

area under consideration they are still a very serious hindrance to development.

## II.—HYDROGRAPHIC DATA.

The Fraser and its more important tributaries, as well as the enormous area drained by them are shown on most maps of B.C. The length of the main river between New Westminster and the Rockies is about 680 miles. Its more important branches have a united length of about 1,400 miles, and if all the creeks be included the length of the entire water-channel is probably not much short of 6,000 miles. The area of the watershed traversed by this extended ground-sludge is about 95,000 square miles. It lies largely within the area known as the "Dry Belt." Statistics relating to

The western boundary of the drainage area is formed by the mountain-summits of the Coast Range, whilst part of the eastern boundary follows the crest of the Rockies. In both these areas the precipitation is very much higher than on the "Dry Belt." If we assume the average annual precipitation over the entire watershed as equal to 16 inches of rain the average outflow of the Fraser, making due allowance for evaporation, must be near 2,000,000 cubic feet per minute. During the early summer floods more than double this quantity flows off. But even that is probably small compared with what must have passed down the river in the days when the valley-gravels were formed.

The gradient of the river is variable. Between Lillooet and Lytton it has an average fall of about 5



Coal Harbour, Quatsino Sound, with the West Vancouver Commercial Co's Boarding House in foreground.

the fall of snow and rain are very meagre. At three points only has any systematic record been kept. The average annual fall of snow and rain at those stations is as under :

	Rainfall, inches.	Snowfall, inches.
Barkerville . . . . .	21.03	170.4
Spence's Bridge . . . . .	6.73	24.4
Nicola Lake . . . . .	7.36	34.6

feet per mile. From Lytton to Yale it falls 6 feet per mile—though it is doubtless much steeper than that in the Canyon. Between Hope and New Westminster the river is much wider than at any other part, and the inclination between those points is only 1.4 foot per mile. The Thompson, between Ashcroft and Lytton, falls 10 feet per mile. Below is given the inclination of the more important creeks in Cariboo, which yielded much coarser gold than the main river :