Sailplane and Glider

The First Journal devoted to Soaring and Gliding

JUNE 1948

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Sailplane and Glider

and ULTRA LIGHT AIRCRAFT

THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

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CONTENTS

Cover Photo: *OERLINGHAUSEN. Shows D. L. Barker with "Minimoa" taken by A. C. Dobsen, Ikonta F.II. 1/100 Super XX 2X Yellow Filter.*

EDITORIAL

To the Editor, Sailplane and Glider.

Dear Sir,

Your leading article in the April issue of the *Sailplane* requires an answer.

I am not here proposing to comment on the views expressed regarding the constitution of the B.G.A., except to say that views on this matter are only valid if the writer has an absolutely clear picture of the necessary functions of that body.

But I am concerned that the *Sailplane* should put forward a case inferring that the British team selected for Samedan next month are a collection of would-be 'cost-free gladiators' out to have an extravagantly good time at someone else's expense.

Let me assure you that to my personal knowledge the reverse is the case—each member of the team is dipping into his own pocket to a far deeper extent than should be the case, some are if necessary going positively to risk financial embarassment.

To compare the expenses of such an expedition with a £35 Cook's continental tour is illusory. The cost of motoring 5 cars and trailers a total of 15/20,000 miles on the Continent, of sea transport, of insurance for aircraft, pilots (compulsory), cars and trailers, and the essential provision of a sum to cover contingencies which may arise during the course of the contests, are not problems weighing heavily on the Cook's tourist.

To those who know personally the individuals making up the team the views expressed can only harm their exponent. But your readers cover a wider circle than this, and it is really important that the team should feel that we go to Samedan with the goodwill of our own side—the gliding fraternity in its widest sense. The *Sailplane* could, and should, assist in ensuring that this is created.

Yours truly,

PHILIP WILLS.

The above letter from Mr. Philip Wills takes the lid off the boiling cauldron of the affairs of the B.G.A. Had they been properly run such a letter would not have been necessary. To begin with, had the team and helpers been selected with the full knowledge of the Gliding Fraternity, no doubt its approval and its support would have been forthcoming. As it is the impression prevails, and which Mr. Will's letter is meant to dispel, that a few gliding "aces" have got together and are going to have a month or more in Switzerland, not entirely at their own expense. Had the B.G.A. had a Public Relations Committee to report monthly on its activities, any criticisms could have been voiced at a much earlier stage and no doubt would have been heeded. Owing to the peculiar constitution of the B.G.A., the Gliding Fraternity has no say as to who is to represent it abroad; consequently it is not much interested in paying any of the expenses of the party. The figure of about £1,000 mentioned in the April issue as being what such a venture should cost, has been provided as to £500 by the Royal Aero Club, £400 by the S.B.A.C. and £100 by De Havillands. This about covers the actual out of pockets other than the cost of the team and helpers. That these latter must largely pay their own expenses is regrettable but we have explained the reasons why above.

Help in kind has come from Slingsby's (two "Gull IV's"), Elliotts (an "Olympia"), Messrs. Rover Cars (four towing cars, through S/L. Furlong), and others whom we have not space to mention.

We have said enough to show that all is not well with the B.G.A. nor with the Gliding Fraternity. But until the Competitions are over we shall say no more, and since the team is now going to Switzerland, no one will do aught else but wish it well—in any case it is now a "fait accompli." We are glad that the team has been completed by the inclusion of W/C. Hanks and F/Lt. R. C. Forbes (our new "Gold C") and G/Capt. Paul, B.A.F.O. If our team does not win, it will not be for lack of guts.

CROSS-COUNTRY ON STANDING WAVES

By G/Capt. E. PAUL

LAST Autumn, the ridge at SCHARFOLDENDORF surprised many people by producing lift, not merely to 400 metres or so, the usual height, but a steady smooth lift up to 2,000 metres. Conditions at the time were not exactly recorded, but it is known that there was a moderate lapse rate up to 2,000 metres, at which height the lift vanished, and above this there was a marked inversion. The wind at 300 metres was from 059°T 25/40 k.m.p.h., increasing to 70/80 k.m.p.h. at 2,000. A map of the ridge, and the locality is at *Fig.* 1.

2. It was supposed at the time that the unexpectedly good lift was produced by a combination of appropriate lapse rate, combined with the funnel effect produced by the wind blowing between the two hills marked P and Q in *Fig.* 1. However, similar conditions have not yet re-occurred, and it has not been possible to check this theory.

3. A more direct result, however, was a calculation of the possibility of gaining sufficient height in such conditions to be able to complete a 50 kilometre cross-country flight merely by turning down wind, and gliding as far as possible. The curves produced at *Fig.* 2 were the result, and they show that conditions at the time were such that, in a sailplane of 1 metre-second sink, gliding at 65 k.m.p.h. a flight of over 50 kilometres should be possible, always assuming that no excessive down currents were encountered during the flight. The existence of areas of down currents seemed a natural thing to anticipate; but if there were down currents in the lee of the ridge, there seemed an equal possibility of further lift, and it was hoped that standing waves might be found down wind from the ridge. Were this so, then there should be a possibility of a flight made by climbing in the first instance in the ridge lift, flying down wind from the ridge; regaining height in the standing wave, and continuing again down wind. When the opportunity came to put the theory to test, this proved to be the case, and two flights of 75 kilometres resulted.

4. Conditions on the morning of 21st March looked far from favourable. The T-O diagram (*see Fig.* 3)* showed a layer of very wet air underneath a big inversion at about 1,000 metres. The wind

*The Editor regrets that the attempt to reproduce on our paper the fine lined contour map and the T-O diagram were unsuccessful. The T-O gram is omitted and diagram substituted for Fig. 1. Readers are asked to imagine two N-S ridges running through P and Q respectively.

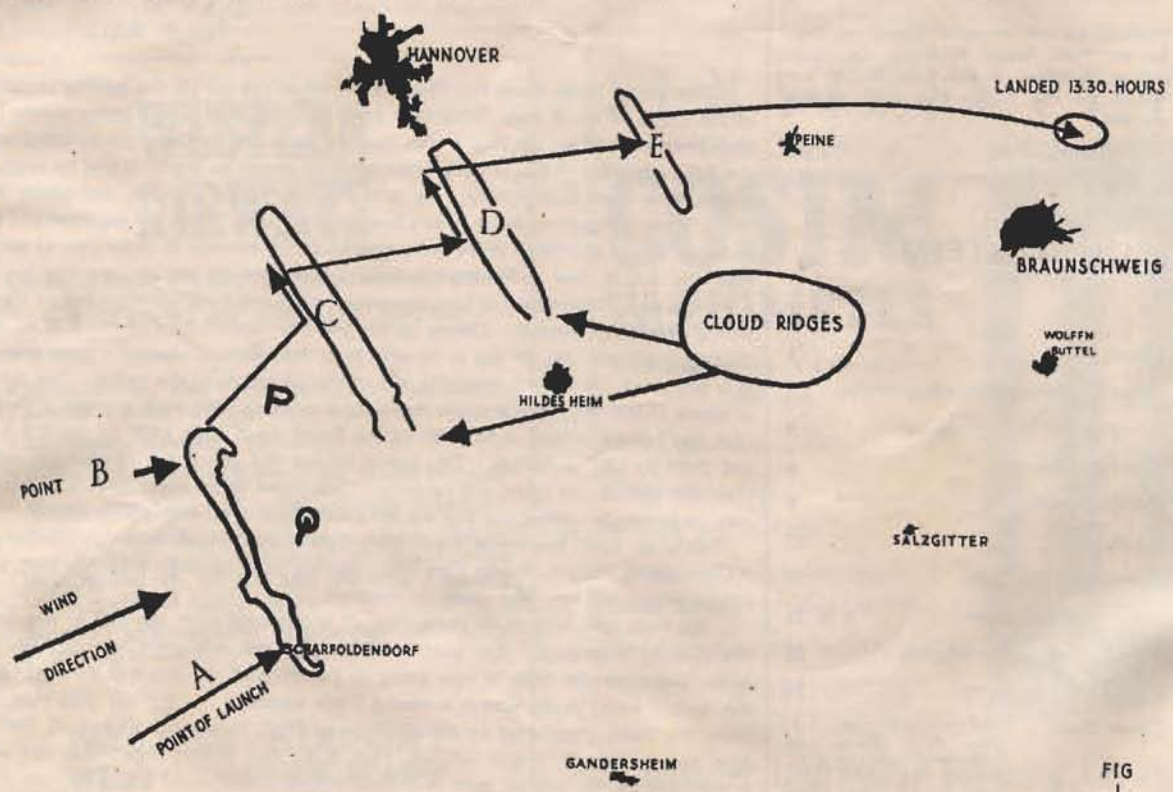


FIG 1

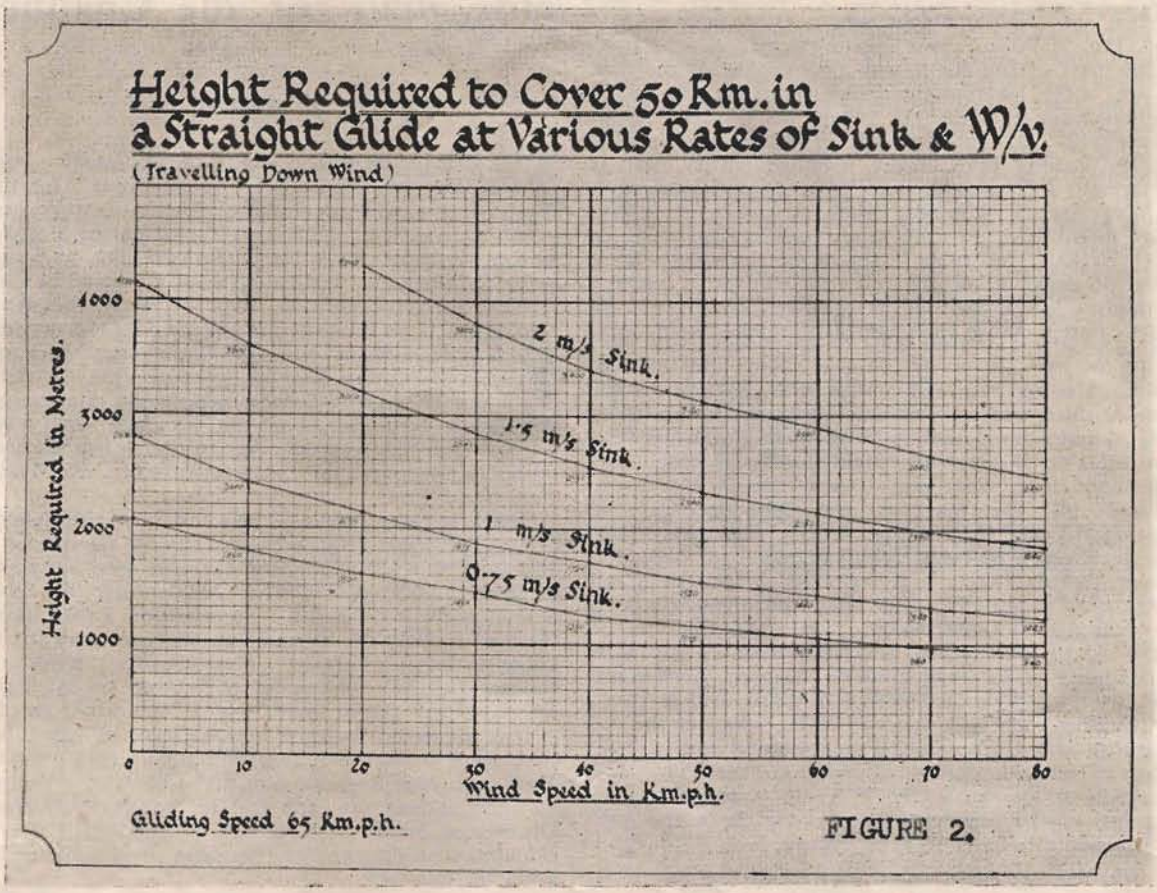


FIGURE 2.

was blowing at 20-25 k.m.p.h. from the west, and a thick layer of stratus blew over the ridge, leaving only 200 metres between the top of the ridge (400 metres) and cloud base (600 metres). However, the ridge lift was excellent, giving plus 2 and more metres per second, and continuing up into cloud, so the "Weihe" was duly launched to see what was going on.

5. The first 1½ hours was spent on the ridge in and out of cloud, the main difficulty being that, although it was possible to ascend into cloud, having done so, there was difficulty in keeping in position relative to the ridge in order to remain in the area of the lift. However, after 1½ hours (12.00 hours local time) the cloud at point 'B' (*see map, Fig.* 1) showed signs of breaking, and accordingly the climb was continued in the hope that there would be sufficient gaps to be able to see the ground and maintain position, and this proved to be the case. At 12.00 metres the "Weihe" was level with the top of the cloud layer ahead (to the West) and only about 200 metres below the level of the highest tops. Above these there was clear sky and brilliant sunshine, and air so exhilarating and sparking clear as to suggest nothing so much as blue champagne.

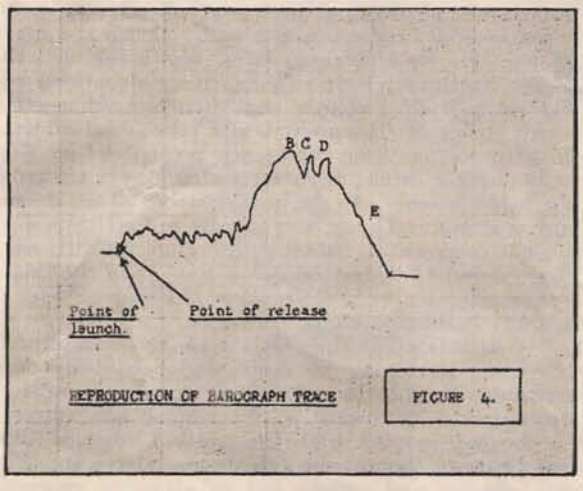
6. Lift, which up to this time had been a little turbulent, became dead smooth, and continued at a fairly steady plus 1 up to 1,850 metres at which height it became zero. The time was now 12.30 hours and the point on the barograph trace (*Fig.* 4) is marked 'B' corresponding with 'B' on the map at *Fig.* 1. By this time, cloud was breaking well to the North and East although remaining thick on the ridge itself; course was therefore set northwards towards Hannover, with the dual object of getting as far from the launch point ('A' on *Fig* 1) as possible, whilst not steering too closely towards the Russian zone. In the immediate lee of the ridge, sink was minus 1½ but this rapidly fell off to minus ½ and remained constant until vigorous lift was encountered 15 kilometres down wind from the ridge at the point marked 'C' both on the map at *Fig.* 1 and the barograph chart at *Fig.* 4.

7. At this point there was a clearly marked roll of cloud, stretching at right angles to the wind direction, flanked by patches of dispersing stratus upward and downward of it. Course was altered to proceed parallel with the upwind edge of this roll of cloud, but about 500 metres above it; lift was smooth and steady but in all other respects

like soaring along a ridge; it died away to zero when the original height was nearly regained, and so the " Weihe " was again turned down wind. This part of the flight was a repetition of the first part, after leaving the ridge, even to the point where after a further 15 kilometres good lift again appeared and another roll of cloud was soared ridge fashion and height regained. This part is marked ' D ' on both map (*Fig.* 1) and barograph chart (*Fig.* 4). The first cloud roll and its attendant lift might just possibly have been caused by hills other than the ridge; this time however, there was no reason to doubt that it was in fact a genuine standing wave, because it occurred over perfectly flat country, and in the absence of a noticeable thermal activity.

8. Having regained nearly the original height for a third time, flight was continued down wind again and after a further 15 kilometres (marked ' E ' on map at *Fig.* 1) very slight " delayed sink " was obtained from what was a third rapidly dispensing cloud roll. The mark is just discernible on the barograph at ' E ' on *Fig.* 4. By this time (13.00 hours local time) nearly all cloud had dispersed over the flat plain, leaving only 1/10th of small strata-cu cloud-lets, and these subsequently disappeared by 14.00 hours. This appeared to be the last lift of any use, and from then on the flight continued as an easy glide to Waggum (just north of Brunswick) reached with 800 metres still in hand. A landing was made here at 13.30 hours on the old airport, now the home of a most helpful and friendly Army Unit who provided lunch to the Pilot, and helped to dismantle the " Weihe " ready for the arrival of the retrieving party later on in the day. Total distance was 75.6 kilometres.

9. The two main points about this flight seem to be, first, that cross-country flights need not depend solely upon ridge winds and thermals; and secondly, even a casual glance at the map of England suggests that there are many places from which such flights should be possible.



REPRODUCTION OF BAROGRAPH TRACE

FIGURE 4.

Howgozit for the Channel

By

J. C. NEILAN

THE American transoceanic airlines used to use a diagram called a " Howgozit Chart " for the easy solution of their flight problems of range and point-of-no-return. This chart consisted of a graph having distance along the horizontal axis and fuel contents along the vertical axis, and lines drawn on it were fuel consumption lines. Exactly the same sort of chart can be made for gliders, only the vertical axis is now altitude, and the lines drawn on it are height consumption lines or lines of sink. Such a chart can be a great help in making up one's mind whether to burn one's boat and go ahead with, say, a Channel crossing, or whether to return to the coast immediately or go a mile or two further to investigate that cloud first.

The first thing to do, if you have not already got one, is to make a table of best flying speeds for a selection of winds and downcurrents (see Sailplane of March and August, 1947). Incidentally this table should really be called a " Penetration Table " and its use involves the assumption that no more lift is going to be encountered. You use the " Miles per thousand feet " column of this table to calculate where to draw the various " Sink " lines on the graph.

It is suggested that you make a separate graph for each wind strength (each 10 m.p.h.) up to 40 m.p.h. Mark out your distance along the bottom, allowing an extra mileage at each end for navigation errors. Draw your height scale vertically, and add to every calculated height another thousand (or more) feet to allow for bad luck.

Calculate the height required at 5 ft./sec. sink for the distance plus margin decided on, and having added on your height allowance, plot it as a line sloping down from left to right. Then using the same strength head wind, plot the first part of a similar line sloping up from left to right. In the wind calm condition, these lines meet at the middle of the distance, but in the increasing winds, they meet progressively nearer to the starting point. Where they meet is the point-of-no-return for that set of conditions. If you are above the line, you can reach its termination. If you are below it, you can't unless your sink decreases. Now draw in the lines for 3 ft./sec. and 2 ft./sec. to complete the chart.

In the event of anyone arriving at such a sea crossing in a cross-wind, it would not do to use the Calm graph, as it would be necessary to steer somewhat into the wind to allow for drift, so a normal vector diagram or computor should be used to calculate the effective head or tail-wind component.

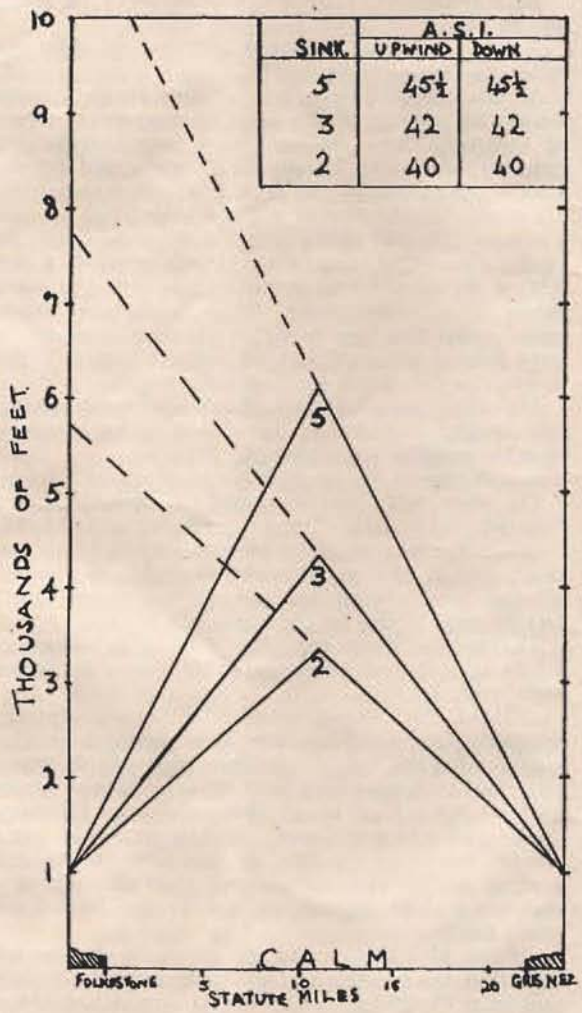
It is interesting to note that when Stephenson in his " Gull " crossed the Channel from Hawkinge to near Gris Nez on the 22nd April, 1939, in what was probably a 40 m.p.h. wind, he started at about 6,000 ft. and crossed the coast at 2,600 ft., and he encountered 10 ft./sec. sink immediately after leaving cloud for a short time, and then normal sink as far as five miles from the French coast, then slightly reduced

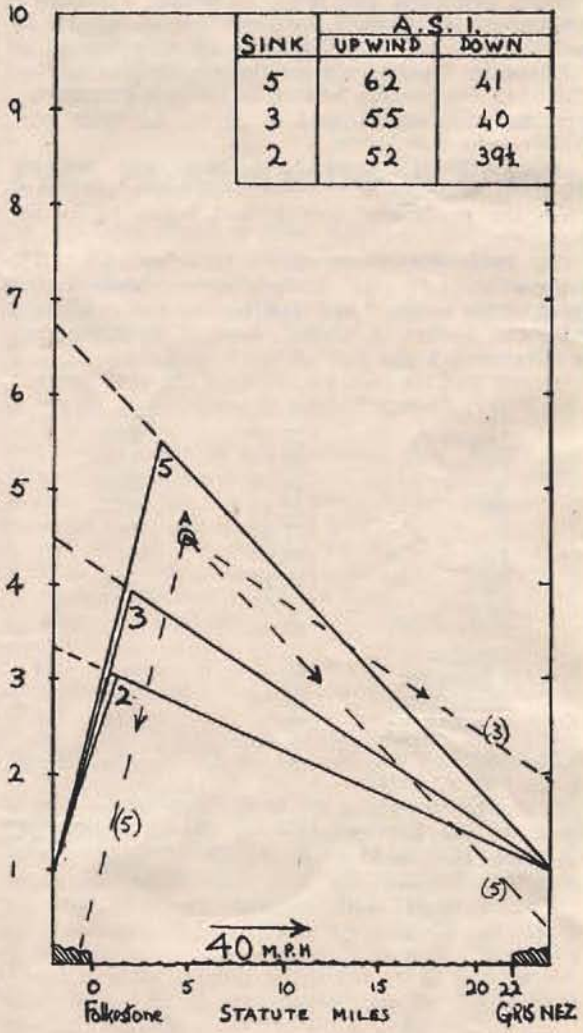
sink from there. From my own observations of Channel crossings in aeroplanes I would say that there is no reason to suppose that you might expect a general slight downcurrent other than what you normally find in the vicinity of clouds.

I have drawn two diagrams for Olympia aircraft, one for calm and the other for a forty m.p.h. tailwind. Let us suppose we are flying on such a day as the latter, and get carried out to sea while gaining height in cloud. At 4,500 ft. the lift is lost, and we come out of cloud and judge our distance from the English coast to be five miles. We plot our position on the diagram. We then look at the variometer and see the red ball at 5 ft./sec. The chart says that we are below safety height for 5 ft./sec. sink, so we hope for a decrease of sink, meanwhile drawing lines from our position (A) parallel to the 5 ft./sec. sink lines. We now see that without the extra height (1,000 ft.) we allowed we really would be in a mess, being unable to reach either shore. The extra thousand feet makes it just possible to reach the English coast, and a bit easier to reach the French, assuming the sink stayed at 5 ft./sec. all the way. We know, however that it is unlikely to remain as bad as that so we set course for Cap Gris Nez with a reasonably light heart. We can see from our position on the diagram that an average sink of about 4¼ ft./sec. would bring us two miles inland at 1,000 ft., and we reckon that our probable average sink will be more like 3 ft./sec., so we draw a line from A parallel to the 3 ft./sec. line, and find it crosses the coast at 2,200 ft.

I think that most pilots will agree that there is no worse time to become involved in mental arithmetic than when confronted with the problem of whether to go on or turn back. Each minute counts, and it is much quicker to glance at a diagram than to start dividing heights by sinking speeds, and errors are less likely to occur when all the calculations are done in the comfort of the home, with bags of time to check everything. You can make your safety allowances whatever you feel like.

Final words, E. & O.E., and Good Luck !





Gliding in France

The Rhone Aero-Club recorded 1,209 *hours of Soaring in* 1947.

By GUY BORGÉ

I AM glad to write about the Rhône Aéro-Club to-day, because it is my club and it has gained first place among all the French aero-clubs. It completed more than 1,200 hours of Soaring in 1947, a very high figure indeed with five sailplanes.

Founded in 1898, this Lyons Club is one of the oldest Aero-Clubs in the world, and it solemnizes its " fifty " during this year. But it began only in 1931 to enter the field of Soaring. Their best pilots then were M. Henri Lumière and M. Georges Burlaton. M. Lumière, a world known maker of cameras and films, was president of the Rhône Aéro-Club for many years. M. Burlaton is the President of the Soaring Section to-day.

Both presented the first La Banne d'Ordanche 1933 contests, where M. Lumiere flew 48 minutes in a "Wien," and M. Burlaton 18 minutes in a " Chapeaux " performance sailplane, built in Lyons. Till 1942, the Soaring Section had only " Primaries," and its members hopped at Bron, Loyettes and Villefranche sur Saône.

But, by 1946, it moved to the new Corbas airfield, 10 miles from Lyons; it received some sailplanes from the Air-Sports Service, and began to fly intensively.

In 1946, 421 hours, 2,580 launches, 11 " B " badges and 4 " C " badges were obtained. In 1947, 1,208 hours, 7,616 launches, 24 " B " badges, 24 " C " badges, 5 altitude legs, 4 duration legs, 4 distance legs and 3 silver " C " badges.

Here I give the monthly report of the 1947 results :

Month.	*Hours.*	*Launches.*
January ..	73.22	245
February ..	50.17	152
March ..	74.30	368
April ..	142.43	832
May ..	127.47	667
June ..	109.03	747
July ..	146.35	782
August ..	165.08	1.039
September ..	83.12	677
October ..	75.53	665
November ..	104.18	1.095
December ..	55.40	347
Total 1947 : ..	1,208.26	7.616

Badges " B " 24, " C " 24, silver " C " 3, altitude 5, distance 4, duration 4.

Statistics show that we have flown on 174 days, from the 4th January, 1947, to the 21st December. Of these 174 days, 44 (or 25 per cent) were extremely good for soaring, by the following repartition :

31	with	thermal	lift
6	,,	wave	,,
6	,,	slope	,,
1	,,	front	,,
44			

There were 61 flights longer than 1 hour, 23 climbs above the 5,000 feet level, 11 distance flights.

Best month was July, in spite of its anticyclonal conditions, with 8 very good days on 16 flown. During these 8 days, the maximum height reached by a sailplane above the airfield after a wind-launch was greater than 4,000 feet.

The Lyons Soaring records, broken in 1947, consist in :

Highest Altitude above the airfield : Brézun (26 years old). 8,250 feet in a aero-towed " Nord " 1300, by a wave.

Best Altitude gain : Brézun. 7,600 feet under a cumulus cloud.

Best Duration : Guinet (18 years old). 6 hours 40, by slope lift.

Longest Distance : Borgé (22 years old). 68 miles, by pure thermals.

As the monthly report and records indicate, some interesting sources of lift exist throughout the year at Corbas. There are plenty of pure thermals in Summer, shown by numerous buzzards and by the whirlwinds taking up the sand from the tarmac.

Corbas Airfield lies in a huge plain, but against a minute hill, 500 yards long and 90 feet high. We lately discovered that this hillock created a lift with a 30 miles North Wind and so obtained some Silver " C " Durations. Three sailplanes have once soared together here, but each pilot must be very careful to avoid risk of collision ; it is easier to get the five hours in thermals.

Wave Soaring with South Winds is very interesting, but deeply mysterious, because the 14 observed situations differ considerably.

Some typical wave flights :—

On the 16th January, 1947, Lafont flew the " Castel 301." He climbed to 5,263 feet for his " C " badge in a perfectly smooth ascent. Sky was clear, but a Moazagotl cloud formed and covered all the field. Wind was nil at the ground-level, but 35 miles strong in the upper air.

During the afternoon, the " C.800 " two-seater made also several climbs upwind above the 5,000 feet level.

On the 26th April, conditions were different ; with a lighter wind the lift zone occupied another place, more to South. Brézun took off at noon, but the lift disappeared at 2.52, and he was forced to land. An hour later, this capricious lift came back, and the sailplanes, wind-launched or aero-towed, remained in the air at 3,650 feet. The coming of the evening did not stop that activity, and some fires lighted at the ground-level gave pilots landing signals.

On the 26th May, at 6 a.m., the radio-sond ascent indicated the existence of up-currents to 6,500 feet, and from 10,000 feet to 11,850 feet into an isothermal air. Between 6,500 and 10,000 feet, the air was

unstable. Brézun showed these facts were right, by climbing to 6,500 feet in the smooth wave, and from 6,500 to 8,250 feet in a thermal. His flight in the " Nord 1300 " was timed 3 hours 52 minutes. Meantime, another young pilot, Cottard, flew 2 hours 38 minutes (with a 5,000 feet gain) in the " Castel 310." Mourier got his " C " badge by 1 hour 10 minutes in the " Emouchet." The " C.800 " two-seater made a 10 miles trip across the wind, climbed to 6,580 feet in a 6 ft./second current, and landed after 1 hour 46 minutes.

The Soaring Section of the Rhône Aéro-Club owns 7 sailplanes to-day: 2 " C.800 " two-seaters, 1 " Castel 301," 1 " Emouchet," 2 " Nord 1300 " and a " Castel 310," with a Ford winch.

But the Section, during 8 months, had only a " Morane 502 " plane (French-built Fieseler Storch with a 230 h.p. Salmson engine), and no winch. All the school flights were then given in the aero-towed " C.800." After several hours of dual, the pupil might take the " Castel 301 " for all at once his first solo, his first aero-tow in solo, and his " B " badge !

This new method produced the best results without any incident. We found that teaching by aero-tow launches is very good and improves the pilotage. The pupil has more time during his first solo to know his machine before landing. It is possible to fly with 2 members only. Cost of the operation is not greater than the wind-launches, because the 1,350 yards wires are very expensive to-day. Progress may be very fast.

I take the instance of a friend of mine, Jacques Brézun. He flew for the first time in September, 1946, the " C.800 " two-seater. After 19 flights of dual, he soloed the " Castel 301 " on the 17th November. On the 11th January, 1947, the " Morane 502 " brought him in a wave, and he got his " C " badge by 33 minutes.

He succeeded to the altitude leg on the 26th May, to the duration on the 6th July in thermals, to the distance on the 3rd August by going to Saint Vallier. Because he did not find any field, he landed on the sands of the Rhône River.

This example shows that it is possible in a flat site such as Corbas to go from the " ab initio " stage to the Silver " C " badge in less than a year. These Silver " C " flights are worth a great deal, since their owners have tried all sorts of flights, in thermals, waves, or slope lift. And our instructors want to get us airborne in any conditions. We have flown in the worst weathers, with strong gales or a very low ceiling.

On certain days, with Southern Winds, turbulence is so terrible that the towing rope is unable to endure shocks and breaks. Without straps, the pilot would be brought away from his machine; this event could be very unpleasant, for we have no parachutes.

In spite of these " any weather " methods, no incident occurred. The only crashes were a " Castel 301," overturned by a strong wind, and an " Emouchet " which landed between some trees. These good results are due to the merits of both our instructors, MM. Martinaud and Bornand. (The former flies with a wooden leg because he lost a leg during a sailplane accident in 1941 at La Montagne Noire). M. Bornand has more than 5,000 power hours, the Silver " C " and the Golden " C " altitude. It is a delight to watch him perform aerobatics in his " C.800," or land straight in the hangars. He tows the one-seaters behind a 65 h.p. Piper Cub with good results.

At Corbas, a launch costs 50 francs (1/2d.) for the more than 21 year pilots, in a one or two-seater, and to 5 minutes. After 5 minutes, each minute costs 5 francs; after 1 hour of flying these fares progressively decrease to encourage pupils to try for duration. The less than 21 years pilots pay 25 francs a launch, and 2 francs a minute after 5 minutes.

If one wishes to fly, he must be an active member of the Rhône Aéro-Club (300 francs a year), pass the medical test (75 francs), pay the Air Sports personal insurance (250 francs a year). These conditions are the same in all the French Aéro-clubs, for power or motorless flying. The Club pays third party insurance for each sailplane or plane.

Although 1947 has been a very good year for the Soaring Section of the Rhône Aéro-Club, 1948 must be better for celebrating its fifties. But we prefer to speak in SAILPLANE of our projects when they are accomplished.

1948 Performances in France

(a) Altitude flights at Saint Auban.

8th January. Mrs. Lafargue, launched at 1,318 feet, climbed to 17,600 feet. This 16,282 feet gain establishes an unofficial feminine world record because the barograph was not working. (Mrs. Lafargue and M. Lafargue form the " highest couple " in France).

Messrs. Rousselet and Girard gained 16,611 feet in a two-seater.

21st January. A feminine crew, Mrs. Mathé and Mrs. Gaudry made a 9,210 feet gain. (Mrs. Gaudry is the wife of the C.F.I. at Saint Auban, who at the same moment gained 15,460 feet).

16th March. On this day, 5 Golden " C " altitudes, 6 Silver " C " altitudes and 6 durations were achieved. M. Valette climbed to 13,815 feet in an " Air 100 " sailplane, and became the 10th French Gold " C " holder.

17th March. 3 Golden " C " altitudes and 5 Durations gained. F./Lt. Michaud climbed to 17,105 feet.

6th April. Elizabeth Boselli reached 18,092 feet above sea level, and beat her own World Record by a 15,790 feet gain.

The day of the 6th April had been forecast to Miss Boselli by the Meteorological Services in Paris, as the most favourable for a wave performance. Wind was very strong—50 miles/hour, and she started by a winch launch because it was impossible to try an aero-tow. Casting off at 658 feet, she climbed to 3,950 feet in the Penitents Slope lift. She then found a wave ascending current of 15 feet/second, and climbed to 15,790 feet during a 90 miles trip in the Saint Auban country.

(*Continued on next page*)

Sailplane was a " Nord 2000 Olympia."

9th April. M. Gaudry broke the French altitude record after a winch launch to 658 feet. He gained 21,217 feet in a " Nord 2000 ".

(b) Distance flights from the Paris area.

15th April. M. Mattern flew 188 miles during 5 hrs. 40 mins., in a " Mü 13 ", from Beynes to Nantes. This Golden " C " performance is very remarkable, because he is a 19 years' amateur pilot. M. Leder (Swiss), 145 miles in a " Nord 2000" from Beynes. M. Ledermann (Swiss), 109 miles from Beynes in a " Nord 2000 ".

The French government had no Swiss francs for attending the 1947 Samedan Contests, so the Swiss Aero Club loaned the currencies in exchange of the training at Beynes of several Swiss pilots.

16th April. M. Remande got his Gold " C " leg by a 6 hours 15 mins. flight in a " Nord 2000 ", from Saint Cyr to Nantes (208 miles).

23rd April. M. Ledermann, 112 miles in a " Weihe ".

24th April. M. Leder, 149 miles in a " Weihe ." M. Régnier, 152 miles in a " Mü 13 ". M. Rosset, 129 miles in a " Nord 2000 ".

25th April. M. Touzé, 74 miles in a " Castel 310 L ".

1st May. M. Pierre, 155 miles in a " Mü 13 ". (He is only 19 years old, and a great " hope " for French Soaring. He attended the second experimental camp at the Le Fayet Mont Blanc airfield in 1947 for high mountain current research).

Miss Choisnet and Mrs. Gasnier, 63 miles in a " Kranich ". (Mrs. Gasnier is the wife of the C.F.I. at the Beynes national centre).

3rd May. M. Rosset got a Golden " C " leg with a 190 miles trip, Beynes—Aubusson. Gasnier and Mazoyer, each in a " Weihe ", arrived at Limoges, (208 miles).

Messrs. Lepanset and Pariset beat the French two-seater distance record by flying also to Limoges.

The retrieving of the 3 sailplanes, the " Kranich " and the " Weihes " was made at the same time by a " Fieseler Storch ".

M. Nicaise flew a " Nord 2000 " from Saint Cyr, (177 miles).

A Letter to the Editor

Hans Haack, stud. mach. Stuttgart, 25 April, 1948
Stuttgart-N, Saumweg 15.

Dear Mr. Editor,

After an interruption of eight years we German glider pilots attempt, with these lines, to resume our connections with our fellow sportsmen all over the world, particularly in England.

We are a small group of German glider pilots, whose experience dates back to peace times, and who have preserved their love of gliding. We hope that you, Sir, as the editor of the journal " SAILPLANE AND GLIDER " have remained faithful to this fine sport and that you will have some minutes to spare for our letter.

To begin with, we shall give you a short account of our present situation. After the breakdown of the Nazi regime we Germans were forbidden any activity connected with aviation. Thus glider pilots, too, were condemned to give up flying. About a year ago, several clubs for the construction of glider models were licensed in the British and U.S. Occupation Zones, but according to a press notice we read the other day, these clubs were prohibited in the British Zone now.

We are only too well aware of the reasons for the prohibition enacted in 1945, and we well understand this measure, too. Meanwhile, three years have passed without bringing about an improvement of our situation. Nor has a peace treaty come about which, in our opinion, would mean the definite settlement of the aviation problem.

We hold that sports must remain sports free from all political or militaristic influences, as we could see in the peaceful contests of the youth of all the world at the Olympic Games of 1936 at Berlin as well as in the preceding years. We do hope that the same spirit will help the youth of all nations to be friends again in times to come.

In view of the strong prejudice existing to-day against a civil aviation in Germany, which regrettably also includes our glider sport besides air-transport and sporting aviation, we beg you to send us your view as to the following essential question that can only be answered by a real glider pilot: " In how far would it be dangerous if the German youth were allowed to resume gliding, and is it not this sport that helps to bridge the gaps between the nations much better than many other kinds of sport ? "

To-day there are only a few gliding fields left in Germany, such as on the Rhön, the Teck, and on the Hornberg, with their hangars and workshops partly spared from destruction, the others, if possible, are used for agriculture. The gliders were seized by the Occupation powers and, if they have not been sold or demolished in the meantime, they will hardly serve their purpose any more, having been locked up for three years without any maintenance.

Such, in short outlines, is the condition of our gliding fields. Far worse, however, is the general condition of our youth in these distressing times, as well as our daily troubles. To-day our foremost concern is to keep up the old team spirit and to restore our contact with the glider pilots in all the world. A new start from scratch would set us hoping for the support of true enthusiasts. We would particularly welcome foreign glider experts helping us with advice, so that we should never again lose our good reputation by unsportsmanlike interference from outside.

Hoping for an early answer,
We remain,
Sincerely yours,

EBERHARD EIDILAN, HANS RINNER, HANS HAACK,
ERICH BITOMSKY, WOLFGANG PILS,
BERNHARD KIRCKHOF.

THE KIRBY "PREFECT"

Slingsby Type 30A

IT has been felt for sometime that there is a need for an intermediate stage for a pilot between flying the "Cadet II" or "Tutor" and the very high performance "Gull IV".

Before the war Slingsby Sailplanes produced Grunau "Baby" Sailplanes under licence from Germany to fill this requirement.

The "Prefect" has been designed as a replacement for the "Baby" which has some shortcomings, particularly as the "Baby" design is now over 14 years' old and a good deal of progress has been made in that time.

The "Type 30A" has been designed as an advanced training sailplane. That is to include pilots up to Silver "C" Standard, for school and club flying, aero towing and cloud flying.

It is a machine designed to handle in an orthodox manner in flight, but to have no vicious characteristics.

The general flying characteristics of this machine are similar to those of the two-seater trainer ("Type 21B"). The visibility from the cockpit, position and slope of the front of the cockpit are designed to give the same position for the pilot in relation to the flight path of the machine.

It will therefore be an ideal machine for a pupil who has been trained up to "sailplane" standard on the two-seater.

Special attention has been given by the designer to robustness and also ease of maintenance. All moving parts in the control systems are mounted on self lubricating bearings and adequate inspectional facilities are provided. Interchangeability of all major components is provided—an important factor in a training unit—allowing spare parts to be fitted with a minimum of delay. A large proportion of the metal fittings are standard "Cadet" parts including the wheel and axle which is interchangeable with the "Cadet" and "Gull IV". As several hundred "Cadets" are in use at the moment, spare fittings will be readily available from "Cadet" stocks. A totally enclosed internal expanding wheel brake can be fitted as an extra.

By present day standards of both strength and handling requirements the "Baby" leaves much to be desired and from the firm's pre-war experience in dealing with Club maintenance and repairs is not economical owing to the type of construction used, especially the fuselage which was very vulnerable and liable to damage if main landing skids were broken.

The "Prefect" fuselage is built on the same principle as the very successful "Type 21B" fuselage, whilst the very novel wing construction represents a combination of strength and rigidity, giving a very light weight structure.

The wheeled undercarriage (from our experience on previous types) is a great asset, both in increasing the serviceabilty of the machine and in the ease and quickness of ground handling, whilst the incorporation of dive brakes ensures the safety of the machine and pilot by limiting the terminal velocity of the machine to 90% of the maximum permissible diving speed. The parachute stowage will accommodate all standard types of back-pack parachutes.

Cockpit layout has also considerably improved since the "Baby" was designed.

The "Prefect" cockpit is comparable with the other post-war designs of the firm, pilot comfort and disposition of controls having been given careful attention.

The open cockpit will be standard, but closed coupé cover can be supplied in addition or as an alternative.

The machine has a gliding angle of 1 in 22.5 and a sinking speed of well under 3 ft./sec. More emphasis has been put on obtaining stability in flight and good handling qualities, rather than a high performance.

A nose hook for aero towing and a belly hook for winch launching are standard.

The machine has been designed to meet the latest A.R.B. requirements in the semi-acrobatic category. Cloud flying and the following aerobatic manoevres will be permissible. Loops, stall turns and tight turns to 3½ G.

Another noteworthy feature is the fact that the machine will cater for a heavy pilot of 225 lb. down to a light pilot of 140 lb. without the addition of any ballast.

Provision has been made on the instrument panel for a full set of blind flying instruments.

It is estimated that the price for production machines will be approximately £425 (ex works).

ULTRA LIGHT AIRCRAFT ASSOCIATION

GROUP ACTIVITIES

Experimental Group, Elstree. After a long period of waiting, this Group has now obtained permission to use a Blister hangar on Elstree Aerodrome and members of the Group held their first meeting there this month (April). A work-bench, office table, wall cupboards and various tools, instruments and books have been supplied by various members and the Group expects to be comfortably settled in its new quarters with very little delay. Apart from the hangar itself, the Group has the use of two small rooms built on to the brick end-wall of the Blister. One of these will most likely be used as a workshop and the other as a flight office and general meeting room and the Group Committee is now making plans to collect the Taylor-Watkinson " Dingbat " single-seat ultra light aircraft which the Group has purchased. As soon as this aircraft has been moved to Elstree it will be overhauled by members of the Group and made ready for flight without delay. The aircraft is at present fitted with a 30 h.p. Carden-Ford engine but it is expected that this will be replaced by one of the batch of 37 h.p. J.A.P. engines now held by U.L.A.A.

Brookside Flying Group, Shoreham. This Group has now taken delivery of a Miles " Magister " which is to be used for training purposes and we understand that Group flying operations have already started at Shoreham airport. Early this year the Group was given verbal permission by the M.C.A. to use an abandoned hut and Blister hangar on the airport but, after members of the Group had started to re-decorate the hut, M.C.A. withdrew their permission as a result of a protest to the Ministry by the chairman of the flying club already established at Shoreham. However, after representations had been made to M.C.A.—both by the Group direct and by U.L.A.A. on the Group's behalf—permission has once more been given for the Group to move in. After an unfortunate delay, " season " landing cards have also now been issued in respect of the Group's aircraft so that the Brookside people are now ready to go ahead with their training.

Cardiff Ultra Light Aircraft Club. News of promising developments are now to hand from this Club, the Hon. Secretary of which reports that permission has now been obtained for the Club to use Pengam Moors (Cardiff) Airport for flying purposes. Accordingly the Club is now negotiating for the purchase of a Taylorcraft machine (40 h.p. Continental engine) for which two offers of free—(or very low cost) hangarage have been received by the Club. In addition, two members of the Club have put forward their names for approval as Group Inspectors under the U.L.A.A. voluntary inspection scheme.

Aerotec Research Group, Bristol. A summary of the activities of this Group during the period January 1st to March 17th this year has been received and makes very interesting reading. The report is, unfortunately, too long to reproduce in full in the Bulletin but we are greatly impressed by the very business-like way in which this Group conducts its affairs. Being primarily a design Group, the Aerotec members are carrying out a programme of work, which, we are certain, will eventually benefit the whole ultra light aircraft movement. A considerable amount of data on ultra light aircraft has been recorded and this will, we understand, eventually be made available to other U.L.A Groups which may need it. The Group has also co-operated with U.L.A.A.'s Design Sub-committee in connection with the Association's efforts to form an approved design team and we feel that their help in this direction will be extremely useful.

Apart from their more academic pursuits, members of the Aerotec Research Group are actively engaged on the design of their own ultra light aircraft, the " Sportsman " which was reviewed briefly in Bulletin No. 10, and in this connection the Group has made arrangements with the Low Speed Aerodynamics Research Association whereby the latter organisation will undertake the wind-tunnel testing of a scale model of the " Sportsman ". The final mock-up of the forward part of the fuselage of the " Sportsman " (including stub-wings) is also now taking shape in the Group's workshop and data gleaned from Section D of the A.R.B.'s Airworthiness requirements is to be used in the designing of the undercarriage test-rig. This is expected to influence greatly the structure of the aircraft in general and it is intended that the undercarriage and its attendant structure will enable the cockpit to withstand a much higher impact than has previously been the practice in aircraft design.

New Groups. Following on our report in last month's Bulletin of Groups affiliated to U.L.A.A., and of others which had been formed but had not yet affiliated and of those which were in process of formation, we are very glad to be able to report that the ultra light aircraft section of the Royal Military Academy Sandhurst Flying Club has now completed its affiliation and accordingly becomes U.L.A.A. Group No. 9. In addition we have been advised that yet another Group has been formed, this being known as the Bournemouth-Christchurch Ultra Light Aircraft Group under the chairmanship of Mr. A. C. Leith who is Works Engineer at Messrs. Airspeed Ltd., Christchurch, Hants. The Secretary of this latest Group is Mr. R. Haigh, The Vicarage, Sopley, Nr. Christchurch. Finally yet another Group is projected at Luton, Beds, and a meeting is to be held at the George Hotel, Luton, on the 26th May, at 7 p.m., for the purpose of launching this Group. The Provisional Organiser is Mr. A. H. Emden, A.R.Ae.S., 23, Hazelbury Crescent, Luton, Beds.

Summer Training Camp

The response to our announcement of a proposal to organise a series of flying training camps during the summer months has not been as large as we had expected although sufficient interest has been shown to convince us that adequate support will be forthcoming to make the project worth-while. However, before we can really go ahead with the scheme we want to hear from everybody who is attracted by the idea and so, in order to give a lead to those who

might still be hesitating, the following details may prove a useful guide :

(1). It is expected that dual and solo flying will be available at the camps at between 20/- and 25/- per hour and that up to 14 hours' flying could be put in by each member attending during a full 14-day period.

(2). The average inclusive figure quoted as what they would be prepared to spend for a full 14-day period (including flying) by those who have replied to date is in the region of £28. On the assumption that each 14-day period would be fully attended, and that a maximum of 14 hours' flying would be carried out by each member attending, we believe that we could offer training to " A " licence standard, plus a fortnight's pleasant holiday, for this figure.

(3). Of those who have replied to date, most seem in favour of the August-September period. From our own point of view, too, and having regard to the limited time at our disposal, it seems likely that, if held at all this year, the camps would have to take place during that period.

(4). So far as location is concerned, we have been offered facilities for a training camp at an aerodrome in Oxfordshire where suitable living accommodation would be available on the airfield itself. Those who may have held back up to now because of a fear of having to sleep under canvas need not do so any longer since the need to use tents will not now arise.

In view of these developments, we can now put our proposals in a more concrete form. We would, therefore, be glad to hear from all members who would like to attend for training to " A " licence standard at an aerodrome in Oxfordshire for a 14-day period any time during August and September. The cost would be between £25 and £30 inclusive although it would be reduced proportionately if less than 14 hours were carried out. Will all members (Individual as well as Group) who are interested please get in touch with the Hon. Secretary of U.L.A.A. immediately, stating the dates (Saturday to Saturday) between which they could attend ?

DESIGN SUPPLEMENT

(Contributed by G/Captain E. L. Mole, Chairman Design Sub-Committee).

.L.A. CATEGORY C. OF A.

1. Further developments have now taken place in the negotiations between the Air Registration Board and ourselves over a new C. of A. category for ultra light aircraft. A.R.B. have now published a working draft of the design requirements (less Performance and Handling Sections and engine tests) and copies of this draft are available for study by interested designers. These requirements, which apply to ultra lights subject to a stalling speed limitation of 40 m p.h., greatly simplify the stressing cases and procedure for obtaining design approval and will result in a considerable reduction in the cost of producing alrcraft. We hope that several U.L.A. designs will soon be approved on the basis of the new requirements so that working drawings will be available to Groups for home-construction of their aircraft.

AIRCRAFT DESIGN

2. **The Tipsy " Junior ".** We have heard from Mr. E. O. Tips, head of Avions Tipsy in Belgium, that the second prototype Tipsy " Junior ", which is fitted with a 37 h.p. Aeronca-J.A.P. engine lent to him by U.L.A.A. for trial, has now flown successfully and is promising. (These aircraft have since flown from Ostend to Dover—*Ed.*). It will be remembered that the first prototype " Junior " was fitted with a 62 h.p. Walter Mikron engine. These are the first post-war U.L.A. designs to fly and as soon as the C. of A. tests are over, we hope to arrange for one of these interesting aircraft to be demonstrated in this country.

3. **Bedson " Resurgam ".** One of our members, Mr. G. Don Bedson, has now completed the detail drawings of the U.L.A. design which he calls the " Resurgam " (I will fly again !). We were glad to meet him recently to discuss the design and study the drawings, which are completely professional. Mr. Bedson was connected with the design and development of the well-known Chilton monoplane and is, therefore, no novice at this work. He has already obtained a licence to purchase materials for the prototype which he proposes to build in the Dorking (Surrey) area as soon as he has obtained A.R.B. approval for the design and he would be interested to hear from any local enthusiasts who might care to assist.

4. The " Resurgam " is a thoroughly workmanlike low wing monoplane single-seater which has been designed for extreme simplicity of construction. It is built of wood with ply and fabric covering and, although intended for the 32 h.p. Ava two-stroke engine, it is suitable for the Aeronca-J.A.P. Details are as follows :—

Dimensions :—Span, 23 ft. ; Length, 17 ft. ; Wing area, 92 sq. ft. ; Empty weight, 360 lb. ; All-up weight, 650 lb. ; Wing loading, 7 lb./sq. ft ; Power loading, 17.5 lb./h.p. ; Fuel capacity, 15 galls.

Estimated Performance :—(37 h.p. Aeronca-J.A.P. engine.) Max. speed, 110 m.p h. ; Max. cruising speed, 98 m.p.h. ; Stalling speed, 42 m.p.h. ; Take-off run, 130 yds. ; Rate of climb, 720 ft./min. ; Range, 600 miles ; Endurance, 6 hours.

5. **The " Herald ".** We have received details of an interesting new U.L.A. design by Hants and Sussex Aviation Ltd., of Felpham, Sussex. This aircraft is to be known as the " Herald " and we understand from Mr. A. H. Hawes, Managing Director of the Company, that all detail drawings have been completed and A.R.B. design approval is to be obtained so that the aircraft can qualify for a C. of A. Construction of the first prototype is well in hand.

6. The " Herald " is a cantilever low wing, single-seat aircraft with a tricycle undercarriage and closed cockpit although an open version may be supplied. It is to be fitted with a 37 h.p. Aeronca-J.A.P. engine. The design has been made essentially with a view to ensuring robustness, safety and ease of flying, maximum speed being regarded as a secondary consideration. Production costs have been kept as low as possible by keeping the construction as simple as possible.

7. The fuselage and tail-surfaces are built of welded steel tube and light metal, while the wing is of wood. Fabric covering is specified throughout except for the wing tips and leading edges, which are of ply. The outer mainplanes can be folded for ease of storage or transport. Further details are as follows :—

Dimensions :—Span, 29 ft.; Length, 21 ft. 6ins.; Wing area, 140 sq./ft. (appx.); Empty weight, 581 lb.; Loaded weight, 800 lb.; Wing loading, 5.7 lb./sq. ft.; Power loading, 21.6 lb./h.p.; Fuel capacity, 6¼ galls.

Estimated Performance :—(37 h.p. Aeronca-J.A.P. engine). Max. speed, 95 m.p.h; Stalling speed, 36.4 m.p.h.; Rate of climb, 530 ft./min.; Service ceiling, 12,500 ft.; Take-off run, 157 yds.; Range, 155 miles.

8. Mr. Bedson's " Resurgam " and the Hants & Sussex Company's " Herald " are, apart from the Tipsy " Junior " and Slingsby " Motor-Tutor " (of which prototypes have already flown successfully), the most advanced of the various ultra light aircraft design projects under way and it will be interesting to see which of them flies first. We understand that Mr. Bedson is agreeable to complete sets of drawings of the " Resurgam " being sold to members of the Association once the prototype has obtained its C. of A., while the " Herald " will eventually be made available in kit form.

9. **The Britten U.L.A. Design.** Another of our members, Mr. F. R. J. Britten, in conjunction with a fellow student at the De Havilland Technical School, has begun the design of a practical-looking low wing single-seat U.L.A. These two designers are fortunate in having useful contacts with a well-known aircraft firm where the more difficult components of their prototype will be manufactured. If real enthusiasm counts for anything we shall expect to see these two make rapid progress with their interesting project and hope to be able to publish further details before long.

10. **L.A.C. " Heron ".** We have received from Mr. A. C. Leith copies of working drawings and instructions for building an ultra light aircraft known by the above name, which he proposes to construct with the aid of a Group he has formed in the Bournemouth-Christchurch area. The descriptive literature claims that this aircraft, which is of American origin, has ideal flying characteristics and that nearly 50 of them have been built and flown by amateurs in the U.S.

11. The " Heron " is a single-seater with a pylon-braced parasol wing, rather resembling the Aeronca, and is one of the simplest designs the writer has seen. The fuselage and control surfaces are of steel tube with bronze welded joints while the wing is of wooden construction and of constant section. Fabric covering is used throughout. A rigid undercarriage is fitted using 16 in. by 7 in. airwheels which are stated to have proved most satisfactory. The aircraft is designed for any type of engine of about 30 h.p. and its weight fully loaded is 625 lb. With a wing area of about 120 sq. ft., this gives a low wing loading of 5¼ lb./sq. ft.

12. In the writer's opinion this design will require a number of modifications and considerable refinement before being acceptable by the A.R.B. Moreover, the drawings are insufficiently detailed in their present state for amateur construction and they would probably be inadequate to satisfy normal inspectional requirements. Whilst wishing in every way to encourage such enthusiasm, we must strongly advise all amateur constructors to get A.R.B. approval for any designs and drawings before beginning construction in case major alterations are found necessary to qualify for a C. of A.

AUXILIARY-POWERED SAILPLANES

13. In recent Bulletins we have given notes on the functions of auxiliary-powered sailplanes and have described an idea put forward by Mr. Ince for a detachable " power egg " for use in ferrying sailplanes to their soaring sites. We were, therefore, most interested to receive a letter from Mr. R. Swinn, of Blackpool, who is in the process of fitting an inverted 350 c.c. engine as a pusher power unit on a sailplane. Mr. Swinn has decided that retraction of the engine into the fuselage for soaring purposes is too complicated and consequently he is building the entire power unit within a streamlined shell into which the engine will be retracted when not required. The shell is to be mounted on struts bolted to suitable attachment points to be built into the fuselage so that the complete power unit can be detached when not required. Mr. Swinn also has two 750 c.c. Douglas flat twin engines and is arranging to mount one of these on the same attachment points for the purpose of ferrying the aircraft from its home base to the gliding site. On arrival there, the 350 c.c. auxiliary power unit shell would be fitted in place of the larger engine and used in the normal way to gain height for soaring.

14. Whilst congratulating Mr. Swinn on his enterprise in this matter we must advise him that, before carrying out local experimental flights, he should apply for a special Permit to Fly from the Ministry of Civil Aviation. If, however, he intends to use the aircraft seriously on cross-country flights, it will be necessary for him to obtain A.R.B. design approval for the power plant and to have the sailplane's C. of A. endorsed accordingly.

SUGGESTED U.L.A. AEROCAR

15. We have received an interesting paper from Mr. J. R. Lawson supporting the development of an ultra light aerocar. He considers that the normal personal aircraft will remain an expensive luxury whilst confined to operation from airfields and that it can never command a market big enough to justify mass-production unless its high costs can be balanced by high utilisation. For this purpose he argues that it should be made suitable for a greater proportion of all journeys normally carried out, e.g., for short runs as well as long ones, and to do this, it needs to function both as an aircraft and as a car. In such a form he considers that it should appeal to a wider market than either as an aircraft or a car separately and might at the same time prove to be of great social benefit by enabling the population to disperse away from large towns.

16. Mr. Lawson suggests that the U.L.A. aerocar should have a streamlined car-type body, with either

detachable or folding wings. It should use the same engine both in the air and on the road and to do this the power unit would be mounted aft, driving a pusher propeller directly and the rear wheels by shaft with as little complication as possible through clutch and gearing. Its undercarriage should be on similar lines to car-type suspension but with adequate shock absorption to provide for landing loads.

17. The writer has frequently considered the possibilities of such an aerocar and has read with interest of an American design now being developed. An aerocar must, however, involve considerable weight penalty as an aircraft, with consequent reduction in performance, and it can hardly be as robust as a car for road work. It will, therefore, be neither a good aircraft nor a good car and its virtue will lie solely in the flexibility of its operation in two mediums.

18. One could imagine a body on the lines of the old two-seater Aero Morgan tri-car fitted with little air wheels, the engine and propeller being mounted aft and utilising chain drive to the rear wheel for lightness and cheapness. The wings and empennage would have to be easily detachable for storage at the airfield so as to avoid damage to the aerodynamic structure or control surfaces under road traffic conditions. Mr. Lawson suggests the use of a tail-less swept back wing and in this connection the " Baynes " wing might prove eminently suitable. This wing was designed during the war for " buttoning-on " to a tank with a view to towing it by air and a one-third scale model was successfully tested. We should be interested to have other views on Mr. Lawson's suggestion.

ENGINE DESIGN

" THE ULA " ENGINE

19. As recently announced, one of the best-known motor-cycle engine designers is interested in the U.L.A. field and has promised to produce an engine for us. As he still wishes to remain anonymous, we propose for the present to refer to this project as the " Ula " engine.

20. The designer has studied our primary design requirements of reliability, cheapness and simplicity and has decided upon a flat twin of 1,700 c.c. which will develop 40 h.p. at 3,000 r.p.m. but which could be rated at 50 h.p. if we could accept 3,500 r.p.m. The designer insists that, for simplicity and cheapness, an ungeared propeller drive is essential.

21. We have studied the preliminary design scheme of the " Ula " engine and this shows it to be robust and with certain ingenious features to give extreme simplicity and to reduce manufacturing costs. The engine should have excellent balance since the cylinders are directly opposed, without offset. The designer is negotiating with a suitable firm to produce a few prototype engines and hopes these may be ready for trial by us within a year. He considers there may be a considerable potential market both at home and overseas for a really reliable and cheap U.L.A. engine and we are certain that production of such an engine will do more than anything else to expand this market.

THE CROSS ENGINE

22. We have recently had a discussion with Mr. R. C. Cross (a member of U.L.A.A.) who is head of the Cross Manufacturing Co., Ltd., at Bath, and also the designer of the interesting Cross rotary valve. This valve, by permitting a symmetrical cylinder head and by the avoidance of hot spots (such as occur in the case of poppet exhaust valves) enables extremely high compression ratios to be used without risk of detonation. This results in much increased volumetric and thermal efficiency which in turn give rise to greater power and fuel economy. The principle has been extensively tried out and proved on experimental motor-cycle engines and is now being applied in other fields. It is of interest to note that a compression ratio of 11 : 1 has been used successfully with Pool petrol !

23. Mr. Cross is interested in the U.L.A. engine problem and, as a result of our discussion, has produced a preliminary design of which we have now received the G.A. drawing for study. This shows Mr. Cross's engine to be a three-cylinder radial designed with a view to simplicity of production and to give a reasonably smooth torque. The engine, which will have a capacity of 1,500 c.c., is very compact and it is proposed that both a geared and an ungeared version should be produced, The ungeared engine would produce a maximum of 45 h.p. at 3,000 r.p.m. or, in a racing version, 55 h.p. at 3,000 r.p.m. The weight of the ungeared model would be approximately 140 lb. The geared version, running at 4,000 r.p.m., would produce 60 h.p. normally or 74 h.p. in a racing version and would weigh approximately 150 lb. Fuel consumption at cruising revs., would be approximately 1.6 gallons per hour. Subsequent production of the Cross engine will depend upon a development order and on the market outlook.

SUGGESTED HIGH-SPEED DIESEL U.L.A. ENGINE

24. A letter from our member, Mr. Scott Mackirdy contains the suggestion that the type of high speed Diesel two-stroke engines as used in model aircraft might be developed in a larger size for U.L.A. use, the advantages being extreme simplicity and lightness. He admits that at present these engines use a special ether mixture fuel but he thought that a less extravagant fuel might be found which would prove suitable.

25. This is certainly an interesting idea but the writer doubts if it would work. These little model aircraft engines owe their high power/weight ratio to their extremely high operating speeds which, in the case of larger engines having larger reciprocating parts, are less easily obtained. Moreover gearing would be required which would increase the cost and complication. Larger pistons introduce heat dissipation problems and a Diesel two-stroke big enough for U.L.A. purposes would probably be most difficult to cool adequately. In larger sizes, too, the Diesel principle involves very heavy bearing loads which tend towards a heavy, rough running engine not at all suitable for our requirements. The extreme simplicity is, however, certainly attractive and the writer would be interested to receive other views on the subject.

NEWS FROM THE CLUBS

MIDLAND GLIDING CLUB

April 1948

April 3rd. Wind West 30 m.p.h. gusting, 5/10 cumulus with base averaging 2,000 feet. Six members were present and all flew. Horrell recorded the best height of the day at 3,100 feet above the top of the Mynd. Thermals were scattered owing to the strength of wind, were small in area and ceased early.

April 4th. After passage of a cold front in the early morning which left 10/10 stratus at hill top level the wind became westerly 25 m.p.h. with 5/10 cu. at 2,000 feet, with occasional squalls. All members present flew from bungy launches including the ground engineer and two passengers. At 1900 hours, flying was stopped by a large squall appearing immediately up-wind. Within two minutes of its arrival the landing ground and hangar were in cloud with visibility of 40 yards, providing a warning for the intrepid spirits who advocate "flying through anything". The whole ridge remained covered until a little before dusk.

April 11th. Variable amounts of cumulus at about 4,000 feet. Winch launching. Best flight by Healey who contacted lift over hangar at 400 feet, and climbed to 3,800 feet. At this height he was able to cruise comfortably over the whole length and breadth of the Mynd, with a circle over Church Stretton for good measure. He stated that lift seemed to be practically solid above 2,500 feet.

April 18th. Wind South-west 5-12 m.p.h., very variable. Anticyclonic conditions with much haze and cloud, though cloud cleared during day. Three soaring flights and nine circuits made from winch launches. Bowdler qualified for his "A" and "B".

April 24th. Wind Northerly, 5-10 m.p.h. Good cumulus development at first, then clouded over due to excessive convection. Moderate cu. developed again in afternoon. Only five members present most of the day. Only soaring flights were made by Wingfield who reached 1,600 feet in a 27 minute flight in the Club "Olympia" and Ince who flew for 8 minutes reaching 1,000 feet in "Gracias", the Club's veteran Kite.

April 25th. Wind North-easterly 15-20 m.p.h. 5/10 to 8/10 cumulus at some 4,500 feet. There was probably good thermal activity but for some reason only two flights connected. Wingfield in Club "Olympia", and Thwaite with pupil in two-seater. Nineteen winch launches were made during the day, the highest release being at 1,050 feet with comparatively short cable in use. This day's activities brought home the need for really suitable winch cables which seem to be unobtainable at present. After a series of breaks the long light cable that was in use on the Ford V-8 winch was changed; the replacement was amply strong but was much heavier than it need have been. The Club would be grateful for information about possible sources of supply of really good cable for winching—something strong and thoroughly flexible but not excessively heavy.

May 1948

May 1st. "Silver Tutor", now back after C. of A. inspection was rigged and flight tested, but there was no other flying.

May 2nd. Wind north at first and then N.W., unstable air. Hill soaring, in the ordinary sense of the word, could not be expected with the wind so far round, but it was discovered that the ridge was soarable whenever the sun was unobscured. Launches were at first by winch and then by bungy.

May 5th. Wind west 25 m.p.h. 5/10 cumulus at 3,000 feet. Saunders and Teddy Proll (Ground Engineer) flew wherever they wished over the whole area under near perfect conditions.

May 8th. Wind east 15 m.p.h. 8/10 cumulus at 4,000 feet, with 10/10 medium cloud. Winching in progress, but no one contacted useable lift.

May 9th. Wind east 20 m.p.h. 5/10 cumulus at 4,000 feet. Thermals were going up over the winch, and from wind shadows in the gullies. Testar took the "T.21" with passenger to 3,900 feet, with a rate of climb of from 2 to 15 feet per second.

May 13th. One flight of 25 minutes by Wingfield was the only activity.

May 15th. Wind east 25 m.p.h. Cloudless. This was the first day of the nine days Whit Week camp, and members of the British Olympic Team who had come to put in some practice flying included Philip Wills, Kit Nicholson and Charles Wingfield. From winch launches Wills did 27 minutes, Wingfield 27 minutes and Nicholson 16 minutes over the east slope in lift that was largely of thermal origin. The aircraft of other pilots had insufficient penetration to reach the area of lift from the release point owing to the enforced positioning of the winch well back on the top of the hill.

May 16th. Wind ENE. 20 m.p.h. Very stable air. Everyone went up, round, and down, except Wingfield who soared for 20 minutes.

May 17th. Wind east 25 m.p.h. Still anticyclonic and stable, but those with enough penetration to clear the gullies soared from the east slope. Winching was done from a very secret spot much nearer the east slope, which, for certain legal and political reasons, is best left unnamed. Wills did 1 hour 50 minutes, getting lift at 20 feet per second after release, then plenty of ups over the south side of all eastern gullies. When once well away there was lift over the whole of the Mynd. Nicholson in "Gull IV" did 28 minutes. Unfortunately conditions had deteriorated by the time the club fleet arrived at the launching point.

May 19th. Wind east 12-15 m.p.h. Inversion at 2,300 feet. The first ever aero tow launches were made from the Mynd, but no one contacted. Seven winch launches were made from the "secret site" with almost the same results. The best height recorded was 1,700 feet, thought to be due to a roller effect from the long gully just to the north of the clubground. Smith of the Midland Club cruised

round and round for some time and even climbed a little, weaving a vague and indeterminate pattern. When questioned on these tactics, he stated that he didn't circle because he didn't think it was necessary !

May 21st. Wind light and variable, cloudless. " T.21 " with Testar and Allan after a poor launch got a wind shadow thermal and climbed and climbed to 3,000 feet almost without drift. Tops of thermals got higher during the afternoon, and eventually the " T.21 " reached 4,700 feet, staying up for 2 hours 10 minutes. Wingfield flew an hour later and stayed up for two hours with a best height of 4,000 feet.

May 22nd. Wind became westerly 15 m.p.h. after promising vaguely to do so all morning. Best height of day was recorded by Maufe in the " Silver Tutor ". All aircraft flew until mid-afternoon when wind petered out again, by which time a total of 20 hours 15 minutes had been chalked up.

May 23rd. Rain, sleet and poor visibility made flying impossible for the last day of the Whit Week camp.

May 24th. Wind West 15 m.p.h. 5/10 cumulus, and copy book conditions. Aldridge and Saunders unofficially continued the camp, but lots of additional hard work was occasioned by Saunders landing Espin Hardwick's " Petrel " some six miles up wind after a spell of cloud flying.

May 29th. Rain and poor visibility—no flying.

May 30th. Wind too far south for the ridge to be soarable, thermals masked by approaching warm front. Wingfield soared for 16 minutes, and then the club devoted itself to the first post-war ab initio training that has been done other than by the dual instruction method. Allan was given a series of airborne slides and low hops in the cream " Tutor ".

During the month a total of 51 hours' flying was done.

LONDON GLIDING CLUB

April. The west wind was not quite so persistent this month, but instability was more frequent with the result that, while flying time shows a decrease, no less than 590 miles of cross country flying was chalked up. This included no less than three Silver " C " distance flights by Cocheme, Lee and Anson. The latter covered the remarkable distance of 118 miles in Red " Olympia " on his first cross country flight, maintaining a ground speed of about 40 m.p.h. He started with an aero tow at Luton Airport and passed over the club at a great height shortly afterwards, disappearing south westwards to make the greatest distance we have so far recorded in that direction. Lee also picked an unusual route for his Silver " C " on the previous day, when he flew to Farnborough, which is S.S.W. of Dunstable. Unlike Anson he had very little help in the form of tail wind, as is evident from the fact that Buckley and Hiscox, who departed about the same time as Lee, landed at White Waltham and W. Malling respectively, and all are convinced they were flying down-wind !

The following table shows what everybody did :—

Date.		*Pilot.*	*Landing Place.*	*Distance.*	*Remarks.*
April	3	Cocheme	Stanstead	35 miles	Silver " C " distance.
,,	3	Hurry	Little Haddam	28 ,,	
,,	5	Cocheme	Ilford	35 ,,	
,,	8	Cocheme	Cold Norton	60 ,,	9,000 ft. in cloud and iced up.
,,	11	Hiscox	Nr. Trowbridge	90 ,,	Aero tow at Luton Airport.
,,	16	Cocheme	South of Swindon	62 ,,	Aero tow at Luton Airport.
,,	18	Hiscox	Wyton Huntingdon	35 ,,	Aero tow at Luton Airport.
,,	24	Lee	Farnborough	42 ,,	Silver " C " height and distance.
,,	24	Hiscox	W. Malling	55 ,,	
,,	24	Buckley	White Waltham	30 ,,	Aero tow at Luton Airport.
,,	25	Anson	Winterborne Abbas	118 ,,	Aero tow at Luton Airport ; Silver " C " distance.
			Total	590	

Cadman carried out his Silver " C " duration test on April 5th, while two members of the R.A. Aero Club and another of the C.O.A. Gliding Club put in their five hours on machines which their Clubs brought to Dunstable for that purpose. Two " C " certificates were taken during the month, Roe on the 26th and Erdman on the 27th. Sands and James both took their " B's " on the 18th and " A's " were taken by Pat Foster on the 11th, Mary Greaves on the 19th and Giltrow on the 24th.

This is where we lower the flags and hoist a few blacks. Our brand new " Grunau," after less than a month's service, looks as though it has been dragged through a hedge backwards, which in fact it was, on no less than three occasions, and *all* on one day, April 25th, when three pilots demonstrated how not to approach in a strong N.E. wind. We have a new satellite field, the Zebra paddock at Whipsnade, which can now take its place on the list beside the " met field " and the golf course !

The first committee meeting this month saw Dudley Hiscox re-elected to the chair and Cyril Ruffle elected vice-chairman. Hugh Wheatcroft was appointed to the post of full time professional instructor, and Carter was co-opted on to the committee as hon. assistant secretary. The other members of the committee are now Wright, Bolton, Lee, Ivenoff, Robinson, Arnold and Ellis. Both Wheatcroft and Carter will require the assistance and co-operation of all members in the performance of their extremely arduous and unenviable tasks.

Summary of Flying for April

Number of launches, 577.
Hours flown, 183.
Certificates gained, "A"—3, "B"—2, "C"—2.

Silver "C"	duration	1
,,	distance	3
,,	height	2

PORTSMOUTH GLIDING CLUB

Our official mane is now "Portsmouth Aero Club Gliding Section" and we have full use of the Aero Club Amenities—including the bar, of course!

We have applied for associate membership of the B.G.A.

We are getting organised for a recruiting campaign, and have had very promising results from our first efforts. The "Dagling" has been used for a great number of Training Flights, so a number of very keen types will soon be looking for something more ambitious to fly. Our "Grunau Baby" is coming along well and we hope to have it in use by the Summer.

The Secretary is Mr. R. F. Evelyn, who may be contacted c/o Gliding Section, The Airport, Portsmouth, or at his private address, 52, Evelegh Road, Farlington, Portsmouth. He will be very glad to hear from enthusiasts elsewhere if they happen to want the co-operation of our Club in any matter except the lending of money to them!

Sunday, 11th April. Fripp and Parslow took their "Ventura" to Lychpole Hill and Parslow was auto bunjyed into a light easterly wind. Thermals were very weak and petered out altogether after the first hour. At times the breeze almost faded away completely and Parslow was forced to hill-scrape for some time. However, at the end of five hours he was still in the air and landed beside the trailer five minutes later. Stan Sproule came over from Shoreham in his "Aeronca" and kept Bert company for some time before pushing off back to Portsmouth Airport.

Meanwhile training was carried on at the Airport and good progress was made by Davis, Hillyer, Sullivan, Small and Jefferies, with Dollery in charge.

Sunday, 18th April. A fine training day with an occasional circuit put in by Parslow and Fripp on their "Ventura" between bouts of instructing. Hughes got his "A" with a good steady flight and Davis, who was passed out for circuits in the afternoon, qualified for his "B" with a well flown figure eight circuit. Later in the evening Ron Clear was given an aero tow in the "Ventura" and put up an aerobatic display that impresesd the many power types present.

We are trying to obtain permission to use Bow Hill near Chichester and if we are successful we shall have an excellent Easterly to North Easterly Slope and a North West slope within easy reach of the Airport.

Lychpole Hill, the scene of our two five-hour duration flights, is a site full of interesting possibilities. Although only 200-250 feet high, and blanketed by a hill about a mile up wind the leeward side of this obstacle gives rise to very strong consistent thermals.

The "Grunau Baby" is coming on well in the Club Workshop; the fuselage is completely skinned, all metal fittings, tailplane, elevator, rudder, both main spars and most ribs are finished and we hope to have her flying before the end of the summer.

Saturday, 24th April. The day showed promise with cumulus development starting up early and the "Ventura" was prepared for an attempt at Silver "C" height. Distance was out of the question as the wind was blowing strongly from the North at altitude. The winch was used on the first four attempts, the cable breaking on both of Fripp's launches. Parslow managed 44 minutes from his two flights but it was obvious that to reach cloud base aerotowing would have to be given. After lunch Ron Clear was aerotowed to 3,000 feet in the "Scud III" using our new manilla rope. Fripp followed immediately after and had a less pleasant time on the steel cable before releasing at 2,200 feet.

Clear flew upwind to Hambledon, 7 miles away, climbing in excess of 6,000 feet on the way and landed back at Portsmouth Airport after 1¾ hours. Fripp was carrying a barograph and qualified for his Silver "C" altitude with 6,450 feet. He flew crosswind to Fishbourne, 10 miles away and reached cloud base several times in pleasant smooth lift, but on each occasion the variometer slowly sank back to zero as the base was entered. He returned to the airport at high speed and landed beside the "Dagling" squad after 2 hours 10 minutes in the air.

Sunday, 25th April. As a strong north wind was blowing the "Ventura" was taken to Kithurst Hill and Bert Parslow was given a bunjy launch at 2.25. Thermals were small and fierce and very difficult to keep in, but eventually he got his teeth into a good 'un that took him up to 4,400 feet, thus qualifying for his Silver "C" height. He flew over Arundel and admired the Castle, paid a visit to Littlehampton and finally, feeling peckish, landed in a field 150 yards from Ken Fripp's home at 4 o'clock—just in time for tea.

Saturday, 1st May. Ken Fripp was aerotowed in the "Ventura" with the intention of going on a cross-country flight. Very shortly after releasing he encountered a strong down draught which brought him down to 700 feet. He landed in the grounds of Aldsworth Manor Racton, seven miles away.

Sunday, 2nd May. We carried out 45 training flights at the Airport.

Our "Primary" certainly earns its keep, much to the joy of "Dolly" Dollery, whose especial pride it is. Parslow and Fripp took their "Ventura" to Kithurst Hill, where they rigged and flew without any outside help. They explored several miles of the hills which hadn't been flown over before, and between them put in over four hours.

CAMBRIDGE UNIVERSITY GLIDING CLUB
CLUB NOTICES

The soaring season has truly opened with a swing here. You will already have heard of the exploits of Julian Pringle at Malvern, and of his subsequent flight home from Malvern to Cambridge over Easter—a flight which ranks among the better of those credited to the "Olympia". This machine is much in demand now, and on any day of decent lapse rate, a would be "Olympian" can reckon on 10 or more rivals.

Among the new aspirants to this machine is Jimmy Grantham, who on April 16th, flew some 20 miles

West to Abbotsley. On the 19th he had an aero tow and a pleasant glide to earth and Blanchard and Edwards repeated this pleasant but expensive performance. Jimmy was persuaded to have another go, by offers to contribute towards the cost if the tow was a failure. On seeing Jimmy descend steadily, would be contributors were on the point of taking to their heels, when at 600 feet Jimmy smelt lift and followed it into cloud for the first time in his life. He struggled up to 6,000 feet within the cloud, (using air brakes with great dexterity during moments of confusion) and flitted to and from lesser cumuli until they all dispersed and caused him to land on Bedford Golf course--where he cried " fore " as he whipped on air brakes. Though getting his silver " C " height, the 30 miles was not sufficient for his distance qualification. The Chief Constable of Bedford perceiving a flying machine without propeller at low altitude, sent one of his stalwarts to obtain a few particulars—which were supplied.

Mr. and Mrs. John Pringle have presented the Club with a fine pewter tankard of a good pint capacity, to be presented to the member to make the 1st cross-country of the year, and to be handed on as the distance is increased by others. The member holding the vessel at the end of the academic year is to have his name engraved thereon. It is of a design to be held with the left hand only, while the right is used to effect control in the rolling and pitching planes as is proper. By his flight to Bedford, Grantham has achieved the distinction of being the first to hold the tankard—and imbibe therefrom.

During the period March 14th—23rd, the Club held a very successful camp at the Long Mynd. The major movements of the air masses could not have been more favourable for the sport, although minor movements were responsible for overturning and wrecking grounded " Tutor " with the pilot strapped in.

During the 7 soaring days no fewer than 70 flying hours were logged, amongst which were five hour flights by M. Gee, Chris. Stafforth, Jimmy Grantham, and David Rich. It was to be noted that these duration fiends, found it more comfortable to consume their evening beer standing on the day of their respective flights.

We wish to thank the Midland Club for their hospitality, and David Rich who as a member of both Clubs was able to give our members dual in the " T.21 ".

There was an unexpected cross-country flight on Saturday, April 24th, when Gordon Bell in the " Cambridge " had his first aero-tow. He was due to land at Bourne but shortly after his arrival there he was seen to stooge off upwind and was soon lost to sight. He landed at Oarington (6½ miles) after having flown down a considerable decline at constant alti meter reading before realising his ture height. He stepped out of the machine at 540 feet, and waited the arrival of Cleminson by " Tiger" to tow him back to Bourne.

David Rich gave a fine display of aerobatics in the " Olympia " on the occasion of Marshall'sOpen Day on May 2nd. Loops, spins, and rolls were among his exhibiys as he descended fron 3,000 fete.

Steps are being taken to institute some form of Inter-Varsity competition between Imperial College, London, and ourselves. If any other academic institution possesses a club we would be pleased to hear from them. May this appeal stimulate the " Other Place " into a desire for thermal chasing, and may the days of " Gliding Blues " not be far distant.

DERBYSHIRE AND LANCASHIRE GLIDING CLUB

Club Notes for April

Saturday 3rd. Wind West 15 m.p.h.

A good wind and a clear sky enabled us to put in over 14 hours soaring, half of which was in Club machines. Maximum height was not more than 1,500 but the surprising feature of the day was the manner in which the " Cadet " kept up with the other machines and maintained a steady 900 feet throughout the afternoon and evening. Derek Roper took full advantage of the conditions and made sure of his " C " Certificate with a 15 minute flight which at times reached 1,000 feet. Bungy Baker, hastily brought from Calver also took his " C " with a flight of 11 minutes. The " Tutor " was kept busy, Robin Dolan having an hour and Margaret Swale 40 minutes. Three pilots flew the " G.B. " and six pilots in " Olympias " shared 7 hours, 41 minutes between them.

Totals, 23 launches, 14 hours, 38 minutes.

Sunday 4th. Wind West 15 m.p.h.

In the morning one of the new " S.G. 38's " was rigged and tested, first with a test hop and then with a circuit. In the evening, when conditions had improved, Stan Armstrong took it over the edge and kept it there for five minutes. There was something faintly embarassing in the sight of the open primary soaring along the edge with the pilot indecently exposed on the front. Nothing improper, but not quite the thing, perhaps.

Roper had two more flights in the " Cadet " totalling 70 minutes and Jack Lello took his " C " with a flight of 15 minutes. Five members had just over 2 hours in the " Tutor " and the two-seater also did 2 hours. Nine pilots flew " Olympias " for 6 hours, 40 minutes in all.

Totals, 26 launches, 13 hours, 9 minutes.

1 " C " Certificate.

Saturday 10th. Wind South 5 m.p.h.

A dozen members of the Leicester Club arrived with an " Olympia " and a " G.B." As one might expect, the weather was unsuitable for anything but circuits. However, it was a pleasure to see some strange faces at Camphill. Armstrong in the " T.21 " was launched straight into a good thermal and went up to 2,000 feet. Betty Gay of the Leicester Club was his passenger and so had some consolation for her repeated attempts at the " C " test in conditions which were not quite good enough. The two-seater managed a few delayed descents of 15 minutes each and P. Russel of Leicester is believed to have managed to take his " C " in Jack Rice's " Olympia "

Total, 30 launches, 3 hours, 58 minutes.

1 " C " Certificate (Leicester Gliding Club.)

Sunday 11th. Wind South 5 m.p.h.

The weather was unrelenting and Jack Rice and his crew had a few circuits then packed up and went home. We hope they will pay us another visit and have better luck with the weather.

Training started with a rush and ab initios appeared from all over the place. The slider was brought out and four pupils graduated to the EON Primary. There were only 14 flights in the primary but they were quite sufficient to show that the two machines we have bought are valuable additions to our training fleet. There is an air of quality in the finish and handling of these machines that one might almost say is wasted in a primary machine. The controls are beautifully smooth and light and the elevator lacks that bite which is so often the undoing of pupils in very early training.

Roger Dickson caught a thermal in the " Kite " and went to over 4,000 feet but apart from that there was no excitement of any kind.

Totals, 82 launches, 4 hours, 6 minutes.

Sunday 18th. Wind W.S.W. 12 m.p.h.

Again the main interest of the day was primary instruction. After a few pulls across in the " Penguin " as a final check, the " EON Primary " was brought out and some good progress was made.

In the " Kadet " J. W. Smith completed his " B " tests with a circuit. The " Kite " and the " Tutor " also three " Olympias " did circuits. Jefferson in the " Kite " managed 31 minutes by the aid of a thermal.

Totals 70 launches, 3 hours.

Saturday 24th. Wind North West 10 m.p.h.

For once we made an early start. Although the wind was rather light, Fred. Coleman in his " Olympia " and Scholield in the " Kite " were away before 2 p.m. and had 31 and 22 minutes respectively. George Thompson was next in the " Kite ". After half an hour the conditions improved and George took the " Kite " to 3,000 feet. From then on, conditions were excellent and soon half a dozen machines were between 2,000 and 3,000 feet. For the second time this month, the " Cadet " held 1,000 feet. Geoff Russell had 36 minutes to obtain his " C ". Altogether, it was a most enjoyable day. The only regret was that the two-seater was out of action with a broken tail skid.

Totals 23 launches, 25 hours, 21 minutes.

1 " C " Certificate.

Sunday 25th. Wind N.N.E. 10-15 m.p.h.

At 6 a.m. we thought we were going to have another day like yesterday, a whole day of it. However the wind was North East instead of North West. The Club " G.B. " and the red " Olympia " were taken to Castleton and launched off Siggate. Gerry Smith was first off and he and his partners put in nearly five hours between them, reaching 4,000 feet and practising a little blind flying into the bargain. Harry Midwood, Phil Leech, Fred Breeze and Jim Lawless flew the " G.B. " The red " Olympia ", variously known as Kinderscout and Bloody Mary, was eventually flown home from Siggate and the " G.B. " brought back by trailer.

At Camphill we had a quiet day circuiting the " Tutor " and one or two " Olympias ". George Thompson managed 20 minutes in an " Olympia " but that was about all. In the evening the "EON Primary " came out and five trainees had two or three launches each.

Totals 36 launches, 10 hours 8 minutes.

Grousing is fashionable, but it would be difficult to find fault with the weather this April. There has been plenty for everyone. The visit to Siggate was as successful and enjoyable as it always is and it was through lack of suitable towing cars that only two machines went. As it was, one towing car had to do duty for both machines.

Totals for the month 290 launches, 74 hours, 23 minutes. 5 " C " Certificates. 1 " B " Certificate.

LUNEBURG GLIDING CLUB B.A.F.O.

We recommenced gliding on the 4th April after three months of hard work on overhauling gliders and equipment. All the gliders have had a complete overhaul, together with the winches and all other ground equipment. The English Wilde Balloon Winch has been fitted with an automatic feed and guillotine and gives smooth launches of over 1,000 feet using 3,000 feet of cable. Its performance and reliability is on par with the specially designed German winch.

During the twelve flying days of April, thermal activity has been quite reasonable and 735 launches were carried out which gave us a total flying time of 57 hours. Cpl. Hatch completed the first cross-country flight of the club this season by flying to Itzehoe on the 18th April in a " Grunau Baby ". He covered a distance of 62 miles and reached a height of 7,100 feet, thus qualifying for Silver " C " distance and height.

S./Ldr. Pelling and F./Sgt. Tanner obtained their Silver " C " height on 25th April by climbing to 6,200 feet and 5,200 feet respectively, both being in " Grunau Baby's ".

On 10th April, Sgt. Walker and Sgt. Basham took the " Kranich " up for two hours and did about 30 minutes' cloud flying practice.

On 18th April, Sgt. Walker with a passenger in the " Kranich " climbed to 7,370 feet with a 9 feet per second lift at that height and not having yet reached cloud base, his passenger who became air-sick requested that he be placed on terra-firma as quickly as possible.

Good progress has been shown by new members of the Club at their primary training and, the keenness shown has been outstanding amongst these pupils. A good club spirit prevails and this season should produce some really first-class sailplane pilots.

14 " A " Certificates, 8 " B " Certificates, and 2 " C " Certificates have been gained by new members this month.

THE BRISTOL GLIDING CLUB

The arrival of more favourable weather conditions and also the fact that The Petroleum Office has had to succumb to the barrage of Members petrol Application Forms, has permitted far greater activity at our site of Lulsgate aerodrome. Furthermore the affiliation of the Somerset Gliding Club (who unfortunately have lost their site at Bridgwater) with the Bristol Club has been to our mutual advantage and consequently permitted operation on a large scale. The aircraft

consist of 4 " Cadets ", 1 " S.G.38 ", 1 " Tutor ", 1 " Grunau Baby ", and 4 " Olympias ". Two of the " Olympias " are privately owned and one is at present on charge to our Test and Research Group.

It is now a frequent occurrence to have aero-tows, two winch lines and two auto-tow lines operating at the same time and consequently the flying hours and the launches are steadily mounting. On one occasion there were 111 launches in 24 hours and on another 55 launches produced 10 hours 55 minutes flying. Credit is due to the Instructors, of whom no less than eight have received their B.G.A. Instructor's Certificate, for the smooth and safe manner in which the flying programme is carried out.

There have been many noteworthy performances in recent weeks, but a few which are of particular interest are :—A flight of 20 minutes in a " Cadet " by John Cochrane from a winch launch. 13 year old Michael Hinton's flight of 67 minutes in the " Grunau ", and two very fine performances by Keith Turner and Rex Young of 2¾ hours and 1½ hours respectively in " Olympia " sailplanes.

The decision taken in conjunction with the Midland Club to operate our " Grunau " from the Mynd during the winter months proved to be very profitable, and a total of just under 50 hours flying was completed before it returned to Lulsgate. The most outstanding performance was during the week-end 20-21st March, when the truly amazing total of 19 hours 50 minutes flying time was compiled by the " Grunau " alone. This total consisted of three five-hour flights by Messrs. Farrar, Lance and MacFarlane and a " C " Certificate for L. Pitt. Many thanks Midland Club for your assistance and co-operation in making the venture a resounding success.

The first of our weekly courses up to " B " certificate standard began at Whitsun, and courses will continue until September. The all-in charge for all meals, accommodation and temporary membership of the Club is £12. 12s. 0d. and interested parties are advised to apply for full particulars including enrollment form immediately, if disappointment is to be avoided.

VICTORIAN SOARING ASSOCIATION'S A.N.A. WEEK-END CAMP AT BERWICK AIRSTRIP.

February, 1948

Beaufort Club and the Group again joined forces at Berwick and, while no outstanding flights were turned in, things went very well, although the " Rhon " Group had bad luck. On Sunday, after the second training flight, a hard landing grounded the primary. Mike Bruce and Jack Scully went back to Burwood in the evening to get wood for the necessary repair and, on their return, worked quietly until 04.30 hours to get the job done. " Greater love hath no men than dog-tired they work until dawn that their fellow-man may fly primaries." After this fine effort, Monday proved too rough for primary work to be considered.

The " Coogee " group, although occasionally almost succeeding in sending their soft-hearted assistant instructor into old-fashioned vapours, turned in some nice flights. Circling diligently in elusive thermals they became bright-eyed and slightly garrulous. The assistant instructor later retaliated by showing them how NOT to loop " Coogee," i.e. prolonged pause standing on tail, before " Coogee " with deep sigh at such womanhandling, sulkily completes the manoeuvre.

Beaufort people, mad with the flying, borrowed our Ron Roberts for instructor, and flew from about 12.00 hours Saturday to 03.00 hours Sunday, with a short break for tea and the coming of the moon. Another short break for sleep and breakfast before they resumed until 20.00 hours Sunday. They then shamefacedly returned Ron and shyly borrowed their next victim, Bill Iggulden. Ron was observed next day staggering drearily round in large circles mumbling incoherently.

About 14.45 hours on Monday, flying came to an abrupt standstill when smoke was sighted rising gushingly from a paddock an eighth of a mile from the strip. Intrepid bird-men were soon on the spot and found a thickly-grassed paddock blazing noisily next to a wooden house. With the help of a couple of startled locals, the fire was brought under control, at the expense of scorched shins and throats rasped raw from the dense smoke. Local Bush Fire Brigade arrived to find only blackened earth and smouldering fence posts, and what was probably the most peculiar looking gang of fire-fighters they'd ever encountered, what with the Beaufort boys' universal slightly-shrunken, erstwhile-white hats, and the Group's unique collection of battered ski-caps, cotton sou-wester, ancient khaki slouch hats and other oddities. Exhaustion had set in so a general exodus took place to the nearest swimming-hole. That muddy water sure felt like liquid heaven. Not even the sight of a snake swimming placidly among the reeds brought the gang from the water. General feeling was, ah, what the hell, we're democratic.

ARGENTINE NOTES

The other day, we were reminded once again, that one should never call gliding " motorless flight ".

Major de Havilland (at wing tip) drops in.

Our decrepit tow plane needed complete overhaul (flies since 1930 or so and will soon be retired) so we were without aero-tow. Ehourrout our President managed to get a new " Gypsy Mayor " engine for his " Gipsy Moth ", we made a new engine mount and Major H. de Havilland personally dropped in one day to check the machine and give us some useful hints. Meantime we got our " Pelican " again and shall have a " Morune 502 " (former " Fieseler Storch ") soon, so there will be enough tow-planes during next Argentine soaring contest, to be held toward the end of the year.

Last soaring season has been a

success—5,600 kilometres were flown in distance.

OERLINGHAUSEN GLIDING CLUB

The first course of A.T.C. officers has come and gone, and we feel it safe to say that they were the best course we have yet had here. Their flying was excellent, and their keenness to help on the field outstanding, in many cases showing up the members in a bad light. There was a certain amount of disorganisation at the beginning, causing some discontent, but this was due to the lack of notice we were given of their arrival. They left here with two-seater categories and experience in a high-performance sailplane—the "Minimoa." One Silver "C" cross-country was made, and one Silver "C" height gained, and altogether excellent progress was made all round. We hope that the ensuing courses will keep up the very high standards set up by this course.

Rumour has it that the British Olympic Team may be paying us a visit during the Competitions, and also that a B.A.F.O. team is going to Switzerland in July to pit their wits against the Swiss, but not to take part in the Olympic Games. We do not know how true all this may be, but it would be a good thing for gliding generally and for British Gliding in particular, were this happy state of affairs to come about.

So much for that. Oerlinghausen is looking its best just now; all the trees are in leaf, and the ridge presents a delightful picture in the hot sunlight of this very fine April. We have had some good soaring so far this year, and hope that there will be many more good days available before the end of the soaring season. We expect a good crop of Silver "C's" and possibly (who knows?) a Golden "C" or two as well.

Preparations for the Competitions are now in full swing, and the aircraft and trailers are in the workshops being prepared for the great day. All the "Weihes" are being fitted with C. of G. hooks, and we hope to get a good height on launch at Fassberg by using 2,000 metres of cable on the winch.

AUSTRALIAN GLIDING ASSOCIATION

South Australia. *Gliding and Soaring Club of S.A. and Waikerie Gliding Club. Easter Activities*: Report by R. S. Rowe. We had quite a successful gliding camp over Easter. 17 members of the G. and S.C. of S.A. attended with their two-seater. Unfortunately they did not bring their winch so all the launching had to be done with our winch and tow truck. John Wotherspoon was only able to fly his Olympia "Eon" on Easter Monday. His first launching was 7 minutes duration and the other was 1 hour 15 minutes during which he reached a height of 4,000 feet. He made a voluntary descent as the members of the G. and S.C. of S.A. were preparing to leave.

The best flights made besides those mentioned above was one of 14 minutes duration made by Les Brown in the "Pratt Utility." Les intended to do aerobatics and contacted a thermal after doing a loop. He reached a maximum height of 2,000 feet—winch launch was to height of 950 feet. The other good flight was of 11 minutes duration made by Clive Tolhurst flying the G. and S.C. of S.A. two-seater solo.

Report from G. and S.C. of S.A. Since resuming flying at Gawler Airstrip, Kevin Sedgman made a flight of 11 minutes. Winch launched to 800 feet he reached a maximum height of 1,300 feet. Bruce Heathersay has now gone solo.

Tasmania. *Gliding and Soaring Club of Tasmania.* Report from Howard Dalton, 1st April, 1948.

"Have been very busy organising Club activities, working bees have been held and one of the cars should be finished soon, two runways have been graded on Ralphs Bay site, each over a mile long. Another survey party climbed Gunners Quoin Ridge (1,400 feet)

—over 4 miles primary beat is possible and 6 miles available if turbulence is not too bad at one end.

"The ridge is only 6 miles airline from the city of Hobart although the shortest road is approximately 8 miles. The survey party is interested in locating a road to the top of the ridge, which is very flat, sufficiently to permit safe landings for sailplanes and light aircraft.

"Considerable repair work was necessary on fuselage of the "H. 17," but this is nearing completion, and if wire is obtained, flying operations will commence soon.

"The Civil Aviation Department has been interfering with our rights to use a field in the vicinity of a controlled air space. A strong effort has been made to restrain any such action and a conference was held in Melbourne with satisfactory results, but unfortunately the Officer concerned did not confirm the arrangements until requested some 3 months later and not before he had added some undesirable features. The matter has again been taken up with the Department."

Canberra. A.C.T. *Canberra Gliding and Soaring Club.* Report received 20th April, 1948.

"The weather has been disappointing in the last month and has limited both flying and good results—or so we like to say.

"The best day was on the 21*st March*, 1948 (Sunday). Anticyclonic weather, light variable wind and cloudless. Owing to the light wind, launching was difficult, but at 12.20 p.m. Arthur Powell was launched to 700 feet, picked up lift, and by careful and seemingly interminable circling reached 2,500 feet. Losing this lift he returned to the original spot where there is a slight depression in the field and there found further lift to 1,500 feet. Duration of the flight was 57 minutes.

"There was also flying on *March 28th and 29th*, 1948. On the latter day Roy Raymond climbed from 1,200 to 1,500 feet, with a duration of 18¼ minutes."

Victoria. *The Gliding Club of Victoria.* Flying Report. 21st March, 1948, to 20th April, 1948. Gliding at Reservoir and Somerton. Total: 206 launchings. 16 hours 34¼ minutes.

LETTER TO THE EDITOR

DEAR SIR,

Failure to Release.

Your correspondent, Mr. De Redder, again brings to the fore the subject of releasing the launching cable. The advent of automatic releases has tended to push this risk into the background, and therefore the repetition of the important points and the drill might obviate the risk of an accident.

1. In the interests of safety, all gliders should be fitted with an automatic release as an insurance against forgetfulness, failure of the hand-operated mechanism, or some sudden emergency arising with an inexperienced pilot.

2. In any case, whether fixed or automatic, the mouth of the release should be at least flush with the outside of the glider, preferably "proud" of the surface. Some machines have a release fitted internally, which requires the rings being inserted up a tunnel. This is highly dangerous and should not be used in any circumstances.

3. Rings, and there should always be two, must be round and of the correct size and should rattle freely when inserted. Never be tempted to use chain links or oversize rings—it isn't worth the few pence saved.

4. It is not necessary to lock an automatic release for aerotowing. The cable will not come out under normal conditions, however rough, unless the glider gets into a dangerous position, and then it *should* come out. The habit of locking the release for aerotowing is apt to lead to the lock pin remaining in position when winch launching is undertaken. There is only one condition under which an automatic release should be locked, and that is during training up to the stage of low hops. In this case, the loss of the cable prevents the winch driver from "saving" a machine which is about to stall.

5. There is no known case of an "Ottfur" automatic release having failed to operate when the correct rings were used, but certain rules have been laid down, which, if complied with, prevent any possibility of a failure:—

(*a*) The correct rings must be insisted on.

(*b*) Before inserting the rings the release must be operated by the control and allowed to snap back into position. This ensures that the locking action is right home.

(*c*) The ring is then inserted by operating the automatic part of the mechanism. This ensures that the automatic part is free. **The ring should not be inserted by operation of the hand control.**

6. The release should not be used for retrieving the machine behind a car. If there is no alternative, care should be taken that the pull is in line with the fuselage. A violent snatch pull from a big angle has been known to bend the release.

7. On operating the release at the top of a launch the nose of the machine should be held up slightly to keep a light tension on the launching cable so that the release is felt. The release knob should be pulled *right out* three or four times.

8. Automatic chopping blocks and wire cutters are all very well but are apt to become unserviceable owing to lack of use, which brings us back to the old standby, the Axe, and this should always be available together with a person who knows what to do with it.

9. There is a safety signal which unfortunately is not universally used, usually because there is no signaller at the winch end. It is as follows:—

After the "all-out" signal has been accepted and the launch is well under way, the signaller at the winch end holds his bats horizontally with the surfaces facing the glider. This indicates that the cable is still attached. When the cable is released one bat is dropped and the other is swung to and fro across the body until the glider has turned well away from the launch. If the cable does not release and has been chopped, the horizontal signal is shown continuously with the signaller slowly revolving, and should be repeated by the signaller at the launching end.

Mr. De Redder suggests a transparent panel in the floor. This is a good idea and has been used many times, but only to see that the cable has been released. It is useless and dangerous to try and watch the cable during a launch, in fact anything which tends to keep the pilot's head in the cockpit should be discouraged.

Yours truly, E. J. FURLONG.

SOARING

Your Emblem

Have you earned a gliding or soaring certificate? Then you have something which very few people in the country, and even in the world, possess.

SOARING BADGES

The A, B, C, Silver C and Golden C badge you received is different from the usual emblem you see people wearing. In most cases the buttons in people's lapels signify that their subscriptions are paid up. In your case it means more than payment of dues. It means you've done something. It means that, without a motor, you are striving to outdo the flight of birds. Wear your badge—and wear it proudly!

ROYAL AERO CLUB GLIDING CERTIFICATES

(Issued under delegation, by the B.G.A.)

GLIDING CERTIFICATES: "A" .. 136 (8703—8208 inclusive)
"B" .. 54
"C" .. 46

SILVER "C": 6 (134—139 inclusive).

"B" CERTIFICATES.

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date taken.*
2787	John Mackereth	College of Aeronautics G.C.	9. 5.48
3234	John Clement Everitt	126 G.S.	28. 3.48
4985	Richard Thomas Frederick Lyon	186 G.S.	25. 4.48
5231	Alan Evans	24 G.S.	29. 4.48
5350	Francis Peter Holden	181 G.S.	18. 4.48
6214	Alexander Grant	5 G.S.	25. 2.48
6738	David Edwin Tulett	Southdown G.C.	18. 4.48
7246	Denis Wingfield Cooper	Newcastle G.C.	20. 3.48
7566	Ivor Edwin Baker	89 G.S.	25. 4.48
7797	George William Wilks	163 G.S.	9. 5.48
7940	Eric George Clarke	Handley Page G.C.	24. 4.48
7941	Peter Alan Thornton	Handley Page G.C.	11. 4.48
7971	John Christopher James	London G.C.	18. 4.48
8054	Patricia Helen Foster	London G.C.	8. 5.48
8073	Herbert Ronald Watson	125 G.S.	11. 4.48
8074	Edward Alfred Hack	Surrey G.C.	18. 4.48
8076	Albert James Walker	Wahn G.C.	14. 3.48
8080	George John Charleston	Oerlinghausen G.C.	14. 3.48
8085	Robin Beadon Lisle Foster	College of Aeronautics G.C.	18. 4.48
8087	Mervyn James Fortune	Wahn G.C.	20. 3.48
8092	Pothery Charuvary Ramachandran	146 G.S.	1. 2.48
8096	Bernard Longstaff	49 G.S.	26. 3.48
8097	Joseph Richard Saunders	Air H.Q. G.C.	12. 4.48
8108	James Andrew Paxton	140 Wing G.C.	7. 9.47
8113	Kenneth George Nichols	Oerlinghausen G.C.	14. 8.47
8121	Stanley William Coote	148 G.S.	1.12.46
8128	Peter Frank Jenner	168 G.S.	18. 4.48
8139	Francis Agnes Joyce Cronk	Condor G.C.	14. 3.48
8141	Eric Walter Fox	130 G.S.	28. 9.47
8142	William Edward Maywood	140 Wing G.C.	20. 8.47
8146	John Hosier Nunn	89 G.S.	25. 4.48
8147	Geoffrey Hugh Linksted	139 Wing G.C.	12. 1.48
8148	Noel Clement Ta'Bois	Wunsdorf G.C.	6. 3.48
8149	Jack Burtenshaw	81 G.S.	24. 4.48
8150	Ernest Noel Grantham	College of Aeronautics G.C.	23. 3.48
8165	Albert Avion Case	146 G.S.	29. 2.48
8166	Clive Alexander George Walker	Luneburg G.C. 2	11. 4.48
8167	Robert Wilson Trail	College of Aeronautics G.C.	25. 3.48
8171	John Reginald Dowling	130 G.S.	13. 3.48
8172	John Taylor Edwards	148 G.S.	18. 4.48
8176	Kenneth Frederick Sands	London G.C.	18. 4.48
8179	Ivor Henry Cosby	139 Wing G.C.	13. 9.47
8180	David Gerald Parsey	A.H.Q. G.C.	25. 2.48
8181	John Kenneth Coop	Wunsdorf G.C.	13. 3.48
8182	Ronald Leonard	81 G.S.	24. 4.48
8183	Jan Joseph Bukovsky	College of Aeronautics G.C.	29. 4.48
8191	Charles Anthony Partington	Southdown G.C.	8. 5.48
8192	Arthur Edward Mackenzie Barton	London G.C.	8. 5.48
8193	Christopher Staffurth	Cambridge G.C.	23.11.47
8197	James Herbert Blundell	Wahn G.C.	20. 3.48
8198	John Gilbert Wotherspoon	London G.C.	26. 4.47
8199	Edward Comer Rigg	Wunstorf G.C.	13. 3.48
8201	Patrick Raymond Lord	Luneburg G.C.	20. 9.47
8208	William James Leslie Small	Air H.Q. G.C.	25. 4.48

"C" CERTIFICATES.

2014	Reginald Victor Poulter	125 G.S.	18. 4.48
2191	John Sadler	45 G.S.	27. 4.48
2385	Latimer Laurence Tuke	Air H.Q. G.C.	13. 4.48
2753	Eric John Ducker	148 G.S.	24. 4.48
3208	Thomas Nigel Malcolm Bayne	Air H.Q. G.C.	12. 4.48
3379	Peter Joseph Squelch	89 G.S.	24. 4.48
3403	John Nigel Armstrong	Air H.Q. G.C.	12. 4.48
4444	Laurence Jesse William Hall	College of Aeronautics G.C.	22. 3.48
4445	Arthur Samuel Pryke	104 G.S.	9. 5.48
5342	Edward William John Morris	89 G.S.	25. 4.48
5347	William George Cutting	145 G.S.	25. 4.48
6298	Robert Anderson	168 G.S.	18. 4.48
6311	Derek John Aubrey Roe	London G.C.	26. 4.48
6420	Samuel Philip Russell	Leicester G.C.	10. 4.48
6639	Kenneth Bernard Newman	Southdown G.C.	1. 5.48
6902	Michael Marcus Erdman	London G.C.	27. 4.48
6916	Francis George Irving	Imperial College G.C.	7. 4.48
6962	John Frederick Godley	Southdown G.C.	29. 3.48
7068	Michael Victor Adam	College of Aeronautics G.C.	21. 3.48
7177	Hugh Stuart Stucley Trotter	Surrey G.C.	27. 4.48
7407	Stewart Douglas Baxter	4th Armoured Brigade G.S.	28. 3.48
7442	Gordon Foster Cleminson	Cambridge G.C.	9. 5.48
7817	Roy Norman Holland	Air H.Q. G.C.	11. 4.48
7893	John Alexander Moir Wilson	Cambridge G.C.	18. 5.48
8073	Herbert Ronald Watson	125 G.S.	18. 4.48
8080	George John Charleston	Oerlinghausen G.C.	29. 3.48
8087	Mervyn James Fortune	Wahn G.C.	27. 3.48
8097	Joseph Richard Saunders	Air H.Q. G.C.	13. 4.48
8108	James Andrew Paxton	140 Wing G.C.	9.11.47

No.	Name.	A.T.C. School or Gliding Club.	Date taken.
8113	Kenneth George Nichols	Oerlinghausen G.C.	11. 4.48
8121	Stanley William Coote	148 G.S.	24. 4.48
8142	William Edward Haywood	Oerlinghausen	11. 9.47
8146	John Hosier Nunn	80 G.S.	25. 4.48
8147	Geoffrey Hugh Linksted	139 Wing G.C.	27. 3.48
8148	Noel Clement Ta'Bois	Wunstorf G.C.	25. 4.48
8166	Clive Alexander George Walker	Luneburg G.C.	26. 4.48
8171	John Reginald Dowling	130 G.S.	25. 4.48
8176	Kenneth Frederick Sands	London G.C.	5. 5.48
8179	Ivor Henry Cosby	139 Wing G.C.	12.10.47
8180	David Gerald Parsey	Air H.Q. G.C.	11. 4.48
8181	John Kenneth Coop	Wunsdorf G.C.	26. 4.48
8193	Christopher Staffurth	Cambridge G.C.	15. 3.48
8197	James Herbert Blundell	Wahn G.C.	9. 5.48
8198	John Gilbert Wotherspoon	London G.C.	15. 3.47
8199	Edward Comer Rigg	Wunstorf G.C.	27. 3.48
8201	Patrick Raymond Lord	Luneburg G.C.	17. 4.48

SILVER BADGES.

134	R. H. Grice	(6255)
135	G. H. Lee	(777)
136	C. F. Counter	(4885)
137	B. B. Storey	(6876)
138	C. J. Arnold	(1017)
139	K. Hirst	(6672)

Correction to list in May issue : **"B" CERTIFICATE**

8042	Barbara Evelyn Wigglesworth	*Surrey G.C.*	11. 4.48

CONVECTION AND THE SOARING PILOT

On the day last year whereon I received the June SAILPLANE containing Fl.-Lt. Neubroch's article on Evening Thermals there came a letter from Louis Slater which contained the following :—

" In the meantime—a very pleasant experience on (June 9th) Monday evening. You remember your article in the SAILPLANE many years ago *re* evening thermals—complete with Bara chart. A slow, almost imperceptible climb to great heights with odd layers of trembly turbulance at various heights—and on breaking through further lift and so on. Well, I had an exact replica on Monday evening in the " Olympia." Launched at 8 o'clock B D S T to 500 ft.—at 9 o'clock I was topping 3,200 ft. after climbing slowly but inevitably practically the whole time with odd moments of trembly sink—breaking through. I estimate I broke through 4 layers, but I may have gone through the same layer more than once in a different area geographically. I don't know whether I reached the top but I think not. Ground haze was forming and it got a bit chilly, so I hooted up to 80 m.p.h. and circumscribed Tony Dolan in the " Swale Olympia " twice at 2,500 ft., and Stan Armstrong in the " G.B. II " at 2,000 ft—threw a few rate 4. turns over the fair ground at Bradwell, peered down into Peveril Castle and went for a look at Eyam, then finished up by the hangar with spoilers on from 1,000 ft. at 9.20. Tony stayed till 10.30, knocking up 3 hours. Stan was frozen after 1 hour, but a spot of rum warmed us up and we all went home very happy."

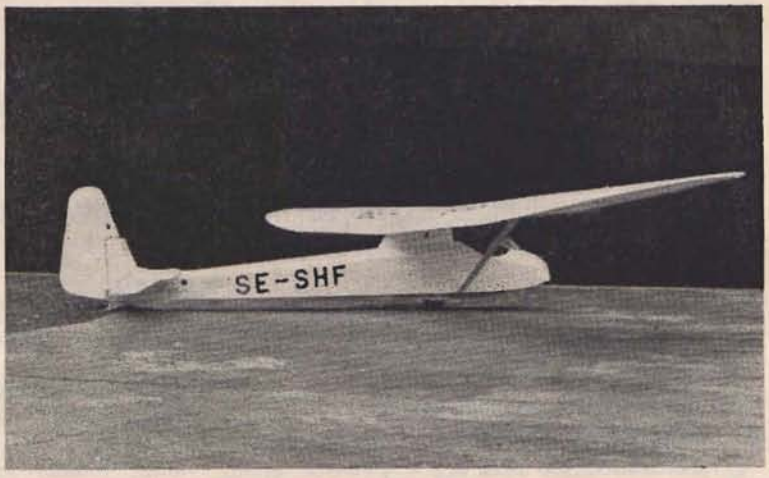
He refers to a phenomenon which has been noted at Camphill over the last ten or twelve years and whose origins appear to be explained by the text of Fl.-Lt. Neubroch's article. The sketch of the Scharfoldendorf ridge might apply equally to the area near Camphill over which our evening thermal develops with the exception that we need a North-West wind for the best effect.

One or two of your 1936-37 issues contain notes submitted by members who have enjoyed flying under these conditions, and Terence Horsley has a chapter in " Soaring Flight " wherein certain exceptional rides are reported in graphic detail.

Now is the time of year for things to happen. We shall be looking for 'em during the next three months and trying, as ever, to find a means to forecast when the next one will happen.

C. A. KAYE.
Derbyshire & Lancashire Gliding Club.

Mr. Bergman, Secretary Royal Swedish Aero Club, seated in a Tutor on a recent visit to Slingsby's.



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Training flights from 1s. 6d. to 6s. a day.

New members welcomed at sub. of 10s. 6d. X months remaining of club year.

Courses, open to non-members announced for June, July, August, and September now all full. Waiting list open for next year.

DERBYSHIRE & LANCASHIRE GLIDING CLUB,
GREAT HUCKLOW, TIDESWELL,
Phone Tideswell 207 **DERBYSHIRE**

To people living in the North Midlands the Club offers full soaring facilities at 10/- per hour in the club fleet of Sailplanes.

Primary training has started and power conversions are a speciality.

The clubhouse is fully licenced and meals are available if booked in advance. Whether there is flying or not there is always something doing every week end.

Subscription, 6 gns.; Entrance fee, 2 gns.; Non-flying members, 1 gn. If you are interested please write to the Hon. Secretary, 87, Fargate, Sheffield 1, for further details.

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Fly in the World's best sailplanes at one of the finest Hill- and Thermal-Soaring sites in Germany. The Club fleet includes "Weihe," "Minimoa," "Kranich," "Rheinland," "Mü. 17" and "Olympia" sailplanes. The weekly charge for non-members, including Messing, Accommodation, and all Flying, is 4 guineas.

We regret this can only apply to Service personnel and civilians in possession of a Mil.Gov.Entry Permit.

Full details may be obtained from:—THE SECRETARY, Oerlinghausen Gliding Club, c/o R.A.F. Station, Gütersloh, B.A.F.O., B.A.O.R. 15.

FOR SALE

GLIDER WINCH A.T.C. pattern, easily fitted any suitable trailer, complete with towing cable, battery, engine just overhauled. Offers invited. Western Airways, Airport, Weston-super-Mare.

OLYMPIA SAILPLANE. Equipped parachute, 2 variometers, German electric turn and bank, compass, etc., just refinished throughout in oil-bound paint and incorporating several improvements at cost of approx. £85. C. of A. renewed June 1948. £550 trailer by Rice Caravans available if required £100. Apply Box 239 Sailplane.

NOTICE

PILOTS interested in forming a soaring group to operate a fully equipped Olympia Sailplane by aero tow from Andover are invited to communicate without delay with R. T. Cole, Morton House, Kingsworthy, Winchester. Tel. Winchester 4254.

WANTED

FUESS type Barograph. Reply A. H. Warminger, 15, Finkelgate, Norwich.

URGENTLY plans for medium-performance two-seater sailplane, at least 1 in 21. Please write giving fullest details and price to R. ROBERTS, 1 Gillard St., Brighton, S.6., Victoria, Australia.

CLUB ANNOUNCEMENTS

MIDLAND GLIDING CLUB LTD.

THE Midland Gliding Club is holding the following Camps of nine days each at its fine site on the Long Mynd, Church Stretton, Shropshire:—

10th—18th July inclusive.
31st July—8th August inclusive.
11th—19th September inclusive.

The Camps are for "B" or "C" Glider Pilots or qualified Aeroplane Pilots; Five machines including a dual two-seater for instructional purposes will be available. Cross-country flights will not be available in Club aircraft owing to the petrol shortage, but this will mean more general flying for Camp members.

The inclusive fee for each Camp, including full membership of the Club for the period, billeting, all meals, use of suitable aircraft, and insurance against damage to machines is £12. 12s. 0d. per person. Members of the club may deduct £3. 3s. 0d. from this amount.

Private owners bringing their own machines will be charged £6. 9s. 0d. plus a charge of 2s. 6d. per launch. This fee includes hangarage for their machine, but this must be stored as directed by the Camp Superintendant and may have to be de-rigged.

Accommodation is limited to 15 members and vacancies will be allotted in order of receipt. Each application must be accompanied by a booking fee of £2. 2s. 0d. which is non-returnable unless the application cannot be accepted.

Camp Secretary, R. N. Thwaite, 39, Silhill Hall Road, Solihull, Warwickshire.

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WITH shortage of paper and increased production costs we are finding it more and more difficult to maintain our present high standards without increasing the Subscription rate. However, if we can increase the Circulation we can spread these extra costs. To do this we require YOUR help. If you are not a regular subscriber then fill in the form below and send it together with your cheque (19/-). If you ARE a regular subscriber, why not make a present of a year's subscription to a friend? By so doing you will not only be helping us to remain the vehicle for news of this grand Sport, but also be assisting in its development.

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