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EXPERIENCES IN THE USE OF ARTILLERY IN THE ARMY OF AMIR TEMUR

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Abstract:
This article describes the experiences of using artillery in the armies of Amir Temur. The contribution to the development of artillery during the period of Amir Temur, the fundamentals of Amir Temur's martial art and management are discussed. There are examples of how the tactical methods used by our national artillery are based the use of artillery during time Amir Temur.

Keywords: Commander, cannon, control, Mawarannahr, fortification, "code", council, tactics, strategy, metal, politics, army, Emir, fortress, military march.

Introduction

Today's pressing problems require us to comprehensively study the basic principles of modern wars, deeply analyze them, and, at the same time, learn the necessary experiences and draw the necessary conclusions from the battles that have taken place in human history. Currently, the artillery, which is considered the main link of the armed forces, is being deeply studied in the history of the army's foundation, how it emerged, how it was formed, and how it evolved. In order to deeply understand and deeply comprehend the significance of his role in the ongoing military actions, to draw the necessary theoretical conclusions and apply them in practice, we turn to the era of Amir Temur.

The President of the Republic of Uzbekistan, Supreme Commander-in-Chief of the Armed Forces Sh.M. Mirziyoyev, during his visit to Kashkadarya region on April 21, 2022, spoke about the military art of Sahibkiran Amir Temur: **"I studied the military art of Sahibkiran Amir Temur. I instructed all responsible**

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persons to study the military art of Amir Temur, conduct scientific research, and find new information. First of all, we need to study the history of our ancestors. Unfortunately, for many years we studied the history of others, battles that have nothing to do with us"[1]. This, in turn, has its place in finding solutions to today's problems by studying the military art and strategy of Amir Temur from professors and teachers like us.

Amir Temur's Uzbek statehood in history, that is, after 150 years of dependence, restored the state's political independence; established the management of society's life based on the existing Sharia and Torah laws of his time; created a centralized state system; firmly began creating all internal and external conditions for the development of economic relations (agriculture, crafts, trade); transformed the region into the world's greatest political, economic, and cultural center; demonstrated what the first leader should be in the management of a society based on autocracy.

Of course, soldier training occupies a special place in state administration. Amir Temur's worldview regarding military policy can be understood through his following words: "I realized that nine-tenths of state affairs are accomplished through council, planning, and consultation, while the remaining one-tenth is accomplished through the sword." Thus, it is not difficult to understand that in politics and governance, Amir Timur paid only a small attention to the sword, that is, to violence, and his banner was always politics and action. At the same time, history recognizes Amir Timur as one of the greatest commanders, since the main goal of his military policy was the creation of a powerful state and empire. We can clearly see proof of this when we familiarize ourselves with the chapters related to this issue in "Temur's Code", which is a product of Sahibkiran's thinking.

In Amir Temur's army, all issues and measures, such as the activities of each soldier, each unit, that is, salary, provision with military equipment, promotion up the career ladder, official relations between the nuker and his bek, military tactics during wartime, were planned in advance and put into a certain order. In short, strict service and organizational discipline were established in Amir Temur's army, clearly indicating who should engage in what and be responsible for what. Even the smallest details were indicated beforehand. For example, the

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requirements for the preparation of an ordinary soldier for a military campaign state: “During the campaign, every eighteen ordinary soldiers took with them a tent, each soldier - two horses, a bow, a quiver, a sword, a saw, an awl, a sack, a star, an axe, ten needles, and a leather bag." Similarly, the details of the weapons necessary for warriors, commanders of ten, hundreds, thousands, and emirs are also reflected in this “Temur’s Code” [2].

If we recall that the “Temur’s Code” clearly outlined the procedure for determining salaries for emirs, commanders of thousands, hundreds, tens, and other military personnel, it becomes clear that Amir Timur considered preparing for future military campaigns, primarily in peacetime, by ensuring the army's well-being and taking care of it. In short, he engaged in battles with confidence in the army, and the army with confidence in him.

It is known that Amir Temur also planned the battle scene in advance. For instance, according to the order he established, if the enemy army exceeded twelve thousand but did not reach forty thousand, the command of the army was assigned to one of the princes. If the enemy's army numbered more than forty thousand, then Sahibkiran himself led the army.

Depending on the circumstances, Amir Timur adjusted the army’s formation and the order of battle. In 1391, in the battle against Tokhtamysh Khan, he used a new military tactic previously unknown to anyone. According to Shami, one of Amir Timur’s historians, “Sohibqiron arranged his army into seven parts in such a way that it is impossible to describe and describe it”. The conclusion from this testimony is that this was an extremely complex and rare military tactic.

Amir Timur strived to prepare military campaigns with utmost thoroughness and without excessive noise. Therefore, his troops could appear at an unexpected time and place for the enemy and launch a surprise attack. It became customary for Sahibkiran to hold a council before every major military campaign. At the council, he listened to the opinions of all those present and tried to choose the most optimal path in these circumstances.

“Such trials and unfaithfulness of fate taught Amir Temur to choose people correctly and reward them according to their worth”, writes M. Ivanin [3].

In order to strengthen his power, Timur first of all paid attention to increasing the number of troops and organizing them. He selected 313 people who served him

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faithfully, were loyal, possessed the qualities necessary for a good commander, knew military art, and were tested in battles. He appointed 100 of them as commanders-in-chief, 100 as commanders-in-chief, and another hundred as commanders-in-chief, while assigning high positions to the remaining 13 commanders. In turn, these selected warriors made a great contribution to the establishment of discipline and military discipline in Amir Temur's army.

Amir Timur's army consisted of infantry and cavalry, but infantry was also provided with horses for long steppe campaigns, and most of the cavalry was also trained to fight on foot. Cavalry, in turn, was divided into ordinary and elite warriors, forming light and heavy cavalry. In addition, Timur had personal guards. In addition to the main types of troops, there were also:

1) pontooners (those engaged in the construction of mobile bridges) and shipbuilders;

2) Naftandoz (fire throwers);

3) fighters (artillerymen) who know how to work with siege techniques and stone-throwing weapons;

4) a special infantry unit, consisting of mountain inhabitants, accustomed to fighting in mountainous terrain, capable of climbing steep cliffs.

Mikhail Ivanin writes that many fortresses besieged under the leadership of Amir Timur were captured as a result of the skillful use of cannon fire and throwing weapons, and this type of army possessed great skill. Indeed, In 1402, during the capture of Smyrna, the knights of Rhodes rushed to help the city. However, Amir Timur surrounded the city from the sea side, installed a platform on wooden platforms and rafts, and placed warriors carrying throwing weapons and shields on top of it. With this method, he succeeded in cutting off communication with the garrison, preventing aid to the enemy[3].

According to Timur's tactics, when choosing a battlefield, the following should have been taken into account: water, a convenient location for stationing and maintaining the army, the possibility of superiority over the enemy in the chosen battlefield, and especially the absence of sunlight on the face and eyes, as well as the wide and even battlefield.

Before the battle, the position of each formation was determined so that Timur's troops could move smoothly. The army had to go straight ahead, without turning

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their horses either to the right or to the left, and when they encountered the enemy, they would rush at them with all their might. This measure was aimed at ensuring that the troops in formation did not engage in futile fire, but attacked fiercely.

An experienced and skilled commander had to carefully inspect the battlefield before battle, study which side the enemy was superior to, be able to quickly eliminate their shortcomings, observe whether the enemy was attacking with separate detachments or simultaneously deploying existing troops, and know if they had secret plans.

Through historical sources, we can learn that our ancestor Sahibkiran Amir Temur, who was a great commander of his time, also paid special attention to the artillery force in the army, viewed the artillery force as the main link in the army's operational formation during battles, sieges of cities and fortresses, that its combat capabilities were unlimited compared to other types of troops, and that it was used as a guarantee of successful victory.

When considering the place and role of the artillery in Amir Timur's army, let's first consider the meaning and essence of the word "artillery". The explanatory dictionary of the Uzbek language defines artillery [Fr. artillere - to prepare, to prepare] as a type of troops; a type of weapon; the science of artillery [3].

There is reason to believe that artillery has a centuries-old history. For example, it is clear that in ancient times in China and Europe there were stone-throwing (throwing) machines, that Amir Timur used such stone-throwing devices (flyers) when conquering fortresses and cities, and how necessary gunpowder was for firing artillery weapons.

The period when the Arabs first began to use gunpowder for shooting (14th century) began with the era of artillery. The first cannons were in the form of an iron bow mounted on a wooden base, with pieces of iron and stone used as arrows. It can be seen that by the time of Amir Temur, the place and role of artillery had increased, and its formation and improvement had sharply increased. Amir Timur was one of the first in the countries of the East to introduce a warhorse into the artillery of his army. This is mentioned for the first time in Muiniddin Natanzi's work "The Anonymous of Alexander".

In the army of Amir Temur, the artillery army can be divided into types of troops - ra'dandoz, arrada, manjaniq, and tiricharx. Each has its own role and

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significance, and they can be distinguished based on their combat applications and functions. Taking into account their combat capabilities, they were mainly used in capturing fortresses and cities, that is, in firing arrows.

Ra'dandoz is a firearm. It was in the form of a cannon, from which fire projectiles were thrown. Although its throwing distance is not mentioned in historical sources from the time of Amir Timur, by the time of Zahiriddin Muhammad Babur, it was thrown at a distance of 1500 meters from the rider.

Arroda - a special device mounted on a wheel, adapted for throwing large stones, used to break through a fortress wall during a siege.

Manjaniq - a weapon used for breaking down the wall of a besieged fortress, widely used for driving stones or logs.

Tiricharkh - a military device with self-propelled projectile: an iron projectile shaped like an arrow, filled with gunpowder, burned and fired at the enemy; sometimes filled with oil, burned and thrown.

The number of artillerymen in Amir Timur's army was several thousand. Artillery guns were designed to damage enemy manpower and equipment, capture fortresses, fortifications, and were concentrated during battle in the most critical directions of the siege (occupation) line[3].

In Nizamuddin Shami's work "Zafarnama", it is stated that "Amir Sahibkiran ordered the preparation of catapults, ra'd, arroda, and tiricharkhs" [5]. The widespread use of manjaniq, ra'd, arroda, and tiricharkh, which were part of Amir Timur's military units, allowed him to fire fire at the enemy from a distance. This, in turn, led to the enemy's surrender before the infantry and cavalry entered the battle. The use of the aforementioned weapons led to a decrease in the casualties of Amir Timur's army.

A tiricharkh is a military device that fires by rotating itself, with gunpowder placed inside an iron projectile-shaped bullet and fired at the enemy by burning. Sometimes it was filled with oil and burned.

Amir Timur studied artillery technologies in the countries of Europe and Asia and tried to introduce modern weapons into his army. Using experienced specialists and masters in the field of artillery, he organized special schools for training his soldiers. Military training was organized in these schools. During the exercises, special attention was paid to the tasks performed through the practical use of

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artillery weapons, as a result of which the soldiers' skills were constantly improving, and they were formed as true warriors, fearless heroes. Amir Timur developed the production of modern artillery weapons, including the manufacture of cannons and ammunition [6].

The artillery used during Timur's reign was considered the most advanced weapon of its time. They are mainly subdivided into the following types:

1. *Fortress cannon* - a cannon of various sizes, made of metal or wood, used to destroy enemy positions on the battlefield.
2. *"Bombarders"* - large cannons designed for striking enemy positions from a long distance. The "bombers" were capable of firing at distances of 1000 meters or more. It should be noted that these distances were relative to modern standards, and the actual effectiveness of the cannons depended on many factors, including weather conditions, the type of ammunition and firing techniques, etc. [7].
3. *The "Sham" cannon* - a large-volume cannon created in Sham (present-day Syria) and used to strike fortresses and fortified positions. The "Shom" cannon was medium-sized balls capable of covering distances of 600-800 meters.
4. Fortress defensive cannons - various types of artillery weapons designed to defend fortresses and towers, such as manjaniq, radandoz, arroda, and tircharks, used to repel enemy attacks. Such cannons were small-sized cannons capable of firing at a distance of about 300-500 meters[8].

Artillery weapons are mainly made of stainless steel. During the Timurid era, new technologies were used to produce weapons made of stainless metals. These weapons allowed them to operate effectively for a long time.

During the reign of Amir Timur, artillery weapons were of strategic importance in battles and played an important role in ensuring military successes [9].

During the Timurid era, the technology of cannon production consisted of several important processes. The main materials for the manufacture of the ball were mainly metal (iron, bronze) and sometimes wood. The choice of high-quality materials was important. The ball production process was often carried out by casting. The metal was melted, poured into special molds, and shaped during the cooling process. The surface of the cast ball is smoothed and brought to the required shape and size. This process was carried out with special instruments. In some cases, metal alloys were used to reinforce the balls. This increased the

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durability of the balls. Ammunition was also prepared for use with the cannon. Ammunition is made of stone, metal, or other materials. Iron, being one of the main materials for cannons, was widely used due to its strength and availability. The alloy, made of bronze, copper, and tin, possessed high resistance and anti-corrosion properties in cannons. Wood was also used for small-sized cannons and weapons. They were used more for protective or auxiliary functions.

The use of these metals helped to increase the strength, durability, and firing power of the cannon. The process of manufacturing artillery weapons during the Timurid era required the use of new technologies and materials.

The prepared cannons were tested, and their firepower and effectiveness were checked. This process was of great importance for military operations. The cannons were installed on the battlefield before use, and repair and adjustment work was carried out as needed. These processes are an important part of military training. These production technologies evolved over time and served to expand and strengthen artillery weapons during Timur's reign.

To strengthen his military forces, Amir Timur attempted to adopt artillery weapons and technologies from various countries. This played an important role in his military successes.

Amir Timur received artillery weapons mainly from China, Iran, Turkey (Ottoman Empire), Arab states (Syria, Seljuks), and European countries (Hungary).

During the reign of Amir Timur, great attention was paid to the training of qualified personnel in the field of artillery. Amir Timur himself actively participated in the process of their preparation. Because the field of artillery requires strong knowledge and calculations. Moreover, during this period, effective military tactics for the use of artillery troops were developed, which allowed for ensuring strategic advantages in battles and the effective deployment of cannons on the battlefield, as well as adequate strikes on enemy positions [9].

Also, during the reign of Timur, constant work was carried out on the renewal of artillery weapons and their effective use. Artillery weapons played an important role in the construction of fortresses and defensive systems, as well as in repelling enemy attacks.

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Based on the foregoing, we know that artillery troops consist of units such as radandoz, manjaniq, arroda, and tircharkh, which are the main means of inflicting fire damage on the enemy. According to historical data, the artillery force consisted of more than **ten thousand soldiers** to control the army and use it where needed. Each unit was deployed depending on the conditions of the fighting.

In Ghiyasuddin Ali Yazdi's work "Ruznomai Ghazavoti India or Diary of the Indian Journey", he cites the following example of Amir Timur's use of arrow and manjaniq firearms in the capture of the Bitnir fortress in India. "...following false thoughts, despite Duljin's presence in the royal camp, they closed the fortress gates and secured them with corrupt thoughts. Immediately, a supreme decree was issued: "Let the Mansur troops prepare arrods and catapults and place them opposite the fortress"[11].

Each region, city, and district assembled the main – "original" and reserve – "isofa" parts. The provinces trained and supplied the army of Amir Timur warriors who could throw stones - sangandoz, destroy walls - manjaniq, firearms or cannons - radandoz and naftandoz, as well as warriors who could use their own firearms. They were used by infantry and cavalry before entering battle against the enemy, i.e., in catapulting, breaking down walls (in engineering work), throwing fire spears, and throwing oil jugs.

When signs of flight and panic appeared in the enemy army, a pursuer, composed of skilled horsemen, was appointed to pursue him. The pursuers attacked the wounded with such force that the enemy cavalry had no strength left to gallop, and the infantry had no shelter to flee. The enemy, who had managed to retreat to a fortress or stronghold and strengthen themselves, was besieged.

Near the fortress walls, catapults were built, arrows mounted on reels were restored, and stones were thrown at the besieged from all sides. Naqbs were dug under the bars. Through cracks in the walls, soldiers began pouring in like a flood. To protect themselves from arrows, spears, stones, and sometimes flammable materials thrown by the besieged, the soldiers, rushing into the fortress from all sides like ants, carried shields or towers over their heads and climbed up using ladders placed on the walls or thrown bows and rings. As an example, Amir Timur besieged a fortress near the city of Damascus. The fortress was fortified, it was supplied with weapons, food, and fodder necessary for long-term defense, and

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the defenders were led by a commander named Yazdar. At first, Sahibkiran did not pay much attention to this fortress. He engaged in other more necessary tasks, namely collecting worldly goods, horses, handmaidens, and servants from Damascus city residents as compensation for granted security. After completing this task, Temurbek turned towards the aforementioned fortress. The fortress was tall, the towers and arches were strong. Realizing that it could not be captured with a single assault, Sahibqiran ordered the preparation of siege weapons. Jahangir began the work by erecting a heap of earth - a sarkoba - near the fortress walls, which would be taller than him. Under the leadership of Amir Jahonshoh, thousands of soldiers gathered firewood, wood, and branches from the surrounding area, poured stones and soil over them, and built a citadel.

Timurid soldiers, rising to the rising sarkob, rained fire from various weapons on those building inside the fortress. Stones thrown from catapults installed opposite the fortress create cracks in the walls, under which nadb - underground passages - are dug, hooks are thrown at them, and warriors rush into the fortress from tightly packed ladders. The defenders, not expecting such a powerful attack, began to panic, and when they realized that resistance was futile, on the twenty-ninth day of the siege, they surrendered the fortress to Timurbek, wishing him well-being. As can be seen from this information, we witness that Amir Temur explained the necessity and role of the artillery force and gave it high praise.

Based on the historical sources, opinions, and considerations presented above, we can conclude that the emergence and development of artillery weapons and troops have their own history, and we are convinced that no one brought them to us, or that their history is not connected to yesterday or the recent past.

This requires them to possess genuine command skills, such as the ability to foresee battle strategy.

Knowing that all weapons in the army of Uzbekistan have their own history, that their roots are inextricably linked with our ancestors, calls on all of us to once again feel a sense of patriotism.

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