

RECENTLY PATENTED INVENTIONS.

Electrical Devices.

INSULATOR.—L. STEINBERGER, New York, N. Y. The essential features of Mr. Steinberger's invention comprise an insulator provided with a body portion having a large superficial insulating-surface, great strength, and improved and novel means for securing it in position upon a switchboard, wall, floor, or other supporting member. It relates to insulators for electric conductors of the type especially adapted for supporting conductors carrying high-tension currents.

ELECTRIC MOTOR.—D. MENDELSON, Brooklyn, N. Y. The invention is in the nature of an electric motor of the vibrating type, designed chiefly to be used in small installations for advertising purposes, but applicable also to other uses; and it consists in the novel construction and arrangement of the motor parts, with special reference to securing a large effective power and freedom from polarization and residual magnetism.

SELF-RESTORING TROLLEY.—J. T. ANDREW, Montgomery, Ala. In this instance the invention pertains to trolleys, the more particular object being to enable the trolley-wheel or other analogous member to be readily replaced upon the conductor when dislodged therefrom. By merely pulling the trolley-pole downwardly so as to place the trolley-harp beneath the conductor and then releasing the pole, the operator is enabled to start the car under conditions where he need pay no further attention to the trolley.

Of Interest to Farmers.

MILK AND CREAM SEPARATOR.—F. H. REID, Sioux City, Iowa. This improvement is in centrifugal separators in which a so-called "liner," comprising a series of metal shells of approximately conical form, are arranged within a drum and the whole mounted upon a rotatable shaft, the full-milk from which the cream is to be separated being admitted at the center of the cones and distributed radially between them, the separation of cream being effected by centrifugal action and the two liquids being drawn off from the drum at separate orifices or spouts.

Of General Interest.

HAIR-WAVER.—A. SCHÄRER, New York, N. Y. The purpose in this case is to provide a device for imparting a decided and uniform wave to the hair and to so construct the device that it will not tend to break the hair and that can be conveniently applied, and also to provide a construction which will be of a simple nature, the comb portion, or that which remains in place upon the head for a period of time being made very light.

BOOT AND SHOE.—C. RADOTINSKY, Kirkwood, Mo. The purpose of the improvement is to provide a construction of welt boots and shoes wherein they will not require lasting in the assemblage and attachment of the upper to the welt and the welt to the outer sole and wherein no insole is employed, the welt being attached directly to the upper and then to the sole.

VULCANIZING PROCESS.—H. W. MORGAN, Cleveland, Ohio. The more particular object here is to apply the vulcanizing material to comparatively pliable substances such as would ordinarily be destroyed by the heat of vulcanization. The inventor desires especially to apply a plastic material to particles of wood, paper, and the like, and so vulcanize the plastic materials as to avoid injury upon the objects to which they are thus applied.

TOOTH-BRUSH AND DENTIFRICE BRACKET.—L. W. MCCONNELL and W. V. GAGE, McCook, Neb. The object of this invention is to provide a device which may be attached to any convenient support, and by means of which the brush as well as the dentifrice may be supported in such manner that they are always within easy reach of the user. Means are provided that will facilitate the drying of the brush after its use.

DISTILLING AND RECTIFYING APPARATUS.—U. LORENTZ, Cristobal, Canal Zone, Panama. In carrying out his invention Mr. Lorentz makes use of lightly-burnt clay diaphragms or partitions and also other media formed of the same material for distributing and diffusing the mash or mash liquor in the still-column, the porosity and rough surface of these parts being highly effective in producing the desired separation of the aqueous and alcoholic elements.

BURIAL-CASE.—E. A. KNODLE, Springfield, Ill. In the present patent the object of the invention is the provision of a new and improved burial-case which is simple and durable in construction, cheap to manufacture, and arranged to permit hermetical sealing, and thus prevent escape of all noxious or mephitic gases and germs of diseases.

STERILIZED ERECTED POLE.—H. P. FOLSOM and H. JONES, Circleville, Ohio. The invention relates to the sterilizing of poles which from their erection in the ground become infected by bacteria and fungi and attacked by insects, resulting in the decay and destruction of a portion of the poles. The invention aims to obviate difficulties developed by antiseptic treatment and to secure and maintain a sterile condition of poles for long periods.

COMBINED NEEDLE AND THREAD CASE.—C. J. EKBERG, San Francisco, Cal. In this

instance the invention has reference to cases, and more particularly to those adapted to hold a needle and thread for traveling and like use. The device combines in an extremely small compass a holder for a needle, different kinds of thread, and a threading device for the needle.

BOTTLE AND BOTTLE-CLOSURE.—A. EIMER, New York, N. Y. Mr. Eimer's invention relates to bottles and bottle-closures, and the object of the improvement is the provision of efficient means for effecting the closure of bottles, especially in connection with those containing chemicals. The means employed will overcome the defects arising from the use of cork, rubber, and ground-glass stoppers.

LABEL-PASTING BOARD.—G. N. BYL, Jersey City, N. J. One purpose here is to construct a board upon which labels may be laid in regular order to receive a coating of an adhesive material and to provide means whereby the labels in any row or series may be instantly raised at one of their ends from the board without soiling the hands, the labels occupying the position at that time which enables the operator to quickly remove them with the least inconvenience and without danger of lacerating or soiling the labels.

HOSE-COUPLING.—J. H. BIERY and J. H. ZWANGER, Alliance, Neb. The improvements made by these inventors are intended more especially for use in firmly connecting together adjacent end portions of hose-sections—such, for instance, as are employed between locomotive-engines and their tenders—although such improvements are equally adapted to analogous purposes in the arts.

MOISTURE-PROOF JOINT.—W. I. AIMS, New York, N. Y. This invention relates to tunnels and like structures securing moisture-proof joints at the sections; and its object is to provide a new and improved joint arranged to render the abutting flanges of the sections moisture proof at the bolts connecting the flanges with each other.

Hardware.

PIPE-CUTTER.—J. J. DELEHANT, Chicago, Ill. The aim of this inventor is, primarily, to provide a tool by means of which the tool may be held in engagement with the pipe during the cutting operation and by means independent of the handle of the tool, and also a tool in which the knife may be easily and widely adjusted adapting it to the particular work on hand, so as to increase the efficiency of the tool and the duration of its parts.

Heating and Lighting.

AUTOMATIC IGNITING AND EXTINGUISHING APPLIANCE FOR GAS-BURNERS.—J. HOROWITZ, 45 Rue Servan, Paris, France. The apparatus is constructed so as to control alternately and automatically from a point situated at a greater or less distance the ignition and substantial extinction of any desired number of gas-burners, illuminating-signals, advertisements, transparencies, and generally speaking, signs of all kinds serving for advertising purposes or as luminous signals. It serves for public lighting, railway-stations, theaters, cafes, etc.

BOILER.—G. KINGSLEY, New York, N. Y. Two water-walls are arranged, respectively, at the sides of the furnace and each having short inwardly-projecting water-tubes and having an arrangement with respect to the walls and grate, so that the gases of combustion are caused to circulate between the walls and around the tubes, thus producing a boiler having a great heating-surface and great steam-making qualities, and one in which the dangers of explosion will be reduced to a minimum.

FITTING FOR WATER-HEATING SYSTEMS.—J. O'NEILL, New York, N. Y. The present invention relates to a fitting in which the return from the radiator enters in a line parallel with the course of the water through the system. It relates to an improvement over the heating systems set forth in Mr. O'Neill's formerly filed application for a patent on a heating system.

Household Utillies.

COFFEE-COOKER.—M. M. HERRERA, Caracas, Venezuela. The more particular object in this case is to provide a vessel to be used in connection with a coffee-pot in such manner that the ground coffee is subjected to the action of steam and allowed to become softened and also to permit the hot water used to percolate through the ground coffee into the coffee-pot.

INDICATOR.—H. S. ELLIS, Greenville, Texas. A plate is made of any material and having its edges provided with notches which are arranged opposite peripheral spaces bearing the names of groceries or other articles and a series of knobs, buttons, or other devices having shanks adapted to enter such notches and wires or equivalent means for holding the said devices in such manner that they may be turned over the edge of the plate, and by their position on the front or back of the same to indicate particular articles to order.

Machines and Mechanical Devices.

GRINDING-MACHINE.—G. PEISELER, Charlottenburg, Prussia, Germany. The machine differs from those which have hitherto been known by the surfaces to be ground of the article operated upon being brought into con-

tact with the grindstone by imparting a rolling motion to the article. This is attained by a work-holder or holding-arm carrying the article being revolvably mounted on a pin and being pressed against the grindstone under the action of a load, the pin carrying the holder being moved according to the nature of the object to be ground.

SPRING-MOTOR.—H. S. ESCH, New York, N. Y. The object of the invention is to provide a motor capable of running for a considerable length of time without requiring rewinding of the springs and arranged to permit storing and desired amount of power for future use by the employment of a plurality of springs adapted to be thrown automatically and successively into action relative to the part to be rotated at a uniform power and speed.

Prime Movers and Their Accessories.

LUBRICATOR.—F. W. KNOTT, Madison, Wis. In this patent the improvement refers to force-feed lubricators; and its object is to provide a lubricator arranged to automatically and periodically force the desired quantity of the lubricant to the bearing, cylinder, or other part or parts to be lubricated.

Railways and Their Accessories.

RAILROAD-SIGNAL.—E. C. LOMBARD, Peoria, Ill. A train may pass freely along the track without affecting the signal in any way; but should two trains get within the same section the torpedo is immediately placed, and when either train gets within a short distance of said torpedo it is exploded to warn the engineer of impending danger. The signal is automatic. Means are employed to enable electric lights to operate simultaneously with torpedo placing and exploding device, and serve as an additional signal.

SEAL-LOCK.—T. E. VAN DERWERKEN, Green Island, N. Y. The principal objects here are to provide means whereby a destructible seal can be applied to a lock in such a manner that the opening of the lock will cause the destruction of the seal, to provide means whereby the car can be locked with an ordinary wired seal either when the seals which are intended to go with the lock are absent or even when the door is not fully closed, also to provide means for holding the seal and for destroying it.

Pertaining to Recreation.

MECHANICAL TOY.—H. C. MURRAY, Gulfport, Miss. One purpose of the invention is the provision of a mechanical toy adapted to be pushed over a surface and wherein as the toy is moved backward and forward the head of the object carried by the toy will be automatically turned from side to side.

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. 8534.**—Wanted, a Crookes tube for connection to a Wimshurst machine.
- For mining engines. J. S. Mundy, Newark, N. J.
- Inquiry No. 8535.**—Wanted, a silvering machine for preparing hemp for spinning into binder twine.
- Pattern Letters. Knight & Son, Seneca Falls, N. Y.
- Inquiry No. 8536.**—Wanted, manufacturers of large needles.
- "U. S." Metal Polish. Indianapolis. Samples free.
- Inquiry No. 8537.**—Wanted, manufacturers of selenium cells.
- Handle & Spoke Mch. Ober Mfg. Co. 10 Bell St., Chagrin Falls, O.
- Inquiry No. 8538.**—Wanted, an electrically-operated corn-popping machine.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 8539.**—Wanted, address of a manufacturer of a machine for making wooden meat skewers.
- WANTED.**—Copies of our "Manufacturers' Index" issued 8 or 9 years ago. State price. Munn & Co., 361 Broadway, New York.
- Inquiry No. 8540.**—Wanted, manufacturers of elastic bands for hose supporters.
- Metal Novelty Works Co., manufacturers of all kinds of light Metal Goods, Dies and Metal Stampings our Specialty. 43-47 S. Canal Street, Chicago.
- Inquiry No. 8541.**—Wanted, manufacturers of portable firewood saws.
- The celebrated "Hornsby-Akroyd" safety oil engine. Koerting gas engine and producer. Ice machines. Built by De La Vergne Mch. Co., Ft. E. 138th St. N. Y. C.
- Inquiry No. 8542.**—Wanted, the addresses of the Birkeland E. Y. de Process, also the apparatus for the artificial production of nitrates.
- Manufacturers of patent articles,** dies, metal stamping, screw machine work, hardware specialties, machine work and special size washers. Quadruga Manufacturing Company, 18 South Canal St., Chicago.
- Inquiry No. 8543.**—Wanted, machinery for carding, spinning and making twine, rope and plaited cord, from cotton, mohair and Angora goat hair.
- Inquiry No. 8544.**—Wanted, rotary engine for oil or alcohol.
- Inquiry No. 8545.**—Wanted, makers of type-writer ribbons.
- Inquiry No. 8546.**—Wanted, manufacturers of devices controlling valves by electricity.



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.

(10254) G. L. M. asks: 1. Please give me the difference between Eastern, Central, and Western standard time and where it is changed. A. Eastern time has the 75th meridian west of Greenwich as its central line and is 5 hours behind Greenwich time. Central time has the 90th, Mountain time the 105th, and Pacific time the 120th meridian as its center. Theoretically the meridians half way between those above named are the lines where the change of time is made, and each is one hour earlier than the next to the east. Practically the convenience of the railroads controls the matter in the United States. Thus, the change of time is made at Buffalo on roads starting from that place, east or west. It is made at Pittsburg for roads having that as a center. This is better than changing the running time an hour at some small way station. The line north and south along which the time changes is not a straight line. 2. Also the difference between Eastern, Central, and Western sun time and where it is changed. A. Sun time is the time at the particular place. It is noon by the sun when the sun is exactly south of one, and clocks which are set to sun time are said to keep local time. This is not called eastern or western. It is the time of that meridian only. It is the same local time upon a line due north or south over the earth. For a change of one degree of longitude the local time changes four minutes, being four minutes earlier for each degree to the west, and later by the same amount for each degree to the east of any place. This is the time that was kept everywhere in the world before standard time was introduced. Now nearly the whole civilized world has standard time based upon the meridian of Greenwich.

(10255) B. C. B. asks: Can you furnish me a book of instruction on the wiring of an electric light plant that explains fully the testing of lines for breaks, that explains the arc lamps, the incandescent lamps, the transformers and everything about an electric light plant? A. There is no single book which covers the range of topics upon which you desire information. We can furnish the following: Crocker's "Electric Lighting," Vol. 1, "The Generating Plant," price \$3; Vol. 2, "Distributing System and Lamps," \$3.

(10256) P. S. writes: 1. Can commercial calcium sulphide be used for phosphorescent paint or light? A. No. 2. If it cannot, what are its uses? A. It has some use in medicine. It may be used for the preparation of sulphureted hydrogen. 3. What is the chemical action of a secondary battery made of copper, zinc, and lye? A. In general, zinc is taken from the solution while charging and deposited upon the zinc plate; oxygen is evolved, which attacks the copper and forms copper oxide upon the positive plate. In the discharge the opposite changes take place. 4. If two pieces of annunciator wire about ten or more feet in length are laid parallel with the insulations touching and with the terminals at one end not connected and those at the other end connected through a telephone receiver and secondary of a medical coil in series, or one terminal to the platinum-pointed screw of a buzzer through the receiver and the other terminal at the same end connected to the vibrating contact, is the sound produced in the receiver caused by leakage, induction between the wires or do the wires act as a condenser? (This also takes place to an extent when the ground is used instead of either wire.) A. We scarcely understand your arrangement from the description, but, if there is a sound produced upon an open circuit, it is by means of waves transmitted across the space separating the wires, as is frequently the case by induction in the working of the telephone. 5. Are the use of the magneto, the galvanometer and similar instruments the only ways for testing for leaks? A. For methods of testing wires and cables, see the book on that subject by Webb, price \$1; or Kempe's "Electrical Testing," price \$7.25. Latest editions. 6. What is the average or extremes of resistance in woods? A. Dry wood is an insulator and wet wood may have any resistance according to its wetness.

(10257) O. F. N. writes: In your answer to question No. 10210 you state that the moon rotates on its axis. Permit me to express my opinion that said rotation cannot be understood so that the moon has its own