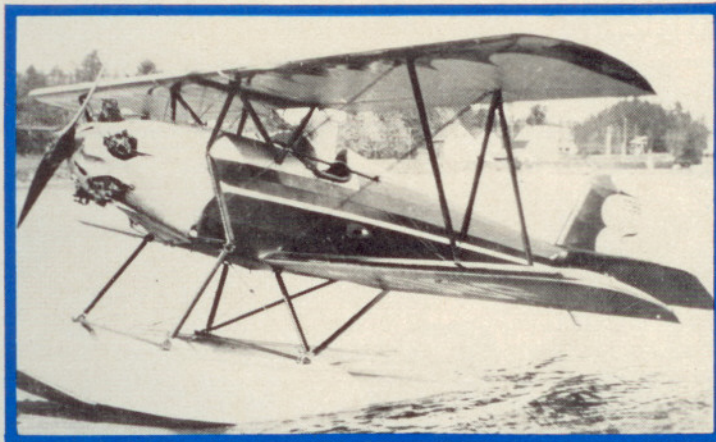


The Gee Bee A



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Gee Bee is a legendary name in American aviation—a trademark of the Granville brothers, who produced a series of spectacular racing planes that captured world headlines in 1931 and 1932. This short period of triumph was enough to make the Gee Bee racers immortal.

Few people realize that the Granvilles developed their aircraft know-how by designing and building a line of traditional biplanes and a series of sport-trainer monoplanes between 1929 and 1931.

The first Gee Bee was designated Model A and had an unorthodox beginning.

The five Granville brothers constituted a unique collection of aviation-minded people with great mechanical skills and an intuitive design capability. The eldest, Zantford, had operated a garage in Arlington, Mass., but turned it over to his brother Tom when he got an airport job in Boston.

Later, he set up a mobile aircraft repair business. When he got the urge to build an airplane of his own instead of working on those of others, he persuaded his four brothers to help him with the work and a good friend to lend financial assistance.

At first glance, the airplane that finally emerged appeared to be a

thoroughly conventional, fabric-covered, open-cockpit biplane. Closer examination, however, revealed some very unorthodox features.

For one, the seating was side-by-side for two occupants instead of the usual tandem arrangement. This feature was not new, having been tried with little success since before World War I. It had succeeded in the contemporary Monocoupe cabin monoplane, and Zantford figured that while tandem seating was all right for military trainers, side-by-side was better for sport flying and civilian training.

There were disadvantages. Side-by-side seating meant a wider fuselage for a small airplane. Providing cockpit space meant an aerodynamically inefficient, stubby fuselage. The steel tube structure was kept as narrow as possible, therefore, and an attempt was made to reduce the drag of two side-by-side heads projecting into the slipstream by installing a separate headrest behind each seat and, in effect, providing separate windshields for each occupant.

Interference between the traditional control stick and the pilot's knees has always been a problem in tight cockpits and is amplified with side-by-side seating. Zantford took care of this by having the dual sticks project from

under the instrument panel instead of up through the floor, anticipating the present system of control wheels mounted on the panel by many years.

He was also ahead of his time in the lightplane field with a fully swivelling tail wheel that could be locked straight for takeoff and landing. Each set of rudder pedals had brakes for differential action, while a connection to the sticks gave full brake application when either stick was held all the way back.

There were other unorthodox features. As an economy move, the wooden upper and lower wing panels were interchangeable, as were the rudder and elevators, and the vertical fin and horizontal stabilizers.

What appeared to be full-span ailerons on the upper wing were actually "flaperons." For landing and takeoff the ailerons could be drooped several degrees to function as flaps. These were augmented by "flaps-only" flaps on the bottom wing.

The original engine used was a 60-hp Velie M-5—a five-cylinder, air-cooled radial also used in the contemporary Monocoupe.

The new biplane was to have its initial run-up on Boston Airport on May 3, 1929, but thunderstorms made that impossible. This was all right with

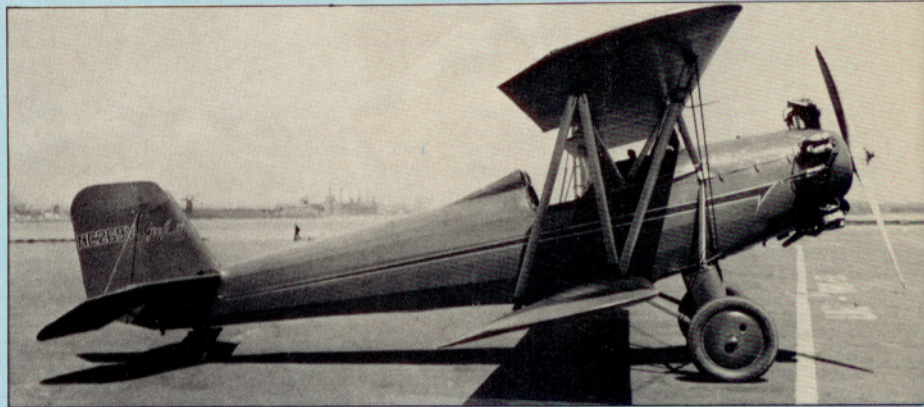
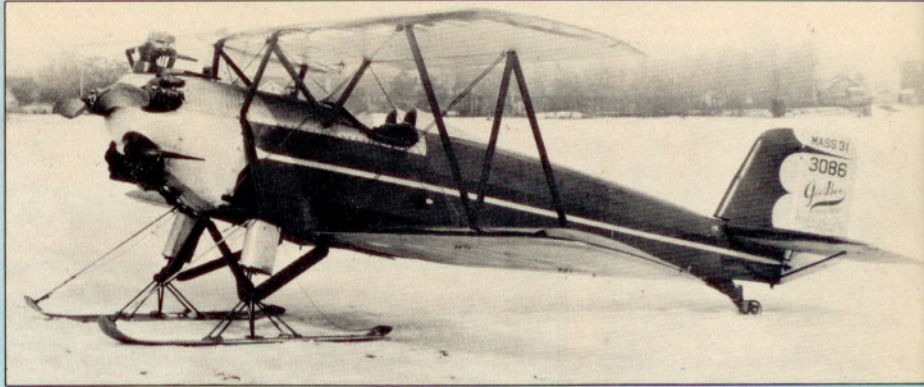
The prototype Gee Bee A was even tried as a seaplane. It is shown here with its second engine, a British Armstrong-Siddely 85-hp Genet. The use of a registration number without an N-prefix meant the plane was only identified and registered, not licensed.

the brothers, who managed to get in a lot of last-minute tinkering that lasted until after midnight. Finally, the storm over, Zantford got into the cockpit for the first engine run at 3:30 a.m. on the fourth.

With everything working smoothly Zantford decided to try some taxiing. He made a few fast runs up and down the unlighted field in the unfinished ship while those back at the hangar could only follow his progress with their ears.

One of the runs didn't sound like the others—there was no reduction of power and rumble of wheels at the proper time. Instead, the sound of the engine just faded away. Zantford simply flew out over the harbor, felt out the unlighted and unlicensed ship, and then came back to make a safe landing in the dark!

The little biplane, which had not yet been formally named Model A, seemed to be a good design. Consideration was given to setting up a company to build production versions. Financing was obtained from the Tait brothers of Springfield, Mass., operators of the airport, who bought out



GEE BEE A

Specifications

Powerplant	Kinner K-5
	100 hp @ 1,810 rpm
Span	29 ft
Length	20 ft 7 in
Wing area	185 sq ft
Empty weight	1,060 lb
Gross weight	1,650 lb
Wing loading	8.9 lb/sq ft
Power loading	16.5 lb/hp

Performance

High speed	109 mph
Cruising speed	92 mph
Landing speed	39 mph
Initial climb	800 fpm
Service ceiling	11,000 ft
Range	400 mi

Zantford's other business interests and helped establish Granville Brothers Aircraft, Inc., at the Springfield airport.

The words Gee Bee were used as a trademark, and they appear as the company name in many documents.

All of the Granvilles now took formal positions in the business. Three qualified engineers were hired to bring the backyard design up to full certification status. A few changes were made—the fuselage was widened slightly and the lower wing flaps were deleted. The original 60-hp engine was considered marginal, and a new 85-hp British Armstrong-Siddely





The prototype A on skis with its final engine, a 100-hp Kinner K-5 (above left). The production Gee Bee A (below) had a wider fuselage than the prototype and deleted the lower wing flaps, but was otherwise identical. Note the wider spacing of the headrests and the enlarged double-contour windshield. Later modifications in the engine mounts moved the engine forward six inches to improve lateral stability. One unique feature was the interchangeability of all the wing panels and stabilizers. The later A's also had full-span "flaperons" on the top wing (above), brakes on each set of rudder pedals, and a swivelling tailwheel that locked for takeoff.



"Genet" was installed in the prototype for further flight testing. This, they found, wasn't the optimum powerplant either, so a new 100-hp Kinner K radial was installed. This engine did the job and was used in the production of Gee Bee A's. A memorandum Type Certificate 2-194 was issued on March 18, 1930.

Three airplanes were built on the initial production run. The first proved to be tail heavy, so a new engine mount was built to move the Kinner ahead about six inches. A second batch of five A's followed. A projected third batch of five was cancelled, however, because the depression had made it hard to sell the first eight. The Granvilles had over-estimated the market, and production of the little biplane came to an early end.

The plant stood idle until a rush job came along to design and build a sport-racing monoplane for the 1930 Cirrus Derby. In the race the new Gee Bee monoplane placed second to a pure racer. This generated some new business. Orders for a half-dozen sportsters followed to keep the plant going.

The real Gee Bee fame, however, came as the result of building the Model Z racer for the Springfield Air Racing Association in 1931, and the R-1 and R-2 follow-ons of 1932. Major disasters occurred to all three of the big racers and to several of the sportsters, as well. The Gee Bee organization went out of business in 1934; the aircraft now had bad reputations.

Three Gee Bees still exist today—one Model A, one Sportster presently being rebuilt by an antiquer, and the rebuilt, two-seat Q.E.D. racer of 1934, now on display in Mexico. □