

thousand, mostly from the port of New York, during the last eight months, and our other great railway has brought in some sixteen thousand by way of the St. Lawrence. This indicates that the danger to us is greater *via* New York than it is *via* the St. Lawrence, and it further indicates that the United States are not in any way exposed as much to us as we are to them. The question then arises, What can we, as medical men, viewing the situation broadly, recommend to all the health authorities with regard to next year? Our opinion is that of many gentlemen in the United States, that excepting, probably, immigration from Norway and Sweden and the British Islands, we shall urge that for a year at any rate—that is, next year—there shall be a complete embargo put upon that kind of immigration which comes to this country, especially through the port of Hamburg. You all know what it is; I need not describe it. If any of you have any doubt about it, let him look at the arrivals by the various ports of entry. If cholera once gets into New York and begins to spread, the people would disperse by twenty or thirty lines of railway, and coming into Buffalo by as many more, you can readily understand what we would be exposed to. The only fight we can make of a really effective character is the external fight. If after that we have to fight it in our individual towns and cities, I trust that with the work done in the present winter by local health organizations, cleaning up everywhere, and making the most positive health regulations necessary, we shall be comparatively free from danger if it gets through our frontier. I trust gentlemen will continue the discussion as I have indicated, and, if possible, formulate some broad conclusions that will be useful to ourselves as health officers, and I have no doubt of equal use to the Honorable Minister of Agriculture.

Dr. Rogers: What would Dr. Bryce consider as the most rapid and thorough way of disinfecting the baggage and the passengers on ships?

Dr. Bryce: Of course it is a question with a great many details in it, but I may say briefly this: it can be illustrated by one single reference on this continent. At New Orleans, as we all know, every year they suffered greatly from yellow fever, and especially from 1876 to 1878. The district during those years was semi-decimated. They introduced a very simple process of putting the infected material into a long cylinder which could be supplied with live steam under pressure rapidly driven in through pipes and kept there until everything in the inside was disinfected. It has been improved upon, and we have now, in the one at Grosse Isle, one of the most effective that I have seen on the continent. It is about nine feet long and four feet in diameter. It would only take a few square yards at a time, and that would take too long. That is, for the baggage itself. The other point is, that after the persons have been removed they are handled in this way at Philadelphia by appliances completed last week. They fitted up a steamer complete in its details so that they could run out close to the infected ships; then take on 50 or 60 passengers an hour and put them in large bath-rooms where they can be washed within an hour, and while washing have their clothing put in a superheated room where it can be disinfected. The next hour they take off as many more, and in

that way disinfect the whole of the passengers. That is the steamer of "observation." Then they take the baggage by a *lighter* to the shore, and disinfect it in a superheated chamber there. The difficulty is they cannot, at Philadelphia or at New York, and we cannot at Grosse Isle yet, bring the ship alongside of a wharf where it could be cleaned. In order to clean the ship at Grosse Isle, Philadelphia, etc., they have adopted a plan of placing on a barge, or some sufficient vessel, large chambers in which sulphur dioxide can be rapidly distributed by means of fans. A large quantity of sulphur dioxide is sent through the ship. If that is done thoroughly and the ship stands under sulphur fumes for twenty-four hours, they have found in New Orleans, at all events, that it does disinfect the ship, not only in cases of smallpox, but also of yellow fever. That is, I think, an answer to the question.

Dr. Playter: I think we should consider hereafter, as medical practitioners, another aspect of the question. We know that there are yet other factors in the causation of all diseases of an infectious nature, and Sir Andrew Clarke has recently brought the question to a fine point in regard to tuberculosis. He said there were necessarily two factors in the causation of tubercles; one the bacillus, and the other the soil on which it grows. It is most desirable that everything should be done through quarantine to prevent the infection reaching this continent, but I think attention should be directed to the other essential more than it has been. Not that we should neglect the first, but the infection will escape the best quarantine and the best disinfection. There will be less danger in the future, but we should prepare for a certain amount of outbreaks at the best on this continent next summer. Our present facilities for instructing the people are, I think, insufficient, and a good deal might be done by way of enlightening the people in the way of the soil. We all admit that if the digestive canal is in a good condition there will be no infection, and the general functions of the body should be kept in a vigorous condition. It seems to me very clear that unless there is a want of acidity or, rather, alkaline conditions of the intestinal canal, the cholera bacillus will not develop there. I think there should always be a thoroughly clean condition of the digestive organs.

Dr. F. W. Campbell: I do not think that, with all the good will that the Hon. Mr. Carling has, he will undertake to keep the digestive organs of the people of Canada in good order. That is a matter which comes under the cognizance of the provincial authorities. I should like to ask for information from those who are health officers if it is not a fact that the statistics give the following: That 70 per cent. of epidemics escape quarantine, and that 30 per cent. only are successful, even under the best system of quarantine?

(To be continued.)

DR. SENN, in a recent clinical lecture, expressed himself as being satisfied that catgut is the only suture necessary to approximate and maintain any fracture of the patella until union has taken place.—*Chicago Clinical Review.*