

# The Air Coupes

*What's In a Name?*

BY PETER M. BOWERS

Back in World War I, the automotive industry moved in on airplane production in a big way. The publicity campaign, which promised to darken the skies of Europe with clouds of American-made warplanes, created a lasting impression in the public mind that airplanes were winged automobiles and could be mass-produced like cars. This was a serious misconception. Actually, airplanes at the time, and for many years thereafter, were built more as were small boats, with lots of handwork and file-to-fit on sequential units, plus frequent small changes between the first and the last units of a particular series.

However, the concept stuck in the public mind, and the sales departments of various manufacturers capitalized on it by giving automobile-type names to some new commercial airplanes. There were various coaches, sedans and broughams, but coupe was the widest used, by far. The word sometimes was used separately from the firm name or in combination with it.

So what is a coupe? In the present automobile sense, it is a closed car with only a "front" seat, which can be a single straight-across unit seating up to three or a pair of separated side-by-side seats for two. In the coach trade that preceded

autos, it was a four-wheeled closed carriage for two, with an outside seat in front for the coachman. The name coupe applied to this style indicated that it was cut down from the larger coach; coupe is from the French word for "cut."

This naming of aircraft styles for the private owner market began right after World War I, when the war-fattened industry thought there would be a big boom in private flying. That boom never materialized, but the "sell 'em something familiar" sales concept continued well past World War II.

There were coupes in European aviation as well as in America, but this discussion will be limited to the domestic models, in approximately chronological order. For models with long production lives, specifications are given for the earliest versions.

At the head of the line is the Dayton-Wright Aerial Coupe, which followed the old concept of two passengers and a coachman. Dayton-Wright had fizzled in trying to sell commercial modifications of the wartime de Havilland 4 observation airplane with a coupe top over an enlarged rear cockpit. So it tried a new, smaller and more practical design. This was the Model O.W.1, the initials identifying Orville Wright, consultant to the company and the alleged designer of the Coupe.

Structurally, the design was traditional for the time, but it had one significant innovation. The superstructure above the up-

per longerons was extended to the upper wing to form a true cabin, with the pilot/coachman inside with, but still ahead of, the passengers. In spite of the prestige of Orville's name, the O.W.1 could not compete with the cheap war-surplus types that had flooded the market.

No one today regards airships as logical private-owner aircraft, but in 1925 Goodyear thought there might be such a market. The new 60-hp three-seat Model AD baby blimp was advertised as a Sport Coupe, but it did not sell. The design then was reclassified as an Air Yacht, but there still were no takers. Goodyear then kept the AD as the nucleus of its famous advertising fleet and named it *Pilgrim*, starting the tradition of naming the Goodyear blimps for the sailing yachts that successfully defended the America's Cup trophy. *Pilgrim* finally was scrapped in January 1932.

The Lindbergh Boom and the final wearing out of cheap war-surplus airplanes finally opened up a market for new design lightplanes in the late 1920s. The first coupe to appear in this era was the Elias Aircoupe, a small side-by-side, two-seat parasol monoplane that was essentially a traditional open-cockpit type with the cockpit covered by a canopy.

Elias was a small firm in Buffalo, New York, that turned out a long series of military and civil prototypes from 1920 to 1926, but never sold anything in produc-

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*In 1920, the Dayton-Wright Aerial Coupe became the first such aircraft to invade American skies. Allegedly designed by Orville Wright, it was the first American cabin biplane to elevate the cabin to the upper wing. Other manufacturers were slow to include this feature.*



PHOTOGRAPHY FROM THE COLLECTION OF THE AUTHOR



tion quantities. The one-only Aircoupe was its final effort. The automotive angle was not new at Elias with the Aircoupe; in 1926 it had offered a 400-hp Airmobile.

The next coupe really hit the jackpot and was in production from 1928 well beyond World War II. This was the little Monocoupe, introduced by the Central States Aviation Company of Moline, Illinois. The firm name soon was changed to match its single product of the time, becoming Mono Aircraft Corporation. Automotive marketing concepts were carried on when the four-place Monocoach was introduced in 1929 and then reintroduced for a different model in 1936. The Monocoupe design kept its name through several corporate reorganizations and name changes.

One basic coupe design is very confusing today because essentially the same airplane was built under different firm names over a relatively short period. A neat cantilever-wing cabin monoplane designed by Swen Swanson, formerly of Lincoln Aircraft Corporation in Nebraska, was marketed by the Kari-Keen Aircraft Company of Sioux City, Iowa, as the Kari-Keen Coupe. The small firm could not withstand the onslaught of the Depression and folded. So local bankers reorganized the firm as Sioux Aircraft and unsuccessfully



Essentially a two-seat parasol monoplane, the Elias Aircoupe fits the modern conception of a coupe-type airplane. A side door added to the fuselage earned the Aircoupe a genuine cabin.

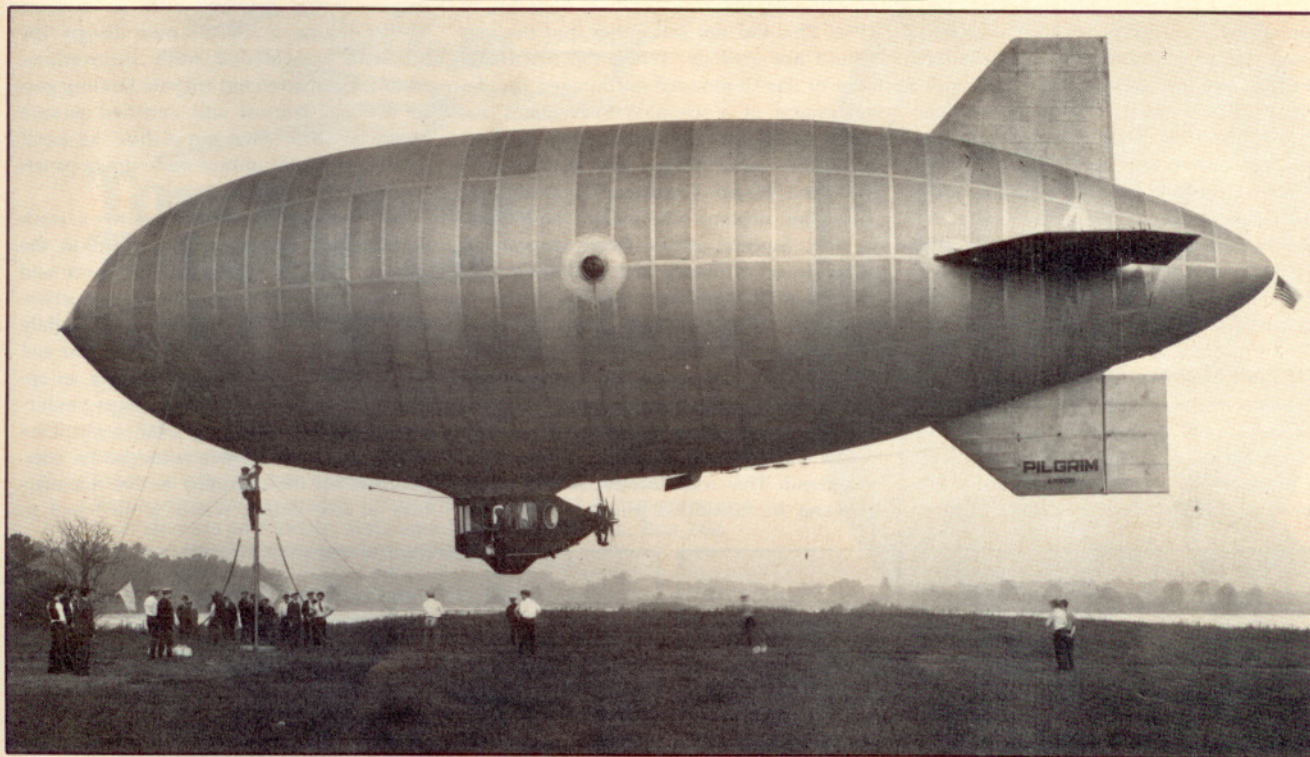


Introduced in 1928, the Monocoupe design kept its name through several corporate reorganizations and name changes, while much-improved versions still were being produced well into the 1950s.

#### COUPE AIRCRAFT Specifications and Performance

Make and Model	Dayton-Wright O.W.1 Aerial Coupe	Goodyear AD Sport Coupe	Elias EC-1 Aircoupe	Central/Mono Monocoupe	Kari-Keen/Sioux Coupe
Year	1920	1925	1927	1928	1929
Powerplant	Wright-Hispano 180 hp @ 1,700 rpm	Lawrance L-4 60 hp @ 2,000 rpm	Anzani-Brownback 80 hp @ 1,600 rpm	Velie M-5 55 hp @ 1,800 rpm	Lambert R-266 90 hp @ 2,375 rpm
Seats	3	3	2	2	2
Wingspan	48 ft	31 ft (diameter)	28 ft 1½ in	32 ft	30 ft
Length	28 ft 6 in	105 ft 6 in	21 ft 1 in	19 ft 9 in	23 ft 2 in
Wing area	534 sq ft	-	192 sq ft	143 sq ft	140 sq ft
Wing loading	4.67 lb/sq ft	-	7.23 lb/sq ft	9.44 lb/sq ft	11.06 lb/sq ft
Power loading	13.84 lb/hp	-	17.35 lb/hp	24.55 lb/hp	17.2 lb/hp
Empty weight	1,450 lb	47,400 cu ft (volume)	870 lb	795 lb	1,014 lb
Gross weight	2,492 lb	921 lb (useful load)	1,388 lb	1,350 lb	1,548 lb
High speed	95 mph	50 mph	90 mph	98 mph	115 mph
Cruise speed	-	39.7 mph	80 mph	85 mph	100 mph
Initial rate of climb	-	-	590 fpm	550 fpm	850 fpm
Service ceiling	-	-	10,000 ft	10,500 ft	14,000 ft
Range	500 mi	525 mi	400 mi	400 mi	420 mi





Instead of a second car, how about an airship? In 1925 Goodyear thought the 60-hp, three-seat Model AD Sport Coupe would sell as a private aircraft. Even called an Air Yacht, it did not sell. So it became the Pilgrim—the first blimp in the company's advertising campaign.

Curtiss-Wright CR-2 Coupe	Fahlin SF-2 Plymo-Coupe	ERCO 415-C Ercoupe	Piper J-4 Cub Coupe	Stits SA-9A Sky Coupe	Make and Model
1930	1935	1938	1938	1961	Year
Wright Gypsy 90 hp @ 1,950 rpm	Chrysler/Plymouth 80 hp @ 3,600 rpm	Continental A-65 65 hp @ 2,350 rpm	Continental A-50 50 hp @ 1,900 rpm	Continental O-200 100 hp @ 2,750 rpm	Powerplant
2	2	2	2	2	Seats
38 ft	32 ft	30 ft	36 ft 2 in	28 ft 7 in	Wingspan
25 ft	20 ft	20 ft 9 in	22 ft 6 in	19 ft 2 in	Length
188 sq ft	172 sq ft	142.6 sq ft	183 sq ft	125 sq ft	Wing area
9.29 lb/sq ft	9.37 lb/sq ft	7.89 lb/sq ft	6.56 lb/sq ft	12.2 lb/sq ft	Wing loading
19.41 lb/hp	20.14 lb/hp	17.31 lb/hp	24 lb/hp	15.25 lb/hp	Power loading
1,136 lb	1,075 lb	690 lb	710 lb	1,000 lb	Empty weight
1,747 lb	1,611 lb	1,125 lb	1,200 lb	1,525 lb	Gross weight
110 mph	115 mph	110 mph	93 mph	116 mph	High speed
90 mph	95 mph	95 mph	83 mph	102 mph	Cruise speed
600 fpm	800 fpm	600 fpm	480 fpm	600 fpm	Initial rate of climb
-	16,000 ft	13,000 ft	10,500 ft	12,500 ft	Service ceiling
450 mi	520 mi	300 mi	325 mi	425 mi	Range



marketed the same airplane as the Sioux Coupe. Swanson, meanwhile, had formed a new company under his own name and brought out the Swanson W-15 Coupe, a relatively minor variation of the same airplane. This one could not buck the Depression, either, and few were sold.

Giant Curtiss-Wright Corporation broke with its tradition of naming its airplanes after birds when it became the next coupe builder. The CR-2 (for Curtiss Robertson, as the St. Louis Division originally was known) Coupe appeared late in 1930, but became another casualty of the Depression. Only two prototypes were built.

Swanson's basic coupe design just would not stay down. Swanson teamed up with an old friend, propeller-maker Ole Fahlin, to upgrade the design, which Fahlin produced as the SF-1 Coupe in the old Nich-

olas-Beazley plant in Marshall, Missouri, in 1934. This did not sell either, but the pair would not give up. When the (then) Bureau of Air Commerce encouraged the development of a so-called Everyman's airplane using low-cost automobile engines, Swanson's basic design was adapted to a modified 80-hp Chrysler/Plymouth engine; the airplane was called the Plymo-Coupe. Several other firms developed auto-engine airplanes and sold their prototypes to the government. But with the exception of the Arrow Sport powered with a Ford V-8, there was no production.

One of the famous coupes, and one very significant to subsequent general aviation, was the Engineering and Research Corporation (ERCO) Ercoupe, built in Riverdale, Maryland. This was introduced as a safety airplane for unskilled pilots in 1938 and

originally was powered with an inverted in-line engine of ERCO's own design. The airplane was loaded with innovations, from the rediscovered tricycle landing gear to two-axis control and certified no-spin characteristics, plus simplified all-metal construction and unique slide-down panels in the rigid canopy.

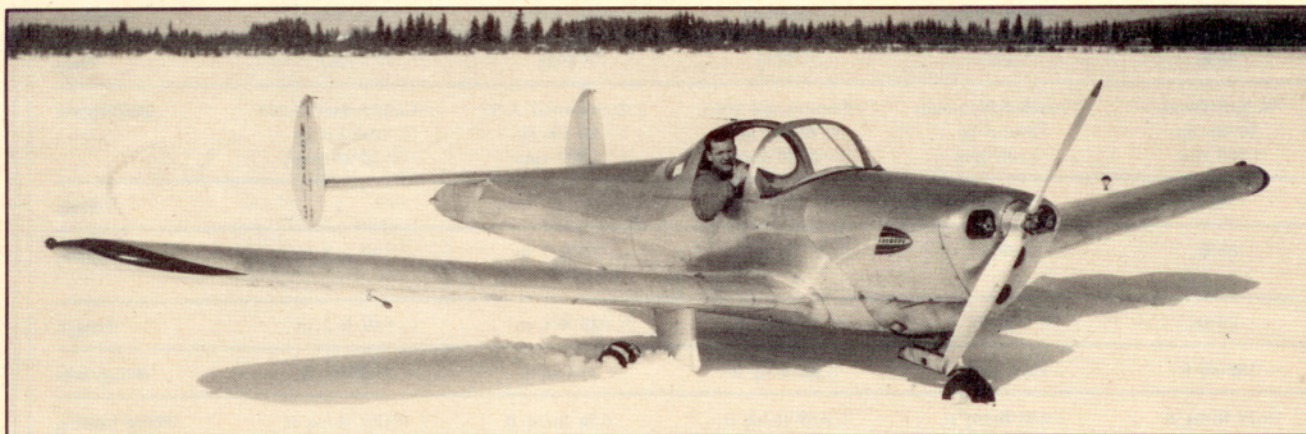
The production model, using a stock Continental 65-hp engine, went to the market in 1940. More than 100 were sold before World War II ended production. ERCO resumed production of a slightly more powerful Ercoupe after the war and introduced minor refinements and an option for three-axis control. Ercoupe production survived the big 1947 lightplane slump that shot down some of its competitors; but the company ended manufacture of the coupe when it switched to



*The Kari-Keen Coupe, the Sioux Coupe and finally the Swanson Coupe were all basically the same cantilever-wing cabin monoplane first designed by Swen Swanson. The Depression brought on their demise.*



*When the Bureau of Air Commerce suggested using low-cost automobile engines to develop an Everyman's airplane, Swen Swanson's coupe design was revamped to include an 80-hp Chrysler/Plymouth engine.*



*ERCO's Ercoupe, introduced in 1940, was perhaps the most famous of all American coupe designs. Produced by a number of manufacturers up to 1969, the design lost its distinctive twin tail and 29-year production identity as a coupe when the Mooney Cadet was born.*



*An early Ercoupe contemporary, the Piper J-4 Cub Coupe was basically the same airplane as the J-3 Cub but with a widened fuselage for side-by-side seating. The J-4E model was equipped with an enclosed 75-hp Continental A-75 engine.*



*The Stits SA-9 Sky Coupe had unusual beginnings. In 1958 a forerunner appeared in home-built form. Design improvements won the SA-9 type certification in 1961.*



other work for the Korean War in 1951.

The distinctive twin-tail design had a checkered production life after that. It was sold to the Forney Aircraft Company of Fort Collins, Colorado, which made a few more minor changes and marketed it as the F-1 Aircoupe (shades of Elias) in 1956. Forney (or Fornair), did not stay in business very long, so the design was taken up by a surprising new owner, the City of Carlsbad, New Mexico. After a short production period contracted to the Air Products Company, Carlsbad sold the Aircoupe design to another small firm, Alon, Incorporated, of Wichita. The airplane was on the market again in 1967 as the Alon A-2 Aircoupe. The first Alon models were duplicates of the late Fornairs, but Alon soon made a change by adopting tubular spring-steel landing gear and a bubble canopy. Alon production, too, was short-lived; the firm merged with Mooney Aircraft of Kerrville, Texas, in 1969. The design then lost its twin tail and also its 29-year production identity as a coupe. It became the Mooney Cadet, and the era of the Ercoupe/Aircoupe ended.

A contemporary of the early Ercoupe, but ahead of it on the market, was the Piper J-4 Cub Coupe. The giant of the industry widened its bread-and-butter J-3 Cub in 1938 to produce the two-seat, side-by-side coupe. It was offered with a variety of engine options, including the J-4 with 50-hp Continental A-50, the J-4 with 65-hp A-65, the J-4B with 60-hp Franklin, the J-4F with 55-hp Lycoming and the J-4E with 75-hp Continental A-75.

Piper's commercial models went out of production after Pearl Harbor, and the Cub Coupe was not revived after the war, as were the J-3 and the Super Cruiser.

The final entry in the line-up of America's flying coupes is the Stits SA-9A Sky Coupe of 1961, which has unusual origins. Ray Stits of Riverside, California, was one of the pioneers in the home-built aircraft movement that got rolling in a big way in the early 1950s. His single-seat SA-3 Playboy was one of the earliest designs available to the amateur builders through purchased plans. As homebuilts became more acceptable to family members, there was a demand for two-seaters. Stits developed several for the plans market, including the 1958 high-wing, side-by-side SA-7 Sky Coupe. With all Stit's design experience behind it, the little Sky Coupe was a good design, which he took a little further along in engineering detail and enlarged slightly for better performance as the SA-9. This model won an approved type certificate in 1961, then had a clear track to be built and sold on a production basis. But Stits abandoned aircraft and plans sales to concentrate on his supply business.

There are no coupes in production in this country, so the name is up for grabs again. Who will be the next to use it? □