

excess of arsenious acid in fragments; 1 1/2 pint will take up about 14 troy grains of arsenic.

(31) C. E. T. writes: Will you inform an "old subscriber" if any definite experiments on the conductivity of dry steam are on record?

(32) P. R. asks if there is any simple way of testing silver to see if it is alloyed with copper.

(33) E. J. W. asks: How can I make indelible inks of different colors, black, purple, red, etc., to mark linen, etc., with stencil plates, rubber stamps, etc.

(34) O. S. asks how to detect the mineral substance terra alba in commercial cream of tartar.

(35) H. W., Jr., asks how to construct a storm glass as used by the United States Naval Department.

(36) C. W. P. asks: What metal in band shape, say 1/2 inch wide by 1/4 inch thick, will stand running over a 5 or 6 inch pulley two or three thousand times, the band to touch only one fourth of the face of pulley?

(37) T. G. McC. asks: 1. Would I have to pay a license, or would I be infringing, on any of the rubber patents if I manufactured some small inventions of my own out of rubber, not vulcanized but soft rubber?

1. Is there a patent on the process of lining metal pots, etc., with what is called porcelain lining? A. The processes in use are covered by several patents.

(38) C. B. asks whether it is possible to compress the air for the use of an engine by means of a windmill.

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

C. E. K.—It is not genuine amber (succinite).—E. A. H.—No. 16 is orthoclase (rose) containing muscovite.

hornblende. No. 194 will be reported subsequently.—E. W. H.—Glass colored by ferrous oxide.—D. C. L.—It contains slate, calcite, galena, iron, and a little copper pyrites.—E. O. H.—Fragment of quartz with a little jasper.

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges with much pleasure the receipt of original papers and contributions on the following subjects:

Winding of a Box and Axle. By H. D. M. Crank Motion. By E. H. The Celestial Machine. By G. V.

HINTS TO CORRESPONDENTS.

We renew our request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question.

Many of our correspondents make inquiries which cannot properly be answered in these columns. Such inquiries, if signed by initials only, are liable to be cast into the waste basket.

Persons desiring special information which is purely of a personal character, and not of general interest, should remit from \$1 to \$5, according to the subject, as we cannot be expected to spend time and labor to obtain such information without remuneration.

[OFFICIAL]

INDEX OF INVENTIONS

Letters Patent of the United States were Granted in the Week Ending July 16, 1878, AND EACH BEARING THAT DATE.

A complete copy of any patent in the annexed list, including both the specifications and drawings, will be furnished from this office for one dollar.

- Adding machine, Borland & Hoffmann 205,993
Adding stick, R. F. Roche 206,136
Arithmetical block, H. H. Hill 205,960

- Gum box and spinning toy, Sibley & Holmwood, Jr 206,142
Hammock eye, T. Tresilian 206,059
Harrow, J. A. Platt 206,029

- Cigars, R. W. Tansill & Co. 6,365
Cigars, Sanchez & Haya 6,379
Cigars, H. Stahlshmidt 6,380

DESIGNS.

- Coffin handles, W. M. Smith 10,755
Fabrics, C. Heritage 10,754

English Patents Issued to Americans.

- From August 27 to August 30, inclusive.
Car axles.—J. N. Smith, Jersey City, N. J.

THE GEOLOGICAL ANTIQUITY OF Flowers and Insects. By J. E. TAYLOR, F.G.S.

ON THE PRESERVATION OF WOOD. By J. CLARK JEFFERSON, A.R.S.M.

NARROW GAUGE SWEDISH LOCOMOTIVE, with one page of engravings.

ICE-HOUSE AND COLD ROOM.—BY R. G. Hatfield.

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