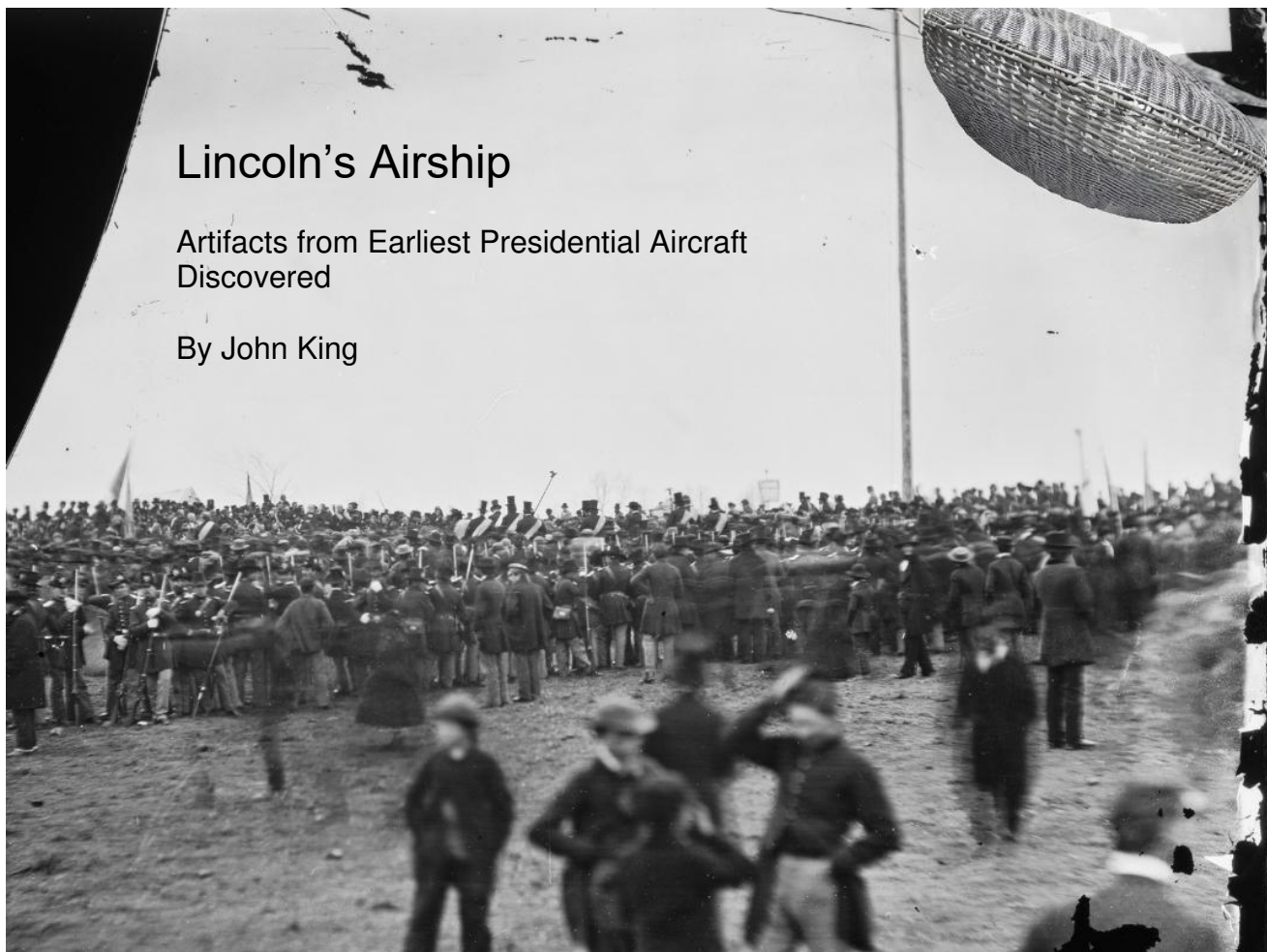




Lincoln's Airship

Artifacts from Earliest Presidential Aircraft
Discovered

By John King



The recent discovery of several artifacts thought to have vanished shortly after the Civil War has shed new light on the subject of Presidential aircraft.

One of the artifacts is a large piece of charred fabric from a presidential airship used by President Abraham Lincoln to travel to the dedication of the Gettysburg National Cemetery in November of 1863. The other two artifacts are the uniform of the Presidential Steward, Walter Beasley, and the overalls of the first "Flying Engineer" Samuel Peterson who spent the flight from Washington to Gettysburg shoveling coal into the steam engine that powered the airship.

Because of wartime security and the loss of the airship shortly after Lincoln's visit to Gettysburg, the story of the first presidential aircraft has been all but lost to history. With the discovery of these artifacts, the story of the Presidential Airship, the USS *Harrodsburg*, can finally be told.

The story of the first presidential aircraft begins

with a Perth Amboy, New Jersey, physician by the name of Dr. Solomon Andrews. In addition to being a physician, Dr. Andrews was a prolific inventor and created 24 successful inventions by the early 1860s. In 1862, Dr. Andrews conceived the idea of an airship and tried to interest the War Department and President Lincoln in developing the idea. His airship featured a structure that would contain cells or balloonets filled with hydrogen that would lift the airship. He had a strange idea that the ship could be navigated without any form of engine using the wind for power, a method similar to tacking as used in sailing a boat. He called the method "gravitation."

Although the idea seemed far-fetched, Abraham Lincoln had a soft spot in his heart for inventors. He had himself patented a design for a device to remove riverboats stranded on sandbars. He discussed the airship idea with both his Secretary of War, Edwin M. Stanton, and Secretary of the Navy, Gideon Welles. They thought the idea might be worth looking into. Stanton could see the possibility of the airship being used for forward or



over-the-horizon reconnaissance and Welles thought an airship might be useful in combating blockade runners off the shores of the Confederate States.

Lincoln realized that a great deal of research would need to be done, and the military was too busy fighting a war to be tied up in a major research and development effort, so he decided to call upon Joseph Henry, the Secretary and head of the Smithsonian Institution for assistance. Henry was a member of the National Academy of Scientific Advisors (NASA), a group that could explore the airship concept and make recommendations on how to design and build such a machine. Because of their quasi-governmental status, the group could also be trusted to keep their deliberations secret for the sake of national security.

The NASA group worked through the fall and winter of 1862 and came up with recommendations for a military airship. They envisioned an airship with a wooden superstructure 400 feet long that could accommodate 16 cells or balloonets filled with hydrogen. They suggested that two cars be placed under the wooden structure. The forward car would be for control and the rear car would hold a small steam engine that would drive, through a system of sprockets and chain drives, two pusher airscrews mounted halfway up on the side of the superstructure. The ship would be steered by way of a rudder mounted just behind the engine car and the up and down direction of the ship would be controlled by a lead weight that would be suspended between the forward and rear car so it could be pulled fore or aft depending on whether the ship's captain wanted to go down or up.

On February 18, 1863, the NASA group presented their findings and conclusions to President Lincoln and Secretaries Stanton and Welles. All agreed that it would be advantageous to move ahead to build an airship given its obvious value to the war effort. There was some discussion as to which service would proceed to build the prototype airship. Mr. Stanton voiced the opinion that at this point in the war, he was satisfied that the current use of stationary or tethered observation balloons fulfilled his needs for battlefield aerial observation platforms. He suggested that the Navy had more of a need for a mobile observation platform if they were to thwart the Confederate blockade runners. Welles agreed

and stated he would get a group of Navy officers together to construct and put into operation an airship for the Navy.

True to his word Welles assembled a group of Navy officers to design and build the Navy airship. To throw off any Confederate spies from discovering what the Navy was up to, the office was given the title "Smuggling Prevention Office" or SPO. The SPO quickly began its work and accepted most of the design elements from the NASA group. Since the SPO wanted to maintain the utmost secrecy about the airship project, they decided early on to construct the airship away from the east coast where there was more of a chance the project would be compromised. They decided to go to the Midwest and in Akron, Ohio, they found an abandoned building large enough to construct the 400-foot airship. The building had been a brewery where a defunct company called Goodbeer had been located.

By May of 1863 work had begun on the airship. Thousands of cow's intestines were used to make the 16 hydrogen cells as impervious to gas loss as possible. Hundreds of board feet of spruce were used to construct the massive superstructure. A small steam engine developing 18 horsepower that had previously been designed to power a motorized railroad hand car had been shipped to Akron by the Baldwin Locomotive works.

In mid-September, under the cover of darkness, what some would later call the "Goodbeer Airship," was hauled out for its first flight. All went well except that the steam engine proved to be temperamental but smoothed out during the first half hour of the flight that circled Akron. It reached an altitude of approximately 400 feet and cruised around for two hours. The crew on this occasion was Captain Franklin Hempstead, Able Seaman-Rudderman Robert Parks, Able Seaman-Lead Weight Positioner Elton Smith, and Flying Engineers Samuel Peterson and John Hasselman. Several flights were then made in the daytime, but secrecy was hard to maintain. Even though the outer fabric was painted silver and was almost invisible to the naked eye when in the air, many in Akron noticed something strange in the sky. After the first daytime flight, there were reports in the local newspaper that a strange object had been sighted. The paper dubbed these sightings as Unidentified Floating Objects or UFOs. Soon though, after more successful test flights, Secretary of Navy Welles decided the wraps could be taken off the Navy's newest weapon. The ship was



transferred to a site near the nation's capital and many congressmen came out to see the large airship that was moored near Anacostia Flats on the eastern shore of the Potomac, just below the Washington Navy Yard.

It was shortly after the airship's move to Washington that President Lincoln was scheduled to go to Gettysburg to dedicate the national cemetery in which so many of the dead from the famous battle were buried. Although he would normally have traveled by train, President Lincoln asked Secretary Welles if he might use the new airship to make the rather short trip to Pennsylvania. Welles agreed and pointed out that the president's safety and security might be better assured if he rode on a government airship.

Some small alterations were made to the airship to accommodate the president. A small section was added to the forward car that allowed a reclining wicker chair and a small desk. Many who have seen a copy of the original Gettysburg Address mistakenly believe that the shaky-looking writing on the document was because the president made some of the changes to it on a train that he took to Gettysburg. But, in reality, these erratic marks were due to some up and down movements of the airship when it encountered thermals as it neared the Appalachian highlands in western Maryland.

There was also a small wicker butler's pantry installed to allow the president's steward to make light meals or snacks for the president. A simple trolley system was set up that allowed the president's steward to place anything that needed to be warmed on a covered tray that could be pulled back and forth to the rear car where one of the Flying Engineers would put the item in a small warming oven located next to the firebox. A small hot plate was also installed. On the flight to Gettysburg, Navy steward Petty Officer Walter Beasley was able to make a small breakfast of warm oatmeal, toast, and coffee for the chief executive. President Lincoln was very impressed with Petty Officer Beasley's ability and commented his breakfast was "first class."

So, all was ready for the president to use the Navy airship to go to Gettysburg on November 19th to deliver his address at the National Cemetery. Lincoln thought it would be appropriate if the airship had a name and suggested that it be called the *Harrodsburg*, named after his birthplace in Kentucky (probably inspiring a later President

to name his aircraft *Independence* after his hometown).

The *Harrodsburg* took off in the early hours of November 19th and covered the 75 miles to Gettysburg in eight hours allowing the President to arrive in plenty of time to attend the ceremonies. The only problem was in landing when the Army landing crew, which had never moored an airship before had a difficult time securing the *Harrodsburg*. During the ceremonies and later reception, the *Harrodsburg* was held down in an open field by shifts of Army personnel. About 3:30 in the afternoon disaster struck. Flying Engineer John Hasselman was on duty in the airship's rear car keeping the steam up in the boiler so the airship would be ready at a moment's notice to take the President back to Washington. It's unclear to this day what happened, but the Board of Inquiry concluded that a glowing ember from the firebox escaped and started the grass under the airship burning. Seeing the fire, the Army ground crew panicked and let go of the ropes holding the *Harrodsburg* down and it quickly lifted off the ground. Fortunately, Flying Engineer Hasselman jumped from the car and ran to safety. Unfortunately for the *Harrodsburg*, the burning grass set one of the landing ropes on fire and slowly the flame worked its way up the rope coming closer and closer to the airship filled with flammable hydrogen. At about 200 feet above the ground and over a nearby Gettysburg farm, the fire reached the main structure of the *Harrodsburg* and the airship exploded. A reporter in the crowd was heard to scream "Oh, the livestock!"

Since the Battle of Chattanooga (November 23-25, 1863) happened soon after the dedication of the Gettysburg National Cemetery, the story of the *Harrodsburg* disaster quickly vanished off the front pages of the nation's newspapers. There was some carping by Democrats that the Republican president had used his arrival at Gettysburg in the Navy's newest weapon as a political stunt to help him in the 1864 election. However, most Americans didn't begrudge him his airship flight.

And after its spectacular end, many realized what a chance the president had taken riding in the hydrogen-filled airship.

After the inquiry into the loss of the *Harrodsburg*, the Navy abandoned the airship as a weapon. Those who witnessed the explosion of the *Harrodsburg* felt that its development would have to wait until a non-flammable lighter-than-air gas was found. to fill its balloonets. In light of recent advances in ship



construction, Secretary Welles believed that the Navy would be better off spending its time and money on developing a fleet of ironclad warships similar to the Union Navy's *Monitor* that had engaged the Confederate *Virginia (Merrimac)* in March of 1862.

A rather interesting, but little-known event took place in December of 1863 shortly after the *Harrodsburg* disaster. President Lincoln was attending a Christmas reception at the German Embassy and became engaged in conversation with a young German officer who had been acting as a military observer of the American Civil War for the King of Wurttemberg. Lincoln had met this officer during the summer and since that time the German observer had witnessed many battles and had also taken some time to visit the American West. While in St. Paul, Minnesota, this officer witnessed a balloon ascent and was so fascinated that he asked the balloonist for a ride. The balloonist agreed and the officer did make a brief tethered ascent. In his conversation with the President, he related how much he enjoyed the short flight. The President then told the young officer about the American airship in which he had ridden to Gettysburg and explained some of the details of the ship including its control mechanisms. This seemed to make a deep impression on the German officer whose name was Count Ferdinand von Zeppelin.

NOTES:

Obviously, this story is one of historical science-fiction. It is, however, based on some interesting historical facts.

*According to John Toland in his 1957 book, *Ships in the Sky: The Story of the Great Dirigibles*, there actually was a physician-inventor by the name of Solomon Andrews who experimented with a dirigible-like airship and claimed to have flown it using a method he called "gravitation." He also wrote a letter to President Lincoln in August of 1863 to try to get the president and the military interested in his airship idea. Unfortunately, no one took him seriously and nothing really came of his efforts.*

President Lincoln actually did have a patent on a device to free river boats stranded on sandbars. His patent model is in the collection of the Smithsonian Institution.

Joseph Henry was the Secretary of the Smithsonian Institution during the Civil War and introduced President Lincoln to Thaddeus S. C. Lowe who did employ

balloons as observation posts for the Union Army in the Civil War. In one demonstration, Lowe hovered above the Smithsonian's castle-like tower and with a wire strung from his wicker basket sent the President the first aerial telegram.

There really was a National Academy of Sciences and Joseph Henry was a member of it. It was set up in 1863 as a special presidential commission to investigate and to report upon any subject of science or art. Although the commission actually accomplished little during the war, one of its functions was to be aware of any chemical or physics developments that might be valuable to the war effort. However, the group never used an acronym such as NASA.

The dimensions of the Harrodsburg cited in this article are very close to the actual dimensions of Count Zeppelin's first dirigible, the LZ-1. The LZ-1 used a moving weight to control ascent and descent. All later Zeppelins used a system of aircraft-like elevators. A Frenchman by the name of Henry Giffard actually flew a steam-powered airship in France in 1852. His airship was around 140 feet long and he flew 17 miles in it. Unfortunately, it could only achieve about six mph. Although Zeppelin airships had metal structures, there was a rival German company by the name of Schutte-Lanz that produced wartime (WWI) airships for Germany that had wooden superstructures. Zeppelins did use cow's intestines as the coating of their gas cells to make them impervious to gas diffusion.

In the 20th century, the U.S. Navy established an air base at Anacostia Flats on the eastern side of the Potomac River south of the Washington Navy Yard.

Count Von Zeppelin actually did meet President Lincoln during the summer of 1863 after he arrived in America to be a military observer of the American Civil War for the King of Wurttemberg. He also took the opportunity to visit the American West and sometime in late August of 1863 ran into a German balloonist in St. Paul, Minnesota, and did go aloft in a tethered balloon.

John B. "Joe" King served 20 years in the Air Force as a supply officer, retiring as a major in 1988. He was assistant editor of the Foundation's *Friends Journal* magazine from 2000 to 2010, and the Editor from 2010 to 2012. He continues to volunteer at the Museum, and to act as an informal advisor to the *Friends Journal*. This story was written for fun while he worked on the magazine. We decided it was too good not to use for April Fool's Day, and Joe graciously agreed to let us share it with you, our supporters. We hope you enjoyed it.