
THE SERBIAN ARMY AND ITS STRUGGLE WITH THE AMMUNITION CRISIS OF 1914*

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ABSTRACT: *The paper discusses the key problem of the Serbian artillery in 1914: the lack of ammunition. The focus of analysis has been placed on the different strategies the Serbian state used to find artillery ammunition and additional weapons. Special attention has been dedicated to the collaboration with France and its shipment of the 'wrong ammunition' in November 1914. It has been shown that the ammunition crisis was overcome by combining a multitude of resources which included abundant assistance from the Entente, Greece, and the Serbia's industrial capacities. The problem of the ammunition crisis has been treated as a global phenomenon, enabling placing Serbian theater of operations into a wider perspective.*

KEYWORDS: artillery, Serbia, First World War, war logistics

“Finally, the pleasure for our eyes! The ammunition has arrived. But, what kind of ammunition! The French shells do not correspond to the French guns that Serbia bought before the war in the French military factories. They are longer by a few millimeters. Mistake? Or an intention? What was planned was now corrected by the Kragujevac workers: they shortened the shells at the Military-Technical Institute. The lost time has been compensated by the steam locomotive drivers from the Serbian railways.”¹

This is how the key moments in the Serbian ammunition crisis of 1914 have been described in the famous Yugoslav 1988 documentary: “Yugoslavia Made by the People “. The plot of the film centered on the story of the creation of the South Slave state. The movie was followed by the book, a photo monograph of the same

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¹ Miomir Miki Stamenković, *Tamo daleko: Jugoslavija po volji naroda*, video DVD, (Beograd: Ferpress, 2007).

title.² Disseminated through a video format and broadcasted on television, the message had a far-reaching impact. However, this was not the first time that the wider audience heard the story of the problematic artillery shells. The famous Serbian writer, Dobrica Ćosić (1921-2014), mentioned the arrival of the wrong type of ammunition in the second volume of his tetralogy, dedicated to Serbia in the First World War: “The Times of Dying”. More precisely, the protagonists of the novel talked about the arrival of the unusable shells.

“Canons are not the Serbian peasant boots. The French are not illiterate. Two and a half millimeters, for God’s sake! Judas Iscariots. We paid for them in gold and blood, and they killed our hope with this deception. Alas, Europe! Gentlemen and brothers, there wasn’t a more ruthless mistake in this new century than one made by the Allies, meaning these two and a half millimeters. Nor was there a more shameless friendly scam, professor. Yes, Europe!”³

This opus was published between 1972 and 1979 and it is hard to overestimate its impact on Serbia’s modern understanding of the Great War. Moreover, Ćosić’s book was dramatized by the famous Yugoslav dramaturge, Borislav Mihajlović Mihiz. The drama was performed in the Yugoslav Drama Theater in 1984.⁴ The scenes related to the French ammunition were an integral part of the play. With the movie, books, and theatre piece, the story of the dubious allied assistance became widely known in Serbia. However, so far there hasn’t been any historiographical effort to determine what exactly happened. The contemporaries and later, historians, mentioned this problem but failed to offer a comprehensive explanation.⁵

In any case, the story of the French ammunition presents only one segment of a larger historiographical problem. How did Serbia cope with Europe’s ammunition shortage of 1914? This article will show that Serbia survived this existential military crisis by diligently combining various elements. These included the supplies sent from the Entente, from France and Russia. Secondly, ammunition was ‘borrowed’ from Greece, still a neutral country in 1914. Thirdly, domestic production was of critical value, as utmost ingenuity and vigor were demonstrated to produce as many shells as possible. All these elements had been knotted with great skill and determination, encompassing everyone, from all available skilled labor to Serbia’s diplomats abroad.

Concerning the peculiar problem, the French shipment from November 1914, when artillery shells did not fit the Serbian guns, it will be shown that there were no secretive or deceptive attempts made by the French or any other Entente officials. More precisely, the Serbian and the French army did use the same model of the gun, but with significant differences. Consequently, the ammunition made for

² Благоје Илић, *Југославија по вољи народа 1914–1918* (Нови Сад: Дневник, 1988), 35.

³ Добрица Ћосић, *Време смрти*, II, (Београд: Просвета, 1976), 279.

⁴ Борислав Михајловић-Михиз, *Колубарска битка: стратегијска драма у два дела према роману Време смрти* (Београд: Југословенско драмско позориште, 1985), 63, 68.

⁵ Ђенерал С, „Муниција за рат“, *Ратник*, 1932, XLVIII, свеска 3, 19; Бранислав Глигоријевић, *Краљ Александар Карађорђевић*, I, (Београд: Београдски издавачко-графички завод, 1996), 155; James Lyon, “Serbia’s artillery during the First World War”, in: *King of battle. Artillery in World War I*, ed. Sanders Marble, (Boston: Brill 2015), 244; James Lyon, *Serbia and the Balkan Front, 1914: The Outbreak of the Great War* (New York: Bloomsbury 2015), 217.

the Serbian type of the '75' cannon had to be produced separately from the ones designated for the French army. In the chaotic early months of the war, the French failed to maintain two separate production lines. Ultimately, in October, November and it part, in December of 1914, the French Ministry of War sent Serbia what was available. These was the ammunition made for the Greek army or the standard ammunition used by the French troops. Despite diplomatic efforts of the two countries to coordinate the arrival of these 'wrong' shipments, a misunderstanding took place and the Serbian officials were taken by surprise once the ammunition was unboxed in Niš in late November 1914.

The sources for the ammunition problems of 1914 can be found on various sides.⁶ The officers' and soldiers' diaries of late 1914 are full of references to the ammunition question. These include topics such as shortages but also cases where gun tubes burst due to the problematic ammunition. On the other side, the Artillery Department of the Serbian Ministry of War dealt extensively with the ammunition supplies. Since the beginning of 1914, the Serbian army had even a permanent delegation of three members stationed at the Schneider's factory in Creusot. The key person was Lieutenant Colonel Milivoje Joksimović, an experienced artillery officer. His telling reports from the factory present a very unique source material.

The artillery shells were also mentioned in the papers of the French military attaché in Serbia, Colonel Pierre Victor Fournier.⁷ Naturally, the issue of shortages was raised within various circles of the Serbian military elite. The former Serbian assistant to Serbia's Chief of Staff, Colonel Živko Pavlović, wrote about this phenomenon after the war, in 1928. Moreover, among the recently published books, the diary or more precisely the notebook, of the Serbian Minister of War in 1914, Colonel Dušan Stefanović, also needs to be mentioned separately. This work brings crucial information about the ammunition crisis in 1914.⁸ Finally, as part of the Centenary publishing efforts, important

⁶ For example, see: Стојан Ивковић: *Ратни дневник: 1915–1918*, приредио Александар С. Ивковић, (Београд: А. С. Ивковић, 1998); Милета М. Продановић, *Ратни дневник 1914–1918*, (Горњи Милановац: Дечје новине-Скупштина општине Горњи Милановац, 1994); Стеван Туцовић, *Ратни дневник пуковника Туцовића* (Ужице-Чајетина: Историјски архив Ужица-Библиотека Љубиша Р. Ђемић, 2017).

⁷ The French military archive in Paris holds the collection of documents that belonged to the French military attaché in Serbia and Montenegro (1912–1915), General Staff Colonel Pierre Victor Fournier (1867–1945). Before arriving to the Balkans, he was attached to the French delegation in Mexico. In 1912 he became the military attaché for Romania, Serbia and Montenegro. He became a general in 1917. His documents collection presents a form of recollections and notes, made by the colonel while in the Balkans. Some of the documents were edited in the form of four separate volumes in 1939, and entitled *Ma mission dans les Balkans*. However, this collection, as well as his role in the war, were largely overlooked by Yugoslav and Serbian historians with praiseworthy exceptions such as Крунослав Ј. Спасић, „Боравак српских трупа у Албанији и њихов транспорт на Крф (децембар 1915–јануар 1916)“, *Војноисторијски гласник*, бр. 1, (1988), 361–395; Биљана Стојић, „Француска и стварање Албанске државе (1912–1914)“, у: *Први балкански рат 1912–1913: Историјски проблеми и процеси у светлости стогодишњег искуства*, уредник Михаило Војводић, (Београд: САНУ, 2015), 187–201.

⁸ Душан П. Стефановић, *Дневник из 1914. године*, приредио Александар Животић, (Београд: Медија центар *Одбрана*, 2017).

titles have been translated into Serbian. This includes the book of Loykianos Chassiotis which centers on the Serb-Greek relations in 1913-1918.⁹

The Crisis

By mid-September 1914 all fighting sides felt that ammunition supplies were becoming a major problem. For example, on the 24th of September 1914, General Joseph Joffre estimated that France was left almost without any reserves. He believed that his army had artillery ammunition for only 15 days.¹⁰ The British Expedition Force in France was even in the worst position. They had shells for just a few days. It was similar on the Eastern front. Since late September the Russian army used the term 'ammunition famine' to describe the seriousness of the problem.¹¹ The Austro-Hungarian army encountered similar problems also in mid-September, while the Second battle for Lamberg was taking place. The combat readiness of several large Austro-Hungarian units fell to the minimum.¹² The supplies of the German army were more far-flung. Nevertheless, by the 14th of November, the German army fell to the 4 days artillery stocks.¹³

The main reason for such a situation was the fascinating expenditure of shells. This again, came as a result of the introduction of the rapid firing artillery weapons. France was the first to introduce such a model in active service, in 1897. It was the M1897 field canon, caliber 75mm. This weapon has been perceived as the most successful field artillery piece of World War I. The most important novelty was the self-contained recoil system. This gun also had a modern sighting, fast-action breech mechanism and fixed shell ammunition. In essence, once the target was aimed, the gun did not have to be adjusted again and again, after each shot. Model 1897 fired fragmentation shells or shrapnel and high explosive shells.¹⁴ These technical characteristics were soon introduced into the artilleries of all European major powers. As a result, the conflict's dynamics, from its beginning in 1914, took the armies by surprise.

The Serbian Capacities

To fully understand the artillery crisis at the Serbian front in Autumn of 1914 it is necessary to reflect on the pre-war situation. After 2 years of bitter public debates, political and economic calculations but also serious scandals, the Serbian government decided in 1906 to choose the French state manufacturer as the main

⁹ Лукијанос Хасиотис, *Српско-грчки односи 1913–1918. Савезничке предности и политичка ривалства*, (Нови Сад-Београд: Прометеј-Радио телевизија Србије, 2017).

¹⁰ Žozef Žofr, *Ratni memoari*, (Beograd: Vojno delo, 1956), 292.

¹¹ Andrey Pavlov, "Russian Artillery", in: *King of Battle. Artillery in World War I*, edited by Sanders Marble, (Boston: Brill 2016), 260.

¹² M. Christian Ortner, *The Austro-Hungarian Artillery from 1867–1918: Technology, Organization, and Tactics*, (Vienna: Heeresgeschichtliches Museum–Verlag Militaria, 2007), 584.

¹³ Holger H. Herwig, "Conclusions", in: *War planning 1914*, eds. Richard F. Hamilton, Holger H. Herwig, (New York: Cambridge University Press, 2010), 250.

¹⁴ Micheal E. Haskew, *Artillery from World War I to the Present Day. Compared and Contrasted*, (London: Amber Books, 2010), 28–30.

provider of its new artillery equipment.¹⁵ The idea was to buy the already famous French weapon, the '75'. There are some differences between the French and the Serbian sources throughout purchases, but the material was mainly bought on two occasions. In 1906 and 1910. The first guns, 188 of them arrived in 1908 and became known as 'M1907' within the Serbian designation system. The French sources mention some smaller purchases in 1908 when 16 guns of the same model were bought. These arrived in Serbia in 1909. The additional 12 guns of the same model were ordered in 1910 and these arrived in 1911.¹⁶ However, the second major order of the guns was in 1910. These were modernized versions of '75' and were introduced under the designation: 'M1907A'. In total, according to Serbian sources, the country bought 248 modern field guns. The difference between the models bought in 1906 and 1910 was in the more powerful sighting equipment as well as more potent explosive shells. It is worth noting that there were problems in the delivery of the guns from the last purchase, as it was impossible to transport the guns to Salonika due to the Italo-Ottoman war. As a consequence, some of the equipment arrived in the middle of the Balkan War of 1912.¹⁷

By 1912 Serbia created a powerful artillery, combining the new and the old equipment. Serbia for example, had 22 older French howitzers, caliber 120 mm, that were designated M97. These were bought in 1900-1901. However, 32 more were bought in 1910. These were more up-to-date weapons. They were designated as 'M910' and had the same caliber of 120 mm. Concerning other heavier weapons, in 1910, 8 howitzers were bought, caliber 150 mm. The small number of the heaviest types of weapons was compensated, to a certain extent, with the 6 heavy mortars – the merzers, caliber 150 mm.¹⁸ The only aspect of the artillery that remained relatively obsolete was the mountain artillery as Serbia, due to financial limitations, could buy only 36 modern weapons, designated as M907, caliber 70 mm. This lack of a weapon of choice for the Serbian mountainous terrain became a source of constant worry once the hostilities erupted in 1914.

It is worth noting that all weapons made for export had a slightly slower rate of fire than the model destined for the French army.¹⁹ However, the Serbian case study shows that there was one more crucial comparative difference that concerned the design. The 'Serbian' '75' used a slightly shorter cartridge than the French model. About the same time, Greece and Bulgaria bought similar equipment in France. Here too, some adaptations were made at the start. For example, the field guns of 75 mm that

¹⁵ Аноним, *Поводом нашег топовског питања* (Београд: Доситеј Обрадовић, 1906); See also: Триша Кацлеровић, *Милитаризам у Србији. Афере и скандали у војсци* (Београд: Народни универзитет, 1952); Ljiljana Aleksić-Pejković, *Rad srpske vlade na zajmu 1904–1906 godine*, (Beograd: Institut društvenih nauka, 1962); Љиљана Алексић-Пејковић, *Односи Србије са Француском и Енглеском 1903–1914* (Београду: Историјски институт, 1965); Данило Шаренац, *Топ, војник и сећање* (Београд: Институт за савремену историју, 2014).

¹⁶ Archives – Service Historique de la Defence (SHD), Vincennes, 7N1572 Attaches militaires, Serbie 1912–1916, military attaché in Belgrade: Notice sur l'Armée Serbe, 24 Juine 1912.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Steven J. Zaloga, *The French 75: The 75 mm M1897 field gun that revolutionized modern artillery* (Oxford: Osprey Publishing, 2020), 8.

were designated for Bulgaria had a different breach mechanism. This was done at the request of the Bulgarian buyers. Eventually, these changes were so great that these guns could no longer be even treated as the standardized type of the M1897 field gun.²⁰ It is possible that adaptations on the ‘Serbian’ guns were also made at the request of the Serbian Cannon Committee. This body had a task of performing the trials of the guns at the firing range. On several occasions, the members of this Committee recommended ‘modifications’ of the original weapons.²¹ The main problem was poor performance of the Schneider ammunition. The results of the tests became public, and the reputation of the French manufacturer dwindled.²² It is quite possible that the increase of the shell casing was done at the request of the Serbian Cannon Committee. This could be one explanation why the Serbian version differed from the basic one.

In any case, as part of the arms deal, the French manufacturer delivered also the ammunition, 100,000 shells.²³ Moreover, the Serbian government bought the license for producing shells in its military factory in Kragujevac, the Military-Technical Arsenal. This complex employed 2000 workers in 1900 and as the biggest factory in Serbia, it was seen as the cradle of Serbia’s industrialization.²⁴ It is important to stress that the collaboration with the French partners was not a straightforward business. The new machines, necessary for the production of the new type of shells were assembled by the end of 1910. However, these were bought in Germany, from the Erhardt factory, in Düsseldorf.²⁵ The factory was fully capable of producing all parts of ammunition including the propelling charges and by the end of the following year, Serbia produced some 20,000 ‘Serbian’ shrapnel projectiles. Gunpowder came from the domestic facility at Obilićevo, near Serbian town of Kruševac. Nevertheless, the propellant – the explosives, had to be imported. Mastering the production of the artillery shells was not easy and serious problems appeared in relation to the production of the artillery fuses. By 1914 this factory employed 3000 workers who worked in three shifts.²⁶

The Serbian army entered the Balkan Wars with the stock of 300,000 shells as new quantities were bought from France prior to the war of 1912.²⁷ However, even this impressive amount was slightly below the Serbian army artillery regulations. Evidently, the unsatisfiable consumption of the ‘75’ was not a secret. Consequently, it was set as a rule that each gun must have at least 1594 shells available. The Serbian army went to

²⁰ Анри Барби, *Брегалница: Српско-бугарски рат 1913*, (Ниш: Талија издаваштво, 2022), 197–198.

²¹ Љиљана Алексић-Пејковић, *Односи Србије са Француском и Енглеском 1903–1914*, 193; Љиљана Алексић-Пејковић, *Rad srpske vlade na zajmu 1904–1906 godine*, 212.

²² Триша Кацлеровић, *op. cit.*, 7–15.

²³ Бранислав Станковић, „Муниција калибра 75 mm за брзометне топове система Шнајдер-Крезом-1907 и М-1907А, у наоружању српске војске 1907–1916“, *Museum*, бр. 3, (2002), 130.

²⁴ Стеван К. Павловић, *Историја Балкана 1804–1945* (Београд: Cliо, 2004), 189.

²⁵ Бранислав Станковић, *op. cit.*, 132.

²⁶ Војни архив (ВА), Пописник 3 (P-3), kutija 461, fascikla 1, dokument 4/1 (461-1-4/1), „Naša fabrika u Kragujevcu“.

²⁷ Interestingly, here again the French and Serbian sources disagree here. The French confidential report about the state of the Serbian army in 1912 states that the stock included as much as 500 000 artillery shells. SHD, Vincennes, Notice sur l’Armée Serbe, 24 June 1912.

war in 1912 with 1310 per gun.²⁸ In any case, the fighting in the Balkan Wars brought much fame to the Serbian artillerymen as it became one of the most appreciated branches of the army. Anecdotes about the precision of the Serbian peasants who now mastered the modern French guns, spread across the Balkans and wider across Europe, especially in France.²⁹ Not a single weapon was destroyed nor lost in 1912 operations. Foreign observers noted that the Serbian use of artillery weapons was aggressive, bold and innovative in comparison to, for example, Bulgarian army.³⁰ On the other side, numerous modern, German-made, field guns and howitzers were taken as spoils of war from the Ottomans. These were the Krupp products, the major rival of the French Creusot. Efforts were later made to repair and supply them, so that new special units could be formed.³¹

In the First Balkan War Serbia spent some 50,000 shrapnel shells. However, the Second Balkan War, despite being shorter, evidently had a much different character. The Bulgarian army was much more able than the Ottoman one. As a consequence, Serbia spent more than 140,000 grenades before being able to claim victory.³² This included also the 79 canister shots used for the action nearby the guns and their crews. This type of shell in many ways symbolized the bitterness and uncertainty of the outcome of this inter-allied war.³³ Serbia managed to capture several Bulgarian '75', so now there were 264 guns of this type in the Serbian arsenal.³⁴

In early 1914 the guns were still more or less new, but the ammunition was spent. The confidential military report of the Ministry of War revealed how bad the situation was. In January 1914 Serbia had only 131,000 shrapnel shells for its 248 guns. It was just 530 shells per gun, a thousand less than the army manual and regulations prescribed. It was even worse with the explosive shells as there were only 18,000 of them for the main field gun. The situation was worse with the mountain gun: only 8400 shrapnel grenades in total. Howitzer ammunition was almost nonexistent: less than 10,000 in sum. It should be added that Serbia was forced to purchase the shells even during the Second Balkan War as fears grew that the army would run out of ammunition.³⁵ These deals were very unfavorable due to the very high prices imposed by the manufacturers.³⁶

²⁸ VA, P-3, 461-1-4/1, „Naša fabrika u Kragujevcu“.

²⁹ Андри Барби, *op. cit.*, 197–201.

³⁰ James Lyon, „Serbia's artillery during the First World War“, 222.

³¹ Serbia entered the war with six “Turkish batteries” with each gun counting on 600 projectiles. Also, two howitzer batteries were formed from the Krupp 120 mm captured weapons, with 500 rounds each. Additionally, one “Turkish” mountain gun battery of three weapons was also organized. VA, P-3, 461-1-4/1, Izveštaj artiljerijskog pukovnika Andre Lj. Milivojevića, Valjevo, 4/17. 11. 1914.

³² *Ibid.*

³³ For a detailed description of the usage of this type of ammunition during the fighting near Štip, in June 1913, see: Андри Барби, *op. cit.*, 80.

³⁴ VA, P-3, 461-1-4/1, list (I.) 12, „Stanje artiljerijske municije u početku januara 1914. godine“, 1/14. 1. 1914.

³⁵ Бенерал С, „Муниција за рат“, *Ратник*, 1932, XLVIII, свеска 3, 10–12.

³⁶ Милош М. Михаиловић, „Улога и рад артилерије Мачванског корпуса при заузимању Шапца и Мачве 10. и 11. августа 1914“, *Ратник*, XLV, 1–2, 1929, 1.

Serbia's plan of stabilizing its supplies implied three cornerstones: buying in France, domestic production, and finding additional quantities abroad. Firstly, at the end of 1913, Serbia made a massive order in France in order to replenish its arsenal. The order was composed of 80,000 shrapnel shells and 21,000 explosive shells for the main weapon, the '75'. Some, 15,000 shells were ordered for Serbia's 36 mountain guns, M907.³⁷ The contract implied that the ammunition was to be delivered by the end of 1914. The plan was to eventually create the reserve of some 325,000 shells. This was the number close to the one from the pre-1912 war. To coordinate the above-mentioned acquisitions in France, a special Serbian military delegation traveled to France, in March 1914.³⁸ They were to be stationed in the Creusot, in France. This way complete coordination was guaranteed. It is important to stress that the chef of this small mission was Lieutenant Colonel Milivoje Joksimović. He was one of the members of the commission which received the shells from the manufacturers during the pre-1914 Serbian orders. He possessed full knowledge of the ammunition problems.³⁹

The Military Technical Arsenal in Kragujevac could supply sufficient quantities of the rifle ammunition, but the production of the shells was relevant only for the peace time conditions. As mentioned, with the available machines the workers in Kragujevac could make only 200 to 250 artillery shells per day, or 5600 rounds a month.⁴⁰ Unfortunately, it is not quite clear where else, except in France, could the Serbian authorities look for artillery ammunition, as much as 100,000, as was planned. Most likely, it was to be the collaboration with the Russian Empire. There was also a possibility that collaboration with the German companies could be continued as well. Efforts were made to make operational again a dozen of captured 'German' Ottoman weapons. In April 1914, Marcel Krupp, a representative of the German factory, arrived in Belgrade to negotiate the deal.⁴¹ As soon as the July crisis erupted it became clear that the Serb-Austrian tensions would not allow Serbia to finish its ambitious rearmament plans. The war started on the 28th of July 1914 and by this date, Serbia received only a fraction of the French grenades: 10,000

³⁷ VA, P-3, 461-1-4/1, l. 10–14, „Stanje artiljerijske municije u početku januara 1914. godine“, 1/14. 1. 1914.

³⁸ Аноним, „Војна комисија“, *Политика*, 24. 2. 1914, 2.

³⁹ Milivoje T. Joksimović 1879-1973, was educated at the military academies in Serbia and Russia. He served at the Kragujevac Military Technical Arsenal from 1904 until 1906. The position at the Gunpowder factory at Obilićevo followed from 1906 until 1909. He was a member of the commission for reception of the French weapons and ammunition before 1914. He was also the Serbian delegate at the International commission for the supply of the troops in London. In addition, he was also a member of the commission for receiving artillery ammunition in France 1914-1915. The socialist deputy, Triša Kaclerović, mentioned him as one of the officers who played a very positive and constructive role during the efforts of the Serbian Assembly in 1909 to discover the abuses related with the work of that commission that accepted ammunition made in France. Namely, several members of this commission were charged for taking the flawed French ammunition, despite the fact that it was obviously of inferior quality. For this scandal and all the details of the investigations see: Триша Кацлеровић, *op. cit.*

⁴⁰ VA, P-3, 461-1-4/1, l. 10–14, „Stanje artiljerijske municije u početku januara 1914. godine“, 1/14. 1. 1914.

⁴¹ „Турски топови“, *Политика*, 19. 4. 1914, 2. For more about these negotiations see: Далибор Денда, *Шлем и шајкача: Војни фактор и југословенско-немачки односи (1918–1941)*, (Нови Сад: Матица српска, 2019), 65–69.

shrapnel for the field canon.⁴² From the war's beginning, moderate ammunition consumption, became an imperative in the Serbian artillery units.⁴³

Cannons and Rifle Butts

The first encounter of the Serbian army with the Austro-Hungarian troops ended up as a great victory for the Serbs. However, Serbian army fired as much as 36,000 shrapnel rounds in less than a week during the Cer battle.⁴⁴ This was more than half the quantity spent in the First Balkan War which in comparison lasted eight months. Moreover, this was just the beginning of the full-on military confrontation with the neighboring great power. Soon the fighting became static for almost two months, and the trench lines spread along the Drina River. Such a situation utterly exhausted the Serbian infantry, but it also further depleted the artillery supplies. By mid-September units reported, one by one, that artillery ammunition supplies were low.⁴⁵ The Serbian Second Army, which was fully engaged on this front, reported its serious troubles with the artillery ammunition on the 29th of September 1914. The response of the Artillery Department of the Serbian Supreme Command was to reach for its supplies in the Kragujevac Arsenal. Additional 7000 projectiles for the field cannons and 4000 for the mountain artillery could be made available in four to five days.⁴⁶ This, however, could 'buy' only a few days of action.

The panic was rising among the top Serbian commanders. Field Marshal Stepa Stepanović, the commander of the Second Army, dramatically illustrated the importance of the artillery for modern war. He bitterly complained to the Field Marshal Radomir Putnik, the Chief of the Supreme Command. Stepanović argued that the enemy was destroying the Serbian infantry at will while the Serbian canons must remain silent. This had a devastating effect on the morale of the men. Right to the point, Stepanović linked Serbia's very participation in the war with amounts of the artillery projectiles that were available.⁴⁷ A dramatic exchange followed between two Serbian field marshals. The debate tackled the ultimate question: where should be the limits of sacrifice when one defends his country? Stepanović asked for several times to be relieved of his command. Field Marshal Putnik denounced such an option, insisting that the army must continue to fight "even if we remain only armed with rifles."⁴⁸ The compromise was finally reached and Stepanović's units were allowed to retreat to safer positions.⁴⁹

In late October a new enemy offensive was launched to break the deadlock in the border region. Serbian units began reporting about the 'hurricane artillery fire'.

⁴² Ibid.

⁴³ VA, P-3, 461-1-4/1, l. 49, „Štab Vrhovne komande komandantima, Artiljerijskog odeljenje – komandantima I, II, III armije i Užičke vojske, 20. 8./3. 9. 1914.

⁴⁴ Живко Г. Павловић, *Битка на Јадру августа 1914. године* (Београд-Лозница: Радунџ-Библиотека Вуковог завичаја, 2014), 542.

⁴⁵ Ђорђе Лукић, *Битка на Дрини* (Београд: Војноиздавачки завод 1966), 243.

⁴⁶ Ibid, 222.

⁴⁷ Ibid, 337.

⁴⁸ Ibid, 337.

⁴⁹ Ibid, 337.

Soon, positions fell one by one, including the strategic strongholds at the mountain Gučevo. By early November the Serbian army was in continuous retreat.⁵⁰ The desperate reports sent by the front commanders were now forwarded by the Supreme Command to the Ministry of War and ultimately to the Prime Minister, Nikola Pašić.

As mentioned before, Serbia received 10,000 shrapnel shells before the July mobilization in late July of 1914. The ammunition from the 1913 contract kept coming in regular intervals as the Serbian documents show.⁵¹ By early October, France delivered more than 50,000 shells for the key artillery weapon, the '75'.⁵² These were the standardized 'Serbian' type of shells. Consequently, despite being fully engaged in the war herself, France was still delivering ammunition mostly as planned in the pre-war times. Basically, by mid-October, the entire 1913 contract had been fulfilled concerning the howitzer and the mountain artillery program.⁵³ Some 19,000 shells for the field gun remained to be transported. However, France had its production problems and it became increasingly hard to fulfill the old peacetime contract.

The problem was that Serbia needed more and more ammunition as units were spending artillery rounds at a prodigious rate. The quantities from the December 1913 contract were simply not enough anymore. Serbian government thought that the solution would be to order more and more ammunition in France. After all, the foreign loans were made available to Serbia and the French government guaranteed all payments about contracts with Serbia.⁵⁴ The first wartime Serbian order was made on the 6th of August 1914. This time the ammunition was asked for the heavy calibers.⁵⁵ It was evident from the 1912-1913 operations that the field gun could not present the answer to all battlefield problems. In addition, in this shipment, Serbia asked for 30,000 detonators.⁵⁶ This can be interpreted as an effort to create reserves in material so that the modest but continuous domestic production was kept at its maximum.

⁵⁰ Ibid, 263.

⁵¹ VA, P-3, 461-1-4/1, l. 15, „Porudžbina artiljerijske municije u Francuskoj“.

⁵² Ibid.

⁵³ After the mobilization, Serbia received, based on this contract an additional 10 000 shells on the 2nd of August 1914. On the same day France delivered also 18 000 explosive projectiles. A subsequent shipment arrived on the 7th of September, 10 000 artillery shells. On the 18th of September, an additional 10 000 artillery rounds arrived. On the 19th September 1914, a new shipment of 5000 artillery shells arrived. Final transports related to the 1913 contract came on the 7th of October 1914 (5 000 shells) and on the 9th of October an additional 10 000 projectiles. In total somewhere around 50 000 artillery rounds reached Serbia. These were projectiles for the cannon M1907. France was not able to produce the final portion, around 19 200 artillery rounds for the field gun. These were fragmentation shells for the Serbian '75'. VA, P-3, 461-1-4/1, l. 15, „Porudžbina artiljerijske municije u Francuskoj“.

⁵⁴ *Veliki rat Srbije za osloboђење i ujediњење*, I, (Beograd: Ministarstvo voјske i mornarice 1924), 166

⁵⁵ Serbia asked for 14 000 explosive shells and only 200 shrapnel rounds. Ammunition was also asked for the 150 mm howitzer and the 'long' 120 mm guns. VA, P-3, 461-1-4/1, l. 15, „Porudžbina artiljerijske municije u Francuskoj“.

⁵⁶ Ibid.

Just one day later, Serbia asked for ammunition for the field gun. In the Serbian internal correspondence, an astonishing amount of 180,000 fragmentation shells was asked from France. This was the request of the Serbian Supreme Command.⁵⁷ In the end, the size was decreased by the government to 122,000 shrapnel shells for the field gun and 60,000 explosive shells for the same weapon. The ammunition for the mountain gun was also ordered, some 27,000 shrapnel shells. All this testifies, not only about the high hopes of the Serbs to the French industry but also to the fact that the Serbian army practically did not have anymore any reserves of artillery ammunition. The Serbian government was unaware that no one in France could produce these amounts of ammunition in such a short period, even in peacetime.

The French case of dealing with the shell crisis is of special interest to Serbia. Namely, the main French factories that produced ammunition, Schneider-Creusot, and Saint-Chamond, could not achieve things anymore on their own. The 'crash program' implied increasing production in great haste and several smaller private armament manufacturers had to be introduced into the process.⁵⁸ The lack of a domestic workforce was a huge problem and was in part compensated by the arrival of workers from the colonies. However, all these measures led to the drastic deterioration of the quality. The statistics showed that by March 1915 one shot in 5000 detonated while still in the weapon. This meant that confidence in the gun was undermined significantly.⁵⁹ The investigation revealed that the smaller factories inadequately treated the imported USA steel and the problem was eventually solved by 1916.⁶⁰

Salvation from Greece and Portugal?

France was the logical choice for ordering ammunition. Nevertheless, other possibilities were explored simultaneously. Dušan Stefanović, Serbia's Minister of War, made a brief note in his documents: "Ask from Greece, one mountain artillery division and 100,000 shrapnel shells, and 50,000 explosive shells".⁶¹ This was most likely written in mid-September 1914. The experts at the Serbian Military-Technical Arsenal came up with this idea first, as they knew who else used the same ammunition as the Serbs. Portugal was also mentioned in this context. As these countries were not part of the war efforts, at least for the time being, they had to have abundant artillery supplies. Diplomatic actions were instantly launched. The ammunition was not to be bought but 'borrowed'. France played here very important role, as a guarantee but also a mediator. French officials promised to replenish the Greek stocks, once the ammunition was transferred to Serbia. Greece, as the Balkan neighbor and a formal ally of Serbia, was a reasonable choice for asking for military assistance. However, the case of Portugal, a faraway country, testified about

⁵⁷ VA, P-3, 461-1-4/1, l. 20, Telegram Nikole Pašića Ministarstvu vojske 11/24. 9. 1914.

⁵⁸ S. J. Zaloga, *op. cit.*, 18.

⁵⁹ *Ibid.*, 19.

⁶⁰ Bruce Gudmundsson, "The French artillery in the First World War", in *King of Battle*, ed. Sanders Marble, (Boston: Brill, 2015), 70.

⁶¹ VA, P-3, 461-1-4/1, l. 14, Potraživanje Vrhovne komande 7/20.9.1914.

the interdependence between various countries, in this new type of conflict. Anyhow, the inquiry into the state of Portugal's reserves led to nowhere, despite continued Serbian inquiries. The Greek case however was very different and more dynamic.⁶²

Nikola Pašić visited the Serbian Supreme Command on the 22nd of September in Valjevo. He was confronted with the appalling situation and instant action was necessary. The cabinet meeting was held tomorrow, on the 23rd of September 1914, and the Serbian government made an official request to Greece to 'borrow' some ammunition. Apart from the artillery ammunition, several mountain artillery weapons were also asked. At first, the Greek government did not reply. The time was crucial. The following day, on the 24th of September, the Serbian envoy in Athens was instructed by Nikola Pašić to be more precise about Serbia's request but also more flexible. Serbia was to return the ammunition in two to three weeks, or to pay for the artillery ammunition and equipment in cash.⁶³ In addition, the Serbian officials decided to ask the Entente for help. A coordinated pressure ensued. Russian and the French military attachés in Athens were also asked to influence the government of Eleftherios Venizelos.⁶⁴

While these diplomatic efforts were still underway, the experts from the Serbian Kragujevac Arsenal proposed yet another shock measure. It was underlined that ammunition stocks could still be found, at the south of the country. In the so-called 'New Serbia', the lands Serbia acquired in the 1912-1913 operations, local Serbian garrisons still had some artillery ammunition. This was immediately transferred to the northern front.⁶⁵

Besides, pressuring Greece, Serbia was still trying to obtain immediate assistance in weapons from France. On the same day of Pašić's visit to Valjevo (the 22nd of September), the Serbian envoy in France, Milenko Vesnić, was asked to try to obtain at least an urgent shipment of 5000 shells.⁶⁶ Moreover, he was also to inquire about the possibility of obtaining two mountain artillery battalions. This meant 24 canons. Pašić urged, that if this was not possible, at least 12 canons were to be sent.⁶⁷ The questions of mountain artillery and the Greek ammunition were now intertwined. What happened was that the French Ministry of War proposed to solve the situation by 'giving away' 20 mountain guns. Still, these guns technically belonged to Greece as the French factory had just finished them for the Greek army. These were the Schneider-Danglis weapons made in Creusot. The French state had to requisition them first.⁶⁸ Russian officials also participated in this deal. Namely, the

⁶² The references to the Greek assistance to Serbia can be found in the Serbian historiography. However, the authors have usually provided only a brief information about this act. Живко Павловић, *op. cit.*; Андреј Митровић, *Србија у Првом светском рату* (Београд: Службени гласник, 2018), 94.

⁶³ VA, P-3, 461-1-4/1, l. 23, Telegram Nikole Pašića srpskom poslanstvu u Atini, 11/24.9.1914.

⁶⁴ VA, P-3, 461-1-4/1, l. 14, Potraživanje Vrhovne komande 7/20.9.1914.

⁶⁵ VA, P-3, 461-1-4/1, l. 26, Ministar vojni Vrhovnoj komandi, 11/24.9.1914.

⁶⁶ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 25. 09.1914).

⁶⁷ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 22.09. 1914).

⁶⁸ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 29. 09.1914).

diplomatic correspondence of the French personnel in Serbia from September 1914 reveals that Russia supported the French decision to give Serbia a certain number of the 'Greek' mountain artillery pieces. Moreover, measures were taken to ensure that the shipment of the guns was sent as soon as possible, directly to Salonika.⁶⁹

Soon, Serbia got two batteries of the Schneider-Danglis model.⁷⁰ Most likely they came directly from the French factory and not from the Greek arsenal. Although the Serbian sources are clear that only two batteries arrived, according to Greek literature, Serbia 'borrowed' as many as 20 mountain guns.⁷¹ This would be enough for the creation of the entire artillery battalion. If true, this would had to leave a much larger trace in the Serbian historical sources.

It is worth mentioning that these batteries were different from the mountain weapons that were already in use by the Serbian army. Namely, the model that was now sent to the Serbian army was designed in 1905 when the Greek colonel Panagiotis Danglis, began his collaboration with the Schneider factory. This led to considerable improvements in the standard Schneider mountain weapon. The new model was named Schneider-Danglis M06. It is worth underlying the difference in the caliber. The new model had a caliber 75 mm, while the caliber of the standard Schneider gun was 70 mm.⁷² The improved guns were very easy to transport. Interestingly, in its prewar quest for a suitable mountain weapon, Serbia desired to order as many as 36 mountain batteries of the Schneider-Danglis model. The decision was made just a few days before the July 1914 mobilization. It was too late and the French manufacturer could no longer accept new deals.⁷³

As a neutral country, Greece found itself under immense pressure from all sides. It's complicated internal politics also influenced its reasoning about the Serbian request for granting access to the artillery arsenal. Germany and Austro-Hungary made it clear that they would treat any support to Serbia as a breach of Greek neutrality. Internally, any decision by pro-Allied Prime Minister, Eleftherios Venizelos, was opposed by the Greek General Staff who saw the 'borrowing' of ammunition to Serbia as a serious weakening of the Greek military readiness.⁷⁴ This was a reasonable objection as the war raged across Europe and ammunition became a rare commodity. Entente's politicians invested great effort into supporting Serbia's appeal. For example, on the 28th of September the British Prime Minister, Edward Grey, insisted that Athens immediately supply Serbia. The ammunition transfer soon became a reality. On the 30th of September, Greece delivered 20,000 shrapnel rounds to Serbia. The quantity was much lower than Serbia asked (80,000), but the shipment meant that the Serbian artillery becomes operational again. The transfer was done in the utmost secrecy.

⁶⁹ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 29. 09. 1914).

⁷⁰ Петар Пешић, *Солунски фронт: Војно-политичка акција* (Београд: Књижара С. Б. Цвијановића, 1921), 9–10; Interestingly, one of the new batteries was commanded by the Serbian major Stevan Tucović, known for accepting the boy soldier, Momčilo Gavrić, in his unit in 1915.

⁷¹ Лукијанос Хасиотис, *op. cit.*, 141.

⁷² VA, P-3, 461-1-4/1, l. 22, Ministar vojni Nikoli Pašiću, 11/24. 9. 1914.

⁷³ Петар Пешић, *op.cit.*, 10.

⁷⁴ It is worth mentioning that Greece already gave Serbia some war material from its own war spoils from the Second Balkan War, including 2.5 million rifle casings. Лукијанос Хасиотис, *op. cit.*, 142.

After everything went smoothly, the Serbian side expressed its gratitude to the French for their mediation role in this complex business.⁷⁵ It is important to underline that this action was led by Prime Minister Venizelos and that the Greek General Staff was not even notified about the event. The Serbia's gratitude to Greece consequently had to be expressed in great secrecy.⁷⁶ As it will be shown later, France will requisition Greek military equipment in the future as well.

The Russian Operations

The Russian government was also determined to assist Serbia. Apart from financial resources that were instantly made available to Serbia, the Russian Ministry of Navy formed a special military mission on the 16th of August 1914.⁷⁷ It was named: 'the Expedition of Special Purpose'. Its mission was to transport the war material, food and several other resources to Serbia via the Danube, by steamboat convoys.⁷⁸ During 1914 as many as five major transports had arrived to Serbia, bringing various military equipment, including some 120,000 rifles, coastal naval guns, sea mines, telegraph equipment, and petrol but also artillery shells. In September, one of the transports brought 13,000 artillery grenades for the '75'.⁷⁹ Shipments from Russia suffered from the same problems as the French ones. For example, Serbian king Peter I Karadjordjević wrote in his diary on the 5th of November 1915 that the Russians artillery weapons were sent to Serbia in parts, in different convoys. On one occasion, Serbia got all the canon parts except the breech loaders. These were carried by another convoy. However, the Bulgarian managed to stop these ships.⁸⁰

In Russia, as in France, the Serbian diplomats found themselves under great pressure.⁸¹ Serbian deputy in Saint Peterburg, Miroslav Spalajković, was alarmed by Milenko Vesnić as well as directly by the Prime Minister, Nikola Pašić. In his peculiar style, Spalajković dramatically claimed that Serbia will capitulate without ammunition.⁸² At first, the Russian side delivered equipment from its arsenal. In September 1914, after the Russian army captured Lamberg, the plan was made that Serbia was to be supplied from the large spoils of war that were captured there. The Serbian military attaché, Captain Branislav Lontkijević, was to participate in the selection of the material. Finally, the gathered material was to be transported to

⁷⁵ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 25. 09.1914).

⁷⁶ Лукијанос Хасиотис, *op. cit.*, 141–143.

⁷⁷ VA, P-3, 461-1-4/1.

⁷⁸ For detail accounts of this type of assistant see: Алексеј Тимофејев, Дарко Кремић, *Руска војна помоћ Србији за време Првог светског рата*, (Београд: Институт за новију историју Србије, 2014); Данило Шаренац, "Руска војна помоћ Србији 1914–1915", у: *Први светски рат и Балкански чвор*, уредници Ивана Пантелић, Јасмина Милановић, Миомир Гаталовић, (Београд: ИСИ, 2014), 359–376.

⁷⁹ Алексеј Тимофејев, Дарко Кремић, *op. cit.*, 104.

⁸⁰ Петар I Карађорђевић, *Ратни дневник 1915–1916*, приредио Драгољуб Р. Живојиновић (Топола: Задужбина краља Петра I, 2003), 159.

⁸¹ VA, P-3, 461-1-4/1, l. 21, Ministarstvo vojno, Artiljerijsko-tehničko odeljenje za Ministarstvo spoljnih poslova, 10/23. 9. 1914.

⁸² Ibid.

Odessa, and towards the Danube port of Reni.⁸³ By December 1914, the ammunition problems of the Russian army were so great that assistance was asked from France.⁸⁴ However, by then the situation in Serbia stabilized.

A Unique Perspective of Lieutenant Colonel Joksimović

As mentioned, Serbian diplomats abroad were placed under immense pressure about the procurement of the artillery rounds. This was especially the case for the Serbian envoy Milenko Vesnić, stationed in the French wartime capital Bordeaux. He was continuously reminded by his superiors in Serbia that the ammunition question was 'urgent', 'acute' and 'life depending'.⁸⁵ In October 1914, Minister of War, Colonel Stefanović wrote the following to Vesnić: "Fulfilment of this (*artillery procurement* D.Š.) should be the most holly assignment for you and the Lieutenant Colonel Joksimović, the fate of our country depends on it."⁸⁶ Vesnić's task was also to keep the Portugal option open and to inquire about this in France. He was also to coordinate closely with the Serbian envoy in Saint Petersburg, Miroslav Spaljoković.⁸⁷ However, Milenko Vesnić and Lieutenant Colonel Joksimović could not speed up the French authorities. The reports of Lieutenant Colonel Joksimović present a very illustrative example of how the French war industry operated at the time.

As a Serbian officer abroad, he received panic-stricken reports from his countrymen. On the other hand, he saw firsthand the situation in France. In his report from October 25th, he wrote that "absolutely nothing has been done regarding our new shipments...The factory has been overloaded with urgent requests made by the French army."⁸⁸ The only solution he saw, was that the French government issues a direct order to the factory so that the Serbian ammunition requests were immediately taken into work. He also mentioned that some 20,000 shrapnels remained to be made from the old, 1913 Serbian contract.⁸⁹ It was clear that the French had trouble producing anything anymore for the Serbian type of the '75'. They did not even want to sign any new contract.⁹⁰ Joksimović's report reveals other details. He was often criticised by the Serbian Minister of War, for not ciphering his telegrams, but Lieutenant Colonel Joksimović replied that he worked in poor conditions and that there was no place where he could encode his reports. He was somehow able to use the French police resources only once and cipher the telegram when the shipment of the Greek ammunition was organized. Due to the Greek neutrality secrecy had to be kept.⁹¹

⁸³ VA, P-3, 461-1-4/1, l. 27–28, Telegram iz Petrograda, 12/25.9.1914.

⁸⁴ Andrey Pavlov, *op. cit.*, 262.

⁸⁵ VA, P-3, 461-1-4/1, l. 32–37, Komisiji za prijem artiljerijskog materijala Ministru vojnom, 12/25.10.1914.

⁸⁶ *Ibid.*

⁸⁷ *Ibid.*

⁸⁸ *Ibid.*

⁸⁹ *Ibid.*

⁹⁰ *Ibid.*

⁹¹ *Ibid.*

He was able to provide some simple equipment and production material for the Kragujevac factory, such as welding machines, etc. He predicted that the situation might change only if the Allies managed to expel the Germans from French territory. He also wrote about the Belgian army. Namely, the Belgian army used the same equipment as the Serbs, so both sides desired the same ammunition. Both countries were in an equally critical position. For example, the Saint-Chamond factory had just made 30,000 fuses that were designated for the Belgian army. Joksimović thought of directing them to the Serbian Kragujevac factory, but firstly the French state needed to order the requisition. On one occasion, Joksimović was preparing a large transport of artillery shells (8,000 rounds) for Serbia. As the ammunition was not fully finished, Joksimović decided to wait for the final parts, so that he could send ammunition that was ready for use, to Serbia. However, the shipment was sold to Belgium while Joksimović waited for the final parts. Similarly, the French authorities would criticize Joksimović if the ammunition stayed too long in their arsenal. Consequently, he was sending parts of the artillery casings as they were finished. This provoked the objections of his superiors in Niš, but Joksimović denounced the accusations that 'such shells were of no use'. He argued that it is better to send what was available and to subsequently finalize the production in Serbia.⁹²

„To have a general impression about the situation, it is necessary to stress, that this country is in a state of war, that a minimal number of personnel has been employed now, that the enemy has flooded half of the country, and that he is standing in front of Paris and L'Havre – due to such situation, the transport, the shipments, especially, the private ones as is the case with our contract, have been utterly disrupted...Due to the circumstances caused by the war, their own needs have priority, then the Belgian shipments – (which is completely understandable), and only then, the Serbian requests, to see if something can be done about them...It is absolutely impossible to organize the work, and the shipment as well as my reporting – as it was in the past, during peace, and as we would like it to be. At my repeated requests, I encounter always the same reply: shrugging shoulders and words *it is not possible to do it differently*. Besides, all this is well known to our delegation in France. This situation is quite logical to me personally, and I am very surprised that we have even managed to squeeze this much in such difficult times that this country lives through. But I repeatedly receive requests for sending a 'a complete artillery round' and to make everyday a report. I have tried to meet these demands...I have used all the possibilities and nothing more could have been done.“⁹³

On 19th of October 1914, 'Creuzot' agreed to provide 5000 rounds for Serbia in November, 10,000 more in December, and 5000 rounds in the first half of January 1915. The information was to be transferred to Pašić. In confidentiality, Pašić was also to be informed that to achieve this, the French Ministry of War had to order the requisition of the material that was already placed aside for Greece.⁹⁴ Joksi-

⁹² Ibid.

⁹³ Ibid.

⁹⁴ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 19.10. 1914).

mović also asked for 30,000 artillery shrapnel shells 75 mm ‘from their production’. This meant that possibility of using the French ammunition for the Serbian guns was already circulating. Joksimović was also trying to obtain 20,000 detonating fuses from the ‘Belgian shipment’.⁹⁵

Joksimović was also in a difficult position while trying to coordinate the transports. He was only informed by the factory once the material had left the site and was transferred toward Marseille. Until it left the port he did not know anything. “I cannot even remotely anticipate, when the next shipment might be expected”.⁹⁶ However, in his report sent on 24th of October 1914, he mentioned the details for shipment of the requisitioned Greek ammunition. These were the fragmentation shells taken from the Saint-Chamond factory. There were as many as 10 260 rounds, caliber 70 mm. As this ammunition was different than the ones used by the Serbs so far, the Lieutenant Colonel provided detailed instructions how to use this ammunition properly.⁹⁷ Another shipment was also mentioned specifically, the 10,000 shrapnel shells for the mountain artillery, caliber 75 mm. This was also requisitioned from the Greek prewar order. The idea of Lieutenant Colonel Joksimović was to use these shells as ammunition for the Serbian field artillery. Naturally, some adjustments had to be made once the transport reached Serbia.⁹⁸

These data have been confirmed by the French sources. Namely, the French listed that they ‘gave away’ ammunition on two occasions to Serbia in 1914. This does not include the shipments relevant for the Serbian 1913 contract. The first additional shipment was sent for Serbia on the 21st of October and included the same quantity mentioned by Joksimović, 10 260 shrapnel rounds. There were also some 10,000 ‘Schneider’ shrapnel projectiles.⁹⁹ The subsequent French shipment materialized on the 20th or on the 21st of November 1914, but due to its specific importance it will be discussed later in the paper.

Having this in mind, it is even clearer now how important was the role of the Military-Technical Arsenal in Kragujevac for finalizing and assembling the shells that arrived to Serbia. The Serbian military representative did what he could. In his resourcefulness, Lieutenant Colonel Joksimović came to an idea to find the projectiles from Serbia’s old orders and to send them all. Namely, these were thousands of shells that were rejected by the Serbian delegation in 1909 and 1910, because of their poor quality. As Joksimović was continuously present in Creusot he knew the matter very well. This ‘rejected’ material was now much desired. Several thousands of various types arrived to Serbia throughout September and October 1914 as part of this program.¹⁰⁰

⁹⁵ VA, P-3, 461-1-4/1, l. 32–35, Komisiji za prijem artiljerijskog materijala Ministru vojnom, 12/25.10.1914.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, État du matériel de guerre, canon, munitions, explosif, cédé à la Serbie depuis le mois d’aout 1914.

¹⁰⁰ VA, P-3, 461-1-4/1, l. 35, Komisiji za prijem artiljerijskog materijala Ministru vojnom, 12/25.10.1914.

The Counter-Offensive and the Wrong Ammunition

In 1928, general Živko Pavlović published a two-volume account of the Kolubara battle, fought in late 1914. The battle was seen as 'the Serbian Marne'. At the time of the battle, Pavlović was a colonel and the aide-de-camp to the Serbian Chief of the Supreme Command, Field Marshal Radomir Putnik. Pavlović mentioned how bewildered were the Serbian officers after hearing the news that the French ammunition was 2.5 mm longer and could not fit the Serbian guns.¹⁰¹ To understand what happened it is important to look at the wider context. In mid-November, the Serbian Prime Minister, Nikola Pašić, raised his intervention to a higher level. He made a personal request, made in coordination with the Serbian Prince Regent, to the Russian Emperor, the British king, and the French president, asking the assistance in respect to the shipments of the war material. As a reaction to this move, the debate was started in the French government circles how to immediately send some 20,000 shells to the Serbs.¹⁰² Also, Lieutenant Colonel Joksimović, as mentioned previously, had already talked with the French officials about sending to Serbia the French ammunition. All Greek ammunition was already requisitioned, and the French could now only send their proper ammunition.

On the 20th November 1914, just four days after Pašić's personal appeal provoked commotion in Bordeaux, the French envoy in Serbia, Auguste Boppe sent a telegram to the French Military Attaché, Pierre Victor Furnie.¹⁰³ The text revealed that the French Ministry of War urgently wanted to know, in what condition the ammunition for the field canon of 75 mm should be sent to Serbia. Also, an additional question was posed: can the Serbian Military Technical Arsenal in Kragujevac make some adjustments to the standardized French ammunition. The aim was to make it fit into the Serbian guns.¹⁰⁴ In the last section of this crucial telegram the French Ministry of War inquired about the purpose of large quantities of explosive that was asked to be delivered to Serbia. Namely, Serbia asked as much as 20 tones immediately and 10 tones for the following month.¹⁰⁵

A similar topic, of adapting the French ammunition, was mentioned in the internal French correspondence, later, in December. After the Austro-Hungarian troops were expelled from Serbia and felicitations were expressed to the Serbs, the collaboration and the shipments of the weapons were to be continued. On the 18th of December 1918, the French Ministry of War was promising to provide 1000 shells per day for the '75' until the 15th of January, hoping to increase the numbers

¹⁰¹ Живко Г. Павловић, *Колубарска битка*, I (Шабац-Лазаревац: Глас цркве–Библиотека *Димитрије Туцовић* 2014), 873.

¹⁰² SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 14.11. 1914).

¹⁰³ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 16. 11. 1914).

¹⁰⁴ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 20. 11. 1914).

¹⁰⁵ Ibid.

afterward. Most importantly, an agreement was reached between the Ministry and the 'Creusot' factory, so that grenades in these upcoming shipments were fully modified for the Serbian guns. The French industry got over the first and the most critical phase of the ammunition crisis. Now they could again produce specific projectiles for the Serbs. In both of these documents, the French make a clear distinction between the 'Serbian' and the 'French' type of ammunition.

In November the situation dramatically improved. Some major events happened in Kragujevac in mid-November. The Kragujevac plant suddenly and completely unexpectedly managed to deliver as much as 20,000 shells to the front around the 10th of November.¹⁰⁶ The wartime director of the Military Technical Arsenal in Kragujevac, Vasa Božidarević, left a detailed explanation of the events.¹⁰⁷ As the Kragujevac factory was producing shrapnels faster than the detonation fuses a difference was made, there were some 15,000 rounds without the fuses in the arsenal by October 1914. There were some efforts to buy the fuses in Italy, but this failed. The experts in Kragujevac decided to solve the problem on their own. They added a special aluminum part on each shell so that some old, discarded fuses could be now placed on the new projectiles. The tests that were performed at the firing range gave excellent results. Suddenly, in 5 to 6 days, adding the artillery shells that were regularly produced, the Kragujevac arsenal delivered, out of nowhere, 20,000 artillery shells for the field artillery.¹⁰⁸ The same factory managed to provide some ammunition for the 120 mm and 150 mm howitzers that were retreated from the front line due to the lack of ammunition. Tests were performed with the ammunition that was captured from the Ottomans or later, from the Habsburg army. Soon, it was decided to make some adjustments. An extremely dangerous work began of narrowing the shells that were packed with explosives. Again, the task was completed with success and several batteries were now able to return to combat using this adapted ammunition.¹⁰⁹

In the meantime, the major shipment from France was on its way. The fact that the Serbian officials were surprised to receive the wrong ammunition could probably be explained by hast and poor diplomatic coordination in war time conditions. If indeed the key telegram of the Auguste Boppe was sent on the 20th of November, the shipment was already in Salonika or on the way there. The exact days when the ships began their journey are difficult to establish, as is often the case with the quantity of the goods that were transported in war conditions.¹¹⁰ Even in the official French documents, reservations were expressed concerning the exact dates when the boats started their journeys.¹¹¹ In any case,

¹⁰⁶ Бранислав Станковић, *op. cit.*, 134.

¹⁰⁷ Васа Божидаровић, „Још мало светлости на Колубарску битку“, *Ратник*, 1922, XXXVIII, свеска 5, 62–64.

¹⁰⁸ Бранислав Станковић, *op. cit.*, 135.

¹⁰⁹ Васа Божидаровић, *op. cit.*, 60–61.

¹¹⁰ Nikola Popović stressed this problem also in respect to the Russian ammunition and war material transports to Serbia. See: Никола Поповић, *Србија и Царска Русија*, (Београд: Службени лист СРЈ, 1994).

¹¹¹ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, État du matériel de guerre, canon, munitions, explosif, cédé à la Serbie depuis le mois d'aout 1914.

on the 20th of November, the French consul in Salonika reported that some 20,000 tons of ammunition had just arrived at Salonika port.¹¹² On the same day, the Serbian consul in Salonika confirmed too, that the French ammunition had arrived. At 10h o'clock the same morning, some 3000 boxes with ammunition were disembarked. The main task now was to transfer them urgently to Serbia. At 22h special train went towards Serbia. It was a locomotive with 20 railroad wagons.¹¹³ The director of the Kragujevac Military-Technical Arsenal, Vasa Božidarević, provided additional details about this event. After the ammunition arrived in Salonika, Božidarević was given the special task. He was to drive to Niš, and await the transport from Salonika and inspect it. Subsequently, he was to distribute the artillery shells where most needed.

“After opening the first boxes with ammunition, to our great surprise, we determined that this ammunition was not for our, but for the French gun.”¹¹⁴ The gun breach could not be closed. The panic was immense as the Supreme Command had just lifted its ban on ammunition consumption. The field commanders were allowed to fire as they wished. This was done knowing that the ammunition was arriving from France, and because the Kragujevac plant suddenly provided the army with 20,000 artillery shells.¹¹⁵ The decision was made to shorten each artillery shell. The casing had to be cut. To do so, each artillery shell had to be disassembled. The army barracks in Niš were selected as the workspace. An improvised workshop was made and hundreds of army reservists were called to help. There were only two places in Serbia where the cutting of the casings could be performed. In Niš, at the Railway workshop and in Kragujevac, at the Arsenal. However, the Kragujevac plant was already evacuating its equipment due to the advance of the Habsburg troops. The evacuation of the key workshops that were necessary for the new task was immediately revoked.¹¹⁶ As only a fraction of the artillery shells could be cut in Niš, the majority had to be sent to Kragujevac. Each casing had to be “pressed near the mouth of the barrel”.¹¹⁷ Immediately after this process, they were shipped back to Niš, to be assembled again. Subsequently, these were transferred to the frontline units.¹¹⁸ Special trains were designated for each part of this mission and the episode became one of the most glorious moments in the history of the Serbian railways. As soon as the boxes with the 300 casings were loaded, the train would rush to Kragujevac factory at top speed. By 28th of November 4000 shells were adjusted. On the 1st of December 18,000 more were adapted in a similar fashion.¹¹⁹

¹¹² SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 20.11. 1914). Unfortunately, the document does not have the marking of the month, but relying on the context and the chronological order of the colonel's papers, it very likely that it was written in November.

¹¹³ Душан Стефановић, *op. cit.*, 627.

¹¹⁴ Васа Божидаревић, *op. cit.*, 62.

¹¹⁵ *Ibid.*

¹¹⁶ *Ibid.*, 63.

¹¹⁷ Живко Г. Павловић, *Колубарска битка*, 912.

¹¹⁸ *Ibid.*, 873.

¹¹⁹ *Ibid.*, 874; Божидаревић, *op. cit.*, 63.

About the same time, on the 16th of November 1914, the information appeared that Greece was sending another contingent of ammunition to Serbia. The French ambassador to Serbia wrote to his colleague Furnie: "At the request of England, supported by Russia, Greece was sending Serbia 20,000 grenades that will arrive at Salonika next Wednesday".¹²⁰ It is not certain, but it is very likely that the Greek side likely found itself again under intense international pressure, mostly by the British, to assist Serbia again. This time the ammunition probably came right from the Greek arsenal. The decision was made just two days after Pašić send his desperate call to the Entente's most prominent figures. The Russian side assisted at the same time. Just three days after the French major shipment, the Russian navy convoys also made it through. On the 23rd of November, the barges were disembarked in the Serbian Danube port of Prahovo and sent immediately to Kragujevac.¹²¹

In just a few days the Serbian ammunition situation improved significantly. On the 25th of November, the Chief of the Serbian High Command, Radomir Putnik, speaking with the Minister of War and the Prime Minister, made a telling comment. He said that the moment for the Serbian counter-offensive was approaching.¹²² However, there were other gripping problems such as battle fatigue and low morale.¹²³ These problems were dealt with by bringing fresh replacements and pulling out many of the units from immediate contact with the enemy. Disciplinary measures were also severed. Once the Serbian counter-offensive started on the 3rd of December 1914, the Serbian artillerymen could count on some 20,000 French modified shells, additional 20,000 'Greek' grenades, and more than 20,000 shells of Russian origin. Plus, there were 20,000 Serbian ones. These supplies were sufficient for supporting an audacious and swift counter offensive.

Indeed, this mixture of ammunition of various, and at times, of dubious origin had its negative consequences. General Mihailo Živković who commanded at the Belgrade section of the front, observed that during the fighting on the 3rd of December 1914, weapons worked properly. However, he reported the case where 2 explosive artillery shells burst while within the canon barrel. The ammunition was of Greek origin. One officer was wounded, while two soldiers were killed. The canon was disabled.¹²⁴ After the Austro-Hungarian army was defeated and the French stabilized their production, new arrangements were made between the Serbs and the French. From January 1915 until April 1915, France was delivering Serbia, each week, around 5 to 7,000 shells that were fully adjusted for the Serbian '75' cannon.¹²⁵

¹²⁰ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914-1916, (Ministre de France à Nish – Attaché militaire, P.V. Furnie 16. 11. 1914).

¹²¹ Душан Стефановић, *op. cit.*, 627.

¹²² *Ibid*, 637.

¹²³ *Ibid*, 656, 658.

¹²⁴ Михаило Живковић, *Одбрана Београда (1914–1915)*, приредио Никола Чубра, (Београд: Финекс 1998), 207.

¹²⁵ SHD, Vincennes, 7N1570 Attaches militaires, Serbie 1914–1916, État du matériel de guerre, canon, munitions, explosif, cédé à la Serbie depuis le mois d'aout 1914.

Conclusion

One of the most distinguished Serbian commanders, Colonel Živko Pavlović, saw the French ammunition assistance as “inadequate” and “irregular”.¹²⁶ Immersed into the Serbian military map, Colonel Živko Pavlović, was desperately trying to come up with the solutions for slowing down the overwhelming enemy forces. As a consequence, the Serbian colonel failed to fully grasp the chaotic conditions elsewhere in Europe, especially in France. On the other hand, his junior colleague Lieutenant Colonel Milivoje Joksimović understood things differently. He knew this was not an isolated Serbo-Austrian war, but a new conflict, where the Serbian front presented only a fraction of the global war. The case of Serbia’s ammunition crisis shows that the commitment of all members of the Entente was a genuine one but that logistical problems were often insurmountable, even for great powers. In addition, the artillery ammunition was just one of the numerous materials that Serbia was receiving from the Entente. This included food, clothes, and medicines and all this had to be transported to Salonika or along the Danube. The vigor of the Serbian soldiers would not have been sufficient for keeping Serbia independent in 1914 without the reception of this waste and diverse allied support. It is important that almost all of this equipment was given to Serbia for free, including artillery ammunition from France and Russia.

The ammunition question of 1914 also provides arguments for the debates related to the July crisis of 1914. Serbia was utterly ill-prepared for any type of war, even for a localized Balkan conflict. Colonel Živko Pavlović also said in his book about the Kolubara battle that never before, in the history of warfare, was one country so dependent on aid arriving from across the globe. He was probably right. Serbia’s desperation for ammunition left deep consequences and stimulated frenetic work on the creation of a domestic military industry. The point was to avoid being dependent again but to rely on its production that had already shown such an impressive level of resourcefulness and ingenuity in the Autumn of 1914.

¹²⁶ Живко Г. Павловић, *Колубарска битка*, 911.

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THE SERBIAN ARMY AND ITS STRUGGLE WITH THE AMMUNITION CRISIS OF 1914

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Summary

The paper covers the essential problem of the Serbian artillery in the Autumn of 1914. The Europe wide ammunition crisis encompassed the Serbian army as well. The focus of analysis has been placed on the different strategies the Serbian state used to find artillery ammunition and additional weapons. The article has been written based on the documents from the Serbian Military Archive as well as personal papers and recollections of the several Serbian senior commanders. However, these insights were supplemented with the documentation that once belonged to the French military attaché in Serbia, Colonel Pierre Victor Fournier. The ammunition crisis of the Serbian army has been treated as part of the global 'ammunition famine' and the topic of artillery projectiles has been used to better contextualize Serbia's war efforts within the wider developments in the Great War. Special attention has been dedicated to the collaboration with France and its shipment of the 'wrong ammunition' in November 1914. It has been shown that this ammunition shipment was not sent in order to provoke any inconvenience for the Serbian army, but was the desperate measure made by the overstretched French Ministry of War. Ultimately, the Serbian army managed to survive the crisis by combining several types of resources. This included the abundant assistance from the Entente, mainly France and Russia. Moreover, a significant role played by Greece has been underlined. Finally, Serbia's industrial capacities were essential in producing ammunition and in adapting all types of war equipment and ammunition.

KEYWORDS: artillery, Serbia, First World War, war logistics

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