mm. wide, not deep, often shallow, close in the same spiral line, and generally very prominent, especially at the basal parts of the branches, where they are about 4 to 8 mm. above the general surface. They are circular, with the sides nearly at right angles to the general surface, but towards the proximal parts the bases of the calicles are swollen in such a manner as to form a concavity from the edge of the calicle to the general surface of the corallum. The calicular fossa is moderately deep in the very prominent calicles, but shallow in the others. The costæ are very distinct, long and curved; the septa are exsert, rather thick and subequal, the primaries being a little thicker and longer than the secondaries or tertiaries; the pali are well-developed but rather thin, and arranged as in *Oculina speciosa*, often nearly filling up the calicular fossa, the secondaries being larger than the primaries and forming an outer circle; columella generally well developed.

As pointed out by Verrill and Pourtalès, this species is distinct from *Oculina diffusa*, of which Milne-Edwards and Haime had supposed it a synonym. It is also quite different from *Oculina petiveri*, which Pourtalès had supposed to be its synonym. From the following additional characters of the *Oculina petiveri*, it will be seen how distinct it is from the present species: the costæ are scarcely marked and short; the bases of the calicles are much swollen, but broad rather than high, so that a distinct convexity is formed from the edge of the calicle to the general surface; the septa are very thin, not exsert, and project but very slightly at their upper portion towards the centre of the calicle; the pali are extremely thin and are simply the inner prolongations of the septa, being not at all distinct from these nor from the columella.

The *Oculina varicosa* is very close to the *Oculina virginea*, Lamarck, from the Indian Ocean (?), the specimen of which from the collection of Lamarck is in the Paris Museum; and, indeed, it may be oubted whether they are specifically distinct. The only character that apparently separates them is the degree of prominence of the calicles, especially of those on the basal parts of the branches. In the *Oculina varicosa* the prominence increases from the distal to the proximal part of the axis, becoming very great at the base, while in *Oculina virginea* they are usually less prominent at the basal parts than at the middle of the branches, being about 2 mm. above the general surface.

Very good figures of the species are given in the Report on the Florida Reefs, in which pl. ii. shows the characteristic form, while pl. i. represents the variety with scarcely prominent calicles: magnified views of the calicles showing their essential structure are given in pl. ii. fig. 4 and pl. iii. figs. 8, 9.

Localities.—Bermuda; St. Thomas.

4. *Oculina coronalis*, n. sp. (Pl. I. figs. 6–6*c*).

Corallum arborescent, large, very much branched, 10 to 14 mm. thick below, becoming very attenuated above; branches and branchlets about 2 to 10 cm. long, often