

DIPHTHERIA AT FORT KENT, MAINE, U.S.A.*

By WELLINGTON JOHNSON, M.D.

ON the afternoon of October 9th, 1897, I was asked by Dr. A. G. Young, Secretary of the State Board of Health, to go to Fort Kent to see what could be done to stamp out an epidemic of diphtheria which had grown from a few cases to so alarming an extent that more than a hundred individuals had suffered from the dread disease, and there had already been twenty-five deaths. Unfortunately, the local board of health had lost control of the epidemic, and a few days previously had sent to the State Board for assistance.

According to arrangements, I started on the 2 a.m. train Monday morning, and arrived at Caribou at 2.30 p.m., where I took a team for a drive of forty-two miles, which was covered that night. Thus I arrived at Fort Kent 10 p.m. of the same day I left home. Word had reached there that relief was to be sent from Augusta, and your correspondent received a hearty welcome from all except the hotel proprietor, who was afraid to have him in the house after he had been visiting diphtheria cases all day.

After a night's rest, working under Dr. Young's instructions, I started out early in the morning to learn the true status of what had to be done to get full control of the epidemic. The local board, together with the chairman of the board of select men and the Catholic priest, Father F. X. Burque, were all disposed to render all the assistance they could in bringing about a speedy relief from the spread of the now dreaded disease.

Word had gone forth to the outside world of the present state of affairs at the fort, so that business was being paralyzed, travelling men not daring to come into the town, so much so that stringent measures must be undertaken to change matters for the better protection of all concerned.

Upon inquiry I found that the health officer, Dr. Sirois, had been trying to manage the whole affair alone, but was fast losing ground, as the disease was spreading to other localities, being carried from place to place by those who were not disposed to obey quarantine laws and regulations, and thus crippling the local board in its efforts to stamp out the disease. Active measures were taken, and the arrest of one renegade had a salutary effect on the would-be travellers who had been exposed to the disease. Dr. Sirois not being able to care for all the sick, Dr. J. F. Archambault was invited to take part in the warfare against the Klebs-Löffler bacillus. Accordingly, on Tuesday morning, October 12th, the above-named physician, with I. B. Bourgoin, member of the board of health, and myself, started on a raid armed with antitoxin and antitoxin syringes. Our first day's campaign was rewarded by finding thirty cases of diphtheria, and antitoxin was administered to all without any serious objection on their part.

The next day found the same party on a similar errand, and this was continued until we made the rounds, and seventy-five or eighty cases were treated. Strange to say, out of the first seventy cases in that vicinity there were twenty-five deaths, while in the last seventy-five cases treated by antitoxin only one died that received the treatment,

* We publish this as an example of democratic thoroughness.—Ed. P. II.

and that was a child of twelve years, who had been sick ten days—a glorious record for the new method of treating the disease with antitoxin.

As to details of treatment: As soon as a case was found we immediately gave from 500 to 1,500 units injected into the deep tissues of the abdomen, the dose varying according to the age of the patient and the severity of the disease. In twenty-four or thirty-six hours the throat would clear up, temperature and pulse would become normal, and the patient would be on the road to recovery. We also used boric acid solutions for gargle, and tincture of muriate of iron and quinine internally. As soon as all the members of the family became convalescent, a thorough disinfection was done with Professor Robinson's formaldehyde generator, and the steam arrangement for clothing, pillows, etc.

Results.—In two weeks' time there were only two cases in the several towns and plantations, and these convalescent. So much for active, persistent, and thorough work with the proper implements to fight the diphtheria germ. The serums used were Messrs. Parke, Davis and Co.'s, and Pasteur's.

In addition to the medical treatment and the disinfection, local boards were organized in the plantations of New Canada, Wallagrass, and the town of Frenchville, and instructed how to proceed in the prevention and cure of contagious diseases, especially diphtheria. Taking all in all, a busy two weeks' work was accomplished by the representative who was sent there by Dr. Young under the auspices of the State Board of Health, for he met and held meetings with the local boards nearly every evening. Great praise is given the State Board by the local boards and citizens, for the ready response the State Board made in the hour of need.

Augusta, October 30th, 1897.

ANALYTICAL NOTES.

PRESERVED BREAD.—Henry A. Sevigne, of Boston, U.S.A., has taken out a patent for a method of preserving bread. The process, according to the *North-Western Miller*, is to heat the bread in an oven to a high temperature, and allow it to cool, until it is at a temperature of 90° F. Each loaf is placed in an airtight and waterproof wrapper before the temperature of the bread has fallen to the temperature of the surrounding atmosphere. The edges of the wrapper are closed and secured upon the loaf, thus enclosing the bread in a flexible, sealed, airtight, and waterproof wrapper, which is sufficiently transparent to enable its contents to be visible.

DETERMINATION OF FAT IN CONDENSED MILK.—The following method has been devised by A. E. Leach for the determination of fat in condensed milk: Weigh out 40 grms. of the sample, and make up 100 c.c.; withdraw by means of a pipette 15 c.c. of the solution, corresponding to 6 grms. of the sample, and transfer to a 50 c.c. test-bottle, graduated to read to 0.1 per cent.; then pour in water till the liquid nearly reaches the neck of the bottle, and add 3.5 c.c. of an aqueous solution of copper sulphate of the strength of 69.28 c.c. per litre (Fehling's copper solution). Shake the bottle well, and allow the contents to