

nized, but the suggestion of the immediate machinery has curiously varied.

The ancient Greeks and Hebrews believed that disease or a plague was a blow from an offended deity, and the Christian's favorite doctrine was, that it was a visitation from the devil; for both, the modern scientist has substituted the microbe, which is no logical advance over the belief of either. The ancient Jews were very practical, business-like and honest people, and could have written sanitary articles in medical journals much better than some of their descendants of the present day do now. They knew the facts of sepsis, and had most elaborate schemes of antiseptics, whose stringency of detail were not much more ridiculous or probably much less satisfactory than many of those which have emanated from Lister himself.

Mr. Tait says, the "germ theory" originated from a supposed analogy between the processes of decomposition and disease. The law of decomposition has long been known; given a solution of organic compounds maintained at a certain temperature to which air has access, it will decompose. Pasteur added the fact that the process was always in the presence of, or on account of, numerous minute organisms which are capable of propagation. Pasteur did not invent a hypothesis, he did not formulate a theory, he did not establish a law, he simply added facts. The microbic theory of decomposition is untenable, as is shown by the homely instance of well-made jam. Here he says: "Let me remind you of the essence of inductive reasoning in Bacon's own words—a rule which has never been successfully evaded: 'The form which is sought can be detected only by a process of exclusion, by which we find a phenomenon constantly present, when the effect is present, absent whenever the effect is absent, and varying in degree with the effect. Such a phenomenon would be the form in question, the cause of the given effect or attribute.'" According to this salient definition, is the *causa causans* of decomposition the microbe? Most certainly not. Therefore we can have no microbic theory of decomposition. But if we proceed on true Baconian lines, we find that not only are the phenomena of decomposition not those of disease, but there is absolutely no analogy between them. Some appearances of analogy there are, but they are easily destroyed by careful examination. Take the huge carcass of an ox, let it lie in the field till the phenomena of decomposition are observed beneath the eyelids. At the same time the same changes will be found active in the pericardium, though all possible communication by the blood current between two such remote spots has been destroyed. The spores of germs of decomposition are always present in our body, and they commence their victory as soon as death occurs. Throughout the

whole nomenclature of disease there is none which affects the whole mass of the living body at once, and at a blow, as does decomposition.

Mr. Tait says that he has followed the researchers on the bacillus of tubercle with great care, because he had objected to a group of cases of abdominal diseases being designated as tuberculous peritonitis. Opening and draining these cases cures the majority of them, and in the characteristic tubercles in a great many of his own cases, the bacillus tuberculosis has been found, while in others it has not. Many of the former have recovered, while some of the latter have ultimately died of the advance of the disease. Hence he concludes that while the bacillus of tuberculosis may be a product of the disease, it is not its cause.

Mr. Tait says that ten years ago electricity was unfortunately revived as a remedy for diseases, and that this time it was directed to the affections in the female pelvis, and that we were told that inflammatory effusions, purulent inclusions and solid tumors had melted away under the influence of the electrolytic current. His criticism of the proposal at the time was confined to the suggestion that, as inflammatory processes were pretty much the same wherever met with, he should be contented to believe the statement, and follow out the treatment, if he saw it applied successfully to a whitlow or ganglion of the wrist, and he now proposes that the same kind of test be put to the "germ theory" in the field of dermatology. Here the great bulk of the phenomena of disease are under the naked eye, and can be supplemented by simple, harmless, and perfectly justifiable experiments, and it is most disappointing to find that the whole result of previous investigation consists in numerous changes of nomenclature, and a blatant advertisement of nostrums. The skin doctors have ranged themselves into two camps, germists and anti-germists. They have quarrelled with each other like gynecologists, and have settled nothing.

Mr. Tait goes into a long dissertation on typhus fever, which he claims is not due to a germ, but to overcrowding. He states that typhus is practically unknown wherever the population is below one hundred and fifty to the acre, but occurs with certainty when it is over two hundred. He says that typhus arises *de novo* upon appropriate provocation, and is speedily killed by cleanliness and an abundant supply of fresh air, which facts are in his opinion contradictory to the "germ theory."

Mr. Tait says: "It is probably the germ of some very ordinary fungus, sprouting with deadly growth from the pabulum afforded by the crowd—a suggestion made to me by the late Charles Darwin. At any rate, in this case the fulfilment of Bacon's canon is complete. The phenomenon, a population above a certain density is always present