

## THE SENSITIVE PLANTS.

### Flowers that Act as Clocks and Weather Glasses.

From the Providence Star.

Even the most casual observer of nature must have noticed the closing of certain flowers upon the partial or entire withdrawal of light. Thus the chickweed is sensitive to cloudy weather and acts almost as a barometer, and every one knows the action of the "pimpernel," or "poor man's weather-glass." This pretty little plant is frequent on Newport Island, where I have found it, especially on the cliffs beyond the first beach. It is adventitious from Europe. Tennyson, who is an acute observer, says of it: "The pimpernel dozed on the lea." The well-known "Marvel of Peru" is also called "Four-o'clock" from its habit of opening at about that hour. If we watch any plant we shall find that it has a pretty definite time of expanding or closing its petals, as well as a particular way of doing it. Botanists, then, speak of the waking and sleeping conditions of the plant, and much research has been bestowed upon the subject in order to find out the physical action and causes of the phenomena. In his recent volume on "Movement in Plants," Mr. Darwin gives the results of his painstaking investigations of this and kindred subjects. As generally happens in his work, while he is steadily aiming at some particular point, he disposes of any quantity of obscurities, as side issues, on the way. The book has been republished in this country and well repays perusal.

Linnaeus, noting the precise time of opening and closing of flowers, constructed a floral clock in his gardens at Upsal, where the hours were indicated by the conditions of different plants. Afterward DeCandolle did the same for the latitude of Paris. The clock of Linnaeus in Sweden runs slower than that of DeCandolle in France. Climate as well as latitude, and particular seasons also, would influence this sensitive horolog. Those interested will find DeCandolle's list given in Figuier's "Vegetable World," American edition, page 134.

Of a few familiar plants the hours of opening are about as follows: Morning glory, 3 to 4 A. M.; pimpernel, 8 to 10 A. M.; marvel of Peru, 4 to 6 P. M.; evening primrose, 5 to 7 P. M.; night blooming cereus, 7 to 8 P. M.

Thus in each flower and simple bell,  
That in our path betrodde lie,  
Are sweet remembrances who tell  
How fast the winged moments fly.

The hours of closing are as definite as those of opening, and thus we may arrange quite a dial, the hours being indicated by particular plants. The plants may be confused by means of artificial light, but upon withdrawal of the unnatural conditions, will, sooner or later, resume their normal record.