

# HERE AT LAST IS THE ARCTIC AUTO-SLEIGH

## Alaskan Gold Hunter, After Nine Years' Work, Invents a Machine for Speeding Over Snow-Clad Passes.

order; J. A. Fraser, Government Agent, and W. W. Evans, Staff Sergeant of the Royal Northwest Mounted Police, all stationed at Carcross, Yukon.

The inventor of the auto-sleigh is Charles E. S. Burch, a mining engineer, who began life in Seattle, Wash. He is a modest man, reluctant always to speak of his achievement in the line of invention. He came to New York recently to perfect arrangements for the construction of several auto-sleighs.

Like hundreds of others Burch was caught in the northward rush of 1896. He closed up his shop in Seattle, and with a very modest fortune set out on his quest for gold. Like all prospectors he had many ups and downs, with downs in the majority. But at last he "struck it rich," and in a few short months found himself emancipated from the endless ranks of prospectors who had delved in the frozen North to no purpose.

Gold came in a rush to Burch. He located a claim that panned out its thousands—so much of the precious metal, indeed, that he soon came to be listed with those who were rich in a country where the standard of wealth is high.

But through all his years of toil and hardship he was working on an idea. It had to do with transportation. Burch saw that the untold riches of Alaska could never be properly developed until this great problem had been solved. Once he had the gold he set about working on his idea in earnest. At the end of nine years he evolved the auto-sleigh.

WHILE the civilized world is deeply engrossed in the conquest of the air, frozen Alaska is slowly forging to the front with what most vitally concerns it and its industries—transportation. Jacob H. Schiff, the banker, made the statement recently while on a tour of that country that "the greatest of all its needs is transportation."

One man at least who has cast his fortunes with Alaska is firmly convinced that he has found the vital secret. He is the inventor of an auto-sleigh. In many tests made in the last year the novel machine has maintained a speed of thirty miles an hour over frozen rivers and through passes that were practically closed to all kinds of transportation except perhaps dog trains, and even they would have been in trouble most of the way. Moreover, the tests were made with passengers aboard, and they all agreed that the auto-sleigh was capable of working wonders in transportation facilities in Alaska.

The auto-sleigh is a queer-looking machine, standing high above its long steel runners, with two big spiral propellers which revolve rapidly in the snow and drive it forward. These propellers rotate in opposite directions, thus neutralizing the tendency toward skidding or side-draught along the line of movement, which would, of course, retard the speed. A V-shaped skating rail made of steel is interchangeably secured to the periphery of the screws, so that they may be quickly removed for repairs en route, or putting on new skating rails. The tests have

proved that the wear and tear on these rails is phenomenally slight and that frequent repairs or replacement will not be necessary.

The inventor has constructed one large auto-sleigh, driven by an 80 horse power gasoline engine, much like those in use in large touring cars in the automobile world. This was built as a White Pass (Yukon) machine to carry both passengers and freight. It is capable of drawing trailers for passengers or freight, and has made many experimental trips in the last year.

This auto-sleigh has successfully negotiated roads that were impassable for wagon teams, and at a speed never before attained while rivers are frozen. Even over rough trails the auto-sleigh maintained a good average speed of ten to twenty miles an hour. Where the snow was not badly drifted the machine made thirty miles. The heavy trailer only tended to steady the machine and make its operation the easier and smoother.

Tests have demonstrated that the auto-sleigh is capable of drawing many times its own weight over almost any kind of Alaskan road. In the last two Winters

trips were made through White Pass, when it was next to impossible to get through by the ordinary means of transportation. The Government at Washington will be called on before very long to consider the auto-sleigh in the matter of mail carrying. The inventor is planning to have several of his novel machines in readiness for operation over the main roads for transportation, and will bid for contracts for the mails as soon as those existing have lapsed. He expects to demonstrate that his auto-sleigh will do away with all the troublesome delays. In the severe Winter months the mails have not infrequently been tied up for weeks at a time. The auto-sleigh is confidently expected to obviate all this and make the problem of mail transportation as easy of solution as it is in less hazardous conditions.

If the tests are worthy of consideration, the question of temperature has practically nothing to do with the successful operation of the auto-sleigh. It has been driven long distances and at good speed over all kinds of roads that were deep in snow when the temperature ranged anywhere between 30 and 72 degrees below

zero. In the Winter of 1909 the inventor made one trip through White Pass when the thermometer marked 72 degrees below zero, carrying several passengers, in comparative comfort.

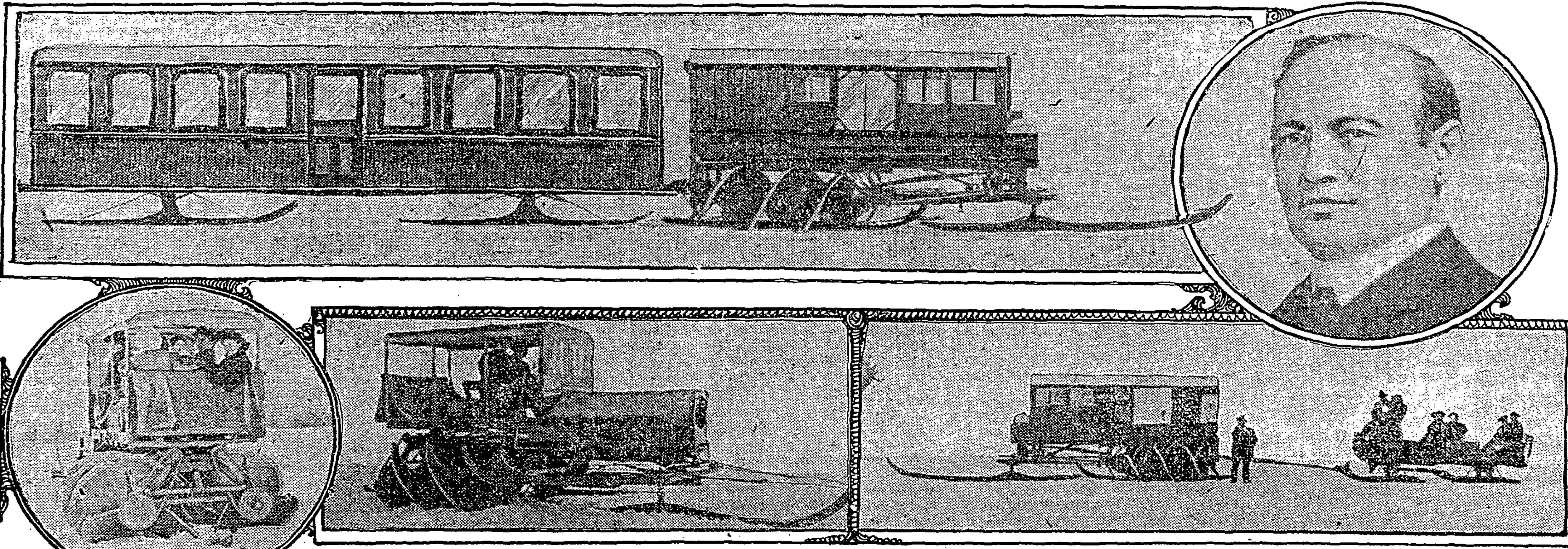
Owing to the fact that the entire surface of the northland is practically composed of tundra and swamps, which in Summer are thawed into quagmire, and that the rivers are not bridged and are not fordable, it is impossible in the warm months to move any supplies from the regular points of delivery by steamboat and railway to the various gold camps. This movement of supplies to the interior must therefore be accomplished in the Winter months.

Once the rivers are well frozen over it is expected that the new auto-sleigh will do the rest as it has never been done before. These icy ways ramify the entire region of mining development, reaching every camp in Alaska, and the inventor of the auto-sleigh expects to have machines in operation over them all before many seasons have passed.

Among those who have witnessed the successful tests of the auto-sleigh are Bishop Stringer, Percy Reid, Mining Re-

The Auto Sleigh and a Passenger Car.

Charles E. S. Burch, the Inventor.



A Test of the Invention.

Taking Passengers Through White Pass.

Front View of the Sleigh.