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ON POISONS AND DISEASE AND SOME EXPERIMENTS WITH THE TOXIN OF THE BACILLUS TETANI.[1]

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II

EXPERIMENTS WITH THE TOXIN OF THE BACILLUS TETANI[2]

I MAY now be permitted to give a brief account of some experiments with the causative principles of the disease known as tetanus or lockjaw, a truly frightful disease of the central nervous system terminating in exhausting and fatal convulsions. It is fortunately one of the rarer diseases of man, but in time of war and on certain occasions, such as Fourth of July celebrations, it occurs more frequently. It has long afflicted the race, and historians of medicine find it described in the Hippocratic writings and other early sources of medical knowledge. Of all our domestic animals, the horse is more subject to it than we, and the loss of these animals from tetanus, more especially in tropical countries, is considerable.

Until 1884 the cause and true nature of the disease remained unknown. In that year two Italian investigators demonstrated the transmissibility of the disease to animals by injecting them with a little purulent material from a small lesion of an individual with a fatal attack of tetanus. In the years 1884–1890, bacteriologists definitely established the infective nature of the disease by isolating the causative organism in pure culture. One ordinarily speaks of this organism as the bacillus tetani, but it is known to the specialist as clostridium tetani, one of the family of

[1] Address of the president of the American Association for the Advancement of Science, Boston, December 27, 1933.

[2] This part of the address was not presented in its entirety.