

storage battery in as simple language as possible, with dimensions of lead plates, and the time necessary to charge it.

(11) C. W. asks for a recipe for making substitute for white wine vinegar, will esteem it a favor.

(12) H. Poe asks for a composition for picture frames. A. Various formulæ are used. We give two: 1. Seven pounds glue are boiled in 3 1/2 pints water...

(13) J. H. asks: 1. To what extent must I enlarge the motor described in SCIENTIFIC AMERICAN SUPPLEMENT, No. 641, to run a small skiff, also what battery to use?

(14) J. L., Jr., asks what the specific gravity of water in a vacuum is. A. The specific gravity of water is the standard for solids and liquids and is 1.000.

(15) A. J. W. writes: I want to know of some substance that is a complete insulator of the magnetic current, such if placed between the poles of a magnet and the armature, will not itself be attracted to the magnet nor permit the armature to be.

(16) J. B. H. writes: I have been troubled lately by accumulation of lime from water passing through water front in kitchen range. The clogging is so serious that sufficient pressure was made twice to rupture inch lead pipe.

(17) A. S.—The observed phenomenon was not a rainbow. The colored circle around the moon as seen when light fleecy or cirrus clouds are passing is properly called a halo, when very close a corona.

(18) F. T. R. asks: Which will produce the most horse power—two engines 12 inches in diameter and 12 inches stroke, or one engine 15 1/4 inches diameter 17 inches stroke, all conditions being equal?

(19) T. E. & S. ask: What is the proper speed for a sixty inch circular saw to cut 15,000 feet of lumber per ten hours?

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

August 14, 1888,

AND EACH BEARING THAT DATE.

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

Album with separable leaves, photographic, H. A. M. Dittmar..... 387,629

Ales and similar liquids, device for cooling, W. B. Hawkins..... 387,785

Aluminum bronze and other alloys, preparing, P. Heroult..... 387,876
Armor plates, etc., hardening and tempering, A. Evrard..... 387,712
Automatically-closing can, G. A. Poole..... 387,959, 387,960
Axle bearing, D. E. Hull..... 387,719

Drier, W. McPherson..... 387,652
Drill. See Core drill.
Drum, heating, I. H. Fry..... 387,715
Drum, heating, J. J. Sullivan..... 387,750

Oils, device for burning crude petroleum and other, J. T. Rader..... 387,911
Ore concentrators, belt or endless apron for, I. A. Woodbury..... 387,964
Organ case, C. H. Hubbell..... 387,984

