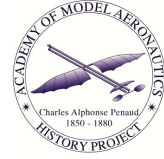




The AMA History Project Presents: Autobiography of DONALD CLEMENS BURNHAM



January 28, 1915 - April 17, 2005 Started modeling in 1912
AMA #7010243

Written & Submitted by DCB (10/2002); Transcribed & Edited by SS (10/2002); Updated by JS (11/2023)

Career:

- First plane was a Baby Rise-off-Ground, which he first flew in his church's gymnasium
 - Entered a contest at his local YMCA in 1929 and won first prize for flying the longest
 - Went on in 1929 to win the state contest in Indianapolis then the national contest conducted by American Boy magazine in Detroit, Michigan winning himself a trip to Europe
 - Demonstrated model plane flying for President Herbert Hoover and his Cabinet in 1930 at age 15
 - Won the junior division of the American Boy contest in 1930 flying his backup plane
 - Graduated from Purdue University in 1936 with a Bachelor of Science degree in mechanical engineering
 - Was the president and chief executive officer of the Westinghouse Electric Corporation starting in 1963 at age 48
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My First Model Airplane

In 1927, I lived in Terre Haute, Indiana. Charles Lindbergh had just flown across the Atlantic Ocean, and I thought he was the person I would most like to emulate. The American Boy magazine had articles about him and also had plans to build a model airplane that would really fly. It was called a Baby ROG. The ROG stood for Rise-off-Ground.

I ordered a kit, with my mother's help, and received the carton with balsa wood, wire parts, tissue paper, and Ambroid (the quick drying glue). Studying the plans in the magazine, I took several evenings to glue the balsa sticks together, to cover the wing with tissue, and carve the little propeller. After hooking the rubber band to the propeller and the rear hook, I wound up the rubber band and could feel the breeze when I let it revolve. Without winding it, I glided the plane and it seemed to go down at an angle and land on its little wheels.

The house was too crowded to fly it indoors and it was winter, so I could not fly it outside. Our church was only two blocks away and it had a gymnasium. I hurried to the church and the gym was vacant when I arrived. I glided the plane before I wound it up. It seemed to go on a gentle slope to the floor. After winding the propeller about 200 turns, I launched the plane as I had glided it. It dipped about six inches and then it flew up until it was at least eight-feet above the floor. It went about 30-feet, circled to the left, and landed beside me. Seeing that plane go up under its own power was a real thrill for me. I couldn't wait to wind it up again and let it take off from the floor.

Although I eventually built scores of model airplanes and some of them flew over 10 minutes, none of them equaled the excitement to that first plane that went up under its own power.

1929 American Boy Magazine Model Airplane Contest

In 1929, I made a model airplane, entered it in a local YMCA contest, and won first prize for flying the longest time. This entitled me to go to a state contest in Indianapolis. I went to this and again I won. This let me go to the national contest conducted by the American Boy magazine in Detroit, Michigan.

My father made a special box to contain my model airplane. In fact, I made two little model airplanes. One was a spare in case something would happen to break the other one. This plane had about a 20-inch wingspan and it was run with a rubber band and a propeller made out of balsa. The rubber band was 20-inches long.

I had my two planes ready and had flown them several times in Lafayette to test them out. I found out that if I wound the rubber band 1,600 turns that the motor would run about four and a half minutes. If I wanted a greater time than that, I needed to get a higher altitude, have a good glide, and hopefully, catch a thermal.

Well, I adjusted the plane so it would glide slow and very flat. When it was fully wound up, it would zoom up, stall and sort of level out, then zoom up, stall again. But it got up to a high altitude quickly.

In Detroit, the contest was at Selfridge Field, a military airport. When it came time for me to launch my plane, I gave it 1,600 turns. I let it go and they started the stopwatches. We got in an old touring car and followed the plane. As it got 300 or 400 feet in the air, we followed it across Selfridge Field. Finally, we were at the end of the field. We couldn't drive away further. The plane was still going. It had flown nine minutes and was still in the air and still up about 400 to 500 feet. A timer with a stopwatch and a pair of binoculars said he could still see it. He kept watching it as it went over Lake Saint Clair. At 10 minutes, 32 seconds, he said he couldn't see it any more, so he stopped the watch. So, the time of my flight was 10 minutes, 32 seconds. I never did get the plane back. It had my name on it, but it was down over the lake and probably no one ever did find it. However, I did have a duplicate plane and that is the one that David Burnham now has at his house in Orleans, Massachusetts.

In winning this contest, I received a \$200 prize and also a trip to Europe. I was the winner in the outdoor category. There was also a winner for indoor planes and a winner for scale models. The three of us with the editor of American Boy magazine and his wife had a very nice trip to Europe where we met the Prince of Wales and saw all of the important things that everyone sees in England and France.

In the picture that is accompanying this article you can see me with my backup plane along with the Mulvihill Trophy and the American Boy Cup. The Mulvihill Trophy was passed on to the winner each year, but the big loving cup I kept and I gave it to the AMA's National Model Aviation Museum in Muncie, Indiana, several years ago.

1930 Visit to President Hoover

The American Boy magazine invited me and three other model builders to fly to Washington, D.C. to meet President Herbert Hoover and fly our model planes for him. This was a great treat

because the trip started in Detroit where we went out to the Ford Field and flew in a brand-new Ford Trimotor from Detroit to Washington. Remember this was 1930 and there were no regular airlines then. In fact, there were no regular beacons and no way to direct the airplanes, so the pilot flying the Ford Trimotor asked all of us to go to the windows when he went down low to circle a town. We were to read the name of the town on the name board that was on the railroad station. We did this several times so he could check his compass settings, then go flying to the next town. We made it by hopping from one railway station to another and not landing, of course, until we got to Washington. Since this was a very slow flying plane, we had several hours in the air. We each took turns sitting in the co-pilot's seat and flying the airplane. I actually got to steer this Ford Trimotor plane, although I was only 15-years-old at the time.

In Washington, we not only met the president and flew our planes for him out on the White House lawn, but we met each of the cabinet members. I had a little bi-plane that I made to fly in an office. I put it on the carpet and let it take off. It circled around the ceiling in front of each of the cabinet members. So, this was a very exciting trip.

1930 American Boy Contest

Again, in 1930, I went to the contest in Detroit. I had a newly designed plane that I thought would be very good and competitive. It was a four-propeller plane. It was something like the twin pushers that many people were building at that time. But, I had the two main motor sticks parallel with a propeller on both ends. This cut down on the frontal area and allowed more rubber bands on the plane.

At this contest, same as the year before, I lost my plane. I had just launched it when there was a demonstration of military planes. They dove right over the model airplane field and then headed straight up in the air. There was a blast of wind that buckled the wings of my airplane and it came crashing down. So, I didn't get any time at all from my new plane.

I had a backup plane then that was a twin pusher. As a last resort, I got it out and flew it. It went for 202 seconds. It didn't fly as long this year because they had a new weight rule. It had to weigh so many ounces for each 100 inches of wing area.

Well, that 202 seconds was enough time for me to win in the junior division again. I won another \$200 prize in 1930.

Internal Combustion Engine Model Airplanes

After I graduated from Purdue University in 1936 and was working for General Motors, I lived in Detroit. A good friend of mine from Purdue is Bob Cahill who worked for Chrysler in Detroit. He and I were both model builders in the rubber band era. Now, with the new little combustion engines, we bought little Brown Junior motors that ran on alcohol and castor oil. We built planes with about a six-foot wingspan and took them out to a field on Nine Mile Road in Detroit to fly them. Of course, you needed a big field, because you had no radio controls. These were Free Flight and they went wherever the wind took them. You had to chase them to get them back. So, we had a lot of fun and exercise flying our planes out there at Nine Mile Road.

Bob and I have kept up corresponding about model planes all these years. We got together again at our farm some years ago to fly the internal combustion planes. But now, of course, we have

radio control so that we can steer them. They circle around, loop, do barrel rolls, come back, and land by our feet.

At the farm near Pittsburgh, we have a high hill called Old Baldy. It has no trees on it. That's where we went to launch the internal combustion-powered planes. These engines were about ½-cubic-inch displacement. The planes were about six-foot wingspan. They flew just like a real airplane. So we enjoyed this until along came a new item for the hobby – electric power.

Electric Power Model Airplanes

In about 1998, the hobby changed somewhat to accommodate flying lighter weight airplanes using electric power. Batteries were developed where you could get five to six minutes flight with only one charge. So, we started building these lighter weight planes, which had about only two or three-foot wingspans. They could be flown on a tennis court or nice size yard. They didn't fly too fast or make much noise since they were electric.

Bob and I got some kits for a plane called WESPE. Besides electric power, we had electric controls so we could sail them in our own yards. The planes were rather fragile, so we used a lot of time repairing them after each flight.

I found that my oldest grandson, Mark, was interested in planes, too. He was able to fly the old internal combustion Radio Controlled (RC) planes much better than I could. He could have that plane take-off and do many stunts. It would barrel roll, loop and come down and land by his feet. I was very happy to have a grandson who was interested in my old hobby and I hope he will come and take me flying many times in the future.

Model airplanes have been such an interesting and enjoyable hobby that I have often wished that I had learned to fly real airplanes back when I only flew the models.

*(signed) Donald C. Burnham
October 25, 2002*

The AMA had the following biography on file about Donald C. Burnham that was written around 1963.

Donald C. Burnham, at age 48 the president and chief executive officer of the Westinghouse Electric Corporation, rose to the position through broad knowledge of industrial production and through management performance and business proficiency.

Long recognized as an authority on manufacturing techniques, he was group executive in charge of the company's industrial products divisions when the board of directors elected him president and a director in July 1963.

Mr. Burnham joined Westinghouse in May 1954 as vice president in charge of manufacturing. In February 1962, when the company's group organization was realigned to conform more closely with its many markets, he was chosen to administer the group of divisions which manufacture and sell thousands of products to numerous industries, and which develop, engineer and produce systems to improve industrial production.

Born January 28, 1915, at Athol, Massachusetts, Mr. Burnham was graduated from Purdue University in 1936 with a Bachelor of Science degree in mechanical engineering. He joined the General Motors Corporation through the company's graduate student course and was assigned to the AC Spark Plug division where he was engaged in manufacturing methods improvements.

In 1938, he was transferred to General Motors' Ternstedt division and was assigned to manufacturing methods and plant layout. He joined the Oldsmobile division in 1941 as a supervisor of methods and plant layout and held successively in that division the positions of manufacturing manager and assistant chief engineer before coming to Westinghouse.

During World War II, Mr. Burnham attained the rank of major with the Army ordnance department and was assigned to Watervliet, New York, Arsenal.

He is a member of the American Society of Mechanical Engineers and in 1958 received the Richards Memorial Award for outstanding achievement by a young mechanical engineer. He also is a member of the Society of Automotive Engineers and of Tau Beta Pi, Pi Tau Sigma and Alpha Pi Mu, honorary engineering societies.

Mr. Burnham is a member of the board of directors of the Purdue Research Foundation and in 1959 received an honorary doctorate of engineering from Purdue. He also is the recipient of an honorary engineering degree from Indiana Institute of Technology.

Mr. Burnham and his wife, who have five children, live at 475 Morrison Drive, Mount Lebanon, Pittsburgh, Pennsylvania. His non-business interests include his family, his church (Presbyterian) and his farm in Washington County, south of Pittsburgh.

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