

G. K. Weissenborn

## The Weißkopf Controversy

In the early morning hours of 14 August 1901 near Bridgeport, Connecticut, a small graceful monoplane took to the air with its inventor and builder, Gustav Weißkopf,<sup>1</sup> at the controls, carrying him for half a mile before landing undamaged. Two years, four months and three days before the Wright brothers' success at Kitty Hawk, a German immigrant mechanic had achieved powered, controlled flight. He was reviled, pronounced a fraud, and then ignored. Like Goebel, the German-American who invented the incandescent light bulb before Edison,<sup>2</sup> Weißkopf, handicapped by his background, and unskilled at self-promotion, saw others hailed as the "first" in the field in which he had made so many breakthroughs. Years after his death, just as an opportunity for recognition became possible, Weißkopf and his accomplishments fell victim to an agreement between the Wright estate and the Smithsonian Institution that finally blocked any official, objective consideration of the evidence amassed in the inventor's favor.

Born on 1 January 1874 in Leutershausen, Bavaria, Gustav Albin Weißkopf was the second child of Babetta née Wittmann and Karl Weißkopf, a railroad foreman. As a boy, Gustav's experimentation with tissue-paper parachutes and his dreams of aviation prompted his schoolmates to dub him "The Flyer."<sup>3</sup> Like most early aviation pioneers, he became interested in observing birds in flight and with the aid of a friend began to trap them in the park, tying strings to the birds' legs so that they could be recovered. The police eventually discovered this *Tierquälerei* and put an end to the experiments.

Gustav was more than a dreamer; things mechanical always interested him, and he would become an outstanding engine designer. His father did not have the heart to punish him when one Sunday he discovered little Gustav splashing about in his best shoes, tinkering with a series of waterwheels he had placed in a stream.<sup>4</sup>

His happy childhood and tranquil home life were abruptly brought to an end when he was orphaned before the age of thirteen. After a brief apprenticeship to a bookbinder, and then to a locksmith, he traveled to



Hamburg where he was taken aboard a ship as a cabin boy. For the next six years, Gustav traveled widely, settling briefly in Brazil, where he helped a German family clear land and plant crops. Throughout these years of wandering, his passion for flying remained undiminished and at nineteen or twenty years of age, he returned to Germany, after having learned that a man, Otto Lilienthal, was actually getting into the air in a craft of his own construction.<sup>5</sup>

Lilienthal (1848-96) had become famous beyond his country's borders and was to influence aviators throughout the world. The data collected in his aerodynamic studies was to be used by many others: in 1901, the American enthusiast Octave Chanute lent the Wright brothers a copy of Lilienthal's work, *Der Vogelflug als Grundlage der Fliegekunst*, with a partial translation in typescript. Gustav Weißkopf stayed and studied with Lilienthal for two weeks and many of Weißkopf's later designs show the influence of Lilienthal's ideas—the plan views of machine No. 21 and Lilienthal's No. 6 glider, which made many successful flights, are remarkably similar.<sup>6</sup>

In 1894, Weißkopf chose to make America his home, never to leave, and 1897 found him testing gliders in Boston. J. B. Millet, a publisher, acted on behalf of the Boston Aeronautical Society in employing Weißkopf to build and fly a glider in 1897; Millet hired a mechanic, Albert B. C. Horn, to help with its construction. Eventually, several gliders were built, one patterned after a design of Lilienthal's managed to get off the ground for short distances. "A lighter person would have done better as his [Weißkopf's] weight must have been nearly 200 lbs." wrote Horn.<sup>7</sup>

Newspaper clippings show that Weißkopf was testing gliders in 1897 in New York, where he was employed by the Horsman Company, a firm selling toys and sporting goods. Here in New York, he met his future wife, Louise Tuba, a Hungarian immigrant, and followed her to Buffalo where they married on 24 November 1897. On the marriage license he listed his occupation as "aeronaut."<sup>8</sup>

For the next two years the family lived in several locations including Baltimore where newspaper records show him building and testing two gliders, but there can be little doubt that Weißkopf was experimenting not only with aircraft designs but also with engines in this period; when interviewed in 1934, his wife stated that he continued his airplane construction both before and after they were married.<sup>9</sup> In 1899, he found employment in a Pittsburgh coal mine, where he met Louis Darvarich, whom he befriended and who helped him work on his aircraft. By affidavit dated 19 July 1934 Darvarich attested to a remarkable event in aviation history:

Approximately April or May 1899, I was present and flew with Mr. Whitehead on the occasion when he succeeded in flying his machine, propelled by a steam motor, on a flight of approximately a half mile distance at a height of about 20 to 25 feet from the ground. This flight occurred in Pittsburgh, and the type machine used by Mr. Whitehead was a monoplane. We were unable to rise high enough to avoid a three-



story building in our path, and when the machine fell I was scalded by the steam, for I had been firing the boiler. I was obliged to spend several weeks in the hospital, and I recall the incident of the flight very clearly. Mr. Whitehead was not injured, as he had been in the front part of the machine steering it.<sup>10</sup>

The historian Thomas D. Crouch, whose approach to Weißkopf in his work, *A Dream of Wings*, is decidedly hostile,<sup>11</sup> states that there is not "a shred of evidence" to support Darvarich's statement, and concludes that "[it] is difficult to believe that any student of the case could give any credence to the Pittsburgh story." His criticisms have been raised by others: no newspaper account has been found about an incident that "should have captured front pages across the nation."

The attitudes of the press and public to the aviators of the time will be discussed in greater detail below; the notion that the press was eager to seek out such news for an aviation-hungry public to devour is, as we shall see, simply not so.

Crouch states that no "mention of treatment for the supposed injuries has been discovered in Pittsburgh police department, fire department, or hospital records." The administrative records of the time were generally not kept as carefully as they would be today and are sadly incomplete, but some evidence of the crash does exist in the form of a statement made by fireman Martin Devine, who was called to the scene of the accident:

. . . I believe I arrived immediately after it crashed into a brick building, a newly constructed apartment house which I believe was on the O'Neale Estate. I recall someone was hurt and taken to a hospital, but do not recall what one. I am able to identify the inventor as Gustave Whitehead from the picture of this man showed me by Miss Stella Randolph.<sup>12</sup>

Nevertheless, the demonstration of 1899 cannot be claimed as the first successful powered flight. No effort was made on Weißkopf's part to record the event either photographically or in form of a log, and no measurements such as speed, altitude or distance flown appear to have been taken. Furthermore, the flight was not fully controlled, and the aircraft did not land undamaged. Such a setback did not, however, deter the inventor.

Leaving Pittsburgh in 1900, Weißkopf moved to Bridgeport, and in 1905 to Fairfield, Connecticut, where he resided till his death. The basement of the flat he rented was put at his disposal and it was here in the summer of 1901 that he began to construct planes and engines at night, after the day's work had been completed. Not long after, a man named Miller offered financial assistance, and with the three hundred dollars given him, Weißkopf built a small workshop behind the house.

He often recruited boys from the neighborhood to help him; though they received no pay, they learned a great deal from their work and were later able to put the knowledge gained in Weißkopf's shop to good use in their jobs. Some of them, including Junius Harworth, Louis Lazay as well as Bert and Andy Papp, witnessed his earliest flights and were



among his first apprentices. Harworth recalled that the first task the inventor set himself after completion of his shop was the repair and modification of a steam engine that he had brought from Pittsburgh and which had been damaged in an early trial flight. Randolph speculated that this engine could have belonged to the aircraft in which Darvarich was injured. At any rate, Harworth states that, with repairs completed, the engine ran perfectly, demonstrating that Weißkopf built functional engines at an early date.<sup>13</sup>

His reputation as a machinist grew quickly and soon attracted a young immigrant, Anton Pruckner, who had just completed four years of intensive shop training in Hungary and who was to become one of Weißkopf's most valued assistants.<sup>14</sup>

The year 1901 would prove one of Weißkopf's busiest and most significant, for the 14 August flight was preceded by many shorter "hops" which strongly indicated progress and spurred the inventor to greater efforts. The airplane he was using had folding wings so that it could be pushed through the streets to locations where it could be tested in safety. An elegant bat-winged monoplane with a ten-meter span, "No. 21" was flown by Weißkopf in the summer of 1901 from Howard Avenue East to Wordin Avenue, along the edge of property belonging to the Bridgeport Gas Company. Upon landing, recalled Harworth, the machine was turned around and another hop was made back to Howard Avenue.<sup>15</sup>

It was also around that time that Cecil A. Steeves, a schoolboy, came upon Weißkopf testing his aircraft on the Gilman Estate. Three men with ropes began pulling the machine which, within two hundred feet, became airborne, rising high enough to clear telephone and trolley lines before sailing across the road to land undamaged in an old circus lot. Major O'Dwyer, having been shown the site by Steeves, took measurements which disclosed the distance travelled by the aircraft to be nearly one thousand feet.<sup>16</sup>

Alexander Gluck, Thomas Schweikert and Joe Ratzenberger were schoolboys at the time; Gluck by affidavit dated 19 July 1934 recalled:

Approximately 1901 or 1902, . . . I was present on one occasion when Mr. Whitehead succeeded in flying his machine, propelled by motor, on a flight of some distance, at a height of four or five feet from the ground. The machine used by Mr. Whitehead was a monoplane with folding wings. I recall its having been pushed from the backyard of the residence where the Whitehead family lived, 241 Pine Street, Bridgeport, Connecticut, which was opposite my residence at the time (228 Pine Street). The plane was set in motion in the street in front of the house, and when it flew was propelled by an engine.<sup>17</sup>

Schweikert and Ratzenberger remembered vividly a flight made in the summer of 1901 on a lot on Cherry Street during which Weißkopf's aircraft rose high enough to lift a group of boys who had been clinging to its fuselage off their feet.<sup>18</sup>



Two of the most impressive witnesses to early 1901 flights, neither of whom had ever met the other, were Frank Layne and Elizabeth Koteles. Both were in their early twenties when the events in question took place, and both were unimpressed with what they saw, ignorant of the flights' significance. When requested for an interview in 1968, Layne, then ninety-two, replied:

I know nothing about the technical matters of airplanes. I do not understand why you would want to interview me. I think you are wasting much of your valuable time. Look, I never knew Mr. Whitehead personally or anything about his aircraft. All I did was watch him fly.<sup>19</sup>

Layne was certain of the date, for he associated it with his discharge from the Navy after service in Cuba, following the sinking of the battleship *Maine*. He had gone to Bridgeport to visit his friends, with whom he went to see Weißkopf fly at Fairfield Beach; the longest flight he witnessed covered "about a quarter of a mile." Other flights were made that day, "some longer and some shorter."<sup>20</sup>

Equally nonplused by the researchers' interest was Elizabeth Koteles. Major O'Dwyer, who interviewed her in 1974, wrote:

The 94-year old Mrs. Koteles was mentally alert and, having been a young married woman (age 22; old enough to understand and retain what she saw) who lived next door to Whitehead on Pine Street, she was well aware of him and his work. She and her husband walked one evening to the place where Whitehead was testing his airplane—but she did not believe she had seen a flight. "No. He didn't fly," she said. "He only went a little way and came down."

This delightfully honest and sincere old lady, still puzzled at our interest in a non-flight, answered numerous questions thoughtfully, taking care to consider before deciding upon making a statement about the height and distance flown. Making comparisons with fixed objects . . . she provided information about the flight which indicated it had covered a distance of 120-200 feet, at a height of approximately five feet. She could recall and imitate the sound of the engine, which indicated it had been a steam one; details she contributed made it probable No. 21 was the airplane she had seen. The year, she recalled, was 1901.<sup>21</sup>

However important these early trials may have been, none was apparently reported on, until the *Bridgeport Herald* printed a story on page five of the 18 August 1901 edition, outlining a flight made for "fully half a mile" on 14 August.<sup>22</sup>

Present at the Fairfield location, according to the story, were: Richard Howell, the paper's editor; two of Weißkopf's assistants, James Dickie and Andrew Celli; and the inventor. After a trial run with ballast instead of a pilot, Weißkopf took over, having removed the weights. Shortly after the propellers were engaged (Howell's language here is imprecise, and he speaks of starting "the wings" as propellers were often called then), Dickie and Celli could no longer hold the machine on the ground. On Weißkopf's command, they let go and "the newspaperman and the



two assistants stood still for a moment watching the air ship in amazement. . . . She was flying now about fifty feet above the ground. . . ."<sup>23</sup> The aviator managed to avoid a group of chestnut trees by leaning to one side, thereby banking the monoplane.<sup>24</sup> He shut off the engine and landed softly. The *New York Herald* and the *Boston Transcript* printed the story on 19 August 1901.

Weißkopf's detractors found many a sympathetic ear, for most people believed that powered, controlled flight was impossible. Orville Wright, after Wilbur's death in 1912, devoted his energies to the defense of the Wright priority as the first to fly,<sup>25</sup> and collected most "anti-Weißkopf" arguments and sentiments into one short article in the August 1945 edition of *U.S. Air Services*. These charges are worth examining in detail.

The article states that first, news of such a revolutionary event would not have been withheld for days, only to be printed in the Sunday edition of the paper. Second, James Dickie denied both that he was present that morning, and that he knew Andrew Celli, the other assistant named. Third, John Dvorak, a Chicago businessman, who financed the building of a motor by Weißkopf, deposed in 1936 that Weißkopf did not have the mechanical skill to build a working motor, and that he was given to gross exaggeration. Finally, Stanley V. Beach, a financial backer after 1903, was never told that he had flown.<sup>26</sup>

There was in fact no delay in printing the story, for the *Bridgeport Herald* was solely a Sunday newspaper; it should be noted that the *New York Herald* and the *Transcript* picked up the news of the event the next day, as did other wire-service papers.<sup>27</sup>

At the heart of Wright's assertion is the premise that public interest in aviation was so intense that any story of a successful flight would have been taken up by the press immediately. This is simply not so. Initial reports of success by the Wrights in December 1903 were dismissed by press and public as "just so many more crackpot items amongst a host of routine absurdities in a bustling and exuberant epoch."<sup>28</sup> To prove to the world that their invention was indeed capable of flight, the Wrights invited the press to witness a demonstration, but when bad weather delayed the tests the reporters departed, convinced it was all a waste of time.<sup>29</sup> Professor Langley's failure to launch the *Aerodrome* in late 1903 had produced howls of derision which had infected the entire field of endeavor and had not yet subsided. In fact, the public in the United States "had become so apathetic to the possibility of heavier-than-air flight that it remained unmoved and unconvinced by reports of the Wrights' success. . . ."<sup>30</sup> In 1906, after flying for three years, the brothers offered their machine to the U. S. Army, "convinced that it had possibilities for military reconnaissance. They were told that the authorities would not take action 'until a machine is produced which by actual operation is shown to be able to produce horizontal flights and to carry an operator.'"<sup>31</sup> This skeptical attitude by the press, the public and the authorities contributed significantly to keep Weißkopf in obscurity.



In James Dickie's affidavit of 2 April 1937 he states that, to the best of his knowledge and belief, the aircraft shown him "in pictures No. 32 and 42" never flew, that he does not know Andrew Celli, and that he was not present on the morning of 14 August 1901.<sup>32</sup>

Though it initially appears very damaging to Weißkopf's claims, the document is riddled with errors and proven distortions.

The dimensions of the aircraft described by Dickie have nothing at all in common with those of machine No. 21, which Weißkopf tested on 14 August; therefore Dickie cannot have been acquainted with that airplane.<sup>33</sup> When Major O'Dwyer spoke with him about the affidavit,

[He] admitted that the engine described in it was one stationed upon the ground, having heavy boilers transmitting steam through a hose to the pipe, causing it to revolve for the testing of tethered aircraft, . . . The engine was not intended for use in aircraft, and never was. In light of Dickie's later admissions, his affidavit of earlier date has little value and it would not have been published had all the facts been known earlier.<sup>34</sup>

The identity of Celli remains a mystery. In the 1960s, however, Major O'Dwyer discovered that Weißkopf's neighbor on Tunxis Hill, a machinist who helped build his aircraft and who often told of having seen him fly, was named Anthony Suelli (actually a Swiss named Züllli). Howell's error in misspelling the name is understandable if he only heard it pronounced. Unfortunately, the researchers made this discovery too late, for Suelli died before he could be interviewed.<sup>35</sup>

Thus it appears that Howell's account remains unsubstantiated, but such is not the case, for two others have sworn they were present that day. By affidavit dated 21 August 1934 Junius Harworth swore that

On August, fourteenth, Nineteen Hundred and One I was present and assisted on the occasion when Mr. Whitehead succeeded in flying his machine, propelled by a motor, to a height of two hundred feet off the ground or sea beach at Lordship Manor, Connecticut. The distance flown was approximately one mile and a half and lasted to the best of my knowledge for four mintues.<sup>36</sup>

Anton Pruckner, with whom Weißkopf made many flights, swore as follows:

I did witness and was present at the time of the August 14, 1901 flight. The flight was about ½ mile in distance overall and about 50 feet or so in the air. The plane circled a little to one side and landed easily with no damage to it or the engine or the occupant who was Gustave Whitehead.<sup>37</sup>

It was Weißkopf's habit, when testing aircraft, to make more than one flight a day unless, of course, the machine was damaged beyond airworthiness. The discrepancies in the affidavits of Pruckner and Harworth arise from the fact that they describe two different flights of the four flights made on that day. This accounts for their absence from Howell's article.<sup>38</sup>



John Dvorak's criticisms, that Weißkopf was too unskilled to build a working engine, and that he was given to gross exaggeration, are simply nonsensical. Junius Harworth responded:

Dvorak is absolutely correct in making affidavit to the effect that Whitehead could not build a motor to satisfy Dvorak. This was because Dvorak had his own drawings, his own ideas, which did not agree with Whitehead's. . . . Why could not Dvorak get any other person to manufacture his motor at that time? It was because his drawings and ideas were not correct. Whitehead knew this, and that is why the breach occurred. . . . He [Dvorak] lacked mechanical skill to build motors. . . . If he lacked skill, how could he judge and claim that Whitehead did not have this skill, when already Whitehead did have a shop, with equipment in it, and was building motors?<sup>39</sup>

In fact, Weißkopf's ability and mechanical skill could have made him a wealthy man at a time when there was an ever-increasing demand for lightweight engines, but he was far more interested in flying. Even so, word of his talent as a machinist spread rapidly. In the 1901 *Bridgeport City Directory* he was listed as a "machinist." His daughter, Rose, remembers bringing home so many letters with orders and advance payments on engines that she could scarcely carry them all. She stated that one day, her father returned fifty orders, for he built "only as many engines for sale as he felt would provide him with funds to advance his own work upon airplanes."<sup>40</sup>

Weißkopf avidly experimented to find a powerful but lightweight propulsion unit, and started with steam, but soon tried other methods:

When interviewed on January 4, 1936, Louis Lazay told the writer that Whitehead had built the first gasoline motor used in an airplane in this country. Darvarich recalled a revolving hexagon-type motor built by Whitehead. Harworth reported under the date of August 28, 1935, that Whitehead had built the Snaideki engine which had 16 cylinders, 8 on a side.<sup>41</sup>

Even Stanley Beach stated that Weißkopf deserved a place in early aviation, "due to his having gone ahead and built extremely light engines. . . . The 5-cylinder kerosene one, with which he claims to have flown over Long Island Sound on Jan. 17, 1902, was, I believe, the first Aviation Diesel."<sup>42</sup>

News of his skill as a mechanic soon spread throughout the state and beyond. The Wright brothers maintained an extensive correspondence with Octave Chanute, who served as their link to the outside world while they were conducting their experiments in such a relatively isolated spot as Kitty Hawk, North Carolina. Most importantly, he kept them abreast of the latest developments in their field. By letter dated 3 July 1901 Chanute wrote to Wilbur:

I have a letter from Carl E. Myers, the balloon maker, stating that a Mr. Whitehead has invented a light weight motor, and has engaged to build



for Mr. Arnot of Elmira "a motor of 10 I.H.P. to weigh with supplies for two hours and accessories about 30 lbs. as estimated."<sup>43</sup>

Wilbur Wright was suitably impressed; one of the greatest problems faced by aviators and mechanics of the time was to find an engine that was both light and powerful. He responded:

The 10-horsepower motor you refer to is certainly a wonder if it weighs only thirty lbs. with supplies for two hours, as the gasoline alone for such an engine would weigh some ten or twelve lbs. thus leaving only 18 or 20 lbs. for the motor or about two lbs. per horsepower. Even if the inventor miscalculates by five hundred percent it would still be an extremely fine motor for aerial purposes.<sup>44</sup>

The German-born inventor also won the endorsement of Charles R. Wittemann, one of the more respected names in American aviation history. He was the first commercial builder of airplanes in the United States; he built some of the first air mail planes for the Post Office Department; he designed special stunt aircraft for many famous flyers; and in World War I, President Wilson appointed him to a committee to examine and report on the aircraft industry at the time. Wittemann once purchased two Weißkopf engines for his airplanes and reported that they functioned well.

When asked of his opinion of Whitehead and his ability, Wittemann replied without hesitation, "I'd say he was a genius. All around."—"You wouldn't say he was just a nut?" he was asked. "Oh no! By no means. He knew what he was doing."<sup>45</sup>

Clearly, Weißkopf was not the vain, boastful dreamer that Dvorak alleges. Despite his best efforts, the inventor was almost always short of money. After Miller, an early garage mechanic who did much work for Weißkopf, a man named Linde provided financial assistance probably until the end of 1902.<sup>46</sup> In 1905, Stanley Beach, son of the editor of *Scientific American*, took an interest in Weißkopf's work and along with his father assisted Weißkopf financially for several years. In 1939, Beach drew up a statement, neither sworn nor signed, about his relationship with Weißkopf. Largely critical, the typed version consisted of six and a half pages and has been relied on heavily by the aviator's detractors.

The two men did not get along, and Weißkopf's assistants have said he would not have worked for Beach but for his painful lack of funds. Beach did not permit him to pursue his own ideas but forced his own unsuccessful designs on him, from time to time.

In statements made in response to Randolph's 1937 book, Beach denied that Weißkopf had ever flown successfully because if he had, Beach as aeronautics editor of his father's magazine would have known about it.

It is indeed strange that Beach did not know of the August 14, 1901, flights when they occurred, whether or not he was promoting Whitehead's efforts at that date. In his capacity as Aeronautics Editor for the *Scientific American*, and as a resident of Stratford (next door to Bridgeport)



he must have discovered that the Bridgeport, New York and Boston papers were either scooping him in his hometown and in his own field, or publishing a fraudulent claim. In either case the *Scientific American's* aeronautics section was strangely silent. Was Beach trying to "save face" thirty-odd years later with his statements?<sup>47</sup>

Strangely enough, Beach's name does not appear on the masthead or anywhere else in *Scientific American*, indicating he had a position on the staff.<sup>48</sup>

Beach's 1939 "statement" has been proven to be the product of more than one hand, for part of the original is typed, part handwritten. In another hand at the top of the first page is written "Please, correct, leave out and add to. . . ." and, as mentioned above, the document was never signed. Interestingly enough, the author managed to pay Weißkopf some compliments; his praise of the inventor's engines has already been alluded to, and on the last page of Beach's (?) statement, he wrote: "I know that the airplane patented by him was inherently stable, laterally and longitudinally, and that it would always make a 'pancake' landing instead of a nose dive." It would seem that for Beach to know this, he must have watched more than one landing of Weißkopf's aircraft.<sup>49</sup>

His flight success attracted attention and visitors, among them the Wright brothers. Though no firm date for the visit can be given, it appears that some time after the August flight they did see him. In Anton Pruckner's 30 October 1964 affidavit, he states:

I can also remember very clearly when the Wright brothers visited Whitehead's shop here in Bridgeport before 1903. I was present and saw them myself. I know this to be true, because they introduced themselves to me at the time. In no way am I confused, as some people have felt, with the Wittemann brothers who came here after 1906. I knew Charles Wittemann well. The Wrights left here with a great deal of information. . . .<sup>50</sup>

Both Cecil Steeves and Junius Harworth remember the Wrights; Steves described them and recalled their telling Weißkopf that they had received his letter, indicating an exchange of correspondence. Though Orville Wright always denied his acquaintance with Weißkopf, the evidence clearly contradicts him. The Wright *Flyer* seems to have nothing in common with Weißkopf's elegant monoplane, and it would be difficult, if not impossible to determine how much "information" was picked up from Weißkopf by the Wright brothers, if any.

The success of 14 August was soon followed up by other flights. In the 1 April 1902 edition of *The American Inventor* there appeared a letter from Weißkopf to the editor, describing two flights made by the inventor on 17 January 1902. His words are worth repeating:

It [machine No. 22, resembling No. 21 with which the Aug. 14 flight was made] was intended to fly only short distances, but the machine behaved so well that at the first trial it covered nearly two miles over the water of



Long Island Sound, and settled in the water without mishap to either machine or operator. It was then towed back to the starting place. On the second trial it started from the same place and sailed with myself on board across Long Island Sound. The machine kept on steadily in crossing the wind at a height of about 200 feet, when it came into my mind to try steering around in a circle. As soon as I turned the rudder and drove one propeller faster than the other, the machine turned a bend and flew north with the wind at a frightful speed, but turned steadily around until I saw the starting place in the distance. I contrived to turn but when near the land again, I slowed up the propellers and sank gently down on an even keel into the water, she readily floated like a boat. My men pulled her out of the water, and as the day was at a close, and the weather changing for the worse, I decided to take her home until Spring.

The length of the flight on the first trial was about two miles, and on the second about seven miles.<sup>51</sup>

Weißkopf's description of his landing brings to mind Stanley Beach's assertion that the machine was "inherently stable, laterally and longitudinally, and that it would always make a 'pancake' landing instead of a nose dive."

Unfortunately, those who might have witnessed these flights were not interviewed. Pruckner was not present on the occasion, though he was told of the events by Weißkopf himself.

Weißkopf was of fine moral character, and never in all the long time I was associated with him or knew him did he ever appear to exaggerate. I have never known him to lie; he was a very truthful man. I believed him when he said he flew, and I still believe he did what he said. . . . I saw his aircraft fly on many occasions and I see no need to disbelieve this particular event.<sup>52</sup>

The ever-restless Weißkopf continued to work and to invent for as long as he was able, and his dissatisfaction with his successes contributed to his eventual obscurity. Upon landing, he would often dismantle an entire airplane to modify it, trying different wing configurations upon a fuselage in order to improve performance. He experimented with gliders and powered craft, monoplanes, biplanes and triplanes, as well as helicopters. Of his successful tests, Weißkopf told Pruckner, "Those flights are no good. They are not long enough. We cannot go anywhere. Before flying means anything, we must go somewhere."<sup>53</sup> This discontent, coupled with a chronic shortage of money is the main reason why the successful flights of 1901 and 1902 were not exploited, not—as Gibbs-Smith asserts—because they were "flights of fancy."<sup>54</sup>

Gradually, he became disheartened, as one by one of his discoveries were credited to others who accepted public acclaim for pioneer work in this field. The First World War brought with it suspicion, prejudice and hatred of all things German and Weißkopf, who appears never to have lost his accent, is believed to have felt credit denied him because of his background.<sup>55</sup>



On 10 October 1927, at only fifty-three years of age, Weißkopf died, leaving his family the house he had built, some acreage and eight dollars. A few months before his passing, he received with tears of joy the news that Charles A. Lindbergh had successfully crossed the Atlantic. Weißkopf was buried in a pauper's grave.<sup>56</sup>

His story would end here, but for the reluctance of prominent scholars and institutions to acknowledge his achievements, or even bother themselves with a thorough, objective review of material gathered to date, a reluctance which only served to spur his biographers, Randolph and Major O'Dwyer, on to greater efforts. Though an extensive history of their dealings with the Smithsonian is beyond the scope of this essay, a brief mention of the Smithsonian's attitude and the reason for its position is made here, for it goes far to explain Weißkopf's relative obscurity today; and it involves no less a personage than Professor Samuel Pierpont Langley (1834-1906), mathematician, astronomer and (as Secretary) head of the Smithsonian.<sup>57</sup>

Langley was already in his fifties when he first developed a serious interest in aviation. In the late 1880s and early 1890s, he began experimenting not with gliders but with rubber-driven models, hoping thereby to advance directly to a full-size powered machine. He was an arrogant and impatient man who approached the subject with almost a spectator's attitude; Gibbs-Smith speaks of his "chauffeur's attitude of mind."<sup>58</sup> Nevertheless, his early model tests were successful and attracted attention.

The facilities and resources open to Langley were impressive. As head of the Smithsonian, he commanded the single largest source of research funding in America,<sup>59</sup> and his position permitted him to call on the services of a staff that boasted expertise in a variety of important areas.<sup>60</sup> Not surprisingly then, when the United States went to war with Spain over Cuba in 1898, the United States government asked Langley to design a full-sized aircraft, and granted him fifty-thousand dollars to build it. The result was the rather large, awkward-looking *Aerodrome*, a monoplane with two sets of mainplanes arranged in tandem. Like Langley's models it was to be catapulted off a houseboat on the Potomac River. The Professor's assistant, Charles Manly, volunteered as pilot, even though he had never even tried to fly a glider, let alone an untested, powered machine, and had no idea as to how the controls would affect the flight.<sup>61</sup>

The aircraft was tested twice, on 7 October and 8 December 1903, and on both occasions fell into the Potomac "like a handful of mortar,"<sup>62</sup> causing even the gentle Manly to deliver a "most voluble series of blasphemies"<sup>63</sup> after his second dunking. Nine days after Langley's failure, the Wrights achieved a powered, controlled flight, sustained for twelve seconds, on an isolated North Carolina beach. The *Aerodrome* was not, however, dead and gone.

Glenn H. Curtis, engineer and test pilot, was granted permission by the Smithsonian in 1914 to rebuild Langley's aircraft. He saw the project as a means of gaining an advantage in the patent suits the Wrights had brought against him for infringing on their flight control system. If the



*Aerodrome* could be made to fly, then it could be stated that the Wright airplane was not the first capable of carrying a man in flight.<sup>64</sup>

Many vital alterations were made to the *Aerodrome*, for aeronautics had advanced considerably since 1903. The then Secretary of the Smithsonian, Dr. C. Walcott, unwisely concealed the true extent of the alterations, and when the machine finally managed to get into the air off Lake Keuka, New York, in the summer of 1914, it was hailed as "the first aeroplane capable of sustained free flight with a man."<sup>65</sup>

Orville Wright was understandably incensed and brought external pressure to bear by sending the 1903 *Flyer* to the Science Museum in London, England; the plane would not be returned until he and his brother were acknowledged as the "Fathers of Powered Flight." The Smithsonian finally issued a retraction in 1942, but the Second World War had intervened to prevent the safe transfer of the machine to the museum until December 1948.

On 23 November of that same year, the executors of Orville Wright's estate entered into a contract with the Smithsonian for the display of the aircraft which dealt with, among other things, the wording to be used on the accompanying plaque. Paragraph 2(d) of the agreement reads:

- 2(d) Neither the Smithsonian Institution or its successors, nor any museum or other agency, bureau or facilities, administered for the United States of America by the Smithsonian Institution or its successors shall publish or permit to be displayed a statement or label in connection with or in respect of any aircraft model or design of earlier date than the Wright Aeroplane of 1903, claiming in effect that such aircraft was capable of carrying a man under its own power in controlled flight.<sup>66</sup>

Failure to observe this condition by the Smithsonian would result in a return of the *Flyer* to the vendors, according to paragraph four of the contract.

The contract clearly ties the museum's hands: it commits one of the world's most renowned public institutions to present a single version of aviation history to the detriment of other contenders for the title of "first," regardless of evidence. The achievements of the Wrights have passed into folklore and become part of American consciousness; the loss of the 1903 *Flyer* would be a serious blow to the museum's prestige, particularly if the terms under which the aircraft was forfeited were to become public knowledge. Recognition of Weißkopf's accomplishments would hardly be a blow to the memory of the Wright brothers, who could still be properly considered as seminal figures of early aviation. By demonstrating their machine in Europe, they overcame public skepticism on both sides of the Atlantic<sup>67</sup> and sparked a resurgence of aviation on the Continent, where developments appear to have reached a plateau following the deaths of Lilienthal and Pilcher. The Wrights raised flying to the level of the practical and revolutionized the manageability of the airplane; indeed, they have outgrown the realm of historical fact, assuming legendary proportions. If such unassailable



national heroes secure their reputation with the country's most prominent museum by contract, then it is not surprising that a half-forgotten immigrant mechanic has little chance of an impartial hearing before a public familiar only with the name "Wright."

Weißkopf has over thirty "firsts" to his name, but because he was generous in sharing information about his discoveries, he received little credit for his efforts.

He was Connecticut's first designer, builder and flyer of powered aircraft and aircraft engines. So far as has been established, he was the first in the country to build sufficiently powerful and lightweight gasoline engines for powered flight and to sell them. . . . In this country he was the first to introduce the use of rubber-tired wheels under airplanes for ground transport. . . . His use of folding wings on airplanes is the first known in this country, and he was the first to use silk in making them; he was the first to provide his craft with individually controllable propellers to vary in revolutions per minute . . . ; first to build a concrete runway in this country. . . . Most of these things he accomplished prior to December 17, 1903.<sup>68</sup>

Weißkopf's excommunication from the halls of aviation history is an unmerited sentence imposed not by history, but by contract. However, the evidence amassed in his favor—affidavits, letters, tape-recorded interviews and newspaper clippings—has now been supplemented by conclusive proof of his genius. The German news magazine *Der Spiegel* recently reported that a full-scale reproduction of machine No. 21 was tested at the Sikorsky Memorial Airport in Bridgeport, Connecticut. Several unpowered flights were successfully concluded, demonstrating the basic airworthiness of the craft.<sup>69</sup> On 7 December 1986 the replica of Weißkopf's machine No. 21 made several successful, sustained, powered flights ranging from 146 to 330 feet distance. The replica was piloted by Andrew Kosch.<sup>70</sup> In addition, the state of Connecticut has petitioned the Smithsonian Institution

to conduct a public hearing in Connecticut to investigate and document reports that Gustav Weißkopf, a German immigrant living in Bridgeport, successfully flew a power-driven, heavier than air machine in free, controlled and sustained flight on August 14, 1901, along the Long Island Sound shoreline.<sup>71</sup>

This powered flight has finally vindicated the man who for so many years had been ridiculed and denounced as a fraud, placing Weißkopf together with the Wrights as one of the greatest aviation pioneers, and the first man to achieve sustained, powered and controlled flight.

University of Toronto  
Toronto, Ontario



## Notes

<sup>1</sup> Though he was known to most of his contemporaries in Bridgeport as Gustave Whitehead, Weißkopf will be referred to by his German name here in order to stress his Central European background, and because it is likely that the inventor himself did not Anglicize his name for several years after his arrival in the United States. Weißkopf is the name he uses on his marriage license, signed in Buffalo, NY, in 1897.

<sup>2</sup> Norris and Ross McWhirter, *The Guinness Book of World Records* (New York: Bantam Books Inc., 1973), 174.

<sup>3</sup> Stella Randolph, *Lost Flights of Gustave Whitehead* (Washington, DC: Places Inc., 1937), 23. The author here gratefully acknowledges his indebtedness to Miss Randolph who, until joined in her research by Major William O'Dwyer in the early 1960s, was virtually alone in keeping alive the aeronautical achievements of Weißkopf. Her two books, *Lost Flights of Gustave Whitehead* and *The Story of Gustave Whitehead: Before the Wrights Flew* (New York: G. P. Putnam's Sons, 1966) and the work *History by Contract* (Leutershausen: Fritz Majer & Sohn, 1978), co-authored by Major W. J. O'Dwyer, will remain cornerstones for any work conducted on Weißkopf in the future. Indeed, Miss Randolph has gathered so much original material that virtually no research on Weißkopf is now possible without consulting documents already published by her. Upon learning that the English historian C. H. Gibbs-Smith, who had strong anti-Weißkopf leanings, was to write the official sanctioned monograph on the aviator for the Smithsonian Institute, Major O'Dwyer remarked: "What will he use for research reference? Stella's two books?" (Letter to Mr. S. Paul Johnston, Director, National Air and Space Museum, 22 Aug. 1968).

<sup>4</sup> Randolph, *The Story of Gustave Whitehead*: . . . , 62.

<sup>5</sup> *Ibid.*, 62.

<sup>6</sup> C. H. Gibbs-Smith, *Aviation* (London: Her Majesty's Stationary Office, 1985), 74-76. Note particularly the same bat-wing of the mainplanes; Weißkopf's machine had a fuselage, whereas Lilienthal hung from a frame between the wings.

<sup>7</sup> O'Dwyer and Randolph, 36.

<sup>8</sup> *Ibid.*, 105.

<sup>9</sup> *Ibid.*, 39.

<sup>10</sup> Louis Darvarich, affidavit dated 19 July 1934 in O'Dwyer and Randolph, 78.

<sup>11</sup> Tom D. Crouch, *A Dream of Wings* (New York: W. W. Norton & Co., 1981) 120. Further quotes regarding the Pittsburgh incident are taken from this page. Crouch's attitude is indeed remarkable, in light of Randolph and O'Dwyer's work. Despite the fact that most witnesses and co-workers were initially interviewed by Randolph in the 1930s, when they were only middle-aged, Crouch speaks of Weißkopf supporters as "determined partisans . . . [drawing on] the fading memories of aged men and women to buttress their hero's shaky case," (119) and "Once again, there is no evidence to substantiate the fading recollections of an old man struggling to recall events that had occurred a lifetime before" (120). He does not name the man. Perhaps not surprisingly, Crouch acknowledges "an enormous debt to Mr. Gibbs-Smith for his guidance in the study of Whitehead's career" (318).

<sup>12</sup> Martin Devine, affidavit dated 15 August 1936 in O'Dwyer and Randolph, 39-40.

<sup>13</sup> Randolph, *Lost Flights of Gustave Whitehead*, 33.

<sup>14</sup> Randolph, *The Story of Gustave Whitehead*: . . . , 80.

<sup>15</sup> O'Dwyer and Randolph, 49.

<sup>16</sup> *Ibid.*, 50.

<sup>17</sup> Alexander Gluck, affidavit dated 19 July 1934 in O'Dwyer and Randolph, 37.

<sup>18</sup> O'Dwyer and Randolph, 50.

<sup>19</sup> W. J. O'Dwyer, "Did Whitehead Fly before the Wrights?" *American Aircraft Modeler*, November 1968, 53.

<sup>20</sup> O'Dwyer and Randolph, 62.

<sup>21</sup> Elizabeth Koteles, witnessed statement dated 1 August 1974 in O'Dwyer and Randolph, 62-63.

<sup>22</sup> *Sunday Herald* (Bridgeport), 18 August 1901, 5.

<sup>23</sup> *Ibid.*

<sup>24</sup> Lilienthal also controlled his glides in flight by shifting his body weight. See: C. H. Gibbs-Smith, *A History of Flying* (London: B. T. Batsford Ltd., 1953), 197.



- 25 Crouch, 308.
- 26 Orville Wright, *U.S. Air Services* (August 1945), quoted in W. J. O'Dwyer and S. Randolph, *History by Contract*, 214.
- 27 Author's correspondence with Major O'Dwyer, dated 25 February 1976.
- 28 Gibbs-Smith, *A History of Flying*, 231.
- 29 J. W. R. Taylor and K. Munson, *History of Aviation* (London: Octopus Books Ltd., 1973), 50.
- 30 Marivn W. McFarland, ed., *The Papers of Wilbur and Orville Wright* (Toronto: McGraw-Hill Book Company, 1953), 1:390.
- 31 Taylor and Munson, 50.
- 32 James Dickie, affidavit dated 2 April 1937 in Randolph, *The Story of Gustave Whitehead*: . . . , 154.
- 33 Randolph, *The Story of Gustave Whitehead*: . . . , 114.
- 34 O'Dwyer and Randolph, 28.
- 35 *Ibid.*, 31.
- 36 Junius Harworth, affidavit dated 21 August 1934 in Randolph, *Lost Flights of Gustave Whitehead*, 50.
- 37 Anton Pruckner, affidavit dated 30 October 1964 in O'Dwyer and Randolph, 54.
- 38 Randolph, *Lost Flights of Gustave Whitehead*, 48.
- 39 Randolph, *The Story of Gustave Whitehead*: . . . , 107
- 40 *Ibid.*, 121.
- 41 *Ibid.*, 127.
- 42 Stanley Beach, statement undated, unsigned, unsworn; in O'Dwyer and Randolph, 297.
- 43 McFarland, 1:65.
- 44 *Ibid.*, 1:66.
- 45 O'Dwyer and Randolph, 136.
- 46 *Ibid.*, 124. There is some uncertainty as to the time Beach first lent assistance to Weißkopf, but it was probably in 1903 or 1904, coinciding with John Weißkopf's (the inventor's brother) trip to California to raise money, and not in 1901, as Beach asserts.
- 47 Randolph, *The Story of Gustave Whitehead*: . . . , 97.
- 48 O'Dwyer and Randolph, 124.
- 49 *Ibid.*, 134.
- 50 Anton Pruckner, affidavit dated 30 October 1964 in O'Dwyer and Randolph, 55.
- 51 Gustave Whitehead, Letter to the Editor, *The American Inventor*, 1 April 1902.
- 52 Anton Pruckner, affidavit dated 30 October 1964 in O'Dwyer and Randolph, 54.
- 53 O'Dwyer and Randolph, 19.
- 54 Gibbs-Smith, *Aviation*, 292.
- 55 Randolph, *Lost Flights of Gustave Whitehead*, 66.
- 56 O'Dwyer and Randolph, 143.
- 57 Gibbs-Smith, *A History of Flying*, 209.
- 58 Gibbs-Smith, *Aviation*, 67.
- 59 Crouch, 129.
- 60 *Ibid.*, 134.
- 61 Gibbs-Smith, *Aviation*, 66.
- 62 Crouch, 287.
- 63 *Ibid.*, 290.
- 64 *Ibid.*, 309.
- 65 Gibbs-Smith, *A History of Flying*, 211.
- 66 Contract between Smithsonian Institute and Estate of the Wright brothers, in O'Dwyer and Randolph, 289.
- 67 Crouch, 142.
- 68 Randolph, *The Story of Gustave Whitehead*: . . . , 134.
- 69 "Weißkopf gegen Gebrüder Wright," *Der Spiegel*, 28 July 1986, 163.
- 70 William J. O'Dwyer to G. K. Weissenborn, Toronto, 1 February 1987. Original in the hand of the author.
- 71 General Assembly of the State of Connecticut, Senate Bill No. 401. Special Act No. 86-11, "An Act Concerning Gustav Weißkopf, Aviation Pioneer," 29 April 1986.