

then re-engraved by hand. In order to make a printing block without re-engraving as above, the photo process must be employed.

(2989) C. M. S. asks (1) how the so-called torpedoes which are used on the fourth of July are made. A. By placing a little fulminating powder and a quantity of fine gravel together and wrapping in paper. 2. How to obtain the nickel from a five cent piece? A. Dissolve in nitric acid, expel excess of acid by boiling, precipitate the copper with iron wire, filter, and precipitate the nickel with zinc.

(2990) A. C. asks for the best known method of cleaning fine wall papers and frescoes. A. In many cases they are uncleanable. Bread crumb is about the safest application. Much depends on the nature of the surface. Some walls can be washed with soap and water.

(2991) H. C. R. asks: How to make modeling clay. A. Knead dry clay with glycerine instead of water, work thoroughly with the hands, moisten work at intervals of two or three days, keep covered with an old piece of rubber cloth to prevent evaporation of moisture.

(2992) W. writes: 1. Please give directions for making soda water on a small scale in a chemical laboratory. A. Soda bicarbonate 360 grains, tartaric acid 300 grains. Divide each into twelve parts and wrap in paper separately, one in blue, the other in white paper. In use dissolve separately in two half tumblers of water, mix and drink. 2. What kind of starch is used in the manufacture of baking powder? A. Potato starch is recommended for the purpose. 3. Please explain duplex and quadruplex telegraphy. A. We refer you to our SUPPLEMENT, Nos. 346, 172, 579, 457, 461. A. Has the Keely motor been entirely given up, as a thing of no value? A. We never believed in it, but cannot answer for others.

(2993) A. C. R. asks: 1. Is there anything that will take the gloss off from clothes and yet not injure the fabric? A. Proper treatment with a hot iron (tailor's goose) will do something, but there is no really effectual treatment. 2. How to make pictures transparent with oil before painting. A. Use castor oil; remove with alcohol when through. 3. Will an induction coil if made long be any stronger than a short one with same quantity of wire? A. No. It will project the lines of force farther out from the core, but will be weaker on the whole than a short one.

(2994) C. E. B. asks: 1. How to dye or stain light-colored leather? A. Take 2 parts iron filings and 1 part bruised gall nuts, boil in 66 parts sharp vinegar. Boil until liquid is reduced about one-half, strain, and apply to the leather. 2. For a paste blacking. A. Mix one part ivory black, 2 parts molasses, 1/2 part olive oil, then add 1/4 part sulphuric acid and 1/8 part hydrochloric acid.

(2995) L. F. D.—By making a patented article in parts you do not avoid a patent. You cannot use a patented article unless you obtain the consent of the owner of the patent.

Replies to Enquiries.

The following replies relate to enquiries recently published in SCIENTIFIC AMERICAN, and to the number therein given:

(2938) In answer to query 2938, in which C. E. E. asked how to improve the brilliancy of a kerosene light, I would say "use a small jet of nitrous oxide thrown into the flame." There is a young man here using it with gas very successfully for a stereopticon. This gas, as well as oxygen, may be had at the dental depots. J. H. C. Harvard University, Dental Department.

(2939) Making alkaline water palatable.—In your answer to inquiry of J. B. G., No. 2939, of April 4, in regard to what will make alkali water drinkable, allow me to state that the same power that produced the alkali fields, which causes alkali water, also produced the cactus covering the plains. If J. B. G. will place water in a barrel, tub, or pail, and throw into said water said cactus, he will find it a safe, harmless, and healthy drink, as I know by practical experience in Colorado and Wyoming; or condensed, plenty of cactus in alkali water kills or saves colic.—C. E. BEBEE.

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. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

April 21, 1891,

AND EACH BEARING THAT DATE.

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

Table listing inventions such as 'Adding and recording machine, J. Mathison', 'Air and water, device for tempering, W. H. Murray', etc.

Table listing inventions such as 'Battery, See Galvanic battery. Ordnance battery', 'Battery plates, making secondary, S. C. C. Currie', etc.

Table listing inventions such as 'Gate, See Swinging gate', 'Gates, J. I. Smith', 'Gem settings, preparing, A. Hogg', etc.

Table listing inventions such as 'Spring, See Pump spring. Vehicle spring', 'Watch case spring', 'Spring motor, J. A. Adams', etc.

DESIGNS.

Table listing designs such as 'Brush hook, J. G. Coffman', 'Fence post anchor, T. W. Hutchins', etc.

TRADE MARKS.

Table listing trade marks such as 'Armid shields and hat linings, P. P. Guillaume', 'Cardboard, paper, and envelopes, Union Company', etc.

A Printed copy of the specification and drawing of any patent in the foregoing list or any patent in print issued since 1883, will be furnished from this office for 25 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway, New York.

Canadian Patents may now be obtained by the inventors for any of the inventions named in the foregoing list, provided they are simple, at a cost of \$40 each. If complicated, the cost will be a little more. For full instructions address Munn & Co., 361 Broadway, New York. Other foreign patents may also be obtained.