est confidence urge the adoption of the suggestions which I shall make in relation to it.

This variety of soil is readily distinguished from all others by ITS WHITE COLOR, FIRM COMPACT TEXTURE, ITS LEVEL SURFACE, ITS GREAT RETENTIVENESS OF MOISTURE, by its softness and plasticity when wet, and by its firm and unyielding nature when dry. It is almost always in its original state, covered with white oak *timber*, from which it derives its name. Sometimes, however, pine grows abundantly on it, mixed with the white oak. The water which runs off from its surface is of a dirty white color, and even when it collects in pools, takes a long time to become clear; in other words, a long time must elapse before all the earthy matter in it, from its extreme fineness, subsides to the bottom. The *sub-soil* is most usually a *true* white clay, (silicate of alumina and protoxide of iron,) unless on the points of land running into the rivers and bay where red clay predominates. Occasionally, we find the sub-soil of a "mottled, marbled" character, being a mixture of the red and white clay in various proportions. Its chemical constituents are no less constant and marked than its physical appearance. It is distinguished by the large proportion of sand, by the small proportion of iron and clay, by the presence of magnesia in sufficient quantities, by a great deficiency of lime, which *is constant*, and by a tolerable supply of the alkalies, phosphates and sulphates. The sand in these soils is always in a finely comminuted state, feeling but slightly gritty under the fingers, and receiving minute impressions when placed in contact with any uneven surface. It is from the extreme fineness of the sand, that this soil derives its compact texture and its power of retaining moisture. It is this which makes up for what would otherwise be a deficiency in the clay and iron. These two latter substances are particularly important in soils from their power of absorbing and retaining moisture.

In the white oak soils, the fine sand is a substitute for iron and clay, absorbing, with great power, moisture, and whatever other fertilizing matter may be in the atmosphere, and retaining it until the wants of the plants require its use. The sand thus performs a vicarious action of iron and clay; it is a substitute for them in giving compactness to the soil; it is a substitute for them in absorbing moisture, and the food which plants obtain from the atmosphere.

The power of charcoal to absorb various gases is well known, a power derived exclusively from its mechanical texture, as shown by its great number of fine pores; and when we consider the fine state of division in which the sand exists in these soils, we readily see how a mass of it must present a very large surface for absorption, and how an almost infinite number of small spaces must exist between the grains of sand, giving it in a great degree the same properties as charcoal. For although this soil appears to form a