

TACTICS.

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When company columns stand the test of two campaigns, and are still thought most highly of by, we may presume, the best judges, it behoves us to devote more than passing attention to the formation. Led by zealous officers, they ran away with victory in 1866.

The battalion commander was at the head of a kind of brigade, composed of four weak fractions; his duty was to remain well in rear, and if he issued any orders after the general object had been explained, it could only be done (when the action commenced) through his adjutant, or any other messenger. No trumpet sound would avail—each fraction sent out its own skirmishers, and to have halted any one company would have caused a gap in the line. The commander, then, had to be an almost tacit witness of the battle. He might from a commanding position give warning of danger unperceived by the fighting line, and he might apply to the second for assistance, but he held no power of giving that assistance, and struggles are quick, sharp, and decisive nowadays. Suppose that the commandant does ask for assistance, and a second battalion advances to the fighting line; he can do no more than join one of his companies, for the Prussian rule is that any force launched against the enemy must be "used" up, and this rule explains how the regiments became so hopelessly entangled.

Commandants of battalions took care to issue from this false position during the breathing time between 1866 and 1870, and note—the fault was remedied by peace manoeuvres. In 1870 we shall find, also, that artillery played an important part; but study of the modified tactical forms introduced, together with a comparison with our own forms, must be the subject of a fresh chapter.

Our last reflection on the campaign of 1866 shall have reference to the shortcoming in every branch of the Prussian combatant army, infantry excepted. Here was a long-meditated, admirably-schemed campaign; the first of a series destined to raise and consolidate an empire of capacity and determination sufficient to rule paramount in Europe; and yet we find infantry alone, of her offensive weapons, equal to the emergency. A great statesman and a great strategist undertook to place the King of Prussia on a pinnacle of grandeur. How seldom is it that one country produces two men of such superb ability in one century! and how thoroughly nature seems to have been exhausted by the effort! Other nations, indeed, have suffered from the talent lavished on the German race.

Count Von Moltke witnessed some service in Turkey (1828 and 1829), and is an instance of a heaven-born general. He has been educated in the School of Theory, and it would be a bold act to assert that a greater strategist never lived. Still this great man falls short of perfection, owing to his never having served as a regimental field officer. For detail he is ever obliged to fall back on officers who have gone regularly through the mill; and a merciful Providence ordained that no special interposition should be made in favour of the chiefs of all the different branches of the German service. They err like mortals.

This very fact may be a source of strength—who knows? Von Moltke is "facile princeps" of his army. The same might have been said of Wellington, of Napoleon, of Lee, &c.

The novelty of breech loading fire was sufficient to demoralize the enemy in campaign No. 1, and the weakness of artillery and cavalry proved the mediocrity of their commanders, enervated by prolonged inaction. It also proved that the eye of the commander-in-chief had overlooked their deficiencies; and thus it must always be after a prolonged peace, without some active minds, backed up with sufficient authority, shake the comatose out of their comfortable bed and routine.

One would have been, indeed, surprised if the same disparity of talent had been exhibited by the three arms in campaign No. 2. Nor was such a contingency within the bounds of possibility under such a chief as Von Moltke. We shall find that artillery and cavalry made their effort in 1870—infantry still marches in the van. One may safely prophesy that campaign No. 3, whenever it may arrive, will witness a still further improvement in field artillery, and a complete revolution in the tactics of cavalry. The martial instinct of the German race is fully roused, and, with Von Moltke as their chief, little short of perfection can arrest their progress.

The unqualified success of Prussia in 1866, and its political result—viz: the formation of a German confederacy—sufficed jealousy, if not anxiety, in the most military nation of Europe. France could look with pride on her military history, and the mere notion of a rival was intolerable to the French army and its chief, the Emperor. Those who foresaw that a struggle for the pride of place was inevitable between the Gallic army and the Teutonic race, predicted a fight of giants, nor was expectancy long deferred. In 1870 the French army was considered, at home and abroad, as powerful as its system of organization enabled it to become. Therefore, calculating on disunion amongst the German States, together with the unpreparedness naturally attending incomplete military reform, the French Emperor drew his sword.

The readiness with which anticipated allies of France espoused the cause of Prussia, or declared their neutrality, together with the tardy departure of Napoleon towards the scene of action, ought, doubtless to have made men's minds waver; but history must needs assert that sympathy amongst spectators leaned in a marked degree, at the outset, towards Germany as the weakest and most inoffensive of the two belligerents.

The Prussians had been victorious in 1866, thanks to their breech loading needle gun! Had they not now to face a superior weapon—the Chassepot? Had not French soldiers, man for man, always proved themselves superior to Germans? Had not the Frenchmen naturally a martial soul? The German citizen hosts might be transformed from peaceful civilians to valiant soldiers, but years must first elapse. Thus argued in the world, and thus it happened that, with few exceptions, its inhabitants calculated on a temporary, if not a permanent, triumph for France. And this, more pardonably, was the confident expectation of one of the two principals. At the end of a short campaign the Rhine was to have formed a French boundary, and a treaty to this effect was to be signed incontinently at Berlin.

The sceptical and cautious—for there existed some both in court and camp—could make no head against insatiable greed for conquest.

There existed a French soldier of high rank who placed his doubts prominently on record; but General Trochu and his writ-

ings were little thought of in July, 1870. Previous shortcomings of "Intendance" were forgotten, and the theoretical disadvantages of *corp d'élite* were forgotten when fantastically attired Zouaves excited public admiration by gesticulation in front of Parisian wineshops.

To the eye there was much to admire in the French army. Its infantry had a world wide fame. The School of Musketry at Vicennes was a model; and the drill of the Chasseur and Tirailleur regiments seemed peculiarly adapted to modern requirement. In camps of instruction the art of manoeuvre as laid down in an official four-volume book was fully mastered, and the most critical could have taken little or no exception to the business-like training of the combatant element. As in England, however, the equally important non-combatant service was not subjected to a practical test during peace-time. And the sequel will exhibit this culpable omission as a primary cause of national calamity.

During peace manoeuvres the French showed an inclination to modify their normal battle formation in columns, and develop musketry fire by deployment. It does not appear, however, that this sound theoretical teaching was acted on in the presence of the enemy. The French tactical formation was invariably a swarm of skirmishers, followed by massive columns in line, and a massed reserve; the field artillery remained throughout an action in the neighbourhood of the division or brigade to which it belonged, and therefore was distributed along the general line; whilst the cavalry approached as nearly to the scene of strife as the nature of the country and the fire of the enemy would allow. Cavalry was also used to a great extent as an escort for horse artillery, albeit a feeling that cavalry, of the three arms, was the most vulnerable, and therefore the least serviceable, seemed to have gained ground since 1859, and the horse soldier played the part of an indispensable encumbrance.

(To be continued.)

A new gunpowder gauge was employed during the siege of Paris, with the object of ascertaining the maximum of pressure in the new piece of seven, by J. le Commandant de Reffye. The process is based on the investigation of M. Treca on the flow of solids. A bronze cylinder pierced with a round hole was screwed into the chamber of the gun. In a recess made in this drilled hole was placed a thick disc of lead, and above this was screwed a small steel plug, in which a hole of small diameter was drilled. The pressure of gas from the explosion caused the disc of lead to flow through this opening in the steel plug, and the flow extended more or less according to the intensity of the pressure. By this means it was ascertained that in certain heavy guns, the interior initial pressure sometimes exceeded 4,000 atmospheres. In the piece of seven, thanks to the employment of compressed powder, the pressure did not exceed 1,800 atmospheres.

The helmet which is to replace the French kepi, is described as being a mixture of steel and brass, and in shape something of the old Roman model. A brim running all round is to protect the wearer from rain and sword cuts; the front is ornamented with a sun, and in time of peace a cock is to form the spike. The private will have brass, the regimental officers silver, and the general officers gold cocks. The helmet is to weigh three pounds, and is first to be tried on the Army round Paris.