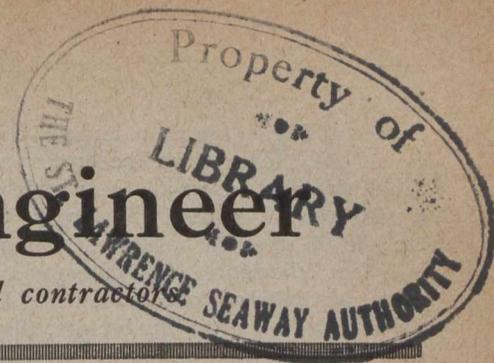


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ROAD BUILDING AT THE FRONT

How the Good Roads of France are Helping to Win the War—Planks and Large Stone the Most Valuable Material—Address Delivered Last Week in Hamilton, Ont., at the Fifth Canadian Good Roads Congress

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Director of Roads, Fifth British Army

MY first job of road-building in France was for the Canadians. I was put in charge of a thousand Belgian refugees—civilians—who were paid four francs each per day for working on the roads. I had not handled men for fifteen years, but I was puzzled to know why I could not put more vim into their work, until I found that these men had to walk from seven to twelve miles per day before they reached their work, and then walk that distance back home again in the evening. Was it any wonder that they had no energy left for their work?

Although I had considerable territory to cover, and a large number of workmen to watch, I could not get a motor or a horse. I simply was not on the list of army officers who were entitled to a horse or a motor, and that settled it. I did succeed, however, in arranging for motor lorries to collect my workmen, and within a month the work showed very satisfactory results.

Introducing Business Methods

These Belgians were divided into thirty-two gangs, with a foreman for each gang. At the end of the month, the paymaster handed in cash to each foreman the pay for his gang without any check whatever upon whether the cash reached its ultimate destination, and without any check on the number of men employed or the hours which they worked. We changed these methods and appointed soldiers as time-keepers, and saved John Bull & Co. something like 30,000 francs per month in the pay roll by cutting out the loafers, etc.

Moreover, modern methods of handling those men greatly increased their output. We had six gangs working in the woods getting out defence pickets, posts and other timber. We almost trebled their output. We had ten gangs in the quarries getting out stone and we trebled their output. The other sixteen gangs were on the actual road-making, and we doubled their output. The Belgians, when given proper superintendence, make excellent workmen.

"They Handed Me a Lemon"

Before the war the French roads were in good repair, but they were greatly overworked, even the routes Nationale. The heavy guns ground the stone to powder and the roads went to pieces fast, especially in the spring and fall. In the fall of 1915 the British army had to stop fighting because they could not carry the needed material over the roads. Sir Eric Geddes reported on the situation, and after he had made his report the British Cabinet asked

him to carry on the work and take charge of all the transportation in the British armies, including standard railways, light railways and roads.

In 1916 I was sent to the Somme to make roads for the Fifth British Army. The job they handed to me was a "lemon." There were 250 miles of broken-down roads that they had been fighting over for months. The stuffing of these roads was gone, and they wanted them re-built so that they could fight over them again within three months. The centre of the road was often a ditch holding water and mud from 8 to 10 inches deep, of the consistency of pea soup.

No Crown, No Road

General H. P. Maybury, the chief engineer of the English Road Board, went over fifty miles of these bad roads with me in two days. I urged him to give me the men and materials to put a crown on them and then they would be alright. He said, "You seem to think that a crown is everything."

"Yes," I replied, "with it you have a road; without it, you have—not."

We gathered all the officers of the various corps and told them what we wanted done; nevertheless, we could not get sufficient stone. But for five miles of the road leading out from Acheux, we picked the stone off the outer 6 feet of each side of the road and threw it to the inner 6 feet, so that we had 12 feet of fairly good road in the middle. The director of roads gave us four and five times the quantity of stone we had before, and timber as required, so we never lacked material to work with after he took charge.

Making Roads With Material from Ruins

The army did not take kindly at first to the new department which had taken over the road work, but when they saw what it was accomplishing, we got their hearty co-operation.

They told me that for me, a lieutenant-colonel, to take a pick from a private's hand and show him what I wanted done, would prove ruinous to army discipline. But it didn't, and within a month we had 12,000 men working to the one idea and with the one policy, and doing fine work for the use of the fighting troops.

When "the big push" was on we could not get stone. As a result we canvassed the surrounding country for everything that could be put onto the roads. Consequently, there are many villages of which not a single brick, stick or stone is left. We took the bricks from the