

EDITORIAL NOTES

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Committee on Publication: J. W. ENGLAND, *Chairman*; G. M. BERINGER, CASWELL A. MAYO, H. B. MASON, E. L. NEWCOMB, and the Editor-in-Chief of the JOURNAL, General Secretary, Treasurer and Reporter on Progress of Pharmacy, *ex-officio*.

THE NEW YEAR.

The New Year comes clothed in mystery. But it comes with a great inheritance and holds great opportunities. The memories should give a determination to do great things in the thoughts of men, in their hearts, in their activities. The experiences of pharmacy should develop in pharmacists the resolve and purpose to shape it for doing greater and better service than ever before. A new year brings new hopes, new purposes, and it should be ennobled by high ambitions.

THE ADVISORY COMMITTEE OF THE A. PH. A. FOR SOLDIER AND SAILOR PHARMACISTS.

Every industry is looking after the welfare of its returning soldiers and sailors; the Committee above named is performing such work for pharmacists who have been and are still in the Service. This work is most important and druggists throughout the country will recognize their duty. The various drug journals have given splendid publicity. The time is now, and we feel assured that this is realized; it is a big undertaking and immediate funds are needed to activate this fine expression of patriotism, and an acknowledgment that druggists believe in the value of pharmacy—that they have an interest in those likewise engaged and who have given service to the country. See the report of progress of the Committee under Committee Reports and “do your bit.” The members of the Committee are giving more than their time.

WAR HISTORY OF PHARMACY.

The War Department, Historical Department, Col. C. W. Weeks, Chief, and Major Frederic L. Paxson, Chief, Economical Section, Historical Branch, desires data relative to the activities of pharmacy and pharmacists in the War.

The Historical Section of the A. Ph. A. is desirous of compiling such data. The only way to obtain them is from those who actively participated. The Chairman of the Historical Section is Hugo Kantrowitz, 104 John

Street, New York City; the Secretary is W. O. Richtmann, 1721 Van Hise Ave., Madison, Wis., and the Historian is E. G. Eberle, 253 Bourse Building, Philadelphia, Pa. The Chairman of the Membership Committees in their respective states are requested to collect such data and transmit them to the Historian. The contributions should be typewritten and in duplicate, double space between the lines and inscribed only on one side of the paper. The War Department desires brief authentic memoranda.

Whether these data are submitted to the War Department or not the American Pharmaceutical Association should have the records. All schools of pharmacy responded in one way or another to the call of the Government and records of the work accomplished should be preserved. Each school had alumni and non-graduates in the Service who should send in to these institutions data of pharmaceutical interest. An historical account of the participation of pharmacy in the war would have value, which to be complete requires coöperative work. This would entail considerable expense besides work of compilation, and the question arises as to whether it is worth the price.

SALE OF THE BAYER COMPANY.

The Bayer plant and stock was sold to the Sterling Products Company, of Wheeling, W. Va., and they in turn sold the dyestuff division to the Grasselli Chemical Company, of Cleveland, Ohio. The price of the purchase was over five million dollars, and the second sale involved nearly half of this amount.

SKIN DISEASES FROM LUBRICANTS USED BY METAL WORKERS.

The British Department of Scientific Research has investigated the cause of oil rashes. They are due to the plugging of the small glands at the roots of the hairs and to the mechanical injury to the skin by metallic particles suspended in the cutting lubricant. Washing on a liberal scale is a method of prevention and also the addition of antiseptics to the cutting lubricant.

TREATMENT OF VENEREAL DISEASES
BY THE GOVERNMENT AND
STATE.

Surgeon-General Rupert Blue, of the Public Health Service, has issued a ruling in regard to the mooted question of the cost of "606," in which trade interests have been embroiled, as follows:

In establishing clinics for the treatment of venereal diseases in the various cities of the country the question of furnishing free arspenamine or salvarsan for the so-called "606" treatment is one that is causing some concern. When the Government furnishes this treatment free there are physicians who complain that the United States Public Health Service is practicing medicine in competition with them. On the other hand, it is said, there is the danger of pauperizing a certain class of patients by the loss of their self-respect and initiative. Surgeon-General Blue is sure of one thing, and that is that cost or no cost, the infected patients must be treated; not as a favor to them, but as a measure of public safety. He has directed that the question of charging for the necessary drugs be left to judgment of the State health officers.

THE AMERICAN PHARMACEUTICAL
ASSOCIATION AND AMERICAN
PHARMACISTS SHOULD TAKE
A DEEPER INTEREST IN
RESEARCH.

The editorial by H. V. Army in the December number of the JOURNAL A. PH. A. should be re-read. A resolve should come into action that the importance of pharmacy will be measured by the research work of pharmacists. Among the addresses delivered before the New York Section of the American Chemical Society was one by Frank R. Eldred, which is re-printed in part:

"It is a rather disquieting thought that we know almost nothing about the mechanism of the action of medicines and that our present medicines have been developed by empirical methods. The effects of many drugs now widely used were discovered accidentally, while certain synthetic drugs were apparently developed for the purpose of utilizing a cheap by-product or a readily available intermediate, and still others were discovered by trying, more or less indiscriminately, one substance after another until one was found which had the desired action. Only a few of the many German synthetic drugs have proved

to be of real value, while the larger number have been foisted upon the public by clever propaganda. It is not desirable that an institution should be established to foster this kind of research. Probably no one but a drug manufacturer knows how many remedies are proposed by chemists and others not chiefly occupied in the development or production of medicinal substances and therefore without any broad knowledge of the needs of medicine. No excuse can be found for many such proposals; some are based upon unsound reasoning and others are entirely lacking in originality, frequently to the extent of having been previously tried and discredited. It would only increase the number of drugs and at the same time lower their average efficacy if drugs inferior to those already available were placed upon the market. A research institute such as we are considering must not therefore lend its influence to the multiplication of drugs of doubtful value nor waste time in the investigation of many of the remedies which might be proposed.

"Although little is known in regard to the manner in which medicines produce their physiological effects, animal experimentation and clinical tests have yielded a great mass of facts in regard to the effects which are produced by various drugs and this forms the foundation of our present efforts in the development of remedial substances. Such facts are of course very important and must not be disregarded. As a result of such studies it has been possible to correlate molecular structure with physiological action in such a way that it has become a most valuable guide to the chemist working in this field, but when substances of such diverse constitution as cocaine, quinine, novocain, benzyl alcohol, and magnesium salts all act as local anesthetics, it becomes apparent that we must look more deeply for the cause of their physiological action.

"The problem is one for the physical chemist, and until the methods of physical chemistry are applied to the study of drugs and the actual mechanism of their action is investigated, we cannot hope for real progress in this most important field. Pharmacology, the study of the action of drugs, then becomes a study involving the application of recognized physical and chemical laws to the investigation of the reactions occurring between the living organism and the chemical agents employed. It is along such lines that an insti-

tute of pharmacology or therapo-chemistry should be developed rather than along the more superficial lines usually thought of in connection with pharmacological work. * * **

ISOTONIC COEFFICIENTS.

William A. Knight, writing in a recent issue of the *Chemist and Druggist*, states that "dispensers are nowadays often asked to prepare solutions of different substances of such strength that they will have the same osmotic pressure. This can, of course, be done by determining the freezing point of the solution of one substance and then by a series of experiments making a solution of the second substance with the same freezing point, but this method requires extremely careful manipulation and takes considerable time. If the substances are non-ionizing, the calculation is simple, since molecular proportions of all such substances produce the same osmotic pressure, *e. g.*, if 360 of milk sugar have the same osmotic pressure as 180 of glucose, then two of milk sugar have the same osmotic pressure as one of glucose. With ionizing substances the calculation is complicated by the fact that a salt such as sodium chloride is partly dissociated into ions of Na and Cl, each of which exerts osmotic pressure, and the amount of ionization varies with the strength of the solution. It has, however, been shown that equi-molecular solutions of substances of the same chemical class (*e. g.*, potassium and sodium salts of monobasic acids) are isotonic, but these relations hold good only for members of the same class, and not of different classes. The isotonic coefficients, *i. e.*, the numbers expressing the relative osmotic pressures, exerted by molecular proportions of the different classes of compounds in dilute solution, are as follows:

Sugars.....	2
Potassium and sodium salts of monobasic acids.....	3
Potassium and sodium salts of dibasic acids.....	4
Potassium and sodium salts of tribasic acids.....	5
Alkaline earth salts of monobasic acids.	4

"The calculation can also be made from the partial coefficients of the constituents, *i. e.*, every acid radicle, 2; every atom of alkali metal, 1; every atom of divalent metal, 0. If we now wish to make 4 fluidounces of a solution of glucose isotonic with normal saline (0.9 percent NaCl), we have:

Amount of NaCl in 4 fluidounces of 9% solution

$$= 4 \times 0.9 \times 4.375^* = 15.75 \text{ grains,}$$

$$\text{and } 58.5 \text{ of NaCl : } 180 \text{ of glucose :: } 3 : 2,$$

$$\text{or } 2 \times 58.5 \text{ NaCl} = 3 \times 180 \text{ glucose,}$$

$$\text{or } 1 \text{ of NaCl} = (3 \times 180) \div (2 \times 58.5) \text{ glucose,}$$

$$\text{or } 15.75 \text{ NaCl} = (3 \times 180 \times 15.75) \div (2 \times 58.5 = 72.6)$$

grains of glucose in 4 fluidounces of solution. "Similarly, to calculate the strength of a solution of magnesium sulphate isotonic with sodium chloride, we have:

$$246.5 \text{ of magnesium sulphate : } 58.5 \text{ of sodium chloride :: } 2 : 3,$$

$$\text{or } 3 \times 246.5 \text{ magnesium sulphate} = 2 \times 58.5 \text{ sodium chloride;}$$

$$\begin{array}{ll} \text{for Mg} = 0 & \text{and Na} = 1 \\ \text{SO}_4 = 2 & \text{Cl} = 2 \\ \therefore \text{MgSO}_4 = 2 & \therefore \text{NaCl} = 3'' \end{array}$$

EGG SUBSTITUTES AND SO-CALLED EGG SAVERS.

The Pennsylvania Department of Agriculture has issued *Bulletin No. 314*, devoted to the class of preparations indicated by the title. More than forty of these preparations were investigated by Prof. C. H. LaWall, and in the introduction to his report he says:

"One of the most reprehensible ways of making money is to take some common, everyday substance, disguise or alter its appearance in some way, make a lot of exaggerated statements regarding it, and then sell it for about ten or fifteen times its market value, extolling it as an economical substitute for some expensive article. There has been no preparation of this class, within recent years, that has sprung into prominence with such rapidity as the so-called egg substitutes and with so little merit of legitimate warrant for their manufacture and sale."

The following are his conclusions, and Commissioner James Foust concurs by declaring the sales of such substitutes in violation of the Pennsylvania Food Act:

"First. The brightest light of publicity should be shed on these products, and the heaviest weight of official authority should be invoked to discourage their manufacture and sale.

Second. They afford an opportunity for unpatriotic profiteering, combined with the development of the art of camouflage to the point of perfection.

* It should be noted that the calculations are made for an imperial fluidounce.—EDITOR.

Third. Their names are deceptive; their composition in no wise resembles that of egg; the presence of color, in those where it is used, is a fraud, and the claims as to replacing value are either deliberate misstatements or ambiguous phrases.

Finally. Egg substitutes serve no purpose that cannot be served just as satisfactorily and much more cheaply by articles in daily use in every household."

SANITARY AND PROPHYLACTIC SERVICE IN BRAZIL.

On May 1 Brazil established a sanitary and prophylactic service to prevent the spread of malaria in the Republic. As the first step in this campaign provision has been made for supplying quinine of known purity at a minimum cost to the public. To accomplish this the President of Brazil has issued a decree creating an official quinine service.

By a second decree of the same date the Minister of Justice and Interior is authorized to organize medical commissions to begin a rural prophylactic service "for combating the destructive epidemics of the interior of Brazil."

NEW CHEMICAL AND DRUG MANUFACTURERS.

According to the *Journal of Commerce*, twenty companies for the manufacture and distribution of drugs, chemicals and dyes were organized during December, their aggregate authorized capitalization being \$6,145,000.00. The names of the companies with capitalization of \$50,000.00 and over which were incorporated in December are: Ambrine Laboratories, Inc., N. Y., \$250,000; American Remedies Co., Del., \$300,000; American Potash & Fertilizer Co., N. J., \$600,000; Aspirin Co. of America, N. J., \$125,000; Allen Pharmacal Co., N. J., \$100,000; DuPont Chemical Co., Del., \$3,600,000; H. & H. Medical Specialty Co., N. Y., \$50,000; K. T. C. Chemical Corp., N. Y., \$50,000; Kinsey Chemical Co., N. J., \$100,000; Laboratory Products Co., N. Y., \$250,000; Laxcarin Products Co., Del. (manufacturing and sale of medicines), \$100,000; Nono Laboratories Co., W. Va., \$100,000; The Panvar Co., Del., \$100,000; Pacific Herb Products Co., Wash., \$50,000; Pittsfield Chemical Co., Pa., \$140,000; Spanish-American Druggists Corp., N. Y., \$100,000; Standard Chemical Works, Pa., \$100,000; Victory Drug & Chem. Corp., N. Y., \$100,000; Washington Dye & Chem. Co., N. Y., \$150,000.

THE AMERICAN METRIC ASSOCIATION.

The annual meeting of the American Metric Association was held in Baltimore during the last week of December. The following resolutions were adopted:

"Resolved, That the American Metric Association hereby requests the formation of local sections throughout the country."

"Resolved, That the American Metric Association hereby expresses its desire to cooperate more fully with those American industries and trades using and contemplating the use of metric weights and measures."

"Resolved, That the American Metric Association send greetings to the universities, colleges and other educational institutions and respectfully invite their cooperation in bringing in the general use of meters, liters and grams for the welfare of America."

United States Senator John F. Shafroth read Bill S5037, which he has introduced in Congress, and asked for a discussion on the subject. This bill is a step toward the general use of metric weights and measures, making exceptions where such seem to be advisable for special work.

The Bill was endorsed by the American Metric Association.

Secretary of Commerce Honorable William C. Redfield was the principal speaker at the "Metric Dinner," held on the evening of December 27th. After outlining his practical experience as a manufacturer for thirty years and his travels in other countries in the interests of his export trade, he voiced the conviction that the metric weights and measures should and would be adopted for general use in the United States. The Secretary of Commerce said in part: "I believe that the metric system offers a return to simplicity, offers an effectiveness of thought, offers more to little children in our schools, if you please, which we are not justified in withholding from them."

The following officers were elected for the year 1919:

President—George F. Kunz, New York.

First Vice-President—Wm. Jay Schieffelin, New York.

Second Vice-President—Jesse M. Smith, New York.

Third Vice-President—David A. Molitor, Detroit.

Treasurer—Arthur P. Williams, New York.

Secretary—Howard Richards, Jr., New York.