

pieces and sold as a slate sponge. The "sheep wool," the finer variety, goes through many processes before being sold, which impart to it a rich golden color. The softest, finest and most valued are the Turkey and Levant sponges. The grading and naming of sponges is also an art peculiar to itself, and many of the names given to some varieties are the production of the sponge "curer's" wisdom.

Castor Oil.

BY D. B. DOTT, F. I. C., F. R. S. E., AND RALPH STOCKMANN, M. D., F. R. S. E.

Castor oil has been the subject of many investigations, but no definite conclusion has yet been arrived at regarding the active principle. The most striking point about it is, that when applied to the skin or mucous membranes, castor oil (unlike croton oil) is a perfectly bland unirritating substance, but when swallowed it causes sufficient irritation to enable it to act as a moderately powerful purgative. Schmiedeberg, Dixon, and others hold that it contains a special acid principle which is the purgative body, while Buchheim long ago stated that there is no special substance, the purgative action depending on the ricinoleic acid which is set free by the oil undergoing partial saponification by the alkalis of the small intestine. The latter is the current view, and has been recently strongly supported by Hans Meyer (*Archiv. Expt. Path. and Pharmak.*, xxviii., 1890). Meyer prepared ricinoleic acid by saponification of the oil with soda, precipitation with calcium chloride and crystallization of the calcium salt from alcohol. The ricinoleic acid was set free by the addition of hydrochloric acid and further purified. The glyceride was also prepared synthetically by heating together glycerine and ricinoleic acid to 300° C. in a stream of carbonic anhydride. Both the glyceride and the ricinoleic acid were found to be purgative to cats and to men, but in men the action was accompanied by more nausea and colicky pains than is usual with castor oil.

As the oil has been heated to 300° C. in an atmosphere of carbonic anhydride, without losing its purgative action, it occurred to one of us that it might be possible to decompose the oil with superheated steam at the temperature of 300° C., and so obtain the purgative principle in a more concentrated form and free from nauseous taste. The oil was decomposed by superheated steam in the laboratory of Messrs. Duncan, Floekhart & Co. and the products used for physiological experiment.

The glycerine in $\frac{1}{2}$ -ounce dose had not the slightest action on a dog, to which it was given by the mouth.

Of the ricinoleic acid 3 drachms given to a dog had no purgative action, and 6 drachms given subsequently remained without effect. The latter amount also proved inoperative in rabbits.

In connection with his castor oil research, Meyer states that dogs and rab-

bits are very uncertain in their reaction to purgatives, and that cats are much more reliable subjects for experiment. Although we do not agree with this statement we made two trials of our ricinoleic acid on these animals. One cat received 3 grammes, the other 10 grammes, and in neither case was there purgation, although the latter evidently had considerable gastric irritation. As Meyer found that cats were purged by any dose of castor oil over 2 grammes, and that one-half gramme or more of his ricinoleic acid was also quite active, while 15 grammes sufficed to purge a dog very thoroughly, it is evident that his ricinoleic acid and ours are substances which differ in important respects.

The residue remaining in the still after the saponification by superheated steam was tested in the same way and found to be devoid of purgative action.—*Phar. Journal*.

Pental: A New Anæsthetic.

Pental is the new name applied by Prof. J. V. Mering to *Trimethylethylen*, a product of amylen-hydrate heated with acids, and recommended by the distinguished clinician as a safe and effective anæsthetic. Pental is described, chemically, physically, and as to its possible utility, in the *Pharmac. Zeitung*, October 7, 1891, and in the *Pharmac. Centralhalle*, October 15, 1891; both journals conservatively withhold endorsement of the product, basing apparent skepticism on the fact that chemically the body has long been known, and that analogous amylens (for instance, *iso-amylen*) were employed as anæsthetics almost 40 years ago, but quickly discarded because found to be unsatisfactory and offensive owing to their unpleasant odor.

So was cocaine well known; yet who will deny that the discovery of its wonderful anæsthetic properties was a revelation to the medical world, and worked a revolution in treatment and practice which will forever distinguish the name of the discoverer, Dr. Koller, whose publication in August, 1884, was responsible for the present universal application of cocaine.

While pental will probably not excite the same degree of interest as did cocaine, it is safe to assume—reckoning on the high character and recognized conservative authority of Prof. V. Mering—that this product will find valuable application. From reports already furnished, notably that of Professor Hollaender of Halle a. S., (*Therap. Monatshefte*, October, 1891), which was read before the Dental Section at the Convention of German Naturalists and Physicians at Halle, this year, the new anæsthetic is shown to be suitable and efficient for minor surgical operations, and particularly in dentistry.

Pental (C₅ H₁₀) occurs as a colorless liquid of low specific gravity; its boiling point is 38° C.; it burns with an illuminating flame, and is readily inhaled without affecting the membranes of throat or passages. It is insoluble in water, but

miscible in all proportions with alcohol, chloroform or ether, and being inflammable like the latter, must be protected from possible ignition. It is exceedingly volatile, but does not decompose on exposure to air or light.

The inhalations are simply conducted, 10 to 25 cc. of the fluid sufficing, and narcosis ensues within 50 to 90 seconds (Dr. Hollaender), without influence on respiration or the action of the heart, and causing no unpleasant side or after effects. From a careful consideration of Dr. Hollaender's report, a most favorable impression of the value of pental is gathered, and we hope to supplement and confirm this by early additional original reports.

Notes on New Remedies.

Salol.

E. Egasse (*Bullet. de Therapeut.*) in the course of an article on salol gives the following formulas for the exhibition of this agent:

In suspension for children. Salol, ad libitum; gum arabic, 5 gm.; gum tragacanth, 20 gm.; simple syrup, 30 gm.; water, 120 gm. For intestinal antiseptis in typhoid fever and in rectal cancer: Salol, 10 parts; olive oil and lime water, of each 60 parts. For burns: Potassium carbonate, 1 gm.; olive oil, 10 gm.; zinc oxide and starch, of each 15 gm.; sulphur, 6 gm.; salol, 5 gm.; lanolin, 63 gm. For contagious impetigo, pustular eczema: Salol, 3 gm.; ether, 3 gm.; cocaine hydrochloride, 20 cgm.; collodion, 20 gm. For sore nipples: Salol, 4 gm.; ether, 4 gm.; collodion, 30 gm.; or in the form of powder, powdered salol and starch equal parts; as ointment, powdered salol, 5 gm.; lanolin or vaselin, 30 gm. Absorbent cotton may be saturated with an ethereal solution of salol.

Cutting Glass Tubes, Bottles, Etc.

Another method, by Prof. Wm. Thomson, consists in having some strips of thick blotting paper at hand from a quarter to half an inch in width, and of different lengths. Two pieces of such paper are wetted and wrapped round the bottle, tube, or other vessel to be cut, once or oftener (once is sufficient). These pieces of paper, cut true, are wrapped round the vessel like two bands. They must not be placed too closely together—say from a quarter to three-eighths of an inch apart for large vessels, and rather less than a quarter of an inch apart for tubes of an inch or so in diameter. When this is arranged a fine flame about two or three inches long is allowed to play on the glass between the two pieces of wet paper, the vessel being slowly revolved and the point of the flame kept between the two papers. Within a minute usually the vessel separates with a clean cut along the line against which the flame played.

THE PEONY was thus named by the Greeks, in honor of Pæon, the physician of the gods, being held by them in high repute.