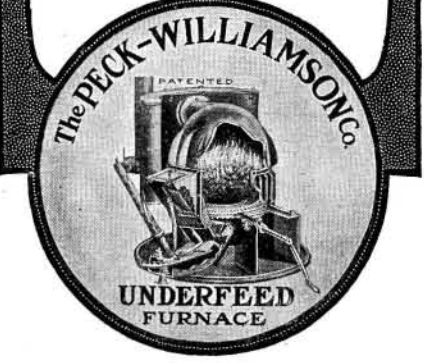
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LANGLEY'S AERODROME. Fully described and illustrated in SCIENTIFIC AMERICAN SUPPLEMENTS 1404 and 1405.

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THE TANTALUM LAMP. A full illustrated description of a lamp having a metallic filament and burning at once without preliminary heating appears in SCIENTIFIC AMERICAN SUPPLEMENT 1523.

THE WATERPROOFING OF FABRICS is thoroughly discussed in SCIENTIFIC AMERICAN SUPPLEMENT 1522 by an expert.

THE SPARK COIL, ITS CONSTRUCTION AND MAINTENANCE, is the subject of a painstaking article in SCIENTIFIC AMERICAN SUPPLEMENT 1522.

ELECTRIC IGNITERS FOR GAS ENGINES are discussed in SCIENTIFIC AMERICAN SUPPLEMENT 1514.

CARBURETERS, a subject of immense importance to automobilists and the users of oil engines, is well treated in SCIENTIFIC AMERICAN SUPPLEMENT 1508.

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MACHINES.—H. MANNING, 46 Grays Inn road, London, England. The mechanism is for lock-stitch sewing machines; and comprises a presser-foot for feeding, a lever comprising an open frame with cam-surfaces and at its upper end an arm carrying the foot, a shaft extending through the opening in the lever and carrying a cam-stud adapted to carry the lever's cam-surfaces a part of the shaft's revolution to move the lever in one direction to feed work, a spring secured at one end to the machine-frame and bearing at its other end on said lever to move it in the opposite direction when the stud is out of operative engagement with the lever. An adjustable stop consisting of a set-screw screwing through a lug on the machine frame is provided with a lock-nut, said lever having a padded projection for engaging the stop-screw.

CENTRIFUGAL APPARATUS FOR ELECTROLYTIC PURPOSES.—R. V. HEUSER, Erie, Pa. This apparatus is partly electrolytic and partly centrifugal, with the following advantages: Comparatively great output per unit of weight of apparatus employed and large percentage of product as compared with quantity of brine employed; greater current density at the cathode; use of mercury not required; process continuous and capable of carrying out without stopping apparatus from running; considerable labor saved; apparatus given comparatively large proportions and yet be under complete control of operator; anodes possess great durability; no colloidal member nor diaphragm is required.

LEMON-SQUEEZER.—P. McGRATH, Hibbing, Minn. This lemon-squeezer is of that type in which a plunger is forced into a cup to press the lemon. The invention provides various improvements intended to facilitate the adjustment of the parts, and insure the efficiency of the squeezer. A prominent feature consisting of a plunger is so mounted as to permit of being rotated when the lemon has been squeezed, whereby to more effectively press the juice and pulp from the fruit.

Prime Movers and Their Accessories.

TURBINE.—L. E. TRUESDEL, Kershaw, S. C. The underlying objects of the present improvement are to more effectively distribute the pressure of the steam or other elastic fluid around the periphery of the rotor of the turbine and also to improve the devices for governing the turbine action. The invention relates particularly to an improvement in radial-flow turbines, and it is of the same general class as that forming the subject of a prior patent granted to Mr. Truesdel.

Railways and Their Accessories.

LUBRICATING-BEARING FOR AXLE-JOURNALS.—T. V. MONROE and M. HALLINAN, Clinton, Iowa. The invention relates to an improvement in bearings for locomotive axle-journals, and has for its object the provision of a simple, cheap, and efficient device of the character mentioned and one which can be readily applied to the journal-boxes now in use. Oil and waste are placed within the upper cellar, and the waste projects through the open center of the bearing-plate against the axle journal. Waste is held in place and prevented from rolling by turned flanges.

RAILROAD SWITCH.—W. H. SAMMONS, North Bend, Ore. The object of this invention is to provide a three-way switch and means to be carried by a locomotive or street car for operating the switch therefrom. In order that the switch may be operated at will by an engineer or motorman, Mr. Sammons provides the front part of the locomotive or car in advance of its forward wheels with a rotatable shaft carrying switch-operating shoes. When necessary to operate the switches by hand switch-blocks are connected to a switch-stand by operating-rods.

Pertaining to Recreation.

CUE-TRIMMER.—A. B. Low, Denver, Col. This invention refers to improvements in devices for removing old glue from and trimming or leveling the ends of billiard or like cues preparatory to placing tips thereon, an object being to provide a trimmer of simple construction that will readily adjust itself to cues of varying sizes.

BASE-BALL-GAME APPARATUS.—J. B. LAUER, Summerville, S. C. In the present patent the invention relates to a base-ball-game apparatus having a multiple dial, read in connection with certain instructions, usually printed upon a slip. The game can be played by eighteen persons, representing two full sides, or it can be played by one person, using the men and operating them according to instructions on the slip.

STARTING GATE.—J. M. FLYNN, New York, N. Y. This gate or barrier is particularly adapted for starting horses on a race-track, an object being to provide a gate so constructed that before rising for the start it will have a movement for a desirable distance lengthwise of the track, whereby the field of horses may be caused to walk to an alignment at the starting-point, thus preventing long and tedious delays incident to starting.

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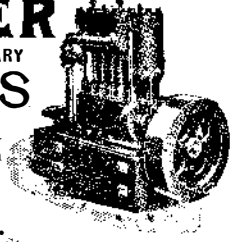


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- Inquiry No. 6894.**—For manufacturers of mills to pulverize tin scraps and tangled wire, No. 16 and smaller.
- Gut strings for Lawn Tennis, Musical Instruments, and other purposes made by P. F. Turner, 46th Street and Packers Avenue, Chicago, Ill.
- Inquiry No. 6895.**—For manufacturers of apparatus for making extractions by means of a volatile solvent and recovery of same.
- We manufacture iron and steel forgings, from twenty pounds to twenty-five tons. Crank shafts of all varieties. Erie Forge Company, Erie, Pa.
- Inquiry No. 6896.**—For manufacturers of crude oil burners for placing under boilers and in furnaces.
- You can rent a well equipped private laboratory by day, week or month from Electrical Testing Laboratories, 548 East 50th Street, New York. Absolute privacy. Ask for terms and facilities.
- Inquiry No. 6897.**—For manufacturers of seamless bags, No. 3 and No. 5 such as used for sugar and salt.
- Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, wood fiber machinery and tools. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.
- Inquiry No. 6898.**—For manufacturers who make small malleable castings from people's patterns.
- Space with power, heat, light and machinery, if desired, in a large New England manufacturing concern, having more room than is necessary for their business. Address Box No. 407, Providence, R. I.
- Inquiry No. 6899.**—For manufacturers of chemical fire extinguishers called "The Underwriters."
- Manufacturers of all kinds sheet metal goods. Vending, gum and chocolate, matches, cigars and cigarettes, amusement machines, made of pressed steel. Send samples. N. Y. Die and Model Works, 508 Pearl St., N. Y.
- Inquiry No. 6900.**—For manufacturers of soda water bottles, of 8 oz. capacity.
- WANTED.**—The patents or sole agency for Britain and France, of new machines and articles used in the Brewing and Allied Trades. Highest references given and required. State best terms with full particulars to "Wideawake" care of Streets Agency, 30 Cornhill, London, England.
- Inquiry No. 6901.**—For manufacturers of a moderate priced instrument used in lining up and leveling shafting.
- WANTED.**—A first-class Machine Shop Foreman; a man who is capable of producing work at the lowest possible cost. Must be a man of ideas and capable of hiring and handling men. Reliability first consideration. Steady position with opportunity to advance. Factory at Waterloo, Iowa. Address Manufacturer, Box 773, New York.
- Inquiry No. 6902.**—For manufacturers of tin foil for covering jelly tumblers.
- Splendid opening for a high-grade mechanical engineer, who has had a broad experience in managing machine shops, the manufacture of machinery, engines and metal specialties. Applicants must be in prime of life and now employed. Preference will be given to applicants who have had modern scientific training in mechanical schools of high standing. Unqualified references will be exacted. All communications received will be regarded as strictly confidential. Address Mechanical Engineer, Box 773, New York.
- Inquiry No. 6903.**—For parties who make and install "Geyser" fountains.
- Small Machine Shop and Brass Foundry located in Central New York are desirous of manufacturing some mechanical article or appliance. Have a thoroughly equipped plant, plenty of ground, reliable water power, railroad facilities. Can turn out mostly anything at a low figure. Experienced mechanics in charge. Presently making gasoline engines and accessories. Address Model Plant, Box 773, N. Y.
- Inquiry No. 6904.**—For manufacturers of wood skewers.