

## Modern Tactics.

[By Capt. H. R. Gall—From Illustrated Naval and Military Magazine.]  
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IN this case the assailants would be forced to attack a carefully-chosen and strongly-entrenched position, with their backs to a defile, and probably only one line of retreat available, either through a mountain gorge, or over a bridge. The last plan offers the greatest chances of success to a general who can seize his opportunity, and handle his troops with daring and dexterity.

Beyond these few simple principles it is impossible to lay down any fixed rules for opposing a crossing.

Strategical considerations will influence the conduct of both sides to a large extent; but tactical movements within striking distance of an enemy must be planned and carried out on the spot, and will always be decided in favour of the commander who can most readily adapt himself to the circumstances, and take advantage of the nature of the ground, the peculiarities of his troops, and the mistakes of his enemies.

A broad and comprehensive knowledge of tactics can alone enable him to act with the confidence which commands success.

### *Forcing the Passage of a River.*

The first thing to be done is to reconnoitre the banks carefully, and push secret reconnaissances over on the enemy's side if possible, to endeavour to discover his positions. In order to do this thoroughly the assailants' own side must be cleared of the defenders' scouts.

Meanwhile the troops should be concentrated at two or more points within a day's forced march of the river, and the most careful and elaborately-planned preparations made to prevent any hitch occurring at the last moment. With this object the boats should be procured, rafts constructed, pontoons collected, and the bridges themselves put together, if time permits, to ascertain that they are the required length. The actual crossing-place or places, will be finally fixed upon by the commander-in-chief, in accordance with the reports he may receive from his engineer and staff-officers selected to reconnoitre.

It is seldom that an army corps can hope to effect a crossing exactly at the most to be desired spot, as the enemy may frustrate it, and for this reason what are called secondary crossing places are most essential, and the preparations for these secondary crossings should, if possible, be as carefully planned as the principal one. If energetically commanded, the defenders will probably be in force to oppose all the most likely crossings.

It can rarely be expected that all the requirements of a good crossing-place will be obtainable. They may be briefly enumerated as follows:

1. Suitable cover on the enemy's side for the landing and establishment of a covering party of infantry.
2. Command of bank, and suitable ground for guns to be got into position, to protect the crossing of the covering party, and subsequently the protection of the bridge, during its construction.
3. A bend of river towards the assailants, to enable them to direct a convergent fire on the opposite side.
4. An island, or islands.
5. A tributary stream.
6. Good sound ground suitable for embarkation and disembarkation.
7. Cover on the assailants' side, to conceal the movements and concentration of troops within easy reach of the river.

There are three kinds of bridges—

1. Permanent bridges, entailing a considerable amount of time and labour.
2. Flying bridges, on-trestles, only suitable to medium sized rivers, and moderate currents.
3. Pontoons, and bridges of boats.

The latter are the easiest to throw across if a force has got them; but are liable to get out of gear, and also to be swept away.

The principles which govern the tactical operations in all three cases are the same.

All preparations completed as regards material, the first thing to be accomplished is the landing and establishment of a suitable covering party of infantry.

We read in ancient history that the swimming and fording of rivers were among the regular exercises of the Roman legionary. Though immersed up to his chin in water, he was an expert in plying his hatchet against the stakes which opposed his passage, while he held his buckler over his head not less steadily than on dry land. Behind him a constant storm of stones and darts was impelled against the enemy from the engines which always accompanied Roman armies. The enemy driven from their position, Cæsar established his covering party, and commenced his bridge.

In the absence of boats, or other means of crossing in these days as of old, covering parties may be forced to swim, although the swimming of rivers is not amongst the regular exercises of the army. Substitute guns for engines, and the principles of tactics for the passage of a river are still those which governed Cæsar.

After a covering-party has once established itself by driving off the enemy, if he appears to oppose the passage, the bridge is commenced from both ends if possible, and pushed on incessantly until completed. Meanwhile, infantry in sufficient numbers should be got across to protect the flanks and front of the covering party, and the moment the bridge is completed, the artillery, cavalry, and various trains, should be moved rapidly across.

The crossing of the River Leek, by Gustavus Adolphus, April 1631, in the presence of 22,000 troops under the veteran commander Tilly, furnishes a rare example of this most hazardous operation, and also a proof of the consummate knowledge of tactics possessed by the King of Sweden. It is thus described by Defoe, in his *Memoirs of a Cavalier*:

"Tilly, joined by the Duke of Bavaria, had about 22,000 men distributed along the Bavarian bank of the River Leek, and occupied all the convenient places on the river to dispute the King of Sweden's passage.

"The King, informed of Tilly's dispositions, resolved to go up and view the disposition of his troops, and setting out with an escort of horse, gained a height from whence he could see the course of the river for several miles. Turning to the north he observed a bend of the river towards his own side, and at once said, 'There's a point will do our business, and if the ground be good, I'll pass there; let Tilly do his worst.'

"He immediately directed a small party of horse to bring him word how high the bank was at the bend, 'and he shall have fifty dollars,' says the King, 'that will bring me word how deep the water is.'

"A sergeant of dragoons obtained leave to go disguised as a boor, and taking with him a long pole, went boldly to the bank of the river, and calling to the sentinels which Tilly had placed on the other bank, asked them if they could help him over the river, and pretended he wanted to come to them. At last, being come to the point where the bend was, he stood parleying with them a great while, and pretends to wade over, thrusting his pole in before him, till being gotten up to his middle he could reach beyond him, where it was too deep. 'Why, you fool,' says one of the sentinels, 'the channel of the river is 20 feet deep.' 'How do you know?' says the dragoon. 'Why, our engineer says he measured it yesterday.'

"This is what he wanted, but, not yet fully satisfied, 'Ay! but,' says he, 'may be it may not be very broad, and if one of you would wade to meet me till I could reach you with my pole, I'd give him half a ducat to pull me over.'

"One of the soldiers immediately strips, and goes in up to the shoulders, and our dragoon goes in on his side. The stream takes the other soldier away, and he being a good swimmer, came over to the dragoon's side.

"After some conversation, the dragoon pretended to be sorry he could not get over the river, and makes off, the Bavarian returning to his comrades on his own side.

"The King having examined the dragoon, understood from him that the ground on his side was higher than the enemy by 10 or 12 feet, and a hard gravel. Hereupon the King resolved to pass there, and himself gives particular directions for a bridge.

"His bridge was only loose planks laid upon large trestles; the trestles were made higher than one another to answer to the river as it became higher or shallower, and was all framed and fitted before any appearance was made of attempting to pass. When all was ready the King brings his army down to the bank of the river and plants his cannon, as the enemy had done, some here and some there, to amuse them.

"At night, on the 4th April, the King commanded 2,000 men to march to the bend, and throw up a trench on either side, and quite round it, with a battery of six pieces of cannon on each end, besides three small mounts, one at the point and one at each side of the bend, which had each of them two pieces upon them.

"This work was begun so briskly, and so well carried on, the King firing all night from the other parts of the river, that by daylight all the batteries at the new works were mounted, and the trench lined with 2,000 musketeers, and all the utensils of the bridge lay ready to be put together.

"Now the Imperialists discovered the design, but it was too late to hinder it. The musketeers in the great trench, and the five new batteries, made such continual fire, that the other bank, which, as said before, lay 12 feet below them, was too hot for the Imperialists, whereupon Tilly, to be provided for the King at his coming over, falls to work in a wood right against the point, and raises a great battery for twenty pieces of cannon, with a breastwork or line so near the river as he could to cover his men, thinking that when the King had built his bridge, he might easily beat it down with his cannon. But the King had doubly prevented him, first by laying his bridge so low that none of Tilly's shot could hurt it; for the bridge lay not half a foot above the water's edge, by which means the King, who had shown himself an excellent engineer, had secured it from any batteries to be made within the land, and the angle of the bank secured it from the remoter batteries on the other side, and the continual fire of the cannon and small shot beat the Imperialists from their station just against it, they having no works to cover them. In the second place to secure his passage, the King sent over 200 men, and after that 200 more, to cast up a ravelin on the other bank just where he designed to land his bridge. This was done with such expedition that it was done before night, and in condition to receive all the shot of Tilly's great battery, and effectually covered his bridge.

(To be continued.)

Recent experiments with carrier pigeons have been so successful that it has been decided to establish a permanent postal service of them in the Russian army. Depots are to be establish at once at certain specified fortresses and other places, and the whole are to be divided into four divisions, corresponding to the same number of lines of communication; there are to be at each 250 carrier pigeons, making a grand total of 1,000 birds.