oils proceeds apace. Iso-eugenol is the subject of a recent patent; violettone is a competitor with ionone, and rhodinol and anethol have been the subject of much work.

Darmstædter and Lifschutz have continued their researches on the chemistry of wool fat. Wijs has studied Hubl's method of iodine absorption in the case of oils and suggested a modification consisting of a solution of iodine monochloride in acetic acid as absorption is much quicker than by the original method. Grier has related his experience in taking the melting point of soft paraffins and indicated a new method depending upon coating the butt of the thermometer with the paraffin and allowing it to dip below the surface of a beaker full of mercury. Another method, suggested by Crossley, depended upon capillary attraction of a melted body, the moment that a rise is noted being taken as the m.p. The detection of cotton-seed oil in lard is an old difficulty with analysts; Tortelli and Ruggeri suggested a modification of the well-known Bechi test, which is capable of detecting 1 per cent. of the adulterant. A novel method has been suggested in our column of Science Notes for the detection of tallow in lard, depending upon the fact that melted lard when cooled and dissolved in chloroform gives off no air bubbles, whereas tallow does. Some easy tests for the purity of turpentine are used at the Custom Houses in Germany, shaking with hydrochloric acid and noting the rise in temperature, being the principle. The use of guaiacum wood oil as an adulterant for otto is the most recent addition to the long list of contaminations and as it has a crystalline character and mild, agreeable smell it can be used by itself. No direct test has been proposed, but the m p. of genuine otto is never below the limits of the new B.P. A quick method of distinguishing quaiacol from creosote, according to Vrenens, is to evaporate a drop with a drop of nitro muriatic acid, the former gives needle shaped crystals, the creosote only an oily residue.

Dowzard has devised a quick method of standardization of tincture of strophanthus, and determines the coloring matter of saffron by comparison with a solution of chromic acid of known strength. Wanters suggested a test for saffron depending upon the tinctorial power dyeing a sample of wool, cotton and silk in the presence of tartaric acid.

Adam has give the analytical data for huile de cade with the conclusion that most of the commercial article is adulterated. Organic glycerophosphates have been produced by Aarian and Trillat. The chemistry of thyroid gland has advanced since the discovery of thyroidin by Baeyer, and the presence of iodine has been suggested by McWalter as a means of standardization. Swinton found only traces of iodine in the precipitated extract, commonly called thyroidin, used largely in hospitals. Stanford has fallen foul of this statement and maintains that the iodine was not extracted by the method used. He has also introduced a new preparation of the gland, called thyroglandin, which he claims to contain all the properties of the glands. Wroblewski has prepared pure diastase by a method based upon the fact that diastase is insoluble in alcohol above 65 per cent., but soluble in 45 per cent. Several new methods have been suggested for the determination of uric acid in urine; Rayleigh stated that nitrogen evolved from urea by the hypobromide method is accompanied with nitrous oxide. Smith estimated nitrous ether in spirit of nitre by adding silver nitrate, chlorate of potassium and nitric acid, and determining the silver salt by means of $\frac{N}{10}$ potassium sulphocyanate. Gladding estimated boric acid by distilling the borate with methylic alcohol and hosphoric acid, and litrating the distillate after the addition of glycerin with standard soda. The action of hydrogen peroxide on carbohydrates in the presence of a trace of ferrous iron has been studied by Cross and Bevan, whilst Fenton has carried the research to the sugar group. Smith has compared the accuracy of titrimetric and gasometric methods of estimating hydrogen peroxide in the presence of preservatives.

Mona extracted nickel from its ore by combining the metal with carbon monoxide. The absorption of CO_2 by magnesia was not so great as was suspected, according to Paul and Cownley, and has reference to the keeping of Gregory's powder. Reduced iron is not satisfactory according to Peck and arsenic is usually present.

Reference should be made to the loss to chemical science in the death of Lord Playfair and George Dragendorff.

PHARMACOGNOSY.

New drugs do not require much space as the references to them are so meagre that much more work is required before they attain sufficient importance to find place in our dispensatories and pharmacopœias. Chione glabra, a native of the Windward Islands, has yielded a volatile oil, but no other characteristics, to Paul and Cownley. Dunstan has also separated an organic body from this oil, but no medical details have been given. The drug is used locally as an aphrodisiac and tonic. Neuroloma lobata, from the same islands, has an alkaloid to which is attributed its virtues as a substitute for quinine and anti dysenteric remedy. Heffter examined the cactus alkaloids with the result that pellotine has revealed its composition. Several alkaloids have been isolated from the mescæ plant by the same author and the results confirmed by White, and their physiological effects studied by Dixon. Briefly, they are cardiac stimulants. Oxycannabin can be obtained from cannabinol according to Dunstan and Henry, and has a simpler formula than that assigned to it by Bolas and Francis. Phallin is the poisonous substance present in species of amanita according to Kobert. Gruettner has isolated fat, tannin and sugar from hamamelis. Ough found that hamamelin, the dry alcoholic extract from hamamelis, prepared by strong alcohol from the leaves, was much more efficacious than that prepared from the bark. Kain has discovered a new glucoside in senega root and found the three chief constituents of an aqueous extract to be senega-saponin, this new lævo rotatory glucoside and saccharose. Houghton, in a communication on aseptic ergot confirmed Kobert's statement that the most satisfactory test of the activity of ergot is obtained by means of feeding fowls with it. An active preparation darkens the combs and wattles and ultimately gangrene. A large proportion of the drug, as offered in commerce, is unfit for medical use according to this author. Bourquelot and Herissey found that the pectin of gentian root yielded mucic acid when treated with nitric acid, and hydrolized with sulphuric acid gave arabinose, thus resembling the pectin of beet-root. Bourquelot and Nordin have examined the sugar from gentian, it is dextro-rotatory, white, does not reduce Fehling's until inverted. Hartwich drew attention to a false sarsaparilla coming from the Amazon River, and closely resembling true sarsæ, but without calcium oxalate or starch. Stockman has described the history, source and constituents of arrow poisons. Kiliani is still working at digitalin and