

[OFFICIAL]

INDEX OF INVENTIONS

FOR WHICH Letters Patent of the United States were Granted in the Week Ending September 5, 1876, AND EACH BEARING THAT DATE. [Those marked (r) are reissued patents.]

Table listing various inventions with their respective patent numbers and dates. Includes items like 'Hair-puffing pin, A. Hurd', 'Nail plates, cutting, L. Soule', 'Sawing machine, G. T. Hiddle', etc.

(36) C. R. C. says: In Fowne's "Chemistry" it is stated that picric acid is also one of the ultimate products of the action of nitric acid upon indigo and numerous other substances, as silk, etc.

(37) C. Roggenkamp, of Appingedam, Holland, asks: 1. What is quicklime? A. It is the anhydrous oxide of calcium. It is commonly prepared from limestone or marble (calcium carbonate) by ignition in a kiln.

(38) J. C. M. asks: How can I make ferro-tartaric acid? A. Dissolve pure sulphate or chloride of iron in distilled water, and add to this a strong aqueous solution of pure soda (or carbonate of soda) in excess; heat nearly to boiling, filter, wash the precipitate thoroughly with hot water, and dry.

(39) E. W. W. asks: How can I take bluing stains out of a red and white crumb cloth? A. If ordinary bluing were used, boiling in a little hot water should remove the stain.

(40) C. H. H. asks: What is the best method of generating carbonic acid gas for use in soda fountains? A. The materials commonly employed are dilute sulphuric acid and coarse marble dust.

(41) H. T. D. asks: 1. How can I coat metal with hard rubber? A. Cover the parts well with gum rubber, and then heat in melted sulphur until the degree of vulcanization desired is reached.

(42) J. J. W. asks: What is a good brown dye for straw hats? A. Try the following: First dry the straw thoroughly, then steep for a short time in a strong solution (neutral) of sulphate of copper.

(43) H. J. asks: I have a set of rabbit furs. They are soiled by the hair. How shall I clean them? A. We do not know of a less objectionable method than that of the application of benzole (not benzine) and some absorbent material, such as paper pulp (dry and warm) or pipe clay.

(44) P. R. H. asks: 1. Please give me an analysis of the purest Lake Superior native copper? A. It consists, generally, of pure copper, but often contains both silver and mercury.

(45) A. H. says: In Machinery Hall at the Centennial, I saw in the exhibit of a compressed air railroad brake a wooden ball, dancing in a strong current of air which was escaping from the apparatus.

(46) J. H. L. asks: How can I get a humming or whistling noise out of a tin tube attached to a wheel of 2 1/2 inches circumference? The tube is 1 inch long by 1/8 inch wide, and the wheel runs at 60 turns a minute.

(47) C. C. P. and others.—The aniline colors are not, in themselves, poisonous; the poisonous qualities are attributable to the small trace of arsenical compounds to be found in almost any of these commercially prepared dyes.

(48) C. J. H. asks: 1. Is there any way to determine the presence or absence of carbonic acid, chloride of lime, and copperas in a mixture of gas tar and brick clay? A. Yes, but we do not

think it probable that notable amounts of the substances enumerated would be likely to exist in such a mixture. 2. If so, can I do it myself? A. It would require the skill of a chemist.

(49) D. W. H. says: I am engaged in manufacturing an article into which liquid ammonia of 16° proof enters largely. I am informed that it can be made very cheaply from sulphate of ammonia and lime, and that the apparatus for making 25 to 60 gallons per day is not expensive.

(50) C. C. B. says, in reply to a correspondent who asked as to the origin of the \$ mark: By the ancients the pillars of Hercules (Gibraltar) were regarded as marking the end of the world; and the two pillars are displayed on ancient coins, bearing a fillet between them with the motto plus ultra (nothing further, or nothing beyond).

(51) J. W. W. says, in reply to J. A. P. who asked how to make apple butter: Take any quantity of fresh unfermented cider and boil it down to half its quantity. Then add fresh ripe apples which are quartered and deprived of their cores.

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

R. M.—Both specimens contain gold.—W. S. V.—No. 48 contains a considerable quantity of iron pyrites. No. 49 is orthoclase, a silicate of alumina, iron, lime, and potassa.—No. 50 is not of natural occurrence. It is a furnace product, probably speigeleisen, a carburet of iron containing manganese.

COMMUNICATIONS RECEIVED.

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

- On a New Form of Chuck. By C. R. W.
On Locomotive Drive Wheels. By G. C.
On Working Men's Demonstrations. By J. G.
On Keeping People Employed. By D. M.

Also inquiries and answers from the following: J. D. F.—E. M. S.—H. F. W.—E. T. P.—B. L. T.—W. N.—J. C. D.

HINTS TO CORRESPONDENTS.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them.

Enquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who sells nautical instruments? Where can gyroscopes be bought? Whose is the best lightning rod? Whose sells photographic apparatus? Why do not makers of guns and rifles advertise in the SCIENTIFIC AMERICAN? Who makes drop presses? Who sells portable boats, that can be folded up?" All such personal inquiries are printed, as will be observed, in the column of "Business and Personal," which is specially set apart for that purpose, subject to the charge mentioned at the head of that column.

Table listing various inventions with their respective patent numbers and dates. Includes items like 'Advertising desk, J. D. D. Mortimer', 'Book cover protector, J. Mahedy', 'Car coupling, D. P. Cubberley', etc.

