On the contrary, I am at one with those who believe that these rents were chiefly due to the volcanic disturbances which threw up the mountain ranges, and that the glacier merely took advantage of the depression. However, by long abrasion it hollowed out the valley into the form we now see it in the fjords under description. At this present day, not far from the head of most of these inlets, glaciers are found in the Coast Range and Cascade mountains in British Columbia; and along both ranges marks of old glacier action can be seen 2000 to 3000 feet below their summits, and even near the sea-margin. Such a depression of the coast, with the presence of the lower temperature then prevailing, would fill these fjords with glaciers. I may add, that though Professor Whitney,* on the most hearsay evidence, seems inclined to think that the Northern Drift is not found over Vancouver Island and British Columbia, it certainly exists in a well-developed condition.

2. Cañons.—This convenient word, of Hispano-American origin, is used extensively all over the Pacific to express the high perpendicular clefts through which many of the rivers of the West flow often for miles. These cañons are generally found where the river breaks through some mountain-range, or other obstruction of a like nature, on its way to the ocean. Such are the cañons of the Stiken in Alaska; the cañon of the Fraser in British Columbia; the gorges of the Columbia, Wisconsin and Canadian, or the Cañon of the Colorado in New Mexico. An examination of these cañons shews them to have been caused by the force of the rivers which flow through them, when these rivers contained (as there is every evidence to prove they did at one time) a greater body of water than at present. During the time when these glaciers covered the sides of the Cascade and other ranges adjoining these rivers, a greatly-increased amount of precipitation would swell the volume of these streams, enabling them to score deeply the surface of the plateau, and "force mountain barriers to reach the ocean, cutting deep channels in its shores where we now find them." These rivers seem at one time to have been merely the outlets of great lakes, which emptied themselves into the ocean by one or more small rivulets, creeping through the opposing barrier of mountains by rocky gorges or volcanic clefts. Gradually they seem to have enlarged these clefts until a greater body flowed through them. Some of the lesser emptiers were cut off, and joined their volume to the main stream, giving it importance and strength, until, in the course of ages, they graved their record in the huge

* 'Proc. California Acad. Sciences,' vol. iii. p. 272.