



Although this train is Swedish, it is typical of those employed by many European armies and factions in the years before and after WWI. This view clearly shows the train's make-up, with the vulnerable engine in the middle, protected by a leading flatcar that will set off any mines. The cannon is visible in elevation on the armored car at left.

## Forging the Red Thunderbolt:

*Armored Trains Provided Mobile Firepower During the Russian Revolution and After*

by Major Alan R. Koenig, FA, USAR

Long before there were tanks, armies used railroad rolling stock as armored fighting vehicles (AFVs), a practice that became common during the American Civil War.

Both Federals and Confederates used many of these predecessors to modern AFVs. To ease the employment of heavy artillery, commanders simply mounted artillery pieces on flatcars to produce the world's first railroad batteries. For defending railways against raiders, Federal forces built ironclad "railroad monitors," cars which carried light field artillery capable of wide fields of fire. Though bound to the rails, railroad monitors were similar to modern tanks, though only one apparently had a turret. In addition, there were rifle cars, which were simply armored boxcars with firing apertures for riflemen. They could support railroad monitors just as infantry fighting vehicles support tanks today. In some cases, individual railroad monitors and rifle

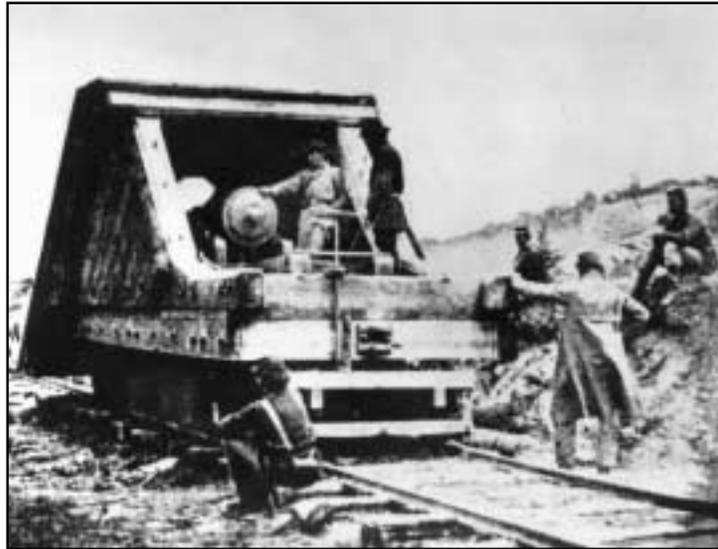
cars might escort supply or construction trains, but they might also be coupled directly to a locomotive to serve as an independent maneuver unit. These were known as ironclad or armored trains.

The ultimate armored train had rifle cars on both sides of a locomotive and cannon-bearing railroad monitors on the ends. These "combined arms" armored trains proved useful for patrolling the rails and engaging Confederate forces. This arrangement of cars, or "march order," exploited train strengths while reducing weaknesses. The ironclad cars on both ends of the train protected the locomotive, which was the Achilles' heel of a train, and provided fearsome firepower. The placement of the artillery-bearing cars on the ends also gave them excellent fields of fire, while the rifle cars had significant small arms firepower that discouraged enemy boarders. This mix of weapons and logical march order remained a

standard feature of armored trains since the American Civil War.

Americans also employed several other types of rolling stock for tactical missions. To check the tracks for breaks or mines, locomotives pushed loaded flatcars ahead of them. In later conflicts, a crewman sat on the flatcar's end to look for hazards. In so doing, he could monitor the tracks and control the progress of the train, hence the terms "monitor" or "control car" came to describe these expendable flatcars. Control cars also protected trains against rams, which were simply rolling stock, sometimes mined, unleashed against troops, opposing trains, and railroad facilities.

Control cars added much to a train's survivability, but handcars, a utilitarian self-propelled track maintenance vehicle, were good tactical vehicles in their own right, being especially useful for reconnaissance and maintaining com-



The U.S. Civil War popularized firepower on rails. At left, a 13-inch seacoast mortar. At right, a cannon with armored glacis.

munications. After the Civil War, armored trolleys replaced handcars in tactical situations, thereby improving crew survivability.

Handcars were good to have, but sometimes locomotives could perform some of their jobs faster. Commanders could rarely spare valuable locomotives for jobs other than train pulling, however, so — as an economy of force measure — the Federals also used steam passenger cars to patrol the rails and deliver pay.

Armed versions of these self-propelled cars were forerunners of another vehicle developed in 1916 by the U. S. and Russian armies. This was a self-propelled armored railroad car, or railroad cruiser, as the Russians aptly named it. While railroad cruisers were expensive, they were often more economical to employ than an entire armored train, and their small and efficient internal combustion engines were sheathed in heavy armor, unlike the large and vulnerable boiler of conventional steam locomotives.<sup>1</sup>

Having observed these developments, European powers improved on what Americans had wrought. The French introduced breech-loading artillery pieces to ironclad railroad cars, and they also mounted *mitrailleuses*, a forerunner of machine guns, on infantry cars, thereby reducing the number of riflemen needed to man the trains. The British also mounted heavy guns, turrets, and searchlights on the trains they used to fight Boers in South Africa. Observing these developments, the Russians realized that the armored trains used on the South African *veld* could also serve on the steppes.<sup>2</sup>

Not total strangers to this new type of weapon, the Russians had experimented with heavy artillery railroad mounts as early as 1885. They mounted a gun on a disappearing carriage so it would recoil inside an armored hull after every shot, but since Tsarist Russia was experiencing the growing pains of industrialization, it could not mass produce these cars, which cost 50,000 rubles per unit. Twenty years later, however, during the Japanese siege of Port Arthur, a Russian officer who had been an observer during the Boer War built several railroad batteries, and this set the precedent for a Russian tradition of using rolling stock for tactical missions. By 1917, the St. Petersburg Putilov works and the Izhor works had built seven standardized armored trains, all

bearing machine guns with light and medium artillery. Units of Russian railroad troops, who constructed and operated military railroads, commanded these trains on the Eastern front during World War I. The military situation there, far more fluid than that of the Western Front, encouraged the use of armored trains as maneuver forces. Finally, by 1915, the Russians had also developed what was called a “track wolf,” a device that could separate rails from ties at the rate of three to four kilometers per hour, thereby freeing soldiers from the labor-intensive task of destroying railroads.<sup>3</sup>

Such developments set the stage for the Russian Civil War, as the Reds defended their Bolshevik Revolution



This armored train, with turreted guns, was in use by the White Russian factions in the Russian Civil War. Both sides used these weapons, as did neighboring nations.

against counter-revolutionaries and interventionists. Perhaps the single most important Bolshevik advantage was their possession of St. Petersburg and Moscow. The possession of Moscow was especially important because it was at the center of Russia's railroad web. This allowed the Reds to dispatch armored trains and troops from front to front to meet each new menace.

At the vanguard of these forces were armored trains, since they were rather effective in the fluid tactical conditions of the Russian Civil War. Geographical factors demanded a long-range weapons system capable of operating in virtually all kinds of weather. Powerful, reliable, steam-powered railroad trains were appropriate for fighting a war in a nation united by rails, and combatants could construct, employ, and command armored trains with relative ease. In contrast, tanks and aviation, both powered by internal combustion engines, lacked sufficient power, reliability, and range to pose serious threats to armored trains.<sup>4</sup>

As one might expect, the best way to engage an armored train was with another armored train. The only other rival to armored trains was cavalry, which did not rely on tracks, thus its mobility could prove decisive. Even so, cavalry could not win a head-to-head encounter with an armored train, as evidenced by the slaughter of cavalrymen charging armored trains at Tsarit-syn' (Volgograd) in 1918.<sup>5</sup>

The Reds used about 103 armored trains during the war, and their historians later considered armored trains to be ancestors of their armored forces. At different times, the Bolsheviks faced anywhere from 47 to 79 counter-revolutionary armored trains, all of which belonged to a confusing array of opponents. Some trains belonged to non-Russians, such as the Allied interventionists or the Central Powers, all of whom opposed Bolshevism and wanted to nip it in the bud. Furthermore, nascent and reconstituted states on Russia's periphery, such as Finland, Latvia, and Poland, also sent armored trains against the Bolsheviks. Finally, the Reds faced Russian White (counter-revolutionary) and Green (anarchist, or peasant) armored trains. The latter also fought the Whites at times.<sup>6</sup>

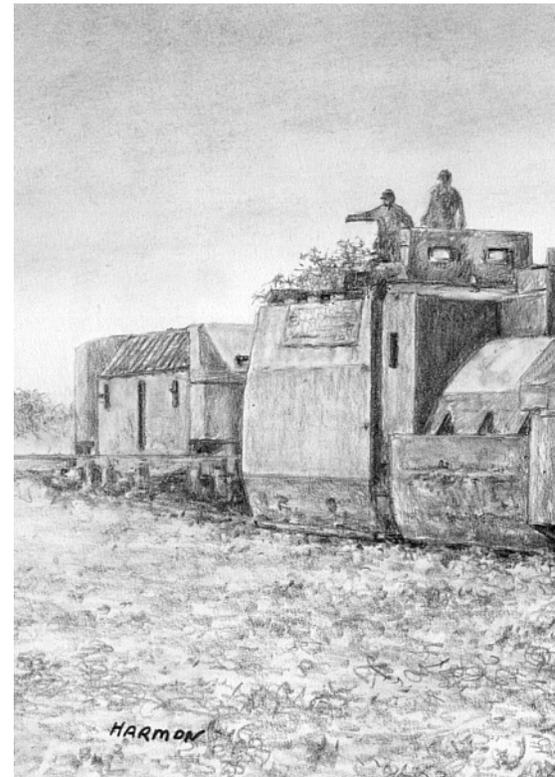
While the Bolsheviks faced many different opponents, none of them coordinated their attacks properly. Yet a Red victory was not a foregone conclusion, especially considering the embryonic condition of the Red Army. During the

opening days of the Russian Civil War, belligerents employed ex-Tsarist armored trains and improvised others. Railroad workshops near the scattered fronts unsystematically converted existing locomotives and rolling stock with expedient materials and available weaponry. In fact, the Soviet's first armored (and that was often a relative term) train simply had field guns and howitzers lashed onto flatcars and hopper cars. As the war progressed, the Reds built more substantial artillery cars, but many of these carried a motley collection of light and heavy machine guns. Bolshevik commanders naturally found such improvised trains difficult to employ and supply. Therefore, by the fall of 1918 the Reds patterned their factory-built armored trains on vintage 1915 Tsarist models to achieve uniformity and interoperability. In so doing, they built cars to accommodate specific types of armament and missions, and these standardized models ultimately replaced many of the improvised cars.<sup>7</sup>

The challenging task of supervising the large variety of trains, tanks, and the three hundred armored cars in the Bolshevik arsenal prompted the Reds to establish *Tsentrobron'* (Central Armor Command) in December 1917. To categorize its railborne assets, *Tsentrobron'* developed a lettering system. Class "A" trains had heavy armor and four 76mm guns for close combat. Class "B" trains carried guns of 107 or 122mm caliber, thus they were probably considered railroad artillery. Likewise, class "V" trains ("V" is the third letter of the Cyrillic alphabet) mounted 152 or 203mm guns. Class "B" and "V" trains used their superior range to stay out of harm's way, so they generally had light armor to protect themselves against small arms and shell fragments. These trains usually provided indirect fire for maneuver elements, which included other armored trains.<sup>8</sup>

The type of armor varied according to availability, but commanders preferred to use layered steel sheets in a kind of sandwich. Each outer sheet was 10 to 15 millimeters thick, and corrugated sheets were placed in the middle to absorb shocks, working much like modern spaced armor arrays. One steel sheet could usually stop conventional rifle bullets and shell or bomb fragments. Several layers would defeat armor-piercing bullets and even 76mm shells if they were fired from over one thousand meters.<sup>9</sup>

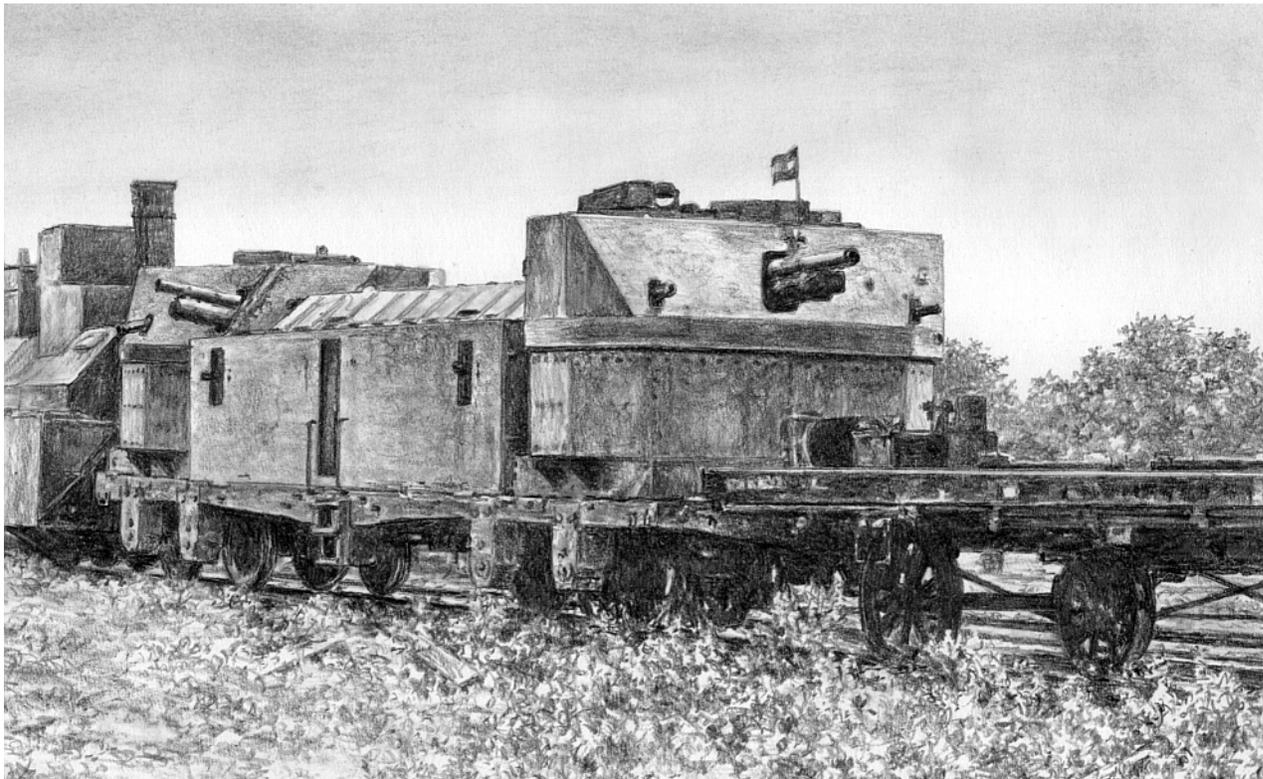
Besides classifying trains by letters, *Tsentrobron'* named their trains for



heroes, revolutionary slogans, cities and geographical areas, natural phenomena, and so forth.<sup>10</sup>

For railroad weapons to operate effectively, *Tsentrobron'* authorized various devices for communications. For on-board communications, trains had electric bells, a hardened telephone system, and speaking trumpets to connect cars by a switchboard. Crewmen merely barked short, pre-designated commands, such as "forward," "halt," or "fire" to the recipient, who repeated commands back to insure they were understood. Trains could also contact other military units or headquarters from isolated areas by radio, telegraph, and telephone connected to established railroad nets. Signal flags or lanterns, messengers, homing pigeons, and trained dogs worked well if signalmen could not use the electronic net. In some instances, locomotive whistles blew Morse code, which was audible up to five to ten kilometers.<sup>11</sup>

*Tsentrobron'* also had the difficult task of finding effective crews for trains, so it first identified preferred train crew skills and character traits. The ideal armored train crewman had experience in both railroad operations and weapons. Personnel officers accordingly assigned army or naval artillerymen, as well as railroad and shop workers, to armored train crews. To reduce crew size, commanders often cross-trained their men. Even so, when the trains lost men through casualties,



skilled replacements were hard to find, and sometimes train commanders pressed local troops into service.<sup>12</sup>

*Tsentrobron'* established certain personnel preferences for the demanding service on armored trains. Since the crewman had to work within limited space, the ideal recruits were well built but not tall. Sighting and operating weapons demanded excellent eyesight, steady nerves, and a steadfast character. Moreover, mental and physical toughness were prerequisites for armored warfare, since shell concussions could damage crewmen's inner membranes, causing ears and noses to bleed. Exacerbating these unpleasant conditions were acrid gases from weapons and fires that could build up inside the cars and might render crewmen unconscious. Considering these factors, it took selective recruiting and on-the-job training to provide skilled armored train crewmen.<sup>13</sup>

The Bolsheviks insured that the chain of command on armored trains paralleled that of regular army companies or batteries. *Tsentrobron'* assigned company grade officers and noncommissioned officers to armored train command staffs. The commander was usually a captain or senior lieutenant. His assistant commanded in his absence, but the *politruk* (commissar) wielded considerable influence. Other command personnel served in a range of necessary specialties, including a chief of artillery, an adjutant, a communications

chief, armored railroad car commanders and their assistants, a landing detachment commander, and a maintenance chief.<sup>14</sup>

To train this diverse group, *Tsentrobron'* established an armored train school in Moscow in 1918, and its curriculum logically focused on lessons learned at the front. To insure uniformity in training and political reliability, *Tsentrobron'* sent command personnel, to include seasoned veterans, to the school. Establishment of the school was a vast improvement over the beginning of the war, when many commanders and key personnel had to learn through on-the-job-training.<sup>15</sup>

Along with personnel matters and training, *Tsentrobron'* oversaw the logistical needs of its armored trains, a responsibility complicated by the immense distances over which these units operated. *Tsentrobron's* solution included base trains, which supported armored trains just as submarine tenders support submersibles hundreds of miles from their bases. A typical base train had an unarmored locomotive and six to twenty cars. A command element with a headquarters and staff worked in its cars, which carried ammunition, supplies, equipment, and accommodations for one armored train crew. During combat operations, the base train waited just out of hostile artillery's range, preferably at the closest railroad station. When the armored train and the base train were in rear areas, the base

train pulled the armored train to reduce wear on its locomotive.

In a country beset by a shortage of rolling stock, the use of base trains to support armored trains is proof that the Bolsheviks considered the latter worth the allotment of scarce resources. Thus, to minimize danger to the prized armored train, *Tsentrobron'* authorized the employment of armored trolleys to reconnoiter the rails ahead of trains. Better to lose a few troops and one small vehicle to an ambush than an entire train, the loss of which was easily equivalent to the loss of an artillery battery. Furthermore, while not exactly plentiful, rail-adaptable armored cars could sometimes serve as trolleys.<sup>16</sup>

While trolleys were useful adjuncts to armored trains, two other types of railroad weapons served in roles for which armored trains were ill suited. The first, an "armored flyer," was a comparatively secure vehicle in which Bolshevik commanders such as Leon Trotsky, who came to be known as the "Father of the Red Army," could supervise operations on distant fronts. An armored flyer typically consisted of an armored locomotive, some base cars, an armored railway car, and one or two flatcars. Trotsky's flyer, for instance, had a radio, a map room, a printing press, a secretarial staff, his Rolls-Royce, ammunition, medicine, and a leather-clad security platoon. Dashing from front to front in the flyer, Trotsky transformed the faltering Red Army into an effec-

tive fighting force by coordinating the war effort from his train, delivering fiery speeches, and executing “enemies of the revolution.” He believed that his armored flyer was the key to turning Red Guards into real soldiers:

“...the flabby, panicky mob would be transformed in two or three weeks into an efficient fighting force. What was needed for this? At once much and little. It needed good commanders, a few dozen experienced fighters, a dozen or so of Communists ready to make any sacrifice, boots for the barefooted, a bathhouse, an energetic propaganda campaign, food, underwear, tobacco, and matches. The train took care of all this.”

Before hostilities ceased, Trotsky had commanded five million men from his armored flyer, traveling a total of 65,000 miles to supervise the war effort.<sup>17</sup>

Maintaining the morale and motivation of soldiers was of vital importance, but it was also desirable to win the “hearts and minds” of the people. Thus, a key ingredient in the ultimate Bolshevik victory was an effective propaganda and civil affairs campaign. To help conduct this campaign, Reds used a variety of propaganda tools, including five propaganda trains (*Agitpoezda* [Agitation trains]) to spread the Bolshevik gospel in conquered areas. These artistically painted trains bore murals, printing presses, movie projectors, theatrical props, and other propaganda tools. Unlike conventional railroad weapons, these trains conducted psychological warfare, using the pen rather than the sword to present Bolshevism as a legitimate ideology. In contrast, the Whites had no such trains, nor did they even attempt propaganda campaigns worthy of note. The Bolsheviks thus won the war for hearts and minds virtually by default.<sup>18</sup>

Propaganda trains spread Marxist-Leninism in the hinterlands, but it took armored trains to serve as the “big sticks.” The fluid nature of the Russian Civil War encouraged the employment of armored trains in tactical missions broader than mere railroad defense. In order for the armored trains to succeed in these missions, however, they needed to conduct thorough reconnaissance beforehand. Along with employing trolleys to gain information, armored trains used German Parseval balloons, which could attain an altitude of 1,000 meters, while the French Caquot type could reach 1,300 meters. Other trains used aircraft, motorcycles,

and searchlights to obtain information.<sup>19</sup>

Once commanders had conducted their reconnaissance and settled on a specific course of action, they used surprise whenever possible to improve their chances. Trains often departed covered or concealed positions at dawn’s first light, burning smokeless coal, maintaining fire discipline, and refraining from blowing their whistles. If the tracks were wrecked, machine gun and artillery fire covered repair crews. When available, an armored trolley pushed a flatcar one to two kilometers ahead of the train to check the tracks for mines and guard against rams. Meanwhile, a second trolley followed one to two kilometers behind the train. The forward trolley was well manned, having the headquarters platoon leader, a senior telephonist, a railroad master (specialist), and two scouts. When it unexpectedly arrived at a station, the enemy opened fire on it. The armored train then let loose with as many weapons as it could bring to bear, surprising the enemy who thought the trolley was reconnoitering alone. To insure that the assault was successful, the train’s guns also supported the attack of the landing detachment, infantry or cavalry forces that rode on the train until the commander ordered them to attack.<sup>20</sup>

Landing detachments projected an armored train’s power far beyond the tracks, and were especially effective where wooded or hilly terrain restricted the armored train’s fields of fire. These detachments normally had a cavalry reconnaissance platoon and three rifle companies, totaling 321 men. Their usefulness was obvious by October of 1920, when sixteen Red armored trains carried these maneuver units. Some armored trains even carried armored assault cars besides small cavalry or infantry units to assault enemy positions under the train’s withering covering fire.<sup>21</sup>

Besides operating with their landing detachments, armored trains also worked with other branches of the Red Army. Infantry and artillery supported armored train attacks by distracting defenders for three to five minutes as a train pierced enemy lines. A train usually tried to pierce the opponent’s flank just as German panzers spearheaded attacks in *schwerpunkt* fashion two decades later. Surprise was needed for success, so the crew concealed the train’s approach until it was five hundred meters from the enemy.<sup>22</sup>

In some situations the roles were reversed, as armored trains supported infantry breakthroughs on enemy flanks. Their guns bombarded key enemy positions, and as the breakthrough progressed, trains displaced to support advancing troops. If the attack succeeded, armored trains pursued enemy forces.<sup>23</sup>

With trains pursuing it, a force might tear up the tracks. Sometimes this worked, but armored trains generally carried repair materials for such a contingency. In addition, both sides were loath to tear up tracks they might need later in a counteroffensive.<sup>24</sup>

Assaulting defensive lines in the field was not the only type of combat a train might expect. The fluid nature of the Russian Civil War resulted in both sides holding their ground at key features along the railroad tracks, conceding much of the vast expanses of the steppe to an opponent willing to operate in a virtual “no-man’s land.” Thus, many objectives, such as heavily fortified railroad yards, were often fifty or even one hundred kilometers distant. In these situations, commanders capitalized on the mobility of armored trains, dispatching groups of two or three to raid an enemy’s rear areas when circumstances permitted. Multiple trains were necessary, since friendly forces were one to three days’ march away. During the raid, each train performed a specific task. The first armored train, usually a class “A,” unleashed its considerable firepower and drove ahead, while the second, probably a class “B,” provided fire support with its railroad batteries. Meanwhile, the third train, possibly a class “C,” protected the rear. This mix of armor and artillery often resulted in the capture of enemy rolling stock, since armored trains could still tow 10 to 15 freight cars. Sometimes armored trains might even capture their own kind in these raids.<sup>25</sup>

The same qualities that made armored trains good offensive weapons — firepower and mobility — also worked to their advantage in defensive operations. As the Whites advanced, the Bolsheviks often set up ambushes on their flanks and likely avenues of approach. Their ambush tactics called for two armored trains, one for close combat and the other for artillery support, to cooperate with a landing detachment. The landing detachment assumed a forward fighting position, allowing the Whites to pass by the heavy artillery train’s extreme range. After the artillery bombardment, the close combat train

moved forward for the kill while the landing detachment enveloped the Whites from the rear, much like classic “hammer and anvil” enveloping tactics.<sup>26</sup>

By employing mobility, firepower, a combined arms approach, and special tactics, armored trains proved valuable in front line duties. Bolshevik armored trains also performed the more mundane task of protecting vital supply and communications lines from partisans and isolated enemy troops. Rather than endlessly cruise the rails, armored trains with landing detachments kept steam up at depots while maintaining contact with posts along the entire defended line. In this way they saved wear-and-tear on the train and kept crews fresh for action.<sup>27</sup>

Besides the noteworthy tactics used by the trains, the scope of their use was also remarkable. Several dozen armored trains operated in maneuver force roles on a greater scale than did their American and British predecessors. Moreover, they served in several operations over an area that spanned 11 time zones. The ultimate harvest of these rail-borne armored forces was a Bolshevik victory, an event that had far-reaching implications for world history. Reds were able to establish the USSR, an ill-conceived experiment in social engineering that failed miserably, causing immeasurable suffering and the lives of millions of people.

At the time of their victory, an immediate result was an attempt to foster world revolution by spreading Bolshevism to the West. As the Reds fought for Ukraine, they soon engaged rival Polish armies intent on re-establishing ancient Polish territorial claims. Both sides used large numbers of armored trains in the Russo-Polish conflicts of 1919-21. It was fortuitous that Polish armored trains were available to fight the Reds, since the Poles had just built several trains for the Third Silesian Uprising. Elite Polish troops skilled in construction techniques and weapons infiltrated through German lands to ethnically Polish areas. These Poles cadred local units that built armored, or more precisely concrete trains, many of which contested more sophisticated German armored trains employed to quell the Polish insurgencies in Silesia. As a result of this building program, 70 Polish trains helped repel Red forces from Polish soil; in so doing, the Poles cut off and captured Red trains and perhaps saved Europe from Bolshevism.<sup>28</sup>

Fortunately, the same type of weapon that performed so admirably in the Russian Civil War ultimately proved capable of halting the Red threat to the West. Armored train effectiveness was nonetheless not lost on the Russian people, who even today are familiar with armored train actions of the bloody conflict. Soviet artists elevated armored trains to icons of the revolution, as several Russian Civil War battle portraits include armored trains. Playwright V. Ivanov portrayed an armored train as a potent weapon in his play “Armored Train # 14-69.” Firmanov’s Chapayev, a novel about the Russian Civil War, depicted armored trains in battle. Poets even found trains a fit subject for their work. One of them included a veiled threat within his artistry:

Under the burning sun,  
Under the darkest night,  
We have been through much.  
We are a peaceful people,  
but our armored train stands  
(waiting) on the siding.

Considering that the Soviets experimented with trains capable of launching ICBMs in the 1980s, the last phrase takes on chilling undertones.<sup>29</sup>

## Notes

<sup>1</sup>Alan R. Koenig, *Ironclads on Rails: American Civil War Railroad Weapons, 1861-65*, (University of Nebraska-Lincoln, 1994), 260-290.

<sup>2</sup>G. Balfour, *The Armoured Train: Its Development and Usage*, (London: B.T. Batsford, Ltd., 1981), 9-15, 19-21; Denis Bishop and Keith Davis, *Railways and War before 1918*, (New York: Macmillan, 1972), 107-11; Jay Stone and Erwin A. Schmidl, *The Boer War and Military Reforms*, (New York: University Press of America, 1988), 58, 322, 324, 326.

<sup>3</sup>Vladimir A. Potselyuyev, *Bronenostsy zheleznikh dorog (Ironclads of the Railroads)*, (Moscow: Molodaya Gvardiya [Young Guards], 1982), 8; Tirrell J. Ferrenz, *Military Engineer*, 23, 137 (September-October, 1932), 471; *Grazhdanskaya Voyna i voyennaya Interventsiya v SSSR: Entsiklopedia (Civil War and Military Intervention in the USSR: Encyclopedia [hereafter referred to as GVVISE])*, (Moscow: Sovetskaya Entsiklopediya, 1983), “Bronepoezd,” (Armored train); Steven J. Zaloga, *Soviet Armour*, (Carrollton, Texas: Squadron/Signal, 1980), 24; GVVISE, s.v. “Bronepoezd” (Armored Train), “Zheleznodorozhnyye Voyska” (Railroad Troops); Potselyuyev, 27.

<sup>4</sup>Zaloga, 24.

<sup>5</sup>Potselyuyev, 12; GVVISE “Bronepoezda” (Armored trains); Potselyuyev, 56.

<sup>6</sup>GVVISE, s.v. “Bronevyeye Sily RKKKA,” (Armored Forces of the R.K.K.A.), “Bronepoezd.” (Armored Train).

<sup>7</sup>Potselyuyev, 18-27.

<sup>8</sup>GVVISE, s.v. “Tsentrobron” (Central Armor Command); “Bronepoezd” (Armored Train).

<sup>9</sup>Potselyuyev, 22-25.

<sup>10</sup>Potselyuyev, 18-31; 48-92.

<sup>11</sup>Potselyuyev, 22-25.

<sup>12</sup>Potselyuyev, 22-25.

<sup>13</sup>Potselyuyev, 22-25, 29-32.

<sup>14</sup>Potselyuyev, 22-25, 29-32.

<sup>15</sup>Potselyuyev, 22-25, 29-32.

<sup>16</sup>Potselyuyev, 30; GVVISE, s.v. “Bronedrezina.” (Armored Trolley).

<sup>17</sup>*Sovetskaya Voyennaya Entsiklopedia (Soviet Military Encyclopedia)*, s.v. “Bronepoezda” (Armored Trains); Melvin C. Wren, *The Course of Russian History*, (New York: Macmillan, 1979), 445; Gwyneth Hughes and Simon Welfare, *Red Empire*, (London: Weidenfeld and Nicolson, 1990), 58, 50.

<sup>18</sup>GVVISE, s.v. “Agitparokhody i Agitpoezda.” (Propaganda River Steamers and Propaganda Trains).

<sup>19</sup>Potselyuyev, 26-41.

<sup>20</sup>Potselyuyev, 26-41.

<sup>21</sup>Potselyuyev, 26-41.

<sup>22</sup>Potselyuyev, 26-41.

<sup>23</sup>Potselyuyev, 26-41; GVVISE, s.v. “Bronevyeye Sily RKKKA” (Armored Forces of the Red Army).

<sup>24</sup>Potselyuyev, 26-41.

<sup>25</sup>Potselyuyev, 12; GVVISE “Bronepoezda” (Armored trains); Potselyuyev, 56.

<sup>26</sup>Potselyuyev, 26-41.

<sup>27</sup>Potselyuyev, 41.

<sup>28</sup>*Pancerny Pociag “Zygmunt Powstaniec” (Armored Train “Sigmond the Rebel”)*, (Warsaw: Ministerstwo Obrony, [Ministry of Defense] 1982), 1-27; Adam Zamoyski, *The Battle for the Marchlands*, (Boulder: Eastern European Monographs, 1981), 26.

<sup>29</sup>Potselyuyev, 111.

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