

**RECENTLY PATENTED INVENTIONS.**

**Electrical Devices.**

**SUSPENSORY DEVICE FOR ELECTRIC LAMPS.**—S. R. BELL, Tuscaloosa, Ala. The device comprises a spring-controlled drum around which is wound a duplex flexible conductor for both supporting an electric lamp and supplying electric current thereto, electrical connections being employed between the drum and one of the terminals of each of the wires forming the conductor. An attaching member for attaching the device to a ceiling or other support is employed, together with hangers for the drum and electrical connections between fuses held by such member and the drum.

**Of Interest to Farmers.**

**PEA-HARVESTER.**—H. M. CHISHOLM, Byron, Ga. The invention relates to improvements in machines for harvesting cow-peas. As the machine is drawn forward the stripper will be rotated, removing the pea-pods from the vines and depositing the pods into the body of the machine; and the body may be readily regulated or adjusted as to height from the ground.

**DEHORNING IMPLEMENT.**—S. T. WICKS, Denver, Col. In this invention the improvement is in that class of implements which is particularly adapted for dehorning calves or very young cattle and which comprises a blade, having opposite and converging cutting edges adapted to make a draw cut in removing the horn.

**Of General Interest.**

**METAL PROTECTING-SOLE FOR FOOTWEAR.**—W. J. LINWOOD and JENNIE BENNETT, Raton, New Mex. The invention pertains to improvements in soles for boots and shoes, the object being to provide a device of this character that will be light, yet strong, and adapted to readily yield to the varying movements of the boot or shoe, and therefore not cramp the wearer's foot. Novel means secure the device to a boot or shoe.

**ART OF PRODUCING MASTIC.**—H. PASCHKE, New York, N. Y. The invention relates to the bituminous mastics formed and capable of employment in a cold state and without the application of heat of any sort, so that the article may be produced as expeditiously as common mortar and applied in essentially the same manner. It possesses not only the advantages of eliminating the use of heat in all forms, but also that of an entirely waterproof composition, especially useful where waterproof walls, ceilings, or analogous structures are to be produced.

**PROCESS OF SMELTING COPPER MATTE.**—W. KEMP, Tucson, Ariz. Ter. Mr. Kemp's invention pertains to smelting, and more particularly to a process for smelting copper matte so as to produce black or metallic copper directly therefrom. The process readily saves seventy-five per cent of the cost of the process ordinarily used in converting. It is of peculiar value to smelters who work on a small scale and who find it necessary to ship the so-called "fifty-per-cent matte." The process is done in a single operation.

**EDUCATIONAL DEVICE.**—R. D. MITCHELL, Sandusky, Ohio. This simple device assists a teacher in instructing a class in mathematics, particularly in addition, and saves time of a teacher in dictating problems and the student's time in writing them, it being possible for the teacher to quickly and accurately designate the boundaries of figures on a chart in columns, the figures within which columns are to be added, and for the students to locate and rule off the boundaries without injury to the chart.

**HAND-BAG.**—A. WIGHARD, Jersey City, N. J. In the present patent the invention has reference to improvements in hand-bags or similar receptacles, the object of the inventor being the provision of a hand-bag or the like with a combined handle and frame, thus reducing the cost and simplifying the construction.

**LIFE BELT OR PRESERVER.**—P. C. PETRIE and H. L. DES ANGES, New York, N. Y. This life-preserver, constructed preferably of balsa wood and treated to render it fireproof and waterproof, is thoroughly durable and serviceable. The manner of forming the straps renders them almost indestructible, by fire or weather. By extending the straps' ends down between the buoyant blocks and connecting them with the binding-wire a secure construction is produced, while the manner of fastening the belt-straps to the preserver insures retaining the strap in position, and enabling it to be readily grasped and tied by the user.

**LIFE-RAFT.**—P. C. PETRIE and H. L. DES ANGES, New York, N. Y. The object of the inventors is to provide a life-raft with a suspended platform enabling the occupants to stand partly submerged, thus increasing the carrying capacity of the raft and yet to permit the platform, when desired, to be connected rigidly with the raft in the plane thereof, so that the raft may be utilized in the usual manner.

**TOOTH-BRUSH HOLDER.**—E. J. HYDE, Spokane, Wash. Novel features permit the attachment of the holder in a vertical position on a wall or the like, adapt it to completely incase a brush, afford a transparent side wall

for exposure of the brush while therein, afford spring-pressed end walls therefor that respectively serve as a lid and bottom for the holder and enable the convenient insertion and removal of the brush, provide drainage for the holder and means for ventilation for the holder to quickly dry the brush held therein.

**RETORT.**—P. JACKSON, Macon, Ga. The object in this instance is to provide a retort more especially designed for extracting turpentine from pine wood and arranged to permit of conveniently loading or charging the retort with the wood to insure proper destructive distillation of the wood and to allow dumping of the residue after the extracting process is completed.

**BEVERAGE-SPOON.**—H. MORGAN, Cripple Creek, Col. The improvement is in spoons for mixing and straining beverages such as are usually dispensed in restaurants, bar-rooms, and the like, the object being to provide a spoon that may be quickly and readily changed from mixing to straining position, thus saving considerable time in the mixing and straining of drinks.

**CAMERA.**—E. L. HALL, New York, N. Y. One purpose of the invention is to provide a simple and economic construction of camera wherein a prism is employed to reflect an image upon the focusing-glass and conveniently-operated means for obtaining an accurate focus by the movement of the lens-carrying section of the camera-box. The same inventor has also procured a patent on another camera, the purpose being to provide one of the type in which the shutter is connected with the focusing-mirror in such manner that when the mirror is brought to focusing position the shutter will be carried out of the focal plane of the lens and whereby when the mirror is carried up to effect an exposure the shutter is automatically carried to working position relative to the lens and is also automatically operated.

**DRAWING-BOARD.**—H. D. GRINNELL, New York, N. Y. The invention provides means by which a long sheet or continued web of paper may be safely held in position convenient for drawing and any part of the web or sheet exposed at will. This is done by providing a frame or board having two drums on which the paper is wound, the drums being connected to devices by means of which they may be rotated simultaneously in the same or opposite directions, thus enabling the sheet to be moved over the board and by turning the drums oppositely the sheet may be stretched firmly over the board.

**ORE-CONCENTRATOR.**—P. A. HARDWICK, Colorado City, Col. In the present invention the improvement has reference to apparatus for concentrating ore, and Mr. Hardwick has for his principal object the provision of an effective ore-concentrator which in this instance is especially adapted for the saving of the float values.

**GAGE.**—A. D. FELLOWS, East Auburn, Cal. In this case the invention refers to gages and more particularly to those adapted for use with shingling-hatchets or similar tools. Its principal objects are to provide a simple and inexpensive device which may be readily attached to the tool.

**FRAME FOR FILTER-PAPERS.**—A. M. VAUGHAN, Richmond, Va. The purpose of the frame is to facilitate the folding and placing of a filter-paper within a funnel. More specifically, the object is to produce a frame for this purpose which may be readily operated in applying the paper and in folding the same to conform to the shape of the funnel.

**Hardware.**

**BORING DEVICE.**—J. PRESS, New York, N. Y. In this case the invention relates to a new and improved boring device for use in conjunction with an ordinary brace and bit to enable the operator to bore a hole at right angles with the surface of the object in which the hole is bored.

**COMBINATION-TOOL.**—C. NIELSEN, Middletown, Conn. The purpose of the inventor is to provide a tool especially adapted for use by machinists, but which is also of value to all mechanics, and which may be used as a scriber, a carpenter's square, a compass-gage, etc., and to so construct the tool that it will be simple, compact, durable, and economic, and convenient of arrangement and manipulation.

**Machines and Mechanical Devices.**

**COMPOUND SPRING-LEVER.**—W. V. GILBERT, "Niton," East Wood road, South Woodford, London, England. This is an elastic or resilient device practically in the nature of a compound lever, and serves upon being actuated by one motion, as by being compressed in one direction or opposing directions from its normal condition, to impart or allow a plurality of motions in various directions and, in recovering its normal condition upon being released from said pressure or actuation, to impart or allow corresponding plurality of motions reciprocal to those caused or allowed by said actuation.

**LAND-LEVELER.**—J. J. JENSEN, Goshen, Idaho. The invention pertains to improvements in machines for leveling ground or land and making roads, lawns, and the like, the object being the provision of a leveler of simple and novel construction which may be easily manipulated to scrape the dirt from high places and dump it in low places.

**Prime Movers and Their Accessories.**

**APPARATUS FOR LUBRICATING.**—M. CASTELNAU, 28 Rue de Washington, Paris, France. This invention is based on a new principle as to the lubrication of engines. This principle is characterized in the first place by a process for the plentiful and perfect lubrication of the members subjected to friction, the lubricant being applied and acting clear of any contact with the gases, steam, vapors, and the like which are at work. It is characterized in the second place by the almost total recovery of the lubricant used. It is applicable to any kind of engine or motor, and can be applied either to distributing-pistons or to driving-pistons.

**Railways and Their Accessories.**

**RAIL-JOINT.**—W. NOLAN and C. H. PEARCE, Aspen, Col. The invention is an improvement in rail-joints. The lateral wing of the fish-plate underlies the inner end of a brace and also abuts at its outer edge against a shoulder of the tie-plate and is braced thereby on opposite sides of the brace, as well as beneath the brace, in the operation of the device. The tie-plate may be spiked down or otherwise secured to the tie, as may be desired.

**STEP-HOLDER FOR CARS.**—J. EDWARDS, New York, N. Y. The invention refers to running-boards or steps of street-cars, such as used usually at the sides of so-called "summer" cars. Where such cars are operated on double tracks, it is usual for the inner board or step, which is disposed over the devil-strip, to be turned up out of the way, this step being usually mounted upon pivots or hinge connections for this purpose.

**Pertaining to Recreation.**

**TOP-SPINNING PISTOL.**—J. W. ELBRA, Cleveland, Ohio. Assignee, J. W. HENCKE, No. 3609 Park Avenue, S.W., Cleveland, Ohio. The pistol is designed to rapidly rotate the top and eject it at its muzzle. The object of the inventor is to produce a simple and effective device, harmless, easily operated, and manufactured at a small cost. It consists of a casing assembled together to simulate a pistol, having means at its muzzle to hold a top and means to be forcibly projected in the barrel by a spring when released by a trigger to engage the periphery of the top, giving it a sharp twist and at the same time eject it from the muzzle.

**Pertaining to Vehicles.**

**SWINGLETTREE.**—A. DE L. LITTLE, Game-well, N. C. The inventor provides a swingle-tree in which the strain of starting a load will be relieved by the spring action, so that injury to the draft devices, as well as to the team, will be avoided, and he arranges the tension-spring in such manner as to prevent any danger of breaking or injuring the same, so that he provides an efficient and durable device at a small cost.

**CAR STOP.**—G. L. HOLLINGSWORTH, Silverton, Colo. patents a car stop for special use in connection with mine cars, and arranged to automatically stop the car when the latter reaches the place of dumping. The stop, which is secured in proper position on the ties between the rails, is in the form of a vertically rocking lever, one end of which is to be automatically engaged by the front axle of the car, the opposite end of the lever having a fork which receives the rear axle and prevents further forward movement of the car.

**ATTACHMENT FOR ELASTIC TIRES.**—W. H. VIOLETT, Piceance, Colo. The improvement of this patentee relates to a means of protecting the tires of automobiles and bicycles and preventing punctures. An auxiliary tire of thin metal encircles the usual elastic tire and is apertured for receiving in close relation plugs of special form made in attachable sections adapted to be quickly placed in position on the auxiliary tire or removed therefrom.

**DUMPING-WAGON.**—P. PINTO, New York, N. Y. This invention provides improvements in the class of wagons used for trucking or heavy carting in which the box or wagon body is adapted to be turned or tilted for dumping the load. The wagon body may be moved to either side when it is desired to discharge the load at the sides, or it may be moved to the rear to discharge the load at the rear.

**TRUCK.**—C. H. RICHARDSON, Dover, N. H. The invention refers more especially to hand-trucks for barrels, boxes, and the like, though applicable to the handling of other freight or merchandise; and one of the objects is to provide a structure of this kind which is inexpensive to manufacture, besides being strong and easily handled. Means are provided for loading and maintaining a load upon the truck and for releasing the same when desired for facilitating the unloading.

**Designs.**

**DESIGN FOR A CLOCK-CASE.**—E. EHRLÉ, New York, N. Y. Mr. Ehrle has invented an ornamental design for a clock-case, which comprises at its upper part a circle or case surrounded by scroll work of very graceful lines, and supported by nude figures of two boys posed in the lower scroll work.

**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.

- Marne Iron Works. Chicago. Catalogue free.
- Inquiry No. 8424.**—Wanted, power looms for weaving wire cloth.
- For mining engines. J. S. Mundy, Newark, N. J.
- Inquiry No. 8425.**—Wanted, name and address of the manufacturer of the Rose automatic knife and razor grinder.
- "U. S." Metal Polish. Indianapolis. Samples free.
- Inquiry No. 8426.**—Wanted, manufacturers of cast steel hooks and eyes for connecting leather and hide rope banding.
- Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.
- Inquiry No. 8427.**—Wanted, names of parties engaged in preparing seal skins for shipment.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 8428.**—Wanted, manufacturers of heavy screw presses, also screw jacks and screw punches.
- I sell patents. To buy, or having one to sell, write Chas. A. Scott, 719 Mutual Life Building, Buffalo, N. Y.
- Inquiry No. 8429.**—Wanted, manufacturers of hand heaters employing slow combustion fuel.
- 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. 8430.**—Wanted, manufacturers of a newly invented rotary gas engine of 2 1/2 h. p., the cylinder being contained within a 12-inch flywheel.
- The celebrated "Hornsbly-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. 8431.**—Wanted, a machine for making tamales.
- Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machine work and special size washers. Quadriga Manufacturing Company, 18 South Canal St., Chicago.
- Inquiry No. 8432.**—For manufacturers of floor scrapers and smoothing devices.
- Inquiry No. 8433.**—Wanted, a machine, similar to a typewriter, for the use of the blind, for writing musical scores.



**HINTS TO CORRESPONDENTS.**  
 Names and Address must accompany all letters or our 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.

A Reader asks a question, but does not even give his place of residence nor date his letter. He is respectfully requested to read the first Hint which stands at the head of the Query Column every week. Although the statement is perfectly plain in meaning, we yet receive every week more than one letter without name or address.

(10182) H. C. D. asks: Being a constant reader of your valuable paper, I take the liberty of asking you to kindly inform me through your Notes and Queries column whether the following statements which appear in the Encyclopædia Britannica (vol. xi, pages 66 and 67) are correct. Under the heading "Gravitation," paragraph 2, it says: "Movement of a Falling Body.—Our knowledge of the force of gravitation being ultimately founded on observation and experiment, it will be convenient at this point to describe the experiments by which a knowledge of the laws of motion of a falling body may be ascertained. We shall first describe these experiments, and then we shall discuss the laws to which we are conducted by their aid. A beginner is apt to be surprised when he is told that a heavy and a light body will fall to the ground in the same time if let drop from the same height. Yet nothing can be easier than to prove this important fact experimentally. Take a piece of cork in one hand and a bullet in the other, and drop these two objects at the same moment from the same height. They will reach the ground together. Nor will the results be different if we try a stone and a piece of wood." On page 67 it says: "The various experiments to which we have referred suffice to establish the very important result that the time occupied by a body in falling to the surface of the earth, if dropped from a point above it, is independent of the mass of the body as well as of the materials of which the body is composed." I always understood it to be a well-known fact that the velocity of falling bodies depends upon the specific gravity and the density of the medium through which they pass, and I am therefore at a loss to understand the meaning of the paragraph referred to. That the above para-