

RECENTLY PATENTED INVENTIONS.

Engineering.

LIGHT HOUSE.—James Andrews and Gustav Linenthal, Allegheny, Pa. This invention is applicable to light houses and other analogous structures, its special feature consisting in forming part of the foundation and superstructure integrally of a single tube or shaft, rendering the structure better able to withstand the pressure of the wind and impact of the waves than the light houses which are bolted to their foundations.

Railway Appliances.

CAR COUPLING.—James F. Deiseher, Lancaster, Ill. An arm is pivoted on the drawhead, and a block pivotally connected with the arm is held to slide, serving to disengage the arm from the coupling link and raise the latter out of place in the drawhead uncoupling the cars, the device permitting automatic coupling and the uncoupling of cars without the operator going between them.

PNEUMATIC RAILWAY SYSTEM.—George W. Kink, Washington, D. C. This invention covers a novel means of connection between an air tube along the line of the track and the motor on the car body, whereby a continuous flow of air from the tube to the motor will be maintained, the operation of the connection being positive, without undue friction, and yet maintaining air-tight joints.

RAIL CHAIN AND SUPPORT.—Curtis H. Showalter, Brookville, Pa. This is a device especially adapted for use at curves, to prevent spreading of the rails at such places, and consists of a series of combined chairs and supports for the outer rails, capable of slightly rocking movement, and serving to force the outer rail inward as the train passes over it.

Electrical.

INSULATOR.—Fidel Miro, Cienfuegos, Cuba. This is a device for the support of all kinds of wires, but especially those carrying high tension current, and is designed to support the wire so long as it is entire, but to release it as soon as it is broken and to automatically make connection with an adjoining wire.

WATER ALARM.—Francis M. Ashton, Lima, Ohio. This is a device adapted to sound an alarm when the water in a boiler or other receptacle rises or falls above or below certain limits, the points at which it becomes operative being easily changed, the device embodying levers connected with float rods, and adapted to make and break an electrical circuit.

Mechanical.

NUT LOCK.—Ithamar C. Hawes, New Milford, Conn. In connection with a bolt having transverse grooves across its threaded end, a nut is used having recesses in one face adapted to register with the grooves, the recesses being under-cut, whereby a flat key inserted in the grooves and recesses will prevent the turning of the nut, the device being especially designed for use with vehicles and agricultural implements.

SAW SET.—James Johnstone, New York City. By this device two contiguous saw teeth of any size and either fine or coarse may be set in one operation. One of the anvils therein is beveled at different degrees of slant on opposite sides and may be readily adjusted to bring any one of its beveled faces into position to suit different degrees of set to be given to the teeth.

STONE POLISHING MACHINE.—George B. McLean, Montpelier, and Othelo W. Lewis, Barre, Vt. This machine is designed to polish a greater area than prior constructions of its class, the polishing wheel frame supported by the main shaft being formed of folding sections. These sections and the polishing wheel are independently adjustable vertically, and means are also provided for relieving the main shaft from undue strain and for securing its proper centering should it become worn.

TYPEWRITING MACHINE.—Edward F. Youngs, West Camp, N. Y. This typewriter, in which upper and lower case and special type characters may be used at will, is capable of rapid manipulation by one hand of the operator, is comparatively noiseless in action, and gives an unobstructed view of the characters as they are made, thus permitting of the detection of errors and the verification of the work as it proceeds.

Agricultural.

COMBINED COTTON CHOPPER AND CULTIVATOR.—Thomas E. Anderson, Memphis, Tenn. On the under side of the frame of this implement are secured two converging beams carrying scrapers at their forward ends and transversely aligning harrow teeth adjustable vertically; and on the under side of the rear end bar of the frame are secured cultivator blades of the "elk's foot" pattern. On a shaft ranging longitudinally of the frame, radial arms are adjustably mounted carrying hoe blades or cutters, the shaft being operated by gearing from the rear wheels.

CORN HARVESTER AND HUSKER.—Leonard G. Youngs and Reuben Richardson, Grant Park, Ill. This device comprises a wheeled frame for traversing the field and carrying spirally and longitudinally grooved rolls for grasping the corn husks, an elevator for carrying away the husks, mechanisms for grasping the stalks and directing them to the rolls, a stationary bar against which the stalks strike and are released from the husks to fall into a chute leading to a wagon, and suitable operating mechanism, whereby a great saving of time and labor is attained.

HARROW.—Marion M. Grimes, County Line, Tenn. This harrow is formed in two sections, and may be worked both ways; as the teeth have a proper cutting edge either way; one section may be folded upon the other when a light draught is desired or the sections may be detached and used separately.

SACK FILLER AND SCOOP.—Walter H. Robinson, Hickson, North Dakota. This device is intended chiefly for use in filling sacks or bags with grain, but is capable of a variety of uses. It does away with the necessity of holding the sack with one hand and manipulating a scoop with the other, as it may be inserted in the mouth of the sack and the grain be scooped and at once passed into the sack, thus saving much time and labor.

Miscellaneous.

LETTER BOX AND GATE POST.—Richard Groom, Jr., Pueblo, Col. This invention provides a post having a box hinged in its upper end which when closed fits into the upper hollow portion of the post, and when desired may be swung outward to facilitate the ready removal of the letters and papers therein.

STEP LADDER.—John W. Hester, Brooklyn, N. Y. Combined with slotted side bar and legs pivotally connected to the bars are rods pivoted to the legs and having headed pins working in the slot of these bars, a latch being pivoted to the side bars and adapted to engage the rods, with other novel features, designed to give great stability when the ladder is extended, and prevent its spreading.

DETACHABLE SPOUT AND CAN OPENER.—Daniel W. Green, New York City. This invention consists of a tube having one end provided with pointed members which may be easily driven into a can, and will cut therefrom a piece corresponding to the size of the tube, by means of which a sealed can may be easily opened, when the device will afford a convenient spout through which the liquid in the can may be poured.

SAFETY VALVE FOR KITCHEN BOILERS.—Peter J. and Cornelius F. Cunneen, New Rochelle, N. Y. This is a valve of cheap and stable construction, designed to be readily adjusted without special skill, and to the interior of which ready access may be had for examining or renewing its parts, to operate when the pressure in the boiler exceeds the pressure for which the valve is set, and allow the water to pass off until the normal pressure is restored.

GRATER FOR NUTMEGS, ETC.—Edwin C. Roraback, Saginaw, Mich. A horizontal cylinder is mounted upon a suitable frame and has a perforated bottom, a stationary grinding cylinder being mounted in one end of the horizontal cylinder, and a revoluble perforated disk mounted loosely therein so as to be longitudinally movable, with means for rotating the disk, by which articles to be grated may be rapidly reduced to a regulated degree of fineness.

LAMP SHADE SUPPORT.—Otto F. Wegener, Seattle, Washington. The fount or oil receptacle is provided with a trough-shaped peripheral rim at the point where it projects farthest from the center, this rim having an overhanging lip designed to receive a sliding foot bearing the shade, which is thus made adjustable around the lamp.

INDICATOR FOR BATH ROOMS, ETC.—Henry Tate, Verplanck, N. Y. This is a device for indicating to one outside when a bath room or other apartment for general use is occupied or vacant, the invention covering a novel construction and combination of parts, the device being operated by the movement of the bolt.

STIRRUP LEATHER STAY.—Jesse D. Paigitt, Dallas, Texas. This is a stay designed to cause the stirrup to hang in proper position for insertion of the rider's foot in mounting, and is U-shaped in cross section to receive the stirrup cross bar and provided with a loop on its convex side at the bottom for the stirrup leather or strap.

BOOT LEG SUPPORTER.—Harvey G. Booz, Doylestown, Pa. This is a bar, preferably made of sheet spring metal, curved for a portion of its length, and made of two sections pivoted together, adapted to be inserted in a side pocket of the boot leg, with its lower portion engaging the sole of the boot, to prevent the leg of the boot from sagging down or wrinkling at the ankle.

BARREL STAND.—George P. Pearson and John A. Foster, Attica, Ind. This invention provides simple means whereby barrels, etc., may be held on suitably arranged supports secured to a store counter, so that they may be readily swung from under the counter to admit of ready access thereto when desired, a peculiarly arranged cover being adapted to automatically fit over the barrel as it is pushed in place.

ADJUSTABLE CROZE.—William Kampfe and Joseph Nagengast, Bayonne, N. J. This is a cooper's tool designed to be instantly adjusted to fit various sizes of barrels, casks, and similar receptacles, and be very efficient in operation while simple in construction.

BABY WALKER AND PROTECTOR.—John S. Irvine, Charlotte, N. C. This is a shield or jacket made of paper mache, wood pulp, or similar material, its upper portion designed to snugly fit the body of the child, while its lower portion is flared or formed into cone shape, to extend outwardly from the feet and form a solid support, to assist the infant in learning to walk and protect it from injuries.

SPINNING TOP.—Arthur Alexandre, Paris, France. This invention relates to tops spun by a screw engaging a nut within the top, and provides the top with an attached sleeve, which not only serves as a handle by which the top may be held while withdrawing the screw to set the top in motion, but also permits the top being held in any position while spinning, and without retarding its motion.

MUSICAL SKIPPING ROPE HANDLE.—John N. Pringle, Belleville, Canada. This invention is an improvement in that class of devices in which the handle has a cogged or toothed wheel, and a bar swinging on the handle is connected with the end of the rope, and has a spring tongue for engaging the wheel, so that as the bar revolves, its spring tongue produces a rattling sound.

UMBRELLA.—John Bergesen, Brooklyn, N. Y. This is an improvement on a former patented invention of the same inventor, designed to provide means for preventing the ribs from spreading too far outward as the umbrella is opened, and for holding the cover away from the joints of ribs to prevent its entanglement therewith. The inventor is now perfecting machinery for the manufacture of the device, regarding which information may be obtained from F. C. Canture, 189 Broadway, New York City.

DEHORNING IMPLEMENT.—Robert A. Steele, Lawrence, Kansas. The object of this invention is to provide an implement for dehorning cattle in which the cutters are so connected that the animal's ears will not interfere with its operation.

PIPE TESTING GAUGE.—Francis M. Ashton, Lima, Ohio. This gauge, which is for testing gas pipes, contains a mercury chamber, the space surrounding which communicates with an air pump, the pipe and the mercury chamber. Any fall of mercury in the gauge glass, after pressure of air from the pump ceases, indicates a leak, whereupon ether is inserted in the gauge, air pressure is applied and the escaping ether denotes the location of the leak.

LITHOGRAPHIC STIPPLING.—Charles H. Gordon, East Orange, N. J. This invention is a novel method of producing lithographic stippling, by which a lithographer is enabled to accurately and rapidly secure effects similar to those attained by a stipple artist, slowly dot by dot, and also allowing of the production of a great variety of gradations of color, and insuring solidity of the work. The effect of a line engraving may also be produced. C. H. Gordon has taken out patents in this and foreign countries, the United States and Canadian patents being under the full control of the well known firm of lithographers, the Messrs. Knapp & Co., of New York City.

SURGICAL TENT OR DILATOR.—Thomas G. Knight, Rockville Center, N. Y. The subject matter of this patent is a tent or dilator for application to brood mares and other animals, and consists of a plug of expansible material having an elastic exterior layer. It is designed to absorb liquid matter in the affected parts.

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2. Elegant colored plate showing perspective view of a \$1,400 cottage at Chicago. Two floor plans, sheet of details, etc. Architect J. M. Young.
3. Design for an entrance hall.
4. An attractive dwelling at Ioliss, Long Island, erected at a cost of \$6,000 complete. Perspective view and floor plans. Schwietzer & Diemer architects, New York.
5. A neat looking cottage at Humboldt Park, Chicago. Cost \$3,200. Photographic perspective view and two floor plans.
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7. A Flemish cottage erected in Philla Park at Wayne Pa., at a cost of \$5,800 complete. Perspective view and floor plans.
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9. Perspective elevation and floor plans of a handsome cottage at South Orange, N. J. Charles B. Atwood, New York, architect. Cost \$13,000 complete.
10. Engraving showing a block of economical brick houses erected at Philadelphia, Pa. Cost \$2,000 each. J. M. Stiller, of Philadelphia, architect. Floor plans and perspective.
11. Perspective and floor plans of a Lake Side cottage at Minnetonka, Minn. Cost about \$4,000. W. H. Dennis, architect, Minneapolis.
12. Miscellaneous contents: Some of the merits of the ARCHITECT AND BUILDERS EDITION OF THE SCIENTIFIC AMERICAN.—The air supply.—The Alhambra.—Decoration of entrance hall, illustrated.—Questions on construction.—The Henry Martin brick machine, illustrated.—Buckeye Portland cement.—A government contract for woodworking machinery.—Architects' and carpenters' transit, illustrated.—Improved dwelling houses, illustrated.—Dumb waiter and hand power elevators.—Improved double blind wiring machine, illustrated.—An improved boiler for power and heating, illustrated.—Resistance to fire of woodposts.—An improved floor spring, illustrated.—An improved hot air furnace, illustrated.—The Taylor "old style" roofing tin.

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NEW BOOKS AND PUBLICATIONS.

STEEL SQUARES AND THEIR USES. By Fred. T. Hodgson. Fully illustrated. New York: The Industrial Publication Company. 1890. Pp. 80. Price \$1.

This is nominally Part II. of Mr. Hodgson's well known work on the steel square. It is in reality complete in itself and is a supplement to the original volume. It describes the application of the square to carpentry, joinery, sheet metal work, cut stone and brick work. Although the subjects treated cover a wider field, the new book is as compact as the old, and should be in the hands of all workmen interested in laying out work by the steel square.

MICROBES AND THE MICROBE KILLER. By William Radam. New York, 1890. Pp. xiii, 369. Price \$3.00.

The germ theory of diseases is treated and illustrated, quite profusely by the author of this work, whose claim is that its contents are unique, that the theory he sets forth is new and that the proofs of its truth are forcible. It will doubtless be of interest to scientists and physicians.

SUGAR ANALYSIS. By Ferdinand G. Wiechmann. New York: John Wiley & Sons. 1890. Pp. vii, 187. Price \$2.50.

This very practical work is devoted mainly to the commercial analysis of sugar, including sampling, hydrometric work and polarization. Excellent tables of specific gravity, the determination of dextrose, determination of levulose, etc., give it a standard and real value.

MINERAL SPRINGS AND HEALTH RESORTS OF CALIFORNIA. With a complete chemical analysis of every important mineral water in the world. A prize essay by Winslow Anderson, M. D. San Francisco: The Bancroft Company. 1890. Pp. xxx, 384. Price \$1.50.

This work is a prize essay written under the auspices of the Medical Society of the State of California, and it contains a large amount of matter interesting to prospective California tourists. The analyses of the mineral waters give it special value. The illustrations are characteristic and bring out forcibly the features which they illustrate.

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