

**RECENTLY PATENTED INVENTIONS.**  
**Electrical Devices.**

**SOCKET FOR ELECTRIC LAMPS.**—J. A. MEBANE, South Boston, Va. The object of the invention is to provide an improved socket for incandescent lamps in which socket-screws are wholly dispensed with, the separate parts being adapted to be easily and quickly connected and disconnected and the electrical connections being made in such manner that the socket may be produced at much less cost than those of usual construction. The casing of the socket is likewise so constructed that its two parts are held together detachably by means of a spring-clamp without aid of screws.

**REGULATOR FOR ALTERNATING CURRENTS.**—E. L. HANEY, Nashville, Tenn. In the present patent the invention has reference to regulators for alternating currents; and the improvement consists, essentially, of a transformer of a special construction, together with means for automatically adjusting the transformer to suit the variations in the current.

**Of Interest to Farmers.**

**HARVESTER-REEL.**—C. O. WYMAN, Anoka, Minn. The primary object of the invention is to provide a reel which may be readily folded into compact form for shipment, and which may also be freely adjusted in all directions when in use for the double purpose of adapting the reel to the condition of the grain and lay of the land while operating, and for holding the reel closely against the body of the harvester when the same is being drawn to and from the field.

**STOREHOUSE FOR GRAIN OR THE LIKE.**—R. C. ROACH, Hutchinson, Kan. In this structure grain or like material may be stored or kept in a state of preservation for an indefinite length of time. The inventor provides simplified and effective means whereby grain may be elevated above and deposited within the structure and provides means whereby the delivery of grain from the storehouse may be readily effected in any quantity, for shipment or transfer thereof or for other purposes. The structure may be rapidly filled or emptied.

**FRUIT-PICKER.**—I. CARMAN, St. Remy, N. Y. This invention relates to a device intended especially for picking strawberries, and by its means a person may go through a field or garden and conveniently cut the stems of the berries which will thereupon fall into a receptacle provided for them, this receptacle forming part of the fruit-picker, and when the receptacle is full the berries may be dumped into a box for shipment.

**COTTON-COMPRESSOR.**—A. T. SNODGRASS, Patterson, La. The objects of this invention are, first, to provide a compressor in which all strains are at or near the bottom; second, to so arrange all levers and toggle-joints in such a manner that all strains will be exerted directly in the direction which will develop the most power to the upward motion of the movable platen; third, to construct a compressor whose leverage is so arranged as to develop the required power (say two thousand tons) through the means of a comparatively small actuating-cylinder.

**Of General Interest.**

**TRAP.**—A. L. FUQUA, Durham, N. C. The present invention refers to a trap of such organization as will admit of contents being drained by an operation which, in addition to draining the trap, cuts off completely its connection with the sewer, so that the device may be used either as a trap or stop-cock. This arrangement dispenses at will with the usual stopper or stop-cock of basins, tubs, and the like, and empties the trap to prevent freezing of the water seal and without exposing the apartments to the danger and nuisance of gases escaping from the sewer.

**TONGS.**—J. G. WINGER, Grand Valley, Pa. The device comprises a handle on which two peculiarly-arranged jaws are mounted, the structure being such that upon operating the handle the jaws may be caused to move toward or from the object being gripped, and these jaws coating with a gripper on the handle serve securely to hold the pipe, casing-collar, or other part against turning movements in either direction.

**BRIDLE-BIT.**—T. MILLIGAN, Fortuna, Cal. In the present patent the invention has reference to improvements in bridle-bits for horses, the inventor's object being the provision of a novel form of bit particularly adapted for controlling fractious horses with comparatively very little effort on the part of the driver.

**WIRE-STRETCHING DEVICE.**—W. D. MILLER, Saco, Mont. Mr. Miller's object in this invention is to provide novel details of construction for a wire-stretcher that are simple, practical, and inexpensive and that afford means for conveniently stretching and temporarily holding a fence-wire alongside of a post for its convenient attachment thereon.

**NIGHT-LAMP.**—R. P. GIBBS, New York, N. Y. The prime feature of the invention which relates particularly to a night lamp of that class which is adapted to contain oil which is burned through the medium of a wick floated on the surface of the oil, lies in the adaptation to such a lamp of the shell of a fish or other shell-bearing animal, such shell being made to contain oil, so that light is shed through the shell with the various colors thereof. This gives a very beautiful effect.

**LEATHER-POLISHING ROLL.**—W. H. GERRITY, New York, N. Y. The roll is formed of a number of disks secured side by side upon an axial shaft or other means, the disks being provided with spiral ribs, said disks being molded with a sunken portion inward from the peripheral portion, thus leaving out a relatively narrow belt to be ground away to fit the disks together, the disks being formed on a slight bevel, so that their meeting surfaces will lie diagonally of axis of the roller, and thus when roller is in operation its action covers any marks left by the meeting surfaces of disks, which marks might otherwise appear in case disks were placed on the shaft in true transverse plane.

**TERRET-RING FOR HARNESS.**—M. BRESNAHAN, Colby, and L. H. GAFFNEY, Greenbay, Wis. The object of this improvement is to provide means for positively controlling a horse or a team of horses, so that the animal or animals will be prevented from pulling forward upon the driving-reins beyond a predetermined limit and also to restrain them from tossing their heads upward or sidewise in attempts to bite each other while standing or in motion.

**FILE-HOLDER.**—C. ARMIJO, Las Cruces, New Mex. In this instance the invention has reference to file-holders, the inventor's object being the provision of a device for holding files of various kinds, and especially those designed for filing away canceled checks which are to be kept for a short time only and are to be taken out at intervals.

**Machines and Mechanical Devices.**

**HOISTING DEVICE.**—R. MCGAHEY, Walla Walla, Wash. The inventor has for his object the provision of novel details of construction for a device that adapt it for the convenient service for the elevation of material of different kinds and that render it especially well adapted for the hoisting of grain in bags and the piling of such packages of material in tiers for compact stowage in a warehouse in an expeditious and safe manner and effect the lowering and transfer of such material to a wagon or car.

**WASHING-MACHINE.**—D. B. D. BLAKE and W. F. BLAKE, Chicago, Ill. This invention relates to washing-machines, and more particularly to that type in which the tub is sustained for oscillatory movement upon a suitable supporting structure. The principal object is to provide a simple, inexpensive, and durable machine in which improved devices are provided for automatically returning the tub to its normal position after each movement thereof.

**MACHINE FOR FORMING WIRE LOOPS.**—H. P. WILSON, New York, N. Y. Mr. Wilson's invention pertains to improvements in machines for forming loops or eyes on the ends of wires—such, for instance, as wire bale-ties—an object being to provide a machine of this character by means of which the loops on wire ends may be rapidly formed and having means for automatically stopping the machine after forming the loops on a predetermined number of wires to form a bundle.

**APPARATUS FOR RAISING LIQUIDS.**—O. H. STAKEMANN, Christiansted, St. Croix Island, Danish West Indies. The apparatus is, especially designed for use in raising water from wells or other sources where ordinary pumps cannot be worked by windmills and other power not available at the particular point at which the wells are situated. It will be especially valuable where other power is already located at some distance from the source of water, as that can be used for compressing the air employed in this apparatus.

**Prime Movers and Their Accessories.**

**ROTARY BOILER.**—H. BROWN, 4 Herne Hill Mansions, Herne Hill, London, S. E., England. Mr. Brown's intention is to provide a boiler in which thorough circulation and agitation of water in the tubes is insured and burning or overheating of the tubes is prevented. The invention consists in mounting a tubulous boiler on trunnions and then rotating said boiler about its longitudinal axis over a furnace, the feed-water and the steam generated being led, respectively, to and from the boiler through a trunnion or trunnions.

**PACKING.**—C. G. HOLMBERG, Woonsocket, S. D. The object of the invention is to provide a packing, more especially designed for packing the pistons of engines—preferably such, for instance, as shown and described in the Letters Patent of the United States formerly granted to Mr. Holmberg—the packing being simple, easily applied, and arranged to yield in every direction to prevent leakage of the motive agent without creating undue friction.

**Railways and Their Accessories.**

**REGISTER-ACTUATING MECHANISM.**—W. W. JOHNSON, Memphis, Tenn. In this patent the invention refers to registers, and more particularly to the actuating mechanism thereof. The principal object is to provide an improved form of actuating-mechanism for registers used upon tram-cars and other public vehicles and also suitable for use in connection with all inclosures where it is desirable to register the entries of persons therein.

**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. 6689.**—For manufacturers of crates and boxes the size of "Octagon Soap" box.

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

**Inquiry No. 6690.**—For manufacturers of lead pencils with name and address stamped on it for advertising purposes.

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

**Inquiry No. 6691.**—Wanted, vapor bath cabinet with complete apparatus, and having outside heater.

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

**Inquiry No. 6692.**—For manufacturers of improved machinery for manufacture of peat.

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

**Inquiry No. 6693.**—Wanted, catalogue and information about broom manufacture, the materials, tools and machinery used; also address of manufacturers of broom-making machinery.

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

**Inquiry No. 6694.**—For names of a few large manufacturers of park benches or settees.

Wanted.—Schemes to use in connection with cash grocery business. Farmers' Supply Co., Iona, Mich.

**Inquiry No. 6695.**—For manufacturers of atmospheric turbines used in boring artesian wells.

Valuable Patent Rights For Sale.—A fly and mosquito gun. Rasmus Petersen, R.F.D., Asbury Park, N. J.

**Inquiry No. 6696.**—Wanted, address of a cotton candy machine company.

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. 6697.**—For manufacturers of small clutch pulley that makes one revolution then stops.

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

**Inquiry No. 6698.**—For manufacturers of cement plaster machinery.

In buying or selling patents money may be saved and time gained by writing Chas. A. Scott, 719 Mutua Life Building, Buffalo, New York.

**Inquiry No. 6699.**—For manufacturers of small rubber device for tobacco bags called "Squeeze-it."

We Manufacture on Contract anything in light Hardware. Write us for estimates. Edmonds-Metzel Mfg. Co., 143-153 South Jefferson Street, Chicago.

**Inquiry No. 6700.**—For manufacturers making a machine that will gum paper in rolls.

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. 6701.**—For manufacturers of a darning needle with point  $\frac{3}{8}$  inch long and no eye.

Have you found a manufacturer for your invention? Write now and send samples. New York Die and Model Works, 508 Pearl Street, New York.

**Inquiry No. 6702.**—For manufacturers of bicycle bells or gears and castings for same.

We manufacture anything in metal. Patented articles, metal stamping, dies, screw mach. work, etc. Metal Novelty Works, 43 Canal Street, Chicago.

**Inquiry No. 6703.**—For manufacturers of small hand machines for combing horses' hair to be used in mattresses.

The SCIENTIFIC AMERICAN SUPPLEMENT is publishing a practical series of illustrated articles on experimental electro-chemistry by N. Monroe Hopkins.

**Inquiry No. 6704.**—For manufacturers of isinglass, such as is used for stoves.

General Utilities Company, 299 Broadway, New York, offers unusual facilities for placing inventions and devices of merit before the public. Correspondence invited.

**Inquiry No. 6705.**—For manufacturers of "Pressure Tank" water works system.

WANTED.—Colonial silverware. Anyone wishing to sell any authentic silver made in this country during the eighteenth century, please communicate with C. A. M., Box 773, New York.

**Inquiry No. 6706.**—Wanted, information concerning cost of equipping a plant for electric lighting and power purposes, providing current enough for town of 25,000 or 50,000 inhabitants.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

**Inquiry No. 6707.**—For manufacturers of machines run by electricity or otherwise, for sand-papering floors laid in place in a building.

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. 6708.**—For manufacturers of accordion plaiting machines.

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. 6709.**—For manufacturer of article called "Squeeze it," marked patented November 23, 1903.

WANTED.—Representative to sell our spinning, weaving and batting machinery, by oldest firm in France and Germany. Grand prize awarded Paris Exposition. Address Steeg, 543 William Street, Buffalo.

**Inquiry No. 6710.**—Wanted, formula for making railroad torpedoes for placing on rail as a danger signal for approaching trains.

A Reliable Manufacturing Institution solicits the correspondence of parties desiring to sell patents of any useful mechanical article which could be manufactured and sold in conjunction with the Mill Supply and Belt-making business. F. Raniville Co., Pearl St., Grand Rapids, Mich.

**Inquiry No. 6711.**—For Eastern and Western manufacturers of barber's chairs, supplies and plate glass mirrors.



**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.

(9598) A. W. asks: Please give the formula for estimating cost per hour for a 16-candle-power incandescent lamp on a 110-volt, 5-ampere circuit, rate 15 cents per kilowatt per month. A 16-candle-power lamp may be taken to use 55 watts per hour. Multiply this number by the number of hours it is in use per month and divide by 1,000, and you will have the kilowatts used in a month.

(9599) G. G. K. asks: Would be pleased to have you answer this question: I wish to protect a house from lightning; house is roofed with shingles. It has a metal ridge board on the peak made from galvanized sheet steel strips 4 feet long and 11 inches wide, each strip extending over the last strip a few inches and all nailed to the roof. By placing points on this metallic ridge board and giving a good ground connection at two places so as to make a complete circuit over the building, would this give good protection from lightning? Please answer in Notes and Queries. A. The sheet metal ridge of your roof will be a very good starting point for a lightning rod. We should advise that you use heavy galvanized telegraph wire for the ground lines and run them down the edges of the roof so as to have all edges provided with a wire. Then make a good earth connection and you will be as well protected as possible. Points may be put on the ridge also.

(9600) T. W. A. asks: I have been making a dry battery which when it is just finished shows from 22 to 26 amperes, but after standing a while, say from 5 to 7 days, will only show 5 or 6 amperes. What is the cause of it, and how can I remedy it? The cell is of the ordinary size, 22 x 6 inches, made of a zinc can lined with paper soaked in a solution of water, sulphuric acid, and bichromate of potash, carbon in the center of can surrounded by a mixture of coke dust, bichromate of potash, sal-ammoniac, graphite, sulphuric acid, and water, all packed in tight and sealed at the top with tar. Would you kindly tell me how, if possible, it can be made so it will not lose its strength so soon? A. The cell you describe is not a dry cell at all. It polarizes and cannot be sealed up and left to itself. The bichromate of potash and the sulphuric acid should be left out, and the cell made to conform to the instructions for making dry cells. The sulphuric acid will act continuously on the zinc whether the cell is in use or not. A dry cell is one which may be left on open circuit without deterioration. Yours cannot be left in that way. We can furnish you full and accurate directions for making dry cells in the SCIENTIFIC AMERICAN SUPPLEMENT Nos. 1363 and 1387, price ten cents each.

(9601) A. S. asks: If a cubic hole were dug in the center of our earth about 8 x 8 x 8 feet, and a man could be in the hole, how would he know whether his head were up or down, or he were lying down or standing upright? A. If a man were in a hole at the center of the earth he would not know which direction was up or down; there would be no such thing as direction. This would be the case, without reference to the size of the hole, even if it were thousands of miles across. If the earth were hollow, a body anywhere in the hollow would be equally attracted in all directions and would lose the sensation of weight or gravitation. All directions would be the same to him.

(9602) M. F. F. asks: 1. How can you lacquer brass, and what is the preparation used to lacquer with? A. Lacquer is prepared from a nice grade of shellac, better from seed lac, by dissolving it in alcohol and adding some other substance to color or harden it. The article must be perfectly clean and should be warmed. The lacquer is applied with a brush. Full and detailed instructions may be found in our "Scientific American Cyclopaedia of Receipts," which we send for \$5. 2. A friend works in a telegraph office and he says his relays are wound in the same direction on both magnets and a telegraph sounder is wound differently. I think the relay is wound in different directions. Who is right? A. The direction of winding the magnets of a relay is of no consequence. They must, however, be connected so that the current circulates in one direction on one spool and in the other di-