RECENTLY PATENTED INVENTIONS.

Electrical Apparatus.

POTENTIAL REGULATOR FOR DYNAMO-ELECTRIC MACHINES.—ALLEN A. TIRRILL, Whitefield, N. H. In a prior patent granted to the same inventor, an automatic potential-regulator for dynamo electric machines was described, which regulator was designed automatically to adjust the voltage on the supply wires. The present invention is an improvement upon that device and is designed to overcome certain objections developed therein, chief among which was the sticking of the solenoid contact-points. The new invention obviates the difficulty by providing a relay, a second set of contact-points, and a separator or supplemental circuit. The improved device is designed to insure the maintenance of a uniform potential, notwithstanding the varying tax on the feed-wires.

Mechanical Devices.

MECHANICAL MOVEMENT.—LOUIS M. GAUTIER, St. Malo, France. This invention provides a motor-car so geared as to transform reciprocating rectilinear motion into continuous rotary motion. The mechanism employed is essentially characterized by the use of grooves or cams of curvilinear, polygonal profile, rotated by sets of rollers (operated by connecting rods) turning within their perimeter, and by the use of friction-wheels transmitting the rotatory motion between two clutch-cups. The variation in the relation of transmission is obtained by changing the degree of inclination of the friction-wheels toward the axes of the system.

STAPLE-FORMING AND DRIVING APPARATUS.—BONIFACE A. GRASSBERGER, Sta. A, Richmond, and BENEDICT J. GRASSBERGER, Buckner, Va. The machine provided by these inventors is designed to form, drive, and clinch staples of wire, and is particularly adapted for use in connection with wood-veneer butter-dishes. In the machine a pivotally mounted clinching arm is provided, which is actuated by a cam-lever. The lever is connected with a vertical reciprocating rod. This rod moves the staple-forming tool. A staple-driving tool has connection with the staple-forming tool. An anvil is mounted in the lower portion of the tool-passage-way, and has a staple-forming tool operating therewith. A staple ejecting plate is mounted to move past the anvil.

PERFORATING-MACHINE. — JAMES J. FLETT, Corvallis, Ore. The machine is provided with a movable slide in which a number of drills are journaled having crank-arms, connected by a rod. The slide carries means by which motion is imparted to the crank-arms to rotate the drills in unison. A spring-pressed presser-foot is movable on the slide, and has bearings for the lower ends of the drills to permit a ready withdrawal of the drills without causing the material to move up through the drills. The machine can readily perforate a large number of sheets of material, so that the holes will be in perfect register.

BOLTING-CLOTH-CLEANING BRUSH.—HARM H. EMMINGA, Golden, Ill. The frame of this brush is formed in sections adjustably secured together, and is mounted on the bolting reel-shaft and adapted to maintain a vertical position while the reel is rotating. A brush is carried in the upper section of the frame, the shaft of which brush carries a pulley. On the reel-shaft another pulley is carried. A belt connects the two pulleys to drive the brush. The brush is so constructed that it may be easily mounted on the reel shaft or detached therefrom without first removing the spiders from the shaft.

ASPHALT APPARATUS.—FRANK BURGER, Brooklyn, New York city. This invention provides an apparatus for compounding asphalt for use on pavements. The apparatus embodies a wheeled frame on which are mounted a sand-heating and drying furnace, boiling and mixing tanks for pitch-asphalt, and measuring and amalgamating devices by which to amalgamate the sand and pitch-asphalt. All parts of the apparatus are connected to work in unison by gearing driven from an engine on the framing.

Railway-Appliances.

TRIPLE VALVE.—JOHN V. WELLS, Wilmerding, Penn. The purpose of the invention is to provide improvements in triple valves, whereby the auxiliary reservoir is cut off from the train-pipe on an increase or excess of pressure. According to the invention, the main piston and slide-valve are held in lap position at whatever pressure there may be in the auxiliary reservoir and brake-cylinder, whereby more uniform braking throughout the several cars of the train is obtained.

TURNTABLE-OPERATING MECHANISM. — GABRIEL ROHRBACH, Del Rio, Tex. The present invention is an improvement upon a similar invention patented by the same inventor. The improvements comprise a novel mechanism for giving motion to the operating device, and also an ingenious construction of the links connecting the dogs with the operating mechanism, by which the dogs are given a better support.

TURNTABLE-LOCK.—GABRIEL ROHRBACH, Del Rio, Tex. This lock comprises bars lying alongside each rail and mounted to slide so as to be projected into contact with the fixed rails, two operating-levers and connections therefrom to the corresponding lock-bar, and a latch pivoted between the extreme positions of the levers and having projections adapted to engage the levers in either position. The lock holds the table in position so that its rail ends correspond with the rail ends of the fixed track.

VENTILATOR FOR CARS.—LORIN W. CANADY, Toyah, Texas. This invention provides an apparatus for ventilating cars and other chambers by means of thermostatic regulators through the medium of movement-transmitting mechanism controlled by a thermostat, and of peculiarly-constructed shutters or covers by which orifices are opened and closed in accordance with the conditions of the temperature.

Miscellaneous Inventions.

DEVICE FOR CRIMPING ARTIFICIAL FLOWERS. — JULES DE GRANDMONT, Brooklyn, New York city. The device comprises two disks or frames, each having upon adjacent faces radially disposed, alternating rows of petal-engaging points, and means for centering the two disks and for giving them relative angular movement. The pressure of a blank between the two disks and the circular movement given to the upper disk, results in crimping the petals in such a manner that they have a more life-like appearance than could otherwise be obtained.

BERRY-CRATE. — GEORGE I. FEIT, Phillipsburg, N. J. This berry-crate has a cover provided with a non-conducting inner lining, cross-bars engaging the upper edges of the crate and forming ventilating-openings above the berries, and a wire secured to the ends of the cross-bars and extending along the sides of the cover to prevent the escape of the berries. The ventilation, in a crate thus constructed, is considerably improved; and the berries are protected against scalding when exposed to the sun during transportation to market.

SCISSOR AND TOOL SHARPENER.—CHARLES A. Dow, Sioux City, Iowa. The sharpener is designed to be attached to a sewing-machine. The device is provided with a grinding-wheel, a carriage mounted to travel lengthwise of the wheel, and a guide for the implement, which guide may be adjusted to preserve the proper bevel of the cutting edge of the implement, or to hold the implement at any desired angle to the periphery of the wheel.

HORSESHOE-PAD. — DANIEL CRUISE, Manhattan, New York city. This horseshoe-pad is constructed of rubber or other resilient material, and is provided with grooves, wherein are embedded strips of leather or other hard material, so that the pad retains all the advantages of elasticity and at the same time presents indurated surfaces to the ground in order to prevent the slipping of the horse's feet.

SHOOTING-GALLERY.—JOSEPH M. BAIER, Dayton, Kan. The present invention seeks to provide a novel target for use in shooting-galleries. The target in question is constructed in two parts hinged together. A stop is mounted upon the target-base and limits the downward drop of the movable part of the target. An elevating incline engages the upper part of the target to raise it after having dropped.

HARNESS-RING. — JAMES W. FISHER, Palouse, Wash. An improved construction of biting and breeching-ring is furnished by this invention, the construction of the rings being such as to simplify the harness, and to prevent the harness from unduly chafing the animal. An angular bar is attached to the ring at its inner face, and projects within the interior space of the ring. An intermediate bar is secured to the body of the ring and the angular bar; and a loop is formed upon the intermediate bar and adapted to receive a hook. The ring receives the inner end of the holdback-strap, and the loop the connections with the breeching.

MAGAZINE-FIREARM.—WALTER W. WOOD, Washington, D. C. This firearm presents many novel features of construction, which differentiate it from others of the same class. The arm is hammerless, and has no projections upon the frame. The frame is entirely closed and solid at the upper surface, thus preventing the entrance of rain, snow, or dirt. The arm is of such construction that the spent shell is ejected downwardly, and dropped near the feet of the marksman, instead of being hurled into the air in front of him. The weapon possesses the merit of embodying fewer parts in its lock and repeating mechanism than most guns, and of including in its construction a simple action.

COCK AND VALVE FOR BOTTLES. — JULES BENGUÉ, Paris, France. The present invention seeks to improve the construction of receptacles which are adapted to contain and spray liquids. The improvements in question pertain chiefly to the conical discharge-valve, which controls the amount of liquid sprayed. The valve ordinarily used, though very effective, is open to the objection of being liable to leak. To obviate this defect, the inventor has materially changed the construction by movably attaching the conical point or valve on the stem which regulates the position of the valve relatively to its seat. Owing to this movable arrangement, the conical valve will automatically assume a position concentric and coaxial with the seat, thus insuring uniform friction and even wear, and hence a tight joint.

FLY-PAPER HOLDER. — ROBERT D. SAFFORD, Brooklyn, New York city. It is the purpose of this invention to provide a device for holding a sheet of sticky fly-paper, so that the paper will be extended, will not roll, and will not come into contact with other objects. The holder is made of bent wire, and comprises a frame upon which the paper is laid, and two bails pivoted to the edges of the frame and folding over the paper. By this construction a guard is formed for the sticky surface of the paper. The device has the merits of simplicity and cheapness of construction and of efficiency of operation.

FOLDING-UMBRELLA.—CARL A. ROSENHOLZ and JOHN H. LAMPE, Wardner, Idaho. The stick and ribs of the umbrella are telescopic, and are so constructed that the umbrella may be readily reduced to less than half the length of the ordinary umbrella. The runner, ribs, and stretchers may be removed, and corresponding parts of less dimensions substituted, thus enabling the stick to be used for a parasol cover and frame. Both the handle and ferrule can be detached so as to lessen the length of the stick. The cover can also be readily taken off and replaced, to enable covers of different colors to be used on the same frame.

BINDER-FRAME.—HARVEY P. JONES, Chicago, Ill. This invention has for its purpose the provision of a binder-frame which shall be readily adjustable to permit a convenient and quick binding of the leaves in such a manner that they may be separately moved and interchanged. The frame has a back with top and bottom flanges, and guideways posited transversely to the back. L-shaped cover-plates are fitted to slide on the guideways, and have end flanges fitted closely to the back flanges to form, at all times a casing with the back whether the cover-plates be moved inward or outward. The cover-plates can be moved simultaneously toward or from each other in order to close or open the binder-frame.

EXERCISER. — ABRAM A. HENDRICKSON, Hollis, Queens, New York city. Connected with an elastic cord adapted to receive handles at its ends and provided with an eye midway between its ends for attachment to a support, are a non-elastic cord attached to auxiliary eyes on the elastic cord, and a pulley over which the non-elastic cord is passed. With this apparatus a greater variety of movements can be accomplished than is possible with most elastic cord machines.

HAND-TOOL FOR FORMING STUD-SPIRALS.—SIDNEY H. HART, Houston, Tex. Within the ferruled handle of this tool, a slotted tube extends. A detachable shaping-head is provided which has a recess in its under face for the outward passage of the wire. There are also means for holding the shaping-head stationary on the handle. After the wire has been put in place, it is bent at right angles to the ferrule of the handle. The shaping-head is then adjusted over the tube so that the recess is brought over the wire. The handle of the tool is now grasped, the outer end of the wire being held by a pair of pliers, and is turned so as to cause the wire on the shaping-head to be twisted around the head until the desired number of coils has been obtained.

DRAWER-GUIDE.—THORVALD HANSON, Eau Claire, Wis. This invention provides a novel, simple means for taking up lateral looseness resulting from shrinkage or wear. With the frame and the drawer slidable therein are connected two L-shaped guide strips loosely disposed on the frame. At the front of the frame are two short adjusting-screws; the frame also having two diagonal adjusting screws. The four screws have threaded engagement with the guide-strips. When the drawer has shrunk, an adjustment of the screws will effect a correction by acting on the guide-strips. Should the drawer bind, the reverse adjustment is effected.

MANUFACTURE OF STONE FROM KIESELGUHR.—CARL GRUENZWEIG, Ludwigshafen, Germany. The inventor of this process has devised a means of manufacturing, from infusorial earth, a light artificial stone similar to cork in its specific gravity and in being a bad conductor of heat, but having an advantage over cork in its ability to withstand high temperatures. The process consists in preparing a dope of infusorial earth, clay, and finely divided cork. The dope is heated, whereby the cork is burned, thus leaving interstitial air-spaces.

GAME APPARATUS.—EDWARD K. GRIESEMER, Reading, Pa. The apparatus consists of a board provided with a series of ribs forming a number of radial chambers. In connection with the board a number of balls are employed. In playing the game a player endeavors to roll a ball in each chamber, and one in the center of the board, the balls having all been previously assembled in the marginal gutter formed by the ribs.

MILKING-STOOL. — ANDREW DAHLSTROM, Big Rapids, Mich. The stool is provided with an oblong seat to which legs are secured. Near one end of the seat an opening is made to receive the milk-pail. The inclined surfaces of the opening are unequally beveled in order that the pail may be more readily placed in a vertical position when nearly filled. The pail, even when filled, will not disturb the equilibrium of the stool, should the milker rise from his seat.

NAME-PLATE.—WILLIAM H. CLARK and LLEWELLYN J. WATTSON, San Francisco, Cal. This name-plate is primarily designed to be applied to pews, and is so constructed that while a base and a display member are employed, which are adapted for locking engagement, no means are visible whereby the two parts may be disconnected. The invention provides a durable construction for locking name-plates and means whereby the members of the plates may be disconnected by a key, without the necessity of the keyhole's appearing at the front of the plate.

ROOFING-TOOL.—ALBERT DANZER, Hagerstown, Md. In applying tin roofing to buildings, not only is the nailing of the numerous hook-clips into the sheathing a tedious operation; but as the nails have to be held in the fingers while being driven, the work is rendered doubly difficult. This invention provides a special tool for nailing the hook-clips so that the hands cannot be injured. The tool comprises a tubular shank having near its lower end downwardly projecting lips adapted to rest on the top of the standing flange of the roofing-sheet. A chute leads into the central passageway of the shank, and receives and guides the nails. A reciprocating driver plays in the passageway and, when brought down, sinks the nail into the sheathing.

Designs.

MATCH-BOX.—JACOB A. MOLLER, JR., Manhattan, New York city. The leading feature of this design consists in the novel decoration provided. On one side the box is ornamented with the figure of a Norseman, and on the other side with a Viking ship.

STAIR-CORNER GUARD.—FRANK D. GOODWIN, Bangor, Me. The guard comprises a triangular plate, with beveled edges, and a circular projection whereby the plate is held in place. The guard is primarily designed to prevent the accumulation of dust in the corners.

HOOK FOR SHOE-LACES.—MORRIS H. LIPMAN, Manhattan, New York city. The hook consists of a loop shank and a single shank, continuous with the loop-shank. The single shank has one member returned in the direction of the loop-shank. The hook is designed to be used in connection with a lace patented by the same inventor, the object of the combined use being to provide a more ready means of disengaging a lace from the shoe than has heretofore been customary.

CLIP.—ANDREW C. NYGAARD, Rawlins, Wyo. The body of this clip is L-shaped in general contour and comprises an upright member and a horizontal member, the upright member being provided with a semicylindrical offset. The clip is designed to be attached to a vehicle, and by reason of its peculiar construction offers means for the attachment of sled-runners, for the raising and lowering of these runners, or for the raising and lowering of wagon-wheels.

BOTTLE.—CHARLES H. FRANCISCO, Brooklyn, New York city. The body of the bottle is polygonal in form and has its edges serrated. The bottle is designed to contain poison. A person feeling for a medicine bottle in the dark, will immediately perceive by the jagged edges that this particular bottle contains poison, and is hence forewarned.

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

NEW BOOKS, ETC.

PETROLEUM MOTOR CARS. By Louis Lockert. New York: D. Van Nostrand Company. 1898. Pp. 218. Illustrated. Price $1.50.

There is no question that the motor car has come stay, and the only question which now arises is as to the type of motive power. This is governed somewhat by conditions, such as nearness to a city, to available power, etc. A motor carriage is an expensive affair, although it is much more economical in the end than a carriage hauled by a horse. But no mistake should be made in purchasing a motor carriage, so it is well for prospective purchasers to be well posted upon what has been done up to the present time. The volume before us deals only with petroleum motor cars, which, together with electric motor cars seem to have the entire field to themselves. There is a large amount of matter in the present volume which will interest all who are in any way engaged in designing motor carriages, and the book will, doubtless, be warmly welcomed by them.

COMMERCIAL ORGANIC ANALYSIS. Vol. II. Part I. By Alfred H. Allen, F.I.C., F.C.S. Philadelphia: P. Blakiston, Son & Company. 1899. 8vo. Pp. 387. Price $3.50.

We already had great pleasure in reviewing two volumes of this most important work. The volume before us is what is known as Volume II., Part I., and while we regret the necessity for not numbering the volumes in regular order, at the same time it does not interfere with the value of the book. The present volume deals with fixed oils, fatty waxes, glycerol, nitroglycerine, and nitroglycerine explosives. We do not know of any book on the subject which is so valuable as Allen's series, which will include eight volumes in all. We are inclined to consider that the series, when complete, will form a library of books which will become classic; for, while methods in chemistry are constantly changing, at the same time the broad principles which underlie them are stable. It should be understood that the Blakiston editions of Allen's books are the only authorized editions, which have been revised by the author. The author does not approve of the spelling advised by the American Association for the Advancement of Science. It has not been adopted in the book. This has resulted in giving the book a far more artistic appearance than can be given by the ugly and uncouth spelling which it has been attempted to force down our throats.

THE CENTRIFUGAL PUMP. Turbines and Water Motors, including the Theory and Practice of Hydraulics. By Charles H. Innes. Manchester, England: Technical Publishing Company, Limited. New York: D. Van Nostrand Company. 1898. Pp. 229. 183 illustrations.

The volume before us is of great value to the engineer, treating mathematically of the problems which confront him when he is called upon to deal with centrifugal pumps, turbines, or water motors. The book will also be of great use to the draftsman and designer in their respective professions. The illustrations are numerous, well chosen, and most of them are on a fairly large scale. The only thing we have to criticise the book for is the lack of an index, which is most exasperating. We will welcome the time when English technical publishers will see the necessity of providing every book with an adequate index.

GAS AND PETROLEUM ENGINES. Translated and adapted from the French of Henry de Graffigny. Edited by A. G. Elliott. London: Whittaker & Son. New York: Macmillan Company. 1898. 16mo. Pp. 140. 52 illustrations. Price 75 cents.

There is already a considerable literature upon gas engines, but there always seems to be room for a practical book upon the subject. It does not compare with other English and American books on the subject, but will doubtless be of interest to the beginner.

LIGHTING BY ACETYLENE. Generators, Burners, and Electric Furnaces. By William E. Gibbs, M.E. New York: D. Van Nostrand Company. 1898. 12mo. Pp. 161. Illustrated. Price $1.50.

The volume before us is the second edition, revised and enlarged. The fact that a second edition has been called for in less than a year shows conclusively that the public is more than ever interested in the new illuminant, and literature on the subject in book form is very limited, and the result is that the present volume will be welcomed by many who will find that it will assist them in solving the somewhat difficult problems which now confront them. Illustrations of the latest forms of generators are given. The second edition is a decided improvement over the first.

YEAR BOOK FOR COLORISTS AND DYERS. Presents a Review of the Year's Advance in the Bleaching, Dyeing, Printing, and Finishing of Textiles. By Harwood Huntington. Wool Exchange Building, New York. 1898. 12mo. Pp. 309. Price $5.

There is very little literature in the English language to which a color chemist can refer and find the information he requires the oftenest. The author is an expert color chemist, of New York city, and is, therefore, particularly qualified to deal with the subject. He intends to produce a yearly volume. While we are not particularly familiar with either the chemistry or the technical art of dyeing, we can say that the book is of great value to all who are in any way interested in the textile industries, giving, as it does, a glossary and abstract of patents, new dyes, new books, and what the author is pleased to term "sundries," which is by no means the least valuable part of the book. The part relating to dye analysis is a most important one, as well as the alphabetical list of dyes, giving agent and dyeing method. Reference to the book is rendered easy by an excellent index. We have no hesitation in saying that it is a valuable contribution to a much neglected portion of technical literature.