

Bulletin No. 72, of 1915, entitled "Experiments with the Automatic Water-Finder," is as follows:

"The position, as a result of our work, is, therefore, that in a country where at least forty per cent. of wells under normal circumstances are failures even in selected sites, wherever the automatic water-finder has indicated water, and a careful test, including boring, has been made, water has been found. As a rule the supply indicated has been within the depth of well sinking; in a few cases, sub-artesian water has been found by boring, at depths varying up to 126 feet. Only one criticism can be made of these results, I think, and that is, that similar boring would, under almost all circumstances, reach a water supply of some sort. Other borings, in what were considered likely sites, do not justify this conclusion. These have only given 66 per cent. of successes, as against complete success when the water-finder has been used and has indicated water.

"It must be confessed, however, that we have so far found no method of using the instrument which enables us to say with certainty the depth at which the water will be found, or its quantity. Messrs. Mansfield & Co., the makers of the instrument we have used, state that they can tell, within small limits, the quantity of water to be obtained, but we have not been able to do this.

"It would seem, however, sufficiently proved that under the conditions which prevail in the trap areas of Western India, where underground water occurs in well-defined streams flowing in rock fissures, sometimes under little or no pressure, and sometimes under considerable pressure, the automatic water-finder can be used with advantage in locating streams of water which can be tapped, either by well-digging or by boring."

In June, 1918, Dr. Mann, writing the authors of this bulletin, says that after many additional borings in the interval the situation remains as stated in his bulletin. He also says that with extended use they are able to form a pretty close estimate of the depth to the water.

Mr. G. B. Brooks, of the Department of Agriculture, Queensland, Australia, has also done some very interesting work with the water-finder, combining it with the divining rod method, and tracing underground streams by both. In spite of the fact that water is very scarce in the areas where the water-finder has been used by him, no failures are recorded on sites selected by the instrument. So successful was his work that the Department of Lands appointed two officers solely as water diviners.

The Department of Physics at the Ontario Agricultural College has one of these instruments, with which it is intended to make tests for those wishing such, the party for whom the tests are made paying the travelling expenses of the operator. It is not an instrument that can be loaned.

DIFFERENT TYPES OF WELLS.

Throughout the rural districts of Ontario the almost universal source of water is a well of one type or another. There are three types in common use, viz., the dug, the driven and the drilled well, each adapted to conditions with certain characteristics.

SHALLOW DUG WELL.

The dug well is suitable where water is available at shallow depths, the surface layer being soil. It has the advantage of always having a considerable reserve of water available. On the other hand, being shallow, and therefore frequently drawing its supply of water from soil near the surface, there is great