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# HISTORY

# The effects of King Sigismund's Hussite wars on the art of war

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This paper elaborates upon the effects on the art of war of the crusades launched in the first half of the 15th century against the Hussites, who intended to reform the Catholic Church. It places this episodic, although rather interesting and controversial period in the process of the "revolution of war", the changes in warfare, that took place in Europe. In the essay questions are answered about the problems arising in connection with the use of Hussite tactics. About the conditions of the Hungarian army's participation, e.g. the composition of the participating Hungarian contingents, it presents more exact answers than any preceding project. The paper highlights the interdependences between the Hussite wars on the one hand and the obsoleteness of Sigismundian military architecture and chivalric warfare on the other. It also describes the direct and indirect effects of these wars on the development of the Hungarian art of war.

# Introduction

In the first years of the reign of Sigismund of Luxemburg (1387–1437), significant changes occurred in the foreign political relations of the region of Hungary's interests. In the I. Battle of Kososvopolje (1389), the troops of the South Slavic lords were decisively defeated by the Osmans, and as a result, Serbia became a Turkish vassal state. From 1390 the Turkish marauders regularly launched raids into the southern counties of the Kingdom of Hungary. The king thought that he would be able to liberate Constantinople and break the rule of the new Osman superpower by a victorious crusade conducted in the framework of a multinational effort. The defeat at Nicopolis proved that preparations for defence were necessary on the southern frontier. In his war against Venice, between 1411 and 1420, he lost Dalmatia.<sup>1</sup>

Despite his failures Sigismund undoubtedly became the most successful politician of his time in Europe. He was German King from 1410 and Holy Roman Emperor from 1433. The biggest diplomatic achievement of Sigismund is likely to have been the ending of the Western (Papal) Schism at the Council of Constance (1414–1418).

Another significant event at the synod was the burning of at the stake of John Hus, who stepped up against the worldly Roman Catholic Church. His execution prompted

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outrage in Bohemia, his followers were declared heretics, and excluded from the church. The eager catholic Sigismund intended to maintain the unity of the Church, but he could only take the throne of Bohemia in 1436, after the end of the Hussite wars. In the following chapters of my paper I am going to elaborate upon the effects of these wars on the art of war in general and on the Hungarian art of war in particular.

## The seeds of the "revolution of war" and the reaction in the age of Sigismund

The social and economic changes, as well as the technical development that had taken place in Europe by the 15th century, affected the art of war, too. By this time, as a result of the decay of the feudal system in Medieval Europe, the insurrection of the nobility as the core of the armed forces had become useless. As far as the economy was concerned, the spread of cash-management increased the revenues of the state. The lessons learned from Sigismund's wars, especially from the crusades against the Hussites, together with the Hundred Years' War in Western Europe made it clear that the feudal military architecture and chivalric warfare had become obsolete.

I consider these wars to be the very beginning of the "revolution of war". This is an expression which is used in the military historians' terminology to refer to those processes that took place in the 14th and 15th centuries and changed the augmentation, equipment, tactics and composition of the European armies. The wars between 1494 and 1530, prompted by the Habsburg–Valois political confrontation, marked the victory of new principles and methods over the old ones, and during the Thirty Years' War (1618–1648) they became prevalent.

The first of the three main factors of the "revolution of war" is the institution of mercenary armies. The European monarchs, at first, tried to find cheaper forms of recruitment, of course, such as the attempts of the King of Hungary to introduce the "militia portalis". This was meant to be a form of recruitment based on serf-lots in addition to the "generalis exercitus", the insurrection of the nobility. All over Europe the nobility opposed the reform attempts. The monarchs already needed an army which was independent of the feudal system, but they weren't powerful enough to establish one. The first permanent mercenary army was formed after Sigismund had died, by the establishment of the French Ordinance cavalry.<sup>2</sup>

The revival of infantry is another important factor of the "revolution of military". This arm lost its importance during the Middle Ages, and had become auxiliary arm. Only a free man can be good infantryman! The truth of this statement is proven both by the Swiss freedom fighters who fought for the independence of their cantons and the Hussites. The rise of infantry triggered the decay of chivalric warfare. The infantry used

the appropriate weapons to neutralize cavalry, including pikes and halberds. They formed a tightly-packed formation in order to multiply the power (and will) of the single warrior. On the other hand, in the age of Sigismund the success of battle still depended on the assault of the armoured cavalry and this arm was the decisive arm of the European armies. It was typical of the wars of the time for the infantry to use a tactic based on defence, dissolve the lines of the assaulting cavalry, and then launch a counter-strike. In fact, the Hussite wagon-fort also followed this principle.

The rise of infantry increased the demand for ranged weapons. The big penetrating power of the missile or bullet was a basic requirement so that these weapons could be used against armoured cavalry, as well. Technical development met the challenge by the invention of firearms. In my opinion, the mechanical ranged weapons with serious armour-piercing skill, like the English longbow in the Hundred Years' War, or the robust crossbows were only stop-gap solutions that functioned only until the difficulties of the application of firearms had been solved, which represented the next step in the evolution of weapons. These problems were due to the massive bulk and weight of the first firearms, the difficulty of their movement, the inaccuracy and low effectiveness of shots as well the poor quality of gunpowder and the frequent accidents.<sup>3</sup>

In the Hussite armies the employment of firearms combined with the wagon-fort tactics, brought significant improvement in the mobilization of firearms. The Hussites' artillery was ahead of its time in the differentiation of gun types. While most historians say this process took place mainly in the Italian wars between 1492 and 1537, I would rather say that the Hussite wars represented this milestone. So the third factor of the "revolution of war" was the appearance of firearms.

## The Hussite Wars

Hussitism, which was a movement to renew the Catholic religion, evolved in Bohemia at the beginning of the 15th century. Although their message didn't contain dogmatic reforms, their leader, John Hus, was sentenced to be burnt at the stake by the Council of Constance. The simmering tensions in Bohemia erupted after the death of King Wenceslas of Luxemburg. The common people of Prague, driven by the Hussite beliefs, flooded the streets of the city to retaliate on the clerics.

King Sigismund claimed his brother's throne. He tried to postpone the decision about the approval of conditions of reign set by the Hussite groups, until he could establish a strong army and lead it into the country.

Meanwhile Hussite priests held a growing number of assemblies. These camps were called tabors and their participants were mainly rustic people who accepted the

preachers of radical Hussite wings. As a result of this, the peasants soon permanently joined these tabors and soon became the core of Hussite armies.

The Hussite Movement had members from all rungs of Bohemian society. Because of Hus' early death, Hussitism soon splintered into various factions. The main groups were the moderate Calixtines (Utraquists) and the radical Taborites. After the death of the Taborite commander, John Zizka, his followers the Orphans established an independent centrist party. These groups, beyond the ideological differences, were also military-political parties. Finally the Hussite armies were defeated not by the weapons of the crusaders but by the diplomacy of King Sigismund, which was based on the internal frictions of the movement.

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# The first and the second crusade

Figure 1. The first two crusade against the Hussites

On 1 March 1420 the pope proclaimed a crusade against the Hussite heretics, promising indulgencies for the participating warriors.<sup>4</sup> The army, which was led by Sigismund himself departed Breslau at the beginning of May.<sup>5</sup> The crusader troops of the Austrian prince and the Holy Roman Empire arrived only during July. The troops advanced towards Prague, encircled and besieged the city. We don't have the exact

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numbers of the crusaders, Palacky is certain that they numbered far more than 100,000, but also admits the lack of reliable information.<sup>6</sup> I also consider this huge number unrealistic.

By that time the John Zizka-led Taborites had settled down in the castle of Hradiste, which they called Tabor, to the south of Prague.<sup>7</sup> Zizka had been the member of the Bohemian contingent at the Battle of Tannenberg, and participated in the Battle of Agincourt on the side of the English army.<sup>8</sup> So he had "up-to-date" knowledge of the nature of contemporary warfare.

The citizens of Prague held the royalist fortresses, the castle and the Fort of Vysehrad, on the edge of the city under siege. Zizka had already left Tabor and arrived with his approximately 9,000-strong army on 20 May to give them a hand.<sup>9</sup> Zizka, taking into consideration the two royalist fortresses, took up his position on the Vitkov Hill east of Prague. From there it was possible to keep the city under fire, and to prevent the complete encirclement of Prague by the outnumbering enemy. Zizka repelled the assault on his positions of the no more than 3–4,000-strong detachment of crusaders, and their defeat caused the disintegration of the crusaders' army. Sigismund failed to keep one of the most important laws of war, maintaining cooperation between the troops. The Battle of Vitkov Hill was a significant strategic turning point in spite of the small strength of opposing forces, because after that the Hussites were able to seize the initiative and launch offensive operations. Zizka left Prague and launched a war of attrition on the royalist troops through the Bohemian countryside.

The Hungarian-Austrian army entered Moravia in October 1420, and advanced towards Kutna Hora. Although the city obeyed the rule of Prague, Sigismund trusted his followers who lived there and under the cover of night opened the city gate for the troops of the king.<sup>10</sup> Kutna Hora's only value was the compliance of its inhabitants. The town was not especially easy to defend, neither regarding its natural conditions nor its fortifications.

Zizka launched an offensive again. The two armies met near Kutna Hora on 21 December.<sup>11</sup> The Hussites, seeing the Hungarians drive a herd of cattle in front of them, in order to prevent a chaos, switched from marching to a defensive formation and formed a wagon-fort. This trick of the Hungarians was very likely to be ascribed to Pipo of Ozora. However, it did not prove to be enough against Zizka; as we can see it even backfired. Though the Hungarians encircled the wagon-fort, they couldn't do anything else. They assaulted the lines of the Hussites, but as a result of heavy firing from the bombards, which were positioned on the carts, they retreated. During the following night Zizka, in a covert action, organized his troops into marching formation and carried out a dynamic outbreak.<sup>12</sup>

The Hungarians thought that the escaping Hussite army would disintegrate, and allowed their warriors to loot the neighbourhood. Hearing that the Hussite war-wagons were approaching, the commanders of the scattered Hungarian troops started an immediate retreat towards Moravia. Pipo only managed to enable the rearguard to engage in battle with the Hussites on 6 January. The remains of the army tried to cross the River Sazava, but the ice gave way under them.<sup>13</sup> A lot of Hungarian soldiers and equipment were lost.

# Hussite warfare

The Hussites' fight for survival against the crusaders at the beginning of the 15th century marked the end of the Middle Ages with a view to the art of war and brought a lot of important innovations. The almost absolute use of infantry was a necessity, because the movement was primarily based on the peasantry. On the other hand, looking back in history, it meant the way of progress. The usual proportion of cavalry and infantry was 1:10. The tasks of the cavalry were reconnaissance and safeguarding the flanks.

In the given situation Zizka found the perfect solution to the problem of mobilizing and defending the infantry. Since the peasants had a lot of carts, he used these vehicles. The carts had to follow the troops anyway, so they offered an ideal solution to the fortification of the tabor (camp). It also provided the opportunity to regroup and rest for the retreating forces after a lost battle.

There had to be a supply of ranged-weapons which required little training to handle. The predominant weapon in Hussite armies was the crossbow. Although it required great physical strength to use, it was still simpler than the use of the reflex bow. In the age of Sigismund only the rich towns could afford to have firearms. The role of urban citizenship in the Hussite movement facilitated the extensive employment of firearms. The mobilization of these weapons that were rather difficult to move, which had never been seen before, was an ingenious decision of Zizka.

The use of certain types of firearms showed significant differentiation in the Hussite armies. The personal weapon of riflemen was the pre-musket "pistala". The firing was done without aiming, but the triangular loop-holes on the carts might have helped to increase the accuracy of the shots. The light field artillery device was called "taranisce" (trestle gun). Operated by two men they were positioned in the gaps between warwagons. The heavy artillery came in the form of bombards, called "houfnice". We can't answer the question whether the "houfnices" were howitzers (as the etymology suggests) or cannons, because the effective range of these weapons was so short that regarding their trajectory the bombards weren't really differentiated.

Firearms	Pistala	Taranisce	Houfnice
Туре	Small-arm	Light field artillery	Heavy artillery
Projectile	Plummet cannonball	Plummet cannonball	Stone cannonball, canister shot
Calibre	15–20 mm	20–30 mm	30 mm <

Table 1. The Hussite firearms

The sizes of bigger guns were diverse. Out of every five carts one was equipped with an artillery device, out every twenty-five one had a bigger gun and each wagonfort had a huge "wagon gun", which required as many as 18–20 horses to tow.<sup>14</sup> It shows that the artillery was already an integral part of the Taborites' army, however, it is an episodic but very important reform in the organisation of the army. The early artillery in Europe worked similarly to a guild. The artillery-masters operated their own bombards for high wages.<sup>15</sup> This method created a medieval bubble in the early modern age armies of the coming years. In contrast, Zizka's organisation made it possible for the artillery to be centrally directed, so they could focus or divide the fire of bombards as it was tactically required.

The peasant tool reinforced with iron, the war flail became the most typical Hussite weapon. It had different varieties, the striking end, 40 cm long on average, was strengthened with metal-bands or spikes. Due to its character, the weapon was inadequate to be used by foot soldiers in phalanx-like formations. Since the latter became the old-new way of the development of the art of war, the flails were simply not suitable for use in such formations. In order to siege a wagon-fort the knights dismounted and carried out the assault on foot. The Hussites rarefied their lines with firearms, than the infantry surged out through the gates of the wagon-fort, and slaughtered the dispersed crusaders.

The carts needed to be modified to form a stabile fortification. They had to be robust and strong but not to the detriment of manoeuvrability. The contemporary sources and field orders both mention the planked sides of the wagons, however, and there could have been a lot of alternative constructions, in the same way as all other items of the Hussites' equipment were diverse. In my view, the loose, roped-together series of planks on the side of the wagon, which can be seen on a lot of reproductions, are impractical. However, they could have provided an extra layer of protection against enemy missile weapons, and due to their flexibility they could have absorbed the kinetic energy of any type of projectiles. On the one hand, they seem to be useful, but they would have obstructed the riflemen shooting out, so I consider the use of the roped

shutters unimaginable on wagons with loop-holes. The use of a panel to heighten the sidewalls seems to be more practical. This would make it much more difficult to cast or shoot (streaming bolts) something inside the cart and loop-holes can also be formed in these panels at a comfortable height.

The wagon-fort itself was usually set up in a rectangular shape on a high ground. The features of the terrain essentially determined the shape and the positioning. There is an almost endless list of examples to show the advantages of setting up the wagon-fort on high ground: the struggle of the Taborites' encircled detachment on the Vladar Hill in the fall of 1421, the battle of Malesov in 1424 between the Calistines and Zizka's Taborites.<sup>16</sup>

That time the bombards and siege machines were the only effective weapons in the destruction of wagon-forts. The wagons showed only a narrow front towards the enemy, of course, but if they were hit, a way could be opened into the wagon fort. In order to prevent the enemy breaching the wagon-fort it was very important to choose its position carefully and prepare the terrain. Besides this, stretching the tabor at right angles to the direction of the expected attack was very practical. This way they could increase the defence level of the wagon-fort, because the longitudinal ballistic dispersion of contemporary guns was bigger than the lateral. This feature was one of the reasons for the development of linear tactics and flanking artillery fire.

When forming of wagon-fort each cart was set into the line aslope so that they covered a part of each other. The illustration in Razin's work, where the wagons in the fortifications are set in the line straight, and the shafts of the wagons point steeply upwards, is obviously mistaken. It is expedient to place the wagons with their shafts pointing inwards, because in this way when the marching column stopped, and a tabor was formed, the horses could be unharnessed and led inside the wagon-fort. The wagon fort was always formed from marching columns, often in very close vicinity of the enemy. According to Zizka's general tactics, it meant four parallel columns, but later there were wagon-forts formed from 6–8 columns.

The Taborite leader used his favourite formation in Hungary in 1423. Zizka wanted to use the quiet period after the short Hussite internal struggles to transfer his campaigns to Moravia, and even to the Kingdom of Hungary. By doing this he was able to demonstrate his power and engage his forces. The Taborites broke into Hungary through the Carpathian Mountains, where they advanced as far as Udvard in Nyitra county.<sup>17</sup> The Hungarians let the Bohemians advance in order to destroy them when they had become exhausted and famished. According to the Bohemian sources, the Hungarian lords rallied an army reinforced with bombards. Zizka recognized the trap and he retreated from Udvard and reached Moravia after seven days.

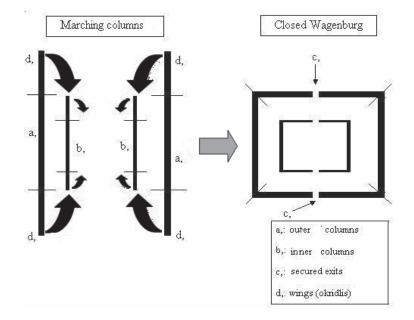


Figure 2. The forming of wagon fort from march

In the four-column order the outer columns were one and a half times longer than the two inner columns. The extra "overhanging" parts were called wings. When the wagons in the column were attacked, the wings turned inward and closed in front of the inner columns.<sup>18</sup> So practically a dual tabor was formed. This turning required great skill from the cart drivers (or couch men). The real fortified war wagons formed only the outer line and transport-supply carts formed the inner lines. More small and independent wagon-forts could move more easily, and moreover, the forts could support each other.

The war wagon was not only a tactical but also an administrative element of the Taborites' army. The wagons themselves were also arranged into units. It is shown by the organisation of the artillery, which I've mentioned before, that every five wagons had a smaller gun and every twenty-five had a bigger gun. These units were arranged into columns (50–100 wagons), which were led by a linesman. The later field orders also allocated 10–20 men to one wagon. Not all of these soldiers served directly on the carts, they were only assigned there. The reason for this might have been to adjust the number of men in the different branches (infantry, artillery and cavalry) to the number of carts.

Besides this administrative architecture there existed a tactical organization, too. The flailmen and spearmen, who are called darabonts, made up distinct company-sized tactical units, under independent command.<sup>19</sup> The achievement of the regular army meant, that while one part of the community was involved in combat, the others worked at home to produce the necessary equipment, weapons and war wagons.

The wagon-fort was the most vulnerable when it wasn't closed, i.e. it wasn't in defensive formation. If the wagon-fort was attacked by heavy cavalry before it was actually erected, they were practically defeated. The only chance of cavalry units against the wagon-fort lay in fast manoeuvres. However, it was almost impossible for the crusaders, who moved slowly and with difficulty, to surprise the Taborites as long as their reconnaissance worked effectively.

The Hungarians also only almost managed to do this in 1430, when the Orphans broke into the country. In the Battle of Nagyszombat the Hungarians divided their army into two parts in order to attack the open column from its two opposite ends. The horsemen of one detachment managed to surprise the Orphans and caused massive losses in close combat. Finally, the Hungarians were beaten due to the fact that the other detachment failed to attack.<sup>20</sup>

The Hussite bands frequently broke into the Hungarian Uplands after the second half of the 1420s. Against the attacks a chain of border fortresses was established similar to the one on the southern frontiers against the Osman-Turks, but this north-western fortress line didn't do as well as the southern. The marauders moved quickly, and by the time Queen Consort Borbala called the citizens of Körmöcbánya to fight in 1428, the Hussites had looted Szakolca, the outskirts of Pozsony and had left the country.<sup>21</sup>

Simultaneously with the Hussites' "Beautiful Rides", there were attempts to break the "heretics" with a crusade campaign. The princes of the Holy Roman Empire tried to follow the Hussites' example, as far as in sending their peasants and war-wagons to Bohemia. The expected success failed to come, the fourth and the fifth crusades ended with Hussite victory.

The wagon-fort tactics described so far suggests that the wagon-fort was basically only a means of defence. A confrontation between wagon-forts raises the question of how one could attack the other. The historians who prove the wagon-fort's capability of attacking often recite the chronicle of Aeneas Sylvius Piccolomini. According to him the Hussites surrounded the enemy troops by the turning of the wings, so they trapped the opposing troops and destroyed them. However, it really happened a few times that a part of the attackers were trapped inside the fort, as we could see in the Battle of Nagyszombat, but this still seems to be an emergency arrangement since the most dangerous situation for the wagon-fort was apparently when a strong enemy unit, made up of individually skilled warriors, breached the open columns. Moreover, a cornered enemy can fight the most desperately, so I think this view is mistaken. In my opinion, the capability of attacking manifested itself in dynamic breakthroughs and flank attacks with columns and not in trapping the enemy inside.

By 1433, Sigismund and the princes of the empire had to realize that they could not solve the conflict with the power of their weapons. Finally, the two parties which fought the last battle of the wars at Lipany east of Prague were formed within Bohemia.<sup>22</sup> Both parties, the radicals and the moderates, who were willing to reach a compromise with Sigismund, had a wagon-fort. In the moderates' wagon-fort the rear of each column was reinforced with bombards and soldiers.<sup>23</sup> They carried out a lateral feint retreat, and as a result of this the radicals chasing them came face to face with these reinforced parts, while the reserve heavy cavalry of the moderates' army broke into the opened wagon-fort and completed the victory. This battle marked the end of Sigismund's wars in Bohemia, but Sigismund himself only marched into Prague in 1436 to take the throne with the approval of the Bohemian nobility.

# The effects of the wars on the Hungarian art of war

The wars of the age of Sigismund pointed out the necessity of qualitative changes and quantitative enhancement in the Hungarian military machine. The Hussite wars had both direct and indirect effects.

The indirect effect was the appearance of a desire for reforms in the king's environment. During his reign Sigismund tried to find the solution to the problems stemming from the obsoleteness of the insurrection of the nobility by establishing the militia portalis. After the Battle of Nicopolis, the Timisoara Assembly approved a royal order to set up the militia portalis, but later on this unelaborated decree was not complied with. According to the decree all Hungarian landowners were required to equip 5 mounted archers for every 100 serfs. After the Turk's defeat at Ankara in 1402 the issue of the reform was taken off the agenda.

By the 1420s, because of the emerging dangers at the borders of the Kingdom of Hungary the necessity of the reform had become clear. During his stay in the Italian city of Siena, Sigismund worked out an adequate reform plan, but the most reformist points of this draft got lost when it was discussed at the Second Timisoara Assembly in 1435. According to the "Siena plan" the landowners had to equip only 1 mounted archer for every 33 serfs. If a nobleman had fewer serfs, he had to combine his efforts with other noblemen in a similar position in order to equip one soldier.<sup>24</sup> The Assembly didn't pass this part of the proposal.

The mounted archers as an independent element of the military architecture could have filled the gap left by the disappearing light cavalry warfare and could have provided the mobility and rapid reaction required against the Hussites. The banderiums of the generalis exercitus were obligatory to remain together for 15 days, and this time often ran out before they could even meet the enemy. The Hungarians were always good at the foraying and ambushing tactics even if they formed an armoured cavalry unit. On the other hand the quick light cavalry wouldn't have made a difference if mobilization had remained slow. This would have been solved with an effective alarm system for each county. The heavy cavalry, which was typical of the Hungarian forces of the time, put the nobility to enormous expense. The following quotation from a contemporary source appropriately describes the appearance of the generalis exercitus: "... unarmed, as it is the custom these days..."<sup>25</sup> As mounted archers even the less well-to-do noblemen could have been represented in the army.<sup>26</sup>

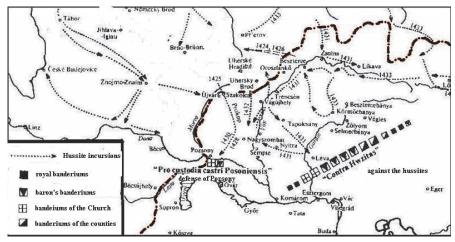


Figure 3. The defence of the northwestern frontier in the "Siena plan"

In 1434 the security situation and the issue of the defence of the north-western frontier significantly changed following the defeat of the radical party at Lipany. So while Sigismund planned to send 14 825 cavalrymen against the Hussites in his reform draft and 2250 for the defence of the castle of Bratislava,<sup>27</sup> in 1435 such a strong concentration of power wouldn't have been needed. He planned to send 59 850 cavalrymen to the Balkan theatre,<sup>28</sup> which is proportional to the length of the common borders.

The direct effect was the appearance of war wagons in the armies of the Hungarians. After 1434 a sizeable group of soldiers were discharged and so the monarchs of the region were given the opportunity to hire seasoned infantry mercenaries, in accordance with the direction of development and the changing face of warfare.

In 1437 Sigismund already employed Bohemian mercenaries, a Taborite unit equipped with war wagons, which was transported to the southern frontier down the Danube, to reinforce the troops of Pongrác of Szentmiklós.<sup>29</sup> They met the Turks in the vicinity of Szendrő. The columns of wagons blocked both flanks, and launched an artillery barrage on the Turkish troops, thus ensuring the victory of the Hungarians.<sup>30</sup> For several reasons, the actively fighting wagon fort didn't become part of the Hungarian armies in the long run. Besides the fact that the wagon fort provided the superiority of infantry over cavalry, we shouldn't forget about what it was originally designed for. It was to give the unskilled foot soldier the mobility of the mounted soldier, and although collectively, but make him a mobile fortress similar to a knight. So a lot of Hussite warriors, acquiring the necessary financial resources and skills, became mercenaries as heavily armoured cavalrymen.<sup>31</sup> The Bohemian commanders who served King Matthias Corvinus, for example Frantisek Hag, Jan Zeleni or Dabis Cernahora had already been cavalry commanders.<sup>32</sup>

Although the importance of infantry and artillery was increasing in the age of the Hunyadi's (John of Hunyad and his son, King Matthias Corvinus), the main branch remained the elite heavy cavalry. John of Hunyad was always accompanied by war wagons during his campaigns against the Osman Empire in the Balkans. In a battle in the valley of the River Jalomita, Hunyadi sent a column of wagons strengthened by bombards to the back of the enemy, where it caused chaos among the Turks. The description of the battle comes from Bonfini, who might have exaggerated in his description of this part of the battle, because we can't find the "continuation" of this manoeuvre in the Hungarian art of war. In his later campaigns he employed the wagon fort only as a rear camp.

The wars of the age of Sigismund represented a never repeated zenith in the use of the wagon fort for offence. Both before and after these wars it was exclusively employed as a passive, rear defence fortification. The Hussite wars constitute an episodic but nevertheless interesting chapter of the art of war in Europe, which anticipated a series of developments in the following centuries, in the fields of regular armies, the integrated organisation and mobility of artillery and the use of infantry.

It can definitely be said that the Hussites would never have been able to defend their achievements and religious reforms without the supreme genius of Zizka. The next

generation of commanders who took over control of the Hussite armies after the death of Zizka in 1424 had been trained in his battles. They had the opportunity to learn a lot in his environment, because the blind general could only get information about the current situation through his questions. Those who watched him work could understand his approach to problems, the factors he considered and the logic of his decision-making. These weren't difficult things, only the simple and eternal principles of warfare.

His opponent King Sigismund, however, was not a great military leader and his military policy on the whole was unsuccessful. His political and diplomatic activity was far more significant. He could not concentrate his efforts on one particular task because he had so many commitments. In my view, his activity as a military organiser should still be acknowledged, although his military reforms failed and he didn't manage to establish a light cavalry which would have been able to conduct tactical operations independently. On the other hand, the defence system against the Turks, which functioned very well until the Battle of Mohács, was a successful achievement of his.

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