RECENTLY PATENTED INVENTIONS.

Pertaining to Apparel.

SEPARABLE FASTENER FOR BOOTS AND SHOES.—J. JEPPERSON, Salt Lake City, Utah. One of the purposes of this invention is to provide a simple, durable and effective means for drawing together the upper of a boot or shoe from the top of the vamp, and holding the upper closed over the front of the foot from the instep to the ankle.

COMB.—W. JACOBS, New Orleans, La. This invention is an improvement in combs, being adapted for embodiment in ladies' dressing and back combs as well as in pocket combs for use by men. The article presents an attractive appearance and combines with a comb, a mirror conveniently arranged for use as desired.

BUCKLE.—A. BIENENZUCHT, New York, N. Y. The buckle is more especially designed for use on men's trousers belts, and arranged with a particularly shaped hook on the tongue, for engagement with the fastening device used for closing the flies of the trousers, to hold the belt against upward movement on the trousers.

Electrical Devices.

ELECTRIC PROCESS FOR MAKING PICTURES.—B. D. AVIS, JR., Wallace, W. Va. In the present patent the invention has reference to picture making, and the more particular purpose is the provision of a method and means for developing by electrolytic action a sensitive plate or analogous member which has been previously affected by the action of light.

VISUAL-SIGNAL APPARATUS.—R. EINBIGLER, New York, N. Y. The object here is to provide an apparatus for use in stock exchanges, factories, and mercantile establishments, and arranged for summoning a person to a meeting place by displaying the person's name, number or other indicating character, and also a station or place to which the person is directed for meeting the caller. It relates to apparatus such as shown and described in Letters Patent of the U. S., formerly granted to Mr. Einbigler.

Of Interest to Farmers.

COMBINED FERTILIZER-DISTRIBUTER AND PLANTER.—F. W. DECKER, Brunswick, Ga. This device has the advantage over the ordinary type of planter in that the work in carrying out the operation is materially reduced. To this end a two wheeled machine is provided which is capable of delivering the fertilizer, drilling the ground preparatory to planting the seed, depositing the seed in the drill, and covering the seed after planting.

CORN-PLANTER.—C. W. LANHAM, Hustonville, Ky. This invention includes a special construction of main and auxiliary frames, the auxiliary frame being arranged at the front and pivotally supported. It carries the seed boxes and dropping mechanism. The various novel details characterize the adjusting and controlling means for the auxiliary frame and the parts carried thereby.

Of General Interest.

PAPER DECORATION.—A. SIMONSON, New York, N. Y. The invention pertains to decorations or festoons, and the intention is to provide a collapsible paper festoon formed of a plurality of layers of tissue paper or similar material, so cut and pasted as to be readily expanded for use as a decoration or garland.

INTERLOCKING BUILDING-BLOCK.—B. BENAS, New York, N. Y. The purpose of the inventor is to provide a new and improved interlocking building-block, for forming walls, partitions, floors and like structures, and arranged to interlock endwise and sidewise with adjacent blocks to form an exceedingly strong and durable structure.

SUBMARINE MINE.—A. P. BROOMELL, York, Pa. In the present patent the invention is an improvement in submarine mines or torpedoes and it has for an object the provision of a novel method of placing the torpedo at the desired depth below the surface of the water and a novel construction whereby the mine is so placed.

SIGN.—R. C. LAFFERTY, Clarksburg, W. Va. In this case the improvement is in signs, and while the invention has a general application and is capable of general use it is especially designed for use as a memorial sign by fraternal and other societies by which to display the names of the deceased members, and as a directory for office buildings.

DEVICE FOR LOWERING LIFE-BOATS.—C. J. CHRISTENSEN, New York, N. Y. This appliance is for use in controlling the lowering of life-boats from the davits of ships or vessels, etc., and the invention has for its purpose to facilitate the launching of the boat and avoid the wearing on the ropes incident to passing the ropes about cleats and permitting them to slip thereon under the weight of the life-boat, as is the usual practice.

APPARATUS FOR VIEWING STEREOSCOPIC OR OTHER PICTURES.—J. RICHARD, 25 Rue Mélingue, Paris, France. The apparatus comprises a horizontally movable carriage carrying a holder or magazine whereby each view in succession is brought into the plane of an upright frame which is capable of being moved vertically to bring one view at a time opposite the eye pieces of the instrument and thereafter return the view to the holder.

EASEL.—E. OLDENBUSCH, New York, N. Y. The invention refers more particularly to that type of easel adapted for use in supporting pictures, mirrors or the like, or for use as the back of small picture frames. One object is to simplify the construction of the hinge or connection between the back plate and the brace, whereby lost motion between the parts will be eliminated, yet they may be moved relatively to each other with minimum friction.

PROCESS OF RECOVERING TIN FROM WASTE.—A. NODON, 12 Rue de Moulis, Bordeaux, France. The object in this case is to provide an improved process for the recovery of tin from all kinds of tin lead waste, and more particularly from waste tinned plate, waste lead tin alloy and plated goods resulting from the manufacture of metal "tin capsules," "tin foil" and "tin tubes."

MOLD.—J. R. KAY, New York, N. Y. An object here is to furnish a mold for forming monolithic bodies of concrete, cement, and the like, which comprises removable and separable parts which can be easily mounted in position and taken down, and which is fashioned from standard structural members of metal or other material.

Hardware.

SAFETY-RAZOR-BLADE HOLDER.—D. CONEKIN, St. Petersburg, Fla. The invention is especially designed for use in stropping the blade and is so formed as to place the edge to be sharpened at the proper angle for the stropping operation. The holder is also made in one piece from a blank and presents a simple economically produced and effective holder for the purpose.

FARRIER'S IMPLEMENTS.—W. RAWALT, Blandinsville, Ill. This invention relates to an improvement in farrier's implements, by means of which a horse's hoof may be quickly and properly trimmed. The object is to provide a tool with a chisel and a movable hammer head, whereby the chisel may be more readily operated to trim the hoof.

VIBRATORY DISINTEGRATOR FOR GAS-PRODUCERS.—J. J. ASTOR, New York, N. Y. This invention relates to certain improvements in the manufacture of producer gas, and the object is to render practical the manufacture of producer gas from peat. The main essential feature involves the disintegrating action on the peat caused by the expansion of the gas occluded in the peat or held within its pores and interstices.

Heating and Lighting.

HEATING APPARATUS.—E. B. SMITH, Scotland, Ontario, Canada. The inventor's purpose is to provide in combination with a boiler or casing, a combustion chamber in connection with the exhaust of an internal combustion engine, for complete burning of the gases, and arranged near the bottom of the casing, an exhaust pipe leading from the chamber, having radiating means, as a coil, located adjacent to the chamber and means for introducing water within the casing surrounding the chamber, and radiating means.

LIGHT-CABINET.—C. F. MCCLURE and W. I. SHUMAN, Sullivan, Ill. The purpose of this invention is to produce a device which, upon the release of a trigger, will ignite a piece of absorbent cotton or similar material, and permit it to move by gravity along a wire or other suitable guiding means to a place where the illumination or combustion is desired.

LAMP-CHIMNEY.—G. H. LEE, Omaha, Neb. This invention relates particularly to means for centering the chimney of a lamp when it is set in position. An object is to provide a chimney having means which will facilitate its being guided to its proper position on the burner without necessitating the exercise of great care.

Household Utilities.

SELF-HEATING FLAT-IRONS.—C. S. KONIGSBERG and W. ALLEN, Oakland, Cal. This invention relates to irons adapted to generate the vapor or gas by which they are heated. One object is to produce an iron adapted to use denatured alcohol and the like for the heating agent, and having a supply tank formed in the lower portion of the handle of the iron.

QUILTING-FRAME.—S. S. RUSSELL, Columbia, S. C. This invention is an improvement in quilting-frames, and particularly in folding quilting-frames. Means provide for adjusting the frame at any angle; provide for securing the extension bars in any adjustment desired and permit them to slide in adjusting relatively to the main bars; and provide for operating to draw the uprights toward each other to securely brace the frame when in use, and also to separate the frame for convenience in storage and shipment.

Machines and Mechanical Devices.

PLUNGER MECHANISM FOR OIL-WELLS.—L. R. MCCARTHY and J. C. VROMAN, Spartansburg, Pa. This improvement pertains to the construction and operation of oil wells and the like, and concerns itself especially with the construction and operation of the plunger mechanism. The purpose is to provide a construction for controlling the pawls which lock the collar in the pipe.

SAW-CARRIAGE.—P. J. MURPHY, Alexandria, Va. This device, while permitting the easy manipulation of the saw-carriage, and the adjustment of the stick of wood to the proper length, prevents the saw from coming in contact with the operator's hand. The guard may be raised or lowered to any convenient height and retained in position to permit adjustment of the wood in place for sawing.

ETCHING-MACHINE.—H. SCHEDIÆR, New York, N. Y. This invention has reference to etching-machines of the type in which a plate or other article to be etched is exposed to the action of free acid in a trough. The invention causes the acid to produce a maximum effect and yet prevents the actual contact of the paddles with the surface to be etched.

GRIPPER FOR PRINTING-PRESSES.—M. W. ALGER and C. L. JACOBSON, Benton Harbor, Mich. The objects here are to provide adjustable fingers or grippers having horizontal adjustment; to provide fingers to hold the sheet being printed at the top and bottom of the sheet; to provide grippers to grasp at intervals the sheet to be printed; and to provide a mechanism simple and economical in construction and efficient in operation.

FILLING DEVICE.—J. PAPISH, New York, N. Y. The aim is to provide in this instance a device by means of which powders, crystals or other granular material can be expeditiously and easily introduced into small-necked bottles and the like, which requires little effort to operate it, and which fills the receptacles without spilling any of the material which is being introduced into the receptacle.

Prime Movers and Their Accessories.

SPARK-PLUG FOR INTERNAL-COMBUSTION ENGINES.—M. EYQUEM, 191 Boulevard Pereire, Paris, France. The invention relates to an improvement in a spark-plug with a tubular electrode and a decompression cock for the purpose of producing the cleaning of the plug not by means of the burned gases, but by fresh gases, that is to say, by air containing particles of gasolene. It is essentially characterized by the application to the plug of a device to cut off the ignition when the above cock of the spark-plug is opened.

Railways and Their Accessories.

CAR-DOOR FOR GRAIN, COAL, ETC.—R. R. REAVELEY, Fort William, Ontario, Canada. The construction embodies two doors hinged at the side edges to swing outwardly and forming, when closed, a substantially triangular opening, with the point of the opening at the bottom, a third door for closing the opening, hinged at the top to swing inwardly, and with the two doors removable from their hinges to swing to the outside of the car below the floor or carried within the car to positions removed from the door opening, and the third door removable to the top of the car.

CAR-FENDER.—T. J. KILLEEN, Portland, Ore. The purpose of this inventor is to provide novel details of construction for a fender, particularly well adapted for use on a street car, and that afford a strong, automatically-operating car-fender, which, when in position on a car, will positively pick up and support a person struck by the car without doing serious injury thereto.

ELECTROMAGNETIC TRACTION SYSTEM.—G. L. STANBRO, and A. D. WAGNER, Norfolk, Va. The object of the improvement is to provide a surface contact railway system which will have all the advantages of such a system and adapted for street service in cities as well as suburban traffic. Heretofore such systems have not been successful, being only applicable to short lengths of track in factory yards and the like.

SEAL-LOCK.—E. L. PITTS, Yuma, Ariz. Ter. In this instance the improvement is in seal record devices. The object of the invention is to provide a device for use on railroad freight cars, registered mail sacks, etc., whereby a continuous and permanent record of the times the car is opened and closed may be obtained.

Pertaining to Recreation.

FISH-HOOK.—W. E. KOCH, Whitehall, N. Y. The invention relates to hooks of the gang type, such as shown and described in Letters Patent of the U. S., formerly granted to Mr. Koch. The aim is to provide a hook arranged to dispense with the lead weight on the main hook, and to counterbalance the hook with a view to securely holding the live bait floating in a natural position, and to keep the main hook and gang hooks in proper relation to each other.

Pertaining to Vehicles.

LOG-WAGON.—W. M. NORRIS, Edwards, Miss. Log-wagons require to have great strength and durability, along with maximum lightness and easy draft, besides being adapted to turn in a comparatively small circle. Eight-wheel wagons are preferable, but they have certain objections or defects which this invention removes by improved construction, arrangement and combination of the parts.

WAGON-DUMP.—E. EWEL, Grand Island, and S. L. CLEMENT, North Loup, Neb. This improvement is particularly adapted for side dump wagons, and means are provided whereby the main chute will receive and support the wagon body when the latter is in dumping position, and means for holding the chute at such time in discharging position and for releasing it from such position after the load is dumped.

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.

HINTS TO CORRESPONDENTS.

The full name and address must accompany all letters, or no attention will be paid thereto. This is solely for our information. *All* queries are answered by mail, and a *few* of the selected answers are afterward published in the paper. We cannot undertake to furnish information on matters of personal interest, without reasonable compensation. To answer questions which are not of general interest usually costs us from $2.00 to $3.00 each upward, and this sum should invariably be remitted in such cases. When there are questions involving building or other construction, or when calculations must be made, an estimate of the cost will be furnished upon request. We cannot give answers to examination papers, or decide wagers, nor can we undertake to solve mathematical problems of any description whatsoever. Do not use postal cards.

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We do not make chemical analyses; but we are always pleased to give the names of minerals which are submitted to us, when it is possible for us to do so. The minerals should be sent marked distinctly with the name of the sender, and should be sent fully prepaid.

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Any books on any scientific or technical subject can be furnished. We solicit requests for quotations. The SCIENTIFIC AMERICAN SUPPLEMENTS referred to are mailed for ten cents each. Book and SUPPLEMENT catalogues will be sent free on request. A careful reading of these "Hints to Correspondents" will prevent any misconception as to the uses and will prevent abuses of this column.

(12148) R. H. A. says: I tried the experiment of renewing old dry cells, and proved to be a failure, which was on page 300 of the October 23rd issue. The chemical did not want to absorb, and took two days before I was able to get the right quantity into the battery, and when sealed up tested about 7 amperes. Will you please tell me how I may overcome this trouble and just how to do it? A. We have nothing better to offer for the renewing of dry cells than you already have tried. It is not worth the while to renew these cells. The liquid is very slowly absorbed, and the cell is already full of crystals from the last charge, which are the result of the action and which will not dissolve in the liquid which you put into the cell. For these reasons one does not get much current from a renewed dry cell. We publish all such processes, for the reason that many amateurs like to experiment with any such process, and they get much pleasure out of the work. Probably your result was as good as could be expected.

(12149) F. M. R. says: Is it ever possible that a stone will never reach the bottom of water in mid-ocean which may be, let us say, 25 miles deep? That is, is water ever so compressed that a stone will displace a volume of water which at this great pressure is equal to the weight of that stone? To state the same question in a different way: Would a submarine diver require heavier shoes to go down 100 feet than he would to go down 20 feet? Allowing, of course, for the added buoyancy of the longer air pipe. A. Water is one of the most incompressible of materials, far more so than the hardest steel. It follows from this that a substance which is denser than water at the surface of the ocean will never become lighter than water as it sinks, or that water will never become as dense as this substance at any depth, since the substance will be compressed more by sinking in the water than the water has been at any level under the water. You will find a full discussion of this question in the following numbers of the SCIENTIFIC AMERICAN: Vol. 96, Nos. 9, 13, and 19, in Answers to Queries. We will send the three papers for 10 cents each.

(12150) E. D. says: Would you please tell me what weight of wire should be used on the fields of the simple electric motor described in "Experimental Science," Vol. I, page 497, for shunt winding, using single cotton-covered wire? Please state also the length of wire on each coil of the fields. A. We have no additional data for the simple electric motor beyond what is given in "Experimental Science," or in SUPPLEMENT No. 641, in which the plans for this motor were originally published. If you connect the motor in shunt, it will doubtless run with battery designed for it and described in SUPPLEMENT No. 792. We send all SUPPLEMENTS at 10 cents each. With this battery the current is graduated by varying the immersion of the plates, and thus economy of action is secured.

(12151) E. H. H. asks how a blue print can be changed to black. A. A blue-print can be changed to a black color by placing the print into the following solution: Borax, ¼ ounce, water 6 ounces. When blackened, wash the print, and place it into the following solution: Gallic acid ¼ ounce, tannic acid ¼ ounce, water 8 ounces. As soon as the color is attained, wash the print and dry. A second blue-print can be made from this, of course, reversed as to position of lines or figures, but by placing the back of the changed blue-print against the surface of sensitized blue-print paper a duplicate with blue lines can be obtained.