backwards over this last, pressing slightly upon it, and tap again, until no more will round up. Then look closely at the little heaps and the scattered parts. The heaps first formed are made of soil fine as flour. The next lot of heaps have *little grains* like granulated sugar. The part scattered about is sand and lumps. The sand is mostly clear and white, some of the grains sparkling in the sun like diamonds The lumps, perhaps, are made of smaller grains stuck together, and do not look clean-cut and white like the sand. Sand, as you well know, is nothing but small bits of rock. Now, if you hold the little heaps so that the sun shines upon them, you may see, if your eyes are sharp, very small rock-bits among these too. In fact, a large part of all soil is rock. When you come to know geology, you will learn how this rock became broken down into such small bits to make soil. But for the present we are interested in knowing that the soil contains rock-bits of many different sizes.

Fig. 3. A soil separated, showing rock grains of many sizes.

Fig. 4. Showing the parts that the trees have given to the soil.

THE SOIL AND THE TREE. "But," you say, "many soils are quite dark in color, while most of this sand is clear and white; There must be something else in soils besides sand grains, or it would not be so dark." Quite true; and now we shall see what this is.

Get from the woods, under last year's leaves, some black mold: and after it has become dried, treat it as you did the sample of earth. You will find much the same separation as before; but on looking closely at the heaps and scattered grains of the mold, you will find two important differences: First, the separate grains, big and little, instead of being white as the sand grains were, are all brown or black. Secondly, instead of looking like rock, these, especially the coarser ones, look like bits of wood.

Long years ago, before the white man came to Canada, even before the man hunted over these hills and plains, the trees began to grow upon the soil. Year after year, as the trees grew bigger they drew water and food more and more, from the soil. The trees were wise, however, and knew that, although the rain that fell might keep up the supply of water that they needed, yet there was nothing to replace the food they took from the soil, unless they did it themselves. So they agreed to give back to the soil as much food as they took from it. Every year, the maples and the oaks and the beeches dropped their leaves