V. CHANNELS AMONG REEFS.

To complete this review of the general appearance and constitution of reef formations, it remains to add some particulars respecting the channels which intervene between coral patches, or separate them from the shores of an island, and also to describe the coral accumulations forming beaches.

The reef of Australia has been instanced as affording an example of one of the larger reef-channels, varying from twenty to sixty miles in width, and as many fathoms in depth. Its average distance from the land is twenty to thirty miles, and the ordinary depth ten to twenty-five fathoms; but toward the southern end, where the channel is widest, the depth exceeds sixty fathoms. "The new Caledonia barrier reefs, 400 miles in length," says Darwin, "seldom approach within eight miles of the shore." The reefs west of the large Feejee Islands are another remarkable example, the reef-grounds being in some parts twenty-five miles wide, and the waters within the barrier, where sounded, twelve to forty fathoms in depth. The barrier in this instance may be from a few hundred yards to half a mile in width; and some of the inner patches are of the same extent; but by far the larger part of the reef-ground is covered with deep waters, mostly blue like the ocean, and as clear and pure. In the course of the cruise of the Wilkes Exploring Expedition, the sloop of war *Peacock* sailed along the west coast of both Viti Lebu and Vanua Lebu, within the inner reefs, a distance exceeding two hundred miles.

The island of Tahiti, on its northern side, presents a good illustration of a narrow channel, and at the same time one that exhibits the usual broken or interrupted character of reefs. This is seen in the following cut, in which the reefs, both fringing and barrier, are the parts inclosed by dotted lines. The outer reef extends half to two-thirds of a mile from the shore. Within it, between Papieti and Matavai, there is an irregular ship channel, varying from three to twenty fathoms in depth. Occasionally it enlarges into har-