which have been suggested as applicable to blended whiskies are to be held in other cases.

(e) The "official" admission of glucose as an ingredient of candy has no bearing on the case. Candy is not a food in a strict sense; it is eaten for pleasure, not for nourishment. The Washington authorities interpret the application of laws subject to revision by the courts; they do not decide fundamental points in science. My argument is that glucose is not cane sugar, milk sugar, invert sugar, or predigested starch, and therefore is not a proper substitute for either of these.

(f) I deny Dr. Wagner's assertion that glucose is not used as a cheapening agent. Such a statement is an insult to the understanding of men. Similarly, the statement that the wine-makers of certain regions prefer glucose to cane sugar for other reasons than economy, or that beer can not be properly made without glucose is unworthy of serious consideration. The dominating factor in all ordinary uses of glucose is to secure greater profit to the manufacturer without informing the consumer of the substitution.

"Its honor rooted in dishonor stands."

(g) In my opinion nothing that Dr. Wagner says diminishes the force of my criticism of the report of 1884. It was a wholly insufficient investigation, and if it were published today for the first time, would be met by all sanitarians and biologists with condemnation. That the framers of the report did twelve years ago say that they had seen no reason to change opinion is of no value in this issue. No investigation of importance had been made. None of them was in close touch with clinical medicine or physiologic investigation, and their later statement merely reflects the conclusions that they came to under the original insufficient investigation. Dr. Murrell's opinion is merely an opinion; its value can only be determined when we know the data on which he based it. Nor can Dr. Wiley's statement be regarded as final. The quotations given seem to be rather *obiter dicta* than formal opinions.

(h) I regret that, by a typographic error, I was made to say that glucose was found to contain sulphuric acid. It does, indeed, frequently contain sulphates, but I referred to sulphurous acid, and the context conforms to this. It was widely stated in the Philadelphia newspapers that the glucose trust had offered to settle all the cases and withdraw the objectionable product. I saw a letter from the office to this effect. I do not understand that the cases were "dismissed." They were "settled," the costs being paid by the trust.

The makers of this glucose knew that it contained sulphites; they knew that such compounds are foreign to natural foods; they knew or should have known that sulphites are harmful to the human system, and that heavy penalties had been imposed for the addition of these substances to meat products, yet they sold the adulterated article, widely, as of superior quality, without hesitation, supervision or notice.

HENRY LEFFMANN.

The letter to which Dr. Leffmann refers is doubtless the following, which was written by the Philadelphia attorney representing the trust:

Aug. 20, 1906.

Hon. B. H. Warren, Dairy and Food Commissioner:

Dear Sir:—In reference to the cases recently brought by your department against various glucose houses, syrup manufacturers and manufacturing confectioners, on the charge of selling food products containing sulphur dioxide, I represent the Corn Products Refining Company, of New York, manufacturers of the glucose used by all of the defendants referred to. Since it was the glucose used by the said defendants that contained the sulphur dioxide which inspired the prosecutions, my clients have assumed the onus of defending these cases.

As the result of a recent conference with the Corn Products Refining Company, I am prepared to admit for my clients that the glucose up to this time manufactured by them does contain a minute quantity of sulphur dioxide, and that under the Pennsylvania Food Law this fact renders their goods in violation of the Pennsylvania Act of 1895, under which all of the present cases are brought. I should like to say just here in their defense, however, and to emphasize this as deeply as I can, that in using sulphur dioxide they have followed a practice which has marked the manufacture of glucose ever since the industry began. The ingredient named is not used in any sense as an adulterant, but to bleach the glucose to a color sufficiently white for confectioners' use. The natural color of glucose is yellow, which makes the manufacture of white candies difficult, if not impossible.

Now, realizing that their goods, as at present made, are in violation of the Pennsylvania law, my clients have already given orders

to their various representatives to withdraw immediately all bleached glucose from the market, not only the market in Pennsylvania, but also those in all other states and territories. Henceforth, they will make for the United States market only what is termed "neutral" glucose, that is to say, glucose, the color of which is natural light yellow. This glucose contains no sulphur dioxide whatever. It will not please manufacturing confectioners, yet under existing circumstances, we have no alternative but to produce it.

In addition to withdrawing all illegal glucose from the market and replacing it with glucose fully in conformity with the law, my clients will also assume the payment of all fines assessed against users of their glucose, where the prosecution pending against them springs from the presence of sulphur dioxide in their goods.

A number of these cases have already been brought in Philadelphia. In most of them hearings were waived, and the defendants held in bail. In others the defendants were held in bail after the hearings. I am greatly in hopes that you will see your way clear to dismiss these cases on payment of fines and costs, as it has been the custom of your department to do. My clients wish to dispose of the whole of this unpleasant situation as speedily as possible, and since the department has fully attained its object of securing the removal of illegal goods from the market, there would seem to be no good reason for pushing the cases further.

Further, the returning of these cases to court would, I respectfully submit, serve no necessary purpose, since the court, after having made it plain that the Corn Products Refining Company had not used sulphur dioxide for any illegitimate purpose, would scarcely impose more than the minimum penalty. At the same time, the carrying of the cases to the Quarter Sessions Court would entail on my clients additional costs and about \$25 in each case. This would seem a useless hardship, since, as I repeat, the Dairy and Food Department has already won its campaign and attained its object.

In order that the matter may be settled and ended as speedily as possible, I will ask you to let me have, from the records of your department, a list of the sulphur dioxide cases already brought.

ELTON J. BUCKLEY.

Dysenteric Outbreak Due to Colon Bacillus.

WARREN, PA., Feb. 12, 1907.

To the Editor:—On Dec. 8, 1906, nearly 3,000 persons—approximately one-third of the population of Warren—were attacked within a short time by severe vomiting, profuse watery bowel discharges and some prostration. There was no fever, and most of the symptoms disappeared within 12 hours. Warning was at once given to boil the water used for drinking, and those who obeyed had no further symptoms. Others continued to suffer from attacks of diarrhea for a period of two weeks. In no case did any typhoid fever develop.

Analyses of the general water supply were made on December 8, and at frequent intervals thereafter, and the wells from which the public supply is obtained were found contaminated with sewage. The *Bacillus coli communis* was found in every sample examined. These wells are 60 feet deep, but they are located in a very insanitary region, near numerous outhouses and outlets of sewers, and on the banks of a river which frequently overflows.

Analyses made at irregular intervals in the past few years always showed these wells to be very pure, and it is believed that in some way surface washings contaminated them.

Up to Jan. 18, 1907, the colon bacillus was found; since then the water has not contained this organism, but the river has fallen several feet and there has been no rain.

That the water was the cause of the epidemic is evidenced by the facts that only users of city water were affected. No other community in a radius of 50 miles had any epidemic; persons who visited Warren and drank the water were attacked within 12 hours with the same malady. The milk and food supply come from a dozen different sources, and no one article of diet was generally used. Analysis of the water failed to show the presence of any other pathologic germ but the colon bacillus. The attack was similar in all cases and was more like an attack of cholera morbus than anything else.

Are there epidemics of a like nature on record in which the colon bacillus is the offender?

Warren is free from typhoid fever, but in April, 1906, a similar epidemic, lasting a few days, was noted. The number of persons affected was not nearly so great. It was attributed to the use of stagnant water from an emergency reservoir, but analyses of the water made at that time showed no evidence of sewage contamination.

M. V. BALL,
President, Board of Health.

[This letter is referred to in the Editorial department, this issue.—ED.]