

The Christmas Bullet

Or 'the gift that nobody wanted.'

The artifact

A 1918 postcard depicting the Christmas Bullet, from a photo by Alfred O. Hohen.

The stories behind the artifact

The Christmas Bullet, later known as the Cantilever Aero Bullet or referred to as the Christmas Strutless Biplane, was an American single-seat cantilever wing biplane. It is considered by many to be among the worst aircraft ever constructed. It is as much the story of one man as it is about the aeroplane itself, and that man was the unfortunately named Dr. William Whitney Christmas.

William Whitney Christmas was born on September 1, 1865, in Warrenton, North Carolina, to James Yancey Christmas and Rhoda Gaines. He attended the St. John's Military Academy then the University of Virginia where he obtained a bachelor's degree and a master's degree. He graduated from George Washington University in 1905 with an M.D.

He married May Norris in 1899 in Maryland, and they had as their son, Whitney Norris Christmas.

Aeroplanes

Aeroplanes that were (allegedly) designed or developed by Christmas, most of which never left the drawing board, but were supposed to introduce various aviation patents. It is unlikely that any of them other than the Bullet ever flew. Christmas Red Bird 1909 biplane

- Christmas Red Bird II 1910 biplane
- Christmas 1912 pusher biplane
- Christmas 1913 tractor biplane
- Christmas 1915 biplane
- Christmas Aerial Express
- Christmas Bullet

Design and development

Christmas, who at the time had no experience in aircraft design or aeronautical work, and possibly very little practical knowledge, claimed to have built an aircraft of his own design in 1908 that was lost in a crash. After a second aircraft was supposedly built, called the Red Bird, later modified into the Red Bird II, Christmas founded the Christmas Aeroplane Company based in Washington, DC, in

1910. No evidence beyond his own claims has ever been found for the existence of either of these aeroplanes, despite extensive research undertaken.

By 1912, the company became the Durham Christmas Aeroplane Sales & Exhibition Company and then later, after moving to Copiague, New York, was renamed the Cantilever Aero Company after in 1918.

At this time Christmas, who's powers of persuasion must have been legendary, convinced two brothers, Henry and Alfred McCarry, to back him financially. When they visited the Continental Aircraft Company premises in Long Island; Christmas somehow convinced both the brothers and the entire company that his planned aircraft would be the key element in a frankly almost unbelievably fanciful plan to kidnap Kaiser Wilhelm II of Germany, and return him in triumph to the United States.

Two designs were proposed, a single-seat "scout" and a three-place "fighting machine".

The single-seat "Christmas Bullet" featured an all-wood construction with a veneer-clad fuselage. Despite his claims to the contrary, neither design feature reduced aerodynamic drag nor was he among the first to use this method of construction; the majority of German World War I-era two-seater aircraft used for bombing and reconnaissance were similarly constructed. The "Bullet" was powered by a prototype Liberty 6 engine. Although the US Army had been persuaded to lend an engine to Christmas, likely due to his persuasive nature, the proviso was that the prototype engine was to be fitted into an airframe for ground testing only.

The design had a major flaw: that it lacked any kind of struts or braces for the wings, with Christmas insisting that they should be flexible. Control of the aircraft was meant to be achieved by wing warping to its flying surfaces. Now there were some precedents for this design: Anthony Fokker in his prototype for the hugely successful and influential Fokker Dr.1 dreidekker had foregone bracing struts or wires. However, by 1918 most manufacturers that had utilised wing warping had moved on to ailerons.

Although the Chief Engineer at Continental, Vincent Burnelli, tried to institute changes, the "Christmas Bullet" was completed with the original design features intact. Construction materials were scrounged from available wood and steel stock and were not "aircraft grade"; this was also a concern to Burnelli.¹

Operational history

On its maiden flight in January 1919, the wings of the "Bullet" peeled from the fuselage and the aircraft crashed, being totally destroyed; and sadly killing the pilot, Cuthbert Mills. The destruction of the prototype Liberty engine was never revealed to the US Army. A second Christmas Bullet was built, this one being powered by a Hall-Scott L-6 engine.

Despite the crash, Christmas placed an ad stating that the Christmas Bullet achieved a 197 mph top speed demonstrated in front of Col. Harmon at Central Park, Long Island. The second aircraft was displayed in Madison Square Garden on 8 March 1919 as the "First Strutless Airplane". In a concerted marketing campaign, Cantilever had postcards printed as an advertorial. The front had a picture of the stubby yet modern-looking aeroplane taken from a photograph by Alfred O. Hohen.

The postcard had printed on in full, in the space nominally reserved for message writing the following missive:

"The Christmas Bullet Biplane, invented and designed by Dr. William Whitney Christmas, manufactured by the Cantilever Aero Company, is a FLEXIBLE WING PLANE constructed on the principle of true bird flight, which makes it self balancing and serviceable in any kind of weather.

The Wing surface is 170 sq ft. and the total weight is 2,100 pounds, which includes fuel for 3 hours. Equipped with a six cylinder 185 horsepower Liberty motor, the Christmas Bullet attained a speed of over 185 miles per hour. It is not only the safest and fastest aeroplane in the world, but lifts more weight for its size than any other aeroplane. HIGHEST SPEED – GREATEST LIFT – LOWEST POWER."

CANTILEVER AERO CO.

1269 Broadway, N.Y.C., U.S.A.

The second aeroplane was sadly, yet somewhat inevitably, also destroyed on its maiden flight, again with the loss of the test pilot, Lt. Allington Joyce Jolly. The project was abandoned before its United States Army Air Service (USAAS) evaluation. What on earth persuaded Jolly to make a second flight attempt is beyond human comprehension given the facts as we know today, however it is not known how much he was actually aware of the true scenario, and how much was he taken in by Christmas.

Following the crash of the second Bullet, Christmas continued to campaign for more funding for further projects, seeking out private and government sources, claiming "hundreds" of patents or patent submissions based on his aeronautical research. His far-fetched assertions were proved untrue but he claimed that he sold his unusual wing design to the US Army.

A contemporary technical description with photographs and drawings appeared in the US printing of **Flight** dated 13th February 1919, claiming that "it would seem that such construction would result in a low factor of safety, but the designer claims a safety factor of seven throughout".

In later years

In retirement he was still proposing improbable aeroplane designs.

He died at Bellevue Hospital in Manhattan, New York City, of pneumonia on April 14, 1960.