RECENTLY PATENTED INVENTIONS.

Railway Appliances.

CAR FENDER.—Sylvanus D. Wright, New York City. The object of the invention is to provide a new and improved car fender which is comparatively simple and durable in construction, very effective in operation, and arranged to automatically compensate for the up and down motion of the car to hold the gate at all times in proper relation to the track. The invention consists principally of a fender platform mounted to slide vertically and lock normally in an uppermost position, and a gate in front of the said platform and adapted to unlock the same to permit the latter to drop by its own weight into a position to receive an object in the path of the car. The invention further consists of a compensation device of special construction to hold the gate always in proper relation to the track, irrespective of the up and down motion of the car.

CAR BRAKE.—Jefferson U. Elwood, McKeesport, Pa. This invention relates to certain improvements in car brakes, and especially that class of such brakes wherein the brake shoes are adapted to be forced into engagement with the track rails when it is desired to stop the car to which the brake mechanism is applied. It consists principally in certain improvements in the arrangement and operation of the brake shoes, whereby the same are arranged to bear in diagonally opposite directions against the track rails, so that the power required to stop the car is considerably lessened, and liability of breaking the rail tread or spreading the rails, so as to throw the car from the track, is greatly reduced.

Mechanical.

BARREL FORMING MACHINE.—John Hauenstein, New Ulm, Minn. This invention relates to machines for forming barrels, kegs, and other casks in which the two ends are contracted relatively to the center. It comprises a carriage adapted to support a barrel and to receive a hoop, a vertically movable contractible ring, means for raising and lowering said ring to engage the barrel staves near the ends resting on the carriage, and mechanism for operating the contractible ring to bend the ends of the staves inward, the end of the barrel when the staves are bent inward being adapted to be forced into the hoop held in the carriage.

WEATHER BOARD CLAMP.—William Kinderman, Troutville, Pa. The object of the invention is to provide a new and improved weather board clamp which is simple and durable in construction and more especially designed for drawing tongued and grooved weather boards together preparatory to nailing the same in place. It comprises a head adapted to engage the top edge of a weather board, the said head being provided near each, extending downwardly from the said lugs and screw threaded at their lower ends, a frame extending between the said rods and adjustable thereon, nuts screwing on the rods and adapted to engage the said frame to hold it in the adjusted position, a rack guided in the said frame and carrying a foot piece at its lower end, and means for imparting movement to the said rack.

SASH BALANCING DEVICE. — Porter Marshall, Fair Play, Mo. This invention relates to devices for operating window sashes, especially sashes of large size. It provides a means whereby the upper sash of a window frame may be raised and lowered by correspondingly operating the lower sash, whereby also the lower sash may be operated independently of the upper sash. In brief, the invention consists of strips angular in cross section and having sliding movement in the frame and of a connection between these strips and the upper sash, and gravity latches carried by the lower sash and adapted for locking engagement with the aforesaid apertured strips.

STEAM ENGINE GOVERNOR.—George W. Grimes, Bluffton, Ind. The object of this improvement is to provide a new and improved steam engine governor, which is simple and durable in construction and very effective in operation, and arranged to regulate the admission of steam to the engine steam chest according to the actual requirements, so as to maintain a uniform speed of the engine. The invention consists of a spring-pressed bracket mounted to turn and carrying the driving shaft, and a locking device held on the said bracket, and adapted to lock the admission valve stem in position to hold the said valve stem normally open.

BOILER.—Charles O'Toole, Dubuque, Ia. The object of the invention is to provide certain new and useful improvements in boilers, whereby all leakage is prevented and the tubes or flues are securely held in place in the boiler head, even should the usual beads be destroyed by the heat. The invention consists of a boiler head formed with an annular groove in the wall of the tube or pipe opening and adapted to receive a bead formed on the tube or flue.

AUTOMATIC FEEDING APPARATUS.—Charles E. Doster and William N. Fisher, Converse, Ind. The object of the invention is to provide a new and improved automatic feeding apparatus more especially designed for use on gas and other supply pipes to regulate the amount of gas passing to the burner, irrespective of the normal pressure in the main, and to cut off the burner from the main in case the pressure is reduced or the supply ceases entirely. The invention consists principally of a fixed valve casing and a valve having a hollow stem and fitted to slide in said casing, said stem carrying the burner.

SHUTTLE WORKER FOR LOOMS.—Lewin K. Heathcote, Glen Rock, Pa. This invention relates to looms, and its object is to provide a new and improved shuttle worker which is simple and durable in construction, very effective in operation, and arranged to insure a positive transmission of the shuttle through the open shed The device is provided with shuttle carriers moving in a longitudinal direction and carrying latches for securing the shuttle, the said shuttle carriers having levers arranged to release the said latches, the levers being actuated by revolving cams for the purpose mentioned.

LANTERN.—John T. Casey, Philadelphia, Pa. In this invention the object of the inventor is to provide a lantern particularly adapted for railroad service and in which it will be possible to readily change the color of the light, combining in one lantern the capability of shedding a red or white light. This object is attained by providing the lantern with a body portion capable of receiving a red shade which is vertically movable above the body portion so as to embrace the light. By these means it is possible to easily cover the light with a red shade so as to change light from white to red or vice versa. The red shade is provided with a rack and pinion device by which it may be operated, and the lantern throughout embodies various novelties of structure by which the advantages of the invention are enhanced.

GUIDE FOR SASHES, PARTITIONS, ETC.—Leonard L. Bishop, Montclair, N. J. This invention relates to guides or devices for doors, sashes, partitions, etc., and it has for its object to provide a means which will enable wide, heavy sashes, doors, partitions, or any object requiring to be raised between guides and balanced by weights or otherwise, to be raised easily and noiselessly, and to prevent the sash, when the device is used thereon, from catching or sticking, and likewise from rattling from wind or other causes. It consists of a plate for supporting a sash cord pulley provided near its upper end with an inwardly extending housing for the sash cord pulley, the portion of the plate above the housing being flat and the portion below the said housing being of much greater length than the upper portion, and provided with a longitudinal groove which, when the plate is applied, forms a guideway for a roller on a sash.

Electrical.

ELECTRO-THERAPEUTIC APPARATUS FOR TREATING DEAFNESS.—Samuel J. Collier, Chicago, Ill. This invention is in the nature of an improved apparatus for treating catarrhal and nervous deafness, and it consists in the peculiar construction and arrangement of an electrically operated apparatus designed to supply a mechanical massage to the ear drum, muscles and small bones of the ear, and at the same time to stimulate the nerves and muscles with a secondary current of electricity, both of said agencies being so arranged as to be made use of independently or conjointly, as may be desired. It comprises a box or case, a galvanic battery, an induction coil and an electro-magnetic sounder, both the coil and sounder being arranged in the box and in a circuit of the same battery, a switch for sending the current to either the induction coil or sounder, or both at the same time, tubular ear pieces having a tubular connection with the interior of the box, and wires leading from the terminals of the secondary coil to the two ear pieces.

THERMOMETRIC CIRCUIT CLOSER OR ALARM.—Richard Pearson, London, England. This invention relates to thermometric electric circuit closer, in which contact is effected by the contact of the mercurial column with platinum contact wires, one of which has always hitherto been in constant contact with the mercury. The objection to this arrangement is that the platinum wires become destroyed. In brief, the invention consists of a thermometer containing a mercurial column, two platinum wires forming the terminal contacts of the circuit and both entering the thermometer bore at such a point that neither is in contact with the mercury column at normal temperatures, and an insulating fluid contained in the bore between the mercury and the said contacts, said insulating fluid consisting of creosote free of fatty matter and having a boiling point of about 400 degrees Fahrenheit.

Agricultural.

CASTER ATTACHMENT FOR PLOWS.—George W. Waters, Corpus Christi, Texas. The object of this invention is primarily to provide a practical attachment for a sulky or other plow which enables the operator to readily turn the plow at any point where it may be desired, when the plow is in service; furthermore, to furnish a device of the above indicated character which will be especially well adapted to facilitate the turning movement of a disk plow and dispense with the use of a tongue to guide the plow. A further object is to provide a plow attachment of the caster type which is adapted for quick and reliable adjustment to turn the plow while moving, and which will be capable of holding the plow from turning until such a movement is necessary.

HAND GARDEN PLOW.—Launy Van Horn, Letts, Ia. The object of the invention is to construct a hand garden plow in such a manner that it may be utilized as a marker, a coverer, and a cultivator, and, furthermore, to provide for the lateral adjustment of the handle of the plow relative to the shanks thereof, the adjustment being accomplished in an exceedingly simple and expeditious manner and so that the plow will be thoroughly under the control of the operator. The invention consists in a hand garden plow, two beams of different lenghths, pivotally connected and provided with a locking device at their pivotal point, and interlocking teeth, and spring-controlled fenders carried by the beams, capable of assuming a position at the inner sides of the shovels or above the said shovels.

Miscellaneous.

TRACE HOLDER.—Reuben H. Ewing, Mondamin, Ia. This invention relates to whiffletrees, and its object is to provide a trace or tug holder for securely holding the trace or tug in place on the end of a singletree or whiffletree. It comprises a pin projecting from the end of the singletree or the like and a stirrup movably connected to the singletree, each stirrup having a free space between its members to receive the end of the trace, and being further provided with a slot or recess adapted to receive the said pin.

CONDENSED MILK CAN. — Arden A. Smith, Brooklyn, N. Y. This new condensed milk can provides a receptacle for condensed milk, and one which may be used on the table, and which will be incapable of leaking, and will also be susceptible to ready operation, and, above all, may be easily cleaned. It consists of a cup having an outlet opening, a slide by which to close the same, a spring in the rear of the slide and a connecting plate secured at its front end to the slide extending rearwardly and connected at its rear end to the spring, and having its portions in line with the rear edge of the slide deflected laterally to a point at one side of the slide, whereby, when the slide is open, a part of the connecting plate in the rear thereof will not be exposed below the outlet opening.

COMPOSITE MUSICAL INSTRUMENT.—William Laugenfeld, Halbur, Iowa. This invention relates to musical instruments of the orchestrion type. Its object is to provide a composite wind instrument which is adapted to mechanically play musical composition by jointly blowing and moving the keys of a number of different wind instruments so as to produce harmony, the mouthpieces of some of the instruments having vibratile reeds, others being blown by the projection of an air jet directly into a perforation of the instrument. The wind for blowing the different instruments in concert is supplied by bellows, and the keys of the several instruments are actuated at the proper time by a longitudinally moved flexible sheet, having projections at proper intervals on its surface which engage and rock levers that are connected with the keys and valves of the different instruments. Devices are provided to sound the instruments in concert and for producing graduated pressure on the reeds.

GARMENT LOCKER.—John Peter, New York City. This invention relates to devices for temporarily supporting hats, umbrellas, canes, etc. It consists of a supporting rod having a locking bar which is capable of being secured to the door or wall, of a hat securer comprising a horizontally extended rod, a spring clip moving longitudinally for engaging the rim of the hat in connection with an adjustable supporting rod. A hanger for umbrellas is also provided, comprising a strip of flexible material having apertures in its ends and adapted to be bent around a handle or stick and an apertured handle on the ends of the said strip.

GARMENT SUPPORTER. — George B. Nichols, Little Rock, Ark. This invention relates to certain improvements in garment supporters and especially to devices of this nature adapted for use as skirt supporters; and the object of the invention is to provide a supporting device of this character adapted for use by ladies as a skirt supporter, the device being of such a construction as to hold the rear part of the skirt in place to prevent the same from slipping down, so as to expose the waistband below the basque and to remove the weight of the skirt from the hips of the wearer. The invention consists of a triangular or three-armed frame provided with hooks at the ends of its arms, two of which are adapted for attachment to the waistband of the skirt on opposite sides of the placket and the other hook being adapted for attachment to tapes secured to the rear of the corsets.

COMBINED TRAP AND GRAPPLING DEVICE.—Austin B. Clayton, Dover, Mo. The object of the invention is to provide a new and improved hooking and grappling device which is simple and durable in construction and designed for use in fishing and trapping animals and grappling lost or other objects in cisterns, wells, lakes, rivers and other places. The invention consists principally of stocks pivotally connected with each other and carrying at their free ends hooks, a central coil spring connected at its ends with said stocks and means for engaging the stocks at their pivots to cause the latter to close.

PLANETARIUM. — James M. Chaney, Independence, Mo. The invention relates to educational appliances, and its object is to provide a new and improved planetarium arranged to show at a glance the location of the planets and stars as seen from the earth at any time or place. The invention consists of a revoluble disk set to the angle of the latitude of the place of observation and adapted to receive rods, each carrying at its outer end the representation of a planet or star, the rods being inserted in the periphery of the disk to the angle of declination of the planet or star.

MINER'S CANDLESTICK.—Samuel Nash, Georgetown, Colo. This invention relates to that class of candlesticks which are employed by miners and others for supporting a candle, and the object of the invention is to provide a device of this character formed from a single piece of wire, having a socket to receive the candle, a spring section in combination with said socket to hold the candle in place therein, means for breaking off the drippings collected at the sides of the candle and supporting devices whereby the candlestick may be carried about. The invention consists of a wire candlestick formed with an arm for supporting it in position, the wire being formed into bends for receiving a candle, the wire further being crossed and formed into a yielding handle loop which is complementary to two opposite bends of the socket, a contraction of the handle serving to separate said opposite bends for releasing the candle.

KITCHEN CABINET.—Henry C. Wheeler, Carbondale, Pa. The invention relates to certain improvements in kitchen cabinets such as are employed for holding cooking utensils and the like, and the object of the invention is to provide a device of this character of a simple and inexpensive construction, which shall be compact and neat in appearance and provided with receptacles for holding utensils of different kinds, and which shall be adapted for use as a work table or kneading board in making bread. In brief, the invention consists of a kitchen cabinet, of a combination of a casing having a series of cross pieces arranged across its upper part and provided in its wall with a series of openings, a leaf hinged to the casing above said openings, a bar extending along the top of the casing and arranged to slide on said cross pieces, arms projecting from said bar and adapted when the bar is moved to pass through said openings in position to support the leaf when lowered, levers pivoted on the cross pieces and coupled together at their adjacent ends, one lever having its opposite end connected to said bar and the other lever having its end connected to the hinged leaf and also to the extended end of the said lever.

SMOKING TUBE.—Lewis H. Sondheim, New York City. The invention relates to that class of smoking tubes in which the tobacco is fed to the front of the tube as fast as it is consumed, and the object of the invention is to improve smoking devices of this character in several particulars. In brief, it consists of a smoking device having a central chamber for receiving the tobacco, the forward end of the smoking device forming a combustion chamber, said device further having a smoke passage exterior of the tobacco chamber, and a longitudinally movable stem adapted to be manually operated and fitting into the tobacco chamber, and having an axial bore in communication with said exterior smoke passage.

FREIGHT CAR ROOF. — Alfred P. Le Gros, Louisville, Ky. The object of the invention is to provide a new and improved freight car, which is simple and durable in construction and arranged to prevent moisture from penetrating into the interior of the car by way of the roof. The invention consists of a freight car roof, comprising a bottom layer of boards having grooves at the sides to form recesses between adjacent boards, top boards each formed with a bevel at its sides and longitudinal grooves in its top, and a layer of fabric between the top and bottom layers of boards.

FASTENING DEVICE FOR WINDOW GUARDS.—Lawrence F. Ryan, New York City. This new device relates to means for locking or fastening window guards and similar objects, providing a means whereby the window guard may be quickly and securely locked in place in a window frame and beneath the sash, and furthermore to provide a latch connection between the guard and the window sash, whereby the sash cannot be raised when the aforesaid connection has been made. In brief, it consists of a window guard having spring controlled locking members arranged for locking engagement with the window frame and a window sash serving to prevent the sash being raised or lowered, unless purposely intended, from the position in which it is placed with reference to the guard.

TOY FURNITURE.—James Edward Wilton, Minneapolis, Minn. The invention is an improvement in the class of toy furniture, such as chairs, bedsteads, etc., which is constructed of blanks cut from flat sheets of thin cardboard or sheet metal, and adapted to be folded into the required form or shape. The furniture being composed of a thin, semi-rigid, but foldable material, and including a central portion, a back portion adapted to stand vertical, side portions adapted to fold downward and serve as supports, and folding arms attached to the back and having tenons or points adapted to enter the slots in the central portion.

LINE INDICATOR FOR COPYISTS. — Charles L. Hastings, Jacksonville, Ill. The invention relates to that class of devices known as "line indicators" for copyists. The main object of the invention is to provide a line indicator with a pneumatic operating mechanism. It consists of a portable pneumatic line indicating apparatus, an air cylinder provided with a piston and adapted for attachment to a copy holder, a line indicator, connected with the piston rod; an air compressor, composed of a cylinder and base adapted for self-support, and a spring-supported piston working therein and having a projecting head, and a flexible tube which connects the said cylinder and air compressor.

TACK LIFTER. — Henry O. Detert, Louisville, Ky. This invention relates to tools for drawing either ordinary tacks or the double pointed tacks generally employed for securing matting to a floor. This tack lifter comprises a laterally curved shank portion, a vertical blade at the end of said shank and extended to a point, and a horizontally disposed blade having a notch in its forward end, one edge of said notch being at substantially right angles to the other edge, whereby a broadly diverging notch is formed.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

NEW BOOKS AND PUBLICATIONS.

THE DYNAMO: HOW MADE AND HOW USED. By S. R. Bottone. Ninth edition, with additional matter and illustrations. London: Swan Sonnenschein & Company, Limited. 1896. Pp. 116. Price 90 cents.

Mr. Bottone is nothing if not practical. Those who wish to build dynamos will find this book of the most practical possible description, the theory being omitted by the author. Dynamo calculations are generally more or less complicated and somewhat difficult for the practical man to cope with, so it is hoped that in the present book the rule of thumb workman may find his peculiar methods of work assisted. It does, however, seem a pity for anyone to attempt to build a dynamo without investigating the practical mathematics of this subject.

HOW TO MAKE AND USE THE STORAGE BATTERY. Embracing its history, theory, maintenance, and the installation of plants. By P. B. Warwick. Illustrated. Lynn, Mass.: Bubier Publishing Company. 1896. Pp. 140. Price $1.50.

Various storage batteries are here treated in series, formulæ are given, and much useful data will be found embodied in the work. Quite a numerous list of "basic patents," as the author terms it, are given. Everything relating to the storage battery, now that it has become of general use in this country, will be considered of especial interest.

THE NAVAL POCKET BOOK. By W. Laird Clowes. With plans. London: Tower Publishing Company, Limited. 1896. Pp. 850. Price $2.

This book contains an account of the navies of the world, and describes ship by ship, giving the dimensions of each ship, her builders and state of completion being also given. Some useful data, notably the list of dry docks in Europe and America, with a very exhaustive index, are also given. The work we should consider one of very great usefulness, not only to those interested in the English navy, but for those interested in naval progress in all countries of the world.

THE POCKET LIST OF RAILROAD OFFICIALS. First Quarter, 1896. New York: Issued quarterly by the Official Railway Equipment Guide. Pp. 384. Price 25 cents.

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