it bears eight or nine fistulæ, varying from minute buds to processes measuring about 13 mm. in length and about 2 mm. in diameter. The smaller specimen bears only a single long process. *Colour* in spirit (where the surface is visible) almost white. *Texture* of the body, firm, very gritty; of the processes, firm, compact, rather stiff. *Surface* roughened on the body with the foreign objects; smooth and glabrous-looking on the fistular processes, but in reality very minutely hispid. *Oscula* and *Pores* both doubtfully observed, but we have reason to believe, from the examination of our preparations, that numerous small openings in the walls of the fistular processes lead from the outside into the central canal.

Skeleton.—(*a*) Of the main body; as in other species of the genus there are stout columns of spiculo-fibre (Pl. XLII. fig. 1, *c*), running vertically towards the surface, where they expand more or less. The special dermal layer (Pl. XLII. fig. 1, *a*), composed of dense brushes of small stylote spicules, so characteristic of the genus, is almost absent over the body, being replaced functionally by large grains of sand (Pl. XLII. fig. 1, *b*), fragments of shell and so forth; yet it can be found in the crevices between these foreign bodies. The skeleton fibres are composed of large, stout styli or subtylostyli, and in the interspaces between them numerous small tylostyli (Pl. XLII. fig. 1, *d*) are scattered, very abundant near the surface, but rare lower down. (*b*) Of the fistular projections; here the skeleton is very regularly and symmetrically arranged; beginning at the outside there is a very dense dermal crust (Pl. XLII. fig. 3, *a*) of small tylostylote spicules, arranged vertically to the surface, beyond which their apices project for a very short distance. This crust is not quite continuous all over the surface, but arranged in a reticulate manner, so as to leave interspaces in which probably the pores are situate. Immediately beneath this layer comes a layer (Pl. XLII. fig. 3, *b*) of larger spicules, lying parallel (more or less) to the surface and also arranged in a reticulate manner, so as to leave interspaces corresponding to those in the dermal crust. This layer is not very thick and immediately below it comes a series of stout, longitudinal bands of spiculo-fibre (Pl. XLII. fig. 3, *c*), about ten or twelve in number, and arranged in a circle against its inner surface, like a series of buttresses against the inside of a wall; then come the soft tissues, almost devoid of spicules excepting immediately around the central canal, where small tylostyli are sometimes abundantly scattered (Pl. XLII. fig. 3, *d*). The structure of the stout fibres in the fistular processes appears to be exactly the same as in the body of the sponge.

Spicules.—Megasclera; (1) large, straight styli or subtylostyli (Pl. XLII. fig. 2), very gradually and finely pointed at the apex and narrowing somewhat towards the base; size up to about 1·2 by 0·0157 mm. (2) Very small, usually slightly curved, slender tylostyli (Pl. XLII. figs. 2*a*, 2*b*), with well-developed heads and fairly sharp apices; size about 0·175 by 0·004 mm. More or less intermediate forms also occur, *e.g.*, in the layer beneath the dermal crust, but the two chief forms are very distinct from one another,