

(2908) W. P. N. asks: Would you please oblige me by publishing a recipe for the cure of catarrh? A. Take equal parts of salt, soda bicarb., and borax. Mix them thoroughly. Use saltspoonful of mixture to cup of warm water. Always have the water warm. Gargle and sniff up the nose three or four times daily. Better consult a good specialist.

(2909) R. A. M. asks: A solid floats at a certain depth in a liquid when the vessel which contains it is in air; if the vessel be placed in a vacuum, will the solid sink, rise or remain stationary? A. The weight of the water would remain unchanged in a vacuum, consequently the floating body would behave as if the water were under atmospheric pressure.

(2910) H. L. B. asks: Is there anything that will eradicate smallpox pits without injury to the skin? If so, what is it? A. No. There is nothing; the connective tissue is destroyed and it cannot be replaced.

(2911) J. L. S. asks: What will kill the odor of camphor dissolved in alcohol? A. Any essential oil will tend to destroy the odor—bergamot, lavender, etc.

(2912) Old Subscriber asks: I have some old engravings that are stained and spotted by age and dampness. How can these stains be removed without injuring the pictures? A. Immerse them in javelle water of solution of chloride of lime. Wash off in clear water and immerse in a solution of hyposulphite of soda. Use first solution as weak as possible consistent with efficacy.

(2913) W. F. writes: I am very badly in want of a recipe for making in quantity a very quick-drying solution of either gum arabic or dextrine, to be quite free from unpleasant taste or smell when either wet or dry. A. Water 5 parts, alcohol 1 part, acetic acid 1 part, dextrine 2 parts.

(2914) H. L. N. asks (1) how to make a marking ink, either blue or black, without the use of oils, to be used principally for marking sacks. A. An excellent medium is solution of 20 parts shellac in strong borax water (borax 30 parts, water 300 parts). Use any desired pigment. Dissolve borax and shellac by heat. Aniline coloring may be used. 1 part coal tar, 1 part benzene, and one-tenth part lampblack is also used. 2. How can I make a cheap paste that will make labels stick to smooth tin cans? A. Fresh solution of gum tragacanth is good. Also see SCIENTIFIC AMERICAN, vol. 63, No. 15.

(2915) P. C. Manufacturing Co. asks: Can you give us a receipt for preventing paste made from flour from foaming while being agitated or stirred up by machinery? A. It is almost impossible to advise anything effectual. Vapor of ether might do some good.

(2916) J. B. W. asks for a liquid that will have no injurious effect on phosphorus and will not freeze readily. A. Use a strong solution of calcium chloride or sulphate of soda.

(2917) W. H. L. writes for a receipt for making mucilage such as put up for sale in bottles. A. See queries 2913 and 2914. Plain solution of gum arabic in water just perfumed with oil of cloves is an excellent mixture.

(2918) G. M. P. asks for receipts (1) for cleaning and polishing marble such as marble top stand tables, bureau tops, etc. A. Brush off the marble and apply following: $\frac{1}{2}$ pound whiting, $\frac{1}{2}$ pound soft soap, 1 ounce washing soda, a piece of blue vitriol the size of a walnut. Rub over the marble and let it stand 24 hours, then wash off and polish with a piece of flannel. To remove stains use a mixture of 1 ounce ox gall, 1 gill of lye, $\frac{1}{2}$ tablespoonfuls of turpentine, made into a paste with pipe clay. Apply as above. For oil stains use perfectly dry clay saturated with benzene, and applied over the spot and allowed to stay for some time. 2. For cleaning and polishing furniture. A. Dissolve 4 ounces best shellac in 2 pints 95 per cent alcohol, add 2 pints linseed oil, 1 pint turpentine, mix and add 4 ounces ether and 4 ounces ammonia, mix, shake before applying. Use a sponge. 3. For cleaning and polishing ivory, such as piano keys, etc. A. For piano keys use the finest crocus or whiting. You cannot whiten them except by special treatment, such as exposure under turpentine to the sun's rays. 4. For taking all kinds of stains, etc., out of fine clothing. A. Use benzene. Apply in a circle around the spot, and work into the center and sponge off.

(2919) J. B. V. asks (1) how to make blue print paper. What are the formulae used? A. See our SUPPLEMENT, Nos. 585, 741, 514, 584, and 714. 2. Can dextrine be made from starch with the use of water alone? If so, how, or how can it be made without diastase? 2. No. Starch is boiled with a weak acid. 3. How may a bottle be cut off near the bottom without injuring the rest of the bottle? A. File a notch, start a crack with a red hot poker, and lead it around. 4. What is the formula for the liquid used in mixing gold paint, bronze, gilding, etc.? A. Use copal varnish or linseed oil and liquid drier. 5. Can you give me a formula for a mucilage that I can stick paper to tin with? A. Use gum tragacanth. Also see SCIENTIFIC AMERICAN, No. 15, vol. 63.

(2920) F. G. asks: Kindly give the recipe for putting gold leaf letters on leather. A. The cover is first washed with clear gum water. The parts to be gilded are then coated twice with white of egg beaten into a froth and allowed to subside into a clear liquid. A little ammonia may be added. To gild, spread a leaf of gold on the gilding cushion with a knife, and blow it flat, then cut it into strips about one-fifth inch wide. Heat the tool until it is just hot enough to fizz under the wet finger; if it sputters it is too hot and will burn the leather; touch its edge with a rag slightly moistened with sweet oil, and with the same rag rub over the part of the book to be gilt. Roll the tool softly on the strips of gold, which will adhere to it, and when enough is taken up, roll it with a heavier pressure along the places to be gilt, and the gold will be transferred to the leather, the excess being wiped away with a soft rag.

(2921) W. McP. F. writes: I have in my possession a certificate of membership issued by the

"Society of the Cincinnati" to my paternal grandfather. It was signed, I imagine when issued (in the eighth year of the independence of the United States), by the President and Secretary. Both names are becoming obliterated by the gradual fading of the ink. "J. Knox" is quite indistinct now. Is there any means by which partial restoration may be effected, or is there any way of arresting the entire disappearance of the signatures? A. We can only advise careful painting over the signatures with a solution of tannic acid in water. This you should try on a very small portion of the signature first, applying it with a small sable or camel's hair pencil.

(2922) P. J. L. asks (1) how to take the smell out of kerosene, say a gallon at a time. A. Agitate with a perfectly cold solution of bichromate of potash in oil of vitriol; after standing decant, wash with weak soda solution, then with water and decant. 2. How to make vaseline? A. It is obtained by distilling off the lighter portions of petroleum and purifying the semi-solid residue. It is described in the U. S. Dispensatory. 3. How to make camphorated oil in small quantities. A. Dissolve 2 ounces camphor by heat in one pint of olive oil. 4. Have you any book or printed descriptions giving full details? A. We know of no book treating of above subjects.

(2923) I. J. A. asks: Please inform me what paste I can use to stick photographs on concave glass for the purpose of painting them, after making them transparent with oil. Common starch used to do it, but now I fail to make them stick, as they seem to shrink and pull off before putting oil on. A. Try fresh thick solution of gum tragacanth or the "paste that will stick anything," described in the SCIENTIFIC AMERICAN, vol. 63, No. 15.

(2924) A. H. G. asks: 1. Please state how a guitar or violin is taken apart (top or bottom off). If steamed, what would be the proper way to proceed? Please state also how the tail piece or piece that the strings are fastened in on the guitar may be removed. A. Never apply steam, as you may ruin it. Use a rather blunt short table knife. Start the belly off, by forcing the knife in between side and belly at one of the inner bouts, then do same for upper and lower bouts, and finally go all around it. At the neck two short cuts at right angles have to be made. It can then be pulled off. The back is never removed. As regards the guitar, you may pry off the string piece, but it is risky. All this work should be done by an expert, as there is every chance of spoiling the instrument. 2. Please name a few oils other than lard oil and cod liver oil, that are cheap and of a white or creamy color. It matters not whether thick or thin, as long as it is of a very light color or pure white. A. You apparently confuse oils with emulsions. None of the oils you name are white or creamy. 3. What will entirely dissolve gum tragacanth? A. For ordinary purposes water comes the nearest. A strong solution of borax in water might act better.

(2925) C. S. M. asks: Can you tell me whether there is any metallic solution that could be used to coat over the surface of an electrotype wax mould, which would insure the deposition of copper thereon as thoroughly as the plumbago now used for that purpose? A. Nitrate of silver, to be reduced by exposure to phosphorous or other vapor, can be used. Thus the articles may be dipped in a solution of nitrate of silver in alcohol. The solution must be saturated. The objects are then exposed under a glass shade or bell jar to the vapor emitted from a solution of phosphorous in bisulphide of carbon. The trouble with the phosphorous process is that it is apt to render copper brittle, if the latter is deposited on a phosphorized surface.

(2926) H. W. asks for some formula for detecting arsenic in paper hangings, draperies, etc. A. If a sample of the paper or drapery is burned, it will, while burning, emit an odor of garlic, if it contains arsenic in quantity. Other tests should be executed by a chemist.

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March 17, 1891.

AND EACH BEARING THAT DATE.

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