

woodwork of the cornice; or the contraction and expansion may have worked the joints loose.

(35) C. F. S. asks: 1. Is the radiation of the method of heating private dwellings with furnace in basement and tin pipe leading to different rooms at the floor called direct or indirect? A. Indirect.

(36) L. W. asks: Will any injurious effects arise from working over and inhaling the vapor or steam arising from boiling or hot aniline dye? A. Yes, it is extremely unhealthy.

(37) A. H. S. asks: Is it injurious to a person's health to sleep in a printing office after working in it all day? It is said that the antimony in type metal is poisonous.

(38) G. G. says: I need a flexible tube to use in kerosene oil. What is the best material to make it of? A. Try one of leather.

(39) E. T. M. says: I am about to construct a flume for carrying off the smoke from a quick-silver furnace, the smoke being strongly impregnated with sulphurous acid.

(40) J. W. says: My cellar is always wet. If I dig a drain or two in it, and dig a well down to the gravel, the drains going into it, will the water soak in the gravel? A. It depends upon the nature of the several strata over which your house stands.

(41) M. E. A. asks: 1. I wish to build an icehouse on my farm, to hold about 8 tons of ice, in which to keep meat, etc.

(42) W. D. asks: Can vinegar be made directly from corn or corn meal without first converting the corn into starch, then to dextrin, and then to grape sugar, and then to vinegar? A. No.

(43) J. H. P. says, in reply to B. D., who says: "I have a piece of gold which has been polished with mercury. What will remove the mercury?" A. Cover the gold in a glass vessel with nitric acid.

(44) E. P. says, in answer to C. B., who asks how to plow with three horses abreast, and regulate the running of the plow: We often do this by shifting the outer end of the clevis off the beam towards the land, and fastening it at the right distance with a guide pin.

(45) J. M. L. says, in reply to H. P. B., who asks if eggshells can be utilized: Eggshells form one of the best clarifiers for cider and wine. One pint of pulverized eggshells will clarify one barrel of cider or wine in from 24 to 48 hours.

(46) N. A. B. asks: 1. Can I arrange the motive power of an electric clock so that a regulator will not be necessary, and so that slight variations in the force of the current will make no difference in the time kept? A. No.

(47) J. V. A. says: Is there any metal or other substance that is perfectly or almost perfectly impenetrable to magnetism? If I take a magnet and place a plate of some substance above it, could the magnetism be prevented from going through it, so that it would have no influence on a piece of iron placed above it? A. No.

(48) W. H. asks: 1. How can hard cistern water be made soft and good for table use? The hardness arises from the cistern being built of cement. A. Boiling the water usually causes precipitation of some of the foreign matter.

COMMUNICATIONS RECEIVED.

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

- On Water Supply for Seaboard Towns. By H. B. M.
On Shrink-On Parts of Machinery. By T. I. B.
On the Radiometer and its Uses. By S. H. T.

Also inquiries and answers from the following: T. P. P.—J. B. H.—W. G. W.—W. W. K.—M. W. W

M. G. P. asks: Are not meerschbaum pipes sometimes boiled in wax etc., to bring out the color? If so, what is the process?—F. S. K. asks: Please give me a recipe for keeping the weevil from corn after it is cribbed in the shuck.

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. The address of the writer should always be given.

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 bicycles? Who bores for water by driving well tubes, and what is the cost of the operation? Who sells wooden clocks? Who makes envelope machinery? Who makes machinery for preparing moss for upholsterers' use?"

[OFFICIAL]

INDEX OF INVENTIONS FOR WHICH Letters Patent of the United States were Granted in the Week Ending August 15, 1876, AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

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. In ordering, please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row, New York city.

Table listing patents with inventor names and numbers, including Alarm electric burglar, Animal tether, Ax, Baking and broiling, Bale band tightener, etc.

Table listing patents with inventor names and numbers, including Buckle and snap, Buckle and snap hook, Buckle, harness, Building block, cellular wall, Bustle, Butter package, Button pliers, etc.

Table listing patents with inventor names and numbers, including Planter, corn, Pliers, W. P. Huntoon, Plow draft, A. B. King, Plow, stock, J. A. Price, Plow, sulky, A. Hamilton, etc.

DESIGNS PATENTED.

Table listing designs patented with numbers and descriptions, including 9,437.—UMBRELLA.—G. Bockstaller et al., St. Louis, Mo.

[A copy of any one of the above patents may be had by remitting one dollar to MUNN & CO., 37 Park Row, New York city.

SCHEDULE OF PATENT FEES.

Table listing patent fees: On each Caveat, \$10; On each Trade mark, \$25; On filing each application for a Patent (17 years), \$15; On issuing each original Patent, \$20; On appeal to Examiners-in-Chief, \$10; On appeal to Commissioner of Patents, \$20; On application for Reissue, \$30; On filing a Disclaimer, \$10; On an application for Design (3 1/2 years), \$10; On application for Design (7 years), \$15; On application for Design (14 years), \$30.

THE VALIDITY OF PATENTS.

We recommend to every person who is about to purchase a patent, or about to commence the manufacture of any article under a license, to have the patent carefully examined by a competent party, and to have a research made in the Patent Office to see what the condition of the art was when the patent was issued. He should also see that the claims are so worded as to cover all the inventor was entitled to when his patent was issued; and it is still more essential that he be informed whether it is an infringement on some other existing patent. Parties desiring to have such searches made can have them done through the Scientific American Patent Agency, by giving the date of the patent and stating the nature of the information desired. For further information, address MUNN & CO., 37 PARK ROW, New York