north, in an hour or so it will point to the south, and in an hou more it will point to the north again. That is, it has the power c "swinging around the circle," and it keeps on growing as it turns although the turning is independent of the growth, and is often s rapid that several turns may be made, without any perceptibl lengthening of the stem.

Some plants climb by their leaves, either by the blades, or mor commonly the petiole coiling round somcthing within reach; other climb by their tendrils. When a fresh and active tendril comes i contact with a neighboring stock, it hooks or coils its end aroun it, then having secured its hold, it shortens by coiling up its whol length or a good part of it. This draws the climbing stem neare to its support, and makes it easier for the younger tendrils to secur their hold.

After detailing the action of the various kinds of tendrils and their "modus operandi," Prof. Day referred to Darwin's statement, "that some tendrils exhibit a most remarkable power of selection, which would be called *instinct* in an animal."

To the pharmaceutist this kingdom is of especial interest. It furnishes most, and those the most important of his drugs. This interest is a pecuniary one, but we all are interested in it as being sure at some time or another in our lives to require its assistance in restoring us to health. Animals rely upon vegetables for their food, and this office of furnishing food to the animal kingdom is the most important that plants fulfil. They are the sole producers of nourishment. They alone transform mineral and chiefly atmospheric materials into organized tissues, which are consumed by animals unable of themselves to produce anything directly from the mineral kingdom.

The constitutents of plants are of two kinds, the earthly or inorganic, and the organic. The earthly matters dissolved in the water of the soil and absorbed by the roots are at length deposited in the wood, and chiefly in the leaves of the plant; they form the ashes left behind when we burn it. There are many of them useful to the plant, but they exist in small quantities, and are not essential to simple vegetation. Those which are essential to vegetation, and make up 88–99 per cent. of every vegetable substance, are called the "Universal Organic Constitutents of Plants,"—carbon, hydrogen, oxygen, nitrogen. These, of course, must be furnished to the plant in the gaseous or liquid form from the earth and the air.

The oxygen and hydrogen are derived principally from water, and which is absorbed by the roots. Nitrogen is obtained from several sources. Nearly 79 per cent. of the atmosphere consists of this gas in a free state, or merely mingled with oxygen. Now, it is to some extent soluble in water, and so becomes a constituent of rain-water, each drop bringing its share. Ammonia, too, which is merely a compound of nitrogen and hydrogen, exists in considerable