

rain or shine, winter or summer. We shall have more to say upon this in its proper place.

DISMOUNTED FIGHTING.

European cavalry officers and the world at large have no conception of the extent to which dismounted fighting was used in the American civil war and the perfection attained in it by our men after very little practice. The instructions therefore are to be found in our cavalry tactics of 1840, which are based mainly on the old French tactics. It will thus be seen that the idea is an old one. But the extent to which it was carried was purely an American innovation. Our country being much covered with woods, mounted fighting is often impracticable. But to men accustomed to fighting on foot no country is difficult. The rapidity exhibited in going into action by dismounted cavalry is marvellous, and the simplicity and adaptability of the system admirable.

In two minutes from the word, "prepare to fight on foot," a line of three-fourths of the men is formed, who go to the front at a run; while the column of horses led by the "number four" out of each set is moved off to the rear, out of danger of stray bullets.

The dash and impetuosity of a dismounted skirmish line is far beyond that of an infantry force of equal numbers. The men come into action perfectly fresh. It is a positive relief to get out of the saddle after a hard day's riding. All of the fighting is done at a quick run. You could not get an infantry line to move so fast. They know well that if they tire themselves running they will pay for it on the march. But the cavalryman is not fatigued. He has no knapsack to weigh him down. His sabre was left on his saddle. He fights altogether on a skirmish line and can do much damage without suffering proportionately. The destructive strength of that thin, elastic line of skirmishers is amazing. A small force can hold a very large area. A large force is practically impossible to turn. Ten thousand cavalry, such as the cavalry corps of the Army of the Potomac once possessed, would form a line of battle from three to five miles long. Thin as was the line, who betide the enemy that massed heavy forces to pierce it! The experiment was tried on both sides, and always to be repented of. The skirmish line would give back in one place only to advance in another. The enemy, overwhelmed by a cross-fire from a semicircle of invisible foes, finally fell back in every instance with heavy loss. The only way to drive a skirmish line is to flank it and threaten the led horses: and to do that requires superior force and a very wide awake leader. And when, after fighting for two or three hours and driving the enemy at a quick run, till the men are fagged out and a success gained, the open ground appears beyond the woods in which the action has been fought. The enemy have retired and it becomes necessary to pursue. In such a case the infantry is powerless to press the enemy sufficiently; but just in the nick of time up come the horses in columns of fours by the roads. The skirmish line is called in and mounted. The men, tired with running, can still ride as rapidly as ever. The horses have been resting and are able to press on. So that we combine the advantages of both infantry and cavalry.

In covering a retreat dismounted cavalry are equally serviceable. Men who know that their retreat is quite secure at a moment's notice will defend a position far more stubbornly than in any other case. Occupying the edge of a wood, the line of a fence,

any obstacle which affords a shelter, our skirmishers will hold on to the last minute, firing on the advancing enemy till they know that every gun and every waggon is out of danger, and then suddenly breaking, silently and swiftly run to their horses, away over the open ground till another defensive position is reached, when the same game is repeated.

In such cases, to cover their retreat, a mounted line of skirmishers is always stationed behind, whose imposing attitude awes the enemy for a brief space, long enough for the footmen to get away in safety, when the recall brings in the horsemen.

I have seen this mode of fighting so often in both aspects that it has grown to be an old story. Its efficiency is great, and it is adaptable to any ground generally deemed "impracticable for cavalry." We know no such ground in the U. S. Volunteer Cavalry.

Open fields we fought on mounted. Our line of battle in corps front was always formed in one way. Each brigade detached one of its regiments to cover its whole front, often half a mile long, with a chain of skirmishers. Two regiments followed behind each wing, at about two hundred yards apart, in line, with sabres drawn. The rest of the brigade formed a third line in column of fours.

There was plenty of room to manoeuvre our guns, which took advantage of every hill to fire a few rounds. Advancing or retreating, this order was alike pliable and useful. It covered an immense front, and its supports were easily shifted. The brigades averaged four regiments, some five. On open ground, such as in central Virginia, around Brandy Station, the mounted fighting was of the most inspiring, romantic and thoroughly delightful kind, as also in the open fields of the lower valley of the Shenandoah. These were the only places where sabre charges were possible, and several times we shared in their wild intoxication. Glorious days were those, and green to the memory of those who shared in them, in the fall of 1863 in that delightful climate.

Whenever woods intervened the mounted skirmish line was dismounted, each squadron officer attending to his own squadron, and the woods cleared on foot. When the ground opened again four legs superseded two.

(To be continued.)

THE THAMES EMBANKMENT.

The Board of Works has issued an official description in pamphlet form of the great work just accomplished. We learn from it that the idea of such an embankment originated with Sir Christopher Wren, as part of his scheme for rebuilding the metropolis; that it was revived at various times and by various persons; that Mr. James Walker in 1840 laid down a line for the corporation, which has now in the main been followed; and that the whole of the present works have been designed and constructed by Mr. Bazalgette, the Engineer to the Board.

Following in an even line, the general curve of the river, the embankment extends from Westminster to Blackfriars Bridge, rising at each end by a gentle gradient, to open upon Bridge street, Westminster, opposite the clock tower of the House of Parliament, and upon Chatham Place, Blackfriars, opposite the station of the Metropolitan District Railway. It passes beneath the Railway bridge at Hungerford, and beneath Waterloo Bridge. It is about a mile and a quarter in length and is one

hundred feet in width throughout. The carriageway is 64 feet wide; the foot-way on the land side 16 feet, and that on the river side 20 feet, planted with trees 20 feet apart. On the river side the foot-way is bounded by a moulded granite parapet, 3 feet 6 inches in height and on the land side partly by walls and partly by temporary boarding which will be ultimately replaced by a cast-iron railing.

The wall of the embankment is a work of extraordinary magnitude and solidity. It is carried down to a depth of 32½ feet below Trinity high water mark, and 14 feet below low water, and the level of the roadway is generally 4 feet above high water rising at the extremities of 20 feet. The rising ground at each extremity is retained by the increasing height of the wall, which is built throughout of brick faced with granite and founded in Portland cement concrete. The river front presents a slightly concave surface, which is plain from the base to mean high water level, and is ornamented above that level by mouldings topped at intervals of about 7 feet by plain blocks of granite, intended to bear lamp-standards of cast iron, and relieved on the river's face by bronze lions' heads, carrying mooring rings. The uniformity of line is broken at intervals by massive piers of granite with flank recesses for steamboat landing stages; and at other places stairs projecting into the river, and intended as landing places for small crafts. The steamboat piers occur at Westminster and Charing-cross, and between Charing-cross and Waterloo Bridge and both are united opposite Essex street. It is intended eventually to surmount the several blocks and pedestals with groups of statuary.

The total area of the land reclaimed from the river amounts to 37½ acres.—Of this 19 acres are occupied by the carriage and footways, 8 acres are devoted to garden and the rest has been conveyed to the Crown, the Templars, and other proprietors along the line.—Within the Embankment wall and forming a portion of its structures, is placed the Low Level Intercepting sewers, which is an intergral portion of the main drainage scheme. Above it is subway for gas and waterpipes, the dimensions of the subway being 7 feet 6 inches in height and 9 feet in width; and the diameter of the sewer varying from 7 feet 9 inches to 8 feet 3 inches. These are both situated under the footway next the river. The footways for the greater part of their length are paved with 3 inch York stone, with granite curbs; but at the eastern end, where the earth filling is of great depth and recent execution, the paths are gravelled temporarily until the earth shall have subsided. For the same reason the carriage way is at present macadamized.

The total cost is estimated at £1,260,000, and the purchase of property at £450,000. The quantities of material are stated to have been as follows.—Granite 650,000 cubic feet; brick work 80,000 cubic yards; concrete 140,000 cubic yards; timber, (for cofferdam, &c.,) 500,000 cubic feet, cassion (for ditto,) 2,500 tons; earth filling 1,000,000 cubic yards; excavation 440,000 cubic yards; York Paving 125,000 superficial feet; broken granite 50,000, superficial yards.

A colored woman of Hamilton named Roland, better known as "Taffy Mary," died lately at the ripe age of 109 years.

North Carolina unable to produce anything else astonishing, presents a citizen aged 143, who at the time of Braddock's defeat in 1755, was 29 years old and had a wife and three children.