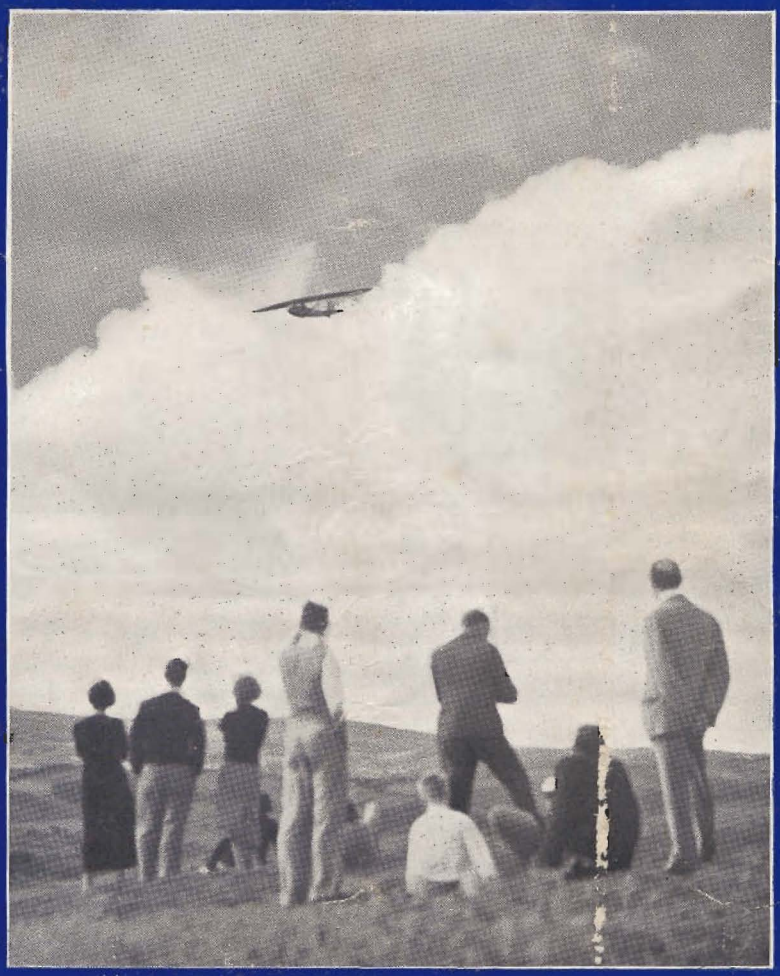
MARCH, 1947

1/6d.



Sailplane and Glider

The First Journal devoted to Soaring and Gliding



Freedom !
in a **WINDAK**

The very thing for golfing, fishing, walking, cycling (or just pottering). The Windak 'golfer' is a civilian version of the official Airborne Smock and is made of the same Gabardine. Rain repellent, windproof, lightweight and, of course, tough-wearing. In brilliant peacetime colours . . . green, scarlet, brown, maroon, royal blue and fawn. *Men's: Prices from* 110/-. *Ladies: from* 84/-.

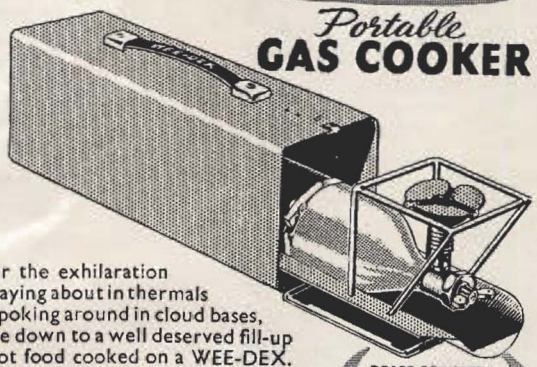
Please write for name of nearest Stockist to the address below.

Wear a Windak

FOR SPORT AND ALL OUTDOOR WEAR

Windak Ltd. Poynton, Cheshire

MAKE THAT *Happy Landing Happier with a* WEE-DEX *Portable* GAS COOKER



After the exhilaration of playing about in thermals and poking around in cloud bases, come down to a well deserved fill-up of hot food cooked on a WEE-DEX. No matter how isolated your hill-top Club-house, you can have all the advantages of a gas equipped kitchen. No oil, spirits or pumping with this cooker–just turn on the gas and light. Write for name of nearest Stockist or send your order direct to us.

PRICE COMPLETE £3·11·3
SPARE REFILLS £1·13·3
REFILLING EMPTY CYLINDERS 3/-

DEX INDUSTRIES LIMITED

ARGOSY WORKS · KINGSTON ROAD · LEATHERHEAD · SURREY

Actual Size



SIMPLE : RELIABLE ULTRA-SENSITIVE

MAKE SURE of contacting the smallest lift by fitting one of these famous Variometers.

DESIGNED to register immediately almost imperceptible vertical speeds yet robust enough to withstand large overloads.

NEGLIGIBLE LAG.

AGENTS ABROAD :

Australia: A. E. Berger, 30, Edwards Avenue, Garden City, S.C.7. Melbourne.

Canada & U.S.A.: J. Simpson, P.O. Box 562, Ottawa, Ontario.

South Africa: J. C. Davidson, 376, Loop St., Petermaritzburg, Natal.

Belgium & Holland: M. Pierre Puttemans, 25, Boulevard Ferd. Campion Vilvorde, Belgium.

Made only by
THE COBB-SLATER INSTRUMENT CO., Ltd.
MATLOCK, ENGLAND. *Phone : Matlock 438.*

ANY QUESTIONS?

Has it occurred to you that the Cellon technical service department may be able to supply the answer to your post-war finishing problem ? We make no wild promises, of course, particularly in these days of shortage of material ; but we feel that if we were able to solve the wartime problems which we *did* solve, then we can be more than a little helpful to you just now. We don't know what your product is—we don't need to guess—for every industrial finishing problem is *our* concern. We merely look forward to hearing your troubles and maybe putting you into a more cheerful frame of mind. We don't work miracles ; but we do work out the right answers. Shall we be hearing from you ?

CELLON · CERRIC · CERRUX

THE FINISHES THAT STAND THE TEST

CELLON LIMITED, KINGSTON-ON-THAMES

Telephone : KINGSTON 1234 (5 lines)

CVS—553

Sailplane and Glider

THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

MARCH 1947 ★ Vol XV No 3

EDITOR:
VERNON BLUNT

ADVERTISING
and
EDITORIAL OFFICES:
139 STRAND, W.C. 2
PHONE: TEMPLE BAR 6451/2

The *Sailplane and Glider* is published on the fifth day of every month. Price One Shilling and Sixpence per copy ; 19/- per year posted. Advertising Rates on application.

Published for the proprietors, Glider Press Ltd., by the Rolls House Publishing Co., Ltd., Breams Buildings, Fetter Lane, E.C.4, and Printed by the Mendip Press Ltd., London and Bath.

CONTENTS

	Page
Editorial	1
Best Air Speeds	2
Problem of Swiss Soaring Flight Maps	4
The Britannia Trophy	5
Synthetic Trainers	6
Icelandic Gliding Club	8
Swedish Contest Rules	10
B.G.A. Cups and Trophies ..	14
"Beginners" Page	15
News from The Clubs	21
B.G.A. Gliding Clubs	23

NOT GOOD ENOUGH

THE names of the Advisory Committee set up by the Minister of Civil Aviation, Lord Nathan, to advise him on the development of private flying including gliding have been announced. They are as follows : Flying Officer H. Bowden, M.P. ; Group Captain D. de B. Clark, representative of insurance interests (for the first year) ; Mrs. A. C. Douglas, representing the British Gliding Association ; Mr. R. E. Hardingham, representing the Air Registration Board ; Air Commodore A. V. Harvey, M.P. ; Squadron Leader E. Kinghorn, M.P. ; Captain A. G. Lamplugh, alternate representative of insurance interests (for the first year) ; Mr. G. J. Mahony, representing the Association of British Aero Clubs ; Colonel R. L. Preston, representing the Royal Aero Club, and Mr. F. E. N. St. Barbe, representing the Society of British Aircraft Constructors. The secretary of the committee is Mr. W. K. Andrews, of the Ministry of Civil Aviation. The chairman is Whitney Straight, chairman of the Royal Aero Club.

The only good thing about this Committee is that there is no Civil Servant on it, an omission probably designed so as to make it unnecessary for the Government to act on any of its advice. What on earth the three M.P.'s are doing on it no one knows, or what contribution they have to make to private flying. But what scurvy treatment to mete out to the gliding movement. Ann Douglas is the lonely representative of the B.G.A. Pertinacious though she may be, and confident as she might be of her ability, of which there is no doubt, to put forward the right advice to the Minister, one can hardly expect her to bring all the other members of the committee round to her way of thinking, especially as none but her is ostensibly interested in gliding or has any expert knowledge of it. Surely the Committee would be strengthened by the inclusion of nominees of the Midland, Derby and Lancs. and the Yorkshire Clubs to say nothing of F. N. Slingsby to advise on the manufacturing side.

This Committee is therefore not good enough and we suggest that the Clubs themselves make representations to the Minister on these lines.

These is too much assumption of power by so called 'representative bodies' these days, a point which was well brought out when the *Economist*, amongst the chief of the Government supporting weeklies told the Government in no uncertain terms that it did not consider itself bound by a so called agreement between the Government and the Periodical Proprietors Association to which it does not belong not to publish for two weeks. The B.G.A., for example, may represent the Gliding Clubs in England and the Forces, but can it be said that it represents the many people who want to glide but who cannot because there is no club for them to join. By its terms of reference the B.G.A. can only represent organised Clubs who belong to it.

It is for this reason therefore that *Sailplane* renews its claim to be invited to this Committee if only to put forward the views of those who do not belong to clubs and cannot because there are no clubs to belong to.

As at present constituted we have no confidence in this Committee.

Some time ago we were taken to task for pointing out in this column that no member of the Cabinet in this Workers Government, had ever made money in his own business, and that the preponderance of its members were either theoreticians or Trade Union job-holders. We replied that "Gliding is Politics." Now that the Government of the Workers has brought on such shortages as will apparently make it almost impossible for Gliding to continue even in its present form, much less on the scale we want, at least for some years, we trust that others will agree with us that "Gliding is Politics."

Having had to fight hard for our meagre ration of paper it is dismaying to have to realise that we cannot get delivery of even our small entitlement, due to the "Crisis." This month and next, *Sailplane* will have fewer pages. If the makers are able to honour their pledges to supply the missing balance we shall do the same and publish as opportunity offers more pages in subsequent issues to make up what our readers have lost in pages in the short issues.

We end with a quotation from a speech by a Labour M.P. :

> "Hundreds and thousands of people, who could never have succeeded in business, were engaged to hinder, misdirect, command and countermand, threaten and bully in the most fantastic and Gilbertian manner the people who had built up, with all its faults, the industrial system which had been the envy of most of the world."

"GLIDING IS POLITICS."

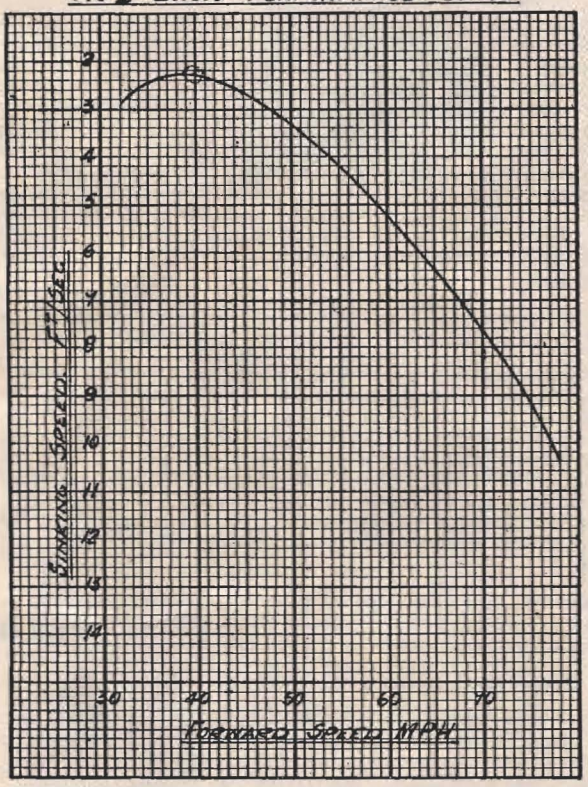
BEST AIR SPEEDS

By G. O. SMITH

I HAVE read with great interest the series of articles by A. Mirsky on this subject, and also particularly the article in the January SAILPLANE by F./Lt. Neubroch. The latter makes a very interesting attempt to make practical use of the information available, and there is no doubt that his argument is academically correct.

I say " academically " because I have two serious practical objections to his whole method of assessing

FIG I BASIC PERFORMANCE CURVE



best air speeds. Firstly, he assumes that the area between thermals is still air, or at least horizontally moving air; and secondly, he further assumes that you know the rate of lift you are going to encounter in that thermal a mile ahead. To my mind, neither of these assumptions is at all justified; and I would much prefer to expect a down-draught between thermals and concentrate on flying through it at the best Gliding Angle, thereby reaching the new thermal with the *minimum loss of height.*

Now the speed for best gliding angle in various rates of down-draught can be calculated accurately from known facts without any assumptions at all; and furthermore, this information can be simply and efficiently used by plotting the best speeds against Variometer readings, as we shall see.

Starting from the known performance curve of Sinking Speed against Forward Speed for any given sailplane, Fig. 1 (my examples are for the " Olympia " at an all-up weight of 500 lbs.; but the principle is, of course, the same for any sailplane) we can calculate and plot the curve of Gliding Angle against Forward Speed in still air, giving the first curve in Fig. 2. By adding together the rates of sink due to down-draught and forward speed, we can further calculate and plot the curves of Gliding Angle against Forward Speed in various down-draughts, Fig. 2; and the peaks of these curves will indicate the forward speed giving the minimum gliding angle in the down-draught concerned.

Now by further combining the information in Figs. 1 and 2, we can plot Variometer Reading against Forward Speed, showing the speeds for minimum gliding angle as shown in Fig. 3, *e.g.* if we are in a 10 ft./sec. down-draught we see from

FIG II GLIDING ANGLES IN VARIOUS DOWN DRAUGHTS.

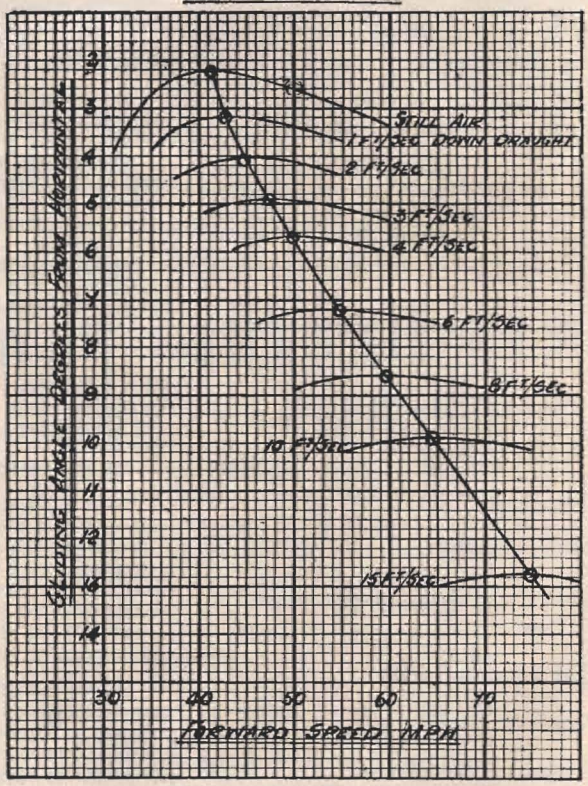


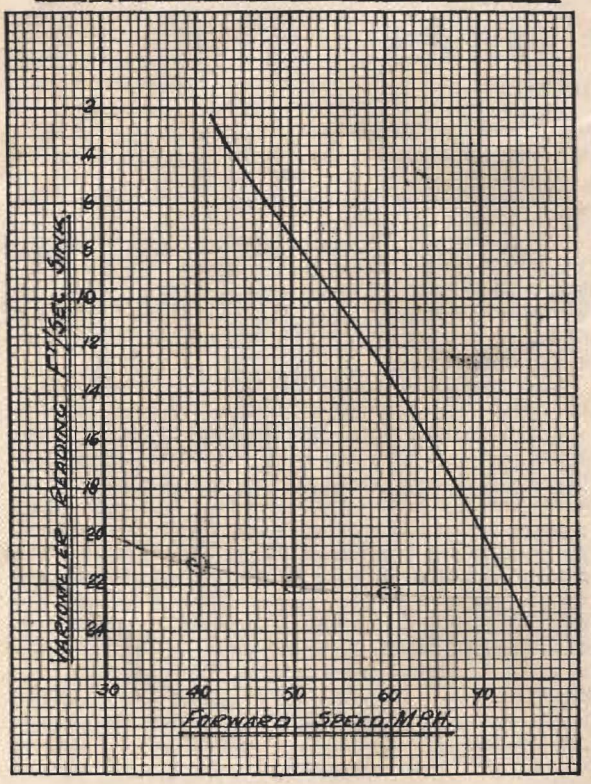
Fig. 2 that we ought to fly at 65 m.p.h. to have the best gliding angle, and further from Fig. 1 that at this condition our total sink will be 10 + 6.4 = 16.4 ft./sec. Therefore, by the time the Variometer shows 16.4 ft./sec. sink, we ought to be flying at 65 m.p.h.

The final step is to post up the figures from Fig. 3 against the Sink scale of the Variometer, as shown in Fig. 4, giving an immediate indication of the speed required for best gliding angle.

Let us just take one example of the practical use of this information. Two "Olympias" together enter a 10 ft./sec. down-draught which turns out to be a n ile wide. "A" does not bother about Best Gliding Angles and continues at his normal speed of 40 m.p.h. His loss of height in the down-draught will be 1,132 ft., and it will take him 1 min. 32 secs. to get through. "B" has our scale (Fig. 4) available, and gently but firmly increases his speed to 65 m.p.h., at which speed his loss of height in the down-draught will be 918 ft. and his time 56 secs. "B" has, therefore, saved *214 ft.* of height and *36 secs.* of time over "A."

Note here one fact particularly, and do not let it pull your leg. On entering a 10 ft./sec. down-draught at your normal speed of 40 m.p.h., your

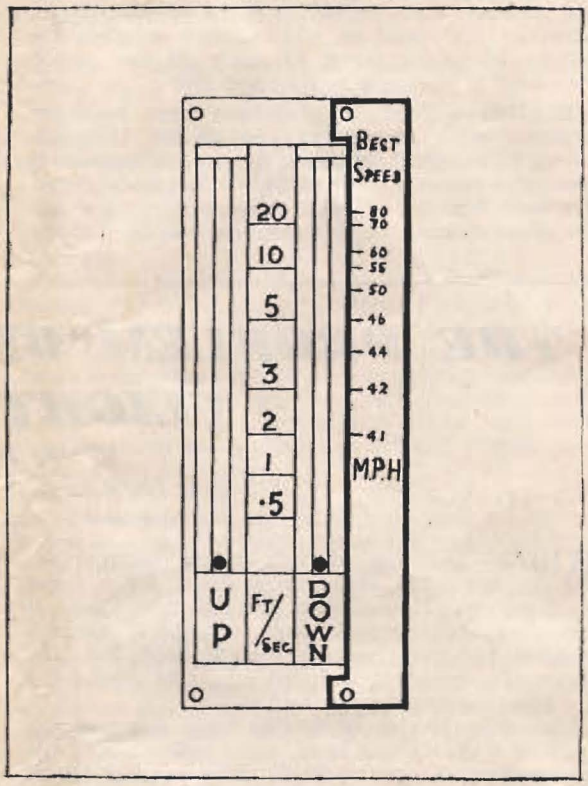
FIG III SPEEDS FOR BEST GLIDING ANGLE.



Variometer will read 12.3 ft./sec. sink (10 + 2.3 from Fig. 1). By the time you have "balanced your A.S.I. and Red Ball" on the scale, your Variometer reading will have increased from 12.3 ft./sec. to *over 16 ft./sec.* sink, and this may easily give you the false impression that you are not effecting any saving. The point to remember is that it *is* a false impression, as shown by the example above.

So far we have considered only gliding angles relative to the air, or the methods of getting from one cloud to another. If your best gliding angle is required to reach a given spot *on the ground*, the further complication of wind enters into the problem. The same line of thought can, however, still be applied; and we may perhaps consider this problem on another occasion.

FIG IV. VARIOMETER ATTACHMENT.



SOARING ASSOCIATION OF CANADA

THE Annual General Meeting was held on Saturday, 1st February, 1947, at the Royal York Hotel in Toronto.

A review has been made of gliding certificates granted in Canada. Although proof that at least two persons earned their "A" and "B" certificates much earlier has been found, the first certificate was issued by the Royal Canadian Flying Club Association to O. Boudreault of the Gatineau Gliding Club in 1944. From that date, the picture is thus:

	A	B	C	Total.
1944 ..	10	9	5	.. 24
1945 ..	33	31	9	.. 73
1946 ..	13	10	3	.. 26

Our membership is not going ahead in a manner that will enable the Association to help further the cause. Renewals are slow coming in. We know people don't want to let their membership lapse. We have the case of the absent-minded member who carried his renewal form and a cheque already made out in his pocket for six months and then wondered why his copy of "Soaring" did not appear. At the end of the membership year, *i.e.* December and June, all the cards then expiring are removed from the files and they do not go back until renewal is received and

the names are then forwarded on to the S.S.A. Have you sent in yours? *Do it now.* Why don't you persuade that companion of the office, train, or wherever you spend an odd moment extolling the delights of soaring flight, to join.* If you cannot, then send in his name and we will try.

The De Havilland Company have agreed to manufacture twenty secondary type gliders, the well-known "Sparrow," providing they can be reasonably assured of sales. The price, $1,000, less instruments, flyaway Toronto. The "Sparrow" is an all-Canadian design and its prototype has been flying with the De Havilland Club for over four years. Its performance is such that it is good for *ab initio* or soaring training, and has been aloft for several hours of thermal flight. This is the machine that was aero-towed to Carp in 1945 and in whom the De Havilland Instructor, Baranowski, demonstrated thermal soaring so effectively on the opening day by a flight to 5,300 feet in full view of everyone. Enquiries to Mr. F. Plumb, Production Manager, De Havilland Aircraft Company of Canada, Postal Station L, Toronto, or this Association.

* *British Gliders Pilots please note.* [*Editor*].

THE PROBLEM OF SWISS SOARING FLIGHT MAPS

By W. JUCKER

(*Soaring Flight Research Station, Alp Scheidegg*)

(*Translated by* F./Lt. H. Neubroch)

WHEN discussing research camps, glider pilots have often expressed a desire for a Swiss soaring map. It was often not understood why it was that flight reports from subsidised research stations had not been further utilized but had apparently been pigeon-holed. In this connection the following needs to be said:

The general value of soaring maps is sometimes doubted. On the one hand, some authorities of the meteorology of soaring flight have reached rough conclusions, based on climatical investigations, on the soaring qualities of large geographic areas; Professor Georgii, who founded the scientific study of soaring flight, on the other hand, denies the need for such soaring maps. In a letter to the author, Professor Georgii says: "Do not spend too much effort on maps of this kind; a detailed rain chart, divided, if possible, according to wind directions, will fulfil the same purpose. Dry areas give good possibilities for soaring." Here it needs to be pointed out that the emphasis is on "maps *of this kind*," *i.e.* on soaring maps which are built up from climatical investigations. I would certainly agree to such an interpretation. Furthermore, German and Polish soaring maps were drawn on a scale on which the whole of Switzerland would measure no more than about one inch across, so that such a map, too, would be useless. The whole problem, however, appears much more interesting if we start from the assumption that a *Swiss soaring map* is to be constructed *from actual air experience.* Such a map would be taken from reality and would accordingly be really useful. Climatically constructed maps would be useful only for cross-country flights, whereas maps compiled from aerial measurements would be useful for slope soaring with different wind direction, for thermal soaring and for standing waves, to give only a few examples.

These considerations led us to chart vertical currents in conditions of different weather systems. We investigated the immediate surroundings of the gliding site on Alp Scheidegg ob Wald in the Zurich Oberland. These investigations were carried out in the following manner:

We had at our disposal altogether some 50 written flight reports of soaring flights of more than half-an-hour's duration, all compiled in entirely different weather situations. From these we chose 23 reports of flights carried out in thermals without the aid of slope winds.

The weather situation was therefore characteristic of *good weather thermals.* To show the prevalence of vertical currents at a definite level (from 1,000 to 1,300 metres above sea level, *i.e.* from 200 metres below the launching site to 100 metres above it) we extracted the enclosed *airways map* from the flight reports, and it was comparatively simple to represent graphically the prevalence of vertical currents. We merely had to draw on a single map all the airways which came into the chosen height layer. We modified the delimitation of areas of up-currents so arrived at by taking air experience, as far as we had it at our disposal from written flight reports, into consideration. This method of going about the job is therefore relatively simple, as long as the reports are detailed and complete. We may discuss how to write flight reports of practical value in a subsequent article.

In the above we have only discussed soaring maps for a relatively small area. It would, however, appear to be only a small step to build up a *Swiss system of maps for glider pilots* from soaring maps of limited areas. We would then only concern ourselves with the collation of the various maps of small areas onto one large map of Switzerland. This will enable the soaring pilot to fly from one vantage point to the next, thus covering a certain distance. Soaring pilots often apply this technique when they are familiar with conditions over soaring sites on route. Moreover, at each site they are familiar with certain routes radiating from it, and a combination of all these on a chart would give a valuable survey of Swiss soaring conditions.

(*Photograph on page* 13)

THE BRITANNIA TROPHY

By GEOFFREY DORMAN

THE Britannia Trophy, which has just been awarded by the Royal Aero Club to Group Capt. Donaldson for 1946, for attaining a speed of 616 m.p.h., which is awarded each year to the pilot who has put up the most meritorious performance in the air during the preceding year, was awarded in 1922 to a glider pilot.

The winner for 1922 was F. P. Raynham, who performed the first extensive soaring flight by a Briton in this country. Freddie Raynham had already achieved fame as a power pilot, having qualified for his Aviator's Certificate, No. 85, in May, 1911.

When the *Daily Mail* offered a prize of £1,000 for the " gliding " flight of the longest duration made in England during a specified week in October, 1922, Freddie Raynham was one of the first entrants. The contest was organised by the Royal Aero Club. He had for some time been associated with the famous Martinsyde firm of aircraft constructors, so Mr. George Handasyde (the " syde " of Martinsyde) designed for him a special monoplane glider. Working in the team with Freddie and George was a keen young man named Sidney Camm, who was then in the drawing office of Hawkers. He was the designer, many years later, of the " Hurricane," " Typhoon," " Tempest " and other famous fighters.

There had been no glides in this country of more than a few minutes' duration, and no one expected to stay up for any length of time. Freddie's glider, like most of the other competing craft, had been hurriedly built. For the competion was held within three months of its being announced, in spite of which, there were 36 entries, 16 of which materialised though only 13 flew.

George Handasyde had not time to make a proper control lever, so a very short stick was fitted, to control the elevator, and a rudder bar for the rudder. The ailerons were connected by a wire which passed horizontally right from wing-tip to wing-tip, through the cockpit. The method of aileron control was for the pilot to hold a turnbuckle which was about level with his chest, and to move this to port or starboard as required. That would have been quite all right for the short downhill glides which were all that Freddie expected to accomplish.

On the first Sunday, Raynham made his first glider flight by way of a test from the South side of Itford Hill, and performed a gentle glide to the bottom of the hill of about one minute.

Itford Hill had been chosen on the grounds that the prevailing S.W. wind would be blowing, as it was a gentle slope with good landing at the foot. But on the opening day, Monday, 16th October, the wind went to N.E. and stayed there for the rest of the week. So the more adventurous went to look at Firle Beacon which was at the N.E. face of the ridge, but which had precipitous slopes. Tony Fokker led the way with his biplane glider, and Freddie soon followed. Fokker astonished everyone by a " bungy " launch from which he stayed in the air for 37½ mins., *carrying a passenger.* That rather debunked the prevailing idea that there was some " black magic " in this soaring business.

Seeing how it was done, Freddie Raynham was " bungied " off in the " Handasyde." He at once got the up-current and gained height. He went along the ridge to Alciston, returned, and landed on a comparatively flat shelf below Firle Beacon. There he picketed the glider in the lee of a wood for the night.

The next morning we had an early breakfast in Seaford and at 8 a.m. were helping Freddie to drag the glider to the top of Firle. There was a steady N.E. wind blowing, and we " bungied " him off. He at once gained height, but, in turning, went too far back over the hill, lost the up-current, and landed. We soon launched him again, and this time he found the current and did not venture too far back nor too far out.

Being an entire novice at soaring flight, he began experimenting. He soared over one area for about 40 minutes after which the air became rather bumpy, so he moved further along the ridge. He seemed to be quite at home, making his turns with his ailerons, and making no use of his rudder, which he later said was quite ineffective. That was the case with most of the British gliders. Indeed it was almost possible to tell which day of the week it was, by counting the additional bits of surface which had been added to rudders. For many pilots added a bit more each day after new tests.

Freddie had been up for about an hour, when he saw another glider, that of Warren Merriam, about to be launched from Firle. So he sportingly moved to another area to give the newcomer room. But the current was not so strong here, and after 1 hour 53 mins., Raynham landed. His sporting gesture very possibly cost him the £1,000 prize, for had he stayed over Firle, there was no reason why he could not have stayed up all day. As it was, his flight was the best until the last Saturday. On that afternoon, a very strong and steady N.E. wind rose and persisted until dark. M. Maneyrol had been the first to take advantage of it and he stayed aloft till the competition ended at sunset, having been in the air for 3 hours 21 mins.

At the end of the year, the Royal Aero Club considered that Raynham's flight was the " most meritorious performance in the air by a British subject," so they awarded him the Britannia Trophy, the first and only occasion on which it has been won by a glider pilot.

It was hoped that gliding would go ahead in view of the fillip it received from the meeting. But people then decided they wanted to " go places " in gliders. So small motors were fixed in the machines of the next year which were known as " motor-gliders." Gliding proper did not revive in Britain until 1930, when the B.G.A. brought Kronfeldt to Itford Hill for a gliding " renaissance meeting."

(Mr. Geoffrey Dorman is Manager of The Information Bureau, Royal Aero Club, and was Press Steward at the Itford gliding meet 1922).

[*Photographs on page* 11]

SYNTHETIC TRAINERS

By Dr. W. E. HICKS

Continued from December issue

DIRECTION OF MOVEMENT

CONSIDERING a single control which can be moved in one or two directions, and assuming that the pupil is concentrating only on moving it in the right direction in response to an unambiguous signal, we can feel confident that he will perform this task correctly from the beginning, and that his reaction time will be about 0.3 seconds and will be little, if at all, shortened by practice. We might say that the knowledge required is readily transformable from the symbolism of words to that of control movements. What practice does in a case like this is to render the response more automatic, so that it interferes less with other mental activities.

In flying, the signals may be far from clear and unambiguous. In addition, there is not one control, but three. The pupil has therefore to be prepared to make one of six different responses; in such a case, we expect the reaction time to be longer at first, and more affected by practice, and there will be an appreciable number of wrong responses at first. Or, if we suppose the pupil tries to make compound responses designed to correct deviations in all three planes at once, he has to choose the right one out of the total of twenty-six ways of responding with one, two, or three controls. The beginner naturally attends to each control in turn—not, of course, in strict rotation—and only later makes use of compound responses. The ability to do so is obviously very useful, and would seem to be one of the things a synthetic trainer could help to teach.

CONTROL—RESPONSE FUNCTION.

The mathematical expression which transforms a control deflection into the corresponding change of motion, attitude, or position of the aircraft involves one or more integrations with respect to time. For instance, an elevator deflection causes an angular acceleration in the fore-and-aft plane, and it takes time for this to build up a given angular velocity. A second integration gives the change of attitude, and, neglecting incidence and speed changes, a third integration gives the height. It is, of course, only true at the very beginning of the manoeuvre that the angular acceleration depends on the elevator deflection; subsequently, the righting and damping moments exert an important and favourable influence. However, these integrations are involved in the function which links height (or airspeed, or attitude, etc.) and the varying elevator deflection, and it can be shown that if the pilot were able to respond continuously and without time-lag to a chosen one of these quantities, in order to make it vary exactly as he wished he would have to invert the function. That is to say, to control attitude perfectly, he would require to observe its first and second rates of change—*i.e.* the angular velocity and acceleration. In fact, as we know, the pilot has a time-lag of up to a third of a second, and it also appears that he responds discontinuously; perfect control is therefore impossible, for these reasons if for no others. Nevertheless, it is still important for him to observe at least the first rate of change of the controlled quantity, and as many more as he can manage. Unfortunately, it is impossible to take any useful account of the acceleration or higher derivations of the motion of a visually-perceived object, unless it is observed for an appreciable time. Therefore any more direct signals of rates of change may be of great importance in helping the pilot to anticipate, and thus avoid over-controlling and oscillating.

One such signal is provided by the control force, or "feel," as it is commonly called. If the pilot determines to move the stick or rudder pedals a certain distance, then the resistance evoked is a measure of the moment applied to the machine; unfortunately, as we said above, it gives no indication of the secondary moments, and therefore only measures the initial angular acceleration. Of course, the pilot might make force his output, if the "feel" is considerable, and possibly use his sense of hand or foot displacement as a secondary check. It is not known in exactly what circumstances one thinks in terms of force rather than movement; clearly, if the gear ratio were so high as to make the movements normally required hardly perceptible, one would have no option. In normal cases, experience of analogous tasks suggests that that form of output is chosen which one finds to be most efficient. Two facts may be significant in this connection; one is that a movement of given extent requires a force to start it and a force to stop it—*i.e.* the time-variation of the force must satisfy certain conditions, owing to the inertia—whereas, if there is a resistance increasing with displacement, and large compared with the inertia forces, it is only necessary to "turn on" the right amount of force; this seems to be a simpler task. The other fact is that the same control force produces the same moment at all speeds, whereas a control deflection gives a moment proportional to the square of the speed; consequently, working in terms of force partly neutralises the variations in sensitivity due to speed changes.

The so-called "response effect" may be mentioned here. As soon as the machine begins to respond to the control deflection, the control force (hinge moment) is diminished, owing to the reduced effective incidence of the control surface. This will tend to have an unstabilising effect, in the sense of causing larger control movements than the pilot desires; whether it will do so in fact, depends on the magnitude of the reduction in control force, both absolutely and relative to the friction, and also on whether the pilot is prepared and can allow for it. It seems unlikely that it is of much importance in gliders, and, to avoid unnecessary complication of the mechanism, it might be omitted from a synthetic trainer.

Another important signal is the acceleration normal to the flight-path, of which it is a measure

of the curvature; hence it indicates approximately the rate of change of attitude. When the pupil has learnt to appreciate rate of change of attitude visually, he may be able to estimate in this way roughly how much of a vertical acceleration is due to his control movements, and how much to atmospheric disturbances.

If height is the controlled quantity, vertical acceleration can give notice of the start and finish of a change of height, but, of course, gives no indication of a steady change. Apart from instruments, the only measure of rate of change of height is attitude, and this the beginner has great difficulty in judging. In theory, he might sit in the machine on the ground—being careful to choose a site from which he could see the distant horizon—and invite somebody to raise the tail up and down, while he memorised the appearance of the front of the cockpit in relation to the horizon when he was in a proper gliding attitude. Then, provided he did his first hops in the same machine, and sat in exactly the same position, and again had a distant horizon to view, and remembered to look at it, he might profit by his forethought. In time, of course, he becomes sufficiently at ease to glance at the wing-tip, which provides an absolute check on attitude, but in the early stages he tries to fly by his height from the ground. Now, even if the response is so rapid and dead-beat that the attitude follows the elevator movements with negligible lag, there is still one integration involved in converting control deflection into change of height. In such a case, as was said above, unless the pilot can anticipate future values of the controlled quantity, by observing (or receiving some signal of) its rate of change, he is bound to develop oscillation, possibly violent. The beginner is unlikely to have had previous practice in judging rate of rise or fall at heights up to fifty feet or so, nor, as we see, can he interpret, without practice, the only signal of it which is continuously available. This state of affairs would seem to constitute the major difficulty in the very early stages, and to be a suitable subject for synthetic training.

Linked with this is the question of control of airspeed. Strictly speaking, an elevator movement or other disturbance sets up not only a rapid adjustment of attitude, but also a slow change of airspeed—either an oscillation or a gradual approach to a new steady value. Roughly, we may regard attitude as measuring the forward acceleration, which should make speed one degree more difficult to control than height; fortunately, this is only true initially, owing to the damping effect of drag, and other factors, and also the change is slow, at least for moderate elevator deflections. However, there is no theoretical difficulty in simulating the audible, instrumental, and "feel" indications of airspeed in a synthetic trainer, and it should certainly be considered.

The elevator control has been chosen as an example, partly because it requires the greatest skill of the purely manipulative kind, whereas the others probably depend rather more on assessment for their proper use. However, the same method of analysis is applicable in principle to the rudder and ailerons.

(To be continued.)

NEWS IN BRIEF

MRS. VERONICA PLATT, who made a record altitude flight of 9,000 feet in a "Grunau Baby" during the war, is writing a special feature for SAILPLANE. Her first article is on page 15 of this issue.

"GLIDING," the lecture which was to have been given recently to the Belfast Branch R. Ae. S. by Professor G. T. R. Hill, has been postponed owing to the illness of the lecturer. The branch hope to present the lecture later in the session.

ON December 10, 1946, Mr. J. W. Leach successfully baled out from a glider. There seems to be a general idea that this is the first time a pilot has successfully baled out of a sailplane in the United Kingdom. Any comments?

FIGURES issued by Headquarters, Reserve Command, R.A.F., show that 1946 has been a record year for A.T.C. Gliding Schools. Nearly 3,000 cadets passed gliding courses during the year and over 168,000 "launches" were made.

FEATURES of the display at the Christmas camp of the Gliding Club of Victoria: Aero-tow of the "Blue Grunau" in the 3,000 feet region, loops, stalls, stall turns, and spiral dives. The spirals were the nearest approach to spins, as the "Grunau" refused to go into a pukka spin. Advanced members of the club had their first aero-tow flights behind a "Tiger Moth." Highest launch by aero-tow was around 4,000 feet. Best flight of the camp—2½ hours by C. Lambeth off an aero-tow; best from winch launch—2 hours 6 minutes by K. Chamberlain; 1 hour 37 minutes by Norm Hyde. (*Pictures next month*).

A COMMITTEE has been set up within the Air Ministry to investigate the problems involved in combating the dangers of flight in cumulo-nimbus clouds and similar turbulent conditions.

THE committee, which is under the chairmanship of Air Vice-Marshal Sir Basil Embry, K.B.E., C.B., D.S.O., A.F.C., Director-General of Training, Air Ministry, includes experts in meteorology, radar, aerodynamics, instrument flying, instrument and aircraft design.

MR. ARTHUR D. HARDINGE, of Melbourne, Australia, and his collegaue, Mr. K. Davis, report good progress in the building of the first Australian "Chilton" Olympia. Fuselage bulkheads are on the jigs, awaiting fittings; elevators completed. One set of wing ribs in the jigs with 30 already finished. Main criticism by the assemblers: super-abundance of different sized materials involved. Biggest difficulty: purchase of wing root metal for the fittings.

More than 1,600 hours have been put in on the job, which, it is hoped, will be completed by next Christmas. (*Pictures next month*).

THE Argentine National Soaring Contest took place on February 2 at the Albatros Gliding Club, Merlo, Buenos Aires. This is the 2nd National Soaring Contest to be held in Argentina, the first being at Cordoba in February 1945.

ICELANDIC GLIDING CLUB

THE "Icelandic Gliding Club" was formed on the 20th of August, 1936, by 33 young Icelanders with common interest in gliding and soaring, this new and unknown sport here in Iceland.

Our instruction took place at first at Vatnsmyri, near Reykjavik, the capital of Iceland. Later on, after the British occupied the country, they built the Reykjavik Aerodrome (at Vatnsmyri), which they delivered to the Icelandic people on the 6th of July this year. Since 1937 our quarters have been at Sandskeid, 22 km. out of town. There we have got very good conditions for gliding and soaring, Termik, mountains not too far away and standing waves when the wind is favourable. The Termik area is the Sandskeid itself, a gravel plain with marshlands on one side and lavafield partially grown with moss on the other.

The slope soaring usually takes place over the slopes of a nearby mountain, Vifilsfell, which rises 450 metres up (655 m. over m.s.l.) in the south. It provides good conditions for that sort of gliding in northerly, westerly and even easterly winds. However, the long distance one has to soar from Sandskeid to the mountain makes this flight a difficult one, which takes a lot of skill and practice.

Gliding in a standing wave can be done, too, from Sandskeid in waves caused by the mountains 18 km. to north (the mountain Esja, 909 m. high and 15 km. long, and Botnsulur still farther away and 1,095 m. high). I once had a launch to only 40 m. height (the winch failed) and started soaring over the slopes of Vifilsfell. I got up to 650 metres over the mountain, then I used the standing wave from Esja, which gave me an even lift of 3—5 m. per sec. up to 1,200 m. height. Unfortunately I did not have time to use this opportunity further as our flying hours were rationed, because of the sailplane shortage (I was 40 mins. in flight this time instead of 30 mins., which I had right to).

This very evening the wind became calm with occasional slight breeze. When the instructions had finished for this day at 2300 hours, and our instructor was soaring homewards (to the hangars) he suddenly got into a strong upwind and reached 500 m. height, in a very short time. We could not determine the cause, whether this was the evening termik or the remains of the day's standing wave. My brother, Mr. Arni Olafsson, who is an instructor too, has ascended (reached) 650 metres height in only two minutes. On this occasion he was winched 150 metres up and the wind velocity was 40 m.p.h. My opinion is that gliding and soaring is the most interesting sport. To be able to fly like a bird is a real fun.

The midsummer nights are light here; this would have been a fine opportunity to have height and distance tests for the club members, but unfortunately we were not able to hold these tests owing to glider shortage. We have reasons to hope that we will not have such trouble again, as we got quite recently from America two "Pratt Reads L.N.E. 1," a "Yankee Doodle" (Saister Kaufman), a "Sweiser" and one "F.J.I." from Sweden. All of them two-seaters. Besides, we have ordered one "Grunau Baby" and an "Olympia" from England. When we have started to use those new sailplanes, things will be different and you will probably hear about it later.

We have been improving our outfit and accommodation at Sandskeid, and it is by now quite reasonable. We have already built two hangars (300 m² and 162 m²). A hut for ourselves, to eat and sleep in, has been made too, and a bigger one is being built alongside one of the hangars. On the Reykjavik Aerodrome we have a part of a big hangar for our sail and motorplanes, two "Luscombes," one "Tiger Moth" and a "Steerman." Those are used both to teach motor-flying, to those of the club members who are interested, and for aero-towing, as we have been granted a permission from the Aerodrome Authorities to practice towing for some time at least. Fortunately there was not a ban on gliding here during the war, so we have been able to keep the club going in spite of some difficulties. The Sandskeid, for instance, was made impossible for motorplanes to land on. The occupational forces used one half of the plain for their tank and artillery divisions, to keep in practice, but the other half we used for our own activity, often at the same time. We would like the magazine to convey our greetings and best wishes to Mr. Harry Leach, "C" pilot from England, who paid us a visit, and Col. Terril E. Price (0-4627 A.P.O. 501, c/o Postmaster, San Francisco, Cal. U.S.A.), who took his "A" in our club.

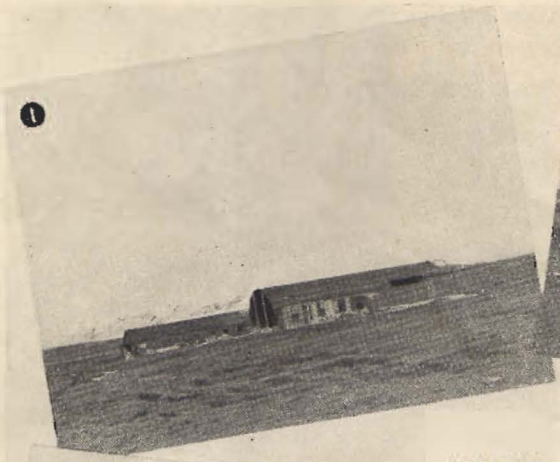
So far 78 people have had a "A" certificate from our club, 37 their "B," and 14 an "AC" certificate. Besides 3 pilots have been more than 5 hours aloft at a time. They are: Mr. Kjartan Gudmundsson, Mr. Helgi Filipusson (both instructors), and Mr. Agnar Kofoed-Hansen, the director of police.

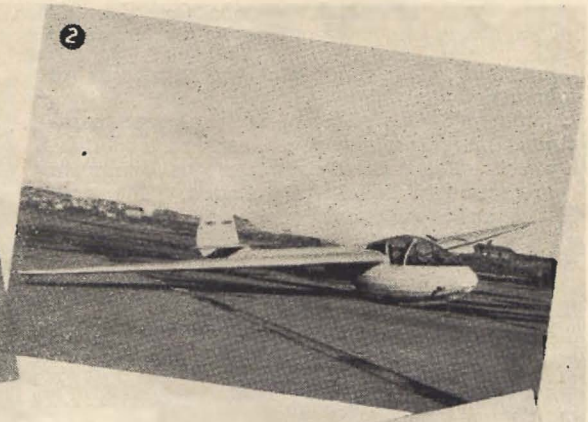
Our club's committee consists as follows:— President is Mr. A. Kofoed-Hansen, director of the police; he founded the club and was its first president. He has done unparalleled work for air aviation in our country, and among others he established its first airways. Vice-president is Mr. Bjorn Jonsson, control officer at the Reykjavik Airodrome. Secretary: Mr. Gudbjartur H. Eiriksson. Cashier: Mr. Thorsteinn Thorbjornsson.

"SVIFFLUGFELAG AKUREYRAR"

In Akureyri, the biggest town in northern Iceland, there is another gliding club, "Svifflugfelag Akureyrar," which was founded 9th April, 1937. This club has, till quite recently, been practicing with one glider only ("Grunau 9"), but now they have a "Sweizer" (two-seater) too.

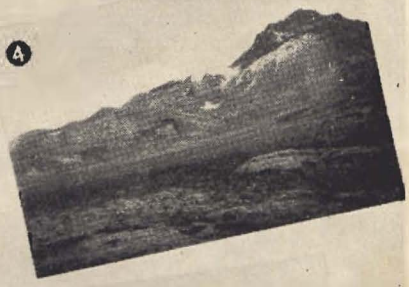
Its committee: President, Mr. Gisli Olafsson; Mr. Karl Magnusson, Miss Gudrun Thorhallsdottir, Mr. August Olafsson and Mr. Sigurdur Thordason. Instructor: Mr. Arinbjorn Steindorsson, Reykjavik.



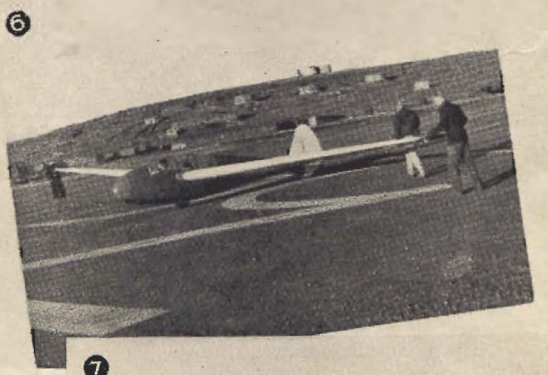


ICELAND GLIDING CLUB









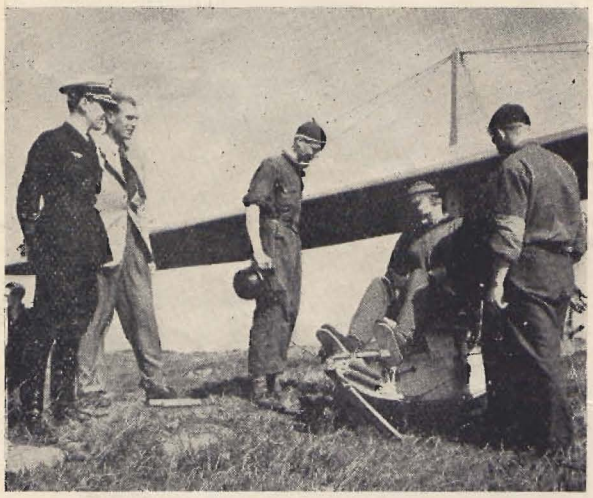


1. *Aurs hangars in Sandskeid, one under construction. Note the " Grunau Baby " in the air.*
2. *Pratt Reid at Reykjavik Airdrome and Esja in the background.*
3. *From Akureyri: Mr. Gisli Olafsson chairman for the Gliding Club of Akureyri.*
4. *Vifilfell 450 m. high. Westward slope.*
5. *Standing waves from Esja and Zogling. Esja 909 m. high.*
6. *Laister Kauffman, " Yankee-Doodle " on Reykjavik Airdrome.*
7. *Vifilsfell and a " Zogling " to be launched. Somewhere over the top is a " Grunau Baby," but it is not easy to recognise.*

SWEDISH CONTEST RULES

For the interest of those who, from time to time, are called upon to arrange contests, we are publishing the Swedish methods of point computation.

1. Contestant: One pilot and the maximum of four assistants.
2. Equipment: One glider of optional type, parachute, barograph, Mae West, car and trailer.
3. Contest: The contest comprises goal flights in combination with altitude flights. The contestant has to make only one flight per day. On all flights at least one barograph should be carried.
4. Performance of contest: Before the opening of the contest the manager and staff choose certain places as goals. The contestant announces his goal to the take-off officer before the start.
5. Methods for computing points:
   a. Goal flights. The contestant earns points for distance made as follows: Points = F (D—20) where D is the distance from Alleberg to landing place in km and F is the factor of the day.



General B. Nurdenskiöld (Head of the Air Force and Vice-Chairman of the R.S.A.C.) on a visit to the Sailplaneing School at Alleberg.

$F = \frac{10}{\sqrt{D_m}}$ and D_m is the arithmetical medium for the three best distances of the day in question. The contestant landing on his goal earns an addition of 50 per cent. of his distance points. A contestant landing farther from Alleberg than his goal earns an addition of 25 per cent. of his distance points.

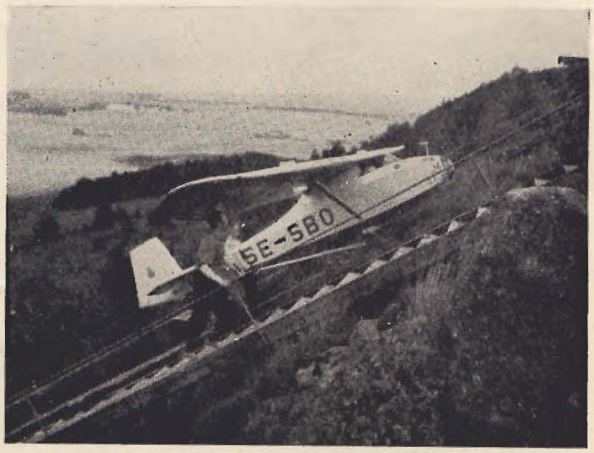
   b. Altitude flights. Points are computed as follows:
   Gained height 0—1500 m = 0.02 points/m
   Gained height 1501—3000 m = 0.03 points/m
   Gained height 3001—no limit = 0.04 points/m

The Swedish Soaring Champion is the one earning the highest number of points.

Knowing the practical working of these rules, I would not want to call them ideal. Too much attention is placed on landing on the goal—soaring is capricious enough without this addition. Who can at take-off estimate the weather conditions, say 50 miles or more away, with such accuracy that he is sure that the thermals will be good enough to let him fly? Not very many, I am sure. Soaring is more or less a matter of chance, especially during a contest. This is also the reason why rules for soaring contests never will be correct—one or two lucky days and the dark horse from the bottom of the list will be at its top. But the rules of any such contest are made in an endeavour to get an even basis on which to estimate the performances. They should eliminate chance as much as possible. With regard to this, the Swedish factor of the day, F, is a very good thing which actually evens out chance. Perhaps too much attention has been given to gained height. Altitude points proved to be a rather large part of the total number of points to all contestants. My opinion is that no notice should be taken to altitude at all, as



Launching Platform—Alleberg.



Funicular Retrieving (Alleberg).

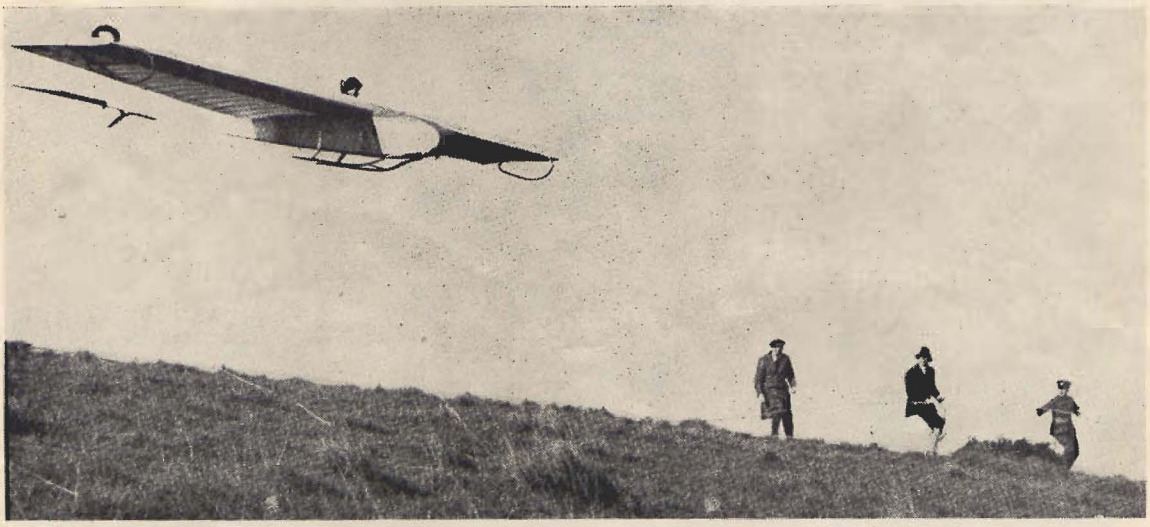
(Continued on page 24)



Britannia Trophy.



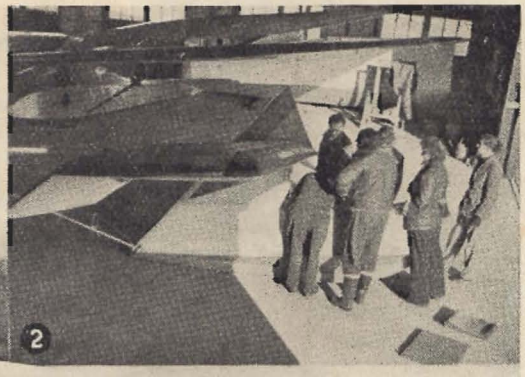
The "Meise Olympia" which was struck by lightning and wrecked at Barntrup (September) while piloted by Major A. R. H. Van Baerle (B.A.O.R.)—Story, November issue.



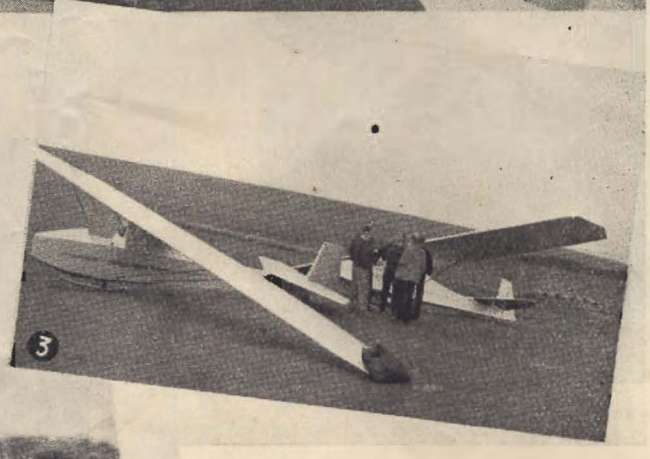
Raynham starting off on his 1 hr. 53 min. Flight.

DERBY & LANCS GLIDING CLUB





1. *Headquarters of the Club. Hangar is out of sight, to right.*
2. *Preparations for the day.*
3. *" Cadet."*



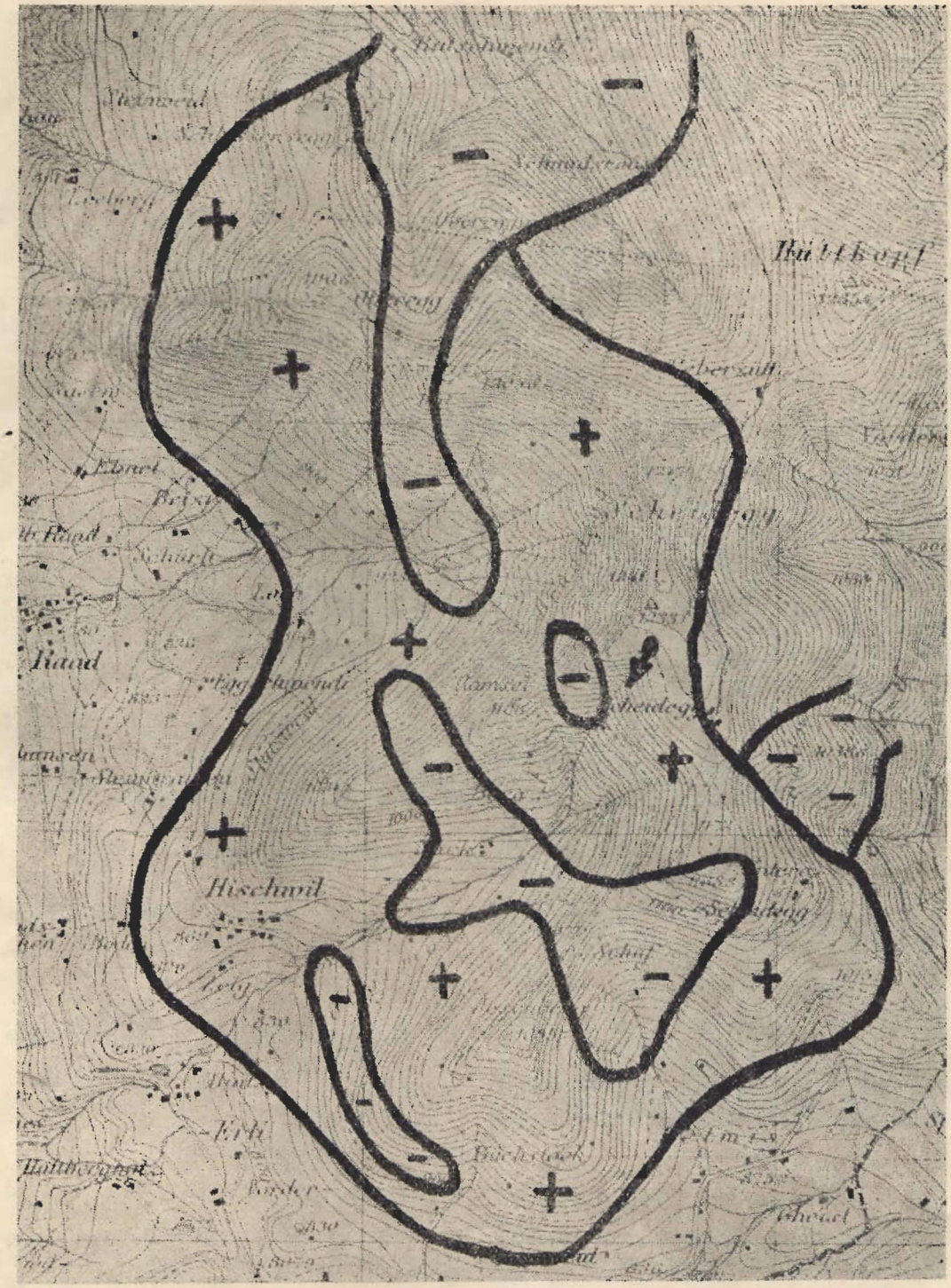


4. *(Nacelled " Dagling") Bernard Thomas giving last minute instruction.*
5. *Home-made winch on Ford chassis (Buck Benton).*
6. *L. to R. Michael Sharp; Margaret and Eddie Swale; Leslie and George Benson; " Audrey "; Phil Leech; I. R. Robertson and "Henry."*





The Problem of Swiss Soaring Flight Maps



This example of a soaring map shows the prevalence of vertical currents near the soaring side Alp Scheidegg ob Wald in the Zurich Oberland (1,200 metres above sea level). It applies in conditions of good weather thermals for a layer from 1,000 to 1,300 metres above sea level. Ascending air is shown by areas showing a plus, areas of descending air are marked minus. Launching site and direction are marked with an arrow. (A complete soaring map should show the following additional information: Launching and landing sites, hangar space, etc.). (From Swiss Aero-Revue, Bern, December 1946.)



B.G.A. CUPS AND TROPHIES, 1946.

FIRTH VICKERS TROPHY
Best performance by a British pilot in a British designed and built sailplane at the National Gliding Competitions.

MANIO CUP
Best goal flight during the year.

SEAGER CUP
Best two-seater performance during the year.

DE HAVILLAND CUP
Greatest height during the year.

WAKEFIELD TROPHY
Longest distance during the year.

DU GARDE PEACH TROPHY
Best Club team during the National Gliding Competitions.

VOLK CUP
Best out-and-return flight during the year.

FLIGHT TEST GROUPS

THE British Gliding Association considers that the services of impartial flight test groups would be of benefit to small firms and amateur builders, as well as to enable tests of gliders and equipment for the Association to be carried out.

Test Group No. 1 has just been approved by the Technical Committee of the B.G.A., and consists of four pilots from the Surrey Gliding Club, whose total hours add up to well over 6,000. They have flown a very considerable variety of aircraft and glider types, and between them cover a wide range of experience. Their chief pilot is test pilot to a well-known aeroplane firm.

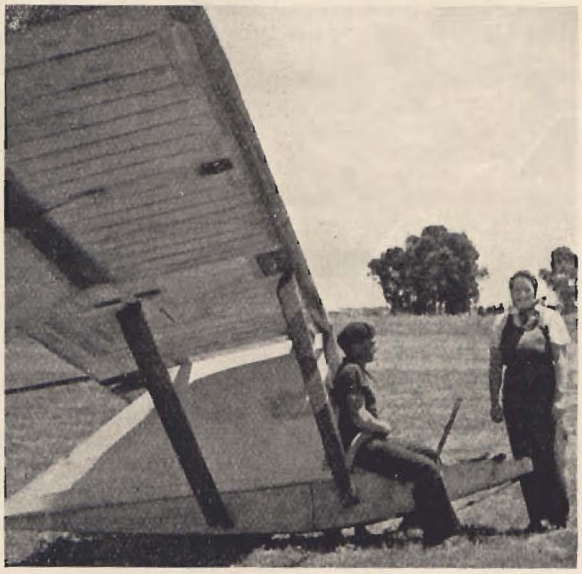
They are willing to undertake the testing of gliders and sailplanes, as well as of light and ultra light aircraft, and instruments, etc. Their services are given free, and only the actual expenses incurred, such as launching or fuel costs, etc., are being charged.

Beginners' Page by VERONICA PLATT

1. The Why and How of Gliding

A SERIES of articles for the beginner, Mr. Editor? That is rather a tall order, for a glider pilot is always a beginner in the sense that he still goes on learning; and each new discovery we make or each fresh flight we take only serves to emphasise how little we knew before and how much there is still unknown. But I will assume you mean someone who has never left the ground, never felt that sensation that on good days combines something of sailing and ski-ing and dancing and skating and surf-riding, yet can make one feel helpless as a leaf in a whirlwind on bad ones. . . . Still, for all its excitement and thrills gliding remains one of the safest of all sports, safer far than crossing a traffic-heavy street or even than riding a bicycle. Boys and girls of fourteen can fly just as well as grandparents in their fifties, and provided they are reasonably fit and healthy there is no reason why they shouldn't. But I stress the fitness because gliding is strenuous, far more strenuous than flying an aeroplane or driving a car; and your motive power lies almost as much in your brain as in the weather. If conditions are right and you do not know how to make the best of them you will get nowhere.

I would like here to quote something I read the other day. It comes from Arnold Haskell's "Ballet-mania." Put gliding in the place of ballet and it is very apt. "This is a chronicle of hard work. The dancer will never cut her rehearsals, but clamour for more; and when she is not herself dancing she watches others, in acute discomfort, for she will make every movement inwardly and suffer with every fault. She has never finished learning. At the height of her triumph she must submit herself to the discipline and often to the abuse of her instructor. To him she is never 'Madame' but always the small girl whose arabesque lacks perfection or whose elevation is weak. What a mental and physical training, this daily class. . . . . I have yet to meet the truly conceited dancer—that is, the dancer who really believes her own pathetic little attempt at bluff. There is always something new to be learned, something that X excels in and that she herself lacks." And there you have the secret of success, or at least of proficiency. There are plenty of proficient glider pilots in the world, but the really outstanding ones are almost as rare as the really outstanding ballerina. Therein lies its fascination. A first-class sailplane pilot is a joy to watch. He flies with a calculated perfection of movement, never hurried, never jerky, yet always in the right place at the right time—which may be due to some sixth sense we others haven't got but is more probably the result of long and careful training and a quick and keen intelligence, allied to a sense of rhythm. It is not necessarily the pupil who learns fastest who advances furthest. One of the best of the pre-war German soaring pilots had such a record of crashery and hamhandedness that he was twice turned out of the school as useless, not worth the trouble of training. Yet he persevered and became brilliant. If you find it difficult don't despair. Gliding can be as exasperating as golf, and one has off-days for just as little apparent reason.



Primary Glider.
Veronica Platt and Pupil.

That brings us to the question of patience. Elementary training can be carried on in almost any kind of weather except with a strong gusty wind, but you are quite likely to turn up at the field and find no flying. Why? Oh, because the towing

winch or car is out of order, or the skid wants fixing, or the ground is too wet, or any one of a hundred other things. This is where the Club discovers the true worth of its members, for the ones that are any good will roll up their sleeves and work till it is dark—and even then sit on discussing gliding theories till they have to make a dash for the last train. There used to be a notice hanging in the bar of the London Gliding Club to the effect that there are thirteen things to be done before you can glide and that unless you have done one thing thirteen times or each of them once, you are not pulling your weight. I forget exactly what the thirteen were, but they must have included opening up the hangars, getting out and cleaning the machines, filling up the cars and winches with petrol and oil and water, laying out the cables, collecting signal flags and landing marks and tools, towing the gliders out on to the field, checking all controls carefully, rounding up the time sheet and stopwatch. . . . That is nine, anyway. And to this you might add cutting the grass, levelling the runways, painting and repairing and bricklaying around the hangars and club, and a dozen more. Where I learnt, we used to have to put in an hour in the carpenter's shop for every flight we made. There was always something to be done in the way of repairing or rebuilding the Club machines and a careless landing by somebody may mean several weeks' work before the primary can be used again. We built all our own machines, both elementary and advanced types, and that gave us a personal interest in their well-being that went a long way towards preventing casual crashery.

A primary glider is a very simple affair, strongly built and *almost foolproof*. It has no pretence to beauty of line or anything but fitness of purpose. The wings are square-ended, the tail ungraceful, the fuselage simply a couple of crossbars and some wires. There is no cabin. The pilot sits out on the nose with nothing between him and the earth but a couple of webbing straps. There is a joystick that gives him fore and aft and lateral control and a rudder bar for his feet that will turn him to left or right. The movements are simple. Stick forward, nose down ; back, nose up ; to the right, bank right ; to the left, bank left. Push with your left foot, the nose turns left. Push with your right foot, the nose turns right. And that is all. To these add one rule—when in doubt push the nose down and you will come to no harm. Put unscientifically, what holds you up is your speed through the air. In the next article I will explain how and why. But for the time being it is enough to remember that in speed lies safety. Hold your nose up, the speed drops, the air can no longer support you, and you stall. Dip your nose, the speed rises, and you have control again. But you will lose a lot of height in a stall, so avoid them like the plague unless you want to bore a hole in the landing field. You will be taught to judge your speed by the feel of the wind in your face and the sound of it in your ears. If ever there is a calm space and a silence, drop your nose quick. It is not the air that has stopped moving, but you. Figure out why afterwards. What you have to do immediately is get up speed and regain control of your machine, and that can only be done by diving. When you can hear and feel the wind again pull your stick back gently and regain the horizontal. Time enough then to wonder what you did wrong and decide never to do it again !

BRITISH GLIDING ASSOCIATION LTD.

Minutes of First General Meeting held on Friday, 24th January, at 4 p.m., at Londonderry House, 19, Park Lane, London, W.1.

Present : In the Chair, Mr. D. G. O. Hiscox.

Club. Full Members.	*Representatives.*
Royal Aero Club	Col. R. L. Preston, C.B.E.
Bristol Gliding Club ..	Mr. T. Rex Young
	Mr. M. R. Chantrill
Cambridge Gliding Club ..	Mr. J. R. L. Campbell
	Mr. G. Wass
Derbyshire & Lancashire Gliding Club	Mr. B. Thomas
	Mr. T. Horsley
Leicester Gliding Club ..	Mr. J. C. Rice
London Gliding Club ..	Mr. A. Sweet
Midland Gliding Club ..	Mr. C. J. Wingfield
Newcastle Gliding Club ..	Mr. K. L. Wood
Oxford Gliding Club ..	Sqd./Ldr. R. Kronfeld
Royal Artillery Aero Club	Major R. H. Purvis.
Southdown Gliding Club ..	Mr. S. G. Stevens
	Mr. W. C. Gowlland
Surrey Gliding Club ..	Mrs. A. C. Douglas
Yorkshire Gliding Club ..	Mr. G. O. Hinchliffe
	Mr. F. N. Slingsby
84 Group Gliding Club ..	Flying Officer R. C. Forbes
	Captain J. R. S. Elmsley

Associate Members.	
Aerotech Flying Club No. 1	Mr. G. A. Chamberlain
	Mr. R. G. Robertson
Croydon Gliding Club ..	Mr. M. Macdonald
	Mr. L. Martin
Imperial College Gliding Club	Mr. P. J. Royce
	Mr. B. A. Hudson
North Somerset Gliding Club	Mr. B. A. Wheatley
	Mr. J. E. Williams
Polish Gliding Club ..	Lieut. J. Tomankiewicz
	Flight-Lieut. Zalinski
R.A.E. Technical College Gliding Club	Mr. L. Welch
	Mr. P. B. Atkins
13 O.T.U. Gliding Club ..	Flight-Lieut. J. H. Davies
Also present :	
12 Group Gliding Club (Proposed)	Flight-Lieut. R. Smyth
R.N. Gliding Unit ..	Lieutenant-Commander (A) J. S. Sproule
	Major F. D. Bird, R.M.
In attendance :	
Honorary Treasurer ..	Mr. J. R. Ashwell-Cooke
Auditor	Mr. H. G. Cooper
Secretary	Sqd.-Ldr. E. H. Spence

In the opening speech the Chairman welcomed the representatives of Clubs to the first General Meeting of the reconstituted British Gliding Association, and

looked forward to its future progress. He particularly welcomed the presence of a new Full Member Club, 84 Group Gliding Club, and a new Associate Member Club, the Polish Gliding Club.

Minutes.

The minutes of the General Meeting held on 4th October, 1946, which had been previously circulated, were agreed and signed.

Appointment of Chairman 1947.

It was proposed by Mr. Ashwell-Cooke, seconded by Mr. J. C. Rice and unanimously approved, that Mr. D. G. O. Hiscox should be re-appointed Chairman for 1947.

(*a*) **Appointment of Honorary Treasurer and Honorary Assistant Secretary.**

The Secretary reported that the appointments for Honorary Treasurer and Honorary Assistant Secretary would normally be a matter for the Council. However, both the previous holders of these posts were present, and had indicated they would be willing to continue in the appointments. As the General Meeting had full powers, he recommended that the General Meeting made the appointments direct for 1947. The recommendation was unanimously approved.

(*b*) **Vice-Chairman.**

As the retiring Vice-Chairman was unable to be present at the General Meeting and his wishes had not been ascertained, the appointment of Vice-Chairman was left to the Council in accordance with the Constitution.

Subcriptions and Entrance Fees.

The Secretary reported that the Council had recommended that the fees for Membership and annual subscription should be the same as for last year, *i.e.* £20 for Full Members and £5 for Associate Members. The meeting unanimously endorsed the Council's recommendation. It was decided not to charge entrance fees.

Appointment of Auditors.

Messrs. Wm. F. Smart, Son & Bloor were unanimously re-appointed as Auditors, and their renumeration left to the Council.

Preliminary Arrangements for 1938 F.A.I. Competitions.

The Secretary-General of the Royal Aero Club, who had just returned from a F.A.I. meeting in Paris, reported that the F.A.I. had agreed to the Council's request that the final offer to hold the 1948 Competitions in the U.K. should be deferred for three months, in order that the B.G.A. would have time to make the necessary financial arrangements to hold the Competitions.

Exchange Visit of Czech Aero Club Gliding Pilots, 1947.

Two Clubs, Derby & Lancs. and Leicester, offered to assist in entertaining the Czech pilots during part of their stay. The final arrangements were then left for the Council's consideration.

Organisation.	*Secretary.*
British Gliding Association	E. H. Spence, Londonderry House, 19, Park Lane, W.1.

Members of the B.G.A.

Bristol Gliding Club ..	M. R. Chantrill, 9, Royal Park, Clifton, Bristol
Cambridge University G.C.	J. R. L. Campbell, King's College Hostel, Peas Hill, Cambridge.
Derbyshire & Lancashire Gliding Club	B. Thomas, 87, Fargate, Sheffield 1
Leicester Gliding Club ..	Miss D. Knight, Ryecroft, St. Mary's Road, Leics.
London Gliding Club ..	A. Sweet, 6, Roland Gardens, S.W.7 (Freemantle 1193)
Midland Gliding Club ..	F. G. Batty, 2, Lombard Street West, West Bromwich, Staffs.
Newcastle Gliding Club ..	A. P. Miller, 25, Holme Avenue, Walkerville, Newcastle-on-Tyne 6
Northern Gliding Club ..	F. Haworth, 30, Fernhill Drive, Stacksteads, Bacup, Lancs.
Oxford University G.C. ..	Miss B. M. Nicklin, 532, Banbury Road, Oxford.
Royal Artillery Aero Club (Gliding Section) ..	Major R. H. Purvis, R.A., c/o Air Wing, School of Artillery, Larkhill, Wilts
Southdown Gliding Club ..	R. F. Brigden, 99, North Street, Brighton 1
Surrey Gliding Club ..	A. Dukinfield-Jones, 36, Deepdene Vale, Dorking, Surrey
Yorkshire Gliding Club ..	L. A. Alderson, Lyndhurst, Sinnington, Yorks.
— Group Gliding Club ..	F./O. R. C. Forbes, 84 Group Gliding Club, Salzgitter, R.A.F., B.A.F.O., c/o B.A.O.R.

B.G.A. Associate Clubs.

Aerotech Flying Club No. 1	P. L. Baker, 2, Northfield Close, Harlington, Middx.
B.A.F.O. Gliding Club ..	W./Cdr. G. E. Robinson, Air Headquarters (Ops.), R.A.F., B.A.F.O., c/o B.A.O.R.
Channel Gliding Club ..	F. G. Whitnall, 16, Cheriton High Street, Folkestone
Croydon Gliding Club ..	L. Martin, 74, Lewin Road, London, S.W.16
Furness Gliding Club ..	L. Redshaw, 12, Rusland Avenue, Barrow-in-Furness
Handley Page Gliding Club	P. H. Wall, c/o The Welfare Officer, Messrs. Handley Page Ltd., Cricklewood, London, N.W.2
Imperial College Gliding Club	P. J. Royce, Imperial College, Prince Consort Road, South Kensington, London, S.W.7
North Somerset Gliding Club	B. A. Wheatley, 12, Lower Bristol Road, Bridgwater, Somerset
North Wales Cross Country Soaring Club	W. E. Crease, Fairholme, Woodlands Road, Hough Green, Chester
Polish Gliding Club ..	Lt. J. Tomankiewicz, Sand Hutton, York
R.A.E. Technical College Gliding Club	P. B. Atkins, Hawthorne Cottage, Runfold, Farnham, Surrey
R.E. Flying Club (Gliding)	Capt. P. Beckett, School of Military Engineering, Deverall Barracks, Ripon, Yorks.

Scottish Gliding Union ..	R. B. Rogerson, 59, Carmyle Ave., Glasgow, E.2
Soaring Club of Gt. Britain	H. O. Davies, 68, Victoria Street, London, S.W.1
Standard Telephone & Cables Gliding Club ..	R. R. French, Standard Telephones and Cables Athletic Club (Gliding Section), North Woolwich, E.16
Ulster Gliding Club ..	J. G. Siderfin, Brockley Coombe, Mountsandel, Coleraine, Co. Derry, N. Ireland
2 Group Gliding Club ..	F./Lt. F. M. Reade, Oerlinghausen, R.A.F., B.A.F.O., c/o B.A.O.R.
4th Armoured Brigade Gliding Club	Major J. H. G. Mitchell, H.Q. Squadron, 4th Armoured Brigade, B.A.O.R.
13 O.T.U. Gliding Club ..	F./Lt. J. H. Davies, R.A.F. Station, Middleton St. George, Durham
85 Wing Gliding Club ..	S./L. H. D. M. Seymour, H.Q. 85 Wing G.C., R.A.F., B.A.F.O., c/o B.A.O.R.
151 Repair Unit (Aircraft) Gliding Clubs	Sgt. P. Rogers, 151 Repair Unit (Aircraft) Gliding Club, R.A.F., B.A.F.O., c/o B.A.O.R.

Council and Committees, 1947.

The Council.

Chairman, D. G. O. Hiscox; *Vice-Chairman*, P. A. Wills, C.B.E.; *Honorary Treasurer*, J. R. Ashwell-Cooke; *Secretary*, E. H. D. Spence.

Members—Special Appointment.

H. C. Bergel, Chairman, Flying Committee (*ex-officio*).
Mrs. A. C. Douglas, Chairman, Contests Committee, Honorary Assistant Secretary (Surrey G. C.).
G. A. Hinchliffe (Yorkshire G.C.).
S./L. R. Kronfeld (Oxford G.C.).
B. A. G. Meads.
Major H. A. Petre, D.S.O., M.C. (Royal Aero Club).
J. W. S. Pringle, Chairman, Research Committee (Cambridge G.C.).
Major R. H. Purvis (R.A. Ae. C.).
J. C. Rice (Leicester G.C.).
S. G. Stevens (Southdown G. C.).
K. G. Wilkinson, Chairman, Technical Committee (*ex-officio*).
C. J. Wingfield (Midland G.C.).
L. Wright (London G.C.).
T. Rex Young (Bristol G.C.).

Flying Committee.—H. C. Bergel (*Chairman*), T. S. Haynes, S./L. R. Kronfeld, C. Nicholson, G. O. Smith, P. A. Wills, C.B.E., C. J. Wingfield.

Technical Committee.—K. G. Wilkinson (*Chairman*), H. E. Bolton, H. Kendall, J. Norman, C. W. Prower, F. N. Slingsby, W. Tye.

Research Committee.—J. W. S. Pringle, Mrs. A. C. Douglas, Dr. W. E. Hick, G. H. Lee, Wing-Com. R. M. Poulter, Dr. A. E. Slater, A. L. Slater, K. W. Turner, L. Welch, K. G. Wilkinson.

Ways and Means Committee.—D. G. O. Hiscox (*Chairman*), P. A. Wills, C.B.E., Wing-Com. J. R. Ashwell-Cooke.

Contests Committee.—Mrs. A. C. Douglas (*Chairman*), P. A. Wills, C.B.E., Lieut.-Com. J. S. Sproule.

F. A. I. Liaison.—P. A. Wills, C.B.E., E. H. Spence.

Note.—1. The Chairman of the Council is an *ex-officio* member of every Committee, or Sub-Committee.
2. All Committees have power to co-opt, within their terms of reference.
3. Other Special Committees or Sub-Committees may be formed to deal with particular subjects. They are dissolved after reporting to the Council or their parent Committee.

Addresses.

Ashwell-Cooke, Wing-Com. J. R., Green Ridges, Pelham's Walk, Esher, Surrey.
Bergel, H. C., York Cottage, Sonning, Berks.
Bolton, H. E., 1, Denham Way, Denham, Bucks.
Douglas, Mrs. A. C., Staplehurst Farm, Salfords, Redhill, Surrey.
Haynes, T. S., Park House, Moreton Road, Upton, Wirral, Cheshire.
Hick, Dr. W. E., M.B., B.S., 66, Panton Street, Cambridge.
Hinchliffe, G. A., c/o 22/4, Bardon Chambers, Infirmary Street, Leeds 1.
Hiscox, D. G. O., 60, Vauxhall Bridge Road, London, S.W.1.
Lee, G. H., 176, The Vale, Golders Green, London, N.W 11.
Kendall, H., Miles Aircraft Ltd., The Aerodrome, Reading, Berks.
Kronfeld, S./L. R., 46*a*, Green Croft Gardens, London, N.W.6.
Meads, B. A. G., Stony Croft, London Road, Alderley Edge, Cheshire.
Nicholson, C., 110, Old Brompton Road, London, S.W.7.
Norman, J., Air Registration Board, Brettenham House, Lancaster Place, Strand, London, W.C.2.
Petre, Major H. A., D.S.O., M.C., 8, Carlos Place, London, W.1.
Poulter, Wing-Com. R. M., Meteorological Office, No. 11 Group, R.A.F., Uxbridge, Middlesex.
Pringle, J. W. S., Peterhouse, Cambridge.
Prower, C. W., 76, Gladstone Avenue, Whitton, Middx.
Purvis, Major R. H., c/o Air Wing, School of Artillery, Larkhill, Wilts.
Rice, J. C., Cosby, near Leicester.
Slater, Dr. A. E., Dell Farm, Whipsnade, near Dunstable, Beds.
Slater, A. L., Cloverlea, Chesterfield Road, Matlock, Derby.
Slingsby, F. N., Slingsby Sailplanes Ltd., Kirbymoorside, Yorks.
Smith, G. O., 23, Park Grove, Derby.
Spence, S./L. E. H. D., B.G.A., Londonderry House, 19, Park Lane, London, W.1.
Sproule, Lieut.-Com. J. S. (A), Crosslane, Findon, Sussex.
Stevens, S. G., Southerlea, Meadow Close, Hove 4, Sussex.
Turner, K. W., 52, St. John's Road, Clifton, Bristol.
Tye, W., Air Registration Board, Brettenham House, Lancaster Place, Strand, London, W.C.2.
Welch, L., The Brake, Ewshott, Farnham, Surrey.
Wilkinson, K. G., 5, Imperial Court, North Harrow, Middlesex.
Wills, P. A., C.B.E., The Manor House, Paley Street, near Maidenhead, Berks.
Wingfield, C. J., Onslow, Shrewsbury.
Wright, L., 30, Newton Road, London, W.2.
Young, T. Rex, 102, Coombe Lane, Bristol 9.

Royal Aero Club Certificates.

The Royal Aero Club has delegated the power to issue Royal Aero Club Gliding Certificates to the B.G.A. as from 1st February. The revenue arising from certificates, after handling expenses have been met, will henceforward be available for the B.G.A. general funds, and assist to make the Association self-supporting. Clubs are requested to assist by ensuring that members qualifying for Certificates do in fact make application for them.

Royal Aero Club Gliding Certificates

Issued during year					*Cumulative Totals*			
A	B	C	Total	Year	A	B	C	Total
61	4	2	67	1930	61	4	2	67
182	40	17	239	1931	243	44	19	306
74	57	31	162	1932	317	101	50	468
33	32	20	85	1933	350	133	70	553
46	24	21	91	1934	396	157	91	644
113	77	43	233	1935	509	234	134	877
108	86	81	275	1936	617	320	215	1152
245	195	133	574	1937	862	515	348	1725
339	234	147	720	1938	1201	749	495	2445
441	199	110	750	1939	1642	948	605	3195
20	7	4	31	1940	1662	955	609	3226
—	—	—	—	1941	1662	955	609	3226
2	1	1	4	1942	1664	956	610	3230
62	16	5	83	1943	1726	972	615	3313
555	99	6	660	1944	2281	1071	621	3973
1627	273	70	1970	1945	3908	1344	691	5943
2176	615	296	3087	1946	6084	1959	987	9030

Silver Badges.

1934	..	2
1935	..	5
1936	..	16
1937	..	7
1938	..	23
1939	..	7
1946	..	20

Gold Badges.

1938	..	1

B.G.A. Membership.

85 Wing Gliding Club and the Polish Gliding Club have joined as Associate Members.

84 Group Gliding Club has become a Full Member.

Handley Page Gliding Club has transferred to Associate Membership.

Royal Aero Club Exhibition.

The Royal Aero Club is holding an aviation exhibition from 31st March to 11th April in the showrooms of the Bristol Aeroplane Co., Ltd., in Piccadilly, opposite the Ritz Hotel.

One of the three separate bays in the showroom will be reserved for the B.G.A. Clubs are invited to send suggestions for suitable exhibits, which should be of general interest and not refer to any particular commercial products, as the exhibition is not a trade show. The following suggestions have already been made :

(*a*) Display of the B.G.A. Cups and Trophies.
(*b*) The B.G.A. collection of gliding badges of different countries.
(*c*) Photographs showing different aspects of gliding and soaring.
(*d*) Tables of International and British gliding records.
(*e*) Scale models of gliders and sailplanes used by Clubs.
(*f*) If space permits, a complete high-performance sailplane, or else a fuselage and one wing.

Purchase Tax.

The Treasury have made an Order under Section 20 of the Finance (No. 2) Act, 1940, entitled " the Purchase Tax (Exemptions) (No. 7) Order, 1946," the effect of which is to exempt from Purchase Tax the following goods :

Passenger gliders and parts of, and accessories to, passenger gliders.

On enquiry from the Treasury it was ascertained that the term " passenger gliders " covered all types of gliders and sailplanes used by Gliding Clubs.

B.G.A. Flight Test Group.

No. 1 Flight Test Group, formed by the Surrey Gliding Club, has been approved. The A.R.B. has welcomed the appearance of such organisations which they consider will be of much assistance to them. There was previous reference to the formation of Flight Test Groups in Para. 12 of Circular No. 13/46.

Particulars of Camps and Courses.

It would be appreciated if a supply of any leaflets or pamphlets prepared by Clubs in connection with proposed camps or courses be forwarded to the B.G.A. Offices for distribution to enquirers.

Announcements

The Council has considered the post-war terms of award of the B.G.A. Cups and Trophies, and it has been decided to allocate them as follows :—

Yearly Awards.

1. De Havilland Cup. Greatest height during the year.
2. Manio Cup. Best goal flight during the year.
3. Wakefield Trophy. Longest distance during the year.
4. Volk Cup. Best out-and-return flight during the year.
5. Seager Cup. Best two-seater performance during the year.

National Gliding Competition Awards.

Du Garde Peach Trophy. Best Club team during competitions.

Firth Vickers Trophy. Best performance by a British pilot in a British designed and built sailplane at the National Gliding Competitions.

(*Photographs on page* 14)

The following awards were made for 1946 :—

1. De Havilland Cup. P. A. Wills, 15,247 ft.
2. Manio Cup. P. A. Wills, 113 miles.
3. Wakefield Trophy. Prince Birabongse Bhanubadth, 184 miles.
4. Volk Cup. H. Kendall, 58 miles.
5. Seager Cup. Lieut.-Com. (A) J. S. Sproule and Lieut. (A) J. Suthers, 103 miles.

As there were no National Competitions in 1946, *the Du Garde Peach and Firth Vickers Trophies were not awarded.*

General Meeting, 24th January.

Mr. D. G. O. Hiscox, re-elected as Chairman for 1947.

The full list of nominations and elections to the Council is as follows :—

Mrs. A. C. Douglas, Surrey Gliding Club ; Mr. G. A. Hinchliffe, Yorkshire Gliding Club ; S./L. R. Kronfeld, Oxford Gliding Club ; Mr. B. A. G. Meads, Derby and Lancs. Gliding Club ; Major H. A. Petre, D.S.O., M.C., Royal Aero Club ; Mr. J. W. S. Pringle, Cambridge Gliding Club ; Major R. H. Purvis, Royal Artillery Aero Club ; Mr. J. C. Rice, Leicester Gliding Club ; Mr. S. G. Stevens, Southdown Gliding Club ; Mr. P. A. Wills, C.B.E., Newcastle Gliding Club ; Mr. C. J. Wingfield, Midland Gliding Club ; Mr. L. Wright, London Gliding Club ; Mr. T. Rex Young, Bristol Gliding Club.

TECHNICAIR LTD.

Sailplane Bureau.

Technical and Plans Service.

Chilton Olympia Agents.

— Trailers. —

TECHNICAIR LTD.

—Aeronautical Engineers—

46 NORTH HYDE LANE,
HESTON, MIDDLESEX.

SOUTHALL 1870 ELGAR 5197

2/6 FOR 10
INCL. TAX



Gillette steel is of glass-cutting hardness!

Hard steel, electrically tempered. Three-facet edges sharper than a surgeon's scalpel. Ground, honed and stropped on micro-precision machines. All are features pioneered by Gillette — but even more convincing will be your first quick, refreshing Gillette shave. After the third or fourth you'll know they're economical too!

'Good Mornings' begin with Gillette

SLINGSBY
SAILPLANES Ltd.

KIRBYMOORSIDE, YORKS.

PIONEERS IN THE DESIGN AND MANUFACTURE OF GLIDERS AND HIGH PERFORMANCE SAILPLANES

Tel.: Kirbymoorside 312. **'Grams: "Sailplanes."**

NEWS FROM THE CLUBS

LONDON GLIDING CLUB

Amidst Arctic conditions the London Gliding Club has been functioning fairly regularly throughout January. On the week-end of the 4th and 5th the wind was north-easterly, but hops were given with the winch and bungie, the latter serving to keep every one warm.

On January 11th, the wind was southerly, and only a few enthusiasts arrived, but on the 12th, with a west wind, a total of five hours was flown on Club machines alone, while the " Blue Gull," the " Buzzard," and the " Minimoa " were flying nearly all day. Latto, when bringing in the " Minimoa," found himself over the lynches with too little height, and had to land in a ploughed field of heavy Dunstable clay. To put it mildly, a considerable amount of stress and strain was endured by some rashly willing helpers before the " Minimoa " was brought home, unscathed. Powered visits to the Club were made by Philip Wills and his son in their " Auster," and by Pasold in a " Moth Minor."

On Saturday, January 18th, there was again a west wind, and private owners turned up in force, as well as the regulars. Joan Price arrived with her two children, and flew the " Buzzard," which she shares with Cooper. John Hurry obtained his " A " in the " Cadet " and Burdett his " C " in the " Tutor "—congratulations to both. On the Sunday there was a thick fog over the Downs, and very little wind to disperse it, so only a few hops were done, late in the afternoon.

The week-end of January 25—26 was a wash-out as far as flying was concerned, and though Lord Nathan had promised us a visit on the Sunday, this had to be postponed owing to the weather. Visitors included Charles Wingfield, who was warmly welcomed, although we sadly missed the old familiar hat, which he had left behind. Dudley Hiscox mixed us a hot rum punch, and with Mrs. Turvey's excellent catering, we made the most of a rotten day.

THE BRISTOL GLIDING CLUB.

The Club has now moved its headquarters across the aerodrome to a much more spacious and centralised group of buildings, which includes a hangar, and is capable of development into a most desirable site.

A great deal remains to be done in every direction of course, and it has been decided that during the coming year all effort should be directed towards the general improvement and establishment of the Club, increase of facilities and amenities, and intensification of the training programme. Summer camps on the Mendips or visits further afield are therefore not likely in 1947, although it is hoped to hold a camp at the home site. Aero-tow will be available for the " Grunau " and private owners quite early in the year.

Lack of machines is likely to restrict use of the hill-site at Wookey, though visits may be made with the " Grunau."

An operational expense which has proved unexpectedly great is that occasioned by wear on towing cables. This has been aggravated by the presence on the aerodrome of copious runways and the inevitability of dragging the cable across them when car-launching. It is hoped that some saving may be effected when winching is more general, and ground slides are done with a sisal line. This chastening experience has been confirmed by the recent paper on car-launching by Keith Turner, issued by the B.G.A., based on the findings of the Cambridge Club who have been operating under similar conditions.

Incidentally Keith Turner, who was before the war President of the Bristol Club, has now returned to these parts and, we are glad to say, to the Club Committee.

A series of lectures on various aspects of gliding flight will be held during week-day evenings to avoid impairing flying time in any way at week-ends, and are regarded as a necessary complement to flying training.

An effort to put the Club socially on the map is being made in the form of a dance planned for March.

Generally, 1947 is faced with confidence and some anticipation of a brighter outlook on the all-important equipment side.

The flying activities of the Club have been restricted recently, due to the relentless unpleasantness of the weather and to the minor prangage on two occasions of our then only aircraft. Good work has nonetheless been put in by many people in various directions, notably in the organisation of catering amenities on the site and of a series of instructional lectures. These are held on week-day evenings in Bristol to avoid diversion of time on the site at week-ends.

The " Grunau Baby," which had become almost a legend, is now in the hangar and has turned out to be a delectable example of its kind, both in looks and performance. A carefully planned conversion course has been evolved with a view to preserving this machine in its present condition.

Another " Beaverette " has succumbed to the rigours of auto-tow to which it was subjected before the winch arrived. It would seem that the prolonged peak revs involved in a high launch are just too much for these game little cars, and that costly clatters are inevitable sooner rather than later. It seems that henceforward ground-slides and retrieving will be their lot, while the winch probably launches two aircraft alternately. Another retrieving vehicle, as yet untried, is a James three-wheeler milk-float. Speculation is rife as to its stability in the rolling plane when used for this purpose.

R./T. communication between winch and launching point is promised in the near future, and is expected to enhance celerity and safety by eliminating misunderstandings.

The Club's first dance is to be held on March 24th at the Victoria Rooms, Bristol, and it is hoped that everyone interested in the movement locally, as well as some it will be possible so to interest, will be there.

Spring is anticipated, though not awaited, with expectation of many other developments and general broadening of the flying programme.

NEWCASTLE GLIDING CLUB

Unlike the weather, Club activities have been on a limited scale of late, confined mainly to talking and excursions to likely sites to investigate their possibilities.

Hartside, of Helm wind fame and

a first-rate potential soaring site, received a further visit from O'Grady, Allan, Callahan, Hendry, Little and Tweedy on Sunday, January 26th, and in spite of a blizzard in progress at the time, a promising stretch of land was examined.

O'Grady and Allan, having " thawed out " overnight, gave details of their discoveries to a General Committee meeting on the following evening, when it was agreed that the Club should concentrate on the development of this area as a soaring ground, as well as for use as a base for Helm wind research: its possibilities being realised from the limited but successful amount of soaring done there in pre-war days.

Further likely training sites were also reported and examined. These are to be considered should negotiations, at present in progress, fail to obtain for us the use of the most suitable ground discovered to date. Names and further details next month !

A winch engine and ancillaries which have just arrived have been temporarily stored by Burningham. Information about a blister hangar at a reasonable price has been handed in by Hendry, of weird, wonderful, yet workable winch fame.

Ferguson, visiting Birmingham, returned with wireless equipment ordered, but it was considered too delicate to entrust to the tender mercies of modern transport systems.

Allan, Little, Hendry and " odd others " have done good work with the new trailer, which is a smart affair and practically completed. Meanwhile, Hon. Secretary Miller, Callahan and Wilkinson, and again those vague and somewhat elusive " odd others," have continued with the house work, standing back for a few minutes to study the effect produced by aluminium paint on an old-fashioned iron banister—its quite striking !

YORKSHIRE GLIDING CLUB

Flying Activity.—The month of January was a complete weather washout with the exception of the 17th, on which some winch circuits were flown by the type-20 two-seater for demonstration purposes. Our pre-war records never showed such a long spell of unfit weather as we have experienced since last September. Although we are short of many things, we have the basic equipment for qualified people to fly, but no weather. There seems to be no end to the British frustration programme these days !

General.—The Club representative attended the first general meeting of the new B.G.A. The conference room at Londonderry House was well filled, creditably so, surely, when it is considered how far some of those present had to journey, and the reading of the thermometer that day—especially in Londonderry House ! (A wrong impression should not be gained from the last sentence, by the way ; Londonderry House is a splendid place and a worthy H.Q.—when the central heating is operating again !) One came away with the impression that the British Gliding and Soaring movement is not without powerful friends, and that in the tough task of reconstruction that lies ahead a strong, fighting organisation will be needed.

Conclusion.—One must apologise again for the lack of interesting material for these notes ; at the time of writing weather conditions are worse than ever, and February is already slipping away. We are still without any real prospect of a new clubhouse, unless one counts numerous offers of superannuated Nissen huts at all kinds of fancy prices ! Well, that problem too, will be solved in due course, and a great difference it will make to the Club when it is solved. Finally, may we remind anyone interested that we intend to run a camp during the summer for " B " and " C " certificate holders and " power " pilots, and shall be glad to hear from anyone interested with a view to finding out probable numbers ?

PORTSMOUTH AND SOUTH HANTS GLIDING CLUB

The silence from the Portsmouth Gliding Club has been interpreted in some quarters as the cessation of activities.

These notes have been written, therefore, to dispel any such ideas and to explain the policy which the club has undertaken.

Right from the first day that gliding was again declared legal, and before that we might whisper, the club put in many useful hours' soaring, using our sites at Kithurst Hill, Lychepole Hill, Old Winchester Hill and pure thermal soaring from winch launches at Portsmouth Airport.

Four privately owned machines were used, and their owners generously let those members fly them who could be relied upon not to " bend " things.

As the club believes that a sound gliding movement must be based upon clubs offering *ab initio* training all flying was voluntarily suspended and we got down to the production of a primary, a two-seater and the rebuilding of the " Kassel 20."

A lighting set was purchased to facilitate night work, and this has been used to great advantage during the long evenings.

During this time the " Scud II " and " Scud III " have been overhauled and the " Lancia " re-sprayed.

The " Kassel 20 " was test flown just before Christmas, and on its first outing Macpherson obtained his " A " and " B " certificates.

We are taking delivery of a second winch which will make the *ab initio* squad independent and enable them to train with greater speed and efficiency.

Mr. Guild, the popular secretary of the Portsmouth Aero Club, has joined as a flying member, and negotiations are in progress for the Aero Club to provide aero-towing " on tap " at attractive prices.

DERBY & LANCS GLIDING CLUB SNOWBOUND . . . .



" Golden Wren " taking off from the north-west after a bungie launch. But not recently.

THE AIRCRAFT CLUB

The Annual General Meeting was held in the Clubroom on Saturday,

January 18th, 1947, at 3 p.m., and in the absence of Mr. Woodmansay, Mr. Scovell took the chair.

After the Hon. Secretary's report had been read and approved, he was instructed to express the Club's approval of the newly-formed Ultra Light Aircraft Association, to assure it of our co-operation and to review the question of affiliation at a later date.

Permits to fly low-powered aircraft. The Club regrets that the Ministry of Civil Aviation Scheme for the issue of permits to fly does not yet appear to be ready and considers that the design and construction of many interesting machines is being held up and interfered with in consequence.

Members of the Aireborough F.C. are to be invited to our meetings.

The Hon. Treasurer's report, which again showed increased bank balances, was approved.

The following officers were elected :—President, H. L. Brook, Esq.; Vice-President, Dr. W. E. Hick; Chairman, A. Woodmansey, Esq., M.A.; Hon. Treasurer, G. Smith, Esq., 3, Otley Road, Harrogate; Hon. Secretary, E. T. W. Addyman; Committee, Messrs. P. Beall, G. Scovell, V. Bonnaud, one Member of the Leeds Group, and one Member of the Aireborough Flying Club.

It was decided to concentrate now upon the nearly overhauled Standard Training Glider, and the completion of the new one.

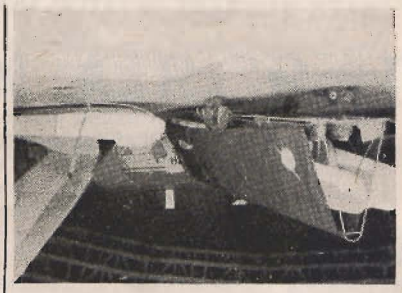
The Committee is to draw up a programme of future activities, for which suggestions will be welcome.

The Otley Chevin Gliding position was reviewed. The Club at the moment does not intend to build its own low-powered aircraft, but has knowledge of 14 designing, building or ready to fly by its own members and others. The type of training adopted is a very suitable preliminary to flying low-powered aircraft, and a knowledge of construction is useful when building or maintaining one's own aircraft.

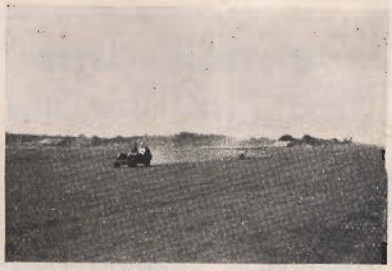
The basic subscription to the Club is 10/- per annum, but those who fly the Club's machines without doing constructional work are charged more. Six new members have recently been elected.

The Aircraft Club welcomes support from past members and others in all parts of the country.

Nissen huts on soaring hills and a covered trailer are badly wanted.

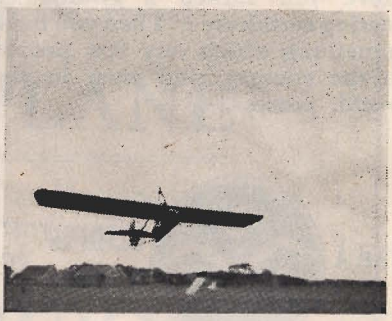


Hangar at Eelde.



Launching an E.S.G. at Eelde.

DUTCH GLIDING CLUB



E.S.G. of the Club being winched off.

B.G.A. GLIDING CERTIFICATES

"A" CERTIFICATES: 83 (Nos. 6086 to 6169)

"B" CERTIFICATES: 29

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
1431	Albert Henry Pocock	4th Armoured Brigade	17.11.46
2626	Leonard Wright	25 G.S.	29.10.46
3337	Albert Edward Mellors	49 G.S., Wymeswold	15.12.46
4180	Edward Francis Patrick Mercy	126 G.S., Booker	27.12.46
4554	Stanley George Luker	126 G.S., Booker	15. 9.46
5005	Alan James Ellison	2 Gp. G.C.	15.12.46
5390	Brian Henry Wood	Ditto	17.11.46
5514	William Hugh Huxtable	95 G.S., St. Eval	29.12.46
5596	James George Lamb	189 G.S., Carlisle	3.11.46
5746	Richard Knowles	141 G.S., Detling	15.12.46
6089	James Edwin Latham	R.A.F., Lubeck	8.12.46
6090	Ronald Bell	B.A.F.O. G.C., Barntrup	5. 5.46
6091	Patrick John Crawford	2 Gp. G.C.	25. 7.46
6092	John Martin Harrington	161 G.S., Ford	10.11.46
6094	John Jacob Strauber	B.A.F.O. G.C., Barntrup	29. 9.46
6096	Leslie John Denning	Ditto	14.10.46
6097	Albert Stanley Dickens	151 R.U. (A)	8. 9.46
6100	Hawkesley Murray Arthur Hayes	R.N. G.U.	30.10.46
6106	Peter Frederick Warren	B.A.F.O. G.C., Barntrup	17.10.46
6107	Robert John Barlow	R.A.Ae.C.	23.11.46
6114	Andrzej Jan Juliusz Adolf Nahlik	47 G.S., Gt. Hucklow	10.11.46
6118	Mervyn Hugh Rhys	B.A.F.O. G.C., Barntrup	9. 6.46
6133	Dennis Edwin Payne	161 G.S., Ford	13.10.46
6138	Charles Fennen	186 G.S., Speke	5. 1.46
6148	Michael Jepson Drabble	M.41 E.G.S., Knowle	26.12.46
6149	George Charles James MacPherson	Portsmouth and South Hants	15.12.46
6151	George Craig Banning-Lover	Oerlinghausen G.C.	14. 7.46
6152	Neville Thomas William Matthews	148 G.S.	23. 6.46
6162	Edward Kenneth Ham	North Somerset G.C.	5. 1.47
5005	Alan James Ellison	Oerlinghausen G.C.	15.12.46
5390	Brian Henry Wood	Ditto	15.12.46
5968	Richard Edward Claude Skilton	Air Division G.C.	22.11.46
6051	Geoffrey William Morris Carter	London G.C.	28.12.46
6090	Ronald Bell	B.A.F.O. G.C., Barntrup	5.12.46
6091	Patrick John Crawford	2. Gp. G.C.	11.10.46
6096	Leslie John Denning	B.A.F.O. G.C., Barntrup	21.11.46
6100	Hawkesley Murray Arthur Hayes	R.N. G.U.	31.10.46
6118	Mervyn Hugh Rhys	B.A.F.O. G.C., Barntrup	10. 9.46
6151	George Craig Banning-Lover	Oerlinghausen G.C.	4. 8.46

SILVER BADGES

81	Allan Jasper	(Cert. number 3993)

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.

The A  **GLIDING BADGE**

The B  **GLIDING BADGE**

The C  **SOARING BADGE**

Silver C  **and Golden C**

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!

BACK NUMBERS of SAILPLANE

We have uncovered a large selection of back numbers dating from 1934 onwards. If readers desirous of obtaining copies will state their precise requirements we shall endeavour to accommodate them. There is a wealth of interesting and instructive detail in the matter of these numbers and, glancing through them, one cannot fail to be impressed at the progress made in the movement which was in its infancy in the early 1930's. Price 2/6d per copy, post free.

SITUATIONS WANTED.

FIRST RATE SWISS Gliding Instructor, Silver C, tug pilot, ground engineer, glider repairer and constructor, seeks employment any above capacity England April, May. Please apply Keith Turner, 52, St. John's Road, Bristol, 8.

FOYLES

* * FOR BOOKS * *

New & secondhand books on every subject. Books bought.

119-125 CHARING CROSS ROAD LONDON WC 2

*Gerrard 5660 (16 lines) * Open 9-6 (inc Sat)*

THE AERONAUTICAL BOOKSHOP

2 mins. from Oxford Circus. Visit this specialist shop that stocks nothing but Aeronautical Books covering every aspect of Aeronautics. If unable to call send 7½d. in stamps for 42 Page Book List and Synopsis of over 500 Aeronautical Publications. — 7, HANOVER COURT, HANOVER STREET, LONDON, W.1. *Tel.*: MAYfair 4445.

AIRCRAFT (HEREFORD) Ltd.

20/21 Newmarket Street,

HEREFORD,

are Agents for Slingsby Sailplanes. Immediate delivery of "Cadet" and "Tutor." "Kite II's early 1947.

CLUB ANNOUNCEMENTS

THE MIDLAND GLIDING CLUB LIMITED

The Long Mynd, Church Stretton, Shropshire. Telephone: Linley 206.

Full particulars may be obtained from the Secretary, F. G. Batty, F.C.A. 2, Lombard Street West, West Bromwich, Staffs.

THE YORKSHIRE GLIDING CLUB. SUTTON BANK, YORKSHIRE.

Full Flying facilities are offered to all *Soaring and Power Pilots.*

JOIN NOW and know Gliding at its BEST at Sutton Bank, Yorkshire.

For full particulars apply to: L. A. ALDERSON, "LYNDHURST," SINNINGTON, YORK, Hon. Secretary, Yorkshire Gliding Club.

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.

SWEDISH CONTEST RULES

(*Continued from page* 10)

it is much easier to fly long distances after achieving high altitudes than from a minimum of altitude. High altitude is a premium in itself and should not be doubled by some extra altitude points.

A bonus of 100 per cent. on the distance points is given for return flights. On a good day with soft wind it is very easy to make goal flights over reasonable distances and return to the take-off place. In a strong wind it can be very difficult and even impossible. I believe consideration should be taken of the strength of the wind.

URGENTLY REQUIRED.

COPY of SAILPLANE AND GLIDER for December, 1945. Box No. 228.

CHILTON AIRCRAFT Co. LTD.

HUNGERFORD, BERKS.

Announce that

owing to the exceptional demand at home and abroad for the

OLYMPIA SAILPLANE

their premises were no longer large enough, and arrangements have been made whereby the manufacture and sales of this machine are taken over by

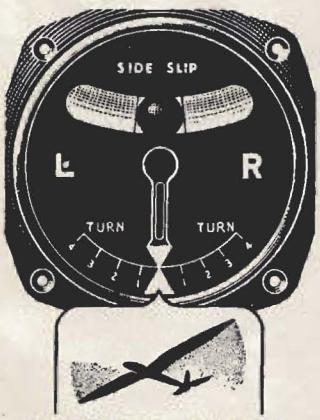
ELLIOTTS OF NEWBURY LTD.

NEWBURY, BERKS.

All future enquiries should be addressed to them.

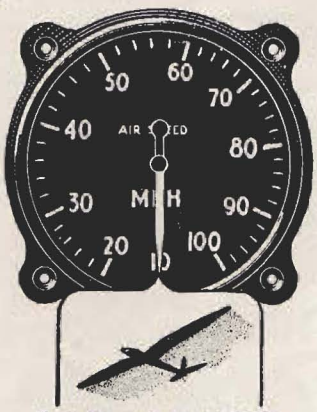
Essential Equipment

NOW AVAILABLE



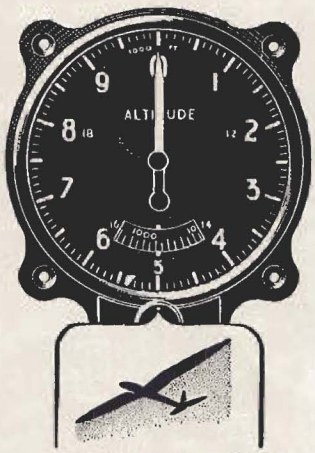
TURN & BANK INDICATOR

9v. Electrical
Operated by dry-cell batteries
Weight — 1 lb. 9 ozs.



AIR SPEED INDICATOR

Special Sailplane
Calibration — 20/100 M.P.H.
Weight — 9 ozs.

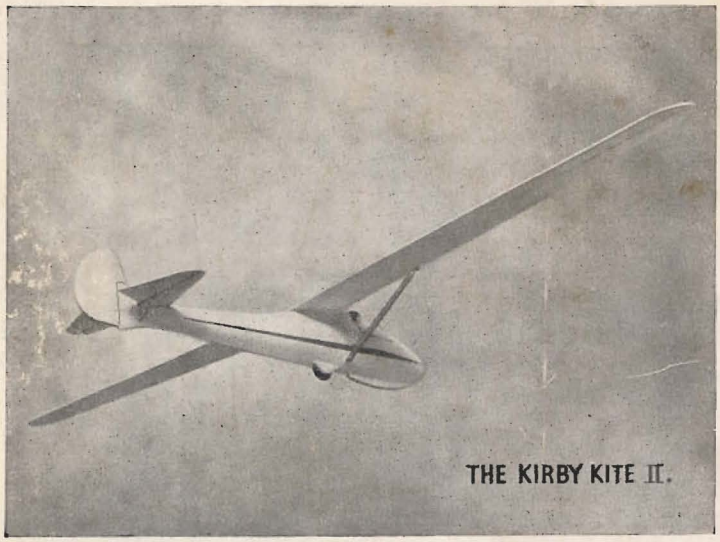


ALTITUDE INDICATOR

0-20,000 feet
Simple robust design
Weight — 12½ ozs.

K. D. G. Instruments Ltd

PURLEY WAY · CROYDON · UPLANDS 6888



THE KIRBY KITE II.

Developed from the pre-war Kite, the 1947 model is without equal in its class. Increased overall dimensions and a completely new wing has produced a machine with outstanding flying characteristics and a wide speed range. Quickly adjustable rudder pedals, central landing wheel and spoilers are other refinements. Open or cabin enclosed cockpit optional. Now in production.

Slingsby Sailplanes and Gliders are now in full production in the largest and most modern factory exclusively devoted to this work in Great Britain. Design and development of this all-British range continues under the personal direction of MR. F. N. SLINGSBY, Britain's leading Sailplane Designer.

Write for Handbook giving all details.

TRIAL FLIGHTS

may be made by anyone having the necessary qualifications. Details on request.

All enquiries to:—

MARTIN HEARN Ltd., 72 Victoria St., London S.W.1

Phone VICTORIA 9822 (extension 5).

PORTSMOUTH AVIATION LIMITED are agents and repairers for **SLINGSBY SAILPLANES AND GLIDERS,** in the Hampshire, Wiltshire, Berkshire, Surrey, Sussex and Kent areas.

They are and have been both before and during the war official Air Ministry Glider repairers and have years of experience of Kirby Cadet repairs.

Clubs and private owners are invited to avail themselves of the special Sales and after Sales service.

All enquiries to—

SAILPLANE AND GLIDER DIVISION

PORTSMOUTH AVIATION LTD., THE AIRPORT, PORTSMOUTH.

Telephone: Portsmouth 74374.