## CHAPTER XV

Valparaiso—Portillo Pass—Sagacity of Mules—Mountain-torrents—Mines, how Discovered—Proofs of the Gradual Elevation of the Cordillera—Effect of Snow on Rocks—Geological Structure of the two Main Ranges, their Distinct Origin and Upheaval—Great Subsidence—Red Snow—Winds—Pinnacles of Snow—Dry and Clear Atmosphere—Electricity—Pampas—Zoology of the Opposite Sides of the Andes—Locusts—Great Bugs—Mendoza—Uspallata Pass—Silicified Trees Buried as they Grew—Incas Bridge—Badness of the Passes Exaggerated—Cumbre—Casuchas—Valparaiso

## PASSAGE OF THE CORDILLERA

ARCH 7, 1835.—We stayed three days at Concepcion, and then sailed for Valparaiso. The wind being northerly, we only reached the mouth of the harbor of Concepcion before it was dark. near the land, and a fog coming on, the anchor was dropped. Presently a large American whaler appeared close alongside of us; and we heard the Yankee swearing at his men to keep quiet, while he listened for the breakers. Captain Fitz Roy hailed him, in a loud clear voice, to anchor where he then The poor man must have thought the voice came from the shore: such a Babel of cries issued at once from the ship -every one hallooing out, "Let go the anchor! veer cable! shorten sail!" It was the most laughable thing I ever heard. If the ship's crew had been all captains, and no men, there could not have been a greater uproar of orders. ward found that the mate stuttered: I suppose all hands were assisting him in giving his orders.

On the 11th we anchored at Valparaiso, and two days afterward I set out to cross the Cordillera. I proceeded to Santiago, where Mr. Caldeleugh most kindly assisted me in every possible way in making the little preparations which