



Regimental artillery

General Tactical Review - Fire

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Tactique générale

In an attempt to understand the reasons for the erratic evolution of regimental joint structures, the case of equipping infantry battalions with light pieces is exemplary.

From the origins

Picard¹ wrote: "From the very beginning of artillery, light guns (crocodile harquebuses, organs or pennants) were attached to the vanguard and cavalry detachments. This tradition was lost in France in the seventeenth century, while it regained new vigour in neighbouring nations. »

In the late 1730s, the French army had begun to equip its infantry battalions with a Swedish style 4-piece.² served by artillery personnel. The Marshal of Saxony thus had in Fontenoy 50 Swedish-style pieces out of the 100 pieces that his army had, in addition to two pieces in the Rostaing.³ per battalion. These parts having been almost all dismantled by enemy fire, their number was considerably reduced so that the army of Flanders in 1748 had only 10 Swedish-style pieces out of 156 pieces.⁴ In 1757, it was decided that each infantry battalion would be equipped, at the entrance, in the field with a new piece in the sweat. In 1757, it was decided that each infantry battalion would be equipped, at the entrance, in the field, with a new sweat coin and 2 new 3-piece Rostaing, drawn from artillery depots but served this time by infantry personnel with high pay. The maintenance and service of these pieces being neglected by the infantry, Gribeauval's reform returned them to the artillery in 1765.⁵ before giving them back to the infantry again in 1773 following a reduction in the artillery and the opposition of Vallières, then back to the artillery in 1774 when Gribeauval was finally appointed inspector of the weapon!

In 1809, the capture of the arsenals of Vienna made it possible to equip all the regiments with two light 3 or 4-pounder guns. These units would have been disbanded at the end of

the campaign but reappeared in 1810 in the Elbe observation corps. They disappeared definitively after the losses of the disastrous campaign of 1812: In 1813, the available parts and horsepower, after requisitioned throughout Germany, could barely provide a light battery for each cavalry division, so much so that in 1815 the divisional artillery and the corps artillery reserves themselves were often reduced to a single battery. At Waterloo, Guyot, commanding the heavy cavalry division of the Guard, complained that he did not have the battery that was organically attached to him, and some dragoon divisions were reduced to having some of their cavalymen dismounted in front of the English squares to support the fire charge of their rifles.

The replacement, under the Restoration, of the infantry regiments, generally with 3 battalions, by departmental legions of between 1 and 4 battalions.⁶ The first, in fact only in some legions, was accompanied by the recreation of one dismounted artillery company per legion (in fact only in some legions) at a strength of 46 men and probably 2 or 4 pieces, probably 4⁷.

Materials and personnel had to be provided by the artillery since the aim was to find employment for the remaining personnel of the dismissed regiments. It is known that this organization did not last more than 5 years and that, as far as the artillery and scout companies were concerned, was only very partially or not at all carried out. It was above all a response to the desire to dismiss the army which had shown itself to be politically unreliable during the Hundred Days, and at the same time it disarmed France and the persistent mistrust of the coalised nations.

The Great War and the multi-weapon infantry

The artillery of the infantry battalions and regiments was not mentioned again until the arrival of the machine guns. Invented by an artilleryman, considered as artillery pieces (and called "ball guns") and initially grouped by batteries, these materials provided the reThese materials equipped the infantry regiments at the end of the 19th century with a section of 2 pieces per battalion, an indisputable indication of their filiation with the former light infantry artillery. The dragoon and cuirassiers regiments were also equipped with them. Significantly, the service of these pieces was now and would remain the responsibility of the weapon to which they were assigned.

It is the necessities of positional warfare that will give a decisive impetus to the development of "artillery" to accompany infantry regiments. To enable the infantry to defend its positions and attack opposing defensive organizations, it was necessary to have high-powered, high rate of fire, portable weapons capable ofThe number of machine guns, and later machine guns, continued to grow. In order to neutralize, in the attack, the blockhouses and other "machine gun nests", it was necessary to use larger calibre, straight shot weapons, hence the adoption by the French of the 37 mm rapid fire gun model 1916, an accompanying weapon transportable in 3 bundles and served by 8 men. The tight trajectories of these weapons, like those of the field guns, could only cut off the enemy parapets, and to reach the bottom of deep, narrow and relatively close trenches, curved fire weapons were needed, hence the many attempts to develop grenade launchers, bomb launchers and trench mortars, which led to the adoption of the

81 mm Stokes mortar, the model for all infantry mortars in use up to the present day. The infantry regiment of 1918 thus lined up a company of 3 37-mm guns and 6 81-mm mortars, while each battalion lined up a company of 12-gun machine guns.

It should be noted, however, that like machine gun sections, infantry guns and mortars will henceforth be considered as internal support and infantry weapons, not as artillery, and personnel will be supplied and trained by the infantry. The use of such armaments for the benefit of the infantry will therefore never be considered as "joint". However, the weight and bulk of this equipment, and the difficulties of supporting and supplying it in combat, already made its long-term use in a foot manoeuvre on infantry ground precarious. The entry into service of the FT tank will provide a partial response to this problem since, armed with either a 37 mm gun derived from the one in service in the infantry⁸The concept of a machine gun was a means of moving and serving a collective piece and its ammunition over infantry terrain and at infantry speed of advance at the cost of only two men instead of 8 or 10. Although light tanks were then considered infantry, a dose of "joint" cooperation reappeared as the need forAlthough light tanks were then considered infantry, a dose of 'joint' cooperation was reappearing as the need for training and support and the desirability of concentrating these assets had led to their being grouped into autonomous companies and battalions, attached to infantry divisions or regiments for the duration of an action.

Apart from the appearance of anti-tank weapons, the infantry of 1940 had not changed much. The French infantry regiment theoretically had at the beginning of the war 8 81 mm mortars, 9 light mortars of 40 or 60 mm, 48 heavy machine guns and 12 25 mm SA-L light towed anti-tank guns. Some regiments had also kept some 37 mm guns. All of them were manned by infantry personnel, but the weight of some equipment (nearly 500 kg for the 25 mm gun) made it impossible to use them off the roads and paths. The tanks, always grouped in battalions in the infantry, belonged organically to large units and commands. The replacement of 81 mm mortars by 120 mm mortars had been considered but was not carried out before the war: as for the 25 mm gun, the weight of the loads and ammunition excluded in any case its transport on men's backs.

After five years of war, the American infantry regiment and its partially motorized French counterpart lined up six 105⁹18 x 57 mm anti-tank guns¹⁰18 x 81 mm and 28 x 60 mm mortars, 35 x 12.7 mm and 42 x 7.62 mm heavy machine guns.¹¹81 automatic rifles BAR¹²and a lot of bazookas. The German regiments, for their part, lined up 6 howitzers of 105 and 2 of 150, 3 anti-tank guns of 7.5 cm PAK 40, 8 mortars of 120 mm¹³It was equipped with 12 x 81 mm, 12 x 81 mm, 24 heavy machine guns, 107 light machine guns, 332 machine guns and also numerous Panzerfaust. The German infantry used 120 and 81 mortars at battalion level, an example that will tend to become widespread after the war until the guns disappeared from the regimental orders of battle.

In addition to adapting its trajectory to the needs of firing from and into a trench, the success of the mortar in replacing guns as a weapon to accompany theThe success of the mortar, which replaced guns as an infantry support weapon, can be explained by its relative lightness, its great ease of use, the high rate of fire and its relatively low price. Without a mount, mechanisms, mobile breech, requiring only a low muzzle velocity and accepting a poor accuracy, the machine is, with equivalent performance, obviously much simpler and lighter than a gun. To take just one example, while the Stokes mortar

weighed a little over 60 kg in 3 bundles and sent a 3 kg shell, including 600 g of explosive at a rate of fire of the The 37 mm gun weighed more than 100 kg, in 2 bundles of 40 kg and one of 20 kg for the barrel, to send shells of only 600 g including 30 g of melinite at a useful range of 1,500 m and at a practical rate of about 15 shots/minute. The guns and machine guns of tanks having provided during the Second World War a preponderant part of the support to the infantry in strained fire, the infantry had gradually to reserve mortars for themselves.

From Battle Groups to Joint Regiments (and back...)

The lessons of the war had triggered an obvious infatuation for joint organizations¹⁴ Kampfgruppen, Combat Commands and Regimental Combat Team. The 7th Rapid Mechanical Division, an experimental unit, was thus articulated into joint regiments, each with a 105 mm AU50 self-propelled battery. This attempt was not generalized and the guns disappeared from the regimental orders of battle in most armies. In the Far East, in Algeria, then in the French army from 1970 to 2000, the exclusive use of the 120 mm mortar was generalised at the regimental level.¹⁵ and 60 and 81 mm mortars at the company level.

The renewed downsizing suffered by the French army from 1960 to 2008 eventually led to a new challenge to these organic structures. At the turn of the 2010's, the French RI lost all the "organic elements" to which it had become accustomed, tanks, motorized scouts, etc. The French Army had to make the most of these "organic elements", heavy mortars, retaining as "accompanying artillery" only heavy and light machine guns and light mortars, generally used at company level. The 120 mm mortars were poured into the artillery regiments in double endowment. This evolution, which was supposed to improve the capabilities of the artillery, was in fact the de facto renunciation of an essential capability, the trained manpower forbidding to put in campaign both systems simultaneously.¹⁶

Some thoughts

On a purely tactical level, the mobility of the "machines" (and their ammunition) across the terrain used by the infantry and at its own pace posed the essential limit to the support function. In extreme circumstances, where only the troop on foot could advance, the use of man-portable machines with their supplies, reinforced by the ability of pack animals: light or heavy machine guns and light mortars, became a permanent feature. This was the case during the mountain war in general, many episodes in the colonies, the war of position between 1915 and 1918, the Italian or Burmese campaigns, the French war in Indochina. And the ability of the command to supply its infantry with accompanying ammunition has always been one of the essential limits to the action of this weapon: Thus the range of the attack beyond the range of heavy non-movable parts was always conditioned by the capacity to carry accompanying ammunition.

But the question of manpower and, behind it, those of recruitment, training, career management, training, administration, have at all times taken a predominant part in

developments that appear to be erratic. All things considered, the difficulties encountered by the infantry in maintaining skills in its "mortar" speciality field make it difficult to maintain a high level of competence.s judgment when Gribeauval decided to pour light pieces into the artillery to remedy their misuse by the infantrymen. How to maintain competence in micro-fields whose terminal rank is that of sergeant as was the case for the mortar specialists of 81 in the French infantry of the 70-90s?

This question is not unrelated to another broader issue: how to learn to use a weapon or system "in large" when it is organized and used only in small structures? This question that we have already asked about the systematization of the "artillery groups" with 2 or 4 guns, applies as well to the generalization of micro-capabilities that would be assigned to joint regiments. On another scale, the historian explains the setbacks of the Union cavalry against his opponent in the first two years of the Civil War: Having no command of a large cavalry unit, the Federals knew only to maneuver "small packages" against a Confederate cavalry maneuvering and organized into divisions and cavalry corps. But this is another story...

1 Commander E. Picard & lieutenant L. Jouan, L' artillerie française au XVIIIe siècle, Paris ,Berger-Levrault, 1906.

2 The ordinary 4-piece formed the bulk of the field artillery's manpower at the time. The Swedish-style gun was a third shorter and half (600 pounds) lighter than the ordinary 4-piece, had a higher rate of fire and was easily fired by hand.

3 The Marquess of Rostaing designed a 2 and a half piece, weighing only 200 pounds, and fired by a single horse or 4 men. The piece caused a great deal of excitement because of its rate of fire of 20 rounds per minute. The Marshal of Saxony wanted to equip his infantry with 2 pieces per battalion. But following disappointing results, this equipment was quickly abandoned.

4 Picard wrote significantly; "One can see the great disadvantage of these guns, which was to distract from the large batteries, at the beginning of the battle, a significant proportion of the artillery personnel to detach it with the infantry in the service of the Swedish-style guns . »

5 The Gribeauval System 4 coin weighed less than 600 pounds, the weight of the old Swedish-style coin, and its adoption made the Swedish and Rostaing coins disappear.

6 This reform had been considered by the Emperor in 1807 and then postponed. The order of 11 August 1815 provided that the legions would comprise 2 line battalions, 1 light infantry battalion, and could be attached an artillery company and a scout company. The addition of several legions in the months and then years that followed led to a change in the composition of the legions and altered their homogeneity.

7 The author of these lines has so far been unable to find the slightest mention of the number and calibre of pieces planned or actually put in place, and it is quite possible that none of these units were ever established.

8 The 37 mm semi-automatic model 1918 otherwise known as the 37 SA 18.

9 The 105 HM3, a shortened part derived from the 105 HM2, carried by a suitable 75 mm mount, produced to equip US airborne divisions and RIUS gun companies. Range 7 600 metres.

10 The Americans adopted the excellent British ordnance QF 6 pounder anti-tank.

11 24 in light machine gun version and 18 in machine gun version.

12 The Browning Automatic rifle model 1918, replacing the Chauchat in the American army, was improved in particular by a bipod. Caliber 7.62, magazine of 20 cartridges. The one of the FM MAC 24-29 contained 25 cartridges.

13 The Germans reused then built themselves as of 1942 the excellent Soviet PM 38 mortar, under the name 12 cm-Granatwerfer-42.

of a weight of 285 kg in firing order, of 600 kg with its coupling and its front box, firing at 5.7 km a 15.8 kg shell at a rate of 15 shots/minute. Lightweight, easy to use, thanks in particular to its circular base plate, transportable on a man's back in three bundles, quick and easy to use.

14 See some for the outright suppression of weapons, at least for management and officer training. On this subject, read the article by Lieutenant-Colonel D., artilleryman, "Pourquoi des armes différentes?" in *Études sur les enseignements des opérations des dernières campagnes*, August 1946, 3rd office of the EMA, pp. 74-84. <https://gallica.bnf.fr/ark:/12148/bpt6k65355772.textImage>

15 The French army was in fact following the German example of the use of the 120 mm at the battalion level, since the French regiments of the period had all been reduced to the size of a battalion of chasseurs.

16 This remark

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