

## RECENTLY PATENTED INVENTIONS.

## Agricultural Implements.

PLOW.—BENJAMIN D. BALDWIN, Maul, Hawall. The invention is a double moldboard hill-ing-up plow, so constructed that it will throw up a large amount of loose soil against the stems of sugar-cane or other growing crops planted in rows. The plow is simple and durable.

COMBINED WIRE-FENCE MACHINE AND STALK-CUTTER.—FRANK SCHMITT, Carlyle, Ill. The purpose of this invention is to provide a machine of improved construction which can be drawn along and made to pay out wire during the building of wire fences, and which will be adapted to reel in fence-wire removed from the posts. The device can likewise be used to collect and cut up stalks.

## Engineering Improvements.

STEAM-BOILER.—WILLIAM N. OLDMAN, 270 Front Avenue, Buffalo, N. Y. Rows of fire-tubes are arranged horizontally and equidistantly; and between each two rows of fire-tubes rows of threaded stay-rods are arranged both vertically and horizontally. The arrangement of the stay-rods in rows between two vertical and horizontal rows of tubes insures uniform distribution of strain, so that cracks and leaks are not liable to occur and a maximum strength is obtained. The inventor claims that his boiler can withstand nearly double the pressure of steam of cylindrical fire-tube boilers having stay-rods arranged in the usual way.

## Metallurgical Apparatus.

MACHINE FOR EXTRACTING METAL FROM ORE.—ALBERT I. IRWIN, Cripple Creek, Col. The object of the invention is to provide a simple mechanical device to be used in conjunction with any suitable solution and an electric current for the continuous and the automatic treatment of the metals, the precious metals being simultaneously extracted and deposited. In a treatment-tank, an endless anode travels, the upper and lower stretches of the anode being in position to be immersed in the solution in the tank. Diagonally-disposed blocks of insulating material are attached to the anode. Under each stretch of the anode in the tank is a cathode.

AMALGAMATOR AND CONCENTRATOR.—IRWIN H. SPRIGGS, Eureka, Utah. The ore amalgamator and concentrator comprises two semi-cylindrical trays arranged one above the other and supported on rockers. Water is supplied to the upper tray. An agitator in the lower tray is operated by the rocking movement of the tray. An automatically operated valve is provided for an outlet in the lower tray. By reason of the peculiar rocking motion, all earth that can be worked by other machines is successfully handled. The machine's chief success, however, lies in saving values in clay.

ORE-LEACHING APPARATUS.—RALPH L. GRAVES, Sumpter, Ore. The invention is an improvement in apparatus for use in separating ore. Means are provided whereby the pulp is agitated through the medium of a suitable pump, the suction and discharge of which can both be within the same tank. By means of this apparatus, agitation can be stopped and resumed at pleasure. The clear fluid can be drawn from the agitation-tank when desired. But little power is required.

## Mechanical Devices.

MACHINE FOR MAKING PLASTER-BOARDS.—PATRICK RYAN, Manhattan, New York city. In July, 1900, Mr. Ryan patented a machine for making plaster-boards. The present invention is an improvement on that machine. The machine is designed to form fire-proof boards for use in buildings, the boards being produced from alternate layers of a suitable fabric and a plastic material such as ordinary plaster. A hopper contains the dry plaster; and an apron passes therefrom. The apron moves through a water-pan or trough to wet the plaster. A second apron, movable transversely to the first apron, is adapted to carry webs of fabric in which the wetted plaster is deposited. The material is spread on the fabric-web by a spreader working over the second apron.

WOOD-TURNING LATHE.—DEFIANCE MACHINE WORKS, Defiance, Ohio. This machine, the invention of Mr. George A. Ensign, is especially designed for producing in large quantities duplicate articles—such as bobbins, handles, spoons, mallets, stakes, pins, and the like, either plain or with beads—the lathe being arranged to reduce the rough material to the finished product complete in every respect and the exact shape and size, perfectly smooth and highly accurate. The lathe consists of a spindle carrying a number of cutters, toward and from which a table is mounted to travel transversely. On the table a head-stock is mounted. A driving-pulley mounted in a swinging support carried by the table is geared with the head-stock. The tail-stock is also mounted on the table; and means are provided for operating the table.

STAPLING-MACHINE.—MILTON HINKLEY, Benton Harbor, Mich. The invention relates to machines for making baskets. The construction is such that the work can be readily shaped over a former without hindrance from the staple-driving devices. When the work is

shaped the staple-forming and staple-driving devices are brought into an active position over the work and the former, to secure the parts of the work together by means of the staples.

MEASURING-FAUCET.—JOHN P. DOBBIN, Hayfork, Cal. This faucet is particularly useful in dispensing soda water, tea, coffee, or other beverages, and is so arranged as to discharge the proper amount into a tumbler or cup. The device is operated without touching the faucet, which is often hot.

CIGARETTE-CUTTER.—FELIX P. HERMIDA, San Juan, Porto Rico. The machine cuts cigarettes from the lengths received from the cigarette-forming machine. And the object is to provide a cutter so constructed as to travel with the movement of the cigarette-length leading from the forming-machine, thus making a straight cut without danger of tearing the paper.

CALCULATING-MACHINE.—CLARENCE E. LOCKE, Kensett, Iowa. The calculating-machine is of the Young-Fowler type, in which a number of independent slides are used. The present invention provides a calculating-machine of this class which is simple and durable; which exhibits the result in such a place that there will be no possibility of confusion nor any necessity for changing the position of the machine to find the result; in which a simple mechanism is furnished for locking the slides when desired; and in which the slides are distinguished so as to facilitate calculation.

BOTTLE-CARRIER.—WILLIS D. SNOW and HARRY M. PALMER, Bloomington, Ill. The inventors have devised a novel machine for assembling a number of jars or bottles, so that they can be carried hanging with open mouths for immersion into a tank holding liquid for filling the bottles or jars. The invention is especially adapted for filling milk-jars in quantity at one operation.

BALL MIXING AND DISCHARGING APPARATUS.—CHARLES DUHAMEL, Rue le Peletier 11, Paris, France. Given a number of balls in a suitable receptacle, to cause the balls to pass from the receptacle in a certain number of outlet tubes leading to stopping or distributing devices—this is the problem which the inventor has solved. A receptacle is used, in which the balls can be inserted, and which is provided with a bottom made in two parts, one of which is fixed and the other movable. On the edge of the fixed part, adjacent to the movable part, are perforations communicating with the outlet-channels. The movements of the movable parts are sufficient, relatively to the sides of the receptacle, to cause at certain moments the greater part of the balls to come together at the lower parts of the receptacle, and leave only a slight layer of balls on certain inclined parts of the bottom. The result is that these latter balls are free to roll toward the outlets.

FIRE-ESCAPE.—THOMAS T. BROWN, Angus, Minn. The fire-escape is provided with a coil of rope which is held in a suitable casing. Mechanism is provided for causing the rope to run slowly out of the casing; so that by fastening the outer end of the rope a person can connect himself with the casing and gradually descend from a burning building.

## Vehicle Accessories and Harness.

MEANS FOR RESTRAINING HORSES.—SAMUEL S. STEWART, Hicksville, N. Y. This invention relates to a device for arresting runaway horses; and it comprises two knobs arranged to be pressed against the nozzle of a horse to throttle it whenever it runs away.

FIFTH-WHEEL.—GEORGE BENJAMIN, Saginaw, Mich. The fifth-wheel comprises a pair of annular members provided with threads loosely screwed together. One of the members is provided with means for connecting it with the front axle of the vehicle; and the other annular member is provided with means for connecting it with the bed of the vehicle. The fifth-wheel is simple, durable, easy to operate, and made up of parts easily interchanged. It is adjustable; and its parts are readily accessible.

## Miscellaneous Inventions.

ENVELOPE OR SACK.—CHARLES A. MEADOWS, Yonkers, N. Y. This new and improved sack is designed for receiving coins, paper money, and other articles, and is arranged to be conveniently opened to permit the discharge of the contents and then to form an advertising medium.

NAPKIN-HOLDER.—ALEXANDER H. BROWNLAY, Onehunga, Auckland, New Zealand. The holder is designed to support a table-napkin over the clothing at the front, and is also adapted to hold a napkin in folded position on the table, thus dispensing with the usual napkin-ring. The holder can be quickly applied to the napkin and to the cloth without danger of cutting the material.

CARD OR PHOTOGRAPH HOLDER.—LUCILLE E. PARKER and JOHN S. GOTT, Lenox, Mass. The clamping device provided by these inventors is capable of engaging a card, photograph, or the like, without perforating or bending the article. The device permits a number of photographs to be strung in series or to be arranged in groups or any other desired order, permits the use of cards of different shapes, thickness and sizes, enables the user to place a stack of photographs or group them

together in one place without having vacant holders left over, and provides for the easy removal of any card or photograph without disturbing other cards. When a number of photographs are to be stored away the improved holder can be folded upon itself, so as to allow the photographs to be arranged face to face.

SMOKE-PIPE REGISTER.—WILLARD S. TUTTLE, Brooklyn, New York city. The invention relates to heating-drums or smoke pipes usually extending from a room through the ceiling and the floor above into an upper room and connecting with the chimney to carry off the smoke and gases, and to radiate heat into the room above. The invention provides a new and improved register for holding a smoke-pipe in position in the floor and arranged for obtaining the desired control of the heated air passing from a room below to the room containing the register.

TRUNK.—FRITZ C. LUNDBECK, San Francisco, Cal. The trunk is arranged with a number of drawers located one above the other to fill the trunk body completely. The construction permits the independent use of the drawers, so that the owner can readily gain access to any of the drawers without disturbing the positions of the other drawers.

DRAWING-TABLE.—HENRY A. DAVIS, Muskegon, Mich. The drawing table comprises a standard on which is a head. The table-top has a plate pivotally connected with the head. A segmental flange is extended outward from one side of the plate; and a locking-bolt is movable through the head and has a hook portion to engage over the flange. The table is simple, cheap, and readily adjustable to any height and incline.

PAPER-BAG HOLDER.—CHARLES F. FRANCISCO, 719 Fifth Street, San Diego, Cal. The invention is an improvement in devices adapted to hold paper bags and the like for use in grocery, confectionery and other stores. The devices are so constructed and arranged as to permit a single bag to be removed from the pack or bundle without disturbing the others.

CHECK-BOX.—THOMAS F. McCULLOUGH, Memphis, Tenn. The box holds and successively delivers consecutively-numbered checks. The device is adapted specifically for use in barber-shops, physicians' offices and hospitals where customers, clients, or patients are served in their turn. By means of the device each person, on entering the waiting room may secure a check; and these checks, running consecutively as they do, will settle all disputes concerning the time of arrival.

PUZZLE.—MARY F. BOUGHNER, Sedalia, Mo. The puzzle includes a board consisting of a box-like casing, and a cardboard false bottom provided with holes arranged in the form of a cross. The holes are marked and are designed to receive pins. The idea is in setting the puzzle to place a pin in each of the sockets except the central one, then by jumping from any of the four sides into the central hole, removing the peg, which is jumped and continuing to jump one peg at a time until only one peg is left on the board, and that in the center.

PAD FOR SUPPORTING PRINTING- FILMS.—BENJAMIN DAY, West Hoboken, N. J. The pad supports a printing-film while it is being inked and presents a semi-rigid and evenly-yielding support for the printing-film, while the latter is under the pressure of the flexible-composition hand-roller that is passed over it during the operation of inking the film. The present pad is an improvement on the plane surface hitherto used in supporting the film during the inking process, and readily accommodates itself to the action of the flexible-composition roller in passing over its printing surface without inking the interstices or intaglio parts surrounding the tints, in relief.

ADJUSTABLE SLEEVE-CHART.—HARRY C. WILSON, Manhattan, New York city. The pattern for sleeves is of such a character that it can be quickly adjusted to the desired measurements. The sleeve pattern is so constructed as to give upon its outside the pattern of the top part of the sleeve and with its inner outline the pattern of the under part of the sleeve.

## Designs.

CASE FOR VENDING-MACHINES.—MILBERT F. PRICE, Iowa City, Iowa. The leading feature of the design is a base with a vertically-extending transparent cylindrical case mounted thereon.

DIE SECTION.—EDWARD H. SMITH, Mt. Vernon, Ohio. A design patent has been granted to H. E. Smith, for a die section for use in the forming of sheet metal articles, which design is characterized by longitudinal curved grooves arranged side by side with an intervening partition, the walls of the grooves being provided with transverse grooves which lead to the outer edges of the curved grooves, the whole aiding in securing the form of article desired.

MERCHANDISE CHUTE FOR VENDING- MACHINES.—MILBERT F. PRICE, Iowa City, Iowa. The chute has a body portion with widened end parts and is to be used in connection with the collar-button-vending machine recently patented by Mr. Price.

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.

## Business and Personal Wants.

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.

MUNN & CO.

Marine Iron Works. Chicago. Catalogue free.

Inquiry No. 1863.—For manufacturers of novelties for the mail order business.

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

Inquiry No. 1864.—For the M. E. Hall hemstitcher or a substitute thereof.

WATER WHEELS. Alcott & Co., Mt. Holly, N. J.

Inquiry No. 1865.—For wholesale manufacturers of door locks.

Stencil Machines.—A. J. Bradley, 101 Beekman St. N.Y.

Inquiry No. 1866.—For dealers in second-hand gasoline engines.

Metal substitute. Crane Bros., Mfrs., Westfield, Mass.

Inquiry No. 1867.—For manufacturers of the wireless telegraphy apparatus.

Gasoline Lamps and Systems. Turner Brass Works, Chicago.

Inquiry No. 1868.—For mechanical drawings on small dynamos and engines.

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

Inquiry No. 1869.—For a machine for tying rats in bunches.

Bids accepted for whole or part of U. S. Patent No. 688,235. Box 2, Kent, N. Y.

Inquiry No. 1870.—For parties to make a screen door fastener.

Glass paper-weights for advertising. Write for prices. Lobmiller Co., Wellsburg, W. Va.

Inquiry No. 1871.—For machines for making light barrels and kegs.

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

Inquiry No. 1872.—For manufacturers of ground paper for making paper maché.

Rigs that Run. Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo.

Inquiry No. 1873.—For manufacturers of silvered glass or mirrors for reflecting telescopes.

FOR SALE.—New patent for boiler No. 684,620. J. Snyder, 234 Wythe Ave., Brooklyn, N. Y.

Inquiry No. 1874.—For manufacturers of collapsible tubes.

For sheet metal stampings and novelties try Standard Stamping Co., Seventh and Hudson, Buffalo, N. Y.

Inquiry No. 1875.—For manufacturers of mailing cases for grease tubes.

If making metal goods and needing special parts, write us. Metal Stamping Co., Niagara Falls, N. Y.

Inquiry No. 1876.—For blocks for cutting out gloves and mittens.

Ten days' trial given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city.

Inquiry No. 1877.—For rubber-tired casters  $\frac{3}{4}$  inches to  $\frac{3}{8}$  inches in diameter.

FOR SALE.—The patent right of a good-selling portable commode. Address Saunders Bros., Westerly, R. I.

Inquiry No. 1878.—For hydraulic jacks affording 12 inches raise and capacity of 500 pounds.

Inventions developed and perfected. Designing and machine work. Garvin Machine Co., 149 Varick, cor. Spring Sts., N. Y.

Inquiry No. 1879.—For rough and finished green and plate glass slabs  $\frac{1}{2}$  inch and 1 inch thick, and about the size of 12 inches by  $\frac{1}{2}$  inches, 18 inches by 22 inches, 40 inches by 22 inches and 76 inches by 22 inches.

Manufacturers of patent articles, dics, stamping tools, light machinery. Quadrige Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 1880.—For manufacturers of hydraulic, electric or steam cranes.

Designers and builders of automatic and special machines of all kinds. Inventions perfected. The W. A. Wilson Machine Company, Rochester, N. Y.

Inquiry No. 1881.—For manufacturers of iron bars, steel-sabed for wood planer knives.

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. 1882.—For knives for rotary and other veneer machines.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$1. Munn & Co., publishers, 361 Broadway, N. Y.

Inquiry No. 1883.—For an apparatus for cooling a cold storage room.

Have completed a series of high-grade Microscope Objectives of entirely new and improved formulas. Do my own work throughout. Am seeking position where can continue or superintend manufacture of the same. Genuine opportunity for enterprising establishment. Dadd, 350 Seventh St., Buffalo, N. Y.

Inquiry No. 1884.—For ice-making plants.

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. 1885.—For machines for cutting out of quick lime pencils which are to be used for calcium lights.

Inquiry No. 1886.—For manufacturers of cabinet handles made of thin brass or nickel.

Inquiry No. 1887.—For manufacturers of machinery for making rugs from old carpets.