

- (17.) That it be made an offence for any person—
- (a.) Expectorating on the floor or walls of the change or bath house :
 - (b.) Failing to keep his clothes in the place provided for them :
 - (c.) Beating clothes or shaking the dust off the same in the change-house :
 - (d.) Washing his clothes in a hand-basin :
 - (e.) Smoking in change or bath house.

V. MINERS' PHTHISIS.

The term "miners' phthisis" is that most generally applied to the pulmonary disease which, since the introduction of rock-drills at metal-mines, has assumed such serious proportions as to necessitate the appointment in several countries of Royal Commissions to inquire into and report upon its prevalence, nature, cause, and prevention. The reports of the four most important of these Commissions are as follows :—

"Report on the Health of Cornish Miners," by Dr. J. S. Haldane, F.R.S., and others. 1904.

"Report on Miners' Phthisis at Bendigo," by Dr. W. Summons. 1906.

"Report on Pulmonary Diseases amongst Miners," West Australia, by Dr. H. L. Cumston. 1910.

"Report on the Mining Regulations Commission, Transvaal," by Drs. F. E. T. Krause and C. Porter, and A. Heymann, Esq. 1910.

As these reports are practically unanimous upon the subject dealt with, and are the work of well-known specialists, it is not our intention to enter at length into the pathology or the etiology of miners' phthisis, more especially as, owing to the absence of adequate statistical and direct information regarding the prevalence of pulmonary diseases amongst miners in New Zealand, we have not been able to formulate such definite scientific opinion as is necessary for the purpose of comparison with the somewhat copious information, statistical and otherwise, regarding the occurrence and cause of diseases and deaths amongst miners, determined periodically and estimated in proportion to the living of all ages which are included in the aforementioned reports.

We have, however, adequate evidence to prove that in New Zealand miners' phthisis has not assumed serious proportions, as in Transvaal, Cornwall, or Bendigo, and we believe that if the remedial measures recommended by us are adopted the disease may be much reduced, if not entirely eradicated from the Dominion.

Miners' phthisis, from a clinical standpoint, may be classified into three types—viz., fibrosis, tuberculosis of the lungs, and tuberculosis of the lungs superimposed upon fibrosis.

Fibrosis is non-infectious, being a pure fibrosis of the lungs, non-tuberculous in origin, and, when contracted at metal-mines, is silicosis, a disease brought about solely by the mechanical action of silica and other rock-dust particles without absorption of them, and with no poisoning of the system generally. It is of purely local origin, and continues as such till tuberculosis, with its specific bacillus, is superadded.

Tuberculosis of the lungs, or consumption, the infecting agent being a bacillus conveyed only through the sputum of infected persons. The actual infection is more likely to be contracted above ground than at work.

Superimposed tuberculosis of the lungs, a combined type, being a tuberculous infection on a fibroid lung, the tubercle bacilli having been inhaled by a person suffering from fibrosis, in which condition susceptibility exists owing to the low resisting-power consequent upon the lung-tissue being impaired by the action of dust. To this type is almost invariably due the deaths ascribed to miners' phthisis.

Miners' phthisis has been confined throughout the world almost entirely to those employed at metal-mines. Coal-miners display marked relative freedom from superimposed tuberculosis, due no doubt to the fact that the particles of