## MEDICAL MATTERS.

## DENTAL CONDITIONS

IN TUBERCULOUS SUBJECTS. Mr. George Thomson, L.D.S., Honorary Dental Surgeon to the Royal Hospital for Diseases of the Chest, London, has an interesting article in the current issue of "The British Journal of Tuberculosis " on the above subject. He says in part: The principal change which has taken place in our *point de vue* since Miller's "Micro-organisms of the Mouth" was published in 1890 concerns itself with the opinion that the tubercle bacillus is not inspired, but that it is ingested through the alimentary tract. Miller is still a long way in advance of many later writers, both as to the cause of dental caries and oral sepsis. "The soil, much more than the seed, controls the disease.'" Professor Adami says: "The tubercle bacillus, we may be fairly sure, from living, it may be, on foodstuffs outside the body, accustomed itself first to living on the surface and in the passage of the organism as a harmless saprophyte, and only later gained the power of living, not on, but in the tissues;

and from that moment it became pathogenic." Dr. Sim Wallace says: "The mouth is so exposed to bacterial infection that whenever it presents a suitable soil for the development of any common species to bacteria, then such bacteria will gain a foothold, and without such suitable soil it seems impossible for any species of bacteria to have more than a transient existence in the mouth."

Dr. W. Hunter and Dr. Peter Daniels, with many others, have realized that oral sepsis produces a lowering of vital resistance, and further renders the patient an easy victim to pyæmic and suppurative processes. It is obvious that a mouth containing carious teeth and diseased gingival margins, with deposits and spaces between the teeth and pockets from which there is an exudation of pus, is a predisposing cause of many infective diseases. It would appear from the foregoing that the first rational method of prevention in the pre-tuberculosis stage would be the restoration of the mouth to health.

Again, it should be strongly urged that the permanent cure of pulmonary tuberculosis must be greatly hindered if the mouth is allowed to remain in an unhygienic condition. That general feeling of wellbeing which is always felt when the mouth is clean is especially important in the case of consumptives. The importance of proper nourishment to tuberculous patients, and the thorough mastication of food, so necessary to normal digestion, make it im perative that the teeth and gums should be restored to health.

The first 3 inches of the alimentary tract is under the control of the patient himself, and if the oral cavity is septic, how is it possible to expect the remainder can be healthy? It is the pollution of the stream at its source. Muthu states that more than 50 per cent. of the patients entering the sanatorium have carious teeth, and points to a close relation between dental caries and consumption. "Diseased conditions of the teeth and mouth not only act as a breeding-ground for micro-organisms, but bring about catarrhal inflammation of the tonsils and the pharynx, which, if persistent, injure their epithelium, weaken their defensive power, and very likely help the spread of infection."

Dr. Etienne Burnett, referring to the experiments of M. Vausteenburghe and M. Grysey, indicates that pulmonary anthracosis is not caused by the inhalation of dust, but by swal-lowing it, and is contracted by intestinal absorption. The dust reaches the lungs by passing through the wall of the alimentary tract. It seems from these experiments that weight is to be attached to the importance of well developed jaws, in which the teeth properly occlude and the mouth is normally closed in the act of breathing, and specially during sleep, so that the air breathed is filtered through the nasal passages, thus offering resistance to the introduction of foreign bacilli.

In the matter of tuberculosis, prophylactic hygiene is more powerful than any therapeutics."

By means of the natural resources of the organism, tuberculosis is already curable. This is not a paradox, but a fact. It is certain that experimental medicine will find the remedy, whether preventive or curable, that will act in the same way as Nature."

## THE PACE-MAKER OF THE HEART.

F Professor Arthur Keith recently gave a most interesting demonstration in the theatre of the Royal College of Surgeons, and showed specimens illustrating recent advances in the knowledge of the structure, functions and diseases of the heart. One of the most re-markable was a small mass of tissue, termed the "pace-maker," because, apparently, the beat of the heart has its origin in this substance. The observations of Professor Keith and Dr. Martin Flack on this tissue were suggested by a discovery by Mr. Tawara, a Japanese pupil of Professor Aschoff, of Freiburg, who found that certain muscular fibres form a tree-like system.



