



Heartland Science

Ohio's Legacy of Discovery & Innovation



Aviation & Aerospace

From the Wright Brothers to the Moon

The Modern Parachute

Floyd Smith and Leslie L. Irvin, working with a research team at what then was McCook Field in Dayton, developed the dominant parachute of the twentieth century. The device received a patent on May 18, 1920 and became the basis for parachutes used throughout the rest of the Century. The Ohioans' invention not only saved the lives of thousands of aviators forced to abandon doomed aircraft; it changed military history. The Smith-Irvin designed parachute led to formation of paratrooper corps, elite troops who typically have launched the first assaults in warfare.



Like most technological achievements, the history of parachutes is complex. We know that parachutes existed in the human imagination for centuries before the team began work at McCook, now Wright Field, at the U.S. Air Force's Wright-Patterson Air Force Base. Sebastien Lenormand, of France, usually gets credit for inventing the first practical parachute in 1783.



The United States military launched its research and development program after Germany equipped its World War I pilots with parachutes. Existing parachutes relied on a cord attached to the aircraft. When the aviator jumped, the cord coiled out until the slack was gone. Then the cord yanked out the folded parachute, which billowed open. Everyone thought the attached cord was essential. Humans, they felt, could not survive a free fall through the air. If aviators did survive, they would be in no condition to deploy manually the parachute themselves.

The attached-cord parachute, however, created problems. It deployed relatively close to the aircraft. That was dangerous when the airplane was in flames or exploded right after bailout. Aviators had little chance to get a safe distance away from the aircraft.

Packing it in

Smith and Irvin realized that the existing "static-line actuated" parachutes, attached to the interior frame of the aircraft, were

Fun Factoids

Bailing Out In History

1000 AD -- Chinese send condemned prisoners over cliffs with like-like device.

1495 - Leonardo Da Vinci sketched designs for a parachute.

1783 -- Sebastien Lenormand invented the modern parachute.

1793 -- Jean Pierre Blanchard first used a parachute in an emergency, escaping from an exploded hot air balloon.

1837 -- Robert Cocking became the first person to die from a parachute accident.

1887 -- Thomas Baldwin safely parachuted to the ground from a balloon 5,000 feet above San Francisco's Golden Gate Park.

1919 - Col. Billy Mitchell suggested using parachutes for a new corps of assault troops who would be dropping from airplanes.

1928 -- Six of Gen. Mitchell's troops jump from a bomber, and set up a machine gun, demonstrating that parachute forces are practical.

unsuitable. They developed a revolutionary new 'chute with canopy and lines packed into a container worn on a body harness.

Aviators activated it manually, with a ripcord yanked while falling freely through the air with no attachment to the aircraft. It had a 28-foot diameter silk canopy with silk suspension lines, folded into a backpack container. A yank on the ripcord opened flaps on the backpack, and deployed a small pilot-chute and then the main parachute.

On April 28, 1919, a member of the design team named Leslie L. Irvin, wearing a prototype of called Model A, jumped from a USD-9 airplane piloted by Smith. Irwin became the first person to make a free-fall parachute jump from an aircraft with the device that would be the 'chute of the future.

Smith received U. S. Patent No. 1,340,423 on the parachute, which he manufactured and sold at the Floyd Smith Aerial Equipment Co. in San Diego, California. Brigadier General William ("Billy") Mitchell first conceived the idea of parachuting troops into combat during World War I. Eventually, under the leadership of Major William Lee at Fort Benning, Georgia, members of the Parachute Test Platoon pioneered methods of combat jumping in 1940.

Modern parachutes are best characterized as parawings and parafoils, some with separate, controllable panels.



1,340,428.

Patented May 18, 1920.

