RECENTLY PATENTED INVENTIONS.

Hardware.

SCREW-DRIVER. T. W. FISHER, Helena, Mont. Frequent annoyance and inconvenience are experienced in the use of the screw-driver due to accidental unseating of the end from the groove in the screw head, and it often happens that from this cause the surface of a structure or piece of work becomes marred, not infrequently necessitating a new dressing or planing. The present invention has for its principal object to provide a screw-driver having means ("denominated by the inventor a holder or guide") whereby the annoyance may be readily overcome and also whereby the operation of insertion and withdrawal of screws may be effected with ease and facility and without liability to cutting or injuring the hand.

Household Utilities.

SAFETY GAS-VALVE. P. L. SALEMI, New York, N. Y. The invention is peculiarly applicable for domestic use on ordinary gas-jets where there is more or less liability of the gas-jets being tampered with accidentally by unauthorized persons or children. The improvement allows the jet to be opened at will, but not opened so readily as to become dangerous. In other words, the inventor seeks to render it impossible for the jet to be opened except by a person who understands it and who desires to open it.

SCREEN FOR WINDOWS OR DOORS. E. CHRISTEN, Decatur, Ind. The inventor preferably employs a suitable frame for supporting the screen before or within the frame of an ordinary window or door, said screen being of special construction and operating to prevent the rays of the sun from entering a compartment in which it may be located. The screen, however, offers no obstruction to the entrance of light and air therethrough nor to the viewing of outside objects or surroundings from within.

Machines and Mechanical Devices.

BRAKE AND AUTOMATIC STOP DEVICE.—J. C. SMITH, Louisville, Ky. In this patent the invention has reference to a combined brake and automatic stop, which is useful in many machines and especially in hoisting-machines, particularly when applied to elevators. The objects are to provide means for automatically stopping a machine, elevator, or the like at predetermined limiting-points and at the same time provide means for stopping the same at intermediate points as desired.

TENSION DEVICE FOR WARP-BEAMS. G. KELLER, New York, N. Y. In this instance the invention relates to looms; and Mr. Keller's object is the provision of a new and improved tension device for warp-beams arranged to give a uniform tension to the warp under varying weather conditions to insure the formation of faultless weaves.

WOODWORKING-LATHE.—J. M. KUEBLER, Wausau, Wis. The cutter is of the rotary type in the present invention and is driven at a high speed. Both of the turrets are driven by certain peculiar mechanism which imparts to them a slow step-by-step movement, the elements being so arranged that the turrets are at, or practically at, rest during the time that the tool engages the work, the movement of the turrets being independent of the rotation of the work-holders or center-pins, which latter rotation goes on continuously.

COFFEE OR SPICE MILL.—J. W. KIREY, Butte, Mont. In carrying out this improvement the object is to provide a mill which shall be adapted for grinding or pulverizing coffee and spices, the same to be not only simple in construction, but adapted for more thoroughly grinding or pulverizing than is possible with any similar mill known to the inventor.

COIN-CONTROLLED LIQUID-DISPENSING APPARATUS.—A. F. BRADSHAW, Bieber, Cal. The intention in view in this case is the provision of a simple mechanism wherein liquid may be drawn from a suitable container on the deposit of a suitable coin or slug, the volume of escaping fluid being regulated automatically by the operation of a suitable knob and the coin being discharged automatically into a suitable receptacle, so that the coin will not subsequently interfere with the proper service of the machine.

NUT-TAPPING MACHINE. G. F. ZWILLING and C. W. RICHARDS, Cleveland, Ohio. In this patent the invention has reference to a machine for automatically threading nuts; and the prime object of the inventors is the production of a machine in which the tapping operations are practically continuous, and thus very greatly increasing the speed of the machine.

Of General Interest.

COPY-HOLDER.—J. L. RIVERS, Seattle, Wash. The design in this case is to meet the demands of type-writer operators for a device which will hold a copy so steadily in place that the jar or vibration of the machine will effect it to the least possible extent (when fastened to a solid desk will do away with all vibration) and which may be used in any number of positions on a folding type writer cabinet, desk, or table in a way to avoid removal or readjustment of the holder when covering the writer with the ordinary cover with which they are provided or when opening or closing a folding writer cabinet or rolling-top desk.

CASING-CLAMPING WRENCH.—J. G. WINGER, Grand Valley, Pa. In carrying out the present invention Mr. Winger has particularly in view as an object the provision of a clamp which will securely engage with the exterior surface of the casing-tube and may be used as a wrench to turn the same, the construction of the device being such that the tube will not be bent or crushed under the influence of pressure exerted thereon.

ANIMAL-TRAP. G. J. MILLER, Walla Walla, Wash. The invention is an improvement in that class of traps in which a spring-actuated bow-shaped jaw is adapted to be set and locked in a retracted position and when tripped by the animal snaps down upon his body. It relates particularly to the construction of the locking and tripping device and its connection with the spring-jaws; also to construction of the jaws and their attachment to fixed portions of the stationary frame, which portions constitute their fulcra; also the means for connecting the ends of the wires bracing each of the jaws.

PIANO BACK.—G. H. JONES, Oregon, Ill. In this patent the object is to provide a back which is simple in construction, comparatively light, and arranged to obtain the greatest strength at the point where the greatest strain is exerted by the strings and the metal plate, to increase the volume of tone of the instrument by the elimination of the heavy posts now in use in frames, and to maintain the instrument in proper tune for a considerable length of time.

Pertaining to Vehicles.

WHIFFLETREE-COUPLING.—G. L. MILLER, Socialville, Ohio. In this instance the invention is especially useful in couplings for connecting the whiffletree, doubletree, or coupling-pole of a carriage or wagon with the cross-bar. It can be applied to the center of bolsters or axles to receive the coupling-pin or king-bolt and will operate in a wood or soft-structure requires protecting lining. As a clamping device it may be used to fasten separate parts together and will constitute a strong brace member for the structure.

Prime Movers and Their Accessories.

PUMP CONTROLLING MEANS. W. SMALL, Sourlake, Texas. Primarily the inventor seeks to provide means for the purposes of a governor for a pump in such manner that when pumping oil large quantities usually wasted when a break in the oil line occurs by reason of excessive pressure or when the supply to the suction becomes too low is saved, whereby pumps equipped with his improvement require less attention, and the service of one or more station attendants dispensed with.

BOILER FLUE CUTTER. J. W. FLESSLER, Moberly, Mo. That class of devices which are employed for cutting the flues or tubes of tubular boilers at a point within the fire space are improved by this invention, and particularly in that class of such cutters in which the body of the tool is provided with a cutter so attached that it may be projected from or retracted within a radial slot in the tool as required for work or when it is being inserted or withdrawn from the tube.

TURBINE. T. EASTMOND and M. M. EREEN, Jacksonville, Fla. In this invention, which relates particularly to improvements in turbines, the object is to provide a reversible multiple compound expansion-turbine that will be effective in operation with an economical use of motive agent, simple and durable in construction, and easily reversed. The inventors have also made another improvement relating to multiple compound expansion steam turbines, the object of which is to provide a machine of this character that will be effective in operation, simple and durable in construction, easily reversed, and arranged to utilize the motive agent to the fullest extent.

Railways and Their Accessories.

RAILROAD-SWITCH. T. A. BOWEN, Blackstone, Va. Mr. Bowen's invention is in the nature of an improved automatic railroad-switch designed to be set in operation by the engineer or some other person on the train or switchman along the track, as when freight trains are being operated over the same. It comprehends certain novel features in the switch mechanism and in the combination, with the same, of a shifting lever with stand, light, and locking devices.

STRAINER ATTACHMENT FOR AUTOMATIC AIR-BRAKES.—S. J. BALLANCE, A. UHLICH, and G. UHLICH, Lincoln, Neb. The object of the invention is to provide a practical device which may be readily connected with a crossover pipe between the train-pipe and the triple valve on cars and also between the engineer's brake-valve and the train-pipe on engines, the train-pipe, triple valve, and engineer's brake-valve being parts common to an air-pressure-brake system, and when so connected serve to arrest any kind of gritty or other impurity that enters the strainer device.

COMBINED RAILWAY-TIE AND RAIL FASTENING DEVICE.—J. T. GRIFFIN, Watertown, Tenn. Mr. Griffin's invention refers more particularly to metallic ties; and the object of his improvement is the provision of an improved tie of this character of strong and simple construction and improved rail-fastening devices so formed and so arranged relatively to the tie as to effectively secure the rails and prevent them from spreading.

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Perforated Metals, Harrington & King Perforating Co., Chicago.

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If it is a paper tube we can supply it. Textile Tube Company, Fall River, Mass.

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Want to buy receptacles for toilet-room disinfectant. Disinfectant, 794 Broad Street, Newark, N. J.

Inquiry No. 5956.—For address of umbrella handle manufacturers.

WANTED.—Addresses of importers and consumers of bamboo. D. F. Mitchell, Jacksonville, Fla.

Inquiry No. 5957.—For machinery to produce knitted table padding.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 15, Montpelier, Vt.

Inquiry No. 5958.—For makers of laundry machinery.

American inventions negotiated in Europe. Wenzel & Hamburger, Equitable Building, Berlin, Germany.

Inquiry No. 5959.—For address of drug company dealing in powdered extract of gulf weed.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Machine Company Foot of East 138th Street, New York.

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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. 5962.—For parties making flint glass.

Patented inventions of brass, bronze, composition or aluminum construction placed on market. Write to American Brass Foundry Co., Hyde Park, Mass.

Inquiry No. 5963.—For several second-hand, small electro magnets; also for dealers in amateurs' electrical supplies.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 5964.—For manufacturers of salve, etc.

SALE.—Adjustable stepladder patented in Canada and United States. Used on stairways. Never placed on market. Joseph A. Jaeger-Bainer, Hull Ave. and So. Scott Ave., Bradford Park, N. Y. C.

Inquiry No. 5965.—For makers of light-weight kerosene engines.

Two patents for sale. Supply tanks for water service, No. 195,662. Valve, a cut-off, for supply tanks, No. 737,941. Can furnish some valves, cut-off, in working order. P. J. Lotthauser, Clarendon, Texas.

Inquiry No. 5966.—For manufacturers of the "Calentadorde Camp."

Would you be interested in doing successful business in Mexico? Please write for particulars. We will recommend you a man well known with all business situations in that country. Arturo Andres, Guadalajara, Mexico.

Inquiry No. 5967.—For machinery to saw buttons out of mussel shells.

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Inquiry No. 5974.—For manufacturers of sand blast machines.

Inquiry No. 5975.—For parties putting up shingle mill to cut cypress shingles.

Inquiry No. 5976.—For manufacturers of carborundum.

Inquiry No. 5977.—For manufacturers of barber combs.

Inquiry No. 5978.—For dealers in samples of rubber stamps.

Inquiry No. 5979.—For machinery for extracting and cleaning hemp.

Inquiry No. 5980.—For manufacturers of peat and peat goods.

Inquiry No. 5981.—For manufacturers of wall and packing paper.

Notes and Queries.

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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Minerals sent for examination should be distinctly marked or labeled.

(9454) C. W. W. asks: 1. How does all artificial motion differ from the earth's motion? A. There is no difference, so far as we know, between the earth's motion and other motion. Motion is change of place. It may be that the question has some special sense which we do not detect. 2. Where, in traveling round the world, do you lose a day? A. If one crosses the 180th meridian going from east to west he will skip a day, that is if he crosses on Tuesday, he will immediately change his reckoning to Wednesday, the hours remaining the same. On the other hand, if he crosses going from west to east he will set his reckoning back a day, that is, if he crosses on Tuesday he will immediately change his reckoning back to Monday. This is not because he loses a day or gains one. He has the same duration as others. It is because on sailing from east to west the days are each more than twenty-four hours long, and in going entirely around the world these minutes in excess of twenty-four hours amount as a total to another twenty-four hours or a day. Similarly in sailing toward the east, one meets the sun earlier by the change he has made in his longitude, four minutes of time for each degree, so that the days are less than twenty-four hours long. In going entirely around the world these deficiencies in the length of the day amount to twenty-four hours or another day, and this the voyager gets by shifting his date backward one day on crossing the 180th meridian. In olden times ships carried their reckoning without change till they had completed the voyage and then made the change on arriving in port. 3. Why will a vessel made of cement hold water and not keep water out? A. A vessel which will not keep water out will not keep water in. It is inconceivable that it should do so. However, a vessel may be porous so that water will leak into it, when it is set into a tank of water, and yet not have water run out of it so as to wet the place where it stands when it contains water. This is explained by the fact that the water which oozes through the pores of the vessel is evaporated as fast as it appears on the outer surface and does not accumulate in sufficient quantities to drop off. Use is made of this peculiarity of porous earthen ware vessels to secure cool water in the tropics. A porous vessel is hung in a draft of air in the shade and the evaporation of the water from the external surface cools the water remaining in the vessel so as to be refreshing to drink. The manufacture of cement blocks as used in architectural work and machines for making them are described and illustrated in SCIENTIFIC AMERICAN, No. 9, Vol. 89, also SUPPLEMENT, Nos. 118 and 645, 10 cents each. Any maker of brick machinery can make the block molding machine. We refer you to the American Clay Working Machinery Company, Bucyrus, Ohio; you will also find another address in the copy of SCIENTIFIC AMERICAN mentioned above.

(9455) D. L. P. asks: Are the velocities of light and attraction from the moon the same, and if not, why is it that the tides are drawn up when the moon is apparently over them? What is the actual position of the moon as regards the earth, when its observed position is at the zenith? A. The force of gravitation is held by scientists to act instantaneously through space. Light travels with a velocity of 186,300 miles per second in the spaces between the heavenly bodies. The tides produced by the moon are not directly between the moon and the center of the earth, that is, directly under the moon. It requires time to overcome the inertia of the water, and the crest of the tide wave is about one hour behind the moon in the open sea, while near the shore, in bays and rivers it may be much farther than this behind the moon. The position of the moon in the sky differs as seen from any place from its position as seen from the center of the earth. You can draw a diagram for the latitude of your place and see the relative position as seen from your place and from the center of the earth.

(9456) S. F. C. asks: Will you kindly decide the following questions: A claims that it has never been scientifically demonstrated that it is possible to throw a globular sphere or baseball and make it describe a curve on the same plane, i. e., what is commonly