

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

STOCK CAR.—Robert C. Burke and Reuben P. Wissler, Brady Island, Neb. This invention provides for supplying an ordinary stock car with a double deck or floor, in such a way that the car may be used either with a single or a double deck, the second deck being both secure and effective, and, when folded, allowing the car to be loaded with large animals or other material. The upper deck is preferably formed of six sections, each hinged at about the middle and adapted to fold down against the side of the car, or to be supported in the position of a deck or second floor by means of folding legs. These auxiliary floor sections may also be swung up directly beneath the roof of the car.

RAILWAY CROSSING SIGNAL.—Judson Shoecraft, Harveyville, Kansas. This signal, which may be a bell or gong, is operated by a motor, an electromagnet having an armature arranged to hold the motor out of operation, and an electric circuit including the magnet and a generator. Two circuit breakers are located on the track on opposite sides of the crossing, and adapted to be operated by trains passing in either direction. The signal is operated electrically on a broken circuit, so that should the battery or other generator in the circuit run down, or the connections become impaired, the alarm will be continuously sounded.

TIE PLATE.—Charles J. Schenck, Gila Bend, Arizona. This tie plate comprises a male and a female member arranged for interlocking engagement, each member having a spring-bearing surface engaging opposite sides of the rail, such surfaces facing one another when the members are assembled, and a flange on one plate being engaged by a flange on the other plate. Portions of the gripping surface of the tie plates may be extended upward to engage with the head of the rail at one or both sides, forming a superior brace for the rails, especially at their outer sides on a curve. This tie plate is also designed to entirely prevent creeping.

COUPLING.—Melvin T. Miles, Cherokee, Iowa. For conducting air, steam, etc., from one railway car to another, this inventor has devised a simple and durable automatic coupling, arranged to effect a positive connection without danger of leakage, and adapted to set the brakes in case the train breaks in two. The invention consists principally of a spring-pressed valve having a hollow body, and with a head and stem having a longitudinal groove adapted to extend through the valve seat when a coupling is made.

Mechanical.

NUT LOCK.—Andrew J. Bennett, Bridgewater, Iowa. According to the improvement, a groove is made across the threads of the bolt, and the nut has a groove across its threads, and a threaded key bar is slidable in the groove of the bolt when the groove in the nut is over the key bar, there being on the outer end of the latter a spring limb to lock it from sliding. The invention affords simple and effective means for releasably holding a nut on a bolt, and one also available for holding the nut of a vehicle axle spindle from accidental displacement.

FLUE CUTTER.—Jeremiah Fitzpatrick, Raton, New Mexico. This device has a tubular body adapted to enter a flue, a collar fitting against the outer end of the flue, and there being in the body a transverse opening in which slides a carrier holding a revolving cutter, adapted to cut the flue from the inside. The carrier is forced outward, to bring the cutter into engagement with the inside of the flue, by a wedge, driven in by a feed screw at whose outer end is a handle, and on the tubular body, outside of the collar, is a ratchet wheel engaged by a spring-pressed pawl held in a handle fulcrumed on the body. By means of the latter handle the body is turned in the flue, and the cutter rotated to cut it.

TOOL FOR OIL WELLS.—Harold G. Durnell, Bolivar, N. Y. To remove worn or damaged valves from oil wells, where the wells are of great depth, this inventor has devised a special tool in which a tap attached to the sucker rod, when it touches the thread in the standing valve, will be screwed into the thread by the weight of the sucker rod, instead of having to turn the rod at the top of the well. The tap thus engaging the valve, the latter can be readily withdrawn, the work being easier and surer than by the methods and tools heretofore used.

WELL TUBING SUPPORT.—Emmett R. Curtin, St. Mary's, Ohio. An improved device adapted to automatically catch and temporarily support the tubing or rods while pulling them up or letting them down into the well is provided by this inventor. In a casing through which the tube or rod passes are arranged toothed and wedge-shaped jaws, whose teeth permit the tube or rod to be pulled up, but securely hold them when the pull is released. These jaws are held away from the tubing or drill rods when they are to be lowered into the well, by means of a spring-pressed lever, but when the operator releases the lever, in case a part of the mechanism should break, the jaws move inwardly to bring their teeth into engagement with the tubing or rods to firmly grip and hold them in place.

MACHINE FOR MAKING BOOK COVERS.—Henry J. Brauer, New Orleans, La. This is an automatic machine for placing cloth, paper, or similar material, on paper board used as book covers, the machine having certain parts adjustable to accommodate it to different sizes of covers. Novel means are employed for applying an adhesive to the cloth or paper and carrying them forward, cutting in the desired places, affixing on the bare boards, and finally ejecting the product in a finished condition. The machine may be attended and operated by one person, the feeding of the stiffening boards being done manually, and all the rest of the work being automatic. The cloth is evenly glued, and brushes turn the edges down more firmly than can be done by hand, the machine being designed to turn out a better and more finished cover than is produced by hand work.

Bicycles, etc.

PEDAL.—Charles Otis, New York City. The pedal designed by this inventor has a strap for the

insertion of the foot of the rider, to hold the foot on the pedal at all times and also to enable the rider to pull upward on the pedals when desired for speeding or heavy riding. The strap normally lies at the lower side of the pedal, so that it is not liable to be stepped upon by the rider, and provision is made for reversing the pedal to bring the strap uppermost and in position to permit the rider to enter his foot beneath it.

LOCK FOR BICYCLES.—Albert W. Nutz, Wallace, Kansas. This lock has but few parts and is strong and inexpensive. It is designed to lock the handle bar in any desired position, and thus prevent the use of the wheel until it is unlocked with a key. The casing of the lock is bolted or riveted to the head, and a bolt sliding through the casing from front to rear enters an opening made in the head, there being in the handle bar one or more openings, circumferentially arranged, either of them adapted to register with the openings in the head. The locking is effected when the handle bar has been placed in proper position, by simply pressing the bolt inward.

CAP FOR BICYCLE VALVES.—David Basch, New York City. This is a cap designed to be held in place by suctional engagement with the rim of the wheel, thus preventing leakage from the valve and also preventing the loss of the metal valve cap, which sometimes happens when the bicycle is in motion. The cap is preferably made of rubber, and is in one piece, having a tubular body portion adapted to cover the exposed portion of the valve, and a cup section to be forced to a contact with the inner face of the rim around the valve. The cap is readily put on or removed, and efficiently protects all parts of the valve.

Agricultural.

CHURN.—Ben Walker, Jr., Austin, Texas. The body of this churn has at its base a circular chamber at the center of which is journaled a tubular shaft carrying a fan or agitator, the lower end of the shaft having openings, and, in the operation of the churn, drawing in a current of air which is discharged to pass upward through the cream. The churn is adapted to be operated by either hand or power, and is so constructed that it may be readily taken apart for cleaning after each churning is finished, and easily put together again.

PRESERVING MILK OR CREAM.—Fredrick Casse, Copenhagen, Denmark. This inventor has devised a method of preserving milk or cream unaltered for a considerable length of time by keeping them as nearly as possible at the temperature of melted frozen milk, this method also preventing the formation of butter during the conveyance of the milk. The entire body of milk is first cooled to near the freezing point, and a portion of the milk is then taken out and separately frozen, when the frozen pieces are placed back in the milk.

Miscellaneous.

LIFE BOAT.—Robert D. Mayo, Frankfort, Mich. Two patents have been granted this inventor for a boat which will be able to float in any kind of weather, and either on its top or bottom, while air will be supplied to the interior, no matter in what position the boat may be, except when entirely submerged, means for signaling by means of rockets being also provided. There are strong bulkheads at each end of the boat, and inner bulkheads form airtight compartments, between which is the living compartment, in which is a cage or carriage where persons may be seated and be unaffected by the movement of the hull. Means are provided for automatically closing the air inlet temporarily when the boat passes below the surface, the admission of air being automatically effected the moment any portion of the vessel is above the surface. The cage or car within the boat moves on ball bearings, the cage being capable of having the hull rotate around it, and an air tube axially coincident to the hull is passed from the cage into a compartment having atmospheric communication.

WOVEN FABRIC.—John Bister, Brooklyn, N. Y. This is a fabric more especially designed for umbrella covering, the face of the fabric having a silky appearance. It consists of interwoven cotton weft and warp threads and a series of silk warp threads, each overlying a cotton warp thread, the silk threads being arranged alternately with a series of the cotton warp threads and bound in at intervals by the weft threads, whereby the silk threads will be floated on the face of the fabric.

WINDOW FRAME.—Alexander Erklin, New York City. According to this improvement, friction rollers are placed in the sash grooves of the frame, the rollers having a yielding or spring support and constantly bearing on the sashes whether the latter are in a lower or upper position. Tension devices are provided for each window sash at each of its sides, to prevent the sashes from having a rattling movement, the device comprising a face plate having openings at each side of its center through which extend portions of the peripheries of friction rollers.

SASH FASTENER.—Richard A. Griffin, Nashville, Tenn. A strong and easily operated sash lock is provided by this inventor, consisting of rack bars arranged transversely of the window frame on each side of a toothed wheel, each bar having an inner toothed edge designed to engage the wheel, and the bars moving in opposite directions. The bars have projecting clamps, to bind the outer and inner sides of the upper and lower sashes and the bars are arranged to be operated so as not to interfere with the curtains or drapery.

WINDOW CLEANING CHAIR.—James S. Lynch, Brooklyn, N. Y. This invention provides a chair seat having a good back, and adapted to be conveniently secured on the outside of a window sill, to enable an occupant of the chair to conveniently clean a window on the outside. On each of the front uprights connecting the seat with the top rail of the back is a sliding angular arm, through an eye on the inner end of which extends a horizontal adjusting screw, with cushioned head forming a clamp by which the chair may be firmly held in position, the cushioned head of the screw bearing against the inner wall.

PANEL DECORATION FOR POTTERY.—William T. Murphy, New York City. To fit in a recess in the face of a similar article, this inventor provides a metal tray conforming to the shape and curvature of the recess, and adapted to receive a picture and a transparent covering for it, a clamping head extending around the edge of the tray. The invention affords a means for placing pictures, chromos, or photographs on vases, flasks, etc., in such manner that the pictures may be removed or changed at will, without marring the picture or injuring the article to which it is applied.

WAGON END-GATE FASTENER.—Thomas B. Pell, Lewisport, Ky. This is a fastening device for end gates, particularly of wagons in which the rear ends of the side boards have a vertical upper portion, and a lower outwardly and downwardly curved portion, the device drawing together the side boards as the end gate is clamped in position. Near the top of each side board at the rear is a slot and facing plate, a rod screw threaded on one end fitting in the slots, by means of which, with the aid of a clamping arm, the sides of the body may be drawn firmly against the end gate.

HAND PAD FOR WRITING PURPOSES.—William T. Martin, Dayton, Washington. This is a cradlelike device, made of any suitable material and in sizes to fit different hands, and has on its under face a bearing surface and its upper face being dished to receive portions of the inside of the hand, providing proper support near the wrist and giving freedom of motion to the hand in writing. A palm projection of the pad enables one to hold the pad on the hand while lifting the hand from its support, and the device is designed to facilitate rapid writing and render it less laborious.

HARDENING BITUMINOUS SUBSTANCES.—Edwin T. Dumble, Austin, Texas. This invention is for a process for hardening or partly solidifying viscid bitumens, tars, or asphaltums, natural or artificial, by mixing them with bituminous coal or analogous material, and subjecting the mixture to a temperature below the boiling point of the liquid substance, thereby softening and dissolving the solid substance and uniting it with the liquid, the temperature then being gradually increased to the boiling point of the compound.

WEIGHING AND COMPUTING SCALES.—Thomas A. Killman and Herschel A. Bratten, Liberty, Tenn. According to this invention, a frame rigid with the scale beam carries an upwardly projecting arm operating a pointer, a second arm pivoted between its ends in the frame operating a pointer, and there being an adjustable fulcrum for the second arm. The invention provides simple means for ascertaining the price of an article being weighed, and is designed to be particularly useful for millers or dealers in grain, etc. The improvement may be applied to an old pair of scales by removing the old post and substituting the one employed in the invention.

TROUSERS STRETCHER.—Harrison Keane, Douglas, and Michael Guider, Cork, Ireland. For distending riding and other breeches these inventors provide a collapsible, breeches shaped, airtight bag, preferably made of vulcanized sheet caoutchouc, with an inlet valve and adapted to be inflated, a waistband brace preventing undue distension at that portion, and button-hole tabs being attached to the brace buttons of the breeches. The device is light and portable and self-adapting to the shape of the breeches, facilitates their cleaning and pipe-claying, and prevents shrinkage in drying.

BOTTLE TOP.—Jacob A. Moller, Jr., New York City. A bottle provided with this improvement has a threaded neck with which the top is threaded to interlock, a hinge in slidably connected sections having one section pivoted to the neck and the other so connected to the top that the latter can rotate independently of the sliding hinge member, the pivoted hinge member having a projection engaging the thread of the top. The cap or cover, after unscrewing, remains connected with the bottle, thus avoiding the possibility of its being lost, and the device permits of better expansion for the cork than is usual. But little sealing is necessary with a bottle provided with this improvement, and as all the parts are readily made by machinery, the top is quite inexpensive.

NECKTIE.—Gustav Kraus, New York City. This invention relates to neckties known as "four-in-hands," and provides a tie which is reversible and may be made without waste of material. The tie is made of two pieces which have their inner wedge-shaped ends sewed together to overlap and form a continuous strip, the strip being doubled lengthwise and its edges sewed together. The tie may be made for about the same price as the ordinary necktie now made, owing to the saving of material by the special cutting and sewing.

LAP BOARD.—Sophia M. Rivers, New York City. A device especially adapted to facilitate basting waists has been devised by this inventor, the board having a curved or substantially cylindrical outer face and being adapted to fit the lap of a person. The outside of the board is pliable to admit of pinning to it the material tightly stretched, preparatory to basting the lining to the goods, there being no difficulty in taking the proper stitches on the rounded surface.

TOBACCO PIPE ATTACHMENT.—Henry Seidler, Fort Benton, Montana. This attachment has spring arms to engage the sides of a pipe bowl, with longitudinal slots forming a central spring and side portions to which a cover is pivotally connected, the cover being held normally closed by engagement with the spring. The device may be readily applied to or removed from pipes of various kinds and sizes, and is very inexpensive.

GAME APPARATUS.—Joseph B. Sargent, Worcester, Mass. This is an apparatus for a game designed to resemble croquet, a shallow box with a glass top having miniature wickets and stakes, as in that game, and the balls being rolled through the wickets by the operator tilting the box in the right direction. If the balls go through the wrong wicket, or through any wicket in the wrong direction, the player must return the ball to the starting point and begin again.

CHILD'S TOY WAGON.—John G. Weber, Brooklyn, N. Y. This is a novel convertible wagon, sleigh and cabinet, simple attachments affording means for its quick and convenient conversion into either of the articles named, and the cabinet having a door hung on hinges. The body portion may be made in different forms and a two-wheeled vehicle may be converted into a sleigh or closed cabinet as readily as can a four-wheeled wagon.

TOY BASE BALL.—John W. Weaver, Richmond, Va. This invention is for an apparatus for mechanically playing base ball, the apparatus being contained in a box of two hinged and folding sections, representing the inner and outer fields. The game comprises a pitching apparatus, a batting apparatus, a series of tilting bases to be operated by the weight of a batted ball to release a base runner, and channel runways between the bases. The game is played with eighteen numbered marbles, nine of one color and nine of another.

Designs.

BICYCLE COVER.—Gaston E. Constantin, Brooklyn, N. Y. This cover in general contour approximates the shape of a liberty cap and is designed to afford a neat looking, inexpensive, and efficient protective covering for a wheel when it is not in use.

SPOOL HOLDER.—Russell Fraser, New York City. This design is for an article having a main longitudinal surface, at right angles to which are circular ends to clasp the ends of a spool, there being an angled extension from the longitudinal surface.

INHALER.—Clarence W. McKee, Phoenix, Arizona. This device has two oval and tapering members, with perforated ends, the members being joined at their larger ends by a spring loop.

A HANDLED VESSEL.—Thomas B. Brown, Noroton, Conn. This design is applicable to all kinds of handled vessels, such as loving cups, mugs, pitchers, etc., and has one or more stag handles extending from its sides, the ends of each handle terminating in raised ornaments on the exterior of the vessel.

SPOON.—Augustus F. Shriver, Newcastle, Cal. This spoon has a straight round handle having cross sections of different diameters, the largest section being outermost.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 10 cents each. Please send name of the patentee, title of invention, and date of this paper.

NEW BOOKS AND PUBLICATIONS.

LINCOLN'S CAMPAIGN; OR, THE POLITICAL REVOLUTION OF 1860. By Osborn H. Oldroyd. Illustrated. Chicago: Laird & Lee. Pp. vi, 241. Price 75 cents.

This volume gives most interesting reading describing the old time political campaign preceding the war. A very commendable portion of it consists in the reproduction of cartoons and of campaign literature of the period, the whole forming a very interesting contribution to the history of the epoch on which strange events depended. In a concluding chapter the presidential possibilities for 1896 are considered, over ten in number, of which one has come true as far as the nomination is concerned.

THE NUT CULTURIST. A treatise on the propagation, planting, and cultivation of nut-bearing trees and shrubs adapted to the climate of the United States, with the scientific and common names of the fruits known in commerce as edible or otherwise useful nuts. By Andrew S. Fuller. Illustrated. New York: Orange Judd Company. 1896. Pp. iv, 289. Price \$1.50.

America, with its endless variety of climate, is adapted to almost any class of agriculture or pomology, and in the present volume we find a very acceptable treatise on the cultivation of nuts in America. In it are treated the almond, beech nut, hickory, walnut, and other similar products. In California considerable success has been obtained in the cultivation of almonds, and it is quite possible that Florida may yet be converted into a successful field for nut cultivation. The present book is a plea for the value of this class of tree product. We particularly commend the index.

HANDY ENGLISH PHRASES. Appropriate to bicycling. With table of parts of bicycles, measures, etc., in both languages. By C. C., of L. A. W., No. 70, 817. New York: Louis Weiss & Company. Pp. 23. Price 25 cents.

Any one who has made a bicycling tour in France, Belgium, and Switzerland knows with what difficulty even one who is familiar with the French language has in acquiring the bicycle vernacular. The commonest bicycle terms seem strange and unfamiliar and it is only after considerable pains and experience that one acquires the proper outfit in the way of a vocabulary. Our author has produced for the members of the League of American Wheelmen, and for such others as contemplate a European trip, a delightful handbook of French and English conversation, in which all the technical terms relating to the bicycle are skillfully introduced. A vocabulary giving the names of the different parts of the wheel appears at the end of the pamphlet. The frontispiece is adorned with a "Scorchear" primitif, from an old stained glass window of the church of Stoke Pogis, made famous by Gray's "Elegy."

The Century Company, of New York, issue some very striking posters to announce on news stands the numbers of the Midsummer Century and St. Nicholas Magazines. The Century poster took first prize in a competition in which about 700 designs were submitted, the accepted design being by a Mr. Leyendecker, a young Chicago artist now studying in Paris. It is a most original conception and cannot fail to attract a good deal of attention.