

RECENTLY PATENTED INVENTIONS.

Electrical Devices.

ELECTRIC SELF-WINDING CLOCK.—A. VON KASPIK, Weehawken, N. J. This invention relates to escapement-clocks driven by spring-motors; and its object is to provide an electrically-self-winding clock arranged to require but a comparatively small spring for driving the clock-work, to reduce the work required by the spring to a minimum, to insure accurate running of the clock at all times, and to permit of dispensing with a pendulum.

TROLLEY.—L. MCD. STEELE, Middletown, Ohio. Mr. Steele's invention has reference to trolleys or like conducting devices employed in connection with electric cars, and more particularly to means for preventing displacement of the contact member thereof from the conductor. Its principal objects are to provide a simple and effective mechanism of this character.

Of Interest to Farmers.

WEEDER.—T. G. THOMPSON, Deerfield, Wis. This implement may be readily applied over a growing plant and operated to remove weeds around said plant without in any way injuring it, and by turning the shanks of the blades in one direction or the other the blades may be set forward or back to either throw the soil toward or away from the growing plant from which the weeds have been removed.

HAY-PRESS.—J. M. GURLEY, Denton, Texas. One purpose in this case is to provide a construction in which pulleys and wheels and all surplus rollers are dispensed with liable to render the machine clumsy and difficult to keep in repair. And another, is to snugly locate the power appliance of the machine, which appliance is of simple construction, on a strong frame and to provide for the plunger-shaft operating in well-adapted guides, reducing to a minimum the possibility of the shaft giving away or breaking.

Of General Interest.

BUCKLE.—L. CABALKA, Lesterville, S. D. The invention is in the nature of a harness-buckle, and has for its principal objects to prevent catching and tearing of the fly-net, the horse's tail being caught thereby, and marring by rubbing action against other parts, as the harness-saddle, strap, etc. It is intended for use on the reins, but is equally adapted to other parts of harness where it is desirable to provide protection afforded thereby.

AMUSEMENT DEVICE.—J. C. BOYLE, Portland, Ore. Mr. Boyle's invention refers to improvements in amusement devices in the form of slides designed not only to afford pleasure to children but serving as a means for healthful exercise, the object being to provide a device of this character that will be simple in construction and inexpensive, and that may be used indoors or in open air, and that may be conveniently folded for transportation or when not in use.

CIGAR-HOLDING DEVICE.—T. B. ERWIN and H. C. MEYER, Britt, Iowa. The invention has reference particularly to improvements in devices for holding and delivering cigars whereby they may be readily ejected one at a time from a coin-controlled vending-machine—such, for instance, as shown in the Messrs. Erwin and Meyer former application for coin-controlled vending machines.

PARALLEL-RULE.—P. CUMMING, Keywest, Fla. In the present patent the invention has reference to parallel-rules, the principal objects of the improvement being the provision of various adjustments in such a device and for the lifting of one blade while the other remains upon the work.

BEARING FOR VENTILATOR-SHAFTS.—T. M. CARPENTER and F. L. BAKER, Los Angeles, Cal. The special objects of the present invention are to improve the devices for mounting the ventilator-fan so that it will be securely held and enabled to operate with the least possible friction. The invention is adapted particularly to the device embodied in a prior patent granted to the inventors.

FOLDING UMBRELLA.—W. S. CONNELL, New York, N. Y. In Mr. Connell's patent the invention pertains to a folding umbrella, parasol or similar device. The principal object of the invention is to secure a construction of umbrella or the like which will permit it to be folded up into such small compass as to be easily placed in the pocket.

PUMP.—T. M. PEARSON, New York, N. Y. The invention relates to means for applying heavy pressure to liquid or semi-liquid substances. It is especially intended as a means for forcing lead into crevices between the plates of ships to prevent leaks therein, although it is useful in other connections, as will be apparent to skilled mechanics.

BUILDER'S BLOCK.—G. J. ROBERTS, Wake-man, Ohio. One object of the invention is to provide a block which can be held by transverse and longitudinal wires in such manner that a series of blocks may be brought together one series on the other and each series have an interlocking engagement, forming a fireproof wall and a wall which protects its supports, and at the same time each block in the wall is so closely in contact with an engaging block as to prevent the possibility of flames passing between them in case of a fire.

MANIFOLD PAD-LEDGER.—A. F. SCHULTZ,

Danville, Ill. This form of pad serves as a ledger. Construction is such that with the aid of an attached carbon-sheet a complete entry of articles bought when entered upon a pad will be transferred to an underlying sheet, which is given to the buyer, the original entry sheet remaining on the pad, so that when a credit customer buys again the sheets on the pad may be quickly looked over and amount unpaid quickly known without reference to regular ledger and added to the last entry sheet, so that at each transaction a creditor will have record of amount owed previous to last order and total amount due at date of issue of last duplicate order sheet, and at same time the merchant has a similar entry on the pad to refer to when next credit transaction by same party is made.

CONNECTING MECHANISM.—H. E. SMITH, Roslyn, Wash. Mr. Smith's invention relates to mechanism for connecting threaded elements, it being particularly applicable to the caps of hydrants and the like. Mere application of the wrench effects the unlocking of the actuating mechanism, and half a turn so frees the cap that it may be withdrawn by direct pull, thus providing for speedy and effective operation, features exceedingly desirable in connection with fire apparatus.

FIRE-ESCAPE.—G. F. WACHTERSHAUSER, Wilkesbarre, Pa. The invention has for its objects the provision of a fire-escape which shall be easily accessible from all parts of the building, which shall take up very little room, shall have few parts to get out of repair, which shall secure a rapid descent and a cushioned fall near the ground, and which shall be simple and cheap to construct.

WRENCH.—C. H. SMITH, Allentown, Pa. In this wrench the jaws similar to those of an ordinary monkey wrench are carried by a shaft mounted to turn and to move longitudinally in its support so as to enable the jaws to be moved into the most convenient position to engage the nut. The support in which the shaft has bearings has a laterally projecting head on which the ratchet handle is mounted to turn and has ratchet teeth to be engaged by the pawls of the handle.

SAW-HANDLE.—G. M. REDDY, Bowie, La. In the present patent the improvement has reference to a handle intended specially for drag or cross-cut saws; and the object of the inventor is the provision of a handle which may be readily applied to saws of various sizes, holding them with entire security.

Heating and Lighting.

HEATING-STOVE.—C. MILLER, Scranton, Pa. It is intended by Mr. Miller that a heating-stove provided with the additional heating-surface as he has invented will not only radiate to improved degree, but by minimum use of coal. By constructing an air passage-way into sections with slip-joints a burned-out one thereof may be readily replaced by simple vertical adjustment of the next-above section.

INCANDESCENT BURNER.—D. FRIED, New York, N. Y. The purpose of the improvement is to provide an incandescent or mantle burner which will be of economic construction and which can be attached to a bracket and be supported in a pendent, upright, or a horizontal position or intermediate positions without in the least interfering with the position of the mantle relative to its supporting-tube.

Household Utilities.

SAD-IRON.—J. COOK, Paterson, N. J. The invention pertains to improvements in sad-irons of the class designed to be heated by a gas-flame within the body portion, the object being to provide an improvement of this class so constructed as to retain the heat for a considerable length of time after extinguishing the flame, thus permitting the use of the iron when detached from a gas-feed pipe.

WINDOW RAISING AND LOCKING DEVICE.—F. BRUNO, New York, N. Y. In this case the invention pertains to improvements in window-sash raising and locking devices of that class shown in a former patent granted to Mr. Bruno, the main objects being to simplify the construction of the device shown in the patent by omitting certain features thereof, thus resulting in economy of production and making it more effective in operation.

Machines and Mechanical Devices.

MACHINE FOR DRAWING IN WARP-THREADS.—U. GANZ and A. W. FRANÇOIS, Wilmington, Del. The present invention has reference to weaving textile fabrics; and the object of the inventors is the provision of a new and improved machine for drawing the warp-threads into the reed in an exceedingly accurate and quick manner and without the aid of skilled labor.

Pertaining to Vehicles.

HARNESS-TRACE.—T. J. WAVRUNEK, Shawano, Wis. The improvement relates to traces for harness provided to couple a draft animal to a wagon or truck, and has for its object to provide novel details of construction for traces, which confer great strength, reduce weight, and enable a comparatively light gage or thickness of leather to be employed, the improved features affording a neat, shapely trace at a moderate cost.

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 the 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. 6981.—For manufacturers of distilling apparatus for making whiskies and brandies.

"U. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 6982.—Wanted, a machine for making mesh fly nets.

2d-hand machinery. Walsh's Sons & Co., Newark, N.J.

Inquiry No. 6983.—Wanted, a second-hand hydraulic hoist, for foundry use, and which is capable of lifting one ton twelve feet high.

Perforated Metals, Harrington & King Perforating Co., Chicago.

Inquiry No. 6984.—For the present address of the Freeland Marine Gasoline Engine Co.

Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 6985.—For the manufacturers of the Hitchcock Improved Lamp.

Adding, multiplying and dividing machine, all in one. Felt & Tarrant Mfg. Co., Chicago.

Inquiry No. 6986.—Wanted, to have a water filter made, cast or spun, in brass.

Commercially pure nickel tube, manufactured by The Standard Welding Co., Cleveland, O.

Inquiry No. 6987.—For manufacturers of copper lightning rods.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.

Inquiry No. 6988.—Wanted, the address of builders of oil furnaces.

Patent for sale, machine tool line. Patterns and jigs for same. Address Charles Shanklin, Hoopeston, Ill.

Inquiry No. 6989.—For the manufacturers of the Morse Thermo-Gage Electric Pyrometer.

I sell patents. To buy them on anything, or having one to sell, write Chas. A. Scott, 719 Mutual Life Building, Buffalo, N. Y.

Inquiry No. 6990.—For manufacturers of feather decorations for millinery.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Machine Company, Foot of East 138th Street, New York.

Inquiry No. 6991.—For dealers in poultry and eggs.

Gut strings for Lawn Tennis, Musical Instruments, and other purposes made by P. F. Turner, 46th Street and Packers Avenue, Chicago, Ill.

Inquiry No. 6992.—Wanted, a small, portable soap press.

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. 6993.—For parties to make special designs in blown glass.

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. 6994.—For manufacturers of liquid rubber.

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. 6995.—For manufacturers of fertilizer machinery and ice plants.

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. 6996.—For manufacturers of ice machines.

The Patentee or Manufacturer of the best railroad track bolts with lock nut device will please mail to me illustrated and descriptive circular of same, together with cost per ton, stating his place of manufacture, etc. A. B. Hart, Jacksonville, Fla.

Inquiry No. 6997.—For dealers in the breakage and sweepings of incandescent electric lamps.

Advertiser, having ample facilities for manufacturing, desires to meet party who thoroughly understands the manufacture of small dynamos, motors and electric fans, who is already engaged in or desires to enter into manufacturing. Address Dynamos, 794 Broad Street, Newark, N. J.

Inquiry No. 6998.—For manufacturers of coconut oil and copra from the cocoanut.

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. 6999.—For firms making small castings, such as used on step ladders and coffee mills.

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. 7000.—Wanted, machines for cutting butter in 56-pound boxes into one-pound blocks.

VACATION TRIPS.

If you are going away this summer be sure to send for "Mountain and Lake Resorts," a beautifully illustrated publication of one hundred and twenty-eight pages, just issued by the LACKAWANNA RAILROAD. The Jersey Hills, the Pocono Mountains, Delaware Water Gap, Richfield Springs, Lake Hopatcong and other delightful summer resorts are described in a way that will tell you how you can go, where you can stay, what you can see and how much it will cost. It is a book that will help you in making your plans.

It will be sent for ten cents in stamps addressed to T. W. LEE, General Passenger Agent New York City.

Inquiry No. 7001.—For parties manufacturing refrigeration machinery for small plant to cool about 30,000 cubic feet, for butter, eggs and cheese.

Inquiry No. 7002.—For makers of twisted wire, or other display racks, on which to display bottles on counters.



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.

(9668) **A. V. V. says:** 1. If a cylindrical block of wood be set on end, resting on a thick layer of dirt (composed largely of sawdust and minute chips, such as accumulate in a woodshed), and the block be repeatedly struck with the back of a heavy ax, why is it that the dirt and dust under the block will collect, instead of scattering, and form a compact, cone-shaped mound, so elevated and pointed that the block will be upset by the blows, though struck each time in its very center? A. Never having seen the phenomenon which you describe, we are unable to explain with positiveness its cause. We imagine, however, that the tendency of each blow is to drive away some of the dirt and dust around the outside of the block; also, as the block rebounds there would be a very slight suction which would tend to draw some particles toward the center. The combination of these two causes is very likely responsible for what you describe. 2. Why is it that one can drive a hollow iron tube (such as is used for driven wells) into the ground more rapidly and with less expenditure of force, by using a wooden maul and striking comparatively light taps, than can be done with a heavy iron sledge and powerful blows? A. In driving a hollow iron tube into the ground the blow must be struck in such a way that the end of the pipe will have time to penetrate into the soil. If too heavy a blow is struck it will tend to buckle the pipe and also cause it to vibrate throughout its length. Both of these things very much increase the friction on the side of the pipe and interfere with its penetrating as far as it otherwise would.

(9669) **H. E. asks:** Should Peary find an open passage to the north, how will he know when he is exactly on the pole? A. The latitude of a place is found from the altitude of the sun and stars above the horizon at noon. If one were on the north pole, the sun would circle around the sky at the same altitude all the twenty-four hours of the day when it was above the horizon at all. As one would only reach the pole in the summer, it would be perpetual day, and the observation of the sun would be continual.

(9670) **M. I. asks:** 1. Please explain how platinum wires are fused into thermometer bulbs so as to be in the right place. The thermometers I refer to have the wires fused into the tube and when the mercury reaches them, it completes an electric circuit and registers the temperature in the furnace room. I cannot understand how the wires could be put in the right place to register any given number of degrees. A. The platinum wires are fused into the thermostat tubes before the thermometer is filled with mercury. The size of the bulb containing the mercury is adjusted so that the wire shall be at the right place. The method of calculating the proper size of bulb is given in Deschanel's "Physics" under the construction of thermometers. It is quite as necessary in making a clinical thermometer as in this case. All thermometers in fact must be adjusted to their desired range of temperature. 2. In December 17 SCIENTIFIC AMERICAN you spoke of people in America raising medicinal plants. Where could they find a market for them? A. Drug plants would be sold to druggists or to wholesale dealers in drugs in cities. Druggists will often buy them and send them to their correspondents in cities. 3. While experimenting with Geissler tubes, I noticed that they would light up if I held one pole in my hand and the other near an operating induction coil. Why was this? I took one of the tubes in each hand and touched one to each terminal of the coil; they lighted up bright. The current must have passed through me. Why didn't I feel it? I know I could not have taken it from terminals themselves without great injury. A. A Geissler tube lights by induction when held in a strong electric field. The electrical waves pass through the space and the tube just as they do in wireless telegraphing and the tube receives them and shines by them. When you touched the ends of the tubes to the terminals of the coil you felt no effect because the current was very small which passed through the tubes and you—one or two milliamperes, perhaps. It is possible to hold a lamp in the same way to a high potential transformer and have it come to full candle power.