

very cheap; all that is required is the apparatus. The charcoal may be used in subsequent treatments, as it does not lose its virtue by the operation.

There are many other substances which absorb oxygen from the air; among which the most prominent are blood, phosphate and carbonate of sodium. These absorb about ten per cent more oxygen than nitrogen, and may be treated in the same way as charcoal.

A New Cement.

The "Journal de Chemie Medicale" states that an excellent cement may be made by dissolving 1 part of amber in $1\frac{1}{2}$ part of bisulphide of carbon. This liquid is applied by a brush to the surfaces it is wished to unite, and on pressing them together, the cement dries almost immediately.

A paper on "The Determination of the Flashing Point of Petroleum" was read by Dr. Reynolds, at a meeting of the Royal Dublin Society, on the 17th ult. His opinion was that twenty-five minutes was the average time for rousing the oil to the flashing-point heat for testing purposes. An electric spark was the most genuine test for the flashing-point, and by it an absolute standard of the quality of oil would be obtained.

It is said that glycerine may be purified by adding one-tenth of its weight of iron filings—allowing the mixture to stand some days, and shaking frequently.

Changes.

A dissolution of the firm of Lyman, Elliot & Co. has taken place, Messrs. Benjamin and Henry Lyman buying out the business carried on on King street, as well as the mills and laboratory, which will be continued under the style of Lyman Bros. & Co.

Messrs. William and Robert Elliot have bought the business of Messrs. Dunspaugh & Watson, and will carry on the trade in all its branches at No. 3 Front street, under the style of Elliot & Co.

Messrs. Dunspaugh & Watson retire from business, having earned their *otium cum dignitate* by an active and prosperous career.

Notes and Queries.

JEWELLER'S ROUGE.—A pure peroxide of iron, perfectly free from grit, and eminently fitted for polishing purposes, may be made by decomposing sulphate of iron by oxalic acid; both substances must be in solution. A precipitate of oxalate of iron falls, [which must be well washed and dried; on being gently heated the salt takes fire, leaving oxide of iron as an impalpable powder.

ARTIFICIAL CAMPHOR.—According to Watts, this compound may be formed by saturating rectified oil of turpentine with hydrochloric acid; keeping the liquid cool; pressing the crystals which form after some hours, and purifying by recrystallization from

hot alcohol. It may be sublimed, like ordinary camphor, which it very much resembles, both in appearance and odor.

A. Z.—AQUEOUS EXTRACT OF JALAP.—An aqueous extract of Jalap made from the root previously exhausted with alcohol, is inert.

Toxicologist.—ARSENIC IN HYDROCHLORIC ACID.—This is a very common impurity; it may be detected best by Marsh's method, for an account of which you had better consult some work on chemistry; or sulphurated hydrogen may be passed through the suspected acid, which, if arsenic is present, will cause a lemon-yellow precipitate of golden orpiment, readily soluble in a solution of carbonate of potash, or soda. This contamination of commercial muriatic acid arises from the use of oil of vitriol obtained from pyrites.

Assistant asks, "What quantity would you give if three grammes of hydrate of chloral were ordered." If placed in such an embarrassing position, and doubtful of the true solution of the mystery, we should feel inclined to throw up our commission until we had qualified ourselves for our position by learning the metrical system of weights and measures, and their equivalents; then we might be able to answer—46 grains.

J. E. K.—RESTORATION OF OIL OF LEMON.—It is said that agitation with a solution of borax, with which some animal charcoal has previously been mixed, will deprive old oil of lemon of its bad odor and color, agitation with boiling water is also stated to be effectual.

B. R.—PEROXIDE OF IRON, the antidote to poisoning by arsenic, is most readily prepared for administration, by mixing about two ounces of liquor ferri perchlor, with a solution of carbonate of soda (*sal soda*) about one ounce of the crystals will be sufficient; a quarter of an ounce of calcined magnesia may be substituted for the soda. This will render ten grains of arsenic innocuous. Ferric hydrate will not keep well, becoming, after the lapse of even a short time, inert as an antidote; after being kept five months its power is diminished to one fourth.

I. Wilson.—LIQ. BISMUTH. ET AMMON. CITR.—You are right in supposing this preparation to contain more than indicated by the official name; it is in reality a solution of citrate of bismuth in a mixture of nitrate and citrate of ammonia. It is to be hoped that the British authorities will change the mode of preparation, as with the bismuth at present in the market, it is very troublesome to make a preparation free from copper.

SOLDERING LIQUID.—A saturated solution of zinc in hydrochloric acid is much prefer-

able to resin or stearine, in soldering tin. It is said that if the solution of chlorido of zinc be neutralized with carbonate, or oxide of tin, the corroding effect of the compound on the seams will be avoided.

Trade Report.

Business, during the present month, has improved considerably. Many large buyers have been down, and have bought pretty extensively, showing their confidence in an improved state of things for the summer months. Payments have also been met with gratifying promptness. The stocks of some descriptions of goods is rather low, and spring arrivals are anxiously waited for.

Prices may be said to have generally advanced, Opium still continues to puzzle buyers and has again raised in price, being quoted at \$12. Balsam Copaiba, slightly higher; Vanilla beans advanced \$2 per lb.; Cardamom and American Saffron, considerably higher; Quinine and Morphia very scarce; English oil of Lavender, higher; Cod Liver oil, slightly advanced. Those articles which favor buyers are Citric Acid, Chiratta, Canada Balsam, and the oils of Citronella, Juniper, and American Peppermint. Alcohol has fallen in price to \$1.77½.

Paints and oils, as usual at this season of the year, have been in very brisk demand; linseed oil both raw and boiled, are slightly higher, and turpentine has also advanced in price.

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