

put in with not so great a capacity. Besides these two furnaces a modern bessemerising plant is being put in; this will be a great benefit to mine owners of Vancouver Island and the coast of British Columbia, and the freight on the matte to New York will be saved to a great extent, as the output of the Crofton smelter will consist of blister copper instead of ordinary matte.

The power plant will consist of one compound condensing engine of 500 h.p., of which one side, that is the high pressure one, will be erected and at present will have a capacity of 275 h.p.

In addition a large blowing engine will be erected to supply the converters, whilst two Connorsville blowers will supply the air for the furnaces. The boiler-room will contain three boilers of 200 h.p. each. The main stack is 12 feet in diameter and 125 feet high.

The plant will be fully supplied with electric power and lighting. The works will not only smelt ores purchased by the company operating at Crofton, but will also treat the matte from other smelters sent to these works, reducing it to blister copper, and thus effecting a considerable saving in freightage to the Eastern refineries.

steamboats ply between Golden and the towns near the head of navigation in the Windermere district. Supplies to the mines are thus sent up the river, and ore brought down to the Canadian Pacific railway for transmission to the smelters. Although a charter has been granted for the purpose of building a railway from Fort Steele to Golden, the matter seems to end there, and over one hundred and fifty miles of mineral-bearing country lying between two of the principal ranges of mountains in British Columbia, is almost cut off from the outside world. The situation is theoretically perfect for the occurrence of rich ore bodies from a geological point of view, and practical work has proven theory to be correct in this case. Railway magnates in search of an outlet for capital would do well to carefully investigate the potentialities lying almost dormant in the Columbia valley. When mines can be worked and ore shipped under existing conditions, surely no further proof is needed of the value of the ore awaiting cheap transportation facilities.

A traveller up the Columbia river on the deck of a steamboat, cannot fail to notice the white cut banks on each side of the river after passing Steamboat mountain as he approaches the Lower Columbia lake. The tops



THE NEW TOWN OF CROFTON, V. I.—FIRST BUILDINGS ON MAIN STREET.

## UNUSUAL OCCURRENCES IN THE WINDERMERE DISTRICT.

BY H. E. NEAVE, M. I. M. E.

**M**INES in the district of Northeast Kootenay have been the subject of several comprehensive articles and the public have read full particulars of the ore bodies so far discovered in the mountain ranges flanking this district. The richness of the ore enabling extraordinary disabilities in transportation to be overcome and yet realise a profit to the shipping mines has been fully discussed upon. It is therefore rather difficult to obtain material of popular interest sufficient to write a paper on and at the same time avoid tiresome repetition. The present article will be confined to a description of a few peculiarities noted by the writer during a short residence in that part. The Columbia river valley lies between the Rocky mountains on the east and the Selkirk range on the west. From Golden on the C. P. Railway, a comfortable stage coach is regularly run to Windermere about 90 miles south and from there to Fort Steele, 60 miles farther, where a railway is again met with. During the summer small

of these banks present uniform and comparatively level benches clothed in the greenest of grass and numerous fir trees, giving the country a park-like appearance. On closely examining the material of which these banks are composed, it is found to be a fine, white powder, generally devoid of pebbles or grit of any description. This is usually attributed to the action of glaciers and called "glacial mud," but the entire absence of the usual boulders found at the base and sides of glaciers, seem to point to some other source. The uniformity of level found on these benches indicate that this "mud" was slowly deposited in water. If so, the Columbia valley from Steamboat mountain looking south was one vast lake, the same "mud" being found, similarly situated, for many miles south. Steamboat mountain, a solitary, isolated mass, rising up in the centre of the Columbia valley, was apparently the barrier to the north and this barrier must have broken suddenly and allowed a rapid subsidence of the water to account for these banks being left as they are. A gradual subsidence would have resulted in sloping or terraced banks, as this "mud" quickly liquefies on the bottom of a lake. A microscopic examination and analysis of this sub-