

fought with the tactics of the day, such as I have already described to you. He himself tells how, on the morning of the battle, he found the Austrians in cantonments dispersed several miles apart, and, instead of at once attacking them, as he would have done later on in his career, he began to draw up his army, "secundum artem," as it was then considered, and of course gave the Austrians time to do the same.

Leaving Frederick the Great's time, and passing on to the time of the early Republican wars, we find that all the continental armies had adopted more or less Frederick's system of fighting in two great lines of three or four deep.

The French Republican Armies first shattered this system, by adopting a line of tactics which was, as it were, forced upon them. They found themselves called upon to fight with these highly drilled and disciplined armies without being either, themselves, and not having the time to become so, they therefore adopted a system which took less time to learn. They broke their armies into small columns which marched independently to the spot where the line was to be taken up, and as these compact bodies presented good marks for the enemy's artillery, they drew in advance swarms of skirmishers, the smoke of whose firing and the confusion caused thereby, very much concealed and assisted the advance of their columns.

This system which was suitable for the dash and *elan* of the French soldier, enabled the Republican armies to beat their enemies, and gave them time to organize and drill their armies in a more regular and careful manner afterwards.

Napoleon is credited with having said that "to retain a superiority over the enemy in battle, it is necessary to change the system of tactics every 10 years," and yet he was not a tactician, and did not attempt to meddle much with tactics, but accepted those he found in use in the Republican armies, and which may be designated "the column with skirmishers." He made, however, several great changes in organization. He made the *coups d'armée* (the idea of which he took from Moreau) which was a small army complete in itself in everything. He also massed his cavalry and artillery, and did great things with them on many occasions.

His defeat of the Prussians at Jena and Auerstadt, gave the final blow to the prestige of Frederick's system of tactics, and the French system became more or less the model for the armies of Europe. From what has been said, you will observe, that two of the greatest changes in tactics in modern times have resulted from other circumstances than actual improvement in arms.

The English alone adhered to the line formation and used two ranks instead of three. This has been accounted for by saying that all our battles were fought on the defensive, for which the line is more suitable. Now, it is true, that most of our battles in the Peninsula were defensive ones owing to our inferiority in numbers, but certainly they were not all defensive, and yet in those, our line formation did not fail us, nor did it at Alma. The line formation gave a great advantage in its extended line of fire, and the probable reason that other nations gave it up, was that they could not, as we could, trust their soldiers to receive the attack of a column in line. Moreover, the column formation gave con-

fidenco to the men, much more so than that of the line formation.

A great improvement took place in the infantry weapon, by the introduction of the percussion lock, about 1842. but no change in tactics resulted from it. At the siege of Sebastopol no change took place. The Minié rifle was, however, first used there, and though our men were unskilled in its use, the Russians suffered greatly from its fire at a range which astonished them.

We next come to the campaign in Italy, in 1859. Here we find a greater use made of skirmishers and a looser style of attack, and for the first time the skirmishers instead of only covering the attack, actually attacking. In this campaign also rifled cannon was first used, and one of its effects was, that owing to its range, its fire reached the Austrian reserves, who were posted at what was then considered the usual distance for reserves to be posted at, so as to be out of range of the enemy's artillery. But altogether there was no very great change in the existing tactics to be observed. The War in Denmark seems to have afforded no information to anyone but the one Power in Europe, who had been quietly for nearly half a century, preparing itself to again surprise the world if not to "witch it, with its noble feats of arms."

Having tried their prentice hand on the Danes, the Prussians turned and grappled Austria by the throat, and it was then and not till then, as Colonel Cheney remarks in his admirable lecture, on "the Study of Military Science in time of Peace," that we found "there had been changes made by Prussia during peaceful years, in organization, in administration, in tactics, in armament, and in strategy, such as the world never saw before." All Europe was in amazement, some nations in alarm. The breechloader, which had hitherto been opposed, was declared to have been the sole cause of the Prussian success, and to speak metaphorically, Europe resounded with the din of armourers making breechloaders. But it soon became evident that the new arm required new tactics, and every one began to enquire into the tactics of the conquerors.

Shortly after the needle gun had been issued to the Prussians, their Generals had an idea that fewer skirmishers would be required than before, owing to the superiority of fire induced by the loading at the breech; but a little experience showed them that the contrary was the case. Their actual tactics in 1865 consisted of moving in columns; of narrow front, either half battalion columns or company columns; each of these columns throwing out clouds of skirmishers, with supports, which gradually pressed forward and reinforced the skirmishers, thus lengthening and thinning the line as they naturally inclined towards the flanks; the small columns sometimes pressing forward and firing volleys, on which at the time the Prussians placed great confidence. This system of attack was by no means what had been laid down by the Prussians in their drill-books, but the circumstances of the case forced it on them, and luckily their men and officers had intellect and confidence enough in one another to adopt it even after the campaign had begun. Thus the normal order of battle for a Prussian infantry battalion was in a double column of divisions (half companies) formed on the

two centre divisions; yet most of the fighting in 1866 was done with their now celebrated company column.

It may perhaps be as well here to see how this company column is formed.

The company is in peace time 200, and in war time, 250 strong. When in line, it consists of two divisions of three ranks each. When in column, it consists of three divisions in column each of two ranks, with an interval of six paces between each, the rear division being formed from the skirmishers who constitute the third and when the company is in line. Six ranks are presented to the enemy's fire, or four ranks when the skirmishers are out, in which case, by the two front ranks kneeling, the whole four can deliver their fire.

Before the Franco-Prussian war, great stress was laid from the supports, by the Prussians, but they had not then fought against breech loaders. Now they confess that the breechloader has so increased the employment of skirmishers in action, that volleys can rarely be used. Attacking with heavy columns is now a thing of the past, as B. gisłowski says in his excellent work, "The Campaign, 1870-1," "The real secret of infantry fighting, speaking in general terms, now consists in so regulating and controlling the independent action of the individual soldier, and of the leaders of a tactical unit as to facilitate, as far as may be, the direction of the fight without losing the advantages of that same independent self reliance."

Great clouds of skirmishers and small tactical units, that is the form for infantry."

The French did make some alteration in their tactics after the introduction of their breechloader, but we now know that they did not appreciate the real tactical powers of the weapon, and they trusted too much to the superiority of range and rapidity of fire of the Chasspôt.

During the war of 1870-71 this superiority of range was a positive drawback to the French, as it tempted them to fire at impossible distances, and to throw away their ammunition.

The Prussians were taught a few lessons also during the campaign. One was that front attack against breechloaders under cover was madness; another was to show any column within rifle range was equally madness; another was the unadvisability of volley firing in most cases, and the necessity of preparing all infantry attacks by a tremendous fire of artillery; another, that it is destruction for infantry to retire in the open under the fire of an enemy armed with breechloaders.

Let us now try and realize a battle field of the present day. Enormous clouds of skirmishers, advancing firing, now halting, now disappearing, now rushing forward in little clumps. Supports and reserves crossing to the front, and merging themselves in the front line, which lengthens itself out on both flanks, no large columns of troops visible, perhaps lines deployed at open order. Guns massed in position. Cavalry seen in small bodies hovering about out of range. In fact, save for the smoke and din of fire arms and artillery, one might fancy one was gazing on one of the *mêlée* fights of the middle ages. But how different in reality. There is order in all that disorder, every individual engaged being more or less in hand and in the highest state of discipline and training. This description of a modern battle field, imperfect as it is, may

\* See Journal of the Institute, Vol. XV, page 129.—Ed.