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EDITORIAL.

PRINTERS' PHTHISIS.

Mr. E. Halford Ross, in an extremely interesting letter in the *Times*, discusses the question of the mortality rate from tuberculosis amongst printers, which is the highest in industry. Mr. Halford Ross has, for the last four years been conducting researches in this connection in various printing offices in the City of London, and in 1918, reported to the Health Committee of the Joint Industrial Council of the Printing Trades then being formed, that "there is a concentration of hereditary pre-disposition to consumption in printers' compositors, owing to the 'closeness' of their craft, and to intermarriage within their families."

Starting from the known to the unknown the investigator reminds us (1) that the tubercle bacillus can actually exist in the human body without attacking it or giving rise to any mischief; and (2) that the bacillus is actually dormant in a proportion of the population, infection accruing probably in childhood. Thus he points out that in a vicious partnership, governing the production of the disease, we are familiar with two of the partners.

But these two factors are quiescentsleeping partners only-therefore Mr. Halford Ross sought for the active partner, the causa-This he believes he has found in tive factor. printers' "list," which is "a black, grumous, woolly, fluffy substance which collects in compositors' boxes, trays, cases and "chases." He was undaunted in his investigations by the fact that it had already been examined by certain bacteriologists for the presence of the tubercle bacillus, and that their examination was sterile and their quest abandoned. Indeed he was actually encouraged to further observation, because the fact that the "list" was bacteriologically negative was in itself peculiar. Then, he tells us, he realised that "there was no object in looking for the tubercle bacillus in the 'list,' the bacillus being already within

the human subject." Then a chemical examination of samples of "list" obtained from various works, was carried out by unbiased persons, who reported that "list" obtained from composing rooms contains both silica and iron in appreciable quantities, that from machine rooms less, results since confirmed.

Silica and the oxides of iron are, says Mr. Halford Ross, known by the medical profession to light up phthisis when inhaled continually by those pre-disposed to the disease. Silicosis, described by Professor Osler in his "Practice of Medicine," otherwise known as stone-cutters' phthisis, or grinders' rot, is caused by silica, and iron causes a similar affection among workers in brass and bronze. Thus, he argues, it would seem likely that silica and iron inhaled by printers' operatives form the third factor in the production of their They have the two sleeping partners phthisis. -predisposition and infection-and they have the remaining active partner contained within the "list." He believes that the prevention of printers' phthisis is now in sight, by the use of suction bellows at regular intervals on compositors' trays, cases, and "chases," thus ren-dering collections of "list" impossible.

He concludes by emphasising that the production of pulmonary tuberculosis in the printing trade is the work of a combine; if the active partner is removed, leaving the sleeping partners to their sleep, the whole concern will be smashed.

Mr. Halford Ross suggests that the next step must be to find out precisely how the silica is conveyed from the compositors' boxes, cases, trays and "chases" into the workers' lungs. We suggest that in the meantime it might be useful to investigate why it is that a cat never lives in a composing room.

Our inquiries bear out Mr. Halford Ross's opinion that the prevention of printers' phthisis is dependent on cleanliness, and the frequent removal, from all departments of printing works, of dust and "list."



