SAILPLANE AND GLIDER

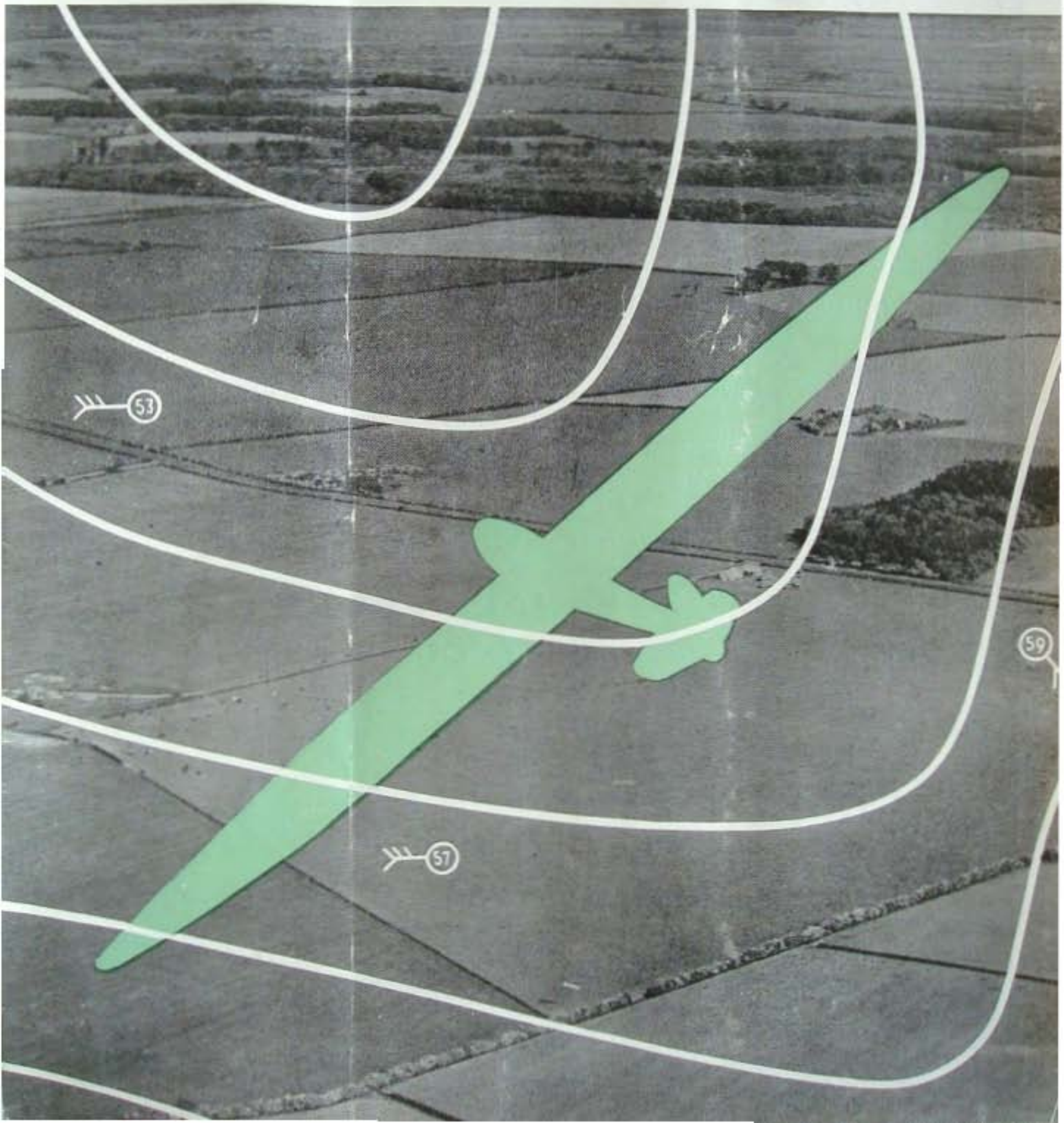
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EDITED BY ALAN E. SLATER



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At Bradwell Edge

EVERY soaring site presents its own local problems to those who are new to it, and the dearth of cross-country flights from Bradwell Edge, on the first occasion on which the National Competitions have been held there, appears to have been due to the lowness of the cloud base, which discouraged pilots who like to get a good height before "burning their boats" and going off into the unknown.

The flying at the meeting is described elsewhere, but it was not all flying. The best soaring sites are in bleak places where depressions of the barometer and of the cloud base are liable to induce similar depressions of spirit in pilots who have to remain earthbound. But the Derbyshire and Lancashire Gliding Club must be congratulated on the measures they took to counteract it, and the evenings were fully provided for by such excitements as a treasure hunt, a visit to the Sheffield Empire, and to Eyam Fair, and on the final Saturday night an enormous Lancashire Hot Pot party at Hathersage. This began with a radio broadcast by Terence Horsley of the *Daily Dispatch*, and ended with a showing of some excellent films taken by Dr. L. Dugard Peach during the meeting. In between there were speeches. Mr. Alan Goodfellow apologised for the site being "not really ready yet" owing to short notice of the intention to hold the Competitions there, but hoped to see us all at it again next year. Mr. Wills, "replying for the cads," made a suggestion that the National Competitions be held rather earlier in the year next time. And Mr. Kay, for the winch crew, described the comments overheard as pilots, coming over, gave their candid opinion on the launch they had just been given; these were apparently of three kinds only: "too d—— slow," "too d—— fast," or "lousy."

An International Contest

A DISTINGUISHED visitor to the Bradwell Edge meeting was Mrs. Warren Eaton, whose late husband was president of the Soaring Society of America, and who is herself a director of the society. Mrs. Eaton brought the news that the next annual soaring contest to be held in the United States will be an international one; it is to take place at Elmira from June 26th to July 10th, 1937.

The Soaring Society of America are most anxious that British pilots should participate in the contest. The site is now thoroughly equipped for such an undertaking, and the Americans believe that their soaring terrain is in general better than that in Europe, so that foreign pilots should have a chance of achieving exceptional performances. It may be taken as certain that a number of the best German sailplane pilots will participate, and invitations have also been sent to the gliding organisations of France, Hungary, Italy, Switzerland, Austria, Holland, Belgium, and Poland.

The expense of transporting sailplanes such a long way is, of course, considerable, but if that is likely to be the only hindrance to British participation in the contest, it should be possible to raise a fund to mitigate as far as can be any individual hardships. We sincerely hope that the Soaring Society's invitation will be accepted.

Our Next Issue

THE letter from Mr. Bergel, published last month, on the question whether thermal currents rotate, has aroused much interest and drawn further letters in reply; in addition we have been collecting evidence and scientific opinion on the subject. It has been impossible, however, to find space for a further discussion in this issue, so it will have to be put off till our next.

As it is impossible to treat of the British, German, and American National Soaring Competitions in one issue, reports of the last two will also have to be held over, together with much other German news, such as descriptions of a crossing of the Alps by Heini Dittmar, and of the Oeresund by Peter Riedel, a flight by the Hungarian Ludwig Rotter, from Berlin to Kiel, during the Olympic Games, an unconfirmed world's height record (machine broke up and barograph lost), the two-seater version of the RHÖNSPERBER, the metal-tube fuselage machine which won the Rhön Competitions, the Editor's visit to the Soaring Research Institute at Darmstadt, and an interview there with Professor Höhndorf on his recent researches into cloud streets. As much as possible of all this will be squeezed into the November issue of THE SAILPLANE AND GLIDER.

From Here and There

Telling South Africa.—The first issue of *Flying and Gliding in South Africa*, a new monthly illustrated aviation magazine which will circulate throughout the South African Union, the Rhodesias and Kenya, will be published this month in Johannesburg. The Editor is Mr. Cyril E. Watling, and the offices of the new company are at Acme House, Gladstone Street, East London, S.A.

* * *

Aero-towing in Japan.—During a gliding training course organised by a Japanese newspaper and the Japan Glider Federation, a pupil was being aero-towed when he overshot the aeroplane and pulled up its tail, causing it to nose-dive. The cable soon broke, and the glider landed safely, but the aeroplane was unable to recover from the dive before crashing, with fatal results to both its occupants.



Scenes at the National Competitions on Bradwell Edge. Top: J. P. Dewsbery in "Rhönsperber," ready to receive the "conservatory." Centre: *The Times* Correspondent (with hat) talking to Alan Goodfellow (judge and timekeeper). Below: holding up the "Cambridge I" in its trailer against the fury of the gale, on the morning after the competitions.

The Volk Cup.—The flight of 5 hours 46¾ minutes by Mr. D. M. Morland on September 2nd is, so far as is known, the longest duration flight since the conclusion of last year's B.G.A. Competitions, and will therefore entitle him to the Volk Cup in the event of no other successful claimant coming forward. Any pilot who has made an official and observed timed flight exceeding this duration during the period September 1st, 1935, to September 6th, 1936, is requested to send in particulars immediately to the Secretary of the British Gliding Association.

Gliders and Aerodromes

The following letter from the Deputy Director of Civil Aviation, dated September 2nd, 1936, has been received by the Secretary of the British Gliding Association:—

"REVISION OF ANNEX D TO THE INTERNATIONAL AIR CONVENTION.

"I am directed to refer to your letter of the 30th September, 1935, on the above subject, and to inform you that the revised text of Annex D as finally approved by the Commission in May of this year has now been received.

"Section 5 which is concerned with the special Rules for Air Traffic on and in the vicinity of aerodromes open to public use states that non-mechanically driven aerodynes shall comply with the Rules of Section 5 as far as posisble.

"The fact that in the absence of an engine every landing of a glider may be regarded as a forced landing was considered to make it all the more important that gliders should conform normally to the general rules applicable to other types of aircraft, otherwise endless confusion and risk of accident would result."

Gliding Certificates

The following names should be added to the list of gliding certificates granted by the Royal Aero Club, published in our August issue (page 157):—

"C" Certificates.

No.	*Name.*	*Club.*	*Date.*
270	L. C. Dugdale	Midland	6.6.36
414	J. W. Horrell	Midland	19.4.36
415	R. N. Thwaite	Midland	19.4.36
434	I. H. Lawrence	Midland	26.4.36
457	C. A. Bill	Midland	26.4.36

The first of the above was erroneously given as a "B" Certificate in our last list.

M. V. Laurie (London Club), No. 273, writes that he has gained a "C" Certificate, having made the qualifying flight on April 19th, 1936.

It should be made clear that these lists we publish are not lists of those who have made qualifying flights; they are lists of certificates applied for, paid for, and actually granted by the Royal Aero Club at the monthly meetings of their committee, and included in the lists subsequently issued by the club.

Sutton Bank Training Camp

AUGUST 2nd—15th, 1936

[The first training camp to be held by the Yorkshire Gliding Club was a pronounced success, 29 gliding certificates being obtained. The following account, sent by the Club, explains how it was done.]



"You blow and I'll see what happens": an action picture taken during the Yorkshire Club's training camp; showing "Bonzo" Heath in close attendance, while A. Cox, the secretary, dances with rage in the background.

THE value of several days' concentrated training in the early stages of gliding was realised as long ago as Whitsuntide, 1932, when the members of the Yorkshire Club (then known as the Bradford Gliding Club) held a four-day training camp at Baildon Moor, near Bradford. The first one was followed at suitable holiday periods by several others with considerable success.

Thus it became apparent when the club was well established at Sutton Bank with excellent facilities and efficient instructors, that in a training course of at least 14 days we could make as much progress with *ab initios* as the early members had made in two, or even three, years pottering about on odd sites at suitable week-ends.

Happily some of our camp members were experienced pilots and were able, on the first day, to show their paces to the "nits," some of whom had actually never before seen a glider—trusting fellows. During the first week-end the wind was so strong that primary training was considered inadvisable, but it provided an excellent opportunity for all members to partake of dual instruction in the two-seaters. Meanwhile, during Bank Holiday Monday, Captain F. J. R. Heath ("Bonzo" to you) sat in the sky for 5 hours 12 minutes surrounded by a GRUNAU BABY, thereby gaining the first leg of a "Silver C." Somewhere he had stowed away a packet of sandwiches, but he found that they were inaccessible until after he had landed.

On Tuesday, August 4th, the wind had abated sufficiently to enable the chief instructor to send out his assistants with a DAGLING and a party of *ab initios*, who slid about—forward, sideways, but never hind side up—for most of the day, while the more experienced members, holders of "A's," "B's," or power flying pilots, were initiated in the art of winch launching on the HOLS DER TEUFEL and FALCON. Peter Bond took his "C"—the youngest "C" pilot it is believed. S. C. O'Grady took his "A," "B," and "C" successfully, handling the FALCON for periods of an hour and over in excellent fashion, and Micklethwaite took his "A" with a circuit on HOLS.

The "nits" soon developed an exquisite keenness. They had called out the assistant instructors at seven o'clock that morning, but on Wednesday they dragged them out at 5 a.m. Their enthusiasm was delightful—to those of us who stayed in bed. DAGLING was flung into the air no less than 104 times during that day and two more "A's" and three "B's" were obtained on HOLS.

On Thursday it rained persistently so most of the party went down to Kirbymoorside, on a tour of inspection of Slingsby's works.

There followed a succession of balmy days with little or no wind. This was splendid, of course, for the "nits." They became thoroughly accustomed to the winch launches, and "A's" and, very soon, "B's" began to accumulate.

On Saturday, August 8th, there came a puff of westerly wind and R. A. Wagstaffe (Jersey) and A. H. James (Penzance), for whom the credit of earlier training goes to the London Club, obtained their "C's." The HOLS squad had been struggling to obtain "A's" for two pupils who had been due to leave us that day, but after repeated attempts with flights of twenty-odd seconds the elusive "30's" were still unattained. The two pupils, both of whom had long distances to travel, decided that, by catching an early train on Sunday morning, they could still reach home in time for resuming business on Monday morning, so a squad of volunteers and our doughty assistant instructors turned out at six on Sunday morning. Mrs. Watson prepared an "in your hand" breakfast for the two "A" candidates, who were dressed up disgustingly for their return to

civilisation. Roy Watson stood by with his car ticking over ready for a dash down to Thirsk station. Winch car, very sporty and most sympathetic, started up immediately and those two lads were launched time after time until, at last, they achieved their "A's." Last man leapt out of HOLS into Watson's car (he had run up alongside with one passenger already aboard) and the dash for the train began with 15 minutes to do it. They missed it at Thirsk, of course, but what was a train compared with the attainment of that first certificate? Watson ran them to York where they finished breakfast in the refreshment room and caught up with their train.

Calm but dull conditions with intermittent sunshine continued until Wednesday, August 12th. Ivanoff, Peter Bond, and "Bonzo" Heath made repeated attempts at contact with thermals, but with little success. Meanwhile "A's" and "B's" continued to roll in and most of Wednesday was spent in bringing up to scratch two *ab initios* who appeared to have made least progress. Thursday brought another waft of westerly wind with a chance for further "C" attempts plus two "A's" and three "B's."

By now all the pupils who still remained in camp had obtained their "A's" and "B's" and, also, they had gained much experience and landing practice with repeated circuits from winch launches, but no wind favoured them and, very regretfully, we abandoned hope of gaining five *ab initio* "C's" in our fortnight's training camp.

One "B" pupil decided to liven things up a bit on Saturday afternoon, in what he considered to be a novel way. He learned, however, that stunting at 100 feet is most inadvisable, particularly as HOLS, and not he, suffered so considerably.

During the final evening's roystering, warm appreciation was given to Mrs. Watson and her family for their excellent catering and service.

Certificates Obtained.

"A."—R. H. Bailey, H. Leach.
"A" and "B."—Miss C. Leathart, A. Thorburn, J. Nolan, R. F. James, J. Wareing, S. B. C. Clough.
"A," "B," and "C."—S. C. O'Grady, Micklethwaite, Tremellen, P. Shaw.
"C."—Peter Bond, R. A. Wagstaffe, A. H. James,
Part "Silver C" (duration).—F. J. R. Heath.
Total Certificates: 12 "A," 10 "B," 7 "C."
Total number of launches, 533.

The Press and the Competitions

As usual, the National Gliding Competitions (a report on which begins on the next page) received far better publicity in the local Press than in most of the great national dailies. An honourable exception was *The Times*, whose aeronautical correspondent actually came down and stayed in the district for the greater part of the meeting; his dispatches were above reproach.

We give, for comparison, extracts from two London journals showing how much their readers were allowed to know of the last two days' flying activities. One of them (we need not say which) gives such an accurate description of the chief cross-country flight of the meeting, that it absolves us from our usual custom of giving a separate detailed report.

From *The Times*, September 7th, 1936:—

"CLOUD STREETS" IN GLIDING.

A LONG FLIGHT.

CLOSE OF COMPETITIONS YESTERDAY.

FROM OUR AERONAUTICAL CORRESPONDENT.

[After a general description of the week-end's flying, covering five inches of column, the writer continues:—]

A still more serious crash yesterday accompanied the finish of Mr. Wills's cross-country flight in the HJORTHS, but in this, as in Mr. Morland's case, the pilot was unhurt. Mr. Wills, in landing over Lincoln, had no other wind indicator but the clouds, and they were still moving E.S.E., as they had been throughout his flight. When it was too late to change the direction of his landing, the pilot found that the wind near the ground, instead of blowing W.N.W., was coming from the south. He therefore had to land down-wind, and his speed over the ground was consequently excessive.

As the skid touched down, the nose tilted forward, the landing hook dug into the ground, and the machine turned over on to its back, smashing the front of the fuselage and breaking a wing-tip. The flight had deserved a better ending, for it was one of the best of its kind, opportunist in origin and highly skilful in its subsequent contrivance, revealing that quality of readiness to seize a chance and to take a chance, which makes the sailplane pilot.

The version of Mr. Wills himself modestly attributes the flight to the conviction that the weather could not be worse elsewhere than it has been here, and asserts that the journey was undertaken in a spirit of desperate optimism. Those who have since learned all the facts know that he was about to land here after an hour's flight to have the ailerons re-rigged when he noticed a "cloud street" approaching, hastily changed his mind, climbed into it, and with drooping ailerons made his way to the east. A "cloud street" is in effect a strip of cloud, on one side or other of which up-currents may always be found. Mr. Wills found his lift in a "street" and soared into the cloud base.

With that gain in height he flew down-wind some eight or nine miles and waited over Stannedge Edge for more good luck which might carry him over Sheffield. After 20 minutes of prudent circling over the hill currents of Stannedge Edge, another "cloud street" presented itself, and up again he went into it, gaining 2,800 feet of height above his starting point of about 4,100 feet above sea level. Now he was ready to venture over the flats. His aim was to work across wind a little so that he might avoid the Wash and make a long flight into Norfolk or Suffolk. South-east of Sheffield he lost height until he came over Sherwood Forest, and when he was close to Welbeck Abbey he identified a "secondary front," from its usual characteristic cross-wind direction.

With the mixed blessing of that "front" he regained his height. On one circle in what he believed to be the lift of the "front" he had alternating periods of climbing at the rate of 10 feet a second and sinking at the rate of 5 feet a second. The "front" nevertheless carried him on some miles until the cross-wind course brought him out behind it into the utterly clear sky, which always follows the passage of a "front." Fifteen miles ahead was another "front," but 15 miles without cloud-lift or hill-lift was too much to attempt with only 4,000 feet of height. When he came to the Fosse Way Mr. Wills turned along it towards Lincoln and his unhappy landing.

[This is followed by a further 5½ inches describing other flights.]

From the *Daily Mail*, September 7th, 1936:—

GLIDER CRASHES.

Caught by a strong current when competing in the British Gliding Association Championship at Great Hucklow, Derbyshire, on Saturday, Mr. P. A. Wills, a Londoner, continued a distance of 38 miles before his glider struck a stone and overturned when he landed near Lincoln.

Mr. Wills is holder of the British long distance record of 104 miles.

The National Soaring Competitions

BRADWELL EDGE, DERBYSHIRE, AUGUST 29th—SEPTEMBER 6th



Tents to the left, trailers to the right: a view of the centre of operations at the B.G.A. Competitions: showing from left to right, the "Rhönadler," "Cambridge II." "Hjordis," nacelled "Dagling," and "White Wren."

FOR the following Report on this year's Annual Competitions held by the British Gliding Association we are indebted to Major Alan Goodfellow, who acted as chief time-keeper and judge during the meeting.

Key List of Competing Machines.

1. HJORDIS.
2. RHÖNSPERBER.
3. RHÖNADLER.
5. CAMBRIDGE I.
6. GRUNAU BABY.
7. KIRBY KITE.
9. KIRBY KITE.
12. GRUNAU BABY.
13. GRUNAU BABY.
15. KIRBY KADET.
17. GOLDEN WREN.
18. WHITE WREN.
19. CRESTED WREN.
20. GRUNAU BABY.
22. FALCON III.
23. WILLOW WREN.
24. CAMBRIDGE II.
26. NACELLE DAGLING.

[Note.—GRUNAU BABY machines were owned as follows: No. 6, S. Hobson and brothers; No. 12, F. C. Coleman; No. 13, W. E. Filmer; No. 20, G. B. Baker.]

Saturday, August 29th.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
18. Smith (G. O.) ...	Derby and Lancs. ...	—	2	15
7. Hiscox	London	—	4	25
12. Coleman	Derby and Lancs. ...	—	—	51
(Circuit and landing.)				
7. Hiscox	London	—	6	30
7. Hiscox	London	—	7	25
12. Wills	London	—	4	25
17. Smith	Derby and Lancs. ...	—	45	45
7. Hiscox	London	1	3	45
26. Davies (A.)	Derby and Lancs. ...	—	1	45
(Circuit and landing.)				
12. Coleman	Derby and Lancs. ...	—	1	0
(Circuit and landing.)				
17. Slater (A. L.) ...	Derby and Lancs. ...	—	37	10
22. Wills	London	—	15	5
(Passenger flight with *Manchester Guardian* corresp.)				
26. Garner	Derby and Lancs. ...	—	42	30
(Attained a height of over 1,200 ft. in the NACELLE DAGLING.)				
12. Coleman	Derby and Lancs. ...	—	34	0
(Attained a height of over 4,000 ft. in his home-constructed GRUNAU BABY.)				
22. Wills	London	—	20	0
(Passenger flight with *Times* correspondent. Attained a height of 1,700 ft.)				
15. Davies	Derby and Lancs. ...	—	34	0
(Attained a height of nearly 2,000 ft. in the KADET.)				
17. Robertson (R. G.) ...	Derby and Lancs. ...	—	30	0
(Three consecutive loops on the GOLDEN WREN.)				
9. Slingsby	Yorkshire	—	22	0
15. Forman	Derby and Lancs. ...	—	7	37
(Qualified for "C" Licence.)				

Remarks.—20 flights; 6 hours 20 minutes 28 seconds flying time.

Conditions were impossible until shortly after midday when the wind was just strong enough for slope-soaring.

At about 7.30 p.m. the wind again died away completely, but remarkable thermal currents were rising from the valley following a period of hot weather. Had there been more time available, or had any of the Class I. machines been rigged in readiness there is no doubt that some very remarkable performances would have been achieved.

Sunday, August 30th.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
7. Hiscox	London	—	21	27
15. Smith	Derby and Lancs. ...	—	5	20
24. Furlong	London	1	3	13
22. Slingsby	Yorkshire	—	10	51
(Passenger flight.)				
13. Filmer	Southdown	—	25	51
7. Hiscox	London	—	29	44
24. Rattray	London	1	48	0
(Winner of Daily Prize.)				
19. Thomas (E.)... ...	Derby and Lancs. ...	—	7	0
18. Richardson	London	1	0	0
17. Smith	Derby and Lancs. ...	—	38	25
5. Turner	Cambridge Univ. ...	—	21	57
7. Hiscox	London	—	21	10
13. Filmer	Southdown	—	20	10
5. Lingford	Cambridge Univ. ...	—	10	50
18. D. M. Morland ...	London	—	6	55

Remarks.—16 flights; 7 hours 30 minutes 53 seconds flying time.

No soaring was possible until afternoon, when conditions were poor with a gusty wind, low cloud base and occasional heavy rain. By 5 p.m. rain had set in and the wind had died down.

The Daily Prize was for the longest individual flight and was won by Captain Rattray on the CAMBRIDGE II. with 1 hour 48 minutes.

Monday, August 31st.

Machine No. and Pilot	*Club.*	*Time.*
5. J. E. Simpson ...	Cambridge Univ.	... 23 m. 35 s.

Mr. Simpson was winch-launched at 11.20 a.m. and immediately got into the clouds. After playing hide and seek with them for some time he landed safely again on the top. The clouds then came right down on to the hill tops for the rest of the day.

Tuesday, September 1st.

Remarks.—A day of no wind and low cloud base. Soaring was impossible, so a spot landing competition was organised on the NACELLE DAGLING, competitors being winch-launched up to about 200 feet and then having to do a circuit and land on a mark.

The results were as follows:—

1. P. A. Wills ... ... 6½ yards over
2. H. L. Richardson ... 10 ,,
3. G. O. Smith ... ... 11 ,,

Altogether 20 pilots competed, the total flying time being 12 mins. 33 secs.

Wednesday, September 2nd.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
18. Morland	London	5	46	45
(Won Daily Prize and completed first test for "Silver C" Licence.)				
1. Wills	London	2	0	0
5. Slazenger	Cambridge Univ. ...	5	7	25
(Completed first test for "Silver C" Licence.)				
17. Slater	Derby and Lancs. ...	5	3	35
(Completed final test for "Silver C" Licence.)				
20. G. B. Baker... ...	London	—	18	0
25. Turner	Cambridge Univ. ...	—	18	0
(Landed at the bottom.)				
7. Hiscox	London	4	25	10
(Landed at the bottom.)				
24. Furlong	London	4	29	25
3. Robertson	Derby and Lancs. ...	4	4	10
13. Filmer	Southdown	2	20	30
20. Baker	London	—	28	20
19. Thomas	Derby and Lancs. ...	2	57	28
2. Dewsbery	London	1	39	30
20. Smith	Derby and Lancs. ...	—	32	30
23. Lingford	Cambridge Univ. ...	1	11	30
9. Sproule	Yorkshire	—	26	20
1. Wills	London	1	0	3
22. Bergel	London	—	10	25
(Passenger flight.)				
22. Bergel	London	—	23	50
(Passenger flight.)				
22. Bergel	London	—	15	22
(Passenger flight.)				
26. Kay (C.)	Derby and Lancs. ...	—	4	10
20. Baker	London	—	17	30
23. Simpson	Cambridge Univ. ...	—	22	12
22. Bergel	London	—	8	25
26. Various	Derby and Lancs. ...	—	4	15
(Circuits and landings by pupils.)				

Remarks.—33 flights; total flying time, 43 hours 55 mins. 20 secs.

Soaring was only possible between noon and 5.40 p.m. when the wind dropped. The lift was mainly confined to the soaring edge with occasional thermals.

Wills reached a maximum of 2,400 feet on HJORDIS, Dewsbery 2,100 feet on RHÖNSPERBER, Robertson 1,800 feet on RHÖNADLER, Thomas 1,300 feet on the CRESTED WREN, and Filmer 1,200 feet on his GRUNAU BABY.

Three pilots, D. M. Morland, R.C. G. Slazenger and A. L. Slater, accomplished their five-hour tests, the latter completing his tests for the "Silver C," and being the first pilot to obtain this licence entirely from the Bradwell Edge.

The Daily Prize was for the maximum number of beats along the western slope with turning points at Hucklow Wood and Bradwell Beacon, about 2½ miles apart. This prize was won by Mr. Morland with 50 beats.



"Stormy weather": the "Cambridge I" and "Cambridge II" "formating" over Bradwell Edge on September 2nd.

When the wind died away several pilots were caught and Morland, Turner and Hiscox all had to land in the valley, accomplishing this without any difficulty.

The Cambridge crew achieved a smart piece of work by retrieving the WILLOW WREN from the valley and having it in the air again in just over two hours.

Thursday, September 3rd.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
5. Simpson	Cambridge Univ. ...	—	2	7
5. Lingford	Cambridge Univ. ...	—	5	40
18. Richardson	London	—	2	29
18. Richardson	London	—	15	20
(Landed in the valley.)				

Remarks.—4 flights; total flying time, 25 hours 27 secs.

Low clouds and rain all day with light south-south-westerly wind. No soaring was possible until the middle of the afternoon, when the CAMBRIDGE I. and the WHITE WREN soared with difficulty on the south slope (Eyam Edge).

At his second attempt Dr. Richardson, after struggling gallantly for a quarter of an hour, had to go to the bottom. He accomplished this without difficulty, and had a worrying time preventing cows from nibbling his wings until the rescue party arrived.

Friday, September 4th.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
5. Slazenger	Cambridge Univ. ...	1	17	10
24. Rattray	London	—	31	15
13. Filmer	Southdown	—	6	13
18. Morland	London	1	10	25
2. Dewsbery	London	—	57	46
7. Hiscox	London	—	52	21
19. Thomas	Derby and Lancs. ...	2	33	15
1. Wills	London	—	24	45
17. Robertson	Derby and Lancs. ...	—	18	25
13. Filmer	Southdown	1	5	30
24. Rattray	London	2	41	45
23. Turner	Cambridge Univ. ...	2	13	2
20. Baker	London	—	16	20
9. Sproule	Yorkshire	—	12	40
5. Simpson	Cambridge Univ. ...	—	28	50
18. Morland	London	—	9	0
9. Nicholson	London	—	4	30

Remarks.—17 flights totalling 15 hours 25 mins. 22 secs.

Low clouds and rain prevented flying until 2.30 p.m. The wind was south-west, and provided hill-soaring on the western slope until about 6.30 p.m. when it died away. Conditions were rough with no good thermals.

The Manio Cup Course was to High Longton and back, and the Daily Prize for the best attempt at the course in the event of its not being completed. Owing to the absence of thermals nobody could get away from the slope. Good performances in rough conditions were put up by Thomas on the CRESTED WREN, Rattray on the CAMBRIDGE II., and Turner on the WILLOW WREN, all of whom stayed up over two hours.

Saturday, September 9th.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
7. Hiscox	London	5	23	10
5. Lingford	Cambridge Univ. ...	1	35	50
3. Robertson	Derby and Lancs. ...	—	34	15
24. Furlong	London	2	42	0
(Landed at Owler Bar, near Sheffield.)				
9. Sproule	Yorkshire	—	52	0
(One loop.)				
22. Bergel	London	—	15	0
(Passenger flight.)				
3. Robertson	Derby and Lancs. ...	3	28	45
2. Nicholson	London	1	46	25
1. Wills	London	2	25	0
(Landed near Lincoln; machine damaged.)				
17. Smith	Derby and Lancs. ...	2	27	50
25. Simpson	Cambridge Univ. ...	1	30	45
20. Baker	London	—	25	0
13. Filmer	Southdown	2	6	2
18. Richardson	London	4	3	40
26. Leech	Derby and Lancs. ...	—	31	20
9. Barker	Yorkshire	—	9	35
5. Slazenger	Cambridge Univ. ...	—	57	30
2. Dewsbery	London	1	54	20
9. Sproule	Yorkshire	—	29	30
26. Dixon	Derby and Lancs. ...	—	5	0
(Landed in the valley.)				
23. Turner	Cambridge Univ. ...	1	14	0
17. Smith	Derby and Lancs. ...	1	41	15
5. Simpson	Cambridge Univ. ...	—	36	45
23. Slazenger	Cambridge Univ. ...	—	15	45

Remarks.—24 flights, totalling 37 hours 30 mins. 42 secs.

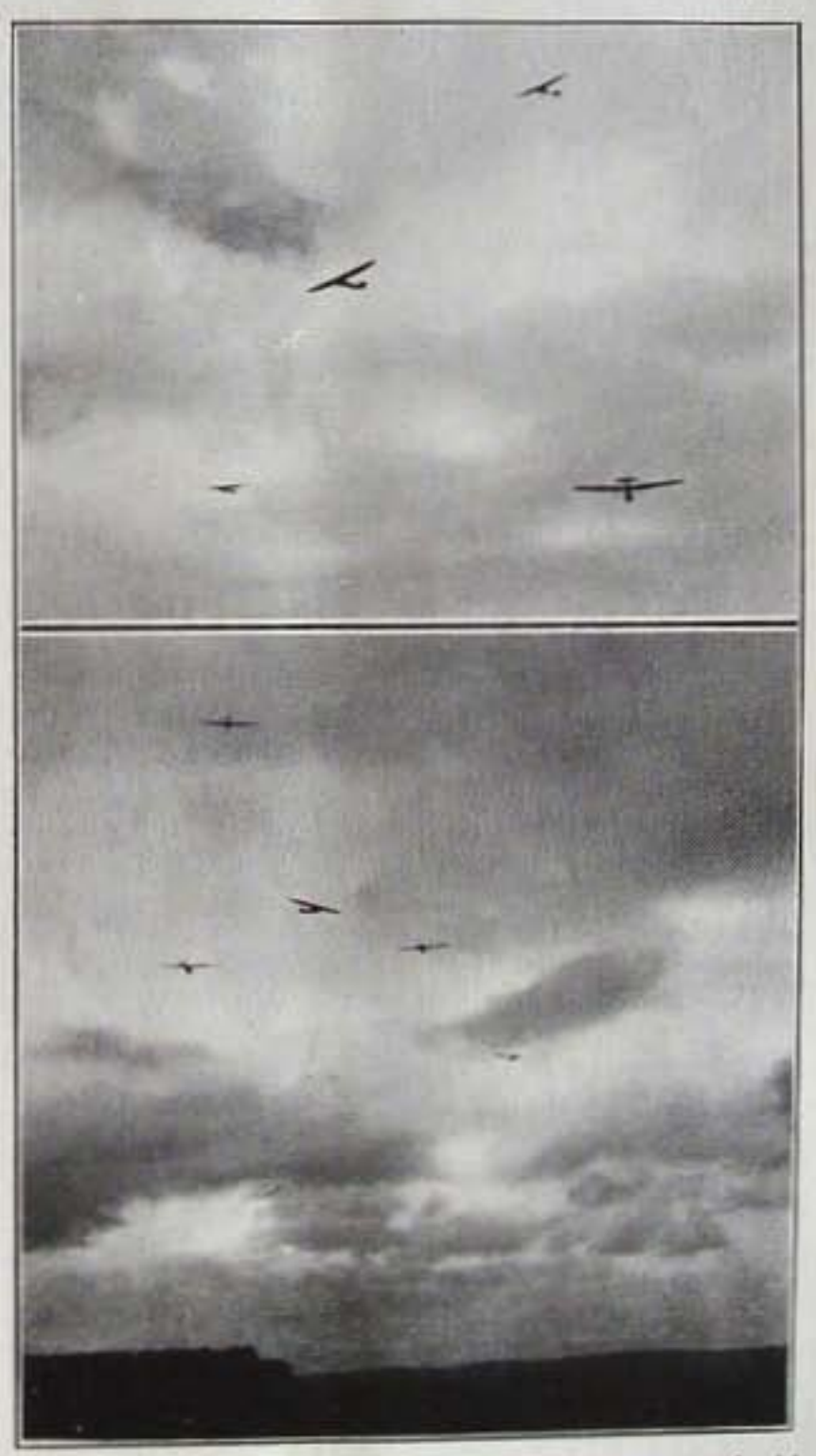
After a wet morning conditions began to improve shortly before mid-day, the rain clearing off and the clouds breaking and forming into cumulus. Thermal lift was very variable, however, and the cloud base was only about 1,200 feet above the hill top.

Wills was just coming in to land when he saw a cloud street coming over and got away on it to Stannedge Edge some eight miles down wind. From here he picked up a second "street," and finally came out in a clear sky over Lincolnshire, landing near Lincoln, about 45 miles from the starting point. Unfortunately the surface wind direction had changed from north-west to nearly due south, with the result that he landed down and across wind and turned over on landing.

Furlong on the CAMBRIDGE II. also got away on the second cloud street and reached Owler Bar, near Sheffield, where he landed safely, approximately 12 miles from the starting point.

The RHÖNSPERBER and the RHÖNADLER had no difficulty in reaching the cloud base, but decided not to risk a cross-country in view of the comparatively low ceiling.

At 5 p.m. the wind dropped and soaring was abandoned for the day.



Fourteen sailplanes were seen in the air together and nearly 44 hours flying time was put in on Wednesday, September 2nd, both figures constituting a record for this country. We could not get the whole 14 into one photograph, but the lower picture shows five machines over Bradwell Edge, and the upper one includes Robertson in "Rhönadler," Filmer in "Grunau Baby," Wills in "Hjordis," and (receding) Morland in "White Wren."

The Daily Prize was for maximum altitude in Class I. and Class II. respectively, and was won with 2,800 feet by Wills in Class I., and with 2,100 feet by Furlong in Class II.

Sunday, September 6th.

Machine No. and Pilot.	*Club.*	*Time.* h.	m.	s.
5. Slazenger	Cambridge Univ. ...	2	3	35
17. Robertson	Derby and Lancs. ...	1	1	15
18. Morland	London	1	30	0
(Landed near Castleton; machine damaged.)				
24. Rattray	London	3	58	0
7. Hiscox	London	3	2	10
2. Dewsbery	London	2	28	35
5. Turner	Cambridge Univ. ...	1	59	5
17. Smith	Derby and Lancs. ...	2	32	0
26. Kay	Derby and Lancs. ...	1	2	15
15. Davies	Derby and Lancs. ...	—	44	0
19. Thomas	Derby and Lancs. ...	3	2	15
3. Robertson	Derby and Lancs. ...	3	25	5
12. Coleman	Derby and Lancs. ...	—	40	45
6. Bergel	London	1	6	0
15. Rayner	Derby and Lancs. ...	1	4	15
26. Garner	Derby and Lancs. ...	—	19	10
5. Lingford	Cambridge Univ. ...	1	48	45
26. Booth	Derby and Lancs. ...	—	39	0
3. Nicholson	London	—	45	45
17. Slater	Derby and Lancs. ...	1	4	30
15. Davies	Derby and Lancs. ...	—	20	30
26. Thompson	Derby and Lancs. ...	—	33	0
24. Furlong	London	1	12	30
7. Hiscox	London	1	8	5
15. Garner	Derby and Lancs. ...	—	13	30
17. Smith	Derby and Lancs. ...	1	3	0
5. Simpson	Cambridge Univ. ...	—	8	20
(Landed in the valley.)				
15. Garner	Derby and Lancs. ...	—	8	0
6. Godson	London	—	3	15

Remarks.—29 flights, totalling 39 hours 6 mins. 35 secs.

Conditions were excellent from about 11.30 a.m. to 6.30 p.m. when the wind dropped.

The clouds were of cumulus formation with a base of between 1,500 and 2,000 feet above the hill-tops, and several streets formed during the day. The fact that nobody attempted a cross-country flight was probably due to its being the last day of the meeting, with the necessity for packing up machines and getting home.

The course for the Manio Cup was to Peveril Castle and back, a distance of about 12 miles. Filmer on his GRUNAU BABY and Morland on the WHITE WREN made meritorious attempts to reach the objective, but could not make enough headway against the strong westerly wind. Morland almost reached the turning point, but was forced down and landed in Hope Valley, near Castleton, damaging the front bulkheads in a heavy landing.

There was keen competition throughout the day for the individual aggregate prize and for the team aggregate prize. Mr. Hiscox on his KIRBY KITE started the day with a comfortable lead for the individual aggregate and finished an easy winner with 17 hours 11 minutes 8 seconds. Robertson on the RHÖNADLER was second with 13 hours 26 minutes 55 seconds.

For the team aggregate prize competition was much keener, and at the start of the last day barely two hours separated the leading machines in the following order:—GOLDEN WREN, CAMBRIDGE II., WHITE WREN, CAMBRIDGE I.

As usual the Cambridge University crew were first in the air and wiped out an hour of their deficit by an early start. They planned to fly right through the day, each pilot doing two hours in turn. By consistently good flying and rapid change over of pilots they improved their position until Simpson was caught out at about 5.30 p.m. when the wind shifted to the south-west and had to land in the valley.

Meanwhile Morland on the WHITE WREN had come down near Castleton, and this left only the GOLDEN WREN and the CAMBRIDGE II. with a clear lead over all rivals.

The CAMBRIDGE II. had started ten minutes behind the GOLDEN WREN, and a flight of nearly four hours by Rattray brought them momentarily into the lead. As the wind failed in the evening Furlong on the CAMBRIDGE II. and Smith on the GOLDEN WREN fought out the finish. In the end it was the CAMBRIDGE II. which had to land first, and the crew of the GOLDEN WREN, Smith, Slater and Robertson, came in meritorious winners with a margin of half an hour to spare.

The leading totals were as follows:—

GOLDEN WREN	...	19 hours 6 minutes 40 seconds.
CAMBRIDGE II.	...	18 hours 26 minutes 35 seconds.
CAMBRIDGE I.	...	17 hours 7 minutes 35 seconds.

Prizes and Awards.

Wakefield Trophy.

(Awarded to the British pilot who holds the British distance record obtained between September 1st, 1935, and September 6th, 1936.)

P. A. Wills, HJORDIS, 104 miles.

Distance Prize.

CLASS I.—P. A. Wills, HJORDIS, Bradwell to Lincoln (£5).

CLASS II.—Not awarded.

Special prize of £2 to E. J. Furlong, CAMBRIDGE II., for his flight from Bradwell to Sheffield.

De Havilland Cup.

(Awarded to the British pilot who holds the British height record obtained between September 1st, 1935, and September 6th, 1936.)

P. A. Wills, HJORDIS, 5,600 feet (Dunstable, July 26th, 1936).

Altitude Prize.

CLASS I.—Not awarded.

CLASS II.—Not awarded.

Special prize of £2 2s. to F. S. Coleman, GRUNAU BABY, 4,100 feet. (Not officially recorded by barograph; Bradwell Edge, August 29th, 1936.)

Volk Cup.

(Awarded to the British pilot holding the British duration record obtained between September 1st, 1935, and September 6th, 1936.)

Reserved.

Manio Cup.

(For the best out and return flight.)

Not awarded.

"Daily Dispatch" Prize.

(*a*) For a flight from Bradwell to Blackpool;



Fracto-cumulus and alto-cumulus clouds form a background to the "White Wren" as D. M. Morland gains height for an attempt to win the Manio Cup, offered for an out and return flight on September 6th.

(*b*) For the best performance on an owner-built glider.

Not yet awarded. Competition open until September 30th, 1936.

Special Prizes for Aggregate Duration during the Meeting.

(*a*) Single pilot: prize of £2 awarded to D. Hiscox, flying a KIRBY KITE with an aggregate of 17 hours 11 mins. 8 secs. during the meeting.

(*b*) Team prize: tankards awarded to A. L. Slater, G. O. Smith and R. G. Robertson, pilots of the GOLDEN WREN, with an aggregate of 19 hours 6 mins. 40 secs. during the meeting.

Du Garde Peach Challenge Cup.

(For the best performance by a member of the Derbyshire and Lancashire Gliding Club during the meeting.)

Awarded to E. Thomas for consistently good flying on the CRESTED WREN throughout the meeting.

Daily Prizes.

(Presented by the Royal Aeronautical Society.)

August 30th.—Longest flight: R. S. Rattray, CAMBRIDGE II., 1 hour 48 minutes.

September 1st.—Spot-landing competition: P. A. Wills, NACELLE DAGLING.

September 2nd.—Lap contest: D. M. Morland, WHITE WREN, 50 laps.

September 5th.—Altitude:—

CLASS I.—P. A. Wills, HJORDIS, 2,800 feet.

CLASS II.—E. J. Furlong, CAMBRIDGE II., 2,100 feet.

This was the first occasion on which the National Contests had been held at Bradwell Edge, and the Derbyshire and Lancashire Club, the members of which had worked very hard in the organisation of the meeting, deserved sympathy on account of the bad weather conditions experienced.

Excluding the "magic hour" on the first Saturday evening there were only three days during which soaring was really possible, and not one day really suitable for cross-country flying. That there should have been a total of 150 hours gliding during the meeting (an average of over one hour per launch) speaks volumes for the site itself. The great advantage of the site is that soaring is possible in any wind direction, from Bradwell Edge in westerly winds, from Eyam Edge in southerly winds, from Castleton Hill in northerly winds, and from Mam Tor in easterly winds. The site also has the great advantage of being nearly 1,500 feet above sea level, so that once a pilot has got away from the hills to the plains he starts off with plenty of height on his voyage.

Unfortunately this very advantage proved also the greatest drawback to the site during the contests, for during a considerable part of the meeting the cloud base varied between 1,000 and 2,000 feet, which meant that as often as not the Edge itself was in the clouds.

The two meetings held this year have proved the possibilities of the site, for at Easter there was plenty of soaring in north and east winds, and in September an even greater amount of soaring in west and south winds. It is to be hoped that the site will be given another chance to show what can be done from it under more favourable weather conditions.



Above: a "secondary cold front," or line of cumulo-nimbus cloud transverse to the wind, approaching Bradwell Edge from the west on Septemb[illegible] This is a common arrangement, and probably explains why German experts tell pilots that when soaring on a "cold front" they should work to [illegible] picture has probably [illegible]

Clouds Over Bradwell Edge

ANY photographer wishing to compile an atlas of cloud types could have got together a good representative collection during the nine days of the National Competitions. All the ten principal kinds were to be seen at one time or another, as well as several of the subsidiary ones, such as lenticular, castellated and mammated varieties.

Apart from ordinary cumulus, the clouds of most interest to sailplane pilots are "cold fronts" and "cloud streets," so here are some examples.

The first in chronological order is that at the bottom of the page, which shows the main cold front of a depression rolling away to the eastwards. The photo was taken at 7.30 p.m. (summer time) on Thursday, September 3rd. It was a real text-book specimen. At the end of a day's rain, there came a final heavy downpour; then the wind at the lowest cloud level was suddenly noticed to have changed from southerly to westerly, and a clearing appeared away on the horizon.

After the clouds had blown off into the distance, their retreating border was seen to consist of high banks of cumulus, and it is interesting to note that their tops were still moving from south; that is, from right to left across the picture. This is to be expected, since the clouds are formed in the damp southerly air of the "warm sector," which is being undercut by the newly arrived cold westerly wind.

The Air Ministry weather maps show this cold front to have come in from the Atlantic at the rate of nearly 500 miles a day; it had been chased all the way by the steamer "Empress of Britain," which finally caught it up just as it reached land. At the time it arrived in Derbyshire, it was stretching in a wide curve from off the north coast of Ireland, across the Solway Firth and down the centre of England, over Brittany and the Bay of Biscay to the north coast of Spain.

What a chance for a sailplane pilot to break the non-intervention agreement! But could he?

In spite of the way in which gliding text-books will talk about cold-front soaring and then give a diagram of a typical depression with its warm and cold fronts and sectors, the fact remains that the main cold front of a depression is preceded by dirty weather and heavy rain, and a sailplane pilot who wanted to make use of it would almost certainly have to fly all the time in cloud and get soaked.

Actually the type of cold front used by sailplane pilots is chiefly that illustrated in the top picture, which shows a "secondary cold front" of the kind which follows after the chief front of a depression. The photograph was taken at 2.30 p.m. on Saturday, September 5th, and shows a long line of cumulo-nimbus cloud approaching Bradwell Edge from the west. It will be noticed that there is clear sky in front of it. There is also





5th. Some "anvils" are seen at the right-hand, or northern end, while further to the left the cumulus tops have not yet "frozen" into "anvils." south, where the up-currents are younger. At a later stage "anvils" may turn into alto-cumulus, and the cloud at the upper left-hand part of the n formed in this way.

clear sky behind. In fact it is almost certainly one of the "fronts" encountered by P. A. Wills in the course of his flight to Lincoln in the HJORDIS. Although Mr. Wills used a cloud street, not a "front," to get away from Bradwell Edge, he relates that, later on, he flew into a "front" from behind, rose inside the cloud, came out into clear air beyond, and then saw another "front" ahead. It was because of the large expanse of cloudless sky in its rear that he was unable to reach this second one, and had to land.

The third photograph shows a cloud street of the type often used by sailplanes. It is built up of several units of cloud, as their protruding bases show, and the line is broken at the far end and continued slightly to one side.

Meteorologists, in doing research work on the conditions which give rise to cloud streets, assume that they are regularly spaced over the whole sky to the exclusion of anything else at the same level. Such skies are to be seen at times, but I have never known of a cross-country soaring flight being made on such a day. In this country, at any rate, when cloud streets have been used by sailplanes, the sky has been mainly occupied by irregular cumulus, with only an occasional "street" here and there, not more than a few miles long.

A. E. S.

(The illustrations of the National Competitions are "Sailplane" photographs.)



Below: F. C. Coleman in his home-made "Grunau Baby" soaring under a cloud-street on September 6th.

the "cold front" of a depression rolling
to the distance: one bank of cumulus is lit
setting sun, while a nearer one is probably
shadow of a secondary "front" on the
horizon. All the cumulus is continually
r, and the shadowed part is in rapid growth.

The Yorkshire Open Contest Meeting

SUTTON BANK. AUGUST 15th—23rd. 1936



A view from the Stedman two-seater sailplane, showing J. S. Sproule flying a "Kirby Kite" at nearly 2,000 feet over Sutton Bank during the Yorkshire Club's Competitions.

[Photo by J. W. Smith.

EXPERIMENTS regarded in the light of their achievement and their contribution towards progress may not always be entirely successful, but their results may prove so satisfactory as to give their instigators grounds for considering their continuance worth while. Such was the case with the Yorkshire Competitions, though the results exceeded our modest expectations.

The weather, our dilatory ally, was not up to expectations. We were, therefore, unable to stimulate as much public interest as we had hoped, and our constantly empty coffers suffered a little in replenishment in consequence. Also many entrants from other clubs failed to put in an appearance. It may be that we had chosen a period which was too close to that of the B.G.A. National Competitions at Bradwell Edge, and these pilots either could not afford the time for both affairs or they wished to reserve their "dark horses" for the major event.

Anyway, the important thing is that everyone had a jolly good time and more flying was done during the period of the competitions than at any previous club meeting at Sutton Bank or, we believe, elsewhere. The total number of soaring flights was over 270, and the figures for flying time compare very favourably with those of the B.G.A. Competitions last year:—

	Yorks. Open Meeting, 1936.	*B.G.A. Meeting, 1935.*
Total flying time (9 days) ...	96 hours	135 hours
Biggest flying time in one day	27¼ hours	45½ hours

Considering that the club had two intermediate machines out of commission throughout the period and that there were four days on which any soaring at all was impossible, these results are gratifying.

Among the visiting pilots and friends we were glad to welcome Liddell (Ulster) with his exotic new KIRBY KITE, Barker (London), also flying a KITE, James and Olver (Midland), with his new H17, Smith and party (Furness), Yorke Bramble and son (Southdown), Burningham and party (Newcastle) and, of course, Wills (with HJORDIS), and Nicholson, who, unfortunately, could not stay beyond the first few days, during which he made frantic efforts to repeat his last year's success in the Spot Landing Competition.

Lord Swinton's Visit.

The Air Minister, Lord Swinton, had written to say that he intended to visit us one day when conditions were favourable, whereupon, on the strength of an Air Ministry forecast of south-west wind and bright intervals on Wednesday, August 19th, a message was

sent to him suggesting that he might make his visit on that day. By mid-day, however, Sutton Bank was enveloped in fog, and when Lord Swinton and his party arrived in the afternoon, heavy rain had been falling for several hours and the wind was moderate south-easterly. The Air Minister made a humorous apology for the Air Ministry forecast, and then proceeded to inspect the hangars, machines, and the club house premises.

We were very pleased that several members of Lord Swinton's party were sufficiently interested to pay us another visit on the following Sunday, when a good deal of soaring was being done.

Awards and Winning Performances.

1. THE HARTNESS CUP, for height above starting point. Winner: Flt.-Lieut. P. M. Watt, 5,200 feet.

2. THE YORKSHIRE CUP, for distance flight measured in straight line. Winner: J. S. Sproule, 38 miles (Sutton Bank to Hunmanby, east coast).

3. THE CHAIRMAN'S CUP, for total flying time during the meeting by a pilot who on January 1st, 1935, was not in possession of "C" gliding certificate or any power flying licence. Winner: W. R. Watson, 10½ hours.

4. SILVER CUP, for Spot-landing Contest No. 1. Winner: L. H. Heath.

5. SILVER CUP, for Spot-landing Contest No. 2. Winner: J. S. Sproule.

6. SAILPLANE TROPHY, for longest duration flight of meeting. Joint winners: A. O. Pick and L. A. Alderson, 5 hours 10 minutes each.

7. SAILPLANE TROPHY, for greatest number of soaring flights during meeting. Winner: R. F. Stedman, 25 flights.

Other flights of interest were those of Wills (HJORDIS) and Barker (KIRBY KITE) on August 16th, when both managed to soar along the edge of the hill at no great height for 30 minutes and 16 minutes respectively in apparently no wind at all. We cannot even attempt to explain it.

Then there was the 4 hours 45 minutes of Roy Watson. The wind failed him 15 minutes too soon, but undaunted he did 5 hours 10 minutes on the following Monday. Stedman (STEDMAN two-seater), with passenger, made night flights of 10 minutes and 27 minutes and Hastwell (GRUNAU BABY) made a night flight of 7 minutes.

Much interest was shown in the trials of Olver's H17, by Olver and Barker. We shall be interested to read Olver's own impressions of his "speedy little 'bus."

Conclusions.

The conclusions drawn after competitions are somewhat varied.

Instructors say: We have far more work at a club meeting. Give us the B.G.A. meeting every time.

Members say: Club meeting is much better. We *do* get a chance to fly ourselves and have only one-tenth of the work we have to do at a B.G.A. Contest Meeting.

Winch drivers: Well, we have the wrong colour ink for what they really said, but we presume they mean that it makes no odds as they are grossly overworked in either case.

So clubs who are wondering about running a similar show next year must figure it out for themselves.

A Note on Circling

[Among the London Gliding Club news published in our August issue, page 161, there appeared some notes on the art of circling in thermals. Actually they were taken from the writer of the following remarks, in which the subject is further discussed.]

OCCASIONALLY when a pilot throws a circle you will see him emerge in a steep dive. Do not laugh loudly. It is too easily done, and from personal experience I do not find the reason quite clear.

The first half of the circle goes prettily. Then, without appreciable movement of the controls, the machine occasionally throws her nose down and spins round. You emerge in a really exhilarating dive, whence you may zoom like a Hawker "Fury," provided you do not scare yourself by looking at that Public Enemy No. 1, the air speed indicator, in which case you die of heart failure immediately.

I think there are several contributory reasons.

(1) When sleuthing about after thermals, one instinctively flies very slowly. As soon as appreciable bank is put on, this speed is too slow, and the outcome is a slightly stalled turn.

(2) In one's impatience to complete the circle, excessive bottom rudder is applied and the nose drops sideways and downwards.

(3) From excessive Joy of Living, one tends to bank too steeply; this is shown by the "bubble" with which some machines are fitted. The consequent inward slip again tends to pull the nose down, since there is a more powerful lateral pressure on the rudder far behind the centre of gravity than on the nose much nearer the centre of gravity.

Of these, over-ruddering is probably the most potent cause. The old RED WREN, with her tiny rudder and slenderly tapered body, never gave way to this spinning-diving habit. One of her younger sisters, fiercer altogether on the rudder, crashed at least three times —and I think the rudder was to blame.

The morals are:—

(1) Enter a circle, especially the first and lowest one with a trifle of excess speed.

(2) Don't apply bank too enthusiastically.

(3) Go easy on the rudder, and be prepared to take a little off, or even to reverse it; stop the turn, get the bank off, and quietly ease out of the dive.

(4) If you have two or three hundred feet of height, don't be alarmed. The phenomenon seems to be quite harmless. The best remedy is to giggle at your disgraceful pilotage, find another thermal, and do it again, ascertaining first that there are no other machines near you.

DIE-HARD.

A 60-Mile Flight.—On September 29th Mr. G. O. Smith, of the Derbyshire and Lancashire Gliding Club, made a cross-country soaring flight in the GOLDEN WREN from Mam Tor, near the club's site in Derbyshire, to Ruabon, just beyond the Welsh border, about 60 miles to the W.S.W. Details of the flight will appear in our next issue.

News from the Clubs

List of Gliding Clubs

There have been some changes in the secretaries' addresses given in the "List of British Gliding Clubs and their Secretaries" on page 192 of our last issue. The following corrections should be made:—

AIRSPEED (formerly Portsmouth and Southsea Gliding Club).—R. G. Worcester, Airspeed, Ltd., The Airport, Portsmouth.

BILLINGHAM.—J. Tunstall, 10, Nth. Mt. Pleasant Street, Stockton-on-Tees.

NORFOLK.—"Ivy Cottage," North Walsham, Norfolk.

ROCHDALE.—F. Hodgkinson, 114, Higher Birches, Whitworth, Lancs.

Yorkshire Gliding Club

August.—After missing several other leisure and pleasure engagements and dodging one's recently acquired paternal obligations to write reports on Training Camp and Competitions (see elsewhere in this issue), one feels that there ought not to be much more to write about for August, but, judging by the amount of flying which continues to be done, one is becoming convinced that there must be a series of hefty sky-hooks in the vicinity of Sutton Bank. All the details of this flying must be dismissed with a mere reference to one or two high spots.

Bank Holiday Meeting.—On August 1st the informal Bank Holiday meeting was opened with over six hours' flying by Bergel, Wills, Lingford, Fisher (Toby), Sproule, Slingsby, Pick (A. O.), and Stedman flying variously on HJORTHS, GRUNAU BABY, FALCON I. and STEDMAN two-seater.

On Sunday, August 2nd, Bergel and Wills flew GRUNAU BABY and FALCON III. two-seater in conditions approximating a gale.

Other Flying.—On several occasions during Camp Fortnight, Sproule amazed the novitiates to gliding by floating GRUNAU BABY or KIRBY KITE for several minutes at a time on thermals over the landing ground in most uninspiring conditions, while Wordsworth made his first flight in GRUNAU BABY (and very nice too). The Secretary got in his hour or so during Competition Week. This will have to last him quite a long time; secretaries are not made to fly. The Treasurer, made likewise, went *beserker*, cast his Treasury to the winds and flew a total of 15 hours in five days. Tuck (Power "A"), having gained a gliding "A" in a fortnight's camp in Germany, took his "B" and "C" in one day at Sutton Bank. Numerous people seem to have made flights of over five hours' duration. We'll mention their names when they get their other "Silver C" legs.

(If I have missed anything or anybody, will those who have been missed kindly write to me about it, enclosing 5s. postal order for detailed reply.)

Instruction Camp.—Before closing these August notes, may I add a few afterthoughts about Camp. Credit and thanks are due to F. N. Slingsby (Instructor-in-Charge) and his assistant instructors, Sproule and Wordsworth; to Blakeston for preliminary detailed organisation; and to the Watson Family, perhaps the most important and certainly the hardest-worked of all, for their excellent catering and service. We never quite got over the early morning cups of tea brought to us in bed each day!

Last, but not least, credit is due to the campers themselves. One of the best features of the Camp was the general jollity and good spirits prevailing—everyone, instructors and pupils, seemed to be having the time of their lives. Experienced pilots like Ivanoff and "Bonzo" Heath were at hand always and "jumped to it" smartly to do everything possible for the "Nits."

These camps are beyond doubt a great fillip to the sport of gliding throughout the country, and we acknowledge our debt to the London Club in leading the way with its 1935 camp. But let no one think that successful camps on these lines can be run without a thoroughly equipped, first-class site, a full and adequate range of machines, the right man in charge, and, finally—this is very important—someone like the Watson Family to do the catering.

We have had already many enquiries about Instruction Camps in 1937. A definite announcement of the club's 1937 programme will appear very shortly; in the meantime it is practically certain that the fortnight's Instruction Camp for 1937 will take place on the corresponding dates (first fortnight in August), and there may be, in addition, a week's Instruction Camp at Whitsuntide.

Midland Gliding Club

August 22nd and 23rd.—Although the wind was westerly it was too light for soaring, but several members stayed the night at the Club House, and we were very glad to welcome Slater, Thompson, and Upton from the Derby Club, who stayed over the week-end.

On the Sunday, conditions improved steadily so that Slater was able to take up FALCON II. and sample the site.

Olver arrived at 7 a.m. on Sunday after travelling all night from Sutton Bank with the H17 in the two-seater trailer, and very shortly afterwards the new machine was assembled and duly admired by an increasing crowd of spectators.

The day was brilliant and Wynne flew the KIRBY KITE during the morning in spite of the lack of hill lift. There seemed to be plenty of fat thermals in the valley and he was able to circle to 1,500 feet above the hill, according to the barograph record of the flight. Being obviously pleased with his performance he rounded it off with a few stalled turns behind the ridge and slipped in to land.

Williams has constructed a cup-type anemometer which seems to function very well indeed and is now mounted on the forward end of the hangar to spend a life of revolutionary contemplation.

During the afternoon conditions hardened enough to encourage Olver to venture over the ridge in H17, or NEMESIS, as she is now officially named. Both he and Barker had made short test flights at Sutton Bank and found the machine extremely responsive to controls and at the same time fast. Unfortunately the air speed indicator was not reading correctly so that it was difficult to estimate the speed of the machine, but when Olver was launched it was very obvious that he intended to make a couple of beats each time the FALCON made one. He was unable to gain much height in view of the poor conditions and very shortly streaked home to land.

During the afternoon all the FALCONS and the KIRBY KITE were in the air, but there was not enough wind for the KADETS. In spite of this, Holland managed to take his "C" certificate and Marshall made an "A" flight of 58 minutes, whilst Johnson also took his "A" certificate.

Total flying hours for the day, 15.

August 30th.—There was a light westerly wind which increased to 15 m.p.h. in the afternoon, so that it was possible to get the KADETS into the air. Major Bill, Sheffield, Thwaite and Barnes, made good use of the available machines and there was much energetic searching for thermals. Thwaite flew the KITE for the first time and pronounced it good. The skids of the FALCON I. and the KITE suffered during the day but no serious damage was done.

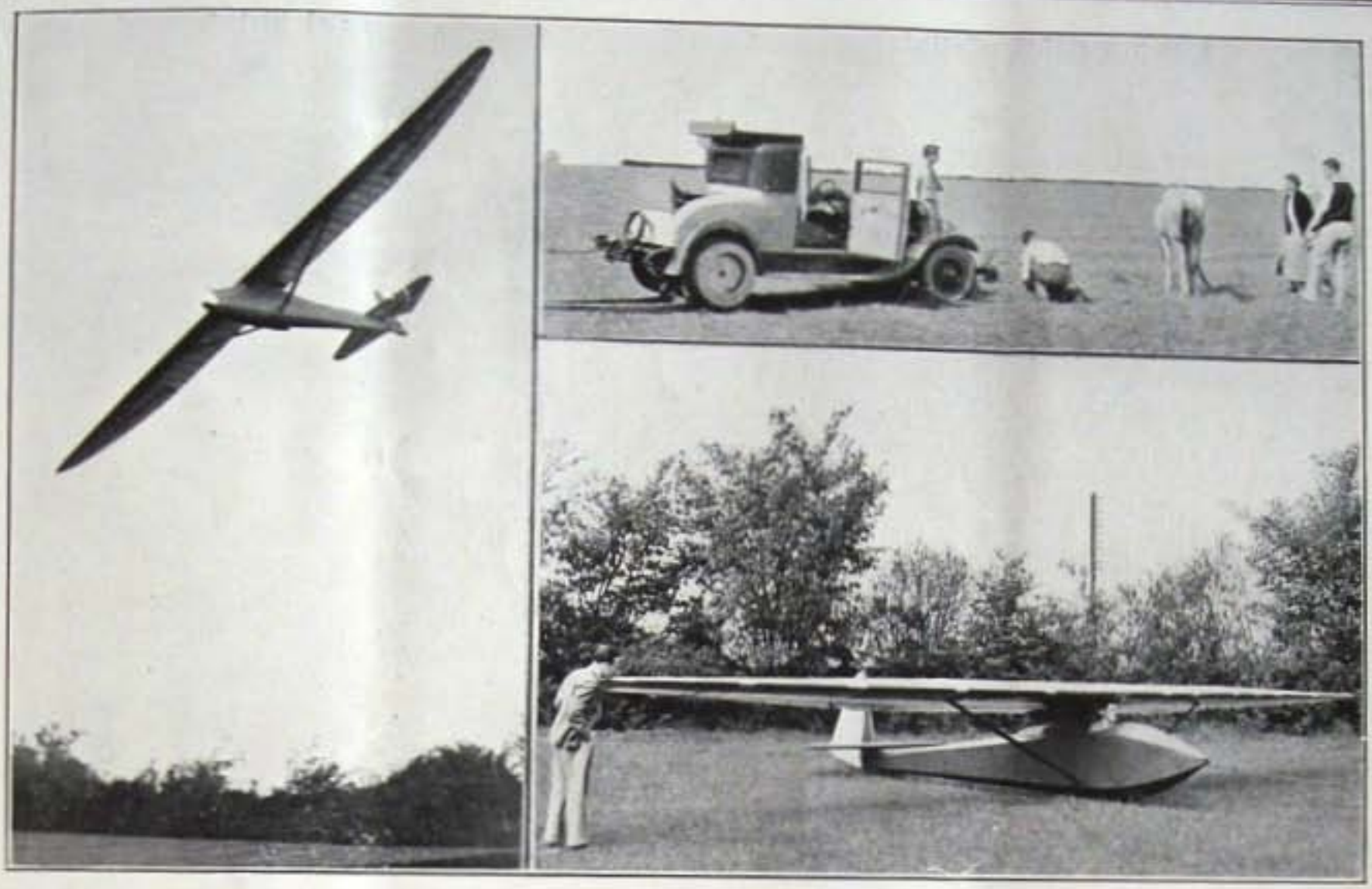
Towards eight o'clock the wind died away suddenly and left three FALCONS without support. It was good fun calculating the chances of hill-top landings, but eventually all three machines struggled to the landing ground without mishap.

September 5th and 6th.—Rough 25 m.p.h. west wind on Saturday; clouds too low for safe flying. Olver beat down the ridge and back again in H17 during a clear period, but conditions were very unattractive.

On Sunday morning the half-a-dozen optimists, who had stayed overnight, started things going early and launched Barnes on his first trip in H17. He found that the machine could be flown slower than hitherto, without loss of control, and seemed well pleased with the result. Later in the day Olver, Barnes, and Thwaite, the three owners of H17, flew her for a total time of 2¼ hours, and there is no doubt that this little machine is a great success and is likely to be the forerunner of several similar machines.

Throughout the day FALCONS II. and III., two KADETS, and H17 battled with the gusty 25 m.p.h. wind. Clouds were down to 1,200 feet, but no one was bothered much as the ceiling was curiously low and even the majestic two-seater could only rise to a modest 700 feet. However, there was plenty of good flying, and joy-riding for the uninitiated, until 6 p.m., when the wind backed south and had a laugh at Everall, who floated to the bottom in KADET II. Healey managed to coax FALCON II. back to the hangar after a very good bit of work.

Johnson took both his "B" and "C" certificates, and 11 hours 50 minutes total flying time was recorded for the day.



Scenes at Caxton Gibbet, where the Cambridge University Gliding Club operate during term time. Left: the "Cambridge I" coming in to land; right: D. MacClement about to start in the "Willow Wren"; above: setting up the winch.

[Photos by J. E. Simpson and Keith Turner.

Cambridge University Gliding Club

It is our sad duty to have to report in these notes the death of our founder President who, as mentioned in last month's SAILPLANE, met with a fatal accident while motor racing in the Limerick International Grand Prix. John Duke of Grafton was one of the original small group who, after first learning to glide at Dunstable, decided to form a club of their own at Cambridge; and it is to a great extent due to the consistent help which the club has received from him since then that it has been able to reach its present state of relative stability. Until he left Cambridge a year ago he played a very practical part in the club's activities, and all who came into contact with him then—and especially those who were his passengers in the old B.A.C. VII., or in his familiar "Merc." as he sped out to the flying ground—will realise what a tragic loss his death at such an early age has been.

Primary Instruction.—The NACELLED ZÖGLING continues valiantly at her job week after week, with only an occasional murmur of protest when she is given an extra hard bump. In the last six weeks of the summer term she made about 100 flights on 14 days of operation, during which "A" certificates were obtained by J. Allan, Gardiner and Kidd, and "B's" by Allan and Kidd. Also about 30 flights were made by various pilots in CAMBRIDGE I.

On May 17th the GREEN WREN was brought out of hibernation, and those pilots whom the smooth obedience of the CAMBRIDGE had made blasé were delighted by their flirtations with this capricious little sailplane. One cad evidently went a bit too far with her, for she suddenly whisked him through three turns of a spin at an unpleasantly low altitude; he, however, managed to flatten out at 100 feet and make what he described as the most perfect landing of his life in a field on the other side of the road.

Soaring.—On May 21st an expedition was made to Haslingfield Hill, about five miles from Cambridge, where it was hoped soaring might be possible in north and south winds. CAMBRIDGE and the winch were towed over, and a number of launches made in a strongish N. wind. The results were disappointing, the best performance being by Slazenger, who was able to maintain height along a straight beat, but lost it on the turn. However, the N. slope is the worse of the two, and it will be interesting to see what can be done in a S. wind.

A height of 1,000 feet was attained on the winch-climb on this day for the first time, by MacClement.

Now for some real soaring. CAMBRIDGE and the WREN were taken up to the B.G.A. competitions at Camphill, and flown by Slazenger, Lingford, Simpson and Turner, with the help of ground organisation by Paget. The Derbyshire hospitality already experienced at Easter was this time combined with a west wind, and both were very much appreciated. The flying time of the two machines was about 24 hours. They were towed up, in two journeys, behind a Singer light delivery van kindly produced at the last minute by Slazenger, which during the meeting was used as a combined bunk-house, canteen, committee room and kitchen—all of which functions tended to merge into a messy homogeneity when the van was driven fast across the landing ground.

While describing the soaring done by the club (for, not having a hill-soaring site of our own, we have a strong inferiority-complex in this respect), we should mention that several of our members belong also to other gliding clubs, and are often to be found flying at week-ends and in the vacation at Dunstable or Sutton Bank—to both of which sites CAMBRIDGE I. has recently been brought and flown. Also we hear that Kidd has been gliding at the Gaisberg, and Turner learning aero-towing at Darmstadt.

Preston and District Gliding Club

The Hon. Secretary writes that, with reference to the lawsuit "Preston and District Glider Club *versus* Aero Engines, Ltd., Bristol," reported in the last issue of THE SAILPLANE, judgment was given on August 18th. Judge Peel decided that Aero Engines, Ltd., had supplied a defective crankshaft, and in taking an unreasonable time to replace this vital part with a new crankshaft of correct material had committed a breach of the contract. He assessed the damages for the breach of the contract in the supply of a new crankshaft at £25, and he gave judgment for the Preston and District Glider Club for that sum. The plaintiff would pay costs only on the engine aspect of the case, and the general costs of the action would have to be found by the defendants, Aero Engines, Ltd.

London Gliding Club

As it is two months since the last instalment of club news appeared, the Summary of Flying, given below, covers a period of eight weeks. This period includes that of the Instruction Camp in the first half of August; also the period of the B.G.A. Competitions in Derbyshire, during which, it will be seen, the club carried on "business as usual." As before, the flying times do not include ground-hops, which probably work out at about two hours per thousand.

The effect of having a resident professional instructor continues to make itself felt, not only in increased flying, but in decreased primary crashery per flights made (touch wood). Two secondary machines, however, have been put out of action in the two months. The KADET had its nose concertina'd by an aeroplane pilot, who stalled it on a turn without enough room to recover; the pilot has had 700 hours power-flying experience, including a flight to Australia and back. The PRÜFLING was written-off in a most unusual manner; a lady pilot went off the hill with the launching rope hanging from the top of the hook (it is presumed to have got there by rebounding off the ground, since the machine's nose had been kept very low); all went well until the pilot was about to land, which she did by passing low down over a club car. It is true that the particular car is intended to be used for stretching bungy, but only during a launch—not during a landing.

Since nobody will write detailed reports of each day's flying, they cannot be given here. An interesting day was August 30th, when Fox in his KITE got thermals to 1,800 feet and 2,200 feet on a day when most soaring pilots could barely keep up. He flew over the car park at Whipsnade Zoo, nearly half a mile behind the hill, in the hope of getting a thermal off it, and sure enough got one.

Furlong, on August 3rd, did a flight of five hours in the CAMBRIDGE II. towards a "Silver C"; later, at the Derbyshire Competitions, he tried, but failed, to fulfil the other two conditions.

Barker's SCUD II. has been sold to Wood, another club member. The brothers Adcock, two of the most active spirits in the Leicestershire Club (now defunct), have brought their PRÜFLING to Dunstable.

Withall, who has been living on the premises so as to get in as much flying as he can before going back to Australia, has taken a personal interest in the welfare of the Slingsby GRUNAU BABY II., even going so far as to cover it with a thin layer of wax all over, which should in theory, he says, improve its performance by 10 per cent.

Visitors.—Several groups of people have visited the club at various times with the object of filming its activities. One particular pair of producers, who come nearly every week-end, possess such remarkable tact that they seem able to get any number of club members to come and act for them as often as required, either as "stars" or as supers. They form the "film unit" of a well-known petroleum company, and the last film they made was such a success that it actually made a profit; much to the annoyance of the firm, which had reckoned on subsidising the "unit" out of advertising appropriation, and now found themselves saddled with the necessity of paying increased income tax.

Research workers are also becoming attracted to the club. One day we had a visit from W. E. "Tufts" Grey, who writes those amusing articles in *Flight* describing how he sticks little bits of wool all over an aeroplane's wing and then photographs the way they wobble. He wanted to see if he could do the same on a glider, but didn't get as far as actually doing it.

Then, on September 20th, there arrived a man from the National Physical Laboratory who was investigating the noise made by aeroplanes, and had come to the conclusion that the mere passage of the air past an aircraft was responsible for quite a large part of the total noise. He had brought a decibel-recording instrument with him, and fixed it on a primary glider, which was given a hefty launch and was able to produce loud whistling noises from its wires. The instrument was then put in a GRUNAU BABY, which was auto-launched, but it failed to register any sound at all.

Sunday, September 20th.—There being an east wind, two parties went over to Sharpenhoe, eight miles away, which Wills got permission to fly over some time ago. It is a short but steep ridge facing E.N.E., and there was just enough wind to keep up. Hiscox flew his KIRBY KITE twice, and Fox and Dent flew theirs alternately. The air wouldn't hold more than one machine with comfort, so when one went up the other came down. Whether the place will ever come into regular use as an east wind site for the club is a bit doubtful, owing to the trouble incurred in getting permission to use it on each separate occasion.

Summary of Flying.

Date.	Ground-hops.	Winch launches.	Hilltop launches.	Flying Time. h.	m.	s.
July 27th, Monday ...	—	3	2	—	20	30
,, 29th, Wednesday ...	41	—	1	—	2	0
,, 30th, Thursday ...	—	—	6	—	27	30
Aug. 1st, Saturday ...	171	—	37	2	55	2
,, 2nd, Sunday ...	9	—	11	6	40	0
Aug. 3rd, Monday ...	38	—	46	25	57	0
,, 4th, Tuesday ...	76	—	23	10	5	15
,, 5th, Wednesday ...	167	—	23	1	32	55
,, 6th, Thursday ...	29	—	—	—	—	—
,, 7th, Friday ...	95	—	—	—	—	—
,, 8th, Saturday ...	116	—	10	—	8	19
,, 9th, Sunday ...	62	—	41	—	57	29
Aug. 10th, Monday ...	146	—	—	—	—	—
,, 11th, Tuesday ...	43	—	31	1	1	34
,, 12th, Wednesday ...	80	—	40	7	6	13
,, 13th, Thursday ...	78	—	43	7	45	53
,, 14th, Friday ...	13	—	—	—	—	—
,, 15th, Saturday ...	75	—	4	—	3	46
,, 16th, Sunday ...	74	—	63	6	45	19
Aug. 17th, Monday ...	—	—	22	6	29	40
,, 18th, Tuesday ...	3	—	4	1	0	0
,, 21st, Friday ...	15	—	15	1	21	20
,, 22nd, Saturday ...	29	—	53	3	37	33
,, 23rd, Sunday ...	45	—	30	8	33	0
Aug. 24th, Monday ...	—	—	9	—	17	2
,, 26th, Wednesday ...	25	—	—	—	—	—
,, 28th, Friday ...	15	—	—	—	—	—
,, 29th, Saturday ...	24	—	22	—	32	31
,, 30th, Sunday ...	41	—	62	6	13	14
Aug. 31st, Monday ...	—	—	13	5	39	0
Sept. 2nd, Wednesday ...	—	—	11	2	8	30
,, 5th, Saturday ...	—	—	27	11	14	45
,, 6th, Sunday ...	33	—	47	19	34	19
Sept. 8th, Tuesday ...	—	—	3	—	49	0
,, 9th, Wednesday ...	28	—	—	—	—	—
,, 12th, Saturday ...	30	—	—	—	—	—
,, 13th, Sunday ...	32	—	38	1	38	1
Sept. 14th, Monday ...	—	—	3	4	4	0
,, 19th, Saturday ...	69	—	—	—	—	—
,, 20th, Sunday ...	58	—	4	1	37	0

Totals.

Week ending.	Launches.	Flying Time.	Certificates.
August 2nd	281	10 hrs. 23 mins.	1
August 9th	726	38 hrs. 41 mins.	15
August 16th	690	22 hrs. 43 mins.	21
August 23rd	266	21 hrs. 2 mins.	7
August 30th	198	7 hrs. 3 mins.	5
September 6th ...	131	38 hrs. 37 mins.	5
September 13th ...	131	2 hrs. 27 mins.	3
September 20th ...	134	5 hrs. 41 mins.	—

Certificate Flights.

July 20th.—Gurteen, "C" (omitted from previous list).
July 25th.—Miss Goldney, "B" (ditto).
August 1st.—Box, "B."
August 3rd.—Furlong, part "Silver C" (duration).
August 4th.—Evans, "C"; Firmin, "C."
August 5th to 16th.—During the period of the Instruction Camp, certificate flights made were: 19 "A," 11 "B" and 1 "C." Names were given in last month's SAILPLANE, page 187.
August 17th.—Read, "B"; Kensall, "B."
August 22nd.—Jackson, "B"; Black, "B."
August 23rd.—West, "A"; Rawnsley, "A"; Greig, "B."
August 24th.—Rawnsley, "B."
August 30th.—Kearney, "A"; Lacey, "A"; Spielmann, "A"; Sclear, "A."
September 5th.—Rawnsley, "C"; Stevenson, "C"; Pasold, "C."
September 6th.—Greig, "C"; Saffery, "C."
September 13th.—Lassam, "A"; Pincher, "A"; Spielmann "B."

Southdown Gliding Club

August 2nd.—Sky overcast, wind very strong; gusty. In the morning it was so rough we wisely spent our time in the hangar. Conditions improved a very little during the afternoon, and so out came the Nacelled Dagling, "The Twin." W. Hatcher had the first short flight. Arriving back up the hill, he gave the impression that he was wondering where his tummy had gone to. So the Twin was tucked away in the hangar again quickly, and intact.

August 9th.—Fine to cloudy, wind variable, *nil* to 5 m.p.h. Short practice flights were made in the Twin. Jameson, L. Hatcher, and Copeland continuously flew their Prüfling, the first two having the usual auto-towed flights, getting up to about 600 feet. Copeland is trying for his "B," and is obviously getting very used to the Prüfling's little ways.

August 16th.—Fine to cloudy. Wind varying, S. to W., *nil* to 5 m.p.h. Now that our new hangar and club house are well under way, one can at once notice the effect these long-needed buildings have had on the well-being of the club in general. Even the lowliest member has been seen with his thumbs in his braces. With ample facilities now for repairs and overhaul, work has been advancing most rapidly on the primary Dagling. Most of the credit for this must go to Rubick and Dunning, who apparently spend most of their waking hours on the premises.

To-day four machines were soon in readiness on top of the hill. The Nacelled Dagling was flown by Goodwin, Hatcher, and Woods, Goodwin just failing to take his "B." L. E. Hatcher and Jameson auto-towed in the Prüfling up to 600 feet during the afternoon, giving a good exhibition of flying. J. Copeland later obtained his "B" in this machine, with a very fine flight of 1¼ minutes.

W. Filmer had his Grunau Baby II. auto-towed up in search of thermals. But thermals and Filmer were evidently not on intimate terms to-day. Nevertheless, he enjoyed the flying that he did get. Dunning also made short flights in his Grunau.

August 23rd.—Fine, no cloud. Wind W., 5-10 m.p.h. An excellent day for training pilots in the earlier stages. Goodwin, W. Hatcher, and Woods made practice flights in the Twin until darkness set in. Dunning had his Grunau on short duration flights all the afternoon.

The Twin, with the release gear fitted, was auto-towed with Captain Little up, who has now passed her as O.K. for launching in this manner. The "learner" pilots hope to make more rapid progress now. L. Hatcher and Jameson gave their usual hectic display with the Prüfling, using all the available cable to auto-tow them.

Cornwall Gliding Club

Since the last report the Keebling has been launched 55 times. Auto-launching has now taken the place of hand launching, a rope attached to the bungy being passed through a pulley and then fastened to the back of a car driven at right angles to the line of flight. We could scarcely have continued hand launching during August, when the call of wives and the beach proved too much for some members. A member gave us the car, an ancient Austin 20.

Rosenannon Downs have now been thoroughly explored. The south slope gives the Keebling a straight flight of up to more than a minute. Northern and eastern slopes give a bare 30 seconds, while the western slope hardly yields 20 seconds. There is a nice western slope, but it has a six-foot ditch, 12 feet across, at the bottom. We can therefore train in any wind, and possibly soar with the wind from S.E. to S.W., but as such a wind never blows on Sundays we may possibly move once more, this time to the Bodmin Moors, where a slope facing west has been seen. Another possibility is moving to the coast, and experimenting with winch launching and slope soaring over the cliffs.

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Derbyshire and Lancashire Gliding Club

Wednesday, July 29th.—No wind. Using all the winch wire on the north and south run, Eadon, Jones, and D. Hobson got "A" certificates, while Upton managed a "45."

Sunday, August 2nd.—Wind west, 35 to 45 m.p.h. Slater and Smith flew the Golden Wren in about the strongest wind she has ever encountered. At times one was hovering stationary at 45 m.p.h. on the clock, while 40 m.p.h. gave a definite backward ground speed.

Airspeed Gliding Club

The Airspeed Gliding Club has been in operation for seven months, and has achieved success both in the increased efficiency of its older members and in the instruction of others.

As the successor of the now defunct Portsmouth and Southsea Gliding Club, the present club have been fortunate in acquiring the old hangar, parts of two machines, and the rights to glide over the surrounding War Office property.

Mr. R. Robinson, the chief instructor and chairman, has put in some very useful work, and we deeply regret to learn he is shortly to leave us. Mr. R. Clear, instructor, has recently bought a Falke. He once did a 45 min. flight in a primary machine, which is the best performance to date.

Portsdown Hill, the site normally used, is particularly good in that it provides excellent up-currents from all points of the compass. Lately the club have found it advantageous to use the Municipal Flying Ground as a site for training to cope with the rise in membership during the summer.

Normally, operations are limited to Sundays, but the general keenness has been such that we have found time to get hours in on week days.

Norfolk Gliding Club

Sunday, August 2nd.—On completion of a rather lengthy overhaul the machine was taken to Skeyton, where members (the faithful few) put in 12 hops in a light west wind. The proceedings were livened by the discovery of a distinct "bump" from the adjacent cornfield. Those who know say it was the beginnings of a thermal.

Sunday, August 9th.—Seven members made 35 flights in a light west wind at Skeyton. No thermals to-day. With the wind in this direction our windward field is cabbages, which apparently do not produce thermals.

While on the subject of thermals, there is a local phenomenon which may be of interest. In this county it is called a "Roger." Apparently it is a form of ground-level whirlwind encountered on hot sunny days, and can be observed for quite a time over the flat fields and meadows of the Broads district. An eye-witness has stated that it would take up haycocks from a field over a path fifty yards wide and scatter them broadcast. Apparently a "Roger" travels over the ground at quite a considerable speed.

Sunday, August 16th.—Our unlucky day. One member made half a flight at Mundesley! The machine got rather "bent" during the first launch off the cliffs here, and it will take several weeks' work to straighten the "bends."

Billingham Gliding Club

We possess only one primary glider at present, but hope to purchase a secondary in the near future; not bad going in three months. Naturally our meetings are divided between damaging the machine and repairing it, but we have a go-ahead policy and enthusiasm soars very high (unlike the primary).

Our ambition is to bring gliding within the means of the ordinary youth and for this reason the age limit is from 14 years upwards. Of course these youngsters are not allowed to fly at this tender age, and the club is necessarily divided into two sections, the dividing age being 21. Our subscriptions are as low as possible, being £1 a year for older members and 10s. for the juniors.

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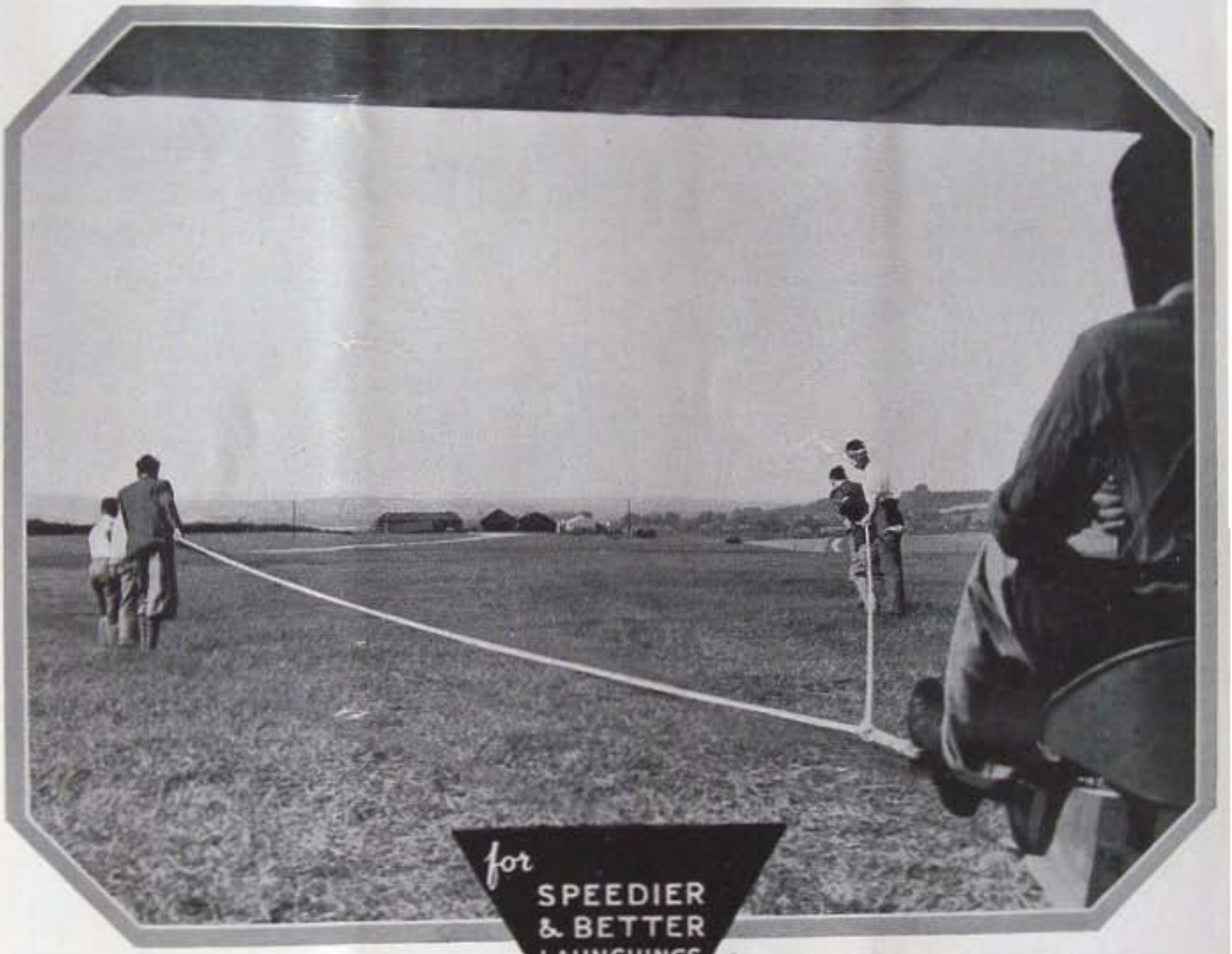
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