

Report on the Progress of Pharmacy

For the Year 1912

Eleventh Installment.

Swiss Ergot of 1911.—A. Vatter gives the following data. Ergot is found most abundant on dry and sunny places 700 to 900 meters above sea level. That on winter rye is small and more uniform than on summer rye. Swiss ergot of 1911 was of excellent strength, running from 0.16 to 0.220% alkaloids by the Keller assay. The therapeutical action of the fluidextract from 1911 ergot was better than that of the harvest of 1910.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 25, 377. H. V. A.

The Vine in Culture and Medicine.—An interesting historical review of G. Ekert, of the grape, the wines prepared therefrom and the products of the vine other than wine that have been used in medicine. Among the products cited are raisins, currants, oil of grape seed, the sour juice (or omphacium), extract of young shoots and tendrils and "lacrimæ vitis," the sap exuding in spring from the wounded stalk.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), Nos. 25 and 26, 369 and 385. H. V. A.

Masticulating Agents.—F. Berger gives historic review of various substances used as "masticatoria" by ancients, primitive people and also at present time. He quotes list of chewing agents published by Hahn in 1839, who groups these into those of acrid taste like pellitory and tobacco; burning taste like ginger and mustard seed; aromatic, like cloves and mastic; tonic and astringent, like cinchona and rhatany; and deodorants, like roasted coffee and wood charcoal. He mentions the chewing of cloves by the Chinese since B. C. 220; of mastic by the Mohammedans; of coca by the Peruvians, and then gives special attention to the three great masticatoria used at the present time; tobacco, chicle, and betel nut. Of the latter he gives many interesting details.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), Nos. 26 and 27, 389 and 401. H. V. A.

Llujta.—This is the Bolivian name of the alkaline material used by the coca chewers of the Andes, and represents the ash of Chenopodium Quino, coca stems, banana stalks or even burnt lime kneaded with potato (or some other starch) and water and dried.

A sample brought from Bolivia by Dr. Herzog has been examined by Hartwich and Wichmann, who find it in grayish tablet-like pieces about 10 cm. x 3 cm. x 4 mm. in size. The starch as shown under the microscope is from wheat; while qualitative analysis showed presence of potassium, sodium, magnesium, calcium, aluminum, iron, carbonates, chlorides, sulphates, phosphates and silicates. Titration showed an alkalinity of 0.968% (calculated as K_2CO_3), while the water insoluble part represented 22.32% $CaCO_3$.

Effect of Trypsin on the sprouting and growth of Plants.—A botanical investigation by Dr. Strujev, who finds that corn and sunflower seeds scarcely sprout in perfectly sterile artificial soils but will sprout if a trypsin solution is added. The proper strength of such solution is 2% and the proper amount is 0.5 to 2 cc. to each pair of seeds (the amount of nutritive fluid used not being stated). More than 2 cc. of the trypsin solution does not produce as large a plant as does 0.5 to 2 cc.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), Nos. 29 and 30, 433 and 449. H. V. A.

Honey: Microscopic Examination.—Dr. C. Fehlmann shows the value in food analysis of the microscopical examination of honey as every natural honey contains pollen. Indeed from the character of the pollen one can determine the geographic source of the honey and even the time of year when stored by the bee. Of course, natural honey diluted with glucose will still show the pollen; hence the plan has its limitations. Besides pollen grains, the sediment from diluted honey shows starch grains; when the bees (in early

spring) are fed on meal and sugar, shows specks of ultramarine; when they have been fed on sugar, shows spores of fungi, when carelessly prepared. The paper closes with the kind of pollen found in natural honey obtained from different parts of Switzerland.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 11, 149. H. V. A.

Digitalis: Chemical Assay.—Dr. James Burmann, emphasizes the possibility of a chemical assay of this drug which will be at least as accurate as the total toxicity method of biological assay. He explains the difficulties of chemical assay due to diversity of glucosidal bodies found in digitalis and the uncertainty of which these glucosides produce the desired action, showing that by the Keller method it is not the true digitoxin which is estimated but another body which he (B.) calls pseudo-digitoxin. He points out the errors in the assays of Fromme and of Ecalle and summarizes precautions necessary to successful assay, all of which (for example, "Do not use rubber corks in distillation") are self-evident to the trained analyst. He then proceeds to give his method which unfortunately was performed only with a "Dialyse Digitale" in which he is presumably commercially interested. He mixes 100 gm. of this "dialyse" with 60 gm. absolute alcohol and after bringing the fluid to 190 gm. with 50% alcohol, adds 30 gm. solution lead subacetate (Sp. Gr. 1.240) and 30 gm. absolute alcohol. The precipitate of organic matter thus formed is filtered off and 125 gm. of the filtrate (representing 50 gms. of the "dialyse" after removal of lead with hydrogen sulphide is concentrated at not more than 50° C. to 50 cc., then made alkaline with 2 cc. 10% ammonia and shaken out with chloroform. The chloroformic extract is evaporated, is redissolved in 3 gm. chloroform, 7 gm. ether is then added and the glucosides are precipitated from this solution by addition of 50 gm. petroleum ether. This precipitate which is then dried to constant weight, is a white amorphous powder responding to all the reactions for digitoxin and on recrystallization from absolute alcohol solution by addition of a little water, shows under the microscope the crystalline rosettes of pseudo-digitoxin and the prismatic tables of true digitoxin. By fractional crystallization, Burmann has separated enough of the two glucosides to estimate the

melting points which he finds to be 145°-150° and 247.5° respectively.

Comparing what he calls his "total assay" with the assay by the Keller method on the same dialysate, he deduces the amount of true digitoxin and gives the following table:

	I	II	III	IV
Total Assay..	0.152%	0.148%	0.118%	0.111%
Keller Assay.	0.118%	0.116%	0.091%	0.085%
Digitoxin ...	0.032%	0.032%	0.027%	0.026%

He has tested the accuracy of his scheme by running assays of the dialysate, to which he added definite amounts of Merck's crystalline digitoxin and finds that increased weight of the glucosidal mixture agrees with the weight of added digitoxin. The paper concludes with reports of biological assays of the dialysate and of the pseudo-digitoxin of Keller and the total digitoxin obtained therefrom.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 11, 153. H. V. A.

Tuberculous Sputum: Bacteriological Examination by the Antiformin Method.—Haass describes the rapid method of preparing tuberculous sputum for bacteriological examination by use of antiformin, which is the trade name for a mixture of solution of chromated soda and alkali. This mixture dissolves mucous, hair, wool, silk, nail tissue, keratin and is therefore an ideal fluid to dissolve the ingredients of the sputum other than bacteria. Moreover, while antiformin does dissolve some bacteria, the bacilli of tuberculosis are not dissolved; thus rendering its identification still easier. The manipulation consists of adding to 10 cc. sputum 20 cc. 10% antiformin, and after shaking, the mixture is warmed to 40° on water bath for one-half hour, or until completely homogeneous. Then add 5 cc. ligroin, shake vigorously and warm to 40° on water bath till the ligroin separates as clear layer, when a sample of the material at the point of contact of the two liquids is transferred on a platinum spatula to a cover glass and examined microscopically after staining. The article traces the history of the process and has a good bibliography.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 12, 174. H. V. A.

Antitrypsic and Meiostragmic Reactions.—M. C. Delenze explains these two types of modern diagnostic tests. The first is based on the fact that while the trypsin of normal

serum readily converts caseine into a form which will not precipitate with acids, the sera of cancerous patients does not thus affect alkaline caseine solutions.

The meiotagmic reaction is a comparison of the surface tension (as expressed in number of drops of fluid to a certain volume) of mixtures of the antigens on one hand and the anticorps on the other; the first being extracts from the diseased tissue while the latter are usually blood sera. The reaction is of service in diagnosis of syphilis, typhoid fever and tuberculosis.

The article gives details of manipulation of both reactions.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 13, 182. H. V. A.

Laminated Artificial Silk.—Dr. A. Verda discusses transparent cellulose which has recently come into the European market under such trade names as *gaudafil*, *aseptafil* and *cellamine*. It comes in thin sheets, impervious to water, oil and air but permits passage of steam. It can be used as a wrapping instead of parchment, as protective covering for wounds in place of taffeta or sheet gutta percha (since it can be sterilized) and as a dialyzing membrane.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 20, 301. H. V. A.

Quino-Quino Balsam.—Hartwich and Jama (Schweiz. Wschr. f. Chem. u. Pharm., 1909, Nos. 41 and 42), described this Bolivian balsam derived from *Myroxylon balsamum* var. *punctatum*, while Riedel (Mentor, 1912, 33), describes a balsam supplied from the same plant, having distinctly different properties, Hartwich now discusses these differences and decides that while both were from the same tree, his was the exudation from the trunk while Riedel's was from the fruit.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 21, 312. H. V. A.

Reactions of Hydrocoerulignone.—Taking as text a paper by J. Mair (Proc. Chem. Soc., London, 26, 115), on the above-named chemical, Professor E. Schär shows the similarity in its action on copper salts and hydrogen dioxide to those shown by guaiac with the same chemicals (Schär's Reaction). He, therefore, reviews his work, giving bibliography from 1868 to date and points out that when certain bodies yielding typical colors on oxidation (e. g. hydrocoerulignone, guaiac—resin, alum, pyragallol and guaiacol) are brought in contact with catalytic agents

(such as copper ferrous and platinum salts, colloidal solutions of metallic gold and platinum) or peroxydases—e. g. blood pigments, malt enzyme, laccase and enzymes of acacia—and with a third substance (such as hydrogen peroxide, cyanogen compounds or even alkaloids or other feeble alkalies) the characteristic coloration occurs.

The presence of three types of chemicals is essential, any two of these producing no more than a faint coloration; and the oxidation (except when hydrogen dioxide is used) can be ascribed to the oxygen of the air. As to the hydrocoerulignone reaction,—the changing from green-yellow $C_{16}H_{18}O_6$ to red coerulignone $C_{16}H_{16}O_6$ when treated with hydrocyanic acid and copper sulphate—he points out that it can be used as a test for cyanides; for blood (controlling Schär's test) and for free alkaloids.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), Nos. 22 and 23, 321 and 337. H. V. A.

The Fat of Roasted Coffee.—To prevent use of added fats in glazing roasted coffee, the Swiss food regulations direct that on maceration of the roasted bean with ether, the dried ethereal extract should not weigh more than 1.5%. Dr. Verda, of Lugano, shows that strongly roasted coffee (black coffee) preferred by the people of the Canton of Tessin gives considerably more than the above amount of extract; samples of Ecuador, Santos, Porto Rico and Salvador coffee roasted by the writer to the shade of "blackness" preferred in Lugano yielded from 2.98 to 4.08% of ether extract. He, therefore, thinks that the present regulations are too severe and that rather than amount of ethereal extract, the refractive index of same should be considered.—Schweiz. Wschr. f. Chem. u. Pharm., L. (1912), No. 22, 326. H. V. A.

Eau de Cologne; Origin, Manufacture and Aging.—Dr. Hermann Prinz thinks the first manufacturer of this preparation was Johann Maria Farina, an Italian, who started the manufacture of cologne water, in Cologne on the Rhine, in 1709. The same firm still carries on business and by general consent of the mercantile and lay world, the bottles carrying its label are looked upon as containing "genuine" Eau de Cologne. The genuine article is acid in reaction, but alkaline and neutral Eau de Colognes are found in the market. Storing and aging vessels should be of

glass or well-seasoned, oak wood, spirit barrels. The alcohol must be free from fusel oil and a method is given for its detection. Only the best quality of essential oils are to be used and only distilled aromatic waters. The finished product should be left undisturbed for a year at least. Four formulas are given.—*Nat. Drugg.*, January, 1912, 9-11. C. M. S.

Asafoetida: Adulterations—Plea for the Establishment of a Separate Standard for Powdered Asafoetida.—Asafoetida is one of the most grossly adulterated drugs imported into the country, says Arthur W. Reum, the foreign material giving high ash and small resin tests. Great variety of color is noticeable in the original cases, some tears are nearly white or cream color, others are brown and the whole mass frequently streaked and spotted with red and on some occasions blue dye. The light colored portions are soft and sticky and are commonly wrapped in coarse cloth or the skins of animals. The dark-colored portions are hard and brittle. Wood, gypsum and earthy matter may be found in the mass. Pieces of a root resembling sumbul, several inches long and from one to two inches in diameter, were found in some cases. Analysis made of a sample received in a granular condition, dark in color and very hard, gave an ash content of 65%, due to a large amount of mineral substance and only 11% of alcohol soluble resin. Six analyses of samples taken from original cases gave the following results:

	Alcohol Solubility	Ash
1.....	33.80%	10.8%
2.....	28.60%
3.....	38.40%	9.5%
4.....	39.10%	14.7%
5.....	50.98%	31.0%
6.....	53.47%	28.4%

A fairly reliable method for the selection of a sample which shall represent accurately the resin and ash content is to select three or four samples, each comprising six to a dozen different parts of the entire mass. These samples may be well mixed and the assay made from the mixture or each may be assayed separately and the results averaged.

For the alcohol extraction, a weighed quantity may be placed on counter-balanced filter papers and washed with hot alcohol to exhaustion; the residue then dried and weighed. Or ten gm. of the drug may be placed in a shell and extracted in a continuous extrac-

tion apparatus and the dried residue then weighed. In grinding asafoetida, from 30% to 50% of drying material, such as starch, is added. This reduces alcohol solubility but does materially affect the ash. Ten assayed samples containing starch gave alcohol soluble material as follows: 17.5%, 37.4%, 22.1%, 19.3%, 20.7%, 23.8%, 18.8%, 19.3%, 11.3%, 14.5%. The ash ranged from 9.2% to 25.7%, with only two below 15%. It is not possible to have the powdered drug answer the requirements of the whole drug, hence it would be well to establish a special standard for the powder, it being extensively used in condition powders and stock foods.—*Pac. Pharm.*, Sept., 1912, 118-119. C. M. S.

Ash Determination of Vegetable Drugs: Desirability of Acid Ash Determination and Uniform Method.—An editorial emphasizes the value of ash determination of powdered drugs, as an indication of quality and purity and points out the necessity of a determination of the acid insoluble ash, as well. The acid insoluble portion remaining after treatment of the ash with hydrochloric acid, showing practically the relative proportion of sand, dirt, etc., in the sample. Much attention has been given to the determination of ash content of drugs by many investigators, both foreign and in the United States, but without specifying methods. The true ash content of a drug is found when the sample is free of all foreign matter, for which reason a washed sample should be used. The cleansing process must, of course, be carried on with extreme care, that none of the tissue be carried away, that none of the salts of the drug be leached out or washed away and that no foreign salts be added. Rapid rinsing with distilled water in a wicker wire container would, no doubt, answer. The washed sample must then be dried to a constant weight at 100° C. Then the absolute ash content of the sample may be had which would serve as a comparative guide to the percent of inorganic impurities in the unwashed sample. Such examination following micro-analysis with chemical tests would well determine the quality and purity of the drug.—*Pac. Pharm.*, Nov., 1912, 153. C. M. S.

Calcium Phenolsulphonate: Nature of Commercial.—Puckner, W. A., reports that, although calcium phenolsulphonate is a distinct chemical substance and is sold by sev-

eral manufacturers of chemicals, examination showed that the several brands differed considerably in composition and were unsatisfactory as to purity.—J. Am. M. Assoc., 1912, v. 59, p. 1157. M. I. W.

Magnesium Peroxide: Degree of Purity of.—Puckner, W. A., reports that while MgO_2 is advanced as a chemical formula for magnesium peroxide, examination in the laboratory showed that the several commercial brands contain only 12.17 to 25.18 percent of real magnesium peroxide.—J. Am. M. Assoc., 1912, v. 59, pp. 1157-1158.—M. I. W.

Digitalis: Duration of Clinical Action of.—Eggleston, Cary, reports a number of observations on the duration of digitalis action, and points out that this action may, and often does, persist for some considerable time after the administration of the drug has been stopped. He also states that the use of the term "cumulation" is a very loose one as at present it is being applied to widely different conditions. The general application is to express the development under small repeated doses of a drug of symptoms which are much more marked than those caused by a single small dose. In the case of digitalis cumulation would be the result of a simple summation of the amounts fixed and absorbed in the tissues, probably of the heart, and, owing to the firmness of this fixation, the intake is in excess of the elimination.—J. Am. M. Assoc., 1912, v. 59, pp. 1352-1357. M. I. W.

Oxygen: Action of.—An editorial (J. Am. M. Assoc., 1912, v. 59, p. 807), points out that while oxygen therapy has in some way or another entered into the experience of almost every physician, few have a real conception of the actual rôle which the gas plays. Some recently reported observations by Benedict and Higgins have established the fact that the inhalation of oxygen lowers the pulse rate. After the oxygen is stopped the pulse-rate at once increases and almost regains the original rate in fifteen minutes. M. I. W.

Magnesium Sulphate: Laxative Action of.—An editorial (J. Am. M. Assoc., 1912, v. 59, pp. 38-39), reviews some of the recently published literature on the laxative action of Epsom salts, and points out that the latest work on this problem appears to speak against any specific stimulating effect of magnesium sulphate on intestinal movement.

The unique laxative property of certain of the salts presumably cannot be explained on the basis of any exceptional effect on peristalsis. For the present, therefore, Glauber's and Epsom salts may remain in the group of the saline purgatives which owe their efficiency to the difficulty which they present to the processes of absorption. M. I. W.

Thymol: As a Remedy for Tape Worm.—Allan, W., reports the use of thymol for *Taenia saginata*, and believes it to be a satisfactory remedy because it is cheap, requires no preliminary starvation or purgation, and is less expensive than pelletierine.—J. Am. M. Assoc., 1912, v. 59, p. 197. M. I. W.

Opium: Morphine in Smoke of.—An editorial (J. Am. M. Assoc., 1912, v. 59, p. 726), calls attention to the work by Pott of the Pharmacologic Institute in Freiburg, showing that morphine can be sublimed unchanged, and therefore can actually be present in opium smoke. Pott has succeeded in demonstrating that the action of smoked opium is due to the presence of undecomposed morphine in the smoke. M. I. W.

Wood Alcohol: Toxic Properties of.—An editorial (J. Am. M. Assoc., 1912, v. 59, pp. 200-201), points out that the widespread discussion which followed the series of deaths in Berlin as a consequence of the drinking of liquors contaminated with wood alcohol has again attracted attention to the scientific aspects of the toxicity of methyl alcohol. Observations recently reported appear to indicate that when reasonable doses of methyl alcohol are administered to animals the participation in metabolism scarcely exceeds three percent of the total exchange of material, and the elimination of methyl alcohol from the body is distinctly delayed, so that repeated ingestion of considerable doses of methyl alcohol may lead to a dangerous accumulation thereof in the body. M. I. W.

Sodium Chloride: Poisoning by.—Campbell, O. H., reports a peculiar case of common salt poisoning in a healthy boy of five years. The mother, believing that the child had worms, gave an enema consisting of a pound of salt in a quart of water. The enema was given at 5 p. m. and within ten minutes symptoms of poisoning were evidenced. The child complained of severe pains in the head, became intensely thirsty, vomited violently, and soon began to purge violently. Within thirty minutes the boy became unconscious

and had one convulsion after another. The symptoms increased steadily until 10 p. m., when the child died.—*J. Am. M. Assoc.*, 1912, v. 59, p. 1290. M. I. W.

Sodium Chloride Poisoning.—An editorial (*J. Am. M. Assoc.*, 1912, v. 59, p. 1297), calls attention to a second case of sodium chloride poisoning reported by Brooks (*Arch. Int. Med.*, November, 1910, p. 577), in which the patient received about nine ounces of salt. M. I. W.

Pyramidon.—An editorial (*J. Am. M. Assoc.*, 1912, v. 59, pp. 461-462), calls attention to the advertisements in newspapers of a new "headache cure," the advertising slogan of which is that it "contains no acetanilid or phenacetin." The name of the preparation is midol, and on examination it was found to depend essentially on pyramidon for its therapeutic effects. A second preparation of the patent medicine type in which pyramidon is the essential drug, is nurito. A quantitative examination indicates that the composition of this nurito is essentially as follows: Milk sugar, 34 percent; phenolphthaleim, 6 percent; and pyramidon, 60 percent. M. I. W.

Lead Poisoning.—Hamilton, Alice, in a discussion of industrial lead-poisoning in the light of recent studies, asserts that this is a disease with which the ordinary practitioner has very little familiarity. Plumbism is fairly common in industrial centers and not only causes permanent disability or death, but also decidedly influences the course of other diseases. Its importance is undeniable and the reason why it has escaped careful study is not apparent. Weyl's lead tabs is far from being a rare condition in this country, and instances of it can be found in every town where there are lead industries of a dangerous character.—*J. Am. M. Assoc.*, 1912, v. 59, pp. 777-782. M. I. W.

Pyramidon Poisoning.—Bechet, Paul E., reports a case of extensive dermatitis medicamentosa, following the use of pyramidon in the "patent medicine" form of midol. The patient, a man aged 52, had been taking acetanilid for several years. After taking midol in full doses for four days, he began to have considerable pruritus and irritation back of the ears and on the neck, which within a few hours involved the trunk. The condition progressively increased, and at the

end of three days there was an extensive erythematopapular eruption on the face, chest and back. There were also several itchy wheals which were over an inch in diameter. The patient was forbidden the use of midol and treated with an alkaline laxative mixture with local applications of magnesia and zinc oxide, and within three days the eruption had largely subsided.—*J. Am. M. Assoc.*, 1912, v. 59, p. 1289. M. I. W.

Antiseptics: Influence on Intestinal Flora.—Harris, Norman M., reviews some of the work that has been done to determine the influence of antiseptics on the intestinal flora, and reports a series of experiments made by him at the request of the Council on Pharmacy and Chemistry of the A. M. A., with the object of testing the combined values of methods and drugs in the field of intestinal antiseptics. He concludes that in spite of so-called "favorable reduction," the results obtained by him plainly indicate that antiseptic drugs fail to kill off per gram of feces, millions of indol-producing bacteria, whose habitat is the large intestine. He agrees with Friedenwald and Leitz that regulations of diet, together with the evacuation of the bowels, is the most effectual method that we have on hand of reducing the bacterial content of the large intestine.—*J. Am. M. Assoc.*, 1912, v. 59, pp. 1344-1349. M. I. W.

Enzymes: Descriptive Definition for.—An editorial (*J. Am. M. Assoc.*, 1912, v. 59, p. 282), points out that enzyme and substrate, according to Fischer, bear a relation to one another like that of a key to its lock. Not all keys will open all locks. The configuration of the two factors must be appropriate. Decidedly forceful and unquestionably unique is the description of the distinctive peculiarity of enzymes lately published by the London physiologist, Professor Halliburton, in a primer intended for the general reader. "We may roughly compare an enzyme," he writes, "to an ill-disposed person who comes into a room full of good-natured people, and who succeeds in setting them all by the ears. He has produced a change in them without undergoing any change himself, by his mere presence. He is, moreover, able to repeat the process over and over again in fresh roomfuls ad infinitum." Perhaps the expression "enzyme" will now acquire a wider usefulness as a descriptive term for a not entirely unknown type of human being.

Iodides: Effects of.—Capps, Joseph A., discusses the use of iodides on the circulation and blood vessels in arterio-sclerosis. He reviews the several theories that have been propounded in connection with the action of iodides, and concludes that iodides in therapeutic doses are not active vasodilators and when long continued do not materially effect blood-pressure. They probably owe their beneficial influence in syphilitic arteriosclerosis to the absorption of the cellular exudate in the arteries.—J. Am. M. Assoc., 1912, v. 59, pp. 1350-1352. M. I. W.

Filterable Viruses: Nature of.—An editorial (J. Am. M. Assoc., 1912, v. 59, pp. 1459-1460), in commenting on a summary of the present status of our knowledge of the filterable viruses, points out that at the present time there are nearly thirty diseases of human, plant and animal life which have been demonstrated as being due to such viruses. Of those which affect man there are foot-and-mouth disease, rabies, vaccinia, variola, yellow fever, molluscum contagiosum, dengue fever, verruca vulgaris, trachoma, sand-fly or three-days fever, poliomyelitis, typhus fever and possibly measles and scarlet fever. These filterable viruses are probably so small as to be practically invisible and pass through the pores of a Berkefeld or a Chamberland filter, which will retain even very small cocci. M. I. W.

Poliomyelitis: Transmission of.—An editorial (J. Am. M. Assoc., 1912, v. 59, pp. 1380-1381), reviews some of the recent work on poliomyelitis, and calls attention to the observations of M. J. Rosenau which indicate that the stable-fly, *Stomoxys calcitrans*, plays an important part as a transmitter of this disease. The discovery that the stable-fly is an important agent in transmitting the disease will make it a comparatively easy matter to prevent infection and to open an avenue for the eventual control of this dread disease. M. I. W.

Waters: The Relation of Interstate to the Spread of Disease.—McLaughlin, Allan J., discusses the relation of interstate waters to the spread of typhoid, and points out that while the average death rates from typhoid

fever per hundred thousand of population in European cities was 5.30 in 1909 and 4.50 in 1910, there is an aggregate total of 25 deaths per hundred thousand annually in the larger cities of the United States. He believes that more attention should be paid to the securing of pure drinking-water and to such treatment of sewage as is found necessary to prevent the spread of disease. J. Am. M. Assoc., 1912, v. 59, pp. 1425-1429. M. I. W.

Rats: Necessity for Extermination.—Rucker, W. C.; discusses the necessity for rodent extermination in American seaports, and points out that the rodent is the twentieth-century anachronism. He is as archaic as the neolithic midden to which he is coeval, and yet today we tolerate him, permit him to devastate our storehouses and to act as the intermediary vehicle for the transference of the organisms of disease between his loathsome carcass and the body of man. It has been necessary for plague to ravage the world many times before man has learned well the lesson that the rat and his confrères, the mouse and the ground-squirrel, are among the most deadly animals with which he has to deal.—J. Am. M. Assoc., 1912, v. 59, pp. 243-244. M. I. W.

Disinfectants: Standardization of.—An editorial (J. Am. M. Assoc., 1912, v. 59, p. 667), comments on the method of standardizing disinfectants with and without organic matter, and expresses the hope that the modified method proposed by Anderson and McClintic will be generally adopted, and that health officials and others having occasion to recommend or to purchase disinfectants will base their opinions on the efficiency, or otherwise, as demonstrated by this method. M. I. W.

Acetone: Tests for.—Rosenbloom, Jacob, points out that in the presence of protein, Lieben's and Gunning's test for acetone are negative and require the use of distillate for positive results. He also calls attention to the Frommer test which can be applied to the urine direct and does not react with diacetic acid if the heating is not carried too high.—J. Am. M. Assoc., 1912, v. 59, p. 445. M. I. W.