

States produce excluded from our markets. On the contrary, let protecting duties be imposed for the Canadian farmer, in order to give him a fair recompense for his labour, and he will soon turn his attention to the most improved systems of culture, and introduce the use of drill crops as well as others.

C. F. CRESINUS.

ON BOTANY.

CHAP. I.

ON THE STRUCTURE OF PLANTS.

(Continued from page 487.)

THE distinguishing characteristics of plants as far as depends upon their branches, are formed in two ways, 1st. from the position in which the branches are placed upon the stem; and 2d. from the angle they form with it in their growth. On an attentive examination of plants and trees we find no fewer than five different ways in which their branches are disposed upon the stem. 1st. When placed without any regard to order or regularity they are in the language of Botany termed *scattered branches*. 2d. When placed alternately on the stem, whether all upon one side or the reverse they are called *alternate*. In the 3d position of branches they are placed opposite to each other, and are designated by the term *opposite*. 4th. In some trees and plants as in the Scotch fir and hemlock, the branches stand all round the stem in the same plain like the radii of a wheel from which they are said to be *verticillated* or *prolifer*. And lastly when the stem to its most minute ramifications, as in the Valerian is divided into two equal sized branches it is called *Dichotomous*. With respect to other distinctions of branches formed by their direction with regard to the stem, these are three in number—termed *spreading* branches when they form nearly a right angle with the stem, but still have an upright direction; *diverging* branches when they form a right angle with the stem, and lastly when they hang down they are called *deflected* branches. These constitute all the distinctive qualities in the branches deserving of notice.

Section third, of leaves.—The leaves although ranked here under the same class with the stem and branches might be considered as a separate part, and in describing any plant the student ought to be careful to note any peculiarities in them. These are common in almost all plants, are found in their natural state very different in different plants; and besides have the peculiarity of being less liable to change from cultivation than other parts are.

Leaves are divided by botanical writers into two classes, the first termed *simple* and the second *compound* leaves. Each of these are again subdivided into orders, according to their figure, substance or the position in which they grow upon the plant. In describing a sim-