

and to acquaint himself with all the qualities of the drugs enumerated in wholesale drug lists, for it is such knowledge that will enable him to compete in business with unprincipled dealers, or with grocers or stores who have not a scientific acquaintance with the subject.

Such knowledge also will help him in cases of analysis where an analyst without such experience would be at a loss, and in toxicological or legal cases, in which a histological knowledge of the structure of poisonous drugs would enable him to give an expert's opinion.

But there are other branches of botany which have of late years assumed considerable importance, and which, although not forming at present an item in the examinations, are well worthy of the attention of pharmacists. Of these bacteriology is one, which has already been turned to account by some advanced pharmacists in the examination, on behalf of medical men, of sputa for *Bacillus tuberculosis*. Similarly, examination of hair for the ringworm fungus might form an additional source of income, since busy medical practitioners would in many cases willingly hand over such work to competent pharmacists. The field of bacteriology is one well worth exploiting for business purposes. A knowledge of the life history of ferments of the yeast class and of the conditions of their development and of their microscopical characters might also be turned to account, since most of the large breweries are now employing chemists who possess this information.

A knowledge also of the unorganized ferments of the diastase group and of their properties offers a promising field. These few instances may serve to indicate that there are possible applications of botanical science which the pharmacist might find worthy of his attention in these days, when the portion of the trade which does not require special scientific knowledge is gradually drifting away from him. To the pharmacist such knowledge will be of much more practical use than a wide acquaintance with phylloaxis, the alternation of generations, the reproduction of cryptogams, apospory, the Schwendenerian theory, the ascent of the sap, and other subjects in which students are examined, but which they forget as soon as possible after examination, and perhaps with good reason, since the acquisition of new facts in regard to them is rendering new views necessary in many cases, and in others the knowledge has no practical application in business.—*Phar. Journal (Eng)*

A Metric System Report.*

STATISTICS BASED UPON 233,000 PRESCRIPTIONS.

By DR. H. M. WINKLEFIEV, Ph. G., St. Louis.

A measurement of gravitative force and the determination of the magnitude of material substances constitute a major portion of the manual training of the

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apprentice, and continues prominent in the practice of the retail druggists' profession. The theory, as well as the practice of pharmacy, is largely dependent upon deductions and results obtained by the act of weighing and measuring. It is not surprising, in view of these facts, to find the representative body of druggists of this country, the American Pharmaceutical Association, practically considering the various systems of weights and measures, more than forty years ago. The committee on weights and measures reporting in 1857 (see page 36 of proceedings for that year) proposed a decimal system for the consideration of the association as a substitute "for the various systems known as apothecaries', avoirdupois, etc." In way of an apology for so radical a step the committee says: "The labor saved in all the various operations in the laboratory will be almost incalculable, and the immense saving in compensations of all kinds in commercial transactions cannot be counted." The report closes with the prophetic assertion that "the reform will not be the work of today, perchance not of our day, but it will be made in due time, for it will be a demand of the age, and generations to come will bless the labors of such as shall be instrumental in conferring so great a boon upon their youth."

This committee outlined the metric system (which is designated as the French system), but objected to the Greek words and Latin syllables. The decimal system which the committee proposed was the one which had just been devised by M. Lefferts, Chairman of the Committee of the New York Chamber of Commerce, and approved by the American Geographical and Statistical Society. It retained the old terms, thus making ten grains equal one scruple, etc. The association did not see its way clear to endorse the system, but continued the committee after increasing its membership from three to five.

In 1858 we find the committee, through a new member, objecting to the hybrid system and favoring the metric system with the suggestion that only four of the eight weights be used (*i. e.*, centigramme, gramme, hectogramme, myriagramme). We are practically following out this recommendation in our practice to day. The spirit of the times is indicated by the volume of proceedings of the 1859 meeting of the A. Ph. A., which devotes 101 pages to the report of the committee on weights and measures. The subject has received attention at almost every meeting of our association since that time.

The adoption of the metric system by the United States Pharmacopoeial Convention of 1890, and its progress in American laboratory and analytical work, is familiar to those who keep abreast of the pharmaceutical times.

The extent of the use of the metric system in prescription writing is more difficult to determine and does not necessarily keep pace with its progress at the hands of pharmacists. The following statistics

are not only interesting, but should, I believe, be permanently recorded as a part of the history made by the metric system, as it gradually, but positively, displaces the older and more cumbersome so called systems of weights and measures.

Reports were made by 233 pharmacists, representing 19 cities and towns scattered through thirty States and Territories. In ratio of metric prescriptions, Gypsum City, Kan., leads the list with a percentage of 100; Wells, Minn., comes next with 97.6; while Kerwin, Kan., and Hamilton, O., follow with 95.6 and 94.7 respectively.

The average of metric prescription out of the 233,000 is 6.27 per cent.

The above statistics have been gathered during the past twelve months.

Many of the druggists responding to my request for information volunteered comments on the use of the metric system. These lead me to believe that the pharmacists are ready to fill metric prescriptions in many places where the physicians fail to write them in that system. By extended correspondence and conversation with members of the medical profession, I find quite a general feeling that it is not safe to use the metric system on account of the ignorance regarding it on the part of the pharmacist. This being the case, each druggist should strive to let the doctors in his neighborhood know that he is ready and prepared to fill all metric prescriptions with accuracy and despatch.

Value of the Microscope to Pharmacists.

By FRANK EDRI, Dec Moines, Ia.

It has been truly said that the pharmacist is the natural analyst of the people, and I might go further and say the same regarding microscopy. No means of scientific investigation has grown so largely in the public mind as the microscope. The lawyer, in his practice before the courts, uses it in evidence; the chemist, in his laboratory uses it almost constantly; the pharmacist, in his store, needs it in the detection of adulterations, and to the physician, in the diagnosis of disease, it is an absolute necessity.

The microscope offers an inviting field to the pharmacist, and one in which he can in many instances add not only to his reputation, but to his income as well. The objection has been raised that the expense of purchase is too great to justify the pharmacist in investing in a microscope. It is true that a good microscope and all the necessary attachments require some outlay, but these expenditures are not excessive, and in purchasing it is not necessary to make the entire outlay at once. It is a good rule to buy a good stand, and then add attachments as wanted. In this way the expenditure is not felt as much as if the whole outlay is made at one time. It is not my purpose to go into detail as to the expenditure necessary in securing a microscopical out-