

## The Employment of Artillery in Masses.

In the last report of the Royal Artillery Institution there is a translation from the *Neue Militarische Blätter*, by Captain E. S. May, R.A., on the above very interesting subject:

When we speak of employing artillery in masses, we mean the concentration of a larger number of pieces than are contained in the tactical units for the attainment of some definite end. Such a method of employing them is no new idea; for neither modern ideas about the fire combat nor modern tactical knowledge are necessary to enable the advantage to be seen that may be derived from the concentration on a single point of many guns, and the heavy losses such a use of the weapon, most effective for destruction, must entail on the particular part of the enemy's position which is chosen for a target. Gustavus Adolphus concentrated his great batteries in action in this very way, and Frederick the Great's endeavours always aimed at a similar handling of his artillery. "The fewer guns brought into action the more human blood has to be spilt." If under the Great King such tactics remained still in their infancy, it was not because their worth was unrecognized, but because the mere technical knowledge of those days did little to aid their development, and prevented their general adoption.

The smooth-bored guns had neither sufficient accuracy nor range to permit of artillery firing over the heads of the infantry on their own side, and positions for artillery had therefore to be selected where they would interfere as little as possible with the infantry advance. Naturally enough, such positions were often only to be found at intervals along the line of battle. Moreover, a certain fixity of position is required to thoroughly develop the advantages of concentration; a position once taken up must not be lightly abandoned. Now, to carry out such tactics successfully, the guns must be possessed of so great a range that, however much the tide of battle may surge to and fro, they need not be in a hurry to change their positions. Yet, although there was seldom space for the employment of his artillery in masses, we observe that Frederick never forgot the fundamental principle of keeping the fire of his guns concentrated as far as possible on one target.

It was not the number of the guns brought together, but the way in which positions were taken up, and the uncompromising way in which the same point of their foe's line was adhered to for a target, that forms the chief characteristic of the handling of Frederick's artillery on the field of battle. They endeavoured to produce a decisive effect by a rapid fire at short ranges. Now, to accomplish this, it was absolutely necessary that the artillery should march near the head of the column, and should be possessed of considerable mobility, and the defeat of Kunersdorf was in a great measure due to the fact that in this respect the guns were still somewhat to seek." In spite, too, of the inevitable and often considerable separation of batteries, we find that in all Frederick's battles almost a concentrated effect was produced. This fact speaks volumes for the intelligence with which they were commanded, though doubtless such good results were only possible under the circumstances in an age where the course of an action might more clearly be foreseen and provided for than now-a-days. The King could pretty well decide beforehand the exact positions his batteries were to take up, and the way in which his attack was made showed tolerably clearly what the course of events would be. When it was known before the battle which of the enemy's flanks was to be assailed, it was not a very difficult matter to bring the artillery early into action against it. Often and often the guns were so exposed in the long preliminary march that against any but an incapable and unenterprising cavalry such a manoeuvre must surely have ended in disaster. (Mollwitz, Rossbach, Leuthen.) During this last battle, where we may also see an excellent example of the celebrated oblique line of battle introduced by the King, there are some interesting phases in the handling of the artillery to be noticed. 1. An early development of a powerful artillery fire against the wing of the opposing infantry selected for attack. 2. The formation of a strong battery to oppose the enemy's artillery (on the Muhlenberg). 3. The advance of the artillery *pari passu* with the infantry. (First of all to Sagschutz, and then to the Muhlenberg). 4. No reserve of artillery is set aside. Rossbach shows in the same way the concentration of eighteen guns into one battery (on the hill of Jaunsberg). The splendid results obtained by the fire of these guns is a feat of arms which is perhaps too little lauded in history, compared at any rate with the much bepraised deeds of Seydlitz's Cavalry. Had it not been for the confusion they occasioned, although only for a short time, in the enemy's ranks the charge of the Prussian Cavalry would scarcely have been as decisive as it was. The battle of Kunersdorf likewise furnishes an example of the employment of the artillery of that period in masses. At that battle three batteries of about twenty guns posted in somewhat widely separated positions on the Klosterberg, Wachsberg, and Spitzberg, cannonaded the Russian left, which rested on the Muhlenberg,

with excellent effect, especially so in the ease of the battery on the Spitzberg.

The defective organization of Frederick's artillery, however, formed the greatest obstacle to its consistent employment in masses. No regulations on the subject existed, and there were only a few instructions (in their own way, however, quite exceptionally good), which inculcated the pounding of the point of attack with masses of artillery, uniformity of direction, and the formation of an Artillery Reserve. The greater mobility of the "regimental guns," and the unwieldiness of the guns of position prevented these instructions being fully carried out. It is the merit of Napoleon that he succeeded, at any rate to some extent, in getting rid of many difficulties of organization, but the constant wars he was engaged in left him neither time nor leisure for a thorough reorganization of the arm, although he more than once contemplated such an undertaking. In spite of the evil experiences which the French suffered at the commencement of the wars of the Revolution, owing to the defective organization of their artillery already alluded to, they could not bring themselves easily to break away from the old system of artillery attached to a regiment, and at the battle of Pirmaseuz the "regimental" were placed in position between the "position" guns.

Another advance in tactics introduced at this time furnished an additional obstacle to the employment of artillery in masses. The advance to attack in column no longer rendered impossible to decide on the positions for artillery much beforehand, and they had to be taken up as opportunity offered during the development and progress of the action, yet the prompt accomplishment of the orders then given was often impossible owing to the unwieldiness of the pieces. But the nature of the tactics of those days, and the advance of large masses to the battle-field, led Napoleon to employ his artillery in masses too.

"Victory will be his who understands how to bring a great mass of guns into action unexpectedly." His first experiences, however, in a change of organization were by no means agreeable. The combination of different calibres in one battery robbed the divisions of Austerlitz of all their 12-pounders, which had been called together for the formation of one vast battery. The enterprise displayed by the French artillery thus collected in masses during the wars of Napoleon, their advance, as at Friedland, to within the shortest ranges of the enemy, placed them often in very precarious situations, but frequently determined the fortunes of the day, as during their campaigns in Spain. At the battle of Wagram, Lauriston massed 102 French guns between Aderklaa and Breitensee against the Austrian centre to prepare the way for the assault by Macdonald's great column. A new change in artillery organization was the outcome of the experience gained in this battle. Each corps set aside an Artillery Reserve of at least twenty-four pieces in addition to the divisional artillery, and the Artillery of the Guard formed an Artillery Reserve for the whole army. The fire of 102 guns was concentrated against the Bagration entrenchments at Borodino, and 101 guns cannonaded the Rajefski redoubt at the same battle. This battle shows, like that of Waterloo, that a general Artillery Reserve for the whole army is not necessary. It hardly ever is used in mass, and generally acts merely as a reserve from which to replace disabled guns in the front line, as was the case with the French on August 16, 1870.

The chain of epoch-making changes in artillery organization comes to an end with the Napoleonic period. In later years its employment in masses was carried to an excess, and beyond the point its organization rendered desirable. Modern views on the tactical employment of artillery are based on the experiences and lessons of the two greatest masters in the art of war, Frederick the Great and Napoleon. The campaign of 1870-71 was noticeable amongst other things for the decided preference shown by the Germans for the employment of artillery in masses, especially so at the battles of Worth, Mars-la-Tour, Vionville, Gravelotte, and Sedan. Modern views have extended as regards this subject in the directions we will now indicate.

1. It is no longer a matter of cannonading one point of attack, or target, but in the case of a battle in which hundreds of thousands of men may be engaged there will be several points on which it may be necessary to concentrate fire as the progress of the action may dictate.

2. Ranges have considerably increased, and a crossing, oblique, or often even enfilading fire may be concentrated on one target in addition to that from the direct front. Changes of position to cannonade a more distant target which may suddenly appear during the battle's course will be less necessary than formerly; and lastly—

3. The vast increase in the number of guns renders their employment in masses an absolute necessity. Since they cannot fire over one another, the guns must be placed side by side; and since the whole artillery of an army corps must get into position within the front it occupies, which would be about two thousand yards, and as there are about 100 guns with usually twenty paces between each to be provided for, we see that the guns would want nearly as much front as the whole army corps itself requires, and can readily understand how concentration