

THE NEW PHARMACOPŒIA AND THE NEWER PHARMACY.*

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The long expected ninth edition of the United States Pharmacopœia is now before us and what are we going to do with it? This is not the time, the place nor the person to go into an elaborate exposition of its features, but a few words upon the responsibilities of the pharmacist who considers the Pharmacopœia as his guide, may be entirely pertinent.

There is no better way to study the changes that have come over Pharmacy during the past half century than to compare the Pharmacopœias of 1870 and of 1916. The first mentioned work was a book of recipes with some macroscopical descriptions of drugs and chemicals thrown in. Even the method of manufacture of such chemicals as benzoic, gallic and tannic acids; aconitine and other alkaloids, potassium bromide and other salts was given in detail. On the other hand, the Pharmacopœia that has just come to us is long on descriptions and short on recipes. Even such old timers as yellow mercuric oxide and bismuth and ammonium citrate are presented without methods of manufacture, while descriptions and tests for identity and assays have been elaborated until it requires a real chemist in a real laboratory to conduct them.

We have grown accustomed to volumetric analyses, but how about the gravimetric, the electrolytic and polariscopic assays that are now provided for those chemicals and preparations which do not adapt themselves to volumetric methods?

The prediction of a prominent manufacturer that the National Food and Drug Law would drive the preparation of pharmaceuticals, galenical as well as chemical, from the drug store to the large factory, is about to be realized and unless the retailers bestir themselves they will become merely the vendors of other men's packaged products with all of the evils—price cutting and otherwise—that the handling of package goods entails.

So much for the new Pharmacopœia, but what of the newer Pharmacy? Is the retailer to be merely a drop-a-nickel-in-the-slot vending machine, or is he to be a real pharmacist? This is being answered each day by the individuals within the ranks of retail pharmacy *by their own acts*.

Thus within the past few months the question has been asked twice by the writer in ordinary mercantile transactions. An order for "one ounce of cold cream" without specification was filled by sending an ounce jar of a largely advertised cream; so largely advertised that it is frequently found among the "great slaughter" advertisements of the department stores. Another order for "four ounces of aromatized castor oil, like the product of the new N. F." was supplied by sending an original package of the aromatic castor oil of one of our well-known pharmaceutical houses.

This druggist's answer was therefore that he would rather be a vendor than a producer. To such an one the ninth edition of the United States Pharmacopœia has even less than no appeal; for him it has no interest.

And finally a few words to those to whom the new Pharmacopœia is a vital thing; to those who not only make their own galenicals, but who also have sufficient ability and the training to conduct the chemical tests that our new standard prescribes; the men who have kept abreast with pharmaceutical progress; the class

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the writer had in mind when two years since he suggested the American Institute of Prescriptionists, put to sleep so successfully in San Francisco last year by those skilled anesthetists, Dr. Hynson and his four able co-workers.

To my mind the new Pharmacopœia furnishes the best possible reason for the existence of the highly trained pharmacist and each of these will make a great mistake if he modestly declines to use the Pharmacopœia as a means of impressing the medical and lay public that he possesses, not merely the knowledge as to what is in the Pharmacopœia, but also the ability to actually carry out the operations which that standard prescribes for the manufacture of official preparations and for the determination of the purity of official drugs and chemicals.

In short, the real pharmacist of the present decade must be more than a peruser of the U. S. P. He must be a user of it as well.

TERMS USED IN ELECTRICITY.

The volt is the unit of electrical pressure; the ampere, the unit of current strength; the ohm, the unit of resistance; the watt, the unit of electric power; and the least of all known, farad, the unit of electrical capacity.

Current strength is determined by dividing the pressure by the strength, thus the number of amperes of current strength is equal to the number of volts divided by the number of ohms. The watt indicates the amount of electric energy being used when an ampere of current is flowing under a pressure of one volt. However, the term kilowatt, or one thousand watts, is more generally used. The unit of electrical capacity, the farad, will contain one ampere of current at one volt pressure for one second of time. The farad is divided into a million equal parts, each part termed the microfarad, and this is the term most used in stating electrical capacity.

The term "volt" is derived from the name of Alessandro Volta, an Italian, born in 1745. He was one of the first men to try to harness electricity, yet he died without the knowledge that a "volt" was the pressure necessary to force an ampere of current through a conductor having one ohm resistance.

Likewise, Andre Marie Ampere, father of the science of electro-dynamics, never knew that an "ampere" was equal to the number of volts of pressure divided by the ohms of resistance. He was born in France in 1755.

George Simon Ohm was the author of what is known as Ohm's Law, now universally recognized as the unit for measuring the resistance of electricity, but it was not until years later that the unit of resistance was named after the German physicist. The number of ohms is computed by dividing the number of volts by the number of amperes.

With either of the two units known, the third can easily be found. Likewise, electrical energy is as easily figured. The "watt" indicates the amount of electric energy being used when one ampere of current is flowing under the pressure of one volt. The watt is derived from the name of James Watt, the man who really invented the modern steam engine. Without the principle of the steam engine, however, electricity as a motive power could not do the powerful tasks it daily accomplishes.

Michael Faraday made the great discovery of magnetic electric currents, the principle on which all modern dynamos and transformers are constructed. In recognition of his great work scientists have named the unit of electrical capacity the "farad." This unit of capacity will contain one ampere of current at one volt pressure for one second of time.—*London Tid Bits.*