

PROBLEMS OF THE *Soaring Movement*

Paul N. Hepburn

Soaring sites, or take off and landing fields, are necessary to the stabilization and advancement of the sport. A permanent location with hangars, shops, offices and living quarters are highly desirable. These things are very necessary for the convenience of the trained pilots, and absolutely essential for the safe and satisfactory training of students. Another important item is the matter of governmental regulation and licensing of both sailplanes and sailplane pilots. At present such regulations are in a chaotic condition and instead of being helpful and constructive are definitely and harmfully restrictive. They tend to destroy the good effect so earnestly striven for by all sincere followers of the art of soaring.

The other half of the problem then concerns organization and regulation. Under this broad designation come many lesser ones, some more important than others but all of them essential. In the first place, strength is necessary to secure desired results and strength requires numbers. But numbers must be thoroughly and efficiently organized. This leads directly into administrative and financial problems.

Many soaring organizations have been formed in all parts of the country for the mutual aid and benefit of the individuals comprising them. A large percentage of them have failed for one reason or another; but it is safe to say that all of them, even those still in existence, suffer from financial mal-nutrition. Various plans have been tried to correct this condition and no definitely satisfactory solution has as yet been discovered. A study of the problems reveals the fact that there are four main sources

of revenue open to use by soaring organizations. The first is membership dues. The second is paid admissions to contests and exhibitions and income from various concessions. The fourth is local or federal governmental aid or support. All of these plans have been tried and no one of them is a solution in itself. A combination of some or all of them seems to be the answer. Experience has proven that the second and fourth sources, that is, private and public aid, should be used with caution as control of policy and operation may be jeopardized or lost altogether. At least not too much dependence should be placed on them as their support can and may be withdrawn suddenly. It seems that the first and third plans in combination must be the mainstay of the financial structure of any soaring organization, the second and fourth plans, if available, merely an extra shoulder to the wheel; welcome but not indispensable.

Then too, great care should be exercised in the selection of the officers and leaders of an organization. Executive ability is essential, as well as self-sacrificing devotion to the demands of the position. The rank and file of the membership little realize the amount of time and effort necessary to carry on the business of such a group. And, curiously enough, sailplaners appear to be rabid individualists who apparently dislike being made a spoke in the wheel. But for their own good they must present a solid front in order to solve their collective problems. It is very important that everyone interested in soaring join the local and the national organization and help establish a strong, efficient and well organized group.

PERFORMANCE *Testing*

by "Vic" Saudek

Conservative guessers of sailplane performance are meaningless. Variometer and air-speed instruments read by anyone but unprejudiced observers are a long way from the truth.

A suggestion is observation from the ground through two theodolites. It is true that there are a great many chances for error, but care, luck, and skill can whittle these down to the point where *some* good will come of the effort.

The idea is to plot the position of the glider in space through a long enough period of time so that the forward and sinking speeds can be determined. The uncontrollable items for this test are: the air should theoretically be still; the glider's speed should be constant during the period of observation; the readings of instruments must be simultaneous and accurate.

We can assume a theoretical set-up for what it is worth and, I hope, try it out several times with the idea that some good may come of it.

Place: The Dray Lakes; Time: Early morning when the air should be nearly dead. Toy balloons filled with lifting gas and smudge fires should indicate winds. Variables: (a) the glider's airspeed indicator should be trusted to the point where constant speed (qualitative) can be allowed. (b) there can be a gun, bell or whistle placed midway between the observation points to get simultaneous readings of azimuth and altitude. (c) good theodolites read by competent engineers will do their best to hold the human error to a minimum.

Suppose the sum of the errors is 5%. Then sinking speed will be 3 ft./sec. or 3.15 ft./sec., but at any rate, some real idea of performance will have been determined.

The writer has done some of this work with balloons and has gotten some satisfactory results. It will be hard work for one or two hours each test day, but you can fly the rest of the day to your heart's content. I'll have further details at a later date and will be glad to hear of some cooperation of you pilots and engineers!