The Chairman felt sure that, after the way in which the members had from time to time received the observations of Mr. Martindale, he had only to suggest to them that which they were anxious to give him, and that was a hearty vote of thanks for the important practical remarks which he had placed before them. He (the Chairman) did not think they would regret the adjournment of the discussion till that night, if only for the observations to which they had just listened. Mr. Martindale had suggested that every formula of the Pharmacopœia should be submitted to this Society in the same way that every clause of a Bill was submitted to the House of Commons. It had been shown that evening that great practical results did arise from bringing these formulæ before them and discussing them. At the last meeting it was suggested by Professor Attfield, that they would be glad to receive the suggestions and experiences of the younger members of the pharmaceutical body, those who are daily in practical contact with the working of the Pharmacopœia; and he (the Chairman) hoped that some of those present were prepared to give some of their experiences, to state their difficulties, and to ask for an elucidation or explanation of them.

Mr. Gerrard (of Guy's Hospital) said he wished to make a few remarks with regard to compound ointment of mercury, which he had found a difficulty in preparing. The directions in the Pharmacopœia were to add the oil to the melted wax. It did not say that the oil was to be hot, and from the directions given, he should infer that it was to be cold; but when they added oil to the wax it was immediately precipitated. When the mixture was nearly cold they were told to add camphor and ointment of mercury, and in doing so they got an unsatisfactory preparation, especially in making a large quantity. The Pharmacopœia instructions for making this ointment in small quantities might be practicable, but they were not practicable for making the quantity ordered in the Pharmacopœia. In dealing with a large quantity of camphor,—say four or six ounces,—it was difficult to get it in a state of powder sufficiently fine to make a smooth ointment; and the only way of getting over it was to melt the wax and oil together, then put in the ointment of mercury, and stir well; and when the mixture was getting cold, or towards a solid state, to put in the powdered camphor, and, by stirring it, they would get an ointment perfectly smooth and consistent. Then, again, with reference to hemlock poultice. In the Pharmacopœia it was ordered to be made with dry powdered leaf; but would it not be better to use extract for this preparation? because they knew very well that in the experience of eminent men the dry leaf of hemlock was found to contain scarcely any active principle. He had heard the opinion of several eminent medical men upon this point, and in the house where he was, they were in the habit of using the extract instead of the powdered leaf, and found it answered better.

Mr. Dartwright remarked that Mr. Martindale had dismissed the subject of fresh tincture of orange-peel more briefly than he should have liked, because it so happened that he had made tincture of orange-peel from fresh Seville oranges and rectified spirit, with all the assurance of certain eminent men at his back, that it was considered immeasurably superior to the officinal form, that of the British Pharmacopœia, but unfortunately, the British public preferred the tincture made with the dried peel. He should, however, like to know what proportion of fresh peel Mr. Martindale would substitute for the dried.

Mr. Martindale thought about double the quantity, the peel being cut thin.

Mr. Sandford considered one and a half for one a fair proportion, the thinly cut fresh peel contained much less of the inert white interior than the dried.

A member remarked that there was a deficiency of tests given in the Pharmacopœia for some of the articles ordered. For instance there was no chemical test for glycerine.

The Chairman said it certainly appeared to him to be a defect that in the Pharmacopœia that there was no test but that of specific gravity for glycerine, which was daily becoming more and more important. It was a fact that some specimens of glycerine possessed all the physical characteristics required in the Pharmacopœia which were not fit to be used in making tannic acid glycerine and the gallic acid glycerine.

Dr. Redwood said it was new to him to hear that the Pharmacopœia was deficient in the number of tests ordered. A statement had, indeed, been made in quite the opposite direction during the discussion of the subject, namely, that the Pharmacopœia required too much in the use of chemical tests and in the requirements of purity in the substances employed. He was not prepared to say that their might not be individual cases—he had no doubt there were, and the one referred to might be of that description—where the tests were not so complete as they might be, or as it was desirable that they should be. It was, however,—and he had adverted to the fact before—absolutely impossible to give such a complete system of tests of the substances ordered to be used in medicine, as would ensure the absence of all impurities in them without greatly complicating the work, and enlarging it to an extent which would be very undesirable. Whilst they give the leading tests for indicating the principal impurities most likely to occur, and which it was most important to guard against they must leave much to the knowledge, skill and judgment, of those who had to put the work into effect. And, therefore, whilst they were educating their young men, and enabling them to provide against the introduction of such impurities in medicines as would interfere with their efficacy, they must from time to time, in successive editions of the Pharmacopœia, increase the number of tests, as they had done in those which had recently appeared. But he could not say that he ever expected to see a Pharmacopœia that would give tests for the detection of all impurities.

At the conclusion of the meeting, Dr. Redwood made some remarks on the preparation of the diluted nitro-hydrochloric acid of the Pharmacopœia. He said this had already been made the subject of several communications by gentlemen, who alluded to the fact that, when made as directed in the Pharmacopœia, it was liable to considerable variation in strength, arising from the loss of some of the evolved gases. Mr. Porter had suggested a special apparatus for its preparation, by which the loss of gas was avoided; but Mr. Porter's apparatus, although ingenious, was rather complicated and expensive. Mr. Porter, in his paper, alluded to the use of a more simple arrangement, but did not recommend it. Now, he (Dr. Redwood) found that by using two Winchester quart bottles, putting the mixed acids into one, and the water into the other, and connecting the bottles by a tube, partly of glass and partly of india-rubber, the loss of gas may be almost entirely prevented, and a uniform product obtained, which nearly answered to the tests given in the Pharmacopœia.

Mr. Tilden said he thought in one respect the product, in whatever way it might be made, would not answer to the Pharmacopœia test, and that was in its neutralizing power. He found by calculation that the acids, in their unmixed state, had less neutralizing power than was assigned to them when mixed. But he had also shown that the acids, if mixed at once with the water, yielded a similar result to that obtained by the Pharmacopœia method if it be kept exposed to the light for about a week.

## Fluid Extracts.*

B. N. GRAY BARTLETT.

No topic connected with Pharmacy has, during the past year, occasioned more discussion than the subject of this article; and, indeed, its importance, especially as the revision of the Pharmacopœia is near at hand, justifies the amount of labor that has been bestowed upon it. When the list of this class of preparations was extended at the last revision, it was hoped and believed that many, if not the majority of apothecaries would undertake their manufacture, instead of relying upon the commercial articles. This anticipated advantage has never been realized; at the outset, the high tax upon alcohol, placing its value above $4 per gallon, and the great loss of menstruum entailed by many formulas seriously militated against any attempt at the preparation of fluid extracts on a scale suited to the wants of the dispensing chemist. The large manufacturers, having facilities for the economical use of alcohol, not to mention a suspected economical use of the respective drugs, were enabled to offer their products at figures so low, comparatively, as to secure their very general use from economical considerations. These manufacturing pharmacists were not slow in discovering the immense demand that would arise for their fluid extracts, could they once induce apothecaries to prepare the weaker preparations, such as tinctures, wines, syrups, and infusions from their "concentrated" products, and they were unsparing in their efforts to secure such a harvest, and gratuitously furnished "books of formulæ," giving the requisite information, and enumerating the advantages of the extemporaneous process. Self-interest makes conviction easy, and their arguments were not unheeded; indeed, it may be safely said, that a large majority of apothecaries, in city and country, make their wines, tinctures, syrups, etc., from fluid extracts, purchased from manufacturers, and give, consequently, to the former preparations all the uncertainty that pertains to the latter. It will not be disputed that commercial fluid extracts are far below the officinal standard, for this is not only evidenced by the physical properties of the articles, and the experience of physicians, but by admissions of manufacturers, if published doses and formulas can be considered as indicative

* From the Pharmacist.