

## **Gustav Albin Weisskopf: The Dream of Flight**

In the mid-19th century, when numerous people from southern and south-western Germany decided to emigrate to America – some for economic, others for personal reasons – Gustav Albin Weisskopf was among them. His dream was "the dream of flying" – something he felt could be far more easily realized in the "land of unlimited opportunity" than in his old homeland of Germany.

Born on January 1, 1874 in Leutershausen, Franconia, Gustav Weisskopf had always dreamt of flying – indeed, at his school he was nicknamed "the flyer" because of his paper darts and airship fantasies. Like most of the early pioneers, he was fascinated by birds, and by the technology of flight in general. With a friend, he used to catch birds and tie cotton to their feet so that he could watch the way the captive birds moved their wings. When he was 13, his childhood and his harmonious family life ended abruptly when he lost both his parents. After a brief period as a bookbinder, Gustav became an apprentice mechanic. He was primarily interested in engine construction, and gained much theoretical and practical knowledge. In 1888, at the age of 14, the young orphan – whose siblings were living with various relatives – travelled to Hamburg. In Hamburg harbour he was forcibly "shanghaied" by the crew of an Australian sailing vessel. Ironically it was this incident that would give him new opportunities for his life and work.

One year later, in 1889, Weisskopf returned to Germany one more time and joined a family that was emigrating to Brazil. Weisskopf did not remain in Brazil for very long, however: he went back to sea for several years and we only have vague information about where he spent his time. His interest in flying remained, however, as proven by a newspaper article he copied. Man had conquered the seas, it said, so why should he not conquer the skies? On board his sailing ships Weisskopf became familiar with rigging, wind and weather, and also had several opportunities to study marine as well as land birds. He was especially fond of the condor, the largest bird in the New World. As a sailor, Weisskopf also learnt how to speak English.

Later Weisskopf was shipwrecked, and in 1894 he eventually arrived in the United States. He decided to stay there for good – after all, the USA had been his ultimate destination: "In the USA I will probably have the best chances to make my vision of a flying machine into reality," he promised himself.

In around 1894 Weisskopf travelled to Germany to meet Otto Lilienthal, who had published fundamental findings about the laws of aerodynamics in his book "Der Vogelflug als Grundlage der Fliegekunst". The meeting between Weisskopf and Lilienthal was mentioned in the "New York Tribune" in the edition of October 6, 1897. During 1897 Weisskopf also made several attempts to fly gliders in Boston. He was hired by the publisher

J. B. Millet to build and fly gliders for the Boston Aeronautical Society. Several gliders were produced, and one of them, based on the Lilienthal glider, actually managed to leave the ground on several occasions. Albert Horn, an assistant, tells what happened: "A person lighter than Weisskopf might have flown a lot further..." Newspaper reports inform us that Weisskopf was then employed by the toys and sports goods company Horsman in New York, where he built and flew kites. It was here that he met his wife, the Hungarian immigrant Luisa Tuba. They were married on November 24, 1897 in Buffalo.

On the wedding certificate Weisskopf entered his profession as "aeronaut". For the next two years Weisskopf lived in Baltimore, where he tried further experiments with gliders. He also appears to have worked on engines during this time. By now he had discovered that using engine power to create wing-beats was not technically feasible. The pioneer now concentrated on a technique familiar from ocean steamers: using screws to generate drive. He began experimenting with different types of airscrew. In 1899 Weisskopf found employment in a coal-mine in Pittsburgh. Here he met Louis Darvarich, who assisted him with the construction of his flying machines. A statutory declaration of July 19, 1934 confirms that Darvarich was present at a very unusual event in flight history: "It was in April or May of 1899 that I attended a flight by Mr. Whitehead [Gustav Albin Weisskopf], and he succeeded in leaving the ground in his steam-engine-driven machine. The flight, roughly 8 metres above the ground, continued for roughly one mile. It took place in Pittsburgh, with Mr. Whitehead's monoplane. We failed to clear a three-storey building, however, and when the machine crashed I was severely burned by the steam, because I had heated the boiler. That is why I had to spend a few weeks in hospital. I remember the flight precisely: Mr. Whitehead was uninjured, because he had been at the front of the machine, steering it from there." Fireman Martin Devane, called to the crash scene, remembers: "...I think I arrived immediately after the plane had crashed into a new brick building on the O'Neill estate. I also remember the injured man who was taken to hospital. I was able to identify the inventor, Gustave Whitehead, from one of the pictures shown to me."

In 1900 Weisskopf moved from Pittsburgh to Bridgeport. In the basement of a rented house, he worked on flying machine designs after his daily shifts until late into the night, and also built engines. A certain Mr. Miller supported him with 300 dollars. Weisskopf used the money to set up a small workshop. Junius Harworth, who often assisted Weisskopf, tells us that the inventor was now working on repairs and modifications to a "steam machine" from Pittsburgh that had been damaged in a crash. According to Harworth, the machine worked perfectly after its repair and the inclusion of a few technical changes. Weisskopf was very skilled at such things: he had a reputation for being gifted at discovering technical solutions, and soon gained a great deal of respect as a mechanical engineer. A young immigrant

named Anton Pruckner who had completed his workshop qualifications in Hungary became Weisskopf's most important colleague.

Weisskopf's busiest and most important year was 1901. At that time he was experimenting with a flying machine that had wings that could be folded away, enabling it to be taken to suitable take-off sites more easily. He flew this device with success in the summer of 1901. The "Bridgeport Herald" of August 18, 1901 mentions a flight taken on August 14 that had covered more than half a mile. Richard Howell, the publisher of the newspaper, and his assistants James Dickie and Andrew Celli, had been at the scene with Weisskopf in Fairfield. Dickie and Celli were under instructions to hold the machine for as long as possible using ropes, soon after the propeller had started, the two helpers were no longer able to hang on to the plane. When Weisskopf shouted out: "Let go!" the two men saw the airship piloted by Weisskopf "fly along several feet above the ground..." Weisskopf managed to fly around a few trees. To carry out this manoeuvre he leaned to one side and made the monoplane fly at an angle; then he tipped the tail rudder to exactly the same side he had seen condors do it in mid-air. After this he switched off the engines and made a gentle landing. The "New York Herald" and the "Boston Transcript" both reported this event on August 19, 1901; the "Wiener Luftschiffer-Zeitung" also printed an article about it. Anton Pruckner and Junius Harworth made statutory declarations that that they had been present at the scene on that August 14, 1901 and had observed both the flight and the landing. On test days Weisskopf would make several flights if the machine remained intact. Conflicting testimony from witnesses can be explained by the fact on August 14, 1901 he actually flew four times.

It was probably Weisskopf's own dissatisfaction with what he had achieved that contributed to his relative lack of fame as a flight pioneer. He once said to Pruckner: "These flights are all useless because they don't last long enough. We still can't fly to everywhere. Flying will only become significant once we can fly to anywhere we want, whenever we want." Weisskopf died at the age of just 53, on October 10, 1927, leaving his family the house he built himself, a few square metres of land, and the sum of just eight dollars.

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