

household use or for watering stock. If the ground surrounding the well is an undisturbed area and free from all excretal waste, it will perform its function as a natural filter and the water may be very good. Especially is this the case if the soil is sand or gravel, for such will not only remove suspended matter and germ life, but will also foster the destruction by oxidation of the organic matter held in solution. A clay subsoil is far inferior to sand in its purifying effect.*

Deep Seated Waters. These are waters that have percolated through the soil and permeable rock strata until arrested by an impervious stratum. They may appear on the surface as springs, but are more commonly obtained by deep wells, driven or bored, possibly through several overlying impervious strata to the water bearing rock. If there are no fissures in these overlying strata and there is no opportunity for water to flow downwards between piping and the sides of the boring, a good water will in all probability, be obtained. While it cannot be taken for granted that a bored well will necessarily yield a good drinking water, it is the source of supply to be generally recommended for the isolated households. Examination has shown that they are capable of furnishing in the larger number of instances, and when proper precaution has been taken to exclude surface water, a supply of high organic purity and very low bacterial content. In certain districts we find these deep seated waters characterized by an excess of saline matter, rendering them unsuitable for domestic use; but when such is not the case the deep well undoubtedly constitutes a safer and better source of supply than the shallow, ground water well. With a pump actuated by a windmill, small gasoline or hot air engine, tanks can be filled in the farm buildings for the watering of the stock and in the farm house to supply the bath room and kitchen. Such an arrangement would mean much, not only in the matter of convenience and the saving of labor, but in the still more important matter of securing a supply that would lead to better thrift in the stock and better health in the family.

Before bringing this address to a close, I must answer though it may be briefly, one or two questions that have been handed me for reply.

1. Is a hard water injurious to health? The human system has a remarkable adaptability and though certain authorities have considered that a hard water is inductive to the formation of calculi there is very little evidence to support the statement.

* Analyses of well waters from farm homesteads are made free of charge by the Chemical Division, Experimental Farm, Ottawa, provided the samples are collected and shipped in accordance with instructions that are sent on application.