

Canadian Rockies, touched by the rays of the morning sun! As we started on our inspiring ride over the prairie, to inspect the celebrated Irrigation Works, it was a pleasant sight to see the girls riding in to school on horseback from the distant farms; with cheeks like roses. For a technical description of the C.P.R. Irrigation system, we must refer our readers back to our October issue, where this unique piece of civil and mechanical engineering is fully described,

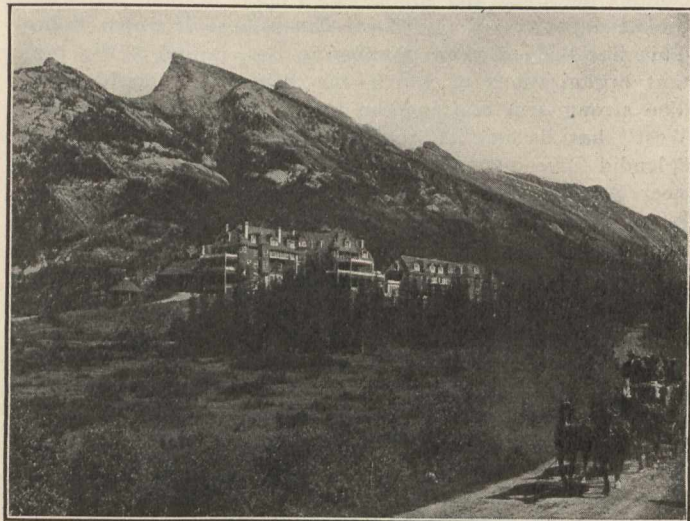


Fig. 3.—C. P. R. Hotel, Banff.

and illustrated by 13 half-tone engravings. The royal manner in which we were entertained in that tent at the field headquarters, will long be remembered.

After partaking of the plentiful, well-cooked, nutritious feast provided, Mr. J. S. Dennis (the authority in Canada on Irrigation), said the area contained in the undertaking comprises a block of 3,000,000 acres: and which, when completed, will be the largest solid block of land under irrigation on the American Continent—twice as big as the next largest in existence. This block of land was granted to the C.P.R., in settlement of the balance of the 25,000,000 acres of land grant due them under their contract for construction of the main line; the even and school sections being included in the grant on condition that irrigation be undertaken within reasonable limits of cost. Irrigable lands are now being sold to farmers at \$18 to \$20 per acre.

The whole Irrigation area is divided—for convenience of administration—into three sections of a million acres each: Eastern, Central, and Western, commencing with the last named, which embraces 967 miles of canals and ditches—and an additional 1,000 miles of lateral ditches will be constructed. Of this western section in South Alberta, 480 miles have been cut, and when completed, 7,235,000 cubic yards of earth will have been removed; and in the mechanical construction of headgates, bridges, etc., 4,550,000 feet of wood used. Assuming a like proportion for the other two sections, a total estimate for the entire project would be as follows:—

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| Mileage of canals and ditches. | 2,900 miles. |
| Excavation | 21,500,000 cub. yds. |
| Timber and lumber | 14,000,000 feet B.M. |
| Estimated total expenditure | \$6,000,000 |

In carrying out this scheme, a notable departure is being made from other large irrigation enterprises on this continent. The common practice is, to build only the main and secondary canals, leaving it to the purchasers of land in any irrigation district to undertake the construction of the distributing ditches. The C.P.R. builds the distributing ditches also, so that each farmer has the water delivered at the corner of his farm. This important advantage, together with the certainty of water supply, and the sure title thereto, makes the scheme an attractive one to settlers from the irrigated "States" to the South; where there is so much uncertainty about the water supply, and so much litigation in connection with its use. This alluring prospect is doubtless one of the contributing causes of the remarkable influx of American farmer emigrants into the Canadian North-West within the last year or two. A comparison of this

great scheme, with irrigation projects now being undertaken by the Federal Government of the United States, under their Reclamation Act, is interesting. In all, 18 projects have been approved by the United States Government. They extend from Montana to California. The total amount of land involved in the 18 scheme is 1,900,000 acres. The largest individual scheme embraces 250,000 acres. The total estimated expenditure to complete the 18 projects is \$38,000,000. Of a truth, the C.P.R. have got our American cousins skinned.

All were impressed with the simple design and construction, yet effectiveness of the moveable winches, trip levers, hinges, etc., for operating the head, secondary, and spillway-gates. Mr. H. B. Muckleston, the engineer responsible, is to be congratulated on this excellent piece of mechanical engineering. But it would be unseemly to pick out any part, where the ensemble is of such a high order. The inspection of that great irrigation system was a liberal education in applied engineering.

About 4 o'clock, our 22 carriages dashed merrily into Calgary, "The Sirloin of Canada" (pop. 12,000). The buildings are mostly of sandstone. Its most important industry—according to the Calgary "Eye Opener," is Brewing. The tone of public life is democratic; for American money and manners prevail. A few days previous to our advent, the Governor-General (Earl Grey) stopped at Calgary on his way to Victoria, B.C., and held a reception. **Seven citizens only attended.** The true explanation of this incident, is not found in the following extract from the Chicago "Record-Herald"; quoted in the smartest weekly in the West, the "Eye Opener," Aug. 4:

"Seward's prediction that the Canadian West would be annexed to the United States within 50 years from 1867, may not be fulfilled on schedule time, but apparently is in a fair way of being realized in a not remote future."

In many American minds the above wish is father to the thought; but contact with all sorts and conditions of men, in a 6,000 miles journey through the North-West, constrains me to say with the editor of the "Eye Opener," that this talk about annexation is the veriest "rot." Calgary has no leisure class. The writer attended Earl Grey's reception at Victoria, B.C., and ventures to say, that the plain, busy, dollar-hunting men of Calgary would have been uncomfortable thereat. Just prior to the visit of the Civil Engineers, Sir Thomas Shaughnessy and James J. Hill, visited the "Sirloin" city, and shortly after our departure

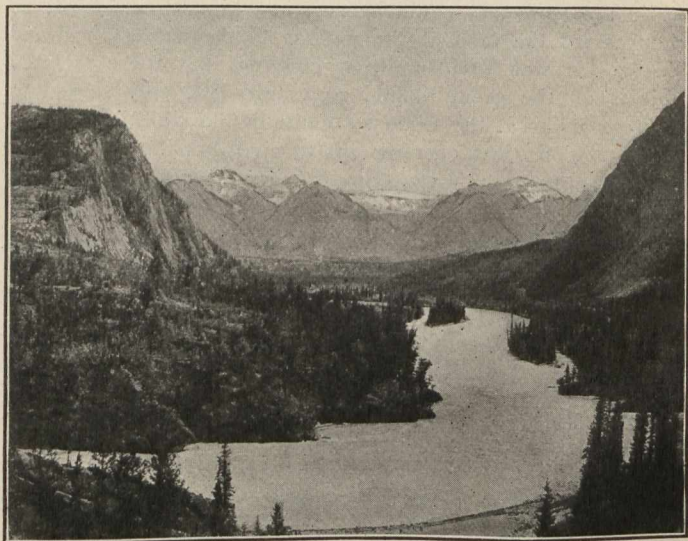


Fig. 4.—Beautiful Bow River at Banff.

towards the Pacific Coast, the Canadian Manufacturers' Association stopped off on their tour. They were received almost frantically. Why? Because they represented dollar-making systems. It was a case of elective affinity. "Time, which treadeth down all things but truth," will adjust the predominant American Colony in Calgary, to the genius and virtues of British institutions.

A run of 20 miles brought us to the fringe of the great plains, with the rushing waters of the Bow River running parallel with the track. Here began our ascent of the series