

Horticulture.

ACTION OF CARBONIC ACID ON PLANTS.

Professor Daubeny of the University of Oxford, reported to a late meeting of the British Association, the following facts as the result of careful experiments:—Plants consisting of ferns and pelagionians, subjected to an atmosphere containing 5 per cent of carbonic acid, did not appear to be injuriously affected; second, a quantity amounting to 20 per cent, injured plants exposed to it; third, the quantity of oxygen given out by plants was not found to be increased by the quantity of carbonic acid to which they were exposed; fourth, on exposing animals to the action of carbonic acid, it was found that frogs and many fish could live in an atmosphere charged with 5 per cent of this gas. From these experiments, he concluded that no objection could be offered to the theory of a large proportion of carbonic acid having existed in the atmosphere, in the early periods of the world's history; such for instance when the immense coal strata were in the course of formation.

THE ROSE.

Professor Agassiz, in a lecture on the trees of America, stated a remarkable fact in regard to the family of the rose, which includes among its varieties, not only many of the beautiful flowers which are known, but also the richest fruits, such as the apple, pear, peach, plum, apricot, cherry, strawberry, raspberry, blackberry, &c.: namely, *that no fossils of plants belonging to this family have ever been discovered by geologists!* This he regarded as conclusive evidence, that the introduction of this family of plants upon the earth was coeval with, or subsequent to the creation of man, to whose comfort and happiness they seem especially designed by a wise Providence to contribute.—*Scientific Annual.*

FIRE BLIGHT.

This mysterious disease, to which the finer sorts of fruits,—particularly pears, are so liable in this

climate, may be owing in a great degree to sudden changes in atmospheric temperature. The *Horticulturist* recommends the shielding of the most vulnerable points from excessive heat or cold; to mulch the ground and sheath the stems with straw, whenever they are not sheltered by the leaves. This is said to work well in preserving the trees in sound health.

QUINCES ON THORNS.

A correspondent of the *Horticulturist* for February, observes that he had seen the most beautiful quinces grown upon the common white-thorn. The stocks were from 1 to 1½ inches in diameter, and grafted about 2 feet from the ground. It is said that in this way the trees are less subject to the borer and other insects; the stocks are hardy, being natives of the poorest soils and most exposed situations; and they are converted by grafting into objects of beauty and utility.

PLANTING ROSES.

The beauty and interest which a garden affords depend greatly upon the disposition of its individual parts; even the arranging and planting of a single bed require experienced taste in order to produce effective display. Take, for example, a rose bed; imagine the kinds to be indiscriminately mixed, and no attention to have been paid to their respective heights, and the effect produced by such a medley assemblage will be immediately felt by any person possessing taste and unaccustomed to observation. Let us further suppose such a bed to be circular, and the effects will be as bad as they well could be, unless the object aimed at was to represent wild nature. The taller plants should have been planted in the centre and the others arranged so as gradually to fall to the outer rim. This arrangement would advance us a step; but let us proceed further and dispose of the trees in zones or circles. In this way we give the bed the expression of design. For be it clearly understood that we are discussing gardening in an artificial sense. Now let us go a little further still, and consider whether there be not yet room for improvement; suppose we plant one colour in the centre circle, and so change each circle until we reach the outer one. By such a classification we add colour as well as design; but imagine the colours to be so arranged that another important feature is produced, viz., contrast, and the picture becomes still further improved, though not yet finished. Would not an edging render the whole more complete? Tho