

1. Those who placed in the top ten of the ten previous U.S. National Soaring Championships.

2. Those who placed in the top three of an SSA Regional Soaring Championships held within the previous 28 months.

3. Those who have the Diamond distance or Diamond goal leg.

4. Those who placed in the top one-half of the three previous U.S. National Soaring Championships.

5. Those who placed in the top fraction of the full-period contestants in an SSA Regional Soaring Championships held within the previous 28 months, the fraction to be determined by the SSA Contest Board 90 days prior to the start of the National Championships, based upon (a) the maximum number of entrants allowed as determined by site and towplane restrictions, and (b) the number of places available

after applications from entrants in the first four categories have been approved.

6. All other entrants in order of postmark date of their applications.

7. In addition, up to five overseas entrants, within the maximum number of allowable entrants as determined under number 5 (a) above, may be permitted entry upon approval by the SSA Contest Board."

The Directors designated an Executive Committee to serve until the next Board meeting, composed of the President, John Ryan, Bill Ivans, and Vice-President Sterling Starr. In addition, David A. Matlin, Los Angeles attorney and long-time SSA member, was re-appointed as the SSA General Counsel for another year.

The next Directors' meeting will be held July 8, 1966, at Reno, Nevada.

## SAILCHUTE OR PARAPLANE?

The sailplane and the parachute have been thought to be as dissimilar as night and day; the sailplane was a means of staying up in the air for hours, while parachute was a means of coming down in minutes. But time, among other things, flies, and in the midst of the National Parachuting Championships in Orange, Massachusetts, last August, a new creature appeared in the air. The Barish Sail Wing made its 19th manned flight and its first official public appearance. Was it a parachute or a glider? It had many of the characteristics of both. In order to give us a basis for some sort of decision as to its aerial status, let us briefly review the background and trace the progress of the parachute.

The unmodified (emergency type) parachute, which is a flat, circular canopy, has remained basically unchanged for the last fifty years. It is at the mercy of the wind and has a glide ratio of zero to one. That is, it has no horizontal travel for each increment of vertical travel. A slight glide ratio can be induced by pulling down on one or two risers (slipping) and spilling out the air from under one side of the canopy.

Later vent holes were cut into the canopy to make it steerable and to give it some forward speed. This type of canopy was called a modified (sport) parachute. The glide ratio was now increased to approximately 1:2. Further modifications over the years slightly improved this ratio.

In 1964 along came the Para-Commander. This was a specially manufactured parachute based on aerodynamic principles developed by Pierre Lemoigne, a French aviator and engineer. It gained lift on the airfoil principle, through its forward speed. The glide ratio approached 3:2. But it was still used as a parachute, and it maintained all the appearance of one, despite the greater number of vents.

Now, with the Sail Wing an even more radical departure has occurred. This nonpowered, heavier-than-air craft is almost as closely akin to the glider as it is to the parachute, both in appearance and performance. As with the sailplane, it employs the lift (airfoil) as well as the drag principle. The Sail Wing is 54 feet from tip to tip (24 feet inflated diameter) and measures but 9 feet from front to rear. It has much less surface area than parachutes with similar



The Barish Sailwing in full flight showing curved leading edge.

rates of descent. The airspeed approaches twenty mph, while the sink rate (with a 175-pound suspended load) is approximately ten fps. The glide ratio, then, is better than 3:1. However, when the wing's angle of attack is altered so that the forward speed is reduced to zero, it no longer has the lift created by the forward speed and the sink rate increases to a little more than 25 fps. The pilot-parachutist has complete control over his forward speed and rate of descent.

When turning the Sail Wing banks, as does any other aircraft, and the turning radius is less than 25 feet, so, while the sink rate is greater than that of current sailplanes, the Sail Wing has the advantage of being able to make tight turns and is therefore capable of remaining within thermals.

But is it a parachute or a glider? It has the appearance of being a little of both (or perhaps neither one). It is similar to the parachute only in that it is nonrigid and the pilot-parachutist is suspended well below it. If the Sail Wing is still in the parachute category then one thing is certain: the parachute has graduated from the position of being a life-saving device to a full-fledged member of the air-transportation field.

And this is just the beginning! Improvements and more radical designs are now on the drawing board. Who can say what might blow out of the wind tunnel tomorrow?

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