

emulsion. The agents generally used are gum tragacanth, gum acacia, tincture of quillain, &c., but the best results, as a rule, are obtained with tragacanth. The B. P. C. formula, in which the use of a mortar is dispensed with, forms a good emulsion if carefully prepared. The method of procedure is to place 40 ounces of cod-liver oil in a dry Winchester quart, then mix together by themselves half an ounce of simple tincture of benzoin and spirit of chloroform with 200 grains of powdered tragacanth. This is added to the oil, and the whole well shaken for a minute. A pint of distilled water is now added all at once, the whole being well agitated again, and finally the flavoring oil, glycerine, and sufficient distilled water to make 4 pints is put in, and the emulsion well shaken for some little time. When the powdered gum tragacanth alone is used to emulsify cod-liver oil, it is necessary to use a mortar. If it is thought desirable to use gum acacia as the emulsifying agent, a good result may be got with the following proportions:—Rub 24 parts of powdered white sugar and gum acacia together in a large mortar, adding sufficient water to form a thickish paste. Now add gradually 48 parts of cod-liver oil in small quantities at a time, triturating regularly until the whole of the oil is emulsified. Thin down slowly with 36 parts of distilled water, flavoring with suitable essential oil, such as almonds or cinnamon. The whole should then be allowed to stand for some time in the mortar, being triturated now and again until a good emulsion results. A thin and creamy emulsion of cod-liver oil may be prepared with the aid of tincture of quillain and an alkali. It will be found suitable for the exhibition of such soluble medicinal agents as the hypophosphites of soda or lime, &c. The tincture of quillain bark may be made as follows, and will be found a most useful emulsifying agent:—

Quillain bark	2 ozs.
Rectified spirit	10 ozs.

Reduce the bark to coarse powder and macerate in the spirit for four days and filter.

To prepare the emulsion, nineteen ounces of lime water and one ounce of the tinctures should be mixed together and placed in a Winchester. Now add gradually 20 ounces of cod-liver oil, shaking well between each addition of the oil, and continue the agitation until the whole is thoroughly incorporated. The emulsion may be flavored with vanilla or almonds, which should first be dissolved in a few drops of chloroform and then added. When it is desired to mix a medicinal agent with this emulsion it should be dissolved in the lime water.

Balsam of copaiba may be emulsified with gum acacia, solution of potash, or the yolk of an egg. If acacia is employed, it answers best in the form of the powdered gum, and the average quantity required is at least one fourth of the weight of the oleo. resin about to be emulsified. The following form is one often met with, and

from which a good result may be obtained:—

R Bals. copaiba	1 oz.
Pulv. acacia	3 drs.
Tr. hyoseyan	2 drs.
Spt. ether nit	2 drs.
Aque.ad	8 ozs.
Misce.	

To prepare this emulsion first place the powdered gum in a dry mortar, then add sufficient water to form a stiff mucilage, then add a very small quantity of copaiba, and well triturate until completely mixed. More copaiba should now be added in small proportions until the whole is completely incorporated. If the emulsion is getting too thick, add a little water now and again. Lastly, the remainder of the water is added, and the tincture and spirit. An excellent emulsion of copaiba may be made with the solution of potash of the British Pharmacopœia as an agent, in which the use of a mortar is unnecessary. Mix the solution of potash with about half an ounce of water in a bottle. Now add the copaiba in small quantities, about a drachm at a time, pouring it into the centre of the alkaline solution and agitating vigorously between each addition. When all the oleo-resin is emulsified, the water should be added in the same manner, about one ounce at a time, and finally any other ingredients, the whole being well shaken. An emulsion prepared with the yolk of an egg is a favorite form with some prescribers.

R Bals. copaiba	3 drs.
Ol. santal	20 m.
Ovi. vitelli	1
Syr. zingib	4 drs.
Vin. xerici	3 ozs.
Aque.ad	8 ozs.
Misce.	

To prepare the yolk, first fracture the egg shell about the centre with a knife, or by means of a sharp knock on the edge of a measure, and divide the shell in half, allowing the albumen to escape by retaining the yolk in the shell until it has all drained off, then place the yolk in a mortar and well triturate it. The copaiba and oil should now be added in small proportions as described before, and when they are thoroughly incorporated, the syrup, wine, and water having been previously mixed, should be slowly stirred, in and the emulsion is complete.

Castor oil is best emulsified with gum acacia, or its mucilage, and is usually made up with sugar and cinnamon water. The oil of sweet almonds form a good emulsion with a solution of potash or other alkali, and may be emulsified without difficulty in a bottle.

R Ol. amygdal dulc.	3 drs.
Liq. potas.	½ dr.
Vin. ipœc	1 dr.
Syr. violæ	½ oz.
Aque.ad	3 ozs.
Misce.	

This is a common prescription, and the emulsion is easily formed when the right method of procedure is known. The oil should be put into the bottle with about two drachms of water first, then add the solution of potash, and shake well until completely emulsified. The water may

now be added gradually, the bottle being well shaken between the addition of each portion, and finally the other ingredients.

Turpentine is usually emulsified with the yolk of an egg, and also forms a good emulsion with soap. When made in the following proportions it does not separate:

R Ol. Terebinth	2 drs.
Pulv. supo. castil.	1 scr.
Aq.ad	4 drs.
Misce.	

Place the soap in a mortar and add the turpentine gradually with rapid trituration, when completely incorporated pour into a bottle and add the water in small quantities at a time, with frequent agitation until completed.

To form an emulsion with spermaceti, it should first be rubbed down one with a few drops of rectified spirit, and emulsified with the yolk of an egg. This agent is undoubtedly the best for emulsifying any solid fats, the proper method being to rub them well together in a mortar until thoroughly incorporated together. The oil of male may be emulsified with mucilage or tincture of quillain.

Balsam of Peru and tincture benzoin with yolk of an egg.

The addition of borax to an emulsion often improves it, but spirit in any quantity, and the admixture of glycerine also, have a tendency to cause it to separate. Such gum-resins as myrrh ammoniacum, &c., should be rubbed down as fine as possible in a mortar, and gradually triturated with water alone, the insoluble part being strained out.

(To be continued.)

Aristol! In Burns and Scalds.

Dr. Heinrich Stern, New York City, says in *The Practitioner*:

I HAD lately two cases of the above injuries under my care, which the exclusive use of Aristol brought to an early and good recovery.

CASE I.—A girl, aged 24, a cook by occupation; her injury was one of the so-called "fourth degree." The seat of it the forearm, the skin and subcutaneous tissues had been destroyed, the parts turned hard dry and eschar like; the surrounding skin became contracted and folded. I applied at once:

Aristol, 1 part.
Vaseline, 10 parts.

The eschar was completely separated by the fourth day, after which by continuous use of the ointment suppuration was limited, and granulation and afterwards repair was completed in less than 1 month.

CASE II.—Child of four years, fell in a bath-tub of hot water. The injury was one of the blister stage; the serum beneath the cuticle showed itself nearly all over the body. I punctured the largest blister carefully, and applied aristol in the before mentioned manner. In about two weeks after the child had recovered.

VALERINE and Chateanine are two new alkaloids discovered by Waliszewski in valerian root. They yield crystallizable salts.