The Canadian Engineer

A weekly paper for civil engineers and contractors

Standard Gauge Railway Work at the Front

Pioneer Truck "Minesweeper" Used by 277th Construction Company in Rebuilding the Main Line of the Nord Railway to Lille—In One Day Laid 2.5 Miles of Track and One Turnout Over Badly Wrecked Roadbed

"In spite of the fact that the enemy, as he withdrew, used every modern artifice for the destruction of railways, roads, bridges and water supply, the Railway Construction Troops were able to meet all demands and accomplished successfully an unparalleled programme of railway reconstruction.

"By the end of October, no less than 1,050 miles of line, much of which had been destroyed, had been brought into service for our armies. This included 485 miles of new track and some 4,000 ft. of bridging.

"The following is an instance of the speed with which the work of reconstruction was carried out: On the 17th October, Lille was evacuated by the enemy. On the 25th October, the first train of supplies for the civil population entered the city, the railway having been carried across the Lys River at Armentieres by a bridge constructed in the short space of four days."—Excerpt from Sir Douglas Haig's Victory Despatch.

IN August, 1918, the Hun was on the move toward Berlin, destroying every bridge, track and roadbed that he was forced to relinquish. The Nord Railway's main line was completely wrecked.

This railway had been of a high type of construction. The roadbed had been ballasted with crushed stone or slag—well drained and bridged. The rails were French stock, weighing from 95 to 110 pounds to the yard, laid on hard wood ties, 10 in. by 5 in. by 9 ft.

The enemy used special appliances for destroying the ties and bending the rails. Highway bridges at railway crossings were destroyed in many instances by exploding charges at abutments only (after crippling all main members beyond repair), thus causing every bridge to fall in such manner that it wedged between the abutments and effectually blocked the railway and also the highway. Bridges crossing canals and rivers were dropped in the same manner.

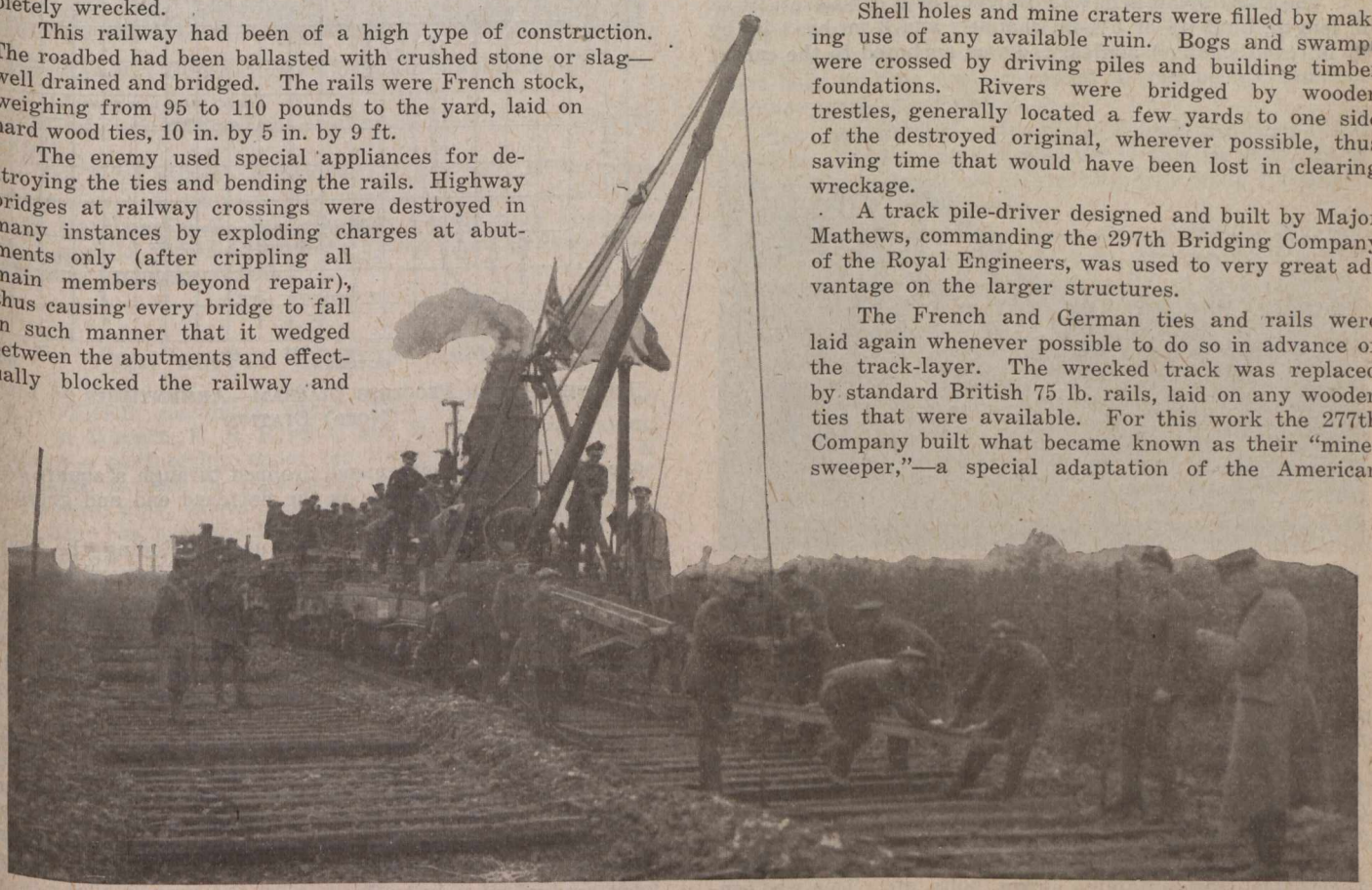
Besides this wreckage, the ever-present shell hole, mine crater, bog and flood added to the difficulties of the construction troops.

The task of rebuilding part of these wrecked railway lines, including the Nord Railway, was assigned to the 277th Railway Construction Company, which had been organized in February, 1916, at the Front, the men being selected from the various units in the trenches, and placed under the command of Captain (now Major) G. L. Ridout, M.C., R.E. From the date of organization until after the armistice, the company was continuously engaged in the construction and repair of either light or standard-gauge railways. The light railways were of the typical construction described by Lt. J. H. McKnight in the February 27th issue of *The Canadian Engineer*, and were often built over the seas of mud, shell holes and ruins so prevalent in Northern France and Belgium. The heaviest work on which the 277th was engaged, however, was the standard gauge construction during the couple months just preceding the armistice.

Shell holes and mine craters were filled by making use of any available ruin. Bogs and swamps were crossed by driving piles and building timber foundations. Rivers were bridged by wooden trestles, generally located a few yards to one side of the destroyed original, wherever possible, thus saving time that would have been lost in clearing wreckage.

A track pile-driver designed and built by Major Mathews, commanding the 297th Bridging Company of the Royal Engineers, was used to very great advantage on the larger structures.

The French and German ties and rails were laid again whenever possible to do so in advance of the track-layer. The wrecked track was replaced by standard British 75 lb. rails, laid on any wooden ties that were available. For this work the 277th Company built what became known as their "minesweeper,"—a special adaptation of the American



THE 277TH COMPANY'S PIONEER TRUCK, DESIGNED AND CONSTRUCTED IN THE FIELD, LAYING RAIL BETWEEN TOURNAI AND LILLE AT THE RATE OF 2.7 MILES A DAY