

(16) J. M. asks (1) for the proportions for making rubber waterproof solution. How much rubber, how much bisulphide of carbon, and how much absolute alcohol?

(17) R. D. asks: What is peroxide of manganese composed of, and what can I obtain such as is used for filling the porous cup of a Leclanche battery?

(18) H. D. C. asks for a recipe of rubber cement that will cement together the edges or overlaps of thin sheet rubber.

(19) H. M. asks: What dye is strong enough and cheap enough to use as a test of suspected communication between a cesspool and a well?

(20) G. W. H. asks how to make a good cement for wood with a light color.

(21) J. H. F. asks: Do you know of any method whereby gray iron castings can be coated with brass to a thickness of one-sixteenth or more of an inch?

(22) W. L. asks where to find information in regard to the distillation of turpentine and resin.

(23) E. H. K. asks: What work on assaying could you recommend to me? Or is there anything in your paper that would give satisfactory information on metallurgy?

(24) D. H. C. asks for the name or names of some complete and reliable book or work on assaying gold and silver, etc., from all kinds of quartz and rock and ore.

(25) F. B. W. asks if Richard Trevithick, of Merthyr Tydvil, South Wales, ran an engine on rails before an engine was run on the Stockton and Darlington road, England.

(26) A. M. R. asks: What is the composition of the gelatine transfer pad?

(27) A. D. writes: I am desirous of using vulcanized India rubber for moulding purposes. Will you tell me the best method of reducing rubber to the proper consistency for that purpose, and if anything is required to harden it again?

(28) C. W. V. writes: In your issue for February 28, 1880, Vol. 42, page 133, you give a receipt for guttapercha cement. What kind of pitch do you mean; that made from coal or that made from the pine tree?

(29) S. L. H. asks for a receipt for making a solution to be used as sizing on white paper so as to prepare it for varnishing with alcohol varnish.

(30) H. T. writes: 1. A piece of floor oil-cloth has been laid in use several months and still remains sticky to such a degree that chairs, tables, etc., placed upon it will adhere to it more or less.

at same time produce deleterious effects upon the glue with which the felt is fastened to the hammers, or upon the strings where they are struck or touched by it?

(31) J. R. C. asks how to remove castor oil and balsam fir from a camel's hair brush.

(32) H. B. G. writes: In the Science Record of 1874, page 20, is a recipe for destroying hair.

(33) W. P. writes: I have spilled a lamp full of coal oil on a Brussels carpet.

(34) L. F. asks: 1. What advantage is it in the gravity battery to have the copper on the bottom instead of having it suspended from a yoke?

(35) S. E. T. writes: I am using water from a well at the bottom of which there is quicksand.

(36) A. F. O. writes: In pouring the composition for my gelatin printing pad I am troubled with little bubbles, which leave troublesome depressions.

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

- F. L. S.—It is micaceous hematite. Its precise value here could only be ascertained by an analysis. Distance from railroad or navigable route, etc., must also be taken into consideration.—H. W. B.—It is chalcopyrite, an ore of copper—if found in sufficient quantity, of some value.—A. L. F.—1. Clay slate containing iron pyrites. 2 and 3. Porphyry. 4. Iron pyrites in altered dolerite.

COMMUNICATIONS RECEIVED.

- On Mercury in Vulcanite Plates. By T. H. C. On Ice boats. By T. D. On the Power Used in Driving a Foot Lathe. By M. On Ice Boats. By J. P. C. Astronomical Notes. By W. R. B. On Water Supply for Washington. By C. L. F. On Repairing Spiral Springs. By E. N. M.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

April 13, 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.

Adjustable chair, M. F. Bell..... 226,475 Anode frame, A. Van Winkle..... 226,576

Table listing various patents and their numbers. Includes items like 'Arm rest for writers, H. H. McElroy', 'Artist's canvas stretcher, J. G. Fletcher', 'Auger, earth, D. P. Cudd', 'Automatic gate, J. P. Kelso', 'Axle box cover, car, A. R. Tiffany', etc.

DESIGNS.

Table listing various designs and their numbers. Includes items like 'Clock case, G. Havell', 'Coffin handles, Bailey & Brainard', 'Gimp, J. Graham', 'Handkerchief, J. Grimshaw', etc.

TRADE-MARKS.

Table listing various trademarks and their numbers. Includes items like 'Beer, lager, Schmitt & Koehne', 'Cigars, cigarettes, and smoking and chewing tobacco, C. G. Emery', 'Galloons, doubles, Prussian bindings, braids, shoe laces, etc., R. Thorp & Sons', etc.

English Patents Issued to Americans.

From April 9 to April 13, 1880, inclusive.

Table listing English patents issued to Americans. Includes items like 'Boot nailing machinery, A. Knowlton, Boston, Mass.', 'Churn, W. Earle, Philadelphia, Pa.', 'Cocoon oil, refining of, A. P. Ashbourne, Boston, Mass.', etc.