

element in bringing about much of the low fever in cities? This malaria is essentially the product of decomposing organic matter, but differs from the ordinary paludal malaria in being more fatal; death from the latter is rare. Sternberg, from the known cases of malarial fever and the number of deaths occurring in the American army division of the Atlantic, and the number of deaths reported as occurring from this cause in New York, shows that the extraordinary number of 189,000 cases should represent the sickness from this cause in that city in one year. It is then more fatal, or more probable it is another fever. What is the bearing of this on the prevalent fever? If this is the principal cause of it, where is the filth and decomposing organic matter? In our privy pits and drains, chiefly. The pits are bad enough. No worse than they have been in the past, and it may be contended that the dry season has been favourable to their disease inciting qualities. I have not devoted much thought to this but it is just as likely the dryness was a benefit. In the drains we must look for the principal source of this substance.

There has been and is a good deal of bad work done in connection with house drains and possibly occasional blunder and practice in connection with public drains until fuller enquiry has been made into the character of the drains to settle their merits, or demerits. It may be affirmed that our drains are probably no worse than they have been for years past. Yet one cannot help thinking that the great volume of water poured into these drains daily must flush some of the larger drains very well. The total daily amount pumped borders upon 4,000,000 of gallons most of which goes through the drains.

This may be the source of the disease but more evidence ought to be forthcoming to bring conviction that it is due to this, call it by whatever name you choose, civic malaria or anything else, sewer air laden with typhoid germs. What is it if not malaria? Typhoid? Well, what is typhoid fever? The bottom facts respecting this disease have not been got at yet. Dr. Cayley, in his account of the Chatham and Redhill outbreak shows that a man without being ill enough to quit his work gave the fever to 305 persons through the splashing from a few stools.

Dr. Woodward (Med. Hist. War of Reb.) cites the case of No. 567, entered in two hospitals as a

case of "chronic diarrhœa," dying of pneumonia one month from date of first entering after convalescence. Autopsy showed the typhoid lesion. He says: "It was common enough for fever cases to be registered as chronic diarrhœa." A certain group of characters mark a case as one of typhoid fever, but it is just now perfectly clear to me that many cases of fever exhibit comparatively few members of the group of characters. Where is the line to be drawn? Somewhere, no doubt, until this disease is shown to be a non-specific fever. Two things ought not to be lost sight of: the man and the disease, the one reacting on the other.

In view of the fact of great variability in this disease, and that it is one thing to say what a fever is during the first few days of attack and at the end of three weeks what it was. No wonder that some difference of opinion would obtain at the beginning of an outbreak such as we are passing through.

The eminent American authority, Dr. Wood, says, speaking of mild cases of enteric fever, such cases "are often mistaken for miasmatic remittent." Have we, or have we not reason to suppose that scores of our fever cases if considered singly and early would present a large percentage of cases not likely to be called typhoid?

It is for you, gentlemen, who have daily been in contact with the disease, to say whether in the main it is typhoid fever or not. Looking at the matter from my point of view, and until it is more definitely decided what typhoid fever is, the weight of evidence points it out as in main an outbreak of typhoid fever.

To return from this necessary digression, where must we further look for the source of this disease?

It would be worth while to examine our *milk supply*. I have the very best evidence that during the latter part of the summer two cases of typhoid occurred in the family of a milk vendor. Then there is our water supply. My views are well known to you all but I may recapitulate. I have spent some time with Dr. Cousens and again with Dr. Robillard examining what is known as the "brewery creek," which enters the Ottawa 200 or 300 yards above our waterworks in-take pipe. The amount of organic matter coming into the river from this source at present cannot do any harm to our water supply, but on sentimental grounds alone this nuisance