

RECENTLY PATENTED INVENTIONS.

The patents described in this department have been secured through the Scientific American Patent Agency, 361 Broadway, New York, N. Y.

Electrical Devices.

ELECTRICAL HOIST.—G. RASMUS, New York, N. Y. The object is this case is to provide an electric hoist having an electric motor provided with a revoluble armature and a revoluble field, the latter being driven from the armature and forming the hoisting drum, so that the apparatus takes up very little room, requires no brake mechanism and is exceedingly serviceable for use in overhead traveling cranes.

TELEPHONE-RECEIVER SUPPORT.—M. M. KAHN, Louisville, Ky. This invention illustrates a very simple and serviceable device for use in supporting a telephone receiver in proper position near the transmitter so as to leave the hand of the user free. The device comprises an ingenious series of connected members, the inner end being attachable to the arm of an ordinary telephone transmitter and at the outer end a standard is provided the top of which forms a seat for the receiver and the foot of which is adapted to rest on a desk or other convenient support.

ELECTRIC RAILROAD-SIGNAL.—T. C. FOGARTY, F. W. BROCK, and F. A. BOWDLE, Chatham, Ill. The improvement is in the nature of a novel construction and arrangement of block signal systems and relates especially to that form of signal systems adapted for electric railroads in which a continuous feed wire carrying an operating circuit of 650 volts is employed. The invention consists in the construction and arrangement of the switch and switch operating devices controlled by the passage of the car.

Of Interest to Farmers.

SEED-CLEANER.—J. H. HEMPEN, Alexandria, La. This invention is particularly useful in connection with apparatus for cleaning and freeing from foreign substances, cotton-seed, rice, wheat, corn, and other grain. The cleanser frees the seed from chaff and trash, as well as from particles of foreign matter or other impurities of higher specific gravity than the seed. It is automatic in action, and adjustable for use in cleansing seeds or granular material, and in which impurities capable of magnetic attraction are removed from the material by means of an electric magnet.

DRAFT DEVICE FOR PLOWS.—A. J. MINOR, Canton, S. D. The invention relates to draft devices, and especially to such devices when used for drawing plows. More specifically, to draft mechanism of this kind which is constructed so as to enable the animals to be hitched to the plow out of alignment with the plowshare, a construction being provided which tends to prevent side draft. Thus, the plow will continue in a straight line although the pulling force is applied at a laterally displaced point. The construction facilitates adjustment of the device to suit the pulling force.

Of General Interest.

BOTTLE-NECK AND CLOSURE THEREFOR.—A. McCAMBRIDGE, Williamstown, N. J. The purpose in this case is to provide details of construction for a bottle neck and closure which are very simple, and that when assembled after the bottle has been filled, will permit the free out-pouring of the liquid contents of the bottle but prevent refilling of the bottle.

CARD-HOLDER.—P. M. MATHESON, San Juan, Porto Rico. The holder is used in affixing price marks to clothing and articles in show windows, etc. The device is constructed of a single piece of wire by bending it to a point intermediate its length to provide a head, with the free ends of the wire brought together and arranged side by side, one of which is formed with a pointed extremity to provide a pin, and the other bent upon itself in a plane at right-angles to the plane of the head to produce a hook for engaging and holding the card.

SHAVING-MUG.—T. D. McKOWN, Pittsburg, Ga. One of the objects of the invention is to provide a simple and inexpensive mug, in which a soap holder is provided with a water-jacket serving to keep the soap suds from drying out when the mug is being used, and so constructed that the entire device can be easily and thoroughly cleaned.

RECEPTACLE-HOLDER.—C. C. LITTLE, San Jose, Cal. The holder is for use in holding cups, glasses and other like receptacles more especially constructed for the use of water color painters in outdoor sketching, and is adapted to be applied to the cross bar of an easel or other support in a manner to carry the glass in an upright position. There is a seat provided for the glass, and means for embracing the body thereof when placed on the seat, and for attaching the holder to a support.

Hardware.

WINDOW-LOCK.—L. G. MILLER, New York, N. Y. The invention relates more particularly to that type of lock which includes a locking member secured to one sash, and a keeper or casing on the other sash, adapted to engage with one end of the locking member to retain

the two sashes in engagement with each other and prevent the window from being opened.

Heating and Lighting.

GAS-MANTLE SUPPORT.—C. J. BARTON, Big Rapids, Mich. The so-called gas mantles attached to gas burners for intensifying the brilliancy of the flame, are very brittle and liable to be cracked or broken off when jarred or otherwise set suddenly in vibration. To avoid this result, and thus prolong the "life" of such mantles, the inventor has devised an improved means for supporting them from a burner.

Household Utilities.

WRINGER.—D. A. SAWYERS, Unionville, Iowa. The invention is particularly useful in connection with devices used for wringing out mops, wash-rags, and the like. An object is to provide a wringer arranged to be moved from place to place, having a frame adapted to support a receptacle such as a pail, and provided with means for wringing out mops, wash-rags, and the like.

TABLE.—A. B. PHELAN, Alliance, Neb. This invention relates more particularly to improvements in that type of table in which there is provided a compartment beneath the top thereof which may be uncovered by moving said top. The compartment may be employed for the storage of kitchen or table articles, or may, if desired, be employed as a sink.

WASTE-PIPE CLEANER.—W. T. LISENEY, Longbeach, Cal. The invention is an improvement in waste pipe cleaners, having among other objects, the provision of an effective means for instantly unchoking and cleansing waste pipes which become clogged with paper, grease, or other foreign substance. Means are provided whereby as the piston is reciprocated any material which might become lodged in the pipes is positively forced out.

COMBINED CLOTHES AND CLOTHES-PIN RECEPTACLE.—W. H. CARPENTER, Lehr, N. D. The receptacle is adapted to be carried upon the person for use in hanging clothes upon or removing them from a line. The inventor's aim is to provide an inexpensive and simple receptacle of separate compartments, adapted to be hung by means of suitable straps from the shoulders of the user.

Machines and Mechanical Devices.

SELF-LUBRICATING SHAFT.—E. L. WOOD, Long Island City, N. Y. There is difficulty in lubricating shafting revolving at high velocities, because centrifugal force repels the oil. Mr. Wood puts the oil inside. This has been before proposed but he has made improvements which are radical and important. He provides convenient and reliable means of insuring a slow discharge under all conditions, with an increased rate of discharge when the shaft is revolved.

HYDRAULIC PRESS.—T. E. HOLMES, 8 Oakdale Road, Nether Edge, Sheffield, England. This invention pertains to hydraulic forging presses and the like worked by means of steam hydraulic intensifier apparatus, and wherein the valves for controlling the admission and exhaust of steam to and from the intensifier and lifting cylinders and for controlling the connections between the air vessel and the high pressure hydraulic system are all controlled by a single hand lever.

FRICTION-CLUTCH.—H. N. DAVIS, Independence, Mo. The object of the invention is to provide a clutch very effective and practically noiseless, and arranged to automatically connect the driving member with the member to be driven, as long as the driving member rotates in a forward direction, and to immediately and automatically release the driven member as soon as the forward motion of the driving member ceases or the driving member runs in a reverse direction.

AIR-LOCK FOR MINES AND TUNNELS.—P. H. DURACK, El Paso, Tex. In carrying out the invention two air locks are provided, one being located near the mouth of the mine shaft or tunnel, and another being placed contiguous to the heading or foot of the shaft or tunnel; and two pipes are arranged in the shaft or tunnel, one for conducting fresh air into the same and the other for removing foul air and water therefrom.

SOUND-REPRODUCING MACHINE.—J. SCHWAN, New York, N. Y. The machine is constructed as a permanent part of a support having a flat top and in the nature of a table, and the machine casing is movably supported below the top. The support is provided with a number of horns radiating to its border and connecting with the horn of the machine, which serve to uniformly distribute the sound waves throughout the room. Thus the ordinary use of the support as a table is not impaired, and the machine, which is to many an unsightly object, is concealed and protected from dust.

SELF-CONTROLLING DEVICE FOR NOTE-SHEETS.—H. MEYER, New York, N. Y. The object of the invention is to provide a device, more especially designed for causing the note sheet to travel at a uniform speed by rotating the winding up roller at a speed decreasing in proportion as the sheet winds up on the winding up roller, thus compensating for the increase in peripheral speed by the increasing thickness of the note sheet roll on the winding up roller.

PNEUMATIC ACTION.—H. MEYER, New York, N. Y. The invention relates to self-players, self-playing pianos, and like musical instruments, and its object is to provide a pneumatic action which is very compact, not liable to get out of order, and arranged to allow convenient and minute adjustment of the valve from the outside, to render the action exceedingly sensitive.

DOOR OPENER AND CLOSER.—P. D. GALARNEAU and W. S. NEWTON, East St. Louis, Ill. The construction of this device embodies a line having two branches, one of which is attached directly to the door and the other passing to the door lock and connected therewith in such a manner that when the line is pulled the door if locked and closed will be unlocked and then opened, or if the door be opened, a pull on the line will close it.

Prime Movers and Their Accessories.

VALVE MECHANISM FOR ENGINES.—W. L. WAYRYNEN, Dolph, S. D. One of the objects in this invention is the provision of means whereby the exhaust valve is automatically opened at the end of the exhaust stroke and held open by the escaping gas while the piston is completing its exhaust stroke.

GAS-ENGINE IGNITER.—W. C. PLANZ, Las Flores, Lower California, Mexico. This invention relates to improvements in ignition devices for use in internal combustion engines, and more particularly to that type of ignition device in which a small portion of the explosive charge is compressed in the ignition cylinder to such a pressure that it spontaneously ignites and serves for igniting the main charge in the main engine cylinder.

ELASTIC-FLUID BURNER.—W. F. LEES, H. A. LEES, and C. W. GRISE, San Diego, Cal. The invention refers to elastic fluid turbines, the more particular object being to produce a turbine operated by the expansive force of gases, such as are produced by the explosion of heavy or light crude oil, petroleum refuse, anthracite, and bituminous gases, water and coal gases, benzene, gasoline, ethylene, marsh gas, natural gas, acetylene gas, semi-water gas, producer gas, various hydrocarbon gases, and alcohol.

Railways and Their Accessories.

ADJUSTABLE EXHAUST FOR LOCOMOTIVES.—H. H. MACKEY, Durand, Mich. In the present patent the object of the invention is the provision of a new and improved adjustable exhaust for locomotives, arranged to control the draft of the boiler, according to the work done at the time by the engine, so as to save fuel.

CAR-REPLACER.—W. M. KITCHEN, Havana, Fla. In operation the derailed car is moved forward until the flanges of the wheels engage the inclined faces of the integral flanges. Continued movement of the car forces the wheels toward the rails, and as the flanges engage the friction rollers, they trip the wheels, dropping them onto the rails with flanges in proper position. The plates are laid flat upon the ties, and engagement of the groove of one of two plates with the rail retains the other in place, and the latter is retained in place by weight of derailed car, the flange of the first mentioned plate receiving the greater stress.

Pertaining to Recreation.

TOY.—A. E. WOOLNOUGH, New York, N. Y. The invention relates to dolls, bears, and similar figure toys, having movable members such as legs or arms, and its object is to provide a toy arranged to allow of turning any one of the movable members independent of the others, and to hold the movable members firmly in any adjusted position, and to produce sounds within the body of the toy on turning any one of the movable members.

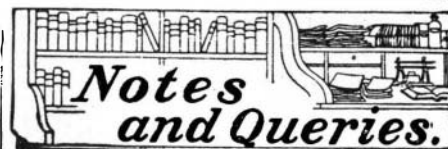
FISHING-FLOAT.—W. VON ROSENBERG, JR., Austin, Tex. The inventor has for his object the construction of a float, the attachment and detachment of which may be effected with great facility; and further to improve the float, or rather its attaching means, to the end that when the line is subjected to undue strain, as when the hook or sinker is snagged, that the line will not be subjected to a breaking strain at the float, in response to its tendency to assume a straight direction under the tension exerted on the line.

PUZZLE.—G. CHAPMAN, Arlington, N. J. The object in this instance is the provision of a puzzle embodying a movable body and a certain defined course or path over which the body is to be moved, the body and path being screened from the direct view of the operator who observes them only through the reflection of a mirror, whereby the natural order of things is reversed.

Pertaining to Vehicles.

ROLLER.—J. M. BRALY, Villapark, N. J. The invention is particularly useful in connection with road and lawn rollers as well as rollers for other purposes. One object is to provide an inexpensive roller having a smooth and hard rolling surface, and so constructed that the height of the roller is suitably proportioned to the weight thereof, to render the device most efficient.

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.



HINTS TO CORRESPONDENTS.

Full hints to correspondents were printed at the head of this column in the issue of August 8th, or will be sent by mail on request.

(10863) P. M. says: I am a high-school boy, and a friend of mine and I want to construct a wireless telegraph. Our homes are about one mile apart and we want to know if it would be possible to construct one at a reasonable cost. 1. Would thunderstorms cause any trouble; i. e., if lightning struck the pole what would happen? 2. About how high would the poles have to be? 3. Have there been any articles in the SUPPLEMENT telling how to construct a simple wireless telegraph? 4. Could you refer us to a few good books on the subject obtainable at a public library? A. We can furnish you SUPPLEMENT No. 1363, price ten cents, which contains a full description of a set of wireless telegraph apparatus for sending one mile. A larger set is described in SUPPLEMENT No. 1605, with full instructions for setting up and tuning a station, in SUPPLEMENT Nos. 1622, 1624, 1625, at ten cents each. These will give you the principal points which you will require to know. Of course a thunder-storm, or lightning, will do to the aerial for the wireless telegraph just what it will do to any other tall object which it strikes. The apparatus must be provided with a reliable lightning arrester. The aerial is always provided with a good ground. It is indispensable. Perhaps an aerial 18 feet above the house top will answer for a mile transmission. We would name good books for your study, Collins's "Wireless Telegraphy," price \$3.00; Mavor's "Wireless Telegraphy," price \$3.00; Collins's "Manual for Operators," price \$1.50. We shall be glad to furnish any or all of these books upon order.

(10864) H. H. F. says: Having studied the question from all sides, I should like to know what reason there is for not using a vertical open front engine on sidewheel steamers. According to several engineers on sidewheel vessels, this type of engine could be used to good advantage by simply placing the machine across the beam of the ship instead of fore and aft, swinging the shaft a little lower and placing the cylinders well up in the housing. It is a well-known fact that inclined engines wear on the underside of all the parts of cylinders, slides, piston, making it hard to keep them in good shape. In using a vertical engine, all this would be done away with, and these advantages gained: Economy of space, compactness, even running and wearing of parts, accessibility of parts, dynamos could be placed in engine room, less vibration. A. We are doubtful if the use of vertical engines with cylinders above the shaft would effect either of the first two or the last of the advantages you claim for it in sidewheel steamers (economy of space, compactness, or reduced vibration). There might be some economy of hold space by having the cylinders vertical instead of inclined, but this would be at the expense of deck or cabin space. The larger the diameter of the paddle wheel the greater its leverage, and consequently the greater the height of the shaft above waterline, and lowering of the shaft would reduce this leverage. The principal objection to superimposed vertical cylinders, however, would be the raising of the center of gravity of the boat higher above the center of buoyancy, tending to topheaviness, and the use of horizontal or inclined engines is with a view to keeping the center of gravity of the boat as low as possible to give increased stability. For this reason if vertical cylinders were used it would be better to have them below than above the shaft. Another objection to vertical cylinders in a sidewheel steamer is the increased tendency to roll in a beam sea due to the alternate vertical thrust of the pistons on opposite ends of the shaft, whereas the alternate thrust in a fore-and-aft direction has no such tendency and only causes an uncomfortable vibration in over-engined boats.

(10865) E. B. M. says: I, as well as several friends, am obliged by our business to go into out-of-the-way regions where the need may possibly arise to use a revolver against a "heathen." Perhaps your valuable columns may settle a discussion which has arisen. 1. Which has the greater penetration and muzzle velocity—one of the modern smokeless-powder automatic revolvers such as the Mauser or the Colt 32- or 38-caliber automatic, or a heavy "frontier" 44- or 45-caliber revolver using black powder? A. The small-bore automatic pistols using high-explosive smokeless powder are beautiful pieces of mechanism and have undoubtedly both higher penetration and muzzle velocity than the older and larger-bore weapons using black powder, but for self-preservation in emergency commend us by all means to the latter, for the following reasons: If you wish to see how far into a boiler plate or how far up the grain of a log of wood you can shoot, the small-bore, high-explosive weapon is preferable; if, again, you are sitting in a fort or other cover and you have no weapon but a pistol with which to pick off as large a number as