

RECENTLY PATENTED INVENTIONS.

Agricultural Implements.

TREE-PROTECTOR.—CASPAR A. CHISOLM, Charleston, S. C. The object of the invention is to provide a guard for trees which is of such construction that it can freely swing with the trunk, so that the bark will not be chafed. The protector comprises slats held in links. Each link consists of a socket and retaining and connecting pin, the several pins being connected, and each extending to the ends of the socket to hold the slat in the socket.

BAND-CUTTER AND FEEDER FOR THRESHING-MACHINES.—THADDEUS L. CUMMINGS, Hagerty, Iowa. This band-cutter and self-feeder attachment has a number of bundle-carriers or feed-boards which can be moved around a hopper and thus conducted to the band-cutters. The bundle-carriers can be adjusted laterally as well as vertically. The band-cutters are in sets, one set being located above and near the concave and cylinder, while the opposite set of cutters is placed at a point above and in advance of the cylinder and concave. The band-cutter and feeder attachment is applicable to any threshing-machine. The driving mechanism for the belts of the bundle-carriers is not interfered with when one of the carriers is laterally or vertically adjusted.

Electrical Apparatus.

TIME-REGULATOR FOR ELECTRIC MOTORS.—MAX M. MOVSHOVITCH, Manhattan, New York city. This invention relates to improvements for regulating and controlling the time-movement of an electric motor; and the object is to provide a simple, automatic device for this purpose which is especially adapted for use in connection with hands movable over a time-dial, although it will be found useful when the motor is designed to operate other devices at stated divisions of time.

ARC-LAMP.—JOSEPH C. MAYRHOFER, Manhattan, New York city. The object of the invention is to provide a simple, automatic means for separating the carbons to start and maintain the arc, and further so to construct the lamp that flickering caused by jolting will be obviated. The lamp, owing to the fact that it withstands jolting, is readily adapted as a headlight for cars and other vehicles.

MEDICINAL ELECTRODE.—ORVILLE L. LEACH, Providence, R. I. The electrode is designed for applying electric treatment to increase the vitality of animal bodies and by supplying a force which is adapted for the use of organized bodies to give strength and destroy microbes and germs by subjecting them to the force. It is known that the filaments of nerves are tubular; that the nerve impressions are communicated with a spiral movement. It is the object of this invention to provide an electrode so constructed that the electric current passing through it will stimulate the nerve motion.

FLASHER FOR ELECTRIC LAMPS.—CLYDE SLUSSER, Danville, Ill. The invention provides a simple attachment for a lamp by means of which the lamp-current will be automatically cut in and out at regular intervals, giving a flashing effect and making the device particularly useful in show-windows, illuminating signs, and other places where it is desired to attract attention.

CONTACT FOR UNDERGROUND TROLLEYS.—JOSEPH S. GARZOUSI, Manhattan, New York city. The contact consists of a frame having contacts on its ends to connect with the main and the return feed wires at the different points of their length, the contact-frame being freely slidable on its plow. Thus, a proper contact is insured at all times so as to prevent the breaking of the current to the motor and the lamps of the car when passing switches, or the like.

A SYSTEM OF ELECTRICAL INTERCOMMUNICATION.—EMERY A. CLARK, Sioux City, Iowa. The invention is particularly concerned with automatic telephone-exchange systems. The object is to provide a transmitter and receiver by the use of which the action of the system will be rendered more certain, the maintenance thereof more economical, and the establishment of any desired connection easy and rapid. In accomplishing this object the inventor has provided for a continuous forward movement of the switch-wheel of the receiver, employing a circuit making and breaking mechanism operated through the movement of the dial of the transmitter to cause the switch-wheel of the receiver to move forward with a step by step movement for each forward movement of the dial, and to be always in unison therewith. Thus, the subscriber can ascertain the relative position of the switch-wheel of his receiver and know what action to take in order to cause the switch-wheel to establish any desired connection.

ELECTRIC TEMPERATURE-INDICATOR.—FRANK L. JOHNSON, 8 South Reservoir Street, Richmond, Va. The device serves the purpose of enabling one to read the temperature of a thermometer from a distance without having to inspect the thermometer itself. It is especially designed for the use of engineers and others who have charge of the regulation of temperature in cold-storage rooms, hospitals, school-buildings, and the like. The invention consists of a special construction and arrangement of a thermometer-tube with terminal contacts fused in exposed relation

to the mercury column. A special form of graduated resistance is connected with the terminal and a special form of casing for inclosing the resistance is provided. The whole is adapted for use in combination with a current-meter for indicating the height of the mercury column.

Engineering Improvements.

ROTARY ENGINE.—JOHN W. HICKS, Chicago, Ill. The novel features of the invention are inlet-ports extending through a piston to opposite sides of the piston-head, a rotary abutment being provided for the piston and mounted to rotate in unison therewith. A steam-chest has sets of ports for registering with the ports in the piston. A valve in the steam-chest is under the control of the operator and has ports adapted to register with either set of ports in the steam-chests, the valve also controlling the exhaust of the motive agent of the steam from the working-chamber of the cylinder.

ROTARY ENGINE.—HARDY HESTAND and ARTHUR R. MATTHEWS, Dundee, Tex. The rotary engine comprises a cylinder in which a piston is mounted to turn, provided with a movable head. An abutment having inlet and exhaust ports extends into the cylinder, the abutment having a cam surface for the piston-head to travel on. A spring-valve on the head end of the abutment is arranged to be engaged by a device on the piston so as temporarily to close the inlet port.

Gas Apparatus.

GAS-GENERATOR.—ELIJAH B. CORNELL, Philadelphia, Pa. The object of the invention is to provide an efficient apparatus for utilizing the heat of a furnace for the production of a fixed gas suitable for illuminating and heating purposes, and capable of heating the furnace which serves to generate the gas. Retorts are arranged in sets on the bridge-wall of the furnace, the sets being connected. A steam supply leads to one set of the retorts; and a hydrocarbon supply is joined with the connection between the sets of retorts. The parts are so correlated as to produce an intimately co-acting organization of liquid fuel economizer, in which the well-known form of furnace does double duty and a permanent fixed gas is produced without depositing carbon.

GAS-RETORT.—ELIJAH B. CORNELL, Philadelphia, Pa. The retort is adapted for use in the production of a fixed gas from volatilized hydrocarbons mixed with steam. The object of the invention is to provide a construction by which the gas-forming material will be thoroughly subjected to the action of heat so as to secure a rapid and complete gasification. Each retort consists of a base having an inlet and an outlet with a partition separating them. A shell and an open-end core provided with a contracted end are also provided, the core having its contracted end fitting in the partition. Particular attention should be called to this core, for it forms the gaseous fluid into a thin sheet or film, all particles of which are evenly exposed to the action of heat.

PROCESS OF MAKING GAS.—ELIJAH B. CORNELL, Philadelphia, Pa. The invention relates to the manufacture of gas from steam and hydrocarbons, and more particularly to a process in which the production of a fixed gas is insured. The process consists in forming hydrogen gas; injecting the hydrogen thus formed together with a hydrocarbon oil into a highly heated retort, thereby forming carburetted hydrogen gas; and at the same time subjecting the gas to a series of successive contractions and expansions while highly heated, thereby forming a fixed illuminating gas.

Mechanical Devices.

COIN-CONTROLLED APPARATUS.—MILBERT F. PRICE, Iowa City, Iowa. This coin-controlled apparatus has a coin-chute into which two coin members normally project. These coin members are adapted to be connected with the device with which the coin-controlled apparatus is used, one of the coin members being operated by the weight of the coin, and a push device being connected with the other coin member to permit the manual operation thereof. The machine is particularly adapted for use in the vending of collar-buttons and similar articles.

COIN-CONTROLLED VENDING APPARATUS.—MILBERT F. PRICE, Iowa City, Iowa. This invention relates to a coin-controlled apparatus involving a hand-lever provided with a coin-pocket receiving the coin and also with a dog for imparting movement from the hand-lever, such dog being engaged by the side of the coin to throw the dog into active position. The coin-pocket has a movable wall which releases the coin as the hand-lever moves. The invention is particularly adapted to a collar-button-vending apparatus invented by Mr. Price.

CONCENTRATOR.—PETER C. FORRESTER, Springvalley, Ill. The concentrator is designed for separating or grading the gold sand in placer diggings, where the fine gold has a tendency to float away by reason of the excess of water used in concentration. The concentrator comprises a water-tank in which a vibrating sluice is arranged. Blocks in the bottom of the sluice have varying height, the

projections diminishing toward the outlet end of the sluice. An endless belt is movable through the sluice upon the blocks. The material as it is carried upward will be separated by the vibrating motion of the sluice. The values will be carried with the belt around a heating-drum and thoroughly dried.

FIRE-ESCAPE.—CHARLES A. IVES, Manhattan, New York city. Mr. Ives has devised a fire-escape which is simple and durable in construction, cheap to manufacture, ready at all times for immediate use to rescue a number of persons successively from a burning building, and arranged with simple devices for conveniently and safely supporting a person during the descent and allowing the person to regulate the speed of the descent.

NAIL-GRAB.—PAUL J. BENNETT, Cheneyville, La. The invention relates to a device for pulling nails out of a nail keg. The nail-grab used for this purpose comprises a rod having a handle or claw, with which claw-carrying members are pivotally connected, having crossed, slotted arms. A slide is movable on the rod and has pins engaging the arms at their slots. A proper manipulation of the handle causes the tool to grasp the nails.

GEOGRAPHICAL CLOCK.—CARLOS ALBAN, Panama, Colombia. The invention relates to that class of clocks in which provision is made for indicating simultaneously the local time of different cities, and provides a simple construction of clock of this class. The hour-hand can be readily adjusted to the local time of different cities. A peculiar novel arrangement of the openings intended for the insertion of the winding-key is provided.

Railway Contrivances.

STREET-RAILWAY TRACK-SANDING DEVICE.—WASHINGTON H. KILBOURN, Greenfield, Mass. The invention provides a reciprocating feed-box or carrier which receives sand from the hopper and retains the sand for a short time. The feed-box or carrier moves over a conducting-chute. As the carrier reciprocates, it will deliver sand from its end portions to opposing sections of the conducting-chute, the chute being so constructed that all the sand delivered thereto will find an exit at a common outlet.

RAILWAY-SWITCH.—JOHN W. GORDON, Marietta, Ohio. The invention relates to switches for street-railways and means for operating the switch of a moving car on the railway-track. The invention provides novel mechanism for a device of this character, which is practical in operation and which can be controlled from either end of the car as may be desired.

Miscellaneous Inventions.

COLLAR.—FANNY E. MCCATHIE, Port Jervis, N. Y. The collar is a collar for women and is made of washable fabric and provided with a stiffener that can be readily removed or inserted.

SELF-INKING RUBBER STAMP.—ARTHUR E. JAMESON, Detroit, Mich. The stamp comprises a frame with a cross-rod mounted to slide therein and to which the inking-pad is pivoted. A second cross-rod or bar is connected with the inking-pad and is also mounted to slide in the frame. Springs return the stamp to inoperative position after the device has been used.

TOBACCO-BOX.—JOHN T. CUTTING, Manhattan, New York city. The box is so constructed that it can be conveniently carried in the pocket and that tobacco can be poured directly into the bowl of the pipe without waste. The lid of the box will lock itself to the box, no catch being needed.

LUBRICATING DEVICE.—JOHN W. BOWERBANK, Jersey City, N. J. The lubricator comprises a receptacle for containing the lubricant, provided in its bottom with a transverse slot. A roller-disk is loosely journaled in the receptacle and extends through the slot to engage the peripheral surface of the part to be lubricated. Thus the desired amount of lubricant is fed only during the time the part to be lubricated is run.

DOTTING ATTACHMENT FOR PENS.—HENRY OETTINGER, Manhattan, New York city. This dotting attachment for ruling-pens comprises a casing into which the entire length of the penholder or handle is received. The casing is open at one side. A roller is mounted on the lower end of the casing. A cam-wheel is carried on the shaft of the roller, and a plate is mounted in the casing to engage with the cam-wheel. When the pen is secured in place the device is to be rolled over the paper. During this movement the cam-wheel will cause an upward movement of the plate, consequently carrying the pen upward in engagement with the paper. But as the recesses of the cam register with the end of the plate a dot will be made, since the pen will be allowed to fall by gravity.

COLLAR BUTTON OR STUD.—WILLIAM SWEENEY, Manhattan, New York city. The inventor has devised a separable collar button or stud so constructed that the stem of the head will enter a barrel connected with the back and lock with the barrel against the tension of a spring located within the head and arranged to bear against the barrel.

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.

Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry.

MUNN & CO.

- Marine Iron Works. Chicago. Catalogue free.
- Inquiry No. 1353.**—For manufacturers of soluble blue.
- For logging engines. J. S. Mundy, Newark, N. J.
- Inquiry No. 1354.**—For manufacturers of double automatic relief check valves.
- TURBINES.**—Lefel & Co. Springfield, Ohio, U. S. A.
- Inquiry No. 1355.**—For manufacturers of duple-phones and polyphones.
- "U. S." Metal Polish. Indianapolis. Samples free.
- Inquiry No. 1356.**—For manufacturers of forgings such as crank shafts for small steam engines, also parties engaged making crank shafts from steel castings.
- WATER WHEELS.** Alcott & Co., Mt. Holly, N. J.
- Inquiry No. 1357.**—For wholesale dealers in mail order novelties.
- Yankee Notions. Waterbury Button Co., Waterbury, Ct.
- Inquiry No. 1358.**—For manufacturers of chemical laboratory supplies.
- Gasoline Lamps and Systems. Turner Brass Works, Chicago.
- Inquiry No. 1359.**—For manufacturers of small castings for dynamos from 10 to 50 volts.
- Machine chain of all kinds. A. H. Bliss & Co. North Attleboro, Mass.
- Inquiry No. 1360.**—For manufacturers of small gas engine castings.
- Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.
- Inquiry No. 1361.**—For manufacturers of ice machines of about 500 pounds capacity daily.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 1362.**—For parties to manufacture pen holders having hard rubber ferrule, aluminium ferrule, cedar stem and cork covering for the aluminium ferrule.
- For Sheet Brass Stamping and small Castings, write Badger Brass Mfg. Co., Kenosha, Wis.
- Inquiry No. 1363.**—For manufacturers of aluminium water pipes.
- Rigs that Run. Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo.
- Inquiry No. 1364.**—For an automatic pump which will stop when a certain pressure is reached, and start again when pressure is decreased.
- Ten days' trial given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city.
- Inquiry No. 1365.**—For manufacturers of all kinds of bent wood.
- SAWMILLS.—With variable friction feed. Send for Catalogue B. Geo. S. Comstock, Mechanicsburg, Pa.
- Inquiry No. 1366.**—For machinery for the manufacture of pulp from waste wood. Also information regarding same.
- Machine Work of every description. Jobbing and repairing. The Garvin Machine Co., 149 Varick, cor. Spring Sts., N. Y.
- Inquiry No. 1367.**—For manufacturers of round hardwood handles 1 inch by 4 feet long.
- Designers and builders of automatic and special machines of all kinds. Inventions perfected. The W. A. Wilson Machine Company, Rochester, N. Y.
- Inquiry No. 1368.**—For manufacturers of coal-heading machines.
- The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.
- Inquiry No. 1369.**—For manufacturers of small handy articles, such as fountain pens, electrical devices, etc.
- WANTED.**—Good draftsman and designer of ornamental iron work. Must be capable to make working details, and have some experience in this special line. Give experience and state wages desired. Flour City Ornamental Iron Works, Minneapolis, Minn.
- Inquiry No. 1370.**—For manufacturers of labor-saving devices.
- The Board of Health of East Liverpool, Ohio, is now ready to receive plans, specifications and bids for a first class garbage furnace to be built and maintained by the city. For further particulars address J. T. Herbert, Clerk of the Board of Health, East Liverpool, Ohio.
- Inquiry No. 1371.**—For manufacturers of automatic feeding attachment for tin punching presses.
- SEEN FROM THE CAR WINDOWS.—The route of the Lackawanna Railroad between New York and Buffalo is one of the unusual attractions to lovers of scenery. It passes through the most picturesque portion of Northern New Jersey, through the famous Delaware Water Gap, and climbs the Pocono Mountain, disclosing at every turn beautiful distant views of the mountains and valleys of Eastern Pennsylvania. At Scranton it passes through the coal region, and the scene from the car windows is a revelation of the enormous extent of the coal industries of the vicinity. The entire trip is enlivened by diversified scenery of lakes, mountains, streams and thriving cities. The management of the Lackawanna is leaving nothing undone that can add to the comforts of their patrons.—Official Railway Guide.
- Inquiry No. 1372.**—For machinery for making butchers' skewers.
- FOR SALE.—Astronomical telescope, silvered glass reflector, 6½ inches aperture, perfect definition, moderate price. Address P. O. Box 115, Mystic, Conn.
- Inquiry No. 1373.**—For manufacturers of machinery for cutting, splitting and bundling fire wood.
- Inquiry No. 1374.**—For dealers in good selling household articles.
- Inquiry No. 1375.**—For manufacturers of automatic wood-turning lathes and woodworking machinery in general.
- Inquiry No. 1376.**—For manufacturers of small hot-air or gas engines from ¼ to 1 horse power.
- Inquiry No. 1377.**—For machinery for handling pine needles, and manufacturing pine needle fiber into various products.
- Inquiry No. 1378.**—For manufacturers of perforating typewriters for use on a Remington machine.
- Inquiry No. 1379.**—For manufacturers of metal corners for use on trunks, valises, etc.
- Inquiry No. 1380.**—For manufacturers of windmills to generate electricity for lighting purposes on a farm.
- Inquiry No. 1381.**—For a small drill to drill plug holes in solid granite by power, compressed air or electricity.
- Inquiry No. 1382.**—For a small generator for running electric drill.