

AN ORNAMENTAL GOURD.

The exceedingly graceful plant which is shown in our illustration is a miniature gourd, the seeds of which were brought from Africa to Europe by Sir Samuel Baker, who states that the plant, when in a wild condition, covers dwarf trees and shrubs with its slender climbing shoots, which are loaded at every joint with pretty little fruits, which, in a young state, are bright green, striped and spotted with white; but which, when ripe, change to scarlet, a color which sets off the white spots and pencilings to increased advantage. The fruits, as will be seen, are borne in clusters of about three or four together. The foliage, being of a distinct shade of green, renders the plant effective, even when not in fruit. It has been grown in a melonhouse, in which it quickly covered a large trellis, and became loaded with fruits which, were it not for their white marblings, might easily be mistaken for those of *solanum capsicastrum*. Some of the African tribes use the long slender shoots of this gourd for garlands and head dresses, purposes for which its habit of growth eminently fits it. Long festoons of it, laden with fruit, might be usefully employed for garnishing stands on the dinner table, or the sprays of crimson fruit might be allowed to hang naturally and gracefully from the margins of ornamental vases. Gourds of this description, says a correspondent of the English *Garden*, well deserve more attention than they have hitherto had.

Fog.

Angus Smith gives an account of a remarkable fog observed at Reikjavik, in Iceland. It appears that, on a bright afternoon in July, "as soon as we left the house, a cloud came down a street from southwards, and some one said: 'Let us cross out of the way of the dust.' I looked more carefully, and, finding the cloud moving very slowly on the ground, concluded that it was smoke from a chimney, but smoke mixed with larger particles than we generally see. Gradually it came to us; there was no smell, but a distinct chill."

Perceiving that it was a fog, Dr. Smith ascended a rising ground, and saw the fog rising out of the small lake behind the town, and rolling into the streets very slowly. A similar fog rose from the sea, and rolled also into the town. Hence it appeared that the wind had nothing to do with the matter, but that both fogs rolled because they were too heavy to remain suspended. The peculiarity of the fog was in the size of its particles, larger than any the author had ever before seen, and which he estimates at from $\frac{1}{400}$ to $\frac{1}{500}$ of an inch in diameter, in the flatness with which it fell on the ground, and in its lumbering mode of rolling, whence all observers at first took it for dust. The author found that the particles were perfectly spherical, and not hollow, but concrete throughout. "They all tended downwards, they were falling, evidently; it was a falling dew, or a slight incipient rain, rapidly disappearing into the earth." Dr. Smith adds: "It seemed evident to me that, to make a distinction absolute between fog, rain, and dew, was a waste of words. There is a broad observable distinction, but no narrow line, and we cannot tell the end or beginning of either."

Examining the common opinion of the vesicular nature of clouds and mists, he declares that it "rests on a foundation too weak to be worth much attention." A vague notion that the globules of fog are analogous to soap bubbles seems to lie at the foundation. Dr. Smith has repeated the experiments of Saussure, but without meeting with any signs of vesicularity. "Indeed," he remarks, in summing up, "I see no reason for going far for a mode of keeping clouds up. Times without number I have observed, on calm summer evenings, a cloud of smoke from a steamboat funnel lying for miles in length at a height very little different from that of the funnel out of which it issued. . . . At other times I have found the smell of a cigar, used by a person fully a quarter of a mile off, over the road, at about the same height as his mouth, nothing being visible. In these cases, have we anything to look to but the size of the particles? They are so small that their resistance to the atmosphere is diminished to its utmost, as the resistance of the air is increased so much, in proportion to the weight, that they cannot fall rapidly."

Curiosities of Ebullition.

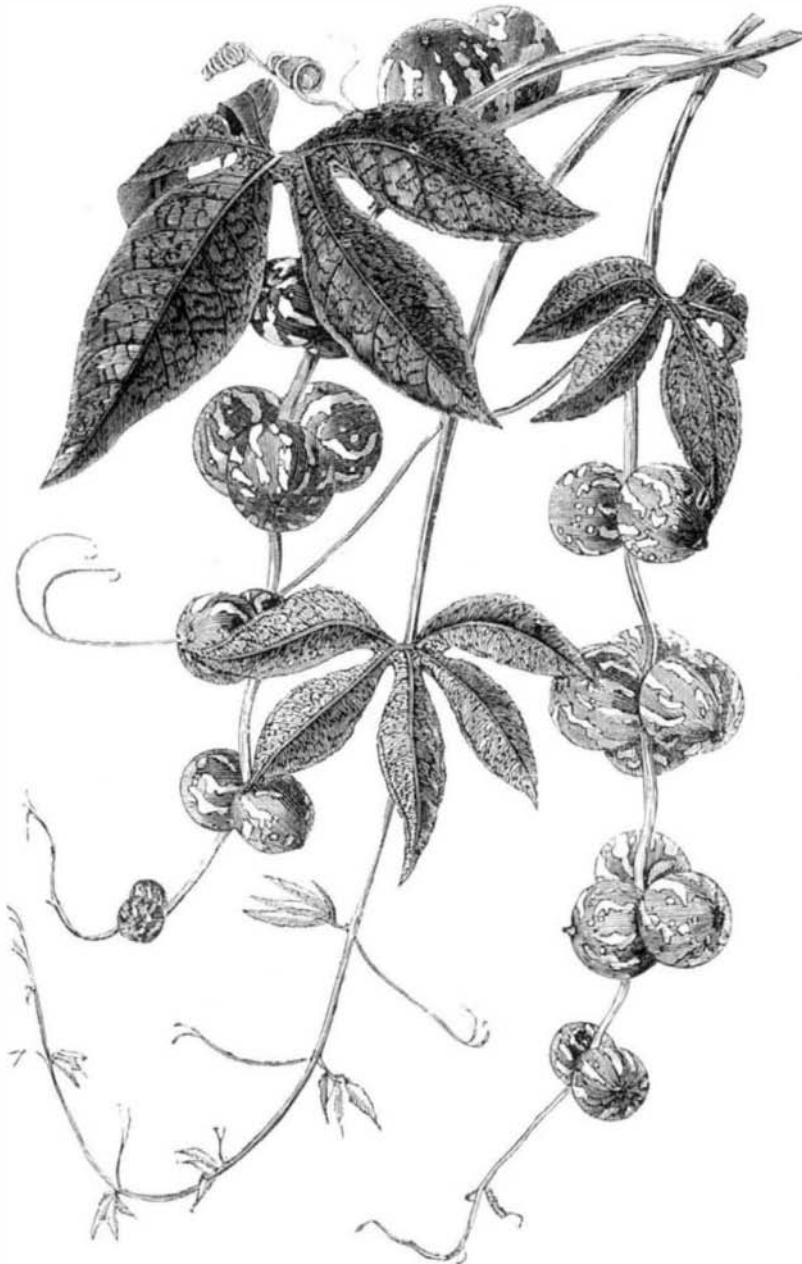
Dr. T. L. Phipson, in the *Chemical News*, says that water, strongly acidified with hydrochloric acid, and containing a small quantity of benzole, was found to enter into violent ebullition every sixty seconds; after a while the boiling ceased completely, and then recommenced suddenly every thirty seconds for some time. The flask still being kept over the spirit lamp, the periods between quiescence and violent ebullition dropped to twenty, ten, and finally to eight seconds, at which interval the phenomenon continued for some considerable time. The temperature of the vapor in the flask was 214° Fah., in the liquid 218°, during the whole time of the experiment.

When methyl alcohol was added to the above mixture of water, hydrochloric acid, and benzole, and the flask placed

over a spirit lamp, no ebullition at all occurred for a very long space of time, and then it took place very suddenly and continued.

Ballooning Experiments.

Captain H. B. Dight recently ascended in his balloon Fairy from Wolverhampton, to illustrate the action of his steering apparatus prior to his experimental trip across the English Channel, for which he announces he has arranged with the British government. The ascent occasioned much interest, and drew together many thousands of spectators. The ascent, however, was not a success. In a torn state, the



BRYANOPSIS LACINIOSA.

balloon and steering machinery fell in a neighboring meadow, after Captain Dight had been in great jeopardy.

A SPRING BUTTON HOLE BOUQUET.

The tasteful arrangement of a small bouquet of choice flowers, shown in the annexed engraving, is made up of a leaf of lily of the valley at the back, upon which lies one spray of that flower mixed with four or five very small pieces of maidenhair fern. These portions of a frond are so arranged that they break the hard outline of the leaf behind them,



and also tone down its bright green by their glaucous shade of color. In front of these is placed a fine thickly petalled bud of climbing *Devoniensis* rose. This, of course, has been properly wired, and slightly blown open. The base of the bud is concealed by two well chosen leaves from a fairy rose, by which means another shade of green is introduced into

the bouquet, which not only serves to set off the rosebud to the best advantage, but also contrasts well with the foliage previously used. If it were a necessity that hardy plants be employed in making up such bouquets, some well selected leaves from *thalicttrum minus* would prove such an efficient substitute for the maidenhair that ninety-nine people out of a hundred would regard it as a fern, and not as a leaf from a flowering plant. Those who do not possess means for growing *adiantum cuneatum* are strongly recommended to cultivate the hardy *thalicttrum*, which does best in a calcareous or magnesian soil.

COTTAGE HORTICULTURE.

THE SELECTION OF OUTDOOR PLANTS.

The choice of flowering plants, suitable for culture in the limited space usually available for the above purpose, is comparatively limited, because of the many qualifications requisite to each plant: for instance, its height, the length of its blooming period, and the color of its bloom. For if the flowers in a bed are of irregular height, part of the bloom must be hid. If the arrangement of the color of the bloom is inharmonious, the effect will be anything but pleasing to the eye; and the more of the plants which are in bloom at the same time, the worse the bed will look. To those possessing a hothouse, greenhouse, or forcing beds, in which a succession of plants may be reared to supply each bed with plants so soon as the old ones have ceased to flower, hyacinths, crocuses, tulips, snowdrops, and lent lilies may be followed by verbenas, stocks, asters, etc., and thus a continuous blooming bed may be secured; but with a proper selection of plants and ordinary care in their culture, three plants (scarlet geraniums, yellow calceolarias, and the deep blue lobelias) will give us the best attainable arrangement of color and of height, and will at the same time produce a flower garden from spring time till the frosts of winter cut them off, which qualifications are not combined in any other plants.

In selecting the plants, choose those whose leaves are of a deep green, and in all cases those which are short and bushy and have no bloom upon them. If, however, they are in bloom, cut off the flowers before planting, which will only delay the blooming a few days, and will greatly strengthen the plant. If the plants have been reared in a greenhouse or under frames, keep them a few days before setting them in the beds, placing them out of doors in the daytime, and taking them in at night, in order to make them hardy and prevent them from suffering from the cool night air. If the plants are placed in a cold frame, either before or after being planted in the beds, be careful to lift the frame during a great part of the daytime, otherwise the sweat which gathers on the inside of the glass will fall upon the plants and infallibly kill them by what is called damping off.

PLANTING.

The bright scarlet horseshoe or fish geranium, and not the pink, should be selected, and planted ten inches apart in the center of the bed. Next come the calceolarias, about ten inches from the geraniums and about ten inches apart, and then the lobelias, about six inches apart, surrounding the calceolarias. All these plants will bloom together and continuously, the geraniums growing tallest and the lobelias shortest; hence we shall not only have a true arrangement of the prismatic colors, but all the flowers will be visible from almost any point of view. The effect may be considerably lightened by planting a standard perpetual rosebush in the center of the beds; but in such case, let the standards be of various heights and the colors to a pattern if the beds are arranged to a pattern, as should be the case. For a red rose, John Hopper is one of the very best. For a yellow one, *Gloire de Dijon* is very superior. In the absence of roses, a white lily may be planted in each bed. If there are border beds, white lilies, or any of the broad-leaved, red, or variegated plants, will form a pleasing contrast.

PROPAGATING.

To propagate geraniums and calceolarias, do not let the plants flower too soon; but pinch off the first appearing bloom and pinch out the eyes of all straggling branches, which will immediately throw out side shoots, thus forming bushy and shapely plants, besides very healthy and strong ones. Give preference to those plants which have their branches close to the surface of the soil. A strict attention to these rules is indispensable to obtaining a fine and freely blossoming plant.

TO DISCOVER INSECTS.

If the leaves of the plant turn reddish or yellow, or if they curl up, a close inspection will generally disclose that the plants are infested with a very small green insect, or else with the red spider, either of which must be destroyed. For this purpose, scald some common tobacco with water until the latter is colored to a yellow, and when cold sprinkle the leaves of the plants with it; but a better plan is to pass the stems and leaves of the plants between the fingers, and to then shake the plant and well water the bed immediately afterward. The latter operation destroys a large proportion of the insects shaken from the plant. This latter method is the only infallible one.