

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

CAR VESTIBULE CONNECTION.—Walter N. Thompson, St. Louis, Mo. A series of springs is secured to the vestibule face plate and extends around the passageway, rods on the outer ends of the springs having their lower ends secured to sliding arms in the car platform, there being cross braces on the rods and springs and a flexible face secured thereto. The improvement forms a yielding flexible connection which does not have any buffer action, and is not intended to affect the movements of the train, but will form an air-tight seal, excluding all rain, snow, dust, etc., the protection being equally good in going around curves. It may be easily attached to the cars.

CAR DOOR.—Napoleon Roy, Duluth, Minn. This invention relates more especially to inside doors for grain cars and their fastenings, providing a door which can be easily operated without using crow-bars, etc., the fastening attachments not interfering with the use or capacity of the car for coal or other freight. A slide door is pivotally supported at its upper end over the doorway, so that it may be tilted, in connection with locking devices and a lifting mechanism, the latter consisting of a chain or cord, by pulling on which the door may be unlocked and moved upward without tilting.

AUTOMATIC CAR SWITCH.—Joseph A. Hawkins, Brooklyn, N. Y. This switch is designed for use in connection with electric, cable, or horse cars, and is designed to enable the driver to quickly and conveniently switch a car from one track to another while the car is in motion. A switching rail is arranged adjacent to one of the rails, and at its outer side a counterpoise lever, one end of which is connected with the switching rail, while a shaft is connected with the switch points, and a connection is made between the shaft and the counterpoise lever, whereby one is operated from the other.

AUTOMATIC GRIP OPENER.—William P. Courtney, Oakland, Cal. This is a simple construction, designed to release the grip at the "let-go" in case the gripman should forget to do so. Combined with the grip is a pitman having a sliding and rocking connection with the grip lever, a link being pivoted at one end to a bell crank lever and its other end to the pitman, while a safety bar is connected with the lever. The improvement may be readily applied to any ordinary form of grip without change of construction.

Mechanical.

LET-OFF FOR LOOMS.—Patrick Duffy, New Bedford, Mass. This is a mechanism to let off the warp yarns from the warp beam or roller, and give the proper tension to the warp. A simple apparatus which carries a dead weight is arranged at one side of the shaft and actuates the weight by a shoe or arm, to shift the weight as the warp is wound off, thus keeping an absolutely even tension on the warp without regard to the amount of warp on the beam or roller. The mechanism is readily adjustable and is not liable to get out of repair.

PERFORATING MACHINES.—Jacob B. Hemsteger, Piqua, O. A simple and durable automatic feed mechanism has been provided by this inventor, insuring the making of rows of perforations in the paper at any desired distance apart. A gripper engaging one end of the paper is mounted to slide a predetermined distance, the gripper being actuated periodically from the needle bar of the perforating machine.

CLUTCH MECHANISM.—Gottlieb F. Tinney, New York City. This is a device for a machine for working or breaking raw hides to render them soft and pliable, the working being effected by coiling the hides upon a shaft or drum and then reversing the motion to uncoil them. A novel and compact arrangement of cam, gear, and clutch mechanism is provided, to connect with the driving shaft and drum, the driving shaft rotating constantly in one direction while the drum reverses itself at the end of every seventh revolution, so that the machine is entirely automatic.

WATERPROOFING PAPER.—John J. Newman, Elkhart, Ind. This is an improvement on a formerly patented machine of the same inventor, by means of which paper leaving the calendar rolls passes over hot rolls, under a hot smoothing roll and between supplemental squeeze rolls. The paper is fed over a wax bed, where it receives on its lower face wax forced up through slits from the feed chamber until thoroughly saturated. The hot bed plate and hot smoothing roll polish and keep smooth both faces of the paper, and by the additional hot squeeze rolls the waste is removed. Two connected tanks afford means of keeping the wax at a proper consistency for continual re-use, thus effecting economy and rendering the application of the coating material uniform at all times.

Agricultural.

POTATO DIGGER.—Isaiah H. Van Horn and William Neel, Thornville, Ohio. To the draught beam is connected a plow standard having at its lower end an A shaped detachable shovel, of different sizes for different uses, wings being bolted along the edges of the shovel and the standard. The upper one of the wings is hung loosely to the standard, so that it is free to rise and fall, rising just enough to throw off the weeds and vines, leaving the ground level and the potatoes scattered in the rear of the digger. The improvement affords a combined cultivator and potato digger, which may also be used for ditching, furrowing out, splitting middles, hilling up, and it may be cheaply and strongly made by any blacksmith.

STRAW STACKER.—John P. Wheeler, Quincy, Ill. A distributing attachment, for removable connection with the straw chute of a stacker, has been designed by this inventor, and it may be adjusted to distribute the straw delivered from the chute either in an outward direction to trim up the outer sides of the stack, or scatter it around the central or marginal portions. The driving mechanism of the stacker is utilized to operate the attachment, which is readily adjustable for

any size or height of stack, and works automatically, saving hand labor.

FRUIT PICKER.—Anders W. Ohman, Tunsta, Insjon, Sweden. A long rod or handle carries at its upper end a plate ring, on the upper and inner edges of which are projecting teeth or knives, while secured to the under side of the ring is a flexible chute supported upon the handle and terminating at its lower end in a collecting bag. The knives or teeth of the ring are made to cut the stems of the fruit by movement of the handle, when the fruit drops through the chute to the bag without injury.

HOG TRAP.—James F. Boman and John Cornelius, Flat Rock, Ind. This is a combined trap and shipping crate, the trap forming also the crate. It has at its rear end a door sliding in guideways, and at the front a horizontally swinging hinged door on which is pivoted a lever with a recess in one edge opposite a recess in a board of the door, a keeper on the lever, and a toothed arm pivoted on the door extending through the keeper. The lever is adapted to hold the animal's head in the opening, which may be made by the two recesses, in order to put a ring in the animal's mouth, etc.

Miscellaneous.

TYPE WRITING MACHINE.—Alfred N. Heine and William K. H. Woerner, Evansville, Ind. This is a machine designed to be cheap, durable, and of simple construction, easily operated, and calling for but little skill in its manipulation. It has a peculiar form of hollow prismatic type bar, carried on a type rod, and having a number of faceted sides on which may be produced any desired number of characters, preferably electrotypes, the bar sliding and turning on the type rod. It also has a convenient arrangement for moving the carriage backward and forward, by which the printing may be seen as fast as made.

FAN AND MOTOR.—George A. Snecker, San Antonio, Texas, and Charles E. Roth, New York City. A spring motor is held in a clock-like casing, in such manner that, through suitable mechanism, the spring is adapted to operate a fan shaft, with which a fan is adjustably and removably connected. The device may be readily attached to any article of furniture or other support, but is especially adapted for attachment to a bedstead.

FOUNTAIN PEN.—Marcellus M. Hitt, Luray, Va. This invention provides an attachment whereby an ordinary pen may be converted into a fountain pen. It consists of an elastic sleeve, as one made of soft rubber, with a flexible tongue having on its end a dovetail tip for insertion in the aperture of the pen, the tongue and the pen together forming a reservoir for ink, which is fed automatically as the writing proceeds.

ENVELOPE OPENER.—Julius Ropes, Ishpeming, Mich. This is a device for cutting or opening folded edges of different material, the case having a grooved guide for the folded portion of the material to be cut, and being provided with an angularly arranged cutting blade. The device is also well adapted for cutting the leaves of books, etc. It can be made in light, compact, and ornamental form, suitable for carrying in the vest pocket, and can be readily taken apart to sharpen the two blades it is usually designed to carry.

BOOK BINDING.—William P. Sloan, Knoxville, Tenn. This invention provides for the connecting of signatures or sections by a binding thread with a cord held on the back of each signature or section, the binding thread also forming a loop on the cord for the passage of the transverse bands. By means of the improvement it is designed to produce a compact and strong book, adapted to be fully opened, so that its leaves will lie perfectly flat for conveniently writing upon.

SLED.—James W. Taylor, Vermillion, South Dakota. A simple and durable sled has been designed by this inventor. It is arranged to permit the runners to readily pass over uneven surfaces in the road without disturbing the position of the box. The front and rear axles are connected with each other, and the runners are mounted to swing on them, a fifth wheel with which a bolster is pivotally connected being held on the front axle, while there is also a fifth wheel connection between the front bolster and its bearing.

SLEIGH GUARD.—Charles N. Hartling, Halifax, Canada. According to this invention, flat elongated blades or auxiliary runners lie flat against the sides of the runners, means being provided for raising and lowering the blades, so that when they are lowered they will serve as runners and prevent sidewise movement of the sleigh. The guard is adapted for use upon any vehicle designed to run upon the snow or ice, and may be easily operated by the rider, and thrown below the shoes or runners to engage the snow or ice, causing the vehicle to run straight, but not acting as a brake.

LADDER AND TRUCK.—Moritz Roessler, Jr., College Point, N. Y. A ladder which may be quickly raised to a great height, with its base resting on the truck by which it is carried, is provided by this invention, the ladder being effectually braced from the top to the bottom. The raising and lowering mechanism carried by the truck is of a novel description, and at a proper point in the ladder is provided a platform. Means are also provided whereby the ladder, when elevated, may be brought to a vertical position or placed at any desired inclination.

ROOFING TILE.—Francis Andreu, New York City. This is a tile of simple and durable construction, designed to effectively drain and carry off the rain water without danger of leakage. It is made of fire clay or other suitable material adapted to be readily pressed into shape. The tiles completely interlock on the sides to prevent lateral displacement, and fit one on top of the other longitudinally, to prevent dislocation in this direction. The body has corrugations forming, on the under side of the tile, channels for the passage of air, and on top channels for draining rain water, at the same time giving considerable strength from the arch shape of the corrugations.

TRAP DOOR FOR MINES.—John Rees, Hamilton, Iowa. This door is hinged in a stout supporting frame to open in both directions, automatically closing when opened either way. It is preferably made

in two face sections, and its frame is formed to fit at the desired point in the mine passage, and be moved from place to place as may be desired. The construction is such that the door retains its position against the air without the use of springs or other devices, keeping the air under constant control and thus affording a safeguard against explosions, while also saving labor and preventing accidents from the carelessness of door tenders.

BOOT TREE.—James Bowler, London, England. This is an improvement in boot trees formed of two parts hinged together, and provided with extended portions to serve as handles for manipulating the tree. The toe and heel portions are of the usual shape exteriorly, and they are hinged together at about the ankle, with a space between their under sides to permit the heel portion to fold beneath the other and allow the tree to be readily introduced into a boot, the parts being then forced apart by pressing on the two upper portions the tree being then locked in extended position by a latch. For convenience of racking, the front portion is made in two parts, united by a hinge, and fixed in rigid position for use by a screw.

TAILOR'S MEASURE.—Abraham M. Cone, Lee, Mass. This is an instrument consisting of a horizontal back bar having a spirit level at or near one or both ends, adjustable horizontal side bars at right angles having spirit levels near their outer ends, and an upright rod or bar in sliding or adjustable connection with one of the side bars. The device is designed to facilitate the taking of more accurate measures by getting in a direct manner points on a level to work from.

CONSTRUCTION OF BASKETS, ETC.—Peter F. Pia, New York City. This invention provides an improved construction of baskets and other receptacles made of metal, and having their meeting edges fastened together by solder or other means. The basket is formed with a series of side flaps, the meeting edges of which are provided with a dovetail groove and projection, the ends of the projections or lugs being flush with the outer faces of the flaps and secured in the grooves by compressing the walls of the latter. The fastening devices are struck up in the blanks of which the baskets are formed, whereby a better and cheaper article may be made.

DUST BRUSH.—John J. Hassard, Harrison, N. J. This is a brush adapted for use upon the walls and ceiling of a room. Its projecting bristles are secured in the face of a core upon a shaft journaled at one end of a long handle, there being also a pulley upon the shaft, and a belt connection whereby the shaft may be rotated by means of a crank near the other end of the handle. The handle has a swinging joint near its outer end, to turn the brush end in a horizontal direction for use on side walls, and other joints of the handle, connected by sleeves or sockets, permit of its being made of any desired length.

FOLDING BED.—Henry B. Young, New York City. The bed frame carrying the mattress is made of angle iron, and pivots near the head turn in bearings of the standards, wrist pins being secured to the pivots, and a flat spring in each standard pressing with its free end on the wrist pin of the corresponding pivot, while each spring is also provided with an extension resting on one side of the standard. The construction is simple and durable, and the bed is readily accessible in all its parts for cleaning and other purposes. It can be conveniently set up, adjusted and counterbalanced, for folding or extending the bed, which is securely held in either position.

LAMP SUPPORT.—James R. McGregor, New York City. This is a device more especially designed for use on sewing machines and similar purposes, supporting the lamp so that it does not interfere with the work and at the same time so that the rays are thrown where the light is required. It consists of a hanging bracket readily secured to the machine, with horizontal longitudinally slotted arm and depending socket in which the shank of the lamp stand may be vertically adjusted, and the lamp be thus readily raised or lowered.

SAD IRON.—Milton J. Shimer, Free-mansburg, Pa. The body of this iron may be of any desired shape, but it has a central transverse staple, with a pair of lugs at each end, on its top face. The handle is detachable, and provided with means for readily gripping and letting go of the staple. To remove the iron from the stove, the handle is simply pressed into position to engage the lugs, thus fixing the handle in place, and when the iron is placed upon the stove its handle may be removed by pressing with the thumb upon a lever extending up at one side.

KITCHEN UTENSIL.—Bertha A. Backman, Malden, Mass. This is a cone-shaped shield, composed of two half sections having a sliding connection with each other, for attachment to frying pans to prevent the spattering of grease upon the stove. It has wire legs at the bottom, and may also be placed on a pot, etc., in boiling meat or vegetables, to prevent the water from boiling over, or it may be used to support a plate or dish to be heated.

TOY.—Norman Allen, Rockaway Beach, N. Y. This toy is in the shape of an egg, and contains a follower over which is a folded ship or other object, so arranged that the whole may be pressed down and concealed within the egg-like body until one end is pressed down upon a support, when the folded object will be forced outward and will automatically unfold and assume its normal shape, standing thus upon one end of the upright egg as a pedestal. The object may then again be readily folded and pressed back into the body as at first.

Designs.

SPOON.—George Freund, Durango, Col. In the bowl of this spoon is a bird's eye view in which appears a river crossed by several bridges, and a series of buildings forming smelting works, with their smoking chimneys, etc.

POCKETBOOK.—Isaac Scheuer, New York City. This pocketbook has on its outside an additional smaller pocket, the inner sides and bottom of which are arranged to give a flexible and loose effect, in contrast to the rigid face of the side of the pocketbook.

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.

WHAT SHALL I LEARN? OR THE YOUNG MEN'S BUSINESS GUIDE. Philadelphia: Standard Publishing Co. Pp. 221. Price \$1. No index.

This little work purports to detail, for some 60 different occupations, the methods of beginning work at them, the method of learning the business in each case, the salary required and the probable prospects of remuneration. A very great range of occupations is covered, and the statement of wages and prospects, while perhaps, in some cases, a little too sanguine, is, on the whole, characterized by conservatism. The preface justly states that the book is radically different from anything that has gone before it. For each trade two to six pages are used to cover a subject. The grade of occupation runs all the way from the analytical chemist, engineer, banker, lawyer, and stock broker down through the trades to glass maker, baker, lithographer, and wood engraver, so that nearly every one can find something about occupations within their scope. The book, while lacking an index, has a table of contents which really seems to make the index unnecessary. Moreover, the subjects are arranged alphabetically.

TRANSACTIONS OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS. Vol. IX. Published by the Institute, New York City. Pp. lx, 857.

The Transactions of the American Institute of Electrical Engineers always forms a welcome publication. The subjects of the papers and discussions indicate those of the day. We can really do no more than commend the work to our readers, as it would be quite impossible in the limits of our space to give anything more than the barest summaries of any of the papers. One thing to be noticed with satisfaction is the number of illustrations, and the general creditable make-up of the book is also most commendable.

FIFTEENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF CONNECTICUT FOR THE SEVEN MONTHS ENDING JUNE 30, 1892, WITH THE REGISTRATION REPORT FOR 1891 RELATING TO BIRTHS, MARRIAGES DEATHS, AND DIVORCES. New Haven: Tuttle, Morehouse & Taylor. 1893. Pp. xl, 194.

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3. A handsome dwelling at Plainfield, N. J. Perspective views and floor plans. A model design. Messrs. Hartwell & Richardson, architects, Boston, Mass.
4. A dwelling at Utica, N. Y., erected at a cost of \$4,700 complete. Floor plans, perspective view, etc. Mr. W. H. Symonds, architect, New York. An Old Colonial style of architecture.
5. Engravings and floor plan of the Fairfield Congregational Church at Fairfield, Conn., erected at a cost of \$52,000. Messrs. J. C. Cady & Co., architects, New York City.
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7. An excellent design for a modern stable at Bridgeport, Conn. Messrs. Longstaff & Hurd, architects, Bridgeport, Conn.
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