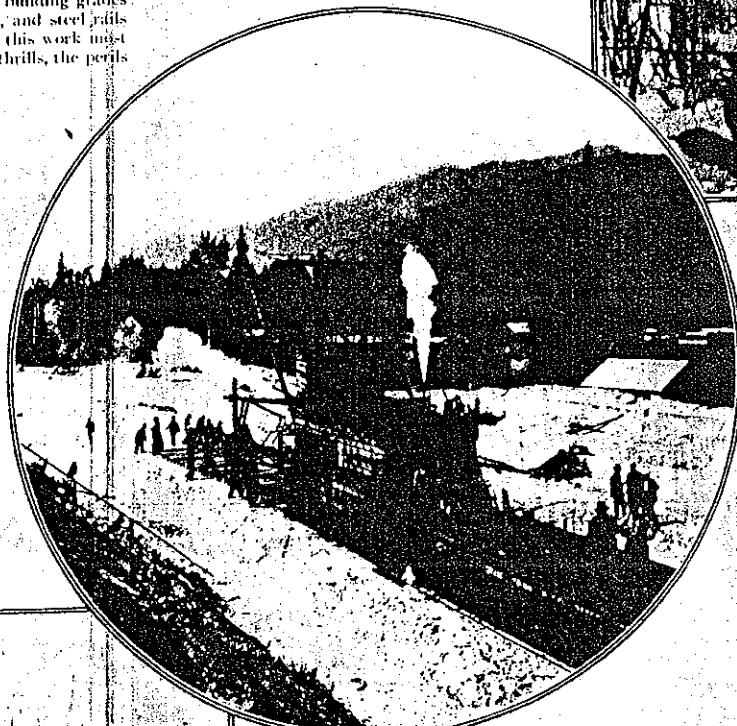


# How a Great Railroad is Built

By JAMES OLIVER CURWOOD

**M**OST of us know that in railroad building grades are laid, and ties are put down, and steel rails fastened to those; and some of this work most of us have seen. But the romance, the thrills, the perils and the hardships—and the thousand wonders—of actual railroad building, but few understand. During the past three or four years the mightiest railroad building operations of all time have been in progress in the Great Northwest. And to see just how a great railroad is built, to see how mountains are blown up, chasms filled and bridged, thousands of men fed and cared for hundreds of miles from civilization, I went to the end of the line of steel of the Grand Trunk Pacific—and far beyond; lived in the contractors' and engineers' camps, explored with the surveyors, and came out convinced that building a railroad through a great range of mountains is one of the most picturesque, thrilling and romantic of all the gigantic tasks that man undertakes today.

The first of the "wonders" that came within my ken occurred early in my investigations—long before I had reached the mountains. We were traveling between Graham and



**LINKING THE UNSETTLED VASTNESS WITH CIVILIZATION**  
The "pioneer" or truck-layer riding over the loose ties and unfastened rails, forging ahead through the new country and leaving behind a steel trail to older communities.



**THE FIRST STEP IN RAILROAD BUILDING**

Surveyors at work in the mountains. "Almost before the rival road had 'come to' the engineers had plotted the right of way and the plans had been deposited with the Government."

his work was done. But not so thought the great builder. The Grand Trunk had a firm hold on the East. It tapped the Atlantic. Why should it not tap the Pacific? This was the question that Hays asked himself. Few will ever know the history of those months of secret meetings of powerful directors, kings of capital, and great engineers—meetings that preceded the announcement that thrilled the financial world, the announcement that one of the world's greatest trans-continents was to be built from coast to coast. From this hour—the hour when the "powers that be" had decided that a great road should be built—began the first great human chapter in the story of the builders. Now the builders of the road cease to be mere men in citizens' clothes—they are generals on the field of battle. They work in secret, guarding their movements and plans, ever on the alert for spies. Every man in the army of investigating engineers that is sent



**CAMP LIFE OF THE RAILROAD BUILDERS**  
"Each contractor's camp is like a small city with its stores, hospitals, scores of sleeping shacks, kitchens, dining rooms, warehouses and barns."

Winnipeg when we came to what is known as a "sink hole." For two hours we were held up while repairs were being made. I was with one of the railroad contractors, and he pointed down the steep embankment to the muskeg below and said:

"We have dumped hundreds of thousands of tons of rock and earth down there!"



**LICENSED DENIZENS OF THE CANADIAN PRAIRIES**

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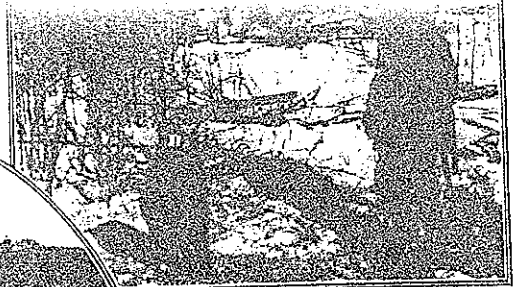
"Where has it gone?"  
His answer was to take me more than a mile distant from the track, where a number of large and curious looking hillocks were bulging out of the earth.

"There is most of our gravel and stone," he said. "There is a subterranean channel under the muskeg, and as we dump in the 'filler' it oozes through that channel and puffs up here."  
As we turned back, he added:

out knows that he is on his honor. "Literally mile by mile the possible routes that a railroad might take are examined. Rival roads know that the reconnaissance engineers are out, here, there, everywhere—but that is all. It may take a hundred or five hundred men a year before the first reports are in. These reports all go to the Chief Engineer, and one by one the various possible routes are sifted down, until at last the best is chosen. Even then all is mystery and secrecy to but a very few men—the great chiefs among the Builders. Today it is rumored that the road will run through such and such a town. Tomorrow a similar rumor

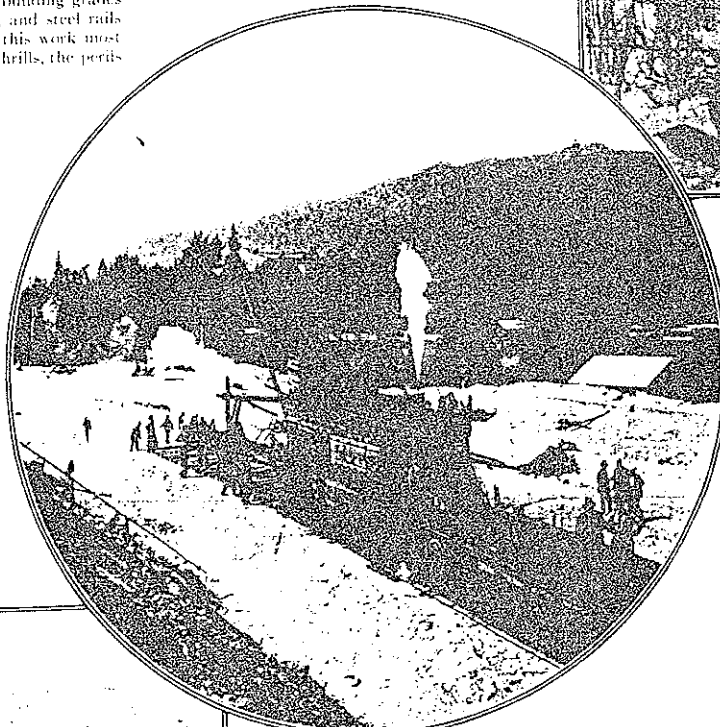
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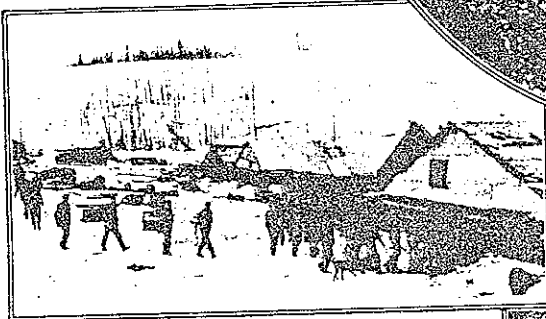
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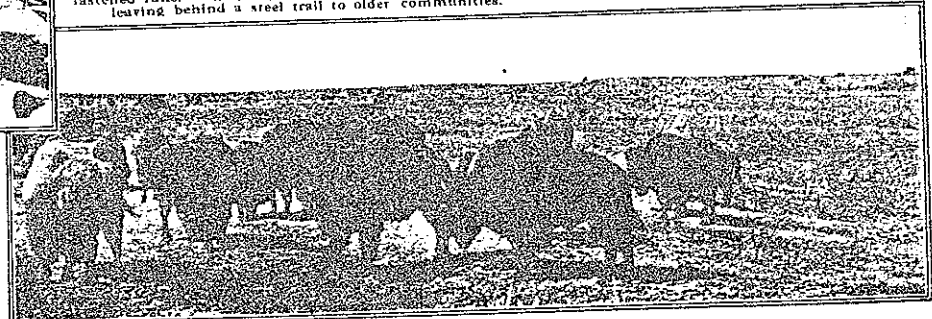


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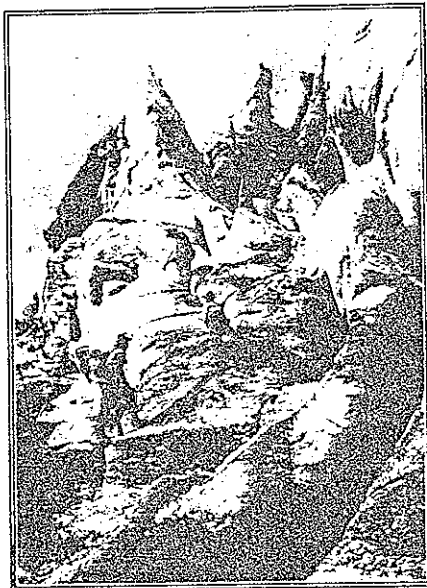
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**A WESTERN SCENIC WONDERLAND**

"A vast, wide, wild, unsubdued Alpine wonderland, rich in scenic grandeur and in the Indian legend and romance of the picturesque voyageurs."

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As we turned back, he added:

"And then there are people—thousands of them—who kick at what they call high freight rates and cost of transportation! A year from now, when this is all filled in, and you travel over it at forty miles an hour, how many will know of the hundreds of thousands of dollars, perhaps millions, that were expended in the building of this one mile of track?"

And this was but the beginning of the wonders and romance that I found. And before describing these, in order to give a picture of the growth of a railroad from the hour of its birth in a human brain, I must go back to that year of 1899, when the most remarkable personality in railroad history loomed up on the horizon in the person of Charles M. Hays. When Hays first set foot in Canada in 1869 he was a stranger to the Dominion. Within less than a decade he changed the map of half a continent. His mission was an unusual one. The first railway built in the Dominion, the Grand Trunk, had fallen on evil days. It was sunk low into the morass of financial difficulty. And Hays was brought in—to save it. His wonderful abilities literally snatched the road from bankruptcy and set it firmly on its feet. Others thought that

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And the great generals play their tricks. Sometimes the work of the engineers is real—sometimes only a "blind," a clever ruse. It was generalship that won the Yellowhead Pass for the Grand Trunk Pacific. A rival road, the Canadian Northern, was pushing toward the western sea, and it was imperative that the Grand Trunk Pacific should not reveal its hand too quickly. The point was how to throw dust in the eyes of its rival. Apparently the Grand Trunk Pacific could not decide whether to thread the mountains by the Pine River or Peace River Pass. Then, suddenly, it threw an army of engineers into the Pine River Pass. Immediately the newspapers concluded that everything was settled, and it was heralded far and wide that the new trans-continental was going through the mountains by that route. Meanwhile, the best engineers in America

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