

pure water in some form is essential to the possession of pure blood. That the rural population realizes the value of pure blood as essential to good health is shown by the avidity with which a large part of it will swallow some patent blood purifier containing 25 per cent. of strong alcohol, in addition to other more mysterious poisons, in the hope of cleansing it, a hope about as reasonable as to expect to purify milk contaminated with sewage by the addition of bad whiskey.

It would be well if they could be got to understand not only that polluted water may cause a variety of diseases, but conversely that pure water is a great medicine, a great purifier of the blood and preventer of disease, possessing more curative power even over the notorious Bright's disease, than any patent safe cure that will ever be concocted.

A thorough diffusion of knowledge on these matters, and especially as to the best methods within reach of the rural populations for preventing the pollution of their wells and springs, ought to result in an incalculable amount of good.

In regard to the establishment of wells, the location should be determined after considering the run of the underground currents, the position of barnyards and outbuildings, and the place of discharge for house slops, etc. It will often be desirable and necessary, particularly when the wells are comparatively shallow, that they should be placed at very considerable distances from the dwelling, into which the water may be conducted by a pipe running below the line of frost. When practicable, the driven well is to be preferred. When wells are dug they should be completely re-filled, except for a few feet at the bottom, a pipe carefully puddled around with clay extending up to the surface. When the wells are over 25 feet in depth, these pipes made of vitrified tile should be of sufficient diameter to admit of the introduction of a suitable pumping box. Many wells so constructed are in use in this Province, and thousands of them are to be found in the Western States. The water supplied by wells so located and constructed will usually be fresh, pure and sparkling, and practically identical with that of living springs.

At the present time our Dominion and Provincial Governments are vying with each other in laudable efforts to do something useful for the farmers. Here is an opportunity which should not be

overlooked. Ministers of Agriculture, agricultural colleges, experimental farms, etc., are useful. One of the prime objects of them all, however, is to teach the farmer how to raise more bread, and on this subject he is tolerably well informed already. Besides, man cannot live by bread alone, its essential complement is water. These in fact are the two great necessities of life and the one should be as good and as plentiful as the other. No subject which occupies the attention of the Provincial Government can be of more magnitude and consequence to the whole population, whether rural or urban, than the subject of water supplies and their pollution. The difficulties of individual localities in solving the complicated problems involved are very great. The dangers of fatal errors being made are great. It is extremely important that the best scientific and practical information possible to be had, which is commonly beyond the reach of those requiring it, should be obtained, and that the information should be widely diffused and made available to all. These are some of the reasons why the Government should take the responsibility in the matter and should place the Provincial Board of Health in a position effectively to deal with the whole subject for the benefit of the whole Province.

METHODS OF DEALING WITH CITY SEWAGE.

READ BEFORE THE ASSOCIATION OF EXECUTIVE HEALTH OFFICERS
BY P. H. DRAYTON, ESQ., CHAIRMAN LOCAL BOARD, TORONTO.

Mr. Chairman and Gentlemen:

THE paper which has been assigned to me, viz: "Methods of Dealing with City Sewage," is one which at the outset I must confess my inability to deal with. The only reason that I can conceive that the subject has been relegated to me is that it is meant as a compliment to the Toronto Local Board of Health generally, by giving it a certain prominence through its Chairman. With this preamble, it will be evident to many of you that what I may have to say on the subject will necessarily be of an amateur type. In commencing, I think I may fairly consider, first of all, the elementary necessities with regard to city sewage, for we may take it for granted that however efficient may be the means for the disposal of the sewage, unless due precautions are taken for the conveyance of the same to the place of disposal, the good result to the population will be but small.