

feeling of indignation at the culpable remissness of the authorities in tolerating the erection, for houses, of these wretched shells of wood, which become a prey to the first spark of fire that falls upon them. It is properly the duty of municipal corporations to guard against the erection of dangerous buildings within their limits; but if Corporations fail in their duty, then clearly the Legislature ought to step in and enact a general law for the prevention of the erection of any wooden building within a defined distance from any other building; and impose upon the officers of municipal corporations the duty of enforcing this law at the risk of pains and penalties. Nothing less than this will bring the municipality of Quebec to its senses, and we hope the Legislature will not miss the opportunity, at the next session, of enacting such a law.

THE RED RIVER EXPEDITION.—ENGINEERS LEAVING THE CAMP AT POINT LEVIS.

A body of Royal Engineers, nineteen strong, have accompanied the Red River expedition, for the purpose of making plans of the territory and engaging in other operations connected with their particular branch of the service. The men are under the command of Lieut. Heneage, R. E., who has been engaged for some time past in putting them through a course of preparatory training. They have received instruction in all the latest improvements in military engineering, signalling, &c., and have also learnt a new and improved alphabetical code, recently invented by an English gentleman. This body of the Red River armament left their Camp at Point Levis, Quebec, on the 18th ult., on their way to Fort William, via Montreal, Toronto and Collingwood. As this is the only corps of Royal Engineers proceeding to the North-West, their movements will be watched with great interest. This week we commence our series of illustrations relating to the Red River expedition with a sketch, by our special artist in Quebec, of the departure of this corps, and we trust next week we shall be able to lay before our readers further sketches of their operations, from the pencils of our artists accompanying the expedition.

THE DETROIT RIVER TUNNELS.

The Detroit river is in reality a strait, connecting three of the greatest lakes in the world with others nearer the seaboard, and through this strait all the commerce between the East and the West must pass until the Ottawa or other canal is built to receive it; a commerce which is now enormous in extent, is increasing rapidly, and must increase for many years to come, as the yet unoccupied territories, large enough for nations, are settled and become productive.

At the present time cars are transferred between the Michigan Central and the Great Western by ferry boats. But the business of these roads is increasing so rapidly, and the extension of the system of roads in the West, which find their outlet over these lines, is so great, that it has become of the first importance to reduce the time and uncertainty of transit to the minimum.

The preliminary surveys and borings in the river bed, made to the full depth of the tunnel, discovered a pass across the river, which passes the entire distance through stiff blue clay, a soil of the most favourable character for works of this kind. Occasional pockets of sand and gravel, so common in the drift formation of this section, were found, and these may produce temporary hindrances, but only such as are readily surmounted by the modern appliances of tunnel construction.

The proposed line (including approaches) may be said to begin at the station of the Michigan Central Railroad, in Detroit, and will be on the surface to First Street. Between First and Cass Streets there will be an open cutting, but by a favourable grade of the street, the line will get under cover at Cass Street, and for a short distance will be under a girder covering.

The rising grade of the street and the descending grade of the tunnel make it practicable to commence arching at a distance of forty-seven feet, which will first be an open cutting; then a double-track tunnel or covered way will be built. At a distance of ninety-two feet from the Detroit portal the circular form of tunnel will begin. From that point there will be two single-track tunnels extending to the portal on the Canada side, from which an open cutting will extend for about half a mile, and thence the track will run on the surface for about one-third of a mile to the junction with the Great Western Railway, two miles distant from the Windsor Station.

The length of the tunnels from the Detroit to the Canada portal will be each 8,558 feet. The engineer has been led to propose the construction of two single-track tunnels, entirely separate, instead of one larger one sufficient to accommodate a double track, because by this plan the total amount of excavation will be considerably reduced, the liability to accident in regular traffic will be greatly lessened, and also by the important consideration that in the event of accident or any obstruction occurring in one tunnel, the other will still be ready for use, and the passage of trains be not even temporarily prevented.

The tunnels will be cylindrical in form, and will run parallel, fifty feet apart. The interior diameter of each is eighteen feet six inches. The shell of brick masonry will be two feet thick in all that part of the line under the bed of the river, but at each bank this will be reduced to one foot six inches.

The grade is one in fifty on each side of the river, with 1,000 feet of level line under the bed of the river.

In addition to the main tunnels, a small drainage tunnel, with an interior diameter of five feet, will be built, extending across the river considerably below the main lines and midway between them. This will be first constructed in order to drain the main tunnels while the work progresses as well as afterward, and also to develop fully the character of the soil at the commencement of the work.

A working shaft, ten feet in interior diameter, will be sunk in each bank of the river, midway between the main tunnels, and connected with them by lateral drifts, each with an interior diameter of nine feet. The engineer estimates that without sinking any working shafts in the river, the work can

be completed within two years, allowing a margin for extra precaution where the water is deepest.

The estimates for excavation and masonry are as follows:—

	Cubic yards.
Excavation in open cutting.....	299,000
Excavation in tunnels.....	233,000
Brick masonry (exclusive of drainage tunnel).....	68,000
Stone masonry.....	3,700

The estimates for the entire cost of the tunnels and approaches, including a permanent double track, with steel rails, right of way, etc., amount to \$3,650,000. The capital proposed for the work is \$3,000,000. The work, when completed, will be a monument to the enterprise of the builders and the genius of the engineer, and one of the greatest accomplishments of modern engineering science.

PREPARING FOR THE BATTLE.

Another scene of woodland life. Two huge deer—evidently long time rivals for the affections of some timid doe—have met to decide their claims. With upraised heads, and with a loud trumpelike cry that echoes and reechoes through the glades of the forest, the two disputants are preparing to rush upon each other, and engage in a fight that may in all probability prove fatal to them both. The does are timidly looking on their lords and masters, and appear to be dissuading them from the strife. The whole group, the two maned monsters; in defiant attitudes, and the startled look of the rest, with the deep background of rich foliage are aptly conceived and artistically rendered. The artist is Carl Kromer.

CINGALESE PAGODA.

This illustration gives a view of a temple in the vicinity of Kandy, in the island of Ceylon. Of all the British possessions in the East, Ceylon is the one where the worship of Buddha most prevails. The whole island is dotted over with monuments, temples and pagodas erected for the worship of or to the honour of this deity, and in the immediate vicinity of the capital these monuments are found most thickly clustered. The buildings are, as a rule, uncouthly built of stone, and roughly ornamented, though there are exceptions where the ornamentation is wonderfully intricate and elaborate.

THE FENIAN RAID.

BATTLE GROUND NEAR COOK'S CORNERS.—PARTICULARS OF THE ENGAGEMENT.—THE FENIAN'S GRAVE.—O'NEIL'S HEAD-QUARTERS, HIS ARREST, &c., &c.

On the 25th of May the Fenians, under General O'Neil, to the number of about two hundred, crossed the lines, about half past seven o'clock in the forenoon, and attempted to effect a lodgement near Pigeon Hill, the scene of their first incursion in 1866. Many hundreds of them were in and about St Albans on the day before; while at Malone, and other points further West on the borders they were making large gatherings, the evident intention being to make a simultaneous attack upon Canada at many different points on the frontier. The issue of President Grant's Proclamation on the day previous, mentioned by us last week, somewhat disconcerted the Fenian plans; and they were further disturbed by the fact that the rank and file did not muster in anything like the anticipated numbers. Now that the raid has proved a disgraceful fizzle, its inception is disavowed by all the wings of the Fenian organization, save that under the direction of General O'Neil, who, in his present prison home, is denounced as a coward and traitor by his followers. The massing of Fenian braves along the frontier commenced on Monday, when crowds arrived at St. Albans, Trout River, Malone, &c. Our own volunteers were called out on Tuesday, the 24th, and Capt. Muir's Cavalry left at seven o'clock that evening. The other volunteers of the city and neighbourhood were forwarded to the front with extraordinary despatch on that and the following days, and before the Fenians had set foot upon our soil, the utmost confidence prevailed that Canada was well prepared for the reception of the foe. On the morning of the 25th, at five o'clock, the special train, with the 1st battalion Prince C. O. Rifle Brigade, under command of Lord A. Russell, with H. R. H. Prince Arthur on the staff, left Bonaventure station en route for St. John's, where the volunteers had preceded them to be there posted, as Gen. Lindsay might see proper. They numbered 700 strong.

Col. Smith with a detachment of the 60th having arrived at Stanbridge, about eight miles from the border, late on the previous night, left early in the morning, accompanied by Lt.-Col. Chamberlin's Corps, for Cook's Corners, the old Fenian camping ground. When they arrived at the spot so soon to be the theatre of battle, they found already before them the gallant "Home Guards," or "Dunham Boys" recruited the day before by Capt. Westover, and a few other spirited farmers and border gentlemen, who took upon themselves the duty of preparing for the defence of their hearths and houses. Capt. Westover's leadership, in connection with the force under Colonel W. Osborne Smith, and Lt.-Col. Chamberlin, did most excellent and important service to their country before the day was done. General Lindsay disposed of the other forces, volunteers and regulars, at other points along the Huntingdon borders; but as our illustrations this week refer to the proceedings at Cook's Corners and vicinity where the only real fighting was done, we shall confine our remarks principally to the details of what took place in that neighbourhood, for at the other points the enemy retreated on the approach of our forces, without waiting to fire a shot.

On the morning of the 25th, the Fenians were gathered in large numbers about Franklin Centre, three miles from the border, and along the road leading thence to Cook's Corners on the Canada side, they had scattered their cases of arms and ammunition, which were being opened and distributed among the men. It was reported that at this point the Fenians numbered about one thousand strong, and had arms for at least two thousand more. General O'Neil with General Donnelly, his chief of staff, spent the night at Franklin Centre, and early in the morning proceeded to prepare for the advance across the lines. General George F. Foster, of Albany, U. S. Marshal, remonstrated with Gen. O'Neil, read Grant's proclamation, and otherwise endeavoured to dissuade him from advancing, but the General is reported to have expressed his contempt for the President in language more forcible than polite. At all events, he disregarded the proclamation, and the U. S. Marshal came across the lines and

informed Col. Smith that he had no troops at hand to prevent the Fenians from crossing; the Canadians, therefore, appeared at once for the onslaught. The Home Guards had been in position on the hill-side, about 500 yards from the American line, on the night of the 24th, where, in the morning, they were joined by a portion of the forces under Col. Smith and Lieut.-Col. Chamberlin, the whole number of the Canadian force not exceeding seventy men, though at other near points there were ample reserves in waiting, ready to advance on an hour's notice. The position of the Canadians was almost impregnable; our special correspondent, who was on the spot, and whose sketches appear elsewhere, says that had our men been an hour or two later, the Fenians would have occupied the ground, and it would have been serious work indeed to have dislodged them. The rocks and brushwood furnished them splendid natural shelter; and this they lost no time in improving by throwing up rifle pits. They fought, therefore, almost under cover, and the result shewed with perfect safety to themselves and some loss to the enemy. Before noon the Fenians moved onwards and crossed the line. O'Neil was, or professed to have been, in high spirits. The house of Alva Richards, about ten rods south of the border line, on the road from Franklin to Cook's Corners, was chosen as the place from which to view the battle, for the Fenians had already seen that the Canadians were prepared to receive them. The Fenians, many of whom had spent the night on a hill overlooking the frontier, came down by Richards' house, and passed along the road leading to Cook's Corners. Some eight rods north of the boundary line is a gully, through which runs a small brook, named in some of the accounts "Chickabiddy," over which the road is bridged, and beyond which are the heights that were occupied by the Canadians. From Richards' house to the Canadian position was only about a quarter of a mile. The Burlington, Vt., company, about fifty men, under command of Captain Cronan, dashed down the hill in order to form a skirmish line across the brook. When they had crossed the line, the Canadians opened fire. At the first volley private John Rowe was shot and instantly killed, and Lieutenant John Hallihan received a flesh wound in the arm. The company wavered, and receiving no support fell back to the shelter of Richards' house and outbuildings. The next company, under Captain Cary, joined Captain Cronan in the rear of the house. Soon afterward, private James Keenan ventured out too far and received a ball in his leg near the ankle. This reception, and the sharp fire of the Canadians—many accounts agree that it was from the well-directed aims of the "Dunham boys"—the Fenians suffered—caused a stampede among the invaders, and General O'Neil tried to rally them by the following speech:

"Men of Ireland; I am ashamed of you. You have acted disgracefully, but you will have another chance of showing whether you are cravens or not. Comrades, we must not, we dare not go back now with the stain of cowardice on us. Comrades, I will lead you again, and if you will not follow me I will go with my officers and die in your front. I leave you now under command of Boyle O'Reilly."

After this brave utterance, O'Neil, who had been across the borders, in the woods on an eminence opposite the Canadian position, retired to an attic room in Mr. Alva Richards' house, at the gable end of which, through a three-cornered window, he intended to have watched the fortune of the day. But it is reported that Colonel Chamberlin, having through his glass discovered his presence there, directed his men to pour their fire upon the house, and Mr. Richards accordingly ordered General O'Neil to leave. As he went out he was met by Gen. Foster, U. S. Marshal, who was then accompanied by his deputy, and supported by several American citizens, who promised to sustain him in the execution of his duty. General Foster thereupon arrested O'Neil, telling him that in case of resistance he might be shot, but O'Neil very quietly permitted himself to be placed in the Marshal's carriage, and was driven off to St. Albans through hundreds of straggling Fenians on the road. It is said, and perhaps with truth, that he welcomed his arrest as a happy escape from an uncomfortable, and in fact untenable position. Mr. Boyle O'Reilly made a poor leader under the changed circumstances; an advance was made by the Fenians and a struggling fire kept up, but few casualties of a serious character occurred to the Fenians, and none at all to the Canadians. In the afternoon, three companies of Fenians occupied the woods opposite the Canadians, and for a time kept up a brisk but harmless fire. They lost one man killed and had several wounded. These two are the only well authenticated fatal cases which occurred during the whole day, though several reports mention much larger numbers of slain. Gen. Donnelly, who along with nearly all the other Fenians who had ventured so near the front had taken shelter in and about Richards' house, ventured out a little too soon, and was "winged" by a Canadian bullet, some say shot in the ankle, others in the spine. His wound was at all events a dangerous one, and he is now with O'Neil, Gleason, Father McMahon, Starr, and other Fenian leaders, a prisoner in the hands of the United States authorities.

The Canadian volunteers acted throughout with consummate coolness and bravery. They followed the retreating Fenians, and threw a galling fire into their ranks; they kept the sneakers around the neighbouring houses prisoners until darkness sheltered their escape. They drove the companies of Fenians who on the afternoon of the 25th attempted to dislodge them clean out of their cover, killing one and wounding several. All this they did, without losing a man, without even permitting themselves to become unduly excited. They also buried the body of the young Fenian Rowe, who fell a victim to their first fire. He was laid under some eighteen inches or two feet of Canadian soil, dressed as he was in his Fenian uniform, and with his pocket handkerchief spread across his face. Above his grave the Canadians piled a "Cairn" or heap of stones, as shown in our illustration. Our special artist tells us that the Fenians were much distressed at not being able to bring away his body; but the fact of its lying within range of the Canadian fire was sufficient to prevent any of the Fenian braves from attempting its rescue. They would not risk their own lives for the body of their late companion in arms, but they offered twenty-five dollars to any one who would bring it across the lines! On Tuesday morning last, however, Deputy Marshal Smalley crossed the lines and asked Col. Smith for permission to remove Rowe's body. Col. Smith replied that it would be given up to the friends of the deceased, but that no Fenian should be permitted to cross over for it. A short time afterwards an undertaker arrived from St. Albans, with a plain black walnut coffin, and the body being exhumed, was placed therein and carried to St. Albans.

The Fenian "invasion" has now entirely collapsed. We