

hydraulic press, and both are a division of a copending application previously filed. The object of the present improvement is the same as the one above, and both relate to hydraulic presses for forging and other purposes—such, for example, as bending and testing armor-plates, flanging, and the like—in which the power for lifting the press-head is supplied from an accumulator or other source independent of that from which the power is derived for causing the head to perform its work.

WATER-MOTOR.—M. H. WHITE, Everett, Wash. This apparatus comprises a casing open at each end and having a flat base on which it may rest in upright position on the bed of a stream, so that the water flows through the casing. Placed longitudinally in the casing is a peculiarly-constructed screw, the plates of which are acted on by the current, whereby a rotary movement is imparted, and said movement is utilized for operating the pumps attached to the casing and by which the water is elevated. It is particularly useful for elevating water used for irrigating purposes.

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.



WANTS 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 This is for our information and not for publication.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.

(9432) W. K. F. says. Will you kindly answer me in the Notes and Queries of the SCIENTIFIC AMERICAN, the following questions: (a) Which would be better to measure the capacity of a 5x7 Crowfoot battery? (b) What should it register? (c) How can any deficiency to register the proper amount be made up? A. A voltmeter will measure the e.m.f., and an ammeter will give you the current in a Crowfoot cell. The voltage is usually about 1.07 volts in a cell freshly set up, and in an old cell may be less than a volt. The amperes depend upon the external resistance, the distance between the zinc and the copper, the strength of the solution, and other things. If a cell is run down, the clear liquid at the top should be siphoned off, and water should be added to bring the liquid up over the zinc.

(9433) W. C. asks: Being a constant reader of your valuable paper, I take the liberty of asking the following questions: Suppose a train traveling at the rate of a mile per minute carries a gun which sends a ball with the same velocity as the train. What would be the result? In other words, would the ball reach a given point in advance of the train? What would be the result if the gun were discharged in the opposite direction? A. As a constant reader of the SCIENTIFIC AMERICAN you should have seen the problem of the gun fired on a moving train discussed several times in recent years. You will find it in Queries 8823, 8862, and 9270. The principle is simple. The gun will do the same to the ball as if the train did not exist. The train will do the same to the ball as if the gun did not exist. Newton's law is "A given force will produce the same effect, whether it acts alone or with other forces." If the ball were discharged in the same direction as that of the train, the ball would go forward with two motions, that of the train and that of the gun. It would thus go ahead of the train a mile a minute. If shot in the opposite direction, the train would carry the ball forward and the gun carry it backward at the same time, a mile a minute. The ball would therefore drop directly from the mouth of the gun to the ground. It is the same with throwing a package from a moving train. Throw it backward if you want it to drop to the ground.

(9434) R. R. asks: Please answer the following question in Notes and Queries column: Can the coils and instruments necessary to produce the Hertzian waves for a wireless telegraph transmitter, to be used with a receiver like that mentioned on page 347 of SCIENTIFIC AMERICAN of April 30, be made by an amateur; if so, where could I get the necessary information? A. Any person with some mechanical ability and experience may confidently undertake to make the wireless telegraph apparatus described in our issue of September 14, 1901. With some knowledge of electrical work, there is no reason to apprehend failure to make it do its work well. The necessary information is given in the paper referred to above. Special instructions for making an induction coil are given in Norrie's "Induction Coils," price \$1. It will be better to buy a relay and sounder than to try to make one.

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. 5777.—For a manufacturer to make in quantities a very light metal article of tempered or spring steel.

ACTES.—Duryea Power Co., Reading, Pa.

Inquiry No. 5778.—For manufacturers of cheap lockets, etc.

For logging engines. J. S. Mundy, Newark, N. J.

Inquiry No. 5779.—For the address of the United States Cotton Duck Corporation, of Baltimore.

"C. S." Metal Polish, Indianapolis. Samples free.

Inquiry No. 5780.—For manufacturers of cotton duck or sail-cloth.

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

Inquiry No. 5781.—For manufacturers of tinning machines, stamps and supplies.

METAL PATTERNS. For small castings. Fred Smith, Springfield, Conn.

Inquiry No. 5782.—For dealers in novelties, rubber gas balloons, canes, toy whips, etc.

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

Inquiry No. 5783.—For manufacturers of porcelain drawers.

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

Inquiry No. 5784.—For parties to manufacture dental forceps of a special pattern.

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

Inquiry No. 5785.—For manufacturers of machinery by which garbage and street sweepings are converted into fuel.

WANTED.—Exclusive sale improved automobile specialties. Specialties, Box 775, New York.

Inquiry No. 5786.—For manufacturers of dies of different shapes for a press for making ornaments and flowers of sheet metal.

FOR SALE.—The Benson metal window screen frame. For cash, royalty or territorial rights. S. W. Benson, 1015 14th Street, Denver, Colo.

Inquiry No. 5787.—For manufacturers of concrete mixing machines.

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

Inquiry No. 5788.—For makers of electric motors.

Any metal, sheet, band, rod, bar, wire; cut, bent, crimped, punched, stamped, shaped, embossed, lettered. Dies made. Metal Stamping Co., Niagara Falls, N. Y.

Inquiry No. 5789.—For makers of novelties and domestic appliances.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 13 South Canal Street, Chicago.

Inquiry No. 5790.—For makers of windmills, tanks, etc., for country residences.

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

Inquiry No. 5791.—For machinery for making ordinary black powder, also for parties who build and plan powder plants.

Inquiry No. 5792.—For makers of sodium and potassium silicates.

Inquiry No. 5793.—For machines for turning insulator pins, etc., for telegraph and telephone purposes.

Inquiry No. 5794.—For a second-hand compass and level.

Inquiry No. 5795.—For makers of the vacuum disk or suction shoe for walking upside down on the ceiling.

Inquiry No. 5796.—For makers of rotary fans driven by clockwork.

Inquiry No. 5797.—For a convertible steam road roller, traction and fixed motor engines.

Inquiry No. 5798.—For a dump car for conveying and automatically spreading material.

Inquiry No. 5799.—For complete portable rock crushing and elevating outfits.

Inquiry No. 5800.—For portable storage bins.

Inquiry No. 5801.—For a dirt-elevating machine with a plow and elevator for grading roads.

Inquiry No. 5802.—For a reversible steel road machine for cutting down banks and widening roads.

Inquiry No. 5803.—For the manufacturers of the Thomson-Houston electric rock drill.

Table of scientific inquiries and their corresponding page numbers, including items like 'Air or gas compressor', 'Dyeing, etc.', 'Faucet, self-closing', 'Feeder, automatically regulated steam boiler', etc.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending July 12, 1904

AND EACH BEARING THAT DATE

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

Table listing specific inventions such as 'Addressing machine, W. Murphy', 'Addressing machine, J. S. Duncan', 'Agitator, rotary, J. Smith', etc.

Table listing specific inventions such as 'Dyeing, etc., apparatus for, J. Schmitt', 'Dyeing, etc., apparatus for, R. Louch', 'Electric battery, P. J. Kamperdyk', etc.