

looks less like a leaf than any other part of the flower. Fig. 12 will, however, serve to show us the plan upon which the botanist considers a stamen to be formed. The anther corresponds to the leaf-blade, and the filament to the petiole. The two cells of the anther correspond to the two halves of the leaf, and the cells burst open along what answers to the margin of the leaf.

10. In the case of apocarpous pistils, as that of the Buttercup, the botanist considers each carpel to be formed by a leaf-blade doubled lengthwise until the edges meet and unite, thus forming the ovary. Fig. 13 will make this clear.

11. There are many facts which support this theory as to the nature of the different parts of the flower. Suffice it to mention here, that in the white Water-Lily,



in which there are several circles of sepals and petals, it is difficult to say where the sepals end and the petals begin, on account of the gradual change from one set to the other. And not only

Fig. 13. is there a gradual transition from sepals to petals, but there is likewise a similar transition from petals to stamens, some parts occurring which are neither altogether petals, nor altogether stamens, but a mixture of both, being imperfect petals with imperfect anthers at their summits. We can thus trace ordinary leaf-forms. by gradual changes, to stamens.

We shall then distinguish the leaves of plants as *foliage-leaves* and *flower-leaves*, giving the latter name exclusively to the parts which make up the flower, and the former to the ordinary leaves which grow upon the stem and its branches.

Fig. 13.—Diagram to illustrate the leaf-structure of the carpel.