

British Altitude record page 2, Blind flying page 20

SEPTEMBER, 1946

ONE SHILLING

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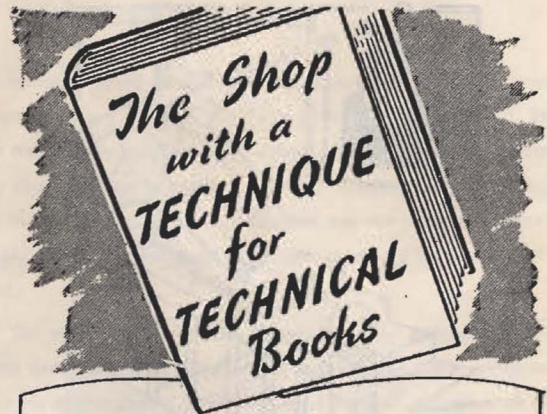
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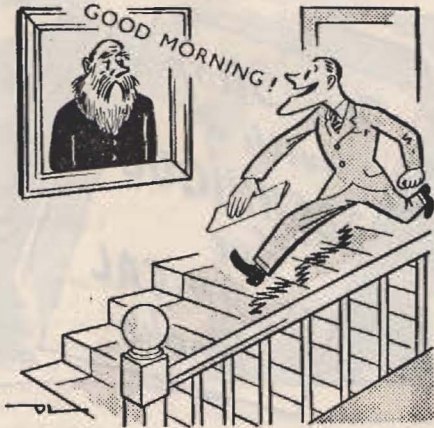
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# Sailplane and Glider

THE FIRST JOURNAL DEVOTED  
TO SOARING AND GLIDING

SEPTEMBER 1946 ★ Vol XIV No 9

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## EDITORIAL

TWO "cracks" commonly heard since the birth of Aviation until the present day are, "It doesn't do any work," and "It's heavy but it's strong." These expressions have been freely bandied by so-called experts, salesmen, amateurs etc., when describing shortcomings of their sailplanes. Usually they are used to cover up deficiencies in workmanship or to make excuses for poor performance. Should any reader apply these remarks to his sailplane he would be well rid of the thing: it is inefficient.

Let us once and for all dispose of these expressions and realise that every part of a sailplane does useful work of some sort. Admittedly some components receive their highest loads in the course of ground handling, but should even these components be not quite up to par the possibility of transferring an excessive load to some other part of the structure and straining cannot be ruled out. This brings us to a very present and serious situation in the gliding and soaring movement, the flying of pre-war sailplanes and gliders in unairworthy condition.

Two further cracks to those mentioned in the first paragraph have recently resounded at gliding meetings with ugly results, both in the course of a few weeks. Both have done damage to the movement which has enough struggling to do without asking for trouble. In one case to the writer's personal knowledge the poor condition of a craft was quite well-known and commented on by qualified people. Thus for the sake of a few pounds, life was endangered and incalculable harm was done to the movement.

A few accidents will soon focus the eyes of the controllers on the subject and the result will be the bogey of restriction, with its added expense and detraction from the joys of gliding and soaring. The movement could not afford that, far better be satisfied with less flying for a while than suffer broken bones for the sake of a few square feet of plywood. Skilled repair facilities are at a premium, material is difficult to come by we know, but things can be done with effort. Sailplanes which have been stored during the war years may appear to be in reasonable trim but it is suggested that while the structure is quite strong enough to absorb the loads of normal flight, conditions may easily arise where the craft must absorb severe loadings from excessive aero towing speed, violent turns, severe gust conditions, etc. It is at these times of course that any weakness of the structure shows up and possibly leads to more severe results.

The suggestion is made that all sailplanes of pre-war vintage, no matter how airworthy they may appear in the enthusiastic eyes of their owners, should be given a most careful inspection, preferably by an examiner independent of the owner, and facilities provided by removing some of the ply skin for every glued joint to be inspected very carefully. The pre-war casein joint was an excellent job, but even the glue manufacturers would never claim such joints would withstand over six years of damp storage, bad ventilation, etc., without losing some strength. Shrinkage of timber causing small cracks, corrosion of unprotected bolts inside holes all add their quota of potential trouble to which there is only one answer, thorough and skilled inspection of the structure.

## THE B.A.F.O. SOARING CONTEST

FOR some time now the four gliding clubs represented in the B.A.F.O. Gliding Clubs Association have been busy preparing for the first soaring contest to be held in Germany since the end of the war. The 2 Group gliding field at Oerlinghausen, near Bielefeld, with its famous ridge—a part of the Teutoburger woods—reaching heights of 1,000 ft., was chosen as the most suitable and central site and the date of the competition was fixed from June 22nd to 30th.

Competition rules were largely based on B.G.A. rules, although there were several modifications. For flights of 100 miles and over, a bonus, reaching 100 per cent for a flight of 300 miles, was to be given, so as to compensate teams for the loss of a sailplane and pilot on the next day's flying. Three pilots and three gliders—though not necessarily the same—were admitted on each day, and all launches were to be carried out by means of a winch.

Equipment belonging to the "away" teams began to arrive on Wednesday, 19th June. We were sorry to find that the B.A.F.O. Gliding Club was not to be represented. 84 Group sent a convoy, consisting among other things of a "Queen Mary" and several other heavy transports, along the Autobahn from Brunswick, while team and supporters arrived in Austers. Air Division Gliding Club brought a "Weihe" two "Meises" and a "Grunau"—the latter to fly outside the competition—and pitched tents and office trailer in a corner of the field. Soon



*The Trophy*

gliders, including a "Weihe," a "Meise" and a "Minimoa" belonging to our hosts, were launched in all directions. Air Division had built centre of gravity couplings into all their kites, casting off at anything between 300 and 500 metres above the winch. Everywhere great activity with pre-competition nerves and gremlins much in evidence.

Friday was a grand day, with lots of thermals and cumulus. Several people stayed up for more than three hours. Noteworthy was A.C.I. Pickup's effort, of Air Division G.C. He soared the "Grunau" in thermals for 3½ hours—and two months ago he had never been inside a glider.

Similar weather on Saturday, the 22nd, and everything ready for the start of the contests. S/Ldr. Ramsey, D.F.C. and Bar, of 84 Group Gliding Club, set off in the early afternoon and reached a point 16 miles North of Frankfurt, covering a distance of 111 miles and reaching a maximum height of 2,775 metres. W/O Tuck covered 33 miles, while F/L Haynes reached a point 27 miles from Oerlinghausen. Sgt. Jasper, of the Air Division Gliding Club, completed the distance test for his Silver "C" with a flight of 39 miles.

It was very much later when we got a landing report from F/L Reade, D.F.C. He had carried out what proved to be the contest's best flight, to a point, 169 miles away, in the French zone of occupation, not far from the Luxemburg border. His "Weihe" had reached a height of 3,380 metres!

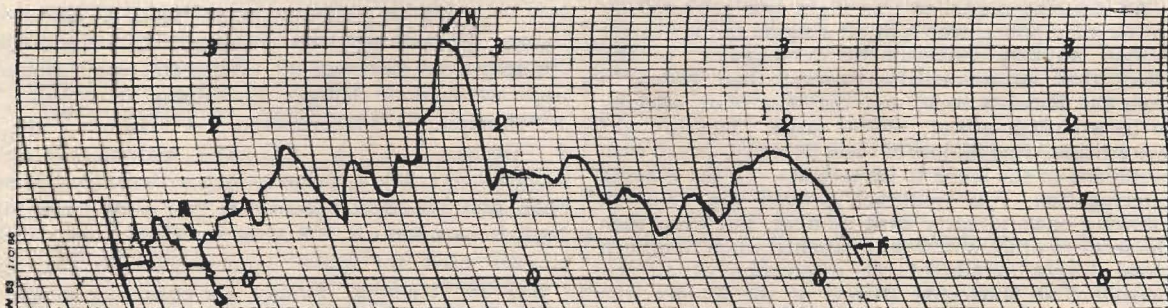
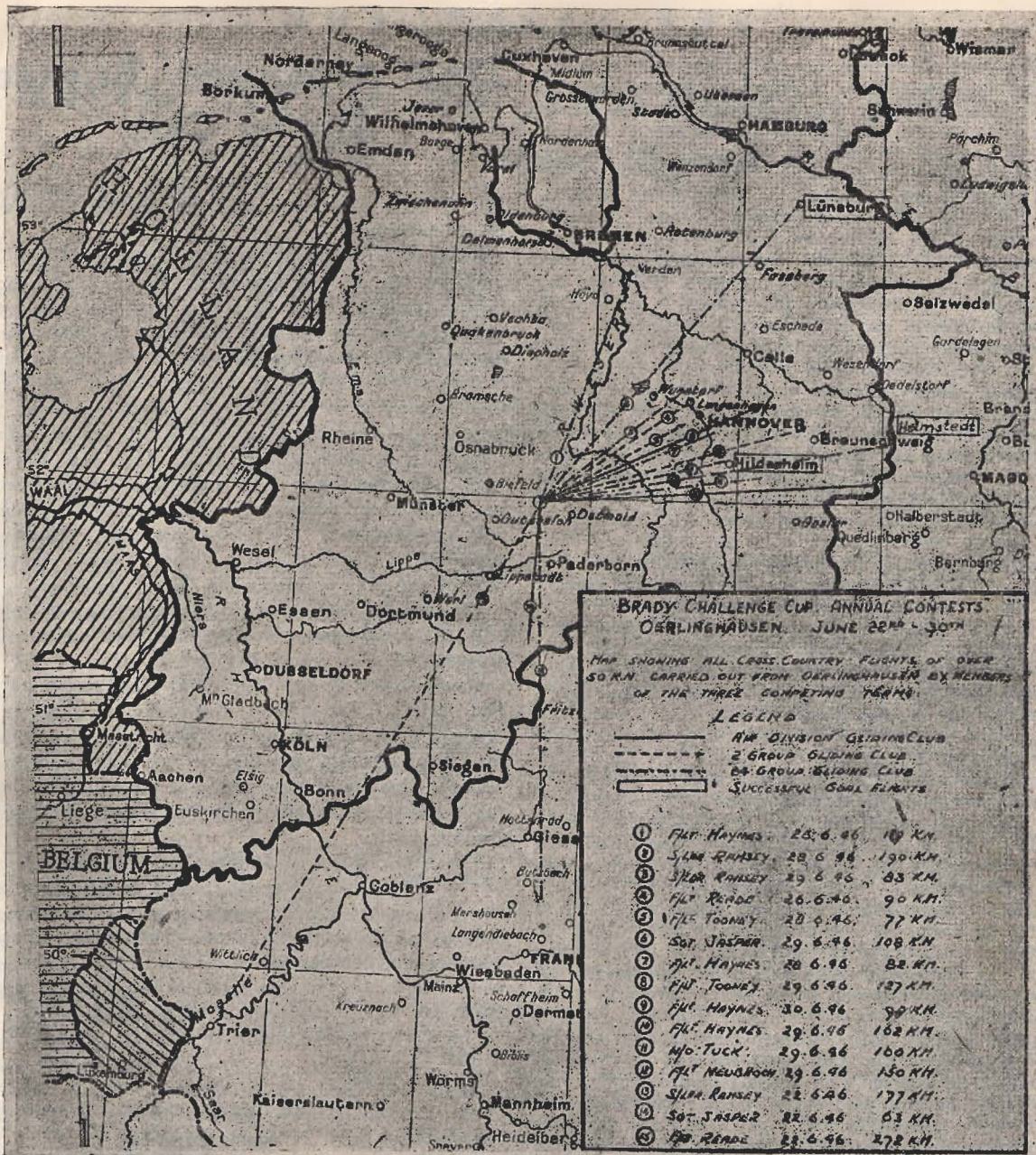
Sunday, Monday and Tuesday the weather clamped. At last, Tuesday evening, there was a break. The field was immediately covered by gliders which were feverishly being prepared for flying. Breathless calm before the storm, with all pilots eager to take off at the right moment, just as the front was about to pass the field. When it came, no-one found any appreciable lift, and we were again immersed in thick, drizzly hill-fog. But the monotony had been broken.

A much more active cold front passed Oerlinghausen soon after noon on Wednesday. F/L Reade, now quite rested after his strenuous retrieving journey over shocking roads, went with it to Langenhagen, north of Hannover, 57 miles away. F/L Toomey, also of 2 Group, took the only "Mu 13" to enter in the competition, to a point 31 miles away. Air Division, were very unlucky when L.A.C. Smith was forced to land his "Meise" in the downcurrents on the other side of the famous Oerlinghausen ridge. At the last moment he flew into a heap of straw which caused the aircraft to break up. Smith suffered superficial head injuries, while the "Meise" was completely written off.

Stan Haynes of 84 Group flew his "Weihe" to Verden, 73 miles away, and S/Ldr. Ramsey reached Lubbecke, 28 miles from Oerlinghausen.

Thursday we had more rain, and it was not till well after six p.m. that the weather cleared. From then on, however, till the end of the competition on Sunday evening, the weather remained fine and made all the waiting worth while.

On Friday we had a reasonably steady Southerly wind which enabled many pilots to use the high



Barograph of S/L Ramsey's 196 KM Flight.

ridge North of the field. Several pilots remained on the ridge and waited for a suitable thermal to take them further. S/Ldr. Ramsey declared that he would fly to Luneburg, 119 miles away, and earned a bonus of 25 per cent for reaching his goal. This was the competition's best goal flight. F/L Haynes, also of 84 Group, went 51 miles to a point South of Hannover. F/L Toomey, of 2 Group, covered 48 miles. Among all the excitement and activity we almost overlooked F/L Reade's achievement in staying on the ridge for 5 hours 28 minutes. This was the competition's only endurance flight. It assured Frankie Reade an excellent individual score, and incidentally gave him the last leg for his Silver "C."

On Saturday the wind had veered by almost 90 degrees. Every member of the 84 Group team got away to an excellent cross-country. W/O Tuck covered 63 miles to a point not far from the 84 Group site at Salzgitter, S/Ldr. Ramsey landed 52 miles away, while Stan Haynes beat the band with a goal flight to Helmstedt, 102 miles, the last town this side of the Russian-occupied zone. F/L Toomey, of 2 Group, covered 79 miles in the "Minimoa" to land at Volkenrode airfield, having looked in for lunch at the R.A.F. Station Detmold on a previous launch.

The Air Division team, too, was slowly getting into its stride. Cpt. van Baerle landed the "Kranich" outside the house of the President of Lippe, near Detmold. Signalman Huntley came down 15 miles away, and Sgt. Jasper gained a good many points for the club by flying the "Weihe" to a point not far from Brunswick. He had still plenty of height to carry on, but having mistaken Lehrte for Branswick, and not wanting to risk a landing beyond the zone border, he came down after a flight of 68 miles.

Somewhat astonishing was F/L Neubroch's flight of 92 miles in the "Grunau Baby", which had been substituted for the "Meise" which Air Division lost on Wednesday. Having reached a height of 1,300 metres in the morning, after which he landed back at Oerlinghausen, he set off again in the afternoon. After three hours of thermal flying and ridge-soaring towards the East, carrying neither barograph nor maps, he was lost and not a little worried as to his position in relation to the zone border. After a further half an hour, during which he kept slightly North of East, thermals gave out and he prepared to land. He circled over a village but, seeing a more suitable landing field near another village to the North, he landed there at 6 p.m. To his amazement he learnt that the first village was in the Russian zone, and that he had landed only a few hundred yards inside the British zone.

An amusing sequel to this flight was provided by the German police, who sent off a signal to the nearest British Military Government detachment, to the effect that an unidentified aircraft had glided in from the Russian zone, and that the pilot, alleging to be a British officer, was at large. This brought two British Army Majors of Field Security, armed with revolvers, to the scene to investigate. In the ensuing interrogation, F/L Neubroch proved the value of knowing one's identity card number, but even then the security officers were only satisfied when Neubroch gave correct details of the disposition of aircrew personnel at Harrogate to one of the Majors who happened to hail from that beautiful spa.

## 22nd Armoured Brigade Gliding Club

THE news about the club this month is rather depressing.

First, we were unable to find a new airfield in a condition suitable for rebuilding: medium bombers having made a thorough job of cratering the lot. Then members in our new area were so widely dispersed that it was impracticable to run the organisation unless club house accommodation could be found—with beds. This raised endless problems of rations, and requisitioning that could not be overcome without backing from a very high Army level.

But the worst blow of all was that after the Army had okayed our permission to fly, B.A.F.O. replied with an emphatic "No" to our request, following it up with "Where are your gliders?" which meant that at any time we might lose all our machines.

On July 30th a final committee meeting was held, and the Club was officially dissolved while still solvent.

One member of our Club, who three months ago had never left the ground, and now does some very stylish—if sometimes unintentional—aerobatics in his "Rhonsperber," has taken a nucleus of machines and the chief instructor, and is "launching out off his own bat." So watch out for 4th Armoured Brigade Gliding Club.

The R.A.F. 2 Group Gliding Club at Oerlinghausen have very kindly extended their membership to cover 40 of our keener members, and we have been able to be of some help to their club in the way of winches and equipment. A few other members, too far away to join this excellent organisation have been able to fill vacancies at other smaller clubs.

Our Club's record stands at:—

40 .. "A's"

18 .. "B's"

4 .. "C's" (All thermal soaring "C's" off winch launches).

Including car launches we made 2,700 launches during our three months of existence, without aerotow or a soaring ridge we completed 135 hours of flying. All members were club-trained from scratch. Equipment at start was nil. When the club "wound up," we had a hangar containing 1 "Weihe," 1 "Olympia," 1 "Rhonsperber," 4 "Grunau 2 B's," 1 "Grunau 2 A," 1 "S.G. 38" with nacelle and 5 open "S.G. 38's." 1 Opel winch with cable and one span, plus one small "Re-winch" for cable retrieving built from a 500 c.c. B.S.A. motor cycle engine, plus 2 cars used for glider launching—especially for "S.G. 38" training. Finally, the entire organisation was operated only in members' spare time.

**LONG MYND TO NEWPORT, MON.****British Altitude Record**

Weihe—23.6.46.

P. A. Wills

JUNE 23rd marked the zenith of a week's remarkable flying by the Cambridge University Gliding Club, during the first organised post-war camp held at the Long Mynd in Shropshire, the site of the Midland Club. This showed conclusively that with the smallest official practical encouragement (other than the unfulfilled promises which so far have remained verbal only) British motorless flight can quickly make immense strides.

After some 400 hours soaring it is an indication of the immense scope and variability of motorless flight that this particular flight from beginning to end was entirely unlike any other that I had ever experienced.

On Sunday, June 23rd, the weather broadcast was that a high pressure area to the S.W. of Ireland had developed a ridge running N.E. as far as S.E. Scotland. The forecast was fine and warm, with some showers and possible thunderstorms on the N.W. coast and N. Wales, but no-one seemed to anticipate that the air was going to achieve well-nigh explosive instability over a wide area of the country.

In Church Stretton, in the valley nearly 1,000 ft. below and to the East of the Mynd, there was a morning ground fog, though on the heather moor of the Mynd itself it was clear, with a view to the West over the top of the mist clamped down in Asterton valley.

The surface wind was light and variable and on the whole drifting down the hill from N.E., whilst the upper wind was light and Northerly.

At 11.30, Pringle was winched in the "Blue Gull" and came down to report only very slight occasional lift of the order of  $\frac{1}{2}$  ft. a second under the cloudbase at 600 ft.

At 12.00 I was launched in the "Weihe." I had declared Cardiff airport, 65 miles to the South, as a goal, one reason being that from the forecast I believed that instability would be greatest in the Western coastal districts of England and Wales, and from the cumulo-nimbus already visible to the West and North-West it was clear that an altitude flight was a possibility.

The chances were that my flight would only become a delayed descent of perhaps 10 minutes after the launch, so considerable optimism was required to don warm boots, flying overalls, mark out my maps, prepare my barographs, put a pair of pyjamas and spongebag in the back locker and make the other preparations required for an advanced flight.

When I took off, cloudbase was about 700 ft. above the Mynd, the cumuli were flat and ill-defined and clearly in a very early stage of growth. Nevertheless on releasing at only 400 ft. I turned under one of these cloudlets and found lift of the order of 1 to 2 ft./sec. By careful manoeuvring I worked up to 700 ft. and then for over an hour found myself committed to an astonishing game of a sort of tiny

tots blind flying display. Directly over the club site, almost in earshot of the criticisms of those on the ground, I circled and manoeuvred in and out of the low ragged puffs of cloud and in spite of the down-hill drift and the low altitude, found broken lift in every one. The best lift seemed to be at the edges, half in and half out of the cloud, though hardly one complete circle showed rise all the way round. Thus in the rough air I frequently disappeared into a cloud at a stately 40 m.p.h., got tipped up on the inside half of the circle by a down-current, and whistled out a few seconds later at an undignified 55 m.p.h., no doubt to the jeers of the spectators beneath.

However as time went on it was clear that the clouds over the Mynd were gradually building up, and slowly my efforts produced on balance an increase in altitude.

On my clear-air half circles an astonishing and unusual cloudscape became visible. My own clouds were, as I have said, based at only about 700 ft. over the Mynd, which is itself about 1,500 ft. above sea level, but over the valley just to the East, the early morning mist had lifted and was forming small cumuli based below the surface Mynd level, whilst the tops of these cumuli were only about the same height as the bottom of the Mynd ones.

When on the other hand one circled out into clear air on the Western side of the Mynd, large cumulo-nimbus clouds could be seen to West and North-West, already obviously strong and towering up to around 15,000 ft. One particularly strong one had come into sight to the W.S.W. about 15 miles away, and appeared to be coming cross-wind towards us.

I understand that the cloud which was developing over the Mynd, and in which I was circling, is a standard phenomenon there in light wind thermal conditions, and as it developed I slowly climbed until I had reached a height of around 5,000 ft. in a cloud like an extraordinarily narrow twisted pillar of smoke nearly a mile high. I then estimated that from this height I could reach the cumulo-nimbus to the W.S.W. which I had already marked down, and set off for it.

I flew for about 15 minutes in dead calm air, well over the tops of the small cumuli which by now dotted the sky in every direction, and as I got nearer I saw that my cloud had indeed developed into a giant, far bigger than the ones I had had experience of the week before. As I got nearer it obscured the whole of the South-Western sky, heavy rain was falling from one sector, and overhead a huge anvil stretched out as a canopy.

I reached the fringes of the lower part at 2,000 ft., (above take off) and immediately the air became turbulent. As I went on I encountered lift and started to circle. I entered the cloud at 2,500 ft. and climbed not very fast until when I seemed to have got as high as I could I turned, still in cloud,

## T H E S A I L P L A N E

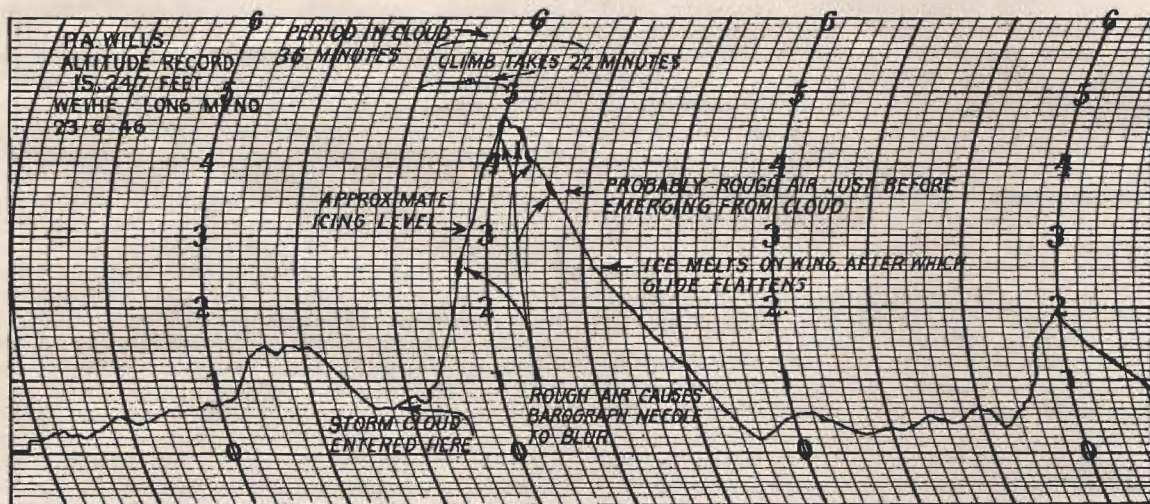
on to a W.S.W. compass course to get further into the heart of the storm.

I struck more lift, circled again, and again when I seemed to have got as high as possible turned W.S.W. Soon I struck strong lift, and some heavy rain drops cracked against the cockpit cover. From now on I became too busy to store up very detailed recollections, so much happened in so short a time,

The green ball of the rate-of-climb indicator disappeared into the top of its tube, and the rain got heavier and heavier drumming on the fuselage and starting to bubble through cracks in the cockpit lid. I was worried lest, when we reached icing level the machine, being covered with water, would acquire a coating of ice all over which would seriously affect its flying qualities. But this did not happen, and unlike on previous similar climbs, I did not on this occasion experience the forward building up of icicles on all excrescences including the pitot tubes, which usually means the loss of one's airspeed indicator when it melts on the way down. Freezing level was about 10,000 ft. (above take-off) and although the cockpit cover was quickly obscured by ice my view outside was sufficiently featureless any-

these violent up-currents and the "Weihe" in spite of its wonderful handling qualities was thrown about, the speed varying between 35 and 60 m.p.h. as we rocketed round. Each time the speed got too high for comfort, I straightened up on the turn-and-bank needles and eased it off on the elevator, then went again into the turn. The variation in the scream of the air as the speeds altered, and the crackling roar of rain and then hail on the machine provided a somewhat awe-inspiring background, and in addition to watching my instruments I soon had to be watching myself for signs of oxygen lack as, adding the 1,500 ft. or so of the take-off altitude to my own, I was reaching a height above sea-level where this begins to affect judgment.

It is a curious fact that too little oxygen produces the same effects on the human brain as too much alcohol. The brain is progressively deadened from the higher centres downwards. Inhibitions go, and a feeling of happy carelessness disguises a progressive deterioration of judgment and slowing down of reactions. In several cases, the after effects are also similar—a racking headache and complete loss of memory of what happened.



way for me not to miss it, being confined to a few feet of wing disappearing into the murk.

To me the remarkable flavour of these flights is given by the tiny size to which one's world contracts. The view comes down to a curved sheet of celluloid obscured by ice-crystals an inch or so to each side and above one's head, and a small panel of instruments dancing about two feet in front by one's knees. The cloud outside is a blind engine of some millions of horsepower, and it is not difficult to start imagining that it dislikes one.

Meanwhile the large needle of the altimeter was going round nearly twice as fast as the second-hand of a watch, and in one minute I rose over 2,000 ft. Such a rate of climb without powered assistance is difficult to visualise. If I had jumped overboard and pulled the ripcord of my parachute, I should merely have reduced my rate of ascent by less than a half.

The air was even more turbulent than usual in

Now although many pilots of powered aircraft claim to have flown for short periods without oxygen at altitudes up to 20,000 ft., it must be realised that in such machines and in clear air the utmost clarity of judgment is not essential.

In a sailplane circling blind in turbulent cloud, it is; the instruments used do not present a natural picture of the attitude of the machine, but require highly inferential interpretation.

However, I immediately found, what every invalid knows, that if one is watching oneself for ailments, one immediately detects undoubted symptoms of every known disease from cholera to housemaid's knee, and the upshot was that when my altimeter showed I was approaching 17,000 ft. above sea-level, with no least sign of a lessening ferocity of the up-current, I decided to straighten up and fly out of the storm. I found some little difficulty in doing this; several times I got the machine on an even keel for a split second when a violent gust threw one wing

up and put me into a turn again. However, by working away I eventually got on to a South-Easterly course, which would bring me out of the storm in the direction of my goal at Cardiff and about a quarter of an hour later emerged into a sunlit but rather awe-inspiring world.

The left-hand half was peaceful enough. Far below the fields and hills of Hereford and Gloucestershire were visible through numberless white puffs of cumulus wool-packs, the tops of which were still some two miles below me.

But the whole of the right-hand half and the sky immediately above me was obscured by the storm cloud, which seemed to stretch as far as I could see over Central Wales.

The "anvil" of the storm cloud, that huge characteristic shelf which forms at the top of the down-wind side of a really big cumulo-nimbus, formed an immense grey canopy overhead, so that I was flying in a kind of half tunnel, sun, blue sky, white clouds and green fields to my left, grey cloud overhead, and every colour from grey to indigo-black to the right, where a curtain of cloud five miles high dropped from the anvil and clamped down on the dimly-seen craggy mountains of Wales, which disappeared into smoky screens of torrential rain, split every now and then by flashes of lightning.

At nearly 17,000 ft. I did not appear to be much more than halfway up this giant curtain!

I had not the least doubt that the world's sailplane altitude record was waiting to be broken in that stuff; the up-currents must have gone to heights of the order of 30,000 ft., but I had still less doubt in deciding to leave it unbroken. I later heard that all over the country cloudbursts of extraordinary violence had occurred and on the Long Mynd one washed away the road up from Church Stretton. I was getting a front-row view of an unusually violent weather phenomenon.

I was too high to locate myself, but flew on a compass course in silent smooth air for three-quarters of an hour, by which time I was down to 7,000 ft., but to my right was still the wall of the storm, stretching into the far distance. I now found I was approaching a region of still smoky air where for some extraordinary reason there were clearly no up-currents, and it therefore appeared that after all I was going to be foiled of my goal flight to Cardiff.

After a great deal more hard work such indeed proved to be the case. I located myself at Ross-on-Wye, worked up in a cumulus to 7,000 ft., and set off in an attempt to reach Cardiff from this in a straight glide. I never found another ripple in the sky and landed after 5 hours in the air at Newport, 8 miles short of my goal.

The greatest altitude reached was of the order of 17,000 ft. above sea-level, but for record purposes the height of the launching point and the height attained on the launch before release has to be subtracted. The barograph record has now been officially homologated and the altitude achieved is 15,207 ft.

Lastly, the lessons to be drawn. This is I think the first British flight in a major cumulo-nimbus, so it is early to try to generalise. But I suggest two points.

The first is that from the sailflying point of view a distinction seems necessary between major and

minor cumulo-nimbus. I think the visual difference may well be that a major one has an anvil, and a minor one has not. By and large the minor one probably runs up to about 17,000 ft. (the word "minor" being relative only) and the major one to say 35,000 ft. The former should be treated with the utmost respect, the latter with a degree of awe.

The second point I suggest is that a limit of say 15,000 to 17,000 ft. above sea-level should be set for such flights without oxygen equipment. Otherwise in their enthusiasm chaps are going to go putting on the odd hundred feet or so from time to time until eventually there is bound to be trouble. So let us now investigate oxygen.

## THE NEW KIRBY "TUTOR"

AT Sutton Bank, on August 25th, I was privileged to have a flight in Slingsby's prototype "Tutor." This machine should not be confused with the earlier "Tutors" from which it differs, particularly in my view, in performance. I have flown earlier "Tutors" once or twice, and rightly or wrongly, I thought them little better than the standard "Cadet." This new "Tutor" is something quite different. It is not easy to estimate the performance of a new type in a couple of flights, and I think normally, I err on the side of scepticism. The performance of the "Tutor" was one of the greatest surprises I have had.

The wind was W.N.W. at about 15 m.p.h., with low, wispy cloud forming at 800 ft. above the Bank. As a standard of comparison, a "Kite," said to be a slight modification of the pre-war "Kite," with which we are all familiar, was being flown at the same time and with a complete set of instruments, by a fairly recent member of the Yorkshire Club—a Polish Silver "C" pilot, Lewandowski. Over about half-an-hour's flying, the sinking speed of the "Tutor" was much the same as that of the "Kite." For the latter half of the flight I was well above the "Kite," circling to cloud base with no trouble at all. Some of the difference in performance of the two machines may have been due to the writer's great familiarity with the site in pre-war years, but I don't attribute much to this myself. The "Tutor" is very pleasant on the controls and circles very easily. Hands off, it flew at 35—40 knots on an even course for much longer than most machines will, and most surprising of all, when I put the nose down a little, the machine went forward to a large extent, rather than downwards: that is, it has a surprising speed range. It stalled at 22 knots on the clock, flew well in the smooth air at 25, and handled well in the rough air at 28. The approach and landing was normal, and similar to that of any elementary or intermediate sailplane type.

I have no hesitation in saying that many machines which in the past have been called sailplanes, have had little better performance than the new "Tutor," and I can strongly recommend it to all gliding clubs.

• "BILL" BARKER.

## NEWS FROM HIRTH

A LETTER has been received from Wolf Hirth, asking for news of the many people he met at British Gliding Clubs before the war; also for news of Miss Cynthia Elliot, whom he visited while she was interned in Germany. (It was not easy to get permission, and we have heard from another source that he was able to wangle an electric fire for one British internee, probably the same lady.)

He says that the production of "Minimoas" in Goepingen was stopped in the summer of 1939 and he moved to Kirchheim, where the Schempp-Hirth firm had started producing two-seater "Goeviers" in 1938 and continued doing so till 1942. In Nabern, Teck, another factory produced fifty "Habichts" (an aerobatic type) between 1941 and 1943. His partner, Martin Schempp, now makes cabinets in Kirchheim and beds and hand-carts in Nabern. Hirth spends half the week in Nabern, and the other half at his home in Stuttgart (apparently intact in spite of the bombing) looking after his late father's Companies.

He states that Carli Magersuppe (active in British gliding 15 years ago), who has changed his name to Marsen, is now leading big truck transports between Hirth's place and the Rhineland. Stamer, who developed the famous Gliding School at the Wasserkuppe, was interned for three months, but is now making reports for the Air Ministry. Professor Georgii, once head of the German gliding organisation, and of the Soaring Research Institute, is said to be in Paris, possibly working for the F.A.I. Hanna Reitsch, still interned, is ill with heart trouble. Hirth has now a daughter, Barbara, born in 1942.

A.E.S.

## H. G. WELLS AND GLIDING

By A. E. Slater

MR. H. G. WELLS, who died on August 13, furnished some of his romances with many fantastic flying vehicles, not excepting space-ships, but it is not always remembered that gliders were included among them. Before the end of the last century his imagination was stimulated by a visit from J. W. Dunne, famous once for tailless gliders and aeroplanes and later for a theory about Time and Immortality. Dunne was about to go out to the South African war as a Captain and wanted to ensure that his aeronautical ideas would not become lost to posterity, so he entrusted them to the safe keeping of H. G. Wells. The pair of them spent a happy afternoon watching little paper models fluttering about Wells's garden at Sandgate.

An obvious portrait of J. W. Dunne (though not, we hope, in every particular) is the Captain Douglas in Wells's novel "Bealby," published in 1915. There is a memorable scene when a horrified house-party discovers the Captain in a lonely dell "playing with little bits of paper—oh! like a kitten plays with dead leaves."

Considering that H.G. Wells had probably never been up in a glider at all and certainly not before 1909, the year "Tono-Bungay" was published, his description in that novel of a flight down Crest Hill in an experimental glider is astonishingly realistic:—

"For ten seconds or so, as I swept down the air flattened on my infernal framework and with the wind in my eyes, the rush of the ground beneath me filled me with sick and helpless terror; I felt as though some violent oscillatory current was throbbing in my brain and backbone, and I groaned aloud. I set my teeth and groaned. It was a groan wrung out of me in spite of myself. My sensations of terror swooped to a climax.

"And then, you know, they ended.

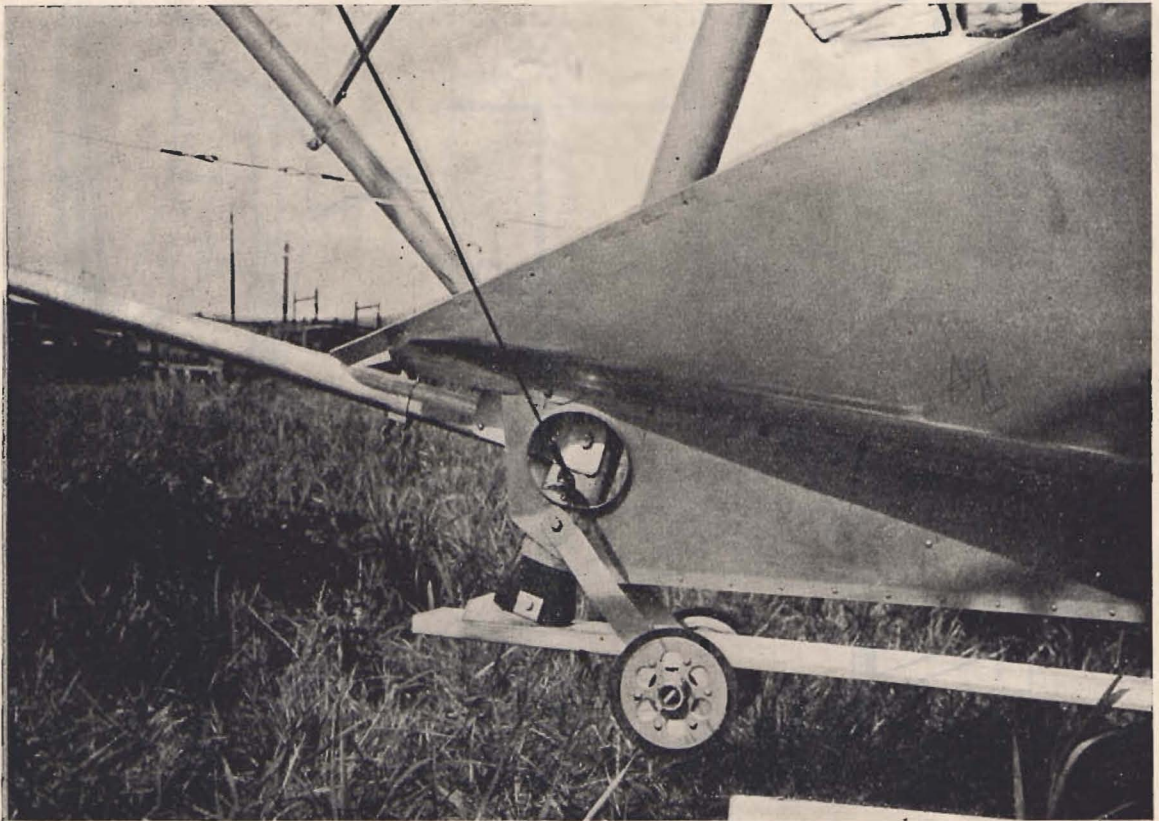
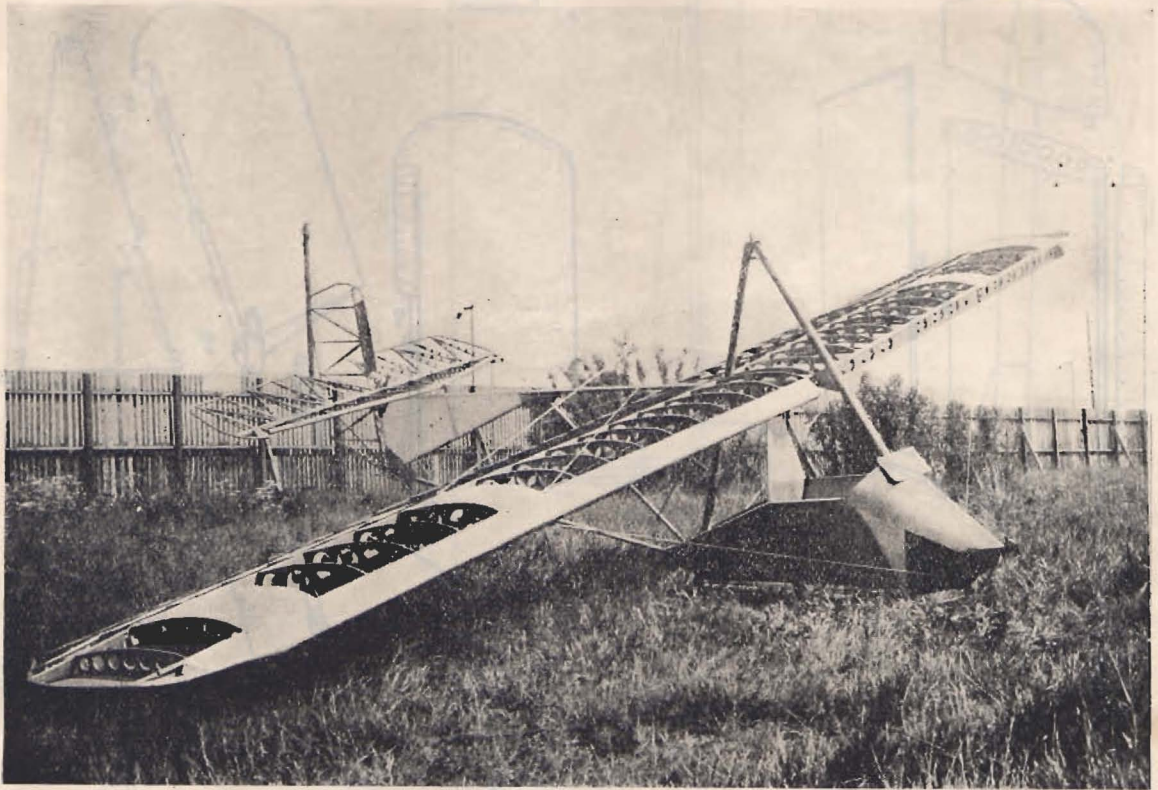
"Suddenly my terror was over and done with. I was soaring through the air right way up, steadily, and no mischance had happened. I felt intensely alive and my nerves were strung like a bow. I shifted a limb, swerved and shouted between fear and triumph as I recovered from the swerve and heeled the other way and steadied myself.

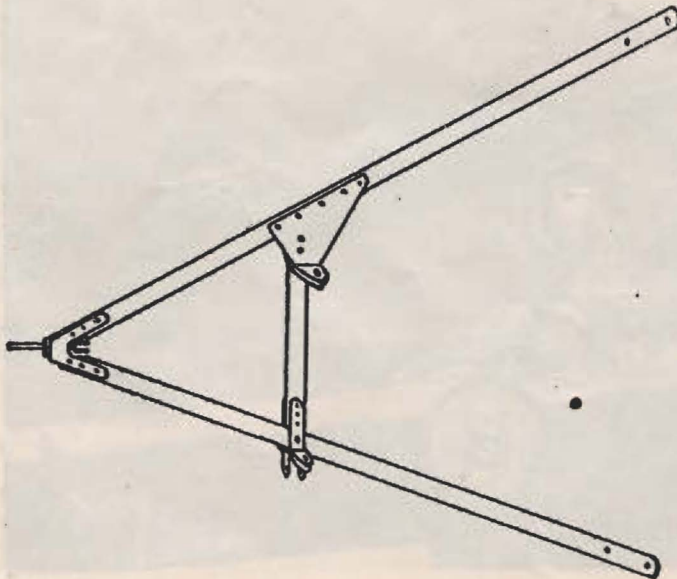
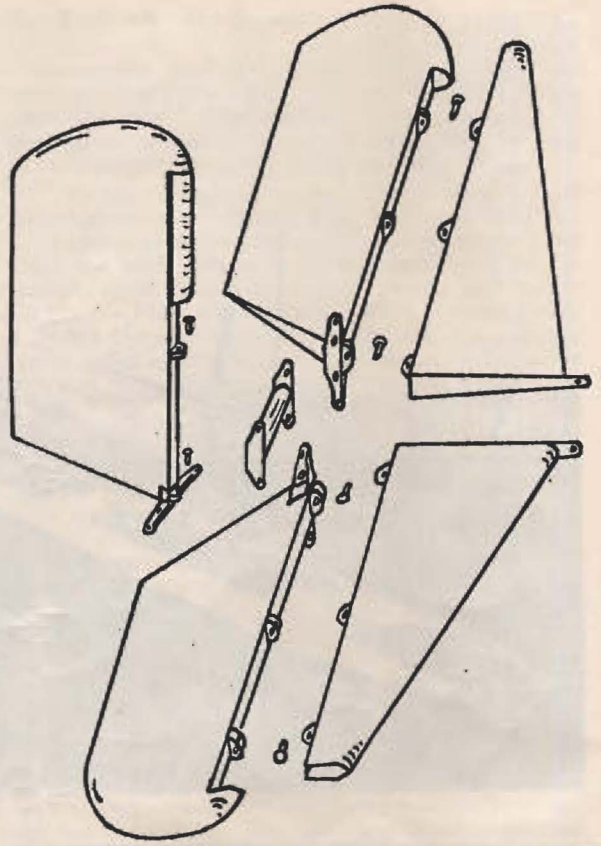
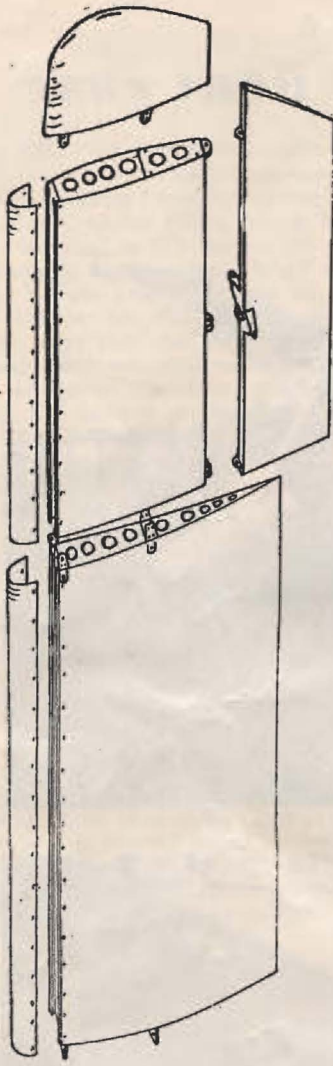
"I thought I was going to hit a rook that was flying athwart me—it was queer with what projectile silence that jumped upon me out of nothingness, and I yelled helplessly, 'Get out of the way!' The bird doubled itself up like a partly inverted V, flapped, went up to the right abruptly and vanished from my circle of interest. Then I saw the shadow of my own aeroplane keeping a fixed distance before me and very steady, and the turf as it seemed streaming out behind it. The turf!—it wasn't after all streaming so impossibly fast. . . .

"When I came gliding down to the safe spread of level green I had chosen, I was as cool and ready as a city clerk who drops off an omnibus in motion, and I had learnt much more than soaring. I tilted up her nose at the right moment, levelled again and grounded like a snowflake on a windless day."

In addition to the inevitable Little Engine, the next stage in these experiments by the supposed writer, George Ponderevo, included a contractile gas-bag, whose specific gravity could be increased at will by compressing it with a fine-meshed silk net. However, the net tore open, the balloon oozed out through the holes and burst, and the pilot was precipitated into the beech trees on Farthing Down.

This contractile gas-bag idea, which Wells seems to have got from the swimming-bladder of fishes, was first mooted by him in 1902 in "Anticipations," the book in which he earned ridicule by forecasting the coming of the aeroplane "very probably before 1950." In this book he imagined an extraordinary flying machine which was in fact a glider that could glide upwards as well as downwards. In addition to wings, it was to have a row of contractile balloons hung over its fuselage from front to rear. Thus the machine could not only be made alternatively lighter or heavier than air, but the balloons could be differentially contracted to make it slant upwards or downwards. In the heavy condition it would glide down and meanwhile be steered in any desired direction; then it would be once more lightened, pointed upwards and glided back into the sky. Now that Wells is gone, who will bring this ingenious scheme to fruition?





THE FIRST POST WAR DUTCH  
DURAL PRIMALY

Page 11. *Top*: Left wing leading edge removed showing construction.

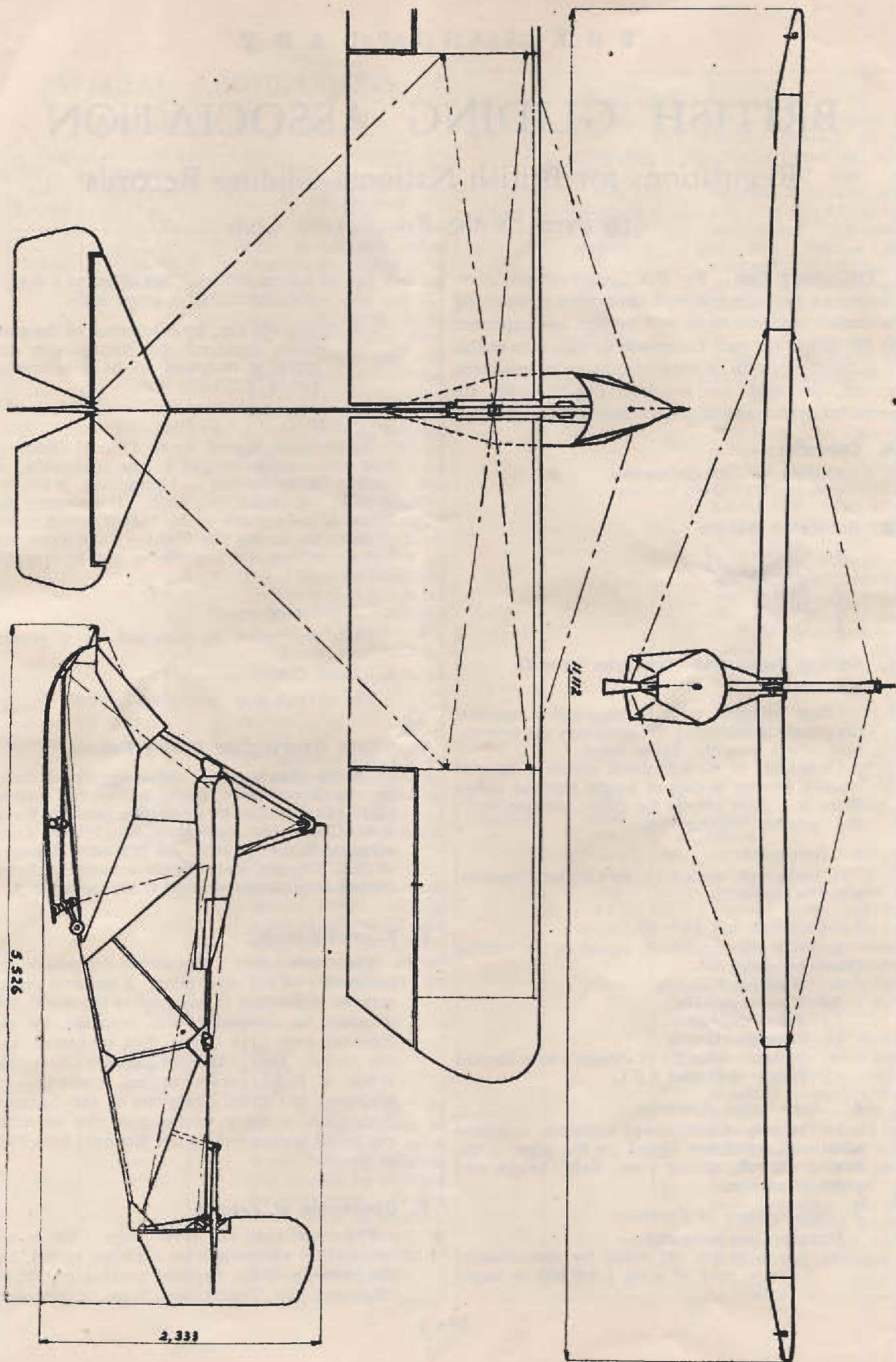
*Bottom*:  
Undercarriage assembly.

Page 12. *Left*: Exploded view of wing.

*Right*: Tailplane construction.

*Centre*: King-Post.

Page 13. G. A. Drawing.



# BRITISH GLIDING ASSOCIATION

## Regulations for British National Gliding Records

Approved by the Royal Aero Club

**Preliminary Note :** The F.A.I. international regulations are generally followed, the system of observing is similar, and distances and heights are expressed in the metric system. The reason for this is to enable a national record to be submitted as an international record, provided the required F.A.I. limits are exceeded, without further documentation or delay.

### A. Categories :—

- Category I — Single Seaters
- Category II—Multi Seaters

### B. Recognised Records :—

1. Distance
2. Out-and-Return
3. Goal Flight
4. Height
5. Duration

### C. General Regulations—Categories I and II.

#### 1. Claims.

Claim by chief pilot to responsible national organisation, enclosing the necessary documents, and, where possible, flying maps.

Claims are to be submitted within 6 days of landing (except in case of height records) unless there is a good reason for delay, acceptable to the national organisation.

#### 2. Barographs.

A barograph, sealed by an Official Observer, must be carried.

#### 3. Certificate of Take-off.

A certificate of take-off, signed by an Official Observer, giving :—

- (a) Name(s) of pilot(s)
- (b) Type of aircraft
- (c) Place, time, date
- (d) Method of launch
- (e) Estimated height of release above ground
- (f) Height of ground A.S.L.

#### 4. Aero-Towed Launches.

In the case of aero-towed launches, a similar additional certificate signed by the pilot of the towing aircraft, giving time, date, height and point of release.

#### 5. Measurement of Distances.

Distances are measured :—

- (a) Up to 50 km. (31 miles) by measurement on a map of scale 1/100,000 or larger scale.

(b) 50 km. to 400 km. (248 miles) on a map of scale 1/500,000, or larger scale.

(c) Above 400 km., by calculation of the great circle distance. For this purpose the globe is reckoned to be a sphere of radius 6,371.226 km.

### 6. Weight.

A certificate, signed by an Official Observer—that the average weight of the occupants, including flying clothing and parachute, is not less than 75 kg. (165.5 lbs.) each. If necessary the 75 kg. is to be made up by ballast, which is not jettisonable during the flight. Parachutes and flying clothing are considered non-jettisonable ballast.

### 7. Number of crew.

Each seat must be occupied by a person.

### 8. Dual Control.

The aircraft may have dual control.

### D. Official Observers for Gliding Records.

Official Observers are either appointed direct by the Royal Aero Club, or by the British Gliding Association by delegation from the Royal Aero Club. The testimony of Officers Commanding R.A.F. or R.N. Air Stations, Managers of Civil Airports, and officials actually on flying control duty on aerodromes is also recognised.

### E. National Records.

The "nationality" of a record depends on the nationality of the chief pilot. A national record may be attempted in any part of the world, but it must be controlled and recorded by the National Aero Club of the pilot concerned, i.e., the Royal Aero Club for British Nationals. When a flight covers several countries the testimony of Official Observers of the National Aero Club or other witnesses of the countries concerned is accepted by the National Aero Club of the pilot.

### F. Observation of Records.

Prior notice to the Royal Aero Club is not required for an attempt on a gliding record, but the presence of the required number of Official Observers and Timekeepers must be arranged.

T H E S A I L P L A N E

**SPECIAL REGULATIONS  
CATEGORIES I and II**

Type of Record	Exceed previous by	Regulations additional to General Regulations	4. Height	2. Above
1. Distance	10 km. (6.2 miles)  (Present F.A.I. req. 5%)	<ol style="list-style-type: none"> <li>1. After landing the sealed barograph must be handed to an Official Observer, who will extract the chart, enter the name of the pilot, type of flight, sign and date it and forward the chart to the national official organisation.</li> <li>2. A certificate of landing signed by an Official Observer or two local witnesses, giving the name(s) of pilot(s), type of aircraft, place, date and time of landing.</li> <li>3. The difference in height between the points of release and landing must not exceed 1% of the distance covered.</li> </ol>	200m. (656 ft.)  (Present F.A.I. req. 300m. if below 6000m.  500m. if above 6000m.	<ol style="list-style-type: none"> <li>7. The sealed barograph is to be handed to an Official Observer, who will verify that the seal is unbroken and see that the barograph still sealed with chart in situ, reaches the national official organisation for calibration within 8 days of landing, unless there is a good reason for delay, acceptable to the national organisation.</li> <li>8. If the launch is by aero-tow, the towing aircraft must also carry a barograph and execute a steep dive immediately after release in order to check the release height.</li> <li>9. The height allowed is the difference between the highest point on the barograph chart and the lowest previous point on the chart, after release. The I.C.A.N. scale of calibration is to be used.</li> </ol>
2. Out-and-Return	10 km. (6.2 miles)  (Present F.A.I. req. 5%)	<ol style="list-style-type: none"> <li>1. Above</li> <li>2. Above</li> <li>3. Above</li> </ol> The turning point is to be declared beforehand in writing, and an Official Observer stationed to confirm it is reached.	5. Duration	<ol style="list-style-type: none"> <li>1. Above</li> <li>2. Above</li> <li>5. Above</li> <li>10. An official timekeeper must also give a certificate of times of release and landing. For this purpose a low grade accuracy watch is sufficient, provided it is checked one hour from the time of each observation.</li> <li>11. Arrangements should be made to keep the aircraft under constant visual observation by Official Observers. Should the barograph cease to work their testimony may be accepted at the discretion of the national official organisation from the time the barograph stops.</li> </ol>
3. Goal Flight	10 km. (6.2 miles)  (Present F.A.I. req. 5%)	<ol style="list-style-type: none"> <li>1. Above</li> <li>2. Above</li> <li>3. Above</li> <li>6. The goal must be declared beforehand in writing. An aerodrome or gliding site should be selected for preference. If any other point is selected, the landing must be made within 1000m. of the declared point.</li> </ol>	15 mins.  (Present F.A.I. req. 15 mins.)	

## Instructor Standards and Qualifications

Recommended by the B.G.A.

### Class "A," or Senior Instructor

Permitted to instruct on light gliders (maximum 1,250 lbs. all-up weight) up to any stage without restriction, including dual, instrument flying and aero towing.

#### Qualifications

1. 200 hours flying as first pilot. Not more than 50 hours power flying may count towards this total.
2. 50 hours dual instrumental experience on gliders, or possession of recognised Service or Civil aeroplane instructors qualifications.
3. Must be "Silver Badge" holder.
4. Must have been a Club or Service approved winch driver for at least 12 months.
5. Must have been an Instructor, Class "B" for at least 12 months.
6. Evidence of at least 10 hours blind flying instruction under the hood in the air, which shall include recovery from spins.
7. Knowledge of B.G.A. Basic Syllabus.
8. Must hold current "A" Gliding Licence (when instituted).
9. Tested by B.G.A. examining board (after instituted).

### Class "B," or Instructor

Permitted to instruct on light gliders (maximum 1,250 lbs. all-up weight) to soaring stage, but not permitted to give instruction in Instrument flying. Endorsements will be required for giving instruction in (a) 2-seater gliders, (b) aero-towing.

#### Qualifications

1. 20 hours soaring.
2. Must have been club or service approved winch driver for at least 3 months.
3. Must have been a "C" or Assistant Instructor for at least 3 months.
4. Evidence of 25 winch launches as pilot of glider.
5. Knowledge of B.G.A. Basic Syllabus to "Silver Badge" stage.
6. Capable of lecturing in elementary Meteorology, Theory of Flight and Airmanship.
7. Must have club authorisation to carry out D.I. on gliders and winches.
8. Must hold current "A" Gliding Licence (when instituted). Endorsements: (a) 5 hours dual instruction under training, (b) at least 10 aero-tows as pilot of glider.
9. Test by B.G.A. examining board (when instituted).

### Class "C," or Assistant Instructor

Permitted to act in conjunction with, or on instruction from, an "A," or "B" Instructor (who retains responsibility) for the purposes of solo training to "A" Gliding Licence.

#### Qualifications

1. Must hold "C" Certificate, and "A" Gliding Licence (when instituted).
2. Must have knowledge of B.G.A. Basic Syllabus to "A" Gliding Licence stage.

## Flying Regulations

Recommended by the B.G.A.

### 1. Instructor

The ruling of the Instructor in Charge shall be final in all matters concerning flying on or from the Club grounds, and no flying shall take place without his permission.

### 2. Certificates of Airworthiness. Daily Inspection

All aircraft flown from a Club site must possess current C. of A. and have a D.I. to an approved schedule.

### 3. Test Flights

Any newly rigged aircraft or any aircraft which has been subject to re-rigging or repair since its last flight must be first flown by an approved person.

### 4. Harness

Approved harness for pilot and passengers must be fitted and properly fastened on every flight.

### 5. Launching

Launching cable must not be attached to the glider until the pilot is ready to be launched.

### 6. Standard Signalling Procedure

Standard signalling procedure must be used for all launches, other than bungy, as follows:—

#### Bat Method—

(Bats to be yellow, or contrasting to background, and 18 ins. in diameter.)

- (a) Glider ready for launch, and take off path clear: 1 bat held vertically at arms length.
- (b) Take up slack: 1 bat moved up and down at arms length.
- (c) All out: 2 bats moved up and down at arms length.
- (d) Stop: 2 bats held up vertically.
- (e) Wash out: 2 bats moved backwards and forwards crossing each other in front of the feet.

#### Light Method—

The equivalent signals for the above are:—

- (a) A steady white light.
- (b) White dashes of 3 seconds duration.
- (c) Quick white dots of 1 second duration.
- (d) Steady white light.
- (e) Steady white light swung to-and-fro in front of legs.

### 7. Communication

An adequate system of communication must exist between the Instructor in Charge and the winch driver.

### 8. Defects. Heavy Landings

All pilots must report any defect or heavy landing to the Instructor in Charge before the aircraft is flown again.

### 9. Powered Launching Gear. Daily Inspection

On any powered launch the source of power must have a D.I. by a Club approved person; the D.I. schedule shall as a minimum

# THE SAILPLANE

involve checking of fuel, oil and water, and that the cable cutting mechanism is in serviceable condition.

## 10. Drivers

A Club approved driver must be present at every launch.

## 11. Quick Release. Operation

All pilots must be instructed to operate the quick release twice on every powered launch, even when under the impression that the link has slipped out, or the cable broken.

## 12. Local Flying Conditions

The Instructor in Charge is responsible for acquainting all visiting pilots of any local regulations.

## Research Committee Organisation

It is requested that letters or papers on each aspect be sent to the following named individuals who act as co-ordinators, and all Clubs are requested to assist.

### Group 1.

#### Detection from the Ground of Thermal Break-away.

J. W. S. Pringle, Dr. Slater, Mrs. Douglas.

- (a) Smoke and other wind indicators. *Co-ordinator*: Dr. A. E. Slater, West Park Hospital, Epsom, Surrey.
- (b) Radio and sonic. *Co-ordinator*: J. W. S. Pringle, Peterhouse, Cambridge.
- (c) Nature of ground. *Co-ordinator*: Mrs. Douglas, Staplehurst Farm, Salfords, Redhill, Surrey.

### Group 2.

**Aerodynamics.** K. G. Wilkinson, and one Member of the R.Ae.S. still to be nominated. With the specific aid of Bristol G.C., Cambridge G.C. *Co-ordinator*: K. G. Wilkinson, 56, Eastcote Road, Ruislip, Middlesex.

### Group 3.

**Structure.** K. G. Wilkinson, and one Member of the R.Ac.S. still to be nominated. With the specific aid of Bristol G.C., Cambridge G.C. *Co-ordinator*: K. G. Wilkinson (as above).

### Group 4.

**Properties of Atmosphere during Convection. (Measurements in Flight).** J. W. S. Pringle, W/C. R. M. Poulter, Mrs. Douglas.

- (a) Meteorological instruments in aircraft. *Co-ordinator*: J. W. S. Pringle (as above).
- (b) Analysis of flight records. *Co-ordinator*: Mrs. Douglas (as above).
- (c) Meteorological data. *Co-ordinator*: W/C. R. M. Poulter, Meteorological Office, No. 11 Group, R.A.F., Uxbridge, Middlesex.

### Group 5.

**Sailplane Instruments.** A. L. Slater. *Co-ordinator*: A. L. Slater, Cloverlea, Chesterfield Road, Matlock.

### Group 6.

**Standing Waves.** Newcastle Club. *Co-ordinator*: Dr. W. E. Hick, 66, Panton Street, Cambridge.

### Group 7.

**Radio for Gliding and Soaring.** Newcastle Club. *Co-ordinator*: Dr. W. E. Hick (as above).

### Group 8.

**Winches.** A. L. Slater. *Co-ordinator*: A. L. Slater (as above).

### Group 9.

**Technique of Mechanical Launching.** K. W. Turner. *Co-ordinator*: K. W. Turner, Old Shardelows, Fulbourne, Cambs.

### Group 10.

**Auxiliary Power Units for Launching.** L. Welch. *Co-ordinator*: L. Welch, The Brake, Ewshott, Farnham, Surrey.

## B.G.A. News Circular No. 9/46 (Extracts)

1st August, 1946.

### 1. Associate Clubs.

The following have joined the Association:—

22nd Armoured Brigade G.C. *Secretary*: Capt. P. M. King. *Address*: 22nd Armoured Brigade Gliding Club, B.A.O.R.

North Somerset G.C. *Secretary*: B. A. Wheatley. *Address*: 12, Lower Bristol Road, Bridgewater.

### 2. F.A.I. Meeting.

The first post-war General Conference of the National Aero Clubs forming the Federation Aeronautique Internationale will be held in London on 10th—13th September, 1946, the Royal Aero Club being the hosts. The Gliding Committee of the F.A.I. will be meeting at the same time, and Mr. P. A. Wills has been nominated by the Royal Aero Club as the British representative, assisted by Messrs. J. W. S. Pringle and E. H. D. Spence.

During the general meeting, one of the matters to be discussed is the location and functions of the body which is to take over the duties of the pre-war ISTUS.

### 3. Ex-German Aircraft.

Out of the six German aircraft collected from Farnborough, only four are in a state which enable repairs to be carried out without undue delay. The "Kranich" cannot be repaired until the missing parts are available, and one of the "Olympias" is in such a bad condition that it is not worth repairing. The remaining four aircraft have been allotted as follows:—

Bristol Gliding Club	.. One "Grunau Baby II"
Midland Gliding Club	.. One "Grunau Baby II"
Newcastle Gliding Club	.. One "Olympia"
Surrey Gliding Club	.. One "Weihe"

The above Clubs are being informed direct of the financial and other conditions which go with the loan of the aircraft.

### 4. H.17.

As the result of a recent fatal accident, it has been decided that B.G.A. Cs. of A. for this type of aircraft will not be issued until further type flight trials have been carried out. All known owners of "H.17s" have been written to to this effect and asked to provide an "H.17" on loan to enable

(continued on page 19)

## GLIDING AT THE HAGUE

WHEN our club was formed in 1932 we had only a "Kassel" primary and a shock-cord, but in the following years we got more and more equipment. A big step forward was our first winch in 1936 and the procuring of a nacelled "Zögling" and a "Condor I" sailplane in 1937. At that time we were given permission to use Ypenburg airfield. After many remarkable flights the "Condor" was damaged beyond repair when it came down with two-thirds of one wing broken off in a very turbulent Cumulus cloud. The pilot, who had no parachute with him escaped unhurt! although the wing broke at 3,500 ft.

Several members took their "C" after they had got instruction on the "Grunau 8" two-seater of the Netherlands Gliding Institute.

By 1939 we owned a "Grunau"; a home built "12-m Zögling," an "ESG" (Grunau 9); 2 winches and 2 retrieving cars. On the first day of the war we lost the greater part of it and after the liberation only the "Grunau," a winch and a retrieving car were left. But soon we held a meeting to discuss



*A fleet of pre-war machines at the Hague Gliding Club the possibilities of gliding in the new circumstances and a new council was chosen:*

*Chairman:* Lt. Broekmeyer.

*Hon. Sec.:* A. Jager. *Treasurer:* J. Joelle.

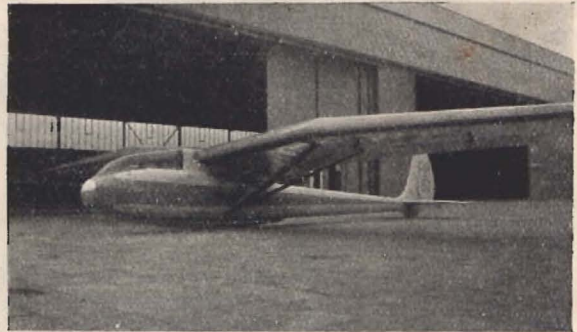
*Members:* L. Teepe and W. van Nifferick.

Everyone wanted to restart gliding as soon as possible but it was not until September, 1945, that we could get in the air again. This was at the national gliding camp at Leende near Eindhoven. The object of the camp was to renew licences of instructors, technicians and pilots. We brought with us all material that was left, and a group of members who formed the "Soaring Group of Ypenburg" brought their privately owned "Kranich" two-seater. Before the war these men owned a "Rhön-Bussard" which was destroyed by the Germans in 1944. The camp was a complete success and our instructors Vastenouw, Van der Meer, Van Zanten and Hoffmann renewed their licences, together with several members.

As there was not any airfield in the West of Holland we organised "expeditions" to Leende and Teuge (near Apeldoorn) until we obtained permission to use Valkenburg aerodrome some miles North of the Hague. Easter Monday, 1946, we used it for the first time and are now flying regularly there. The Hague and Leiden Gliding Club joined forces, the latter contributing their "Grunau."



*The "Grunau 9" 2-seater training machine*



*The "Condor I" sailplane belonging to the Hague Club, in 1937*

Meanwhile our "Grunau" was fitted with an experimental rearward placed hook and April 27th the test flights were carried out by W. van Nifferick in co-operation with the National Laboratory for Aeronautics and the Royal Aero Club. We entertained great hopes of getting up much higher and we were not disappointed. More about the results in my next article. Some weeks ago in a storm we reached 700 m. by winch using the new hook, but normally a height of 350—400 m. can be got, with about 800 m. cable.

### SCOTTISH GLIDING DISPLAY

A SOARING and Gliding demonstration and Instruction Meeting is being organised by McDonald Aircraft Ltd., of Leven, Fife, and will

take place at Balado Airfield, Kinross, with the high performance soaring at Bishop Hill adjacent to Loch Leven.

"Kirby Cadets," "Tutors" and a two-seater will be in use, and there will be exhibition flying with the new "Kirby Kite II" and other visiting machines.

The event is being run in conjunction with Martin Hearn Ltd., and will give Scottish enthusiasts an opportunity of seeing and trying out the post-war Slingsby machines.

All particulars may be obtained from McDonald Aircraft Ltd., 20, South Street, Leven, Fife.

**The B.A.F.O. Soaring Contest—*from page 6***

Much the same weather prevailed on Sunday, the last day of the competition, when F/L Reade reached a height of 2,460 ft. above release point. F/L Toomey landed after a flight of 25 miles, while W/Cdr. Mann, of 84 Group, flying a "Weihe", and Cpt. van Baerle, of the Air Division team, in the "Kranich", landed in adjacent fields 15 miles away. F/L Haynes rounded off his consistently brilliant flying with a goal-flight to Hildesheim, 56 miles away, and W/O Tuck covered a distance of 20 miles. Signalman Huntley, of Air Division, displayed his hitherto hidden qualities as a ferry pilot by taking his "Meise" to Detmold, and later in the evening flying the "Weihe" back to his club's field at Barntrup, 21 miles from Oerlinghausen.

The final score gave the 84 Group team 1,500 marks, 1,121.5 points to 2 Group, and Air Division were last with 328 points. It needs to be remembered however, that in the case of 84 and 2 Groups, every contestant (with the exception of one who had more than 50 gliding hours in England before the war) was a service pilot with hundreds of hours in the air, while the Air Division team had not a single service pilot to boast of. The outstanding individual score was gained by F/L Reade, D.F.C., of 2 Group, with no fewer than 871.5 points.

There can be no doubt that, in spite of much unfavourable weather, the Oerlinghausen competitions were a great success. They gave many of us (including F/L Reade, F/L Toomey, F/L Neubroch and Sgt. Jasper) our first chance of a cross-country, and raised our standards beyond expectation. Taking together all those cross-countries which scored points, a distance of 1,400 miles was covered during the competition. H.N.

**INDIVIDUAL MARKS SCORED DURING THE BRADY CHALLENGE CUP COMPETITIONS, OERLINGHAUSEN, 1946.**

Position	Name	Club	Score
1.	F/L Reade, D.F.C.	2 Group G.C.	871.5
2.	S/L Ramsey, D.F.C. and Bar	84 Group G.C.	748.5
3.	F/L Haynes	84 Group G.C.	612
4.	F/L Toomey	2 Group G.C.	237
5.	F/L Neubroch	Air Division G.C.	158
6.	Sgt. Jasper	Air Division G.C.	148
7.	W/O Tuck	84 Group G.C.	133.5
8.	Cpt. van Baerle	Air Division G.C.	14
9.	S/L Walley	2 Group G.C.	12.5
10.	Sgm. Huntley	Air Division G.C.	8

**DUTCH GLIDING NEWS**

We had to cancel the National Contest at Eelde due to all sorts of difficulties, but several club camps were held. The Hague Gliding Club went with their "Grunau" to Teuge: thermal conditions were not favourable there. The Amsterdam Gliding Club held a two-week camp at Soesterberg, once the centre of our military aviation, but to-day it is used only by Prince Bernhard as a private airfield. They used a "ESG-Primary," a "Grunau Baby" and a "Goevier" two-seater which was towed by the "Fieseler Storch" of the Prince, who also made a flight in the "Goevier." Two club-members stayed more than 10 minutes in a thermal with the open "Primary."

H. SCHWING.

**NEW BRITISH GLIDING RECORDS**

The following records have been confirmed by the British Gliding Association.

*Category 1*

**(Single-Seater) Distance**

P. A. WILLS: "Weihe." White Waltham (Berks) to Leicester (Suffolk), 113 miles. 27th July.

**(Single-Seater) Height**

P. A. WILLS: "Weihe" at Long Mynd (Salop) 15,247 ft. 23rd June.

*Category 2*

**(Two-Seater) Distance**

Lieutenant Commander (A) J. S. SPROULE and Lieutenant (A) SUTHERS, in Kranich from Peplow (Salop) to Owlswick (Bucks.), on 6th July, 1946. 103 miles.

**(Two-Seater) Height**

Sq. Ldr. E. J. FURLONG and Lt. JOHNSON, R.N. "Kranich" at Peplow (Salop) 3,601 ft. 5th July.

**BRITISH GLIDING ASSOCIATION—**

*(Continued from page 17)*

these tests to be carried out. So far there has been no response to this appeal. Clubs are requested to assist.

**5. Beaverettes.**

Mr. J. C. Rice, of the Leicester Gliding Club and a member of the B.G.A. Council has purchased at an auction nine of the above vehicles. After providing for the needs of his own Club, he will have a few spare ones, which he is willing to offer to any Club at £70 each, the price to cover collection and servicing charges in order that the vehicles will be in good running order at Leicester.

Clubs will no doubt appreciate Mr. Rice's generous gesture in sharing his good fortune. They are requested to write direct to:—

Rice Caravans Limited,  
Park Road,  
Blaby,

Near Leicester.

Telephone: Wigston 89289.

Mr. Rice also states that he can assist Clubs to obtain Bren Gun Carriers (tracklaying) at £60 each in running order, which are now with a dealer in Birmingham.

# TRAINING IN THERMAL AND CLOUD SOARING

By A. F. Hooper

**T**RAINING for instrument flying during bad visibility, flying in or through Cumulus, or even Cumulo Nimbus clouds, should be the aim of every sailplane pilot. Owing to the lack of facilities at present, for intending sailplane pilots to practise such instrument flying, the Link Trainer is admirably suited for the work.

The new types of Link Trainer are very much better than the older types for this purpose, and very few adjustments are necessary to adapt these machines for gliding practices. The fact that the Link Trainer is power driven, and throttle controlled, does not detract from its value as a means of learning the art of instrument control.

No variometer is fitted in the Link Trainer, but the same indications can be obtained from the Glide Path Indicator which is incorporated in the Beam Approach Visual Indicator. Granted there are no calibrations, but the pilot and instructor may pre-arrange the indications necessary on the Glide Path Indicator, as it is operated by the instructor from the table.

The Link Instructor should have a large sheet of graph paper, with several sets of concentric circles marked on it, the circles to be of  $\frac{1}{4}$  in.,  $\frac{1}{2}$  in., 1 in. and  $1\frac{1}{2}$  in. diameters.

The pilot will climb the Link Trainer by use of the throttle, and when sufficient height has been obtained, say some 6,000 feet, the throttle will be set at a fairly low cruising speed in order to obtain greater sensitivity of the instruments. The throttle should then be left at that setting and not used again. It will only be necessary at the end of the practice to throttle back in order to reduce height to 0 feet.

## Method of Soaring Practice

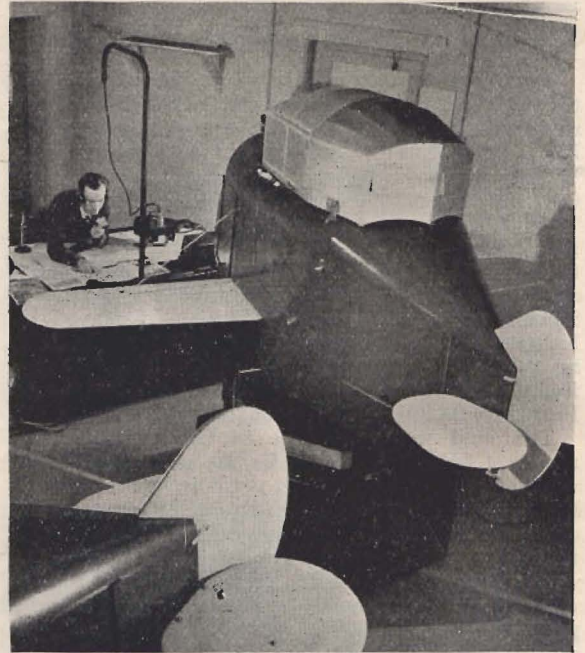
(1) *By the Pilot.* Having obtained the necessary height and settled at a given airspeed, the pilot should adjust his flying attitude by the use of the Artificial Horizon. Variations of height should only now be made at from 200 to 300 feet per minute. It should be remembered that the pilot should disregard use of the throttle, and also the indications of the Tachometer, since his flying will now be controlled by Air Speed Indicator, Vertical Speed Indicator, Artificial Horizon, Directional Gyro, Turn and Bank Indicator and Glide Path Indicator (Variometer).

When the variometer indicates "rise," the pilot will endeavour to fly in the thermal, and continue to circle in it, getting maximum lift, until receiving other instructions from the Instructor.

(2) *By the Instructor.* When the pilot has adjusted his flight, regarding Air Speed, Height, Attitude, etc., the Instructor will start the Auto-Recorder on the prepared chart, at the same time giving the pilot a heading to steer to take him toward the first set of thermals. As the machine enters the indicated thermals, slight rough air should be applied. This will have the twofold purpose of making conditions much more realistic, and will serve as an indication that a thermal has been reached.

The G.P.I. (Variometer) should now be raised in a position to indicate lift, and further indications given for the pilot's guidance of the position of the machine to the thermal current.

When the pilot has made use of the centre of the thermal for two or three minutes, making perfect turns, further indications will be given of the loss



*The Link Trainer in Action*

of the thermal and he should then be given a course to steer to bring the machine to another set of thermals, thus simulating flying into thermals as would happen in actual flight.

For synthetic training, two search methods have been evolved, which ensure that a thermal up-current will be found again, if lost:—

(1) The variometer will indicate the loss of the thermal, and a turn should immediately be commenced to either right or left through 270 degrees. This should re-establish contact. Should the thermal be contacted before the turn is completed, say at 250 degrees or 260 degrees, hold off on that heading, and commence circling in the thermal area again.

(2) The second method—When the variometer shows "rise," keep straight on course, when it sinks to zero start a medium turn to starboard at constant rate of turn. If only "sink" is encountered, straighten out after 260 degrees turn, and continue in straight flight for  $\frac{1}{3}$  t seconds (where t seconds is the time a sailplane takes to make a turn through 360 degrees) and then commence to circle to starboard.

Lifting of a wing by a thermal current will indicate the side on which a thermal is to be found, and the pilot should turn accordingly.



**ADVERTISEMENT**

**GOVERNMENT  
SURPLUS STORES**

The Ministry of Supply has for immediate disposal the following Balloon Winches located as shown below.

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AR987/7

Fifty Balloon Winches by Wild and Co. about 1½ ton capacity complete with two grooved surge drums, Bollard and plain storage drum containing about 7000 feet of steel wire rope, blocks, clamps shock absorber unit, Ford "V" 8 petrol engine and sub-frame.

Condition: Category B.1 needing minor repairs and some replacements.

Location: R.A.F. Station, Cardington, Beds. Application for inspection should be made in writing to Disposal Officer at that address.

No undertaking is given that facilities will be available for working or load tests.

Purchasers must take delivery Free on Rail, Cardington, within two weeks of the date of issue of Release Instructions.

Offers for any or all of these items are invited. No Forms of Tender are necessary and letters should be addressed to:—

Ministry of Supply,  
Director of Contracts,  
Gt. Westminster House,  
Horseferry Road,  
London, S.W.1

to arrive not later than 10 a.m. on 23rd September, 1946.

Envelopes must be marked "Tender No. 152101 returnable 10 a.m. 23rd September, 1946." Failure to mark the envelope correctly may result in a Tender not being considered.

Any Contracts made as the result of this tendering will be subject to the Department's usual Conditions of Sale (Form C.C.C./Sales/1), a copy of which may be obtained, if desired, from the Ministry of Supply, Contracts Directorate (C.B.4), Great Westminster House, Horseferry Road, London, S.W.1. Reference 152101 should be quoted when applying for this Form.



Dudley Hiscox test flying the first Chilton "Olympia"

**BRITISH GLIDING ASSOCIATION**  
Delegation to Czechoslovakia—Sep. 8-22

Club	Representative
BRISTOL ..	F/LT. W. L. JENNINGS T. REX YOUNG
CAMBRIDGE ..	P. R. WIJEWARDENE
DERBYSHIRE & LANCASHIRE	MISS PADDON B. THOMAS
LEICESTER ..	J. C. RICE
LONDON ..	P. G. TOVEY
MIDLAND ..	C. J. WINGFIELD
YORKSHIRE ..	B. J. F. HARTNESS

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## CLUB NEWS

The Derbyshire and Lancashire  
Gliding Club

**J**ULY has been a good month on the whole, and the club can report progress in all directions. All our flying to date has been done in club machines, no private owners as yet contributing to our flying time. The "primary" squad has been started in earnest and is now open to newcomers.

On the ground, the combined efforts of all those not actually engaged in flying has resulted in a series of drains and a culvert under the road near the hangar. This effort was organised by Stanley Dickson and Fred Coleman, and very hard they worked too. A Fordson tractor has appeared to assist in the constructional work thanks to the good offices of Cyril Kaye who is also building a new winch and a very superior trailer for an "Olympia."

The "Kite" and the "Wren" which were placed U/S for overhauls have appeared again thanks to a lot of hard work on the part of Gerry Smith. Unfortunately the "Wren" was damaged getting it out of the hangar and has therefore not been flown very much lately.

*Saturday, July 12th*, Wind WNW 10/15 m.p.h. Buck Benton was the instructor of the day and he started the ball rolling with a short soaring flight in the "Kadet." He was then followed by Roger Dickson also in the "Kadet" and by Zeta Paddon and George Thompson in the "Grunau."

After Tea, Gerry Smith and Thomas in the "Grunau" and "Wren" respectively carried out a test to find out the relative performance of the two machines.

The winch cable was damaged during the last launch and the remainder of the evening was taken up with getting it ready for to-morrow.

*Sunday, July 13th*. Owing to rain no flying was possible but during a lull after lunch Louis Slater took a party out with the "Kadet" to do some wind balancing so the day was not entirely wasted.

*Saturday, July 20th*, Wind 15/20 m.p.h. Conditions were not very good and soaring was only possible in short bursts and most people only got extended circuits.

Buckle who got his "C" at Sutton Bank last week-end, was spending his last week-end with us before going overseas and he found that "the hand of God" still descends behind our back wall. Nothing was damaged except his morale which soon recovered. Dolan an ex-R.A.F. pilot got his "A" and later in the evening had his first glider circuit.

*Sunday, July 21st*, Wind W, 5/10 m.p.h. Cyril Kaye was the instructor of the day with Charles Verity as his assistant. The lift was very patchy and circuits with an occasional beat were the order of the day. Dolan flew off his "B" and later was lucky enough to get seven minutes soaring whilst on a circuit over the edge thus Qualifying for his "C."

After tea the "Penguin" was brought out and the sliding candidates all had a few slides, so that during the day all tastes were catered for.

*Saturday, July 28th*, Wind WNW 20/25 m.p.h. A party arrived early to meet Bill Creese who brought

the new "Kadet" from Chester. After an early lunch the machine was rigged in the hope of getting it flying the same afternoon but the wind was too strong and only the great among the brethren flew the "Grunau" whilst the others fitted the "Kadet" with instruments and serviced the winch.

*Sunday, July 28th*, Wind W 10/15 m.p.h. After rather a late start flying was patchy and extended circuits and hops was all that was possible before lunch. During the afternoon conditions improved and at one time the "Grunau" was accompanied by both the "Kadets" whilst the "Penguin" was kept very busy on the ground. During the afternoon Barton got his "B" and "C."

During the afternoon, Stanley Dickson and Freddy Coleman took a leaf out of the ancient Egyptian's book when they perched the stone crusher on top of a concrete pedestal some three feet high. And there was amazement among the brethren as they came down the field for tea.

Some comic relief was provided at the end of the day's operations when Buck Benton and the tractor tried to persuade the winch to enter the hangar against its will. It was raining at the time and the onlookers thought it was very funny until they had to turn out and push the darn thing in themselves.

*Summary for July, 1946*. 182 launches: Certificates, 2 "A," 2 "B," 2 "C." Flying time 33 hours 52 minutes.

*Thursday, August 1st*. A working party was at the club all the week and on Thursday afternoon soaring was attempted but only Fred Coleman had any luck and Ashton tried for his "C" but only found red ball, and all the others had extended circuits.

*Friday, August 2nd*. More circuits, Ashton again failed to contact any lift.

*Saturday, August 3rd*. Wind W 10 m.p.h. A nice day with sporadic hill lift and thermals up to 1,200 feet. Twelve pilots flew for a combined total of 3 hours 34 minutes. The "Primary" squad were hard at work all afternoon.

*Sunday, August 4th*, Wind S veering W, 5/10 m.p.h. The conditions were patchy and only Terence Horsley, Louis Slater, Robertson and Shepard found anything to keep them aloft for more than a few minutes.

The "Primary" squad was kept very busy. Cartilage got his "A."

*Bank Holiday Monday*. Wind SSW veering later to W. Great flying activity with practically no wind, high launches with practise in precision flying for thermal seekers in the morning.

Later the wind freshened as two thunder storms passed to North and South of us some distance away.

Some soaring was done but the ceiling was often very low and at times a faulty turn meant a hurried landing. Gerry Smith and Bernard Thomas caught the best conditions of the day and reached over a thousand feet, whilst Cyril Kaye had a good ride round in the "Kite" just before the lift petered out altogether. Cartilage took his "B."

## LONDON GLIDING CLUB

ONE of the best soaring days in July was Sunday the 14th, when there were cumulo-nimbus clouds to reinforce the hill lift. As on an earlier occasion this year, the best lift was found in the rain; the air was reported rough just as a bout of rain arrived, after which it immediately became smooth.

Greig in the "Blue Gull" and Lavington in his "Kite," both reached 2,500 feet, while Waghorn took the "Tutor" up to 2,300 feet. Waghorn is on a temporary visit from Australia; he has reached Silver "C" height there without a barograph, and was trying to make it officially this time. The "Tutor" did about 6 hours' soaring during the day.

Another good day was Sunday the 28th, when Cole took the "Tutor" to 3,000 feet in thermals, but after that the sky deteriorated and only hill lift remained, if any.

Up to now the Club "Tutor" has put in more than 400 hours' soaring since the beginning of the year. To-day, at last, there were other Club machines in evidence, being prepared for the August camp: two "Kadets," an extra pair of "Tutor" wings and Slingsby's new side-by-side two-seater, which is on loan to us pending the delivery of our own. The original "Scud II," which has had many owners since Buxton flew it in a thunderstorm in 1934, has now been bought by Benson and another member, who rigged it for the first time to-day. The Italians in the Clubhouse have now been replaced by Germans, who claim one Segelflieger among their number.

## Instruction Camp

The Club's first post-war instruction camp was held from Friday, August 2nd to Sunday, August 11th. The Club arranged for the use of part of the Eaton Bray "Sportsdrome" for primary instruction, and as the winch was also used by visiting sailplanes, we had the spectacle of model and full-sized gliders hunting for thermals together. For the most part the two new "Kadets" operated at Eaton Bray and the two "Tutors" at Dunstable, while the two-seater divided its time between the two places. When there was a soaring wind at Dunstable it proved itself excellent and was usually above all its rivals; it also went up in thermals to 2,500 feet. At Eaton Bray it was used to introduce aeroplane pilots to gliding. Occasionally aero-towing was done at Eaton Bray as well. Honourable mention must be made to our new member, Reid, who has had much experience with the A.T.C. in South Africa, where also he has done two legs of the Silver "C." He was put in charge of the Eaton Bray activities and worked hard there for a week beforehand getting the place ready.

The Navy turned up for the first week-end with their "Olympia," "Mu 13," and towing Tiger Moth, and Ann Douglas brought the "Weihe," which has been lent by the B.G.A. to the Surrey Club for research. Another visitor was Jack Rice from Leicester in his "Topsy."

The "Weihe" was up for 4½ hours in one flight, reaching cloud-base at 4,150 feet. It went up again and disappeared into the blue and nobody here has

heard of it since. Welsh took up the "Mu 13" on Sunday and explored the local thermals around Eaton Bray. He found the best one coming off a field of cut crops just to windward (N.W.) of the Sportsdrome; there were also some good ones from the ploughed land on the flanks of Ivinghoe Beacon.

Instruction continued all the week. The first good slope-soaring day was the 5th, when about 10½ hours were put up at Dunstable, to which the two-seater was aero-towed from Eaton Bray. The 6th was even better, when four Club aircraft put in 23 hours 1 minute at Dunstable. The two-seater was responsible for 3 hours 49 minutes of this.

On the 7th, Huxley tried for Silver "C" duration in a "Kadet," but after 3 hours 7 minutes he had the misfortune to be crowded out of the lift by the aerial congestion. However, he kept up for 5 hours 6 minutes on the following day, maintaining the "Kadet" constantly above the other machines. In one of these flights he reached 1,000 feet without instruments. The 10th was another good soaring day, with lift as far as the Zoo.

On Sunday, August 11th, the wind provided some soaring for the "Blue Gull" in the morning but then backed. The main event of the day was the unexpected arrival in the afternoon of Hiscox in his new "Olympia." He had taken delivery of it last night at Teale, near Reading, where he tested it in winch circuits. Then to-day, after being towed up by Wills, he soared it on its "delivery flight" 38 miles to Dunstable, taking 1½ hours over the journey, which was partly cross-wind, and getting up to 4,100 feet on the way. This "Olympia" is a fine looking machine, and we were able to compare it with the Navy's German one which has been left here. The most obvious difference is the rounded front of the cockpit cover, looking like an immense bubble.

It remains to be said that much help in lifting, etc., was given by the German prisoners, who have been far more co-operative than their predecessors the Italian "co-operators" ever were.

A. E. SLATER.

## NEW B.A.F.O. CLUB

A Gliding Club has been formed at No. 151 R.U. (A), R.A.F., B.A.F.O., and has a membership of 35 with a long waiting list.

Gliding takes place on Wednesday afternoons and week-ends, and the one "Primary" and one "Grunau Baby" are used to capacity. It is hoped that a further one of each type will soon be serviceable.

Of the non-flying branch members, fifteen are already "airborne"—mostly on the "high hop" stage.

Squadron Leader Ramsay—holder of "Silver C"—is leaving, but several other soaring enthusiasts will continue to try and follow his excellent example. One flying member, F/Lt. Barclay, has already done a flight of over 5 hours duration.

## YORKSHIRE CLUB

*Flying Activity.* Being too late for publication last month, due to the "SAILPLANE" going to press earlier than in preceding months there is rather a long period to cover in these notes. Light SE winds with warm and showery weather persisted over the week-ends 16/17 and 22/23 June with no flying apart from a few tests. The week-end 29/30 opened with a rough day, Billy Sharpe managing 55 turbulent minutes in the "Kite," with hill lift to 900 feet extending into cloud. Sunday, the 30th opened well, Brian Hartness reaching 2,000 ft. in the "Kite" during the morning. A total 11½ hours were logged—33 launches including 12 A.T.C. flights, three of which were successful "C" tests: G/Capt. Paul, F/Lt. Blumer and F/Lt. Davies. A lull caused some anxious hill-scraping in the "Cadet" family around mid-day, but the wind freshened an hour or so later and the "Cadet" jobs regained their usual 600 ft. or so.

On Saturday, 7th July, 7 hours hill soaring were logged; three new members, Buckle, Lewandowski (Polish Silver "C" pre-war), and Counter being sent solo after dual in the Type 20.

Sunday, 8th, was a day of light wind, and 30 winch circuits were made, including 10 passenger flights for the benefit of the communal purse—an ever-hungry maw indeed!

The following Saturday was a pleasant slope-soaring day, and Buckle qualified for his "C" in grand evening thermal conditions, at 19.30 hours. He has now gone overseas (Army) and we wish him all the best. Sharpe and Hinchliffe carried out a radio test in the "Type-20" with the Type-38 set which was successful. Further tests will be made when certain additional apparatus arrives; the idea promises well, but one thing is certain: a pupil with no instruments and even less experience must NOT be encased in headphones!

On the 14th we were "rained off" and enclosed at 15.00 hours but had managed to squeeze in 4¼ hours beforehand.

The 20th July (Saturday) was a

successful afternoon—22 launches including 10 A.T.C. F/Lt. Joliffe passed his "C" test.

Sunday the 21st, another good hill-soaring day with a little thermal activity; there were numerous passenger flights and one "C" test passed—Mr. Staples (A.T.C.).

Billy Sharpe put in some valuable passenger stooping in the "Type 20" (Slingsby's new two-seater).

Saturday the 27th was rained off, but the following day, which incidentally was the opening day of the first A.T.C. course (instructors), logged 22 hours with good slope soaring conditions. It was a great joy to see such old members as Johnny Maw, Dr. De Redder and Arthur Burningham soaring here again—the first time since the club restarted business at "the old stand." There was some good thermal activity—Lewandowski reached 2,200 ft. in the "Kite," Jowett 1,700 ft. in his own "Kite." There were 38 launches in the day—all soaring flights, and one successful "C" test for Arthur Nixon. Burningham made a cross country flight to Norton (Malton)—maximum height 2,700 ft. above Sutton Bank, and several members of the

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There is no 'closed season' for 'ab initio' training, which can continue throughout the Autumn and Winter, thus building up a potential for next year's Club life and flying.

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course reached 1,600 to 1,800 ft. in "Grunau" and "Falcon I," under somewhat turbulent conditions. The 30th was a weather wash-out. The remainder of the course will be reported in our next notes.

*A.T.C. Liaison.* The Club flying and A.T.C. activities continue to blend very well. No. 28 Gliding School is now fully organised and over 20 A.T.C. instructors have taken their "C" tests already.

*Hambelton Lodge.* Very little progress has been made on the social and domestic side of the club, and some enthusiastic people are badly needed. With rationing and purchase control this side of the business is a dreadful headache. Most of us have been accommodated at the Golden Fleece in Thirsk, where we have had an excellent reception, and where everything has been done as well as the Fleece did before the war—often at the cost of hard work and inconvenience to the management and staff.

*General.* Progress has been good, and again, we are making more headway than any of us would have dared to forecast. There has been 140 hours soaring at the site since we re-opened in January, and only one aircraft has been slightly damaged in landing, which speaks very well for the way in which sometimes irksome safety rules have been accepted by members.

G.A.H.

## THE SCOTTISH GLIDING UNION

After having almost come to the conclusion that the only Gliders we would ever see would be of the Paper Dart Variety, we have at last started flying again with a real live Kirby "Cadet."

On Sunday, 28th July, the "Cadet," which Thorburn had helped to deliver, was rigged at Balado Aerodrome, but was not flown till the wind had died down in the evening. Campbell and Thorburn had three circuits each after the initial test hopping.

Saturday 3rd and Sunday 4th August. The "Cadet" was again circuted by Campbell and Thorburn. A sensitive altimeter has been fitted and this showed a height of 600 ft. on some launches.

Rudd arrived on Sunday, having taken 24 hours to get out from Glasgow due to transport difficulties.

Saturday, 10th August. A Meeting was held at the Royal Hotel, Milnathort, at 3 p.m., followed by tea and flying at Balado. It has been suggested that all future meetings should be followed by tea and flying as this is the first S.G.U. meeting which has finished on time, within living memory. We were pleased to see Mr. Welch of the Local Press and to find out that he is an enthusiastic Radio "Ham" and has his own Short Wave Station.

Sunday, 11th August. An expedition set out from Balado to test out our newly acquired ex-Army "Guy" Truck on the new track up to the shoulder of Bishop Hill. In spite of a spot of bother with the autovac on the truck and with a large piece of rock, the top was reached in due course. The party then had a look round the site and wished that they had brought the "Cadet" along too. There are a few jobs to be done however before this will be possible. In the afternoon Thorburn and Campbell circuted the "Cadet" at Balado and Lawson and Parker had some dual in the B.A. "Swallows" belonging to Kinross Flying Club.

C. Whitacre, son of the Airport Manager at Balado, joined the club and becomes our youngest member. He has already done much good work by spiriting the winch out to the launching point as soon as any of the "Glider Maniacs" are seen to be looking in the direction of the wind sock.

We are very fortunate indeed to be able to use Balado and we are deeply grateful to Mr. MacDonald of Kinross Flying Club for all the help he is giving us.

In spite of the lurid reports in certain sections of the Popular Press no altitude or distance records were set up in the "Cadet." Also Campbell wishes to point out that his "H.17" wing does not stick out of the window at his home permanently, although the Press insisted on photographing it that way.

Problem:—If it takes the "Cadet" 30 seconds to reach 600 ft. and the "Guy" Truck 30 minutes to reach 1,000 ft., how long will

it take to build a hangar on the top of Bishop Hill?

Our Progress and Planning Department say 30 hours, but it depends on the hangar. Tim Time Study says 30 years.

## THE NEWCASTLE GLIDING CLUB LTD.

Progress is being made in two main directions despite serious difficulties caused by shortages of everything except enthusiasm and goodwill. In the essential matter of flying a date for the recommencement of activities was fixed some months ago. It was August 17th. In the equally essential matter of Club organisation, a house in the City has been rented for use as Headquarters and Central Stores and Workshop. The address is 11, Lovaine Place, Newcastle, 2. These notes detail progress in both directions.

The Cramlington site has been de-requisitioned to an extent sufficient to allow our use of the unfenced portion of the field and the hangar. A second-hand "Primary" has been acquired, it being towed from Croydon in a trailer recently built for the purpose. After considerable attention to woodwork, fittings and fabric, the "Primary" was considered slide-worthy and it remained only to provide a winch and retrieving car to enable our first objective—"Primary" training facilities—to be attained.

For the next stage of training, necessitating a truly air-worthy machine, a new "Primary" was ordered, the delivery not being guaranteed but suggested hopefully by the makers as likely to be before our re-opening date. For further work a "Tutor" was ordered, with delivery in June later revised to August 12th; and, crowning glory, an "Olympia" was allocated to the Club by the B.G.A. for research purposes, subject to conditions including that we pay the £100 necessary for repairs.

On the 17th neither of the new machines had arrived. A "Beaverette" bought from the good Mr. Rice was not yet due, and the Club possessed no winch. A suitable car for retrieving was loaned by a local farmer and an attempt was made to borrow a winch from other good friends. The winch was kindly

loaned but despite a week-end of work, it proved impossible, due to engine failure, to get it to the site even by the evening of the 18th.

As the week-end weather was ideal, the farm car was put to auto-towing the "Primary." After a number of slides the car engine failed also, due to a faulty petrol system. The mechanics were called upon and on the Sunday morning (18th), a new pump diaphragm was fitted. In the afternoon sliding was re-commenced. The last in the comedy of errors then occurred as the engine took fire at the carburettor. After the fire had been extinguished the engine required sufficient attention to keep it out of action for the rest of the day. As the wind freshened, balancing lessons were given in the "Primary"—nothing else remained possible. The re-opening was over—we'd had it!

The house rented in the City is one of a street intended for eventual demolition when the new Town Hall is built. With its neighbours it has been untenanted since 1938 and is consequently in a bad state. After surveying it, rooms were allocated to requirements and the work of cleaning and renovation started. The ground floor is to become a workshop, the first floor to contain the office and a refreshment room, and the second floor to be bar, bar-lounge, and store-rooms. The speed at which the transformation will occur depends on the response of members to the appeal to "turn to." To prevent dissipation of effort, definite work evenings are fixed. There is urgent need of haste as electricity must be connected before the coming of short evenings.

The general prospect, as stated in the May issue, is of work. "Aemulus Studiorum et Laborum," however, we "press on regardless." The future is bright and the present is fun. Our hope is in the Helm.

ROYAL AERO CLUB

GLIDING CERTIFICATES

"A" CERTIFICATES: 208 (Nos. 4851-5058)

"B" CERTIFICATES: 74

No.	Name	A.T.C. School or Gliding Club	Date
1195	Thomas Jack Primrose	48 G.S., Castle Bromwich	30. 6.46
1548	David Henry Dennett	48 G.S., Castle Bromwich	30. 6.46
1740	Leonard William Hagell	122 G.S., Harrow	16. 9.43
1791	Deryck Gordon Hobbs	81 G.S., Yeovil	30. 6.46
2215	Eric Gordon Griffiths	166 G.S., Hawkinge	7. 7.46
2394	Derrick Charles Smith	166 G.S., Hawkinge	22. 6.46
2828	Derek Leslie Collingwood	44 G.S., Bruntingthorpe	7. 4.46
2878	Ivor Gardiner Dorward	181 G.S., Blackpool	13. 7.46
2879	John Keith Hatfield	181 G.S., Blackpool	13. 7.46
3133	William John Inglis	27 G.S., Woosington	16. 6.46
3267	Keith Roland Sturt	167 G.S., Fair Oaks	30. 6.46
3348	Roy Stanley Scott	161 G.S., Ford	30. 6.46
3377	Peter Anthony Gordon Cockrell	161 G.S., Ford	30. 6.46
3379	Peter Joseph Squelch	89 G.S., Christchurch	26. 6.46
3428	Edwin John Thomas Manning	81 G.S., Yeovil	7. 7.46
3711	John Middleton Price	144 G.S., Heston	14. 7.46
3912	Roy Lewis Dodge	81 G.S., Yeovil	23. 6.46
4230	John Raymond Pearce	89 G.S., Christchurch	20. 4.46
4304	Kenneth John Howard Townsend	94 G.S., Yate	30. 6.46
4427	John Alfred Fiegehen	107 G.S., Coleby Grange	6. 7.46
4519	John Francis Chilcott	48 G.S., Castle Bromwich	30. 6.46
4556	Vivian Frederick James Falconer	88 G.S., Wroughton	23. 6.46
4671	Peter Adrian Liley	168 G.S., Rochester	6. 7.46
4690	Jack Marshall Reep	13 O.T.U. G.S., Middleton St. George	19. 6.46
4705	Phillips William Doleman Winkley	48 G.S., Castle Bromwich	30. 6.46
4721	Ralph Schofield	184 G.S., Woodford	22. 6.46
4864	Bernard Henry Kinkead	Cambridge Univ. G.C.	25. 5.46
4878	Harold William Campbell	Derby and Lances G.C.	30. 6.46
4885	Cyril Frank Counter	Lubeck G.C.	19. 5.46
4886	Walter Raymond Thornton	Lubeck G.C.	12. 6.46
4888	Eric John William Dyer	82 G.S., Roberough	30. 9.45
4889	Ivor Geary	82 G.S., Roberough	18. 2.45
4891	Arthur Mottram	Lubeck G.C.	8. 6.46
4897	James Victor Ginn	Lubeck G.C.	16. 6.46
4898	Crawford Wishart	Lubeck G.C.	16. 6.46
4899	Anthony Bower Adams	Cambridge G.C.	1. 6.46
4900	John William Sharpe	Lubeck G.C.	12. 6.46
4903	Robert Joseph Hinton	92 G.S., Charny Down	14.10.45
4904	Alfred Ernest Skinner	S.A.A.F., Pretoria	14. 5.43
4908	John Lionel Greville Pittaway	Cambridge Univ. G.C.	25. 5.46
4909	Anthony John Smith	95 G.S., St. Eval	23. 6.46
4914	Ernest Watson Rimmer	Lubeck G.C.	7. 6.46
4920	Ronald Edward Claudi	22nd Arm'd B'de G.C.	31. 5.46
4921	Robert Louis Constant Bastianen	22nd Arm'd B'de G.C.	31. 5.46
4922	Peter John Morley	22nd Arm'd B'de G.C.	26. 6.46
4923	Grenville Edwin Pembroke Green	2 Group, Oerlinghausen	28.10.45
4924	Robert John White	189 G.S., Kingstown	23. 6.46
4929	Cecil George Foord	94 G.S., Yate	22. 6.46
4943	Princee Birabongse Bhanubadth	3 G.S., Kidbrooke	17. 1.43
4948	James Edward Townley Dykes	3 G.S., Drem	16. 5.46
4950	Anne Isobel Blake	Cambridge Univ., G.S.	11. 5.46
4955	William Holderness	107 G.S., Coleby Grange	30. 6.46
4956	Arthur Trevena James Crew	B.A.F.O., Minderheide	1. 6.46
4960	John Wilson	85 Group, Ghent	29.10.45
4963	John Hilton Edwards	Cambridge Univ. G.S.	19. 6.46
4967	Frank Davenport Skelton	144 G.S., Heston	6. 7.46
4973	David John Williams	106 G.S., Henlow	30. 6.46
4976	Leonard Eckersley Price	122 G.S., Leavesden	30. 6.46
4980	Sydney Ronald Dodd	106 G.S., Henlow	30. 6.46
4997	Charles Beresford Eaton Burt-Andrews	B.A.F.O., Minderheide	20. 4.46
5000	John Andrews Tester	108 G.S., Desborough	2. 6.46
5001	Peter William Rowles	130 G.S., S.R., Grp., R.A.F.	4. 7.46
5003	Herbert Bayton-Evans	22nd Arm'd B'de G.C.	3. 6.46
5004	Donald Michael King	22nd Arm'd B'de G.C.	25. 6.46
5005	Alan James Ellison	22nd Arm'd B'de G.C.	7. 7.46
5006	Sydney Idris Roberts	22nd Arm'd B'de G.C.	5. 7.46
5015	Rolf Herman Dresner	2 Group, Oerlinghausen	17. 2.46
5039	John Crofton Davies	87 G.S., Weston-s.-Mare	9. 6.46
5041	Henry Michael Andrew Armstrong	95 G.S., St. Eval	17. 3.46
5043	Philip William Samson James	Haltou Apprentices, G.C.	9. 5.46
5049	Robert James Dear	127 G.S., Panshanger	26. 5.46
5050	Trevor Brian Sanders	127 G.S., Panshanger	26. 5.46
5054	Anthony Herbert Cannon Page	22nd Arm'd B'de G.C.	6. 7.46
5056	Anne Innes Elliot Ritchie	2 Group, Oerlinghausen	14. 4.46

"C" CERTIFICATES: 33

817	Frederick William March Ruck	Portsmouth and S. Hants	21. 4.46
1398	John William Billenness	Southdown G.C.	13. 6.46
1680	William Guna Tilleke	Derby and Lances G.C.	13. 6.46
1784	Arthur Douglas Marsh	141 G.S., Detling	7. 7.46
1824	Donovan Herbert Clarke	141 G.S., Detling	7. 7.46
2075	Ronald Frank	22 G.S., Kirbymoorside	22. 6.46
2393	Sidney Elliott	Yorkshire G.C.	2. 6.46
2440	Roger Anfray Mann	Yorkshire G.C.	24. 4.46
2823	Arthur Robinson	87 G.S., Weston-s.-Mare	19. 5.46
2824	John Cevee	87 G.S., Weston-s.-Mare	19. 5.46

## CLUB ANNOUNCEMENTS

### THE BRISTOL GLIDING CLUB PTY. LTD.

#### Resumption of Activities

A General Meeting will be held in the near future. Meanwhile a new Register and Mailing List is being prepared, and prospective members are invited to write to the Hon. Secretary of the Organising Committee at the address below, mentioning any previous flying or gliding experience.

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### THE MIDLAND GLIDING CLUB LIMITED

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

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Yorkshire Gliding Club.

### THE SURREY GLIDING CLUB

The Surrey Gliding Club intends to open with limited facilities on August 5th in the Redhill area.

To begin with, the only machine for club use will be a fully-equipped "Kite II," which will be restricted to qualified pilots for Silver "C" attempts. When not required by such pilots it will be available to Silver "C" members.

As soon as training facilities can be made available, this will be announced.

Subscription, £5 5s. Soaring, 10/- per hour, during interim period.

Further particulars from the Secretary, A. D. Jones, 23, Rose Hill, Dorking.

### ROYAL AERO CLUB GLIDING CERTIFICATES.

We regret that owing to the large number of these now coming forward each month—usually several hundreds—we shall be unable to publish the list of those who gain "A" certificates for some time to come. It is hoped later to include them in a special supplement. For the time being only "B" and "C" certificates will be gazetted in *SAILPLANE*.

## GLIDING CERTIFICATES—continued

No.	Name	A.T.C. School or Gliding Club	Date
2887	Eric Noel Feuwick Blumer	26 G.S., Middleton St. George	30. 6.46
3927	Frank Foster	London G.C.	2. 5.46
4396	Edward Neville Wilkinson	Cambridge Univ. G.C.	17. 6.46
4425	Geoffrey Wass	Cambridge Univ. G.C.	19. 6.46
4461	John Dill Jackson	Cambridge Univ. G.C.	24. 6.46
4465	Gordon Alick Hookings	Cambridge Univ. G.C.	15. 6.46
4685	Gerard John Christopher Paul	13 O.T.U., G.C.	31. 6.46
4686	John Herbert Davies	13 O.T.U., G.C.	31. 6.46
4763	David Brian Barrett	Cambridge Univ. G.C.	17. 6.46
4878	Harold William Campbell	Derby and Lanes. G.C.	6. 7.46
4885	Cyril Frank Counter	Lubeck G.C.	12. 6.46
4898	Crawford Wishart	Lubeck G.C.	26. 6.46
4920	Ronald Edward Claudi	22nd Arm'd B'de	12. 6.46
4921	Robert Louis Constant Bastianen	22nd Arm'd B'de	12. 6.46
4923	Grenville Edwin Pembroke Green	2 Group, Oerlinghausen	20.11.45
4943	Prince Birabongse Bhanubadth	3 G.S., Kidbrooke	29. 1.44
4948	James Edward Townley Dykes	3 G.S., Drem	19. 5.46
4963	John Hilton Edwards	Cambridge Univ. G.C.	26. 6.46
4997	Charles Beresford Eaton Burt-Andrews	B.A.F.O., Minderheide	21. 4.46
5003	Herbert Bayton-Evans	22nd Arm'd B'de G.C.	25. 6.46
5015	Rolf Herman Dresner	2 Group, Oerlinghausen	20. 4.46
5041	Henry Michael Andrew	95 G.S., St. Eval	31. 6.46
5043	Philip William Samson James	Haltou Apprentices G.C.	1. 6.46

#### SILVER BADGES: 3

65	Owen Penrhyn Wingfield	(Cert. 950)	19. 6.46
66	Stephen George Stevens	(Cert. 674)	4. 7.46
67	Thomas Stanley Haynes	(Cert. 4132)	9. 6.46

### KENT GLIDING CLUB.

Will all ex-members and others interested and living in the Maidstone or Chatham area, contact the Secretary:

Mrs. R. H. HADDOCK, "LENHURST,"  
HARRIETSHAM, KENT.

### SOUTHDOWN GLIDING CLUB LTD.

We shall commence Gliding and Soaring again at the Devil's Dyke. Old members and prospective members should write for details to:

Hon. Secretary, R. F. BRIGDEN,  
99, NORTH STREET, BRIGHTON.

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### SCOTTISH GLIDING UNION LTD.

We will commence operations next month at Bishophill, Kinross and Balado Airfield, Milnathort.

New members are now being enrolled. Entrance fee £2 2s. 0d. Subscription: Flying Member £6 6s. 0d.; Non-Flying Member £3 3s. 0d.

Full particulars from Secretary,  
R. B. Rogerson, 59, Carmyle Ave.,  
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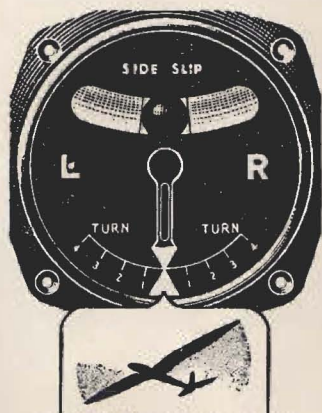
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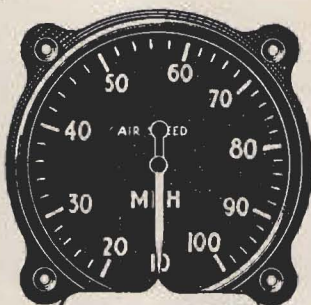
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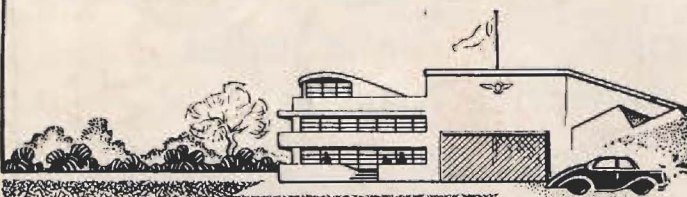


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