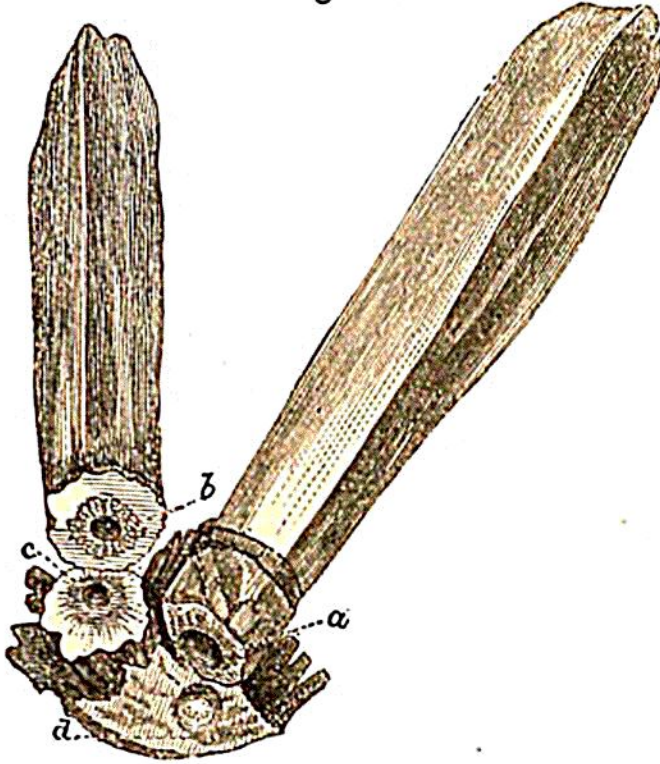


occasion for the aid either of tentacles in its vicinity, or of a powerful apparatus of masticating organs.

By furnishing these animals with a set of peculiar organs to act the part of hands as well as feet, we have another

Fig. 24.



Spines of *Cidaris mammillatus*.

a. Muscular fibres.

b. The muscular capsule laid open.

c. The origins of the muscles.

d. One of the tubercles.

instance of the care of Divine Providence to adapt every creature to the situation and circumstances in which it is placed. The legs and arms of the higher animals would be rather an incumbrance to an Echinidan, as well as a deformity; it is therefore furnished with a set of organs better adapted to its peculiar station, wants, and functions, in a numerous set of retractile tubes* capable of the necessary exten-

sion, fitted at their extremity with a cup acting as a cupping-glass or sucker, and enabling the animal to adhere, with irresistible force, to any substance to which it applies them, and discharging at the same time the functions of hands to lay hold of their prey and convey it to their mouth, of legs and feet to stay themselves upon, and of lungs to assist in their respiration.

The workmanship also in these animal structures is as beautiful and striking as the contrivance manifested in them is wonderful. Their protuberances, especially in the mammillary sea-urchin, their variously sculptured spines, their tentacular suckers, all by their perfect finish and

* Fig. 21.