RECENTLY PATENTED INVENTIONS.

Pertaining to Apparel.

TROUSERS-SUPPORTER.—S. LEVIN, New York, N. Y. In this construction an elastic belt is wholly contained within the trousers, and has wire loops or their equivalent attached to its opposite ends and adapted to engage over a button at the front of the trousers in holding them in place. The invention also provides in connection with the belt, adjacent to its ends, drawers supporters which engage with the supporting loops of the trousers when the ends of the belt are detached, and prevent the passage of the ends therethrough.

Electrical Devices.

ELECTRIC SWITCH.—H. D. GRINNELL, New Bedford, Mass. The switch is more especially designed for turning on or off the gas supply for the lamps of an automobile or other motor vehicle, and at the same time controlling the igniting devices for said lamps. The result is obtained by the use of a manually-controlled switch shaft, having an arm carrying a pinion in mesh with an internal gear wheel formed of alternating insulated and contact-making sections.

ELECTRICALLY-OPERATED AUTOMATIC SWITCH.—W. A. LACKE, Chicago, Ill. One advantage in this device is the fact that the solenoids are dead at all times except when in the act of moving the damper in case a contact closes, and the damper regulating mechanism is in consequence actuated, the closure thereafter of the same contact will have no effect and will not waste any current. It is only when another contact is closed and current is needed for moving the damper in the opposite direction that any current whatever is able to flow.

ELECTRIC-LIGHT BRACKET.—E. I. DRENT, New Orleans, La. The invention relates more particularly to brackets which include a body provided with a bulb-carrying socket, clamping jaws for removably securing the feed wires in place on the body, and a ring, the latter serving removably to engage the jaws to fasten the same firmly in place.

Of Interest to Farmers.

ATTACHMENT FOR RIDING-CULTIVATORS AND OTHER AGRICULTURAL IMPLEMENTS.—C. N. SIMPSON, Bryan, Texas. This attachment may with slight changes in the implement be placed upon a riding plow, a riding cultivator, or a planter, and enable an exact control, so that the plows proper, or cultivator blades may be instantly changed in adjustment, to lower or raise their points in conformity with changes in inclination of the surface of the ground, thus insuring equal proper depth of furrow, or agitation of soil, in level and undulating ground, and when the implement is turned at a fence row.

COTTON-MARKER FOR BALES.—G. W. LONG and E. OTIDYS, Lindsay, Okla. In the present patent the invention is an improvement in cotton markers for use on bales of cotton whereby the bale when being tied out will operate to permanently bind the marker to the bale by the ties, which hold the bale in compression.

Of General Interest.

ENVELOP.—N. J. MACDONALD, Irish Cove, Nova Scotia, Canada. This invention refers to certain improvements in envelops, and more particularly to a special flap construction, whereby after the envelop is sealed, it is very difficult, if not impossible to gain access thereto without leaving evidence of the fact that the envelop has been tampered with.

APPARATUS FOR THE BACTERIOLOGICAL TREATMENT OF SEWAGE AND THE LIKE.—G. A. LUCAS, 75 Rue Voltaire, Levallois-Perret, Seine, France. The invention is an improvement in apparatus for the bacteriological treatment of sewage, fecal matters, domestic waste water and the like. It may be installed in dwelling houses, thus permitting the destruction on the spot and in a complete manner of the organic germs contained in sewage. It is an improvement over a prior patent granted to Mr. Lucas and treats sewage successively by anaerobic and aerobic fermentation and oxidation.

FURNACE FOR SMELTING ORES.—W. KEMP, Tucson, Ariz. Ter. This invention relates to furnaces, and admits of general use, but is of peculiar value in furnaces provided with water jackets and adapted to be used in connection with burners for smelting ores. Upon actual test this furnace has proven more efficient than the old style furnaces.

HOLDER.—I. HERZFELDER, New York, N. Y. The object here is to provide a holder or box for containing court plaster, postage stamps and like articles, and arranged to accommodate a large number of articles in a comparatively small space, to allow convenient removal of an article as required and to protect them against deleterious influences of moisture.

BALE-TIE.—H. O. FRY, Bridal Veil, Ore. The purpose of the invention is to provide novel details of construction for a bale tie, especially well adapted for holding a wire strand bound tightly around a bundle of shooks, lath, shingles or other material, to adapt such material for convenient handling and transportation.

FIRE-EXTINGUISHER.—D. H. CONKLING, Fort Pierce, Fla. The invention relates to improvements in extinguishers in which a mixture of sulphuric acid and bicarbonate of soda is combined to form carbonic acid gas which possesses powerful extinguishing properties. Means are provided whereby the extinguisher may be instantly and automatically recharged by the returning of the extinguisher receptacle to its normal or upright position.

TYPE-WRITER CABINET.—J. D. CLEATON, Atlanta, Ga. The object of the inventor is to provide an office desk of the usual form with a compartment at one side of the central knee space with means to assist in lifting the typewriter from the compartment, up through the top of the desk and to dispose it over the knee space to be further shifted if desired to a more central position.

NON-REFILLABLE BOTTLE.—J. S. BROMHEAD, New York, N. Y. The invention provides a bottle arranged to insure a steady flow of liquid from the bottle when tilting the same, and prevents refilling of the bottle by unauthorized persons after the bottle is once emptied of its original contents. It relates to non-refillable bottles, such as shown and described in Letters Patent of the U. S., formerly granted to Mr. Bromhead.

Hardware.

FLUSHING DEVICE FOR WATER-CLOSET TANKS.—J. F. YOUNG, Owatonna, Minn. The purpose of this inventor is to provide an independent automatic locking device, adapted for use in connection with the customary float locking supply valve, and which, although it may be used for other purposes, is especially designed to be employed in water-closet tanks.

SOCKET-PIECE FOR STUDDING, ETC.—W. P. RICE, Lowell, Ohio. The object of the invention in this case is to provide a device especially adapted for securing the beveled end of a piece of timber against the side of another piece, as, for instance, in securing the legs of trestles to the body portion.

RAZOR-BLADE SHARPENER.—D. M. PERINE, Pittsburg, Pa. An object of this improvement is to provide a device by which the blade may be sharpened evenly, such result being obtained by disposing the blade holder on a pivot centrally located between two sharpening disks.

STRAP-SEAL.—S. BARUCH and M. DESSAUER, New York, N. Y. The invention comprehends a fastening for holding together the ends of the strap or straps to be connected, and a seal comprising a plate of sheet metal bent around the overlapping portions of the strap or straps and secured by aid of eyelets so as to conceal and protect the fastening.

PADLOCK.—L. A. E. C. BYRNE, Lahor, Punjab, India. More particularly the invention relates to a padlock of the kind comprising a casing, a rotatable shackle mounted to project partly from the casing, a slidable member, which in a predetermined position holds the shackle against movement, and key-operable tumbler levers controlling the slidable member.

Heating and Lighting.

FURNACE FOR UNIFORMLY HEATING METALS.—W. N. BEST, New York, N. Y. The invention has reference to certain improvements in furnaces adapted for use in heating forgings, castings, or the melting of metals, and the object of the inventor is to so construct the furnace that the temperature of all parts of the heating chamber will be the same.

Household Utilities.

STRAINER.—G. F. GRIMM, Evansville, Ind. The main object in this case is to provide a device by which a strainer may be supported on a coffee pot of ordinary construction without changing the latter in the least. A further object is to provide an adjustable support which may be applied to pots of different sizes.

CUSPIDOR.—J. H. GREGORY and F. M. SHUMWAY, Farwell, Mich. The invention has in view a cuspidor having side portions hinged at the top to swing outwardly from the base, and provided with a hopper bottom inclining from the center toward each hinged side portion, to insure ready discharge and easy cleansing.

Machines and Mechanical Devices.

MECHANISM FOR THE PRODUCTION OF A CONSTANT MIXTURE OF GAS AND AIR.—F. W. WOLFF, 22 Melancthonstrasse, Berlin, Germany. This mechanism is for use for the production of a constant mixture for illuminating purposes, with the employment of a suction and forcing apparatus, the action of which is regulated in dependence upon the consumption, and which produces and sucks the mixture at iow pressure, and sends it at an increased pressure into the service pipe.

PHONOGRAPHIC REPRODUCER.—R. B. SMITH, New York, N. Y. Primarily the invention pertains to phonographic reproducers, but may also be used in connection with phonographic records and generally in all relations where there is a stylus lever controllable by, or employed for the purpose of controlling a diaphragm in order to record or reproduce sounds.

DISPENSING-MACHINE.—C. M. JEWELL, Canastota, S. D. This machine is particularly adapted for dispensing sheets, envelops, pictures, cards, packages of cards, or similar sheet material, and relates more particularly to the operating and controlling means for delivering the articles to be dispensed to the discharge opening.

COMBINATION HARNESS AND WARP STOP-MOTION.—H. ANNER and M. J. MARNEL, Phillipsburg, N. J. The invention refers to looms and provides motion arranged to stop the loom in case a warp thread breaks, the breaking of a warp thread allowing its heddle to drop and close an electric circuit at the time the heddle frame moves into lowermost position, the electric circuit controlling an actuating device for the usual stop motion of the loom.

DOGGING DEVICE.—O. M. KREBS, Memphis, Tenn. The logs being sawed are secured by dogs to knees adjustable upon head blocks. After each cut these knees are advanced on the head blocks so as to present the log to the saw to saw another plank. The log is held to the knees by dogs. The dogs used in practice do not hold the logs rigidly on the carriage and are apt to become dislodged. The object here is to provide a device which will enable the logs to be securely held against the knees.

Musical Devices.

SELF-PLAYING PIANO.—F. B. LONG and E. A. TAPPE, Los Angeles, Cal. The intention here is to provide an effective connection between the pneumatic and the hammer action, to allow playing the piano automatically or by hand power and without interference by the connection. This is obtained by use of a lever, connected at one end with the movable member of the pneumatic, and an auxiliary lifter rod for engagement with one of the members of the hammer action, to lift the rod resting on the free end of the lever.

SOUNDING-BOARD FOR PIANOS.—F. B. LONG, Los Angeles, Cal. In this patent the purpose of the inventor is to provide a new and improved sounding board for pianos, provided with manually adjustable devices for maintaining the original crown of the sounding board and for increasing the singing quality and the volume of the tone.

Prime Movers and Their Accessories.

BELT-GUIDE.—G. H. TENPAS, Sherman, N. Y. The invention relates to belt guides, the more particular purpose being to provide an efficient form of belt guide for use in connection with portable engines and including means whereby, in a few minutes, various adjustments may be made relative to the position occupied by the moving belt.

Railways and Their Accessories.

RAILROAD-TIE AND RAIL-FASTENER.—J. P. DONOVAN, Georgetown, Ky. This tie is provided with rail-seats which serve to prevent lateral movement of the rails, and the improved rail-fastener prevents vertical separation of the rails from the ties. Thus the fastener coacts with the ties in holding the rails secured against both integral and vertical movement of the rails relative to the ties.

CONCRETE RAILWAY-TIE.—J. P. DONOVAN, Georgetown, Ky. The invention comprises a tie with raised shoulders on the upper side which are separated to provide rail-seats, and with transverse openings below the seats, for receiving rail-fastenings, and reinforcing members arranged longitudinally of the tie in two horizontal sets, one near the base, the other near the top of the tie, and comprising metallic rods having end disks, wholly imbedded in the concrete.

APPARATUS FOR MOLDING CONCRETE RAILWAY-TIES.—J. P. DONOVAN, Georgetown, Ky. Mr. Donovan's invention is embodied in a box-like body or mold proper provided with certain accessories whereby concrete railway ties, also fence posts, building blocks, and the like may be produced with facility and despatch. Ten molds may be used for each shift so that concrete may take initial set in the first of the series while concrete is being placed in the last.

Pertaining to Vehicles.

VEHICLE-WHEEL.—J. H. SCOTT, Jersey City, N. J. This is an improvement in wheels in which a resilient connection between the spokes and the rim of the wheel is effected in order that the use of pneumatic or cushioned tires may be unnecessary. To this end a wheel is provided, a hub having a series of radiating spokes secured thereto, a rim, and a cap fitting over the outer end of each spoke having a curved spring attached intermediate its length, with its free ends connected to the rim.

ATTACHMENT FOR AUTOMOBILES.—H. S. DELAMERE, Ferndale, Cal. The aim here is to provide an attachment for automobiles by means of which one or both of the driving wheels will actuate a removable drum upon which a line can be wound up, to draw the automobile out of a mnd hole or sand pit, and up steep grades or hills.

WHEEL.—A. C. GILLAM, Hicksville, Ohio. The object here is to provide a pneumatic wheel with a punctureless tire. The annular pneumatic tubes are protected from injury, being housed in by an inner ring and body plates and are subject only to pressure strain and not to frictional wear. This permits the inventor to make the air chambers of the pneumatic cushioning tubes relatively large, it being understood that these tubes may be made of any suitable material.

Designs.

DESIGN FOR WINDOW SHADES AND THE LIKE.—A. A. BOECK, New York, N. Y. Mr. Boeck has designed ornamental patterns for fabric for window shades of three different types which display artistic and original taste and form of varied and beautiful effects.

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

NEW BOOKS, ETC.

THE POE CULT AND OTHER POE PAPERS. By Eügene Didier. New York: Broadway Publishing Company, 1909. 16mo.; 301 pp. Price, $1.15.

The twenty-three separate articles comprised in this volume have been published in various American magazines during the last thirty-five years. Among the subjects treated are "The Poe Cult," "Poe: Real and Reputed," "The Boyhood of Edgar A. Poe," "Poe's Female Friends," "The Loves of Edgar A. Poe," "The True Story of Poe's Death," "The Poe Monument," "Portraits of Poe," "The Poe Mania," "The Truth about Edgar A. Poe," "Recollections of Poe by the Witnesses of His Life," "The 'Discoverer' of Poe," "Poe and the University of Virginia," "The Centennial of the Birth of Edgar A. Poe." The book is a very interesting one, and reflects great credit upon the author and shows an extraordinary grasp of the whole subject of Poe.

THE SOLICITOR'S PATENT PRACTICE. By George Frederick Emery. London: Effngham Wilson, 1909. 16mo.; 245 pp.

The aim of this book is to provide a handbook for ready references on British patent law for the use of solicitors, it not being the purpose of the author to include subjects which would make it of particular value to the patent agent. Much general information is contained in the book but it is of course impossible for the author in a little over two hundred pages to treat fully the many questions in patent law which a solicitor must be informed concerning, and on the principle that a little knowledge is dangerous it would not be wise for a solicitor to place the volume on his shelf except with more comprehensive works. When referred to in connection with some standard work, "The Solicitor's Patent Practice" should prove useful.

STATICS BY ALGEBRAIC AND GRAPHIC METHODS. By L. J. Johnson. New York: John Wiley & Sons, 1909. 8vo.; 170 pp.; 13 plates. Price, $2.

The former edition of this work is so well known as one of the first treatises on statics to include in a complete and practical way the valuable graphical method, that it is only necessary now to remark upon the additions and alterations. These include a detailed scheme tested by the author in his classes, for assigning individual data for the exercises and a copious collection of practice problems with answers. A short syllabus is also added to facilitate review and enforce certain points. The author's arrangement is well calculated to give a facility in applying the subject valuable in engineering practice.

STRENGTH OF MATERIALS. By Arthur Morley, M.Sc. London and New York: Longmans, Green & Co., 1909. 8vo.; 480 pp.; fully illustrated with diagrams. Price, $2.50.

This book, like the foregoing, is intended primarily for engineering students and differs from other works on the subject principally in the completeness with which demonstrations involving even simple mathematical problems are worked out: in many books the method is indicated and a good deal then left to the imagination, which is sometimes confusing to those whose mathematics are limited or out of practice. The result of important recent research work bearing on strength of materials has been included, reference being given to more complete records of the tests. Other important subjects are more fully treated than usual, such as the strength of rotating disks and cylinders, the bending of curved bars with application to hooks, links, etc., and the stresses and instability arising from certain speeds in running machinery, all of which are of practical application and valuable to the engineering practitioner.

ROBERT FULTON AND THE CLERMONT. The Authoritative Story of Robert Fulton's Early Experiments, Personal Effects, and Historic Achievements. Containing Many of Fulton's Hitherto Unpublished Letters, Drawings, and Pictures. By Alice Crary Sutcliffe. New York: The Century Company, Pp. xv, 367; 8vo.; cloth. Price, $1.20.

Among the many lives of Fulton which have been written, this by his great-granddaughter is unique, because of the many hitherto unpublished letters of Fulton which it contains; letters which throw much new light on the work and aims of that distinguished man. It also contains reproductions of several drawings, which are of great interest and even future value in establishing certain disputed facts about the engines of the "Clermont."