# Napoleon's Heavy Cavalry, the *Cuirassier* and *Carabinier*: Their Arms, Armor, and Tactics

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Napoleon Bonaparte came to power in France after his coup of 18 Brumaire year VIII (9 November 1799). Guided by his organizational genius, each branch of the French army—infantry, cavalry, and artillery—underwent a reorganization. Napoleon had definite ideas as to the role of each of these services, and he wanted to mold them into the most efficient army in Europe. According to Napoleon, there were four types of cavalry: scouts, light cavalry, dragoons, and *Cutrassiers* (heavy cavalry).<sup>1</sup>

On 17 September 1802, Napoleon ordered the heavy cavalry within the army to be reduced to twenty regiments: two *Carabiniers* and eighteen *Cuirassiers*.<sup>2</sup> (The *Carabiniers* were elite heavy cavalry units). Originally, only six of these units were to be issued the cuirass; however, by the end of 1803 twelve regiments of armored heavy cavalry existed within the French army. Two more regiments of *Cuirassier* were added by 1810, and the two *Carabinier* regiments were armored after taking heavy casualties during the 1809 campaign.<sup>3</sup> Therefore, there were a total of sixteen armored cavalry regiments in the French army at the height of the Napoleonic Empire.

## **SWORDS**

The main weapon of the Cuirassiers was a straight cavalry sword: the *Carabinier* first carried a straight sword. but it was replaced in 1810 with a curved saber. In 1801, the heavy cavalry were issued a new pattern of sword, called the An IX ("Year IX"). This replaced the old heavy cavalry sword issued in 1784. The new sword had a flat blade 381/4 inches long by 1% inches wide; the blade was % of an inch thick. The hilt consisted of a brass knucklebow with three extra bars. These bars connected at the upper part of the guard, but did not continue into the pommel, stopping ½ to ¾ inches short. The grip consisted of wood bound with cord, covered with leather, and this was bound with twisted brass wiring. The grip did not, however, have a brass ferrule at the base. The scabbard was made of plain steel. It had two bands with hanging rings for the swordbelt and a steel shoe shaped like a lvre.4

This new sword was a formidable weapon, but there were several design flaws that needed to be addressed. The



first problem was the weight of the weapon. The flat, unfullered blade was very heavy, and the troopers complained about this weight. The second problem was the construction of the hilt. The three side bars did not extend into the pommel, which was a cause of weakness in the hilt. The lack of a brass ferrule at the base of the grip gave the weapon a tendency to split. The final complaint against the Year IX sword was actually in the construction of the scabbard. The lack of a wooden lining inside the scabbard made it vulnerable to denting which could cause the sword to stick when being drawn. Needless to say, this could be a most serious problem if it occurred in combat!<sup>5</sup>

The Year XI design of the heavy cavalry sword attempted to address the problems encountered with the Year IX pattern sword. The weight of the sword was reduced by changing from a flat to a double-fullered blade. The dimensions of the sword (length, width, and thickness) were basically the same. A brass ferrule was added to the bottom of the grip to keep it from splitting. Also, the side bars were extended to within ¼ of an inch of the pommel. The scabbards were reinforced by the addition of wooden liners. While this helped prevent the blade from getting stuck in the scabbard, it added weight to the sword; this nullified the weight lost with the fullering of the blade. Troopers continued to complain about the weight of the sword throughout the period of the Napoleonic Empire.

Although the Year XI sword was an improvement over the Year IX weapon, and this version of the heavy cavalry sword went into production, it was never officially adopted by the French government. Marshal Louis-Alexandre Berthier, the Minister of War, wanted further revisions made to the Year XI sword, and did not approve the new blades until 22 September 1804. The new pattern, called the Year XIII sword, was virtually the same as the Year XI sword, except that the three side bars of the guard, which did not connect with the pommel in the prior two patterns, was extended into the base of the pommel.<sup>7</sup>

The swords were forged at three sites in France: the Manufacturie Royale D'Alsace in Klingenthal (Southwest of Strasbourg), the Manufacture d'Armes de Versailles at Versailles, and L'Atelier de Paris in Paris. Of the three, the most important center was Klingenthal. Between 1800 and 1816. this company produced 15,199 blades of the Year IX pattern and 54,640 of the Year XI/XIII variety.8 This establishment came under the control of the Colaux family in 1801 (Year IX). There are three types of blade markings to be found on Klingenthal blades. The first reads "Manufacturie Nationale de Klingenthal, Colaux Freres Entrepreneurs." This marking is dated from 1801 (Year IX) through 1804, the year of the coronation of Napoleon as Emperor of France. The second marking reads "Manufacturie Imperiale de Klingenthal, Colaux Freres." Blades forged between the coronation of Napoleon and 1810 carry this inscription. The final variation of engraving is "Manufacturie Imperiale de Klingenthal"

followed by a date; the date replaced the family name. One other note on the Klingenthal blades: during the First Restoration of Louis XVIII, from April 1814 to March 1815, the manufacturers substituted "Royale" for "Impertale" within the stamp on the weapons.<sup>9</sup>

The Versailles workshops produced most of the quality weapons during the Napoleonic period. It was here that the weapons of the Imperial Guard were manufactured. Therefore, swords produced there were more ornate and were stamped with "VERSAILLES." Versailles also produced the hilts for blades produced at Klingenthal, so some of the heavy cavalry swords had Klingenthal stamps on the blades and Versailles stamps on the hilts. These hilts had their "VERSAILLES" stamped on the knucklebow.<sup>10</sup>

The blades from L'Atelier de Paris, a private firm in Paris, can be identified by a stylized "AP" mark. This mark has also been called "AR," perhaps because of the style of the stamp, and translated as *Armée de la République*. Also, these blades have an inspection mark that looks like a column or fasces with a Phrygian bonnet, or hat, which was the symbol of the French Revolution. This is the red bonnet that Parisian sans-culottes forced Louis XVI to wear as a symbol of his support of the Revolution. <sup>11</sup>

Officers' swords were more ornate versions of the trooper blades with some distinctions. Their swords, called

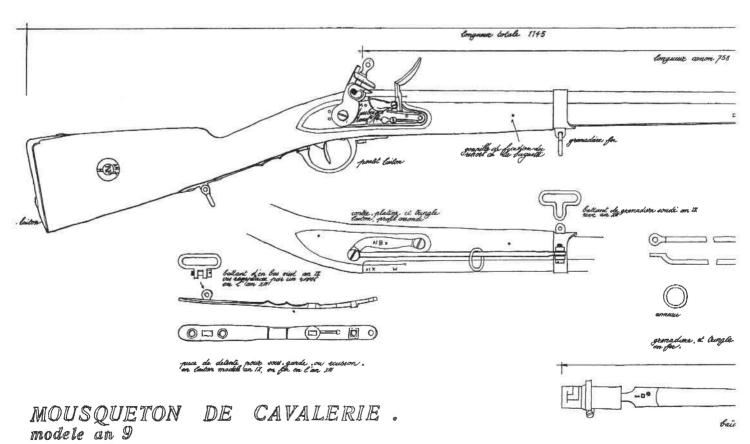


Figure 1 & 1a. Mousqueton de Cavalerie, Modèle an 9. Jean Boudriot, *Armes à Feu Françaises Modèles Réglementaries, 1717–1836*, Cahier #3, plate #5.

sabre de bataille, were either straight or curved, with scabbards of "black leather with gilded copper fittings or of browned sheet iron reinforced with gilded copper." The blades themselves had engravings on one third of their length. The hilts could be of the regular style, or the officers could have added a more ornate piece. <sup>13</sup>

The *Carabinier* regiments, before becoming armored, carried either a Year IV or a Year IX pattern sword. The Year IV sword had a length of 115 cm when sheathed. It had a straight, flat blade, a hilt with a distinctive copper guard that had a grenade stamped on it, and a leather scabbard with brass fittings. The *Carabinier* variation of the Year IX pattern sword added a fourth side bar on the guard.<sup>14</sup>

When the two regiments became armored in 1810 because of the casualties in the 1809 campaign against Austria, the straight cavalry swords were replaced by curved sabers. These "à la Montmorency" blades were part of the effort to keep the Cutrassier and Carabinier regiments' identities separate. As a further measure, the Carabinier troopers took the hilts, with the distinctive grenade symbols, from their old swords and welded them on the new blades. <sup>15</sup>

As usual, the officer swords and sabers were more ornate versions of the trooper weapons; officers were allowed the choice of straight or curved blades.<sup>16</sup>

### MUSKETS

When he came to power in 1800, Napoleon ordered a study of the existing weapons used in the French army and then formed a committee to improve and simplify these weapons. Before this, the firearms used by French soldiers were the old Royal army muskets of the 1777 pattern, known as *Charlevilles*. These were the same weapons sold to the fledgling United States troops in the Revolutionary War. The old pattern muskets were effective, but the chaos of the Revolution caused quality control at the various arms manufactories to deteriorate. Therefore, the new commission created the "System of the Year Nine," which included an infantry musket, a cavalry musketoon, a dragoon musket, a cavalry pistol, and a pistol for the gendarmerie. The new weapons were similar to the 1777 pattern weapons, but with minor improvements and simplifications. These were the

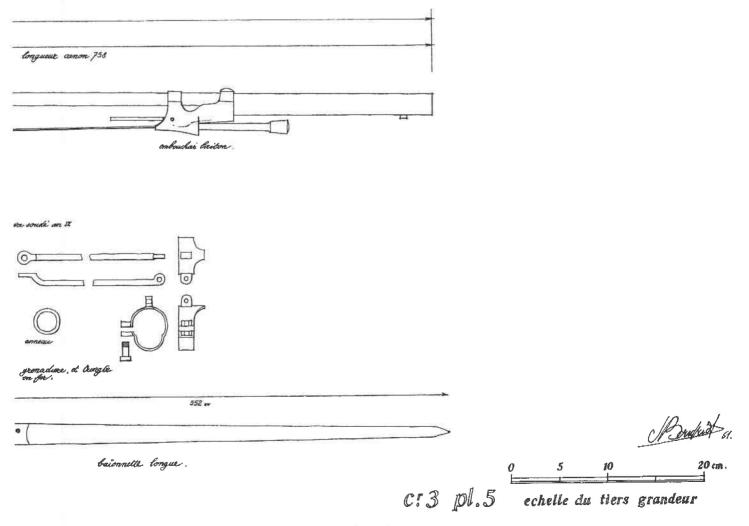


Figure 1a.

basic firearms of the French army during the Napoleonic wars. There were some minor changes and improvements with the "System of the Year Thirteen," but, with the exception of the cavalry pistol, the basic design remained the same.<sup>18</sup>

Napoleon's reorganization included the armories themselves. The four royal armories at Charleville, Maubeuge, Saint Etienne, and Tulle were reorganized and retooled to produce the new weapons, and four new sites were opened at Liège, Mutzig, Turin, and Versailles. Bayonets were produced at the Klingenthal installation, along with the swords.<sup>19</sup>

A decree issued on 25 December 1811 ordered 16,000 muskets be distributed to the *Cuirassier* and *Carabinier* units in preparation for the upcoming campaign in Russia. The *Carabinier* units had given up their firearms in the early years of the Revolution due to the lack of weapons for the infantry, and later were armed with the dragoon musket, which they gave up when they changed their uniforms after the 1809 campaign. The *Cuirassier* only used their swords until this time. They were accordingly issued the cavalry musketoon of the Year IX/XIII pattern. This weapon was based on the old 1777 pattern cavalry weapon, which had been modified and improved in the two systems of Year IX and XIII (1800–1801 and 1804–1805).<sup>21</sup>

The cavalry musketoon was 1.145 m (about 45 inches) long; the barrel was 0.758 m (about 29.8 inches) long. It weighed 3.289 kg (about 7.25 lb). Its caliber was 17.1 mm. The bayonette was shorter than the infantry bayonette, being only 0.487 m (19.17 inches).<sup>22</sup>

There are several manufacture and inspector marks on the musketoon. The most obvious is the name of the armory where the weapon was made. This is on the lock mechanism on the right side and reads *Manuf. Imp. de St. Etienne*. On the tang, just above the bolt that secures the barrel to the stock, can be found the system designation  $M^{le}$  an 9 (Modèle an 9). On the barrel, just forward from where it joins the stock on the left side, is an inspector mark and the year of manufacture, which is in roman numerals. On the stock of the musketoon, there is a circular mark that has the year of production, two inspector marks, and the date of manufacture. In the center of the circle can be found the letters *EF*, *RF*, or *MR*. The pair of letters can also be found just forward of the touch-hole on the right side of the barrel. Just behind the touch-hole is the mark of the barrel inspector. <sup>23</sup>

Approximately 560,000 cavalry musketoons were manufactured between 1803 and 1814. Their effective range was about 150 yards against a massed target, much less against small groups of men or individual targets. One weak point in the design of the musketoon was the narrowness of the neck of the butt, which tended to break off if a soldier struck

something too hard. All in all, the French cavalry musketoon was an excellent weapon of the period that equaled or excelled the performance of other European weapons in the same category.<sup>24</sup>

The musket used by the Carabinier regiments before the 1812 Russian Campaign was the dragoon musket of the Year IX and Year XIII patterns. These weapons were 1.417 m long (55.78 inches), with a barrel length of 1.028 m (40.47 inches). They weighed 4.275 kg (9.4 lb), and were 17.5mm caliber. 25 For the most part, the inspection marks would be in the identical places as those of the musketoon. One difference between the two weapons was the placement of inspector marks on the barrel, just in front of where the barrel joins the stock: the dragon musket had its marks on the right side, as opposed to the musketoon, which was on the left. Also, the year of manufacture was stamped on the left side of the barrel, in Arabic numerals. The actual firing mechanism of the dragoon musket (and the infantry musket as well) was larger than that of the musketoon, which was slightly smaller (160 to 144 mm). Also, the stock of the dragoon musket extended further along the barrel than that of the musketoon.26

## **PISTOLS**

In the systems of Year IX and Year XIII, the cavalry pistol was the one weapon that underwent a substantial change. The length of the pistol, the length of the barrel, and the caliber actually remained the same: pistol, 0.352 m (13.86 inches); barrel, 0.207 m (8.15 inches); caliber, 17.1 mm. The weight of the pistol dropped from 1.29 kg (2.84 lb) to 1.269 kg (2.79 lb). Both models had the name of their manufacture engraved on the plate in the same place as on the musketoon. The firing mechanism was the same on the pistols as on the musketoons, only on a slightly smaller scale (144 to 130 mm).<sup>27</sup>

The most obvious difference between the two models of pistols was the length of the stock and the muzzle stock cap that held the barrel and stock together. On the Year IX models, this piece was rather large and extended almost to the end of the barrel; it also encircled the barrel with two distinct loops, front and rear. The Year XIII model had a much smaller piece, which left about half of the barrel extended beyond the stock. The Year XIII model also had a circular identification mark on the left side, opposite the firing mechanism. This mark was similar to the ones found on the musketoon with *RF*, *ER*, or *MR* in the center, the year of manufacture above the center, and inspector marks as well. On the barrel of both models, the year of manufacture was engraved on the left, and the model type was engraved on the tang.<sup>28</sup>

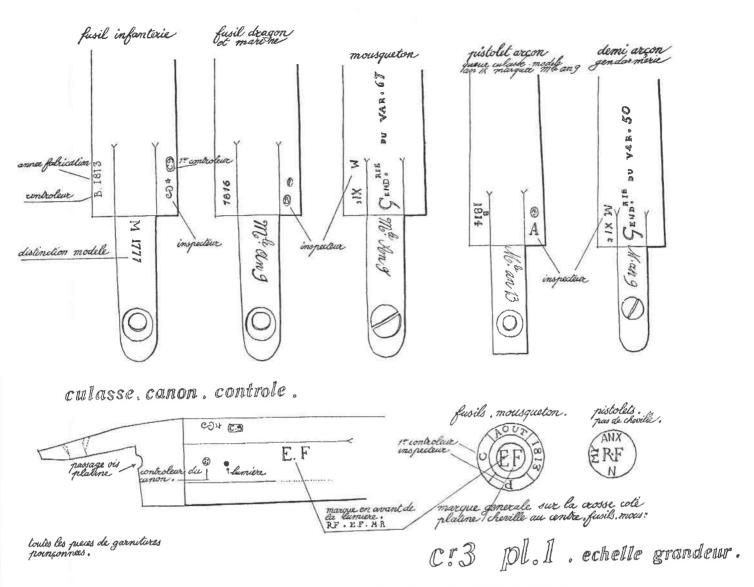


Figure 2. Identification marks. Boudriot, Armes à Feu, Cahier #3, plate #1.

## ARMOR

When Napoleon reorganized his cavalry in 1802, he had to consider the fact that his heavy cavalry, at the time simply called *cavalerie*, would have to contend with the heavy cavalry of the other nations in Europe. The Austrian army included regiments of *Cuirassiers* who had run roughshod over French cavalry during the Revolution; therefore, Napoleon decided to armor his heavy cavalry. However, unlike their Austrian counterparts, the French *Cuirassiers* were issued a complete cuirass rather than just a breastplate. This proved a prudent measure; during the 1809 campaign, the *Cuirassiers* from France and Austria met on several occasions, and the superior protection of the full cuirass proved its worth. The French cavalry defeated their opponents, achieving, according to Colonel Marcellin Marbot, an 8:1 ratio of killed and a 13:1 ratio of wounded.<sup>29</sup>

There were three different patterns of cuirass produced during the Napoleonic period. There were thirty-four copper

rivets on the outside edge of the front and back pieces. The "MkI" cuirass had a fairly blocky breastplate that formed a blunt angle at the bottom. This was made into a more rounded unit with the MkII cuirass, issued in 1806, and further rounded on the bottom of the breastplate with the MkIII cuirass, issued in 1809. There were belts at each shoulder and one at the waist that held the two pieces together. The shoulder belts were usually covered with brass scales; the exceptions were in the 8th Cutrassier regiment, which had bare black leather straps, and the 9th Cuirassier regiment, which used dual yellow-copper chains on their shoulder straps. The officer cuirass was, of course, more ornate, with gilded scales and silver lace down the length of each piece. One difference in the three patterns was that the officer's MkI cuirass only had thirty-two copper rivets, whereas the MkII and MkIII patterns called for thirty-four gilded rivets.30

The Carabinier cuirass was the same basic piece of armor as the MkIII cuirass, except for the thin sheet of brass

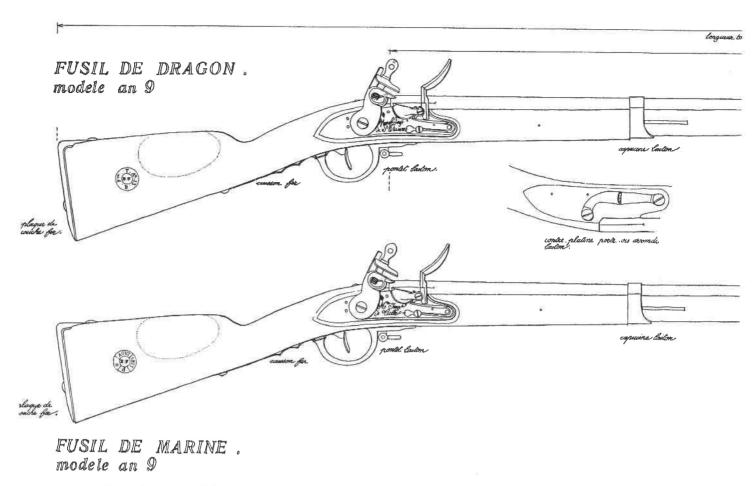


Figure 3 & 3a. Fusil de Dragon and Fusil de marine, Modèle an 9. Boudriot, Armes à Feu, Cahier #3, plate #4.

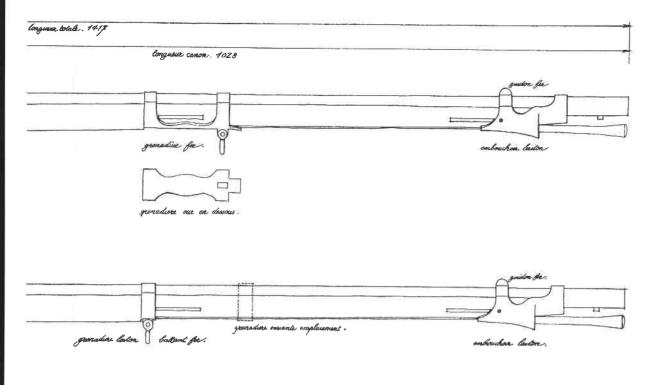
that covered the iron, leaving only a 25mm border around each piece, where the yellow copper rivets were placed. The straps on the armor were of natural leather with copper fittings. The officer's cuirass was very ornate, with a red copper sheet instead of brass; there was also a silver sunburst placed on the center of the breastplate. As mentioned earlier, the *Carabiniers* did not receive their armor until 1810.<sup>31</sup>

A trooper put on the armor by connecting the shoulder pieces together, lowering the unit over his head, and then securing the waist belt. The combination of cuirass, helmet, musketoon, and two pistols, along with ammunition, made for a heavy burden for the horses to carry. However, the cuirass provided good care against pistol balls, saber cuts, lances, and long-ranged musket fire. The armor was less effective against short-ranged musket fire, and no help what-so-ever against artillery. Originally, the cuirass was tested against three musket shots from thirty paces-if the armor resisted penetration, then it was passed. However, the number of "faulty" pieces was so high under this form of examination, the manufacturers and the bureaucrats within the Ministry of War succeeded in changing the "test" to one shot at long range.32 Even with this weakening of quality control, the cuirass helped make the French heavy cavalry the most effective shock units during the Napoleonic period.

## HELMETS

The *Cutrassier* helmet consisted of an iron cap, partially covered by a fur band, with a copper crest that held a horsehair main. Chin straps were leather covered in copper scales. Until 1811, there was no standard pattern for the helmets, so they varied from regiment to regiment, and even from trooper to trooper. These helmets also had red plumes, unless you were either a staff or senior officer; then they were white. The color of musicians' plumes depended on the regiment. The effort to standardize the pattern failed due to poor quality materials and workmanship. The troopers usually kept their old helmets rather than accept the inferior replacement.<sup>35</sup>

The *Carabiniers* had two different pieces of headgear during the Napoleonic period. In 1793, they were issued large bearskin-covered headgear, similar to those worn by infantry grenadiers (or some marching bands today). However, whoever designed these helmets forgot to include chin straps, so the cavalrymen had problems keeping them on! When Napoleon ordered the *Carabiniers* to wear a cuirass after the 1809 Campaign, the old bearskin helm was replaced by one along classic lines. It was made of yellow copper (officers helms were of red copper). The chin strap scales and



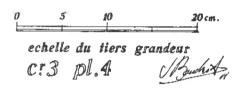


Figure 3a.

headband was of iron (silver for officers). The helmet was topped off with a scarlet comb rather than horsehair. The trumpeter wore trooper helmets, but before 1812, had light blue combs.<sup>34</sup>

# HEAVY CAVALRY TACTICS

Napoleon used his heavy cavalry as shock troops, throwing them into the battle after his enemy had been softened up by artillery bombardment and infantry assault. He also used them to defeat enemy heavy cavalry formations and to keep from being defeated himself. To give you an idea of these three uses, it is appropriate to present three brief episodes where the heavy cavalry played an important role in a Napoleonic battle. They are the battles of Eylau (8 February 1807), the Ratisbon cycle (April 1809), and Waterloo (18 June 1815).

In January 1807, Napoleon's army was bivouacked in and around Warsaw after destroying the Prussian army and chasing the Russian army into what had been Poland. The Russian army, commanded by General Baron Levin Bennigsen, made a surprise move with 63,000 Russian and 13,000

Prussian troops to try and attack Napoleon while his troops were spread out in winter quarters. However, his efforts at surprise failed, and he only saved his army from destruction by the fortunate capture of a set of Napoleon's orders by a band of Cossacks. Napoleon was unable to completely concentrate his army, so on the morning of 8 February he faced 67,000 Russian troops with 43,000 men.

The weather was severe, with heavy snow and temperatures below freezing. Napoleon's initial assault with his infantry was repulsed, and the Russian army advanced against the weakened center of the French line. Napoleon called on his brother-in-law, Joachim Murat, to take the cavalry reserve, 10,700 mounted men, and attack the Russian center and keep the French line from breaking. At 11:30 AM, Murat lined up the Reserve cavalry and charged the Russian line. Eighty squadrons of cavalry charged the Russian line at one time. Imagine the thunder of that many horses charging at one time! The snow and clouds of smoke from the use of course-grained black powder cut visibility and aided the French; the Russian infantry did not know what was about to happen until it was too late. The cavalry penetrated the infantry that was in front of the village of Eylau, then divided

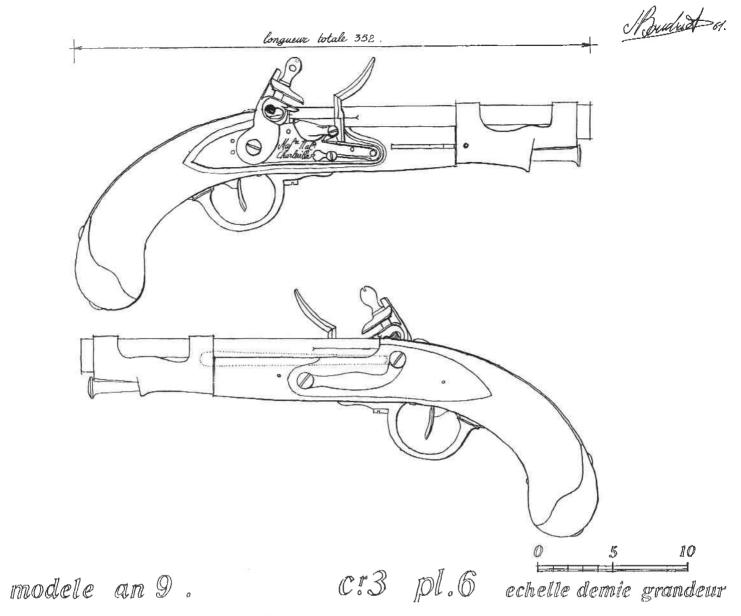


Figure 4. Cavalry Pistol, Modèle an 9. Boudriot, Armes à Feu, Cahier #3, plate #6.

into two columns. The left-most column struck some Russian cavalry and routed it, following it through the center of the Russian line. The rightmost column hit the second line of the Russian center and penetrated that as well. The two columns met behind the Russian line, reformed into one column, and charged back through the thoroughly disordered Russian line. This magnificent charge, costing the cavalry about 1,500 casualties, disrupted the Russian advance and gave Napoleon time to re-order his beleaguered infantry and saved the French army from possible defeat.<sup>35</sup> This, then, was how heavy cavalry could hold off a defeat.

The Campaign of 1809, against the Austrian Empire, gave the French heavy cavalry several chances to test its mettle against its Austrian counterparts. During what is known as the Ratisbon Cycle, the series of battles around the city of Ratisbon, French and Austrian *Cuirassier* faced each

other on the battlefield. After receiving a drubbing from French forces in the vicinity of Ratisbon, the Austrian commander, Archduke Charles, brother of the Emperor, positioned forty-four squadrons of cavalry to delay French pursuit as long as possible. Napoleon sent forty squadrons of heavy cavalry, supported by thirty-four squadrons of light cavalry and a division of infantry in pursuit of his foe. General Etienne Nansouty formed the 1st Heavy Cavalry division into battle order, with three regiments on the first line, while General Raymond Saint-Sulpice formed the 2nd division into column by brigade. The light cavalry formed up on the right and rear in a covering role. When the Austrian Cuirassier charged, General Nansouty ordered his Cuirassier forward at a trot, then at the charge. The Carabinier regiment, which was in the center of the French formation, fired off a volley with their muskets, and then charged into the melee. General

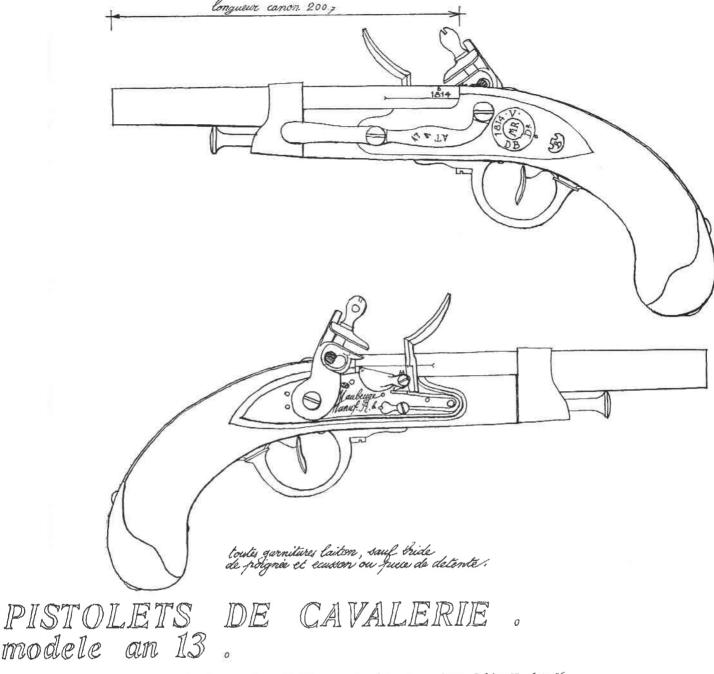


Figure 5. Calvalry Pistol, Modèle an 13. Boudrlot, Armes à Feu, Cahier #3, plate #6.

Saint-Sulpice followed immediately afterwards with his own charge. In this combat, the superiority of the French cuirass over the Austrian breastplate was shown. The French cavalry routed their opponents and went on to harass the withdrawing Austrian army.<sup>36</sup>

Finally, the heavy cavalry could be used to break through the enemy line at the proper moment, after the proper "softening up" by artillery and infantry assault, and cause the defeat of the enemy. Marshal Michel Ney tried this tactic at the battle of Waterloo. French artillery conducted an extended bombardment of the Allied line; this was followed up by an infantry assault. At about 4:00 PM, Marshal Ney saw

what he thought were signs of an allied withdrawal, and decided to unleash the heavy cavalry to penetrate the Allied line. What started out as one heavy cavalry division charging the enemy soon became more than 5,000 horsemen advancing. Unfortunately for the French, Arthur Wellesley, the Duke of Wellington, was not withdrawing from the battlefield; he formed his infantry into squares to repel the cavalry attack. Because of the lack of infantry and artillery support, the French cavalry assault was repulsed.<sup>37</sup>

If the French had used proper combined arms tactics, the Battle of Waterloo may have turned out differently. The heavy cavalry, when properly used and supported, were almost invincible. The *Cuirassier* and *Carabinier* regiments, thanks to Napoleon's reorganization and rearming, went from average heavy cavalry during the Revolution to being the pre-eminent cavalry force of the entire Napoleonic period.

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