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EDITED BY ALAN E. SLATER

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The Ninth Elmira Contest

AMERICAN soaring is going ahead. At this year's annual meeting at Elmira, N.Y., held from June 26th to July 10th, 20 machines were soared by 59 pilots for a total of 418½ hours, and 5,841 miles in all were covered on distance flights.

The most important change in the rules was a big jump in the minimum performances required to earn points; these were raised to "Silver C" standard—31 miles distance, 3,280 feet height, and five hours duration. When the new rules were announced, says *Soaring*, there was rather a hue and cry from some of the intending competitors, who thought their low performance craft not up to such high standards, and did not realise that this was precisely the purpose of the change. The purpose was, in fact, to encourage the production of high performance sailplanes, which had been all too few in previous contests.

One of the most original of the new machines was that designed and built by Robert Stanley, which had a monocoque metal fuselage, and straight "middle-wings" with a slight dihedral angle. On it he set up a new American height record of 6,380 feet on June 29th, and on July 2nd, having had no previous experience of cross-country flying, went 122 miles. But while he was telephoning his whereabouts, some souvenir-hunter stole the "flippers," which he had removed and put in the cockpit, so his machine was henceforth out of the contest.

Robert Stanley was then lent another interesting new design, the Ross IBIS, belonging to the Soaring Society of America, in which he proceeded to put up a new American distance record of 219 miles on July 4th by flying to Washington. The IBIS, a development from the Ross-Stephens sailplane described in this journal last December, has a rather small span and flies best at 37 m.p.h. It looks a beautiful machine. Among others who flew it, Lewin Barringer took it up to 5,600 feet on July 10th.

Another new design was the Bowlus BABY ALBATROSS, an intermediate or "utility" type with a dural tube boom to the tail, a span of 44 feet, and a price of $750. It was flown by Jack O'Meara, "Silver C" No. 12 (1933), who has been out of soaring for a few years but made an impressive come-back by taking the machine, amongst other feats, on a goal flight of 133 miles, and finishing the contest 5th in order of points.

American pilots seem to make a speciality of designing, building and flying their own machines, for another who did so was Stanley Corcoran, whose CINEMA, although of intermediate performance, took him on flights of 202, 183, and 146 miles—the 3rd, 5th, and 10th longest of the meeting.

Four two-seaters took part, one of which, the SCHWEIZER all-metal sailplane, was a further new design of interest, with a remarkable slope-soaring performance. Another, that of Stanley Smith (yet another designer-pilot), put up an American distance record, for flight with passenger, of 28 miles, though this was exceeded later by two German entrants, each of whom flew a KRANICH. Herr Bayer took his wife 97 miles, and Peter Riedel went 73 miles with the Bureau of Air Commerce Inspector in charge during the contest.

Peter Riedel, however, flew his KRANICH solo most of the time, and so well that he finally came out top of the contest with 1,486 points. Being of German nationality, there were some prizes he was not eligible for, but he was a most welcome participant. His most noteworthy feat was a world's distance goal-flight record of 225 miles on July 3rd, when he flew to the Hoover Airport at Washington. He was also, on July 5th, the first soaring pilot to reach New York City from Elmira (196 miles). After much blind flying in clouds he arrived over the city at 6,300 feet, and, with so much height to spare, flew on to Atlantic City and then out over the Atlantic Ocean (which gave him one of the greatest thrills of his life) before returning to land.

Other German machines were two MINIMOAS, a RHÖNSPERBER and a RHÖNBUSSARD; the rest were American. In a MINIMOA Richard DuPont regained the altitude record, and won his father's Gold Trophy, by climbing to 6,700 feet on July 5th. During the contest there were four altitude flights of over 6,000 feet and thirteen of between 5,000 and 6,000.

The RHÖNSPERBER was flown by Emil Lehecka who, by consistently good flying, including a 130-mile goal flight, came out top of the Americans and second only to Riedel, with 1,271 points, and so became Soaring Champion for the year. Richard DuPont came next with 968 points, and Chester Decker fourth with 870 points.

To sum up, there were 11 good cross-country days out of the 15; seven new pilots have "Silver C's," and Riedel, Stanley, and Corcoran have done half the "Golden C." It is noteworthy that in America cross-country pilots often keep going for a considerable time; twelve distance flights took over six hours, and three of these over seven hours.

From Here and There

Gliding Broadcast.—The B.B.C. announces that on October 8th the weekly survey of Midland sport will include an eye-witness account of gliding on the Long Mynd by a Birmingham journalist, Ivan Roe. The announcement concludes: "Tuition is strict, machines are well constructed, and enthusiasts have been heard to declare that 'it's safer than Rugby football.' "

* * *

Olympic Gliding.—In view of the efforts being made to include sailflying as an Olympic sport, it is of interest that the 1940 Games are now to be held in Finland instead of Japan. The Finnish Olympic Committee has announced that the Games will begin on July 20th that year, but that they will consist "not of modern sports but of the sports made famous by the Olympiads of old."

* * *

In Switzerland.—Mr. J. E. Simpson, of the Cambridge Club, spent two days at the end of August with the gliding men on Berne Aerodrome. He flew their GRUNAU BABY, and next day had an hour's thermal flight in the SPYR III, the type which was used in last year's international contest and was described in THE SAILPLANE last November. Mr. J. W. S. Pringle, also of the Cambridge Club, happened on the Swiss National Gliding Competitions at Braunwald earlier in the month, and has promised some photos which he took there.

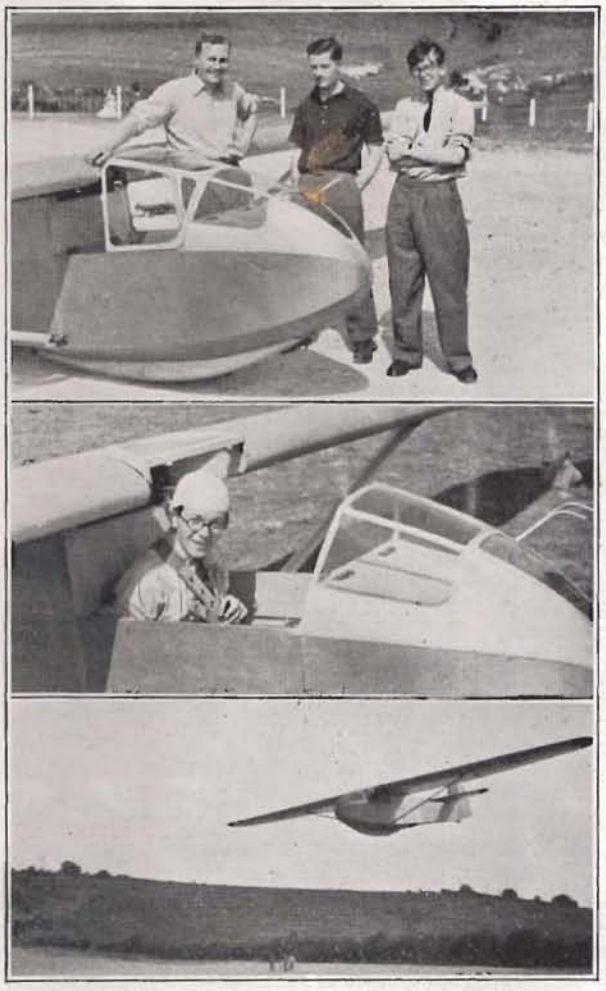
* * *

Gliding and Power Flying.—Seven members of the Cambridge Gliding Club attended the camp of the University Air Squadron at Abingdon at the end of July. One of them, H. H. Ricketts, was allowed to fly solo on the second day of his power-flying tuition, and another returning from a flight to Aldergrove, made a very creditable forced landing over some trees into a field "about the size of a postage stamp." Wing Commander C. E. W. Lockyer, chief instructor to the squadron, told the *Evening News* Air Correspondent: "All of my glider men, without exception, are jolly good pilots, and I make a point of advising every pupil in my squadron to join the Varsity Gliding Club if he can possibly manage it. Glider pilots show themselves to be weather-wise, besides having a good 'feel' of the air and sound judgment."

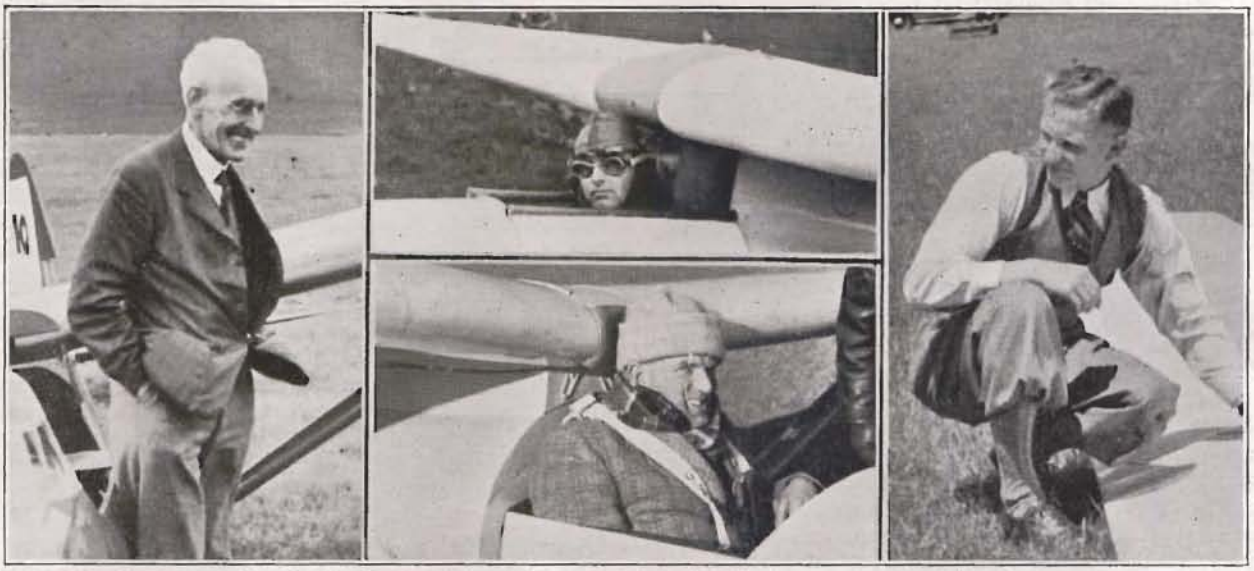
* * *

Ulster Gliding.—The Rural Council of Limavady (where the Londonderry Air came from) continues to try and cramp the style of the gliding club at Magilligan Strand, though their own style has been somewhat cramped by a Board of Trade order permitting the use of the Strand. Mrs. Gregg, who said she had had her foot "all but severed" by the towing wire, complained of "gliding operations which were carried on by people who had so little regard for common courtesy that they had the effrontery to oppose the ban imposed by the council, who represented the ratepayers, and proceeded to obtain the sanction of the Board of Trade." Mrs. Simpson wrote that the bungalows there were difficult to let on account of the gliding, while Mr. Semple's explanation of the existence of the club was that it had been financed by "the linen people of Belfast" in order to increase the sale of their linen.

Frank Hawks.—Lieutenant-Commander F. M. Hawks, the American high-speed flyer, who was killed on August 23rd, when his aeroplane struck electric cables, may be remembered for the trans-continental flight in a towed glider which he made in 1930. He left San Diego, California, on March 30th that year in his glider EAGLET, reached New York eight days later, having been towed across America in 19 stages by a "Waco" with Wright Whirlwind motor. The total distance covered was 2,860 miles, and total flying time 36 hrs. 47 mins. on tow, plus 7 hrs. 12 mins. in free flight after casting off the cable over the various stopping places. At one point the "train" climbed to over 10,000 feet in an effort to escape the bumps, and at another they ran into a line squall at 8,000 feet and power-dived through the up-currents, the aeroplane's engines going full throttle to prevent the glider overtaking it.



The "Camel," a new sailplane designed by A. Ivanoff and J. S. Sproule, and built by Scott and Zander, had its first flights last month. It has folding wings and other ingenious novelties, which we hope to describe later. The span is small and the cruising speed somewhat high. If further trials prove satisfactory, the machine may be put into production. Above are shown Mr. Ivanoff, Mr. T. T. Davies (part owner) and Mr. Sproule beside it, Mr. Sproule in the cockpit before putting on the cover, and one of the first test hops. Note the excellent view, helped by a transparent panel in the nose. The cockpit is roomy and comfortable, and specially easy to get out of in an emergency.



Four new "Silver C" pilots. On the left, Mr. Eustace Thomas beside his "Condor"; top centre, Mr. L. H. ("Tough Tom") Barker in his "Scud III"; below, Mr. D. F. Greig in his "Grey Kite"; and right, Mr. Ingo Pasold, of Czecho-slovakia, beside his "Rhönbussard."

"Silver C" Certificates

THE following "Silver C" certificates have been awarded by the International Commission for the Study of Motorless Flight (Istus):—

856	...	...	E. Thomas
857	...	...	I. Pasold
858	...	...	H. Tudor Edmunds
859	...	...	J. C. Dent
860	...	...	L. H. Barker
861	...	...	D. F. Greig

Mr. Thomas must be the oldest "Silver C" pilot in the world; but as he has not stated his age, and threatens us with a libel action if we get it wrong, the most we can say is that he is commonly believed to be nearer 70 than 60. Portraits of four of the new "Silver C's" are given above; Captain Dent's photo was published a few months ago, while Dr. Edmunds has leaped into fame with such rapidity that he has not yet found his way into our portrait gallery.

In addition to the above, six more names have been sent in to the Istus, two further completed claims are now being checked up by the British Gliding Association, and supporting documents of some of the tests have been received from eight other persons by the B.G.A.

Club for Liverpool.—Mr. P. E. A. Cowley, of 47, Malvern Road, Wallasey Village, Cheshire, would be pleased to meet any gliding enthusiasts near Liverpool with a view to forming a gliding club.

* * *

An Indian Proposal.—Mr. J. W. S. Pringle has had a letter from a member of the Central Indian Legislature who intends to form an "All India Gliding Club," and wishes to find out if anyone in England would be willing to go out to India for a year to act as instructor in flying and construction. Enquiries should be addressed to Mr. Pringle at King's College, Cambridge.

Another Duration Record

LESS than a month after the British single-seater duration record was raised to 13 hrs. 27 mins., it has again been beaten. On August 18th Flying Officer A. N. Young (Sub-Lieutenant, R.N.), who is attached to the Fleet Air Arm at Leuchars, Perthshire, flew for 15 hrs. 47 mins. at the Midland Club's site at Long Mynd, Shropshire.

Mr. Young had his first introduction to gliding only five days before, when he joined the club's instruction camp. Moreover, he was in a machine he had never flown before, the FALCON II belonging to Mr. C. Espin Hardwick, President of the club. He was launched in it by the club tractor at 5.15 a.m., having previously stoked up with a hot breakfast provided by three camp members who had stayed up all night. On board were bags of food, coffee and fruit, and two cushions which proved their value later in the day.

Careful flying was necessary for the first hour, as the wind was light and rather southerly, and the hangar lights had to be watched till dawn. Sunrise found the pilot practising blind flying in and out of the base of a large mass of cloud between 800 and 1,000 ft. This cleared away at 8 a.m. The ensuing boredom was relieved at 10 when the club got going, and the six hours from then till 4 p.m. were spent in playing with the variometer—Mr. Young's first experience of using one. This enabled him to spend much of the time at 3,000 ft.; he invariably found lift over the club house and over the first gully south of the road at the north end. Another two hours of boredom followed, only relieved by seeing someone put the club FALCON down on the moors behind. He then read *Punch* for a bit, after getting the knack of reading and flying simultaneously. Finally, the wind began to drop and to back again towards south. The pilot, believing for some reason that the British record was 14 hrs. 47 mins., decided to beat this figure by an hour, landed at 9.2 p.m., and retired to a hot bath.

Some New German Sailplanes

[*The following descriptions of three recently produced German sailplanes have been translated from "Flugsport," from which the general arrangement drawings are also taken.*]

A Cantilever "Condor"

IN March this year the firm of Schleicher in Poppenhausen brought on the market Heini Dittmar's design "Cantilever CONDOR II." As compared with the older CONDOR II of 1935, the struts have been removed to obtain a better flying performance, especially at high speeds. The fuselage cross-section has, by a clever use of space, been further reduced somewhat, so that the main bulkhead is 70 mm. lower and 50 mm. narrower. In spite of this the pilot's freedom of movement has not been reduced, chiefly owing to an alteration in the cockpit cover.

Special attention has been given to greater simplicity of assembly. An alteration in the aileron control has increased the manœuvrability by 20 to 30% over the whole speed range. Two Flettner flaps of large span ease the pressure on the controls; large landing flaps change the gliding angle and shorten the "float" effectively.

The spar is considerably broadened at the wing root; the safety factor in "A" case is 12.5. Noteworthy is the design of the main attachments. The fish-plates are not at the side of the spar, but lie horizontally above and below the two flanges. By this arrangement the filling block is dispensed with and the screws are shorter. The two halves of the wing are joined by means of a conical bolt.

The tail surfaces are made either damped or undamped, according to the wish of the N.S.F.K. Corps Leader.

The "Reiher" at the International Competitions last year, when it was flown by Hanna Reitsch. It was then a "hush-hush" machine, but details of the design have now been published.

The span is 17.24 m. (56 ft. 7 ins.); length, 7.78 m. (25 ft. 6 ins.); empty weight, 230 kg. (507 lbs.). The performance of the original CONDOR II was: Sinking speed 0.5 m. (1 ft. 8 ins.) per second at 55 km. (34 miles) per hour; 2 m. per sec. (6 ft. 7 ins.) at 140 km. (87 miles) per hour. These are somewhat *überboten* [increased?] in the new design.

Since Heini Dittmar flew in it the greatest distance across the Alps at the Berne meeting, the machine has been in use for instruction at Darmstadt. As a result the CONDOR IIA, as it is now called, has been improved in various ways. Ease of rolling is improved 30%. The equipped weight remains less than that of the CONDOR II, and is 225 kg. The rudder is mass-balanced. There is a faired-in gap between the wings 16 cm. wide, and assembly is further facilitated in that both wings can be hung on the fuselage and then joined up afterwards.

The "Reiher"

The sailplane REIHER was developed by the D.F.S. (German Research Institute for Soaring Flight) for high-performance soaring. To achieve specially good performance, the design incorporated thin wing sections, and reduction of drag by means of smooth skin, enclosure of all control mechanism, sharp trailing edges, small fuselage cross-section, etc. There was little idea of putting the machine into production, but it is planned to build four or six of the type. In spite of this concentration on performance characteristics, such excellent flying properties were achieved that any good sailplane pilot can fly this machine without difficulty. Its performances in the international meeting of 1937 were thoroughly satisfactory, but not its flying properties. The latter have been improved during the past year, and the second experimental machine of the type has given full satisfaction.

Special attention was given to quick rigging and dismantling for taking part in competitions.

The REIHER is fitted with D.F.S. air brakes. It is a cantilever middle-wing machine with single spar and torsion-stiff leading edge. The spars are joined in the middle of the fuselage, thus avoiding a heavy centre-section. The turning loads in the wing are not conducted into the fuselage by a shoulder-piece, but are disposed of through a leading-edge spar to the bulkhead behind the pilot. This solution is, in contrast to the shoulder-piece method, better as regards weight, and in addition facilitates the employment of a simple method of assembly for the bolts joining the main spar and leading-edge spar respectively to the fuselage.

From the inner portion of the wing as far as the aileron, the rear of the wing is adjustable, to obtain an increase of camber. When the flap is moved through 15° the aileron is simultaneously trimmed 8° downwards.

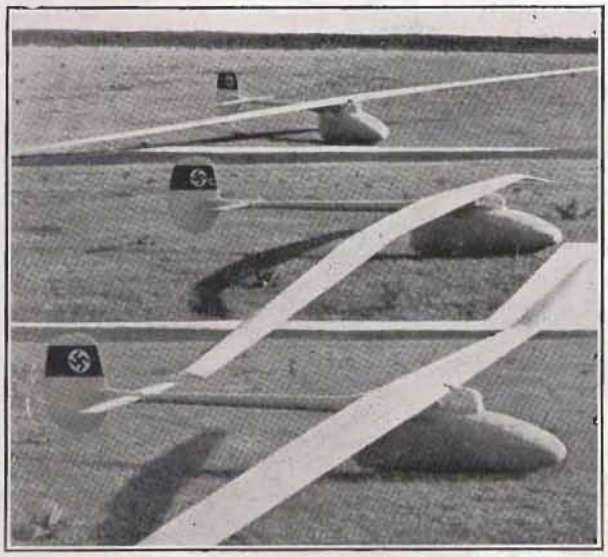
All connections for working the ailerons, flaps and air brakes are automatically coupled up when the wing is joined to the fuselage. [Details of these connections

and of the construction of the main spar, with drawings, are then given, and these will be reproduced in the next issue.—Ed.] The assembly, as also the dismantling, of the machine can be done by four men in two minutes.

The fuselage is of normal construction with bulkheads and longerons and plywood covering. There is a fixed elevator fin, made fast with a wing screw at three points.

The wing section chosen for the Reiher is Göttingen 549, as its properties appeared best for the purpose of the design. In the outer region of the wing, as from 0.6 of the semi-span, 549 gives place to 676, which is noted for wide range of its ca_{max}.

Data of the Reiher are: Surface, 19.36 sq. m. (208.4 sq. ft.); span, 19 m. (62 ft. 4 ins.); aspect ratio, 18.64; weight equipped, 220 kg. (485 lbs.); additional weight, 100 kg. (220 lbs.); least sinking speed at 55 km. (34 miles) per hour, 0.53 m. (1 ft. 9 ins.) per second; best gliding angle, 1 in 33 at a speed of 67 km. (42 miles) per hour.



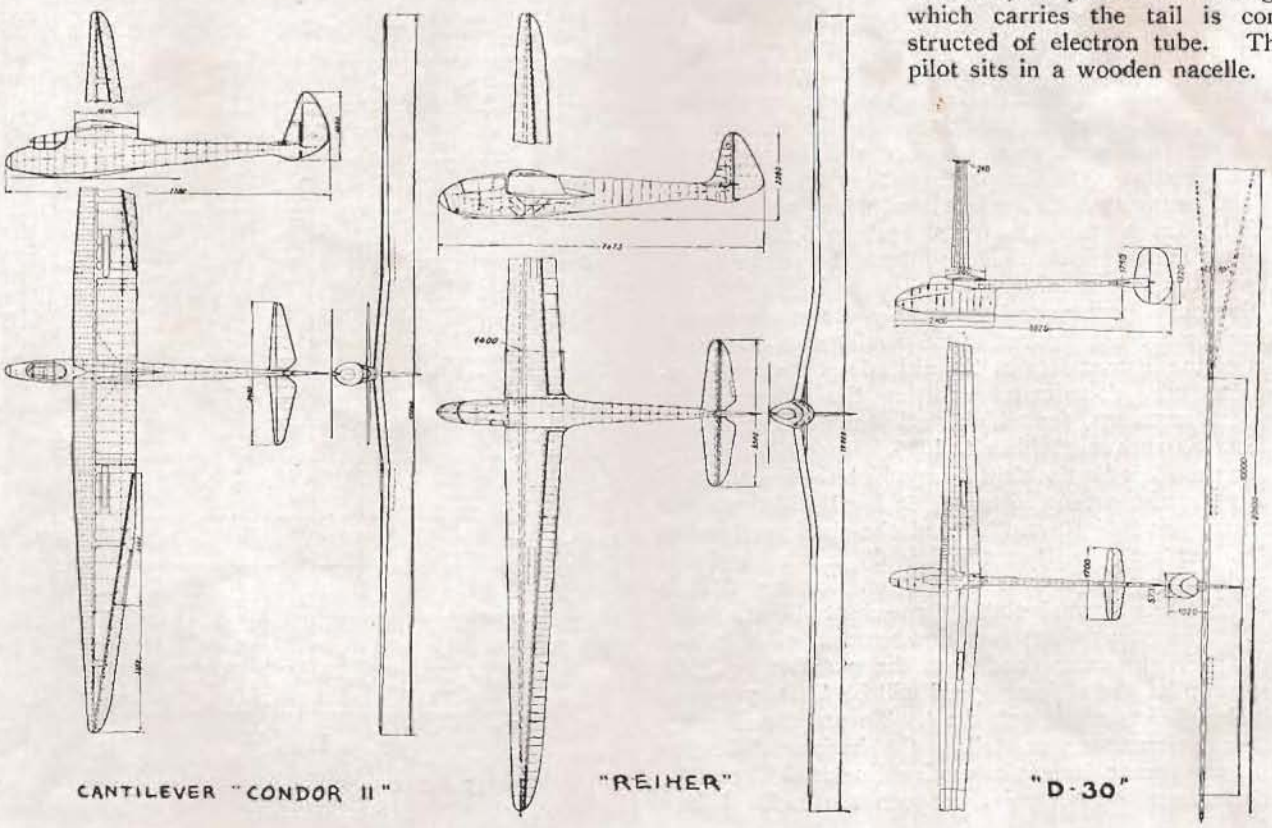
The "Akaflieg Darmstadt," always to the fore with new ideas in design, has now produced this the "D-30." The pictures show the adjustable wings in their three possible positions.

A Darmstadt Experiment

The sailplane D–30 was built by the technical aviation group of the technical high school ("Akaflieg") at Darmstadt. The design, general and detailed, was carried out by Alt and Puffert. The intention was to create a machine with small sinking speed and good cruising performance.

The wing, of 20 metres span (65 ft. 7 ins.), is in three parts—a middle portion 10 m. long and outer portions 5 m. The outer portions can be adjusted during flight to a positive or negative dihedral angle to the extent of about 10° upwards and 2½° downwards. To keep the drag of the machine as low as possible, a thin wing section was chosen. In consequence of this it was necessary, to get sufficient stiffness, to construct the spar in metal. Only a few years ago it was held by acknowledged experts to be impossible to build a machine with such a narrow wing. To facilitate landing, air brakes are fitted, and in addition the ailerons can both be pulled downwards simultaneously.

Skin friction accounts for a high proportion of the total drag of the fuselage. In order to reduce as far as possible the upper surface which is exposed to moisture, the part of the fuselage which carries the tail is constructed of electron tube. The pilot sits in a wooden nacelle.



The tail is of wood. The rudder and elevator are both "half-damped," as was first done in the WIND-SPIEL [the trailing half of the control surface moves more than the leading half, giving the effect of a camber.—ED.]. The rudder is connected to the ailerons in such a way that, when the rudder is moved, the ailerons work differentially so as to assist the turn.

A technical novelty in the D–30 is the adjustable dihedral angle during flight. Sailplanes with the wing bent downwards are well known (RHÖNSPERBER, MINIMOA, CONDOR, REIHER, etc.), but nevertheless it would appear doubtful whether this type of wing represents the most favourable solution. One is entitled to hope, therefore, that the adjustable wings of the D–30 will shed light on the influence of gull wings on stability and control.

The span is 20.1 m. (65 ft. 11 ins.); length, 6.6 m. (21 ft. 8 ins.); surface, 12 sq. m. (129 sq. ft.); aspect ratio, 33; taper, 1 : 4; empty weight, 175 kg. (386 lbs.); sinking speed, 0.5 m. (1 ft. 7.7 ins.) per second at a forward speed of 62 km. (38½ miles) per hour; best gliding angle, 1 in 36 at a forward speed of 72 km. (45 miles) per hour.

A Diagram for the Best Air-Speed to Use in any Conditions

A FORMULA connecting the sinking speed with the forward speed will enable mathematical deduction to supply an equation for the correct air-speed to use, to give the best gliding angle, in any conditions of downdraught, and contrary or favourable winds.

Such a formula is supplied by the usual assumption that drag is composed of two items: induced drag due to lift, and eddy-making drag due to irregular form, skin friction, etc.

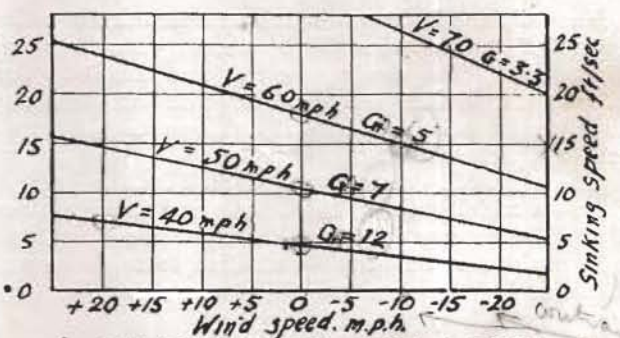
The data required to construct the formula for any machine are: weight, wing area, aspect ratio, and reliable test data giving the sinking speed and corresponding forward speed, preferably for a high as well as for a low speed, with information of the altitude of the test flight.

It must be remembered that the readings given by air-speed meters and variometers are not true readings except at the altitude for which they are calibrated; the air-speed meter reads in proportion to the air density, and the variometers, depending for their action on the escape of air from a container, read in proportion to the air density to the power 3/2.

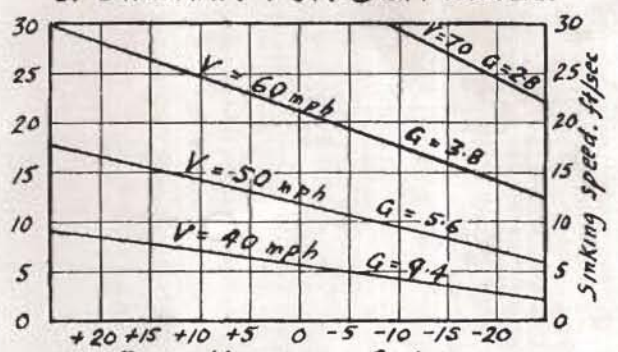
This means that instruments calibrated at sea level read low at higher elevations, and at 5,000 ft. the readings must be multiplied by 1·2 and 1·3 respectively, to give the true readings.

Diagrams constructed to apply at considerable altitude must use figures corresponding to the readings of the instruments at the altitude considered, and this has been done in constructing the diagrams for the RHÖNBUSSARD, for which sufficient data are given in THE SAILPLANE of March, 1935.

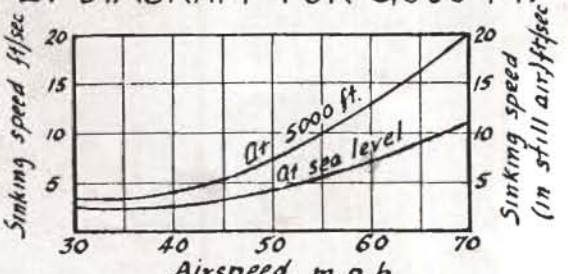
Diagram 1 is for the altitude at which the instruments read correctly, presumed to be sea level. If there is a contrary wind of 10 m.p.h., and the sinking speed is 15 ft. per sec., the best speed is 60 m.p.h., and the actual gliding angle is 1 : 5. From diagram 3 it is seen that the normal sinking speed at 60 m.p.h. is 7 ft. per sec., so there is a downcurrent of 8 ft. per sec. If in the same conditions the machine is flying at 40 m.p.h., the sinking speed will be 11 ft. per sec., and the gliding angle only 1 : 4. To use the diagram in these circumstances, follow the horizontal line at 11 ft. per sec. as far as the vertical line at −10 m.p.h., and thus arrive at a point between the inclined lines 50 and 60 m.p.h. This indicates a best speed 54 m.p.h. which is sufficiently close, but the process can again be repeated on reaching the 54 m.p.h.



1. DIAGRAM FOR SEA LEVEL



2. DIAGRAM FOR 5,000 FT.



3. GRAPH OF SINKING SPEED IN STILL AIR

Diagram 2 is for conditions at 5,000 ft., and owing to the disproportionate errors of the two instruments in use, it is not materially different, in the indication of the best speed, from the first. Corresponding gliding angles are, however, much reduced.

It must be noticed that the gliding angles "G" shown on the diagrams are those obtained in the conditions indicated. Thus in diagram 1, against the line V = 40, G is shown as 12; this does not mean that 1 : 12 is the best gliding angle at 40 m.p.h., but that 40 m.p.h. is the best speed in the circumstances indicated, and that then the gliding angle is only 1 : 12.

The mathematical work employed is too cumbersome to give here, but diagrams for other machines will be prepared on receipt of the necessary data.

UBIQUE.

The following notes are appended to the diagram:—

The graphs apply to the RHÖNBUSSARD at an all-up weight of 474 lbs.

G is the best gliding angle obtainable when the sinking speed is that indicated by the height of the line at the point considered, with wind speed indicated below.

Air speed and sinking speed are as shown by instruments.

The graph for 5,000 feet is drawn for readings shown on the instruments. For true readings multiply the air speed by 1·2 and sinking speed by 1·3, for the curve at 5,000 feet.

Correspondence

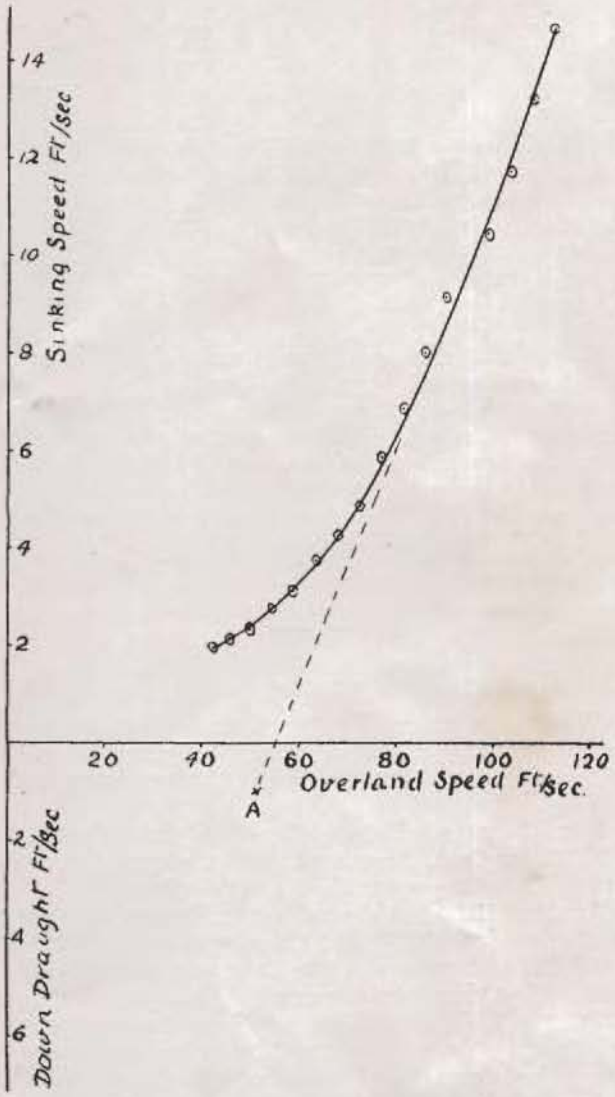
Variometer Speed-Calibration

SIR,

In your July number Mr. J. S. Fox asks some reader to work out the best procedure for "Round the Country" flying. Mr. Fox has since sent me the maker's "performance curve" for his RHÖNADLER. I have plotted these figures on the attached curve after correcting the air-speed figures to give the horizontal component or overland speed. Within the limits given (29 to 78 m.p.h.) the correction is negligible, the difference even at 78 m.p.h. being less than 1%. The abscissæ may therefore be read as air-speeds without appreciable error.

The best air-speed in still air is found by drawing a tangent to the curve from the origin. This shows that a speed below the minimum given, if practicable, would give the longest glide.

With opposing winds and down-draughts the tangent must be drawn from the corresponding point to the right of and below the origin. As an example we may take the particular case mentioned by Mr. Fox—an opposing wind of 35 m.p.h. (=51.3 ft. per sec.) and a down-draught of 1 ft. per sec. The point A corresponds to these figures and the tangent, shown by a broken line, touches the curve at the point 8.6 ft. per sec. sinking speed, 90 ft. per sec. horizontal speed. The total sinking speed is 8.6 + 1 = 9.6 ft. per sec. and the nett overland speed is 90 − 51.3 = 38.7 ft. per sec., so that if the pilot is a mile high he can land 4 miles away up-wind.



It will be noted that the curve is so straight at this part and so nearly in line with this particular tangent that the pilot may depart widely from the "best" speed, especially in an upward direction, with a nearly equal performance.

J. C. WILSON

Air-Speed Indicators

SIR,

In reply to the A.S.I. correspondence of last month I thank Rhoveesquared and W. E. Hick for their observations. I do not, however, agree that the cup anemometer is independent of air density, for reduced to an absurd limit it is obvious that if operated in a vacuum this or any other type of air-speed measuring instrument will cease to function. This applies even to sensitive hot-wire laboratory instruments.

My aim in endeavouring to develop a direct reading pressure plate instrument is not to get a reading independent of height, but to get an instrument which is simple, has the minimum number of parts, and has no appreciable lag.

E. LAVINGTON.

Cross-Country Flights

THERE has been a number of cross-country flights during July and August in addition to those made during the National Contests in July. As to the latter, we want this year to correlate the various flights to see whether this will lead to anything useful being learned, and consequently have had to wait till all possible accounts of these flights have been collected.

Of the other flights, all those made in July, August, and September will have to be listed in the next issue (provided we are informed immediately of any made during September). But two particularly interesting ones are described below: one by Mr. Fox in RHÖNADLER from Heston to Cambridge on July 30th, and one by Dr. Dewsbery in RHÖNSPERBER from Devizes, Wilts., to Faversham, Kent, on July 27th. This last is the third longest ever done in England.

120 Miles an Hour up the Great North Road

Whether it was really 120 m.p.h. or not, I do not know; but to anyone unaccustomed to flying aeroplanes it certainly seemed as if the RHÖNADLER was really moving.

I had been towed straight up-wind from Heston to 2,000 ft. by Capt. Fergusson, just before his departure to tow Dewsbery up at the Exeter display.

At about 12.50 I said good-bye to Heston in a strong southerly wind (200°), but there was an inversion at 3,000 ft., and not a cloud to be seen ahead of me. I had my first view from the air of London, from between 1,500 to 2,500 ft. The winding Thames looked bright and shining, but the City looked the blackest thing I had ever seen. No wonder it produces thermals.

I scurried over North London, borne along by a wind of about 40 m.p.h. as I circled endlessly in any lift available. Not far from Hendon I reached the ceiling again at 3,000 ft., and then the fun began.

I once used to think that the ADLER had no speed-range, but recently I have learnt better. I put the speed up to 125 km. (about 77 m.p.h.), and, with the 40 m.p.h. wind behind me, laughed loudly at the poor *speed merchants* just below, doing their miserable 60 to 80 m.p.h. along the white ribbon of the Great North Road.

Soon, however, I began to laugh less loudly, *and* on the other side of my face. I was down to 300 ft. over the cross-road turning to St. Albans, wrestling grimly in a half-gale with a tiny, but very strong, thermal. I kept on going up about 15 ft. per second, and then down again at 10–12 ft. per second; meanwhile a huge wood, full of hungry trees, passed rapidly below me in welcoming proximity.

"What on earth do we do these awful things for?" I wondered!

A minute or two later I saw Hatfield 3,000 ft. below me. I had made the mistake of wearing my usual clothing, on a cloudless day, and I was feeling so hot and bothered that I longed to go down for lunch. I turned back to chase a swift, in the top of whose thermal I kept my height for some time until I was far down-wind of Hatfield.

In an incredibly short time I found myself looking down on "Mildenhall," unique in its curved layout and westerly-facing aspect. "Impossible," I thought; but it certainly was not good old Duxford, so it *must* be Mildenhall. However, I was wrong in thinking that I was right (or right in thinking that I was wrong), as this proved to be a new R.A.F. mushroom aerodrome which was not marked on my map.

Soon afterwards I arrived at Cambridge, with 2,000 ft. in hand. The sea—up left of the Wash—might have been very delightful for a bathe, but I had no clouds or height to help me, and my lonely and willing trailer-driver had to get back home early; so, after playing round over Cambridge, I finally landed by the tar-mac in front of the offices on Marshall's aerodrome. For the willing services of a gang of mechanics I was charged the modest sum of 4s.

It had all been good fun; but, as I sat there having lunch I kept thinking: "What *do* we do these things for?"

J. S. Fox.

Devizes to Faversham: 128 Miles

Stephenson and Ann Edmonds went off first and both got good thermals within two minutes of arriving over the soaring slope.

I soon got into 10 feet per sec. lift and worked my way up to 6,000 feet. I followed the south face of the Marlborough Downs. Over Oare the sky was clear for some distance in an easterly direction, but good over Marlborough. I flew up-wind from Oare to a good cloud and up to 5,000 feet. Then there was a long glide at 65 m.p.h. to Hungerford; arrived there at 2,000 feet and climbed up again to 4,000. I got back on to the course by flying south-east to Reading, where I got up to 5,000. The Staines reservoirs were then in sight, over which my course lay. I worked my way to Brooklands (5,000 feet) and began to get into really good conditions and was able to fly straight while still climbing. I passed over Croydon at 5,500 feet and so to Gravesend (2,200 feet); got into a good one just west of Rochester and went up again to 5,500 at 4.45 p.m. Continued east and saw some clouds ahead hanging down 1,000 feet below. Passed these, and beyond the sky was absolutely clear. I was still at 4,000 feet, so continued on, noting that the sinking speed at 60 m.p.h. was less than at the best of the conditions. I saw Faversham and picked the furthest of two possible fields, where I landed, and went to the nearest farm.

The most useful principle I learnt during the flight was approaching the underneath of clouds *exactly* down-wind. This enabled me to get into a cloud up-current 4,000 feet below the respective cloud near Rochester.

J. P. D.

Exeter Display

The RHÖNSPERBER was taken by J. P. Dewsbery to Exeter for the last week-end in July, to give an aero-towing demonstration at the airport. The towing pilot, instead of going up-wind and avoiding clouds, took him the other way and charged into a cloud. Thinking he was too far down-wind to get back, Dr. Dewsbery hung on to the cable, but began to overtake the aeroplane in the cloud, and also slewed off to one side. On emerging, the cable tightened with such sideways force that the aeroplane's towing fitting (£40) broke off; the cable whipped back and wrapped itself round the SPERBER'S wings and tail. Still, it landed normally.

Adventures in Poland

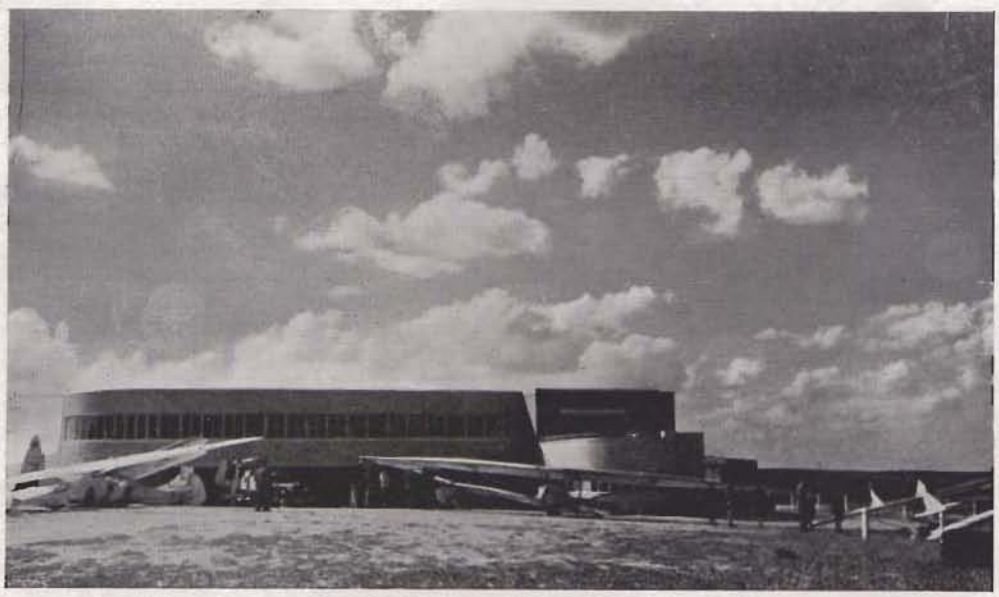
This summer there have again been several British visitors to the gliding school at Bezmiechova in Poland. A. W. Lacey and J. P. Lassam, of the London Gliding Club, were there in July. What Mr. Lassam did with his sailplane while attempting a five-hour "Silver C" flight was so spectacular that the fame of it reached the English newspapers. During his flight a storm blew up and he was signalled to come down, but in spite of side-slipping and trying to spin, he got carried up into the clouds. Suddenly the wind caused him to do a half loop and left him upside-down (a position which the newspapers evidently believed to be unprecedented)—at least, so he was told afterwards. But he got back to the landing ground, missing the edge of a "great pine forest" by 10 feet. Next day he did the five hours.

Mr. H. Adcock, who was there later, saw a SALAMANDER break up while diving beyond the vertical, and the bits are said to have come floating down all around him.

One day in July, we hear, three Polish pilots flew into Russia. The Russians rang up to say they had arrived, but no word has been heard of them since, and all further information has been refused. But now two Russian aeroplane pilots have made forced landings in Poland, so they are going to remain the guests of the Poles until something is done about the lost Polish sailplane pilots.

Exploring a Cold Front

Squadron-Leader P. M. Watt writes that, while flying an aeroplane from Scampton, Lincs., to Welburn, he saw a particularly interesting piece of weather. "I got pushed round towards the coast by very heavy thunderstorms. Fog was forming, and when I gave up the attempt to reach Welburn I flew to Scarborough. The sea was covered by fog which extended a few miles inland. On the approach of the storm, which was moving east, the fog rose in a solid mass to meet it, inclined at about 45° to the horizon. I flew along this wall at about 1,000 feet (it extended up to 2,000 or 3,000), and it curved gradually inland, finishing at a point about 10 miles north of Hull. Unfortunately time was too short to investigate temperature conditions at various points, and the amount of lift round the edge of the storms. Inside, the temperature was 15° C. by strut thermometer, and it was raining so hard that we got soaked, and the wing tips were barely visible at times. There was a great deal of lightning going on all around, too close for comfort, and we only stayed in the thick of it for 10 minutes."



We have never before published a complete external view of the clubhouse and hangar of the London Gliding Club at Dunstable, and it has been suggested to us that in consequence many of our readers, especially those overseas, do not know what it looks like. So here it is, and now they know. The larger part is, upstairs, the dining room and lounge, and below, the entrance to the hangar, which extends a long way back and is mostly nearly twice as high as its entrance. On the right is the bar, with a "tea garden" roof. The old wooden clubhouse, out of view on the left, is now a dormitory.

Two High Climbs

MR. PETER DAVIS has recently made two notable altitude flights from Heston in the RHÖNADLER. Unfortunately on both occasions the barograph ceased to register before reaching the top of the climb.

On July 26th he was aero-towed off at 3.15, cast off at 2,100 feet, found cloud base at 5,500, and climbed inside a storm cloud to 9,300 feet on the altimeter, though the barograph only registered up to 8,650. Being without parachute he did not like to go higher, so came out of the cloud over N.W. London. A lot of clouds below made a very spectacular sight, with the Thames winding away below them. The cloud was one of three mountainous storm clouds which had, he writes, been very common that day. For the most part the lift was fairly smooth, and frequently at 10 feet per second. Circling in about 40 seconds per circle was sufficient to keep in the lift most of the time. After coming out he glided back to a landing at Heston at 4.30.

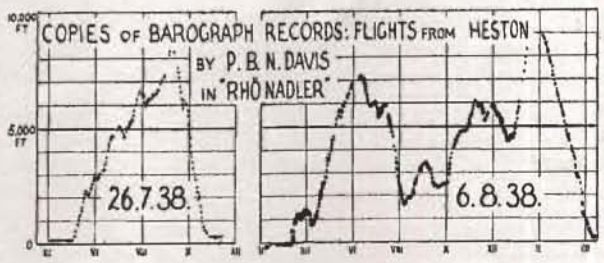
On the second flight, made on August 6th, Mr. Davis's altimeter read 11,300 feet at the top, but the barograph reading, after correction, was only up to 9,300 feet. The release from aero-tow was made at 1,400 feet, so the actual climb above release was 9,900 feet—just "Golden C" height. The unrecorded portion of the flight consisted of a rapid climb and a rapid descent, and as the average rate of climb recorded was 730 feet per minute, there is justification for what the altimeter said. The pilot's own account of the flight, to the highest point yet reached by sailplane over England, follows.

Eleven Thousand Feet

Weather conditions on August 6th were favourable to high flying—a light W.S.W. wind (polar air) having an excellent lapse rate with no inversion. The clouds, whose base was at 6,000 feet, were built up in masses rather than in tall pillars, and none of them produced storms.

I had set my heart on attaining a good altitude. For this reason, though the ADLER was rigged and ready by 12 o'clock, I did not take off till 3.30, as the conditions were improving all the time. So during this long and rather tantalising wait, self-imposed as it was, John Fox and I sat watching the clouds building up over London, higher and higher. John knew what I wanted to do, and heroically spent the whole day with me when he ought to have been far away doing other things. As it was, he made my path easy for me, and not only on the ground. For he had devised a very efficient battery system for the Pullin turn indicator in the ADLER—two switches for two sets of batteries, giving one the all-important certainty that the instrument will not run down and leave one stranded in the middle of some enormous cloud.

At last we [pilot and sailplane] were in the air, having pulled off the aeroplane as low as possible. There followed a climb to cloud base and then another 1,500 feet inside the cloud. But the lift was not very determined, and my blind-flying was rather messy. I always have great difficulty in not being deceived by the noise of



the turn-and-bank indicator, which creates a false impression that speed is being maintained, when one may in fact be stalling. After playing around in and out of the cloud for some time I flew back up-wind to Heston, then for the next hour or so continued thermal-soaring with some unsuccessful cloud-flying thrown in.

I had now been up for over two hours, and still not done a big climb, so I flew off towards London where conditions were undoubtedly best. I made my way down rather a weak cloud street, with plenty of haze or "murk" underneath it, so familiar a characteristic of up-currents over towns. At the far end I turned to fly up it again, the lift having been just sufficient to maintain height. But now, on the return journey, so to speak, the lift had increased to 10 feet per second. So I swung into a wide circle, switched on the turn-and-bank indicator, and waited. The great thing about "cloud climbing" is to be thoroughly settled down in a large circle and to be flying on the instruments before one is actually "blind."

I was soon greedily swallowed up by the cloud. This sensation has been described by Philip Wills as being absorbed by an enormous octopus. That is exactly the feeling, and is rather a fascinating experience.

Now my mind concentrated on four things only (quite enough, too): the turn-and-bank indicator, air speed indicator, variometer and altimeter. I continued my slow, "Rate 1" circles, rising all the time. These were large enough to prevent any serious attack of vertigo. Sometimes the air would get rough, sometimes my blind flying became worse than usual, and in either case I would straighten up for a moment to let things settle down. My greatest concern was not to fall into a spiral dive. It is helpful in this respect to pay at least as much attention to the "bank" needle as to the other (contrary to aeroplane practice). For the same reason it pays to over-rudder one's circles slightly.

All the time we were rising at great speed, but each 1,000 feet seemed to take hours to gain. The barograph shows that I cannot have been in the cloud more than twenty minutes, but it seemed an endless time. Particularly was this the case when, at over 11,000 feet, the lift having given place to a down-current, I decided to leave the cloud. But this was not so easy, for the air now became unpleasantly rough, and I found myself working the stick vigorously to and fro to keep the needles in their proper places. This admittedly kept the circulation going, which was rather a good thing as it was extremely cold. I was flying up-wind on a compass course. But here was the difficulty, since the compass did not have a fair chance being tossed about

as it was, and I had the feeling that if I could not manage to fly in a straight line I should never re-emerge from the cloud except in a most undignified manner from the bottom.

But at last we finally burst forth into the sunshine. The cockpit cover was soaking wet, so my view was restricted to what I could see through the two little holes in either side—and a very spectacular view it was—a vertical wall of cloud stretching below and above me, with a patchwork of smaller clouds beneath. Now I turned back and threaded the cloud through to the other side, flying on an easterly course, and then back west again, but could find nothing. By now it had the appearance externally of breaking up, so I decided to call it a day, found I was just about over the Thames on the west side of London, and set off for Heston. Several formations of bombers passed underneath me, for London's "air war" was in progress. It took three-quarters of an hour to glide down, and I amused myself by flying out to Windsor and back, landing finally at 7 p.m.

P. B. N. Davis.

Review

Aerodynamics. By N. A. V. Piercey, D.Sc., M.Inst.C.E., M.I.Mech.E., F.R.Ae.S. The English Universities Press, Ltd. 1937. Pp. 416 + Author Index + Subject Index. Price 30s.

THE design of a sailplane depends on modern aerodynamical theory. Thus, for example, the loads on a tapered wing can only be calculated by a method which has been introduced within the last few years. So that an introduction to modern theory is a necessity to anyone who wants to understand or take part in design work.

Aerodynamics is a book written to fill this need. The author in his prefaces writes that "this book presents the modern science of aerodynamics and its immediate application to aircraft," and he observes that the earlier part of the book is to serve as an undergraduate course and the later part is for the use of the designer and research engineer.

Chapter I, to describe the contents of the book in detail, is entitled "Air at Rest, the Atmosphere, and Static Lift." This defines the scope of the chapter, which includes the relations for the stability of the atmosphere. There is, however, the amusing statement that if the atmosphere is unstable "vertical winds occur and make aeronautics dangerous, if not impossible"!

Chapter II, "Air Flow and Aerodynamic Force," gives those theorems of hydrodynamics (Hydrodynamics is a large and old established playground of mathematicians) which are immediately useful in aerodynamics, and is followed by Chapter III, "Wind Tunnel Experiment," which describes how measurements on models are made to interpret the theories for practical use.

Chapter IV, "Aircraft in Steady Flight," considers the airship and the aeroplane in comparison, the performance of the aeroplane, and its stability, and thus introduces the whole subject of the aerodynamic design of the aeroplane in one chapter.

In Chapter V, "Fundamentals of Irrotational Flow," the author goes back to lay the foundations for deeper treatment and gives the necessary hydrodynamic theory. On this foundation Chapter VI, "Two Dimensional Aerofoils," gives the methods of calculating aerofoil sections which have enabled the designer to calculate a suitable section for any particular use.

Chapter VII, "Vortices and their Relation to Drag and Lift," continues with the hydrodynamic theory for use in Chapter VIII, "Wing Theory," where this theory is applied to aeroplane wings. Besides the theory used in the design of wings, this chapter includes that necessary for the interpretation of wind tunnel results.

Chapter IX, "Viscous Flow and Skin Drag," is of evident importance, for the greater part of the drag of an aeroplane or of most sailplanes is of this nature. Investigation of skin drag is still being made, and this chapter will no doubt need additions in a few years.

Chapter X is entitled "Airscrews and the Autogyro."

Chapter XI, "Performance and Efficiency," begins with a general discussion, continues with a consideration of gliding drag, then the effect of airscrew interference is considered, and the chapter concludes with some performance calculations. The reader who has got as far as this will be able to make the slight changes necessary for calculating the performance of sailplanes.

Chapter XII, "Safety in Flight," deals with stability, control, and load factors. The mathematics of stability is very cumbersome and is not used in full by practical designers. The success of the author in dealing in one chapter with stability is in itself a strong argument for the usefulness of his method. I am not acquainted with the full theory of stability, and so am not qualified to give an opinion of the value of this part. This is the end of the book except for the index.

The usual method of teaching aerodynamics has been to confront the student with the wilderness of hydrodynamics before he is allowed to approach practical problems. This may be a useful drill for the student who has been caught young, possibly more useful than writing Latin verses, but it may equip him with more learning than he needs. Dr. Piercey's method in this book has been to present the necessary hydrodynamics in sections immediately before the sections where it is used, so that the connection is obvious to the student.

Aerodynamic design waits on mathematical technique, and to read this book, naturally, it is necessary to understand the calculus, and the student who has not been taught the calculus will need a text book. Although it must take some time to understand the calculus, the student may be encouraged if he remembers that he does not need to be a full-blown mathematician to use the calculus any more than he needs to be an engineer to drive a motor car.

I think that this is a very good book for the unassisted study of aerodynamics, and that it provides a complete basis. Even for the man who cannot handle mathematics, there is a great amount of useful explanation and information.

Kentigern.

British Gliding Association

Meeting of General Council

The General Council met on Wednesday, August 24th.

Present:—Major A. Goodfellow (Derbyshire and Lancashire Gliding Club) in the chair, H. E. Bolton (London Gliding Club), J. R. Ashwell Cooke (London Gliding Club), C. E. Hardwick (Midland Gliding Club), L. H. Heath (Yorkshire Gliding Club), E. Jarvis (Essex Gliding Club), R. Kronfeld (Oxford University and City Gliding Club), C. H. Latimer Needham (Individual representative), G. A. Little (Southdown Gliding Club), W. O. Manning (Royal Aeronautical Society), Major H. A. Petre, D.S.O., M.C. (Royal Aero Club), J. W. S. Pringle (Cambridge University Gliding Club), E. G. Sanguinetti (Kent Gliding Club), F. Slingsby (Furness Gliding Club), A. Sweet (London Gliding Club), P. A. Wills (Newcastle Gliding Club). In attendance:—H. E. Perrin, Secretary; E. H. Spence, Asst. Secretary, R.Ae.C.

The following items on the agenda were dealt with:—

Election to B.G.A.—The Oxford University and City Gliding Club was elected to the Council, with Mr. Robert Kronfeld as its representative.

Subsidy Sub-Committee.—Mr. L. H. Heath was unanimously elected as the representative of the Yorkshire Gliding Club on the Council and on the Gliding Subsidy Sub-Committee in place of Major J. E. D. Shaw who had resigned.

Marking of Gliding Sites.—The Council of the B.G.A. have approached the Air Ministry suggesting that a distinctive ground sign should be allotted to gliding sites, and it has now been agreed that the landing ground of the gliding site may be marked by means of an equilateral triangle marked out in white lines at least 10 yards long and two feet wide, and placed centrally on the landing area.

The B.G.A. have, in addition, asked that power-driven aircraft should be requested to avoid flying at any height in the vicinity of localities marked with the ground sign. It is hoped that these localities will also be shown by a special symbol on aviation maps.

Civil Air Guard.—Representatives of the B.G.A. have recently met the Air Ministry with a view to exploring the possibility of linking up the Civil Air Guard Scheme to the Gliding Movement. Their report was submitted to the Council and the matter is still under discussion.

Gliding Subsidy

The Gliding Subsidy Sub-Committee met on August 3rd.

Present:—D. Hiscox (in the chair), Major A. Goodfellow, C. E. Hardwick, E. G. Sanguinetti, P. A. Wills. In attendance:—H. E. Perrin (Secretary), E. H. Spence (Asst. Secretary, R.Ae.C.).

Claims were submitted and approved for recommendation to the Subsidy Trustees as follows:—

	£	s.	d.
Cambridge University Gliding Club	59	13	6
Channel Gliding Club	92	1	6
Derbyshire and Lancashire Gliding Club	353	1	3
London Gliding Club	496	9	2
Midland Gliding Club	523	19	5
Newcastle Gliding Club...	326	17	1
Norfolk and Norwich Aero Club (Gliding Section)	145	3	7
Southdown Gliding Club	7	7	4
Ulster Gliding Club	100	2	11
Yorkshire Gliding Club...	236	9	6
British Gliding Association	103	3	0
Total	£2,444	8	3

Gliding Subsidy Trustees.—The Trustees met on August 4th.

Present:—Prof. D. Brunt, M.A. (in the chair), H. E. Perrin, W. L. Courtney. In attendance:—E. H. Spence (Asst. Secretary, R.Ae.C.).

The claims recommended by the Subsidy Sub-Committee were approved and payments made.

"Nyborg Special"

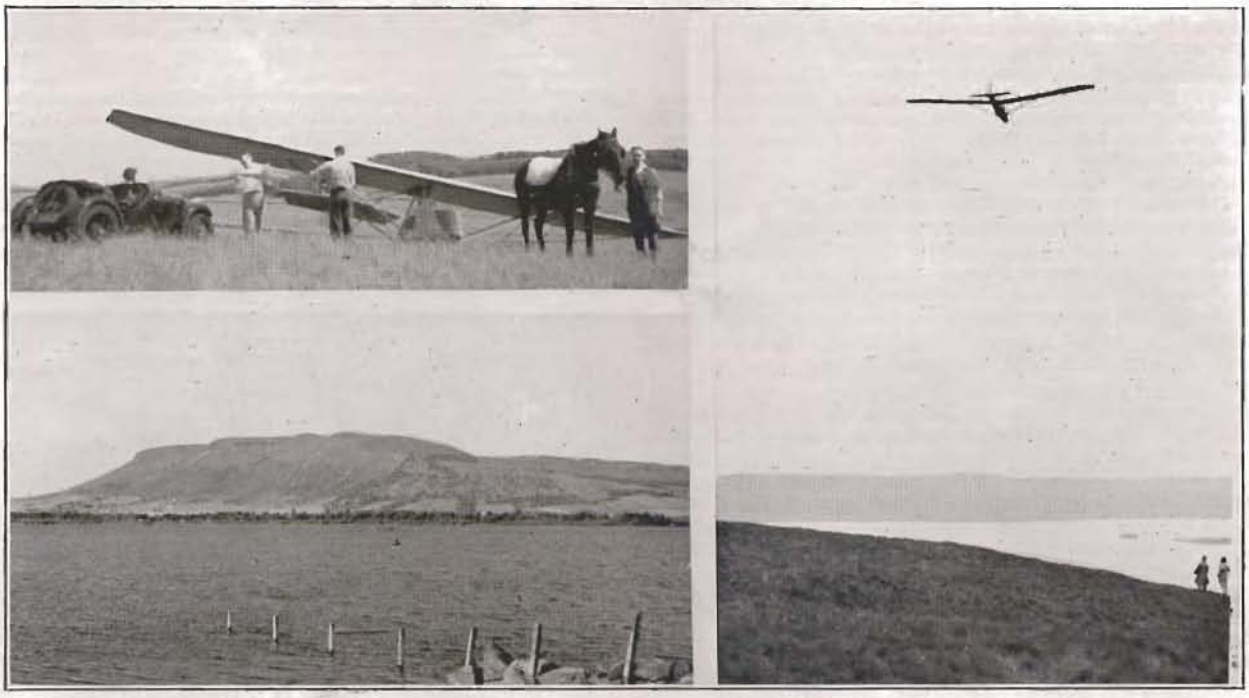
Six years ago there were several articles and letters in The Sailplane on the subject of Mr. T. G. Nyborg's sailplane, the first example of which had then recently been constructed. It embodies many original ideas, of which the most noticeable to the eye are the small span and large aspect ratio of the wings. Since that time other examples have been made, and tested by auto-launch over comparatively flat fields in Worcestershire; and Mr. Nyborg himself, since he has learned to fly at the Midland Gliding Club, has now taken a hand in the testing.

Mr. Nyborg standing beside his sailplane at the Cambridge Club, and Mr. Slazenger in the cockpit ready for a test flight. Below, a flight across the aerodrome.

On Saturday, August 13th, we visited Duxford to see the machine winched across the aerodrome, piloted by R. C. G. Slazenger, of the Cambridge Club. Next day Mr. Slazenger did the first "S" turns on it, and since then he has been aero-towed. The first aero-tow was cut short at 1,000 feet owing to snapping of the weak link in the cable, but the second was to 2,000 feet, and during it the only trouble was a tendency for the machine to catch up the aeroplane. During the descent, we hear, the variometer showed a best sinking speed of about 8 feet per second at 65 m.p.h. flying speed. Mr. Slazenger tried a stall, which was followed by a spin, out of which he dived.

Auto-Launching Using Pulleys.—The Technical Committee of the British Gliding Association have examined the causes of a fatal accident which occurred recently when a two-seater was being launched by the above method, and recommend that auto-launching round a pulley should be discontinued. Clubs should inform the Technical Committee should they, for any reason, wish to continue this method of launching.

News from the Clubs



Scenes at the Scottish Gliding Union's site. Top left: horse and "Hols"; bottom left: Bishop's Hill from Loch Leven; right: Loch Leven from Bishop's Hill, and A. J. Thorburn just launched in his "Falcon."

Cambridge University Gliding Club

July 18th.—Aero-towing took place at Marshall's Aerodrome, using a new fine-pitch propeller, which had been lent to us for trial. It enabled the "Moth" to fly much slower than before. A. P. Pringle went up first in the KITE and released optimistically at 800 feet, only to land after 10 minutes. He went up later in the CAMBRIDGE I and stayed up for 2¼ hours. H. W. F. Jones had 55 minutes and G. Kidd 30 minutes in the KITE. Cloud base was at 3,600 feet at the beginning of the afternoon and later rose to 4,000 feet.

July 21st.—Aero-towing at Marshall's Aerodrome. H. W. F. Jones had 1¼ hours in the CAMBRIDGE I, G. Kidd had 1¾ hours in the KITE, and R. T. Cole had 45 minutes in the CAMBRIDGE I. The greatest height was 4,700 feet, this was achieved by Jones, who climbed 300 feet in cloud without instruments and was then seen to come out going rather quickly in a peculiar attitude.

July 31st.—Winch launching at Caxton Gibbet. H. W. F. Jones made a flight of 18 minutes in the CAMBRIDGE I, reaching a height of 1,600 feet. N. W. Lee also made a thermal flight in the TOTTERNHOE, remaining in the air for 12 minutes. He only climbed about 150 feet above the launch, but held height for some time. This promises to be our first "C" in a thermal off the winch.

August 13th and 14th.—Aero-towing at Duxford. Conditions were not encouraging, but several flights of half an hour were made in weak lift. We were pleased to see J. E. Simpson and the Editor of THE SAILPLANE, who both flew Simpson's KITE, also Mr. Nyborg, who brought his NYBORG SPECIAL for Slazenger to fly.

At Caxton.—Several new members have joined and a nacelled DAGLING has been acquired. There have not been very many members in Cambridge lately so the few requiring training have had a very good start. The CAMBRIDGE was, unfortunately, bent by an over-confident pilot, but otherwise training has proceeded fairly normally, and several certificates have been taken.

August 21st.—John Pringle was the only member to fly as no one else was in Cambridge. He was unable to resist the look of the sky, and after some difficulty he managed to get the KITE rigged and launched from Marshall's Aerodrome by 12.15 p.m. He was due to play tennis later in the day and so was anxious not to go away, although the wind was W.S.W. at 15 m.p.h. on the ground. He released at 1,700 feet over Cambridge and eventually reached cloud base at 5,000 feet over Quy Fen, 4½ miles down-wind. He then flew up-wind, via various streets, to Duxford, where he went into a cloud and climbed to 7,700 feet. After leaving this he flew towards Cambridge to avoid a storm, but found a good cloud in front of it in which he climbed to 6,800 feet before being driven out by rain. He arrived over Cambridge at 5,000 feet and did six loops on the way down before returning to land at Marshall's at 2.50 p.m. after 2½ hours in the air. This flight gets Pringle his "Silver C" as he completed the distance and duration some time ago.

Scottish Gliding Union

Since the last report quite a lot of ground-hopping has been done on the training site adjoining the club house at Bishop Hill.

July did not prove too good for soaring flights, but notwithstanding this the FALCON I has continued to find its way back to the hill top.

On August 31st A. J. Thorburn raised the flying time with a flight of 2 hours 20 minutes, and rose to 2,900 feet (4,500 feet above sea level). It was noticed that the first 400 feet was made in 4 seconds, which is a bit too speedy. When we get delivery of the new winch from Glasgow the take-off should be considerably more comfortable.

Johnnie Campbell, of the Dumbarton Club, just missed getting his "C" the previous day. He was returning that evening to Dumbarton after a week's stay on the ground and decided to make the effort, but the wind was light and he landed at the bottom. However, he had secured his "B" earlier in the week. The machine he used for his "C" attempt was the HOLS DER TEUFEL, formerly of Dunstable.

Miss Ann Edmonds and W. B. Murray made an inspection of the site on August 10th, and both agreed that Bishop Hill was one of the finest gliding sites in Europe. "There are endless possibilities here. I think the site is marvellous," remarked Bill. "I'm just dying to get off in the GRUNAU and am longing for the week-end to come round," was Miss Edmonds' comment.

While we claim the hill to be useful in all winds, N.W. to S.W., Murray is of the opinion that it will be useful in a wind from any direction.

Midland Gliding Club

The second issue of the club magazine, *Wing Tips*, which we have received, starts with an article on general meteorology by C. Reilly. We have got far from the time when it was bad form to talk meteorology at a gliding club, and people held the preposterous idea that one could learn all about up-currents by asking questions of meteorologists, and in no other way.

Mr. Rushton, Chief Instructor, writes: "Our president has succeeded, after untiring efforts, in acquiring additional land to the south and east of the present site, so making it possible for us to have winch launching equal to any in the country and over ground which generates more thermals per square foot than any two other sites put together. And what thermals!" He complains, however, that very few members have turned up to use these thermals except when there is a west wind.

One writer has an amusing description of Dunstable at Competition time: ". . . dozens of machines a few inches apart, above, below, alongside, with wings overlapping, and struggling along the little hill like so many seagulls after a shoal of whitebait."

At Prestatyn, on Whit Sunday, H. C. Wynne climbed 3,000 ft. and set off southwards, but was forced to land after 10 miles. Barnes and Olver flew their H-17 there.

A club barograph is now available at a charge of 1s. 6d. per flight; but, in order to encourage pilots to search for thermals in the absence of slope lift, no charge is made for it on flights of less than 20 minutes.

Mr. Keeble has relinquished the resident managership, but will probably live near Birmingham so will continue to fly at the club.

A race for the "Silver C" is in progress between Mr. C. Espin Hardwick, who has climbed 3,400 ft. in his own FALCON II over Bishops Castle, and Mr. Frank Davies, who did 38 miles at the National Contests.

The Austin group has been re-formed, and started training at Handsworth on May 28th. Construction work is also done at Handsworth, where members can come and learn how to do it.

The Hereford group has a record DAGLING which has had 2,026 launches without a major crash—not even a broken landing wire. The record was not even broken when it charged down-wind into a hedge last May.

Wing Tips can be obtained for 3d., plus postage, from D. A. Hannay, Lowans Hill Farm, Redditch.

Public School Camp.—This was held from August 13th to 21st, and, though not well patronised by the public schools, we hear, attracted a number of others. In the first week about 180 hours' flying were put in, and 6 "C" certificates taken, as well as 4 legs to a "Silver C." In addition, Rooper completed his "Silver C" by flying 72 miles to the other side of Ashby de la Zouche on Wednesday, August 17th, attaining 3,500 ft. on the way, and doing his 5 hours' duration the next day on FALCON II.

Also on Wednesday, Young soared for 15¾ hours and put up a new British duration record (described elsewhere). On Friday the same pilot took the KITE 26 miles to the other side of Bridgnorth, but touched a tree on landing and broke a wing.

On Saturday, August 20th, Wright and Latto arrived from the London Club and became country members. Another visitor was Wing-Commander Atcherley, who was taken for a ride in the two-seater by Mr. Hardwick. They caught a lovely thermal over the usual spot at Rock Cottage and rose to 2,000 ft. The result was that Atcherley joined the club next day and took his "A," "B" and "C" in the TUTOR. He is stated to be now an enthusiastic convert.

Unfortunately a serious accident took place on the final evening, August 21st. When the two-seater FALCON was launched by the usual method of a bungy attached to a rope pulled through a pulley by a car, the ring failed for some unexplainable reason to come off the open hook. When the machine had risen to 50 ft. and was beginning to make a left turn, the rope tightened and pulled it down on to the hill-side about 200 ft. below the top. The passenger, Major J. G. Stewart-Smith, of Kinver, was so badly injured in the ensuing crash that he died the next day, while Mr. J. V. Rushton, the pilot, suffered broken ribs and other injuries but is now happily recovering in the Quarry Nursing Home, Shrewsbury. It appears that the rope at the car end broke after the machine had taken off, and the stretch in the bungy caused it to flick back on to the machine and become entwined around the hook or the bracing wires, so that in effect a permanent contact was made and the machine could not break away. This method of launching has now been suspended, but it has been in use for the last three years and thousands of launches have been made with it without the slightest trouble.

London Gliding Club

Those who did ground jobs during the National Competitions have now been able to get back into the air, while several who did take part felt that they needed a change and ran a little private meeting of their own on the hills around Huish in Wiltshire. (This district, after its development by the Cambridge Club earlier in the year, is rapidly turning into the chief national soaring centre.) They took with them the GREY KITE and Ann Edmonds' GRUNAU, and the SPERBER joined them temporarily.

A climb to 3,500 ft. off a winch launch was made on July 24th by Burnett. He and A. B. Wilkinson have now left us for jobs in the North Midlands, so will in future do most of their flying from Bradwell Edge.

The CAMEL, designed by Sproule and Ivanoff, and built by Zander & Scott, had its first test hops on August 1st and was soared for the first time on the 17th. Its most ingenious feature is the folding wings for hangar storage; though this won't affect the charge for hangarage, it will at least render the machine less liable to damage when "lifting" is going on in the hangar.

This must be a unique photograph. It was taken from a sailplane soaring in the rising smoke from a heath fire and shows the actual fire which apparently started the up-current. Around it are patches of burnt grass, and in the distance the London Gliding Club can be seen. The wind, which was light and variable that day (August 4th), is blowing temporarily from about N.N.W. The photographer, Brian A. Powell, and the pilot, John E. Simpson, were up in the club's "Falcon III" for 15¾ minutes, and only came down then because the passenger had had his money's worth of smoke-soaring.

Sunday, August 7th.—Murray, on his first cross-country flight, tried to reach the club from a start at Devizes, one of the Wiltshire sites. After 3½ hours he had to land near Aylesbury, 17 miles short of here, and 60 miles from Devizes. There was practically no wind.

On the previous day, at Heston, Peter Davis was aero-towed in the RHÖNADLER to 1,500 ft. and proceeded to climb in various cumulus clouds to 11,300 ft. Wills, also at Heston, took up an "Aeronca" for a half-hour's flight, climbed at an astonishing rate by circling with the engine full on, in a thermal off some houses, shut off the engine at 3,500 ft., and soared for 10 minutes, meanwhile gaining a further 200 ft. His circles were made in 30 seconds each.

Sunday, August 14th.—In a very light northerly wind, 11 sailplanes tried to get thermals off the winch. The only one of any consequence was picked up by Hiscox in his GULL, and took him to 1,200 ft. in a 23-minute flight.

On the following Wednesday eight machines were got out in a good soaring wind, including the CAMEL. Lacey, in the club BUSSARD, attained over 1,000 metres and completed his "Silver C."

Sunday, August 21st.—Good clouds in the morning, but difficult to reach. However, W. Adcock took the Desoutter GRUNAU up to them at 3,000 ft. and remained there for over half an hour while an irregular street of very large cumulus went over. Meanwhile a pilot attempted to do the same thing in the club BUSSARD, but did his first circle so slowly, and so low down, that he stalled on to the hill-top and the machine's nose disintegrated. Dr. Edmunds went off in the RHÖNADLER and landed about 15 miles away near Hitchin.

Just before 1 p.m. a rainstorm came over; it was elongated in the wind direction, west to east, but the weather map marks

it as a cold front along a line S.S.W. to N.N.E. Turner, in the Bristol Club's GRUNAU, was up at the time and noted a drop in temperature of 20° Fahr., though this was partly due to his gain in height in the storm; the weather map makes the drop about 8°.

On the previous day we were visited by a party of 40 people from the British Association at Cambridge. Unlike last year, they did not consist entirely of engineers, and the party was actually rumoured to contain a meteorologist or two.

Instruction Camp.—This, unlike the other monthly camps this year, lasted a whole fortnight—from July 29th to August 12th. There were 25 members, and they had 1,980 launches. Certificates gained were: 22 "A," 21 "B," 4 "C." There were no soaring winds during the camp, and the "C" flights were made by people who stayed on an extra day.

Our summary of flying for July, which could not be given last month owing to the Competition totals not being worked out, is included this month instead.

Tailpiece.—Small daughter, aged three, helping enthusiastic glider pilot to carry his lunch to the car: "Shall I carry the thermal flasks, Daddy?"

Summary of Flying.

Week ending:	*Days of Flying*	*Ground-hops*	*Timed Flights*	*Flying Time hrs.*	*mins.*
July 3 ...	5	100	131	52	55
,, 10 and 17* ...	11	—	452	291	42
,, 24	5	201	86	7	23
,, 31	2	403	47	3	55
Aug. 7	7	1,170	152	4	52
,, 14	7	342	244	26	22
,, 21	3	105	113	40	33
,, 28	3	100	41	1	5

* This includes the period of the National Contests, during which club members competing made 266 flights totalling 264 hrs. 26 mins., and in addition there were 173 passenger flights in two-seaters totalling 25 hrs. 12 mins. (Flights by members of other clubs are not included in the totals.)

From January 1st to August 28th there were 10,006 launches and 1,286 hrs. 54 mins. flying. Last year the figure of 10,000 launches was not reached till October 9th, and 1,000 hours' flying on October 24th.

Certificate Flights.

June 29th.—Stonhill, "B"; Stonhill, "C."

July 20th.—Williams, "B."

July 31st.—Carmichael, "A"; Bremerman, "A"; Roake, "B."

August 5th.—Powell, "A"; Sweeting, "A"; Stenning, "A"; Peters, "A"; Kirkwood, "A"; Lamb, "A"; Gallagher, "A"; Robinson, "A"; Porter, "A"; Canti, "A"; Miss Van Zanten, "A"; Bremerman, "A."

August 6th.—Lovell, "A"; Norris, "A"; Gallagher, "B"; Bremerman, "B"; Peters, "B"; Carmichael, "B"; Sweeting, "B"; Powell, "B."

August 7th.—McGowan, "A"; Stettiner, "A"; Dewsbury, "A"; Villiers, "A"; Temple, "A"; Flint, "A"; Hallett, "A."

August 8th.—Wilkes, "A"; Walker, "A"; Lamb, "B"; Miss Waldron, "B"; Porter, "B"; Robinson, "B."

August 10th.—Canti, "B"; Stenning, "B"; McGowan, "B"; Miss Van Zanten, "B."

August 12th.—Dewsbery, "B"; Walker, "B"; Esmonde, "B"; Hallett, "B"; Hallett, "C."

August 13th.—Mortimer, "A"; Randle, "B"; Kirkwood, "B"; McGowan, "C"; Bremerman, "C"; Oliver, "C."

August 17th.—Lacey, part "Silver C" (height).

August 21st.—Scrase, "A"; Stettiner, "B."

August 27th.—Straus, "A"; Wheatcroft, "A"; Briggs, "A"; Thomas, "A."

Aftermath of Record.—After the international duration record set up in July by Murray and Sproule, each had a large fan mail, including a proposal of marriage. That received by Murray is not for publication, but here are some extracts from Sproule's:—

DEAR STANLEY SPROULE,

Before I come to the chief subject of this letter I want to congratulate you on what I think is the finest performance put up by any man during the present century. . . .

Now for the great question I have decided to put to you.

First, I must tell you that I am a seer, and have been connected with Spiritualism for 15 years; my Guide is a North-American Indian named White Cloud (you will see the connection with your grand sport), and he has many times come and shown himself to me in dreams. When I saw your photograph in the *Sunday Express*, was at once struck with the great likeness between you and him; his eyes have the same kind look as yours, and there is something about the mouth—I can't say exactly what—which indicates the same character between you.

Well, the night after your wonderfull record, my hand started to write automatically, and after coming out of trance, my eyes fell upon these words: "I have big work for Stanley. Call him."

I am certain you must be the Stanley to which White Cloud alludes—there could be no other. . . . I have therefore made up my mind that it is my fate and duty to be associated with you in a life-partnership. . . When can we meet? . . . I might say that you will not be disappointed in my personal apperance, in fact, in my younger days I was considered little short of beauty—and have still a very personable appearance. My hair is Aburn the shade the call Tishian.

Yours lovingly and impatiently.

Yorkshire Gliding Club

August.—Practically the whole of the month has been given to the Annual Instruction Camp, which, largely due to the untiring efforts of the voluntary instructors, and the unselfish attitude of other members in giving precedence to camp flying, has been even more successful than last year. Owing to adverse weather conditions depriving us of flying time, the camp was extended for a further week. This extension was nobly repaid in certificates gained.

Four certificates only were earned in the first week, but better weather prevailing, more were obtained in the second week, including eight "C's." There were very few decent soaring days in the whole of the month, but on one of them, the 19th, Pick reached 2,600 ft. and a camp member, Vaughan, 1,400 ft.; five "C" certificate flights were made on the same day.

Our KADET, flown by Street, landed with a wing down in a fair wind, pivoted on the tip and after settling down nicely, lifted her tail in the air and overturned. The rudder took most of the weight and the machine was in commission within a few days, but, unfortunately, her troubles were not at an end. Miss Van Zanten, flying too slowly on a down-wind turn, bumped the machine good and hard, and we shall be a KADET short for some time to come.

On the 21st regular club members managed seven hours' soaring, in addition to which two camp certificates were gained and all the usual training carried on.

The camp finally came to an end on the 27th, and we feel that it has been one of our best efforts, attended with no more than the normal amount of crashery. Indeed, if one considers the number of launches made in the three weeks, the majority of them being for persons at the most lurid stage of training, the cost in wreckage seems almost negligible. The one really unfortunate incident concerned one of the Adams brothers who had his leg cut by the winch cable whilst retrieving. He had already secured his "A" and "B" and was thus debarred from taking

Billy Sharpe flying the Yorkshire Club's "Grunau" over Sutton Bank in July: photographed from above by G. A. Hinchcliffe in Stedman two-seater.

his "C." He is making a good recovery, and we hope that he will be able to return and make up for this misfortune in due course. Several letters of appreciation have been received from members of the camp, and these are gratefully acknowledged.

On Tuesday, August 30th, Slingsby brought a new FALCON III for a test flight, and was accompanied by Mr. and Mrs. Kronfeld and M. Mutsaarts, of the Belgian National Gliding School. With Mrs. Kronfeld as passenger, Slingsby landed the FALCON III at the bottom of the south slope near Kilburn, owing to difficult weather conditions. We have had several visitors from abroad during the month (Belgium, Holland, France, Germany and Poland), and to all of them we extend a welcome whenever they care to visit us.

The following certificates were obtained during the month:—

"A."—8th, Vaughan, Adams; 14th, Street, Miss Forbes, Goodheart; 15th, V. H. Adams; 23rd, Cook; 24th, Hadekel, M. Ollis, W. S. Ollis; 27th, Dixon.

"B."—10th, Adams, Vaughan; 17th, Street; 20th, Goodheart, Miss Forbes; 21st, V. H. Adams, Walker; 24th, Cook, Hadekel; 25th, M. Ollis; 26th, W. S. Ollis.

"C."—17th, Vaughan; 18th, Priestman; 19th, Winstone, Street, Savage, Tovey; 20th, Goodheart, Miss Van Zanten; 21st, Walker; 27th, Cook, M. Ollis, W. S. Ollis.

Total: 11 "A," 11 "B," 12 "C"; 34 certificates in all.

To-day there are gliding people everywhere. In most small gatherings they are to be found without difficulty. All you have to do is to burst in and cry "Lifting!" in a loud voice. Several will turn pale, leave their beer or cocoa and hide in dark corners. Those are Gliding chaps, chaps!

Club Dance.—A dance will be held at the Golden Fleece Hotel, Thirsk, on Saturday, October 8th. Tickets obtainable from Mr. A. M. Verity, 139, Norman Lane, Idle, nr. Bradford; price 6s. 6d. for dinner and dance, 3s. for dance only.

Annual Report.

We have received the Secretary's Report for the year ending July 31st, 1938. From it the following extracts are taken:—

On July 31st, 1938, the club completed its eighth year. In the Secretary's Report last year, my predecessor said that one of our greatest needs was a large increase in membership to make fuller use of the facilities then available. I am glad to say that we have had a record year for new members, and for the first time our total membership exceeds 100, the actual figure at July 31st last being 145. That is the figure for full yearly members and in addition approximately 150 short period members received instruction or flying in some form with the club.

An important addition to our flying organisation during the year has been the opening of the Durham County Branch of the club, which has resulted in the provision of localised regular instructional amenities on an excellent training site near Sunderland. At the outset your committee frankly regarded this as an experiment which, if proved successful, might be repeated elsewhere within the club's sphere of influence, and particularly in the West Riding. An essential requirement for the progress of such a branch is a flow of new members sufficient to replace those who have reached the soaring stage. We can regard the results so far as extremely satisfactory and encouraging, and the credit for this must be given to the generosity and energy of Mr. J. Maw, to Mr. G. S. Aird, the Branch Secretary, and to Mr. Hartness (Instructor-in-Charge) and Mr. Renwick for sacrificing a large number of flying days at Sutton Bank. We congratulate the first two *ab initio* "C's" of the branch—Mr. J. Maw and Mr. J. Sutton.

The fleet of club machines has necessarily been further enlarged during the year by the addition of one open DAGLING and one NACELLED DAGLING in use at the Durham County Branch, and a KIRBY TUTOR and a Slingsby GULL at Sutton Bank. In addition the club's FALCON I was exchanged for a KIRBY KITE early in the club year. The GULL is fitted with blind flying equipment, and it is also during the year under review that parachutes and barographs have first been made available for members' use.

Regular aero-towing facilities were introduced during the year by the club's purchase of an aero-towing attachment which we have, by arrangement with the York Aero Club, had fitted to one of the club's machines which is available for our use when required. And here I must speak with gratitude of the kindness of our President, Major J. E. D. Shaw. He has helped the club in many ways during the past year, and by no means the least of his benefactions is the use we have been allowed to make of his private aerodrome for aero-towing and instruction. He has also most generously completed the tarmac apron and path in front of the hangar, something which was badly needed but quite beyond the club's finances at the present time.

Instructional facilities during the year have kept pace with the increase in members, and during the year under review our members have qualified for 56 "A," 41 "B," and 36 "C" certificates. These figures are approximately double last year's, and are by a very substantial margin a record for a provincial club for *any* year. Four members, Barker, Deane-Drummond, Raphael and Haslinger, qualified for their "Silver C's."

In regard to crashery we have not had a good year, and we have been hard put to it to keep our fleet of machines in commission. This is in part undoubtedly due to the increased activity both in instruction and advanced flying.

For the first time for several years there are no substantial building developments to report. All our resources have been devoted to the flying side. In an attempt to keep the flying ground in better condition a horse has been acquired for use instead of retrieving cars when the ground is waterlogged and a stable and storehouse have been built behind the original hangar.

The club's capital debt has been further reduced during the year ending July 31st last and now stands at £270.

The Government Gliding Subsidy provides both the reason and the justification for this insistence on instructional efficiency, and my Report would be incomplete without some reference to this sum of £5,000 per annum which is being used to interest and instruct people in gliding. When the granting of this subsidy was first announced the Government made it clear that it was to be paid in proportion to results achieved by the various approved clubs. The Air Ministry has on several occasions laid additional emphasis on this sound principle, whereby any club, however large or small, which conforms to very reasonable standards to ensure its stability, can claim a subsidy grant in proportion to the certificate results it has shown in the previous year.

There have been, during the past year, attempts in certain quarters to get this principle interfered with, and these attempts which, if successful, would certainly have resulted in a serious waste of public money have caused this club a good deal of concern. I am therefore happy to report to you that it has once again be categorically laid down that, after a small grant to the British Gliding Association for administration expenses, the £5,000 subsidy will continue to be allocated to clubs *proportionately to points based on certificates gained in the previous year.*

Your committee and directors have had a rather anxious time pending this decision as we have spent a good deal of money on providing facilities for instruction and practice flying and this year will certainly absorb our maximum allocation of subsidy. Moreover, the present system of subsidy grants according to results is the only means and justification for this club's offering *ab initio* instructional facilities at anything less than a prohibitive figure. This fact cannot be made too clear.

Ulster Gliding Club

Sunday, June 5th.—A disappointing day in view of the fact that some of our friends from the Yorkshire Club were visiting us. There was a little wind but not in the right quarter to produce lift. The FALCON III and the KADET did circuits, Dinsmore taking his "A" in the latter.

Friday, June 10th.—A steady north-westerly wind induced the lucky men who live near the site to turn out in the evening for instruction in the two-seater.

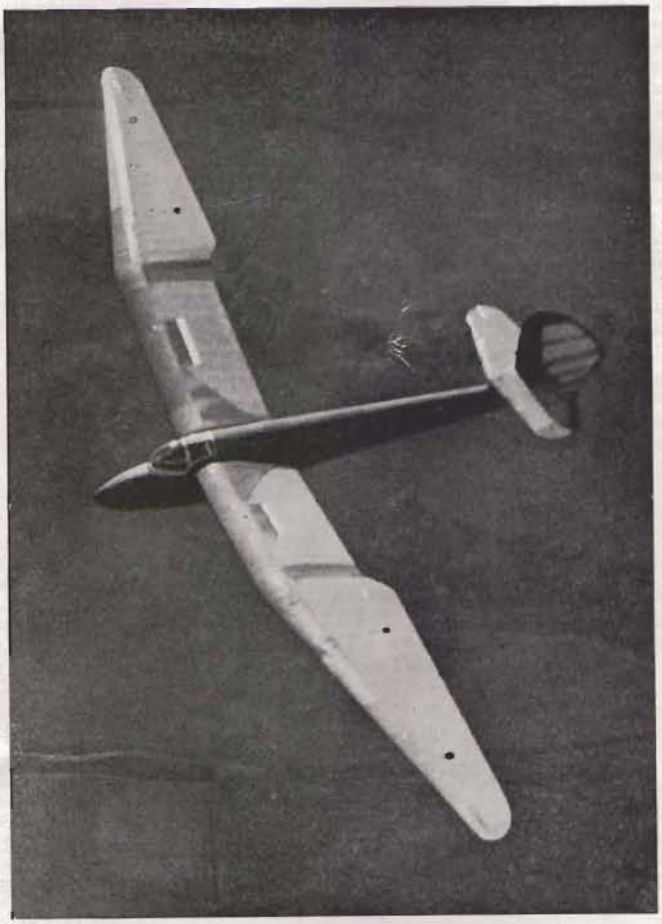
Sunday, June 12th.—A good soaring day at last, and the FALCON III, the KADET, and the KITE were in great demand from lunch time onwards. Unfortunately an abundance of low clouds made the game of hide and seek a little too exciting to be pleasant. Henry and Mackie, in particular, thoroughly enjoyed themselves at it. Mackie's passenger's views have not yet been published! The KITE, with Siderfin on board, got into a big one and sank steadily to the back of the hills.

Sunday, June 19th.—The day dawned wet and windy but cleared after lunch, so the FALCON III and the KITE were put through their paces until the wind dropped.

Wednesday, June 22nd.—Too good an evening to be missed, so the "locals" turned out and did slides, hops, and circuits in the KADET. Reid had his first solo and took his "A" in fine style. Moore followed his example and secured his "B." Not a bad evening's work and a successful end to a rather unsatisfactory month's flying.

Summary for June.—Flying time, 12 hours 42 minutes. Launches, 85; Certificates, 2 "A" and 1 "B."

Saturday, July 2nd.—The new KADET and trailer arrived from Slingsby's and was duly given its C. of A. The high tide prevented us operating until after tea but things went with a swing from then until dusk. Reid and Moore continued the good



Minimoa

the sailplane of the master pilot

It takes a "Minimoa" to tackle tempting clouds, climbing blind flying up to 22,000 feet where the plane is loaded down with ice. More and more leading pilots of every country where there is any soaring sport prefer this sturdy and reliable sailplane with its unusually high safety factor and stability.

Here are a few of the latest record flights in MINIMOAS:—

Mr. Philip Wills, England, setting a new English mark for distance with 209 miles and for altitude with 10,080 feet.
Mr. Lewin B. Barringer, U.S.A., flying 212 miles over the flat country of Texas.
M. Nessler, France, flying a MINIMOA up to 11,000 feet.

And here are the altitude records of this year's Rhoen competition in Germany:—

Lemm with a MINIMOA 16,000 feet.
Fick with a MINIMOA 18,000 feet.
Drechsel with a MINIMOA 22,600 feet (international record).

Seven MINIMOAS were flown over the 300 km. mark on cross-country flights *on one day* during the Rhoen contest 1938.

"I cannot speak too highly of the flying qualities of the MINIMOA."
Lewin B. Barringer, General Manager of the Soaring Society of America.

Sportflugzeugbau Schempp-Hirth

Goeppingen, Wuerttemberg, Germany

work begun on Wednesday and got their "B's" and "C's." Mackie in the FALCON III and Henry in the KITE had another spasm of cloud-dodging. Henry got inside a big one, and though he came out of it all right, we understand he wasn't too happy while it lasted. That'll learn him!

Sunday, July 3rd.—A day of rainstorms and uncertain S.W. winds. The new KADET and the two-seater were got out, but without much success. Finally, when no one was looking a puff of wind sneaked up and overturned the KADET. Unpleasant scrunching noises and a smashed aileron and tail plane resulted.

Tuesday, July 5th.—The second KADET also being *hors de combat* with a crumpled nose and wing, the beginners were restricted to circuits in the KASSEL 20. Metcalfe, stout fellow, came all the way from Belfast after tea to put them through their paces. Unfortunately the wind dropped shortly after he arrived, but not before Dinsmore had got his "B" in the approved style.

Tuesday, July 12th.—A gorgeous evening but dead calm, so we had to be content with circuits in the rejuvenated KADET.

Friday, July 15th.—A good N.W. wind, but owing to a fickle tide not much time in which to use it. The local contingent put the KADET up and soared her good and proper while the going lasted. Reid and Dinsmore had the time of their lives and went home with first-class "C's" to their credit.

Saturday, July 16th.—Once again the KADET was in demand by the learners and this time McCartney did his stuff and secured his "B" and "C." The Schneider Trophy should be a gift for him if he continues flying at the speed he did then. Mackie and Siderfin soared the KITE until the tide came in and almost swamped the trailers.

Wednesday, July 20th.—The local folk turned out for some soaring, but unfortunately the towing car wouldn't tow.

Saturday, July 23rd.—A fine day but no wind, so all and sundry practised spot-landing in the KADET. The "spot" proved to be a somewhat elastic site.

Sunday, July 31st.—No wind again, so "spotting" was once more the order of the day. We may not do much flying but we do get plenty of fresh air and exercise.

Summary for July.—Flying time, 13 hours 22 minutes. Launches, 67; Certificates, 3 "B" and 4 "C."

Friday, August 12th.—A brisk N.W. wind tempted the local folk out even though the weather and tide were not too favourable. There was plenty of lift about and the KITE and KADET were soared with ease, though low cloud and rainstorms gave Dinsmore and Siderfin an anxious time avoiding one another over Binevenagh.

Saturday, August 13th.—Less wind; neither KADET nor KITE got above a thousand feet.

Sunday, August 14th.—No wind at all, so we circuited the FALCON III and gave the general public good value for their money.

Saturday, August 20th.—Gardiner and Davey, of the Cambridge Club, visited us with the former's H-17 and started the ball rolling by soaring her good and proper in the teeth of a strong west wind. This wind is not a particularly good one as far as our site is concerned, but their example was soon followed by all and sundry in the KITE, KADET and FALCON III. McCartney, on his first soaring flight since taking his "C," went to Binevenagh and returned without mishap. Stout effort! Two new members, Dr. Evans and Major White, received their baptisms in the two-seater, the latter literally so, as no sooner was he well up in the air than the heavens opened and almost filled the cockpit. He paid his sub. in spite of this!

Sunday, August 21st.—We rigged the KADET on the hill top and prayed for a breeze. Our orisons availed us nought so in despair we bungied Metcalfe to the bottom and had a spot landing competition. Tell it not in Gath, but our star pilot landed on the wrong side of the river amid much profanity.

Saturday, August 27th.—Plenty of wind but few members. Reid appeared to think he had a monopoly of the KADET and in spite of frantic signals from below remained with his head in the clouds. Dinsmore in despair tried to rig the KASSEL single-handed. The Reid-KADET partnership finally liquidated itself in the river to the evident satisfaction of the disgruntled shareholders. Instruction flights in FALCON III.

Sunday, August 28th.—Once again a brisk trade was done with the two-seater, the efforts of the bus conductors, Henry and Metcalfe, doing much to reduce our overdraft. The KITE was put through its paces by Metcalfe, who showed what can be done with a sailplane when you know how. Dinsmore later had his first flight in this machine which effectively removed the rancour remaining from his previous day's struggles with the KASSEL. The less fortunate ones contented themselves with the KADET. The day closed with a vigorous hunt for sundry missing tools, all of which were eventually located, as usual, on or about Dinsmore's person!

Monday, August 29th.—Monday evening opened with a fierce north-westerly wind which unfortunately soon veered to the south and caused some erratic flying.

Tuesday, August 30th.—The local contingent turned out and took advantage of the evening breeze in the FALCON III and KADET.

Summary for August.—Launches 113. Flying time 35 hours 58 minutes.

Channel Gliding Club

Since the extra R.A.F. squadron has been stationed at Hawkinge, that aerodrome is no longer available for our club use, so we have been obliged to consolidate ourselves at our soaring site on the hill overlooking Folkestone.

Another 60-foot Ellis Hangar has been built up against the original one, the intervening section being removed so that there is complete freedom of movement from one hangar to another, the whole floor area being under one roof. A club room has also been built, 30 feet long, in front of the main building, in order to facilitate the club's social activities.

Several new members have recently joined, and training is going on apace, chiefly on our DICKSON primary, affectionately known as "Jumbo"; we have recently considerably modified the machine by adding a *cabane* and wire bracing in place of the original steel tube struts, which were invariably buckled if a heavy landing was made. Twenty to twenty-five towed flights are usually made per day, our 30-90 Vauxhall, which is still going strong, being used for the job.

After several years of excellent service, our B.A.C. IV is undergoing a complete overhaul in our workshop, all doubtful material throughout being replaced. We are fortunate in this respect in having a large percentage of skilled workers amongst our members, including one with a commercial G.E. licence.

The club has two primaries and three more advanced types of machines. Its present satisfactory state is due in no small way to the subsidy grants which the B.G.A. has enabled us to attain.

Hull Gliding Club

The prolonged absence of notes from the pages of THE SAILPLANE has not meant that we have been inactive during the winter months, but rather that training has continued without any incidents worth reporting. On April 25th Anson secured the club's first "A" certificate. Owing to differences with the Corporation we were forced to suspend our activities during May and June, but flying continued once more on July 3rd. Flying conditions were rough and all controls worked overtime. Heavy showers put an end to activities, so instead there was revelry in the club house until the early hours of the morning.

July 10th.—Conditions were rough again and the tendency was to fly fast—the wailing of the wires mingling with the wails of the instructors at the efforts of some members to do turns. By a coincidence we completed to-day exactly 1,000 launches on the anniversary of one year of operation with our present machine, and the only damage to show for all the hard work is a piece of splintered plywood and a doped patch on the tail unit.

July 17th.—Several members reported that they could feel patches of lift while gliding down from 400 feet—not bumps, but quite considerable heaves. Paris, Beedham, and Walker secured their "A" tickets with 43, 46, and 43 seconds respectively. Rain again stopped play.

July 24th.—A warm day and wind east. We started the day by obtaining two more "A's," Havercroft with 41 seconds and Grove with 36. After lunch Morris, Tree, and Ripley secured their "A's" with 35, 39, and 37 seconds respectively. This makes 8 "A's" in a fortnight.

The haystacks at one end of the aerodrome caused some trouble and one or two were flattened out in the process of retrieving.

A very successful Flannel Dance was held in the club house on July 29th, and it is hoped there will be more.

The note at the foot of the list of certificates in the August issue of THE SAILPLANE is of great interest to us: "As a matter of history No. 100 was earned by C. G. Lawson, of the Southdown Skysailing Club on December 28th, 1930." Lawson and Beedham (No. 1,000 in the published list) are both members of the club.

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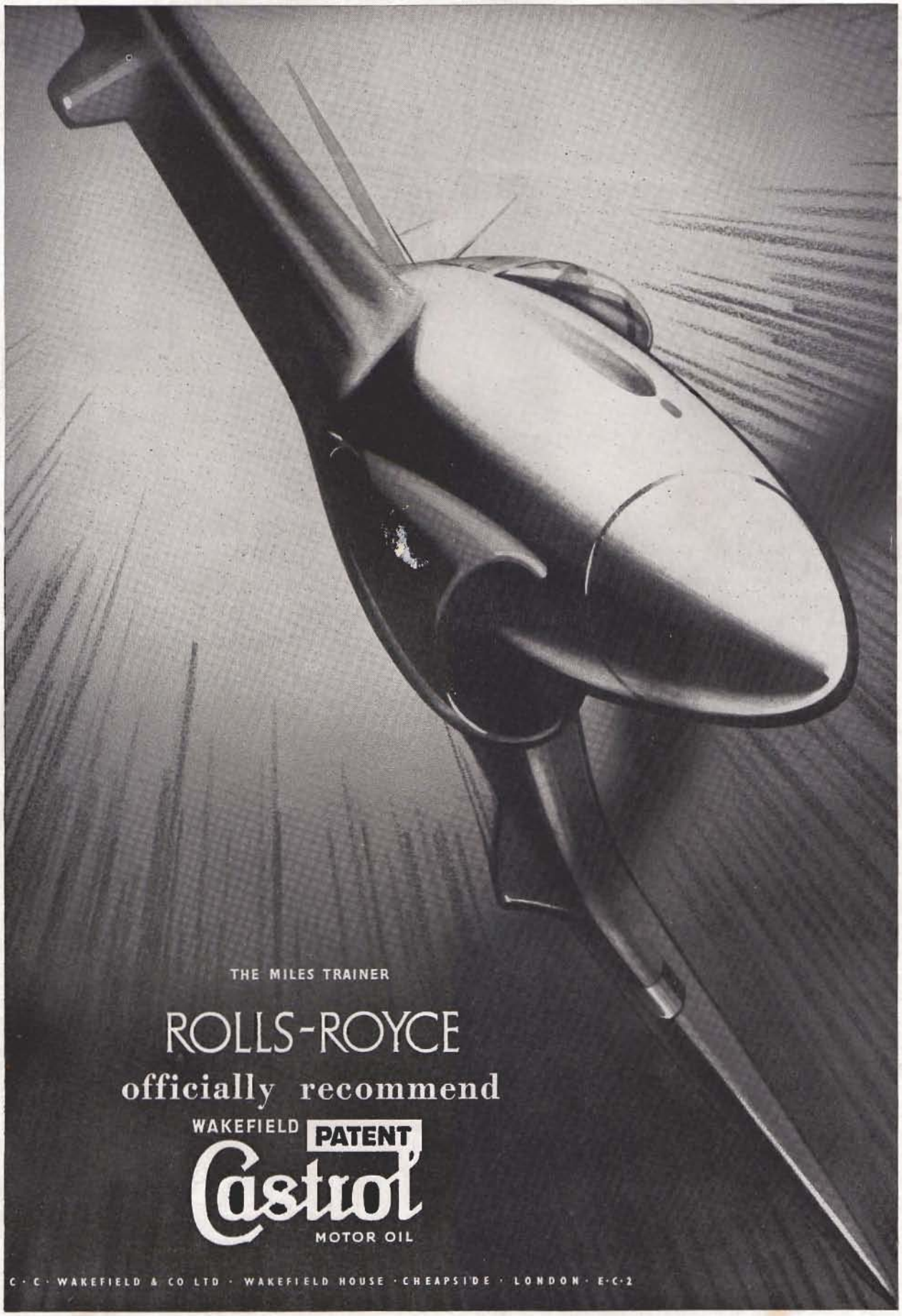
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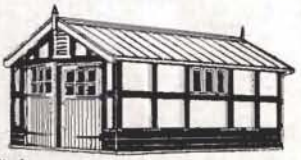

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