

ON THE ETERNAL ICE.

Railroad Laid on Bed That Never Thaws.

By E. F. Strother.

Few persons who notice the occasional references in dispatches to the "New York-to-Paris" railroad project know the picturesque story of the building of the first Alaskan link of this great proposed chain. This link is the Council City & Solomon River Railroad, a daring piece of engineering and construction work. Its significance is its proof that the Alaskan tundra can be crossed—an achievement which many of the best engineers had repeatedly declared impossible.

J. Warren Dickson, a young New York en-



J. WARREN DICKSON.

Builder of Alaska's first standard gauge railroad.

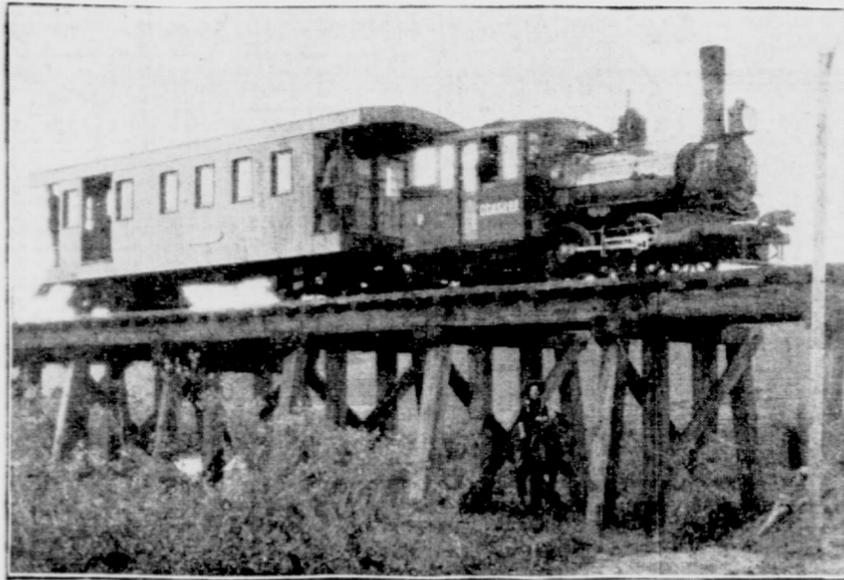
gineer, built this most northerly railroad in the world, after planning it out in every detail five thousand miles away from Alaska. And so exactly were these details worked out that when the first year's work was finished near Nome every item of a \$500,000 equipment was accounted for, save a few odds and ends worth less than \$100.

Mr. Dickson first went to Alaska in 1900, and quickly saw that the greatest need of the country was railroad transportation. The beaches around Nome were all claimed and the development of the country lay inland. It was necessary that something better than dog sledges should be used for transporting supplies. This process was prohibitively expensive, and had the further disadvantage that it was practicable at all only in the winter. For this crude sledge transportation he found the astounding rate of \$3 to \$5 a ton for every mile hauled, and often several times that for long distance hauls in the interior. He saw that the railroad could greatly reduce these freight charges and still pay handsomely on the investment.

Mr. Dickson hired engineering crews and made complete surveys in 1901 and 1902, and in 1903 he returned to New York to enlist capital. A number of well known Eastern men agreed to back the project. They took up the proposition promptly and decided to build that summer, although it was already late in the spring. Mr. Dickson had had no time to make arrangements for beginning actual construction work that same season. He was face to face with a great problem requiring instant action. Every minute was precious, for the open season in Alaska was almost at hand, and not even a spike had been ordered for the railroad he must build five thousand miles away.

He first swiftly organized his accounting and purchasing departments, and within two weeks fifteen cars which he had purchased, and over thirty others, all loaded with materials and supplies, sped toward Seattle over the Northern Pacific Railroad, and he was racing westward ahead of them.

At Seattle the work of gathering together the men for the construction gangs was taken up. With the best efforts that could be made, only 125 of the needed six hundred could be got in the Northwest. These were enrolled, and on the morning of June 3, 1903, the first of the steamers of the fleet sailed from Seattle for the Nome goldfields, on the Seward Peninsula. Two weeks later, in the bright light of the Arctic midnight, at 12:40 a. m., June 19, 1903, the ships anchored half a mile from shore, thirty-five miles down the coast east of Nome. A few hours later all hands had landed and had set to work pitching the various tents—cook, mess, sleeping, commissary, office, etc.—so that, upon the barren beach, one hundred miles from the Arctic Circle, a tented city sprang up with military precision. At 1:50 p. m. of the same day, just thirteen hours after first anchoring, ground was broken



FIRST STANDARD GAUGE PASSENGER CAR CONSTRUCTED IN ALASKA. Built in the shops of the Council City & Solomon River Railroad, at Dickson, Alaska. The locomotive used to run on the elevated railway in New York.

and the construction gang was digging with a will on the grade of the first standard gauge railroad in Alaska. This ocean terminal was named Dickson.

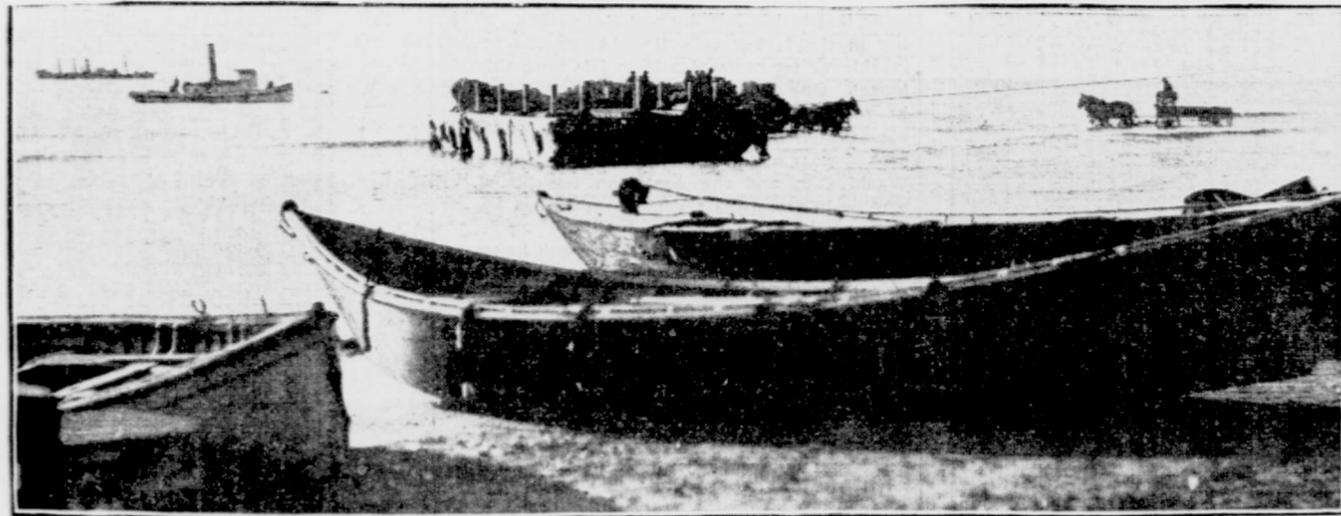
The work of unloading the vessels was proceeding at the same time. On account of the shallow water near shore the steamers could not be brought closer in than half a mile. The supplies were, therefore, loaded on lighters and hauled in as close to shore as they could come, and were then for a second time transferred to rafts. These rafts were then hauled to shore hand-over-hand along a rope made fast on shore. When the rafts were beached, the goods were landed, with frequent mishaps. On several occasions heavy pieces, such as locomotive boilers, bed plates, etc., were lost overboard from the lighters by accident in the surf, and these had to be recovered.

One of the first most difficult tasks was to set up the locomotives. The separate parts, some of them as heavy as nine tons, had finally been safely landed on the beach. But to hoist these massive parts into position and to connect their delicately adjusted joints was a problem, for the ship having on board the necessary hoisting machinery was delayed by bad weather. These difficulties were ingeniously overcome by digging a pit in the beach sand and erecting over it a trestle with a track on it. Then the trucks were rolled into position on the trestle; the bed

the "knowing ones" held to the same opinion—the tracks would have to be sustained by a heavy underplanking. This would add another item of great expense, as ordinary planking was worth \$40 to \$60 a thousand feet board measure.

But Mr. Dickson studied out the solution. He utilized the moss and muck—which is of the consistency of wet clay—by building them into the grade (which at the same time gave him ditches for drainage on each side) and then tamping the grade. The action of the long hours of hot sun drained and hardened the grade. Then the tracks were laid and the ballasting done from nearby gravel hillsides.

And the substantial roadbed, unaffected by the winters, is silent proof of the success of the methods used. Along the line loaded freight cars in some places pass over tracks built in this substantial manner eight or ten feet above crystal ice. This substratum of ice never melts, in spite of the very warm days of summer which prevail even here within one hundred miles of the Arctic Circle. It is the primeval freeze that has not thawed since ancient geologic ages. It is kept from thawing by the thick blanket of moss, muck and gravel lying over it, and the whole roadbed has proved a firm foundation for this commercial enterprise involving great capital. Three winters have already proved that there is not the slightest "heaving" and that it is as solid a foundation as that of any railroad in the United States.



LIGHTERING THE RAILROAD EQUIPMENT FROM STEAMER TO LAND. There was no pier. The steamer lay far out, the tugboat further in, the loaded scow as close to shore as it could be towed. Then teams bore the machinery through the surf to the land from the scow.

plates, boilers, etc., were then skidded up into their proper positions—all by hand tackle—and the work of adjusting all the small fittings completed the locomotives. Even the donkey engines were on the overdue steamer.

In the mean time the first engineering problem was being solved, the bridging of an arm of the sea which lay ahead of the construction gangs. In twelve days a trestle 465 feet long was completed, every pile having to be driven through frozen bottom, and the first train of standard gauge cars was drawn across the first standard trestle in Alaska.

Now came the greatest problem of all—the construction across the tundra. The lowlands of Alaska are covered with age old growths of moss in hummocks, decayed year after year, in nature's process of soil making, to a depth of from one to three feet, with frequent pools of water. It was this unstable ground over which engineers had declared no roadbed could be built to sustain the heavy cars of a standard gauge road except at prohibitive cost. But Mr. Dickson had convinced himself that, while this tundra in itself was not firm enough, it was only an excrescence on a solid foundation of earth, in some places frozen, and in other places over a foundation of ice. He realized that the ground underneath this tundra would sustain his tracks. But the difficulty was in disposing of the moss and its underlying muck, to save the enormous cost of handling and draining it, for unskilled labor was \$4 a day. Concerning one thing, all

The first four months of work accomplished remarkable results. The camp had increased to six hundred men. Eight miles of standard track were built and ballasted, and paralleled by a telephone line; complete railroad yards were laid out, with switches to all the supplies, sufficient to build over forty miles more of the road; three large buildings were erected and occupied; a complete machine shop was in operation; everything was left in order for the next season's work, and six hundred workmen had been sheltered and fed without one fatal illness or accident.

The line is now over thirty-four miles long, and the revenue is on a basis that would build the eyes of a traffic manager in "the States." Freight is carried for \$1 a ton for every mile hauled. That is about 125 times as much as the rate in the States. Passenger rates are 20 cents a mile—ten times the rate on the Pennsylvania Railroad.

FEMINE REASONING.

Senator Dolliver was condemning an opponent's argument.

"In such an argument," he said, "the logic is absurdly false. It is like the logic of a young woman of Fort Dodge."

"This young woman sat plying the needle one spring morning on the piazza of her pretty little house. A coat of her husband's was in her lap. The husband himself appeared, and she said, fretfully:

"It is too bad, the careless way the tailor put this button on. This is the fifth time I have had to sew it on for you!"

THE OLDTIME TAVERN.

Continued from second page.

place of the Sons of Liberty, and it was in this old tavern that the first lodge of Free Masons was organized in America, in the year 1752. Seventeen years later the first grand lodge of Free Masons was organized in this tavern, with General Joseph Warren as master and Paul Revere as one of the other officers. When the War of the Revolution came on the Green Dragon was used as a hospital.

The old Wright Tavern is still standing in Concord, and it has not suffered any great change. The Wayside Inn recalls memories of Longfellow and his "Tales" that would probably never have been written but for this old



MRS. J. WARREN DICKSON. In Esquimau costume.

hostelry. The Wayside Inn signboard bore this inscription:

D. H., 1686.
E. H., 1746.
A. HOWE, 1736.

The initials are those of the Howes, who kept the tavern for more than a century. Washington was a guest at this old tavern in the year

English, French Etchings
OF 18TH CENTURY.
MEZZOTINTS, PHOTOS AND CARBONS
OF ALL EUROPEAN GALLERIES.
2 West 28th St. GEORGE BUSSE.

1789, when he was on his way to Boston from Marlboro. Longfellow was more than once a guest at the Wayside.

HE THOUGHT WRONG.

Seymour Eaton, ex-secretary of the international policyholders' committee, is a firm believer in women's intelligence, and in many of his enterprises women have held important posts.

Apropos of women's wit, Mr. Eaton said, at Atlantic City:

"As I was strolling the other day on the boardwalk a wheeled chair containing two women trundled slowly by me. I heard one woman say:

"What has become of that blonde with whom Harry Hawke was flirting all summer?"

"Thought he was flirting, you mean," said the second woman. "She married him last month!"

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