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THE GERMAN AUTUMN MANŒUVRES, 1890.

By Major OTTO WACHS, Z.D.

THE manœuvres which took place in August and September last, and in the year before, have for two reasons given many interesting results; one is *powder with little smoke*, and the other the *magazine rifle with small calibre*. For brevity, we will speak of them in our article of to-day as new powder and new rifle. Both have brought *tactical* and *technical* innovations.

We will try in the following pages to give a short account of the results of our own experience, and the opinion of competent judges.

The manœuvres began as usual in August with the exercises of *regiments* and *brigades*; then followed operations of the *detachments*, representing skirmishes founded on the principles of war. Each party is generally composed of three to four battalions of infantry, two to three squadrons of cavalry, three batteries of artillery, and a detachment of pioneers.

The Commanders of the detachment are given their tasks by the leading Officer, who usually has the rank of General; they form their resolutions according to them, and lead the troops by day and by night. After the combat has taken place, the leading Officer criticizes everything concerning the command, the behaviour of the three arms and that of the outposts. On this occasion the leading Officer gives the decision as to which of the parties has fulfilled its duties, and which way would have been shorter or better. German discipline does not allow the judgment of the leading Officer to be contradicted. The umpires can give only the result of their observations, what they have seen during the action, before or after the criticism of the leading Officer, but the decision rests alone with him.

We come now to the grand manœuvres—brigade against brigade, division against division or against a marked enemy, army corps against army corps, or, as took place in Silesia under the command of the Emperor, two army corps against a marked enemy.

During the exercises of detachments, and during the grand manœuvres, we had occasion to observe new tactical forms in the three arms and in connection with each other; but not the forms alone have altered, new principles have appeared.

We begin with the "queen of battles," with the *infantry*.

The *low trajectory* of the projectile from the new rifle, its *accuracy* in hitting the aim, and its *wider sphere* of activity, have caused the *distances* to be *increased* from where the beginning of the action takes place. The "old school" cannot longer hold its own against the new time, new weapons, and new principles. This *soi-disant* old school taught that the infantry only could have any effect on the enemy when it approached it as nearly as possible, and thought it not necessary first to shake the enemy by the fire of the artillery and infantry. It was on the 18th of August, 1870, on the battlefield of St. Privat, where the Prussian Guard had to pay with so many lives

NOTE.—Owing to pressure of time, the proof was not submitted to the author for correction. Those errors which were obvious have been, as far as possible, corrected here.—L. A. II.

the adherence to this old principle. But even when the "needle-gun," with its shorter range, could be used for such a reason, the "Mauser gun" never could; it and the magazine rifle have completely superseded it.

Till the beginning of this year it was thought a tactical fault if troops began to fire at a greater distance than from 400 to 500 metres. This has been altered suddenly by the "Terturen," that is to say, by the supplements to the "Felddienst-Ordnung." These supplements say plainly that it is forbidden for columns and lines to stand unsheltered if within range of artillery and infantry fire, and they order to begin firing at greater distances than before. These two directions change at once the tactics of the columns and of the lines into the tactics of the shooters. According to the new rules, the infantry fought in the first line in swarms of shooters, and where the country was favourable the troops were allowed to rally. Years ago, no one would have imagined that the time was so near that, as happened in the last manœuvres, ten companies of one regiment were engaged as shooters, while only two remained closed as a reserve. It happened that when an army corps was in action, whole brigades fought in masses as shooters. The new directions also have caused the former divisions of an army—the *Treffen*—to disappear; and the *Treffen* of to-day are nothing but reserves in rear, to make good the losses in the first rank. In consequence of the wider sphere of all projectiles from cannons or rifles, the distances between the troops of the first and second line, or, to use a technical expression, between the echelons, have become greater, and are now from 400 to 500 metres. If we reckon the distance at which our shooters begin to fire at the enemy (600—700 metres), we see that from the enemy in the first line to our reserve a distance of from 1,000 to 1,200 metres remains.

The distances given here are for a sheltered country; many Officers think that they must be larger if one is obliged to fight in an open country, otherwise the losses of men and horses would be too great. We have already seen that in fights only with shooters in the first line, and have given the small troops following different loose formations to have a chance against the projectiles. One formation, to give an example, is that the troop has only two men in front; the humour of the soldiers calls this formation *earth-worms*. We cannot think such deep formations advantageous to-day, where the projectiles of a rifle have penetrating force enough to kill three and four men behind one another at a distance of 400 to 500 metres. And what mischief would effect the fire of artillery!

As we are speaking of the field of battle, we must not forget that the infantry has great skill and dexterity in throwing up *earth-works*. One we saw rise in fifteen minutes; it had a strong outline or profile. This field limit was for shooters lying down, if for kneeling ones, from 30 to 40 minutes are required, and if the shooter is standing, from an hour to an hour and a half. But the infantry which resolves to hold its position is not satisfied with digging one limit, but wherever the ground allows it, limits are raised one above the other. Earth is the best material to shelter against the projectiles of infantry, but the outline must be nearly 1 metre thick. A brick wall of the thickness of the walls that surround villages, and trees in general, are little worth against the new rifle, which is the reason the defender did not use these objects as coverings and established rather a wall before them. But not the defender alone threw up walls, the aggressor did the same when halting for awhile; in the hand of the one as well as of the other the spade has become a weapon. Before one position we saw pioneers draw strong wire round posts or stakes, and from tree to tree, in order to detain the enemy under the strongest fire and to prevent the passage of cavalry. The wires were from 0.50 metre above the ground, and afforded a good hindrance.

We will not forget to mention the little *towers*, armed with a coat of mail,

and constructed by the late Lieutenant-Colonel Schumann. These towers were first used in the manœuvres, 1889, near Hanover. Eight of them were transported to a position of nearly 3 miles, at which were prepared walls, sheltered positions for artillery, &c. He found that the difficulty in bringing the towers into position was not great, and also that their value in the field was very considerable. They were used to strengthen weak points. Their cannons have a calibre of 3·7 and 5·3 centimetres, and fire bomb-shells, grapeshot, and shrapnel at a distance of 3,500 metres, firing forty shots in one minute. Only two men are necessary to serve the guns. Since the new powder is used the artillerymen are able to breathe in the tower, even when they shoot quickly. It has not yet been decided if these towers shall be used in a campaign on account of the bulk of the material for their transport and the ammunition.

With respect to the *arrangements of firing*, we have to say that this became less difficult than it was before, as the Officers see their soldiers and can influence them morally, as there is no smoke, a circumstance that is very significant. The rule has been followed by the fire-leading Officers to economize the ammunition of the soldiers, whilst the distances from the enemy are great, but to begin a hot fire when about to storm. Troops without cartridges are defenceless. If there should be a large target, though distant, visible only for some moments, as, for example, a battery in movement, one must fire rapidly at it. The smoke of the rifle is as little as when one lights a cigar; in damp weather the powder smokes a little more, and is visible for a longer time. The individual shooter, who is no longer veiled in smoke but to be seen if not sheltered from the enemy, is forced to do his utmost to profit by any shelter. Some regiments had fastened a little staff of iron near the muzzle of the rifle to rest the gun when shooting in lying down.

The instances of *marching* were extraordinary, and to prove them we accompanied a battalion which marched that day at least 25 miles. The weather was then very hot, and the troops had not only to march over sandy ground, to pass hedges and walls, but to fight, and yet we did not see one straggler. Another battalion marched one day, nearly always engaged, 15 miles, was then commanded to the outposts, from where it was sent at 9 o'clock p.m. to venture upon an enterprise against the flank of the enemy. This troop returned into the bivouac at 3 o'clock a.m.; after having marched 16 miles. At 6 o'clock a.m. the marching, fighting, &c., began anew, and on this day another 17½ miles must be marched. This battalion has in a short time marched 47½ miles, and that under difficulties. In this place we will mention that there are two sorts of marching, the *travelling march* (generally 14 miles on one day) and the *war march*, where no comfort is allowed and all is prepared to fight instantaneously. A regiment of infantry travels over 1 kilometre in about twelve minutes.¹ But the results such as those above only can be obtained by systematic training and control of everything on which the health and strength of the soldiers depends, and by the strictest observation of the discipline of marching. The secret of the result lies in the hard service of Officers and non-commissioned officers, who do not rest till their men are as comfortable as possible and till the soldiers have prepared their meals in the bivouac or in the quarters, if the men are provided out of stores, which is sometimes the case in the manœuvres, and is a proof as good for the Intendence as for the men.

This year the German *cavalry* was for the first time equally armed with lances. This weapon has many adversaries in the army, because it is said to be inconvenient for man and horse, to burden the horse and make it difficult to place the carbine as well as to fight on foot. The cavalry will get the new

¹ Over 3 miles an hour.

carbine (model 1868) next year. In some regiments experiments are being made with a new saddle.

The *strategical* service of the cavalry, that is to say, the service of information on which the Commander-in-Chief bases his resolutions and the plan to fight, has become very difficult on account of the new powder. When it was possible two years ago by small patrols of cavalry not only to find the enemy, but also to get information concerning his designs, it is to-day hardly possible to push cavalry near the enemy's position without sacrificing it, as it will be destroyed by shots before it has seen the enemy. The cavalry does not remark any smoke, and, though it hears the rifles and guns, it does not know from where the danger is, and it is impossible to learn by the ear the position of the shooting enemy when he is standing at different points and the detonations begin to fight with each other. And yet the cavalry must be, as it were, in the future the eye of the Army, but an eye which is willing at any moment to sacrifice itself. More difficult still to fulfil are the claims which the battlefield requires if it must act against artillery and infantry.

On some occasions we saw cavalry fight on foot and have influence on the result of the day; it happened to occupy important positions, and was able to hold them till infantry and artillery could arrive; another time, a pass far from the position was occupied during the night, and through this pass, which it secured, the infantry debouched the following morning; sometimes it succeeded in laying an ambush.

The perseverance in *marching* was very great, and after the manœuvres we found the horses in good condition. On one day a cavalry brigade was sent to flank the enemy, the distance ridden was not less than $37\frac{1}{2}$ miles, $\frac{1}{3}$ of which were through a narrow, hard way, ridden a long time in compact columns at one side, of marching infantry and artillery. To pass this last distance quickly, the brigade was forced to trot incessantly. Three squadrons of hussars had to pass the *Führde* (sund) of Flensburg, near Ekensund, which is here 114 yards broad; two squadrons were transported in ferry-boats, but the horses of the third were unsaddled, and swam through the sund, led by the hussars from boats; in two and a half minutes the horses swam through.

With great interest the cavalry manœuvres took place in August, where the Guards were engaged, as well as the manœuvres of two divisions of cavalry in September. With the first exercise four regiments were employed on each side, supposed to be the vanguard and rearguard of two armies; these manœuvres were therefore very instructive, as the two Commandants alone knew where the troops should be in the night. The exercises demanded no long marches, but were extended very widely; small detachments had to swim often through the Spree. The two cavalry divisions which fought against each other were twelve regiments of cavalry strong, thirty-six guns, two battalions of infantry, pioneer, and telegraph detachments; these exercises took place between the Saar and the Mosel.

Just as significantly as the two arms spoken of, the new powder influenced the *field artillery*. To find out the distance between the enemy and our own position has become easier, as no smoke on our side hinders observation: it has also become difficult, because the lines of the enemy are not defined by smoke. If the artillery of the enemy is sheltered, and fighting has begun, one cannot find it by the sounds, and in time of war we are obliged to try to find the artillery which aims at ours by the lines which are made by the projectiles of the enemy in the ground. In order not to betray our position it is dangerous to change it (the regiment warns directly for change of position) if there are no pressing circumstances. But when a change must take place, then the artillery wants more scouts than in old times, who look for a

new position and for the best way to reach it. More than ever the artillery must profit by favourable moments, and fire then as quickly as possible. As the rifle reaches farther now, the artillery is obliged to be more than ever prepared against infantry, and it is no longer able to unlimber the guns and to hold its position against the fire of infantry at distances of from 1,000 to 1,200 metres; this would be ruin. Shooting exercises with ball ammunition had the result that a company of 250 men, with only ten cartridges for every soldier, was able in fifteen minutes, at a distance of 1,300 metres, to destroy a battery. In the same manner as the seeing and aiming at artillery has become more difficult, it has become easier concerning infantry, which oftener must change position. Only the artillery of two German army corps used the new powder during the manœuvres. One saw very little smoke, but remarked often a fire-flash that came from the muzzle, and the position of the cannons was betrayed when before them either was sand, which whirled after the shot, or if dry grass began to burn. The artillery was used in the manœuvres when possible in great masses, and in the field one hopes to gain the victory by the better practice in shooting.

Pioneers who had prepared the position for the artillery afterwards served it as guard.

More than ever this year were undertaken *enterprises at night*, generally going out from the gros of the outposts. The night was chosen to avoid the great loss of lives caused by the new powder and rifle, but these enterprises were undertaken to surprise the enemy and to obtain a commanding position for the action of the next day. Such a night expedition lays highest claims to the discipline and order of the troops. Speaking of these enterprises, we must observe that one does not intend to fight night battles in the future, a view which does not put out the possibility of assembling before daylight, and with daylight to begin with superior forces a decisive battle (Tel-el-Kebir).

For some years, and also this year, many troops were given the *baggage*, or a part of it, to accustom the leading Officer and the troops to these *impedimenta* (carriages of ammunition, of medicine, the columns of provisions, the detachments of telegraph and telephone, &c.), which lengthen the marching columns and make them less movable, which must be sheltered on the march as well as in the bivouac and in the cantonment. If these trains were with the troops or not, in any case the orders for marching, fighting, &c., must be exactly the same as it would be in war time, when all the trains are with the army.

Whilst the infantry of the IXth Army Corps bivouacked *under tents*, it was only allowed in the XVIth Army Corps to take in the manœuvre, for Officers and men, the same things as in war, and in no bivouac did we see *one tent*; the Officers were lying at night near the men in the open air. When the troops had the carriages of ammunition with them, the *supplying of cartridges* was practised. That this supply shall take place at the right time is the duty of the Commander of the battalion; he has to direct the carriages behind the line, and to take care that ammunition is brought to his companies in the first line by soldiers who are trained for this service, or by the reinforcements which are sent there. In war the soldiers take the ammunition of the dead and wounded, and fill all their pockets with cartridges. It depends on the country and on other circumstances where the carriages of ammunition are placed, but, at all events, it must not be difficult to reach them.

A short time after one has arrived at the cantonment, Officers and non-commissioned officers have to make themselves *acquainted* with the place and the country round it, that they may be able to give at every moment a disposition for defending it, &c.

With some battalions of riflemen *trained dogs* were of great use, because they gave warning if anybody came near to the camp from outside.

The *helmets* covered with brass and the *buttons* of the uniforms were betrayers in particular when the sun was shining.

The *loading* and *unloading* railway carriages with infantry, cavalry, and artillery were executed fast and quietly.

The *result* of the German manœuvres is this : Because the Commander-in-Chief cannot get quick and exact reports about the enemy, the *deployment* of the troops must be more slow and more cautious ; but not this alone, also the *crisis* of the fight will be more remote than before, because the engagements begin at greater distances and the firing must have longer time to do its work. As so many new factors must be taken into consideration, the demands on every man of the army, from General to the last soldier, have grown immensely, and with them the responsibility. The *importance of the ground*, and the good or bad use made of it, can decide, in particular with unpromptu fights, the fate of the day. Artillery and infantry must support each other more than ever, and the infantry cannot reap the laurels in a ranged battle *without being aided* by artillery. Attacks in front against an enemy who has not been weakened by our projectiles *cannot succeed*. The defender will take *greater* profit from the new powder and new rifle than the assailant. The interference of cavalry has been more *limited*, but is yet possible.

We conclude this article here, but suggest that now, more than ever, the result of the battles of the future depends on the *SPIRITUAL* and *MORAL* factors of the armies : the spiritual, as the claims to the character to self-dependence and to reflection have increased ; the moral, because the terrors of the battle are no longer veiled in smoke, that intoxicated in some manner.