tar, the oil with one-half its weight of powdered acacia; to this add, at once, one-half as much water as the combined weight of oil and gum, and triturate briskly until the mixture has assumed the color and consistence of a thick cream, which produces a crackling noise when the pestle is moved rapidly around the sides of the mortar." To this can be added any amount more of water or other desirable vehicle or medicament to bring the finished preparation up to the quantity prescribed.

If perfectly made, this emulsion will stand any degree of dilution with watery mixtures; in fact, its quality is proved when, by a large addition of water, the oil globules will not separate and collect at the top of the liquid.

Practice has demonstrated that the proportion of gum can be varied according of the nature of the oil employed, but the constant relation between the water used for the emulsion proper and the mixture of oil and gum must be scrupulously adhered to as insuring infallible results.

Fixed oils, rich in gum, such as copaiba, castor oil, etc., do not require as large an amount of gum as cod-liver oil, while for ethereal oils, such as turpentine, an equal amount of gum is requisite.

Preparation of Bismuth Absolutely free from Arsenic.

To prepare not too large quantities of absolutely pure metallic bismuth, and free from every trace of arsenic, Löwe proposes the following method in the *Zeitschrift f. Anal. Chem.*

Commercial bismuth is treated with a sufficient quantity of nitric acid to dissolve it, with the aid of heat. Any tin or antimony present will thereby be left behind. The clear solution is transferred to a flask and diluted with distilled water as far as it is possible without producing a cloudiness. The bismuth is then precipitated by soda solution, and when the precipitation is completed, one and a half times as much more of the soda solution added as had already been used. Next a sufficient amount of dense glycerin is added to re-dissolve the precipitate, or at least the greater part of it, for, if the metal was very impure, small amounts of iron, nickel, and similar metals will remain behind as oxides. Up to this point no arsenic has been separated because the arsenate of bismuth is likewise soluble in an alkaline solution containing glycerin. A few drops of solution of carbonate of sodium are now added, the liquid filtered off after twelve hours from any residue, and the filtrate mixed with four to five times as much grape-sugar as the original weight of the bismuth, the sugar being previously dissolved in eight times its weight of distilled water. If commercial grape-sugar is used, which is never pure and always contains lime, it is dissolved in six to eight parts of water in a flask, and solution of carbonate of sodium added until this ceases to produce a precipitate. The liquid is then heated on the water-bath, which will cause it to become quickly clear; it is then allowed to become entirely cold or may be cooled rapidly by placing the flask in cold water, a few drops of solution of soda are added, and the whole is set aside, well corked for some time. It is then filtered and added to the bismuth solution.

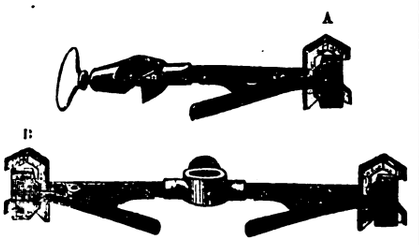
The mixed liquids are set aside, in a tightly closed flask, in a moderately warm and dark place, until any silver or copper present are precipitated, the former as metal and the latter as suboxide. The removal of copper may be recognized by the disappearance of all blue tint. The mixture is now again filtered. Next, the yellowish filtrate is poured into a flask which is set in a cold saturated solution of common salt, and heated for some time to boiling, whereby the liquid assumes a deep-brown color, and all the bismuth present is precipitated as gray metallic mud, while all the arsenic remains in solution. When the reduction is finished, the metallic precipitate is washed, until the wash-water has only a slight yellowish tint, whereupon it is mixed with a one-per-cent sulphuric acid, and finally completely washed with water. The drying of the finely divided metal must be hastened by placing it upon porous clay-tiles and passing a warm current of air over it, since it will otherwise become slightly oxidized in some places. After being thoroughly dried, the metallic powder is firmly pressed into a porcelain crucible, covered with lamp-black and, after the cover has been luted on, the metal melted. It will then be absolutely free from arsenic.

"Bromine-Sticks."

In our last volume (New Remedies, 1883, p. 297) we gave an account of a method patented by A. Frank to use bromine as a disinfectant. The inventor mixes the bromine with *kieselguhr* (a porous, siliceous fossil earth), which permits it to be handled with the greatest ease.

The same inventor now places this substance upon the market (through the chemical works of E. Schering, in Berlin) in form of thin sticks, which permit quite an exact measurement of any desired quantity of bromine, since the sticks contain almost exactly 1 gramme of bromine in each centimeter of length.

These sticks will probably be found useful also in chemical laboratories, if it is desired to oxidize some substance by means of small quantities of bromine.—*Pharm. Centralh.*, No. 8.



NEW BURETTE CLAMPS.

The clamps here illustrated have the double advantage that they may receive and hold burettes of any diameter, and so that the graduated scale may be easily read, but also that the burette may be quickly taken out and exchanged for another.

The holder consists of an arm fitting to the upright rod of a retort-stand in the usual manner. At its outer end it has an angular claw, the open side of which is closed by a plate pressed against it by a spring acting upon its handle. The inside of the claw and plate are covered with a thin layer of cork. The clamp is either single or double. By a pressure upon the projecting handle of the plate-piece, the burette is readily disengaged. When held in place, its front is not grasped by any part of the apparatus; hence the graduated scale is always fully exposed. This new burette clamp is made and sold by Dr. Robt. Muencke, of Berlin, and may be obtained here through dealers in chemical apparatus.

Prescription Difficulty (*Ind. Phar.*).

Chlorate of potassium	30 grs.
Borax	15 "
Tr. cubebs	2 drs.
Mucilage of acacia	2 oz.

Sig. Dose, a teaspoonful.

It has thus far gelatinized on each occasion when its preparation has been attempted.

Tolu Rock and Rye (*Ind. Pharm.*).

Good whiskey	1 gallon.
Rock candy	4 pounds.
Gum tolu	2 ounces.

Put the whole into a two-gallon jug, set in a warm place, and agitate several times a day until the candy is dissolved. Then strain through flannel or coarse muslin.

[The proportion of sugar appears to us larger than good whiskey will dissolve, and it may be remarked, in passing, that it is reported that the original "rock and rye" contained figs among its ingredients.—Ed. Am. Drug.]

Wizard Oil (*Ind. Pharm.*).

The following mixture produces something resembling this nostrum:

Oil of cloves	½ oz.
Water of ammonia,	
Ether,	
Oil of turpentine, of each	½ "
Chloroform	1 dr.
Camphor	2 drs.
Oil of sassafras	1 oz.
Alcohol, sufficient to make	1 pt.

Mix, and dissolve.

Florida Water (*Drug. Circular*).

Oil of lavender	4 fl. oz.
Oil of bergamot	4 "
Oil of neroli	2 fl. dr.
Oil of orange	4 "
Oil of clove	1 "
Pure musk	4 grains.
Cologne spirit (96%)	1 gallon.
Tincture of Tonka bean	sufficient to color.

Macerate for 15 days, and filter through paper.

St. John Long's Liniment (*Med. Times*).

The following is the formula employed by Jacob Hecker, Ph.G., the apothecary of the Pennsylvania Hospital, Philadelphia: The yolk of 8 eggs; 24 fl. oz. of turpentine; 16 fl. oz. of acetic acid, and 24 fl. oz. of water. The yolks, with a small quantity of the water, are to be briskly shaken in a gallon bottle, then the turpentine is to be added in small portions with continued shaking, then the acid, and finally the water are added, with similar shaking, until the mixture is completed. A drachm of good oil of lemon to each pint is an improvement.

Sorel's Cement for filling cavities in teeth is made by adding, rapidly, deliquescent chloride of zinc to enough oxide of zinc to make a thick paste, and applying it immediately.

Phosphate of Zinc Cement, said to be more durable and less irritating, is made by mixing oxide of zinc with syrupy phosphoric acid made by boiling the officinal concentrated phosphoric acid until the temperature rises to 215° C. (419° F.).

Lime-Juice and Glycerin.

Lime, or lemon-juice	8 ozs.
Rose-water,	
Elder-flower water,	
Alcohol, of each	2 "
Glycerin	3 "
Oil of lemon	30 drps.

Heat the lemon (or lime) juice in a porcelain dish to nearly the boiling point. When cool add the aromatic waters and the alcohol, and mix the whole well together. After 24 hours' repose, decant or filter, and then add the glycerin and oil of lemon with thorough shaking.

Dr. Syke's Catarrh Cure.

Mr. D. S. Sager, chemist, of Brantford, Canada, writes us that an analysis of a package of this substance showed that it consisted of between 66 and 67 per cent of chlorate of potassium, with powdered licorice-root and a small amount of brown powder not analyzed. The liquid is made by adding the powder to a stated amount of water, filtering out the sediment, and flavoring with wintergreen.