SAILPLANE AND GLIDER

FEBRUARY
1939
Vol. 10 No. 2

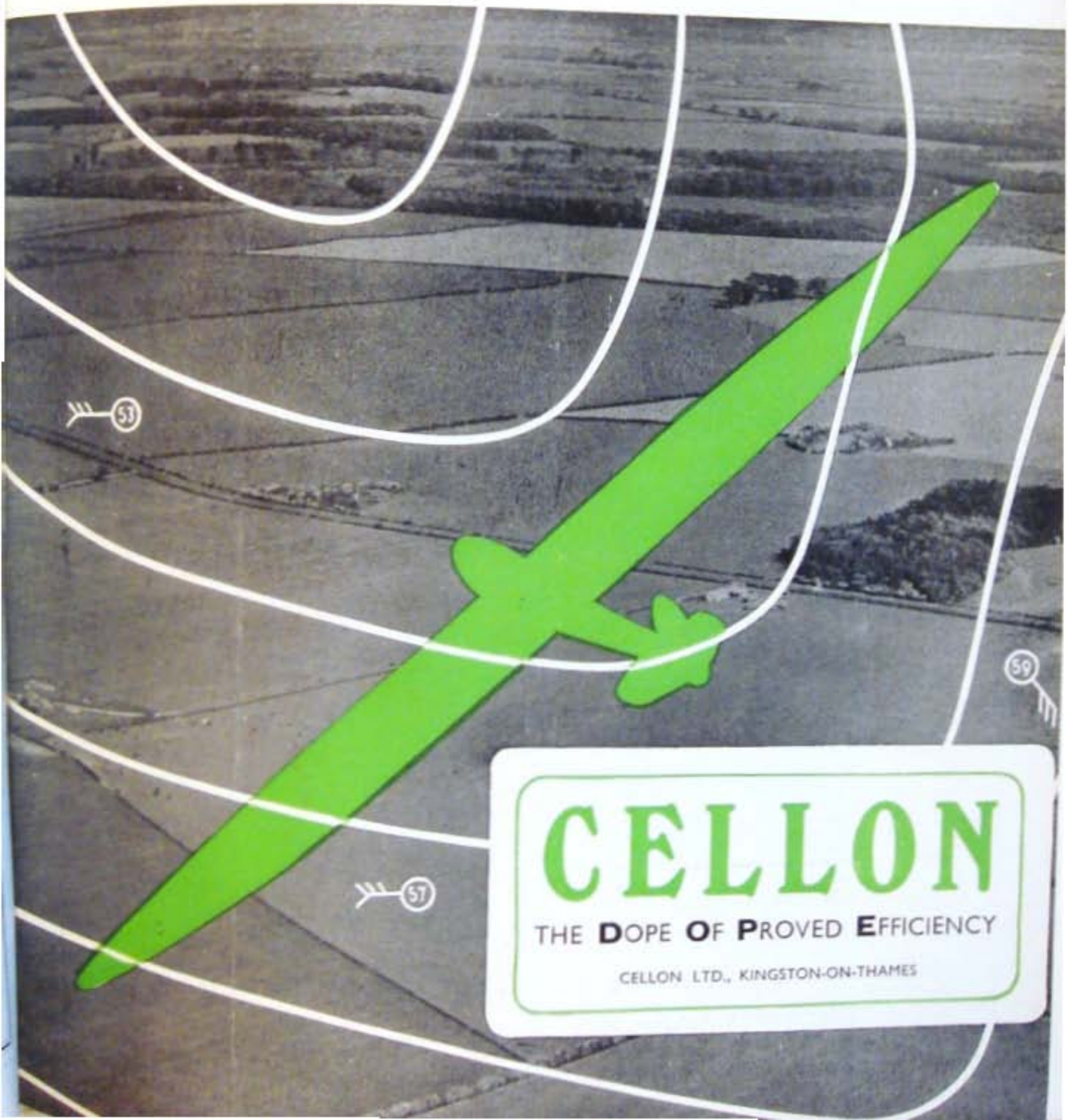
Published Monthly

PRICE - -

Editorial Office
13, Victoria St., S.W.1

Official Organ of the British Gliding Association

EDITED BY ALAN E. SLATER



THE SAILPLANE *and* GLIDER

Official Organ of The British Gliding Association

Editorial Offices: 13, VICTORIA STREET, LONDON, S.W.1 Telephone: ABBey 2615-6-7

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Coming Events

TWO meetings have so far been decided on this year, though the National Contest is still undecided as to either place or time. Easter Sunday is on April 9th and Whit Sunday on May 28th. The two meetings referred to cover the Easter period.

The first is an inter-club aero-towing meeting, to be held, as last year, at the Ratcliffe Aerodrome, seven miles north of Leicester, by kind permission of its owner, Sir W. Lindsay Everard, M.P. The dates are April 7th, 8th, 9th and 10th, and the arrangements are being prepared by the London, the Derbyshire and Lancashire, and the Midland Gliding Clubs. Members of all other clubs will be welcome. Those wishing to participate should advise D. G. O. Hiscox (60, Vauxhall Bridge Road, London, S.W.1), B. A. G. Meads (Stonycroft, London Road, Alderley Edge, Manchester), or J. V. Rushton (Birmingham New Road, Lanesfield, Wolverhampton). Tows to 2,000 ft. will cost 10s. each, or 15% less if paid for in advance.

North-east winds have been frequent in recent Aprils, so prospects of long cross-country flights to the south-west should be good.

The other meeting is the Cambridge Club's Wiltshire Camp, also in April, to which visiting private owners will be welcome. It may be relied on to produce some first-class news.

Instruction Camps

No less than 15 instruction camps have already been fixed. Here is a list of them:—

April 7th to 15th, Midland Club.
April 7th to 16th, London Club.
May 5th to 14th, London Club.
May 27th to June 4th, Midland Club.
May 28th to June 3rd, Yorkshire Club.
June 2nd to 11th, London Club.
July 7th to 16th, London Club.
July 15th to 30th, Surrey Club.
July 30th to August 6th, Yorkshire Club: course for advanced pilots only.
August 4th to 18th, London Club.
August 5th to 13th, Midland Club.
August 13th to 26th, Yorkshire Club.
August 19th to 27th, Midland Club (Public Schools Camp).
September 2nd to 16th, Derbyshire and Lancashire Club.
September 3rd to 16th, Yorkshire Club.
September 8th to 17th, London Club.

The organisers of these camps reserve the right to cancel them or change the dates.

The cost of a fortnight's course, including flying, board and camping accommodation, and use of club, is usually about 12 guineas, and shorter camps cost less in proportion. Full particulars can be got from: The Manager, London Gliding Club, Dunstable, Beds.; the Camp Secretary of the Midland Gliding Club, 1, Newhall Street, Birmingham, 3; the Secretary of the Yorkshire Gliding Club, 32, Wensley Green, Chapel Allerton, Leeds, 7; the Secretary of the Derbyshire and Lancashire Gliding Club, 63, Clarkhouse Road, Sheffield; and the Secretary of the Surrey Gliding Club, Buckland, Betchworth, Surrey.

For the past two months there have been references in the Press to a scheme for providing some hundreds of Air Defence Cadets with gliding camps this year. The idea is to use the grounds and organisation of existing gliding clubs. Everybody concerned has been ready for some time to go ahead with the arrangements, except the authorities who are being asked to subsidise the scheme, so it is still held up.

German National Meetings

The long distance goal flight tour, in which competitors have to soar over a prescribed route in several stages, is from June 18th to July 2nd. The route has not yet been announced.

A contest for two-seater sailplanes is being held from June 25th to July 9th. Hanover is announced as the *Austragungsort,* which appears to mean the place from which it is being organised.

The Rhön Contest, the 20th of the annual series, is from July 23rd to August 6th. It is "chiefly" for single-seaters, and in connection with it there will be a competition for new sailplane designs. Regional eliminating contests for the Rhön are held at various local centres beforehand (many of them at Whitsuntide) and last a week.

Also on the Wasserkuppe is held the National Model Sailplane Contest, on Whit Sunday and Monday. At this hundreds of models compete.

From Here and There

Italian Competitions.—An Italian gliding contest is announced to take place at Sezze di Littoria from February 13th to 19th.

* * *

Gliding in Manchukuo.—There are 55 gliders and sailplanes in Manchukuo. They are distributed among about seven different centres, at some of which aerotowing is done with German "Bücke" machines.

* * *

Swiss Statistics.—There are 32 gliding groups in Switzerland, with 474 flying members. According to *Flugsport* they made (presumably during the past year) 2,645 launches, with 104 hrs. 28 mins. 20 secs. flying time.

* * *

The "Cloudometer."—The instrument for predicting the height of the cloud base from ground temperature and humidity, invented by Mr. J. S. Fox and displayed during the last National Contest, is now marketed as "The Fox Patent Cloud Base Predictor" for £3 15s.

* * *

German Statistics.—A report issued by General Christiansen, Leader of the National Socialist Flying Corps, and summarised in *Flying*, states that the Corps controls 25 gliding schools and 465 gliding camps or local centres, and possesses 5,000 sailplanes and gliders. During 1938 there have been 31 soaring flights above 12,000 ft. and 70 flights above 9,000 ft.

* * *

Mr. F. C. H. Allen.—We regret to see a report of the death of Francis C. H. Allen in Austria on January 28th, following an operation. Mr. Allen took his "C" certificate at the Cambridge Club's Wiltshire Camp last April. His wife, formerly Miss Naomi Heron-Maxwell, is well known as a sailplane pilot, instructor, and lecturer. They were married on March 2nd last year.

* * *

Gliding in Iceland.—There are two gliding groups in Iceland, each with a GRUNAU 9 primary machine. One is at Reykjavik, the capital, and the other at Akureyri, on the north coast. They are called Svifflugfjelag Islands and Svifflugfjelag Akureyrar, respectively. The Reykjavik one has made 1,200 launches in the past two years, and has secured 14 "A" and 8 "B" certificates, while one member got his "C" in Germany.

* * *

Negative Lift.—How the Dipper, with a specific gravity no greater than that of most birds, is able to walk under water in pursuit of its food is explained in Vol. 2 of *The Handbook of British Birds*. The explanation, a recent discovery, is that the bird walks upstream and, by keeping its head down, presents the inclined plane of its back to the current. If ornithologists can be got to understand this much, it should be a first step towards removing their notorious ignorance of how birds fly.

* * *

Gliding Engagement.—An engagement is announced between Mr. A. Graham Douglas, only son of Mr. and Mrs. A. A. Douglas, of South Nutfield, Surrey, and Miss Ann Courtenay Edmonds, only daughter of Major and Mrs. C. H. W. Edmonds, of Buckland, Betchworth, Surrey. Miss Edmonds, already a capable aeroplane pilot, took up gliding at the Anglo-German Camp at Dunstable in August, 1937. She at once got badly bitten and soon bought a GRUNAU; then, after organising a most successful meeting on a site at Reigate last Whitsuntide, started a "Surrey Gliding Club" there. Mr. Douglas was the club's first pupil; a photo of him about to have a ground-hop was published last December on page 289. He is the owner of the Redhill Flying Club.

Thermals

Sudden and fleeting from the vaulted sky—
A flash of light!
The glist'ning wing has dipped its pointed tip,
A mirror bright,
The golden rays encountered in their path
A sailplane's flight.
Scaling the heights of heaven all unheard
On outspread wings,
Man in the cockpit soars a league above
Terrestrial things,
Turning on aery pinnacles unseen
Incessant rings.

D.L.P

"Off the Rails"

Under this title (or more literally, "Derailments") Herr Oskar Ursinus, in his journal *Flugsport*, has some vigorous remarks to make on sailflying in general and those who would restrict it in particular. Here is a translation:—

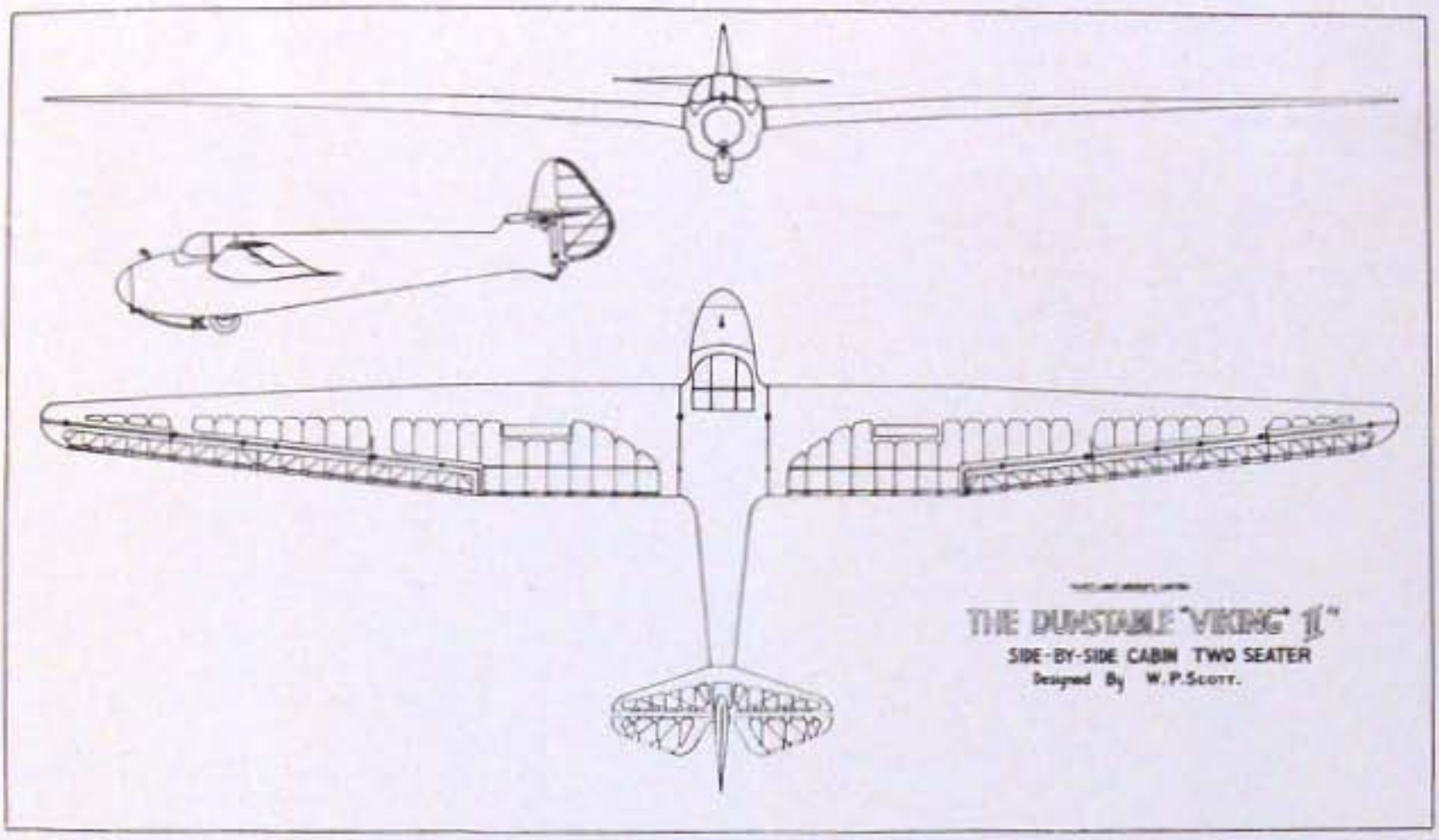
"We in Germany are proud to have created sailflying and to have made a present of it to the world. And now there suddenly comes along an inexperienced fellow who tries, in a so-called technical paper for German sporting aviation, to raise a feeling against the existence of sailflying. Hereby he asserts, with serene technical ignorance, that the sailflying movement owes its existence only to the catastrophic unemployment which reigned in the earlier Germany. Then the members of flying groups are incited to think that they can no longer be expected to spend their nights with workshop noises about their ears, and so on. A poisoning of well-springs of the worst sort!

"It is unheard of that the freedom of the German Press should be used by unbridled persons in order to fling in the mud the feats of our German sailflying pioneers, many of whom have sacrificed their lives. I refrained deliberately from taking up the matter in this place and thought that the many writers who are active in sailflying affairs would take an energetic stand against this heresy. Nothing has been done! Or is perhaps one or the other afraid——?

"In the case before us there is only one thing to do: such heresies (derailments) must no longer be allowed to appear, and such writings must by every means be prevented from falling into the hands of our youth."

The Dunstable "Viking II"

A NEW TWO-SEATER SAILPLANE



Two-seater sailplanes are coming more into the news, and this year Germany is for the first time holding a special National Contest for two-seaters. The "Viking II," now under construction at Dunstable, follows the latest fashion with side-by-side seating. It has a span of 61 ft. and length of 22 ft. 1 in. The wing chord at the root is 4 ft. 11½ ins.

THE DUNSTABLE VIKING II is a side-by-side cabin two-seater with dual control, one set of controls being easily disconnected for joy-riding. Its design has been based on that of the single-seater VIKING I which so far has proved itself very successful.

The main features of the VIKING II are as follows:—

Span, 61 ft.; wing area, 235 sq. ft.; aspect ratio, 16.3; empty weight, 510 lbs.; wing loading, 3.8 lbs. per sq. ft.

The performance as calculated for this machine is slightly better than that of the single-seater, sinking speed being 2.4 ft. per sec. at 35 m.p.h.; therefore with ailerons up at 65 m.p.h. the sink will be approximately 5 ft. per sec.

The wing is in two sections, each attaching to the side of the fuselage with two tapered pins and one straight bolt, making a clean joint not requiring fairings. The wing has been considerably thickened up in section at the root to make room for the arms of the pilot in the stubs and to give an economical spar through the fuselage. Ailerons and spoilers interlock on assembly.

Tailplane and elevator are placed on top of a short fin, the elevator automatically interlocking on assembly and not requiring pin and safety pin to be fitted, thus reducing the time taken for rigging by from 6 mins. to 8 mins. for the whole machine. Ease in assembling and dismantling has been carefully considered in the design of this machine.

The ailerons can be trimmed both up and down; the amount of trim for this machine is not yet fixed.

The undergear consists of a short skid, with a single air wheel at the rear, built into the fuselage and fitted with a brake which is connected to a lever within easy reach of both pilots.

After much consideration we have again chosen the almost vertical cockpit cover in preference to carrying it to the nose, so as to get good visibility to either side of both pilots and to maintain vision in adverse conditions.

The general construction of the machine is normal except for a few additional features, such as that all working joints in the control system are fitted with ball-races, and an extra longeron runs from the rear of the wing to the nose—this to give extra stiffness to the large opening of the cockpit.

Both sets of rudder pedals adjust separately without disconnecting the control wires.

Provision is being made in the detachable nose for earth to balance the machine when carrying only one. Earth being obtainable anywhere, this avoids the carrying or mislaying of a lead weight.

The first of these machines will be ready for test early in the spring.

W. R. SCOTT.

Two-Seater Duration

THE world's duration record for two-seater sailplanes, held in Britain for two months last year, is becoming more difficult than ever to bring back to this country. The latest record is 50 hours 15 minutes, put up by two German pilots, Bödecker and Zander, in a KRANICH, which they flew from 10.45 a.m. on December 9th to 1 p.m. on December 11th at Rossitten in East Prussia.

The site is on a narrow spit of land, 60 miles long and about a mile wide. Half the width is occupied by enormous sand dunes which rise to 200 ft. The west slope, as it is called, is gentle, but the east side of the dunes is steep; thus easterly winds are best for soaring, although the prevailing wind is from the west. This sounds unfortunate, but it is a law of Nature for the lee side of dunes to be steep. The reason is that when the wind blows a cloud of sand grains along, they are not suspended like dust; according to modern theory, the grains rise by being flung by the wind against other grains lying on the ground, and then rebounding upwards, so that the height of the cloud of sand depends on the wind speed. The grains which are blown over the crest of the dune immediately drop into dead air and blow no further; and that is why the dunes never blow away but merely creep a few feet eastwards every year. The local authorities are gradually fixing the dunes by getting fir trees to grow on them, and when the last dune has been covered the gliding school at Rossitten will have to pack up.

The two record-breakers used a four-mile length of dune, all of which was bare except for a tree-covered portion at the north end by Pillkoppen. Most of the slope drops sheer into the water, but there are small flat patches of ground at the bottom at each end and one half way along.

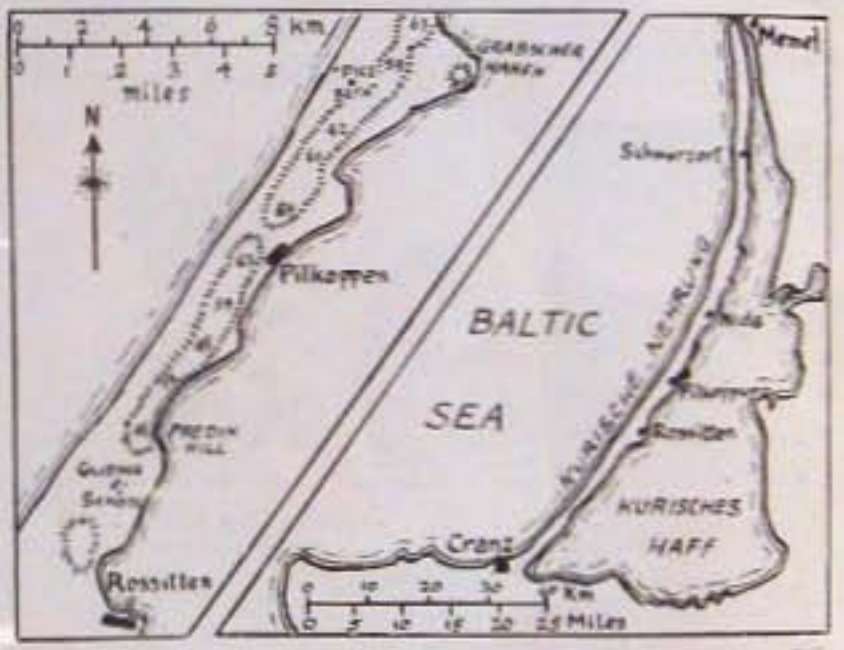
They had been preparing for this flight for some weeks, according to an account published in *Der Deutsche Sportflieger*, and had only been waiting for a good weather forecast. On the day the flight started, a wind of 30 to 55 miles an hour blew from the south-east directly on to the slope, enabling them to hold a height of 800 feet. They spent the daylight hours getting familiar with the contours and deciding where would be the best part of the slope to spend the night, and came to the conclusion that the wooded north end had the smoothest contours. Moreover, it overlooked the village of Pillkoppen, where there would be signs of life to keep them interested.

In this northerly latitude and eastern longitude twilight set in at 3.30 p.m. The pilots then found that, contrary to expectation, the uncovered sandy crest was very difficult to make out in the dark. In fact, visibility got worse and for some hours the front pilot had to do all the flying. This was not too encouraging, considering that 30 out of the 50 hours would have to be flown in darkness.

When the moon came up at 7.30 p.m., the rear pilot could see well enough to take over the controls. But the wind got stronger and started to move round towards the south, at the same time becoming more gusty—in fact, they had never known it so rough at Rossitten. As a result they lost height to within 70 to 100 ft. of the hill top. Then the sky became overclouded and the moon hidden, and what with the poor visibility, the low height, and the rough air making them sick, they got thoroughly exhausted and thought they would have to land.

At midnight the sky cleared, the wind backed till it was again square on to the hill, the turbulence was much reduced and the KRANICH regained its lost height. But the pilots were extremely tired and had to take very short turns at the controls. They noticed a tendency to fly faster at night. The lamps which had been placed along the crest and foot of the hill, according to another account, kept blowing out in the strong wind.

When dawn set in at 7 a.m. the second day, the tiredness disappeared, and the pilots exchanged shouts with their comrades below, who wrote in the sand the number



of hours as they mounted up. Clouds again filled the sky and the KRANICH, at 650 ft., would come under the influence of isolated portions of cloud and would then climb at 3 to 5 ft. per second. So the pilots had a competition to see who could get highest.

Why do duration flyers always take insufficient food? These two were no exception. They were down to their last bar of chocolate by mid-day, so that for the last 24 hours of the flight they had to starve. The drink also gave out. Still, everything felt so bright in the daytime that they felt well able to survive another night.

Once again at 3.30 darkness set in. It was a darker darkness than the night before, with a completely overcast sky. Only the front pilot dared take the controls, and he confined himself to the wooded slope at Pillkoppen with only an occasional excursion to Predin at the south end. Not till 10 p.m. did it get a little brighter so that the rear pilot could take over. At 2 a.m. they were more tired than at any time during the flight, and nearly gave up. "In spite of plucking up all our energy," they relate, "we fell asleep four or five times and only woke on pulling up the speed. Through the excessive exhaustion, now and then we saw great towering and ghostly shapes on the hill, which dis-

solved as they were approached." They were now taking turns to fly every three minutes or less.

This state of affairs continued until the third day broke at 7.30 a.m., when the tiredness immediately disappeared. They had determined to keep on till the 50 hours were up, and the last hour or two seemed interminable. The landing was made at 1 p.m. at the place from which they had been catapulted two days before.

The following are, as far as is known, the world's two-seater duration records since soaring began:—

August 26th, 1922.—Fokker in own biplane at Wasserkuppe, Germany: 13 mins.

October 16th, 1922.—Fokker in own biplane at Firle Beacon, England: 37 mins.

October 21st, 1922.—Olley in FOKKER biplane at Firle Beacon, England: 49 mins.

May 11th, 1925.—Seiler in own-designed sailplane, at Rossitten, Germany: 1 hr. 23 mins.

August 10th, 1925.—Hesselbach in MARGARETE, at Wasserkuppe: 3 hrs. 6 mins.

October 1st, 1925.—Hesselbach (German) in MARGARETE, at Crimea, Russia: 5 hrs. 52 mins.

June 3rd, 1926.—Schulz in COETHEN, at Rossitten: 9 hrs. 21 mins.

October 2nd, 1935.—Lissitvine, at Koktebel, Crimea, Russia: 38 hrs. 40 mins.

At the beginning of 1937 the *Fédération Aéronautique Internationale* decided to recognise two-seater soaring records, and since then the following official records have been put up:—

July 12th, 1937.—Fox and Murray (British) in FALCON III, at Wasserkuppe: 9 hrs. 48 mins.

November 26th-27th, 1937.—Jachtmann in amphibian sailplane, at Sylt Island, Germany: 14 hrs. 3 mins.

June 29th, 1938.—Erich Meyer in KRANICH, at Hornberg, Germany: 21 hrs. 2 mins.

July 9th-10th, 1938.—Murray and Sproule in FALCON III, at Dunstable, England: 22 hrs. 13 mins.

September 8th-10th, 1938.—Karlbacher and Führinger in MG-9A, at Spitzerberg, Vienna: 40 hrs. 38 mins.

December 9th-11th, 1938.—Bödecker and Zander in KRANICH, at Rossitten: 50 hrs. 15 mins.

The World's Altitude Record

WE have already reported the height record achieved by Erwin Ziller at Grunau, in Silesia, on November 21st (not 28th as first stated). The exact figures are now available, and show that the height reached was 28,215 ft. (8,600 m.) above sea level, and 22,441 ft. (6,840 m.) above the cast-off point. The latter figure exceeds by 502 ft. the previous record set up by Walter Drechsel last August. The climb was made by using the stationary wave of air in the lee of the Giant Mountains, which forms in southerly foehn winds and is capped by a lenticular cloud known as the "Moazagotl." Herr Ziller, writing in *Luftwelt*, gives the following account of his record flight:—

"On November 21st, in the forenoon, above the Hirschberg valley in the Giant Mountains there formed the well known 'Moazagotl' cloud, which with its peculiar up-current zones is always producing new and interesting phenomena for sailplane pilots. I started at 11.15 a.m. by aero-tow from the Hartau Aerodrome near Hirschberg in the sailplane KRANICH, which I had fitted up with oxygen apparatus, with the object of making an altitude flight.

"According to my altimeter I cast off at about 1,200 m. (3,940 ft.). Owing to poor up-current conditions I was then slow in climbing to about 2,000 m. (6,560 ft.), when suddenly the KRANICH rose strongly in powerful up-draughts. At 3,600 m. (11,800 ft.) I entered the clouds, in which my instruments immediately became iced up, so that I had to fly blind for a long time. I climbed up to 6,500 m. (21,300 ft.) but, on attempting to get out of the cloud, came into down-currents which brought me down to 2,300 m. (7,550 ft.).

"Flying on in a southerly direction towards the Schneekoppe, I reached the front border of a 'Moazagotl' cloud and climbed rather smoothly to a height of 8,600 metres. At about 6,000, 7,000, and 8,000 m. it was necessary to fly through ice clouds. The temperature sank to minus 40° C. (minus 40° Fahr.), so that even my fur boots gave little protection from the cold. Owing to the great cold and oncoming darkness I was obliged to terminate the flight. I landed, after a flying time of about 4½ hours, on the airport of Breslau-Gandau, 70 km. (43½ miles) from Hartau."

This is, so far as we know, the first height record established with the help of oxygen. Captain Drechsel's record was made without oxygen, though at the same meeting several pilots who got up nearly as high did so with oxygen.

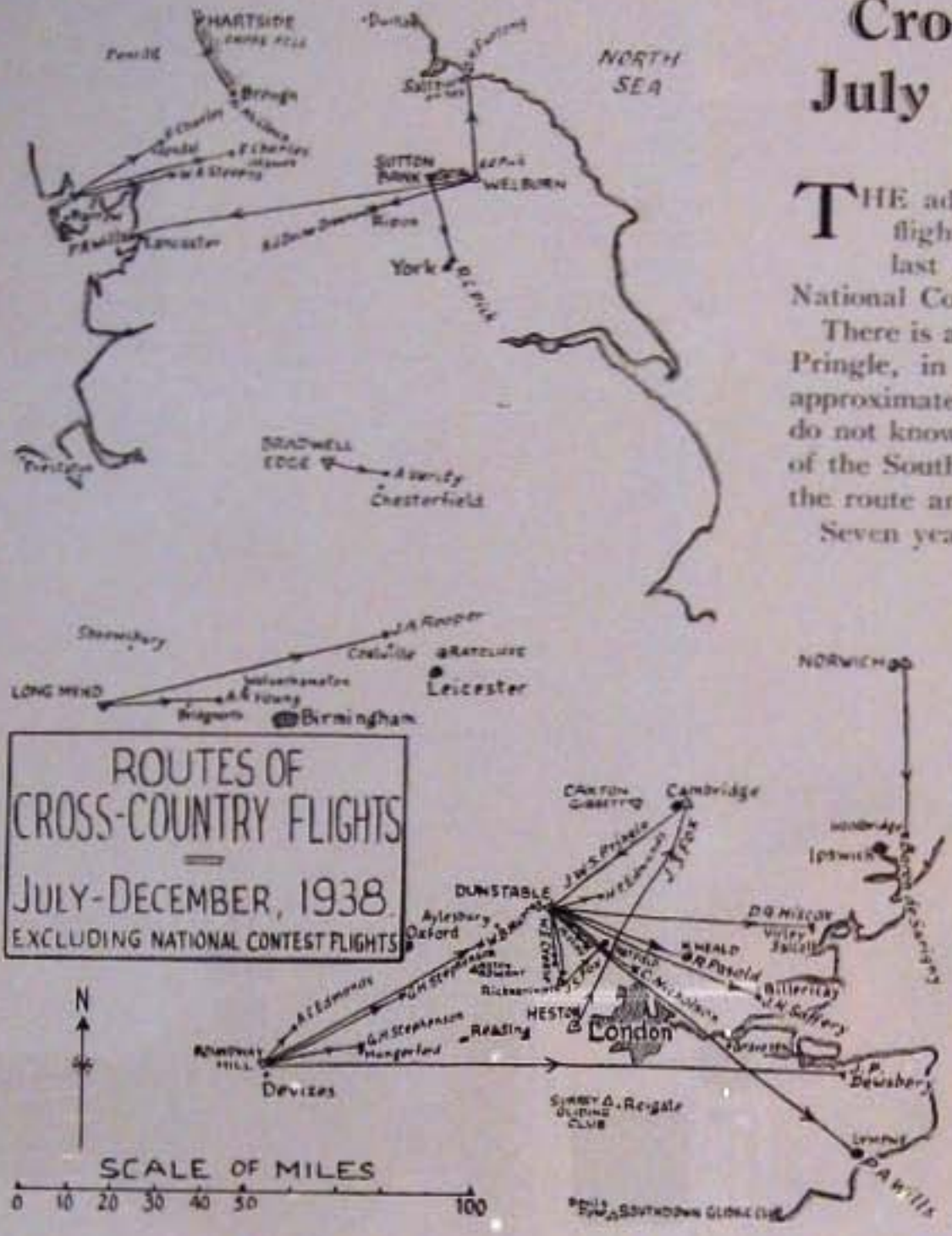
As we go to press we have received an interesting letter from Dr. Küttner, who held the previous "Moazagotl" record. He encloses a copy of Ziller's barogram, and says that when Ziller arrived over Breslau he was still 6,000 m. high!

Herr Lippisch's Lecture

Dr. A. Lippisch, who has contributed more than any other man to the history of sailplane design, visited England last December to give his first lecture to an English audience since 1931. He described the smoke tunnel he has designed at the Research Institute for Soaring Flight in Darmstadt, and showed some wonderful slow-motion films demonstrating the air flow over various aerofoils at various angles, in some cases with a rotating cylinder in the leading edge.

All Herr Lippisch's considerable ingenuity was needed to produce this tunnel, in which parallel jets of smoke have to remain free from turbulence while approaching the aerofoil to be tested.

Particularly interesting were the films showing the flow during and after an abrupt change of incidence, as knowledge of this may well lead to a better understanding of flapping flight.



Cross-Country Flights July to December, 1938

THE adjoining map shows the routes of distance flights made in England in the second half of last year, apart from those made during the National Contest.

There is also a flight on September 13th by J. W. S. Pringle, in which he flew round Cambridge in an approximate circle with a radius of six miles, but we do not know the exact route. Further, S. G. Stevens, of the Southdown Club, made a flight of 17 miles, but the route and date have not been reported.

Seven years ago, in THE SAILPLANE, C. H. Latimer-Needham put forth a formula for estimating the value of a soaring site. Marks were allotted for various features, and a number of sites were compared. The Crossfell Range in the Pennines came out best with 87 marks out of a possible 100. It had not been soared over then, and since that time several attempts to soar along the range have been unsuccessful. But at last it has been done. Mr. McClean, of the Newcastle Club, took off from 1,100 ft. above Melmerby village, where the summit of the ridge is over 2,000 ft. In 15 minutes he climbed 1,800 ft. to cloud base, and then slope-soared for 15 miles with a loss of only 700 ft., which he regained on a further slope. The flight took 43 minutes. There was no cloud lift.

Date	*Starting Place*	*Pilot*	*Sailplane*	*Mode of Start*	*Landing and Mileage*	
July —	Sutton Bank (Yorkshire Club)	A. O. Pick	Grunau Baby	Slope lift	Welburn aerodrome	11
,, 18	,, ,, ,, ,,	R. C. Pick	——	Slope lift	York aerodrome	20
,, 26	,, ,, ,, ,,	A. O. Pick	Grunau Baby	Slope lift	Welburn aerodrome	11
,, 27	Welburn (Yorkshire Club)	O. H. Facing	Gull	Aero-tow	Saltburn-on-Sea	22
,, 27	Roundway Hill, Devizes	G. H. Stephenson	Kirby Kite	Slope lift	Hungerford	22
,, 27	,, ,, ,,	Miss A. C. Edmonds	Grunau Baby	Slope lift	Winterbourne Bassett	12
,, 27	,, ,, ,,	J. P. Dewsbery	Rhönsperber	Slope lift	Faversham, Kent	128
,, 28	Sutton Bank (Yorkshire Club)	A. O. Pick	Grunau Baby	Slope lift	Welburn aerodrome	11
,, 30	Heston Airport	J. S. Fox	Rhönadler	Aero-tow	Cambridge	55
Aug. 1	Welburn (Yorkshire Club)	P. A. Wills	Minimoa	Aero-tow	Lancaster	76
,, 1	,, ,, ,,	A. J. Deane-Drummond	Gull	Aero-tow	Ripon	25
,, 6	Roundway Hill, Devizes	G. H. Stephenson	Kirby Kite	Slope lift	Harwell aerodrome, Wantage	35
,, 7	,, ,, ,,	W. B. Murray	Kirby Kite	Slope lift	Aylesbury	55
,, 17	Long Mynd (Midland Club)	J. A. Rooper	Kirby Kite	Slope lift	Griffydam, Coalville	65
,, 19	,, ,, ,, ,,	A. N. Young	Kirby Kite	Slope lift	Bridgnorth	26
,, 20	Dunstable (London Club)	H. T. Edmunds	Rhönadler	Slope lift	Almshoebury, Hitchin	13
,, 20	Ireleth (Furness Club)	F. Charles	Kirby Kite	Slope lift	Kendal	37
,, 21	,, ,, ,,	F. Charles	Kirby Kite	Slope lift	Moorcock Inn, Hawes	28
,, 21	,, ,, ,,	W. A. Stevens	Grunau Baby	Slope lift	Sevens Flats	22
Sept. 2	Dunstable (London Club)	R. Paseld	Rhönbussard	Slope lift	North Weald aerodrome	22
,, 3	,, ,, ,,	D. G. O. Hiscox	Gull	Slope lift	Virley Salcott, Essex	57
,, 3	,, ,, ,,	J. S. Fox	Rhönadler	Slope lift	Hatfield, via Rickmansworth	29
,, 4	,, ,, ,,	P. A. Wills	Minimoa	Slope lift	Lympne aerodrome	87
,, 4	,, ,, ,,	C. Nicholson	Rhönsperber	Slope lift	Enfield	22
,, 4	,, ,, ,,	D. G. O. Hiscox	Gull	Slope lift	St. Albans	12
,, 4	,, ,, ,,	W. E. Crease	Kirby Kite	Slope lift	Sarratt Hill, Rickmansworth	13
,, 13	Norwich	Baron de Sarigny	Kirby Kite	Aero-tow	Woodbridge, near Ipswich	36
,, 15	Cambridge	J. W. S. Pringle	Kirby Kite	Aero-tow	Dunstable	38
Oct. 30	Bradwell Edge (D. & L. Club)	A. Verity	Kirby Kite	Slope lift	New Whittington	14
Nov. 1	Dunstable (London Club)	J. H. Saffery	Grunau Baby	Slope lift	Billericay, Essex	44
Dec. 27	Hartside (Newcastle Club)	N. McClean	Grunau Baby	Slope lift	Brough	20

A New Sailflying Film

FOR the past two years or more, Dunstable has been visited at intervals by two members of the Shell Company's Film Unit who in their spare time (and not as representatives of the Company) have been making a film of gliding activities. The film, which is described as "A Savoy Film Production, directed and photographed by D'Arcy Cartwright, length 1,500 ft., Cert. 'U,'" is now on the market with the title "Prelude to Flight." It has been trade shown, and is shortly to appear for the first time in public at the Regal, Marble Arch, London.

Practically the entire cast is made up of familiar figures in the gliding world; their speech, however, will be less familiar, as the sound track has been added afterwards, though the two principal actors have been fitted with their own genuine voices. The scene opens in the clubhouse with general conversation which soon sorts itself out, and before long our Mr. Walker has persuaded some people to get a few machines out. Later we hear Mr. Vigers giving instructional talks, illustrated by pilots doing what he is talking about; finally, nearly half the picture is taken up by a thermal flight by Mr. Bergel in the RHÖNADLER, and we hear him thinking out loud so that we can all follow what he is doing, and why.

Those who glide will be delighted with the excellence of the photography. As to the general public, the film has had an unusually good reception from the trade Press, so it should have a wide distribution. The distributors are: Technique Distributors, Ltd., 93-95, Wardour-street, London, W.1.

Books on Sale

We have arranged to have on sale at THE SAILPLANE Office, for the convenience of readers, copies of the latest German text book on soaring, namely, the *Handbuch des Segelfliegens*, which was reviewed in this journal last October and described by the reviewer (K.W.T.) as "quite the best general book on gliding ever written." The book consists of 37 sections, each written by an acknowledged expert, under the general editorship of Wolf Hirth. To some extent, of course, parts of it cover similar ground to Hirth's "Art of Soaring Flight," though this is dealt with by a different set of authors with a correspondingly fresh "angle" on the subject. Other matters dealt with extensively are sailplane design, meteorology, aerodynamics, various stages of training, aero-towing, aerobatics, soaring among mountains, competition flying, goal flights, etc.

The *Handbuch des Segelfliegens* can be obtained from THE SAILPLANE Office, 13, Victoria Street, London, S.W.1, for 12s. 6d. post free.

Our stock of *The Art of Soaring Flight* is now getting low owing to the large demand for the book, and any further orders for copies should be placed immediately.

The bound volume of THE SAILPLANE AND GLIDER for 1938 is now ready. The binding is in blue cloth with gold lettering, and the price is 13s. 6d. Readers' own copies can be bound in the same style for 6s.

The Skyward Path

THERE are various lines of the poets in which they seem to have pictured the very delights that sailplaning has made possible in a later age. Though it is doubtful whether the poets themselves would have found the skill to take these frail craft safely into the skies—still less to bring them back safely to earth—they would surely have perceived in their flight a principle of beauty, as well as a marvel of human achievement.

Keats would perhaps have seen in the feats of sailplaning an answer to his challenge:—

". . . Is there so small a range
In the present strength of manhood, that the high
Imagination cannot freely fly
As she was wont of old? Prepare her steeds,
Paw up against the light, and do strange deeds
Upon the clouds?"

What words can better describe the fascination of soaring than his rhythmical lines:—

"Charms us at once away from all our troubles:
So that we feel uplifted from the world
Walking upon the white clouds wreath'd and curl'd."

"Floating" would be more appropriate here than "walking," but the perfection of the metre will not bear the alteration of one word.

Francis Thompson pictures for us a cloudland more remote:—

". . . the clouds that floated
As sea-birds they were,
Slow on the coerule
Lulls of the air,
Lulled on the luminous
Levels of air."

Shelley describes in his poem, "The Cloud," another type of sky, such as men to-day—as well as birds—may explore, supported on effortless wings:—

"For after the rain when with never a stain
The pavilion of heaven is bare,
And the winds and sunbeams with their convex gleams
Build up the blue dome of air,
I silently laugh at my own cenotaph,
And out of the caverns of rain,
Like a child from the womb, like a ghost from the tomb
I arise and unbuild it again."

Sometimes that "unbuilding" comes all too soon, after a few short hours of deceptively brilliant sunshine. Sometimes, against all appearance and prediction, a cloudless spell will lengthen out from days into weeks, with only a film of haze to veil the seemingly transparent depths of blue sky.

C.O.A.

Correspondence

The "Nyborg" Sailplane

SIR,

In the December issue of THE SAILPLANE Mr. Michael Savage states that the experimental data given in Mr. Saffery's report of his first flight in my glider must be rather inaccurate.

I assume that he means to say that he is unable to accept the distance flown and the starting speed given as correct. It would be very interesting to know why he doubts the accuracy of this report.

I can only say that the figures given agree very well with those obtained from many other flights carried out by Mr. Green and myself, but we always managed to stop before we hit the fence, although several times we only just succeeded. If Mr. Savage will take the trouble to come to Worcester I shall be pleased to give him every facility for taking his own readings.

With regard to the formula for sinking speed given by Mr. Savage, I can only say that it is an empirical one from which, if sinking speed and flying speed are known, the lift coefficient and coefficient of resistance can be determined. To determine the relation between the lift coefficient K_L and the coefficient of resistance K_D direct from drawings, it is generally found necessary to make scale models and then measure the K_L and K_D for different velocities and then to introduce a scale factor, a shape factor and a speed factor according to the comparison between results obtained from models and results obtained from full size machines.

Below I give the data of my machine :—

Weight, 450 lbs.
Span, 34 ft.
Area, 50 sq. ft.
Landing speed well below 40 m.p.h.
The camber is 1/6 at the shoulder and 1/12 at the tip.
The lower surface is flat, and no slots or flaps are used.

According to Needham, my stalling speed should be 50 to 55 m.p.h., whereas I get less than 40 m.p.h. in actual flight.

* * * *

With reference to M.G.C.'s letter in the January issue of THE SAILPLANE I should like to point out with regard to the lift coefficient of my machine that his calculated values for the different speeds are the mean values, but as the camber varies from 16% at the shoulder to 8% at the tip, the maximum value of C_L for shoulder parts of the wing must be considerably larger than his figures indicate.

He asks if I have any rational explanation to offer for the exceptional performance of my wing. I can only give two alternatives :—

1. My stated flying speed—not stalling speed—may be wrong.

2. The theoretical data he is using may be wrong. The first alternative would be easy to accept if the speed cannot be proved to be correct.

In THE SAILPLANE of January 20th, 1933, I give a calculated performance for my glider according to my own method, compared with the method proposed by "Kentigern" in THE SAILPLANE of August 26th, 1932, and it will be noticed that for a flying speed of less than 40 m.p.h. the "Kentigern" method gives the better performance, whereas above 40 m.p.h. my method gives the better performance.

According to "Kentigern," a lift coefficient of $C_L=1$ can be assumed for birds.

The main reason for a high C_L is a narrow chord, long span and correct camber gradient over the total length of the wing and the correct wing loading both per unit of area and per unit length of span. The Reynolds number has, apparently, very little effect, if any, on C_L.

* * * *

I am afraid that Mr. Keith Turner's idea of ground effect, as put forward in his letter in the January SAILPLANE, is not quite right.

According to "Airplane Design," by Edward P. Warner, A.B.M.S., page 157, we have :—

> "The increase in lift is only slightly apparent in a monoplane wing set at its angle of maximum lift and with its centre of pressure one-half chord length above the ground—the gain in that case being of the order of 2 to 3%. If the distance be reduced to one-fourth chord length, the maximum lift goes up 10%. The effect on drag is much larger in magnitude and more consistent. The maximum lift to drag ratio is increased by an average of about 18% with the ground one chord length below the airfoil and 32% at one-half chord length."

These figures are, of course, for monoplanes. Now, as my wings are nearly 2 ft. from the ground when standing, they must be 3 ft. from the ground when the glider is 3 ft. up, and as the chord is 1½ ft. mean, we have :—

$$\frac{3}{1.5} = 3.3 \text{ chord length to the ground.}$$

Therefore the big reduction in drag as stated can hardly take place, and we shall have to look for other reasons for the big discrepancies between Mr. Saffery's ground hops and Mr. Slazenger's aero-tows.

To begin with, I think that Mr. Keith Turner should read my article in the October, 1938, SAILPLANE again, and he will notice that there are apparently two conditions of flying at the same speed, i.e., you can fly the glider at one speed and your sinking speed can vary so much that the gliding angle alters from nearly horizontal flight to 1 in 5 down, and by a quick manipulation of the elevator it can be brought back to nearly horizontal again.

Next, I think that Mr. Keith Turner should read Mr. C. Nicholson's description of his flight from Dunstable to Lympne in the SPERBER, as printed in the issue of THE SAILPLANE for January, 1939, where he will find plenty of reason for different results in the same machine.

Finally, it is a coincidence that Mr. Turner should mention the late Mr. G. E. Collins, for I have in my possession, for legal purposes, an affidavit signed by Mr. Collins, part of which reads:—

> ". . . that the said Nyborg's sailplane has, to the best of my knowledge and belief, a smaller gliding angle than any other heavier-than-air flying machine of which I am aware."

T. G. NYBORG,
Boughton Villa, St. John's, Worcester.

Gliding Certificates

THE following gliding certificates, for which qualifying flights were made on the dates shown, were granted by the Royal Aero Club on December 19th, 1938:—

"A" Certificates

No.	Name.	Club.	Date.
1178	L. G. Drew	Cambridge	11.11.38
1179	P. H. R. O. Beckett	Cambridge	10.11.38
1180	J. D. Bolton	Cambridge	30.10.38
1181	J. P. Elton	Cambridge	22.11.38
1182	M. J. Edwards	Midland	25.9.38
1183	L. K. Hodgson	Midland	30.10.38
1184	C. A. Simmons	Oxford	6.11.38
1185	Corinne M. Atkins	Oxford	23.9.38
1186	F. J. T. Atkins	Oxford	23.9.38
1187	J. Aspell-Verdi	Oxford	23.10.38
1188	D. V. E. Howard	Oxford	15.11.38
1189	A. G. Douglas	Surrey	27.11.38
1190	A. D. Jones	Surrey	27.11.38
1191	A. R. Turpin	Surrey	27.11.38
1192	S. D. Loch	Cambridge	16.11.38
1193	W. McD. Morison	Cambridge	25.11.38
1194	M. C. Crosfield	Cambridge	11.11.38
1195	T. J. Primrose	Midland	5.11.38
1196	V. H. Adams	Yorkshire	15.8.38
1197	J. R. C. Young	Cambridge	23.10.38
1198	D. J. C. Pinckney	Cambridge	26.11.38
1199	J. M. Taylor	Inverness	31.5.38
1200	C. E. D. Gibson	Cambridge	11.11.38
1201	F. J. Wood	Newcastle	27.11.38
1202	A. Harris	Derby and Lancs.	11.12.38

"B" Certificates

No.	Name.	Club.	Date.
1180	J. D. Bolton	Cambridge	16.11.38
1182	M. J. Edwards	Midland	25.9.38
1186	F. J. T. Atkins	Oxford	25.9.38
1184	C. A. Simmons	Oxford	10.11.38
1044	E. Pratt	Yorkshire	20.11.38
862	D. E. Stafford	Cambridge	24.11.38
1173	A. E. Tickett	Cambridge	3.12.38
1196	V. H. Adams	Yorkshire	21.8.38
1197	J. R. C. Young	Cambridge	18.11.38
1199	J. M. Taylor	Inverness	20.6.38
1085	G. C. Kyberd	Southdown	4.12.38

"C" Certificates

No.	Name.	Club.	Date.
1182	M. J. Edwards	Midland	2.10.38
1026	W. A. Villiers	London	26.11.38
801	R. Riley	London	26.11.38
1024	L. C. Stenning	London	3.12.38

The following were granted on January 24th, 1939:

"A" Certificates

No.	Name.	Club.	Date.
1203	A. J. B. Arthur	Midland	30.10.38
1204	C. T. Rowe	Midland	26.3.38

"B" Certificates

No.	Name	Club.	Date
870	Eileen H. W. Rowan	Newcastle	21.12.38
1203	A. J. B. Arthur	Midland	1.1.39
1170	W. G. Worton	London	1.1.39
1204	C. T. Rowe	Midland	28.5.38
1193	W. McD. Morison	Cambridge	19.1.39

"C" Certificates

No.	Name.	Club.	Date.
1204	C. T. Rowe	Midland	19.6.38

It is now possible to make out a table of totals for the various clubs, though there are no doubt still some people who passed tests last year and have not yet applied for the certificate.

The list below includes 19 clubs, as against 13 in the 1937 list, 12 in 1936, and 9 in 1935. Clubs which have not appeared in the list before are Oxford University and City, Norfolk and Norwich, Scottish Gliding Union, Inverness, Hull, Surrey, and Croydon.

The Oxford Club has leaped at one bound into fourth place, and for this Mr. Robert Kronfeld, the chief instructor, must take a large share of the credit. The Gliding Section of the Norfolk and Norwich Aero Club has been quite busy; it operates entirely on an aerodrome. So does Hull. The Surrey Club only got going in the autumn and will, no doubt, show up strongly next year; as we go to press the first "C" tests have been passed there. Scotland has woken up; its list, however, does not include the first Scottish gliding certificate, for this was No. 158, earned by a Kilmarnock Gliding Club in May, 1931.

The table given below shows the number of tests passed during the year for which certificates have so far been obtained; not the number of certificates granted during the year.

Totals for 1938

Club	"A"	"B"	"C"	Total
London	95	64	43	202
Yorkshire	45	31	25	101
Derby and Lancs.	26	20	23	69
Oxford	34	27	6	67
Cambridge	29	22	10	61
Midland	21	21	17	59
Newcastle	13	5	3	21
Norfolk	9	8	2	19
Southdown	6	6	3	15
Ulster	4	4	5	13
Scottish Union	5	3	–	8
Furness	5	1	1	7
Inverness	3	4	–	7
Hull	7	–	–	7
Dorset	4	1	–	5
Channel	1	1	1	3
Surrey	3	–	–	3
Kent	–	1	–	1
Croydon	1	–	–	1
Totals	311	219	139	669

"Silver C" Certificates

FOUR further "Silver C" certificates have been awarded to British pilots, and as their tests were completed last year, this brings the total for the year up to twenty, as against nineteen in 1937. The new holders are: J. H. Saffery, of the London Club; P. M. Thomas, of the Cambridge University Club; G. L. Raphael, of the Yorkshire Club; and A. Davies, of the Derbyshire and Lancashire Club. The British Gliding Association now allots numbers in series to "Silver C" pilots of British nationality, so the list below gives the British number before each pilot's name and the international number after it.

1	G. E. Collins	26
2	P. A. Wills	45
3	R. G. Robertson	75
4	S. Humphries	85
5	J. C. Neilan	174
6	C. Nicholson	177
7	Miss N. Heron-Maxwell ...	208
8	P. M. Watt	241
9	H. C. Bergel	244
10	A. L. Slater	291
11	G. O. Smith	298
12	J. S. Fox	338
13	R. S. Rattray...	342
14	P. B. N. Davis	343
15	G. H. Stephenson	345
16	D. G. O. Hiscox	360
17	K. G. Wilkinson	361
18	J. E. Simpson...	362
19	J. V. Rushton	363
20	G. A. Little	364
21	K. Lingford	365
22	J. S. Sproule	366
23	K. W. Turner...	367
24	E. J. Furlong	368
25	S. C. O'Grady	585
26	E. E. H. Collins	594
27	J. L. Wordsworth	595
28	Mrs. J. Price	621
29	G. M. Thompson	622
30	L. R. Robertson	625
31	E. Thomas	856
32	I. Pasold	857
33	H. Tudor Edmunds	858
34	J. C. Dent	859
35	L. H. Barker	860
36	D. F. Greig	861
37	A. J. Deane-Drummond ...	1004
38	A. Ivanoff	1005
39	A. W. Lacey	1006
40	M. H. Maufe	1007
41	J. Parker	1008
42	E. H. Taylor	1009
43	K. M. Chirgwin	1061
44	R. Pasold	1062
45	J. W. S. Pringle	1063
46	J. A. Rooper	1064
47	J. H. Saffery	1093
48	P. M. Thomas...	1094
49	G. L. Raphael	1095
50	A. Davies	1096

News from the Clubs

London Gliding Club

For the last two months gales, snow, fog, rain and non-soaring winds have taken turns at interfering with the flying, the two privately-owned KITES have taken turns at going away for repairs, and the club GRUNAUS taken turns at going away with the winch cable. The first time it was a piece of grit fell into the mechanism at the launch and prevented the hook being pulled open; the second time the pilot forgot to release. Apart from such minor incidents everything has gone smoothly except the wind. In spite of winter, people still come out here on week-days, which in fact have provided much of the best soaring. On Monday, December 5th, Greenshields did part of his "Silver C" with a flight of 5 hrs. 5 mins.

Saturday, December 3rd.—Soaring conditions rather strange. Nobody could get much height over the hill adjoining the club ground, but at the Whipsnade end sailplanes were hovering at several hundred feet well out from the hill towards Ivinghoe. Were the Ivinghoe hills throwing up a stationary wave? The writer, after hill-scraping at the Dunstable end, went off south and rose all the way to Dagnall; but on the way back it suddenly became rough and pushed GRUNAU below the hill top, as if the wave length had suddenly changed and placed Whipsnade in the down-wash instead of just in front of the crest.

Charles Wingfield, of the Cambridge and Midland and, before that, of Macgill University Gliding Club in Canada, had his first soar at Dunstable. Another visitor was a pilot from Czechoslovakia.

Sunday, January 8th.—A fierce S.W. wind, soarable only in the Bowl, with violent heaves up and down, proved ideal weather for the CAMEL, in which Ivanoff climbed above everybody else.

Wednesday, January 11th.—Cole, in a club GRUNAU, hung on to the winch cable and was thus kited up to 1,500 ft. The wind, according to met. reports, was 28 m.p.h. on the ground and 35 to 40 m.p.h. at 1,600 ft., and blowing from about S.W.

The Year's Flying.—From January 1st to December 31st, 1938, there were:—

13,173 launches;
1,584 hours 15 minutes flying time.

This exceeds last year's totals by 1,687 launches and 489 hours 24 minutes flying time.

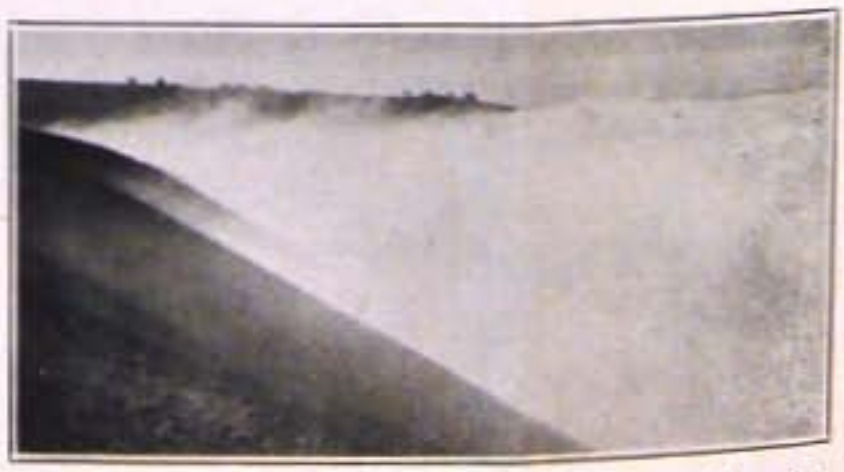
Summary of Flying.

Week ending:		*Days of Flying*	*Ground-hops*	*Timed Flights*	*Flying hrs.*	*Time mins.*
December	4	4	20	56	21	2
,,	11	3	36	16	6	41
,,	18	1	—	6	—	26
,,	31	2	—	24	4	18
January	8*	4	—	65	27	28
,,	15	2	—	22	3	41
,,	22	2	20	15	1	13
,,	29	1	—	2	—	2

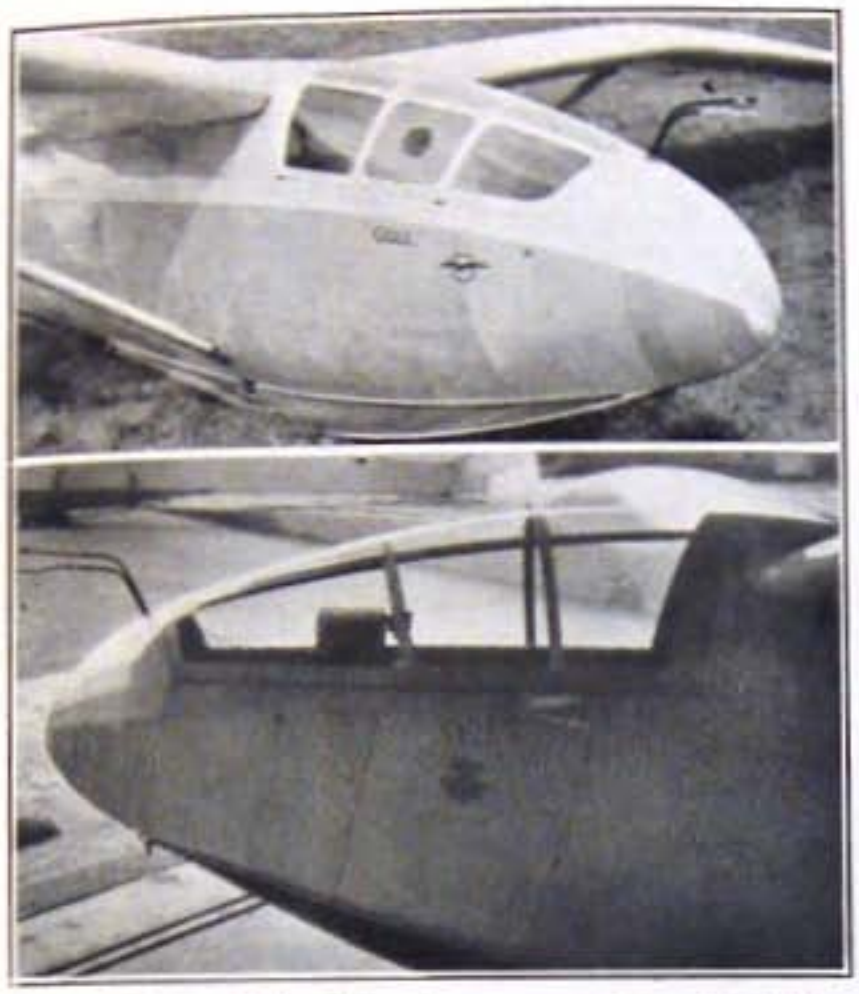
* Eight days commencing Sunday, January 1st.

Certificate Flights.

December 3rd.—Stenning, "C."
December 5th.—Greenshields, part "Silver C" (duration).
January 1st.—Worton, "B."



Recognise it? Dunstable Downs nearly submerged by a November fog. The wind is blowing from left to right across the fog surface, but down below it is calm.



The latest "Kirby Gull" sailplanes have an extended cockpit window, giving greater visibility. Above is the first "Gull" ever produced, owned by D. S. Hiscox, who has now exchanged it for the latest model shown below.

Club Dance.—This, on December 10th, was announced as a "Kiddies' Party," with a warning that anyone coming in adult clothes would have them removed. On arrival, guests found the walls placarded with illustrated nursery rhymes by Lawrence Wright. We can't do justice to the pictures without using colours, but here are some of the rhymes:—

Boys and girls, come out to fly,
The winch is broken, the cars are dry,
So come with a whoop and come with a call,
A three shilling hop will serve you all.

I love little FALCON,
Her ways are so calm,
And if I don't stall her
She'll do me no harm.

I'll sit in the hill-lift
As stable as pie,
And G.B.'s will hate me
Because I am high.

Grunau-bye-Baby, on the hill-top,
When the wind blows, the GRUNAU will rock,
When the wind fades the airspeed will fall,
Down will come GRUNAU BABY and stall.

I had a little nut tree
And nothing did it bear
But a SCUD II sailplane
Which had landed there.

The Yorkshire Fire Brigade
They came to visit me,
And all for the SCUD
In my little nut tree.

"Pussy-cat, pussy-cat, where have you been?"
"I've been to ——'s* to get my machine."
"Pussy-cat, pussy-cat, what found you there?"
"I found the damn thing was *still* under repair."
[* Censored by our legal advisers.—ED.]

List of Machines.

In publishing the yearly list of machines kept at the club (all or part time), we have for once been able to get the private owners' list correct first time by consulting the Manager's record of those for which rent is paid, ought to be paid, or which will be impounded to enable it to be paid.

Club machines are:—
FALCON III two-seater.
RHÖNBUSSARD.
"Desoutter" GRUNAU BABY I.
"Slingsby" GRUNAU BABY II.
"Baker" GRUNAU BABY II.
KIRBY KITE for use of Imperial College Group.
FALCON I.
KIRBY TUTOR.
KIRBY KADET.
Three NACELLED DAGLINGS.
Five OPEN DAGLINGS.

Private machines are:—
MINIMOA, owned by Wills, at present stored away for the winter.
RHÖNADLER, owned by Fox, Edmunds and Davis; for sale. Edmunds is taking a share in a VIKING and Fox hasn't made up his mind yet what he'll do.
RHÖNSPERBER, owned by Dewsbery, Nicholson and Cooper.
RHÖNBUSSARD, painted cream, owned by R. Pasold. His brother has gone abroad, and so a share in the machine is for sale.
RHÖNBUSSARD, owned by Mrs. Price, Cooper and Baker; at present at the Surrey Club.
GULL, of latest type, acquired by Hiscox recently in exchange for his old one.
GULL, also of latest type, painted blue, owned by Greig, Stephenson and Dent; first flown by Greig on December 27th at Dunstable, and now usually goes to Reigate when southerly winds blow.
KIRBY KITE, painted blue-green, owned by Bucknell.
KIRBY KITE, painted eggshell-blue, owned by Briggs. Both these KITES were acquired by their pilots before reaching "C" stage.
GRUNAU BABY II, owned by Miss Edmonds, now at the Surrey Club, and unlikely ever to return.
SCUD II, owned by Horsfield. Wright and O. H. Furlong have now taken shares in it.
SCUD II, painted cream, owned by Briscoe. Not been aired for some time.
SCUD II, painted green, owned by Wood; equally inactive.
CAMEL, owned by Sproule, Ivanoff and Davies.
GREEN WREN, owned by the brothers Read.
TERN, owned by Gardiner (not the Cambridge one), who hasn't been near it for nearly two years. Would probably be glad to sell it.
KASSEL 25, owned by Toth. For sale to anyone who will do a bit of repair work on it.
A VIKING I has been ordered by Dr. Edmunds and E. J. Furlong.
Some members who are in the De Havilland firm at Hatfield are rumoured to be building a sailplane of their own design.
Machines which appeared in last year's list and have since been sold are: HJORDIS, which has gone to South Africa; WHITE WREN, to Portsmouth; and CAMBRIDGE II, to Hatcher and Copeland of the Surrey Club.

Surrey Gliding Club

December-January.—Deep snow and strong easterly winds made gliding impossible, but provided some very good ski-ing at the end of the old year.

The club hut is now completed and more or less furnished. This building used to be on top of the hill, but was taken to pieces by the members, who carried whole sides and the roof down the hillside after dark, after gliding had finished for the day.

On **Sunday, January 8th,** A. G. Douglas got his "B" off the mantlepiece in the NACELLE.

On **Sunday, January 15th,** three machines put in over six hours' soaring, the GULL reaching 1,700 ft., the GRUNAU 1,500 ft., and the club TUTOR 1,200 ft. The wind was strong enough to necessitate flying about 8 m.p.h. above normal to remain in front of the hill.

Saturday, January 27th.—Light east wind; fine. High winch launches in open PRIMARY.

Sunday, January 28th.—Strong east wind, very cold. All the members retired inside the hangar and started finishing off the floor. The contingent from the Tank Corps arrived with a magnificent trolley for removing the PRIMARY, which they had

built; and Briggs arrived with his KITE. The day ended with tea in the hut out of thermoses, and by the light of three candles.

Wednesday, January 31st.—Fine and calm. Windsock went crazy with thermals, and blew from every direction, finally tying itself up round the post, having retired on its own to half-mast. Gulls circling almost continuously from what we suspect to be a regular thermal from the big sandpits. A. D. Jones got his first thermal after a high launch in the PRIMARY, and mistook the roaring noise for speed, stalled, and did his best to write off the winch—much to the mild surprise of the occupants—but missed by at least 15 ft., fortunately doing no damage.

Cambridge University Gliding Club

During the vacation, the club machines were given a thorough overhaul, and preliminary work was begun on the GRANTA. This machine has been designed chiefly by Payne as a high performance secondary. It is now under construction, and its salient features are as follows:—

It is small and easy to build. The wings, supported by single struts, are of single spar construction, with a torsion leading edge. The fuselage resembles that of an H.17, with a wheel on the skid. With a good speed range, and high safety factor, it will be suitable for aero-towing and capable of aerobatics.

Training was resumed at the beginning of term on two NACELLES, with ample spares in hand. Progress has been rather hampered by mud and wind.

Cross-country in January.

January 20th.—Pat Pringle opened the thermal season with our first cross-country flight. He was aero-towed from Marshall's Aerodrome in the KITE, taking off at about 1.30 p.m. in an easterly wind, under widely spaced and rather poorly developed cumulus. He released at 3,300 ft., and in the words of the towing pilot, "I saw his tail disappear into a cloud." Soon after the take-off there was a shower of hail. Rather patchy thermals up to 8 ft. per second were encountered, and when he arrived over Caxton at about 2,000 ft., he decided to call it a day. He finished his flight with a spectacular shoot-up, to the complete astonishment of the toiling beginners below.

January 22nd.—Proceedings were hampered by a high wind, which proved the undoing of a DAGLING. The TOTTERNHOE narrowly escaped disaster when the instructor for the day decided to have a flight. In coming in to land he cut his approach rather fine and brushed the top of a hedge. Fortunately no damage was done, and on alighting he was heard to remark: "Who said there was no wind gradient?"

Wiltshire Camp.—In view of the success of last year's camps in Wiltshire, it has been decided to hold a similar one during the first fortnight of April this year. It will probably include the three week-ends, April 2nd, 9th, and 16th. Hill soaring is possible in all wind directions, and aero-towing will be available at Huish when required.

Private owners will be welcome; they are asked to write to the Camp Secretary, 1, Bene't Street, Cambridge, if they intend to come and require accommodation.

Certificates Gained.—Morrison, Fowler, and Bramwell have qualified for their "B" certificate.

Yorkshire Gliding Club

January.—Exceptionally severe weather has practically brought the place to a standstill this month. There has been snow on the Bank most of the time and the road has been intermittently impassable.

Flying took place on January 1st, the wind blowing from the west at about 20 m.p.h. for a short time, and Hastwell managed 15 minutes in the KITE before it became too dark. The brothers Sharpe each did a test of the "newly-wheeled" DAGLING and got very wet in the process. Mudguards seem to be indicated!

Weather conditions then closed the whole show down until the 15th, when a really decent hill-soaring day with a south-west wind came along. Sharpe, Saffery, Barker, Hastwell and Pick (A. O.), all flew in KITES and GRUNAUS, and put in an hour and twenty minutes between them; the "soarable" part of the day was all too short. Robson, Watmough and Maw (J.) from Sunderland (Co. Durham) Branch arrived just too late and had to be content with circuits. The best lift of the day was about 1.20 p.m. and appeared to be boosted hill-lift right over the Point, and in it Billy Sharpe reached 1,500 ft. The wind backed rapidly to south-east at about 4 p.m., in which quarter it remained until the end of the month.

West Riding Branch.

This branch reports that it has been honoured by Sir Emmanuel Hoyle, Bart., O.B.E., J.P., accepting the office of President. Wordsworth has given several days' assistance, and C. Brook, who is "the man on the spot," has worked very hard and given instruction on all possible days. Weather conditions have made such days very few and far between. However, a goodly number of members are enrolled and looking forward to better weather.

The training ground is situated very high up and is exposed; we understand that there is a more sheltered field which may be secured in the near future. A winch car has been put into service and was first tested by Cyril Brooke on January 22nd. Everything worked well except the release—until Brooke found that he was sitting on the operating ring!

Newcastle Gliding Club

For the last week the state of the weather, like another State, has been rotten, and activities have been confined to Cramlington.

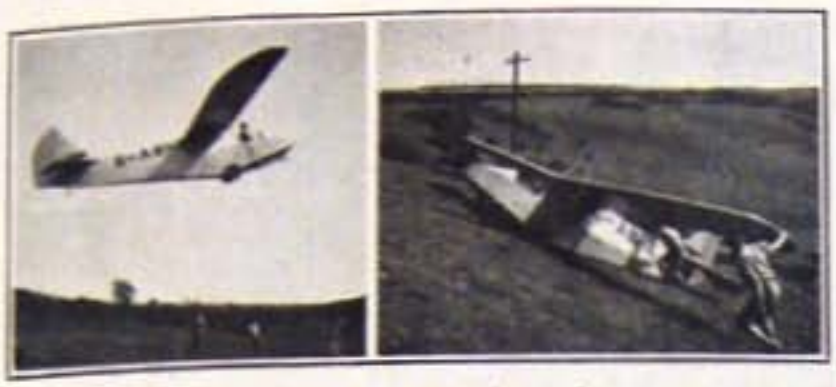
Sunday, January 15th, saw boisterous conditions, resulting in fun and games in the TUTOR for the more advanced pilots and no flying for the luckless trainees.

January 22nd.—In spite of rather moist conditions there was a good turn out and a useful day's flying. The NACELLED PRIMARY was tested out after general overhaul and handed over to an avid bunch of "B" aspirants, of whom Harrison and Phillipson collected theirs in very certain style. The GRUNAU was also flown considerably by pilots anxious to practise tight circles as a result of reading Hirth, whilst at the other end of the scale the *ab initios* wrestled manfully with the intricacies of sliding the DAGLING.

Artistic talent is present in the Durham County Branch of the Yorkshire Gliding Club, one of whose members produced the above for a Christmas card.

(Drawing by James Robson.

Dorset Gliding Club



The "Aeronca" which, after its engine dropped out, was converted to a glider, is here seen in operation at the Dorset Gliding Club.

After reading H.J.P.'s article in THE SAILPLANE on soaring his AERONCA, readers may like to hear the rest of the story.

He passed it on to the Dorset Gliding Club, and although no serious soaring was done with it, we had great fun with the little machine, finding its manœuvrability just the thing for our very cramped site at Maiden Newton.

At the moment the fuselage is suffering from curvature of the spine due to a stall landing being made on to an ancient British earthwork, of which we have several fine examples on our site. However, the end of the chapter is not yet, and we hope in time to record further useful work by this sturdy little warrior.

A few notes on the Dorset Gliding Club might not be out of place. The early part of the year was spent in completely rebuilding the DAGLING, and doing repairs to the other machines. Two months were spent waiting for the wind to blow in the right direction, during which we had the mortification one day of seeing Fox fly right over our site on his way to Cornwall.

Plans were made for Empire Air Day, but once again the local weather defeated us.

From then onwards until the beginning of September there was much hoppery on the DAGLING and one or two certificates were taken, but after about the second week in September the weather was consistently bad at week-ends, and in November, during a particularly bad gale, the hangar was practically wrecked, the DAGLING, SCAUP and AERONCA all being damaged.

This will, I am afraid, close the Maiden Newton site for good as the hangar cannot very well be repaired. (Incidentally it has stood the south-westerly gales there for eight years, probably as long as any gliding club hangar in England.)

We are hoping, however, to introduce winch-launching this year on Yeovil Aerodrome, where we shall have much better facilities.

Derbyshire and Lancashire Gliding Club

January.—An energetic programme for the coming year is now completed, and it includes inter-club competitions, members' camp for a week at Whitsuntide, and a two weeks' training camp in September, together with a proposed inter-club aero-towing meeting at Easter.

The latest thing in "Hush-hush" winches is now nearing completion and, together with new retrieving cars, will provide members with greater facilities for the pursuance or learning of the gentle art than ever before.

During this month we are to lose the services of one of our most popular and hard-working members, L. R. Robertson, who has taken up an appointment with the Municipal Authority of Dartford. As an instructor, two-seater pilot or adviser on our outside improvement scheme, "Robert" has made himself invaluable, and it is with great regret that we part with him. The club's best wishes for his future success will accompany him.

Members are reminded that the Annual General Meeting takes place at the club premises on Saturday, February 18th, at 7 p.m., and even if the almost continuous snow which has isolated Camphill for the last six weeks is still with us, it is the duty of everyone to make a special effort to attend. A supper will follow.

Sunday, January 1st.—Wind W.S.W., 42 m.p.h., dropping to 20 m.p.h. later. The new year opened well with a fine soaring day. In the morning there were smooth conditions, often associated with snow on the ground, but with the rapid thaw during the day the smoothness gradually disappeared. Have other clubs noticed any effect of a snowy landscape on flying conditions? Those who were flying during the shower in the afternoon saw the unusual spectacle of a completely circular rainbow dipping down right under them and up again the other side.

Week-end, January 7th and 8th.—Low cloud and rain on Saturday and a 60 m.p.h. W.S.W. wind on Sunday prevented any flying. During the height of the gale the curl-over at the edge of the hill was producing a 30 m.p.h. E. wind in parts of the landing ground.

Saturday, January 14th.—Low cloud and rapidly thawing snow. A towing car was cranked up when in reverse gear by mistake, and the spectacle of an empty car rapidly disappearing backwards in the fog and chased by a yelling mob was, we are told, quite novel.

Sunday, January 15th.—Wind S.W., 40 m.p.h. Shepard had a rough 20 minutes in the club G.B. over the south corner in the afternoon, but conditions were not very suitable, and rain set in shortly after, so attention was concentrated on the programme of public works.

Sunday, January 22nd.—Wind S.S.W., 20 m.p.h. At last we were able to make a start with our training for the new year, and actually got in 15 ground hops before the promised warm front arrived and rain put a stop to the day's flying. Many members have become expert at table tennis this winter.

Sunday, January 29th.—Wind E. 25 m.p.h. More table tennis. Also experiments with skis by the gentlemen, while the rabble indulged in vulgar brawls in the snow. The snow all round the hangar varied in depth between 3 and 5 ft.

Summary of flying for January.—Bungy launches, 16; winch launches, 24; flying time, 9 hrs. 10 mins.

Southdown Gliding Club

Eighth Annual Report, 1938.

The following are extracts from the Report:—

During the year just closed the club has progressed steadily. The influx of new members has increased by about 40 per cent. over that of the previous year, and the financial position is sound.

Records for the period show a total of some 1,500 launches. Of certificate-qualifying flights officially observed, the following are recorded:—"A," 12; "B," 9; "C," 4; raising the club aggregate at date to "A," 84; "B," 48; "C," 36; and Silver "C," 1.

The club was represented, as usual, at the annual National Competitions organised by the B.G.A. this year at Dunstable, G. A. Little, in his TERN, securing 4th place prize in the Seager Trophy event.

In the matter of donations, Dr. Hackworth, the Chairman, presented a water tank, Mr. S. G. Stevens a towing car, and Mr. F. King some electrical equipment. There are also anonymous donors of some £45 cash. Claims upon Government Subsidy have been presented and paid over to the total of some £93.

Club machines now comprise:—Two R.F.D. training-type machines (one new primary and one soaring-practice); one B.A.C. sailplane with special skid-type landing gear (optional one/two-seater with dual controls); and the R.F.D. variable span sailplane. Members' machines include:—The TERN, a KIRBY KITE, two GRUNAU II machines, and a special type of powered ground trainer. Another machine is under construction, and the club is considering the purchase of another machine of the soaring-practice type. There is also a reserve of sundry spare parts and fittings.

Club transport during the year was considerably increased to a total of some six towing and retrieving cars, and there is also a winch. The last named was fitted during the year with the new telephonic system of communication by which the pilot may control the speed of his launch up to the time of the actual cast-off, and this was successfully demonstrated to the Press during the month of July. Transport, at the close of the year, comprised four vehicles in running order. Other equipment includes 1,000 ft. of hill cable and 3,000 ft. of winching cable.

The workshop (both wood and metal sections) has been extensively used during the year and proved very useful. The electric lighting equipment continues to give every satisfaction. The appointment of a permanent steward has proved satisfactory in every way.

In addition to the two main sites rented by the club others in the district have been used from time to time experimentally,

and a scheme is under consideration whereby it is hoped to take advantage of varying weather conditions to enable more soaring to be undertaken by club members qualified for it by the process of "visitation."

Arraogements are well in hand for a scheme of aero-towed launching to be available for club members at the near-by aerodrome at Wilmington, and this should be in operatoin in the coming year.

One of the most noteworthy features of the year just closed is the fact that the last payment of cash, in redemption of the original overdraft loan of some £300, has been effected, and the club is now free of all debt and may reasonably expect to develop more freely in the future. Partly by reason of this, and partly because of the demands upon his time of professional duties in aviation, the Founder-Secretary of the club, Mr. A. York Bramble, has asked to be relieved of this office, which he has held for some eight years, together with that of Treasurer. The Committee have accepted this with regret, and record their thanks for his long services, and they have offered him a Vice-Presidency.

By the inter-affiliation of this club with the Third Avenue Club, Hove, the club now has "town" premises, comprising living accommodation, club bar, ball room and games room. Such additional amenities will doubtless prove advantageous to this club.

The club took its usual part in Empire Air Day flying this year at Shoreham Airport, when Messrs. Little and Stevens took over their respective sailplanes and gave demonstration flights to the accompaniment of a running commentary by the General Secretary. The club's participation in this event on behalf of the R.A.F. Benevolent Fund was much appreciated by the organising authorities.

The ninth **Annual General Meeting** and Social of the Southdown Gliding Club, held on January 22nd, at Langford's Hotel, Hove, was marked this year by noteworthy features.

Administrative officers elected for 1939 included Dr. V. C. Hackworth as Chairman, Mr. S. G. Stevens as Hon. General Secretary, Mr. G. A. Little as Chief Ground Engineer, Chief Instructor and Club Delegate to the British Gliding Association, and Mr. E. A. Edmonds as Hon. Treasurer. The new registered office of the club is at Southerlea, Meadow Close, Hove 4. Mr. R. F. Dagnall remains the club's President and Mr. F. White, of Shoreham, and Mr. A. York Bramble, the retiring General Secretary, were elected Vice-Presidents.

After cocktails a large company sat down to dinner in the newly-affiliated Third Avenue Club. Following this came a presentation to the Acting-President, Mr. York Bramble, of a fine pair of binoculars on behalf of "Members of the Southdown Gliding Club," in appreciation of his honorary work in organising and administering the affairs of the club since its inception. In reply Mr. York Bramble referred to the interesting fact of his attempt to found a gliding school as far back as 17 years ago, near the club's present site at the Dyke, and which ultimately resulted in the founding, in 1930, of the Southdown Skysailing Club. This club, with sundry changes, had continued to function right through the "slump" period of 1933 (when nearly 120 British Gliding Clubs became moribund, leaving only some half-dozen active) up to the present time. He stressed that the importance of the club's participation in the early history of British Gliding is yet to be fully recorded.

Then followed the presentation of club trophies as follows: Leaney Challenge Cup for greatest distance flown from club's site in the year, Mr. Stevens (17 miles); Yorke Cup for outstanding achievement during the year, Mr. Rubick (2nd year) for his work as primary training instructor; Lawford Challenge Cup for greatest altitude, Mr. Stevens (3,500 ft.); "Silver C" pewter mug, Mr. G. A. Little; ordinary "C" ditto, Mr. L. Huggett. There followed a wedding presentation of a barometer, a book, and flowers to Mr. S. Cox (assistant treasurer) and his wife, both flying members of the club.

To the toast of "The Visitors," proposed by Mr. Stevens, Dr. A. E. Slater, internationally known as the Editor of The Sailplane, replied with congratulations to the retiring Secretary-Treasurer on the success of the club, and suggested that development of the technique of thermal soaring from winch-launching might be pursued with considerable advantage on the South Downs. Another internationally known figure of the gliding world also spoke in reply—Mr. J. S. Sproule, who with Flt.-Lt. Murray last year put up the then world's two-seater glider duration record. He considered that the club should publicise itself and its activity more, the which he "always found to be steadily going on" whenever he visited the South Downs.

Then followed a variety of entertainment, including solos on the piano-accordion, by Mr. Hume, and on pipe and "humanatone," by Dr. Slater, Mr. Filmer's gliding films, and the cartoon "Cloud Cuckoo" (projector lent by Mr. S. Legg), cabaret given by members' friends, and finally dancing, with prizes given by Dr. Hackworth and Mr. and Mrs. Cox.

Croydon Gliding Club

At the annual meeting of the club on January 27th, according to a local paper, the chairman said that the membership showed a substantial increase, and referred to the success of the club's camp at Devil's Dyke, the Southdown Club's site, last Easter. He hoped that the dual control two-seater which he was building would be ready by Easter. The club's new site at Biggin Hill was ideal for primary training; they now had a 21 h.p. car for winching the machine.

Mr. C. Palmer was re-elected chairman, and Mr. K. Snugg secretary; the secretary's address is not given.

Published by H. O. Davies, 13, Victoria Street, London, S.W.1. and Printed by Hicks, Wilkinson & Sears, 4, Dorset Buildings, Salisbury Square, E.C.4.