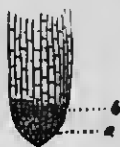


nearly white. Then it is not of the same *form* as the part of the plant above ground. It is made up of a number of thread-like parts which spread out in all directions, and if you examine one of these threads through your magnifying glass, you will find that from its surface are given off many finer threads, called *rootlets*. These latter are of great importance to the plant; it is largely by means of their tender extremities, and the parts adjacent to these, that it imbibes the nutritious fluids contained in the soil.

Whilst you are looking at these delicate rootlets, you may perhaps wonder that they should be able to make their way through the soil, but how they do this will be apparent to you if you examine the tip of one of them with a microscope of considerable power. Fig. 2 repre-



sents such a tip highly magnified. It is to be observed that the growth of the rootlet does not take place at the very extremity, but immediately behind it. The extreme tip consists of harder and firmer matter than that behind, and is in fact a sort of cap or thimble to protect the growing part underneath. As the rootlets grow, this little thimble is pushed on first through the crevices of the soil, and, as you may suppose, is soon worn away on the outside, but it is as rapidly renewed by the rootlet itself on the inside.

Another difference between the root and the part above ground you will scarcely have failed to discover: the root has no leaves, nor has it any buds.

You may describe the root of the Buttercup as *fibrous*.

Fig. 2.—Extremity of rootlet; a, the harder tip; b, the growing portion behind the tip.