

Truth's Contributors.

TYPHOID FEVER.

Nature of the Infection—How Produced and Propagated.

BY DR. CANNIFF, MEDICAL HEALTH OFFICER, OF TORONTO.

The subject of typhoid and other forms of low fever is one of increasing importance. Typhoid fever, and low fevers with typhoid symptoms, are rarely absent from many communities; and yet they may be regarded as preventable diseases. It is not always possible for the physician to distinguish between genuine typhoid and certain febrile diseases, possessing sometimes a few, and sometimes most of the characteristic features of typhoid. Still, true typhoid is as distinct in its nature and origin as a potato is from a turnip. What then is typhoid fever? It is regarded by the medical scientists as a specific disease, due to specific germs planted in the human system which had their origin in a pre-existing case of typhoid fever. It has been shown in a former paper how difficult it often is to follow the track of the contagion of scarlet fever. It is far more difficult in typhoid to follow the often devious channel by which the seed is conveyed from one person to another. Still there is no difficulty in many cases to discern the very probable road which leads from one typhoid case to another.

Typhoid is not what is called a contagious disease. There is no evidence, and no reason to believe that the disease is ever contracted simply by contact with, or contiguity to, the affected person. Individuals do not catch the disease by entering the sick room. Even the nurse rarely takes the disease from the patient. Two or more of a family often have the disease, sometimes one after another; or the nurse may be stricken down with it; but in these cases all have become affected from a common source. The specific germs, the fruit of a case of typhoid, are not cast off by the lungs, nor the skin, nor the kidneys, although the excretions therefrom are impure, and inimical to health, making disinfection of them a necessity.

In the typhoid disease there is found, at a certain stage, ulceration in a certain portion of the bowels. Patches of ulcers form by the breaking down of small glands, with the adjoining mucus membrane. It is during this process that the typhoid germs are multiplied and developed.

These remarks clear the way for understanding the mode by which the germs are transmitted from individual to individual. Each case of typhoid usually produces a good harvest of germs, the seed of the disease. They are carried in the fecal matter, and with it cast out of the body. It will be well to notice here how important it is that the discharges should be promptly and thoroughly disinfected. The disinfectant used should be a germicide so powerful as to effectually destroy all vitality in the specific germs. When such disinfection is practiced all danger of propagating the disease is at once removed. But too often not only is disinfection neglected, or imperfectly done, but feces are deposited where the specific germs may in several ways, in course of time, find channels by which they again reach the human system. It is a matter calculated to excite disgust; but it is a recognized fact with which the public should become acquainted. The length of time before transmission from one to another is accomplished is often uncertain. The period is often so long that the connection between the two cases cannot be traced. The vitality of the germs is probably very great, and like vegetable seed may be inactive for a long time. If the discharges from a typhoid case are thrown into a privy-pit, it is very probable that the whole mass contained in the pit will become leavened. That this fertilized specific poison from privies frequently pollutes wells there can be no doubt; that it may contaminate food and milk is equally certain. But, perhaps, the typhoid discharge, without being disinfected, is thrown into a closet with water service, and is carried

away. Whether it shall become the parent seed of other typhoid cases will depend on circumstances. If it passes into a running stream it will, after a time, become so diluted as to render it innocuous. Should, however, any one drink a cup of water from the stream a short distance below the point where the sewer empties into the stream, he may in that cup have the typhoid germs in sufficient quantity and concentration to plant the disease in his system. Again, it is quite possible for the typhoid excreta to find its way by a more indirect route. For instance, the foul discharge from a typhoid patient is thrown, without being disinfected, into a water closet and carried by drain and sewer to, say the Toronto bay, where it is mixed with water already foul, so that the poison is unlikely to become diluted; on the contrary, it may find a place for further development. This specific poison may, under certain conditions of wind and weather, be carried out through the gap, and to the source of the water supply to the city. Or, what is more probable, by an accidental leak in the pipe which lies at the bottom of the bay, the poison may be sucked into the pipe and conveyed in the water to the reservoir, to be served to the citizens; and it may reach one or more in sufficiently concentrated forms to beget the disease. This is no doubt possible; but not very probable. The greater danger is contamination of the city water by sewage without the presence of typhoid germs, whereby various other ailments, as low and remittent fever, and diarrhoea are produced, and acute affections of all kinds made worse.

Typhoid fever finds entrance to the human system always by the mouth and stomach. We have seen that through the agency of drinking water the germs may obtain entrance to the system; but the food may constitute the vehicle by which they are carried into the stomach. Outbreaks of typhoid have been traced to milk which had been polluted by the excreta of a typhoid, either from the cows drinking affected water or by the use of such water in the dairy. Other articles of food may also be the vehicle of the germs. The typhoid excreta may become dry and then pulverized and be blown about so as to lodge on articles of food. And possibly, when thus floating in the air, a sufficient quantity may find lodgment in the mouth and then be carried into the stomach, to sow the seeds of typhoid.

By whatever means the typhoid germs reach the stomach, they pass with the aliment from the stomach without any known effect upon their vitality by that organ. There is no evidence that they are absorbed by the stomach. They pass along with the contents of the bowels until the point is reached where they find a suitable nidus for development, in the process of which the patches of ulcers form, of which mention was made.

True typhoid fever, the nature of which has been discussed, is often simulated, and up to a certain stage of the development of febrile affections no one can be sure of the type. It may form the subject of another paper to consider such forms of fever as bear resemblance to typhoid, and their causes and prevention.

The means by which typhoid may be prevented are sufficiently indicated above, as well as the mode and importance of disinfection.

Phrenology.

BY WALLACE MASON.

As the subject of phrenology is being more and more discussed, allow me to furnish you with a few facts connected therewith. Professor Daniel Wilson, in a recent paper read before the American Association for the Advancement of Science, says:

"Consistently with the recognition of the brain as the organ of intellectual activity, it seems not unnatural to assume for man, as a rational animal, a very distinctive cerebral development. One of the most distinguished of living naturalists, Professor Owen, has even made this organ the basis of a system of classification, by means of which he separates man with a sub-class distinct from all other mammalia."

"No one, I presume," says Darwin, "doubts that the large size of the brain in man, relatively to his body, in comparison to that of the gorilla or orang, is closely connected with his higher mental powers."

In that very able and thoughtful paper,

Professor Wilson gives a great many measurements of the brain and skull from eminent authors, and although his figures clearly show that men with great mental power had always large brains, yet much of his data seems very puzzling, as it shows that many people having large heavy brains do not manifest a corresponding amount of mental ability. He clears this difficulty, however. The quality of the brain, he shows to be an important consideration, and in conclusion he says: "But it seems by no means improbable that certain marked distinctions in races may be traceable to the very fact of a prevailing difference in the specific gravity of the brain or of certain of its constitutional portions, to the greater or less complexity of its convolutions, and to the relative characteristics of the two hemispheres."

Now this is just the point the educated phrenologist insists on. The difference in quality of brain, the depth of the convolutions and its relative size in the different hemispheres, even Professor Wilson, who may or may not be an advocate of Phrenology, recognizes the fact that to the frontal region belongs the intellectual faculties. This being so, no matter how large the other portions of the brain may be, the mental being small, the individual possessor will not show much intellectual power. The faculties in the upper part of the head are the moral, in the back, social, and in the side the organs of force, or the ability to look after self. These are not judged of by "bumps," vulgarly so called, but by the length of brain from the medulla oblongata, which lies at the top of the spinal cord. There are, no doubt, many self-dubbed "Professors" who are simply bumpologists; who know nothing about anatomy or Physiology, but depend upon the credulity of mankind and bring the whole science into disrepute. Forty years ago there were many ignorant teachers; but that did not affect the great foundation truths in the least. A college is now in existence in New York, chartered by the State Legislature for the purpose of scientific instruction in phrenology, where students who have passed a course receive a diploma. This college is not under the management of O. S. Fowler, as many suppose, but is in the hands of a company, Mr. Fowler having separated from it over thirty years ago.

In reference to the *World's and Grip's* attack on Phrenology, it is an open secret that the almighty dollar, properly presented to the selfish propensities of their editors, would have a powerful effect in drawing their moral and intellectual faculties in favor of phrenology or any otherology.

The Golden Legend.

BY COL. D. WYLIE, BROCKVILLE.

In a recent paper for TRUTH something was said of the Legend of Nicodemus. Perhaps it may be of interest to your readers to learn of another legend which appears to have been more popular among the clergy of the fifteenth century than the sacred meetings. In 1483, Caxton, who stands first as a printer and publisher of his day, but who, it is said, never produced a Bible for fear of falling under the censure of the church, printed an edition of the *Golden Legend*. This work, he says, was "accomplished at the commandement and request of the noble and puyssaunte Erle, and my special good Lorde Wyllam, Erle of Arondel." This work has many wood cuts, and contains an account of all "the high and great fates of our Lord, the fates of our blessed Lady, the lives, passion, and miracles of St. George and many other saints." It is said by Dublin to be, without exception, one of the most elaborate, skilful, and magnificent specimens of printing ever issued from Caxton's press. There were three editions of the work printed. Three copies, in an imperfect state, are in the library, at Cambridge, but which of the three editions is not mentioned by the Rev. C. H. Hartshorn, who notices the fact.

At the beginning of the book, as well as the end, it is observed respecting the title, "The Golden Legend"—"for like as it passeth gold in value all other metals, so this legend

exceedeth all other books," superior, therefore, to the Holy Scriptures. In 1449, Walter, Lord Hungerford, bequeathed the legend to Margaret, wife of his son, to show how highly it was appreciated, and in the year 1655 the learned Claude D'Espence was obliged to make a public recantation for calling the legend "Legend Ferreo"—or the Legend of Iron.

Baronius has given the lines of many apocryphal saints; for instance, of a Saint Nisioris, whom he calls a martyr of Antioch; but, it appears, Baronius, having read in Chrysostom this word, which signified couple or pair, he mistook it for the name of a saint, which never existed. This, it is said, is not an uncommon blunder, but then it is only fools who laugh. Let us here record another most extraordinary incident given as a legend. Two pious maidens, residents of a nunnery, the night of the nativity of Christ, after the mass, retired to a solitary spot till the second mass was sung. One asked the other, "Why do you want two cushions, while I have only one?" The other replied, "I would place it between us, for the child Jesus; as the evangelist says, where there are two or three persons assembled, I am in the midst of them." This being done, they sat down, feeling a most lively pleasure at their fancy; and there they remained from the nativity of Christ to that of St. John the Baptist, but this great interval of time passed with those saintly maidens as two hours would appear to others. The abbess and her nuns were alarmed at the absence, for no one could give any account of them. On the eve of St. John, a cowherd passing by them, beheld a beautiful child seated on a cushion between the pair of run-away nuns. By her they were found with the child playfully seated between them, who with blushing countenance inquired if the second bell had yet rung. All were astonished that the pair had been in the same place from the nativity of Jesus to that of St. John. The abbess asked them about the child which sat betwixt them, when they solemnly declared that they saw no child betwixt them, and persisted in their story. Such is one of the miracles of the "Golden Legend."

It is also recorded that monks imagined holiness was often proportioned to their own faithfulness. St. Ignatius, say they, delighted to appear abroad with old dirty shoes; he never used a comb, but let his hair clot, and religiously abstained from paring his nails. One saint attained to such piety as to have near three hundred patches on his breeches, which, after his death, were hung up in public as incentives. St. Francis discovered by certain experience that the devils were frightened away by such kind of breeches, and one of their heroes declares that the purest souls are in the dirtiest bodies.

St. Macanuis, the Golden Legend relates, happened "to kill a flea that bit him," and when he saw the blood of the flea he repented, un-clothed himself, and went naked in the desert six months and suffered himself to be bitten by flies. It is also recorded that St. Austin, the apostle of England, arriving at Strode in Kent, was pelted from the town with the tails of fishes. For this treatment St. Austin called down the curse of the Almighty, and after that all the children born in the town had tails, till the inhabitants repented. The record ends thus, "but blessed be Gude, at this daye is no such deformyte."

A story from the English translation may entertain the reader, although he may question the lesson of morality taught. "There was a man who borrowed of a Jew a sum of money, and swore upon the altar of St. Nicholas that he would render and pay it again as soon as he might, and gave no other pledge. When the Jew, after waiting a long time, asked for payment, the borrower said he had paid him. The Jew took the man to law. The borrower was placed in the witness stand. He carried a hollow staff with him, in which the money was hidden. The staff he asked the Jew to hold while the borrower took the oath, receiving the staff back again. He then swore he had given the Jew more than he owed him. On his way home the borrower was run over and killed, and the staff broken, and the money scattered, which opened the Jew's eyes to the trick which had been played upon him. The people advised the Jew to take the money which was his. This he refused to do, but said that if, through the merits of St. Nicholas, the man was restored to life, he, the Jew, would become a Christian,