RECENTLY PATENTED INVENTIONS.

Electrical Devices.

WATERPROOF ENTRANCE - BUSHING FOR WIRES.—W. B. HOPKINS, Providence, R. I. In this patent the invention relates to a device for running wires into buildings and closed spaces of various kinds without the possibility of water entering the conduits. The improvement also serves to prevent the abrasion of the wires and is provided with means whereby it may be readily mounted upon poles, buildings, etc., whereby the wires may be readily placed in position.

TOOL FOR INSERTING WIRES IN SLEEVES.—H. BEAUDETTE, Troy, N. Y. The invention pertains particularly to devices for use in forcing electric wires, such as trolley-wires, into coupling-sleeves, an object being to provide a tool for this purpose that will be simple in construction, inexpensive, and by means of which the wire ends may be easily inserted.

Of Interest to Farmers.

PLANTING ATTACHMENTS FOR PLOWS.—D. GORDON, Dallas, Texas. The purpose of this inventor is to provide a beam having adjustable supporting-wheels capable of being raised and lowered to bring the driving-wheels into engagement with the ground or raise them from it and to provide means for independently raising and lowering the driving-wheels to permit the plowshare to enter the ground more or less deeply and also to provide a simple driving connection between the driving-wheels and the seed-distributing device employed for planting.

POTATO-SORTER.—O. P. HALLOCK, Mattituck, N. Y. In this instance the aim of the invention is the provision of a new and improved sorter which is simple and durable in construction, very effective in operation, and arranged to sort the large potatoes from the smaller ones and to separate the dirt from the large potatoes.

STOCK-WATERING DEVICE. — F. C. MUDD, Ellisgrove, Ill. The object in this case is to provide an improved device arranged to pump water to a trough or like receptacle through the agency of the animal stepping up to the trough to drink. After drinking, the remaining water in the trough is automatically discharged, so that each animal receives its own fresh-water supply in the trough.

Of General Interest.

COASTING DEVICE.—W. F. CLARK and P. T. PERRAULT, North Adams, Mass. This device is especially adapted for the use of children. Upon the upper end of a standard, rising from a runner, a seat is carried. Placed upon the seat the rider grasps the sides, raises the shoes from the snow and slides upon the runner, maintaining a balance in a vertical position. Wear and tear upon shoes is largely saved by not touching them to the snow during coasting. It is possible to readily turn or to dismount to avoid collision.

CAMERA-SUPPORT.—M. GRAF, Tuckahoe, N. Y. The purpose here is to provide details of construction for a support which are practical and inexpensive, affording convenient means for quickly and reliably adjusting parts of the same to spread apart and hold the legs of a tripod at a desired degree of divergence and also enable the accurate adjustment of details for elevating, depressing, or leveling the body of the camera as may be necessary for its proper use.

DRAWING INSTRUMENT.—E. S. JOHNSON, Lincoln, Neb. This instrument is capable of use for drawing ellipses and circles of various sizes, and ellipses of all shapes and sizes within the limits prescribed by the length of the body piece, which can be made in sizes to suit needs, so that it can be used for drawing semicircles of any radius by the expedient of setting the two slides in contact at their contiguous edges, which brings the two points of attachment of the flexible connection into substantial coincidence. This connection adjusts in length at a projection through instrumentality of a spring and bar.

BRIDLE-BIT.—C. C. KING, Little Rock, Ark. This invention is in the nature of a bridle-bit for kicking, balking, or runaway horses; and it consists in the construction and arrangement of parts of the device whereby an extreme tension put upon the reins is made to so adjust the parts of the bit as to pinch and close the nostrils of the horse, and by cutting off his supply of air reduce him to subjection.

CHEEK-PLUMPER. OLIVE L. MAYES, Evanston, Wyo. In this patent the invention has reference to toilet articles for personal wear; and it consists of a packer or plumper for filling out the hollow of each cheek of the human face, thereby improving the personal appearance of the wearer under conditions the most comfortable.

SHIRT-WAIST HOLDER AND SKIRT-SUPPORTER.—FANNY K. OTTENHEIMER, New York, N. Y. The purpose in this instance is to provide a very simple, economic, and readily-applicable device which may be made independent of the shirt-waist and removably attached thereto and which may be detachably connected directly to the shirt-waist so that the device may be quickly and conveniently disconnected from the shirt-waist, enabling the latter to be laundered without obstruction.

TYPE CARRIER FOR CYLINDER PRESSES.—C. S. ROSIN, Tacoma, Wash. This improvement pertains to presses employed for printing wooden boxes and the like; and the object is to provide a carrier arranged with movable types, leads, spaces, border-bars, etc., to allow convenient changing of the subject-matter to be printed and to permit readily setting up the matter and attaching the carrier to the cylinder of the press.

DEVICE FOR DRYING THE HAIR.—LILLIAN SWAIN, New York, N. Y. This collapsible device has means for attachment to the shoulders and chest, the body portion being in the shape of one or more horizontal bows of a non-corrosive material and arranged when the device is upon the person to support the hair, spread, and hold it out from the point of juncture of the neck with the head, completely freeing the neck and permitting free passage of air around the neck and through the hair. The hair dries rapidly and uniformly, and the garments are protected from drippings.

CABINET.—D. J. SWEET, Pittsfield, Mass. Mr. Sweet's invention pertains to improvements in cabinets particularly adapted for holding envelops containing the pay of workmen in business establishments, an object being to provide a very simple and convenient means for assembling and delivering the wages of employes.

SUSPENDERS.—I. WECHSLER, New York, N. Y. The invention refers particularly to improvements in devices for attaching suspender-ends to the main straps or webs, the object being to provide an inexpensive attaching device so arranged that the button-engaging ends will yield with the swinging motion during the movements of the wearer's body, thus not only relieving strain on the suspenders, but relieving pressure on the shoulders.

Heating and Lighting.

COMBINED CRUCIBLE AND PREHEATER.—J. A. AUPPERLE, Indianapolis, Ind. In this patent the invention relates to crucibles and to apparatus used in connection therewith. Mr. Aupperle's more particular object in carrying out the improvement being to produce a preheater in combination with a certain type of crucible in which said preheater is supplied with purified air.

INCANDESCENT HYDROCARBON-LAMP.—S. GRANT and T. L. STEWART, Portland, Ore. The invention relates to improvements in lamps with a retort-vaporizer constructed to return the hydrocarbon-vapor to a point below fuel-inlet and on same side of lamp on which fuel-inlet is located, the feed-tube leading into a canopy and the feed-tube and the jet-tube being in the shape of a V, and both of said tubes being straight, or nearly so, so as to enable one to easily clean both of said tubes and to insert and renew the wire-gauze or other packing when needed.

BURNER.—A. G. KAUFMAN, New York, N. Y. In this patent the invention has reference to Bunsen burners; and its object is the provision of a new and improved burner which is simple and durable in construction and arranged to produce an exceedingly powerful heating-flame with a comparatively small amount of gas. The device may be utilized for various purposes; for instance it may be arranged as a soldering-iron.

Household Utilities.

COMBINATIONAL CHAIR.—D. HOECKE, New York, N. Y. This portable chair may be readily folded and admits of a considerable variety of uses. It can be adjusted into quite a number of different positions, so that its general purpose may be changed by gradations, thereby being able to serve as a couch or an ordinary rocking-chair, or it may partake to some extent of the characteristics of both a rocking-chair and a couch.

SINK-STRAINER.—H. G. LAWRENCE, Salt Lake City, Utah. The objects of this invention are to provide a strainer which shall be capable of application to any sink, which requires no change of the pipes in order to put it in place, which can be easily removed for cleaning purposes, and which can be manufactured at very small expense and be thoroughly efficient to accomplish the desired objects.

FLAT-IRON HEATER.—W. J. LE BARRON, Barre, Vt. In this patent the invention refers to means for temporarily incasing a plurality of flat-irons used for laundry purposes while they are subjected to heat radiating from the top of a stove, and has for its object to provide novel details of construction for a flat-iron heater which adapt it for very effective service and afford a neat, compact and inexpensive device.

MACHINE FOR SHAPING SAW-TEETH.—J. MCMASTER and D. D. MCMASTER, Seattle, Wash. The invention relates to a machine for shaping saw-teeth, and more particularly to a type of machine especially suitable for shaping the teeth of circular saws while in motion. The invention permits of quite a number of adjustments. Files may be adjusted so that the saw-teeth are rendered uniform in length and thickness. The operation may be readily performed after the teeth have been swaged for sharpening.

WINDOW CONTROLLER AND LOCK.—G. MCDOWELL, New York, N. Y. The purpose here is to provide a device adapted for attachment to the meeting-rail of the lower sash, for example, and for frictional binding and locking engagement with a side rail of the upper sash, so that the two sashes may be locked together, though opened at the top and bottom to any desired extent. A further purpose is to construct the device so that either sash may be independently operated and so that, further, when the two sashes have been closed in the window frame the device will automatically act to lock and secure the sashes in their closed position.

Railways and Their Accessories.

APPARATUS FOR LOADING GRAIN-CARS.—E. L. ADAMS and A. C. ADAMS, Edgar, Neb. The purpose of the inventors is to provide a simple, durable, and economic form of apparatus especially adapted for loading grain into cars and to so construct the supply-head of the apparatus that the grain can be directed to any point in a car, so as to produce an automatic leveling of the grain and obviate the usual manual labor required for such purpose.

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(9459) E. G. S. asks: What is meant by cutting lines of magnetic force? A. To answer your inquiries, which really cover almost the entire field of electrical science, we will begin with the last, which should have been first. We recommend and can furnish you with Swoope's "Lessons in Practical Electricity," price $2, by the study of which all the questions which you ask will be answered and many others which you will need to know before you will be an intelligent worker in electrical work. 1. Lines of magnetic force (Swoope, page 14) are a very useful invention to express the strength of a place in the region affected by a magnet. A certain magnetic strength is said to be equal to 1 line of force, because a magnet pole would be pulled there with a certain force. 1,000 lines mean 1,000 times the pull on a magnet of the same strength. The strength of all magnets is represented by these lines. They are not real lines, any more than the equator of the earth is a real line; they are a very convenient invention to express magnetic force. When a coil or piece of wire passes through a place affected by a magnet the wire is said to cut the lines of force of that magnet. 2. Which are the positive and negative poles of a zinc and carbon cell? A. The end of the zinc which projects out of a battery cell is the negative pole, and the end of the carbon which projects out of the cell is the positive pole of the cell. (Swoope, page 54.) 3. Why does a current have to flow back to a cell again? That is, why does not one wire do just as well as two—one wire having both ends split for contact? A. A connection of the plates outside of the liquid of a cell is necessary to produce electricity in the cell by chemical action of the liquid on the zinc plate or rod in the liquid. Why this is so is not easy of explanation, nor is it necessary to know the reason, in order to know the fact. 4. How do you attach a wire, and of which pole from a battery to charge a Leyden jar? A. You cannot charge a Leyden jar from a chemical battery of cells unless you have many thousands of cells connected in series. Then you would connect the positive pole to one coating of the jar and the other coating to the negative pole of the battery and the jar would be charged. There is not electrical pressure enough in a few cells to drive electricity into a Leyden jar so as to produce a spark from the jar. 5. If a thick copper wire carries electricity easier and with less resistance than a thin one, why are thin ones used for bell work? A. Thin wires are used for bell work because they cost much less than thick ones and will do the work just as well by using some more cells on the line. The reason for using thin wires instead of thicker ones in any place is one of cost. It is cheaper to furnish battery than to pay for copper. But very thin wires are not used for bell work. They would require too many cells for economy. A balance is struck by using a wire about No. 18, not too thin nor too thick. 6. If two wires are heavily charged, that is dangerous to touch, how could an arc or incandescent lamp be connected to same without shutting off current and without getting a shock? A. If wires are carrying a heavy current it is not possible to touch them without danger of shock. Wiremen wear rubber gloves, and use rubber handled nippers for such work. 7. How can a person without any knowledge whatever of electricity know which wires are dangerous and which are not? A. No one with or without knowledge of electricity can tell whether a wire is safe by looking at it simply. 8. If street railway rails are connected by copper wires at the joints, with feed wire suspended above the street and also another small wire above each feed wire, which takes the return current back to the power house—the wire above the feed wire, or the rails; and if not the rails, why are the joints of rails connected by copper wires? A. The small wires above the trolley wire of a street railway line are for the purpose of preventing any outside wire which may happen to fall upon the line, from striking the trolley wire. They carry no electricity. The rails carry the return current through the wires which connect them. 9. What is meant by induction? A. Induction (Swoope, page 293) is the influence a wire carrying a current