



Empty weight of the P.H. 29 is only 121 pounds.

Z. Kluger

## MIDGET GLIDER

By Dr. F. J. PIATELLI

This interesting article on two new designs was received from Palestine shortly before the present situation there developed. At a later time those desiring to learn more about these ships may contact Mr. Piatelli at 4 Shadal Str., Tel. Aviv, Palestine.—Ed.

**T**WO new sailplanes have been recently designed in Palestine and several details of their general conception and construction might be of interest. Both machines are entirely of wooden construction and similar in general layout and details.

However, while the P.H. 29 is purely an experimental job built to test specific ideas on aerodynamic and structural design, the P.H. 33 is a prototype intended for Aero Club use, and may be regarded as a standard intermediate machine for pupils having "A" and "B" glider certificates, intending to train for "C" and graduate to more advanced sailplanes.

### P.H. 29

The initiative to design and build P.H. 29 was taken when it was felt that local workmanship had acquired sufficient training and familiarity with available materials and with the designer's technique, to embark on a prototype.

Experience gained in the repair and construction of existing primary gliders has been thus put to advantage, and a survey of locally available woods, plywoods, glues, fabrics and dopes has induced the designer to test the possibility of employing these in a far more

advanced layout than ever attempted before in this country.

On the other side, there is now a marked tendency toward the home-made, simple aircraft, and it is worthwhile testing the possibility of producing an aerodynamically sound airframe without expensive tools, jigs or raw materials. It may also be noticed that all over the world there is a definite tendency toward small size sailplanes of clean design.

In fact, with a machine of the size and weight of P.H. 29, it will be possible to train in sailplaning with a very small group of men, say five or six, since two people are sufficient to carry the machine and four can take it, disassembled, anywhere including mountainous country. This number of people would also be sufficient to provide shock cord launches under normal circumstances.

Thus the following principles have been laid down as requirements for the new design:

- a—Aerodynamically clean, without excessive complication.
- b—Simple construction, to be achieved with the elimination of expensive jigs and tools.
- c—A minimum of working hours, also leading to low cost.
- d—The best performance compatible with the above requirements, and especially absence of unusual stability and control reactions in flight.