RECENTLY PATENTED INVENTIONS.

Electrical Devices.

ELECTRIC TARGET.—W. F. MANGELS, New York, N. Y. The inventor's object is to provide a new and improved target which is simple and durable in construction and arranged to sound an electric alarm whenever the bull's eye is struck by a projectile, the alarm being automatically sounded a length of time governed by the impelling force exerted by the projectile on the bull's eye.

Engineering Improvements.

STEAM-ENGINE.—M. CASTELNAU, 8 Rue Richepanse, Paris, France. The invention of Mr. Castelnau relates to improvements in high-tension and high-temperature steam engines; and the object is to provide a steam engine so arranged as to avoid the objections arising from the excessive temperature of steam and to allow in practice the use of steam at a pressure of over forty kilogrammes. To obtain this result, the machine is so arranged as to do away with the stuffing boxes of piston rods and to cool the cylinder internal wall by the direct contact of the exterior air.

MUFFLER.—T. H. JAMISON, Claysville, Pa. The object aimed at by this inventor is the provision of a new and improved muffler which is simple and durable in construction and arranged to effectively muffle or deaden the exhaust of steam engines, explosive engines, or other engines and machines without causing any back pressure in the engine cylinder.

Household Utilities.

BABY-WALKER.—J. L. PHILLIPS, Washington, D. C. This invention relates to certain improvements in the construction and manner of suspending baby-walkers—that is to say, devices used for encouraging children to walk. The child is free to move around in various directions, but it is at all times supported, and is allowed to press only a small portion of its weight upon its legs.

IRONING-BOARD.—J. A. PIERCE, Miami, Ind. Ter. This ironing board belongs to that type in which is included a tension device for bearing the iron on the article being pressed and a vertically adjustable stand adapted to support interchangeable presser boards, and the invention primarily seeks to provide a board in which the several parts are arranged to be conveniently manipulated and set to the different adjustments.

BROOM-ATTACHMENT.—I. P. KILGORE, Westpoint, Ill. Mr. Kilgore's invention is an improvement in broom attachments, being in the nature of an oiler for brooms whereby oil may be supplied to the brooms in any desired amount for the purpose of oiling floors, etc. The invention is applicable to the ordinary brooms on the market and may be applied thereto by the purchasers of the can.

HANDLE FOR TOILET ARTICLES.—L. B. PRAHAR, New York, N. Y. The purpose of the invention is to furnish means for connecting mirrors and the like to their handles without detracting from the strength of the handle and so that the handle may be quickly applied and removed, the act of applying the handle causing the band for the mirror or other article to be drawn tightly around the same and to bear at its inner central portion against a ferrule, which ferrule in its turn is pressed toward the article clamped by the handle, with which it engages when the latter is tightened.

Machines and Mechanical Devices.

MACHINE FOR PLACING MATERIAL IN BRUSH-BACKS.—C. W. SMITH, New York, N. Y. This machine has devices for grasping bristles or brush and separating them from the stock in bulk in tufts to fill the hole in the block to a proper extent. These devices then carry the brush material to a point where a clip is applied, and the material is then bent to form a double thickness. Finally the clip is held so that the brush-back may be taken in the operator's hands and forced on the brush material, holding devices then acting to fasten parts of the clip into the brush-back, whereby the material is held in place. The operation is automatic except as above mentioned.

HAT-SEWING MACHINE.—E. G. O'DONNELL, Fall River, Mass. The present machine is of the same general character as that shown in a previous invention of Mr. O'Donnell. By means of a certain arrangement the sweat-band is fed with absolute uniformity with respect to the hat, and stretching or yielding of the cloth backing of the sweat-band is not permitted to interfere with the accuracy with which the sweat-band is placed in the hat.

Pertaining to Vehicles.

PAWL-AND-RATCHET DEVICE.—H. W. COOLEY, Lonerock, Ore. In this patent the invention relates to pawl-and-ratchet devices for holding or locking mechanical contrivances, such as the brakes of vehicles, although it may be used in other relations. The improvement provides a means for locking a part, such as a brake-shoe, in an applied position and for releasing the locking device by a pull exerted in the same direction as the pull required to apply or set the part.

Railways and Their Accessories.

CAR-COUPLING.—S. K. DUNKLE, Sharon, Pa. No link is used in this class of car-couplings, and the object of the improvement is to provide a linkless coupling which embodies the elements of simplicity, economy, durability, and safety. The coupling operation can be effected with absolute safety, as no one is required to go between the cars.

RAIL-CLAMP.—C. W. HILL, Forest City, Ill. The object of the present invention is to provide a rail-clamp more especially designed for use on car-trucks carrying steam shovels, excavators, and the like, and arranged for automatically forming a stop or block for the car-truck wheels to prevent backward movement of the truck, but to allow free forward traveling thereof as the work progresses and the car-truck advances correspondingly. The invention relates to rail clamps, such as shown in a former patent of Mr. Hill.

DUMPING BOX-CAR.—G. E. SIMONTON, Vanwert, Ohio. The primary object of this invention is to produce a twin hopper dumping car with means for securely closing the filling or loading openings in the roof for the purpose of excluding rain and weather from grain or other bulky material. The roof doors are constructed to open freely in order to fully expose the openings, and they are arranged to fold snugly over the openings to effectually close them, special provision being made to thoroughly close the joint between the meeting edges of the doors for the more perfect exclusion of the weather.

Miscellaneous.

GOODS-EXHIBITOR.—S. STENGER and J. C. MALLORY, Altoona, Pa. The improved exhibitor of these inventors is for displaying merchandise—such as oil-cloth, linoleum, matting, carpets, and the like—in rolls or bolts. Provision is made for a series of rolls and a knife is provided that may be adjusted to any one of the rolls for cutting off the desired quantity.

TENSION DEVICE.—J. BARRETT, Tombstone, Ariz. This invention of Mr. Barrett comprises certain novel features of construction; and relates to a device for operating bell-cords and all other flexible connections to whistles, trip devices, and like instruments where a signal or impulse is to be transmitted.

LOCK FOR COLLAPSIBLE BOXES.—J. R. VAN WORMER, Atlanta, Ga. The present improvement of this inventor relates to a means for fastening together the parts of collapsible boxes formed of paper or other analogous material. The improvement is particularly adapted for use in connection with a "nestable paper box" previously patented by Mr. Van Wormer.

ENVELOPE MOISTENING AND SEALING DEVICE.—A. GOLDSTEIN and B. GOLDSTEIN, Patton, Pa. The purpose in this case is to provide a device adapted for moistening the gummed portion of the sealing-flap of an envelop and for effecting a closure of such moistened flap upon the body of the envelope, and, further, to provide a hollow cylindrical body or roller for such purpose adapted to contain liquid and one or more absorbent pads exposed at the exterior of the roller, which pads are held in communication with the liquid contents of the roller.

MUSICAL INSTRUMENT.—G. H. BLAIR, Spokane, Wash. In carrying out this improvement the inventor contemplates the provision of an instrument, especially a mandolin, which shall have an increased sweetness and power of tone. The object is to so construct the top of the instrument that the ordinary ridge shall be discontinued along the bass-section of the top, thereby permitting the vibrations to travel uninterrupted along the entire bass-section, which will give greater strength and volume to the tone.

TRUCK FOR STOOLS OR CHAIRS.—F. A. MAST, Davenport, Iowa. This invention has for its purpose to provide a four-wheeled truck of novel construction that may be attached upon the legs of a chair or a stool and afford means for the easy propulsion of the seat in either direction laterally in front of a long desk, thus enabling an accountant to quickly obtain access to any of a number of heavy books arranged in sequence on the desk, thus saving time and labor while conducting an examination and entry of accounts in a number of large books.

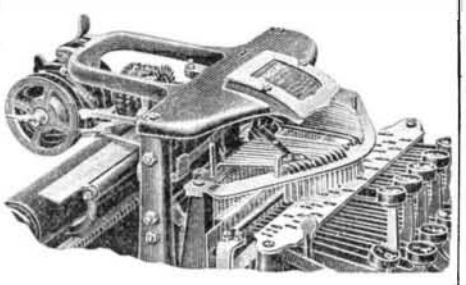
TRANSPARENT-SLIDE FOLDING BOX.—S. PRAGER, New York, N. Y. A main object of the present invention is to construct a box which may be provided with a transparent top of any suitable material—such as celluloid, gelatin, mica, or the like—the translucent material being retained securely in place on the top without the use of any fastening substance or means, such as cement, glue, or other adhesive material.

NON-REFILLABLE BOTTLE.—I. MORGENROTH, New York, N. Y. The object in view of this inventor is the provision of a construction which allows a bottle or package to be originally filled in an easy manner, after which the several parts may be quickly assembled to prevent access being obtained to them for subsequent removal and at the same time allow the liquid to be easily and readily decanted.

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.

AN EFFICIENT LOW-PRICED TYPEWRITER.

A demand for a good typewriting machine at a low price has existed for many years, yet no machine has succeeded in meeting the requirements until recently. This was done by the Postal Typewriter, as it combines high quality with low cost and it has been done, not alone by reducing the number of parts, but what is far more important, the number of accurate working points and accurate adjustments.



In the Postal the typewheel is stopped at the proper letter by an arm geared to the typewheel striking a pin lifted in the path of the arm by the key lever depressed by the operator. This arm, made for the sake of lightness and strength, of the finest tempered tool steel, carries a switch, also made of tempered steel. This switch is connected by the simplest kind of mechanism to the printing escapement and unlocks the escapement when the arm strikes the raised pin. Thus one adjustment of this switch and printing escapement does away with separate adjustments for each of the 28 key levers as in other wheel machines, and saves enormously in labor besides reducing the liability of wearing out of adjustment by 28 to 1. This stopping and unlocking device is one of the most original and practical things brought out in the typewriter art in many years. The printing is done by the typewheel striking down on the paper platen, just like a typebar does, and this gives a great manifolding power, something not considered possible in wheel machines.

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READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. **In every case it is necessary to give the number of the inquiry.**

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Marine Iron Works. Chicago. Catalogue free.

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AUTOS.—Duryea Power Co., Reading, Pa.

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Morgan Emery wheels. Box 517, Stroudsburg, Pa.

Inquiry No. 4460.—For makers of domestic rugs and carpets.

"C. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 4461.—For manufacturers of tiles for bathrooms and floors.

Handle & Spoke Mchy. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 4462.—For plows with 7 to 20 blades, to be driven by steam or electricity.

Mechanics' Tools and materials. Net price catalogue. Geo. S. Comstock, Mechanicsburg, Pa.

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Sawmill machinery and outfits manufactured by the Lane Mfg. Co.. Box 13, Montpelier, Vt.

Inquiry No. 4464.—For machines to grain maize and at the same time reduce the stem, core and leaves to forage.

We make anything in sheet metal, any shape. Estimates free. Metal Stamping Co., Niagara Falls, N. Y.

Inquiry No. 4465.—For manufacturers of poker or card machines.

Let me sell your patent. I have buyers waiting. Charles A. Scott, Granite Building, Rochester, N. Y.

Inquiry No. 4466.—Wanted, one-quarter horse power variable speed counter shaft for printing press.

Machine Work of every description. Jobbing and repairing. The Garvin Machine Co., 149 Varick, cor. Spring Sts., N. Y.

Inquiry No. 4467.—For makers of photo-engraving appliances complete.

The largest manufacturer in the world of merry-go-rounds, shooting galleries and hand organs. For prices and terms write to C. W. Parker, Abilene, Kan.

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We manufacture anything in metal. Patented articles, metal stamping, dies, screw mach. work, etc. Metal Novelty Works, 43 Canal Street, Chicago.

Inquiry No. 4469.—For a machine for filling and folding powder papers at the same time.

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Contract manufacturers of hardware specialties, machinery, stampings, dies, tools, etc. Excellent marketing connections. Edmonds-Metzel Mfg. Co., Chicago.

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Inquiry No. 4472.—For makers of gas reservoirs, also construction companies to undertake laying gas mains.

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Inquiry No. 4473.—For machinery for manufacturing bottle-wrapers.

WANTED.—A gas producer engineer or draftsman familiar with construction and operation of gas producer. State experience. Weber Gas and Gasoline Engine Co., Kansas City, Mo.

Inquiry No. 4474.—For manufacturers of broom making machinery.

WANTED.—Patent Office draughtsmen; only thoroughly experienced men need apply. Must show specimens of patent drawings. Munn & Co., SCIENTIFIC AMERICAN office, 361 Broadway, New York.

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Representatives for Spain.—Hormaechea, Elorriaga & Co., Calle Libertad No. 1. Po. lo., Bilbao, Spain. Offer their services to represent American manufacturers of novelties and new patented inventions. Will handle agencies to entire satisfaction, guaranteeing best service. A 1 references furnished to parties interested.

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HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.

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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(9153) V. L. B. says: Please answer the following questions in your columns of Notes and Queries: Has charcoal been reduced to the liquid state, and if so, is it of any scientic use in that form? A. We have no knowledge of charcoal being liquefied. The utility of such a process would depend on the chemical and physical properties of the product. We are inclined to think that use could be found for it. 2. Will ice melt in a vacuum, or simply vaporize? A. A substance cannot be melted if the pressure upon it is less than its vapor pressure at its melting point. The pressure of aqueous vapor at the freezing point of water is 4.6 mm. Hence in a vacuum of less than 4.6 mm. of mercury ice cannot be melted.

(9154) C. N. M. says: I wish to learn how much horse power a wheel will produce in a stream running 4 miles per hour, 4 feet deep, 24 feet wide. What is the best system for a wheel, etc.? A. A stream running 4 miles per hour, 4 feet deep, and 24 feet wide, would develop, if it were possible to utilize all of the energy in the water, 0.6 horse power. With a paddle-wheel covering the full cross-section of the stream, it would be impossible to utilize more than one-third of the above amount, or 0.2 horse power. The scheme, therefore, as you suggest it, seems hardly feasible. If, however, it were possible to obtain a fall of even a few feet, there is sufficient water here to give a valuable water power. With a fall of 10 feet, very nearly 10 horse power could be developed.

(9155) L. E. D. B. says: Being a subscriber of SCIENTIFIC AMERICAN would like very much to ask a few questions about operating a boiler. As it is with me, I have taken a position entirely out of my line. I am an apothecary or chemist by profession, but by ill-luck, as it were, was hired as such, but when I arrived in above-named city (Salt Lake City) I was placed in as engineer and fireman, which I know nothing about; but as it is at present, I would like to ask you which would be the best way to run or operate a boiler to get up steam in a hurry, of which I will endeavor to give a diagram explaining to you the style and pressure required; viz., No. 1 being the safety valve at 100 pounds pressure; No. 2 the three water valves; No. 3 the water gage; No. 4 the Penberthy water injector; No. 5 the sump box, the water of which gets very hot at times so that the injector will not raise (how can I remedy that?); No. 6 the fire box; Nos. 7, 8, 9, and 10 man or hand holes to boiler; No. 11 feed pipe to engine and steam heating plant; No. 12 blowout pipe in center rear of boiler. If you can give me full particulars to above either by mail or through your most esteemed and valuable paper, the SCIENTIFIC AMERICAN, would be very much obliged to you. A. We would say that it is impossible for us in the compass of a single letter to give you the in-