THE FINAL Gee Bee DESIGNS

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1933 had been a tough year for the Gee Bee racers #7 and 11. (See February 1977 issue.) Both ships had been wrecked and both Springfield Air Racing Association (S.A.R.A.) and Granville Brothers Aircraft had been forced to close. A great pilot had been killed, also, but in spite of all this, there was no indication that there was anything wrong with the design or workmanship of the R series Gee Bee racers. Grannie Granville was still positive that he had built the finest racers that present knowledge could produce.

Grannie, with his two top engineers, Pete Miller and Don De Lackner had opened a consulting engineering office in New York City after closing the Gee Bee shop at Springfield, Massachusetts in October of 1933. Operating as Granville-Miller and De Lackner, they planned to pick up as much work as possible, but at the same time to design some new Gee Bees. If a contract or two could be picked up, it might be possible to reopen the Gee Bee plant in the spring.

The MacRobertson race from London to Melbourne, Australia was less than a year away. There would be a lot of prize money. All three men were confident that Gee Bee was one of the best qualified companies in the United States to design and build a winner, and that it could be done with a larger Model R series aircraft. The R design was still the ship with the speed, fuel capacity, cabin room and excellent handling qualities. Grannie's double-hinged flaps had been proven on the R-2 and were in the process of being patented.

A new R series airplane was soon on the drawing board. Called the Gee Bee R-5 International Super Sportster, it was simply a larger version of the R-1/R-2 which Roy Minor had gone off the end of the field with in September. She would be typical Gee Bee construction with a wing spread of 30 feet and a length of 22½ feet, welded 4130 steel tube fuselage, spruce and mahogany wings and tail. The fuel tanks would carry 425 gallons of gasoline. The engine would be a Pratt and Whitney "Hornet" pouring out 825 hp at 2200 rpm and gross weight would be 5040 lbs.

Estimated performance was really fantastic. Top speed would be 295 mph with a cruise of 260. Landing speed (flaps up) 85 mph, flaps extended 45 to 50 mph. Initial rate of climb 4000 feet per minute. Endurance at cruise speed would be 7.1 hours or 1850 miles. At full throttle endurance would be 4.75 hours or about 1400 miles.

Several of our top American race pilots were looking for the right airplane to enter in the race. They were also looking for a sponsor to pay the expenses. One of these was an already famous ocean flying pilot named Clyde Pangborn. Grannie felt that Pangborn and the R-5 would be a winning combination and he was trying hard to sell him an R-5.

The R-5 was not the only thing on the drawing boards. There were two others. Grannie had taken in the Indianapolis 500 race in 1933 and came home very critical of what he had seen. Why not, he reasoned, use some aeronautical engineering on these racing cars, and give the driver a chance to live through a major crash. Weight would not be a serious problem as it was on a racing airplane so why not build the body out of heavy 4130 steel tubing, welded up the same as a Gee Bee airplane fuselage. It could fully enclose the driver, instead of his head and shoulders sticking up in the air. Also, why not build it clean and streamlined like the R racers with nothing sticking out except the wheels? There would be lots of room for plenty of padding in the cabin and with a proper harness, the driver would have a fine chance to survive a crash.

So the second design on the board was the Gee Bee "Atlanta", Model F-V8-1. In order to properly streamline it, only one wheel was to be used in the rear. It would be front wheel drive and front wheel steer. In order to avoid skidding, it would have a good sized fin and rudder similar to an airplane except that the rudder would be controlled by a pendulum instead of by the pilot. Power would be supplied by a stock Ford V-8 engine and speed was estimated to be 140 mph. Wheelbase was to be 122½ inches and weight loaded would be around 2500 pounds.

Back at Springfield, Mark Granville built up a wind tunnel model and Grannie and Pete took it to the wind tunnel at New York University and gave it complete tests as they had done on the R-1 of 1932.

Probably 140 mph will sound silly to some of the young people of today but, if so, just check the Indianapolis figures back in the 30's.

Grannie had a verbal promise for backing on the racing car project from a major U. S. company and by February, drawings were complete.

The third project in the works was a new Gee Bee "Ascender". This job had been hanging fire since 1931 but it was one Grannie was deeply interested in. Back then we had built and Grannie and my brother, Mark, had both flown the first Gee Bee "Ascender". It was a little three wheel landing gear job and very little money had been spent on it — $500.00. It was built only to prove or disprove two things. One was whether a three wheel gear was practical, the other was to find if there was any advantage in putting the elevator control in front instead of at the tail.

A simple little fuselage was built up, wings and ailerons from an Aeronca C-2 were used and also the 26 hp Aeronca engine. This engine was mounted up over the tiny closed cabin and the prop turned in front of the windshield. There was a large rudder in the rear and up front over the nose wheel was a control surface which I guess today would be called a stabilator. (See photo)

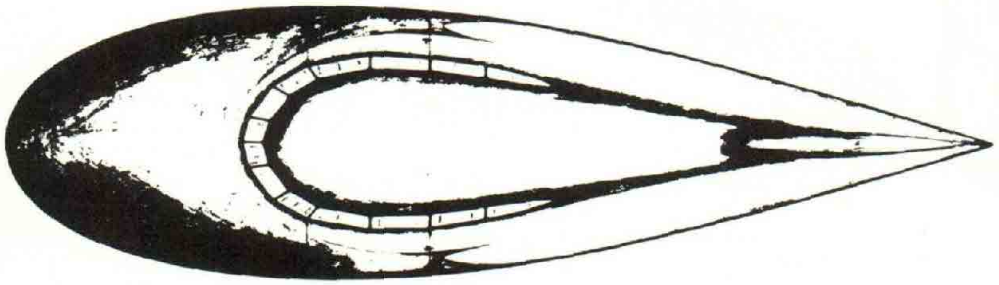
Grannie flew the Ascender many times and was very happy with the three wheel gear. He could land it in any position from directly on the nose wheel to nose very high. All landings were very good with no bounce. Mark also flew it occasionally. It handled well except aileron control was very sluggish because of the ship's very low speed.

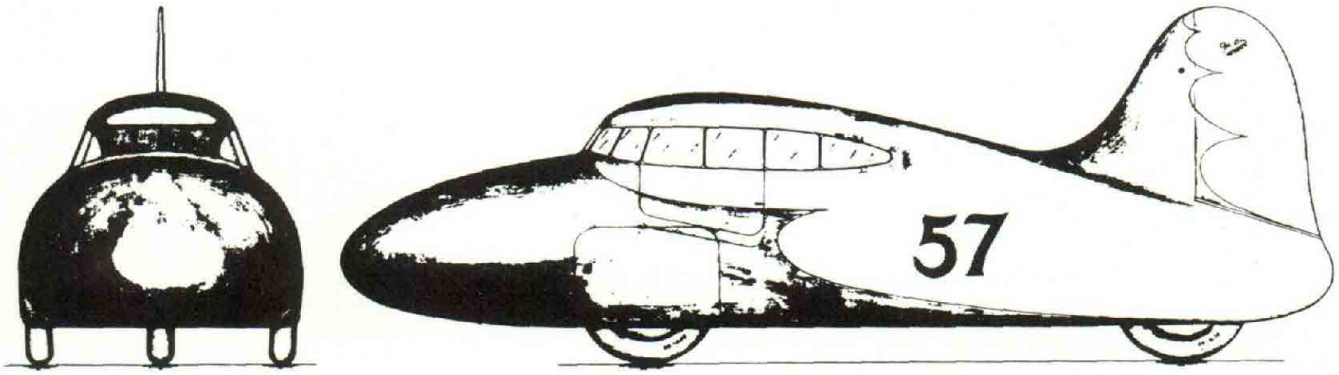
The Gee Bee Atlanta, a race car utilizing aircraft design and construction techniques, as well as materials. It was supposed to do 140 mph powered by a stock Ford flat head V-8 — quite fast for that day and time. The racer was also designed with crashworthiness in mind — advanced thinking for 1933/34 when a typical Indy car had the driver exposed from about the waist up.

Gee Bee
"ATLANTA"

POWERED BY STOCK FORD V8 ENGINE
140 M.P.H.

Wheelbase	122½"
Tread (Front Wheels)	56"
Overall Length	227"
Overall Width	64½"
Height at Rudder	84"
Height at Cabin	64"
Seat Width	40"
Turning Radius	19½'
Weight Empty	1750#
Racing Weight	2500#



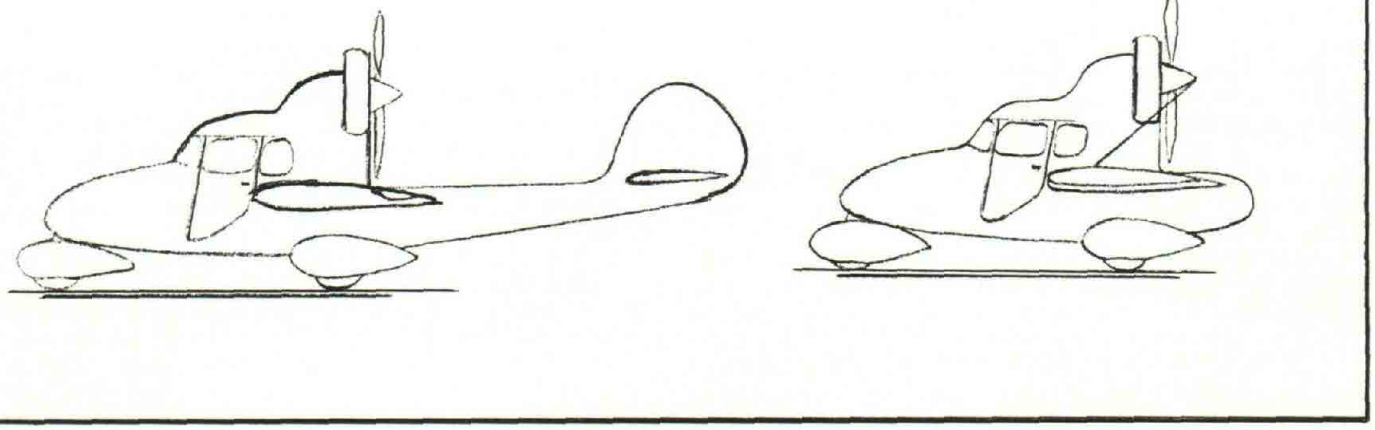


Finally one day, Mark was circling the field coming in to land. He had it cocked up at quite an angle and found he could not level it out again and he made a very rough one wing landing. Neither Mark nor Grannie wore chutes when flying the Ascender and on this day Mark was sitting on bare steel tubing so he received a severe spinal injury.

The Ascender was a washout but had served its purpose. Grannie decided that the three wheel landing gear had a great future but could see no basis for front end controls, although this one had worked very well.

So this third project on the drawing board was a direct descendant of the old Ascender but quite a lot different. It would be a cute little two place side by side job, high wing and three wheel gear. Engine would be a Warner Scarab rated at 110 hp and would be mounted up and behind the cabin as a pusher. I do not have a 3-view of this job, only a news item showing a rough side view. What set it apart from others was the fact that it would be roadable. The idea was that the ship would be flown into any airport and in twenty minutes, two people could remove the wings and entire rear half of the fuselage. A screen, carried inside, would go around

The Ascender roadable aircraft — with and without the tail. This machine was never built, due to the tragic death of Grannie Granville.



the propeller. The nose wheel was steerable like a car and she was now ready to fire up and drive right downtown.

Grannie was dealing on this ship with one of our major oil companies. They were considering buying five of these ships to scatter over the country to use for advertising.

Grannie still owned a Model E Sportster which he loved to fly but had offered it for sale as he badly needed the money. Somebody in Texas bought it and it had to be delivered. Grannie decided that he had been cooped up too long in the office and would go to Springfield, pick it up and make the delivery himself. Also, he decided to go by the way of New Orleans and take in the Mardi Gras which he had always wanted to see.

On February 11, he took off from Springfield Airport and flew to Baltimore. My brother Tom, myself and wife were living in Hagerstown and he could have spent the night with us, but for unknown reasons he landed at Baltimore. The weather was very bad and it was no better when he took off the next morning. Again for reasons unknown to anyone but himself, he attempted a landing at Spartanburg, South Carolina. Visibility was very bad and this may be why he wanted to land. However, he apparently was unaware that the field was under construction until he was very close to the ground. His carburetor must have iced up for when he opened the throttle the Warner quit dead. In an attempt to miss the men and equipment on the field, he tried to stretch the ship's glide beyond its limit and almost made it. No one was hit but the Sportster stalled and crashed. Grannie was dead before anyone could get to him. So ended the career of one of aviation's most colorful geniuses. He was just 32 years old and was well known in the industry from coast to coast. His briefcase, taken from the wreck, contained three view drawings of all three of the projects the men had been working on. I've often wondered what he would have accomplished on World War II aircraft had he lived.

After it was all over, we all went back to our jobs. Grannie's wife, Alta, found a job and went to work to support her two small children. Pete and Don sadly went back to the drawing boards to carry on as best they could and try to get a few orders. However, all of the people Grannie had been working on were no longer willing to go along and not one of the three projects was ever built.

We were all determined to keep on building airplanes and, after a while, Pete and Don did land a contract for a MacRobertson ship. This was the two place ship known as the Q.E.D. and is another story which I will attempt to tell later.

IN MEMORY OF ED GRANVILLE

Ed Granville died on July 18, 1977 at his home in Silver Lake, New Hampshire. His brother, Bob, treasures the following article written by Walter F. Harmon, aviation writer of the Springfield, Massachusetts Republican. Mr. Harmon has known the Granvilles since the early 30s and regularly reported on the Gee Bee aircraft in their heyday.

"Edward H. Granville was one of the friendliest, most down-to-earth, gracious individuals it has been my privilege to know. Yet, if anyone had a right to be aloof, haughty, stand-offish, and mix only with the upper crust, it was he.

"He was part of the team which made the Granville name, and Springfield, known coast to coast and even in Europe during the Great Depression.

"He and his brothers, Zantford (Grannie), Robert, Mark and Thomas manufactured airplanes, all Gee Bees,

The Gee Bee Ascender, a test bed for a roadable aircraft concept. The strange little canard flew well, but suffered from poor aileron response — likely from the fact that the wing was from an Aeronca C-2, which shared that characteristic. The 2-cylinder Aeronca engine was also from a C-2. The aircraft was heavily damaged in a landing accident and was never rebuilt.

(Photo by S. Robert Pugliese of the Hartford Times)
Edward H. Granville

Gee Bee

at the old Springfield Airport, now Springfield Shopping Plaza on Liberty Street.

"The planes, and pilots who flew them, such as Jimmy Doolittle who led the raid over Tokyo in World War II, received national recognition. They set speed records which lasted for years in the era before World War II and jet aircraft. Those records, such as twice winning the Thompson Trophy race, and Maud Tait's winning the Women's Aerol Trophy, brought recognition to Springfield.

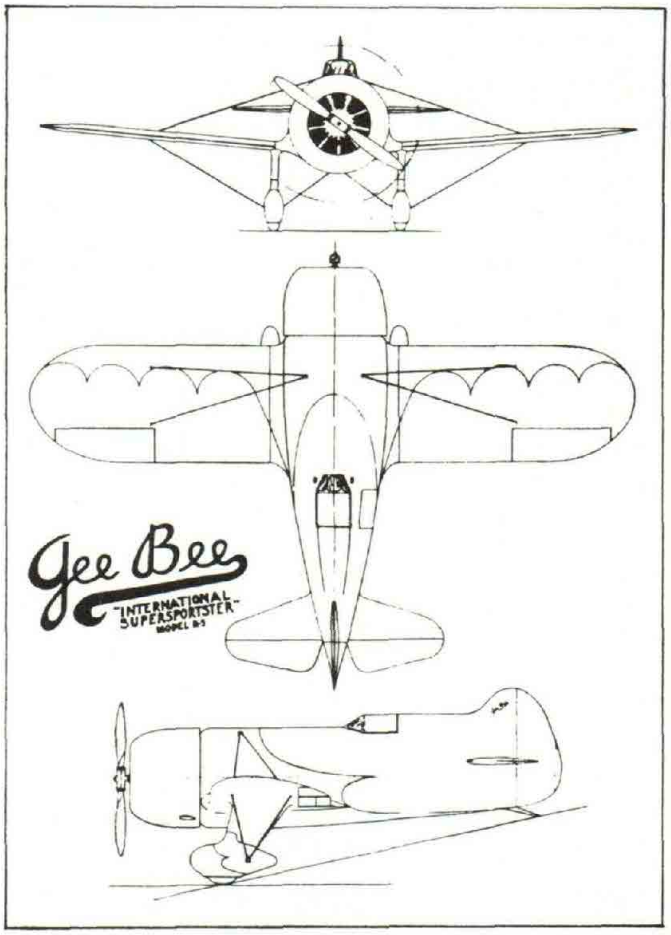
"A nationally known syndicated columnist of the era told a Springfield audience that Springfield, thanks to the Granvilles, could become the center of the aviation industry as Detroit was head of the automobile industry. But Springfield dropped the ball.

"Whether they finished high school or not, I do not recall. However, all the brothers were smart, educated themselves in their chosen field and were recognized as contributing much to the development of aviation.

"They were feted at banquets, in parades and toasted by mayors and governors.

"Ed Granville went to work in 1933 for a small company in East Hartford, Connecticut, which today is Pratt and Whitney Aircraft Division of United Technologies. He worked his way up and during World War II, as chief of experimental construction, had more than 1600 employees working for him. He had retired a year ago to live in Silver Lake, N.H. He was born in Madison, N.H.

"Over the years this writer knew him, there never was a time when he did not have a friendly smile of recognition, whether we met at an airport or a meeting where he or somebody else was to speak."



The Gee Bee that never was. Designed to compete in the 1934 MacRobertson Race from England to Australia, the R-5 died with Grannie Granville. Another design, the 2-place Q.E.D., was built for the MacRobertson, however, and exists today in a private museum in Mexico. Specifications for the R-5 include: Span - 30 ft.; Length - 22 ft. 6 in.; Height - 8 ft. 4 in.; Wing Area - 144 sq. ft.; Engine - Pratt and Whitney Hornet, 825 hp at 2200 rpm; Fuel Capacity - 425 gal.; Empty Weight - 2200 lbs.; Gross - 5040 lbs.; Top Speed - 295 mph; Landing Speed (flaps down) - 45-50 mph; Cruise - 260 mph; Initial Rate of Climb - 4000 fpm; Endurance at Cruise rpm - 7.1 hours.