

oughly; dip them in a strong aqueous solution of mercurous nitrate, then, for a few seconds, in the hot gold bath, rinse in clear water, dry in warm sawdust, and burnish if desired. Silvering by dipping: To a saturated aqueous solution of bisulphite of soda in pure water add solution of nitrate of silver, with constant stirring, until the precipitate at first formed ceases to redissolve. Use the bath cold in a porcelain enameled iron vessel. Clean and dip as in the gold bath. We know of no satisfactory method of coating with nickel without a battery.

(21) R. M. asks for a receipt for making a gold and silver wash suitable for small brass articles. A. See answer to E. E. S., above.

(22) I. A. B. wants to know the cheapest and best deodorizer or deodorizing process for kerosene or petroleum. A. Hydrocarbon derivatives of petroleum—such as kerosene—possess a characteristic odor which cannot be totally removed without altering the identity of the substance. The unpleasant odor imparted to it by impurities which it commonly contains may be removed by the following treatment: Agitate it briskly with three per cent of oil of vitriol, wash out the acid with water; digest, with frequent agitation, for several hours with 5 per cent of clean, fresh chloride of lime. Settle and wash out with water. Remove moisture by agitating with powdered chloride of calcium. Settle and decant.

(23) L. D. M. asks whether there is any law against turning out or filing off one side of United States gold and silver coins to make bangles of them, or against melting coins for the sake of the gold or silver. A. Section 5459 Revised Statutes, reads: "Every person who fraudulently, by any art, way, or means, defaces, mutilates, impairs, diminishes, falsifies, scales, or lightens the gold or silver coins which have been or which may hereafter be coined at the mints of the United States, or any foreign gold or silver coins which are by law made current or are in actual use and circulation as money within the United States, shall be imprisoned not more than two years and fined not more than two thousand dollars." We think this law prohibits the defacement of coins as in making bangles. We do not know of any provision that prohibits the melting of coins for the sake of the gold or silver.

**MINERALS, ETC.**—Specimens have been received from the following correspondents, and examined, with the results stated:

Dr. G. H. P.—It is quartz rock.—J. T. C. and O. L.—A fair quality of fire clay. See column of Business and Personal for the addresses of dealers.—J. T. S.—A poor quality of peat.—O. A. P. T.—The ore consists chiefly of carbonate and sulphide of copper—it carries a small quantity of silver.—F. G. D.—A semi-decomposed feldspathic rock, with a little quartz and talc.—D. Mc. G.—Coal shale—of no commercial value.—P. M. C.—Limestone—of no value to lithographers.—J. G.—Hematite—an iron ore.—W. St. J.—The rock is a common mica and talcose schist—not the "tin bloom" of miners. It would hardly pay to dig deeper.—C. H. G.—The crystals are smoky quartz—of very little economic value.—H. S.—Chiefly carbonate of lime—not valuable.—G. J. G.—Quartz pebbles.—J. F. S.—Ferromanganese-iron and manganese oxides.—H. T. C.—It is a fair quality of carbon black. If properly packed might command a market here.

#### NEW BOOKS AND PUBLICATIONS.

CHICAGO FIELD, 155 and 157 Dearborn street, Chicago, Ill. Dr. N. Rowe editor. An illustrated weekly devoted to field sports. Price \$4 per year.

This journal, under the editorship of Dr. Rowe, has taken a foremost position among papers devoted to sport and sporting. It is well edited, and each week contains articles of much valuable information for lovers of dogs and horses. It is the only illustrated paper published in this country devoted to sports of the field, and is well worth its subscription price to those who are fond of out-door sports.

**WAR SHIPS AND NAVIES OF THE WORLD.** By Chief Engineer J. W. King. Boston: A. Williams & Co. 1880. 8vo, cloth, pp. 623. Sixty-six pages of engravings.

Mr. King has had exceptional facilities for making a thorough study of the naval progress of Europe during recent years, and has brought to the task a degree of practical experience and insight quite as exceptional. He entered the United States Navy when the steam marine was in its infancy, and served in the first paddle wheel frigate, the first screw war ship, indeed in all the pioneer naval steamers with the single exception of the Fulton. He has been Government Inspector of ocean mail steamers, and Chief Engineer of the New York Navy Yard. He was Chief Engineer of the North Atlantic fleet in the early part of the civil war, and subsequently was superintendent of the construction of all the armor clads built west of the Alleghanies. More recently he has been chief of the Bureau of Engineering. Most of the information embodied in the present work was gathered during several tours of observation abroad under orders from the government of the United States, made for the purpose of studying recent progress in naval architecture and the mechanical appliances for use in naval warfare. The result is a comprehensive treatise containing a vast range of fresh information touching the construction, motive power, and armament of modern warships, naval artillery, marine engines, torpedoes, and torpedo boats etc. The navies of all the naval powers are separately described, dwelling especially upon the changes in types of war ships, and in armor and armament made during the past decade. Much information is also given with regard to naval dock yards, methods of contracting for ships and machinery, naval administration, the personnel of navies, naval expenditures, and related matters. Extremely valuable also are the chapters on recent progress and improvements in artillery construction, the different systems of great guns, gun trials; armor plates and war ship materials and tests of them; the different systems of marine engines and boilers; steam and hydraulic steering gear; torpedo explosives; P. E. Jay..... 235,976

torpedo warfare, and the like. The author's wide experience as an engineer has admirably fitted him for this part of his task. Though treating of difficult subjects he has successfully endeavored to set down the information given in a manner so clear that the non-technical reader will be easily able to follow him. The volume is particularly timely at this juncture, when the great problems of restoring our commercial and naval marine, and of providing for the defense of our coasts, are attracting the attention of our legislators and citizens.

**CHRISTMAS BOOKS.** By Charles Dickens. New York: I. K. Funk & Co. 2 vols. 8yo, paper. Each 25 cents.

A Christmas Carol, The Chimes, The Cricket on the Hearth, The Battle of Life, and the Haunted Man, with sixteen full page illustrations, printed on clear type, are here given for fifty cents. The books comprise Nos. 48 and 49 of the standard series, the excellent quality and extreme cheapness of which we have several times taken occasion to speak.

**JOSH BILLINGS' COOK BOOK.** New York: G. W. Carleton & Co.

A cent's worth of proverbial philosophy badly spelled, some poor engravings, and a few burlesque recipes as destitute of wit as they are of resemblance to English speech.

#### [OFFICIAL.]

#### INDEX OF INVENTIONS

FOR WHICH

**Letters Patent of the United States were Granted in the Week Ending December 28, 1880,**

**AND EACH BEARING THAT DATE.**

[Those marked (r) are reissued patents.]

A printed copy of the specification and drawing of any patent in the annexed list, also of any patent issued since 1866, will be furnished from this office for one dollar. In ordering please state the number and date of the patent desired and remit to Nunn & Co., 37 Park Row, New York city. We also furnish copies of patents granted prior to 1866; but at increased cost, as the specifications not being printed, must be copied by hand.

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