

or bar projects from the support and is connected with the plunger. A spring exerts pressure on the arm or bar. The plunger properly actuates its part of the diaphragm to draw off the fibers through the openings in a screen into a suction-box, the material flowing by its gravity into a receiving-box and over a gate. The provision of a single outlet for two or more suction chambers having a number of screen-plates brings the pulp into a separate compartment in the receiving-box, so that the operator has full control of the pulp, regardless of the number of suction-chambers in the machine.

ADJUSTABLE GUN-STOCK.—JOSEPH N. ZOLLER, St. Matthews, Ky. This attachment for gun-stocks enables one gun to be used for various purposes. An adjusting head is pivoted in the stock and attached to the grip. The head is provided with peripheral teeth, between the spaces of which a bolt held to slide in the stock can be projected.

WASH-TUB ATTACHMENT.—OTTO SCHWEITZER, Paterson, N. J. The inventor has provided a wash-tub with a movable partition enabling the wash-tub to be used as a bathtub. On the upper edge of the partition, levers are mounted. A plate is pivoted on one lever and has sliding connections with the other lever. A screw is carried on the partitions and works with the inner ends of the levers.

STOOL.—JOHN M. BURDUM, Batavia, Ill. This stool is to be used in boot and shoe stores and comprises a seat for the salesman and a rest for the foot of the person on whom a shoe is to be fitted.

CRUCIBLE.—PORTER W. SHIMER, Easton, Pa. The crucible is to be used for fusing or highly heating metal or other material in an atmosphere of any gas. The crucible is provided with a hollow stopper seated on a rubber gasket and having means for cooling the stopper and crucible and circulating air.

WEATHER-STRIP.—WILLIAM L. SMITH, HOMER E. ASHCRAFT and WILLIAM O. JAMISON, Seymour, Iowa. This weather-strip can be attached to any door. When the door is closed a member of the weather-strip is firmly in engagement with a threshold-strip. As the door is opened, a protective member of the weather-strip is automatically carried up to engagement with the body of the weather-strip; as the door is closed the protective member of the weather-strip is automatically brought into engagement with the threshold-strip and lodged in protective position.

GAME.—JOHN G. FLOYD, Mastic, N. Y. The apparatus employed in this game comprises a course, defined at its ends by goals. In this course a ball is to be placed. Players arranged in opposing teams are to have for their object to protect their respective goals and to prevent their opponents' forcing a ball past the goal. The apparatus can be quickly set up in a room or on a lawn.

SPACE-BAR FOR LINOTYPE MACHINES.—DAVID A. HENSLEY, Vicksburg, Miss. The improved space-bar consists essentially of two parts or wedges, the upper one of which may be termed a stationary member inasmuch as it is held against upward movement in the ordinary manner, while the lower part may be termed the movable member, as it is driven by the usual or any improved mechanism for the purpose of expanding the space-bar. The operation of the improved space-bar is the same as that of ordinary space-bars. Superior results are obtained, however, owing particularly to the fact that a shield is employed of substantially the same outline as the movable member, which shield is of uniform thickness instead of being wedge-shaped as in other constructions. It is impossible for either the movable wedge or the shield to spring away from the stationary wedge or to move transversely or edgewise.

CALENDAR.—ARTHUR A. SPARKS, San Francisco, Cal. The calendar relates to that class in which a device is provided for indicating at a glance the day of the week and the month. Each one of the date-spaces has a holder or fastening device. An indicator can be secured to any of the fastening devices. To prevent accidental loss of the indicator, an elastic string or cord is employed.

STOVE.—SAMUEL W. JACKSON, Selma, Cal. From the top plate of the stove a combustion chamber, and an inner or supplementary combustion chamber, are hung. A stand-pipe extends up from the bottom wall of the outer combustion chamber into the inner combustion chamber. Fuel is economized; and the draft is controlled in a simple, novel manner.

Designs.

GARMENT-HOOK.—WILLIAM H. GOSS, Stonington, Me. The hook comprises two upwardly-curved members and an upwardly and downwardly curved member.

DISPLAY SAMPLE-TUBE.—CHARLES F. PRICE, Richmond Hill, Queens, N. Y. The leading feature of the design consists of a glass tube closed at one end, and decorated at the other end with a cap which extends for some distance along the body.

PLAITING-BLADE.—DAVID KISCH, Manhattan, N. Y. The blade comprises a number of transversely disposed parallel tongues beveled on one face and convex.

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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Water Wheels. Alcott & Co., Mt. Holly, N. J.

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Inquiry No. 262.—For German silver wire.

Inquiry No. 263.—For manufacturers of dry batteries.

Inquiry No. 264.—For manufacturers of tinfoil.

Inquiry No. 265.—For electric supply houses.

Inquiry No. 266.—For manufacturers of machinery for cutting and shaping pumice stone in regular squares and ovals.

Inquiry No. 267.—For the manufacturer of a scale patented by Bachler & Waterman, of Philadelphia; the scale working without weights.

Inquiry No. 268.—For manufacturers of washing machines, dish washers, boot-polishing machines, etc.

Inquiry No. 269.—For manufacturers of small billiard and pool tables with accessories for same, such as balls, cushions, cues, etc.

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Inquiry No. 271.—For manufacturers of double crank axle forgings from 1 1/2 to 3 inches throw or 3 to 5 inches stroke.

Inquiry No. 272.—For manufacturers of electric welding machinery.

Inquiry No. 273.—For manufacturers of non-corrosive metal in sheets of No. 14 and No. 16 gages, capable of being bent at right angles and stiff as cold rolled steel; price not to exceed half the cost of brass or copper.

Inquiry No. 274.—For manufacturers of small, rotary engines of moderate horse power.

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Inquiry No. 277.—For parties to make a model hot air radiator.

Inquiry No. 278.—For manufacturers of small spring meters for running fans.

Inquiry No. 279.—For manufacturers of compressed air riveting tools for bridge work.

Inquiry No. 280.—For manufacturer of boiler water-tubes with a circulating pipe inside of copper and brass for model boilers and steel for larger ones.

Inquiry No. 281.—For manufacturers of tin can machinery for canning purposes.

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Inquiry No. 291.—For manufacturers of light perforating machines, capable of perforating thin sheet copper and aluminum with about 100 holes to the square inch.

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Inquiry No. 296.—For manufacturers of a gas water-heating apparatus to be used in a gymnasium bathroom.

Inquiry No. 297.—For parties to make a 3-piece metal novelty.

Inquiry No. 298.—For manufacturers of creamery supplies, condensing and sterilizing apparatus.

Notes & 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. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(8143) J. W. B. writes: 1. I desire to make a helix to magnetize a 3/8-inch bar of octagon steel. How long and how many turns of wire, and of what size wire shall I make it? I get current from a dynamo. A. The statement that the current is from a dynamo gives no clue to its voltage, which must be known before a coil can be constructed to magnetize a magnet. However, proceed as follows: Wind a coil of No. 12 cotton-covered wire of a size that the bar will slip easily through the coil. Any insulated wire will do as well, if magnet wire is not at hand. Make perhaps 100 turns, number not important. Connect this in series with a lamp. Turn on the current, and pass the bar back and forth through the coil. Continue this till by experiment the bar is not made any stronger by further treatment. If the lamp is an arc lamp, the work will soon be done; if it is an incandescent lamp, longer will be required. The flow of the amperes around the bar magnetizes it. The process is very simple. 2. Can I make good bar and U magnets, using steel ends and wrought-iron center? A. Yes; the iron neither helps nor hinders the magnetism.

NEW BOOKS, ETC.

THE SCIENTIFIC AMERICAN CYCLOPEDIA OF RECIPES, NOTES AND QUERIES. Edited by Albert A. Hopkins. Sixteenth Revised Edition. New York: Munn & Company, 1901. Large 8vo. Pp. 790. Cloth, \$5; sheep, \$6. Appendix sold separately for \$1. The first edition of this book appeared in 1891, and within the past decade it has gone through sixteen editions (including the present)—a fact which, alone, is sufficient to attest the great value of the work as a book of reference, solving the difficulties of all classes, from the chemist and technologist,

the manufacturer and artisan, down to the housewife and the cook in the kitchen. It is by far the most compendious work of the sort ever attempted, comprising upward of 15,000 recipes and formulæ, and usually embracing minute directions for carrying out the processes. The titles are arranged alphabetically, thus facilitating consultation. The book is well and clearly printed on good paper and is strongly and substantially bound.—National Druggist.

INDEX OF INVENTIONS

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[See note at end of list about copies of these patents.]

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