OCTOBER, 1947

1/6d.



Sailplane and Glider

The First Journal devoted to Soaring and Gliding



WINDAK LTD POYNTON CHESHIRE

SCOTTISH GLIDING UNION

BISHOPHILL AND BALADO AIRFIELD

Entrance Fee £1. 1. 0.
Subscription £3. 3. 0.

FULL PARTICULARS FROM

Hon. Secretary:

A. J. THORBURN,
137, ROSSLYN STREET

KIRKCALDY

PHONE DYSART 5442

WESTERN AIRWAYS

Obtain Maximum Utilization of your Club Fleet by On-Site Repair

- **Special "on site" repair service available within a wide radius of Weston-super-Mare.**
- **Estimates speedily given.**
- **Fully equipped workshops for major repairs.**
- **Speed, economy and satisfaction guaranteed.**
- **Over 200 gliders and sailplanes repaired and overhauled in the last 12 months to the entire satisfaction of Clubs and Private Owners in all parts of the country.**
- **Agents and spares stockists for main manufacturers.**

WESTON AIRPORT
WESTON-SUPER-MARE
Phone Weston 2700

RECORDING ALTIMETERS

RANGE:
500 ft. to 15,000 ft.; 12 hour graph.

SIZE: 1½" x 3" x 5"

Write for Descriptive Booklet.



CHOWLES & NELSON
Gliding Instruments
WINSLOW, BUCKS.

Manufacturers and Sole Distributors for Gt. Britain

EXPORT ENQUIRIES TO "SAILPLANE AND GLIDER" OFFICE.

Sailplane and Glider

and ULTRA LIGHT AIRCRAFT

THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

OCTOBER 1947 ★ Vol XV No 10

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
Twenty-five Years Back	2
Ultra Light Aircraft Association	4
Australian Gliding Association	6
14th American National Soaring Contests	9
International Gliding Week, Samedan	14
B.A.F.O. Gliding Competition, 1947	15
News From The Clubs	17
Letters to the Editor	21
R.A.C. Certificates	23

Front Cover: *Locality: Gatineau Gliding Club, Canada. Montreal Star-Standard Photo. Glider soars aloft with Cmdr. K. C. Cooper, Gatineau Club Member, as daughter Diane and Mrs. Cooper watch.*

Reprieve?

AS we go to Press we hear the news, which has still to be confirmed, however, that although there may be no petrol for devotees to use to get to gliding sites and clubs, there may only be a ten per cent. cut in Club petrol, and indeed if the authorities take the view that Gliding Clubs are training establishments, there may be no cut at all.

We still think, however, that it may be difficult to persuade the petrol officers that retrieving is an "essential" journey within the meaning of the Act.

The whole story of the way the present Government has treated the petrol question, however, shows that the action taken is manifestly political and the question has not primarily been considered from a National point of view. It might be unreasonable, therefore, to expect them to think of gliding on the National level.

It is to be hoped that the Government will think again about this question, and from the point of view of the Nation and not of sectional interests. If we have to go down in the general collapse which is used as a threat or a promise according to one's political persuasion, we shall not complain, but we shall do so most bitterly if there is any more evidence of unfair, biased and political discrimination in regard to gliding and small power aircraft flying.

The other piece of news is that the proposed International Gliding Contests which were to have taken place here next year, will not be held here, but most probably in Switzerland. Which will be lucky for those who manage to get there, but perhaps a good thing for us.

We should have felt rather shamefaced not to have been able to entertain our visitors as we would have liked, and they might not have liked it either. In any case we have not the sites, nor the organisation, nor the money, to go in for this sort of thing, as will readily be conceded by those who went to Switzerland this year to the Samedan Gliding Week or to U.S.A. What is more, we need better machines if we are to get the best out of our pilots. Even the "Meise," under whatever name it may appear, is now out of date, and much better projects are on the stocks, more of them abroad, however, than in Great Britain.

It appears that we are in for a hard time. But hard times bring out the best in people, and we may find more comradeship in adversity than in prosperous times. One of the joys of pre-war clubs—so we have always understood—was the enthusiasm shown by people who arrived for the weekend, worked hard, slept well in bunkhouses, got up early in the morning and had enormous appetites for breakfast. It is a poor lookout for the latter now, but if we lose our waistlines we shall get lighter in weight and improve the performances of our machines. What a prospect! But even that is better than having no gliding at all.

TWENTY-FIVE YEARS BACK

The first British Gliding Meeting at Itford Hill.

By GEOFFREY DORMAN
(R.Ae.C. Press Steward at the Meeting)

FROM 16th to 21st October, 1922, the first gliding meeting ever to be held in England took place at Itford Hill, near Lewes, in Sussex. The *Daily Mail* had offered a prize of £1,000 for the competitor who remained in the air longest without landing, during the time of the meeting. The prize was won by the



E. Gordon England immediately after take-off.

Frenchman, A. Maneyrol, on a freak "Peyret" glider, in which the monoplane wings were arranged in tandem. The flight which won the prize was the first and only flight which Maneyrol made. He brought his glider to the Firle Beacon end of the Itford range in the afternoon of the last day. No-one took him seriously. But when he was launched into the teeth of a strong and steady N.E. wind, he remained airborne until the closing time of the meeting 3 hours 21 minutes later.

The parent of gliding, as we know it to-day, was the Treaty of Versailles. If there had been no treaty, there would probably have been no gliding then, and none to-day. By the terms of that Treaty the Germans were not allowed to build power-driven aircraft. So all the money available for flying in the Germany of the post-1918 period went at first into gliding and gliding research.

Stories began to filter through to this country of amazing gliding flights at the Wassekuppe, near Frankfort-on-Main. Distances up to 20 miles were reported. All the world wondered.

One day, in the summer of 1922, a young man named Paul Bewsher, who had served in the R.N.A.S. during the war, who was a reporter on the *Daily Mail*, came to see me in the office of the Aeroplane, by which paper I was then employed, to ask me for some reliable information on gliding. I took him in to see the Editor, C. G. Grey, who told him that if Lord Rothermere, who had just succeeded his brother, Lord Northcliffe as *Daily Mail* owner, wished to help flying as much as his late brother had done, he could not do better than to offer a prize for gliding in Britain.

The result was that in the middle of August 1922 the *Mail* announced the offer of a prize of £1,000 for a gliding flight in Britain at a meeting to be held in October.

That gave just three months for the building and testing of gliders, for none at all existed in Britain. But in spite of that there were 36 entries, 16 of which came to Itford at the appointed time, and 13 of them flew. No German competitors came, though a young man named Jeyes brought a German "Klemperer," a type which had flown well in Germany. But through lack of experience, he damaged it too badly to compete further.

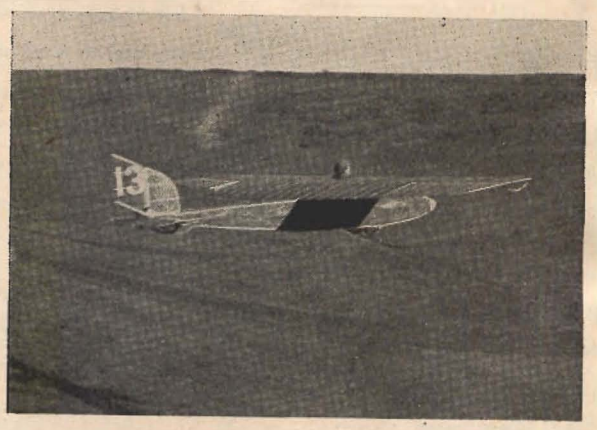
Anthony Fokker brought two biplane gliders with which he had competed in Germany. He flew one himself, and the other was flown by Gordon Olley, who was beginning to make a name for himself as an airline pilot. One of his gliders was a two-seater.

There were two French entrants—Maneyrol, and Barbot on a "Dewoitine."

All gliders were launched from the top of the hill with "bungy." Retrieving cars had not been thought of. Most gliders were man-handled up the hill on trolleys made with aeroplane wheels, and in that way they were taken the two or three miles along the ridge, from the hangars to Firle Beacon when necessary.

Tony Fokker had learned a few things in Germany, so he brought a large Cadillac car on to the roof of which the glider was lifted for transport. I forget what folding methods he had, but I rather think the tail and tailbooms were detachable when the glider had to be taken by road or through gates or between hedges.

The site was chosen, as there was a gentle slope to the S.W. and the S.W. wind was thought to prevail.

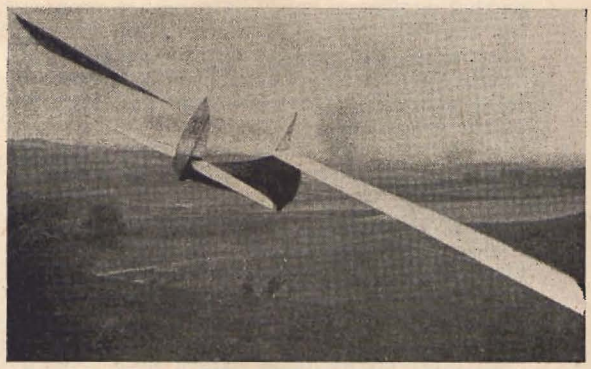


E. Gordon England in flight.

But it did not prevail much. There was an S.W. wind on the two days before the meeting began, and a few test flights were made. But thereafter, the wind shifted to the N.E. and remained in that quarter

for the rest of the meeting. So on the Monday Tony Fokker started the long trek to Firle Beacon, and the rest of the gliders which were ready to fly, followed his example.

The first real gliding flight was made by Eric Gordon England on a glider of his own design and construction. He made a downhill slide of about 3 minutes' duration, though he thought that he had gained a few feet of height during the course of it. Later in the meeting he stalled at about 30 feet trying to get back into the uplift of Firle Beacon,



Herne's "D.H." beginning to break up in the air after having had the wings converted from aileron control to warp.

and he broke his ankle, from the effects of which he still limps to-day.

F. Warren Merriam, a famous pre-war instructor, also had a bad crash which was fortunately without serious results. He stalled just after he took off, began a spin, and hit the deck with a resounding thud. He was shaken and bruised, but luckily got out from one of the worst-looking crashes I have seen, without more serious hurt.

The De Havilland Company had built two gliders, one of which was flown by Hubert Broad, and the other by E.D.C. (" Buller ") Herne. As with all the gliders, the controls were under-powered. We had not yet realised the effect of there being no propeller slip-stream to help the controls. Rudders were specially inoperative, and it was almost possible to see how many flights most competitors had made by the number of additions to the rudder—one extra addition for each flight.

The D.H. machines were found to lack control laterally. So one night Capt. de Havilland decided to try as an experiment, locking the ailerons and reverting to the old-fashioned method of wing warping. On the Thursday, when there was quite a thick mist over the hills, Buller Herne came out for a trial. He was launched from a lower slope of Itford. Those of us watching from the top saw the wings start to flex. We thought that Buller was taking control of the glider. But we soon saw that the glider was taking control of Buller. The wings began flex back and fore ever more quickly till eventually one of them snapped. The glider was at a height of about 20 or 30 feet, and it hit the ground with a thud. We were relieved to see Buller get out from the wreckage, look at it ruefully, and remark to the first on the scene, " Now I suppose we will go back to ailerons."

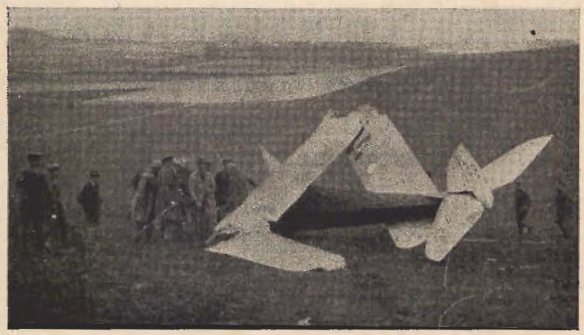
Rex Stocken, who was test pilot of the Aircraft Disposals Co., had brought a pretty little monoplane with curved wings which he named " Phi-phi." He made his first flight from Firle Beacon, and the wings flexed alarmingly. But he made a controlled flight at a very flat angle and landed more than a mile from where he had started. He took the measurement, and at the end he was awarded the prize for the longest flight measured in a straight line from start to finish.

One of the most sensational flights of the meeting was that made by Freddie Raynham of 1 hour 53 minutes. I described that flight fully in the SAILPLANE earlier in the year when I told how he was awarded the Britannia Trophy for it.

Freddie was leading until the last afternoon when Maneyrol appeared in the " Peyret " to make what proved to be the winning flight.

Just after Maneyrol had been launched, a young R.A.F. officer, Alec Gray, brought out a home-made glider, which he had built from the fuselage of a Bristol Fighter and the wing of a " Fokker D VII." His first launch was not successful, and the craft fell back and hit the ground with its keel with a resounding thud. No one thought it could possibly fly, it seemed so heavy. But the second launch was successful, and Alec Gray soared into the air to keep company with Maneyrol. He continued for nearly two hours, but Maneyrol had about 1 hour's start. So, as it began to get dark, Gray landed. The official ending of the meeting was at sunset. Maneyrol remained aloft till that time. It had suddenly become dark, as it is inclined to do in mid-October. Cars were lined up near a flat spot and the headlights were switched on to light the ground for Maneyrol, so the meeting ended with the first glider night landing seen in this country or so far as I know, anywhere else. The world's duration record bad been broken.

The wind was so strong and steady on this last



After breaking up in the air. Herne standing in front and remarking, "Now we shall go back to ailerons, I suppose."

day, that, as an onlooker said, " even a soap box could have soared in it."

There were a number of comic turns which did not fly. One was what looked like a flying bicycle, with a pedal-driven airscrew. It did not perform at all.

There was a pedal-driven ornithopter which also did not perform.

One entry was by someone who called himself J. J. O'Freddy. He never materialised, but he added to the gaiety of the meeting by sending a telegram warning the officials that he would arrive by air from Sheerness. He did not arrive. His entry was given on the programme as being " a biplane with power provided by the pilot paddling." Presumably he was some sort of leg-pull or practical joke.

The meeting ended with a gala dinner and the prize-giving at the Esplanade Hotel at Seaford.

All the important people from the aircraft industry were at the meeting to watch the fun. I vividly remember seeing Mr. (now Sir Frederick) Handley Page with a startled look on his face as his car nearly got out of control when trying to climb the steep face of Itford Hill. Sidney Camm, then a coming young man, was a volunteer helper to Freddie Raynham.

Until the meeting, aircraft design in Britain had been stagnant since the end of the war. But immediately came a spate of new designs which I always attributed to the beneficial results of the exercise and fresh air during that week. It was the first of many " get-togethers " of the aircraft community.

Having tasted the joys of gliding, people thought it was but a step to putting small motors into gliders. So the next year a contest was held at Lympne for " motor-gliders," and gliding as a sport was still-born. It was not till 1930 that gliding was revived as a sport of its own. The B.G.A. was formed that year, and they brought Kronfeldt to give a demonstration at Itford Hill. A few clubs were formed and the moving spirit was C. H. Lowe-Wilde, who was awarded Gliding Certificate No. 1 in March of that year. From 1930 gliding went ahead and attracted many adherents who preferred it to power-flying, and others who could afford to get into the air no other way.

ULTRA LIGHT AIRCRAFT ASSOCIATION

PERMITS TO FLY FOR EXISTING ULTRA LIGHT AIRCRAFT

WE print below a statement received from M.C.A. of the conditions under which they will be prepared to give consideration to the issue of Permits to Fly in respect of existing ultra light aircraft of pre-war design which have flown successfully.

" *Conditions and Limitations to be embodied in Permits to Fly ultra light aircraft.*"

1. This permission is valid only for the purpose of flights within Great Britain and Northern Ireland.
2. The aircraft shall not be flown over any populous area, concourse of people, or over any aerodrome where at the time conditions are such as to make the flying of such an aircraft dangerous.
3. The aircraft shall not carry passengers or freight.
4. The aircraft may not be flown by a person not holding a pilot's licence for the purpose of becoming eligible for the issue of such a licence.
5. The aircraft shall not be used for aerobatic flying.
6. The aircraft shall not be flown unless it is in a state of adequate repair, and in sound working order.
7. The aircraft shall not be flown on any occasion unless there is in force in relation to its flying on that occasion a policy of insurance approved by the Ministry of Civil Aviation for the purpose of the present permit against legal liability which may be incurred in respect of third party damage to persons and property on the ground.
8. The aircraft shall not be flown in any manner whereby the said policy of insurance shall be invalidated.
9. The aircraft must not be flown except under Visual Flight Rule conditions in daylight, *i.e.* at a minimum distance of 500 feet vertically and 2,000 feet horizontally from cloud, with visibility of at least 3 miles.
10. Under the conditions in clause 9 above, the aircraft must not be flown except under contact flying regulations in daylight, *i.e.* flights must be conducted by visual reference to the ground or water.
11. The aircraft must be flown clear of all controlled airspace unless prior written permission has been obtained from the Controlling Authority for flights within that airspace.
12. Inside controlled airspace after permission has been granted by the Controlling Authority, flights must be made within the height limits laid down.
13. Subject to any cancellation or suspension thereof, this permission is valid from..... ..... to ..... (at present any permits issued will be valid until 31st December, 1947).

NOTE.—Before the permission of the flights of the aircraft is issued, it will be necessary to forward to this office for prior approval the policy of insurance mentioned under condition 7, together with a copy of the policy for retention in Ministry of Civil Aviation records. It should be noted that one of the conditions which the Ministry of Civil Aviation will require is that the policy should not embody a condition or warranty requiring that a Certificate of Airworthiness must have been issued or must be in force in respect of the said aircraft. Should a general form of policy be obtained which includes a warranty as above, it will be necessary to obtain from the Insurance Company an endorsement to form part of the policy and embody the following paragraph : —

" It is understood and agreed that the aircraft has not been certified as airworthy under the Air Navigation (Consolidation) Order, 1923, and it is agreed that the indemnity given by this policy is not affected by the absence of a Certificate of Airworthiness (any warranty or condition in the policy notwithstanding).
Dated this..... day of ....."

When forwarding the policy for Ministry of Civil Aviation examination a statement should be furnished that the total all-up weight of the aircraft, including pilot and other person or persons carried, will not exceed x lbs. The amount of the insurance covered by the policy must not be less than £10,000 in respect of each of an indefinite series of accidents without any over-riding total limit, so, however, that no more than £5,000 shall be payable in respect of loss of, or damage to, property."

Ministry of Civil Aviation August 6th, 1947.

DESIGN SUPPLEMENT

Contributed by G./Capt. E. L. MOLE, Chairman, Design Sub-Committee.

Chilton Aircraft

1. Congratulations to Sqn.-Ldr. R. L. Porteous (a member of U.L.A.A.) on obtaining third place out of 32 competitors in the recent Folkestone Aero Trophy Race in his 44 h.p. Train-engined "Chilton." On conclusion of the race, which was over three laps of approximately 20 miles each, Sqn.-Ldr. Porteous continued for a fourth lap in order to complete 100 kilometres in a closed circuit in an attack on the existing international speed record for light aircraft with a maximum engine capacity of two litres. This record has been held by Germany since before the war with a speed of 114 m.p.h., but in his flight on Sunday, August 31st—which was officially observed by the Royal Aero Club—Porteous set up a new world speed record for the class of almost 125 m.p.h., subject, of course, to confirmation by F.A.I.

2. Allowing for wind drift and five turns per lap, with a climb over a 500 feet cliff, we estimate that the "Chilton" must have attained at least 135 m.p.h. true air speed on the level. This is a remarkable achievement, and Sqn.-Ldr. Porteous deserves our congratulations; his efforts with the "Chilton" have been of immense value in boosting the ultra light movement.

3. Referring to the "Chilton's" world speed record, it will interest our members to learn that the proposals we submitted to the Federation Aeronautique Internationale through the Royal Aero Club (reported in the last issue of the Bulletin) for a new ultra light aircraft class for international record purposes covered five categories in all. These consisted of single seat aircraft with engines of up to one and two litres capacity; two-seat aircraft with up to two litres engine capacity; single-seat motor-gliders with up to one litre engine capacity and two-seat motor-gliders with up to two litres engine capacity. All the above categories would be subject to the following limitations:—

Maximum loaded weight .. .. 450 kgs.
Maximum landing speed (at full load) .. .. 65 km.p.h.

The records to be admitted for all categories would be:—

(*a*) Distance in a straight line.
(*b*) Height above starting point.
(*c*) Speed over 10 kms., 100 kms., and 1,000 kms in a closed circuit without stop.

4. If it should prove impossible at present to introduce this new U.L.A. Class, we have suggested that a fifth category be admitted to the existing F.A.I. Class C (light aircraft) to cover engines up to one litre engine capacity. The present lowest category is for engines up to two litres capacity in which our lower-powered types are hopelessly outclassed. Class C as a whole is open to freak racing aircraft with dangerously high wing loadings, a type which we do not wish to develop and against which we would have difficulty in competing.

Tipsy "Junior."

5. The Tipsy "Junior" is now undergoing its official C. of A. flight tests in the hands of Mr. F. H. Dixon, Fairey's test pilot. Refinements in the shape of wheel brakes and air brakes are also being tested and Mr. Dixon is most enthusiastic about the aircraft's control and handling characteristics. It is to be hoped that a "Junior" may be seen in this country before the end of the summer.

Slingsby Type 28.

6. The Slingsby Type 28 (motor-Tutor) has not yet flown, though the first prototype (being built by Martin Hearn Ltd., of Hooton Park, Liverpool) is nearly ready. This aircraft is fitted with a 24 h.p. Scott Flying Squirrel engine, but it is possible that a modified 750 c.c. O.H.V. Coventry Victor flat-twin engine may be ready in time for the second prototype now under construction at Slingsby Sailplanes Ltd., Kirbymoorside, Yorkshire.

Major W. A. Weaver.

7. As announced earlier in this Bulletin, Major W. A. Weaver, Managing Director of the Coventry Victor Motor Co., Ltd., has recently joined U.L.A.A. Major Weaver is interested in the problem of producing a suitable engine for our purposes, and is considering the possibilities of modifying a neat little flat four cylinder, air-cooled engine of 40 h.p., now in production at his firm.

High Performance Aircraft.

8. One of our members, Mr. D. H. G. Ince, wrote us an interesting letter in which he said that, whilst appreciating the need for safe aircraft and a good accident-free record for the ultra light aircraft movement, he could not help feeling that a high-performance aircraft on the lines of the De Havilland "TK4" would be appreciated by many ex-R.A.F. pilots. We sympathise fully with the idea, but would suggest: "What's wrong with the 'Chilton'?" This aircraft is very definitely in the high-performance category, as its breaking of the 100 kilometres world speed record for its class will show, and it is fully aerobatic. Anyone who has seen Sqn.-Ldr. Porteous's recent displays at various air rallies will support this! Moreover, the "Chilton" lands moderately slowly—within the 40 m.p.h. limit we have suggested as a requirement for the proposed new U.L.A.C. of "A" category now under consideration by the A.R.B.

Horten Tail-less Aircraft.

9. Mr. Ince also recommended consideration of the pure flying wing for ultra light aircraft and quoted the German " Horten " aircraft as examples. We followed up this idea and are indebted to the Ministry of Supply for sending us a most interesting R.A.E. Report by Mr. K. G. Wilkinson, which describes the remarkable series of tail-less aircraft produced by the Horten brothers between 1933 and 1945. This Report is available in the U.L.A.A. Library and may be obtained on loan on application to the Hon. Secretary.

10. Fourteen marks of " Horten " aircraft were produced in the above twelve year period, all being of the tail-less type with swept back wings. They ranged from high-performance sailplanes to twin-engined transports and were finally developed up to a twin jet-engined fighter bomber. In one of the gliders the pilot was accommodated in a prone position to obtain the maximum possible aero-dynamic efficiency, a best gliding angle of 1 in 37 being attained !

11. Two versions of the " Horten " aircraft fall into the U.L.A. category : the first was the " Mark II " glider powered with a 60 h.p. Hirth engine installed as a pusher. This had a maximum level speed of 130 m.p.h., but the type was abandoned owing to poor control characteristics. The " Mark II " glider was replaced by the " Mark III ", which had a modified wing and improved control and which proved a successful and useful type of high-performance sail-plane.

12. One version of this type (the " Mark IIId ") was converted into an auxiliary powered sailplane by the installation of a 32 h.p. Volkeswagen car engine. The idea was to provide power for take-off and climb which could be shut off when soaring. The engine was totally enclosed in the centre-section and drove a retractable propeller by means of a multiple belt drive. The power installation was very heavy, being the standard car engine complete with exhaust system and electric starter, weighing as much as 240 lbs. As a matter of interest, the specification and stated performance figures for the " Mark IIId " are tabulated below :—

Specification.

All-wing, tail-less, auxiliary powered sailplane.

Span	65.6 ft.
Wing area	403 sq. ft.
Aspect ratio	10.66
Taper ratio	7
Sweepback (¼ chord)	23°
Weight empty (approx.)	800 lbs.
Weight loaded ,,	1000 lbs.
Wing loading	2.5 lbs. sq. ft.

Stated performance.

32 h.p. Volkeswagen engine.

Take-off run	75 yds.
Rate of climb	400 ft./min.
Cruising speed	70 m.p.h.
Maximum level speed	80 m.p.h.
Best free gliding angle	1 in 28

AUSTRALIAN GLIDING ASSOCIATION

New South Wales.

Proposed Christmas Gliding Meeting at Parkes. Mr. M. Waghorn, President of the N.S.W. Gliding Association, wishes to explain the following points :

1. This is not a competition, merely a gathering of sailplane pilots at a place known to be suitable for advanced thermal soaring.
2. Parkes has been suggested mainly because we have been there on a number of occasions, know it to be a suitable location where we will not be much disturbed by power flying, and I have good reason to believe that we can obtain shelter both for visitors and sailplanes by making application to the R.A.A.F.
3. No date or duration has yet been set for the Meeting, and we would like all those who are definitely intending to come, to advise us immediately and to suggest what dates would suit them most. As soon as we receive this information we can approach the R.A.A.F. I can, however, say immediately that it is not proposed to provide any catering arrangements, but that huts, showers and sanitary facilities are likely to be available, provided we can get R.A.A.F. permission.

I have a feeling that we may learn from this informal meeting a good deal about the arrangements it would be necessary to make to run a proper National Competition at a later date.

Gliding Accident : Fleurs Airstrip : Taberlet's Sailplane. Jack Munn and Sid Taberlet killed during test flight. New design 2-seater fuselage fails in flight.

The following summary of the circumstances surrounding the accident has been received from the President of the N.S.W. Gliding Association :—

" The machine, a high-performance, tandem two-seater, was designed by Sid Taberlet, who commenced work on it over five years ago. The original basic stressing of the wing is reputed to have been carried out by Roy Hedrick, but so far no trace of any calculations can be found. The design was changed a good deal throughout its progress, and such items as the butterfly tail were only decided upon in the very late stages of the design. The machine was unconventional, insofar as as it had Junkers type flaps fitted along the trailing edge of both wings and had a fabric covered fuselage of a wooden girder type construction, similar in many ways to that used on Jack Munn's ' Falcon.'

" A good deal of the aerodynamic calculations on performance and loads had been carried out for Taberlet by two members of the lecturing staff at the Sydney University. I, unfortunately, did not see the machine either prior to covering, or at any time until I examined the wreckage. There is no doubt, in my mind, that the rear fuselage of the machine was inadequate in strength, particularly under torsional loads. Sid Taberlet may not have been aware that for the corresponding yawing force the butterfly tail produces very much greater torsional load on the rear fuselage than a conventional

rudder. Furthermore, the design of control for the butterfly control surfaces could be seriously criticised, both from the point of view of inadequate strength and stiffness and because of the extremely small lever arms used throughout in conjunction with unsupported push-pull rods of very small diameter.

" I believe the following to be an accurate description of the flying on the day of the accident':

" On the morning of Saturday, 2nd August, 1947, 4 ground slides were carried out the full length of the strip in almost dead calm conditions. Both Munn and Taberlet were in the machine with the former flying it, although dual control was fitted. The slides were carried out using a Ford V 8 utility truck, driven by Jim Davis, as a tow car. One low hop to about 5 feet was then carried out and followed by another one, on which a height of 30 feet was reached, and the aircraft was yawed whilst on the tow.

" The machine was then launched to a height of about 600 feet, using the same method as hitherto. The towline was released normally, and the machine then carried out a gentle turn of about 360 degrees. It had straightened up when the butterfly tail folded over relatively slowly in the direction away from the previously mentioned circle. The failure, which may be described as a twisting of the rear fuselage, was not sudden and may have been accompanied by some fluttering of the tail unit. The machine made no sudden movements for a few seconds but commenced gliding rather faster than normal, and then nosed up and stalled. This, it is believed, may have been caused by the occupants lowering the flaps in an endeavour to slow down the glide. The machine commenced to spin from the stall and straightened out of the spin in a near vertical dive which it maintained to the ground.

" I examined the wreckage next day and formed the conclusions already mentioned, and carried out a further examination on Monday, 4th August, 1947, to confirm a number of points. I was contacted by the Department of Civil Aviation, who were desirous of carrying out an investigation of the accident, but wished to know the views of the N.S.W. Gliding Association. I advised them that I considered it would be desirable for them to conduct an investigation, and on Tuesday, 5th August, 1947, a party headed by Mr. Harper, Chief Accidents Investigation Officer, and a number of engineers came to Sydney for this purpose. I did not accompany them to the scene of the accident, but we had a long discussion in my office before they went to it. I understand that their findings will be similar to my own. They have, however, obtained all the drawings and calculations concerning the machine which they have been able to locate, and are carrying out a brief strength analysis of the rear fuselage. They also have, of course signed statements from a number of eye-witnesses.

" There is no doubt that the accident was caused by lack of strength and stiffness whether or no the failure was preceded by some form of flutter. It is greatly to be regretted that test flights were carried out with a crew of two, which is against all normal powered aircraft practice.

M. M. WAGHORN.

Some Notes on Taberlet's Sailplane. The records of the A.G.A. show that the machine was started by Sid Taberlet over 3 years ago. Early information received indicates that the machine was to be a two-seater tandem high-performance sailplane employing the German auxiliary wing feature—very thin wing section—span 57 feet tapered wings with single strut either side. Length 23 feet. Estimated performances were stated to be: Best cruising speed, 52 to 54 miles per hour, giving sinking speed 3.6 feet per second and gliding ratio of 20 to 1. Best gliding angle: 24.6 to 1 at 40 miles per hour with flap (auxiliary wing) up 5 degrees. Best sinking speed: 2.2 feet per second at 35 miles per hour with flap down 20 degrees. Stalling speeds: Flap up 5 degrees 32 miles per hour. No flap: 30 miles per hour. Flap down: 25 miles per hour.

Jack Munn. Jack, who was 32 years of age, was well-known to Australian gliding enthusiasts. His earliest gliding was done in " hang " gliders and he also built the early " Heron " bi-plane glider which was successfully flown. He was a member of the Brisbane Gliding Club in 1940 and received instruction in the " Pegasus " two-seater, which he later used as a protoytpe for his famous " Falcon " two-seater, which has been successfully operated in N.S.W. for some years. Jack had made some very meritorious thermal flights in the " Falcon," from winch tow, car tow and aero tow launchings. He had also flown the Slingsby " Gull " and the " Kite II " sailplanes. He founded the Sydney Metropolitan Gliding Club, of which he was President and Instructor. He leaves a wife and four children. Jack had been a regular and accurate A.G.A. correspondent since 11th February, 1943.

Sid Taberlet. Sid was 29 years of age and a great friend of Jack Munn. They were together in the R.A.A.F. for a considerable time during the war. Sid was a member of the Sydney Metropolitan Gliding Club, and had made solo flights. He leaves a wife and one child.

The Honorary Secretary of the N.S.W. Gliding Association (Mr. Allen Ash) advises that his address is now: 3, Bowden Street, Parramatta, New South Wales.

New South Wales Gliding Association Benevolent Fund. The recent sad accident at Fleurs, which resulted in the deaths of Jack Munn and Sidney Taberlet, robbed the Gliding Movement in Australia of two of its most valuable members and most of us of two personal friends.

It is felt that we can show our respect for them and our sympathy with their bereaved families in no more fitting manner than by organising and subscribing to a collection of money, the proceeds of which will be passed to Mrs. Munn and Mrs. Taberlet.

I suggest that members should not only subscribe to this collection, but should bring it to the notice of their friends who are interested in aviation. The collection will be known as the Munn-Taberlet Benevolent Fund, and cheques or postal notes should be endorsed accordingly.

The Treasurer of the Fund is Mr. G. Miles, of 190, Croydon Road, Croydon, Honorary Treasurer of the N.S.W. Gliding Association.

NEWS IN BRIEF

SENOR JUAN BAUTISTA DANIEL SALES, flying at Monflorite, Spain, recently broke the Argentine National duration record with a flight of 12 hours 40 minutes. He was eventually forced to land at 8.30 p.m. owing to local restrictions on night flying. This record was previously held by J. B. Chourrout with 8 hours 35 minutes.

FIRST glider landing on the Isle of Wight was made recently by Mr. R. E. Pears, a Company Director of the Surrey Gliding Club in an EON " Olympia." Mr. Pears was towed off from Redhill and released at 2,000 feet over the airfield, at 12.55 p.m. He landed at Cowes Airport at 15.50, and was met by Mr. Russell Gunton, Managing Director of Somerton Airways Ltd., who arranged a tow back to Redhill by an Auster Autocrat later in the day.

TWO $5 steak dinners was part of the prize for making the longest cross-country flight at the recent Texas National Meet. *Annual active membership fee for the S. California Soaring Association is* $5.—EDITOR.

BRISTOL CLUB ENTERTAINS

BRIGHT sunshine, offset by a cold fresh westerly wind, produced reasonably good soaring conditions at Lulsgate for the Club's autumn " open day " on Sunday, September 21st. Visitors and club pilots found no difficulty in staying up for an hour or so from the aero-tow, though little " up " seemed to be available on a winch circuit.

The public rolled up in some strength to be admitted as Day Members, and was kept informed by a loud-speaker system operated by Members. One focus of attention was the Short " Nimbus " prototype which was " put through the hoop," and later flown by Members.

Aero-towing was done by Club pilots flying a hired " Autocrat " and by a R.A. Flying Club's " Auster " most sportingly brought down to help. Credit is also due to the North Somerset people for bringing up their winch, " Beavers " and man-power.

Making their first public appearance were our new " Cadet " and " Tutor," which had been flown down by " Bristol Freighter " the day before to make the first practical application of the Kemsley Loan.

Among the visitors were Philip Wills, Dudley Hiscox and Doctor Slater.

Declaring Hawkinge as his goal, Hiscox set off in Rex Young's " Olympia." He got as far as Petworth, Sussex, 98 miles from Lulsgate. Charles Ryall, a club member, reached Boscombe Down in his own " Olympia," a cross-country of 35 miles.

Polished aerobatic displays were put up by " Jenny Jennings " in the Club " Olympia " and by John Cochran in the " Tutor," the latter from winch-launches.

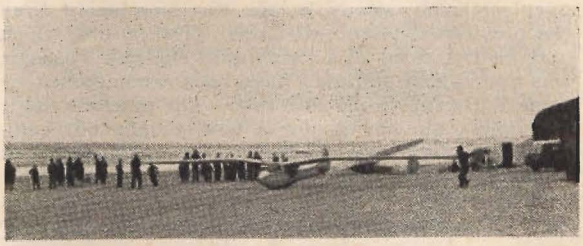
Altogether a most enjoyable day and a just reward for the hard work put in beforehand.

ULSTER GLIDING CLUB

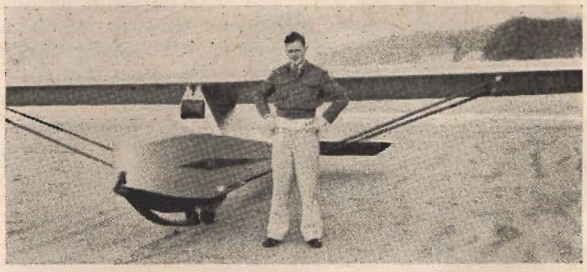
Summer Recollections



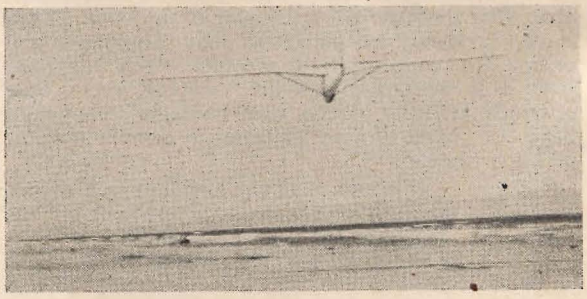
William Liddell.



Liddell about to be launched in his " Gull."



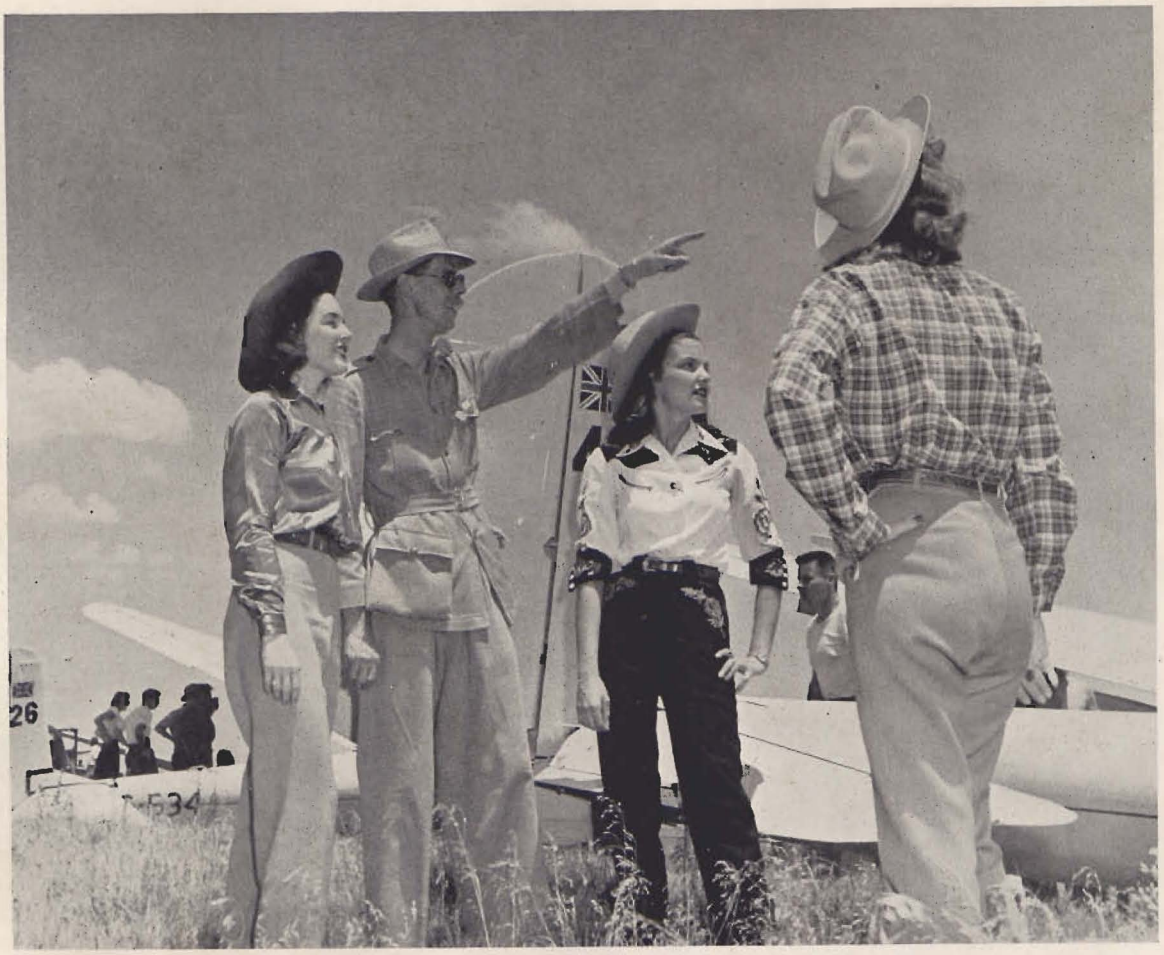
Reid with the new " Tutor."



The " Gull " coming into land.

14th AMERICAN NATIONAL SOARING CONTESTS

THE Soaring Society of America's Annual Soaring Contests took place at Wichita Falls, Texas, in July, and lasted 17 days. The move from Elmira, N.Y., the home of American gliding, was at last made to make it easier for the large groups of gliding enthusiasts in California and Florida to attend. As a result, over 300 attended, with nearly 100 gliders. Wichita Falls was chosen as the heat on the flat prairie in that region produces remarkable thermals, there are violent thunderstorms in the afternoons, and there is an average wind speed of 12 m.p.h. Because of these conditions, flights of over 200 miles were made almost every day, two international records were beaten, and national records were raised 11 times.



Charles Wingfield and Texan "Cheesecake."

International Goal and Return	MacCready	Screamin' Weiner	230 miles
International Women's Altitude	Bennis	Kirby Kite	6794 ft. gained
U.S. Distance	Comey	Schweizer 1-21	300.25 miles
	Robinson	Zanonia	333.00 miles
U.S. Goal and Return	Charles	Minimoa	122 miles
	MacCready	Screamin' Weiner	230 miles
U.S. Altitude	Trager	Laister-Kauffmann TG-4	25000 ft. gained
U.S. Women's Distance	Bennis	Kirby Kite	94 miles
U.S. Women's Goal and Return	Bennis	Kirby Kite	52 miles
U.S. 2 Place Goal	Yerian	Schweizer TG-3	207 miles
U.S. 2 Place Goal and Return	Maxey	Laister-Kauffmann TG-4	104 miles
British Distance	Wingfield	Olympia Eon	215 miles
British Goal and Return	Wingfield	Olympia Eon	146 miles

Some other interesting figures were :—

Flights over 300 miles	3
Flights over 200 miles	33
Flights over 100 miles	37
Flights gaining over 10,000 ft.	10
Silver " C's " won	23
Golden " C's " won	12
Total Altitude gained	2,551,811 ft.
Total Duration	1,743 hours
Total Distance	40,921 miles
Average Age of Contestants	33.3 years

A large French Team attended, consisting of their six best pilots, all Silver " C's," and four gliders. Two Air-100, a large-span wooden glider similar to the " Weihe," one French-built " Olympia," and an all-metal mid-gull-wing " SOP-1." Valette was placed fifth in the competitions in an " Air-100," Nessler eighth in the other " Air-100," making a flight of 319 miles, and Le Panse 11th in the metal " SOP-1." If they had not arrived late, and had great difficulty over long-distance retrieving, one of them should certainly have won the contests.



Entente Cordiale in Lone Star State — Wingfield and Nessler (French Champion).

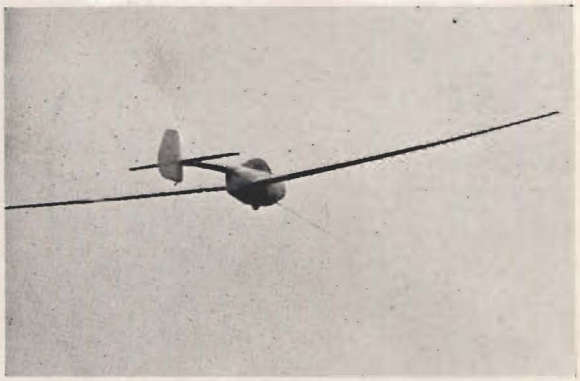
Instead of this, Americans flying American gliders, won all the first three places. Dick Comey, Director of the S.S.A., flying the new all-metal " Schweizer 1.21 " prototype, which will sell at $3,000, gained most points, while Culver and Nugent " Screamin' Weiners," small fast, heavy wooden gliders, admirable for distance flying in really strong thermals, were placed second and third.

Continued on page 13



BRITISH TEAM

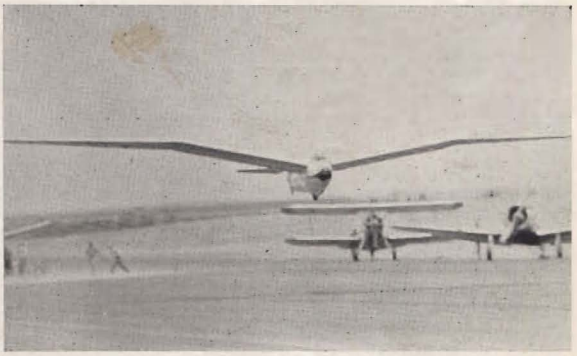
Back row: left to right. Taylor Boyer (Editor "Soaring"). J. E. Kelly. Owen Wingfield, Nigel Bicknell, F/Sgt. Stamford, D. Van Wyke. Front Row: left to right. Charles Wingfield, Naomi Allen, Chester Duker (Team Manager).



"Ross Ranger **11***".*



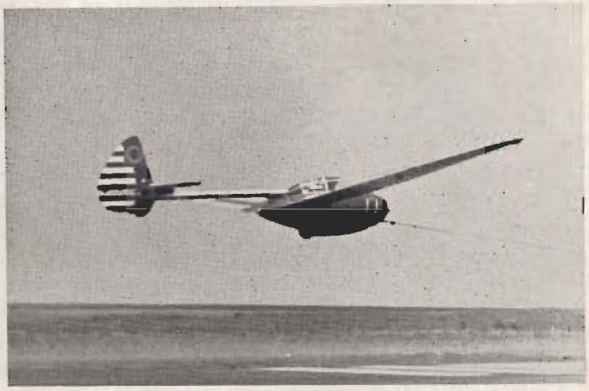
Bowler's powered Glider. 40 h.p. 4-cyl 2-stroke engine.



"Zanonia" piloted by Robinson.



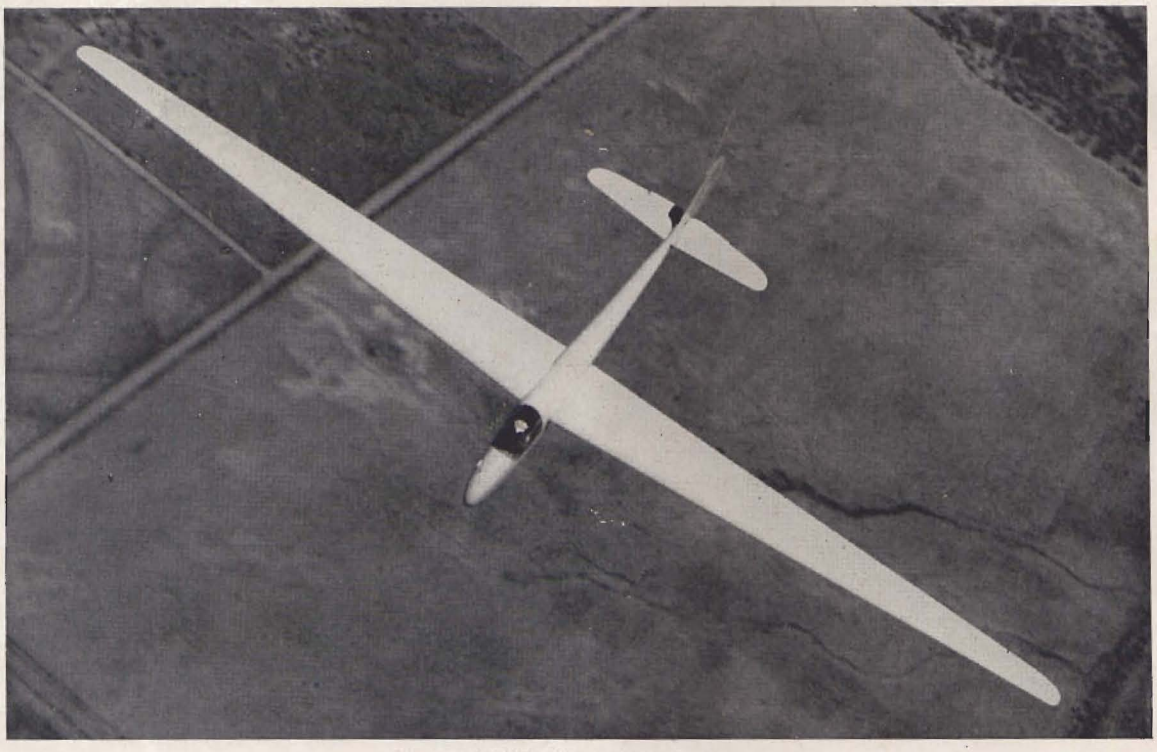
"Kirby Kite" piloted by Virginia Bennis, U.S. woman champion.



"Baby Albatross".



Left to right: *Charles Wingfield, Nigel Bicknell, Naomi Allen.*



French "Air-100" over Texas prairie.

The British Team, sent over by Elliotts of Newbury, with the help of our Civil Air Attaché in Washington, was handicapped by losing its No. 1 pilot, Decker, half-way through the contests. Charles Wingfield made continual very good flights, and was placed tenth. Unfortunately, points were only awarded to individuals, so a few long flights made by Nigel Bicknell and Naomi Allen did not help the final position of the British team. Acclimatisation was a major problem, and coming straight from England it was evident that some of the team found the incessant work of maintenance and retrieving long distances somewhat excessive. A seventeen day contest was possibly suitable for the pleasant climate of Elmira, N.Y., but it is clearly too long a period for the 100° F. in the shade in Texas.

The majority of the gliders in the contest were surplus Army trainers; "Schweizers," "Laister-Kauffmanns," "Pratt-Reades" and the like, which put up most surprising performances in conditions of that kind. But the few high-performance sailplanes, such as the French "Air-100," "Olympia Eons," "Kirby Kite," "Minimoa" and "Schweizer 1-21," stood out noticeably.

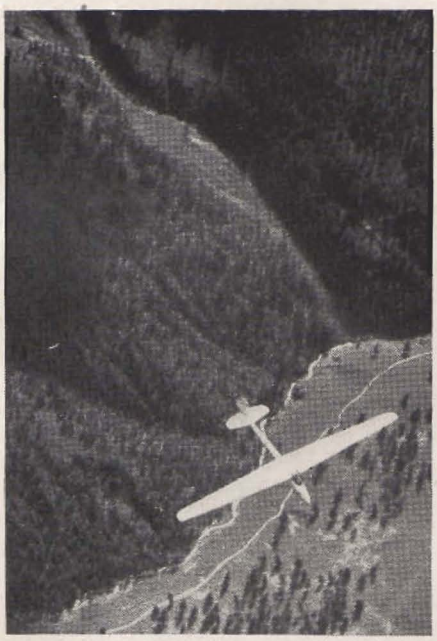
A large abandoned Army airfield was used, complete with hangars, living quarters, café and kitchen, and a large organisation staff handled the whole contests admirably. Local business men put up large cash prizes, amounting to about $5,000, but these naturally did not cover the large expenses involved by the contestants, nearly all of whom came from the East or West Coasts.



"Prue" sailplane built from a fighter drop-tank.

Everyone hoped that a British team would be seen at the American Contests again; but clearly the energy and expense that has to go into a venture of this kind cannot be guaranteed every year. The French had the great advantage of being a government team, but such a situation is possibly too much for us to hope for in the future. However, with luck, individuals from Britain will manage to take part on future occasions.

INTERNATIONAL GLIDING WEEK, SAMEDAN



Max Gasnier (France)



Professor Walter Georgij.



Kendall.



"Moswey" III.

SAMEDAN RESULTS :—

	Pilot	Nationality	Total Marks
1	Maurer, S. (Sieger)	Swiss	1773
2	Schachenmann	Swiss	1437
3	Kuhn	Swiss	1394
4	Comte	Swiss	1219
5	Cevers	Swedish	930
6	Branciard	French	923
7	Salm Elsässer	Swiss	911
8	Zientek	Polish	869
9	Ruckstuhl	Swiss	855
10	Choisnet (Marcelle)	French	791
11	Plesko	Czech	780
12	Gasnier	French	768
13	Trümpy (Isabella)	Swiss	675
14	Kamil	Egyptian	661
15	Hanslian	Czech	615
16	Kendall Brooks	British	487
17	Poljacek	Czech	399
18	Refrégier	French	141
19	Wall	British	60

B.A.F.O. GLIDING COMPETITION, 1947

AT a preliminary conference of gliding enthusiasts in Germany, it was decided that the four teams to compete would be : The B.A.F.O. G.C. (Scharfoldendorf) ; 84 Group G.C. (Saltzgitter) ; 2 Group G.C. (Oerlinghausen) and 85 Wing G.C. (Hamburg), that the dates would be : " A " Contest (experts), 17th to 23rd May ; the " B " (amateurs), 23rd to 26th May.

News of the Competition was received by the pilots at 85 Wing G.C. Hamburg with enthusiasm and determination, though some of us were acutely aware of the staggering odds against us. To begin with, we had only just received delivery of our first high performance sailplane, an " Olympia," and hours of work would be required to make it serviceable. Secondly, the speed of demob had caught us at an awkward moment, and we could only just raise a team ; but what a team ! At our site in Utersen we had no soaring ridge and practically no thermal activity. We, therefore, could hardly call ourselves lift conscious.

However, the main-spar of our team and officer i/c morale, was F./Lt. Mark Twomey, who carefully concealed his horror, and grimly lectured us on the ground and in the air. In view of the fact that 85 Wing G.C. was the only competing club which was self-supporting and flew at the weekends compared to the other clubs who were flying full time it became increasingly obvious that we would not be ready in time to enter. Desperate measures were introduced by S./Ldr. " Paddy " Seymour, our Club Secretary, who brought in a " cease flying order " to deal with the emergency. We must suspend flying for the three vital weeks preceding the contest, and help get the aircraft ready.

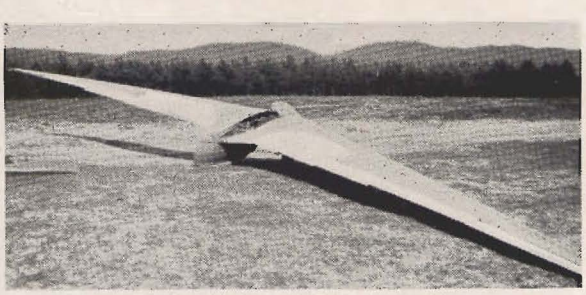
Led by S./Ldr. Seymour, the pilots of 85 Wing G.C., officers and erks alike, flung off their jackets and set to with a will on every possible occasion. Hearty thanks must be extended to our WAAF officers, Section Officer Hyde, our Treasurer, and Flight Officer Rankin, a non-flying member. These ladies shared our difficult task and showed an example in attendance that would do credit to any flying member. Gradually we overcame all the obstacles, and they were many. Transport problems ; trailers to be found ; a hundred and one necessities to enable a gliding club to travel 200 miles in one day. Without Paddy Seymour we should have been doomed to failure.

We arrived at Oerlinghausen, No. 2 Group site, scene of the competition, in the midst of the " A " test.



85 Wing Gliding Club en route to the competition.

Weather had not been favourable but was improving, and we were in time to see " Jock Forbes " wrest the distance goal record from Philip Wills with a flight into Holland. Despite terrific opposition



The " Flying Wing " (Glider) on the field at Oerlinghausen.

from all sides B.A.F.O. G.C. came out on top of the " A " competition, and we " B " merchants prepared for the fray next morning.

May 24th dawned dismally with lowering cloud and little wind, but we hurried to the field after breakfast in order to prepare our winches and aircraft. The " B " contest was limited to " Grunaus " and " Olympias." Dame Fortune scowled upon us for the next two days. It was, in fact, half-way through our last day before the weather relented and powerful thermals were felt in the vicinity of the field.

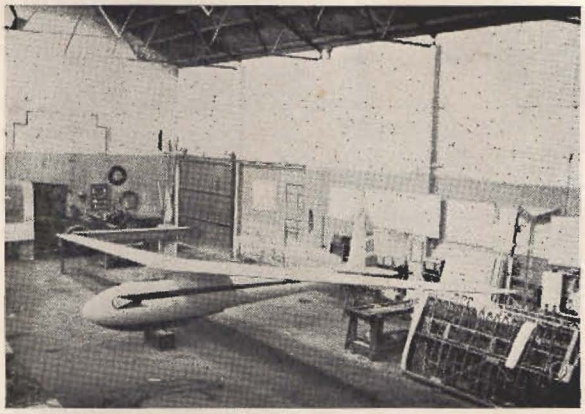
After being caged to circuits and bumps during the past two days, the " Grunaus " and " Olympias " spread their wings like freed birds and wafted their way upwards, with their ASI's and pilots whistling gaily. By 4 p.m. almost all the pilots, including myself, had " beetled off." Fortunately, I was retrieved in time to witness a display given by the " Flying Wing," an amazing aircraft of the Oerlinghausen Club. The performance of this glider is nothing short of phenomenal, and I believe most of the credit for its discovery must go to F./Lt. Mark Twomey who, at that time, was a member of 2 Group G.C. Both the German designer and pilot were there to demonstrate and explain its peculiarities, although neither spoke very good English. However, I gathered that the pilot lies face down on supporting cushions in the tiny centre section, with his hands free to operate a control column similar to that of a heavy aircraft, only on a much smaller scale. The trailing edge of the wing is totally composed of ailerons, the outer set of which, control bank, and the inner act as elevators. When flying level, and the stick is pushed forward, the inner ailerons on both port and starboard wings, drop, and act as elevators. When banking the outer ailerons come into operation, with, of course, co-ordination of both on steep turns. Rudder control, I confess, still baffles me unless the spoilers, which are foot-operated, can be used individually to create drag. It has a wing span as great, if not greater, than the " Kranich " (75 feet) with incredible flexibility—one can see the wings strain backwards on winch launch and the take-off wheel is jettisoned at 50 feet, leaving a skid for landing.

On one occasion the " Wing " swept over the crowd at 12 feet for a landing, and continued to float the entire length of the field before it touched down, a distance of nearly half a mile. I should hate to try and estimate its sink rate. There were quite a number of spectators present and no doubt some of them will be able to supply other facts about this amazing machine, and by so doing they will satisfy the interest of the gliding public.

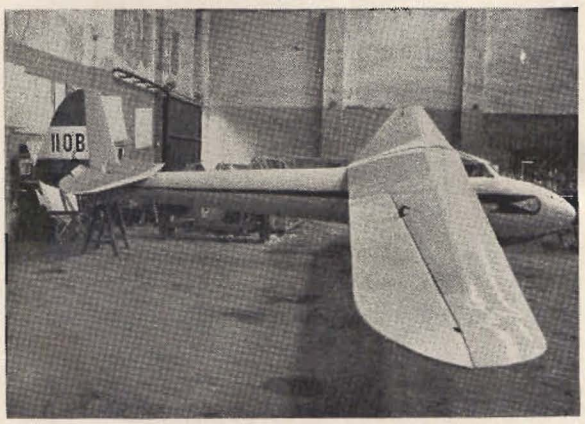
Again the B.A.F.O. Club came out on top of the " B " contest, with 85 Wing second place. Most outstanding flight of the three days was made by F./Lt. Twomey of 85 Wing G.C., who flew from Oerlinghausen to Sellar, a distance of about 160 miles, in the club " Olympia." Jock Forbes, though only a spectator, brought the last day of the competition to a close by seriously threatening the British two-seater height record in an Oerlinghausen " Kranich."

GONSALEZ CHAVES GLIDING CLUB

(Argentine)



1st Olympia made in the Argentine. 6,500 work hours. 3 carpenters, 1 metal worker for fittings. 1st day flew 4 hours. Next day, Madson got aloft, did all kinds of acrobatics, and stayed up 4 hours. Since then has done a number of 4 hour flights and one of 7 hours 5 mins. No distance so far because of bad wind direction — N — which leads to the ocean after 100 kms.



NEWS FROM THE CLUBS

CAMBRIDGE UNIVERSITY GLIDING CLUB

A camp was held at the Long Mynd from the 7th until the 22nd of June; the weather was not kind, there being only two days of soarable weather. The Midland Gliding Club, however, by their warm hospitality, made some amends for the unfavourable winds. Shortage of aircraft due to our commitments at the National Competitions and the early loss of a "Cadet," further restricted flying. Two "C" licences were obtained, and Dr. Alderidge and Head both achieved some 2,800 feet in the "Tutor."

The Club has now opened membership to power and sailplane pilots, not necessarily members of the University. Several such members have already been recruited.

During July and August the Club continued aero-tows from Marshalls, and auto-tows from Bourne. Some remarkable flights have been recorded at both places. R. Austin obtained his "C" licence and height for his Silver "C," from an auto-tow to 800 feet in a "Tutor." He climbed up to cloud base at 4,200 feet, and did not return for 47 minutes.

Paul Blanchard also reached the cloud base at 3,700 feet while flying the "Tutor" off an auto-tow to 800 feet. He confidently hopped from one cloud to another over Bourne, and continued this for 45 minutes before bringing his aircraft in, to enable others to sample the lift.

August 29th was a good day for the Club. Mr. Pringle set off on a goal flight to see friends at Great Leighs, near Chelmsford. He several times attained 8,000 feet on this trip. On the same day "Mac" Head made a flight of 53 miles, to a small place between Buckingham and Bicester, in just under three hours. This trip in the old "Cambridge" is probably the best ever made in that machine. He attained 7,000 feet on this journey, and now has both altitude and distance for his Silver "C." During this week G. Hookings covered 31 miles in the "Olympia," and also gained Silver "C" height.

Both Wijiwardene and Tom Hughes covered distances of over 60 miles, while participating in the National Competitions in which they gained third prize for the Club. Tom Hughes has further to be congratulated on obtaining a Silver "C" licence. Other praiseworthy flights have been made, but have to be omitted through lack of space.

Some members received their first soaring experience, while flying dual in the Club's "Kranich" at Bramcote, and a big future lies in the development of this method of instruction in the Club.

The new academic year begins this month, and we look forward with high hopes for the future of the Club, backed by the experience of the last twelve months.

DERBY AND LANCS GLIDING CLUB

Except for one or two occasions, the wind has blown steadily between North-East and South-East for the whole of August. Both the "Nacelle" and the open primary are under repair, and we have had to use a "Cadet" for elementary training. It has been obvious this month that hardly any elementary training can take place with a "Cadet" when the wind is east, as the ground is too rough on the east side of the site.

The results for August were: 397 launches and 49 hours' flying. Six "A" Certificates, 3 "B" Certificates, 2 five-hour tests and 2 height tests for the Silver Badge.

Some good work has been put in by Fred Coleman and his gang of "pressed men." We now have a drain from both sides of the hangar.

August 1st. Wind S.E. 15. Circuits only in "G.B." and "Tutor."

3rd-Wind South veering. Elementary training was carried on for the benefit of Whitworth, Haughton and Barbara Richards. The first two obtained their "A" Certificates at the first attempt, but it was the higher up the faster for Barbara, who broke the record for the number of 29 second flights in a row. After her third flight the others agreed unanimously that it was over 30 seconds and it was their turn next!

The "G.B.," "Kite" and "Tutor" were used for circuits, but Phil Leech was the only pilot to contact a thermal and even that gave out very quickly. The "Spalinger" did twelve circuits.

4th-Wind S.W. veering W. 15. There was a distinct improvement in the weather during the course of the day. A few hops in the "Cadet" soon showed that the wind was too strong, although Kathleen Bodell coped quite well. During the afternoon Terence Horseley kept the "Olympia" in the air for half-an-hour whilst Club machines did circuits. About 8 p.m. it became obvious that the evening thermal was beginning to work. R. Dickson was first away in the "G.B.," followed by Jefferson in the "Kite," Stanley Dickson and Shepard in "Olympias." In the meantime Gerry Smith and Stan Armstrong shared the "Spalinger" between them.

5th-Wind W.N.W. 25. It was not until noon that the sun drove the mist from the top of the hill and it was nearly 3 o'clock before the day developed into a blustering full-blooded soaring day.

The lift at times was phenomenal, and the "Spalinger" pilots were taking passengers up to over 2,000 feet and landing again inside a quarter of an hour.

9th-Wind South 2 m.p.h. Blomfield, Pat Dickson and Kathleen Bodell flew the "Cadet," the first two obtaining "A" Certificates. Several "Olympias" in addition to the Club "G.B.," were out looking for thermals, but Robertson was the only pilot to make contact and subsequently spent a pleasant afternoon watching the unsuccessful attempts from a height of 2,000 feet.

August 10th—31st. The period to the end of the month was unrelieved by excitement or interest of any kind.

On the 16th August Kathleen took her "A" Certificate with a very nice flight of 35 seconds in the "Cadet," and on the 31st August, Reeks, Whitworth and Adamtchick obtained their "B"

Certificates by circuiting the "Cadet" just in time to improve the tone of the Club notes for August.

A Treasure Hunt was organised by Gerry Smith and Buck Benton on Saturday, 23rd August. After a briefing at the Club, crews were presented with printed instructions and shortly afterwards about thirty vehicles disappeared in all directions. The course covered about twenty odd miles, and the first three crews arrived back within five minutes of each other. The Hunt was followed by a supper organised by the ladies and the launching of huge fire balloons, an old Camphill custom. The party broke up at 3 a.m.

SOUTHDOWN GLIDING CLUB

Few people with knowledge of the South Coast have not seen the Severn Sisters, perhaps gazed at them at some time in silent admiration of their sweeping curves, or stood upon their mighty shoulders to peer across the Channel at some passing vessel. Perhaps you have been even more fortunate and passed in a vessel yourself to view their shining faces from a more romantic angle.

Let me introduce you. We'll start from the beginning, down in the bay one mile east of Seaford, where the Cuckmere River becomes the English Channel.

Turn yourself eastwards, stranger, and what do you see?

Magnificent, isn't it? Seven mighty cliffs—five miles of gleaming whiteness, and beyond that just the sea.

Now look upwards. There's the top of the first "Sister," 355 feet above, and what is more to the point, there is a "Grunau Baby" soaring of the face. But then I forgot to tell you that the new site of the Southdown Gliding Club is on the top of those cliffs. Come up with me and have a look around.

Looking eastwards we see the Seven Sisters from a new angle, no whiteness now, just seven green tops, that last one is nearly 600 feet high, none other than Beachy Head.

The flying field itself, at one time a R.A.F. emergency aerodrome, stretches from the West slope upon which we are now sitting to about 1 mile to the East, and level with the top of the second Sister.

This position gives the machines an abundance of space on which to land, and enables winch launches of up to 1,500 feet to be made, with



George Borne airborne in "Grunau" at Friston.

no fear of the cable being fouled by trees, rocks or bushes.

To the North of the site we have the main Seaford-Eastbourne road running along a third slope which presents itself to the North and North-East winds.

And now, stranger, if you cast your vision further afield you will notice that the horizon stretching from Eastbourne in the East through nearly 180 degrees to the far West is made up of more hills. These are even higher than our own and extend as far as Portsmouth, 60 miles away.

We have been using this site for about a year now, and we feel convinced that it is one of the finest in the country. With regards to the actual soaring possibilities, the main cliff ridge faces the prevailing wind (S.W.), and is therefore soarable through 90 per cent. of the year. On this beat heights of up to 1,200 feet can be maintained and Beachy Head has been reached.

With a Westerly or North-Westerly wind blowing the west slope provides lift for about 600 feet with a shorter beat, and likewise the North slope gives a similar result with a North or North-East wind.

Under the right conditions, that is with the overland winds blowing such as was experienced throughout August, thermic activity is good, cloud base has been reached and Silver "C" height exceeded.

That's how it is, stranger, and the last eighteen months has been a period of pioneering, some real hard work has been done to get the Southdown Gliding Club on its feet again after lying dormant through the war years.

At this stage I would like to stress the fact that without the untiring enthusiasm of Messrs. R. Brigden and J. Billeness with the very able guidance of our Chairman, Mr. S. C. Stevens, this Club would not now be in its present state of lively activity.

Soon after the end of hostilities our trio were thinking once more of the old sport and the pre-war site at The Devils Dyke was soon to see the "Grunau Baby" being rigged in preparation for the first launch. Well the first launch was made and several more after it, but the position proved hopeless, due to the fact that the area had been used as a battle training ground and was littered with smoke bombs, shell holes and barbed wire, the remainder being ploughed up.

Then began a search of the district for a new site, and many were tried with varying degrees of success, until S. C. Stevens, acting upon an old hunch that he had been harbouring, decided to explore the now de-requisitioned Aerodrome at Friston with a view to soaring from the cliff. Permission was granted by the farmer, a winch was borrowed and the "Grunau" taken to the scene of action.



Our home-made winch.

After a few weekends of test soaring the great possibilities of this new site were realized and negotiations were started for a lease. The next big problem was to get the Club organized, and towards this end our three stalwarts spent many months of hard toil, including the construction of a winch that any club in this country would be proud to possess. In the spring of this year an *ab-initio* course was started, and by middle summer had resulted in a new batch of "A" certificates plus a number of ex-R.A.F. pilots who had been converted on the "Grunau Baby."

So much for the past, stranger, at present we are a band of well-organized enthusiasts, each with a keen interest in the future of the Club. We have an additional

" Cadet " plus " Tutor " wings on order, a new winch of the barrage balloon type, and more aircraft to come when funds permit.

As for the future, well, who knows ? Twenty-five years ago at the first organized gliding meeting in England, " Kronfeld " was launched from Itford Hill within three miles of our present site, and soared the South Downs to Portsmouth. Why should this not be done again, and again after that ? What is to prevent Portsmouth becoming a recognized target for those who fly from Friston ? We have the right conditions, the right spirit, and hope soon to have the right machines.

Well, we must see what can be done, and I'll be telling you from time to time. Meanwhile, farewell stranger—or are we friends now ?

VICTORIA (N.S.W.) GLIDING CLUB

The Club is staging a come-back. It is a great pity that a club such as ours should be reduced to this level, where it has to " stage a come-back." Nevertheless, we are at present involved in a struggle to get back on to our feet. The aftermath of the war finds a once virile club, struggling and uncertain, largely through a lack of " team spirit " on the part of the members.

The pioneering efforts of the old hands over a number of years prior to the war, richly deserved the great results they achieved. The range of machines and equipment which these pioneers built up is most comprehensive and complete. In fact we have apparently reached the stage where we have *too much* equipment. Such is not the case, but members have voiced this opinion.

No, there is not too much equipment. The trouble lies within the team that should turn out to use it. The old team returned from their various war jobs to discover the remnants of the club they had left. Largely their earlier efforts had been nullified despite the struggles of the executive who did manage to retain the club's identity and keep operating. Faced once again with the toil of the earlier years, the old team (unfortunately for themselves as well as the club) found themselves tired of carrying the burden.

The few who struggled on during the war are still carrying on with a small batch of young members, newcomers to the game. The come-back is being staged with these newcomers as a nucleus. Now is the time, and here is the opportunity to put the club on a firm footing. Therefore an appeal is made to all members to take a more active interest in the club and by a concerted effort to lift it out of the present doldrums into the higher plane it so richly deserves.

Harry Bartram, writing from Queensland, says :—" I receive all circulars and SAILPLANE. Although this place is a paradise, I sure would like to be sitting a few hundred feet above the winch. I'll go balmy one day and make a come-back. Circuits in a ' Fordson Tractor ' are apt to be boring."

(Owing to a lack of suitable fields close to Shepparton township, Benalla Aerodrome has been chosen as the next most suitable site for the Christmas Camp, and enquiries have been instituted regarding its procurement.)

LEICESTERSHIRE GLIDING CLUB

" At immense trouble and expense," to quote the great Barnum in one of his less castigating moods, a first-class show laid on by members for members this summer conquered the difficulties of terrain and provided Leicestershire Gliding Club with advanced soaring facilities.

Two expeditions to the Long Mynd, where the Midland Gliding Club's hospitality is only rivalled by their eagerness to share knowledge, yielded an encouraging crop of certificates at the expense of petrol and the dignity of those who travelled on armour-plated seats in the Club beaver.

With admirable persistence, Jack Rice finally succeeded in finding a day suitable for soaring his " Gull," and picked up his first leg (metaphorical) of the Silver " C " *en route*. Secretary Doreen Knight, Dave Jephcott and the now almost legendary Ted Felce (red beard et al) returned triumphant with " C " certificates.

Ted, grown ambitious, now threatens to aero-tow members over darkest Leicestershire in the light plane that is taking shape, amidst elaborate secrecy precautions, in his back-yard shed. The shed's former occupant, a snarling three-wheeler, was thrown out without ceremony about the time someone in the Government started fiddling with petrol rations. . . .

Still at great expense, though we fear that Jack Rice has had to bear most of it, aero-towing went forward apace during the sun-spoiled weekends. Jack's gallant "Moth " has crawled over much country in attempts to give less-experienced pilots the opportunity of finding thermals. Members are rather proud of having what must be Britain's youngest glider-girl, 18-year-old Betty Gays, as one of their number ; prouder still that she should confidently sail off on an aero-tow soon after gaining her " B " and before getting in any ridge-soaring time.

Not the least encouraging aspect of this summer's activities has been the ready co-operation of Austers Ltd., who put their Rearsby field at our disposal, and that of the county Aero Club.

While winching of *ab-initiates* took place at Rearsby, the Club was able to force on with aero-tows from Ratcliffe. This and the sole use of Ratcliffe for a week while the aero-club had an August holiday helped many more new members to progress with their training.

It is pleasant to record this example of mutual support between power-flying and sailplaning interests. In our humble submission, it's only in this way that the Little Man's flying in Britain can survive.

BRISTOL GLIDING CLUB

One year has elapsed since we first descended, with one " Cadet " and one beaverette, upon the plover- and aeromodellist-haunted acres of Lulsgate Bottom Aerodrome. Auto-tow was then the only possible launching method, but it served us well and we were lucky in having a number of competent Instructors from the start. Flying was continued through the winter whenever the aerodrome showed through the snow, and in March our " Grunau " was put into use. These two aircraft have been concerned in the bulk of the 2,400 launches recorded since the start, although we have recently acquired a wheeled " Olympia " and are awaiting a " Tutor " and another " Cadet."

The majority of the launches has fallen to the lot of the winch built and loaned to us by Roger Pears,

which has stood the test well, getting the G.B. up to 2,300 feet on occasion. Spring and summer thermals found the first course of pupils just about ready to make use of them, and twelve " C "s have been gained over the site, three of them by flights of over 25 minutes. One " C " flight of 12 minutes was recently made in the " Cadet," and both " Grunau " and " Olympia " have been above 3,000 feet in thermal lift.

We have continued to use beaverette-tow for sliders and hoppers, though feeling in need of a more potent vehicle here, as it gives the instructor better control over the pilot and, equally important, leaves the winch to the circuit people. There are now so many of these latter that winching has become a definite bottle-neck, especially now the new aircraft have come to join the queue. However, two double-drum Wild winch conversions are on the stocks, the first being almost ready to take the field.

No cross-country flying has been done this season due to shortage of Club aircraft, but Rex Young has convincingly demonstrated the possibilities of the area with several out-and-returns in his own " Olympia." Circling in a brisk thermal at 5,000 feet recently, he was subjected to a short but exciting dive attack by a five foot span buzzard which had been using the same lift. It was last seen passing rapidly under the wing in the direction of the tail-surfaces, fortunately without result.

An expansion of membership from the present 90 to 150 is expected immediately in connection with a special training scheme, and the extra aircraft and launching facilities will have to be put hard to work if we are to give everyone a satisfactory amount of joy.

By the time these notes appear, we shall know whether our Autumn " At Home " was made or marred by the weather.* It serves to mark the close of our first post-war year, a year in which the Club has established itself, particularly on the equipment side, to a far greater degree than the most optimistic of the organisers dared to hope. A winter spent on intensive training and the development of equipment and of new facilities will pave the way to really efficient operation next year.

YORKSHIRE GLIDING CLUB

Flying. August has perhaps been the most disappointing month we have ever experienced. There was not one solitary soaring day and the very little flying done can be summed up as follows :—

August 1st. Last day of Club Course—light S.E. wind, 18 winch launches for 36 minutes' flying. *August 3rd*: 6 launches for 16 minutes—all A.T.C. The 10th was mainly an A.T.C. day again; Instructors Savage, Mills and Dews came again from Leconfield in the hope of " C "s, but got only some winch circuits; 15 launches in all for 30 minutes' flying, including some passenger flights. On the 23rd and 24th, light variable winds again with everything " going down," except on one occasion when Ritchie Pick managed to hold height for a few minutes in the " Kite." On the 31st the Newcastle " Tutor " was circuited by Burningham, Fidler, De Redder and Roberts.

General. The Annual General Meeting was held in the new club house, which was erected just in time for it—a bare shell of a building with a little basic furniture but, at last, a roof over our heads and a good floor beneath our feet. Already we have had a few welcome gifts from members and friends—in the shape of furniture and equipment—and there is now great scope for anyone who always wanted to build his own pub, to take off his jacket and build a bar. We already have a rolling shutter, so that we can at least comply with the regulations so far as closing the darned thing is concerned ! This is one of those jobs where money doesn't help much—what we want are people with pieces of wood, hammers and nails, and other items of barter—or perhaps Queen Ann's Bounty could help ? We contrived to build the place around the old brick fireplace—all that was left of pre-war glory—thereby preserving ancient happy memories and (if we remember aright), a smoky chimney ! At the time of writing, the A.T.C. hangar is nearing completion, and apart from its obvious use it will (*a*) shelter the new club house from south westerlies (how we'd like to see one !), and (*b*) catch water for washing things (if it ever rains again). Turning to the General Meeting itself, we were fortunate enough to finish the first financial year with only a small trading loss, but having allowed full depreciation on all assets, are really in a strong position. What the Club needs most of all now is members, and until we get soaring weather the membership position will not improve much. It takes more than ordinary enthusiasm to persuade any but the few diehards to use their petrol in weekend after weekend of long trips with no soaring at the end of them. The new petrol cut will provide another setback, and it is to be hoped that some fighting will be done at high level to secure petrol for members to reach the clubs, and to maintain the supply required for operation of launching and retrieving machinery.

At the time of writing, we hear that the Yorkshire Aero Club, Sherburn-in-Elmet, has fitted an " Auster " with a towing hook and will be able to arrange aero-tows by appointment. Another item of general interest is that No. 28 Gliding School A.T.C. (Sutton Bank) is also operating in non-soaring weather at Topcliffe airfield (by permission of the A.O.C.'s and C.O. concerned) at weekends, and at present the Royal Engineers' officers are being given primary training there in their own club aircraft. (The R.E. unit concerned is from Ripon.) Club primary training seems more remote than ever, and the long-term wisdom and economy of basic training on powered aircraft seems to commend itself more and more for serious consideration.

ULSTER GLIDING CLUB

The past season has been a very poor one from the Club's point of view, as although the weather has been unusually good, the wind has been persistently in the wrong quarter from the point of view of our soaring site. The last soaring was done on 22nd June and nothing further took place until 31st August, so one may judge how barren things have been.

Early in July extraordinary cloudburst completely washed away the road to the site, and as this is not a public thoroughfare it may conceivably remain impassable for an indefinite period. The reinstatement is beyond the capabilities of the Club, as it will entail the provision of about 100 tons of

* *A brief account of the " At Home " is published on page 8*

soil and filling and the removal of countless boulders ranging in size from a football to a dining room table. Meanwhile an alternative route *via* a sandy track at the far end of the site is being used.

During the period of enforced inactivity the towing car has been rebored and generally overhauled, and a small hangar, a one-time aircraft crate, has been erected to house one of the machines. The trailer, originally designed for the " Kite " has been adapted to take the " Tutor " as well.

During the Summer a new club has been formed at the R.N. Air Station at Eglinton, a few miles from the Club's site, and as they have not, as yet, any machines, an arrangement has been concluded for the members of the Naval Club to join the Ulster Club for a nominal fee and to have full use of the Ulster machines and site. Few of the Naval people have had any flying experience, and a start was therefore made on 31st August to train them on the " Tutor." Some doubt was felt as to the suitability of this type of machine for *ab-initio* work, but so far there have been no " incidents " and the machine is still intact. Over a dozen beginners have been given slides and hops and two week-ends have produced one " A " and one " B " Certificate. It is thought that the wear and tear of primary training would be excessive on a machine of this type if used on a normal site, but we are of the opinion that the dead level sand of the foreshore from which we operate minimises the stresses sufficiently to warrant carrying on with this.

(*Pictures on page* 8)

LETTERS TO THE EDITOR

RELATIVE AIRFLOW INDICATORS

In a letter in the June issue of SAILPLANE, Arthur M. Dennis claims that enthusiastic learners may be misled by a technical article published in these columns, and dismisses light-heartedly a subject with potentially serious consequences, as " an amusing topic for rainy afternoons at the Club." Demonstrably he has misread the article and is in error in these statements.

The article (Relative Airflow Indicators—February issue) treats, *inter alia*, of the risk of neglect to consider factors other than the angle of attack in relation to the onset of stalling conditions. A. M. Dennis, in an attempt to refute this (and mentioning as his authority, Kermode), refers to what is, of course, a fundamental and universally accepted fact; namely, that for a given aerofoil or wing-section a given (increased) angle of attack of approximately constant magnitude will always have been reached when the stall has become fully developed: *i.e.* when, in practice, the predisposing conditions with manifestation of turbulent flow, slack controls, etc., have been traversed and the machine falls out of control. (Knowing Kermode personally I fancy he would deprecate being called an " authority " for including this elemental fact of aerodynamics in his book on flying).

But in any event the article in question is nowhere at variance with that simple truth. The passage which A. M. Dennis has quoted and labelled as " incorrect " simply states that the stalling *condition* can develop from almost any angle of attack, *depending upon* what other conditions of flight obtain at the time. (The actual words in the original article are that the " condition can be reached at different times for almost all angles of attack, depending upon the different conditions obtaining at the time "). The word " almost " connotes the exclusion of negative angles of small degree, and the phrase " can be reached " obviously implies a conditional development. In practice such (conditional) development is often very rapid, the sudden, involuntary increase to the limiting angle of attack being unnoticed until the stall takes charge. But that is too late to prevent the consequent ill-effects. And prevention is better than cure. The remedy is, as the article shows, to be alert to concomitant flight conditions, notably airspeed.

For the benefit of those " eager learners " that A. M. Dennis may thus himself mislead, many of the like of whom one has been privileged to help in flying, over a period of 30 years with balloons, gliders and airplanes, it cannot be too strongly emphasized that in flying aerodynes, particularly gliders at " non-recovery height," the pilot's immediate awareness of incipient stall conditions makes for more confident, more skilful and safer flying.

As to the flight example, A. M. Dennis quotes from the article, it was thought unnecessary to underline the known difference between settled and transitional readings of such air-activated instruments as angle-of-attack indicators. Their design renders them vulnerable to position error, to friction-lag error and to vane-inertia error, amongst others. These errors may variously cancel out or give a resultant high or low reading. The attentive user soon learns which way his " indicated " angle of attack will tend to change in the transition from manoeuvring to steady-flight conditions. In the quoted example the indicated angle may be taken as high. Since, in the thermal, there would exist already a component of " lift " in the direction opposed to gravitational thrust, the " position energy " (or reserve lift) of the machine may be employed during the (relative) loss of height in the nose-down attitude, to maintain a fairly steep turn (which means a high angle of attack) with less risk of the stall condition developing. This is due to the increased airspeed, of course, and despite the 5-degree nearer approach to the critical angle of attack than in the glide angle of attack quoted at 15 degrees in the example. In other words the lesser the margin of gravitatioual component " in hand," the greater the risk of stall-precipitation, even if the angle of attack be a little more remote from the critical.

A. M. Dennis may read casually and joke lightly; but extended experience teaches not only a healthy respect for the air and its laws but also the privileged duty of passing on to " enthusiastic learners " any useful information so gained.

A. YORK BRAMBLE.

My partner, Ken Davies, and I were very pleased to read the news item about our " Olympia " in the

March issue of SAILPLANE AND GLIDER, also to see our photographs in the next month's issue. Believe me, they were a great stimulus to two very tired sailplane constructors, and made us forget our worries and spur on at a greater effort. And the item in June issue made us feel that one day we shall be able to look around and say: "Are there any more jobs to be done?" and the answer will be "no"—much to our surprise.

Now I have some more news.

All component parts are finished except for a few minor items. Work has begun on the wings. The starboard leading edge has been set up and glued, and in another week we should be ready for the covering of the "D" tube, having decided this method the best according to our workshop space, and it gives us a higher degree of accuracy and much firmer jig to pull the ply around this rather "knife-edge" wing section.

As far as can be prophesied, 5 or 6 weeks' spare time work will see the two "D" tubes finished, so with that estimate we will be very hard pushed to get the machine out by Christmas.

"Ken" and I have decided to try and bring our machine to the Olympic Games next year and would greatly appreciate any information pertaining to the contests and the method of entry, so if you could supply all details I would be very glad to have them.

George Wilson, a Sydney *Daily Telegraph* reporter, visited the workshop recently and saw the possibility of a very good story. He takes a great interest in publicity for gliding, and has promised that if he can give gliding any impetus he will do so with the greatest pleasure, so we will hear more from his pen. His subsequent reports in the press, prompted the Australian Broadcasting Commission to approach us in regard to a national broadcast in "News Review," a feature three nights per week over the National network. I was asked to speak about the machine, our progress, features of the sailplane, ambitions and prospects. (I enclose a copy.)

It is our intention to satisfy the Olympic Games committee that we have a machine which has an equal chance overseas in the Contests, and as there hadn't been any reference to a gliding section in the local press, we thought it about time something was done to publicise this truly wonderful sport. I contacted the Games Committee and was told that any nomination of pilots and machines must be made through the Australian Gliding Association. This has been done and we are now waiting to see if any recognition of our efforts is forthcoming.

Our "Olympia" will be the first finished, but will only be finished in time for a few good flights prior to her departure in May 1948.

Financing the "Olympia" may prove a bit of a problem. Funds are not very plentiful. The Government could have been more generous with their offer to assist, and a great amount of money will have to be raised to help defray expenses by the respective sporting bodies represented. Our own position is very precarious if they cannot include the gliding entry. The freighting of the machine is going to cost £200 (Australian) to send over, plus £80 fare each person, and of course the outlay may cost us a total of £800 for the trip—a considerable sum considering we will spend £300 to complete the machine and the trailer. We are sending up a prayer for golden rain and hoping that luck will come our way.

We are very keen to help open the way to further discussions on gliding, and by talking of the sport encourage more ex-R.A.A.F. pilots to take an interest and help the much-needed expansion in the gliding programme to materialise.

I see by Lord Kemsley's marvellous loan that the sport has much to thank for his timely generosity, and we hope that everybody pulls their weight to make the activity flourish on completely unselfish lines and co-operative spirit, thus providing a harmonious background for people who want to relax from their everyday routine. It seems a great pity that in England there are many glider pilots waiting to join clubs, whereas in Australia other sports have a greater following, and it is very hard to convince the average young man that gliding is not as dangerous as some people believe.

I received a letter from Leo Follmann of Buenos Aires a few weeks ago, and he sent two photos of the "Gonzales — Chaves" Olympia. The best flights of this machine being 4 hours, 7 hours and 5 hours 4 minutes—all thermal flights. The finish on the machine was remarkable and some beautiful workmanship provides evidence of the 6,500 man hours by 4 men in 1½ years. I hope ours doesn't take that number of hours, but there are signs that it will take about 4,500.

Our energies are directed wholeheartedly in pushing gliding before the public, and impressing the Games Committee with our sincerity of purpose.

If we can represent Australia for the first time, I think that our International status will be elevated, so with the hopes of a successful public appeal we look forward to brighter days ahead.

ARTHUR D. HARDINGE.

Copy of Radio Broadcast, "News Review" Station, 3 A.R. Melbourne.

14*th July*, 1947.

"We began building our glider in February 1946 and now, after 17 months' work we have reached a stage where only final assembly of fuselage and two wings remains. When it is finished it will be one of the largest gliders in Australia; its wing span is 50 feet. But there are other unusual features as well. It is, I think, the most complicated machine in Australia and will have the highest performance of any. For instance, without any uplift at all, it should glide 5 miles from 1,000 feet. It is an identical machine to many that will be flown in International gliding contests in Britain in conjunction with the 1948 Olympic Games. The details of this machine were decided upon by the representative committee of experts appointed by the International Commission for the study of motorless flight. Of course, owing to the war and shortage of supplies, not all the machines will be of the same design, but it was decided that in any future contests, all countries would fly machines of the same type. Perhaps some of the features I should have mentioned about this Olympic sailplane are that it is fully aerobatic, has safe and efficient dive brakes, that it is particularly safe and suitable for cloud flying, and that it has a high cruising speed. With tail trim in operation, it will quickly increase its cruising speed from 45 m.p.h. to 65-70 m.p.h., and can dive at approximately 145 m.p.h. Mr. Ken Davies and myself hope

to go overseas next year and fly this sailplane, but before we do, expect to fly many distance and duration flights. I don't think you could miss in this type of machine because it is so good. Everyone who has flown it has remarked on its outstanding performance and manoeuvrability, and is particularly suitable for long and arduous flights, so our prospects are very bright."



The New F.A.I. Silver "C" for Great Britain

FOR SALE.

SCUD 11 intermediate sailplane. Recently overhauled and in excellent condition. Complete with trailer, £200. Apply A. Parslow, 29, Allenby Grove, Porchester, Hants.

OLYMPIA Sailplane, in perfect condition, supplied by Messrs. Elliotts of Newbury, along with full set of blind flying instruments. This sailplane has done a very few hours' flying and is absolutely perfect. Reply to Box No. 235.

WANTED.

A BLUEPRINT and instructions for building a high-performance Sailplane. Box 233.

ROYAL AERO CLUB GLIDING CERTIFICATES

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

GLIDING CERTIFICATES: "A" .. 196 (6755—6950)
"B" .. 71
"C" .. 60

SILVER BADGES: 6

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
	"B" CERTIFICATES		
4693	Peter Edwin Neville Smith	London G.C.	11. 8.47
5396	George Bolton	Scottish Gliding Union	13. 7.45
5457	Harold Arthur Eburne	129 G.S.	6. 7.47
5667	David Young	Scottish Gliding Union	13. 7.47
5738	Rodney Terence Charlesworth	84 G.S.	10. 8.47
5795	Robert Henry Casbard	122 G.S.	18. 8.47
6203	Denis Alec Morley Jackson	Ditto	10. 8.47
6222	Robert Lindsay Davies	R.N. Gliding Union	5. 4.47
6365	Grace Betty Gays	Leicester G.C.	7. 8.47
6432	David Walker	Scottish Gliding Union	13. 7.47
6578	James Thorne	140 Wing G.C.	25. 6.47
6757	John Stuart Jennison	47 G.S.	6. 7.47
6758	Leslie Benson	Derby and Lancs.	1. 6.47
6759	Alan Shannon Clark	London G.C.	20. 7.47
6769	William McKay	141 G.S.	7. 6.47
6772	Edward Saul Davis	127 G.S.	29. 6.47
6776	Leonard Henry Thompson	105 G.S.	13. 7.47
6778	Frederick William George Wilkinson	85 Wing G.C.	1. 6.47
6780	Leslie Ernest Albert Hacke	130 G.S.	11. 1.47
6782	Gwynfryn Morgan	84 Gp. G.C.	20. 6.47
6784	William Wallace Sheppard	42 G.S.	6. 7.47
6793	Gerald O'Brien Harding	B.A.F.O. G.C.	20. 4.47
6798	David Henry Gason Ince	4 G.S.	8.12.46
6801	Ronald Arthur Ramsay Rae	25 G.S.	13. 7.47
6806	Ronald Arthur Farmer	B.A.F.O. G.C.	19. 5.46
6810	Allan Harvey de Buriatte	84 Gp. G.C.	26. 6.47
6811	Gerard Dudley Wall	Imperial College G.C.	25. 5.47
6815	Andrew Bain	7 G.S.	18. 5.47
6817	Robert Lawrence Bowes	140 Wing G.C.	13. 7.47
6819	Geoffrey Albert Henry Thomas	47 G.S.	20. 7.47
6822	Roy Herbert Ferguson	Newcastle G.C.	13. 8.47
6824	Geoffrey de Egglesfield Collin	84 Gp. G.C.	5. 4.47
6827	Royden Charles Golding	61 Gp.	22. 7.47
6836	John Kemp Gallie	12 Gp. G.C.	27. 7.47
6838	Jack Kjelstrup Hemmestad	84 Gp. G.C.	20. 5.47
6839	Jack Lumb	47 G.S.	6. 7.47
6841	Frank Jonniffe	12 Gp. G.C.	13. 7.47
6842	William Lamb	Ditto	13. 7.47
6843	Harold Mansell King	Ditto	13. 7.47
6844	John Francis Warren Hastings	Condor G.C.	28. 6.47
6859	Jaques Antonin Maurice Cocheme	2 Gp. B.A.F.O.	31. 7.46
6861	Richard Allerton-Austin	Southdown G.C.	24. 5.47
6862	Philip Dawson	5 G.S.	2. 6.47
6864	Eric John Clarke	167 G.S.	3. 8.47
6868	Stanley Richard Hodge	Somerset Aero Club	24. 7.47
6876	Brian Bennett Storey	R.A. Aero Club	23.11.46
6879	Charles Crichton	84 Gp. G.C.	23. 7.47
6880	Edgar William Basham	151 R.U. (A.)	22. 6.47
6881	John Hallward Dyas	Lubeck G.C.	2. 8.47
6883	Josef Singer	Surrey G.C.	12. 7.47
6887	William Page Walker	Air H.Q. G.C.	27. 7.47
6888	Robert Hugh Garnett	Surrey G.C.	27. 7.47
6894	Basil Victor Hewes	Leicester G.C.	10. 8.47
6898	Charles Edward Stuart Lockett	130 G.S.	29. 3.47
6900	Cyril Roy Vale	London G.C.	29. 7.47
6902	Michael Marcus Erdman	125 G.S.	30. 8.47
6908	Robert Patterson	123 G.S.	13. 7.47
6915	David William O'Kelly	Derby and Lancs.	28. 7.47
6918	Jan Mach	Czech National Aero Club	4. 7.46
6919	Hugh Basil Gregory	B.A.F.O. G.C.	11. 8.46
6920	Alan Maffett	R.A. G.C.	13. 7.47
6921	Rodney Hamilton-Peters	Midland G.C.	4. 8.47
6925	John Dawson Hieron Radford	Derby and Lancs.	7. 6.47
6928	Walter Nymoen	84 Gp. G.C.	11. 6.47
6929	Kenneth Burton Forbes	Scottish G.U.	10. 8.47
6930	Lawrence Patrick Moore	Midland G.C.	3. 8.47
6944	Henry Charles James	144 G.S.	15. 9.46
6946	John Moore	London G.C.	16. 8.47
6947	George Arthur Henwood	Ditto	16. 8.47
6948	Ian McGowan-Docherty	Ditto	16. 8.47
6874	Frederick William White	5 G.S.	29. 5.47
	"C" CERTIFICATES		
1212	Kenneth Meredith Prichett	Yorkshire G.C.	29. 7.47
1823	George Edward Nunn	Midland G.C.	29. 7.47
2370	Arthur White	Ditto	29. 7.47
2513	Edward John Hurworth	Ditto	29. 7.47
2569	Kenneth James Arthur Fripp	Portsmouth G.C.	28. 7.47
2623	Michael Leslie Hennet	28 G.S.	26. 7.47
2677	Harry Thomas Dumbleton	41 G.S.	20. 7.47
2807	Robert Culvenor Gibson	203 G.S.	16. 7.47
3606	Robert Melvin McDougal	Bristol G.C.	19. 8.47
4083	David Walter Tanner	Yorkshire G.C.	26. 7.47
4180	Edward Francis Patrick Mercy	Ditto	29. 7.47
4181	Douglas Edwin Felce	Leicester G.C.	5. 8.47

FOR SALE

ABOUT 4,000 PNEUMATIC HAND TOOLS, comprising Drills, Hammers, Riveters (3/16"—¾"). Best makers. Big savings. Illstd. List from Box 2176, G.T.C. Ltd., 82-94, Seymour Place, London, W.1.

FULLY reconditioned H-17 fuselage with rebuilt trailer. Fuselage complete with detachable cockpit canopy, Sutton harness, two quick release tow hooks and instruments, etc. £95 or nearest offer. Phone Elmbridge 4251, or write Box 234.

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)*

Glider Photographs

REQUIRED FOR

FRONT COVER

OF

SAILPLANE

ONE GUINEA for copyright if used. Glossy prints or negatives only.

When submitting please state: Photographer, type of camera, film used, stop, exposure and locality.

Please reply to ART EDITOR, *Sailplane & Glider*. 139 *Strand, W.C.2.*

GLIDING CERTIFICATES—*continued*

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
4265	Arthur Dudley Marshall	Midland G.C.	29. 7.47
4331	Adrian Roger Ion Austin	Cambridge University G.C.	27. 7.47
4387	Cyril Albert Nepean Bishop	Surrey G.C.	3. 8.47
4515	Ian Hamilton Paxton	Cambridge University G.C.	18. 6.47
4627	Peter Robert Corrick	61 Gp.	23. 7.47
4675	David Bramwell Jephcott	Leicestershire G.C.	3. 8.47
4980	Sydney Ronald Dodd	106 G.S.	23. 7.47
5144	James Douglas Earnshaw	28 G.S.	26. 7.47
5267	Olive Doreen Knight	Leicester G.C.	5. 8.47
5457	Harold Arthur Eburne	129 G.S.	13. 7.47
5894	Robert Jack Smallbone	London G.C.	3. 8.47
5923	Ivor Edwin Stretch	151 R.U. (A.)	18. 6.47
5972	Alan David Dick	Midland G.C.	3. 8.47
6013	Brian Neville Bennett	Ditto	6. 6.47
6026	Sydney Henstock	47 G.S.	25. 5.47
6335	Arthur Harold Manners Edney	Derby and Lancs.	29. 7.47
6417	Cyril Edward Coote	148 G.S.	23. 7.47
6493	Andrew Coulson	Newcastle G.C.	29. 7.47
6528	Arthur Adair McKernan	203 G.S.	16. 7.47
6649	Cecil Howard Filmer	Condor G.S.	5. 8.47
6568	Peter John Hilton Perkin	London G.C.	5. 8.47
6590	William Verling	61 Gp.	22. 7.47
6662	Anthony James Ralph Reilly	London G.C.	5. 8.47
6742	Sidney William Farley	81 G.S.	20. 7.47
6745	Frederick John Hanks	London G.C.	5. 8.47
6746	Michael Duncan Young	49 G.S.	27. 7.47
6758	Leslie Benson	Derby and Lancs.	29. 6.47
6778	Frederick William George Wilkinson	85 Wing G.C.	16. 7.47
6798	David Henry Gason Ince	Midland G.C.	5. 8.47
6806	Ronald Arthur Farmer	B.A.F.O. G.C.	20. 6.47
6811	Gerard Dudley Wall	Imperial College G.C.	24. 7.47
6817	Robert Lawrence Bowes	140 Wing G.C.	17. 7.47
6824	Geoffrey de Egglesfield Collin	84 Gp. G.C.	27. 4.47
6827	Royden Charles Golding	61 Gp.	24. 7.47
6828	Geoffrey Arthur Catling	95 G.S.	3. 8.47
6838	Jack Kjelstrup Hemmestad	84 Gp. G.C.	8. 6.47
6859	Jacque Antonin Maurice Cocheme	2 Gp. B.A.F.O.	11. 9.46
6861	Richard Allerton-Austin	Southdown G.C.	3. 8.47
6879	Charles Crichton	84 G.C.	29. 7.47
6880	Edgar William Basham	151 R.U. (A.)	2. 8.47
6900	Cyril Roy Vale	London G.C.	6. 8.47
6915	David William O'Kelly	Derby and Lancs.	29. 7.47
6918	Jan Mach	Czech National Aero Club	3. 8.47
6920	Alan Maffett	R.A. G.C.	20. 7.47
6921	Rodney Hamilton-Peters	Midland G.C.	5. 8.47
6925	John Dawson Hieron Radford	Derby and Lancs.	29. 6.47
6927	Walter Nymoen	84 Gp. G.S.	18. 7.47
6930	Lawrence Patrick Moore	Midland G.C.	5. 8.47

SILVER "C" BADGES

99	T. B. Hughes	(4388)
100	T. Horsley	(900)
101	C. L. Faulkner	(911)
102	T. R. Young	(2422)
103	G. E. Thompson	(4596)
104	D. L. Pratt	(5264)

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.

CHOWLES & NELSON

RECORDING ALTIMETERS

WINSLOW BLETCHLEY BUCKS

ALT., & A.S.I. CALIBRATIONS
INSTRUMENT REPAIRS

AIRCRAFT (HEREFORD) Ltd.

20/21 Newmarket Street,

HEREFORD,

are Agents for Slingsby Sailplanes. Immediate delivery of "Cadet" and "Tutor."

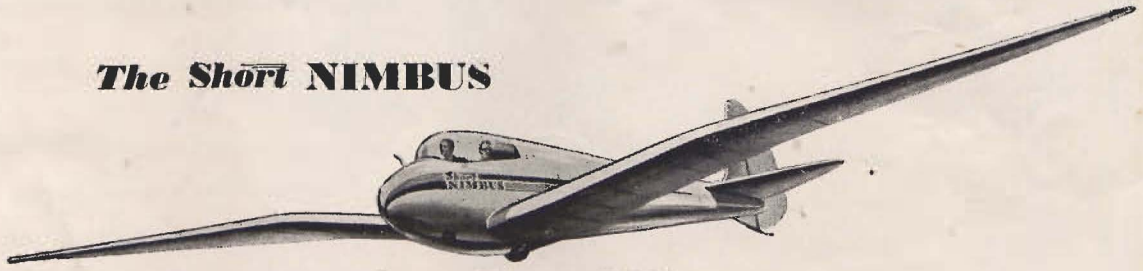
SLINGSBY SAILPLANES Ltd.

KIRBYMOORSIDE, YORKS.

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

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

The Short NIMBUS



low-wing sailplane — tandem dual-control — perfect vision

PERFECTED after exhaustive experiments by Short's team of aeronautical engineers with sailplane experience, the Nimbus presents new features of interest to sailplane enthusiasts.

A low-wing, two-seater, the Nimbus has a comfortable cockpit with the widest possible field of vision for both front and rear occupants. Important features are: dual controls; longitudinal trimming; dive brakes; and the added advantage of Aileron Droop adjustment while in flight. The air frame is also fully bonded to latest requirements.

With its wood monocoque fuselage, Perspex coupé and unobtrusive centre-wheel undercarriage, the Short Nimbus is a sailplane of clean, distinctive design. Ideal for instruction and aerobatics. Launched by winch or aero-towing, it is ideal for dual instruction in advanced soaring.

SHORT NIMBUS SAILPLANE

Wing Area	240 sq. ft.
Span	62 ft.
Overall Length	27 ft. 4 ins.
Aspect Ratio	16
Empty Weight	800 lbs.

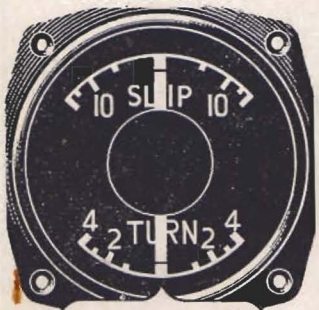
Sea-Level Condition—2 Crew, each weighing 200 lbs.

Minimum Gliding Angle	1 in 25.8
Sinking Speed	2.3 ft. p.s. at 38 m.p.h.
Stalling Speed	35 m.p.h.
Recommended Approach Speed	42 m.p.h.
Maximum Permissible Speed	130 m.p.h.

***Short* NIMBUS**
sailplane

SHORT BROS. (ROCHESTER & BEDFORD) LTD., ROCHESTER · SHORT & HARLAND LTD., BELFAST

Essential Equipment



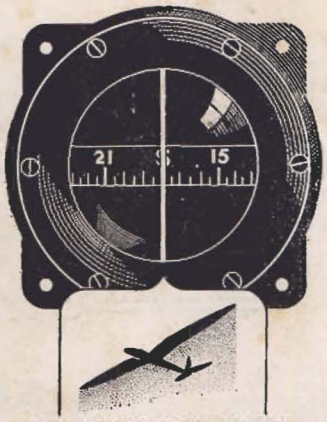
TURN & SLIP INDICATOR

12v. Electrical
Weight—1 lb. 11 ozs.
Operated by dry-cell batteries



AIR SPEED INDICATOR

Special Sailplane Calibration
20/100 M.P.H. *(Single circle)*
or 20/150 M.P.H. *(Double circle)*
Weight 9 ozs.



DASHBOARD COMPASS

Simple robust design
Weight—17 ozs.

Reconditioned Sensitive Altimeters also available.

K. D. G. Instruments Ltd

PURLEY WAY . CROYDON . THORNTON HEATH 3868



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).