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THE APPEARANCE, DEVELOPMENT AND SITUATION OF AIR DEFENSE ARTILLERY (ADA) IN HUNGARY UNTIL THE TRIANON PEACE TREATY

Absztrakt/Abstract

Az első világháború kezdetéig számos légi cél fejlesztése történt meg nagyon rövid idő alatt. 1900-ban megépült az első irányítható Zeppelin típusú léghajó, és Németországban egy léghajó zászlóalj jött létre. A Wright testvérek, Wilbur és Orville, motoros repülőjének megjelenése egy hatalmas lépés volt a repülés történetében. 1903. szeptember 14-i sikeres kísérletük a katonai vezetés figyelmét arra hívta fel a, hogy a ezek az eszközök katonai téren is kiválóan alkalmazhatóak. Főként a németek és a franciák fordítottak nagy figyelmet erre a tényre. Röviddel az után, hogy első repülőgépek megjelentek a háborúban, megjelent a légvédelem is. jelen írás a légvédelmi tüzérség magyarországi fejlődésével foglalkozik az I. világháború végéig.

Until the World War the development of various air targets was extremely fast. In 1900 the first steerable ZEPPELIN-type airship was built and in Germany an airship battalion was formed. The work of the Wright brothers, Wilbur and Orville, practically the appearance of engine airplane, was a huge step in the history of flying. Their successful experiment on 14 September 1903 called the attention of military leaderships on these devices, of which military utility was obvious. Mainly the German and the French paid great attention to them, and, even if with not as huge priority. Shortly after the first use of airplanes in war, the air defense had appeared. This paper deals with the development of air defense artillery in Hungary until the end of World War I.

Kulcsszavak/Keywords: *légvédelem, első világháború ~ air defense, World War I.*

THE APPEARANCE AND DEVELOPMENT OF AIR DEFENSE ARTILLERY UNTIL THE WORLD WAR I.

Almost at the same time as the Montgolfier brothers' balloon appeared and was used in military (reconnaissance) came up the idea and also the practical realization of fighting against it too. The successful balloon-experiment on 5 June 1783 was followed by I.C.G. Hayze Prussian engineer's book in 1784, in which he dealt with the usage of this new military

device. In this writing there are some parts about counter-intelligence as well. Out of the weapons of those times he pointed out rifle, howitzer, mortar and rocket as possible and effective tools. It neither took long that the artillery should be used in air defense. No longer than in 10 years the Austrians too shot a French balloon with their cannons on 13 June 1794 near Mabeuge.[1] The shots of the 2 howitzers were against the device and its staff spying on the fortress. The principle, which later got a role in the usage of ADA, emerged even then: the defensive force didn't so much necessarily try to eliminate the air device as they rather wanted to encourage their troops by shooting and scaring away the staff of the balloon, also to deprive the enemy from reaching its desired aim (which was practically reconnaissance these times). The elimination of the balloon was, naturally, unsuccessful.

The next notes are from 80 years later, from the 1870-71 Prussian-French war. The Germans blockaded Paris. The French used balloons to keep in touch with and send mails to the rest of the country.[2] To stop it The Germans assembled a 3.7cm "balloon-repelling cannon". 5 cannons like that were built and carried on carts. Their efficiency was still not good enough. Out of the 66 launched balloons the Germans could shoot down probably(!) only one on 12 Nov 1870.

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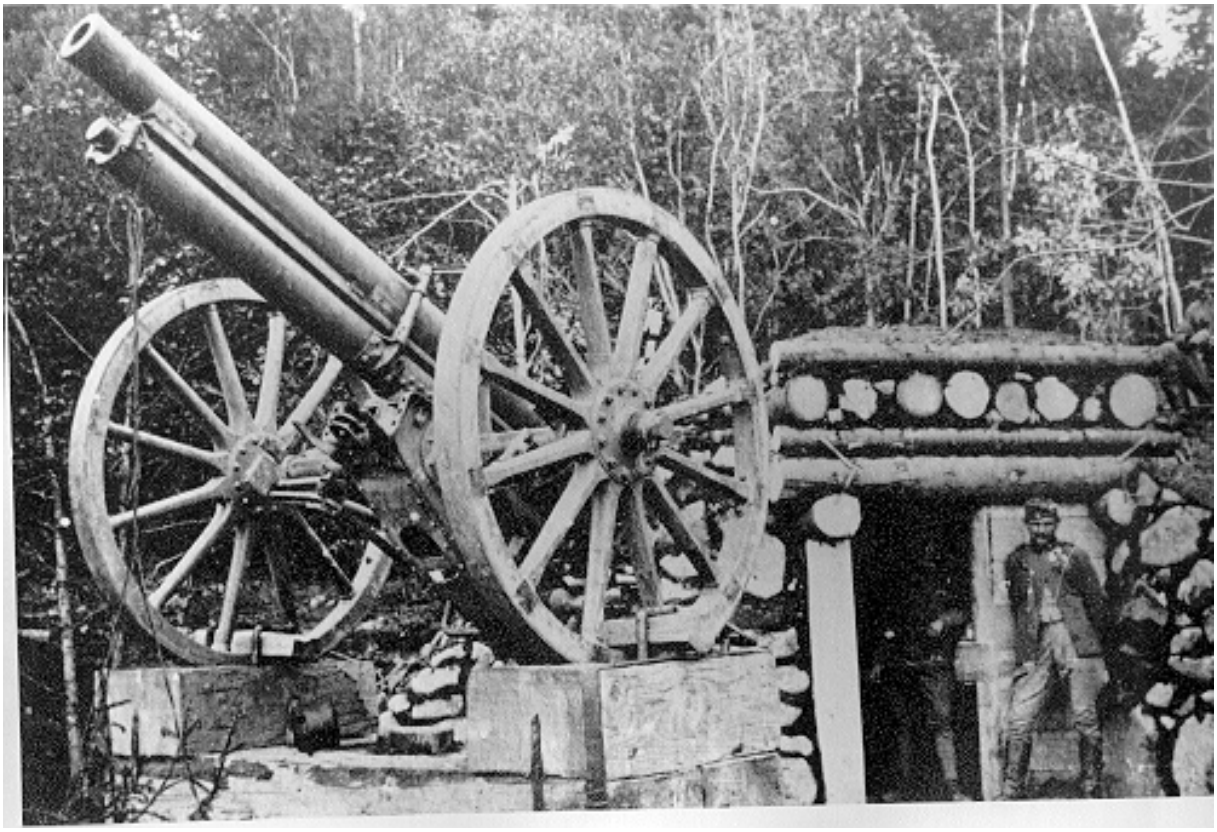
In 1909 Blériot managed to fly across the La Manche Canal and by this act the relative protection of England (by their fleet) started to disappear. In the major French, Russian, German and Austro-Hungarian trainings, airplanes were used as reconnaissance and mail service as well.

To the question of 'How can these devices be repelled?' there were 2 answers then. The first was: by the aircraft itself. But then again the effective shooting was not solved yet. The other possibility – naturally not excluding the 1st one but being developed at once – was to develop the artillery and eliminate the air targets. These questions were also discussed by every European power, but with much smaller emphasis, compared to aircrafts. The Austro-Hungarian and German military leadership wanted to solve it mainly by camp and fortress artillery. Even though the Austro-Hungarian Monarchy experimented on creating special devices since 1894, these were not successful. In SKODA factory an "air vehicle antimissile" was planned in 1910 but its production started only way too later. So when the world war started, the Monarchy didn't own an antimissile.

[1] Siménfalvy Tihamér főhadnagy: A léghajó a tábori és várharcban. Magyar Katonai Közlöny (MKK) 1909/11. page 1016

[2] Same as previous page 1017



Picture 1. Camp artillery device on an off-the-cuff air defense shooting display

The German put much more emphasis on the issue of air defense by cannons. In the 1906 year's car exhibition they introduced a middle cornered 5cm air-balloon-repelling gun built on an armoured infantry vehicle. But they didn't take too much effort either on mass producing modern air vehicle repelling devices. In the beginning of the world war even Germany owned only 6 car-drawn air defense cannons and 8 horse-drawn experimental(!) air defense cannons. It may have been the French who cared most about creating an air defense artillery. They were planning cannons and munitions against air targets in 1906 and they started the practical experiments in 1907. But they still used 75M cannons for this for a long time during the war.

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AIR DEFENSE ARTILLERY DURING THE WORLD WAR

In the beginning of the war, expect for the German, practically no armies owned a device especially constructed to repel an air target. But it soon turned out that using an aircraft for military purpose – even if not by direct strikes but by reconnaissance, messenger and spotting correction activities – can cause serious damages. The first mass produced cannons used specifically for air defense were made by the German since 1916, with the cubic measures of 8 cm, 8.8 cm and 10.5 cm. By the end of the war they had 197 times more air defense cannons than in the beginning of the war (2576 pices).

As the Austro-Hungarian Monarchy didn't have any air defense cannons, they tried to use the ones they looted from the Russians against air targets. Primarily the 5M and 5/8 M type camp cannons, later of which the latter had a longer history in Hungary. Because of their being unsuccessful, firstly the general staff of the Monarchy commandeered 3 air defense

cannons which were made for Holland and Romania in SKODA factory.[3] After that they ordered to mass produce the type. These were horse-drawn air defense cannons assembled with the barrels of 5/8Ms. Later Hungary inherited some of them. The 14M8 type air vehicle repellent cannons looted from the Russians were also successful. During the war the 8cm 17M camp cannons were also developed into air defense cannons. The classic, camp and fortress cannons were difficult to use as air defense cannons. For the flying attributes of air warfare devices, neither their side-angle nor their angle of elevation manoeuvrability was satisfying. To compensate it, firstly primitive solutions, later less primitive ones were introduced. Placing the cannons on off-the-cuff displays then later on scaffoldings widened the possibilities somewhat, but the effectiveness and its improvement was still far behind even the minimal expectations. Only the production of the cannons specifically prepared for air defense targets with KÖZÉSARKAS technique solution and building them on vehicles brought some real change.

From 1915 not only the technical improvement started but the operational one too. Firstly, some air defense subunits were established, then, from 1917 batteries used in air vehicle repelling were set up within the artillery regiment as its 5. battery. They consisted of 2-2 pieces of 14.O.M. cannons. In 1918 all infantry divisions had a camp cannon regiment. Every second regiments 5th battery was an air defense one.[4] The 1 November 1918 'Army Arrangement Table' shows the revaluation of this branch, in which the home-defense troops had the following power:

- 13 pieces of 8cm anti-aircraft guns for the heavy artillery regiments;
- 75 pieces off-the-cuff 8cm anti-aircraft guns for the defence of the cities, for the camp artillery regiments and for the heavy artillery regiments;
- 16 pieces off-the-cuff 8cm anti-aircraft platoons for the camp artillery regiments;
- 1 piece of 7cm motorized cannon;
- 1 piece of 2cm automatic gun platoon;
- 1 piece of 3.7cm automatic gun platoon;
- 1 piece of 7 ½ Italian anti-aircraft cannon.[5]

It is worth saying some words about the effectiveness of the air defense artillery during the World War I. In 1914 to shoot down a target approximately 11000 shots were needed, in 1918 about 3500. The ADA shot down the 18-20% of the total eliminated targets.

[3] Dr. Barcy Zoltán: A magyar légvédelmi tüzérség fejlesztése és rejtése 1922-1938. Hadtörténeti Közlemények 1985/4. page 878

[4] Dr. Varga József: A légvédelmi tüzérség története a kezdetektől a második világháború végéig. Magyar Honvédség Légvédelmi Rakéta- és Tüzérfőnökség kiadványa, 1996., page 28

[5] A Magyar Tüzér. page 142

Picture 2. Camp artillery device in off-the-cuff air defense shooting position

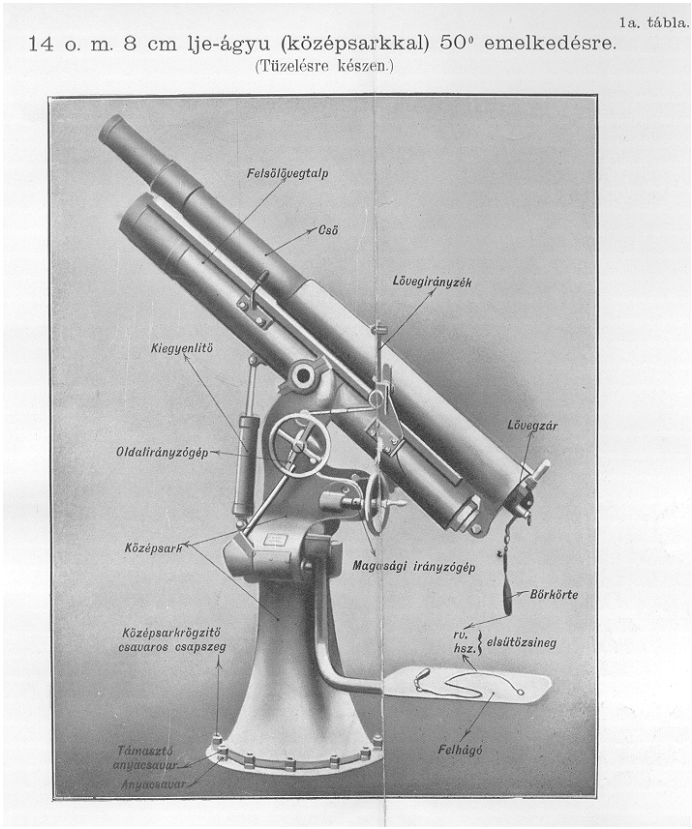
We can say that by the end of the war the air vehicle repellent devices, especially the cannons got bigger role and more emphasis in the battles. But they didn't get independent from the camp and fortress artillery in the Austro-Hungarian Monarchy. On the other hand the construction and mass production of really effective and primarily air defense cannons never happened. During the collapse the majority of the Monarchy's cannons used in air defense either got destroyed or got taken away by the enemy. So the Hungarian Republic of Council too owned only ten cannons suitable for air defense. Four of them were 14M, six were 5M. They were going to protect the capital and the 43. artillery regiment with its five air defense batteries was also set up.[6]

THE HUNGARIAN ADA UNTIL TRIANON[7]

After the fall of the Republic of Council the country was divided into seven military regions. Though, this was only a theory for a while because the Romanians didn't withdraw their troops from Duna-Tisza köze and Trans-Tisza until the December 1919. So by the end of the year only four military regions were formed, in Budapest, Székesfehérvár, Kaposvár and

[6] Dr. Varga József: im. page 35
[7] Dr. Barcy Zoltán: im. page 877-878

Szeged. There were no aircraft-repellent cannons in the order of battle. The reason for this was mainly the shortage of cannons. In the beginning of 1920 a resolution was passed to set up a 2-cannon 14M material 'repel' training batteries within the will-be-formed artillery trainee regiment.



Picture 3. 14 O.M air defense cannon

The cannons were taken down the armoured trains. The troops practically didn't have air defense in the plans to get back the Hungarian regions. Though, the leadership wanted to solve the protection of the capital by all means, as far as possible. In August 1920 the Ministry of Defense ordered to set up the 'Aircraft-repellent Battery of Budapest Gun Battalion'. It consisted of four pieces of 14M air vehicle repellent cannons and one piece of 75M signal cannon. The battalion appeared in the November order of battle in the Budapest division as the 4th battalion of the artillery regiment. Truly enough, there were only 3 pieces of 8cm cannon and 1 piece of 7.5cm one here. Besides, 'Gellért Guard' also had two air defense cannons.[8]

The Ministry of Defense was going to set up seven infantry battalions and one horse battalion. They would have got one four-cannon aircraft repellent battalion each. Furthermore, they were going to send a 'Training battalion' with four cannons into the order of battle. The Hungarian Army owned only ten cannons out of the 36 ones that would have been necessary for these plans. There were no particular hopes for it to be able to make it up. So this quite poor inheritance was strongly felt in quantitative and qualitative points of view as well between the two world wars, especially in the 20s.

The Peace Treaty, which was signed on 4 June 1920 and came to life on 26 July 1920 by all means "solved the problem" of air defense artillery for a long time. The treaty sent

[8] Hadtörténeti Levéltár (HL), HM A.o.1. tétel 69019. 1920.

Hungary into a complete hopeless situation in the field of military. Air defense, excluded its passive form, was completely forbidden.

The Vth part of the 'Hungarian Peace Treaty', the 'Instructions for the military, warship and airship' was dealing with the artillery. 104 section 3. paragraph stated the Hungarian armed forces can only own cannons according to the Vth Table. So all in all 105 cannons with 1000 bullet-munition. The usage of bigger than 105 mm devices were banned. As the Vth part 1st chapter 108. section stated: 'All troops not mentioned in this Table are forbidden', Hungary was not allowed to have either aircraft forces or air defense cannons. The XIth part which dealt with ' Air transport' stated in its 260. section that ' The air vehicles belonging to the allied and accompanied forces are allowed to fly above and land on the whole territory of Hungary...' The 117th section stated that the " all the weapons, munitions and war materials exceeding the allowed amount, including all the aircraft-repelling devices' must be surrendered.[9]

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Source of pictures: Hadtörténeti Intézet és Múzeum

[9] A Magyar Békeszerződés, Kiadja a M.Kir. Külügyminisztérium Bp. M. Kir. Tud. - Egyetemi Nyomda 1920.