

RECENTLY PATENTED INVENTIONS.

Engineering.

WIND ENGINE.—Samuel Griswold, Davenport, Washington. This invention provides a wheel of novel construction, designed to be cheap and durable, the improvement consisting of a vane casting journaled in a derrick, a wheel casting pivoted in the vane casting upon a horizontal shaft, and the wheel attached to the wheel casting, whereby it can be shifted from a vertical to a horizontal position, and *vice versa*, while in operation, and still impart motion to the sucker rod. This improved construction is designed to afford a uniform rate of speed under varying forces of wind.

Railway Appliances.

STOCK CAR.—John A. Stewart, Mansfield, Ohio. This invention provides a car with removable stanchions so constructed that separate compartments may be thereby conveniently and quickly formed in the car to accommodate one or more animals. Provision is also made for attending to the stock at any time, whether the car is in motion or not, and for the storage of a quantity of food, which may be placed in the storage compartment without disturbing the cattle, while a water trough is provided, adapted to be supplied from stationary reservoirs.

CAR BRAKE ATTACHMENT.—Lincoln H. Raub, South Easton, Pa. A convenient means for setting the brakes by hand, in connection with a safety attachment, and a spring attachment for the brake beam, so that the brakes will not be set sufficiently hard to prevent the wheels from turning, form the distinctive features of this invention. The improvement is designed to obviate difficulties arising where air-operated brakes are also operated by hand, the ratchet wheel and pawl of the hand mechanism being in such cases frequently injured or destroyed, while also preventing the damage to car wheels occasioned by sliding on the track when the brakes operate to entirely prevent the wheel from turning.

Mechanical Appliances.

PLANNER CHUCK.—Charles F. Fulmer and William E. Kelvie, Plainfield, N. J. Combined with a rotatable platen securable on a base piece is a jaw with tongues that slide in grooves of the platen, and is actuated by a screw, another jaw composed of a base plate having tongues engaging the platen grooves, while there is a circular boss and two standing bolts, and a jaw piece with a socket in its lower face to fit on the boss of the base plate, and having curved slots through which the standing bolts pass. The improvement affords means for a quick change of adjustment to suit the form of material to be held, either straight or taper, and hold it firmly in position to be operated upon by the cutting tool of the planer.

LATHE CHUCK.—The same inventors have also obtained a patent for an improved lathe chuck, which is so constructed that its jaws may be simultaneously moved or each jaw can be separately adjusted, the chuck being adapted to grip articles of a regular or irregular form. It is a simple, durable and convenient device, the invention providing a novel construction and combination of parts designed to secure great strength and afford special facility for its ready manipulation.

SCREW BEADING MACHINE.—Abraham M. Southard and George W. Smith, Denver, Col. This invention covers a novel construction, whereby the ordinary beader used by tinmiths is transformed into a machine capable of forming screw threads on the joining extremities of all kinds of light metal pipes or tubing, such as stove pipes, speaking tubes, etc., and all kinds of sheet metal conduits. A pair of shafts, on which is mounted a pair of co-acting bead rolls, are held in a suitable frame, one of the shafts having a threaded portion, while a gauge is slidingly supported between the shafts and has a feeding attachment consisting of a half nut or threaded lug to engage one side of the threaded shaft. The screw bead or thread is formed on the pipe by turning a crank, after the proper gauge adjustment.

CASTING MACHINE.—John S. Griffin, Roslyn, Washington. Combined with a casing is a mould consisting of two horizontal swinging sections hinged together at one end, where it is provided with upper and lower anti-friction wheels, in connection with mechanism for opening and closing the mould. This improved casting machine is designed for conveniently and rapidly casting billets, hollow ingots to be manufactured into seamless tubes, and other articles.

RIVETING MACHINE.—Reinhold A. Carl, Hearne, Texas. This invention relates to improvements in machines for driving rivets in leather and other flexible material, providing a machine especially adapted to drive a pointed rivet instead of the ordinary blunt rivet. It has two vertically aligning plungers forced together by a lever mechanism, a sleeve inclosing the lower plunger, above which meet a pair of spring-pressed jaws, a separable burr holder being interposed between the two plungers, while a spring-pressed burr set is mounted loosely on the upper plunger, with a lever mechanism for forcing the set downward and a lever mechanism for releasing it. The machine drives and heads the rivets at the same operation, and without first punching holes in the material.

BRICK MACHINE.—Albert Brooker, Lancaster, Wis. Combined with the supporting frame and a mud box in its upper part is a die having outwardly extending bars working in guideways in the frame, to which weighted levers are pivoted, links connecting the levers with the bars of the die. It is a machine of simple construction, in which the ordinary bottomless mould may be used, and which will deliver the moulded bricks directly upon movable pads, the machine being also provided with a wire cut-off for smoothing the tops of the bricks and separating them from the mud die.

ROOFING SEAMER.—Richard R. Delaney, Charleston, West Va. Combined with a pair of

tongs are three jaws, connected with and operated by the tongs, a roller being journaled to one of the jaws, which serves to turn the edge of the seam down, ready to be clamped and finished by the tongs. It is a simple and convenient tool for turning single or double seams, made at a small cost and very powerful, being effective for turning and clamping together the seams of heavy sheet metal like tin, zinc, or galvanized iron.

MACHINE FOR POLISHING COFFEE, etc.—William P. Clifford, Oskaloosa, Iowa. A shaft carrying a series of opposing arms is held to revolve in a cylinder, the arms consisting of plates radiating from hubs, while pins extend from the opposite faces of the plates, in combination with a tank adapted to contain glazing material, a warming jacket surrounding the tank, and a pipe leading from the tank into the cylinder. The machine is of simple and durable construction, and may be used in connection with a coffee cleaner and grader or independently, for polishing and glazing coffee or any material requiring such manipulation.

SEWING MACHINE.—Henry H. Fefel, New York City. Combined with the needle, feed, and main shaft of the machine, with a stitch hook having an upper and lower bill poised in the center on a pivoted crank, is a rotarily reciprocating double crank shaft, the stitch hook being attached to one of the cranks. The machine is especially designed for making an "overstitch," is simple and durable and capable of high speed, and is designed to lay the threads of each stitch close together and at the proper angle to give the work the appearance of hand stitching. The feed and needle arm motion, the tension and guides and other accessories of the machine, may be of any approved construction.

SCREW DRIVER.—John Q. Day, Red Cliff, Col. The handle of this tool supports a tube having two sets of spiral grooves, the shank extending into the tube being provided with a clutch, and a sleeve having a clutch being mounted to turn loosely on the shank, the clutch engaging the shank clutch, while blocks pivoted on the sleeve engage one set of spiral grooves at a time, and a spring coiled on the shank presses with one end on the latter and with its other end on the tube. The screw driver is actuated by simply pressing the handle when the screw head is engaged, and it is arranged to turn the shank in either direction for driving in or unscrewing screws.

Agricultural.

PLANTER.—Orval E. Baldrige, Illinois. This is a machine of simple construction, intended to be built at a low cost. The drive wheel has an adjustable sleeve on one of its spokes, combined with seed boxes and a centrally pivoted lever, the seed drop bars being pivoted to the lever and held to slide in the boxes, while an arm hinged at one end of the lever has an offset adapted to engage with the sleeve of the drive wheel. The seed may be covered by any of the well known attachments, but preferably by curved blades secured to the rear lower portion of the chutes.

Miscellaneous.

WIND MUSICAL INSTRUMENT.—Harry J. Light, Sedan, Kansas. This invention provides means for changing the pitch or key of this class of instruments, as the clarinet, flute, etc., by the lengthening of the bore by means of rings, to be placed between the several joints of the instruments. The rings or washers are made of bone, gutta percha, celluloid, or other suitable material, and their interior diameters correspond precisely to the diameter of the bore of the instrument. Exterior rings are employed to fill the spaces covered by the extension of the sections, to give the instrument the usual smooth appearance.

GAME ATTACHMENT.—Emma Barker, London, England. This invention provides means for playing an indoor game substantially like lawn tennis, certain attachments being provided whereby the net may be conveniently supported upon an ordinary dining table, and a convenient racket adapted for indoor use. The courts are marked upon the table, across which the net is stretched, and a soft rubber ball is preferably used, the service being delivered underhand, and the ball being struck by a fore-hand stroke at a point beyond the end of the table.

SHOW CABINET.—Robert E. Sherlock, Lethbridge, and Manfred Freeman, Grenfell, Canada. This is a cabinet in which ribbons, laces, and similar goods will be protected from dust and soiling, and be held in such manner that they will be displayed to the best advantage, while they may be conveniently unrolled and measured and as conveniently replaced. Rows of spools are mounted on a series of horizontal shafts, there being on the shafts friction pulleys designed to be readily forced against the ends of the spools. Longitudinally swinging doors are arranged one above the other opposite the spools.

BANJO TAIL PIECE.—Herschel Fenton, New York City. This tail piece is adapted to rock on the upper edge of the clamping hoop, a depending rear limb rocking on the side of the hoop, and having a lug apertured to receive an adjusting bolt. The device affords means to strain the strings in conjunction with the keys, holding the strings off the head skin, and affording means to connect the strings to the cross bar of the tail piece in a manner to avoid chafing of the strings, thus increasing their durability.

TWINE HOLDER.—Charles F. Walters, Prospect, N. Y. This is an attachment for twine holders designed to automatically wind up the end of the twine after it has been used for tying packages, etc. To the holder is secured a frame in which turns a grooved pulley, provided in its hub and rim with opposite openings, a pinion being connected to the pulley and a segmental gear wheel in mesh with the pinion, while a weighted arm is connected with the segmental gear wheel.

GATE.—Jacob W. Miller, Marion, Ohio. This invention relates to farm gates which swing horizontally and are also capable of being raised bodily independently of their swinging motion, to allow hogs,

sheep, etc., to pass through without permitting cattle to pass. The invention provides a novel combination of devices for operating the gate, so that when raised it is lifted directly against its weight to throw it against the hinge post, instead of the pull being exerted from the post to raise the gate.

DRAWERS.—Romulus E. Hill, Evans-ton, Ill. This invention relates to the manufacture also of trousers, overalls, tights, etc., providing a peculiar make at the crotch, whereby the garment is rendered elastic and better adjustable to various strains, thus contributing to the comfort and convenience of the wearer, while greater economy is obtained in cutting and fitting, variations in waist size being obtained without materially altering the pattern of the leg sections.

LAMP.—Edgar J. Bissell, Bartold, Mo. This is an improvement in that class of lamps having a tube for providing a central air draught, an outer tube affording a wick space, while a vertically removable chimney holder on the latter tube has a deflector, and a central rod projecting above the air tube has a shoulder and single spreader disk with aperture receiving the rod and an outer marginal series of apertures, the spreader disk being of greater diameter than the wick tube. The lamp is simple and compact, and designed to give a strong, clear light, throwing out but little heat in proportion to the size of the flame, the outer and inner draughts being combined in such a way as to give a steady vertical flame.

FIRE ESCAPE.—Horace Mullenex, Alpine, N. Y. This is a device of simple construction, capable of attachment to any building, to be automatically operated by the weight of the descending persons, the rapidity of descent being readily controlled. It consists of a frame in which are journaled drums over which passes a chain carrier to which baskets are attached, friction wheels being carried by the drum shafts, which are mounted in vertically movable bearings, while friction blocks are mounted under the wheels, and springs press the blocks upward.

POCKET CASH REGISTER.—James L. Brown, Brookville, Pa. The body of this device is a flat oblong plate having a dial cash indicator and register at its two ends, and an intermediate slide register. It is designed to be conveniently carried in the pocket to indicate cash on hand and register cash paid out, and to serve as well for a rule, straight edge, and pencil holder. One side edge of the plate is graduated to form the rule, and the pencil holder is attached to the other side.

ELECTRIC POST OFFICE BOX.—Will A. M. Smith and Robert T. F. Smith, Morrison, Ill. Combined with the box is a door with a catch, and arranged to be operated by gravity, the latch which engages the catch having an armature, while an electro magnet within the box is adapted to lift the latch. The box itself is of the usual form and construction, while the push button is preferably located near the desk of the attendant, so that he may release the door and deliver the mail without changing his position, there being as many push buttons as there are boxes, and each push button having the same number as that of the box with which it connects.

CHECK, DRAFT, ETC.—John L. Spalding, Aitkin, Minn. This invention provides for a certain arrangement of figures in table form with indicative marks or symbols attached on the face of the check to be punched, as required, to denote the value of the check, so that its original amount cannot be altered or raised without detection. The invention is also applicable to money orders or other papers in which the amount on the face is checked before delivery to the payee by the punching of figures on the face of the instrument indicative of the amount of the check.

TYPEWRITER ATTACHMENT.—Anna M. Rother, Brooklyn, N. Y. This improvement consists of a treadle connected by a chain or cord to a lever, the latter being connected to a shaft which has a fixed arm connected with the usual transverse rod connected to the carriage of the typewriter, and adapted to shift the roller platen backward, to cause imprint of upper case capital letters. It is a simple and inexpensive device, which may also be adopted for any use requiring a treadle and a yielding connection therefrom to a movable part.

SUSPENDER BUCKLE.—John T. Brodnax, New Orleans, La. This is an improved device for connecting suspender ends to the suspenders proper, the buckle frame having a transverse slot and upwardly extending openings in its front portion, while the back plate has a web which unites it to the front portion, the clamp having its upper edge provided with a right-angled bar which is slotted to receive the web, and has its lower edge provided with teeth adapted to engage the suspender.

SUSPENDERS.—The same inventor has likewise obtained a patent for improvements in the attachments for connecting the different parts of the suspenders, and for attaching the suspender ends or button straps. The improvement embraces tubular front attachments having a hook, tongue, and cross bar extending across the lower portion of the opening of the tube, with other novel features.

PATTERN FOR VESTS AND SHIRTS.—A third patent to the same inventor provides a pattern in which the suspenders will be located relative to the side and shoulder seams and neck band of the garment, whereby a proper and comfortable fit is insured, whatever be the proportions of the person for whom the garment is intended. The rules of measurement apply to shirts as well as vests, and the improvement relates to former patented inventions of the same inventor for suspender attachments for shirts and vests in which the suspenders are permanently secured to the garment, or arranged in pockets formed therein, and converge to a point on the back.

SASH HOLDER.—Edward Z. Kidd, Deadwood, South Dakota. This is a combined sash holder and lock consisting in an open front casing having inclined slots in its side walls, a roller with trunnions working in the slots, the roller projecting

through the open front of the casing when its trunnions are at the lower ends of the slots, with a locking arm or lever movable across the lower end of one slot in its path of one of the trunnions, to lock the roller in its lowermost position. The device dispenses with springs, and is adapted to hold the sash at any desired point when open, locking it when closed.

SKYLIGHT LIFTER AND LOCK.—William Trebilcock, Central City, Col. A notched lifting bar connected to the skylight is arranged for lateral movement in an aperture in a bracket, a locking lever engaging the bar, while a spring-actuated locking bar pivoted to its lower end projects through the bracket to hold the lifting bar from upward movement. This improvement forms a simple and easily operated device to raise and lower the skylight for ventilating purposes, holding it locked in any of its adjusted positions so that it cannot be raised or lowered from the outside.

DECK SUPPORT FOR SHIPS' BOATS.—Cornelis J. Van Sluys, Ymuiden, and Cornelis Steffelaar, Jzn., Velzen, Netherlands. This invention relates to an improved construction of supports arranged to facilitate the rapid launching of the boats, and at the same time providing for them a safe and secure resting place on the deck of a vessel. In the construction side bearings are arranged in combination with intermediate keel bearings, there being a longitudinal screw shaft and connections between the shaft and the keel bearings for raising and lowering them.

HARNESS.—John J. Hardy, Lavonia, Ga. This harness has a combined collar and hame, a cross bar pivoted on the upper part of the collar and elbow levers pivoted on its lower sides, with connections between the ends of the levers and, the cross bar, while the traces are secured to the lower ends of the elbow levers, and the ordinary hip and breeching straps are connected by a back strap with the upper hame straps of the collar. This harness is comparatively inexpensive, having less than the usual number of parts, can be quickly put on or taken off, and is designed to be very easy to the horse.

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.

SCIENTIFIC AMERICAN

BUILDING EDITION.

JULY NUMBER.—(No. 69.)

TABLE OF CONTENTS.

1. Elegant plate in colors and floor plans showing a colonial cottage at Brookline, Mass. An admirable design. Cost \$4,500 complete.
2. Colored plate illustrating a row of dwellings with ornamental fronts, erected at Philadelphia. Perspective and floor plans. Cost from \$7,500 to \$5,800 complete. Architects G. U. & U. D. Hewitt, Phila.
3. A residence at Longwood, near Boston, Mass. An excellent design. Floor plans, perspective elevation, etc. Cost \$8,700 complete. Brigham & Spofford, architects, Boston.
4. View of the new building for the Hibernia Savings and Loan Society at San Francisco, Cal.
5. A stone residence at Germantown, Pa. Cost \$10,245 complete. Perspective and floor plans.
6. Perspective and plans of the country residence of Mr. Walter E. Rex, at Chestnut Hill, Pa. Cost \$14,000 complete.
7. A very attractive and convenient cottage, of colonial style, erected at Longwood, Mass. Cost \$4,500 complete. Messrs. Rand & Taylor, of Boston, architects.
8. Perspective view of the new and substantial residence of E. A. Merrill, Esq., at Minneapolis, Minn.
9. Nine double houses of Queen Anne style erected at Syracuse, N. Y., by Mr. E. E. Price, at a cost of \$75,000. Plans and perspective.
10. A coach house and stable erected for Mr. Walter Rex at Chestnut Hill, Pa. Plan and perspective view. Cost \$1,000 complete.
11. A suburban cottage at Brookline, Mass., of colonial architecture. Cost \$3,600 complete.
12. Design for a two story summer residence. R. A. Briggs, architect.
13. A picturesque design for a gardener's lodge.
14. Cottage at Narberth Park, Pa. Cost \$4,500 complete. Perspective view and floor plans.
15. A farm house for \$1,000. Floor plans and perspective elevation.
16. Miscellaneous contents: Decorative treatment and materials.—Wall paper.—The Bexley system of emptying cesspools.—Decorative don'ts.—Heat from the moon.—An improved hot water heater, illustrated.—Improved steel ceiling, illustrated.—Foundations under water.—Staircase and baluster designs, illustrated.—Enrichments for mouldings, friezes, etc., illustrated.—Concrete.—The Richardson & Boynton heater, illustrated.

The Scientific American Architects and Builders Edition is issued monthly. \$2.50 a year. Single copies, 25 cents. Forty large quarto pages, equal to about two hundred ordinary book pages; forming, practically, a large and splendid MAGAZINE OF ARCHITECTURE, richly adorned with elegant plates in colors and with fine engravings, illustrating the most interesting examples of Modern Architectural Construction and allied subjects.

The Fullness, Richness, Cheapness, and Convenience of this work have won for it the LARGEST CIRCULATION of any Architectural publication in the world. Sold by all newsdealers.

MUNN & CO., PUBLISHERS,
361 Broadway, New York.