

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication.

(1) T. O. T. asks: 1. Can you give a receipt for a good toning solution? A. Acetate of soda and common salt, each 15 grains; chloride of gold, 1 grain; 8 ounces water.

(2) B. F. McD. asks: What is the best kind of steel to make magnets of for telephone receivers? Can Bessemer, good tool, or spring steel be used?

(3) E. M. asks the radius of the sharp-curves in use on the elevated railroads in New York city. A. 90'.

(4) F. J. P. asks how he may construct a reliable telephone from his store to his residence, a distance of 180 rods. A. Cut a circular aperture about 6 inches in diameter in a board.

(5) S. A. H. writes: Many of the spectacles sold are advertised as Russian or Scotch pebble. Do they make any glass of Russian or Scotch pebble?

(6) T. H. asks: 1. Will it be a good plan to connect a lightning rod to an iron pump in well that has 1 1/2 inch gas pipe for suction? A. Yes, but the pipe should not be relied on as the only ground for your rod, unless it always extends deeply into the water.

(7) H. C. O. asks if hard rubber would do as well or better than glass for the plate of a Wimshurst electric machine, such as has been described in the SCIENTIFIC AMERICAN several times in the past few years.

(8) H. S. B. asks: Does the phonograph imitate the peculiar tone of voice of the person who speaks into it, and can it imitate the different notes in a piece or song, and can it imitate the different musical instruments? A. The phonograph does imitate all the features of the voice or any other sound affecting it, but imparts also its own metallic character thereto.

(9) H. J. K. desires a formula for the wax used for map engraving by the wax plate process. A. Take of white wax 2 ounces, asphaltum 2 ounces.

(10) W. C. C. writes: 1. I have two pop valves on my compress set at 90 pounds, and neither ceases to pop until they get to near 80. What is the remedy? A. There is none, but to relieve them of any undue friction by cleaning free from rust and dirt.

(11) C. W. B. asks a receipt for bluing gun barrels. A. Clean bright, then heat in an oven or long muffle until the desired color is obtained. Cool and rub with linseed oil.

(12) N. McG.—You can japan brass by heating, to oxidize the surface, or dipping in acid for the same purpose. Bright work does not take the japan well. It is also liable to crawl in baking.

(13) T. M. B. asks a receipt for icing for cakes and pastry. A. 10 teaspoonfuls of pulverized sugar to the white of one egg. Beat to a stiff froth.

(14) C. R. asks when a rattlesnake has its first rattle. A. At 2 years of age.

(15) A. J. G.—To make stick rouge. Melt paraffine and mix rouge so that there shall be as little paraffine as will possibly hold the rouge together, and roll into sticks.

(16) W. T. B.—The amount of flow in an artesian well is not always indicated by the static pressure when the well is closed. The kind and coarseness of the sand or gravel composing the stratum from which the water enters the pipe, governs the volume of the flow to a large extent.

(17) A. N. S. asks: What weight will be sustained by a cubic foot of air at 150° Fah., the outside air being at 80°. A. 0.008463 of a pound per cubic foot.

(18) J. M. W. asks: Why are kites not more used for propelling boats? A. It would not be possible thus to obtain as much power as can be got from sails, and the direction of the vessel could not be as readily controlled.

(19) F. V. V. writes: In reply to G. S. D., No. 19 query of July 9, page 27, I find that you have made a mistake. You state never sharpen the clipper on the flat side, always on the bevel side.

(20) F. L. D.—The force of dynamite and all other explosives is equal in all directions from the center fire. Whatever is laid upon the charge has weight. The air has weight. Tamping is, however, more necessary with gunpowder than with dynamite, gun-cotton, and the other high explosives, because the latter act with many times the suddenness of gunpowder.

(21) W. I. asks: Does a larger coal stove produce more heat from the same amount of coal than a smaller one? A. The size of stove should be proportioned to that of the room to be heated, when the stove is burning the fuel in the manner for which it was designed.

The following is one of the better class: Take 3 ounces of nitric acid, put it in a bottle, and add a 25 cent piece, cut fine. Let it dissolve, and then add 3 ounces mercury, which is also to be dissolved; finally add 2 quarts rain water.

(25) E. M. asks if silver chloride without being in contact with organic matter is decomposed by sunlight, also silver cyanide such as used in plating. A. The former is, while the latter, which is the double cyanide of potassium and silver, is not affected by light.

(26) A. B. desires a receipt for a varnish that when applied to one side ordinary glass will imitate the genuine ruby glass. A. Use an ordinary shellac varnish, made by dissolving shellac in alcohol, and color to suit your fancy by dissolving some aniline red in a little alcohol and mixing it with the varnish.

(27) C. P. McG. wants a formula for making a paste or glue with which to stick labels to tin boxes. A. Use starch paste with which a little Venice turpentine has been incorporated while it was warm.

(28) A. H. N. asks if there is anything that will positively remove freckles from the face of a person. A. Nothing will entirely banish freckles, although a wash made by dissolving three grains of borax in five drachms each of rose water and orange flower water is said to be excellent.

(29) P. H. C. desires a receipt for making a washing blue, and the best way to make it and compound it. A. Take one ounce of soft Prussian blue, powder it in a mortar with 1 quart of clear rain water and add 1/4 ounce of oxalic acid.

(30) M. S. T. desires a receipt for mixing white paint (lead or zinc) to paint inside woodwork for his house, so it will not turn yellow. A. Use zinc mixed with white varnish, and finish off with white varnish, also use best quality of ingredients to insure perfect success.

(31) R. S. McI. writes: Water, when allowed to freeze upon glass, adheres quite strongly. Will you please explain the philosophy of this? A. The ice is in intimate contact with the surface of the glass, and adheres, as all substances do under like conditions.

(32) T. K. P. desires a receipt for making a paint for branding wood red, something that will dry quick and not run when varnished. A. Take of shellac, 2 ounces; borax, 2 ounces; water, 25 ounces; gum arabic, 2 ounces.

(33) J. J. desires recipe for a good, harmless hair wash. A. Take of scalded black tea 2 ounces, with 1 gallon boiling water; strain, and add 3 ounces glycerine, tincture cantharides 1/2 ounce, and bay rum 1 quart. Mix well by shaking, and then add perfume.

(34) E. M. R.—High and low tone is difference in pitch, which is made by difference in the number of vibrations per second. The same tone may be loud or strong, or weak or soft, with the same number of vibrations per second.

INDEX OF INVENTIONS For which Letters Patent of the United States were Granted July 5, 1887,

Table listing inventions such as Abdominal supporter, Advertising medium, Air moistener, Amalgamator, Andiron, etc., with their respective patent numbers.

Table listing inventions such as Baking furnace and oven, Bathing machine, Battery, Bearing, ball, Bed and dressing case, etc., with their respective patent numbers.