

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 This is for our information, and not for publication.

(1) D. R. P. writes: I have a valuable rifle and revolver which I desire to keep in good order. What oils shall I use? A. Sperm oil that has been exposed to the sun for a week, in a bottle, with lead shavings, makes a very fine oil, much used for sewing machines, clocks, and watches.

(2) C. P. C. desires a receipt of wine color lacquer, such as is used upon tinware, etc. A. Put 3 ounces of seed lac and 2 drachms aniline, color of shade to suit, into a pint of well rectified spirits. Let the whole remain for 14 days, but during that time agitate the bottle once a day at least. When properly combined, strain the liquid through muslin.

(3) L. B. asks the latest processes on mixing and preparing the material with which to manufacture paper buckets. A. Ordinary wood pulp is used mixed with glue or size, pressed into moulds and varnished.

(4) J. G. writes: 1. The English unit of heat being the quantity required to raise one pound of water one degree Fah., what is the measure of a unit of heat as applied in measuring change of temperature of air? A. The amount of heat which would raise one pound of water any given number of degrees would raise about one-quarter of a pound (more accurately 0.2374 pound) of air the same number.

(5) S. U. P. asks if the burning of bones renders them less valuable as a fertilizer. A. It does impair their value. 2. How to make silhouettes, with the aid of a good magic lantern. A. Locate the lantern three feet from a hard wall, seat the subject in a chair one foot from the wall; place a sheet of white paper against the wall, securing the four corners with flour paste, then with a pencil trace out the outline of the figure as projected by the lantern.

(6) M. L. S. asks: 1. How great is the distance at which the telephone in its present state of perfection can be worked with good results? A. There is so much difficulty in working long lines that no general answer can be made.

the yellow and red series to the black, and does not represent the prismatic spectrum. Its light is incandescent. In heating a piece of polished iron or steel, the order is reversed below 700°, and commences with the pale straw, deepening into orange and reddish brown to violet and blue, ending in black, when, if the heat continues to rise, it runs back through the red and yellow series to white.

(7) G. B. asks (1) whether common salt (NaCl) dissolved in water, and decomposed with electricity, will yield (HCl) hydrochloric acid? A. With a current of sufficient electromotive force, chlorine gas will be given off at one pole and hydrogen at the other.

(8) H. S. asks: 1. Which of three mid-ship sections of equal depth and beam will have the greatest initial stability—one with the extreme beam on the rail, on the deck, or on the water line? A. On the water line.

(9) J. T. D. asks the best soldering solution for soldering copper wires to German silver springs, so that, after being soldered, a firm working line springs will not be covered with verdigris. A. Use silver solder with borax flux.

(10) Machinist.—You should put nothing on leather belts to prevent their slipping. Cover the pulleys with leather.

(11) M. A. M. asks (1) the composition of perspiration. A. In 1,000 parts perspiration there are of:

Table with 2 columns: Substance and Amount. Water: 985.50 parts. Sodium chloride: 2.23. Potassium chloride: 0.24. Sodium and potassium sulphate: 0.01. Sodium and potassium united to organic acids: 2.02. Total: 1,000.

2. If used in quantity sufficient for the exciting fluid of a common battery cell where zinc and copper are used, what parts of the fluid would have an affinity for the metals, and what changes would take place in the fluid or its parts? A. The water would suffer decomposition.

(12) G. F. R., Hawaii, asks (1) whether the use of crude petroleum as fuel for boilers is injurious to boilers, either directly or indirectly. If so, in what way? I have been using it with bagasse in the furnaces of a sugar factory.

(13) W. O. C. says: Will you please tell me how many pounds of water a cubic foot of dry granite will absorb? A. A correspondent, to whom we submitted the above inquiry, made a practical experiment, concerning which he writes as follows: We inserted a cubic foot of granite into a barrel of water, placing same on four small blocks, so that the six sides of the cube would be exposed to the water.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

June 14, 1887,

AND EACH BEARING THAT DATE.

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

Table listing inventions and their patent numbers. Includes: Abdominal supporter and pessary, combined, D. L. Snediker (364,968); Adjustable wrench, E. S. Boynton (364,749); Alarm, See Burglar alarm. Low water alarm (364,898); Albuminometer, A. C. Christensen (364,802); Anemometer, recording, W. H. Childs (364,705); Arm rest for penmen, T. F. Crane (364,917); Arm rest, penman's, T. Graham (364,770); Awning for windows, roller, F. P. Perkins (364,853); Awning, portable, B. D. Pennington (364,853); Bag frame, traveling, H. Ruff (365,024); Bags, frame handle connection for hand, R. R. Debacher (364,900); Bags, sheet metal handle for traveling, R. C. Jenkinson (r.) (10,845); Baling press, J. E. Mansfield (364,836); Barometers, rotary indicator and dial scale for aneroid, H. S. S. Watkin (364,692); Bathing cap, W. Osborne (364,847); Bathing, W. M. Norris (365,017); Battery, See Galvanic battery (364,860); Battery cell, A. V. Meserole (364,860); Battery solution, W. P. 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