RECENTLY PATENTED INVENTIONS.

Railway Appliances.

SIGNALING APPARATUS. — George B. Williams, Portland, Oregon. This invention provides a conductor's signaling valve in which the exhaust from the signaling pipe is automatically regulated by means of a trigger device, with other novel features, forming a simple and durable apparatus designed to transmit accurately and promptly signals from the conductor to the engineer of a train by means of compressed air, the apparatus being also adapted for employment in signaling work with stationary plant.

RAILWAY RAIL FASTENING.—Thomas J. Bush, Lexington, Ky. By this invention, diagonal intersecting holes are bored in the tie to receive interlocking bolts which pass through sloping clamp plates and through slotted plates on top of the tie, thus affording a uniform and level foundation for the rail, which is prevented from settling into the tie and shifting out of gauge.

DIE FOR MAKING BOLTS. — The same inventor has also obtained a patent for a machine for making interlocking bolts, such as required in this rail fastening, the machine comprising a die and a punch or mandrel to face off and recess the end of the bolt to form a locking shoulder, the invention being an improvement on a former patented invention of the same patentee.

ELEVATED RAILROAD. — John N. Valley, Jersey City, N. J. Two patents have been granted this inventor for structures adapted for passenger or freight carrying purposes, and also for use in timber lands for getting out logs, or in mines, etc., the improvements relating mainly to the mode of suspending and bracing the track rail from a stringer sustained by struts, and in a method of laying or fastening the track rail sections on the sleeper to maintain its straightness both ways, for promoting greater ease of travel of a carriage or trolley and giving increased durability to the entire structure.

Electrical.

POTENTIAL REGULATOR. — Alvirus L. Ellis, Kansas City, Mo. A pair of electric motors is connected with the potential controlling devices and with the main circuit, and a circuit controlling magnet and armature are arranged to send the current to one or the other of the motors, thus operating the potential controlling device in accordance with the requirements of the circuit, the arrangement being applicable in a circuit carrying either a direct or an alternating current.

Agricultural.

POTATO PLANTER.—Ferdinand Storck, Buena Vista, Col. In this frame a vertically adjustable standard carries a plow with which is connected a seed tube, while there are adjustable covering plows in the rear of the main plow, with other novel features, by means of which potatoes may be planted in a straight line and with the hills at equal distances apart.

PLOW AND FERTILIZER DISTRIBUTER. —Silamon McLean, Mineral Springs, S. C. In this machine the fertilizer hopper is independent of the plow beam, and may be readily removed therefrom, while the distributing section in use normally sustains all the weight of the fertilizer, and the plows may be raised and lowered at the will of the operator, the machine being adapted to distribute either damp or dry fertilizer, placing the material at the bottom of the furrow and thoroughly incorporating it with the soil.

COTTON STALK PULLER. — Lewis L. Womack, Zephyr, Texas. This machine has a pulling wheel journaled near the ground on the lower end of a short vertical axle, and operated by gearing from the main horizontal axle, the stalks being received between teeth and the rim of the wheel, and as the machine advances, the stalks are pulled up and discharged at the rear of the machine.

CHURN. — James McBride, Bavington, Pa. This invention covers an improvement in what are known as "barrel churns," and provides a churn that may be easily operated, in which the cream may be readily placed and removed, and which is designed to quickly and thoroughly do its work, the body of the churn being given an end over end motion if desired, or rotated in a horizontal position.

CATTLE STANCHION.—The same inventor has obtained a patent for a stanchion to which an animal may be quickly and readily secured, while at the same time great freedom of movement is allowed, means being provided in connection therewith for preventing the animal from fouling the floor of the stall.

HAY PRESS. — John B. Foresman, Foresman, Ind. In connection with the baling chamber is a revolving feeding chamber, feeding rollers lying near the edges of feeding wings and forcing material into the baling chamber, the baling operation being continuous, and the bales of hay and straw being compacted and banded and automatically ejected from the machine.

Miscellaneous.

BRUSH SCRAPER FOR PAINT PAILS.—David F. Brown, Omaha, Neb. This is an attachment adapted to clamp the edges of the bucket, and made of spring wire, having an inner scraper portion and an exterior clamping portion with spring bows which engage the rim of the pail or bucket.

SAMPLE CASE —Henry Noee, Chicago, Ill. This is a case for the display of carpet samples, providing for the arrangement of a large number of various patterns within a small compass, the samples being readily changed, and arranged for display by turning them over as the leaves of a book, without liability of scattering or soiling them.

BURIAL APPARATUS.—Nicholas Brickell, Poplar Grove, Ark. A knock-down frame is adapted to be placed over a grave, with parallel tracks, and a carriage forming a bier running on the tracks to receive the coffin, the carriage having pivoted handles, to facilitate lowering a coffin or casket to the bottom of a vault or a grave.

ATOMIZER. — Edward T. Kassel, New York City. This is a device for spraying perfumery and antiseptic or other liquids, for toilet, medicinal, or surgical uses, the device allowing strictly localized applications of antiseptic or other fluids by one hand of a surgeon while leaving his other hand free to perform an operation.

FOUNTAIN INKSTAND. — James V. Bergen, Austin, Texas. This invention provides an attachment for inkstands designed to be simple and durable in construction, and by means of which the ink is confined in air and dust proof reservoir which can be easily cleaned when desired, the operator only having to remove a cover to get at all the parts.

ADJUSTABLE BOOK REST.—Charles W. Becannon, New York City. This support has a foot piece attached thereto by hinges, the lower edge of the support having a ledge to serve as a stop for the book, and the support being provided with triangular bails of different sizes hinged to its back or lower surface, whereby it may be set at any desired angle, the device being also adapted for use as a writing desk or table.

ADDING MACHINE.—Gideon B. Massey, Mamaroneck, N. Y. (deceased, Sarah R. Massey and Stanley A. Bryant, administrators). A series of number wheels are operated simultaneously by slides having numbers corresponding to those on the wheel, there being also a "carrying" mechanism, and a novel printing and paper feeding mechanism, for obtaining an accurate total of a series of large numbers, so that the total and the sum added are recorded every time an addition is made.

CASH REGISTER. — This is another patented invention of the same inventor for the construction of a check-printing machine which will print, number, and cut off checks in succession, and at the same time produce a continuous record of the numbers of the checks, an indicator being provided for showing the position of the check-numbering wheels.

AUTOMATIC WEIGHER AND PACKER. —John A. Ostenberg, Des Moines, Iowa. This is a machine for weighing starch, spices, and similar material, and discharging it into boxes, bags, or other packages, a standard carrying a sleeve with a series of weighing scales, while a circular hopper discharges through shaker spouts into the boxes of the scales, and a mechanism is provided for shutting off the supply of material when the proper amount has been fed.

TRANSPOSING KEY BOARD. — Anders Holmstrom, New York City. Combined with a movable transposing key board is a latch device, allowing the key board to be latched when adjusted to any desired position, preventing accidental movement and holding the keys in proper relation to the action stems for playing the instrument, and allowing change of pitch of tone for obtaining different musical effects by fingering the same keys.

STREET LETTER BOX. — Ira G. Lane, New York City. This is a box designed to be entirely of iron and having a neatly finished connection with the ordinary lamp post, with a top hood forming a newspaper or package compartment, and a hinged drop lid provided with a swinging tray, while the discharge opening is partly in the front and partly in the bottom, the front and bottom doors being coupled together for simultaneous operation.

HOUSE DOOR LETTER BOX. — This is another patent by the same inventor for a box to be placed on the inside of a door or partition wall, and provided with an interior bar to prevent abstraction of mail from or at the drop lid or inlet opening, and also to facilitate the passage of mail into the box, while an alarm device is connected with the box to give notice whenever the drop lid is opened.

MEAT HOLDER. — Robert W. Randle, Portland, Ind. This is a device adapted to hold a ham or joint of meat while being carved, having a series of upright fixed clamping fingers, and a pivoted and adjustable clamping arm, with a lever for closing the latter toward the fingers, and a catch to hold it when closed, there being a removable cover inclosing the whole, and a ventilating screen.

MEASURING VESSEL.—Henry W. Laun, Englewood, Ill. This is a transparent vessel protected by a jacket, whereby liquids may be measured without the use of an additional measuring cup, there being a graduated scale on the side of the liquid receptacle, and a faucet partly in its bottom and partly in its side.

CLOTHES DRIER. — Mary L. W. Martinot, New York City. This device consists of a square drying chamber, having a heat flue in the bottom and outlets in the top, with parallel slideways on its inner walls, and clothes-holding trays formed of slats, and other novel features, being especially adapted for use with oil or gas stoves, etc., providing means whereby clothes may be quickly dried indoors without danger from too much heat.

WATER CONDUCTOR FOR TURBINES.—John Graham, Minneapolis, Minn. This conductor has a siphon pipe inserted in the water reservoir, a novel description of readily operated valve at the mouth of the pipe beneath the water level, a vent valve at the top of the siphon, a pipe from the trunk pipe below the head on the long leg of the siphon connecting with a suitable pump, and a gate valve at the lower end of the trunk, where water is supplied to the turbine.

FORCE PUMP.—Frederick F. Danaher, Brooklyn, N. Y. This is an improvement in that class of devices known as plumbers' force pumps, designed for convenient and expeditious application to a sink, or for other uses of a similar nature, the invention covering a novel construction and combination of parts.

TREATING POTASSIC SALTS. — Bernhard Peitzsch, Stassfurt, Germany. This invention consists of a process of treating potassic raw salts, as found in a mineral state at Stassfurt, to manufacture therefrom potash, soda, hydrochloric acid, magnesia, gypsum, and sulphur or sulphuric acid, the process allowing of the direct manufacture, without any waste products.

DISINFECTING PAVING COMPOSITION. —John Fottrell, New York City. This invention provides for the use of carbolic acid in connection with a body of Portland or any suitable cement, the acid being thoroughly mixed with the cement in proportions varying according to the locality where such pavement is to be laid, after which the cement is applied, mixed with water, in the usual way.

BICYCLE CRANK. — William Blakely, Bournemouth West, England. The crank arm is formed of a shell of stamped steel plates clamped upon a wood core, the axle journals being fluted and the flutes filled with agate or other hard material, while the metal shell has an eye notched to correspond with the flutes of the axle, the construction forming a light and very stiff shaft or axle, not likely to spring or bend under the weight of a heavy rider.

CHECK HOOK. — Karl G. Bareis, Madison, Wis. This invention consists of a hollow post adapted to be secured to the back pad or saddle of the harness, with an arm to be opened or closed on the post to insert and retain the check rein in place, making a simple and efficient device, which is ornamental in appearance.

VEHICLE POLE ATTACHMENT.—Henry W. Roberts, Duncan, Mich. A spring-pressed bolt is fitted to slide in a post on the holdback, the base plate of which the bolt is adapted to engage, forming a safety attachment designed to conveniently and securely fasten the ring of the neck yoke to the holdback of the pole or release it when desired.

DUMPING CART. — Timothy Flanigan, Chicago, Ill. This is a cart especially designed to carry garbage and half-liquid substances, as well as for ordinary purposes, the closed dumping body on the frame in the rear of the seat having a door, with a locking mechanism, and there being a connection leading from the lock to the driver's seat.

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Notes & Queries

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(2856) F. P. R. asks: What substance will make gold leaves adhere permanently to paper, and what is the mode of its appliance? A. Glaire, which is pure albumen, is sometimes used. It is made by shaking up the white of an egg with a few drops of ammonia, and drawing off the clear liquid, which has subsided on standing. This is painted on the lines, and by slight heat, as of a hot iron, the leaf adheres. Gold size is used on thick paper, or thick gum arabic water may be used. The illuminators of to-day cannot get as good results as did the old workers of the middle ages. The old gilding is never equaled now.

(2857) D. B. P. asks: What preparation is suitable to be placed on boxwood, for the purpose of photographing on, preparatory to engraving? A. See SCIENTIFIC AMERICAN SUPPLEMENT, No. 576, page 9203, for formula and particulars.

(2858) H. G. L. asks: What is the law for the magnetic field? A. The field developed by an electro-magnet varies directly as the current strength and directly as the number of convolutions of wire.

(2859) I. S. B. asks for a formula for making corn remedy, either liquid or plaster.

A.	Salicylic acid 30	grains	gr. xxx.
	Cannabis Indica (Indian hemp).....	5 grains	gr. v.
	Castor oil.....	½ drachm	ʒ ss.
	Collodion..	½ ounce	℥ ss.

Mix and apply morning and evening for four days. Then soak the feet in warm water. If this be done faithfully, the corns are removed without any difficulty. 2. How is sticking plaster made, such as surgeons use for drawing together the edges of wounds? A. Adhesive plaster:

Litharge.	5 ounces	℥ v.
Olive oil.....	12 ounces	℥ xii.
Water.....	8 ounces	ʒ viii.

Put the water and litharge into a copper pan. Mix together with a spatula, add the oil, and boil, stirring constantly. This process takes from 4 to 5 hours, but it can be hastened to 20 or 30 minutes by adding an ounce of colorless vinegar. To make resin or strapping plaster, used in retaining the lips of recent cuts and wounds in contact: Mix by a moderate heat 1 ounce of resin to 5 ounces of litharge plaster (as given above) and spread upon muslin. 3. How is court plaster made? A. Bruise a sufficient quantity of isinglass, let it soak in a little warm water for 24 hours, expose it to heat over the fire