

railway. In fact they will probably leave a considerable profit on the construction the cost of which is roundly estimated to be \$100,000,000. The ground on which this assertion is made is the comparatively high prices at which lands, given in aid of railways, in the United States, have been sold. The following is a statement of prices of a number of these:

Grand Rapids and Indiana	\$13 98
Burlington and Missouri.....	11 70
Illinois Central.....	11 42
Hannibal and St. Joseph.....	11 00
Chicago, Rock Island and Pacific..	7 63
Atcheson, Topeka and Santa Fe..	7 70
Flint and Marquette	7 18
Southern Minnesota.....	7 04
Atlantic and Pacific.....	6 77
St. Paul and Pacific	6 50
Winona and St. Peter.....	7 08
Iowa Falls and Sioux City.....	6 50
Minnesota Central	6 33
Cedar Rapids and Missouri River..	6 00
Jackson, Lansing and Saginaw....	6 00
Dubuque and Sioux City.....	6 00
St. Paul and Sioux City.....	5 67
Missouri River, Fort Scott and Gulf	6 39
Des Moines Valley.....	5 30
Marquette and Ontonagon.....	5 09
Lake Superior and Mississippi....	4 88
Union Pacific.....	4 25
Denver Pacific.....	4 18
Kansas Pacific.....	3 07

The average price of these lands is \$7.04 per acre; and it must be remarked that a large portion of all these western lands border on the great American desert which commences west of the 100° of W. Long.; which stretches from the Canadian Territory, and runs for thousands of miles south to the plains of Mexico, where the tropical rains are met; they are, therefore, comparatively worthless. The lands which are to be given to the Canadian Pacific Railway, on the other hand are well watered and among the best in the world—if not the absolutely best wheat growing lands in the world. With the progress of settlement they must, therefore, sell at a high price; and this implies large profit to the undertaking. In appraising the value of the land grant of 50,000,000 acres to the U. S. Northern Pacific Railway, the financial agents of that undertaking make the following statement:

"Now what is this landed empire of 50,000,000 acres worth? If it sells for only the low price per acre at which the Kansas Pacific Road forced off its lands, while it ran through and stopped in a wilderness of buffalo grass the proceeds would be over \$165,000,000. If nursed and sold on judicious credits, as were the lands of the Illinois Central, the proceeds would be, on the basis of that road's sales, \$550,000,000! If sold at the average price of the Minnesota School Lands, the proceeds would be \$350,000,000. The elements for appraising the market value of the Northern Pacific Land Grant sufficiently exist to make it absolutely certain that it can be sold for a sum much greater than the cost of constructing and equipping the road."

There would not be any exaggeration in this calculation, if it were not for the disturbing element of aridity west of the 100°. But in the case of the lands of the Canadian Pacific Railway the combination of favorable climatic, agricultural and commercial conditions, affords reasonable calculations of the highest success and almost unlimited development.

If we take the valuation of the lands set apart for the Canadian Pacific at the Govt. price of only \$1 per acre, they will give \$50,000,000. But they are really worth much more than the U. S. lands of which we have above given quotation of prices. Say however that lands and grant together amount to \$100,000,000; the proposed Railway being 2450 miles in length, this would give \$40,812 per mile for its construction; a sum which we believe will leave a large profit on that work, seeing the nature of the country the road is pass through. We have then the fact that the Govt. grants are alone more than sufficient to build the road.

A question of vital importance in the construction of the Canadian Pacific Railway is that of

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to be overcome in traversing the continent. On this point we refer to the *Profile*, taken from the report of Mr. Sandford Fleming, which is printed elsewhere (facing the title page) in this volume of the *Year Book*. A glance at this will show the immense physical advantages for railway construction, which the route across the continent through Canadian territory possesses over that which is now actually in operation in the United States. The following are altitudes, taken from the *Profile*, over which the railways in the U. S. territory traverse, proceeding west from Omaha:

<i>Feet above the level of the Sea.</i>	
Cheyenne.....	6063
Sherman Summit, Bleak Hills.....	8342
Laramie.....	7175
Bridgers Pass Rocky Mountains....	7534
Green River.....	6092
Wasatch Summit.....	7500
Ogden City.....	4320
Promontory City.....	4943
North Point Salt Lake.....	4290
Humbolt Hills.....	5650
Humbolt Lake.....	4047
Summit Sierra Nevada.....	7044

The altitudes to be surmounted by the Canadian Pacific, taken from the same source, are as follows:—

<i>Feet above the level of the Sea.</i>	
Long Lake	1300
Lake Nipigon.....	1250
Height of land between Lake Nipigon and Fort Garry	1500
Fort Garry.....	640
Jasper House.....	3372
Yellow Head Pass.....	3760
Tête Jaune Cache.....	2560
Albedo Lake.....	2835
Kamloops.....	810
Lytton	700
Hope.....	150

Nothing can be more conclusive than a comparison between these two figures. But the dynamic and physical difficulties implied in hauling heavy trains over great altitudes are not alone to be surmounted. The climatic influences connected with them are scarcely a less important consideration. Proportion of altitude implies proportion of severity of weather and fall of snow. The works found necessary to protect from snow falls on the U. S. Railway are stupendous; and yet, the traffic was often impeded, for days, from snow blockade last winter. Everywhere along the Canadian line there is reason to believe the fall of snow will be very light.