

According to the conditions of the competition it was to be wide enough for the passage of infantry in fours, and it was essential that it should be completed in six hours.

The only materials available were tamarack poles; no planks could be obtained for the roadway, which had therefore to be corduroyed; no lashings or spikes were to be had, and accordingly all the fastenings needed were made with treenails.

The working party available consisted of 32 N.-Com's. and sappers with three officers. It will, therefore, be seen at once that the company had plenty of work cut out for it.

Most of the poles (the roadway alone required more than 300) had been felled by the company on the previous day and hauled to the site of the bridge, but some still remained to be fetched. N.B.—(They had not been cut to the proper length required.) A small number of trenails, but not nearly enough, had also been prepared beforehand.

The 107 feet of the bridge was divided into nine spans of just under 12 feet each; eight piers were therefore required; they consisted of one four-legged trestle and seven two-legged trestles, the average height of the trestles being about  $5\frac{1}{2}$  feet.

The working party was divided into six squads of four sappers each, under a non-commissioned officer. At the commencement four of these squads were employed in constructing the trestles. The 5th squad prepared the roadbearers; the 6th squad prepared the small spars for the corduroy roadway. The two remaining sappers were meanwhile busy making treenails.

Work was commenced at 6.15 a.m. and by 8.30 a.m. seven out of the eight trestles were finished. These were then carried out into position and held until the outer roadbearers were pinned to the transom; auger holes for which purpose had previously been made. The intermediate roadbearers, three in number, were next placed and then the corduroy roadway, the spars forming which were steadied by ribands pinned at intervals to the outer roadbearers.

In about  $4\frac{1}{2}$  hours from commencing work the bridge was passable for troops though still unfinished.

In  $5\frac{3}{4}$  hours the work was done, handrails and ramps all complete, with a notice board to state what loads the bridge was fit for.

Shortly after it was finished the bridge was tried by marching a company of infantry across it, and it was found to stand the test perfectly.

Captain Stuart Davidson, R.E., Inspector of Engineers, remarks, concerning this achievement:—

"The large amount of work done in the time and the total absence of avoidable delays of any kind combine to render this really admirable piece of bridging the best work of its kind which it has ever been my good fortune to witness."

The bridge, after completion, was photographed, and the view shows a substantial structure, built with a good and very regular camber, and with apparently a surplus of strength for any use to which such a bridge might be put. The idea with which an examiner is impressed is the wonderfully great amount of good work evidently accomplished in a short time by men with very few advantages for doing such a task.

### Cavalry Distance Rides.

WE have to thank Colonel H. M. Bengough (assistant adjutant-general, Bangalore) for a copy of a small pamphlet in which he has taken some pains to give the detailed conditions regarding abnormal cavalry marches made in English and foreign armies, and the subject is undoubtedly one of considerable interest to cavalry men. The reaction which of late years, and more particularly since the Franco-German war, has set in favor of *l'arme blanche*, and the employment of horsemen in large proportion in every *corps d'armée*, has led to many inquiries as to the actual extent of the marching powers of the mounted branch, and the information thus gained has considerably astonished some of those whose cry has been that the days of cavalry, acting in large bodies, are numbered. Not many years ago, Colonel Chesney read at the United Service Institution an exceedingly clever paper, the central idea of which was an ideal cavalry force, numbering some 20,000 or 30,000 men, drilled and equipped to fight on foot or on horseback, and composed entirely, as a *corps d'élite*, of carefully picked and chosen men. With this body of troops, the lecturer maintained, a skilful leader could march through almost any hostile force, and in any civilised country maintain himself independently of any commissariat or transport train. The theory was original, and in some measure favored by the extraordinary feats performed in 1870 and 1871 by the Uhlán horsemen, whose exploits towards the close of that terrible campaign in France, gave a new reading to the art of employing cavalry in war. History repeats itself, and the military student whose enthusiasm has been fired by the deeds of these daring German riders, has only to go back to our own great civil war to see how well Cromwell understood the value of mobility and celerity of move-

ments in the operations of his cavalry, who were taught to fight in the saddle at close quarters, or with pike and matchlock as skirmishers on foot. Colonel Bengough says most truly that many English cavalry officers object to knocking their horses about by practising such distance rides and exceptional marches in peace time as they would, on certain occasions, be compelled to attempt in war. This is a mistake, and one which has frequently led to disaster.

The depletion of our cavalry in the Crimea was, no doubt, largely due to lack of commissariat, want of forage and blankets; but also it has been allowed, to the system then in vogue of over-"coddling" our troop horses in peace time, and thus rendering them less hardy under privation and scanty supplies. That prince of cavalry leaders, Seidlitz, explained to his master, the Great Frederick, how impossible it was to train cavalry without knocking them about, and even occasionally maiming or killing a horse or man. Lord Lake, General Gilbert, Lord Cardigan, Captain Nolan, Colonels Barrow and Drury-Lowe, and all our best cavalry leaders of the present day, believe in the principle that "omelettes cannot be made without breaking eggs," and that to make a fine and dashing squadron, men and horses must be well rattled about. The author of the little pamphlet under notice gives us some interesting extracts from the German *Militär Wochenblatt*, describing several remarkable distance rides carried out by the Russian cavalry early in the year 1884, and he very pertinently asks how it is that we, a nation of horsemen should utterly ignore the necessity for special training in peace, and wait invariably for the terrible experiences of the actual campaign. 149 miles in  $40\frac{1}{2}$  hours, of which  $27\frac{1}{2}$  hours were actual marching, so that the actual rate was about  $5\frac{1}{2}$  miles an hour, was the distance performed by a detachment of the cavalry school of Krasnoze, St. Petersburg. A distance ride of two sotinas of the 15th Cossack Regiment, extending to 217 miles from Warsaw, crossing the Vistula to Tschénstuchan, was successfully carried out between the 11th and daybreak on the 14th January. The detachment marched 210 miles in 72 hours, over ground half level half hilly, through forests, and under the most unfavourable circumstances of weather. In 1804 Lord Lake's cavalry, when pursuing Holkar, marched 79 miles in 24 hours, of which 36 miles were during the night, and this after a long and harassing succession of marches, amounting to 350 miles in 15 days. Stewart's cavalry of the Confederate army, composed of 1800 horsemen, marched from Chambersburg to Leesburgh, 90 miles, in 36 hours, and General Morgan in the following year achieved a similar feat, but Morgan's cavalry carried nothing but the rider, his arms, 100 rounds of ammunition, saddle, bridle and blanket. General Drury-Lowe's cavalry brigade, after Tel-el-Kebir, marched from Kassassin to Belbeis, 22 miles, in one day, and from Belbeis to Cairo, 36 miles, on the day following. At Bangalore, some 20 years ago, an experimental march of 500 miles was made to test the relative powers of entire horses and geldings, fifty of each being selected, when it was found that the latter suffered less, and finished the task in fresher condition than the former. At the Cape of Good Hope extraordinary distances are ridden by the Dutch and English farmers, and by English officers in sporting expeditions, but the quadruped has the advantage of being able to canter across the springy turf "veldt," instead of a rough stony road. We owe gratitude to Colonel Bengough for calling attention to the great importance of long distance cavalry rides, which, strange to say, are almost unknown during peace time in the British army on home service.

Since the foregoing lines were written; it is most gratifying to chronicle the measures recently taken by that accomplished soldier, Sir Evelyn Wood, to carry out the cavalry exercises we have described. Sir Evelyn, who is no mean performer across country either in silk or scarlet, has inaugurated his Colchester command by several useful reforms and original ideas for the good of the service, amongst others a series of "cavalry distance rides," on the principle of those described above. The last experiment of this nature was made a few days ago, where a party consisting of Lieut. Maryon-Wilson and a sergeant and four men of the 13th Hussars, with a led horse, were detailed to march from Colchester to Norwich and back, a distance of  $137\frac{1}{2}$  miles, the time occupied from start to finish being  $68\frac{1}{2}$  hours. This included two night halts at Ipswich, so that the actual marching time was only 20 hours, 30 minutes, or an average of nearly seven miles an hour. The men were clothed and equipped on the supposition that they were carrying important dispatches from one army to another, across an unfriendly country. With the exception of the officer's horse, the others had to carry an average weight of 227 lbs., and the entire journey was completed without any casualty, each horse on arrival in Colchester Barracks being fresh and fit for further service. Upon the report furnished by the General to headquarters, instructions have been sent to all general officers commanding the military districts at home to organize similar distance rides, His Royal Highness expressing his warmest approval at the satisfactory results which have been obtained from the experiments undertaken at the instance of Sir Evelyn Wood. In every garrison where cavalry are quartered experimental distance rides of this nature should be carried out, both with