

(29) W. B. R. asks how to soften hard cast iron so that it can be filed and fitted easily.

(30) T. M. inquires as to the action of glue on porcelain, when allowed to dry in a porcelain evaporating dish.

(31) C. H. asks for a good work on amalgamating and milling. We are running over silver plated copper plates, using cyanide of potassium to clean with.

(32) J. H. asks: 1. Is it lawful for any one to make a patented article, without permission from the owner of the patent, providing the person makes it for his own use solely, and not to sell?

(33) W. F. K. writes: I have a small stream of spring water about 20 inches square, or rather 20 square inches as it runs, that is 10 inches wide and 2 inches deep, could raise the head to 20 feet high.

(34) M. F. J. asks: 1. Can a reliable watch be affected or made to go faster, on account of its owner taking shocks from a small induction coil?

(35) W. C. B. writes: I have tried to put up an acoustic telephone, from office to dwelling, distance about 200 feet, and cannot get it working satisfactory. There seems to be too much vibration or buzzing noise in the diaphragm, as though the words spoken could not get out fast enough.

(36) Dr. N. J. S. writes: When sheets, handkerchiefs, and other linen or cotton fabrics are soiled with vaseline, and afterwards washed in soap suds or boiled in lye, the stain disappears.

(37) J. A. D. writes: I have a Niagara pump, 4 inches suction and 2 inches discharge, and I cannot make it pump hot water it pumps cold water all right.

good force pump will pump hot water if the supply of water is a good height above the pump. Write the manufacturers of your pump.

(38) H. O. asks how to charge horseshoe and bar magnets. A. The quickest and best way to magnetize steel bars is to place them centrally in a suitable coil, and then connect the helix with the wires from a dynamo-electric machine or powerful battery for a few seconds, remembering to break the current before removing the magnet from the coil.

(39) E. R. T. asks how to make pure oxygen gas. A. Mix pure crystallized potassium chlorate with about one-quarter its weight of pure black oxide of manganese, and heat the mixture in a copper retort, with large delivery tube, until the gas begins to come over.

(40) O. E. C. asks for a receipt for white-wash for out-of-door work. A. For brickwork exposed to damp take one-half peck well burned quicklime, fresh from the kiln, slake with hot water, enough to reduce it to a paste, and pass it through a fine sieve; add a gallon of clean white salt which has been dissolved in a small quantity of boiling water, and a thin smooth paste, also hot, made from 1 pound fine rice flour; also one-quarter pound best white glue, made in the water bath.

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

F. C. R.—Iron pyrites—sulphide of iron—contains traces of gold.—A. M.—A variety of bituminous coal containing much sulphur.—E. S. H.—1. Encrinites or stone lilies. 2. Niagara limestone. 3. Fibrous talc.—R. McA.—A variety of fine silicious clay.

COMMUNICATIONS RECEIVED. On the Mound Builders. By W. O. C.

INDEX OF INVENTIONS FOR WHICH

Letters Patent of the United States were Granted in the Week Ending May 10, 1881. AND EACH BEARING THAT DATE [Those marked (r) are reissued patents.]

A printed copy of the specification and drawing of a 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 Munn & 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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