

RECENTLY PATENTED INVENTIONS.

Engineering.

PROPULSION OF VESSELS.—John L. Helms, New York City. According to this improvement side paddles of finlike construction are located near the stern and near the stem of the vessel at each side, the paddles having a hinged connection with a sliding support, and each set being adapted to move to and from the other set, the forward set making a stroke against the water while the rear set moves forward, folded close against the sides of the vessel, and vice versa, the blades thus operating alternately to propel the vessel. Means are also provided for reversing the action of the paddles, to move the vessel backward, and the propelling mechanisms are equally balanced at each side of the vessel's hull, it being practicable to turn the vessel on its center.

Railway Appliances.

REFRIGERATOR CAR.—Charles S. Hardy, San Diego, Cal. This invention is for an improvement in cars provided with folding ice receptacles, and covers better means of packing the folding parts of the ice receptacle and improved spatter devices for the drain flue. The ice receptacle is composed of hinged sections, and is made water and air tight at all points except where openings are left for inlet and discharge, and the partition at the lower end forming the drain flue has rubber or other flexible material at its upper or inlet end, so arranged that the floor of the ice receptacle will normally seal itself to the drain flue by its own weight.

Electrical.

VOLTMETER.—Paul Brandt, Berlin, Germany. In order to avoid errors of voltmeters due to the remanent magnetism of the iron core actuated by the solenoid, this inventor substitutes for the solid iron core hitherto used a sleeve of soft iron containing a bundle or cluster of wires, causing a mutual induction between the sleeve and the cluster of wires whereby the remanent magnetism of the sleeve is completely neutralized. The soft iron sleeve, containing its bundle or cluster of wires, is actuated in the usual manner, being drawn into the spool or bobbin of the solenoid and suitably connected to an index or pointer.

Miscellaneous.

NASAL EXPANDER.—George B. Farmer, Perth, Canada. A spring yoke carrying on its free ends suction cups is, according to this invention, adapted to be readily inserted and applied to the nose, to properly expand the nasal wings and improve the passages for air inhaled to insure better breathing. Each of the cups has a hard center and annular flexible rim adapted to gently but positively engage the inner surfaces of the nasal wings.

MOVABLE TOY DEVICE.—Axel L. Sjoberg, Union Hill, N. J. To impart a rapid or slow movement to toys or similar articles, this invention provides a device which may be contained in the article or in a casing forming a portion of the article. A counter-balanced winding shaft is journaled in a frame and a spring tension device is secured at one end to one side of the movable object, a guide at the opposite side of the movable object engaging a cord having one end connected with the winding shaft and the other end connected with the spring tension device. The winding of the device is accomplished by the motion of the article.

BREAST FORM.—George M. McCleary, McKeesport, Pa. This is a pneumatic form with convex outer faces and provided with non-elastic shaping bands holding the form close to the body. Shoulder straps and a girth are also provided, the latter having elastic sections, and being united at the back by a lacing and at the front by a clasp.

Designs.

THRILL COUPLING PLATE.—Charles T. Redfield, Glen Haven, N. Y. This plate has a main portion slightly bowed at the middle, and at one end a wing at an angle and terminating in a notched flange, while at the opposite end is a shorter wing, also notched.

FLOWER HOLDER.—Stephen M. Griswold, Brooklyn, N. Y. This holder consists of twin loops, side by side, made of one piece of metal, a pin being pendant from one of the loops.

INCANDESCENT LAMP BULB.—Lawrence H. Dolan, Alexandria, Ind. This is a six-sided pear-shaped bulb, whose surface is covered with diamond-shaped facets.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co. for 10 cents each. Please send name of the patentee, title of invention, and date of this paper.

NEW BOOKS AND PUBLICATIONS.

A MANUAL OF PHOTO ENGRAVING, CONTAINING PRACTICAL INSTRUCTIONS FOR PRODUCING PHOTO ENGRAVED PLATES IN RELIEF AND HALF TONE. By H. Jenkins. Chicago, Ill.: The Inland Printer. Pp. 129. Price \$2.

A very practical book, beautifully printed, containing many illustrations of various styles of half tone work, the frontispiece being especially rich, representing the perfection of tricolor work in a picture of a goldfinch bird, the red breast, blue head, and intermediate colors coming out most brilliantly. Preceding this page are pictures of the bird in yellow, a pink red, blue and a darker red, which, when superimposed over each other, give the remarkable multicolored picture. There are directions for preparing the plates and their treatment, illustrations of the apparatus used and examples of different kinds of screen plates and diaphragms shown. It is a book easily understood, being based apparently on the results of actual experience, which is systematically classified and explained. It should prove a valuable aid to those desiring to be guided rightly in learning the elementary and practical points of the half tone process.

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

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Notes & Queries

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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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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.

(7122) J. C. H. says: Supposing a gas jet in a dwelling house is left open and gas escapes at the rate of five feet an hour. Would it be reduced by igniting the same? That is, would it lessen the pressure or speed of the gas, in passing the cock at the jet? If so, how much? A. The tendency of lighting would be to increase the flow by expanding by heat the aperture in the tip.

(7123) J. W. asks: Will you please inform me in the SCIENTIFIC AMERICAN how camphorated oil is made? Also, what book can you recommend on pharmaceutical preparations? A. Camphorated oil is prepared by dissolving 1 ounce avoirdupois of camphor in 42 ounces avoirdupois of cotton seed oil, or dissolve 1 ounce avoirdupois of camphor in 4 fluid ounces of olive oil. We can supply the following books on pharmaceutical preparations: "The Era Formulary," 5,000 formulas, price \$5. Beasley's "Pocket Formulary," price \$2.25. Griffith's "Universal Formulary," price \$5.50. "The Art of Compounding. A Reference Book for Pharmacists at the Prescription Counter," by Scoville, price \$3 post paid.

(7124) C. H. W. asks: In a permanent magnet, there being a positive and a negative pole, will the negative pole repel the same object that the positive pole will attract? If so, is the field of repulsion of the negative pole of the same size and of the same inverse intensity as that of the positive pole? A. We answer the first query affirmatively. But the poles may vary considerably as regards the field of force in their vicinity. In other words, the polarization may be unsymmetrical.

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