

sea-sickness and powerful carminative. It is inhaled and taken internally in 5 to 10 drop doses.

Valerydine, a compound of phenacetine with valerianic acid, recommended as a remedy in hysteria, neuralgia, etc., in doses of 8 to 16 grains.

Xeroform, a combination of tribromophenol and bismuth; praised by Kaiser as a substitute for iodoform.

BOTANY.

Progress is chiefly to be recorded in physiological botany, where many able workers have been engaged in elucidating phenomena for years past. Darwin controverted former statements that stomates of marsh and aquatic plants do not close when the leaves are gathered. The function of stomates is a source of considerable discussion amongst botanists. Ramann found that no diminution of the mineral substances in leaves takes place during the autumn. The same author also found that potassium and phosphoric acid greatly preponderate in the ash of the pine pollen. Stoklasa reported that arsenic has a highly poisonous effect on plants, although in the presence of superphosphates it is not injurious as long as the quantity does not exceed 0.3 per cent. Strásburger has contributed to our knowledge of the cell wall, especially as regards the growth or increase in thickness. Green has reviewed the advances made in the study of fermentation under the action of soluble enzymes, and has drawn attention to secretion of an alcohol-producing enzyme by the yeast-cell. The gum in elm-galls, according to Passerini, is different from arabin, dextrin and other gums. It is strongly dextro-rotatory and reduces Fehling's solution. Emulsin has been detected by Hérissey in several lichens. The incense trees of the West Indies have been identified, the resin yielded by *Protium guineense* being identical with that used in St. Lucia, Cayenne and Venezuela. Farlow has published a treatise on the distinctions between edible and poisonous fungi. Dassonville found that salts of potassium and sodium have opposite effects on the tissues, the latter increasing and the former retarding the rigidity of the plant. An excess of carbon dioxide in the atmosphere tended to increase the length of the stem of lupinus and other plants, according to Téodorisco. Stoklasa has confirmed the statement of Molisch that iron is not a necessary constituent of chlorophyll. Ratz found that fungi have

the power of forming diastase, and that the presence of starch is not essential for the purpose. It will be remembered that taka-diastase is prepared in this manner according to published statements. Chlorophyll has been produced in the dark by Etard and Bonilhae, but the interesting problem was not settled whether this product was physiologically active.

PHOTOGRAPHY.

Progress in this department has been steady, but no epoch-marking discoveries have to be noted. The enthusiasm upon the subject of three-color photography has waned considerably but in practical printing some interest is still focussed on the method, the principal drawback being the initial expense.

Chemists should take advantage of the numerous practical hints and formulæ published in our section "Photographic Notes" from time to time. There is also a good field for compressed tablets of pyro, eikonogen, hydroquinone, etc., and for toning purposes chloride of gold and sodium suitably diluted. The work of the amateur photographer is considerably lightened by having these in definite weighed quantities ready to hand when required instead of solutions that spoil by keeping. Ortol is the name of a new developer which has advantages over pyro, eikonogen, etc. The objection to the poisonous nature of mercury intensifiers has led to the introduction of others that are harmless.

Among these the copper sulphate formula (C.D., July, 1898, page 162) and uranium are the best. The old cadmium intensifier is a fraud. Velox paper has strong recommendations for winter work, it can be manipulated in candle or gaslight. Acetate, in conjunction with pyro, is recommended as an improved developer as it does not stain either fingers or negative. Formaldehyde has been recommended in a similar fashion with hydroquinone, but intended for live work. At recent exhibitions gum bichromate photographs have received a good deal of praise, as the effects are very pleasing, but, as much of these is due to judicious manipulation with brush, it is hardly pure photography. The conversion of Eastman's Photographic Co., into Kodak, Limited, with an immense capital, quickly subscribed, is one of the events of 1898.

The drug trade is not on a push cart, but it needs to be pushed nevertheless.

Montreal College of Pharmacy.

SESSIONAL EXAMINATION.

The Christmas examinations of the Montreal College of Pharmacy were closed on Thursday, December 22nd, with the following results, the names of students in the separate classes being placed in order of merit as follows:

Materia Medica, Junior Class.—J. W. McFarlane, A. S. Hart, D. G. Scott and M. Albert, equal; A. E. Baldwin and L. G. Ryan, equal; W. Joseph Shea, W. J. McKindsey, Bernard Fox, J. A. Dearden.

Materia Medica, Senior Class.—N. Guerin, G. Richard, Miss A. A. Prevost, P. Bergeron, J. B. Bisailon.

Chemistry, Junior Class.—Joseph Valois, E. Valboncœur, Roger Pasquin.

Chemistry, Senior Class.—A. J. Bedard, A. T. Christie, A. E. Baldwin.

Botany Class.—A. J. Bedard, H. Guerin, L. R. Vezina, H. St. Georges, A. E. Baldwin, G. Richard, A. T. Christie, A. S. Hart, H. Genereux, P. E. Brouillet, Oscar O. Paquette.

The next sessional examination will be held at the end of March, which will close the college session of 1898-99. The marks then obtained will be added to those now obtained, the combined result showing the standing of the students entitled to certificates.

Never Fear Competition.

Of course it's a good thing if you've got the only article of the kind in the world and everybody must possess one or more of these articles and nobody else on earth can supply the demand. But don't expect to step into anything of this kind when you go into business. Competition won't hurt you, provided you handle the right kind of goods and treat your trade fairly and honestly. The friends of Benjamin Franklin tried to dissuade him from starting a newspaper because there were two other papers in America.

A very curious presentation of the number of Irishmen, of the stamp of Wolseley in England, the Duke of Tetuan in Spain, General O'Brutscheff in Russia, Viscount Taaffe in Hungary, who are leaders in many nations, is given in the January *Cosmopolitan* under the title, "Irish Leaders in Many Nations." It will be found interesting to all who have even a drop of Irish blood in their veins. "The Jews in Jerusalem" is another article in the same number possessing interest for a large class.