

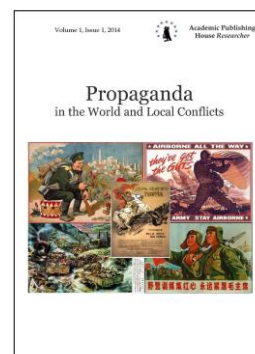
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Propaganda Ammunition (Based on the Experience of World War I and World War II)

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Abstract

The article is dedicated to the use of propaganda ammunition by the warring parties during World War I and World War II. Attention is paid to the means of ammunition delivery to the enemy's positions, as well as performance characteristics of the ammunition used.

We used specialized scientific and technical literature on the issue of military propaganda and methods of the propaganda sources delivery as materials. Methodology of the study is based on the main principles of historicism, objectivity and chronological sequence. The principle of objectivity allowed us to disengage ourselves from stereotype opinions, assessments and thinking, and thanks to the chronological principle we were able to build up the study in its chronological sequence.

In the conclusion, the author notes that the experience of using propaganda materials during World War I has shown that efficient delivery of propaganda sources to the enemy's deployment sites can play a significant role in orchestrating the desired psychological effect on the enemy. Keeping this in mind, in the period prior to the World War II, different countries were developing propaganda ammunitions delivered by air and ground transport. During World War II, further development of propaganda ammunitions was taking into account the military hardware technical development. As a result of this confrontation, a range of means for the delivery of propaganda materials was determined, and firing leaflets charged into the missile of a caliber of more than 122 mm was considered inefficient.

Keywords: agitation, propaganda, weapons, World War I, World War II, propaganda ammunition.

1. Introduction

During World War I, the main trendsetter of the new methods of waging propaganda war was Great Britain. It was this country that developed the first propaganda missile in 1918. Agitation grenades, mortar ammunitions, air bombs and other means of the propaganda materials delivery were subsequently designed and tested. This is what our article speaks about.

2. Materials and methods

We used specialized scientific and technical literature on the issue of military propaganda and methods of the propaganda sources delivery as materials. We also used reference literature (e.g. [Tekhnicheskaya Entsiklopediya, 1927](#)).

Methodology of the study is based on the main principles of historicism, objectivity and chronological sequence. The principle of objectivity allowed us to disengage ourselves from stereotype opinions, assessments and thinking, and thanks to the chronological principle we were able to build up the study in its chronological sequence.

3. Results

It is important to understand at once that propaganda ammunition is a special purpose ammunition. It is designed to scatter (cover the ground with) propaganda materials (usually leaflets) across the territory controlled by the enemy. These ammunitions have no specific destructive power, but large fragments of such ammunitions can pose a danger to buildings, equipment and people.

Yet in 1927, Volume 1 of *Tekhnicheskaya Entsiklopediya* was noting that the propaganda missile was intended to disseminate propaganda leaflets among enemy troops by means of gunshots. The missile was not intended to damage the enemy with shrapnel, so it was designed to produce the smallest number of fragments and parts that could injure people. Leaflets were inserted through the bottom part of the missile that could fit 1.0 to 1.4 kg. After the shot, during the flight of the missile, at a certain height the distant tube fire was spreading to the powder chamber where the bursting charge was exploding; the resulting gases were pressing the diaphragm thus knocking out the missile's load along with its bottom. The leaflets were thrown back, unfolding in the air in the shape of a cloud of 25 to 60 meters in cross-section, spinning by inertia, scattering in separate sheets, depending on the wind direction. Having fallen down, the leaflets formed a narrow strip on the ground in the wind direction, 300 to 600 meters long ([Tekhnicheskaya Entsiklopediya, 1927: 285-286](#)).

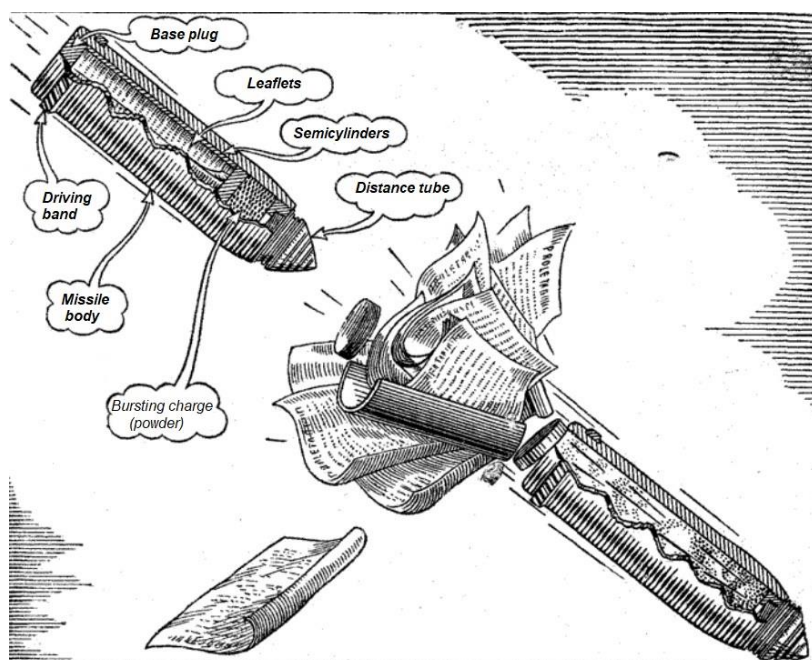


Fig. 1. Propaganda missile and the mechanism of its use

Propaganda ammunition was divided into certain groups depending on the delivery method: by air (aircrafts, balloons) and by ground transport (artillery, mortars). Let's look at each delivery method separately.

Air Delivery

Towards the end of World War I, covering the ground with leaflets in the enemy's territory was used on a large scale with the help of balloons. In his military report called "Air Propaganda Propagation Methods", dated March 12, 1918, Captain Mitchell (France) emphasized that although the balloons could only deliver 1 kg of propaganda material each, it was a very efficient means of demoralizing the enemy ([Stepanov, 2010: 52](#)).

It should be understood that Germany also used agitation balloons with a shell volume of 12.5 m³. The weight of printed materials for such balloons was up to 5 kg (2.5 thousand leaflets of the A5 format), the height of the balloon flight was 5 thousand meters, the distance it could cover was 300 km. In 1918, the United States were regularly launching balloons charged with propaganda materials into

the enemy's territory. The scale of U.S. propaganda is evidenced by the fact that in three months of air battles they disseminated more than 3 million leaflets (Stepanov, 2010: 53).

After the end of World War I, the Soviet Union developed a propaganda aircraft called "Maxim Gorky" that had its own printing facilities onboard. So, it was possible to produce propaganda products during the flight. However, the aircraft crashed during the official test and the project was closed down (Katorin, 2017: 117-123).

By the beginning of World War II, there were two main means of airdropping propaganda materials: from balloons and from aircrafts. Let's look at these dissemination means.

Balloons As a Means of Disseminating Printed Information

During World War II, the British Defense Department organized an active subversive propaganda work against Germany. With the war outbreak, the British launched 60 balloons with leaflets, proclamations, newspaper circulations where the policy of the Third Reich was exposed. One of the leaflets dropped on the Germans said: "In this war, we are not fighting against you, the Germans; we are fighting against tyranny and a regime that betrays not only its own people, but also the entire Western culture and all that is dear to you and us... God is with the right cause!" (Stepanov, 2010: 54).

Propaganda materials were delivered to the enemy's territory with the help of a regular balloon that was able to make unmanned flights with a disposable load to the distances of more than 1,000 km. However, these agitation balloons, due to the lack of accurate information about high-altitude air flows, were often delivering leaflets to the wrong destination. Designed to bring moral and psychological pressure to bear upon the German troops, British balloons were sometimes found in neutral Switzerland or were dropping proclamations in German on Italy or Spain. Only 60 % of the balloons launched in the direction of Germany actually reached their destination (Stepanov, 2010: 54).

In order to improve the leaflets' airdropping quality, a J-100 leaflet container was developed. It was designed for use in the unmanned balloons flying up to 500 km away. Its operational principle was simple. Consistently moving along the air zones with different pressures, the gas in the balloon shell was expanding and eventually tearing the band linked to it, releasing a disposable load from the container. The maximum load for the J-100 container was about 3 kg. Other J-9-10-300-type balloon-container systems were able to fly with a load of leaflets (about 5 kg) at a distance of 500 to 1.2 thousand km (Stepanov, 2010: 54).

Later, the British created balloon-container systems of series 170 and 180 to flood the enemy's territory with leaflets at a distance of 3,000 km from the launching point. The disposable load of such a device was 40 kg (Stepanov, 2010: 55).

In 1933, Japan also began creating unmanned balloons for military purposes. Thus, in 1937 to 1941, the Japanese launched several test balloons in the direction of the USSR. In 1942, the concept of using agitation balloons as well as bomber balloons over long distances entered the stage of practical implementation, taking into account natural meteorological factors.

In order to carry out high-altitude long-range raids, gas balloons with a shell volume of 120 m³ were mass-produced in Japan. Balloons were launched in groups. Most of these balloons were carrying shrapnel bombs, sometimes the group included several leaflet balloons. In just five months, the number of leaflets sent across the ocean exceeded 10 thousand copies. However, from November 1944 to March 1945, the Japanese were launching mainly bombs in the direction of the U.S., using almost no leaflets (Stepanov, 2010: 55).

Aircrafts As a Means of Disseminating Printed Information

Prior to the outbreak of World War II, the tactic of airdropping leaflets from a low height directly above the enemy's deployment sites was used in the air delivery of propaganda materials in different countries of the world. During World War II, airdropping of leaflets from a low height proved inefficient due to the ground-based counter-effort. For example, this is what Soviet propagandists had to face near Stalingrad in 1942. Near Stalingrad, any attempts at airdropping leaflets from the Soviet planes at low height often ended with the loss of both the machine and the crew, as the Germans were attacking the "agitators" using all kinds of weapons. And the leaflets dropped from a high altitude were carried far away along the Volga steppes. As a result, the solution to this problem required an intervention of the designers and armorers. On the instructions of the Head of the Special Propaganda Department of the General Political Administration of the Workers' and Peasants' Red Army, they were required to construct a

propaganda air bomb. And taking into account all of the shortcomings of the propaganda ammunitions, when metal shrapnel was falling on soldiers' heads in addition to leaflets, the air bomb was made mainly of wood (Pyr'ev, Reznichenko, 2001: 244).

Weight of the agitation bomb, made in the dimensions of a 100-kg high-explosive bomb, did not exceed 20 kg, but it received the name AGB-100-30. The plywood front and the rear conical parts were fastened to the central cylindrical part with nails and twine. A metal sleeve was installed in the head part to fasten the tail of the distance tube. From that metal sleeve to the tail inside the air bomb, a tube with the additional powder pellet was installed, ensuring the bomb body's opening at a given height. The AGB was loaded with rolled leaflets, each roll was weighing 2.7 to 3.2 kg. Basically, these were the leaflets of format (Pyr'ev, Reznichenko, 2001: 244).

The AGB-100-30 was used both in external and internal bomb-release units. When the air bomb was dropped, the distance tube was activated, the front and rear cones were knocked out by the pellet, tearing the twine, and the plywood cylindrical part made of flat sheet was unfolding, releasing the ammunition contents.

Summer and full calm were considered to be the most favorable conditions for the use of AGB. Then the height of bombs' unpacking could be 500 meters, and the area covered with leaflets was the most wide-reaching. In windy weather or with rising air flows, the unpacking of propaganda ammunitions had been organized at altitudes of 50 meters and up (Pyr'ev, Reznichenko, 2001: 244).

The use of aviation for propaganda activities was carried out almost throughout the war by all the warring parties. Even in the autumn of 1944, Germany allocated aviation for these activities, for example during the East Scorpio Operation (Nesterenko, 2015: 117-118).

Ground-Based Delivery of Propaganda Ammunitions

By the beginning of World War II, almost all the main parties to the confrontation had developed propaganda missiles of different calibers, 75 to 155 mm. However, the Soviet Union took this matter a step further when agitation missiles for 305-mm guns were developed. There is information that such missiles were used near Sevastopol, but not for the intended purpose. Soviet artillerymen were stuffing them with sand instead of leaflets and firing at the German infantry.

The propaganda missile principle was very close to one of the propaganda bomb. Propaganda ammunition for guns and mortars had thin glass-like walls with a base plug. Bursting charge and the leaflet rolls were placed inside it. The distance tube was installed in such a way as to make the charge explode at an altitude of 100 to 150 meters. The thread was overturned, the rolls were thrown out, disseminating thanks to the centrifugal force.

Most often the propaganda artillery was used by Soviet troops. But there were certain downsides in that. Thus, when the gun was fired, it was getting exposed, so it was important to keep in mind that there is the counter-battery artillery fire. A single gun was not enough for the mass dissemination of leaflets, so as a rule, a battery or an artillery division was used at once. The result was of dubious efficiency, and the artillery position was exposed. There were also other drawbacks. Propaganda ammunitions were delivered by the BM-13 volley fire rocket systems. However, after the propaganda missile explosion, the 17-kilogram engine body with fin assembly was also falling on the trenches (Pyr'ev, Reznichenko, 2001: 244).

In the case of Germany, they used artillery more often compared to aircrafts to disseminate propaganda materials.

Since the end of World War II, the experience of using agitation ammunition has been thoroughly analyzed and the agitation materials delivery means have been improved.

So, the means of delivery that are in service with the Western countries became as follows:

Air bomb for leaflets delivery. Its empty weight is 52 kg, equipped weight is 100 kg. Its capacity is up to 30 thousand A4 leaflets. And the delivery distance is up to 500 km.

Balloons. Manufactured from paper, rubber or polyethylene and filled with light gas (usually helium, less often hydrogen). Carry a disposable load of up to 9 kg of printed products. And the delivery distance is up to 2.4 thousand km.

Unmanned aircrafts. They are able to deliver with high accuracy 50 to 100 kg of leaflets in a special head part or in outer suspension containers for a range of up to 150-200 km.

Special aviation container for leaflets delivery. Manufactured in the field from standard cardboard boxes for the leaflets airdropping from aircrafts and helicopters of military transport aviation. Capacity of up to 50 kg of propaganda materials (20 to 40 thousand leaflets).

Artillery 122-mm propaganda missile for self-propelled and towed artillery mounts. The missile's total weight is 21.5 kg. It can hold 0.8 kg of agitation materials (up to 400 leaflets). Coverage at a height of 100 to 150 meters and wind speeds of up to 3 m/s reaches 2.4 to 4.9 sq.km. (Krys'ko, 1999: 75-76).

The delivery means in service with the countries of the East included:

Agitation air bomb. It uses the body of a 500-kilogram high-explosive bomb and is designed for precision airdropping of printed materials when bombed from a height of 150 to 500 meters at a speed of up to 1,500 km/h and from a height of 700 to 2,500 meters at a flight speed of up to 3,000 km/h.

It is dropped from aircrafts of various types, capable of carrying up to 12 agitation bombs or more. The loaded bomb is 298 to 306 kg. The printed materials weight is 68 to 75 kg, i.e. up to 35 thousands of leaflets. It allows covering the front area from 450 to 1,850 meters long from the bomb opening height of 300 to 400 meters and at wind speed from 0 to 8 m/s, to the distance of 1,000 to 6,000 meters.

Agitation balloon. The shell volume is 12.5 cubic meters, weight of printed materials is up to 5 kg (2.5 thousand A4 leaflets). The balloon can fly at the height of up to 5 thousand meters. The flight range is up to 300 km.

122-mm rocket with agitation head part. The number of guides on the combat unit is 36 to 40. The missile's total weight is 56 plus 1 kg. Weight of the head part is 17 kg. The rocket can hold 1.5 kg of agitation materials (up to 750 leaflets). The maximum range is 15.58 km. The coverage area is 1 to 2.35 sq. km.

82-mm mortar rounds with six-vented mortar bomb. The maximum range is 3 km. The capacity is 350 grams (175 leaflets).

Agitation parachute container. It is designed for single or serial precision airdropping of printed materials from a height of 400 to 1,000 meters at flight speeds of up to 700 km/h. It is a disassembled metal container with a parachute and an automatic remote device for its opening at a given height. The weight of containers in the loaded mode is 100+10 kg, the weight of printed materials is 70+10 kg (30 to 35 thousand leaflets). The optimum opening height is 300 to 600 meters. When a container bearing leaflets of any format is dropped from the aircraft, the coverage area is 100 to 180 meters wide and 1,000-1,500 meters long (Krys'ko, 1999: 76-77).

4. Conclusion

The experience of using propaganda materials during World War I has shown that the efficient delivery of propaganda sources to the enemy's deployment sites can play a significant role in orchestrating the desired psychological effect on the enemy. Keeping this in mind, in the period prior to the World War II, different countries were developing propaganda ammunitions delivered by air and ground transport. During World War II, further development of propaganda ammunitions was taking into account the military hardware technical development. As a result of this confrontation, a range of means for the delivery of propaganda materials was determined, and firing leaflets charged into the missile of a caliber of more than 122 mm was considered inefficient.

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