

RECENTLY PATENTED INVENTIONS.

Mechanical.

WATER ELEVATOR.—Joseph McMurrin, Shoshone, Ida. The object of the invention is to provide a new and improved water elevator or centrifugal pump, which is simple and durable in construction, very effective in operation, and arranged to elevate the water to any desired height. The invention consists of two or more pipes or cylinders, located one within the other, and adapted to revolve in opposite directions, the pipes being provided with spiral blades.

SAW GUIDE.—Wrenny Peake and Edward C. Inderlied, Rock Rift, N. Y. This invention relates to a guide for a cross-cut saw adapted to be operated by a single person in sawing a log, and the object is to provide a simple device adapted to engage and exert a downward pressure on the saw at the side of the log opposite that at which the sawyer stands. In brief, the invention consists of a saw guide, comprising an anchor plate adapted to be secured to a log, an arm curved upward between its ends and having pivotal connection with the anchor plate, and guide fingers on the free end of said arm.

Miscellaneous.

TREMOLO ATTACHMENT FOR STRINGED MUSICAL INSTRUMENTS.—Clarence Elwood Pryor, New York, N. Y. The object of the invention is to provide a new and improved tremolo autoharp attachment for pianos and other stringed musical instruments which is simple and durable in construction, very effective in operation, entirely independent of the hammers or other parts of the action, and arranged to enable the player to readily throw it out of action and vary the tremolo effect, as desired. It consists of a tremolo attachment for stringed musical instruments, comprising an eccentrically mounted drum under the control of the performer, a netting attached to the said drum, and bodies suspended from the said netting, and adapted to move in and out of contact with the piano strings.

SUNSHADE FOR BICYCLES.—George A. Conklin, Blairtown, Iowa. This invention relates to certain improvements in that class of sunshades or parasols which are especially designed for use on bicycles and similar vehicles, and the object of the invention is to provide a device of this character of a simple and inexpensive construction which shall be adapted to be folded compactly and which shall be at once light and strong and capable of convenient application and adjustment to secure it in place. The invention consists in a sleeve having means for securing it in place to the frame or handle bar of the bicycle or equivalent vehicle, a folding parasol having a stem slidable in said sleeve and spring retainers arranged on said stem and adapted to engage apertures in said sleeve to hold the parasol in an elevated or lowered position.

WINDOW CLEANING CHAIR.—Henry G. Wilmerling, Brooklyn, N. Y. The invention relates to an improvement in window cleaning chairs, and the object of the invention is to provide a chair of exceedingly simple and durable construction and capable of being expeditiously and conveniently applied to a window frame and sill in such manner that the chair will be held firmly and securely in position, and furthermore to so construct the chair that it may be adjusted to window sills of different widths. In brief, the invention consists of a base bar terminating at one end in a bracket adapted for engagement with the inner sill of a window, a seat having sliding movement on the said bar and provided with a standard at its inner end attached to its bottom and having a foot bar for engagement with the outer sill of a window, an arm extended outward from the foot bar, a slide on said arm for the base bar and a lock lever carried by the seat and adapted for engagement with the said base bar.

TROUSERS STRETCHER.—William J. McCoy, Santa Barbara, Cal. The invention relates to an improved device for stretching the legs of trousers to remove wrinkles in the cloth and preserve correct form of the garment, and has for its object to provide a novel, simple and inexpensive device which will be adapted for a convenient application, and that in pairs will, when in position, produce a crease at the front and rear faces of the legs of trousers to which the duplicate stretchers are applied and remove wrinkles from other portions of the same. In brief, the invention consists in a trousers stretcher, of the combination with two stretcher bars longitudinally slotted between their ends, of a connecting link consisting of two plates having their ends projected into the slots and pivoted to the bars, one of said plates being provided with slot openings and the other provided with projections to engage in the slots, whereby the two plates will be held in parallelism when adjusted.

BICYCLE SUPPORT.—Stuart A. Brown, Hubbardston, Mass. The object of the invention is to provide a new and improved bicycle support which is simple and durable in construction and arranged to enable the rider to quickly bring the support in action, to hold the wheel in an upright position on the road or other place. The invention consists principally of a pair of legs mounted to swing transversely on the sides of the bicycle frame, said legs being normally folded up against the sides of the frame and adapted to swing downward to engage their free ends with the ground on opposite sides of the frame.

SAFETY POCKET.—Charlotte Melisse Johnson, Charleston, W. Va. The object of the invention is to provide a pocket for garments of all kinds which will prevent the accidental loss of articles contained therein by dropping out when stooping down or by having the pockets picked, and it consists in a pocket having transversely arranged about its body portion a constricting band of elastic material arranged upon the exterior of the pocket and held in place by retaining keepers, which, while preventing the band from coming off altogether, will nevertheless allow it to adjust itself along the body of the pocket, according to the volume of contents of the pocket.

HARNESS SADDLE.—Otto F. Seyfarth, New York City. The invention relates to improvements in harness saddles, and the object is to provide a harness

saddle particularly adapted to soreback horses. It consists of a harness saddle, comprising saddle pads, a metal tree having slotted ends, metal plates secured to the inner side of the pads and having slot openings registering with slots through the pads, clip plates removably secured to the pads, and having hook portions adapted to pass through the several slot openings, and having slot openings through which straps may pass, terrets detachably secured to the tree, and a check hook removably secured to the tree.

KEYED CITHERN.—Louis K. Dathan, Brooklyn, N. Y. The invention relates to citherns and the like, and its object is to provide a new and improved musical instrument arranged for the performer to manipulate a keyboard in order to pick the desired strings in such a manner that any desired forte or pianissimo is produced. The invention consists principally of a keyboard provided with keys capable of independent movement toward and from the strings, but connected to move sidewise in unison, and each carrying a picker adapted to engage the corresponding string with more or less force, according to the position of the keys and their pickers relatively to the strings.

NEWSPAPER ADVERTISING INDEX.—George W. Leesnitzer, Washington, D. C. The advertising index is designed for the use of newspapers. This device is based upon an economic idea, which, it is claimed, will greatly enhance the value of advertising goods and wares. It consists of a classification of the items offered by the different advertisers. These items are grouped under their proper headings in the columns, and the whole is provided with an index. In the crowded advertising columns of any large journal the reader, under this plan, can as readily refer to any item as he could to a word in the dictionary. It also practically dispenses with the use of display headlines, thus effecting, in many instances, a large saving to the advertiser.

SAFETY ENVELOPE.—Mary Clarke, New York City. This invention relates to certain improvements in safety envelopes, such as are especially designed for mailing purposes, and the object of the invention is to provide an envelope of a simple and inexpensive character which shall be adapted to effectually guard against tampering with letters, etc., the envelope being so constructed as to indicate at once whether it has been tampered with. It consists of an envelope having end flaps—a bottom flap and a sealing flap—said end flaps and bottom flap being secured together and the bottom flap being provided with a slit, the sealing flap being formed at its central portion with cuts extending inward from its edges, whereby a tongue is formed at the central portion thereof, said tongue having its end even with the edge of the sealing flap and having at its opposite sides rearwardly projecting locking ears, the edges of the sealing flap on opposite sides of said central tongue being gummed and adapted to be sealed down on the bottom flap, and said tongue being adapted, when the sealing flap is closed, to pass through the slit in the bottom flap to bring said ears into engagement with the edges of the said slit.

SAFE ATTACHMENT.—Abraham Oberndorf, Jr., Centralia, Kan. The object of the invention is to provide a device, in the nature of a portable attachment, which, when placed in a safe, vault, or strong room, will, in the event of an attempt by burglars to blow open the same, cause the generation of a stifling and poisonous gas which will make it impossible for the burglar to live in the atmosphere of the same, and thus preclude him from making away with the booty. The invention consists in the construction and arrangement of such portable device, which may be hung up or detachably fixed in any safe or vault already in use, and without regard to the construction of the same, and which device serves to utilize the concussion to set off or release a trigger and hammer mechanism that in turn breaks the bottle, or bottles, or tubes, containing the reagents from which the deadly gas is evolved.

VENETIAN BLIND ROLLER SUPPORT.—Charles L. Miller, New York. In the ordinary method of hanging Venetian blind rollers, the said rollers are unsupported intermediate of their ends, and it is found that when long rollers are employed they will sag at the middle, and thus prevent an easy action of the same and also cause the slats of the blind to curve at the center. The object of the invention is to prevent these difficulties or objections; and, broadly stated, the invention consists in an intermediate hanger or support for a Venetian blind roller. In brief, it comprises a roller for a Venetian blind, made in sections, and a hanger plate having a pivotal connection with a portion extended between the adjacent ends of said roller sections, and having a fastening device at its upper end adapted to be engaged with a device secured to a window casing.

TROUSERS GUARD FOR BICYCLE RIDERS.—Robert Severs Bowman, Berwick, Pa. The improved guard, or clasp, is designed and adapted to clamp the slack fold of the trousers leg and hold it drawn smoothly without wrinkling or destroying the "crease" formed in the front portion of the same. The guard is constructed of a circular body portion for embracing the leg of the user, and a clasp or clamp proper for receiving and holding the fold of the trousers leg.

AXLE.—John R. Henry, Homer City, Pa. The invention relates to certain improvements in axles, and has for its object to provide in part an axle of a convenient and inexpensive construction adapted to be manufactured without requiring the axletree to be forged, which shall at the same time be at once simple and of sufficient strength, and in part to provide an axle having means for conveniently and securely attaching thereto the hub of the wheel. The invention consists in an axle having an axletree of bar iron, such, for example, as is common in the market, said axletree having metallic sleeves secured to its ends and adapted to receive the wheel hubs, the said hubs and sleeves being secured together by a simple attaching device.

HALTER.—Charles H. Allen and Harry C. Maltby, Chicago, Ill. The invention relates to an improvement in halters, having for its object to construct a halter from a single piece of material, and furthermore to provide for a running noose loop and a hitching or leading strap spring controlled, the spring being attached

to the said strap at one of its ends and to the throat latch or equivalent portion of the halter; and, furthermore, to provide a hitching or leading strap having a spring attached at one of its ends to the strap, the strap passing through the spring, and the spring at its opposite end being adapted for attachment to the bridle or bit, whereby the halter strap or hitching or leading strap will not be broken when suddenly pulled upon, since, when the spring has been pulled to its full length and strength the force will be exerted equally upon the entire length of the strap, thus preserving the spring from injury. In fact, when the spring has been pulled out and receives all the strain it will bear, the horse will then be pulling directly on the whole length of the strap and spring combined.

PHOTOGRAPHIC SHUTTER.—Oscar Friese, Berlin, Germany. The invention relates to certain improvements in photographic shutters, adapted to be employed for regulating the exposure of the sensitized film in cameras, and the object of the invention is to provide a device of this character of a simple and inexpensive construction, which shall be adapted to be conveniently manipulated, so as to produce either an instantaneous or time exposure, the construction being such that the shutter may be made of any desired size, so as to give the best results with any lens. The invention consists in a shutter having a series of pivoted parallel strips arranged side by side, and adapted when moved to position at right angles to the sensitized surface to permit free passage of the reflected light between them, but when moved in the reverse direction to fold flat against one another, so as to exclude the light from the lens to which the shutter is applied, and means for actuating said strips simultaneously to open and close the shutter.

INKSTAND.—Rollo M. Badger, Sayre, Pa. This invention relates to certain improvements in inkstands, and particularly in that class of such devices commonly known as "pneumatic" inkstands, wherein the ink is supplied from the ink reservoir to the well or cup proportionately as it is used from such cup or well, and the object of the invention is to provide a device of this character of a simple and inexpensive construction, which shall be adapted to be conveniently adjusted to regulate the supply of ink from the reservoir to the well. The invention consists in an inkstand composed of two parts, the upper part being hollow and forming a reservoir for the ink, the lower part being adapted to rest on a supporting surface and forming a stopper for the neck of the said reservoir, said lower part being provided with an ink well, the upper part being held in an inverted position on the lower part or cup, said sections being provided with passages formed in them and communicating between the ink well and the reservoir, and controlled by the movement of one part relatively to the other.

CHECK STUB HOLDER.—Thomas W. Kimball, New York City. This invention relates to devices for holding the stubs of checks compactly in engagement with the cover of a check book, and the object is to provide a device of simple and comparatively inexpensive construction, which may be quickly and easily attached to a check book, and so constructed that a stub may be easily inserted underneath the holder without disturbing the stubs previously placed underneath the same. The invention comprises a spring tongue adapted for removable engagement with the cover of a check book to engage the stubs turned thereon, and consists of a single piece of resilient metal.

Designs.

DESIGN FOR A MAT FOR PICTURES.—Augusta Wells, Berkeley, Cal. The leading feature of the design consists of the border of flowers at the opening in the mat, the edge of the mat at the said opening following the lines of the inner edge of the border of flowers. A minor feature of the design is the said border of flowers appearing in relief.

DESIGN FOR AN UMBRELLA STAND.—Michael J. Collins, New York City. A leading feature of the design resides in the stand comprising the base, the back, the top piece and the vertical spindles between the base and the top piece. Another leading feature is the continuous and pendant spindles between the base and the top piece of the stand.

DESIGN FOR A FRAME FOR BICYCLE SADDLES.—William C. Smith, New York City. In general contour the saddle frame is approximately oval, and its front portion is inclined gradually forward from the ends in direction of the transverse center of the frame, meeting at the latter point what appears as an abbreviated pommel. The bottom of the frame is apparently dish shaped at the cheeks and is of riddled appearance. In the transverse center of the body of the frame is a pear shaped opening, commencing at the cante portion of the frame and leading to the representation of the pommel, while the marginal surface of the exterior of the body of the frame, the corresponding portion of the pommel projection, together with the margin of the opening, are correspondingly bounded by a border, which border apparently rises from the body of the frame and is intended to represent a flange.

NAPKIN RING.—J. Hasselbring, Brooklyn, N. Y. The leading feature of the design consists in an open work ornament extending transversely over the ring, at the outside thereof, with the ends of the ornament projecting beyond the edges of the ring. Another feature of the design consists in the external annular beads arranged at the edges of the ring and in contact with the middle portion of the ornament to maintain an unbroken continuity of the ring in the rear of the said middle portion of the ornament.

DESIGN FOR A WEEDER.—Rufus J. Lipe, Delta, Colo. The leading feature of the design consists of the zigzag blade, the ends of which range forwardly and terminate in upward side extensions, the bow departing rearwardly from, and disposed at, an inclination to the said upward extensions of the blade and the tang, the lines of which depart rearwardly from the center of the bow.

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

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Notes & Queries

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References to former articles or answers should give date of paper and page or number of question.
Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.
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(6889) C. F. T. asks: Has the SCIENTIFIC AMERICAN published any data concerning construction of coils for production of X rays? I desire to make a coil to give 3 or 4 inch spark and would like some information as to best proportions and insulation. A. We have published very exhaustive papers on the subject of X ray work with many illustrations. In SCIENTIFIC AMERICAN, 7, 10, 12, and 14, of vol. 74, also SUPPLEMENT, Nos. 1050, 1054, 1055, 1056, 1057, 1058, 1065, and 1067; price 10 cents each by mail. We do not advise the making by an amateur of so large a coil, as special difficulties are involved in its construction.

(6890) L. F. B. asks: In the last issue of the SCIENTIFIC AMERICAN there was an article on "Improvements in Crookes Tubes." Could you give any information in regard to the size of tube, coil, and amount of electricity required? Do you publish any papers on the Roentgen photography and X rays? Can an armature do anything with this X ray discovery? A. For papers on the Roentgen photography we refer you to our SUPPLEMENT and SCIENTIFIC AMERICAN, as in above query. An ordinary armature is not sufficient to give the requisite potential.

(6891) P. C. T. asks: 1. What are the types of rotary interrupters for induction coils? A. Rotary interrupters are built on the general lines of a commutator. 2. Is Elihu Thomson's air blast for the same purpose as the D. McFarlan Moore method of producing interruptions in a vacuum? If not, what is it for? If so, which is considered best? A. Not exactly. Thomson's air blast simply blows out the arc. Moore's is used to produce a sharp break primarily, but in his work very delicate questions of balance are also involved. His air break is described in the SCIENTIFIC AMERICAN, No. 9, vol. 74. 3. If ordinary induction coil (with core) were excited by alternating current, would the effects be practically the same? A. Yes. 4. Should condenser be used? A. Yes. 5. If coil was excited by say a current of 500 volts, would the secondary be of corresponding higher voltage than if excited by two cells of battery? A. Approximately.

(6892) G. H. asks: 1. Is a field efficient for motor or dynamo if polar extremities and yoke are of soft gray iron and waist of laminated iron? A. The laminated waist will, however, have a bad effect in the case of a dynamo in preventing self-excitation. The laminations must be at right angles to the windings. 2. A creeping vine running along and covering the outside walls of a house, have they a tendency toward making these walls damp or do they make damp walls dry? A. This is rather an open question. In summer its effect would doubtless tend to the direction of dampness by excluding sunlight from the wall.

(6893) G. O. B. asks: 1. Can you inform me where I can secure working drawings with description of methods of insulating and construction, size, wire ratio, etc., for a coil to give not less than a 4 to 6 inch spark? Either SCIENTIFIC AMERICAN SUPPLEMENT or some good practical book on the construction and operation of induction coils. I have a current of 4 amperes at 55 volts pressure, with which I want to operate

the coil. A. We cannot refer you to such description, as such large coils are generally beyond the limit of an amateur's work. Our SUPPLEMENT, No. 160, gives a coil adapted to give a 1 to 1 1/2 inch spark. One of twice its linear dimensions, but wound with No. 36 wire, should give a 4 to 6 inch spark. 2. How many turns would be necessary to fully saturate a core 2 inches diameter, 30 inches long, No. 14 soft iron, wire, core open, magnetic circuit? A. Owing to the great leakage of lines of force almost any number of ampere turns could be used on the core without completely saturating it. 3. Also what should be the ratio between primary and secondary? I have never had any experience with induction coils, although have had in other lines, and do not just know where to obtain it. A. There is no fixed ratio. We advise you not to attempt to make a coil for 4 inch spark until you have successfully made one such as described in SUPPLEMENT, No. 160 or No. 589.

(6894) J. C. asks: Assuming a green fruit, for instance, a lemon or green apple, can it be converted into a battery? If I pin or confine in a lemon or any green fruit a strip of copper and zinc about half an inch apart, and connect them with a wire, same as in an ordinary battery, electricity will be generated. How can I detect by some visible experiment or proof the presence of electricity? A. Try touching the ends of your wires to a little piece of blotting paper moistened with potassium iodide solution; you may get a brown stain. The wires should be about 1/2 inch apart.

(6895) G. L. H. asks: I am about to make a large induction coil and would like your advice on wire; expect to use No. 36 and wind in thin disks with paraffine. I want to know whether to use double or single covered, cotton or silk. Silk of course is better, but is so expensive. Is it enough better to pay the difference? A. By winding your wire with a lathe you can use bare wire. In our SUPPLEMENT, No. 160, you will find a full description with illustrations of the construction of an induction coil.

THE LIST OF PATENTS.

We regret very much that we are not able to publish in this week's issue the index of inventions for which patents were granted for the week ending June 30. We were not able to procure the list from the government printer at the time of going to press, because the government printing office is in arrears with its work, due to the fact that the money for the Patent Office work is exhausted. The appropriation for the new fiscal year became available, we are informed, on July 1, and we trust that hereafter we may be able to publish the list without interruption.—Ed.

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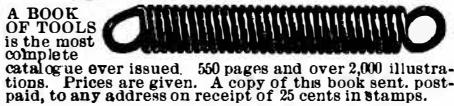
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