

## DISCOVER UKRAINE: TECHNOLOGY

## Ukrainian Pioneers of Flight

## Peter Nesterov

When you happen to drive out of the city, along the arrow-straight, long and spacious Prospekt Peremohy (Victory Avenue) in Kyiv, just before the fly-over near the Svatoshin subway station, on the right, you can see a unique world memorial.

In the middle of a square, just in front of the main office block of the state-owned Kyiv Aviation Plant "Avi-Ant", integrated with Antonov's Aircraft Design Office, the famous Ukrainian aircraft construction company is where the monument is located. The monument is about 6 meters high, not garish, but simple. Placed on a low and wide pedestal, the statue is of a young slender aviator, Staff-Captain Peter Nesterov. The pilot's figure is depicted in a flying uniform representative of the dawn of aviation. The flyer has both feet on the ground, his face raised up to the sky and his hands as if pointed at some airplane aerobatics maneuvers.



High over him, as if tracing a trail of the famous in the world "Nesterov's Loop" (even today the most stunning aerobatics figure), is raising skywards frozen up in stainless steel, the figure-of-loop track, as if it was sky-written by a little fragile French "Neuport" airplane.

The young Russian flyer, Peter Nesterov (1887-1914), was the first in the world to successfully master this aerobatics figure. This event happened in the skies over Kyiv on July 27, 1913. Ukraine at that time was a southern province of the Russian Empire.

Here is an excerpt from the official report to the high military authorities: "On 27 July 1913 Nesterov's Neuport took off and climbed to an altitude of about 800-1000 meters. The flyer switched off the engine. The plane went into a dive. At altitude about 600 meters the engine was switched on again. The plane, obedient to the pilot's confident control, shot vertically upwards, lay on its back, traced a smooth loop and again went into a dive. The engine was switched off again, the plane smoothly went off diving in a gently sloping spiral down to earth and successfully landed."

Peter Nesterov's courageous feat stirred up interest in the whole world. His heroic deed brought rave reviews and enthusiastic telegrams from many countries. He was awarded a gold medal from the Kyiv Aeronautics Society.

In spite of Peter Nesterov's insistence that aerobatics was "a training tool for flyers" his military commanders flatly forbade the use of his "dead loop" in training. Nevertheless,

Nesterov soon repeated his "dead loop" once more on March 31, 1914.

Peter Nesterov was the first who broke from training rules and prohibitions and successfully practiced steep turns with a bank. He was not only an audacious and courageous flyer, but also an intelligent, prudent pilot. He was a talented designer as well.

Soon after the Civil War began (1914), the already renowned hero became famous for his successful day and night bomb missions and reconnaissance flights deep into the rear of enemy territory. The angry Austrian command even placed a large reward for someone to shoot his plane down.

Having no weapon on his light plane he conceived an idea and developed a tactics for air ramming the enemy's planes by utilizing the undercarriage of his plane. Soon after, the right moment came.

On August 26, 1914, the famous, audacious ace for the last time took off against the enemy in his Marrant aircraft. The small fragile monoplane of Peter Nesterov tracked down the larger and more powerful Austrian Albatros.

Here is how an eyewitness described that terrible and eye-catching event: "Nesterov's plane reached the enemy's plane from above and rear, and rammed it like a falcon hits an awkward heron. The unwieldy Albatros after the air strike, as if being shocked, continued for a while on its course, but suddenly fell down to the side and headlong dug into the ground."

This time Peter Nesterov failed in his risky assumptions and couldn't escape death himself.

During the Second World War many pilots repeated Nesterov's air ramming. Some of them even survived, mainly those who used the aircraft propeller as a sort of the "circular saw".

Peter Nesterov was buried with great military honors amidst a mass of mourners, near by Askold's grave in Kyiv. Later his grave was transferred to the Lukyanovsky burial-ground.

## Glossary

**garish** – very brightly coloured in a way that is unpleasant to look at

**Staff-Captain** – a fairly high rank in the air force

**aerobatics** – tricks done in a plane

**stunning** – very surprising or shocking

**loop** – a shape like a curve or a circle

**dive** – to travel down through the air to a lower level

**feat** – an impressive achievement

**stir up interest** – to cause interest

**rave reviews** – reviews of praise

**steep** – rising or falling sharply, not gradually

**bank** – if a plane banks it travels with one side higher than the other

**audacious** – showing great confidence in a way that is impressive or slightly shocking

**prudent** – sensible and careful

**reconnaissance** – the military activity of sending aircraft to find out about the enemy's force

- ram** – to drive into something very hard  
**undercarriage** – the wheels of an aircraft and the structure that holds them  
**ace** – someone who is very skillful  
**eye-catching** – unusual or attractive in a way that makes you notice it  
**falcon** – a bird that kills and eats other animals  
**heron** – a large bird with very long legs and a long beak, that lives near water  
**unwieldy** – big, heavy and difficult to use  
**headlong** – very quickly  
**saw** – a tool with a flat blade that you use for cutting wood

**Comprehension Check**

*Decide if the following sentences are true (T) or false (F).*

- \_\_\_ 1 In Kyiv near the Svyatoshin subway station the statue of a pilot is situated in front of the Aviation Plant.
- \_\_\_ 2 The monument features a slender young man in a flying uniform.
- \_\_\_ 3 "Nesterov's Loop" was accomplished on July 27, 1914.
- \_\_\_ 4 The flyer climbed to an altitude of 50 meters.
- \_\_\_ 5 Peter Nesterov's heroic deed stirred up interest in the whole world.
- \_\_\_ 6 He was awarded a gold medal from the Ukrainian government.
- \_\_\_ 7 Peter Nesterov was not only a courageous flyer, but a talented designer as well.
- \_\_\_ 8 During the war he developed a tactics for air ramming the enemy's planes.
- \_\_\_ 9 After Nesterov's plane rammed the enemy's plane from above, it continued on its course.
- \_\_\_ 10 Many pilots repeated Nesterov's air ramming during the Second World War.

**Ihor Sykorsky**

Ihor Sikorsky (1889-1972), no doubt, a superstar of world aviation, the world-wide famous, talented pioneer, designer of the most perfect and powerful helicopters, hydro-planes (clippers) and heavy multi-engine aircraft.

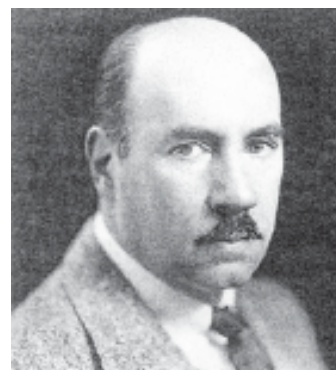
Ihor Sikorsky was born into the family of a well-known and well-off psychiatrist in Kyiv, where he graduated from a local gymnasium. While a student of Kyiv Polytechnic Institute (1907-1909) he created its first own small, improvised aviation workshop. There he purchased from France one of the most powerful engines of the times, the Anzany engine. Using that he constructed his first helicopter. Though the helicopter could lift its own weight (180 kg), it couldn't rise up with its designer aboard. Because a more powerful engine wasn't available at the moment, he decided to switch to designing other aircraft.

Ihor Sikorsky glorified tzarist Russia with his famous unprecedented gigantic four-engine air-craft "Russky Vityaz" and "Illiah Muromez", which he, as an incredibly young designer (24-25 years old), piloted personally (1913-1914). Several times these gigantic birds, piloted by him, appeared in the sky over his native city. During his long career he was an excellent, courageous and prudent pilot.

His fame in creating heavy multi-engine aircraft became known throughout the world.

Ihor Sikorsky, escaping from the chaos and repression of the Russian revolution, at first immigrated to France (1918). But soon after, he understood, that in France he was

only an alien, one of the immense immigrant crowd that had surged from Russia during the revolution. So he decided to immigrate to the United States to try his fortune once more. As it turned out later – for once and forever.



Moreover, he's brought glory to the United States by his clippers S-42, S-43, his helicopters S-55, S-58 and the world record breaking light, speedy and high-altitude S-59. "Mister Helicopter" was entered on a list of the most famous inventors of the United States of America.

Being a patriot, he always felt nostalgia for his native land. And Ukraine, in its turn, should be proud of its son.

**Glossary**

- aircraft** – a plane or other vehicle that can fly  
**alien** – a creature from another world  
**surge** – suddenly move very quickly

**Comprehension Check**

*Match these beginnings of the sentences to their endings.*

- |   |   |
|---|---|
| 1. Ihor Sikorsky is                               | a) while a student of Kyiv Polytechnic Institute. |
| 2. He was born in Kyiv                            | b) by his new inventions.                         |
| 3. Ihor Sikorsky constructed his first helicopter | c) the world-famous designer of aircraft.         |
| 4. At the age of 24, he                           | d) tried his fortune in France and the USA.       |
| 5. He piloted these gigantic birds                | e) designed gigantic four-engine aircraft.        |
| 6. After the revolution Ihor Sikorsky             | f) personally.                                    |
| 7. He brought glory to the United States          | g) where he graduated from a local gymnasium.     |

**Oleg Antonov**

Oleg Antonov (1906 – 1984) was the first talented Ukrainian aircraft designer to successfully and properly maintain Ihor Sykorsky's tradition in creating super-heavy multi-engine aircraft.

Antonov had an overwhelming desire to fly. In his youthful years gliding was his passion. He began to fly on gliders of his own design. He was not only an outstanding designer, but an experienced, intelligent and prudent pilot as well.

When the Second World War broke out, there were in operation about 600 A-7 heavy landing gliders of his design that were used in military operations against the Nazis.

Oleg Antonov founded the Antonov Aircraft Design Office. He's brought glory to Ukraine by the wide range of aircraft designed and constructed by him and by his expertise in diverse aircraft. The range of aircraft designs begins with the world famous multipurpose biplane AH-2 and the turbo-prop twin-engined AH-24, the most mass produced and widely purchased abroad passenger plane. The range ends



with the “don’t need to be advertized” gigantic heavy cargo planes: the turbo-prop “Antey” (АН-22), the four-engine “Ruslan” (АН-124) and the six-engine freight-carrying leader “Mriya” (АН-225) jet aircraft. Those freighters are famous and fly

throughout the whole world nowadays.

Few people, in reality, have an innate, almost in-born desire to fly. Many are content with the favorite Russian and Ukrainian maxims: “Who born to crawl, he cannot fly” or “The higher you jump, the longer you’ll fly and the worse you’ll be bruised.”

There are few individuals such as Nesterov, Sikorsky and Antonov. They, who had the youthful ardor, will, ingenuity and persistence to overcome all the numerous, incredible difficulties to make their dreams come true. And at the same time to bring glory to their homeland and to all whole humankind.

**Glossary**

- maintain** – to make something continue
- gliding** – sport of flying in a light plane without an engine
- expertise** – special skills or knowledge
- diverse** – very different from each other
- range** – variety
- biplane** – a type of aircraft with two sets of wings
- cargo** – the goods that are being carried in a plane
- jet aircraft** – a fast plane with a jet engine
- freighter** – an aircraft that carries goods
- innate desire** – a desire you are born with
- maxim** – a well-known phrase or saying
- be bruised** – to get a purple or brown mark on your skin because you have fallen
- ardor** – very strong admiration
- ingenuity** – skill at inventing things and thinking of new ideas

**Comprehension Check**

*Put the sentences about Oleg Antonov in the correct order.*

- \_\_\_ His first world famous aircraft was the AN-2 biplane.
- \_\_\_ Oleg Antonov successfully created super-heavy multi-engine aircraft.
- \_\_\_ His gliders were used in military operations against the Nazis.
- \_\_\_ Oleg Antonov’s range of aircraft designs ended with gigantic heavy cargo planes.
- \_\_\_ In his youthful years gliding was his passion.
- \_\_\_ Antonov’s freighters fly throughout the whole world nowadays.
- \_\_\_ He flew on gliders of his own design.
- \_\_\_ Oleg Antonov founded the Antonov Aircraft Design Office.
- \_\_\_ AN-24 is the most widely purchased abroad passenger plane.
- \_\_\_ He has brought glory to Ukraine by designing and constructing the wide range of aircraft.

**LANGUAGE WORK**

○ **Write singular or plural forms as necessary.**

<i>Singular</i>	<i>Plural</i>
statue	flyer
maneuvers	skies
society	authorities
hero	enemy
eyewitnesses	aircraft
feet	engines
death	gymnasium
cargo	

○ **Match the words to make word-combinations.**

official	event
military	hero
heroic	land
renowned	authorities
air	desire
eye-catching	aircraft
world-wide famous	deed
powerful	plane
multi-engine	report
native	Ruslan
overwhelming	designer
passenger	ramming
four-engine	aircraft
jet	engine
innate	desire

○ **Match the synonyms.**

famous	thin
slender	clever
stunning	outstanding
fragile	brave
courageous	immense
audacious	surprising
intelligent	confident
gigantic	well-known
prudent	delicate
unprecedented	careful

**DISCUSSION**

○ **Answer the questions fully.**

1. Where is the monument to Peter Nesterov located?
2. What does it look like?
3. What kind of aerobic figure did Peter Nesterov master?
4. How was the heroic deed described in the official report?
5. What tactics did Peter Nesterov develop during the war?
6. Where was Peter Nesterov buried?
7. When and where was Ihor Sikorsky born?
8. What were his first steps as a designer and constructor of aircraft?
9. What did he glorify his homeland with?
10. Where did Ihor Sikorsky immigrate after the October revolution?
11. What has he brought glory to the USA by?
12. What was Oleg Antonov famous for?
13. What were his greatest achievements?
14. What aircraft created by Oleg Antonov are famous and fly nowadays?

○ **Express your opinion.**

1. What deeds of the pioneers of flight stir up your interest? Why?
2. Prove that they all were courageous people.
3. Provide facts that they were talented constructors.
4. Can you interpret the maxim “Who born to crawl, he cannot fly”?
5. What is your life’s motto?
6. What is your cherished dream?
7. Have you ever dreamed of becoming famous? Why?

**WRITING**

○ **Write an essay “The dawn of Ukrainian aviation history”.**

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