

RECENTLY PATENTED INVENTIONS.

Machines and Mechanical Devices.

HYDRAULIC AIR-COMPRESSOR.—W. G. Cox, New York, N. Y. One purpose of the invention is to provide an economic form of hydraulic air-compressor so constructed that water may be admitted at either side through what may be termed a "double chamber," one section of which chamber acts as a cushion to the incoming water, thus preventing hammering of the inlet-valve, which latter is especially formed to the same end.

CARRIAGE FOR OVERHEAD CABLES.—T. ALEXANDER, Brookhaven, Miss. In this patent the invention relates particularly to improvements in the construction of the track or carriage, whereby improved advantages are obtained in respect to the strength, durability and operation; also, in relation to means for dogging or locking the carriage to a hauling-rope, which runs alongside the track-rope; also, in means for supporting the load from the carriage; also, in improvements in guides and supports for the hauling-rope on the framework, to which the track-rope is secured and by which it is supported.

ELEVATOR.—P. F. FOLEY, New York, N. Y. The invention relates to an improvement in the elevator disclosed in a prior patent granted to Mr. Foley. In the apparatus shown in this patent a form of differential sheave and cable gearing is employed, involving a counterweight and tension-weight mounted in two separate shafts or vertical guideways. This arrangement is disadvantageous in that considerable room is occupied in providing the two independent shafts. An object of the present invention is to provide a construction which allows the sheave-weight and counterweight to move in the same shaft, thus economizing space in the building.

MOLD FOR CONCRETE WALLS.—C. E. SHUMWAY, Albion, Mich. In this instance the invention relates to improvements in molds for concrete walls; and the object in view is to provide an improved machine by which a double wall, with an air-space between the adjacent or parallel courses, may be rapidly and economically constructed by unskilled labor.

MACHINE FOR PACKING FLOUR INTO BARRELS OR SACKS.—L. VAN NETTE, Bradford, Pa. Mr. Van Nette's invention relates to a machine especially designed for use in flouring-mills to be used for packing flour into barrels or sacks for market by the simple compression of the flour into these receptacles, thereby avoiding the employment of the auger almost universally used in the present methods of packing.

Attaching to Vehicles.

THILL OR DRAFT-POLE COUPLING.—H. TURNER, Koolunga, South Australia, Australia. The object in this case is to provide details of construction for a thill or coupling which in duplicate affords means for detachably connecting a pair of shafts or draft-pole to the front axle of a vehicle, which will hold the thills or pole free to rock in a vertical plane, prevent rattling of the hinged parts, and permit a quick detachment and interchange of the thills or the pole connecting with the front axle without use of tools.

RUNNING-GEAR FOR WAGONS.—J. GREAR, Paducah, Ky. This invention is an improvement in the axles and connected parts of the frame of running-gear for wagons and carriages, the objects being increased lightness, durability, strength and economy of manufacture. In the manufacture the several parts, save the blocks that constitute the bearings and the journals proper, are struck up from sheet or plate metal by means of suitable dies and are thus very cheaply produced.

SUPPORT FOR VEHICLE-TOPS.—B. K. HENDRICKS, Cain Point, Ill. The objects of Mr. Hendricks' invention are to prevent the bending and breaking of the bows when the top is laid down, reduce the bouncing up and down of the top when in use, thus making the top last much longer, improve the appearance of the vehicle, and permit it to be taken under low sheds and doors.

Prime Movers.

PROPELLING MECHANISM FOR BOATS.—B. J. LAVIGN, New York, N. Y. The purpose of this invention is to provide an effective propelling mechanism for boats, particularly of that character which is driven by foot or pedal power, and, further, to provide means whereby the speed of the mechanism may be increased or diminished as desired, and in an expeditious and convenient manner under the full control of the operator.

Of General Interest.

CLAMP FOR HOOPS, BANDS, ETC.—W. P. RICE, Lowell, Ohio. The principal object of Mr. Rice's improvement is to provide a device which may be quickly and readily applied to a tub, cask, or the like, and may be adjusted to fit casks of varying circumference, so that the necessity of employing rivets or similar fastening means is obviated.

MIRROR.—L. B. PRAHAR, New York, N. Y. In this case the purpose is to provide a construction of mirror, especially hand-mirror, whereby the glass may be held in a contractile frame or a divided frame with means for placing it under tension without danger of the reflector, no matter how thin the glass, from

being checked or broken while securing it in position or when the mirror is subjected to any edge strain during transportation or accident in handling.

CONSTRUCTION OF FLOORS, PARTITIONS, OR THE LIKE.—V. MOESLEIN, Weehawken, N. J. In this patent the object is to provide improvements in the construction of floors, etc., whereby an exceedingly strong and durable support is produced for holding the plaster and for supporting filling material that may be employed, the floor, etc., being completely fireproof and arranged to permit the use of unskilled labor to place the parts in position.

BEAD-LOOM.—H. B. MEES, Nadeau, Kan. In carrying out this invention Mr. Mees has particularly in view the provision of a small loom which will hold the warp-threads apart in such manner that they may be stretched taut and equal distances apart, thereby obviating the possibility of the threads loosening and spoiling the work.

MAIL-BOX.—A. M. HOES, St. Paul, Neb. In this patent the invention has reference to improvements in mail-boxes for rural service, the object being to provide a box of this description that will be of simple construction, inexpensive, having no parts liable to get out of order, and so arranged that it may be easily opened and closed. The box may be made of any suitable metal.

GAS-LIGHT NEGATIVE-PRINTING ATTACHMENT.—G. W. HARSE, New York, N. Y. One object of the inventor has in view is the provision of a light and cheap device which may be easily fitted to an ordinary gas-burner to expose a negative and the sensitized paper held in an ordinary printing-frame to the rays of light. The gas-burners may be with or without incandescent mantles.

INKSTAND.—G. A. GRIGGS, Billings, Mont. The purpose in this case is to provide an inkstand in which the feed-funnel is employed to supply ink to the pen-nib, the funnel being depressed at each dipping, and to construct such an inkstand so that it will be reliable in all temperatures and so that the chamber is fully open at the bottom and practically closed at the top, being reversed when filled, which filling can be quickly and cleanly done, and also to so construct it that in use the ink will not overflow.

CHECK-PUNCH.—T. K. DAVISON, Jamestown, N. Y. In this patent the invention has reference to improvements in devices for puncturing the value-marks for banking checks, an object of the inventor being to provide a device for this purpose that will be simple in its construction, having no parts liable to get out of order or break, and that may be conveniently carried in a person's pocket.

BRICK FOR THE CONSTRUCTION OF ARCHES.—S. H. CLARKE, Cuzco, Minehead, Somerset, England. The improvement is designed more particularly for use in situations where the structure of the arch is liable to disintegration and collapse, the improved brick tending to avert the risk of collapse, and, furthermore, enabling an arch to be built and repaired readily and quickly without specially-skilled labor, an advantage of utmost importance in the case, for example, of the furnace-arches of marine boilers using liquid fuel.

REFRIGERATOR-CAR.—J. S. BASHAW, Gainesville, Fla. In this patent the invention refers to an improvement in refrigerating-cars which enables Mr. Bashaw to adapt a car of ordinary construction to use as a refrigerator, this end being attained, generally speaking, by providing one or more ice-tanks of peculiar construction which are capable of being placed in the car through the usual door thereof. Means are involved for circulating air through the car.

GLOVE.—W. LEFI, Gloversville, N. Y. The object in this case is to provide improvements in gloves having outside seams, and more particularly at the joint of the thumb and body portions, whereby a very strong, durable, and well fitting glove is produced and the strain incident to putting on the glove or when carrying packages or umbrellas, holding reins, etc., is more on the leather instead of on one portion of the seam joining the thumb to the body portion.

LEDGER-BINDER.—L. E. SCHOCH, Chicago, Ill. The invention has particular application to devices of the class commonly known as "loose-leaf" or "perpetual" ledger binders. Primarily the inventor has in view as an object the construction of a binder of the class described which may readily receive a large number of loose leaves, and which may be locked securely in such manner that the leaves will be firmly clamped between the covers of the binder.

FOLDABLE BEDSTEAD.—C. P. BROWN, Springlake, Mich. In this instance the invention refers to improvements in foldable bedsteads by which the inventor seeks to produce a construction enabling him to utilize a standard metallic head-section, a similar foot-section, and a standard bed-frame in a way to fold the parts compactly when it is not desired to use the bed and at the same time allow the several parts to be easily and quickly unfolded for use.

BOX-LID HOLDER.—C. S. CHRISTIANSON, Reynolds, N. D. This invention relates particularly to improvements in devices for holding lids of cigar-boxes open at any desired angle for displaying goods, the object being to provide a device for this purpose that will be

simple in construction, readily applied, and that when in position will occupy very little space.

CORE-DRYING OVEN.—W. J. BREEN, Mahwah, N. J. The primary object of the inventor has in view is the provision of a construction by which a large number of small or medium-sized "green" cores may be handled without injury or breakage during the operation of placing them in the oven, drying the cores, and removing them from the oven.

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.

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- For mining engines. J. S. Mundy, Newark, N. J.
- Inquiry No. 5547.**—For makers of electrical clocks for factories, controlled by one master clock.
- "U. S." Metal Polish. Indianapolis. Samples free.
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- Inquiry No. 5549.**—For the makers of Gooblers' pocket check protector.
- Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.
- Inquiry No. 5550.**—For manufacturers of putty and machines for making the same.
- FOR SALE.—Patent on hand portable fire-escape or royalty. Inventor, 4128 Steele Street, Denver, Colo.
- Inquiry No. 5551.**—For manufacturers of cracker-making machinery.
- American inventions negotiated in Europe. Wenzel & Hamburger, Equitable Building, Berlin, Germany.
- Inquiry No. 5552.**—For manufacturers of small ice-making machinery.
- For Sale or Royalty.—Patent. Multi-color job printing press. Entirely new. C. M. Shigley, Columbus, O.
- Inquiry No. 5553.**—For drills for drilling hard rock under water.
- Young man desires agency of good article for country neighborhood; good references. F. E. Chace, Pawtucket, R. I.
- Inquiry No. 5554.**—For the address of Mr. Hugh L. Willoughby, for whom there is a letter in this office.
- In buying or selling patents money may be saved and time gained by writing Chas. A. Scott, 30 Cutler Building, Rochester, New York.
- Inquiry No. 5555.**—For manufacturers of tools and machinery for making lead bends, traps, etc.
- Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway New York. Free on application.
- Inquiry No. 5556.**—For makers of small fans, or rotary vacuum pump, for creating a vacuum in receivers, for experimental purposes.
- 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.
- Inquiry No. 5557.**—For dirt-conveying machinery for use in constructing dams, etc.
- The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company, Foot of East 138th Street, New York.
- Inquiry No. 5558.**—For makers of and dealers in quarrying machinery and supplies.
- I want the agency or right for any good-selling article. Send sample and full particulars.
- H. H. Rice, Beloit, Wis.
- Inquiry No. 5559.**—For makers of broom-making and paper bag-making machinery.
- 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. 5560.**—For manufacturers of paper.
- Export to Australia.—Gentleman having good connection wishes to represent first-class American manufacturer. Address N. LeRoy Tracy, care of Tracy, Robinson & Williams Company, Hartford, Conn.
- Inquiry No. 5561.**—For address of makers of household specialties, of small steel wire.
- WANTED.**—To manufacture on reasonable terms anything in wood or metal. First-class facilities for manufacturing and shipping. Satisfaction guaranteed. Send samples for estimate. Wayland Incubator & Manufacturing Co., Wayland, N. Y.
- Inquiry No. 5562.**—For makers of working model steam engines.
- Inquiry No. 5563.**—For makers of wood fiber machines.
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- Inquiry No. 5565.**—For the manufacturer or inventor of the automatic coin-operating, type-setting and stamping machine.
- Inquiry No. 5566.**—For the present address of the Armat Moving Picture Co.
- Inquiry No. 5567.**—For the manufacturers of leatherette wall pockets.
- Inquiry No. 5568.**—For manufacturers of garter buckles.
- Inquiry No. 5569.**—For makers of the "Massey" vise for pipe and vise combined, called the "Massey Perfect No. 25."
- Inquiry No. 5570.**—For makers of accordion-plaiting machines.
- Inquiry No. 5571.**—For a machine drill not too heavy, but strong enough to put in a 3-foot hole for blasting in quarry work.
- Inquiry No. 5572.**—For a schooner about 140 feet long.
- Inquiry No. 5573.**—For a heater to furnish heat in buildings.
- Inquiry No. 5574.**—For the address of the makers of the McLaughlin hub and axle.



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.

(9398) J. W. S. says: Kindly inform me through the notes and query column of the SCIENTIFIC AMERICAN whether there is any known chemical or agency known to science that will dissolve or destroy air; that is, whether there is any chemical or other agency known that, being placed in an air-tight cask, will dissolve or destroy the air contained therein, and if so, what are they? A. We do not know any chemical which will destroy air and thus produce a vacuum in an air-tight cask. This is what we understand your question to mean. Phosphorus will consume the oxygen of the air slowly in any air-tight place, and thus produce a partial vacuum. But the nitrogen and carbon dioxide which are always present in the air cannot be disposed of in this manner, nor indeed is there any way known to chemists by which the nitrogen can be transformed directly into a solid.

(9399) C. A. R. writes: Will you please explain, through your question column of the SCIENTIFIC AMERICAN, the action and theory of a reactive coil, such as is used in Thompson's electric hoop welding? A. The common name of reactive coils is choking coils, a name which more clearly indicates their functions. These coils act as rheostats in direct-current circuits, to restrain the flow of current. This they do by their self-induction. A clear presentation of this subject may be found in Sheldon's "Alternating Current Machines," which we send for \$2.50.

(9400) C. E. B. says: I have a very handsome old mahogany table that has been varnished, and would like to know how to put a high polish on it, as you see on new tables that have never been varnished. What I want is polished wood, not varnished wood. A. To produce a wood polish, you must remove the old varnish with sandpaper, and finish the surface by a thorough rubbing with a cloth pad and turpentine; then rub to a bright finish with thin shellac varnish, applying but little at a time on the pad.

NEW BOOKS, ETC.

O'GORMAN'S MOTOR POCKET BOOK. By Mervyn O'Gorman, M.I.E.E., Assoc.M. I.M.E. New York: E. P. Dutton & Co., 1904. 12mo.; pp. 387. Price, \$3.

This little volume is a practical pocket handbook for the automobilist. It is arranged in the form of a dictionary of automobile terms and topics, all the words being given in English, French, and German. Besides tables in these three languages of words used in first aid to the injured, in regard to time, clothes, drinks, and other subjects of importance to the tourist, there are numerous other tables of value giving, for example, the number of revolutions different sized wheels make in a mile, speeds in miles per hour corresponding to times by seconds from one to three minutes, equivalent temperatures in Fahrenheit, Reaumur, and Centigrade, the specific gravities corresponding to the degrees on the Baumé scale, etc. The book also contains full instructions upon taking an automobile into France for touring purposes. There is a great deal of practical information within its pages, and much of this information is made very clear by nearly 500 cuts.

MACHINES AND TOOLS EMPLOYED IN THE WORKING OF SHEET METALS. By R. H. Hodgson, A.M.I.M.E. Manchester, England: Technical Publishing Company, Ltd., 1903. 12mo.; pp. 311. Price, \$2.

The scarcity of literature upon presses and press tools will cause this book to be welcomed by all sheet metal workers, as in its pages will be found very thorough descriptions of the various kinds of presses and tools used in this industry, as well as of the methods of operation of the same. The 281 illustrations in the book include pictures of typical power presses, the said pictures being supplemented with accurate descriptions. Calculations and definitions of sufficient number have been interspersed throughout the text in such a way as to allow any practical mechanic to grasp the points under consideration with the least possible calculation.