

## RECENTLY PATENTED INVENTIONS.

## Railway Appliances.

**CAR COUPLING.**—Charles H. Smith, Birmingham, Ala. This is an improvement in the side-latching type of coupler, and the invention provides novel, simple, and efficient means for connecting such a coupling with the elongated coupling link of an ordinary link and pin coupling, also providing an attachment for the drawhead of a side-latching car coupling which will prevent the drawhead from falling upon the track in case it becomes detached from the car frame at its rear end, together with a novel means for uncoupling a partly detached drawhead.

**LUBRICATOR FOR CAR OR OTHER AXLES.**—John S. Washburn, Hackensack, N. J. Although more especially designed for railroad use, this improvement is also applicable to shafts of stationary machinery in mills or elsewhere, where the shafts have end play in addition to their rotary motion. The box has a lower oil chamber or space, and carries a free-rocking oil-lifting apron operated by the end play of the axle to raise the oil lifter and convey the lubricant from the well to the journal, which will thus be positively and automatically lubricated with but little or no friction. There may also be arranged on the opposite side of the box a sponge carried by a spring to more effectually promote the distribution of oil along the axle journal.

**SWITCH WORKING MECHANISM.**—Robert E. Brackelsberg and George G. Edwards, Portland, Oregon. These inventors have made an improvement in devices to automatically throw a switch by the movement of a train, and which will also close the switch. The mechanism is of a simple and substantial character, and may be connected with any ordinary switch or switch stand, the connection being so made that the switch may be operated by hand in the usual way, and also operated by the train without interfering with the switch stand.

## Electrical.

**COMMUTATOR BRUSH.**—Rudolf Kersberg, Hohenlimburg, Germany. This brush consists of a metallic cloth or fabric formed of wire spirals screwing one in the other, single wire spirals being inclosed in the fabric. The device is simple, durable, and efficient, and so arranged as to prevent the dust arising from the contact of the brush with the commutator from settling in or adhering to the parts forming the brush.

## Agricultural.

**PLOW.**—John D. Burkhardt, Charlie H. Waterman, and John D. Smith, Dayton, Washington. These inventors have made an improvement in combined hillside and sulky plows, providing a double plow carrying a right hand and left hand share, and means whereby either plow may be readily carried to and from engagement with the ground. The forward axle may also be adjusted independently of the adjustment of the plow shares, and either beam and its share may be disconnected from the carriage, both beams being normally connected with the carriage in such manner that one plow will ride upon a swiveled wheel on the land, independent of the other plow, in position for work.

**MOWER.**—Richard McGabey, Walla Walla, Washington. This is an improvement in machines having the finger bar and sickle located at the front, ahead of the team, the invention providing a construction whereby the team can draw the machine with less labor than when attached to a side bar machine, the machine being more readily manipulated, and adapted to be directed straight across a field or worked along a hillside. The sickles are in view of the driver, who completely controls every part of the machine, in which there are less than the usual number of parts, so that it can be very economically and strongly made.

**CHEESE-FORMING MACHINE.**—Henry R. Van Eyck, Zeeland, Mich. To work soft cheese into proper form, and cut it into cakes according to a predetermined weight, is the design of this machine, in which the invention consists principally of a conveying and agitating screw operating in a casing having a contracted outlet discharging onto a conveyor belt propelled by the cheese discharged from the outlet, the speed of the belt being governed by the weight of the cheese on it.

**BAND CUTTER AND FEEDER.**—William S. Van Wechel and Dennes L. Wynia, Orange City, Iowa. These inventors have designed a simple and inexpensive mechanism to be connected with any ordinary thrashing machine, to feed bundles of grain to the cylinder, cut their bands and separate them so that the unthrashed grain will be evenly fed. The machine is adjustable for bundles of different sizes, is designed to be thoroughly efficient, and not liable easily to get out of repair.

## Miscellaneous.

**MILK WAGON.**—Nicholas Milbank, New York City. This wagon is especially devised for the carriage of bottled milk in the boxes in which the milk was primarily packed, thus avoiding the necessity of extra handling of the milk, which is carried in this improved wagon in a manner most convenient for removal.

**HORSE COVER.**—Edward H. Cooper, Fond du Lac, Wis. As an improved article of manufacture, this inventor has devised a form of blanket fastening, permitting the blanket to be drawn closely to the animal at the front, or left loose as may be desired, a novel form of girth hook aiding in such adjustment.

**HORSE SHOE.**—Frederick W. Bach, New York City. This shoe is provided on opposite sides with a series of calks arranged diagonally; with the outer portions ahead of the inner portions, thus spreading the effective bearing points of the several calks over a pretty large surface. The calks are not continued to the outer curve of the shoe, and are not liable to injure the horse's legs or feet, but they give the shoe a strong grip on the ground to prevent the slipping of the horse in any direction, when either pulling or backing.

**ANIMAL MUZZLE.**—Thomas H. Johnson, Plymouth, Fla. A frame fitting the animal's muzz-

le has a gravity-actuated guard piece at the nose, permitting cattle or horses on which it is applied to eat grass or herbage with their heads in lowered position, while the parts automatically adjust themselves when the head is elevated to close and lock the front of the muzzle, preventing the animals from injuring fruit trees, etc.

**ANIMAL TRAP.**—Frank D. Hay, Keokuk, Iowa. This trap has a dumping platform which forms a perfect support for an animal entering, but which acts to deposit the animal, after entry, into a prison compartment, from which escape is impossible. The trap is especially designed to catch and cage rats and mice.

**CLOTHES LINE SUPPORT.**—Charles G. Norlin and Frank Lindstrom, Marquette, Kansas. The line is, according to this invention, made fast at one end, and is pendent near its other end on a rotatable pulley, there being a weight on the pendent end of the line, while there are link bars loose on the line adapted to engage hooks on the supports. The improvement affords ready means of placing clothes on the line and making the line taut without the use of props.

**HAT OR BONNET HOLDER.**—Isaac D. Van Gorder, Niles, Mich. This is a novel supporting device particularly adapted for the adjustable support of a trimmed hat or bonnet, either in a shipping box or on a display stand, so as to securely hold the article in a desired position, and avoid dislodgment, while it may be readily removed when desired without injury. The holder consists principally of a base to be secured to the bottom of a box, and having a socket in which is held a standard carrying two pairs of horizontally projecting and curved limbs.

**MATTRESS FILLING MACHINE.**—William H. Putnam, Durand, Mich. This machine has upper and lower stretches of pliable material, a follower, a take-up mechanism, and side and top and bottom boards, by means of which the filling may be readily and conveniently held in proper quantity and perfect distribution, and fed in that shape to the casing, the filling while being forced into the casing having pressure equalized upon it to such an extent that no portion of the filling will be disturbed while it is being placed in the casing. The machine is of durable and inexpensive construction, and readily adjustable to produce mattresses of different sizes.

**SOFA BED.**—Eric Sodergren, Brooklyn, N. Y. This inventor has designed a compact construction affording a receptacle at one end of the sofa, and within the sofa frame a vertically adjustable spring bed, connected with the sofa seat so as to be elevated when the seat piece is elevated, and thus removed from the top of the sofa frame, and to be automatically depressed to a horizontal plane by a return of the seat piece. The sofa is thus readily convertible into a single bed that does not take up more floor space than the sofa.

**DEVICE FOR LIBERATING ANIMALS.**—Charles C. Partridge, Hyde Park, Mass. This improvement is specially designed for releasing horses from the fastenings in their stalls in case of fire, and leading them out of the stable. In connection with sliding partitions between the stalls are locking devices connected with a cable operated by a drum mechanism on the outside of the building, whereby the animals connected with the releasing cable will be forced to move therewith, and will thus be led out of the building.

**MAKING STAINED GLASS PANELS.**—Henry C. Hughes, London, England. This invention is an improvement on a former patented invention of the same inventor, for welding together differently colored pieces of glass in artistic design, and painted with vitrifiable enamel color, substituting in the process a cheaper and better material than sheet platinum, and providing also an improved bed upon which the welding is effected, the bed replacing the fire clay slab previously designed.

**CUTTING MACHINE.**—Perry E. Wilson and Philip M. Hesch, Jr., Titusville, Pa. This invention relates to machines adapted to cut paper, asbestos cloth, etc., from rolls, the machine provided being capable of handling large and heavy rolls, and having means for conveniently adjusting the rolls vertically, also cutting the material in strips of any desired length, the cutting and feeding mechanism being so arranged that they may be operated at any point on one side of the machine.

**WHEEL TIRE.**—Harry M. Devoe, New York City. This is an elastic tubular tire provided interiorly with a continuous coarsening whose convolutions are connected on the inner side of the tire by wires interwoven with the coils. The improvement forms a tire for pulleys and wheels for frictional driving gear and for vehicle wheels in which collapsing will be avoided and the necessity of inflating with air will be obviated, the tire not being destroyed or materially injured by being punctured.

**SPOKE SOCKET.**—Philipp Schneider, Chattanooga, Tenn. This is a re-enforce and protecting device, comprising two half sections each formed with a semicircular end portion, the adjacent edges of which join to completely encircle the spoke when fitted thereon, the same being securely held in the felly sockets, and preventing the dirt from entering and the spokes from becoming quickly worn or weakened.

**TRUNK.**—Ernst L. Forsgren, New York City. This trunk has a removable casing within an outer shell, and its construction is such that it may be conveniently packed and articles readily removed from any compartment without disturbing the contents of the other compartments. The casing is mounted to turn in the shell, and is provided with longitudinal partitions forming separate compartments, with a hinged cover for each compartment, made of two spring-pressed sections.

**GRAIN METER.**—James W. Coker, Niles, Mich. This is a device for attachment to an ordinary grain chute to automatically measure and discharge the grain, and consists of a tilting compartmented box turning on a stationary pivot below the chute, and having two notches in a circle whose plane is perpendicular to the pivot, a stationary curved apertured plate forming the bottom of the compartmented box, while there is a mov-

able wing in the chute and a latch operatively connected with the wing and adapted to engage either of the notches to lock the tilting box in either of its normal positions.

**BAG HOLDER.**—George S. Ingle, Evansville, Ind. This invention comprises a portable frame with uprights in which slides a platform, and means for raising, lowering, and locking it, a detachable spout or chute being vertically adjustable on the standard, and there being movable hooks attached to the spout for supporting the mouth of a bag and holding it open while being filled with grain. By means of the adjustable platform, bags, barrels, etc., may be readily raised to such height that they may be conveniently handled.

**COPY HOLDER.**—Rosecrans Sheldon, Chicago, Ill. This is a device of simple construction, on which a book or manuscript may be readily fastened and held at any desired angle. It also has an aligning arm adapted to move over the lines to be copied to indicate the progress of the copying, simple means being provided for moving the line arm line by line by merely touching the handle.

**STAMP HOLDER AND MOISTENER.**—George Loomis, Parkersburg, West Va. In the front portion of this box is a sponge cup, at the rear of which are vertical stamp compartments in which the stamps lie singly, one upon the other, on spring-pressed plates, whereby they will be normally raised to about the level of the box, from which they are removed separately and drawn over the top of the sponge.

**PASTEURIZING AND RACKING OFF BEER.**—Adelbert O. Müller and Andreas Giesen, Fremont, Neb. These inventors have devised a very cheap and simple apparatus through which beer to be racked or bottled may run in a constant stream, and by means of which the beer may also be sterilized and cooled to its proper temperature. The operation is such that the froth is kept back and the beer is delivered without loss of carbonic acid gas.

**REGISTERING MEASURES OF LIQUIDS.**—Francis Geran, Brooklyn, N. Y. This is a device to be attached to a faucet, to indicate and register the number of glasses or measures of liquid drawn from a cask or barrel. The construction of the mechanism is such that, when connected with a faucet for drawing beer or ale, it registers only when the device is turned in one direction, enabling the glass or measure to be brought beneath the faucet as many times as necessary to properly fill it.

**DESIGN FOR A BOTTLE.**—Alphons Dryfoos, New York City. The cross section of this bottle is approximately triangular, but with one of the sides of the triangle convex to form the segment of a circle. 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 CENTURY COOK BOOK AND FAMILY MEDICAL ADVISER.** By Jennie A. Hausay. Chicago: Laird & Lee. 1894. 16mo. Pp. 353, illustrated. Paper. Price 25 cents.

This low-priced receipt book contains a large number of plain practical receipts in which all foreign names for dishes or their ingredients are eliminated. The work is profusely illustrated. The sections devoted to "Table Etiquette" and "How to Keep Persons and Things Neat and Fresh" are especially valuable. The medical section treats of emergencies and all the diseases which are so ill-advisedly treated in receipt books, such as consumption and scarlet fever.

**AN INTRODUCTION TO STRUCTURAL BOTANY.** (Flowering Plants.) By Dunkinfield Henry Scott. London: Adam & Charles Black. Pp. 288, 113 figures. Price \$1.

This book is designed to be a first guide to the study of the structure of plants, and to awaken among pupils in schools and private students a genuine interest in the study of living things. Three types are especially made the subject matter of study, exemplified by the wall flower, the lily, and the spruce fir, with the idea of imparting as thorough a knowledge as possible of a few plants rather than scraps of information about a larger number.

**SUN AND SHADE.** An artistic periodical. New York Photogravure Co. Large quarto, monthly. \$4 a year.

The April number of this periodical contains eight plates: Rose Coghlan, the noted actress; The Reproof; Aristocracy; A Study from Life; Salvator; The Drunkard's Wife; Smithsonian Institution; An Avenue of Willows. The very high character of the work has given this publication a well deserved reputation. Each picture is worth being framed, and will bear as close criticism as many much more expensive proof prints. The publishers announce as a special feature a series of reproductions directly from the original paintings of the gems of the British National Gallery.

**WATER OR HYDRAULIC MOTORS.** By Philip R. Bjorling. London: E. & F. N. Spon. New York: Spon & Chamberlain. 1894. 208 illustrations. Pp. 287. Price \$3.50.

The author has placed this book before the public to supply a want which seems to exist for a treatise on this subject which shall give a treatment not too mathematical for the general reader. In all hydraulic machinery there is an especial temptation toward mathematics, a temptation which the author seems to have succeeded in resisting. The work is very excellently printed on good paper, and has numerous illustrations.

**A TREATISE ON ELEMENTARY HYDROSTATICS.** By John Greaves, M.A. Cambridge. 1894. Pp. 201. Price \$1.10.

The volume just reviewed was commented on as being without mathematics; the present one treats the subject

of hydrostatics more generally, and with mathematics to the exclusion of calculus, except where certain alternative proofs are given using this mathematical method. It is written for an especial English examination, so that it is definitely limited in scope.

**THE MAGNETO HAND TELEPHONE.** Its construction, fitting up, and adaptability to everyday use. By Norman Hughes. New York: Spon & Chamberlain. London: E. & F. N. Spon. 1894. Pp. 80. Price \$1.

The title of this very neat little manual indicates its subject. It is devoted to the telephone, which is now public property. It is very short and practical, and will be found valuable for amateurs and beginners in the art. A considerable portion of the treatise is devoted to the practical lineman's work.

**HOW TO RUN ENGINES AND BOILERS.** Practical instruction for young engineers and steam users. By Egbert Pomeroy Watson. New York: Spon & Chamberlain. London: E. & F. N. Spon. 1894. Pp. 125. Price \$1.

Like the volume on telephones reviewed above, this belongs to the Spon & Chamberlain series of practical hand books. It is an entirely practical book, and one which we think will be of value to the engineer. At its end it contains a species of contents mistakenly termed an index.

Any of the above books may be purchased through this office. Send for new book catalogue just published. MUNN & CO., 361 Broadway, New York.

## SCIENTIFIC AMERICAN BUILDING EDITION.

MAY, 1894.—(No. 103.)

## TABLE OF CONTENTS.

- Elegant plate in colors showing a handsome residence recently erected for William H. Bartlett, Esq., at Evanston, Ill. Two perspective views and floor plans. Mr. J. L. Silsbee, architect, Chicago, Ill. A very picturesque design.
- Plate in colors showing a cottage at Mt. Vernon, N. Y., recently completed for E. J. Walther, Esq. Two perspective views and floor plans. Mr. L. H. Lucas, architect, Mt. Vernon, N. Y. An excellent design.
- Cottage at Morgan Park, Ill., recently erected for G. F. Patterson, Esq., at a cost of \$3,000 complete. Two perspective views and floor plans. Mr. H. H. Waterman, architect, Chicago, Ill.
- A summer house at Southampton, Long Island, N. Y., recently completed for H. M. Day, Esq. Two perspective views and floor plans. A model design. Messrs. G. E. Harney & W. S. Purdy, architects, New York.
- A residence at Fortchester, N. Y., recently erected for Walter S. Haviland, Esq. Two perspective views and floor plans. A very pleasing design. Mr. Louis Mertz, architect, Portchester, N. Y.
- Floor plans, interior view, and two perspectives of a residence recently completed at Hackensack, N. J., for George A. Vroom, Esq. An excellent design and unique plan. Cost complete \$6,950. Mr. Christopher Meyer, architect, New York City.
- The Barnum Institute of Science and History, of Bridgeport, Conn., donated by the late Phineas T. Barnum. A one-half page perspective view. Cost for building and grounds \$100,000. A fine example of the Romanesque style of architecture.
- A residence at Stamford, Conn., recently erected for Oliver G. Fessenden, Esq., at a cost of \$5,199. Two perspective views and floor plans. Mr. Wm. H. Day, architect, New York City. A very pleasing design.
- A cottage of moderate cost recently completed for Hiram R. Smith, Esq., at Randall Park, Freeport, Long Island, N. Y. Cost complete \$3,900. Two perspective views and floor plans. Mr. Wm. Raynor, Freeport, Long Island, N. Y., architect. A very attractive design.
- "Otter Cottage," recently completed for Henry H. Adams, Esq., at Belle Haven Park, Greenwich, Conn. Mr. H. W. Howard, architect, Greenwich, Conn. An attractive design in the colonial style of architecture. Two perspective views and floor plans.
- A colonial cottage at "The Bluffs," Mt. Vernon, N. Y., recently completed for E. A. Hunt, Esq. Two perspective views, an interior view and floor plans. Mr. Louis H. Lucas, architect, Mt. Vernon, N. Y.
- Half-page engraving showing hall and staircase of a London dwelling.
- Miscellaneous Contents: Clients' right of replicating design.—Shop and mill construction.—Seasoning oak.—Beautiful designs in parquetry work, illustrated.—The effect of fire on concrete.—Water-proof cellars.—Embossing wood.—Steel butt with ball-bearing washers, illustrated.—"The Holland" radiators, illustrated.—Graphite paint.—Sand-papery machines.—The Van Wagoner & Williams Hardware Company.—Window screens and screen doors.—Maple flooring.—The Pullman sash balance, illustrated.—Portland cement walks.—Subterranean London.—An alloy which adheres to glass.—A saw clamp and filing guide, 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.