less curved. In very few species only are they quite simple, without branches. They are nearly always more or less branched, in many larger species very richly ramified. The modes of ramification are rather variable. In the majority of Plectoidea the spines are rather regularly verticillate, bearing an increasing number of verticils, each of which is composed of three divergent branches. These arise from the three edges of the spine, and all the branches of one edge are usually parallel, either perpendicular to the spine, or directed at an acute angle towards its apex. When the verticils are numerous (five to ten or more), their size commonly tapers gradually towards the apex. Pinnate spines occur more rarely than verticillate ones; in this case the two paired lateral edges only of the prismatic spine bear opposite or alternate branches, whilst the odd middle edge bears no ramules. In some species the spines are singly or doubly forked. In many species (mainly those with cylindrical spines) the ramification of the spines is more or less irregular.

Whilst in all Plagonida the branches of the spines remain perfectly free, in all Plectanida, again, the meeting ends of the branches become united and grow together, and by this concrescence a loose network arises, like wickerwork, which partly encloses the central capsule and the central parts of the spines, on which it rests. The meshes of this loose wickerwork are large, either quite irregular, of very different size and form, or more or less regular, with a certain form and arrangement of the meshes, effected by the peculiar kind of ramification. Commonly the siliceous threads of the arachnoidal wickerwork are very thin, often extremely delicate, representing "pseudopodia metamorphosed into silex." Sometimes the wickerwork is spongy. Its surface is constantly rough and bristly, with free ends of the spine-branches, never covered with a regular lattice-plate, as in the Cyrtellaria (Spyroidea, Botryodea, and Cyrtoidea).

The entire form of the central wickerwork is in the minority of Plectanida quite irregular and indefinite; in the majority, however, a certain more or less regular entire form is recognisable, effected by a certain, more or less regular origin and mode of the connection of the meeting branches. So in some species of *Triplecta* (Pl. **91**, fig. 7) the network represents a triangular plate, of *Plectophora* and *Plectaniscus* a three-sided pyramid, of *Tetraplecta* (Pl. **91**, fig. 3) a tetrahedron, and in many other species a polyhedron of more or less regular form. Some species of Plectanida become very similar to certain species of Stephoidea, Spyroidea, and Cyrtoidea; so *Plectaniscus* and *Periplecta* approach to *Cortina* and *Cortiniscus*, *Pteroscenium* and *Clathrocorys*, &c. (compare Pls. **92, 93, 53, 64,** &c.). They may represent a true phylogenetic connection between both groups. But in these cases also the distinction is determined by the fact that the true Plectoidea never possess a complete sagittal ring (like the Stephoidea) nor a regular lattice-shell (like the Spyroidea, Botryodea, and Cyrtoidea).