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Canadian Railway Troops



1918 75th Anniversary of the End of World War I 1993



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FRONT COVER: A narrow-gauge ammunition train of the Canadian Railway Troops taking artillery shells to the front line through a shattered village "somewhere in France" in September, 1917.

National Archives of Canada, Photo No. PA-1757.

As part of its activities, the CRHA operates the Canadian Railway Museum at Delson / St. Constant, Que. which is about 14 miles (23 Km.) from downtown Montreal. It is open from late May to early October (daily until Labour Day). Members, and their immediate families, are admitted free of charge.

The Canadian Railway Troops in World War I

"Lest We Forget"

By Fred F. Angus

I. INTRODUCTION

November 11, 1993 marks the 75th anniversary of the end of World War I. After more than four years of incredible bloodshed, destruction and suffering, an armistice was signed at 5:00 A.M. on Monday, November 11, 1918 and six hours later, the eleventh hour of the eleventh day of the eleventh month, the guns fell silent and the greatest war in history, up to that time, was over. This significant anniversary is an appropriate occasion for an article on the Canadian Railway Troops, and other units associated with them, during the First World War.

This article does not seek to glorify or justify war, neither does it discuss the political and moral factors which led to the outbreak of such a disastrous conflict. The reader will, no doubt, have his own information and opinions on these matters. It is certainly not a history of World War I; only enough background information has been given to place the work of the Canadian Railway Troops in proper perspective. It is intended to tell of an amazing feat of Canadian railroading, with some quotations from people who were actually there. This is the story of the construction, operation and maintenance, carried out under the worst possible conditions, of thousands of miles of railway line, both narrow and standard gauge, along the lines of the Western Front in France and Belgium between 1915 and 1918.

World War I was, of course, fought throughout many different areas of the world, as far south as the Falkland Islands and as far north as the Arctic Circle, including the interior of Africa, the South Pacific islands, the eastern Mediterranean, and the coasts of Turkey. However, it was on the Western Front, a line hundreds of miles long from Switzerland to the North Sea, where so many of the battles were fought and where the war was eventually decided. For almost three and a half years, November 1914 to March 1918, the line was more or less stabilized, scarcely moving more than a few miles, while the opposing sides dug in and engaged in trench warfare. This involved constant attacks, often of vast proportions, upon the enemy entrenchments and, despite huge losses and appalling casualties, gains were measured in yards rather than miles. It was not until the great German offensive of March 21, 1918 broke through the Allied lines that some mobility was restored to the battles. Eventually the Allied counterattacks succeeded in stopping the advance of the German armies which thus lost their last chance to break through and win. From June to November the Allies advanced and finally, on November 11, the war ended. During the long period of trench warfare, and also of the advances during the last four months of the war, the transportation of supplies to the front lines was of extreme importance and the efforts of the Canadian Railway Troops played a major part in the eventual victory.

II. EARLY USE OF RAILWAYS IN WAR

From the very beginning of railways, there was some awareness that this new form of transportation would be of use in war as well as peace. One of the earliest, if not the earliest, cases of troop movements by rail during hostilities occurred right here in Canada. The year was 1837 and the occasion was the employment of the Champlain and St. Lawrence Rail Road, which had opened only the year before, to move British soldiers during the Lower Canada rebellion of that year. In 1854, during the Crimean War, the British War Office commissioned the firm of Peto, Brassey and Betts (the same firm that built the original main line of the Grand Trunk Railway) to build a railway to carry supplies to the army besieging Sebastopol. This railway, comprising 39 miles of track, 17 locomotives and many freight wagons, was built by the contractors at cost price as a public duty. However it was not until the 1860's that the first major use of railways in war occurred. In 1861 the American Civil War broke out and lasted for four long, bloody years. This conflict, the largest ever fought in the New World, is often described as the first modern war. Covering a territory stretching hundreds of miles, the war was fought on many fronts and required great mobility of both troops and supplies. The importance of the, already quite substantial, railway network in the United States became quickly apparent to both sides, and struggles for important rail lines and terminals played an important part in the war. The Union (North) had a majority of the nation's railroads, while the Confederates (South) were at a disadvantage railway-wise, a factor which played a significant role in the eventual Union victory.

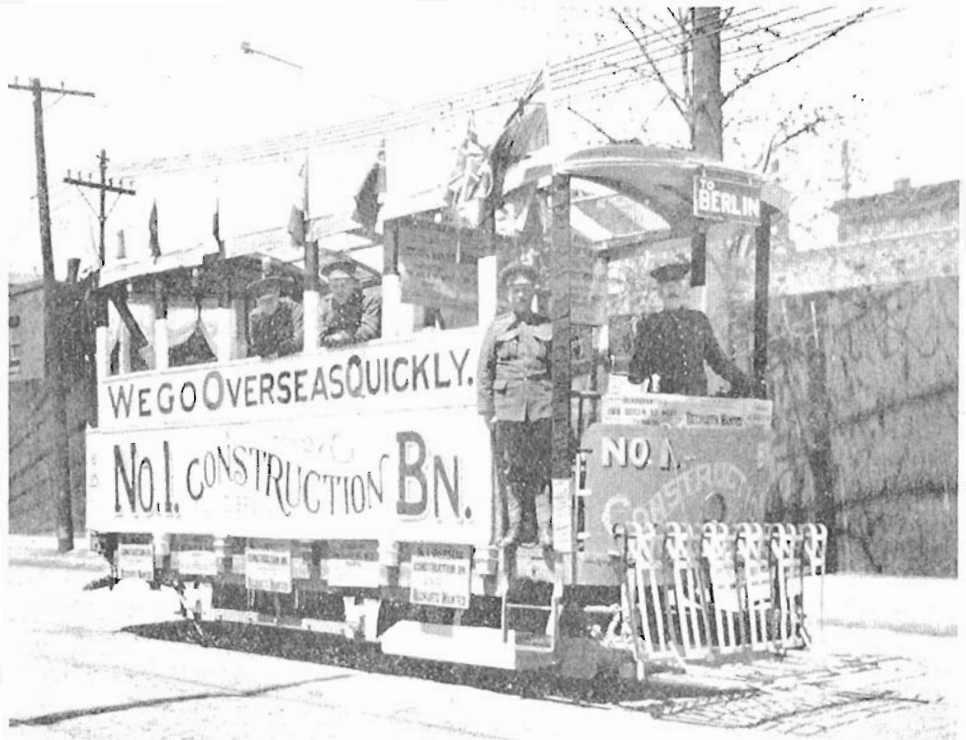
The efficiency of moving the army by rail was noted, at first hand, by a twenty year old ticket agent and (starting in 1864) train dispatcher who worked for the Chicago & Alton Railroad at Joliet, Illinois. His name was William C. Van Horne. Twenty years later he was General Manager of the Canadian Pacific Railway, and, in 1885, he used this knowledge, learned during the Civil War, to move the army to the Canadian West in record time, over the unfinished CPR main line, thus contributing to the quick end of the North West rebellion. This great feat of logistics attracted attention abroad, especially by the British War Office and the German General Staff.

Other nations, noting the importance of railways in the Civil War, reacted in different ways, ranging to indifference to serious planning. One nation which took the concept of military use of railways very seriously was Germany. As early as 1870 the Germans' massive movement of the military by rail played an important part in their victory over France in the Franco-Prussian War, and, on a much larger scale, it allowed the German armies to move quickly to the French and Belgian borders in 1914 on the outbreak of World War I.

Recruiting for the CORCC began on March 12, was completed by May 15, the force was mobilized at Saint John, N.B. in May and June, and shipped overseas with little delay, sailing from Saint John on the S.S. Herschel on June 14, 1915. The CORCC, under its commanding officer Colonel C.W.P. Ramsey CMG, arrived in England on June 25, underwent two months of training, and on August 25 was inspected by King George V and set sail for France, travelling via Southampton and Calais. In September, 1915 authorization was given for the recruiting of a reserve base consisting of two officers and 140 men. This work was undertaken by Frederick L. Wanklyn, General Executive Assistant of the CPR who became honorary Lieutenant Colonel of the corps. During the time this reserve base was in England it performed work on the railways there, especially in the Newcastle area. After these reserves were exhausted, further reinforcements of the CORCC was taken from the general reserve of the Canadian Railway Troops. The CORCC was the first of the force of Canadian railway workers to serve, a force which reached a nominal strength of almost 15,000 by the war's end.



Col. C.W.P. Ramsey, C.M.G. Officer Commanding the CORCC.



A recruiting car for the No. 1 Construction Battalion in Toronto in the spring of 1916. The car is an old Toronto Railway open car, modified by the men of the Battalion. Note the sign on the front of the car reading "TO BERLIN". It was going to be a long, hard trip.

Canadian Railway & Marine World (CRMW), July, 1916.

The first assignment of the CORCC was at Alveringhem, Belgium, about six miles west of Dixmude, where it was attached to the Second and Fifth Divisions of the Belgian Army. Its work at that time consisted of the construction of reinforced concrete machine gun emplacements, observation towers, artillery emplacements, shell proof shelters, standard gauge railway mounted gun emplacements, 2-foot gauge railways and trench train lines. A mechanical plant was also supplied and operated at Forthem for the transshipping of materials from barges to the light railway system. The high quality of the work is demonstrated by the fact that the artillery emplacements successfully withstood direct hits from 11-inch armour piercing shells; in one case a shell, striking directly in the embrasure, cut 4 feet from the barrel of a six inch gun without seriously damaging the emplacement. A light railway system of 2-foot gauge, using 9-pound rail, was constructed for the carrying of supplies, ammunition and other stores from Forthem, about five miles behind the lines, to Dixmude, then paralleling the trenches in both directions from that point. This was the first light railway ever constructed immediately behind the front line on either the British or Belgian fronts. It was a somewhat primitive affair, being operate partly by horses and partly by manpower, but it was a decided improvement over the previously-used horse and hand transport. The CORCC strongly advocated an extensive, power operated system of 2-foot gauge railway, using 30-pound rail, but this was not approved since the higher authorities still believed that a breakthrough was just around the corner, a breakthrough that would restore the war of movement and so make light railways



Members of the CORCC laying narrow-gauge track near the front lines. CRMW, August, 1918.

unnecessary. While some light railways were established in 1916, it was not until 1917, when all means of transport other than railways had failed, that the large scale network of light railways, long advocated by the CORCC, came into being.

Near the end of October, 1915, the Corps was recalled to England with orders to proceed to Salonika (in western Macedonia) to work on the Salonika - Uskub Railway. This transfer never took place for, just at this time, the enemy broke through the Serbian lines and many of the railway lines, on which the CORCC would have been working, were lost. Accordingly, the corps was returned to France by November 5 and divided into two companies. One went to Audricq, the central railway supply depot of the British Armies, and worked on the extension of the yards there. This depot then consisted of 40 miles of track; this had been extended to 120 miles by the end of the war. The other company went to Wippenhoeck, in Belgium just south-west of Ypres, and a few weeks later it was joined by the company from Audricq which had finished its work there. The CORCC was then attached to the second British Army and started work on standard gauge lines in the area. The railheads at that time were from 15 to 25 miles behind the front lines since advanced railways for handling supplies were still almost unknown and were considered dangerous and unreliable. They were, of course, dangerous but so were all types of transportation near the front lines.

The CORCC remained in the area of Ypres until August, 1916, during the huge offensive on the Somme. It is in this period that official thinking turned more and more towards railways, including light railways, as the answer to the transportation problem. The first work undertaken in the area, late in 1915, was

the construction of a standard-gauge line from Wippenhoeck, on the main line, to Dickebusch, a point south of Ypres and only a mile and a half from the front lines. The idea was that it would be used for railway-mounted gun spurs and possibly small amounts of stone traffic for repairing the roads. As work advanced, strong arguments were made that the line should be used for advanced supply and ammunition transport. Gradually this idea took hold, and authority was given for the construction of advanced railheads on this line. This was the first advanced standard-gauge railhead behind the British front. Early in 1916 the corps built a new line to the north which eventually connected with the old main line north of Ypres. They also built a metre-gauge yard on the Belgian railway at Ghyvelde.

In the spring of 1916, the Canadian Army at last approved the idea of establishing a power-operated 2-foot gauge railway in the Ypres salient. This was undertaken by the First Tramways Company of the Canadian Engineers (which will be discussed more fully later) but a detachment was furnished by the CORCC to lay track and generally assist in this work. Much of the railway was built from salvaged materials, and in the beginning was somewhat primitive. The first motive power was provided by two 10-ton locomotives abandoned in the German advance and fished out of Dickebusch Lake. Primitive as it was, this line was an example of what could be done by light railways and was the forerunner of the system that was eventually built.

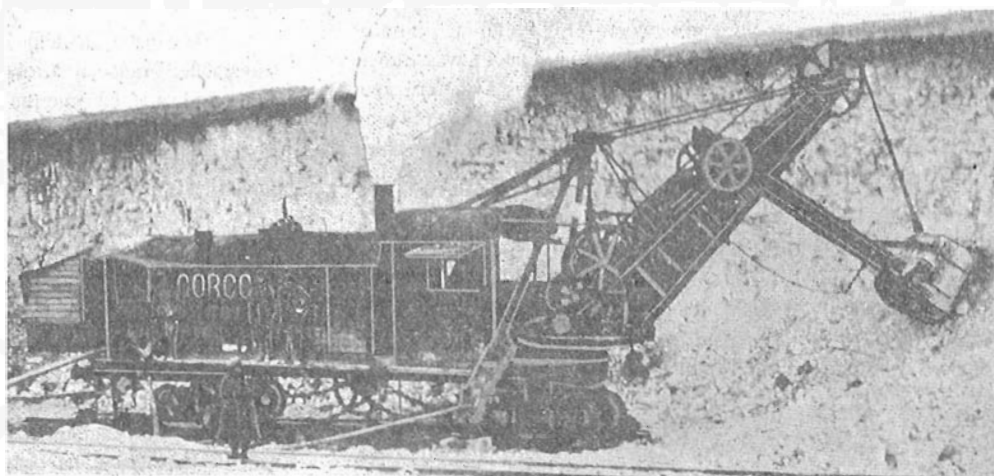
In March 1916, shipments of steel standard-gauge box cars began to arrive from Canada; these required final assembly and this work was done by the CORCC. A total of 1300 cars were assembled before improved plant and labour were available, at which time the



An ammunition loading station, October, 1917. Note the horses in the distance. National Archives of Canada, Photo No. PA-2122.

work was turned over to the British army mechanical staff. During this work, the CORCC had the somewhat unpleasant experience of being present at the blowing up of some 15,000 tons of ammunition in the Audruicq dump, only a quarter mile from the car yard. Thankfully the ammunition did not go off all at once or it would have made an explosion of almost nuclear proportions. Nevertheless the explosions, which were set off by German bombs, continued for three days and, in some cases, threw shells for nearly a mile.

As railway work progressed, the need was felt for more track construction equipment, there being no such modern equipment available in the area. Eventually, after much pleading, permission was given for the acquisition of two 70-ton steamshovels and two standard-gauge track pile drivers; these were supplied by the Canadian government through the CPR, and they arrived in June, 1916. From that time until the end of the war both steamshovels and pile drivers



One of the two steamshovels, supplied by the Dominion government through the CPR, at work at Puchevillers in November, 1917. CRMW, September, 1919.

were constantly employed, in many cases operating 24 hours a day. During the final German retreat in 1918, the pile drivers drove the great majority of the piles needed on the new bridges from the Somme to the coast.



*On the railway in a captured area of No Man's Land. Notice the pile of sandbags
CRMW, August, 1918.*

The CORCC continued as a unit until the end of the war and won an impressive number of awards for bravery: one Companion of St Michael and St. George (CMG), 9 Distinguished Service Orders (DSO), 10 Military Crosses (MC), 6 Distinguished Conduct Medals (DCM), 20 Military Medals (MM), 6 Belgian Croix de Guerre. From mid-1916 on, the CORCC was joined by other units from Canada which became the Canadian Railway Troops and which expanded very greatly the work of railway construction on the Western Front.

V. THE CANADIAN RAILWAY TROOPS

In May, 1916, after personal representations had been made to several British War Office departments, it was finally decided to ask Canada to furnish another unit, approximately 1000 strong, for railway construction work. This battalion, initially under Lieutenant - Colonel J.W. Stewart of Vancouver, was known as the 239th Overseas Railway Construction Corps. Due to various delays in organizing and recruiting, this corps did not reach France until March 22, 1917 by which time it had become the Third Battalion, Canadian Railway Troops.

July 1, 1916 was a day which changed the course of the war and, perhaps, the history of the world. On that day began the battle of the Somme. The British armies suffered 60,000 casualties on the first day alone, a slaughter unequalled in any previous war and possibly the worst in any one day of any war in history. The Somme campaign continued for months with little significant advance, gains, if any, were measured in feet. Eventually the armies became bogged down in the mud as constant shelling reduced the ground to a sea of mud which swallowed up friend and enemy alike and obliterated all roads. The summer of 1916 finished any serious hopes of a quick breakthrough which would end the war. For more than two more years the carnage would continue, all within a relatively small area, and would require the moving of immense quantities of supplies, not to mention the transportation of troops to the front and the evacuation of casualties. The railway was the only practical means of getting through this wilderness, and the Canadians played a major part in building and maintaining these railways.

After the commencement of the battle of the Somme, it was decided by the Imperial General Staff to make greater use of railways, and more especially of light railways in forward areas as used by both the French and the Germans. To accomplish this, Sir Eric Geddes was appointed Director General of Transportation with power to reorganize all the transportation services on the British Western Front. Sir Eric quickly looked to Canada for direction to supervise and direct the construction of railways. It was agreed that Canada should furnish five battalions of construction men, to be known as the Canadian Railway Troops, and that Colonel Stewart should proceed to France immediately to act as Deputy Director of Light Railways, as well as

being in immediate command of the Canadian Railway Construction Battalions upon their arrival in France. Lieutenant Colonel Angus McDonnell (who, we will remember, had advocated light railways away back in 1914 but had been rebuffed) was delegated to remain in England to organize the units and to follow Lt. Col. Stewart as second in command on completion of the organization. On January 1, 1917 Stewart, by now promoted to Brigadier-General, was appointed Deputy Director General Transportation (Construction) and made directly responsible to the Director of Transportation for all railway construction, thus having supervision of the work done by the Royal Engineers' Railway Construction Companies (whose strength was then 5312 of all ranks) in addition to all work done by the Canadian Railway Troops.

The first five battalions of the Canadian Railway Troops were:

The First Canadian Overseas Construction Battalion, which had reached France in October 1916 and was working on Standard-gauge railways, became the First Battalion, CRT.

The 127th Infantry Battalion, then at Bramshott, England, became the Second Battalion, CRT and proceeded to France on January 11, 1917.

The 239th Battalion, previously discussed, became the Third Battalion, CRT.

The Fourth and Fifth Battalions, CRT, were organized at Purfleet, England and proceeded to France in February, 1917.

Things were now moving at ever-increasing speed in anticipation of the campaigns scheduled for 1917. In March, 1917 it was decided to organize five more Battalions of the Canadian Railway Troops, and as more units arrived from Canada they were sent to Purfleet to be organized. By April 1, there were six Battalions in the field, and by the end of June, 1917 all ten were fully operational. So quickly had official thinking turned around that the majority of these units were employed on light railway construction and maintenance and, from mid-1917 until the end of the war, all the light railway construction on the British Western Front was carried out by the Canadian Railway Troops.

The organization of the Canadian Railway Troops was separate from the Canadian Corps. Their headquarters was established



A light Railway goods yard at Dixie Siding, behind Vimy Ridge, in October, 1917. Steam locomotives were not usually used close to the front lines because their smoke would give away their position to enemy gunners. National Archives of Canada, Photo PA-2126.

at the British Army's General Headquarters in France. This enabled Brigadier-General Stewart to fill the dual capacity of General Officer Commanding of the Canadian Railway Troops, and Deputy Director of General Transportation.

The Canadian Railway Troops proved their worth soon after their arrival. In February and March, 1917, the Germans had made a strategic retreat on the Somme, and the first of the railway battalions to arrive were able to push forward standard gauge and light railway lines with surprising speed in spite of the atrocious weather and the thoroughness of the destruction wrought by the enemy during the retreat.

In April, 1917 began the battle of Arras, and it is here that the Canadian Railway Troops, and, in fact, the Canadians in general, scored one of their greatest triumphs, an event which is still looked on as an important turning point in Canadian history. On Easter Monday, April 9, 1917, against seemingly impossible odds, the Canadians, under Sir Julian Byng, later to be Baron Byng of Vimy and Governor General of Canada, attacked and captured Vimy Ridge, then the strongest German fortress on the Western Front. After all the frustrations and horrendous losses of the Somme campaign, the capture, in a matter of hours, of this strategic position seemed nothing less than a miracle. For several weeks prior to the opening of the attack the weather had been extremely bad, and the ground in the battle area was like a

quagmire. Nevertheless, the Canadian Railway Troops had laid rails to within a short distance of the front line. Then, as soon as the infantry advanced on that memorable Easter Monday, the railway battalions constructed new lines on the heels of the fighting men. Supplies and ammunition were carried forward on standard and narrow-gauge lines, and the wounded were evacuated over them to the very doors of the field ambulance dressing stations and the casualty clearing hospitals. It was the first time in the war that such work had been accomplished. Within a week of the opening of the campaign, trains were running to the top of Vimy Ridge, and by the end of April light railways were running forward to the British ration dumps which were now some distance ahead across the level plain.

In the summer of 1917 began the Passchendaele campaign which, in many ways, was worse than the Somme, a year before. Here, the drainage system of the low-lying ground had been completely destroyed by the incessant shellfire with the result that the entire terrain became a seemingly endless sea of mud of an especially tenacious variety. Attempting to attack over such ground with the enemy firing everything possible at you is warfare of the most horrifying and gruesome kind. Eventually, in the late autumn of 1917, the attack bogged down and petered out with little accomplished beyond adding greatly to the ever lengthening casualty lists. By this time some people were seriously wondering



Moving supplies on a light railway recently laid over captured ground. The "duckboards", shown on both sides of the line, were necessary to avoid getting bogged down in the mud. CRMW, August, 1918.

if the war would ever end, if it did, whether there would be anyone left to see the day. During all this tragic time the Canadian Railway Troops were as determined and successful as ever, building and rebuilding, sometimes many times over, the railways which had become the lifelines of the Canadian forces. The difficulty of the task facing the Canadian Railway Troops in the Ypres salient may be gauged from the fact that during the summer of 1917 the average number of breaks in the light railway lines due to enemy shellfire was about 100 per day (more than four every hour), in the areas of the Second and Fifth British armies alone.

One account, reported in the Canadian Railway and Marine World for November 1917, sounds almost like fiction; but it is true and is only one of very many such incidents in the history of the Canadian Railway Troops:

"During one of the recent attacks, Sergt. Oscar Samson, of Alberta, was seriously wounded in the arm. Instead of trekking for medical assistance back to the rear, he attempted to carry on at his job of mending lines destroyed by Hun shells, so that more ammunition could be rushed up. Finally his arm got so painful he decided to go forward on the track that had been mended to an advanced dressing station he knew of. His wound had been fixed by a comrade, and his arm was tied up in an improvised sling. Samson climbed on a tractor that was hauling a trainload of Stokes gun ammunition. When they got to a junction near the front line, both guard and driver were wounded by splinters from a high explosive shell. The little train had made the crest of the grade and was gathering momentum every second, with the driver of the tractor hanging limp and unconscious from his seat. Samson pulled him up to a place of safety and shut off the engine, but

the heavy train had too much headway to be stopped, and in addition the brake gear had been blown away by another shell. Climbing back to get the brakes on the cars, Samson came across the wounded guard. He had been knocked off the top of the truck, and his foot catching in the framework of the car, he was being dragged along with his head and shoulders bumping along the ballast. The Canadian Sergeant released his foot, but failed in his attempt to gather him up into the rapidly moving car. About a hundred yards ahead was another ammunition train, its cargo of high explosive shells being unloaded at a battery position. By good luck, and a knowledge of braking learned on the grades in the Rockies, Samson managed to slow down his train just as it reached the standing trucks, and a serious collision and explosion were avoided. Then, although the shell fire was extremely heavy, the sergeant went back and rescued the wounded guard. Samson won the Military Medal for his splendid exhibition of pluck."

An incident that shows the high morale of the Railway Troops was a comment made by an engine driver on the narrow gauge. A war correspondent asked the driver, who was operating in an area subject to shelling bombing and gas attacks, "What gives you the most trouble in running one of these tractors?". He replied simply: "She's off the iron a little more than I'd like". Despite the dangers, his chief concern was of derailments!

Other stories of the exploits of the CRT will be told in section IX following.

Constructing and maintaining these ever-extending railways required very great quantities of supplies plus the transportation systems to deliver them to where they were needed. Some material came from England, but much was shipped from Canada. A major source of rails and track supplies came from track of the Canadian Northern and Grand Trunk Pacific railways in Alberta and British Columbia. Consolidation of these lines, following their takeover by the Dominion government, had left many miles of track redundant, for the two lines paralleled each other, often only a few hundred yards apart, for many miles. In 1917 and 1918 this track was taken up and the rails, fish plates and other material were shipped to France for use on the Western Front.

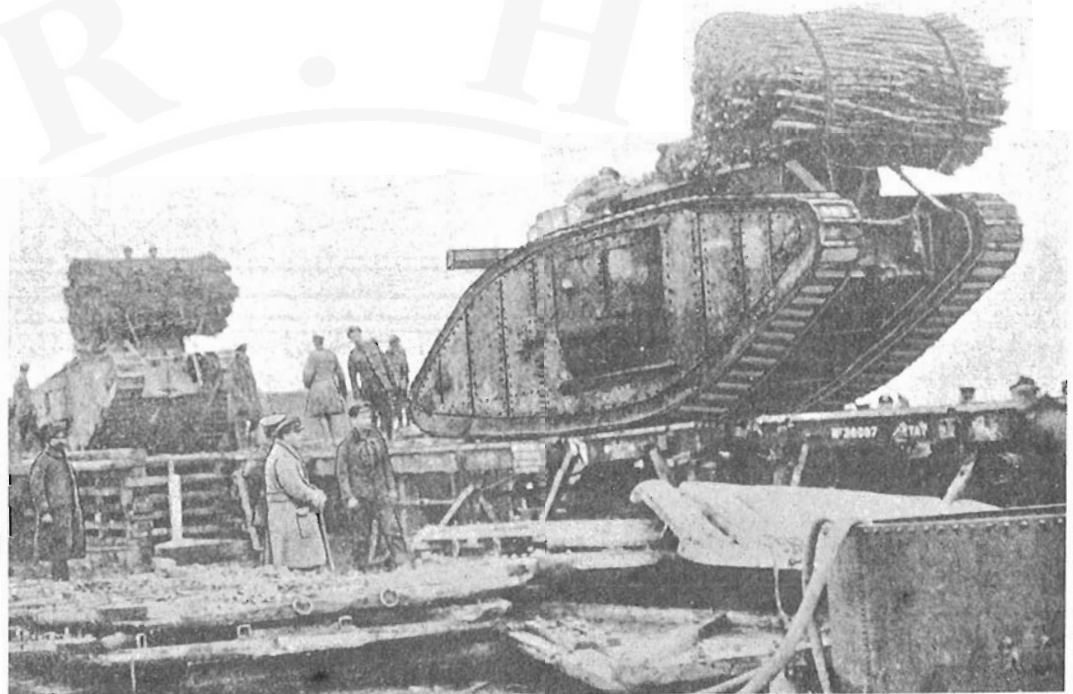
By March 1918 both sides were worn out. The only prospect for a change in the stalemate seemed to be the impending arrival of troops of the United States which had entered the war on the Allied side on April 6, 1917. By early 1918, American soldiers were arriving in France but, so far, not in large enough numbers to shift the balance. Realizing this, the Germans made one last bid to break through and win the war, and so, on March 21, 1918 they launched a huge offensive which broke the allied lines and, for a

time, threatened to do exactly what had been planned. Much of the track laid by the Canadian Railway Troops was overrun and passed into enemy hands. Seven battalions of the CRT were withdrawn and were employed for a time on the construction of a rear defense trench system. This system extended over a front of 30 miles, and comprised about 120 miles of trenches. This was an extremely trying time for the CRT. For a time they were transformed from construction workers into fighting men. As the enemy advanced on Amiens, the railwaymen organized 16 Lewis gun teams and held their positions until relieved by members of the New Zealand Division. Three

of the battalions were organized into the Canadian Railway Brigade (a fighting force), but this was short lived as it was realized that railway construction was so important that the CRB was disbanded and its members returned to construction duties. In the meantime, three more battalions of the Canadian Railway Troops had been formed, making a total of 13. The Second and Third Canadian Railway Labour Battalions became the 11th and 12th of the CRT, and, in addition, the 13th Battalion, CRT, was formed from the personnel at Purfleet, England.

By the early summer of 1918 the tide had turned and the crisis had passed. The great German advance, after three months, had lost its push and, gradually, the Allies advanced again. At this time the Canadian Overseas Construction Corps (the CORCC which we have already considered), the 58th Broad Gauge Operating Company (to be considered later), the 13th Light Railway Operating Company, the 69th Wagon Erecting Company and the 85th Engine Crew Company were brought under the Headquarters, Canadian Railway Troops, and the whole formed into the corps of the Canadian Railway Troops. About this time Brigadier-General Stewart was appointed Director of Construction, a position which was responsible for all construction of a civil engineering character in the zone of the British armies.

One part of the history of the CRT that requires consideration is their service in what is now known as the Middle East. In the summer of 1918, during the final offensive against the Turks in Palestine, British General Allenby called for a party of expert bridge builders. The War Office requisitioned the services of the Canadian Railway Troops, and six officers and 250 men were selected from those in France who volunteered for this special service. They left for Palestine on September 20, 1918, and served in the area of the Jordan River and the Dead Sea. Operating

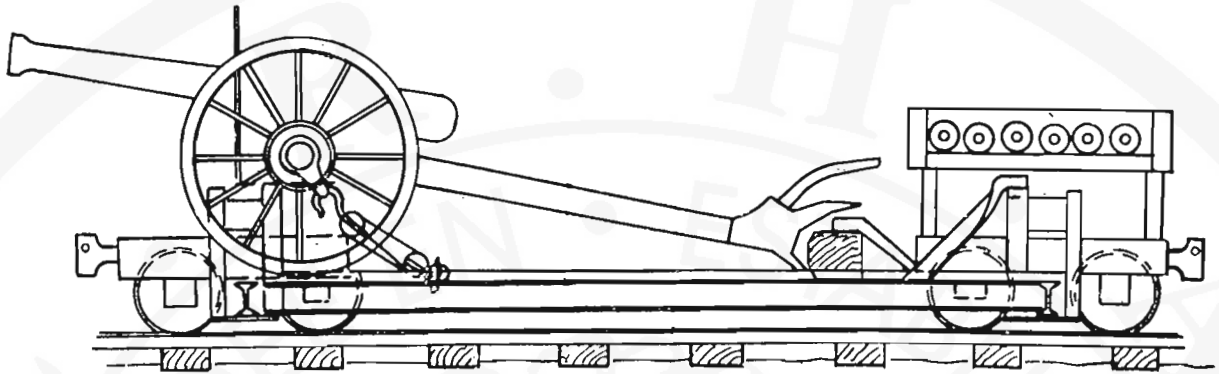


The moving of tanks on the rail lines was a difficult job. In November, 1917, the troops moved 460 tanks in one night for the successful attack on Cambrai. CRMW, September, 1919.

conditions were extremely unpleasant. Although the Troops were not under enemy fire, they suffered greatly from the climate. The temperature was almost always over 100 degrees and frequently reached 120. The air was also very humid because of evaporation from the Dead Sea, and there were also scorpions, centipedes, stinging spiders and mosquitoes. The Canadians were affected by Malaria as well as Influenza, and at one time in October not more than six men were able to work at one time. They did, however, have help from the Egyptian Labour Corps and, with this help, by October 6 the railway was passable all the way to Damascus.

As the summer of 1918 advanced the spirits of the Allies rose and, for the first time in four years, it appeared that the end might not be all that far ahead. The stalemate had been broken and the armies were advancing. The Canadian Railway Troops were constantly at work, just as much as before, perhaps even more so in order to keep up the supply lines to the advancing army. By November the CRT had reached a strength of 14,877 plus 1,087 in CRT Operating Companies and 3,364 Troops in England. This compares to a total of 7,340 nominal strength of the Imperial Railway Construction Corps.

The advance continued until the City of Mons, in Belgium, was captured early on the morning of Monday, November 11, 1918. This was where the British Army had first engaged the enemy in August, 1914. By now both sides realized the futility of continuing the war and early that morning the armistice was signed. At 11:00 A.M. the fighting stopped and the war was over. The main work of the Canadian Railway Troops had ended; some jobs continued for a few more months, but before very long the units returned to England and by June, 1919 the CRT had been demobilized. They had won 489 honours and decorations for bravery during the war.



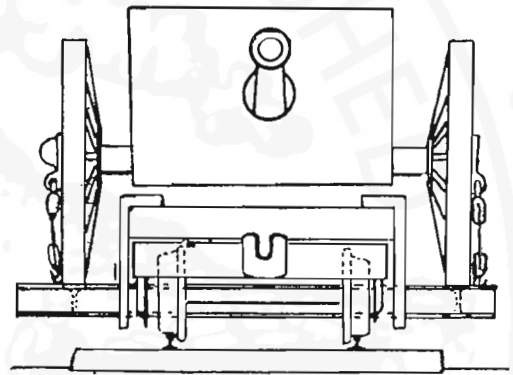
VI. THE CANADIAN ENGINEERS' FIRST TRAMWAY COMPANY

Among the units engaged in railway work on the Western Front, the Canadian tramways companies did their share of the work with the best, although their work is not as generally known. They were not part of the Canadian Railway Troops, but were, throughout their history, part of the Canadian Corps.

The First and Second Tramways Companies, Canadian Engineers, were authorized, formed, worked and were demobilized in France and never existed anywhere else than in the forward area. The first company, the Composite Pioneer Company, Canadian Corps, was formed on May 19, 1916 to construct and operate light railways in the Ypres sector, and the personnel were drawn from the First, Second and Third Canadian Pioneer battalions, as well as the CORCC. There were about 280 members of this first company under Captain D.H. Williams. Major Goldie DSO was Field Engineer and Major R.P. Rogers was Assistant Field Engineer.

The company built and operated about 40 miles of 2-foot gauge, equal to the French 60-centimetre, track and the first power for operating was the two small locomotives, previously mentioned, which were salvaged from Dickebusch Lake. On September 3, 1916 the company left Vlamertinghe and moved south with the Canadian Corps to Albert, for the battle of the Somme. There they did good work on the lines from Albert to Becourt Wood and Pozieres, working with tractors (small internal-combustion locomotives) up to Gordon dump. From there on, the trains were moved by horse or mule power until sufficient ballast was available to make the track fit for tractors beyond that point. The company left the Somme on October 26, 1916, and returned to the Lens front. At that time a portion of the company, under Lieutenant S.F. Workman, proceeded to Bois-de-Bray and formed a second company which became the Canadian Engineers Second Tramways Company.

By the time of the capture of Vimy Ridge in April 1917, the 2-foot gauge lines were hauling about 125 tons a day, but after that time the tonnage steadily increased as new lines were opened up. Construction was carried on steadily throughout 1917, and the ground won at the battles of Vimy Ridge, Hill 65, Avion and Hill 70 was covered with 2-foot tracks, so that by the end of 1917 the Canadian front was better served by light railways than any other sector of the British front. About June 1917, the transport of guns was inaugurated; these ranged in size from the standard 18-



"International No. 1", one of two cars converted by the Canadian Engineers First Tramway Company to move and fire 18-pounder guns on the 2-foot gauge railway lines. CRMW, November, 1919.

pounder field gun to the large 8-inch howitzers. In fact some batteries chose positions which were entirely dependant on the tramways for the moving of guns, ammunition and all other supplies. After the capture of Vimy Ridge the company established a fixed location for its headquarters, this was at Lens Junction, between Souchez and Ablain St. Nazaire, and the headquarters remained there for fifteen months. During this time the track was upgraded; rails were renewed, more ballast was put in, crossings were repaired, grades were revised and the whole system was made more efficient. Nevertheless, the work was very dangerous for the whole area was exposed to enemy shell fire at all times, and in front of Vimy Ridge operation was only possible at night. Trains were dispatched on these single-track lines on a station-to-station basis similar to the English system of passing control of a train from one signal box to the next. In contrast, the British tended to dispatch their trains from a central control point.

By the end of 1917, the company was handling almost 700 tons and making over 2000 ton-miles daily. Traffic was worked as far as the tramways yards at Lens Junction by the Army Light Railway, with steam, and from there forward in army cars by tractor. Three types of these were in use:

- 20 H.P. simplex, capable of hauling 15 tons.
- 40 H.P. simplex, capable of hauling 30 tons.
- 45 H.P. gasoline-electric, capable of hauling 45 tons.



The "Mechanical Bug", a locomotive made by the Canadian Corps Tramway officers with the help of a corporal. The engine is from a motorcycle, the fly-wheel from a sugar refinery, and the belt from a minehead smashed by artillery fire.

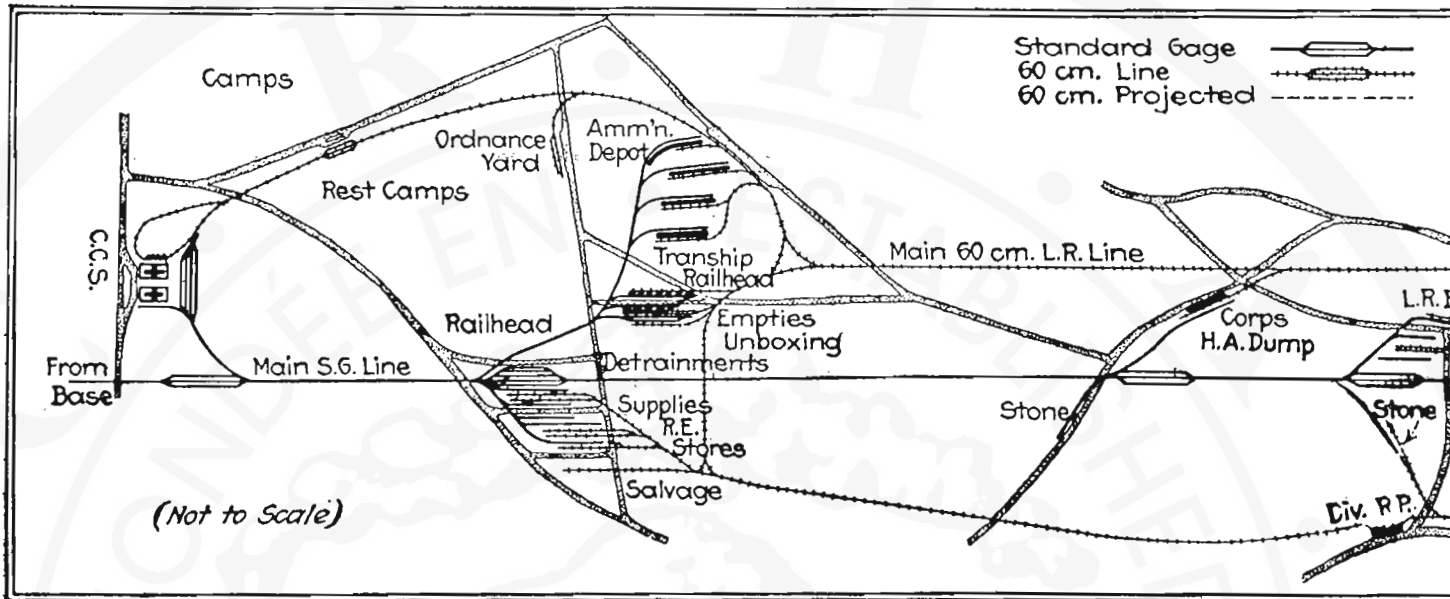
National Archives of Canada, photo No. PA-2712.

The army cars were usually double-truck flats and gondolas which weighed 2 1/2 tons empty and could carry 10 tons. In addition the company had, for local traffic, a considerable number of small springless cars with a capacity of 1 1/2 tons, as well as some captured German cars which had a capacity of 5 tons. The next step was to undertake troop movements; in the winter of 1917-18 this grew to considerable dimensions, sometimes two battalions would be brought up, and two others brought back, in a night. Regular night trains were run to take work crews to their positions on the defense lines, the regular schedule handling 1200 men per night. In addition, hospital trains were run on a regular schedule to and from the forward dressing stations. The construction department was housed at three locations; two of these, although far forward, were somewhat sheltered. However, at the third, known as Whiz-Bang Corner, the section lived constantly alongside the infantry in support, and on two occasions shell fire was so bad that almost the whole section became casualties. Nevertheless, the average number of trains operated per night was 25, and on one memorable night, 37 trains were run.

In the spring of 1918 gas warfare was carried on extensively, and the tramways companies played an important part. Gas cylinders would be loaded on the cars, moved well forward, and then electrically connected and detonated by remote control. In this way about 1500 cylinders would release gas at once. Another operation was providing special cars from which 18-pounder guns could be fired. Two of these cars were built and named "International No. 1 and No. 2". They, together with another car for ammunition, would be moved, with a 20 H.P. tractor, to a point just behind the front line, would spend the night harassing the enemy, moving to avoid retaliation, then pulling back before dawn leaving no trace.

On August 11, 1918, the company moved, by road and by standard-gauge railway, to Amiens, and later rejoined the Canadian Army at Arras. By now the Allies were quickly advancing, and the two tramways companies worked unceasingly to keep the railhead up to the advancing armies. In places they crossed the old no-man's-land and linked up with the captured German tracks; this was a risky undertaking for the enemy would often sabotage or booby-trap the lines before retreating. By September, average daily tonnage was 723, with 4003 ton-miles, rising in October to 1243 tons and 7268 ton-miles. The all-time record for one day, set in mid-October, was 1782 tons and 10,325 ton miles! Construction continued, one of the major works being the building of a bridge across a standard-gauge yard; this was completed in three days. In the yard itself, every frog had been blown up by the retreating enemy, and this also had to be repaired.

By November 3, the end of steel was at Valenciennes, while the enemy was just beyond the eastern edge of the town. Here, in order to speed up construction, standard-gauge track and metre-gauge street car lines were re-gauged to 2-feet, and the lines continued, albeit by a somewhat roundabout route, making use of the existing tracks. On November 10, the advance parties crossed from France to Belgium and were at Quievrain, while the main party was preparing to move there and continue to build eastward, following the advancing army. Then, early on the morning of November 11, orders were received that construction was to cease; the war was over. The companies continued to maintain the existing lines until January 24, 1919 when they were relieved by the 231st Forward Light Railway Company, whereupon, on February 1, 1919, the units were demobilized and subsequently returned to Canada.



A schematic diagram showing the layout of the standard-gauge, narrow-gauge and tramway lines on the Western Front.

CRMW, August, 1918.

VII. THE ORGANIZATION OF THE LIGHT RAILWAY SYSTEM

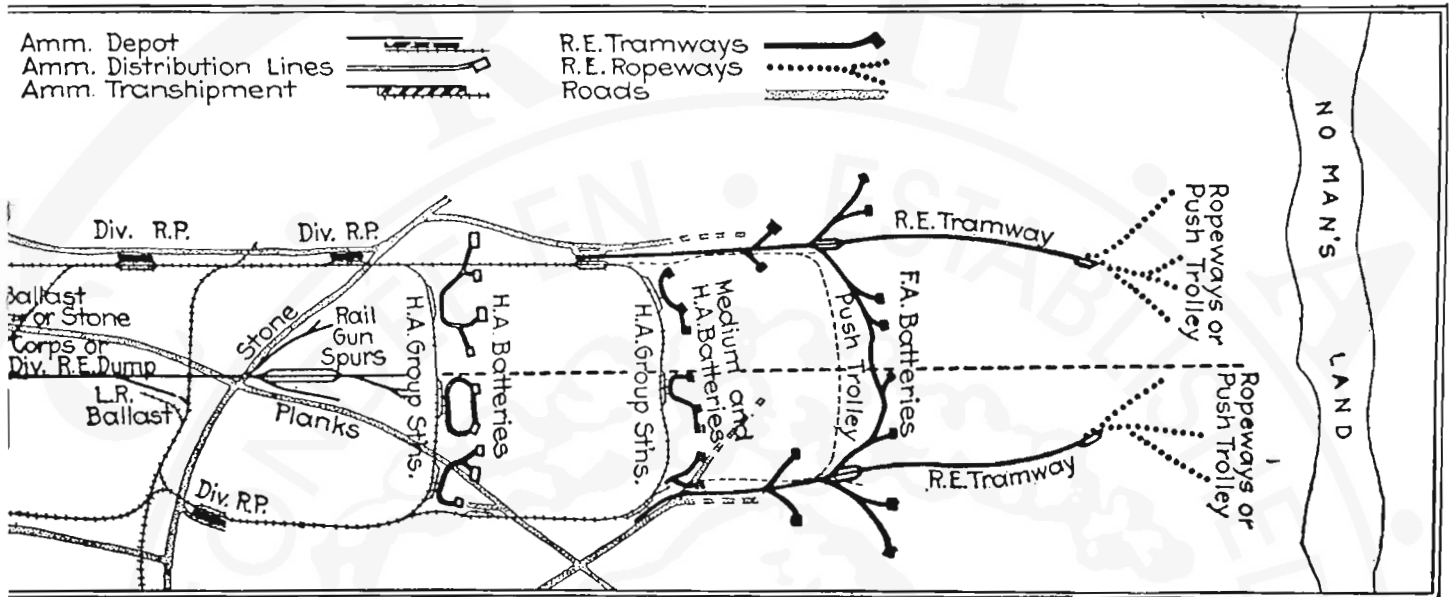
The light railway system, with its complex activities, spreading over wide areas by a small army of officers and men, required careful organization to perform its services, maintain discipline and ensure proper working. There had to be an unbroken line of responsibility from the sapper to the general, and there had to be full provision for constructing and operating the light railway system.

Light railways generally commenced from where the standard-gauge lines ended and continued forward to where they connected with the trench tramway systems which we have already considered. Sometimes, especially if the enemy had retreated, there was overlapping between the light railways and the standard-gauge; this was an advantage because it provided more than one point where supplies could be trans-shipped from one system to the other. Operating companies usually located their camps and terminals away from railheads and ammunition dumps in order to avoid, as much as possible, enemy shelling and bombing. The main line usually ran forward to where it connected, by means of a wye, to a branch line that ran parallel to the line of trenches but two or three miles behind it. From this branch line, other lines branched off towards the front, connecting with the trench tramway systems. Some of these lines were connected by cross tracks in order to provide loops, as well as alternate lines in case any tracks were broken by enemy shellfire.

Communication was achieved by means of a telephone system which was built and maintained with considerable difficulty. Radio communication, although in existence, was not sufficiently developed to permit dispatching trains by radio. The telephone system began at General Headquarters and ran to a "super control"

located at an intermediate point behind the armies. From there separate lines were run to "central controls", and thence to "district controls". By this system, super control handled the distribution of motive power and rolling stock between armies, while central control handled the same distribution between operating companies. Corps light railway offices were connected by separate wires to central controls and to army headquarters. From the district controls, two traffic lines were run wherever there were tracks, one, which connected all stations, was known as the block-to-block line, while the other was the through reporting line which connected main stations or report centres. Each station was equipped with a telephone box which had a lever which could be moved to either side when conversing with adjoining stations, or left in a through position when a through connection was needed. Stations connected with the through wire had small switch boards by which connections could be made between the two wires. If district control wanted to talk to an intermediate station up the line, the nearest report centre was called on the through wire, and the report centre then called the station and made the through connection by plugs on the switchboard. Breaks in the line were so frequent, due to shelling, as well as the concussion of our own guns, that each district control had linemen constantly on hand to repair the breaks. The complexity of the arrangement is shown by the fact that the total extent of all these telephone lines was more than 2000 miles.

Motive power consisted of steam locomotives and internal-combustion tractor units. Steam locomotives were used in daytime up to the point of enemy observation, and to all points at night. The tractors were used at other times and places. There were four types of steam locomotives: Baldwin 16-ton 2-6-0's working at 180 psi. steam pressure and carrying 400 gallons of water and half a ton of



coal. American 15-ton 2-6-2's quite similar to the Baldwins. Hunslett 15-ton 2-6-0's built in England. Other small locomotives also built in England. The tractors were of 20 H.P., 40 H.P. and 6-ton, similar to the tramways ones already discussed. They had armour plated sides and tops so were heavier than those employed on the trench tramways. The cars were a varied lot, ranging in capacity from 1 to 10 tons and were classified by letter as follows: A and B were 1-ton with removable sides. C were 3-ton with removable sides. D were 10-ton with four drop doors on the sides. E were 10-ton with two drop doors on sides as well as well bottoms. F were 10-ton flats. G were 10-ton flats with wells. H were flat cars equipped with 1500-gallon rectangular steel tanks. In addition, there was a large number of 1-ton tip cars together with a miscellaneous mixture of French 10-ton cars and captured German 7 1/2-ton cars of various types. Special flat cars for loading 6-inch and 8-inch howitzers were also built and, by 1918, covered box cars with sliding doors were used to handle wounded stretcher cases as well as rations and mail. Finally, there were work cars, including a 6-ton wrecking crane, about the largest that could be used on a 2-foot gauge railway.

Traffic was moved by direct orders from Army Light Railway Headquarters. A typical order might read: "Order 52. Place 33 empty D class cars at road crossing near station X, Mar. 10, 1917, at 20 o'clock, to move working party of 20 officers and 1,000 other ranks to end of steel on C13 line. Order power for 20.15 K. Returning movement leave end of steel 3 a.m., Mar. 11, 1917. Repeat". As each order was completed, central control was informed and the order would be marked off its books. Trains were operated on the block-to-block system by telephone dispatch. District controls had the most work and required a competent staff of dispatchers working 8-hour tricks under a chief dispatcher. Dispatchers had the rank of sergeant, while the chief dispatcher had the rank of regimental sergeant-major. Thus orders would be carried out from a military, as well as a railway, point of view.

Stations were installed wherever required along the line and consisted of dugouts, shacks or any old buildings suitable for the purpose. They were manned by two men, one for day shift, one for night, and were equipped with watches, lamps, flags and train register books. At each main station there would be a larger staff, some having as many as 20 men, including yard staff, telephone men, switching crews etc. Stations were called by a system of telephone rings; intermediate stations between District Control and the first main station were called direct on the block-to-block wire by using 2, 3, 4 or 5 rings as required, in a similar manner stations beyond the first main station were called on the through wire. That way, district control could speak to any station and keep in touch with the traffic. Because of the heavy traffic every care had to be taken to avoid congestion, tieups and accidents. No lights of any kind were allowed at night and it was not easy to keep traffic moving through areas that might have been gassed, shelled or bombed. In order to minimize the number of trains, locomotives were often double headed, and often pusher locomotives were used on grades. Destination stations were informed well in advance of the expected arrival time of a train so that personnel would be available to unload the train quickly and reduce idle time. Wrecking gangs were constantly on hand to repair the line in the event of its damage from any reason, including shelling, bombing or damage caused by derailments or collisions. The men of these wrecking crews had to know every inch of track, even in total darkness, and had to be on call all the time to clear any damage, often under enemy fire, since no equipment could be left out on the line in daylight. Their tour of duty was only over when every train destined for their section had been delivered, and all empties returned before daylight. The work was so nerve-racking that the crews were allowed one day off out of every three. Water for locomotives was obtained from wells, streams, rivers, canals or shell holes, and was pumped into overhead or underground tanks. If water was scarce, water was brought in by tank cars. Such were the conditions under which the light railways were operated from 1916 until the end of the war.

VIII. THE 58TH BROAD GAUGE OPERATING COMPANY (CANADIANS)

In this consideration of the Canadian railway construction in World War I, we should devote some space to the work of the Canadians on the Standard-gauge railways. A typical unit was the 58th Broad Gauge Operating Company. On October 20, 1916, the Minister of Militia recommended that a section of troops, to be known as the No. 1 Section, Skilled Railway Employees, be organized. On January 3, 1917 recruiting began and the unit, commanded by Captain A.H. Kendall, former Master Mechanic of the Ontario District of the CPR at Toronto, was mobilized at the Guy Street barracks in Montreal. It left Bonaventure station on March 1, sailed from Halifax on the S.S. Ansonia on March 4, and arrived in England on March 15. Soon after it arrived, the unit was renamed the 58th Broad Gauge Operating Company (Canadians), and it arrived in France on April 19.

At first it was planned to split up the company and assign the men to different locations, but then, near the end of May, 1917, an event took place that changed the minds of the authorities and provided the BGOC with its first big job. A 12-inch gun on railway mountings, weighing about 185 tons, had been derailed at Audruicq. It had been on the ground for 50 hours and was defying all efforts to get it back on the tracks, causing much inconvenience to the railway operating crews. The 58th BGOC was ordered to rerail it, and rerail it they did, in the surprisingly short time of 4 1/2 hours. After this display of efficiency, Headquarters decided that the company would remain intact and work as a unit. The unit worked on trains on the standard-gauge lines until the end of the war.

Early in June, 1917 the BGOC, with reinforcements from the Royal Engineers, proceeded to Merris, a newly constructed British railway depot, about 300 yards west of Strazeele (Nord) station. Here were based 15 locomotives, 3 Merryweather pumps, an emergency stores car, a tool van and a small supply of coal. The

main locomotive depot was established at Merris with sub-depots at Bailleul, Steenwerck and Berguette. At Merris the number of locomotives was increased to 40 of various types, ranging from the little Belgian type 25 0-6-0's, which had hand brakes on the tender but none on the engine, to the big 2-8-0 Baldwins. Among them were locomotives from Great Britain, some from Belgium, some Baldwins and a few Canadians. Needless to say it was difficult to maintain a supply of spare parts needed to keep the locomotives running. At first there were no facilities whatever for maintaining locomotives, and these had to be painstakingly built. Water was taken from the nearest ditch, using the Merryweather pumps. Coal was ordered from Headquarters and received in train load lots from Dunkirk and Dieppe (names destined to be famous in the next war). Coal trains were usually unloaded directly on to the ground using the labour of Chinese coolies or German prisoners. On account of the bad water the locomotives had to be washed out every 10 days. When possible the locomotives were double crewed, but when traffic was heavy and men were scarce it was necessary to pool them all.

On the lines of the Nord Railway of France the trains were on the automatic block system, and on the lines of the Railway Operating Division the station block system was used. The ROD lines were divided into sections and at each station hand, or at night lamp, signals were given to locomotive crews in accordance with the rules. No locomotive was permitted to proceed into a section until the crew was furnished with a train order, printed in French and English, indicating that the section was clear, or that the preceding train had left not less than 10 minutes previously. If a section was occupied the train could proceed at "caution" provided the engineer signed the train order and gave up his copy at the end of the section to which it referred. All trains were allowed to run at "caution" except ambulance trains which were run on the absolute station block.



A trestle on the Frevent - Hesdin railway line in France. This trestle was 600 feet long, 40 feet high and contained 150,000 f.b.m. of timber. It was built by the Canadian Railway Troops in only 7 days. CRMW, August, 1919.

When railways ahead were being bombed or shelled by the enemy, especially at night, it was necessary for train crews to be especially alert, for the telephone lines were frequently blown up. Night operation was very difficult due to the almost complete absence of light in the yards. Crews were often required to run trains over unfamiliar territory, without a pilot, at night. Sometimes they would find themselves on a heavy descending grade, would whistle for brakes and trust to luck to find themselves still on the track at the bottom of the grade.

In the spring of 1918 came the greatest crisis faced by the BGOC. Starting at 4:00 A.M. on April 9, (exactly one year after the capture of Vimy Ridge), the area in which the BGOC was operating was hit by intense enemy bombardment. The railway and telephone lines were blown up continually, as were some of the stations, plus the control office at Merville. The situation worsened as more destruction occurred. At 2:00 P.M. it was reported that the enemy had crossed the line at Leventie and was advancing rapidly. The continuous shell and machine gun fire soon made this section of the line of little use for traffic. Supplies were taken to the rear where possible and rolling stock and personnel were withdrawn to Merville. The number of casualties was increasing greatly but it was not advisable to run heavy ambulance trains too far forward. Accordingly a train of flat cars was made up and run as far as possible picking up the wounded and carrying them to a hurriedly-established field hospital at Berguette depot. Meanwhile Armentieres had been captured by the enemy, and the situation deteriorated until April 12, when the Second Army headquarters ordered the BGOC to evacuate at once all lines in that area. By this time Merris depot was being subjected to a bombardment of shrapnel, high explosives and gas shells, and much of the track had been destroyed. Less than an hour after the unit left, the enemy passed through Merris depot, but later was driven back, and the east leg of the wye formed a section of the British front for the next few weeks. Despite great difficulties, the evacuation was carried out successfully.

Although the majority of the old established lines had been captured by the enemy, new lines were speedily built, and on June 5, 1918 the whole unit was ordered to proceed to Conchil-le-Temple, to operate for Canadian and Royal Engineers construction companies building the new double-track lines from Etaples to Conchil, and the new single-track line from Conchil to Candas. Here there were fifteen Baldwin 2-8-0's to handle the main traffic out of Abbeville.

During all this trouble there was a pleasant interlude when, on August 8, King George V paid a personal visit to the line, in order to see the Canadian construction and operating troops at work. A special train was quickly assembled and made a trip from Conchil to Legiscourt; surely one of the strangest Canadian Royal



Canadian Railway Troops working on a standard-gauge line running alongside a narrow-gauge light railway. CRMW, December, 1919.

trains in history. This was not the only special train operated for, at other times specials were run for Marshal Foch, Field Marshall Sir Douglas Haig, General Pershing, Sir Herbert Plummer and Sir Julian Byng.

On August 27 the unit turned the operation of these lines to the Australians and then moved to the Chemin Vert British railway depot. In September and October the BGOC moved several times, generally following the advancing Allied armies. On the lines from Chaulnes, through Cambrai, to Bouchain, and from Cambrai to Caudry, much inconvenience was caused by the explosion of delayed-action mines. However the unit was fortunate that, considering the large number of mines placed, only three locomotives were damaged by these explosions. During the week ended October 3, 1918, the unit handled the following numbers of cars: 2490 Troops and remounts; 9921 Supplies, ordnance, ammunition and general traffic; 884 Construction materials; 1605 Ambulance cars; a total of 14,900 loaded cars.

On November, 11, 1918, several ammunition trains were ordered back to the base, and no more came up. After the last big evacuation of casualty clearing stations, ambulance trains were used for French civilian prisoners of war, many of whom returned in a very weakened condition. These trains were also soon used to transport French and British prisoners of war who were not able to travel on troop trains. As soon as the French and Belgian lines were connected, the BGOC had fifteen Baldwin 2-8-0's double crewed working between Cambrai and Germany. The unit operated the first troop train into Duren, Germany over the Valenciennes-Mons-Liege line.

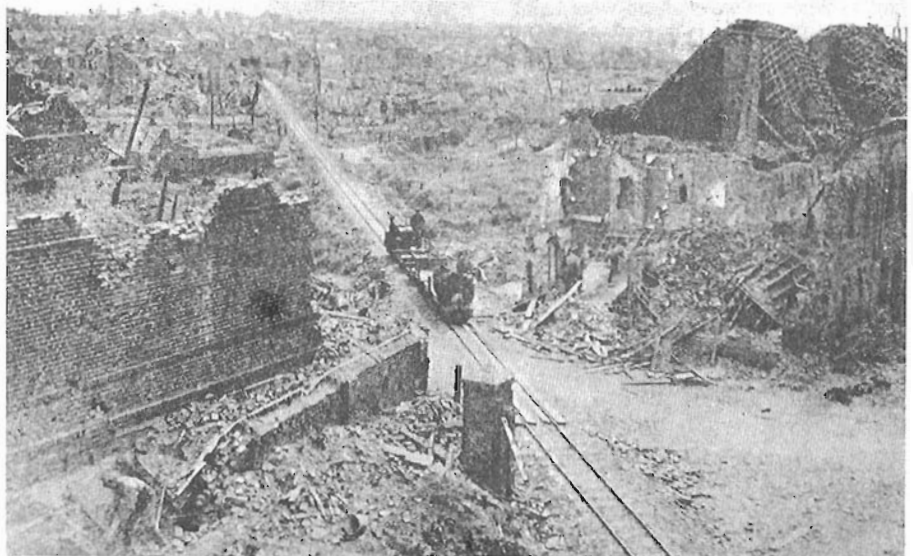
IX. THE CANADIAN RAILWAY TROOPS' WORK ON THE WESTERN FRONT

Editor's Note: The following article was written by Corporal Herbert Forder early in November, 1918, just before the armistice, and appeared in Maclean's Magazine at that time. It was then reprinted in the Canadian Railway and Marine World for March, 1919. It is so good, and so well describes the conditions under which the CRT worked, that we reprint it in full. It should be noted that terms like "The Hun", "The Boche", "Fritz" and "Jerry" all refer to the enemy. "Tommy" is, of course, the British soldier. A "Blighty" was a non-fatal wound which would require the victim to be evacuated to England.

One of the most remarkable features of this war is the record of the Canadian Railway Troops. You can imagine the Frankenstein of war not unlike a monstrous human being. The brain is General Head Quarters, the heart is G.H.Q. Railway Troops; the arteries and veins are the endless lines of track supplemented by the roads department and the mechanical transport which take the place of capillaries, or smaller veins on the surface of the war god; the stomach, liver and kidneys are the Army Service Corps producing and distributing nourishment; the battles are the blood corpuscles fighting along the veins and arteries; the lungs are the Red Cross, the Army Medical Corps, the hospitals, convalescent homes and rest camps, cleansing and renewing the blood; the nerves are the engineers with their wires, telephones and wireless, overhead, along the tracks and underground. The morale of the army is its soul or spirit, dependent upon its general condition of health. Keep that in mind and you will see the importance of the work of the Railway Troops. When the body is attacking or being attacked the outcome hangs in no small degree upon the unbroken transportation of nourishment to every part and more particularly to the part in danger.

The Imperial War Office gave the building and maintenance of these arteries to the Canadian Railway Troops, now numbering 14 battalions, under the headquarters command of Brigadier-General J. W. Stewart, C.M.G. The first battalion to carry on this work was the Canadian Overseas Railway Company, all skilled railway men with high rates of pay, recruited from Canadian railways. This company put in some splendid work at Dickebusch in April and May, 1916. The units and details were recruited in Canada and shipped to the Canadian Railway Depot in England, where they were drilled and trained till a battalion was formed, or they were sent as drafts to augment the strength of battalions already in France.

These troops were armed and equipped in the same manner as their military cousins, the Engineers. They carry the Webb equipment, rifle, bayonet, ammunition and gas



The main line of the narrow-gauge railway passing through the town of Lievin. The construction sub-section men were billeted in the cellars in the foreground.

CRMW, November, 1919.

mask. Their own mechanical and mule transport are responsible for their tools. A square red patch with a square hole planted square between the shoulders of the tunic is their distinctive badge; the same being the cause of many a witty remark and much profane comment on the part of these strenuous troops. At the beginning they were composed of specially recruited officers and men with railway experience. Later the ranks were filled up with Canadian casualties. Quite a number of these recruits wore the blue shoulder straps indicating that they were men of the first contingent. Sometimes they wore two, three and even four gold stripes, speaking words of praise for our modern surgery and hospital system, while bearing a mute witness to the stamina and spirit of these peerless soldiers.

As far as possible the officers were selected from men with railroading careers behind them. Advancement by merit was often rapid. In the 5th, for instance, was a young officer, Lieutenant L-----, a Canadian, whose home is in Puyallap, on Puget Sound. He came from Canada with the rank of corporal and reverted to the ranks according to the rule on arrival in France. He was made full corporal two weeks later, a sergeant in six weeks, and in three months was sent up for his commission. Another lieutenant, an experienced railway man, was found digging a latrine in the honourable capacity of a sapper. A general, walking over the job, recognized him, came over, shook hands, and sent him up for his commission on the spot. There were more promotions from the ranks in the Canadian Railway Troops than in any other branch of the service. This was one of the secrets of their wonderful efficiency, for they fulfilled the Napoleonic maxim and "make them out of mud".

At the time of writing they had laid something over 2,000 miles of track, almost equally divided between standard and narrow gauge. The standard gauge branched everywhere



A painting, by Leonard Richmond, showing a Canadian Railway Construction Company at work in the deepest railway cut in France. This painting was done for the Canadian War Memorials, and was exhibited at the Royal Academy in London, England.

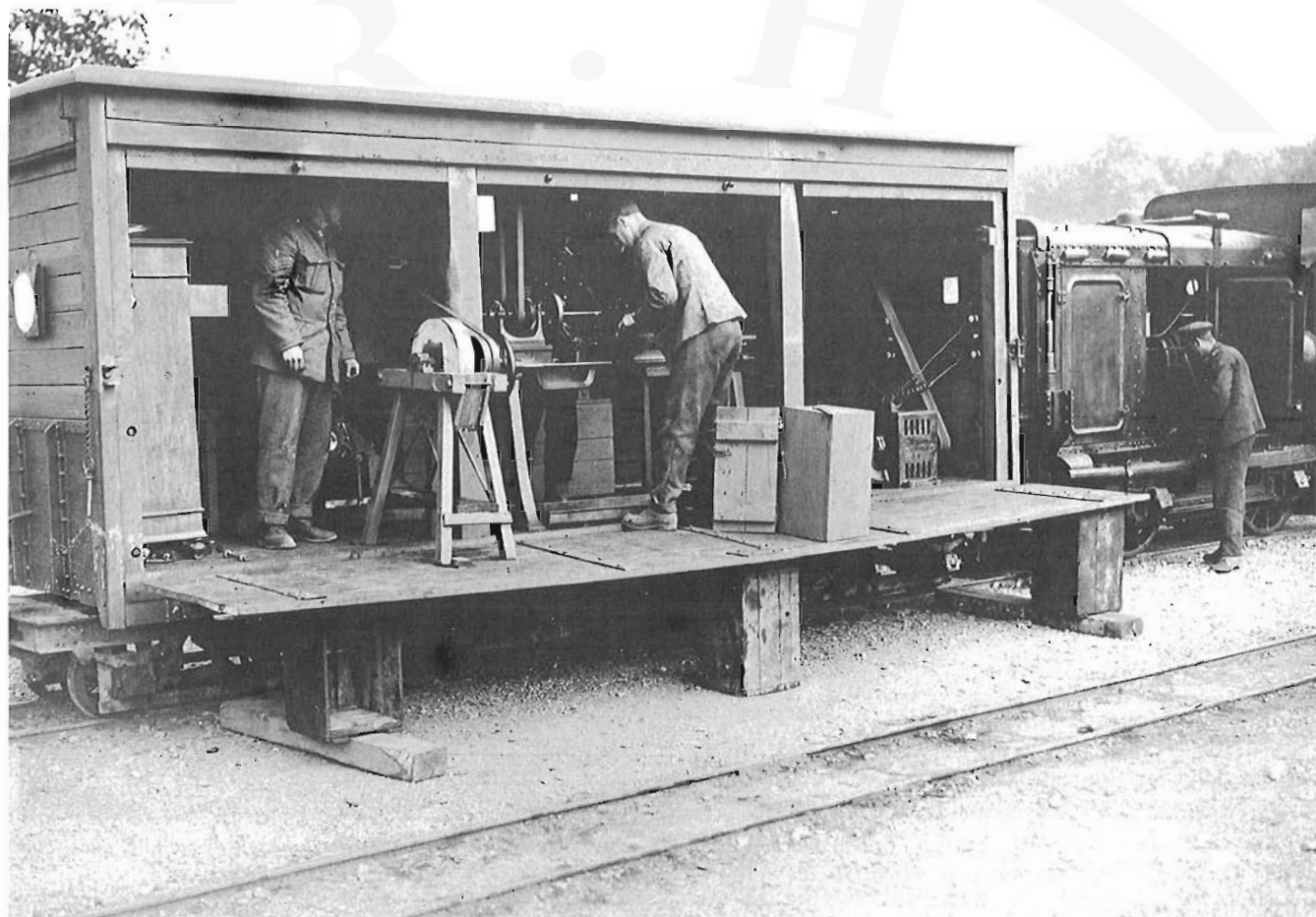
CRMW, March, 1919.

from the main French lines, alleviating congestion which had become chronic, releasing the central arteries of traffic for the business which is keeping France the least injured of the allies outside her frightful battle grounds, maintaining the mines, the farms, the credit and the industry of La Belle France. From these tracks, immediately behind the lines, stretched out a veritable cobweb of narrow gauge, feeding the guns, the troops, the trenches, and carrying the wherewithal to every sector of this complicated war machine. The power on the narrow gauge was mostly petrol motor, aided by a number of dinky locomotives of about 15 tons. The cars on the light track were nearly all open, while the ammunition trucks were a special build with a sunken hold in the centre.

When the Canadian Railway Troops were at work on standard gauge lines they were similar to any civilian gang at work. But when laying narrow gauge, sometimes right across No Man's Land, and often under fire, they were armed and ready with a machine gun squad for each company, stretcher bearers and a Red Cross sergeant. This was the most dangerous kind of work, for the enemy guns were promptly trained on any spot where rail-laying activities were noted. It was particularly dangerous when an advance had been made and our lines of steel had to be extended over the conquered territory; for, then, the enemy strove furiously to hamper "consolidation" and rained shells on us.

To illustrate what happened when it was necessary to build in the wake of an advancing army, I shall tell of the events under the German guns at the first battle of Cambrai. The astonishing victory of General Byng on November 20, 1917, gave the army under his command a vast amount of shattered terrain, from Bullecourt to Villars, 26 miles across. Over the ground the cobweb of steel was immediately spun. The night we started work was bitterly cold and frosty. The hoar frost hung like a mantle of crisp wool over every living and inanimate object. The Fifth C.R.T. had the job and D. Co., in advance on 20 little cars, dropped off at midnight about a mile from the slag heap at Hermes. The chugging of the petrol motors ceased, only the bellow of the big guns near at hand made the night hideous.

A momentary chaos was reduced to a semblance of order as the C.R.T. moved from the steep embankment under a multitude of burdens - stores, canteen and quartermaster's tools, tents, grub, a blacksmith's shop, an orderly room, officers' tents, field kitchens, and blankets. Tent floors wriggled in grotesque contortions through the black drop curtain of the night. Dawn broke upon a camp in the being, the tents standing above circular holes, making a 3 ft. shelter with a surrounding bank to afford some protection from shrapnel.



A travelling workshop on the narrow-gauge railway of the Canadian Railway Troops, in June, 1918. This shop could be moved quickly to wherever its services were needed. National Archives of Canada, photo No. PA-2713.

The men secured a breakfast of hot tea, bacon, bread and butter, jam and hard tack, and, as they ate, they took a keen first survey of their new location. Just above them on the ridge was a cemetery buried in foliage. A large brown cross and the eternal figure of "The Man of Sorrows" dominated the view. Behind them were rolling ridges of red soil, ploughed, harrowed and hacked by shell fire. On the far horizon to the right was Bourlon Wood, a sepia blanket laid over the loins of a white horse. To the centre was Fontaine Noyelles, with its red roofs and one tapering grey spire, then L'Escaut straggling between the rows of poplars. Their speculations were broken by the ascending scream of a high velocity shell.

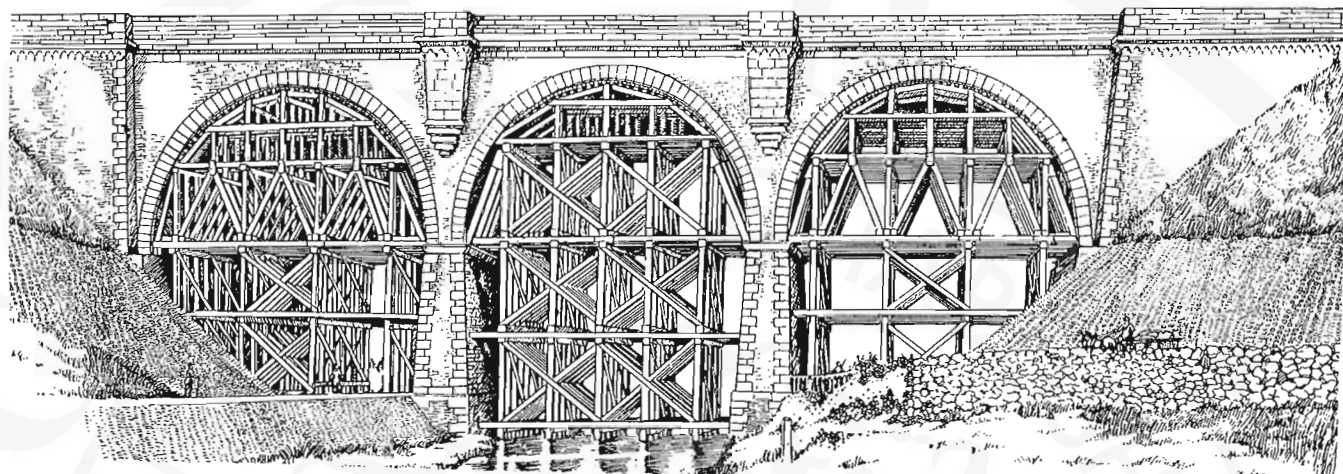
"Krrupp" came the report - a geyser of earth rose and fell 200 yards away. Fritz was seeking that big gun battery behind the last ridge. Again, and once again came the scream and thud of shells. The Hun was distributing his punches like a drunken man in a bar-room.

"Brraap!" and up went a section of the mule transport.

"Brraap!" A hut held by an Imperial Labour Battalion was demolished and scattered like chaff on the storm wind. "Stretcher bearers on the double!" came the cry.

So D. Co. gobbled its last morsel of bacon, tipped up the final drain of tea, and silently and sadly proceeded to move camp. Once more the circus act was repeated. A thousand pieces of material were hauled across the ridges and along the hollows on the stalwart shoulders of grunting and cussing sappers. Three times that day they moved to escape destruction. By nightfall they had made a fairly safe pitch near a disused trench line and several old German dugouts. In the meantime, of course, nothing had been done in the matter of tracklaying. But the following morning reveille sounded at 6.30, and at 7, with dawn breaking clear, they were off to lay the first mile of the narrow gauge.

D. Co. was split up into its component platoons, nos. 13, 14, 15 and 16. Sixteen was put at grading, Fifteen at laying out ties, rails, bolts and spikes, Fourteen at bolting and spiking. Thirteen, "the mechanical gang", were put at cutting rails, laying frogs, points and switches. The ground was good just here, despite the enemy bombardment. The surveyors had done their work well. We decided that D. Co. could lay a mile of track a day. A. Co., coming along behind, would unload ballast and attend to the lifting and lining of the track. B. and C. Cos. were working on another three miles across the Demicourt Road.



The great Wimereux viaduct on the line between Boulogne and Calais. The Canadian Railway Troops have reinforced it with heavy timbers and built a floor, made up of two layers of steel rails, as a protection against bombing. CRMW, August, 1919.

The morning was clear and sparkling blue and the enemy's observation balloons seemed quite near. The sappers bent to their tasks, however, and paid no attention. Snatches of song drifted by on the morning breeze and spike mauls rang lustily against the steel. The songs they sang were not the songs you have heard at home. They were all comic with a queer and tantalizing twist - railway songs that helped along the work and had something of the swing of the deep-sea "chanties".

Here is a verse and chorus for example, led by Corporal D-----, the comedian and football centre of D. Co.:-

*One day our Uncle Sammy, he had a war with Spain,
Not all the boys in blue were in the battle slain.
They were not killed by bullets. Oh! not by any means,
For most of them that died, they were killed by pork and beans.*

Chorus-

*Stung right! Stung right! S-T-U-N-G.
Stung right! Stung right! Easy mark was me.
Oh! when the war is over and once again I'm free,
There'll be no more "Trips around the world" for me.*

This was the metal of their morale. After four years of war they were laughing at the worst Fritz could do - and many of them were twice and thrice wounded veterans.

In the meantime the enemy observation balloons above L'Escaut had given the tip to the batteries in Bourlon Wood. "Brrraap", "Brrraap", "Brrraap!", big stuff came reaching out for the track. A pelting shower of earth, stones, and shrapnel fell among the men at work. Platoon by platoon they "downed tools" and ducked for the Imperial advanced trenches. No one was caught that time. The cooks made tea in the trenches, and the men ate their lunch of bully beef, cheese, bread and butter and jam. After half an hour of this Fritz turned his attention to the howitzer batteries in the sunken road, so D. Co. sallied out and to work again. By five o'clock

the first mile was down. All the guns had gone to supper. The little cars were humming down the track and the tired troops sprang aboard and off they went for "home".

But the day was not over yet. Half a mile towards Hermes they met a "blowout". A high velocity shell from the northern sector of the German lines had tossed the track into a junk pile. The tired troops looked at the mess with disgust. "Well, guess we're in for it", said a sergeant. "One platoon can attend to this job though". The choice fell on No. thirteen. "Might have known it!" growled the men. "Always unlucky! Let's have our number changed".

The other three platoons went on. The men of Thirteen started to work with a will. Broken rails were unbolted, the spikes drawn, and the twisted mess flung over the embankment. The shell hole was next blocked and filled with dirt from outside the ditch. Spare ballast was scraped up and new ties were inserted. Mauls and wrenches were then applied to the task of tightening up. Rails had been carried from up the track, and in a jiffy the track was repaired. Three rails in 23 minutes, gauged, lined and ballasted! Thirteen followed their comrades with the knowledge of a job well done.

It was a happy crowd that swarmed round the hot mulligan dixies that night - a gang of big school boys, ages running from 19 to 57, tired but happy and hungry as wolves in view of a solid meal! To make things complete, the orderly corporal arrived with arms full of mail. The great big event in every Tommy's life was the mail - parcels and toothsome candies, fruit cakes, cigarettes, books, tobacco, socks, handkerchiefs, letters from mother, father, sweetheart, wife and dear, sweet bairns.

Shells, wounds, cold, hunger, hardship, the grisly paw of death ever near, the fretful sergeant and the haughty officer, and a month's pay lost on the Crown and Anchor board - all were forgotten. The man who received a letter or a parcel hurried away, a glad light in his eyes, a warm glow in his heart, for he had come to "the end of a perfect day".

But this was not the end, not on this particular night. The "Last Post" had just blown and the boys were all beneath the blankets and a rosy glow worm in the dark was the cigarette of each tired and contented sapper. Suddenly overhead sounded the unmistakable organ hum of a big Fritzzy plane. "All lights out" was given by three blasts on the sergeant-major's whistle. The droning of the motors came very near and the troops held themselves still in breathless suspense, for this was not the first time they had met hell from German aircraft. The sound died away. Then out of the vast and silent sky came "brrraap" and bellow upon bellow of aerial torpedo.

The men rushed from their tents in their night clothes. Half a mile away, the station at Lillers was ablaze. Petrol tanks were flaming into the dark in vast flashes of flame and smoke. The warehouse was on fire. "Fall in" sounded. The C.R.T. sprang into their clothes. Tools were snatched up and off they went. When they reached la gare, or the station, they saw thousands of French civilians leaving their little homes and flying to the open fields or the nearest dugout. Old women, old men, young women and children in every article of night attire were scurrying away from the dreaded air raid. Wherever possible the sappers helped them along and told them "Fritzzy part tout-de-suite" and, as though supporting their strenuous western optimism, the anti-aircraft opened a terrific barrage. The big "blopping" of the Archies was broken by the racket of the machine guns.

The station was like a scene from Dante's "Inferno" - only more so. Grotesque mushrooms of black smoke blotted out the moon and stars. Red, purple and yellow flames played in fantastic wreaths along the avenues of hell. Little figures rushed hither and yon like manikins in torment. And every minute a hot shell exploded with a dull, far off roar amid the conflagration. Two petrol tanks had been destroyed and an ammunition train blown up. A Red Cross clearing station had been struck, and the huge warehouse levelled with the tracks. Everywhere writhing blue and gold snakes of petrol marked the path of danger. As they died out and flickered into blackness, the sappers rushed in, regardless of the hot shells, ready to blow up at every point any second, and began to clear away the mounds of smoking debris. This was part of their work.

A hospital siding, with two rails blown clear away, was repaired. The crater was filled in, new steel laid on new ties and the whole line spiked and bolted up in half an hour. The men toiled like ruddy fiends in the afterglow of hades. A Red Cross train from the main track was shunted into the new siding. It contained the bodies of two Red Cross nurses with their delicate white hands folded meekly over their courageous hearts in death.

The men of the C.R.T. by this time had reached the wreckage of the ammunition train. It looked as though some monstrous upheaval of nature had tossed it into a forest of twisted girders, hanging shreds of timbers and the burnt skeletons of wagons, tipped in weird gestures of destruction. The sappers tackled it with a cheer. From the south side a wrecking crew of French engineers were removing the large

pieces with a powerful wrecking crane and windless. The worst of the junk was heaped about a vast crater made in the centre of the main line by an aerial torpedo.

Dawn broke with the work being carried on. Carloads of ballast were shot into the cavity. As the grade was made level the new steel was laid, and the wrecking crane moved up and hauled away the awful junk piles. In the meanwhile a company of C.R.T.'s had rolled all the hot shells off the track. And as they toiled at this dangerous task, protecting their hands with wet mitts and gunny sacks, they kidded one another along.

"Look out there, Bill. That blinking 9.2 is going up!"

"Aw! Quit yer kidding. I don't want a Blighty now. I'm due for a Paris leave". And the lad would go on, rolling the hot shell down the track.

"I wonder some guy wouldn't come round with a drink of rum - Gee! I'm all in", says one.

"All you need is something to warm your cold feet", replies his pal, in spite of the obvious fact that both their boots were burning on the hot track.

"Hell! I wonder them French Pollies don't come through with a bottle of Von Blink?" queries another.

"Close it, you dud!" says the next one, "You make a noise like a lamb".

By 9 a.m. the great northern road was clear. The new rails were fast and straight. The immense traffic of the Chemin de Fer du Nord rolled on towards the battle lines and tired Canadian Railway Troops sought their blankets for a game of "shut eye" till 2 p.m., when the work up under the guns would begin again.

And so the days and months went by. First it was a case of laying narrow gauge right up under the guns, with every kind of shell plopping around. Then, if they were lucky, it was standard gauge away back; which meant Y.M.C.A. concerts and lectures, sports, baseball and football, maybe some boxing, and all "the mental and moral pabulum" which had built our splendid morale.

No one has heard the history of the C.R.T. when the German advance last spring swept through the Lys salient. The Portuguese Division retreated, after four days and nights of gas shelling, when human flesh and blood could stand no more. Merville and its three all-important bridges over the canal, were left undefended. Into this breach the general in command plunged three companies of the 11th C.R.T., the only available troops during those momentous hours. This was a strategic point of the utmost importance, for, if it fell, Lillers would be in danger and the whole British line from Arras to the sea threatened by a flanking and rear attack. The troops held the bridges with machine guns, bombers and riflemen till the Jocks and the Australians came up on either flank of the retreating Portuguese.

A little later, when the line was bending at La Bassee, Bethune, Locon, three battalions of the C.R.T., the third, the fifth and the seventh, were held in reserve, thus releasing Imperial battalions for the front lines. The fourth and the sixth

fought hand to hand battles with the Hun in the Cambrai salient in November, 1917. The first day the sixth lost their field kitchens, their equipment and their tools. The second day they went after Fritz and took some of his field kitchens before Bourlon Wood. The scrap the sixth put up was largely instrumental in checking the German waves before Marcoing and Gouzeaucourt. And again the sixth was caught in Velu wood during the spring advance in 1917, and again they fought their way clear of the surrounding Huns.

The C.R.T. are the "handy men" of the British front. They have tackled everything from railroading to strafing the Boche, from taking up ammunition to taking out the wounded - from laying and running the narrow gauge to shooting down enemy aircraft with their Lewis guns. (the 11th shot down a German plane in the apple orchard at Merville).

The Railway Troops have played an important, and a most strenuous, part in the campaign now waging which, we are convinced, is going to end the war. I am writing this at a point 40 miles in advance of the positions we held two months ago - and the C.R.T. have laid steel all along that broad slice of reconquered territory! It has been perhaps the most rapid bit of railroading the world has ever seen.

To show how great the hazard has been, I want to tell of the last advance of our victorious armies before Arras and along the valley of the Scarpe, when two platoons were sent up to repair a narrow gauge line under fire. They relaid 123 shell breaks in six days. They had to live in dugouts. Each night the enemy put over every kind of shell, "Rubber heels", "Coal boxes", "Whizzbangs" and bombs from his aircraft. The Hun was doing all in his power to delay the advance by shelling and bombing our arteries of traffic.

The first morning out the C.R.T. lined up in the square before the station, near the quivering bodies of four disembowelled horses, while members of the Veterinary Corps were busy shooting these poor "Long Faced Pals" to save their pitiful sufferings. The Red Cross were busy taking away dead and wounded Tommies. A 12-inch shell from a long-range naval gun had dropped on a ration-train of the Army Service Corps with frightful consequences. The second morning the Boche blew up a motor lorry in a mechanical transport park near by. The third morning he smashed the corner of a cemetery; and bricks, gravestones, shrapnel, rubble and dead bones fell among them. The sixth morning the Hun got four of their transport mules, wounded the transport cook, and killed two Imperials in horse lines quite close to the C.R.T.

Nights were made hideous by every kind of explosion common to these duels of the big guns. When these two platoons finished their job they were congratulated on parade



A section of newly laid track along the path of the Canal du Nord in France on November 27, 1917. CRMW, September, 1919.

by the general commanding the division. The morale of these troops at such a time of intense nervous strain is shown by the fact that "the clink", or guard tent, standing directly under the range of the German guns, was never dug in or sand-bagged. On the fifth morning one of the defaulters, waiting a court-martial for a few hours A.W.L., was struck by a flying brick on the ankle while busy shaving. He calmly picked up the brick, while shell pieces were rattling down all around him, walked over to the nearest dugout and said: - "Look at that! Jerry tried to give me a free hair cut". Then he proceeded to finish his shave while the earth went reeling and vibrating to the ceaseless impact of exploding shells, any of which may have meant the end of all things for him.

During this last great advance the 5th - in which I am a humble unit - have leap-frogged their companies along the narrow gauge and at this time of writing are actually connecting up our lines with German steel beyond Lille. You see a dozen little cars behind a petrol motor, or a Baldwin dinky locomotive rolling along chock and block with troops going up; ammunition, kits, tents, grub, then more railway material, then ballast from the slag heaps of mines. The farther the line stretches the busier it gets. Truly the veins of the War God are Canadian in structure, Canadian in skill and Canadian in spirit.

The names of some of our commanding officers are household words in France. - General "Jacky" Stewart, Colonel Griffin D.S.O., Major Purdee with his Artemus T. Ward brand of humour and his Champion Baseball Team, Major Adjutant "Bimbo" Sweeny, Major Grant, Major Harrison in charge of the 11th at Merville - these are only a few. There are hundreds unknown to fame, but deserving of the highest honours, kind-hearted, modest gentlemen from every province, doing their duty as they see it from day to day.

The keynote of the Railway Troops is efficiency. It is only by maintaining a high grade of efficiency that the work can be done, and the success this branch of the service has achieved is something that Canada may well prize.



A section of badly shelled track on one of the standard-gauge lines in France. CRMW, January, 1919.

X. THE LAST DAYS

As the autumn of 1918 advanced, so did the allied armies. For the first time since the outbreak of war in 1914 it seemed that victory was not far ahead. How far ahead no one knew, and the horror of the battles continued. The Canadian Railway Troops were in the thick of the action, laying new lines, repairing damaged track and, more and more frequently, repairing captured German rail lines. As we have noted before, the danger from delayed-action mines was very real. As the enemy retreated they left behind many booby-traps to catch the unwary soldier. These booby-traps were usually well concealed and took many forms. The ones that gave the CRT the most trouble were the delayed-action mines that were planted in and around structures, tracks and other facilities. At first specially designed explosive charges were used, but later, as the enemy retreat gained speed, unused shells, bombs, or anything that would explode, were planted. They were set off by ingenious time fuses which contained a large percussion cap and a spring-loaded firing pin. The spring was tied back by a wire encased in a tube. Specially prepared acid was placed in the tube and, when it ate through the wire, the spring would bring the firing pin hard against the cap, exploding the whole charge. By varying the strength of the acid, the time until the explosion could be adjusted. This time varied from half a day to as much as 35 days. Detecting and removing these mines was a dangerous job, since they were well concealed and would go off without warning, sometimes under a passing train. After the armistice, the Germans pointed out the location of many of the mines and they were dug out, or, if too near the set time, were detonated in situ.

Another hazard, which appeared in the last weeks of the war, was the worldwide epidemic of influenza. This disease, commonly called the 1918 Flu or the Spanish Flu, had no direct

cure since antibiotics had not been developed. Striking friend and foe alike, as well as civilians the world over, the flu killed more people in four months than the war had killed in four years. Although the CRT did suffer, along with everyone else, from the flu, the strength of the forces was not seriously affected, and the work carried on.

The end, when it came, was quite sudden. Although all realized that the war could not last much longer, the final surrender and the signing of the armistice took many of the troops by surprise. Early on the morning of November 11, 1918 it was announced that all hostilities would cease at precisely 11:00 A.M. An interesting, never before published, account of what happened that day is contained in a letter written by Richard F. Angus (the uncle of your editor), who was on active service, from Mons, Belgium on November 15, only four days after the war ended:

"Well the war, or rather hostilities, are over at last. I expect there is grand rejoicing in Montreal just now.

We are at present billeted in Mons where we arrived on the morning of the 11th just before the armistice came into effect. We had left our billets in a village near that town early in the morning to work on a blown railway crossing near the town. We were very much surprised at not hearing any gunfire, as we had not heard of the armistice. But at about 8:30 the major came up and told us that it would be in force at eleven o'clock. We then marched into the town and took part in the first parade in the town at the "Grand Place". Punctually at 11 o'clock 15 aeroplanes flew over head and started shooting off flares. Three cheers were called for king Albert, the Brabacone, Marseillaise and God Save the King were sung and then we marched through the streets. The whole town was bedecked with flags, goodness only knows where they were all dug up from, and the streets were packed with people in their "Sunday go to meeting" clothes.

The enthusiasm was tremendous, people ran out and kissed the soldiers and danced and sang and carried on like a bunch of loonatics [sic], but altogether it was very impressive. The men have been treated very well here and many a bottle which has lain hidden under a cellar floor has been dug in honour of the troops.

We have splendid billets in the swankiest part of the town: our mess being in a railway president's house and our sleeping quarters in a mine owner's."

So it was over at last, and the remaining duty of the Canadian Railway Troops was to work on repairing the damaged lines as the victorious armies marched into Germany to begin the occupation which was to continue well into the 1920's. In sheer numbers alone, the work of the Canadian Railway Troops had been impressive. From April, 1917 until the end of the war they had constructed 1169 miles of standard gauge, and 1404 miles of



*Canadian Light Railway officers making use of their observation car built in their yard near Lens, September, 1917.
National Archives of Canada, photo No. PA-3807.*

narrow gauge. This is equivalent to a line from Montreal to a point just east of Kamloops B.C. In addition the constant maintenance and rebuilding of damaged line was as much work as the actual construction. Their casualty rate was more than 13%, for a total of 1,977 members of the Canadian Railway Troops were either killed, wounded or captured by the enemy.

During 1919, the Canadian Railway Troops were demobilized and they, or those who were left of them, returned to Canada. Gradually the world adjusted once again to peacetime and everyone hoped that this would indeed be the "war to end all wars" and that never again would Canadians be called upon to fight in battle. Unfortunately they were called upon again, little more than twenty years later, in an even bigger war, and the hope of world peace seems as remote as ever.

Much of the railway equipment, that had not already been destroyed in action, was scrapped after the war, but some was salvaged for re use elsewhere. Our member Mr. David Davies (who wrote the recent article about Kamloops) recalls seeing a 2-foot gauge Baldwin steam locomotive operating on a slate hauling

railway in Wales. This locomotive had once been used on the narrow-gauge lines of the Western Front.

Today it is three quarters of a century since the guns stopped firing on the Western Front. Few of the veterans now remain, for any surviving veterans of World War I would have to be well over 90 years old at the present time. Soon there will be no one left who can remember, at first hand, the work of the Canadian Railway Troops. The story of their achievements were well known during and soon after the war, but today few know about the work they did and many of the histories of the war do not even mention the Railway Troops.

Many relics still exist, many of them buried in the earth of the old battlefields. One interesting account comes from Dr. R.V.V. Nicholls, Honourary President of the CRHA: "During the summer of 1980 I visited Vimy Ridge near Arras. By pre-arrangement, made back in Canada, I was met there by the Director, Canadian War Museum in Ottawa. In the company of the local museum director, we went down into one of the subterranean galleries. There are miles of these tunnels



Some of the cap badges worn by members of the Canadian Railway Troops in World War I.

which were built by Canadian Army Engineers at the time of the assault on Vimy Ridge. They were provided with narrow gauge tramways built and operated by the Canadian Railway Troops. Most of these galleries are now considered too dangerous for anyone to venture along. Even we three went into a part not open to the public. There we found one of the four-wheel cars used on the tramway to carry ammunition and stores forward, and the wounded and dead backward. The metal parts of the car were in good condition, but the wooden parts were somewhat deteriorated. On behalf of the CRHA I renewed my request that the Canadian War Museum donate the car to us, and arrange for it to be transported to Ottawa en route to Delson. This would serve as a memorial to the Canadian Railway Troops. The Director readily agreed and the car was safely brought to the surface. Within a few weeks it was crated and transported to Canada. It is now at the Canadian Railway Museum, but not presently on exhibition".

As we mark 75 years since the restoration of peace following what was then the bloodiest war in history, we should remember the Canadian Railway Troops as well as those who fought beside them to preserve our way of life and our country. That is what Remembrance Day is all about.

XI. ACKNOWLEDGEMENTS

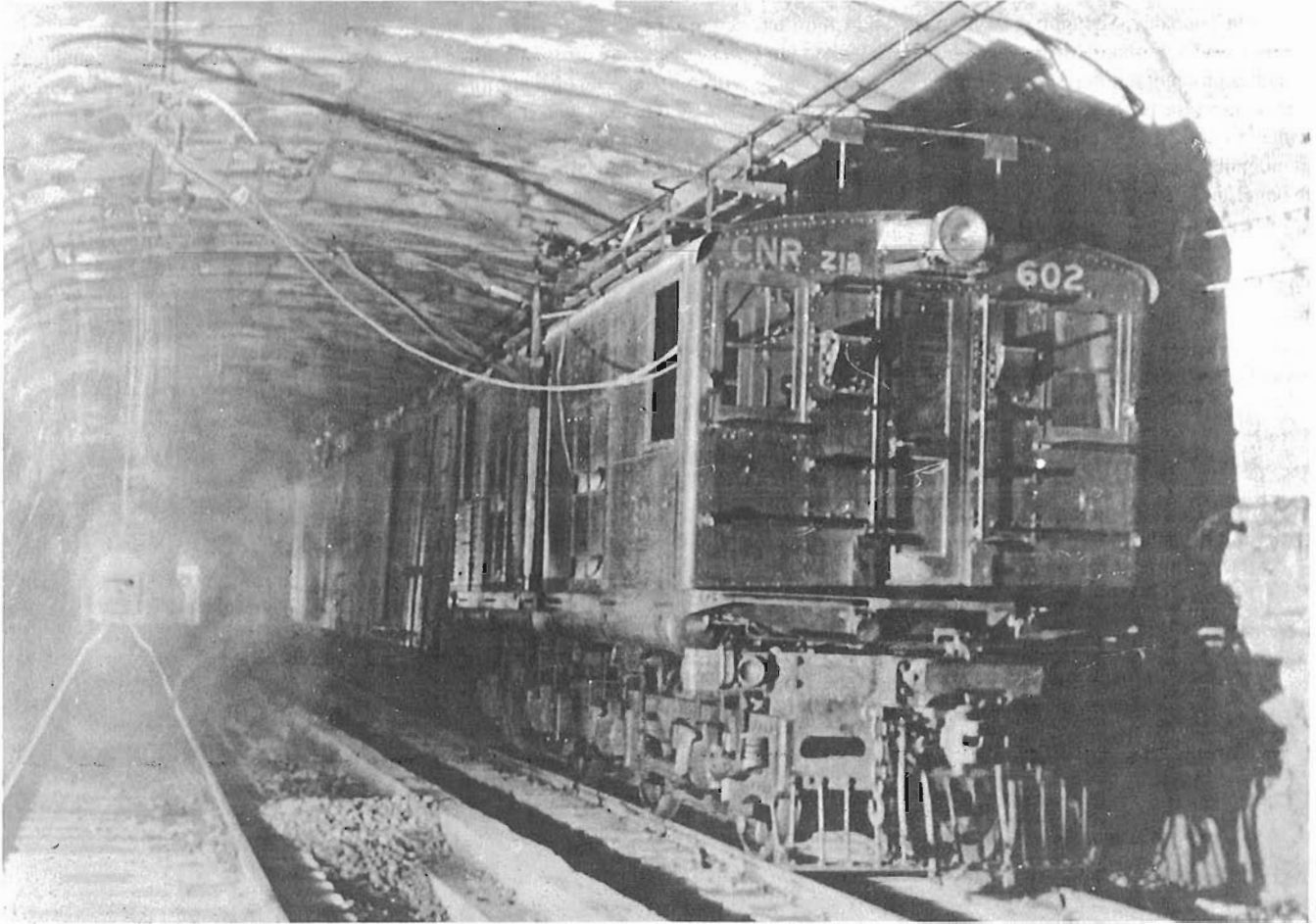
The author has relied on a number of sources in writing this account of the Canadian Railway Troops. The best sources were the articles published in the Canadian Railway and Marine World during, and especially soon after, World War I. In many cases, whole sentences have been quoted, their number making it difficult to acknowledge individually. Especially noteworthy is the splendid article on the CRT which appeared in the March, 1919 issue and which has been quoted in full and so acknowledged.

Dr. R.V.V. Nicholls has provided some source materials, as well as the account of his visit to Vimy Ridge in 1980. He is planning to write a book on the Canadian Railway Troops for which he is gathering information. He would appreciate the favour if anyone having information on the subject would contact him at P.O. Box 519, Merrickville, Ontario K0G 1N0.

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75th Anniversary of Mount Royal Tunnel



Canadian Northern electric locomotive 602 in the Mount Royal tunnel shortly before service began in 1918. National Archives of Canada, photo No. PA-185768.

Seventy-five years ago the attention of the world was occupied by the news from the fighting lines as World War I at last drew to a close. Every day, news bulletins told that the end of the cataclysmic struggle was not far ahead. At the same time, however, the world-wide influenza epidemic was killing people at a much faster rate than the war. With these momentous events taking place in world history, a local event, long anticipated, did not make the news it would have in less troubled times. That event was the opening of the Canadian Northern Railway's Mount Royal Tunnel.

The Canadian Northern's plan had been made public in 1912, and work began that year. The actual tunnelling had gone quite quickly, and the tunnel faces actually met in December, 1913. After that many delays, some caused by financial considerations, others caused by the war, combined to put off the completion date well beyond the time originally planned. At length, however, the work was completed and, on October 21, 1918, the first regular passenger train passed through the tunnel.

The tunnel is a very interesting one and ranked among the great tunnels of the world. At the time of its completion, only one tunnel in Canada, CPR's Connaught, was longer. During construction

it was predicted that difficulties would be comparatively few, and so it turned out. Very little water was met with, and this was where expected, near the west portal where the limestone contacts the older rocks. The core of the mountain was almost exclusively Essexite, a basaltic volcanic rock, somewhat hard to drill, but otherwise quite unobjectionable.

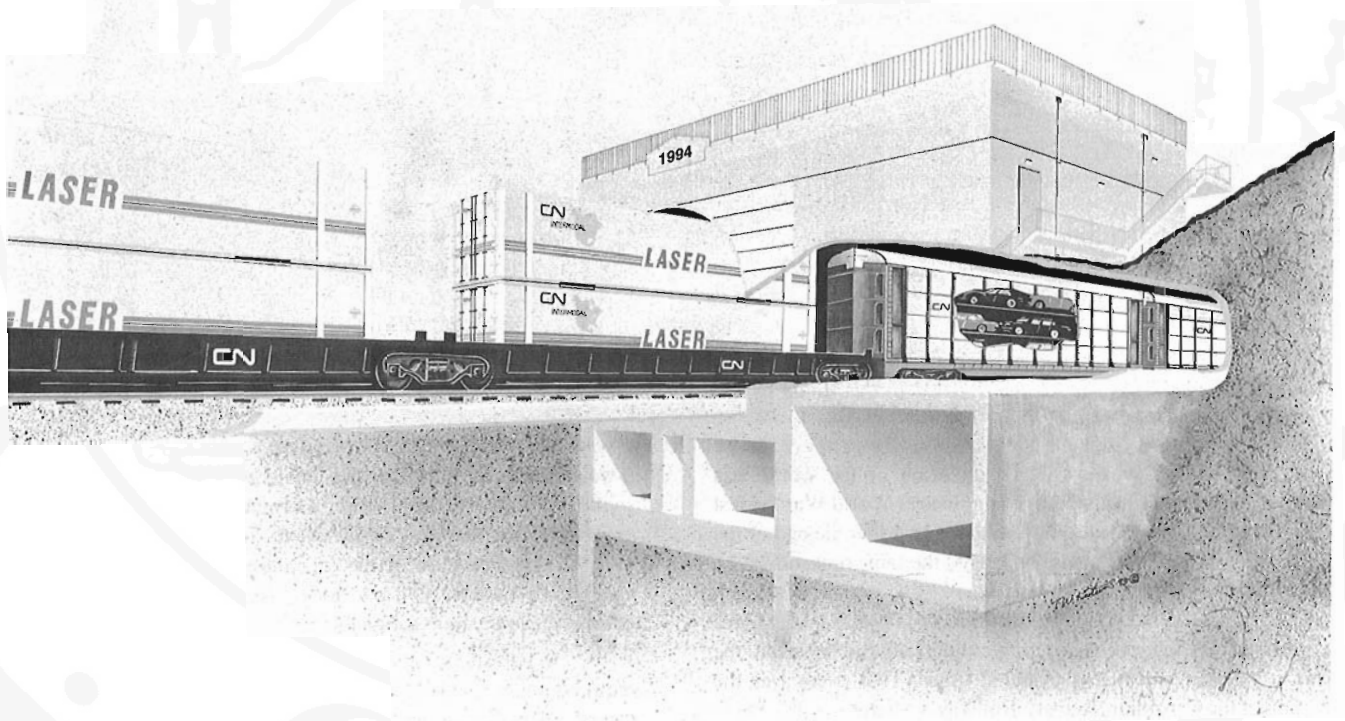
In consideration of the electrical operation, the headroom required under bridges was reduced from 22 1/2 feet to 16 1/2 feet. Near Cartierville, the suburban street car line was carried underneath. The northern suburbs of Montreal were brought within 20 minutes of the heart of the city.

Today, the suburban line is being rebuilt, and the tunnel will enter into a new life as the key element of this system. At this writing, a special train is scheduled to be run on October 21, 1993 in connection with the 75th anniversary. Motive power for this train will be electric locomotive 6711, the same engine which, as No. 601, inaugurated the service through the tunnel three-quarters of a century ago! Although the old equipment will soon be retired, the future of the tunnel is bright as it starts its second seventy-five years.

Canadian National's New St. Clair Tunnel

On Thursday, September 16, 1993, a "Sod Churning" ceremony was held at Sarnia, Ontario to commemorate the start of the boring of the new St. Clair tunnel linking Canada and the United States. The old tunnel, in use since 1891, is too small to admit double-stack container cars and high-level automobile carriers. The machine which will undertake this boring job had been named "Excalibore", a name chosen after a contest for the best name submitted by a local resident. Mr Lyle Leckie won the contest for this name. In case you were wondering, the name comes from "Excalibur" which was the magical sword of King Arthur in fifth century Britain. Although the machine was ceremonially started on September 16, actual work was not scheduled to begin until well into October, since it was necessary to train personnel to operate "Excalibore".

A delegation from the CRHA, consisting of President Walter Bedbrook, Kingston representative Bill Thomson, and your Editor, Fred Angus, attended the ceremony. We did not attend as VIP guests, but as members of the news media. This allowed access to all areas of the work site, and also provided handouts and photos not given to the VIP's. After the speechmaking, the machine started to turn, and quantities of balloons were released. We also saw the double-stack train, posed to show that it would not fit the tunnel, and, later, Amtrak's Toronto-to-Chicago train the "International" passed through the tunnel, followed by a special train for the invited guests. Altogether it was a most interesting and historic day.



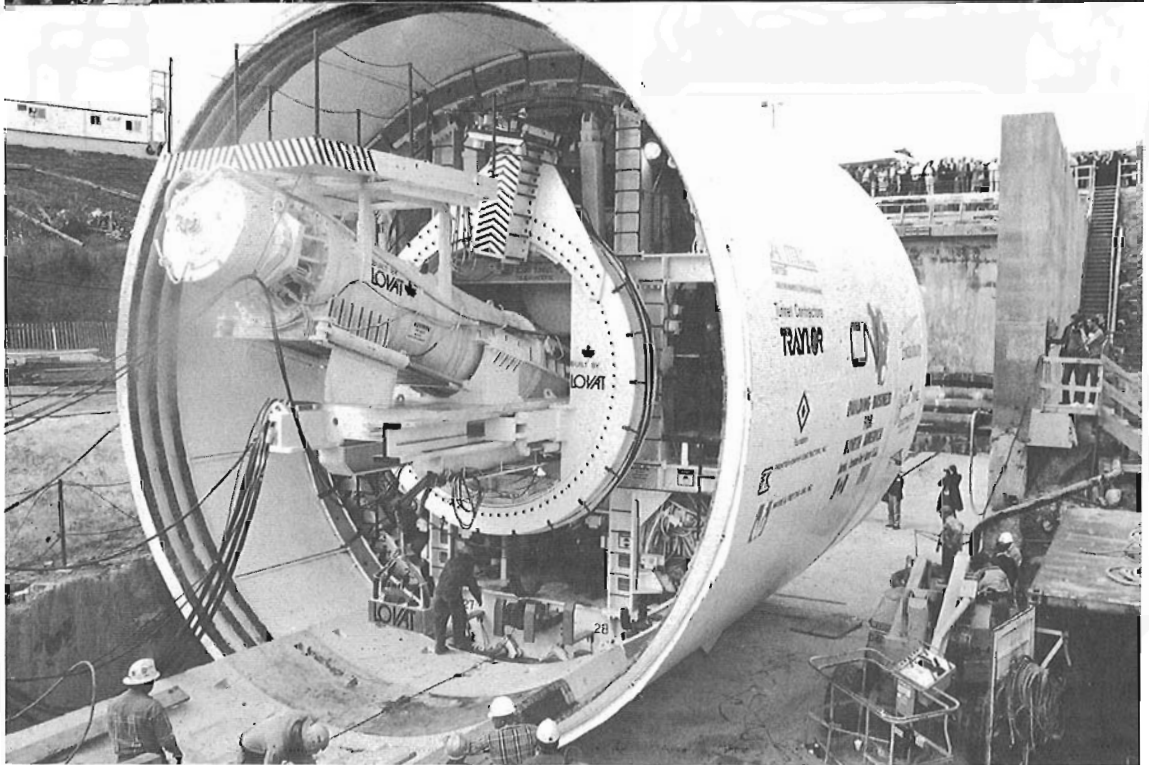
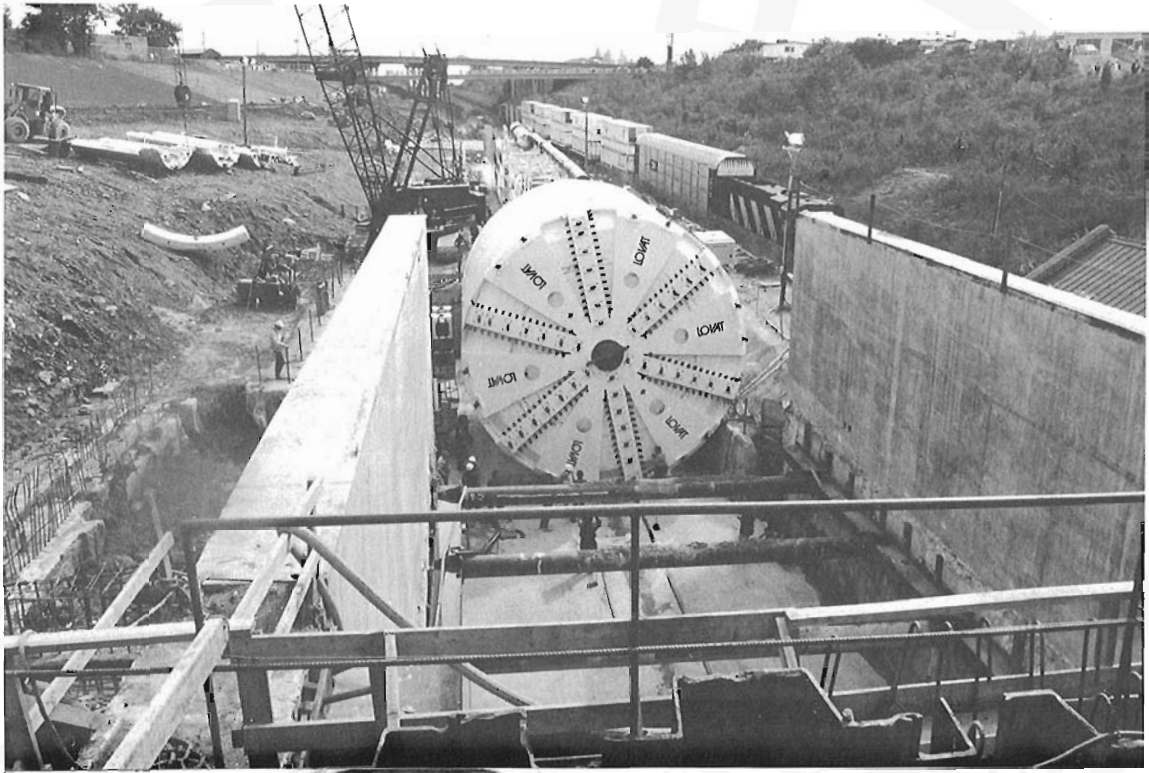
ABOVE: Artist's conception, showing how double-stacks and automobile carriers will go through the new tunnel. CN Photo.

OPPOSITE, TOP: A section of the new tunnel superimposed on a section of the original tunnel of 1890. Photo by Walter Bedbrook.

OPPOSITE, BOTTOM LEFT: A side view of the machine ready to start work. Photo by Walter Bedbrook.

OPPOSITE, BOTTOM RIGHT: Mr. Lyle Leckie, who named "Excalibore", holding a framed photo of it, presented to him by Mr. Tellier of CN. Photo by Walter Bedbrook.



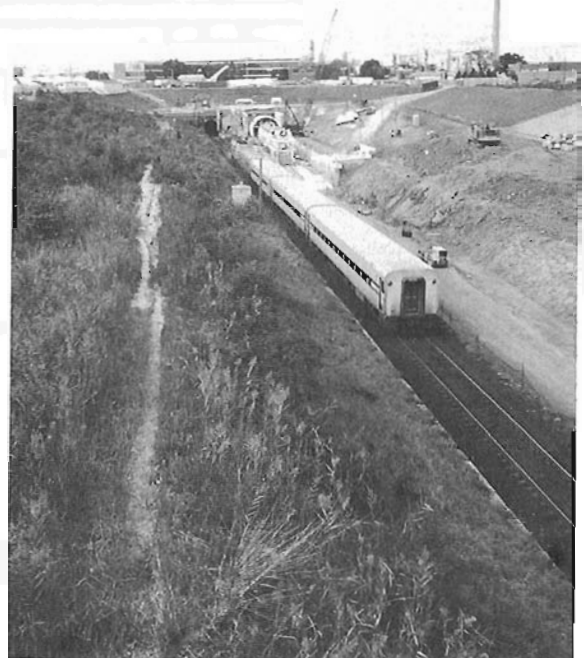


ABOVE, TOP AND BOTTOM: Both Ends of "Excalibore". Note the double-stack train in the background. Photos by Walter Bedbrook.

OPPOSITE, TOP: The special steel-reinforced concrete tunnel liners en route from Woodstock, Ontario. CN Photo.

OPPOSITE, BOTTOM, LEFT: A double-stack train on the track leading to the old tunnel. It won't fit! Photo by Walter Bedbrook.

OPPOSITE, BOTTOM, RIGHT: Amtrak's "International", bound for Chicago, enters the tunnel. Photo by Walter Bedbrook.

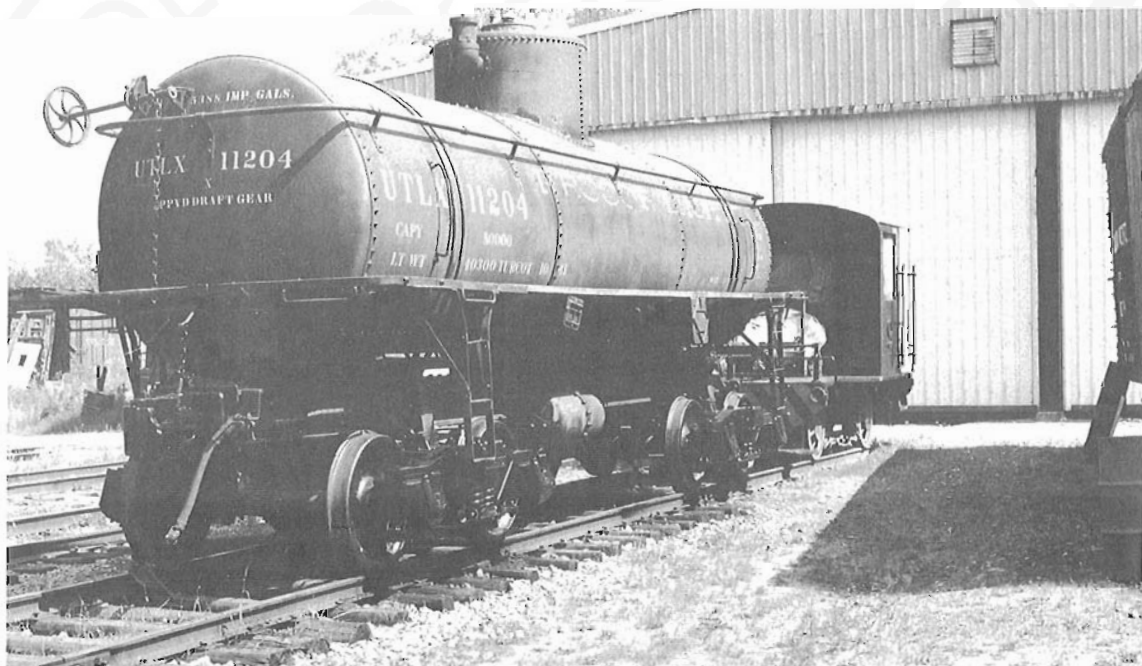


The Restoration of Tank Car 11204

By Rob Blackburn

During 1992 and 1993, our 1916 Procor tank car was restored to its former appearance. The car had been stored outside since its arrival at the Museum in 1962, and the thirty years of exposure to the weather had sadly deteriorated the paint job. Although the car had modern trucks when it arrived, these were subsequently replaced with arch bar trucks of the type it would have had when new in 1916.

The top photo shows 11204 as it appeared before the restoration began, while the bottom photo depicts it as it is today. It has taken two summers to restore her, with limited funding, but with sheer drive and just a one man crew, anything is possible!



The 1993 CRHA Conference

By Jeremy Sporning



The 1993 CRHA Conference was hosted by the Toronto and York Division and saw a total attendance of twenty delegates. On the evening of July 29, the early arrivals to the conference met informally for registration at the brand new Koffler Institute of Pharmacy Management on the University of Toronto campus.

Next morning saw the presentation of four interesting papers at the same venue. First up was Keith Nordlund of CN North America with a slide presentation on the St. Clair Tunnel project. This provided an overview of the entire project and highlighted the engineers' careful study of the construction of the original tunnel in the planning of the new bore. This was followed by Jeff Young from the Ontario Ministry of Transportation who enlightened us on the many aspects of the current high speed rail study in Ontario and Quebec. Our third presenter was Dana Ashdown with a paper on Locomotive building in Toronto. Lastly, one of the delegates, Ian Wheel, gave us a glimpse into the past relationship of the railways, the Toronto waterfront, and the city itself with his talk on the Toronto Railway Viaduct.

After lunch we were guided on a streetcar and walking tour which took us to the waterfront via the Bathurst Street bridge and included stops at the John Street roundhouse and Union Station. We concluded the day at the CHP Heritage Centre which is operated by a co-operative of historical organizations including the Toronto and York Division.

Later that evening some delegates travelled on the new Scarborough Rapid

Transit and were treated by the driver who opened his cab door and operated the normally computer-controlled train by hand.

The following day the Annual General Meeting was held, and then the delegates visited the T&Y Omer Lavallée Archives room for a light lunch and a chance to view some of the collection. We also had a short tour of the industrial buildings and railway spurs in the immediate area.

That evening saw the Conference Banquet held at Victoria Station Restaurant which is constructed partly from boxcars and a caboose. Following the meal, the collective breath of the delegates was taken away by two slide presentations by Greg McDonnell. The first, set to music and a railway sound track, featured shots from his book *Signatures in Steel*. The second was comprised of snowplows and trains doing battle in southern Ontario winters in the mid 1970's.

On a sunny August 1st we arrived at the South Simcoe Railway at Tottenham in time to catch the first run of the day behind CPR 136. After a pleasant run we went to a nearby road crossing to photograph this 1883 survivor pulling a combine and coach. Returning to Tottenham allowed us a look at the rest of the railway's collection.

Following lunch we visited the King Township Historical Society Museum containing the 1851 King station. The exterior restoration on this building is complete, and the interior work is continuing. A fine museum of the local area is also located in a former school on the property.

Our last stop was a brief visit to the Maple station, still used by GO trains, and then we returned to Toronto to conclude the conference.

Chris Kyle and Tony Rubin deserve special mention for their attention to the delegates throughout the conference, and the Toronto & York Division is to be commended for arranging an enjoyable weekend on relatively short notice.



Book Reviews

As the year end holiday season approaches, some people begin to think about Christmas shopping. This year there is an excellent selection of publications of railway interest to tempt those interested. From the mountains of British Columbia to Bermuda (with *two* on the latter) and from steam through stations, schedules and stamps to street cars, there is something of interest reviewed here. We hope you will enjoy them.

\$17.95

CANADIAN RAIL PASSENGER YEARBOOK



CANADIAN RAIL PASSENGER YEARBOOK

By Douglas N.W. Smith
Published by: TRACKSIDE CANADA
P.O. Box 1369, Station "B"
Ottawa, Ontario K1P 5R2

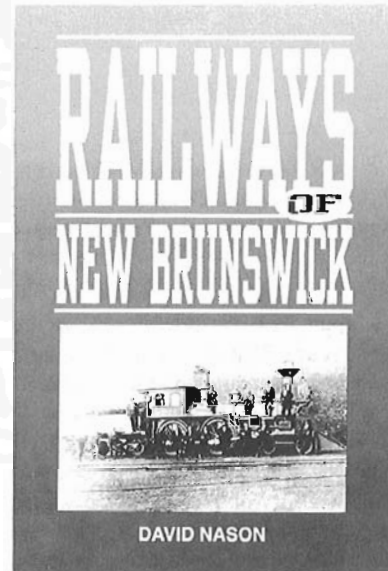
Price: \$21.88 including all taxes and postage.

This 68-page compendium of information and stories relating to passenger travel by rail is a book that should appeal to anyone who is in any way interested in the subject. From historical events to the latest developments, from street car lines to transcontinental trains, there is something here for everyone. The Canadian Rail Passenger Yearbook begins with a review of passenger train happenings during 1992. It then continues with a long article about the CPR's Great West Express, one of Canada's lesser-known name trains. Following this, there is an article on the renaissance of Montreal's commuter trains followed by a nostalgic series of photos, all in full colour, taken by the late great Omer Lavallée. Articles on the centenaries of electric street cars in Toronto and Montreal, information on CP's "Fort" series cars, and

a commemoration of Montreal Central Station's 50th anniversary then follow. Finally, a "Heritage Photo Gallery", comprised of photos old and new, ends the book.

Notable in this book is the considerable use of colour, of uniformly high quality, in the illustrations. Of course many historic older photos exist only on black-and-white, however colour photos have been used to a considerable extent. Altogether, the Canadian Rail Passenger Yearbook is a worthy addition to the rail enthusiast's library. We hope it will live up to its name, and that we will have the pleasure of seeing annual editions of this work.

Reviewed by Fred F. Angus.



RAILWAYS OF NEW BRUNSWICK

By David Nason
Published by New Ireland Press
217 Aberdeen Street
Fredericton, New Brunswick E3B 1R6

Price: \$12.95

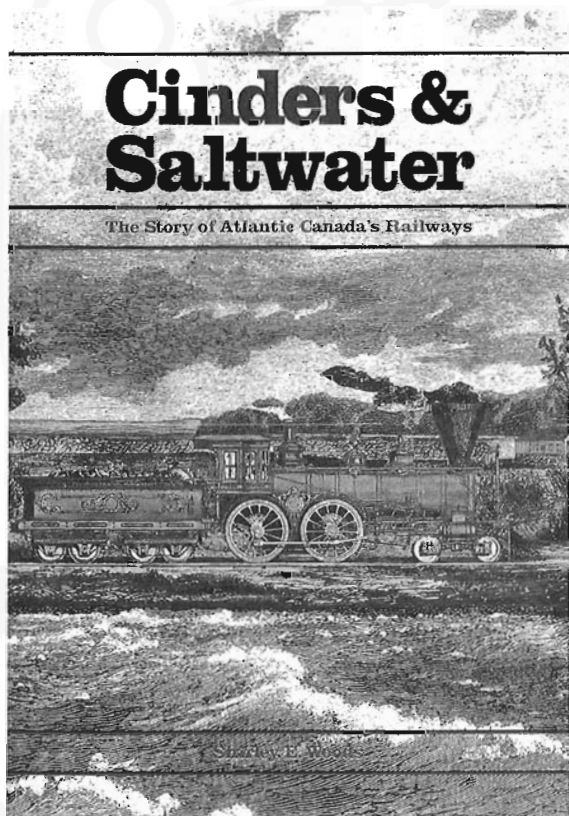
This book, which won the CRHA Book Award for 1992, is a one-volume history of New Brunswick railways from the earliest days to the present time. Following an introduction, there are two basic sections to the book, the first which deals with the six large railways, and the second which describes short and branch lines, twenty in all, which connected to, and often became part of, the larger companies.

In 136 pages, the author explains the reasons for the existence of each railway, the plans that were made and the lines

actually built; often far short of the dreams of the original planners. Each history is brought down to the present day, or to the time of abandonment of each line. The book contains 46 excellent photographs, some never before published, ranging in date from the 1850's to the 1980's. One feature that is very useful is a small map that appears with each chapter. This is an outline map of New Brunswick showing the route of the railway which is discussed in that chapter. Near the end of the book is a similar map which shows all New Brunswick's railways, both existing and abandoned. There are also copious end notes, as well as a good bibliography of source material consulted.

With so many New Brunswick railway lines having been abandoned, and the prospect of many more abandonments in the future, the appearance of a one-volume history of the railways of New Brunswick is a timely addition to Canadian railway literature.

Reviewed by Fred F. Angus.



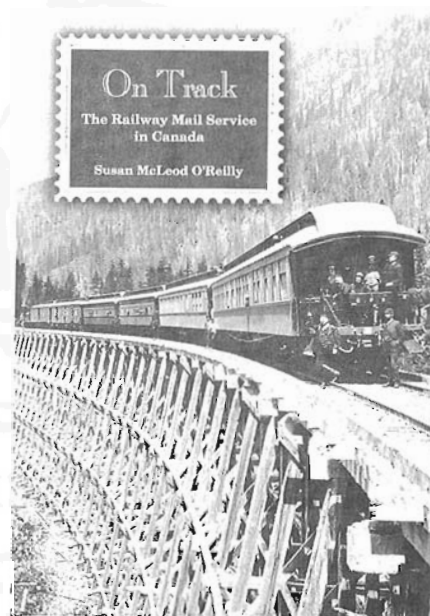
CINDERS & SALTWATER

The Story of Atlantic Canada's Railways
By Shirley E. Woods
Published by Nimbus Publishing Limited
P.O. Box 9301, Station "A"
Halifax, N.S. B3K 5N5

This 220-page hard-covered book covers the history of railways in Canada's four easternmost provinces, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland, from their inception to 1992. It begins with the "Great Railway Meeting" which took place in Halifax in 1851, but actually goes back to the very beginning; a horse-operated tramway constructed at the

Albion coal mine near Stellarton, Nova Scotia in 1829. After the early days, 1829 to 1852, there are chapters on "Tracks to Confederation 1852 - 1867", "The Intercolonial 1867 - 1876", "Prince Edward Island 1867 - 1875", "Newfoundland 1868 - 1901", "The Building Boom 1870 - 1914", "Sunshine & Shadow 1915 - 1945" and, finally, "A Distant Whistle 1946 - 1992". In this book we read of the promoters that first planned the railways, the politicians, schemers and rogues, not to mention the engineers and builders who actually got the job done. We read of the great years of the railways and then the postwar years of slow decline as the railway systems tried hard, but often vainly, to adapt to changing times. Today two provinces are without railways, Newfoundland (excluding Labrador) and Prince Edward Island, while much of the Nova Scotia and New Brunswick lines are gone or are threatened. There are many beautifully-reproduced photos in this book, as well as maps, drawings, acknowledgements and bibliography. Cinders & Saltwater is extremely informative, yet is written in a style that is pleasant to read, and invites the reader to continue following the story until its end.

Reviewed by Fred F. Angus.



ON TRACK

The Railway Mail Service in Canada

By Susan McLeod O'Reilly
Published by the Canadian Museum of Civilization
Hull, Quebec J8X 4H2
In cooperation with the National Postal Museum and Canada Post Corporation
Price \$17.95

This book, which will be of considerable interest to railway enthusiasts and stamp collectors, is the story of the transportation of mail by railways in Canada. As well as simply transporting the mail, the railways also operated travelling post office cars, called RPO's, between 1854 and 1971. Sadly, and

rather unaccountably, the Post Office in Canada has ceased using railways to move the mail, although other countries, including the United States, continue to do so, and have built new equipment for this purpose.

On Track tells the story in an enjoyable, readable, way and yet contains a very great deal of important facts, historical dates, and information on the service throughout its existence. It also includes material on the Newfoundland postal service before and after Confederation with Canada in 1949. The photographs and other illustrations are unmatched. Not only do they show trains, stations and mail cars, but also documents, stamps, envelopes, cancellations, mailboxes and most other pieces of equipment used in post offices and mail cars from the earliest to the latest. The section on postal markings shows many rare covers dating from the 1850's to the 1970's (one, with an 1858 Grand Trunk cancellation, carries a three-penny Beaver stamp, Canada's first stamp design), and we even see examples of the cancellation dies used to make the postmarks. The illustrations are of excellent quality, mostly in black-and-white since they are old, historic photos, but sometimes in colour. One notable photo is a rear-end view of the first through CPR transcontinental train photographed on July 3, 1886. It appears inside the book and also on the cover; for some obscure reason the latter reproduction is in mirror reverse, although the initials "CPR" are the right way around!

On Track is available in both English and French (where it is called "A Fond de Train"), and it is highly recommended to the collector of Canadian stamps as well as the rail historian.

Reviewed By Fred Angus.

THE BERMUDA RAILWAY - GONE BUT NOT FORGOTTEN

By Colin A. Pomeroy

Available from: The Bermuda Railway Museum

37 North Shore

Hamilton Parish, FL04 Bermuda

Price \$19.00 U.S., postpaid.

A small book about a small railway describes this well written and well illustrated 117 page book about a fascinating standard-gauge railway that served the idyllic islands of Bermuda from 1931 to 1948. Its early history and development is described, including proposals from the 1890's, to enabling legislation and implementation by British investors 1928-31. The role played by the prohibition of motor vehicles, 1908 - 1946, set the stage for the railway's construction, and the repeal of that prohibition in 1946 led to the rapid erosion of railway traffic, followed shortly thereafter by abandonment.

The line was entirely single track with short passing sidings at frequent intervals. Safe operation was enforced by a British token system. Passenger trains, typically a motor car and a trailer, provided flexibility in operation and very low axle weights, an important matter since 10% of the line was on bridges or trestle work.

Routine operation during the years of the Great Depression is described, followed by World War II, when the tremendous increase in traffic that was thrust on the railway led to rapid wear-out of equipment. The decline of the railway, 1945-48, is covered

in a fair amount of detail, and mention is made that the investors in the Bermuda Railway Company Ltd. never received a penny in dividends. The railway cost over a million pounds to build and yielded only 115,000 pounds when sold to the government of Bermuda in 1946.

Chapter 2 covers tickets, timetables and fares, while Chapter 3 presents "A Driver's Log", one day in the life of equipment engineer Bill Kitchen who drove a boat train on this occasion. Chapter 4 describes and illustrates the fascinating 1/4 mile long private miniature Ferry Reach Railway that connected the estate of Vincent Astor to the Ferry Reach private halt of the Bermuda Railway. The Ferry Reach Railway's streamlined 2-6-2 was the only steam locomotive ever to operate on Bermuda.

Chapter 5 describes "The Line Today", as the Bermuda Railway Trail, opened to the hiking public in 1984. About 18 miles of the original 23 mile line are preserved as a trail, less most of the bridges that were dismantled in 1948. This chapter is particularly well illustrated since it is contemporary and a walk on the trail is described in detail. Appendices cover (A) Rolling Stock Roster, (B) Stations, (C) Bridges, (D) Profile, (E) Yard Layout, (F) Stamps, (G) Biography of Harold Jennings Kitchen, Chief Engineer and General Manager, (H) Bibliography. Typography appears to be by word processor. Maps are sketches. Photographic reproduction ranges from fair to good. This is all acceptable because it allowed publication of a specialized subject that will appeal to a very small market niche, and is more than adequate.

For anyone with an interest in the Bermuda Railway, this book will answer most of your questions. For those who are not yet acquainted with it, this book will stimulate your interest to visit this most idyllic vacation place.

Reviewed by Ray Corley, from a four-page review prepared by J. William Vigrass.

RATTLE AND SHAKE

The Story of the Bermuda Railway

By David F. Raine

Published by Pompano Publications

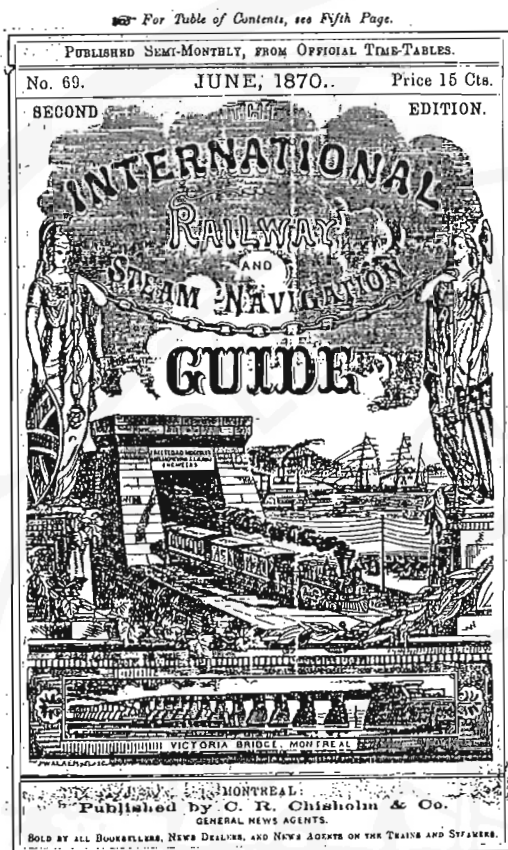
Bridge House Art Gallery

No. 1 Bridge Street

St. George's GE05 Bermuda

This is another fascinating book on the Bermuda Railway which, in 96 large format (8 1/2 X 11 inch) pages, tells the story of this short-lived but most interesting island railway. Starting with the first proposals for a railway in 1893, just 100 years ago, the chapters are entitled "An Unfortunate Beginning", "The Growing Need for Change", "Towards the Starting Line", "Into the Age of Rail", "Operating for the Common Good", "The War Years", "One Final Chug to the Terminal". There are 45 illustrations, including two good maps and many well-reproduced photographs covering the construction and operation of the line, stations, scenery, tickets, as well as views of the right-of-way today. At the end there is a list of Acts, dating from 1924 to 1953, which pertained to the Bermuda Railway. This will be a good place to start for those who want to know even more details about the Bermuda Railway.

Reviewed by Fred Angus.



THE SHIPPER'S BIBLE

An Introduction to the Canadian Guide Collection

By G.T. Bloomfield

Published by The University of Guelph

Guelph, Ontario N1G 2W1

Price \$10.70 including taxes and postage.

The Canadian Official Railway Guide, which began publication in 1864 and ceased in 1991, covers most of the railways of Canada. The definitive collection of these Guides is owned by the library of the University of Guelph which acquired them from the publisher in 1982 and subsequently updated them to the final issue in 1991. This book is a brief history of the Guide, with illustrations from certain issues and information as to how the University of Guelph collection may be accessed.

In 1864 the Canadian Guide was simply a collection of passenger timetables of the Grand Trunk Railway; however it soon expanded and in 1866 became the International Railway Guide. Three years later it changed to International Railway and Steam Navigation Guide, and in 1909 it became The Canadian Official Railway Guide. In March, 1893 a fire in the offices of the publisher destroyed their entire file collection of back issues of the Guide. Some of these earlier issues were replaced, but the collection of pre-1893 copies is, unfortunately, incomplete, although still extremely significant. However, from 1893 to 1991, a period of almost a century, virtually all issues are present, making the collection a gold mine of information to the researcher.

Reviewed by Fred Angus.

CANADIAN PACIFIC'S WESTERN DEPOTS

The Country Stations in Western Canada



CANADIAN PACIFIC'S WESTERN DEPOTS

By Charles W. Bohi and Leslie S. Kozma

Published by Roundhouse Sales

6519 104 Street

Edmonton, Alberta T6H 2L3

Price \$52.95 postpaid.

Once the railway depot was central to the lives of western Canadians. Canadian Pacific's Western Depots - the long-awaited sequel and companion to Canadian National's Western Depots - preserves as much of that record, setting the historical context for railway construction in Western Canada, provides the general criteria which influenced rural station design, traces the evolution of CPR country stations in western Canada, and discusses the unique demands created for those who lived in them.

In addition to the text, more than 200 photographs illustrate the various station designs employed. And finally, three rosters present detailed information about virtually every Canadian Pacific depot constructed in western Canada.

CANADIAN PACIFIC RAILWAY STATIONS IN BRITISH COLUMBIA

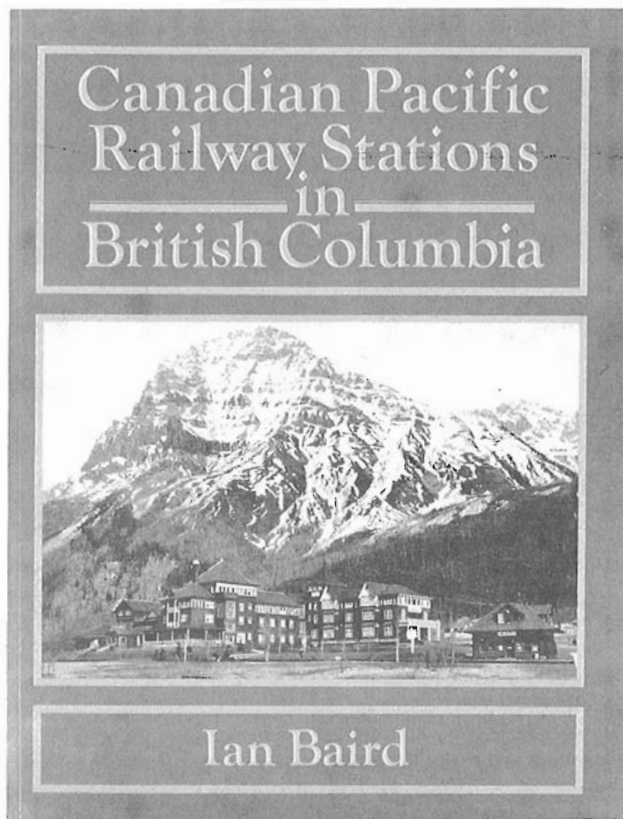
By Ian Baird

Published by Orca Book Publishers Limited

P.O. Box 5626, Station "B"

Victoria, B.C. V8R 6S4

This 112-page soft-cover book describes and illustrates these rapidly-disappearing buildings from both an historical and



aesthetic perspective. There is an introduction which includes a map of CPR lines in British Columbia, showing the locations of the stations. There is a brief history, then a discussion of the architectural features of the stations.

The following sections correspond to the various Divisions: Vancouver Island, Vancouver, Kettle Valley, Kootenay, Revelstoke. Altogether seventy stations are illustrated, the reproduction of the photos ranging from somewhat muddy to excellent. The front cover depicts a partially hand-coloured view of the old station at Field with the Mount Stephen house in the background. This book is an invaluable record of these stations that are so rapidly disappearing.

RAILROADING IN B.C. - A BIBLIOGRAPHY

By Mervyn T. Green

and

HISTORIC RAILWAYS MAP

By Lorne H. Nicklason

Published by Pacific Coast Division, CRHA

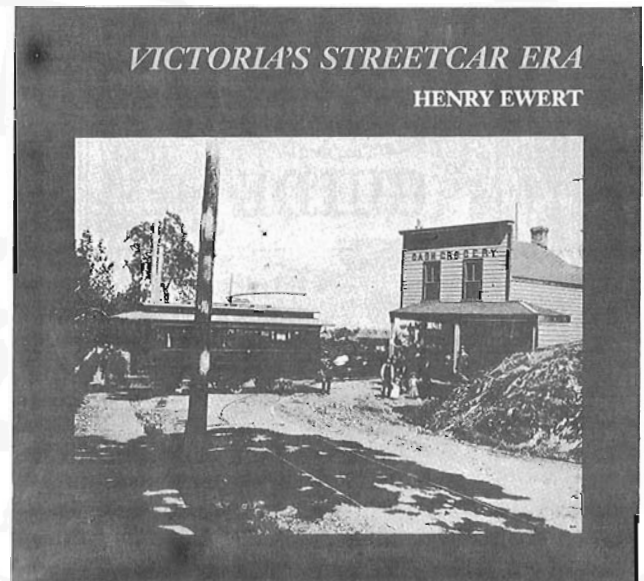
P.O. Box 1006, Station "A"

Vancouver, B.C. V6C 2P1

These two publications by our Pacific Coast Division will be of great value to researchers concerned with the history of railways in British Columbia.

The bibliography lists the great majority of publications which contain material on B.C. railways, while the map, which is

colour coded, shows the history of railways of the Mission, Abbotsford, Huntingdon area. These are very worthy works and highly recommended for those interested in the railways of British Columbia.



VICTORIA'S STREETCAR ERA

By Henry Ewert

Published by Sono Nis Press

1745 Blanshard Street

Victoria B.C. V8W 2J8

Price \$16.95

Anyone who has read Henry Ewert's previous book on the B.C. Electric will know that this book on Victoria is an excellent work. Done in the same style, but this time confined to Victoria, the book covers the history of the system from its start in 1890 until the end of all street car service in 1948. An epilogue brings the transit story up to date as well as discussing the fate of the retired cars.

This 172-page book has 136 very clear photos, many dating from before 1900, plus maps, timetables and illustrations of street car ephemera such as tickets, transfers and rulebooks. There is a full roster of all Victoria street cars, plus notes, bibliography and an index.

The front cover bears a fascinating photo, taken in the early 1890's, of car No. 16 derailed on a sharp curve. This car, the only one of its type to run in Canada, had a six-wheel radial truck and was similar to those used in Boston at that time. In 1896 this car was the one which crashed through the Point Ellice bridge killing 55 people, the worst-ever street car accident in North America. This story, plus many more dealing with this interesting system, is covered in this book which is a "must read" for anyone interested in Canadian street railways.

Reviewed by Fred Angus.

The Past and Future of the CRHA

The Past

C.R.H.A. HISTORY!

As part of the history of our Association that is being assembled, we wish to include a list of the dozens of trips that the Association members enjoyed. These commenced in June, 1932.

A fairly complete list of trips organized by the CRHA in Montreal has been compiled through 1963. Some, but not perhaps all, of the trips through 1975 have also been listed. Would anyone who has a list, or can compile one, please let us know. Information we need is: Date, Railway, bus line etc., Destination, Engine number, etc.

Divisions have been very active over the years in arranging trips of their members. We would like to include a list of all trips taken by each Division, from the beginning. Information under the titles listed above would be appreciated.

Copies of Canadian Rail (and its predecessor, the CRHA News Report, being assembled for the Association history are now complete except for the following: Nos. 31 through 84, 91, 100, 101, 102, 104, 105, 106, 108, 109, 111, 113. If anyone has any of these copies, and would loan them for copying (or, better still, would like to donate them) we would be very grateful.

Please address any answers to these enquiries to:

Stephen Walbridge
196 Lakeview Ave.
Pointe Claire, Que.
H9S 4C5

Many thanks for your help.

The Future

WHERE DO WE GO FROM HERE?

This issue completes Canadian Rail for 1993, and also the 100th issue that your editor has produced. It is an important milestone and an occasion to reflect on the past and on the future. Is it "Time for a new editor"? The first Canadian Rail that I worked on as editor was No. 338, for March, 1980. In those days the magazine was in the small format and appeared monthly. In January, 1983 the present format and bi-monthly frequency was adopted; however the total contents per year was increased and has continued to increase. This year there has been a total of 228 large-format pages produced. A major change took place in 1990, when layout by means of computer was introduced. This has saved considerable money and has allowed the use of special layout techniques not available with conventional typesetting. It also makes for a much closer interaction between the editor and the final layout.

The question is, what next? Myself and all who are associated with Canadian Rail would like to continue improving and expanding the publication, in order to bring the members more and better articles of historical interest. There is one stumbling block; MONEY! It costs money to produce Canadian Rail, and also to mail it. The unit cost would go down if our membership would increase. Unfortunately, our membership is decreasing at an alarming rate. The problem is that very few new members are joining the CRHA, not enough to make up for those who, through death, old age, or other reasons, have ceased to be members. If this trend continues it is difficult to predict what will happen to our Association in the years ahead. The members of the CRHA can

help greatly by becoming, in effect, salespersons for the Association, by spreading the word and trying to get friends and associates to join. Getting new members is the ONLY way to ensure a bright future for the CRHA. Please think about it.

The Directors have seen fit to implement a small increase in the membership dues for 1994. Believe me, it is necessary to maintain, and hopefully improve, the quality of Canadian Rail. We all sincerely hope that all of you see it in this light and will promptly renew your membership as you have done in the past. In return, we will work on further improvements in 1994. The use of colour photographs is now a real possibility and will be tried where possible, notably on the covers of some issues. There are also plans to improve the layout, and also to increase the amount of material produced during the year.

This brings us to the last point. We would seriously like to know what material you would like to see in Canadian Rail, and if you would like to see the same editorial team continue in office. It has been our belief that Canadian Rail is an historical publication, therefore the articles are of historical subjects. But, after all, history begins in the immediate past, and many recent events are history just as much as those of the last century. So please let us know what you think of our articles, and, perhaps, write one or two for the magazine. It is interested members who provide many of our articles.

In the meantime, all those who produce Canadian Rail wish all of our members a happy and prosperous 1994.

Fred F. Angus, Editor. October 18, 1993.

BACK COVER: An artist's conception of the Sarnia portal of the new St. Clair tunnel, now being constructed by CN North America. Unlike the original tunnel, opened in 1891, the new one will handle double-stack container cars and high-level automobile carriers. The old tunnel will be closed, but the facades will be preserved as an historical monument to this great feat of nineteenth century engineering. It is reported that the original cut stone removed during the construction will be used around the new portals as shown.

Photo courtesy of CN North America.

Canadian Rail

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Canada J5A 2G9

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