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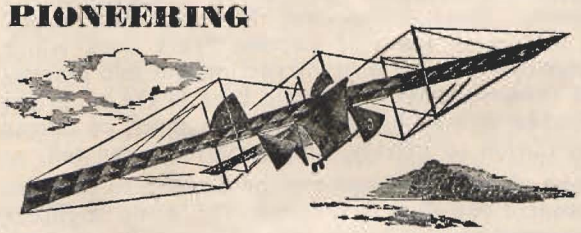
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Sailplane and Glider

THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

APRIL 1946 ★ Vol XIV No 4

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WELL, we now know the worst. As was suspected, there is to be no Subsidy, and it is not sure either that impressed machines are to be returned if they are still in being, or that others are to be made available in their place. Some few German gliders may be loaned to clubs for "research," but the terms of such "loan" are not yet decided. We wonder who is going to pay the insurance and upkeep costs of these machines. It would be most unlike the Treasury to do so—and why should the clubs? Surely the best thing is to give the machines to the clubs who get them. How are they to be allocated? Presumably by ballot, although, of course, the new B.G.A. Technical Committee might set certain tasks to certain clubs—the Newcastle Club might be encouraged to investigate the Helm Bar, and the Scottish Gliding Union the Grampians Standing Waves, to mention two which come most easily to mind. They might be allotted the best experimental aircraft available for the purpose.

It arouses curiosity, however, to observe the reason given for the non-award of a subsidy—that Gliding and Soaring hold no military value. This contrasts oddly with the decision of the Air Staff to increase the A.T.C. Gliding School from 67 at the end of the war to 90 to-day, and therefore increase the amount of Gliding (and now Soaring) training available to cadets. One wonders why the Navy, too, are establishing their own gliding schools?

Clearly there is more in this than meets the eye. Can it be that the Air Ministry fear that if Gliding were made available to all quickly at reasonable cost all their instructors would quickly leave and join the Clubs? We had the impression that the Minister for Civil Aviation, though sympathetic, was not quite happy in his brief.

The clubs now have to think out ways of making Primary instruction economic. There is two-way winching, with bunjy launching to fall back on. There is Captain Pears' idea which some think the most economic, of dual instruction and solo practise—a method which certainly gives more solid time in the air in the early stages. Whether it may be expecting too much of human capacity to absorb tuition so quickly, only experience can tell.

On the question of general equipment there seems to be more ground for content. The B.G.A. request for some eighteen categories of equipment seems to have been favourably received. The price at which these will be handed over, especially such things as winches, will materially affect the finance of *ab-initio* training. If such things as hangars and huts are included the formation of new clubs will be encouraged and facilitated. As with sailplanes, the prospect of imminent physical possession of something to look at is a good deal more reassuring than a receipt for an order given and paid for. Few things will help the Gliding Movement so much as the sight of clubhouses and hangars, and sailplanes in the air. Nevertheless, a good deal of hard work lies before everyone before these things come to pass and the Movement is in full flight again. There will be many delays and much heartbreaking waiting.

Under the circumstances the decision not to hold any National Contests in 1946 was inevitable. Preparations for those for 1947, however, must be fierce and strenuous. For in 1948 the Olympic Games is to be held in England, and if, as in 1938, it is decided that Soaring is to be included, there will be some extremely keen competition from abroad. No doubt the B.G.A. will consider the possibility of holding a British Empire Contest in the same year. Such a contest might be of value if it took place before the Olympiad.

NORWAY

NORWAY, that rugged country which is the gateway for the Arctic, has, since the time of the Vikings, been the home of explorers, of men famed for their skill and courage on the sea.

The Norwegians have made national sports of pitting their knowledge and strength against the forces of nature; extracting from the elements the thrills of speed and acceleration. This relatively poor country has fortunes in beautiful sailing yachts, as anyone can see coming up the Oslo Fjord on a summer day. Sailing is more popular there than anywhere in the world.

When snow covers the mountains, the Norwegian finds outlet for his love of altitude, speed and individual effort on his skis. Skiing can be easy, but the field for accomplishment as in soaring, is almost limitless. The Norwegians have long led the world also in skiing.

How was it thus, that we never heard of Norwegians in soaring, the sport which combines and enhances the best of skiing and sailing?

I decided to find out.

THE FIRST PIONEER

In 1943 I met a young Norwegian courier pilot, who told me they did soar in Norway. Since 1930 a handful of enthusiasts had struggled to bring the sport into the country, from Germany, where they had learned it. The first pioneer was Hans Gron Lund, who conducted a gliding school near Fredriksstad. Some of his early pupils, both Norwegian and Swedish are the leaders in the sport to-day. His first pupil, Sindre Hestvedt, is to-day the acting president of the Aero Club of Norway. For many years he has been the president of Oslo Seilflyclubb and a sailplane owner. He owned one of the world's first two-place sailplanes—a "Grunau 8."

Lars Bergo, the courier pilot, who told me this between flights, was also at first a student of Hans Gron Lund. His manner told me something of why we had not heard much of the Norwegians. He was extremely modest. So were the others I talked to, later. They felt they had accomplished so little of what *could* be done, that it was really nothing to shout about.

RUNWAYS OF ICE

Still, by 1940 this country of workers, farmers, and middle-class people, with a population of less than half that of London, had over 30 active sailplane flying clubs, and a national organisation. The sport had at last caught the imagination of the young people. Lars Bergo, who had been in Germany for six months, and had seen soaring at its best, was travelling from town to town organising clubs, teaching, guiding, encouraging. He had obtained the licence to build the popular "Grunau Baby." Soon his construction sets were being assembled all over the country. New soaring sites were being located, and it was found that, very good thermic conditions prevailed in the Eastern valleys in the summer, despite the fact that most of them lay north of 60° latitude. Slope soaring was mostly done in the winter, along the frozen lakes. The ice provided unlimited runways, so the students were towed behind cars, all around the lake. The glider when released, would land near the car, and the wind down on the lake was often negligible, so very little retrieving was necessary. On Stensfjorder, a lake which became very popular with the clubs near Oslo, the planes were towed to very high altitudes, where the wind was sufficiently strong for ridge soaring. One ridge there is about 45 miles long and from 100 to 1,500 feet high. Here could be found gliders ranging from the primary type "Grunau 9" to the latest high performance "Olympia." Results were generally good, though not outstanding, for flying in zero temperature gets uncomfortable if protracted.

Under the auspices of the national organisation which was actively led by the enthusiastic and inspiring Capt. Oli Reistad, several meets were held near Oslo, attracting such international fgures as the Australian, Herr Kronfeld and, even a team from Italy.

INTERLUDE FOR WAR

Then came the invasion and, after two months of bitter fighting, Norway was occupied under the nation which had led the world in motorless flight. Now the gliding enthusiasts could see their fondest dreams come true—if only they would co-operate with the New Order. They were offered the subsidy that so long had been denied them. A few of the newer members let their love for flying get the better of them, and accepted. But to the older members soaring was but a medium of expressing their love of combat and of liberty. They could no more fly under German direction than an eagle could fly in a cage. So they left everything they had and escaped in danger of their lives to join the Norwegian Forces in England. And after they were trained under their old leader, Oli Reistad, who eventually rose to Lt-Colonel, they continued to risk their lives, flying in all branches of the R.A.F.

Some of them gave their lives, among them my friend Lars. With him Norwegian Soaring lost one of its most tireless workers.

REORGANISATION

There were some of the gliding enthusiasts who chose to fight the invader from within. Among them was Jorger von Tangen and Sindre Hestvedt. Von Tangen eventually went to prison, but Hestvedt was luckier. When the day of liberation came he knew what had happened to the confiscated flying equipment and immediately set about the work of locating the remains. To him must go the credit for the rapid reorganisation after the war. Already this winter flight training has been resumed, still without a government subsidy, but with encouragements in the form of captured war materials. Flying equipment is the great need at the moment, especially two-seaters.

THERMALS AT MISS

I was fortunate enough to be present at the first meeting of Norsk Aeroklubb since the war. Representatives from the whole country were there, covering not only sailflying, but also model, and motor flying. The interest in sailflying in all parts of the country is, doubly speaking, soaring. The Germans have left about 40 large aerodromes, as far north as Firmask. These will be idle commercially speaking. Since the Government now seems to encourage all forms of private flying,

(*Continued on page* 18)

THERMALS AT LOW ALTITUDES

By Dr. KARL O. LANGE

FEW glider pilots are fortunate enough to be located near a ridge that permits slope soaring with the prevalent winds. Fronts are few and far between; cumulus clouds can be reached ordinarily only from airplane tow or some other means that assures unitial altitude. So, "everyday soaring" depends in most locations on thermals. But at present it is only too common an experience for an entire glider unit to operate throughout a whole day without accomplishing a single soaring flight. The thermals are there all right but we do not know how to utilize them at the low altitudes obtained from common tow.

FACTORS

In order to make more systematic attempts at catching thermals from auto-tow or winch tow on level ground, three things have to be known: (1) what upcurrent velocities may be expected at low altitudes; (2) how big around is a thermal near the ground, and (3) where do the thermals generate. And, of course, it would be a great advantage to have a means beyond and better than the climb indicator with which to locate upcurrents. David Stacey, when doing graduate work at Harvard's Blue Hill Observatory in 1941, investigated these problems under the author's direction. The results have not yet been published and many of the following data come from this work.

Measurements of Vertical Velocity and of Horizontal Size of Thermals at 1,000′ above Ground.

The test flights of this investigation of thermals were carried out during March, April and May. Thus, the results may apply only to spring conditions. The flights were made—with a "Piper Cub Coupe"—on days with "thermal weather" only, as any experienced glider pilot would define it; namely only when there was strong insolation (little or no scattered clouds) and after the ground had heated up in the morning. The temperature lapse rate was not measured, but it may be assumed to have been dry adiabatic (5.5° F. per 1,000′) in the lowest 5-6,000′ because of the selection of days and daytime for the flights.

The measurements were made over a fixed triangular course from Norwood, Massachusetts airport to Blue Hill Observatory, to a point north, and back to the airport. The underlying territory includes fields and pastures, a golf course, swamp lands, woods, the town of Norwood, also highways, railroad beds, a quarry and the airport aprons—all features that were proclaimed by several authorities to be good thermal sources. The measurements were made about 1,000′ above level ground, which changed from 400′ to 1,000′ above the fringe of the Blue Hills. Other variations from 1,000′ were caused by the upcurrents and downcurrents encountered in flight. They are small enough to be spoken of generally as 1,000′ above ground.

The basis of the evaluations are barograph traces of a special Lange barograph with very open time and pressure scales. Only such vertical motions were evaluated as might be of immediate interest to soaring; that is, small turbulence recognizable in the traces was evened out.

The Vertical Velocities of Thermals at 1,000′

The results of 17 test flights are summarized in Table I.

TABLE I

Vertical Velocity	Percentage of the Total Number of Upcurrents Encountered
2 feet per sec. and under	31%
3 and 4 feet per sec.	39%
5 and 6 feet per sec.	15%
7 and 8 feet per sec.	6%
9 and 10 feet per sec.	7%
Over 10 feet per sec.	2%

The table states that 60% of all upcurrents encountered during the investigation had a vertical velocity of 3 feet per sec. or more at 1,000′. That is, about 2/3 of all upcurrents found should sustain soaring flight in sailplanes and even in utility gliders if expertly flown. 30% of all upcurrents have a vertical component of 5 feet per sec. or more; that is, a sufficient rate to soar with comparative ease. The relative number of upcurrents having a velocity of 3 to 4 feet per sec. is the highest of all groups. It is almost 40% of the total. This appears to be quite significant in two ways. Firstly, it suggests a peculiarity in the mechanics of thermals that is also borne out by other indications, and that might lead to the discovery of further valuable knowledge on the behaviour and usefulness of thermals. Secondly, it points to the fact that a large number of thermals represents the very lowest limit at which we can soar, and thus emphasizes the importance of gliders with a low sinking speed.

As a whole the results of the measurements of upcurrent velocities agree well with our general experience. It is generally known that occasionally upcurrents are encountered at an elevation of 1,000′ that can hardly be missed, namely currents of 9 feet per sec. and more. According to the above table, these cases represent roughly 10% pf all thermals. But the majority of upcurrents is only of the same order of magnitude as the sinking speed of the glider. According to the measurements, 70% of all thermals are 4 feet per sec. or smaller and, therefore, sufficient for prolonged soaring only if the pilot can manage to stay strictly within the thermal and does not lose altitude while groping around for it.

The Size or Diameter of Thermals at 1000′

A few years ago the theory was advanced that thermals have extremely small horizontal dimensions Therefore, it was argued, best altitude gains are obtained by putting the ship into a tight spiral the very moment a thermal is encountered. This technique was quite generally adopted—and proved successful. However, the question presents itself, whether or not this technique is proper in all instances. If, for example, a "Franklin" or a "Cadet" encounters a 3-4 feet per

(*Continued at foot of next page*)

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THERMALS AT LOW ALTITUDES

(*Continued from page* 4)

sec. thermal at 1,300'—and according to Table I there is a 40% chance for that—then, the glider is sure to lose altitude by increasing its sinking speed on account of tight spiralling. The only possibility of staying aloft would be through a thermal of a large enough diameter to permit straight flight or shallow curving. Thus, the Norwood measurements on the diameter of thermals take on special practical importance.

The size or diameter of the upcurrents was computed from the airspeed of the test plane and the time spent in the vertical currents, as measured off from the barograph records. The straight course of the plane was maintained under all circumstances. Thus, when a thermal was encountered the flight led straight through it. If a thermal is pictured as a big air bubble shaped somewhat like a cumulus, it becomes obvious that the flight might have gone right through the centre, thereby measuring the actual largest diameter. On the other extreme, just the edge of the thermal might have overlapped the flight path, recording very much too small a "diameter." On the average the measurements would be between the two extremes, so that it has to be realized that the upcurrents are actually somewhat larger than the "diameters" measured and tabulated below. On the other hand, any glider in straight flight should expect to encounter thermals in the same manner as the test plane did, so that the "diameters" given in the table really have a more direct significance than the actual maximum diameters.

Diameters of Vertical Currents at 1,000' Above Ground

TABLE II

Vertical Velocity	Average "Diameter" of Thermals
2 feet per sec. or under	3,700 feet
3 and 4 feet per sec.	2,500 feet
5 and 6 feet per sec.	2,100 feet
7 and 8 feet per sec.	1,200 feet
9 and 10 feet per sec.	1,200 feet
Over 10 feet per sec.	700 feet

Significantly these figures attest to the soundness of the technique of tight spiralling as far as very strong currents are concerned. Upcurrents of over 10 feet per sec. were found to be less than 1,000' deep. On the other hand, the every day variety of upcurrents has a much larger "diameter," the groups of from 3 to 6 feet per sec. extending over almost half a mile. On the average these two velocity groups, according to Table I, comprise 54% of all upcurrents measured in this investigation. Thus, it may be summarized: more than 50% of all thermals which can be reached from an auto or winch tow to 1,000' have an average "diameter" of about half a mile and a vertical velocity of from 3 feet per sec. to 6 feet per sec. Another 30% are of larger "diameter," but weaker than 3 feet per sec. The rest have smaller "diameters" but their rate of climb exceeds 7 feet per sec.

(*Continued on page* 17)

STORM FRONT FLIGHT FROM CORDOBA TO LA RINCONADA

By ROBERT LUCAS

IT was a lousy day; I had been hoping to get along to the City and have something for lunch that was not the inevitable bread and cheese of the competition fortnight. In the morning I did a trial flight and came straight down again under a light drizzle. Convinced that there would be no flying we put the machines back in the hangar—but we had reckoned without the "Chief," who decided they should be dried first. When we finished it was already three o'clock—good-bye grub—not even bread and cheese!



The storm front passes over.

WHAT A FRONT

As we came out of the hangar we saw over the mountains to the south-west what appeared to be a front. We consulted the meteorological gentry. And these experts told us that we obviously didn't know the local conditions—that was not a front but a local something with a complicated name that I cannot remember. Well, it came up quite normally and it *was* a front. And what a front! The meteorological tower almost flew away . . . and of course, as we did not know the local conditions it caught us with the machines in the hangar. But getting them out and away was the work of a few minutes, and I was able to take off third. My aeroplane pilot was not a glider pilot, and although the front had already passed the field it never entered his head that he had to overtake it; half-way between front and aerodrome he did a climbing turn. I tugged hard on the rope and made him go in the right direction. But we were still climbing and we entered the clouds at 1,200 feet, so I released and carried on alone, overtaking the front after about a thousand yards. There I began to rise at 16 feet a second with a speed of 50 miles per hour.

100 m.p.h.

I flew along the front towards the east till I reached cloud base. There I stayed in the area of greatest lift, transforming rise into speed. I was now doing about 100 miles an hour. At times I was sucked into the clouds; then I changed direction towards the north and came out with the brakes on. This was delightful. I was accompanied by a great host of birds of all shapes and sizes. The flight was smooth and by the speed it almost seemed as if I had an engine. To my left stretched the flat plain where some dust clouds were rising to the same height as I was flying. On my right there were sinister mountains of black clouds from which darted flashes of lightning. I was flying so close to the front that at times my right wing was in the clouds, and at the speed I was putting up I expected to achieve a most impressive distance. But when things look so good they usually pack up. After about 50 minutes I arrived at the extreme eastern end of the storm and also at the end of the pleasure. I stayed up as best I could in the hope that things would improve, and I was stooging about with eighteen inches rise and fall when another "Bussard" appeared, the "Chiesa," piloted by Chourrout. You don't know how wonderful it is when flying some 80 miles from home amid thunder, lightning, and pouring rain, to meet a friend who is in the same condition. We waved at each other and went on looking for up-currents.

ORPHANS IN THE STORM

We had been flying for some 40 minutes thus when quite suddenly another storm formed in front of us. I was higher than Chourrout and rising then at twelve feet per second, so I thought I could probably pass between the peaks of the cumulonimbus that was forming. The last I saw of the "Chiesa" it was diving to get below the storm. (Chourrout in "Chiesa" continued due north and landed after 105 miles.)

STORM AND DESERT

It was infernally rough and I was very glad of my long experience in acrobatics, for the machine got into some most peculiar positions. By the time I emerged in front of the storm I found myself flying over interminable scrub. Behind I could see nothing for the storm, and in front it was greenish desert right to the horizon. The front was better than ever, but it had changed its direction somewhat, being displaced towards the north-west. I had a rough map of the district and it showed a river crossing a wooded zone about 80 miles in width. Thirty minutes later I saw a river, and believing it was the one marked on the map I cheered up a little, for till now this flying over desolate scrub had depressed me considerably. I continued flying very fast, from 100 to 120 miles per hour, trying to keep as much to the east as possible, though at times my compass indicated due north.

A ROAD!

I had taken off at 4.15 from Cordoba and it was already 7.30 p.m. when I saw on the horizon a

road. This was marvellous; since I began to fly over the scrub I had seen no sign of human life. But although I could still see nothing more human than a road I flew towards it with an anxiety which you can well imagine. It was getting on for dark and the thought of sleeping among the frogs and snakes of the desert was so unwelcome that I was already cursing the moment I had decided to fly!

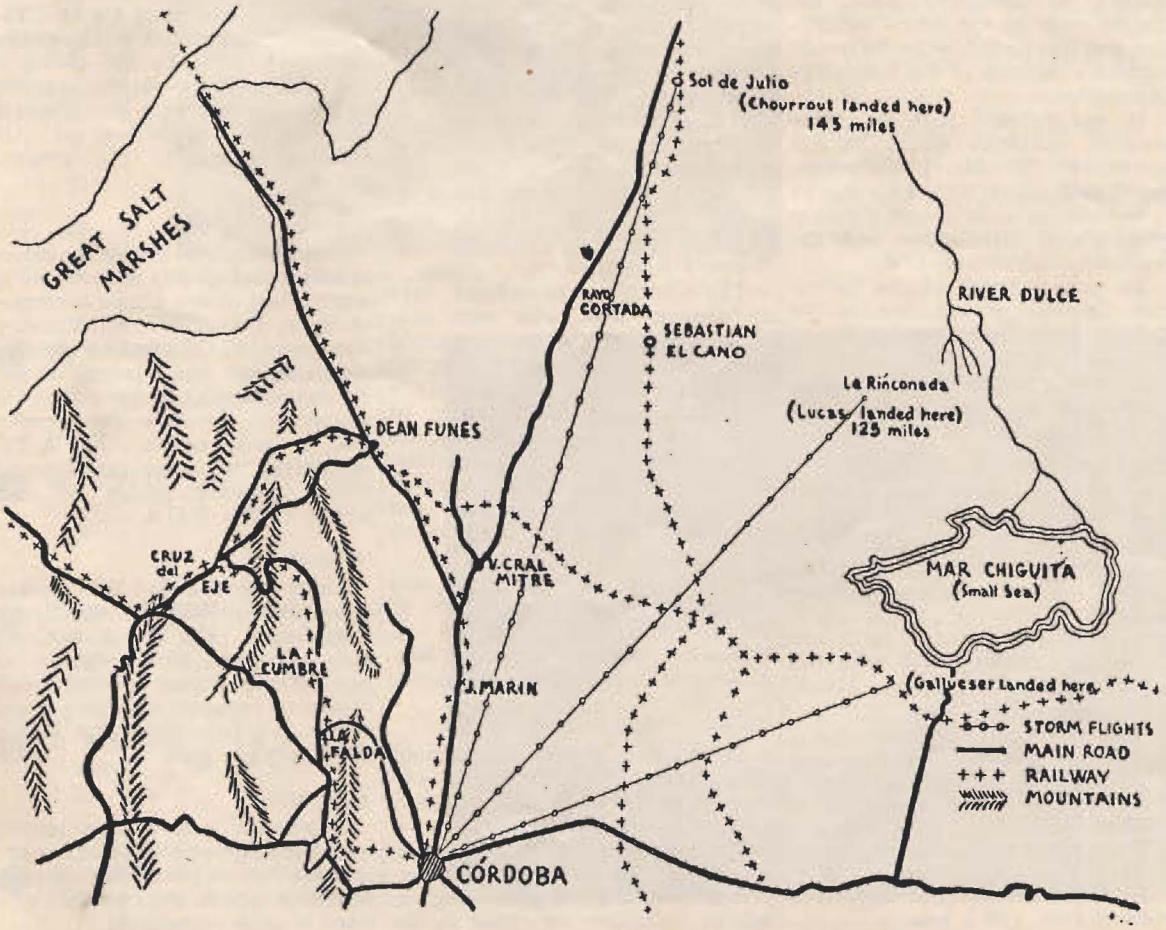
My road was good and straight but appeared to be completely deserted and was bordered by high thorny scrub, but I decided to land on it with a side wind even if I scratched the points of the wings on the bushes. Once down I staked it as firmly as possible, for the storm was already upon me. I sheltered huddled in the cabin, where I passed the night watching the hands of the clock crawl round the dial and trying to avoid the penetrating raindrops.



The Chief (Jepe) with two other Instructors.

LOST FOR 3 DAYS

After a *lovely* night came the dawn, and I was able to see that along this Heaven-sent road had passed only three carts in several weeks. I was collecting water in the variometer thermos bottle (I had had nothing to eat or drink since breakfast the day before) when to my joy I spotted a man on horseback some half-a-mile away. To *my* joy but evidently not to his, for every time I got near he went away again. But when at last I could make him understand he told me cautiously that I might find a ranch hidden in the scrub a mile away. And there, with the help of the inhabitants I stored the sailplane and was lent a horse. I was thrown three times by the brute before I reached the local policeman. (Moral: all soaring pilots should learn to ride!). Then it took me three days to reach the nearest town and talk to Cordoba by telephone, and another three days before Mrs. Platt, the "Chief," and the "Pinguino," who seemed to be on some sort of Cook's Tour, got me out to civilisation again. I had done a storm front flight of 110 miles in three hours forty-five minutes—and it took me six days to get back! Hooray for soaring; I prefer acrobatics . . . .



B.G.A. MEETING OF MARCH 1st

TWENTY-EIGHT CLUBS, of whom twenty are open to the public, were represented at the meeting of the B.G.A. held at the Royal Aero Club on March 1st.

Professor Brunt was in the chair, and the meeting decided to reconstitute the B.G.A. and a draft constitution with minor amendments was agreed, in principle. Amendments are to be considered by the Executive Committee, consisting of Professor D. Brunt, M.A. (Chairman), Mr. P. A. Wills, C.B.E. (Vice-Chairman), Mr. D. G. O. Hiscox, Mr. C. Espin Hardwick, Mr. E. J. N. Archbold, Mr. S. G. Stevens, Mr. J. W. S. Pringle, M. J. C. Rice, Mrs. A. Douglas, Mr. B. A. G. Meads.

Treasurer.

It was agreed that Wing-Commander Ashwell-Cooke should remain as Treasurer until the change over to the new Constitution was completed, when he would become a member of the Executive Committee.

It was decided that the three possible vacancies would be left open until 31st March for subsequent nomination by the Executive Committee so as to ensure a proper geographical distribution and the representation of new Clubs.

An early meeting of the Executive Committee was felt to be desirable, when consideration should be given to the formation of a Finance Committee. (*Note* : This meeting was later arranged for Friday, 8th March.)

Honorary Secretary.

The Chairman also suggested the desirability of appointing an Hon. Secretary to the Association, and Mrs. Douglas was unanimously elected. The Honorary Secretary would have a roving commission to keep in personal touch with the Clubs and to co-operate with the Secretary at the B.G.A. Headquarters.

A new Company under the Companies Act is to be registered and the existing one wound up.

Membership.

There are two kinds of membership.

1. Full membership of club. Subscription, £20 a year.

2. Associate membership. Subscription, £5 a year.

Acting Secretary.

The meeting desired to place on record its appreciation of the services rendered by Squadron-Leader Spence as Acting Secretary.

Technical Committee.

The meeting agreed the necessity for a Technical Committee to deal with questions affecting the design and construction of aircraft and to co-operate with the Air Registration Board. The following were elected :—Mr. K. G. Wilkinson (Chairman), Mr. F. N. Slingsby, Mr. H. E. Bolton, Mr. G. O. Smith, with power to co-opt.

Flying Committee.

It was agreed that the terms of reference for a Flying Committee should be drawn up by the Executive Committee. The following were elected to serve on the Flying Committee :—Mr. P. A. Wills, C.B.E. (Chairman), Squadron-Ldr. R. Kronfeld, Mr. Alan Goodfellow, Squadron-Ldr. J. C. Ward, Mr. D. G. O. Hiscox, with power to co-opt.

Research Committee.

The Chairman considered that meteorology and radio were subjects on which the Association could do research, and suggested that the Royal Aeronautical Society and the Royal Meteorological Society be asked to nominate two members each to serve on this Committee. It was agreed that the Secretary should write to the Societies and and ask them for their views on this matter.

A Research Committee was elected as follows :—Mr. J. W. S. Pringle (Chairman), Mr. K. G. Wilkinson, Mr. A. L. Slater, Mrs. A. Douglas, with power to co-opt.

Gliding Contests, 1946.

There was general agreement that National Contests could not be held in the United Kingdom in 1946.

The representative of 84 Group stated that his A.O.C. had suggested that a gliding meeting be held at Salzgitter sometime in the summer, teams to be entered from B.A.F.O., A.T.C., and the B.G.A., making a total of approximately 50 people. There were few travel facilities for civilians going into Germany at present, but it was hoped that this difficulty might be overcome. It was decided to await an official invitation to this meeting, the number of pilots entering to be specified.

News has also been received that the Executive Committee has arranged for German gliders now at Farnborough to be taken over and checked as soon as possible. As their allocation to Clubs in the first place must primarily depend on proposals for test and research submitted by Clubs, Clubs wishing one or more of these aircraft are requested to forward concrete proposals for consideration by the Research and Executive Committees not later than 4/4/46. The Executive Committee will be guided in the allocation by the ability of the Club to carry out the requisite technical work with the aircraft, and by considerations of the greatest benefit to the greatest number.

Empressed Gliders.

Clubs wishing to obtain the return of empressed gliders are advised to write *direct* to the Under-Secretary of State, D.G.A.T.C. Air Ministry, Kingsway, W.C.2, stating whether compensation was received or not. No guarantee can be given that this action will produce any results. but it will enable the A.T.C. authorities to gauge the demand. Please forward copies of such letters to the B.G.A.

Aircraft.

Clubs are reminded that aircraft must be ordered independently from firms. The B.G.A. can only help to obtain the authority for production. Please forward details of aircraft required, including placed orders, not later than 31st March, if not already sent.

Equipment.

Negotiations have been started with the appropriate Ministries and information of material actually available, prices, etc., will be circulated as soon as received.



Assembling the "Merlin"

AUSTRALIAN GOLD "C" HEIGHT and DISTANCE



"Merlin" continued.

By Dr. HEYDON



Jack Mann climbing in the "Falcon"

AUSTRALIAN ACHIEVEMENTS.

Once before, in 1940, Sydney Soaring Club made what was described as a "Tour by Sailplane." Last Christmas they made a grandly successful similar tour in which some first class performances were put up. During the war we were delighted to read of someone else lucky enough to have the chance of soaring freely. It is true it was irksome only to be able to read about it, and many of us wished we could have had even the minimum times in the air which were chronicled in SAILPLANE. Now Australian Gliding and Soaring has "arrived" in no uncertain fashion.

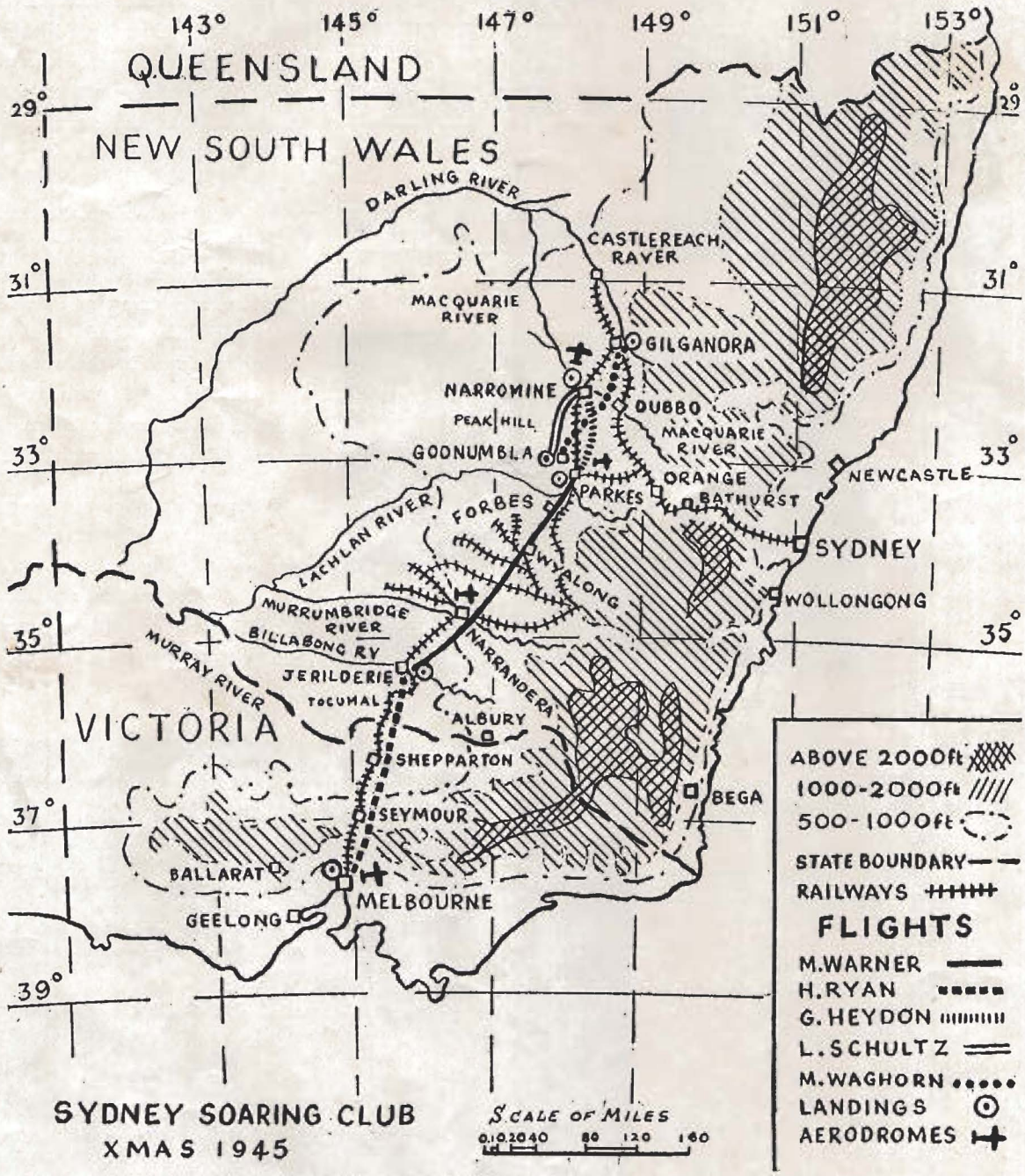
We are glad to be able to print this account in SAILPLANE of an Empire sailflying achievement. We in Britain congratulate them and are only now awaiting the opportunity to do better—if we can.

- **M. WARNER.**—11,600 *ft. climb*—200 *miles.* 8 *hrs.* 15 *mins. duration on* 24*th December,* 1945.
- **H. RYAN.**—7,600 *ft. climb*—169 *miles.* 4 *hrs. duration on* 26*th December.*
- **Dr. G. HEYDON.**—4,000 *ft. climb*—63 *miles.* 4 *hrs.* 8 *mins. duration on* 28*th December.*
- **L. SCHULTZ.**—7,000 *ft. climb*—50 *miles.* 2 *hrs.* 45 *mins. on* 31*st December.*
- **M. WAGHORN.**—10,800 *ft. climb*—93 *miles.* 6 *hrs.* 35 *mins. duration on* 1*st January,* 1946.



—and finding a thermal.

Flights in N.S.W. with the Gull



Showing the position and flights of the party during the "tour."

THE Sydney Soaring Club (formerly known as the Sydney University Gliding Club) at present owns a small sailplane which was designed and built by one of its members, Martin Warner, in 1937, and a Slingsby "Gull" which was imported new in its trailer in 1939.

At Easter, 1940, the Club made a trip to the interior of New South Wales with the "Gull" and a "D.H. Moth" for launching. In four consecutive flying days, M. Warner, G. Heydon, H. Ryan and L. Schultz flew respectively 52, 101, 84 and 105 miles (as measured on the map used). After the first day, the "Gull" was launched from the field where it had landed the evening before, so that, as the Editor of the SAILPLANE remarked, a tour by sailplane was achieved. The best height reached during this trip was in Schultz's flight, about 9,000 feet above his height of release.

This Christmas (1945) the Club made a second trip into the interior with the same "Gull," re-covered with new fabric just before the trip, and a "Tiger Moth" for launching, fitted with a towing attachment and a ten-gallon auxiliary tank. Special allowances of petrol for the "Tiger" and for the car were granted by the rationing authorities; the R.A.A.F. co-operated by allowing the use of its aerodromes. Some very good flights were made on this trip.

WORLD RECORD POSSIBLE

Mr. P. A. Wills, C.B.E., before the outbreak of the war, had some idea of coming to Australia with a two-seater "Gull" towards the end of 1939. In one of his letters to us he suggested that the interior of Australia might be one of the best countries in the world for long-distance sailplaning. Our two trips are the only occasions on which it has been tried out, and the results certainly seem evidence of Mr. Wills' perspicacity. Apparently flights of 100 miles or more can quite often be made in a plane of the "Gull's" performance in the interior of New South Wales during the summer. Possibly a party with a sailplane of higher performance and able to wait if necessary for a favourable wind might fly 500 miles in the interior of Australia in the middle of summer. On this Xmas trip, with



Doctor G. A. M. Heydon and Martin Warner, who is preparing for his flight in the "Gull"

sunrise about 5 a.m. and sunset about 7 p.m. (Eastern Standard time), we found that thermals began about 9 a.m. and were often strong by 10 a.m. and did not die away until about 5 p.m.

On the accompanying map the five flights of this Xmas trip are shown. The weather charts for 9 a.m. on 24th December, the day of the longest flight, and for 26th December, the day of the second longest, are also reproduced.

AERO TOWING

The party consisted of five sailplane pilots (Warner, Ryan, Heydon, Schultz, Waghorn), together with Mrs. Schultz and son, aged five. Schultz's car towed the trailer and carried five persons, the other two travelling in the "Tiger." The power pilots were Schultz and Waghorn. To the non flying member of the party Mrs. Schultz, much of the success of our trip was due.

The R.A.A.F. aerodrome, about three miles East of the town of Parkes, about 180 miles by air from Sydney, was selected as the starting point for our operations, and there the car with trailer, and the "Tiger," duly arrived on 22nd December, 1945. This night the whole party stayed at a hotel in Parkes; during the rest of the trip most camped out. The prevailing weather in New South Wales in summer, West of the coastal range, is hot and dry. "Willie-willies" (small dust devils) are common. During this trip it was fine and very hot.

SHORT TOW ROPE

Next day, Sunday, 23rd December, we all made practice flights from Parkes aerodrome without attempting to go away, and M. Waghorn (of the London Gliding Club), under the guidance of L. Schultz, had his first practice in towing the "Gull" off in the "Tiger." As a result of Warner's experience as a test pilot of the military gliders, in the designing of which he took part during the war, we used only 300 feet of hemp rope (Manila, $1\frac{1}{8}$ inches in circumference) to tow with instead of 500 feet as in 1940; this was certainly an improvement, not only saving room on the launching field, but making things simpler for the sailplane pilot in the air. It may be mentioned that in addition to the releases for the aeroplane and sailplane pilots, we have always used weak links (shearing of copper wires) at both ends of the tow rope, ten gauge soft copper wire at the aeroplane end and twelve gauge at the sailplane end; the latter, which is always used in winch launches too, was found by trial to shear at a tension of about 430 lbs. when held in the link we use. In the course of our experience both these weak links have saved mishaps; it is incredible what an experienced pilot can occasionally forget to do.

The heights given throughout this narrative are those recorded by the Kollsman sensitive altimeter carried on this occasion in the "Gull," set at zero on the ground before take off, with no corrections applied. A spirit thermometer was bound to the leading edge of the port strut and could be read from the cockpit. Parkes aerodrome is 1,050 feet above sea level. The distances given may not be very exact; they were measured directly on R.A.A.F. maps



Look North from Belmont aerodrome over the city of Geelong.

PRACTISE FLIGHTS

The practise flights made on this first day (23rd December) from Parkes 'drome began about 9.40 a.m. and ended about 4 p.m. There was a very light wind from N.W. to W.; cumulus clouds formed about midday, at about 10,000 feet. The following flights, most of which could have been prolonged, were made :—

(1) Martin Warner, released at 1,800 feet, reached 3,000; duration 31 minutes.

(2) Harry Ryan, released at 1,200 feet, reached 4,100; duration 39 minutes.

(3) G. A. M. Heydon, released at 1,500 feet, reached 7,000; duration 70 minutes.

(4) Mervyn Waghorn, released at 1,400 feet, reached 8,400 ; duration 50 minutes.

(5) Leonard Schultz, released at 1,800 feet at 4 p.m. and found no lift; duration 8 minutes.

THE RECORD FLIGHT

On 24th December, M. Warner made his flight of about 197 miles from Parkes to Jerilderie in 8¼ hours, reaching 11,700 feet above height of release. This was a fine flight, conditions being difficult much of the way. Although not internationally recognisable " gold C " distance was exceeded and almost certainly " gold C " height also, since calibration of the Kollsman altimeter could hardly reduce the indicated climb of 11,709 feet below 3,000 metres; probably a slight increase would be indicated by correction for temperature. Warner's own narrative follows :—



East from Belmont toward the Barwon river.

PRE-THERMAL LAUNCH

" Shortly after 9 a.m. on the 24th December, a clear cloudless morning with a light north wind, I was launched by aero-tow from Parkes Aerodrome by ' Tiger Moth VH-AGK ' in the Slingsby ' Gull ' Sailplane owned by the Sydney Soaring Club. I released the tow rope at 9.15 a.m. at a height of 900 feet in a reasonable thermal. This took me to 2,300 feet at 9.30 a.m., where the outside temperature was 83°F. I flew round in the neighbourhood of the aerodrome and Parkes town till 10 a.m. when I got a thermal taking me to 3,500 feet, and I decided the lift had sufficiently improved to make a cross-country flight possible.

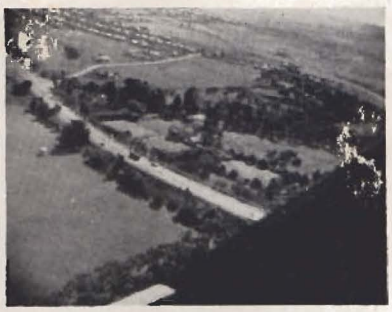
HOURS OF "LIFT"

" I set a S.S.W. course for Forbes, 20 miles away, which I reached after half-an-hour's difficult flying in small thermals at an average height of about 2,000 feet, never getting above 3,500 feet. Crossing Forbes, I came down to 1,500 feet, but making for a cultivated paddock I found another thermal which took me to 3,000 feet at 10.40 a.m. On this part of the trip I found that the ploughed paddocks were sure to produce useful thermals. From here I set out for West Wyalong, 60 miles to the S.W. Oarema Siding was passed on my left at 11.28 a.m. about 14 miles out from Forbes. By this time the lift had improved, and I was flying between 3,000 feet and 6,000 feet. From here to West Wyalong no towns or sidings were noted, but I pin-pointed myself on the map by the hills which I crossed or flew round to obtain more favourable ground, and by Lake Cowal on my right. At 12.10 I saw the first clouds forming ahead of me and was therefore sure of better lift. I estimated them to be at 8,000 or 9,000 feet, which later proved to be wrong.

LUNCH

" Up till now I had been eating an occasional raisin, nut, or bit of chocolate and taking a sip of water from the thermos we had built into the ' Gull.' However, the time being mid-day, and lunch time, I dined—one apple.

" About six miles from West Wyalong, I got my first good thermal and rose to cloud base at 11,500 feet



Looking North-East from the " Merlin."

at 1.15 p.m., where the outside temperature was 28°F. Flying over the town at about 8,000 to 9,000 feet, I checked my speed and came to the conclusion that I had a head wind. I then debated whether to turn back and make a return flight, so at 1.45 p.m., at 9,000 feet, I set a N.E. course and verified that it had been a head wind by covering the ground at twice the rate. However, allowing till 4 p.m. for flying, I did not think I could make Parkes for certain so once more set a S.S.W. course, determining to go as far as I could.

HIGHER AND FASTER

" Till the lift improved at about 11 a.m. I had been flying at an indicated air speed of 40 to 45 m.p.h.; after 11 a.m. I flew up to 52 m.p.h., and having made up my mind to go on, flew up to 60 m.p.h. when I had the height.

" At 2.15 the clouds appeared to be dying and I was flying at an average height of about 7,000 feet. At 2.30 p.m. I saw Ardlethan, and fifteen minutes later caught my thermal of the day going at 12,600 feet indicated height to 2.55 p.m. with an outside temperature of 25°F. This thermal rose strongly at about 10 feet to 15 feet per second and was fairly smooth. I left it right at cloud base as the rate of climb had fallen to well below 3 feet a second and seemed to be dying. It was the best rate of climb in my flight,



Looking West.

though it is not outstanding compared to thermals flown in later in our tour.

" I was wearing shorts and shirt only, but was not at all cold, for the sun was shining and the closed cockpit of the ' Gull ' keeps one fairly warm.

CLOUDS DISAPPEAR

" At 3.15 I was over the Narrandera Range flying at about 8,000 feet and getting smooth thermals taking me to 9,000 feet. At 3.53 p.m. I was over Narrandera at 9,000 feet, with an outside temperature of 48° F. and there were no clouds left in sight.

" The air was notably smooth from here on and no large downs were encountered, in fact it all seemed to be rising up gently, so I set a course between the road and the railway for Jerilderie, knowing that I had broken the existing Australian height and distance records and only anxious to add as many miles as I could, for I knew that given a reasonable following wind my distance would be easy to beat. From Narrandera to Widgiewah Siding was easy going at about 6,000 feet with continuing smooth lift. Widgiewah was passed at 4.30 p.m. and the ceiling dropped steadily, my average height to Bundure Siding being 4,000 feet at 5 p.m. From here on I kept a possible landing place close to a farm in sight all the time till, at 1,200 feet, about 2 miles N.E. of Jerilderie, I decided to land rather than cross the river and make a doubtful landing close to the town.

PLANNED FOOD ADVISABLE

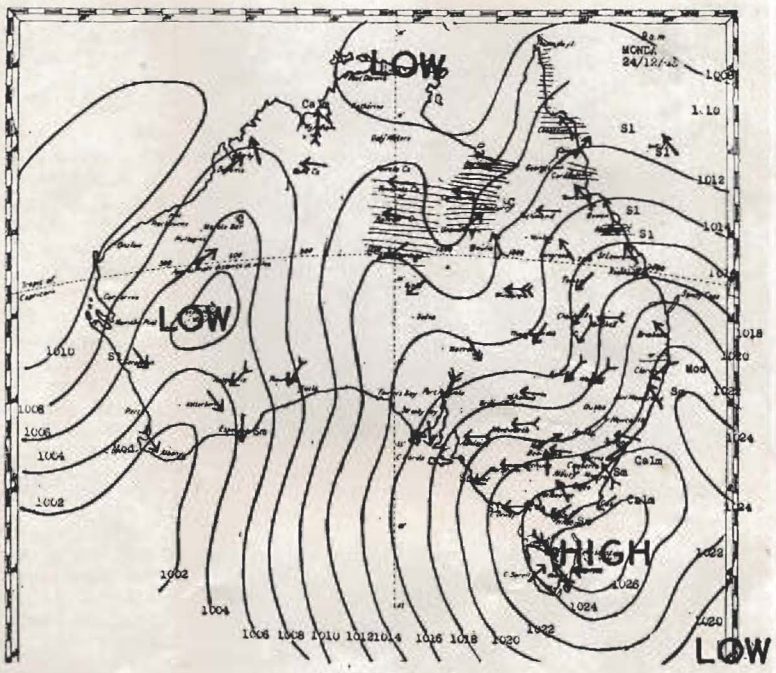
" This I did, landing at 5.30 p.m. after an 8¼ hour thermal cross-country flight of approximately 200 miles, during which I had had a following wind for about 60 miles, no wind to head wind for 50 miles and slight cross wind for the remainder of the trip.

" I found that one thermos full of water was sufficient during flight, but more water was advisable if a walk of any distance was likely, and that carrying some food for the day was a very good plan.

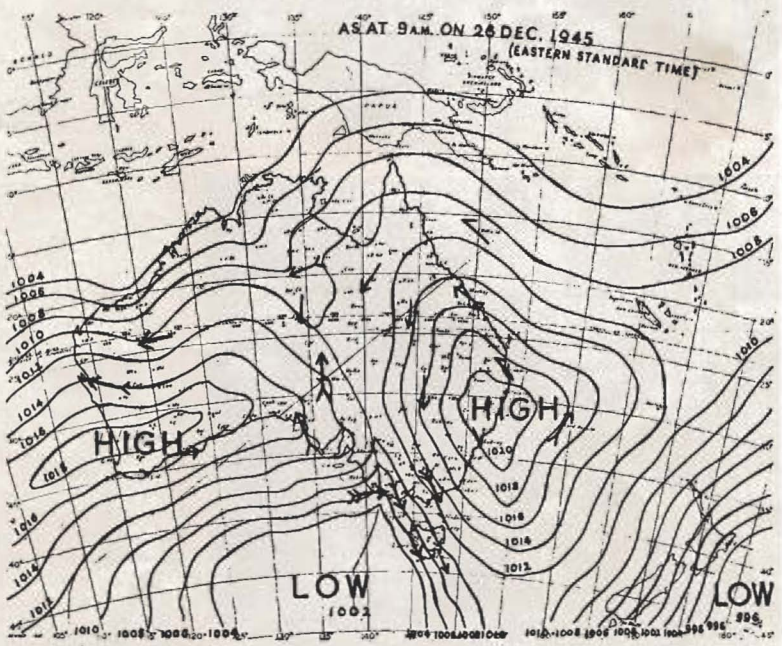
" Navigation by map reading was easy from the sailplane, as at no time was I doubtful of my position. A log of the flight was kept and 32 entries made, noting height, temperature, time and position."

TRAILER PARTY'S LONG TREK

The car party with trailer left Parkes before Warner's telephone message from Jerilderie arrived in the evening; they camped on the road and reached Jerilderie next evening, Xmas day. The " Tiger " left Parkes on Xmas morning, stayed the night at the R.A.A.F. aerodrome at Narrandera, and



Weather chart of 24th December when M. Warner made his record flight.



The day of H. Ryan's flight of 169 miles and 7,600 ft. climb.



" Merlin " two-seater interests the younger set.



The " Merlin " coming in to land.



K. Davis in the cockpit of the " Grunau " at the Geelong camp.

flew on next morning to the field near Jerilderie where the " Gull " had landed, reaching it at 8 a.m. Harry Ryan was then launched and made a remarkable and fast flight, with a strong northerly from Jerilderie to Essendon (the aerodrome of Melbourne), about 169 miles in four hours. This flight, ending in a somewhat spectacular landing in front of the control tower at Essendon, tickled the Melbourne Press, and some papers waxed quite lyrical about " the daring young man in a sailplane " ; it had been one of Melbourne's bad days with a burning hot northerly wind. Ryan's narrative follows :—

THE JERILDERIE THERMAL

" When the ' Tiger Moth ' party arrived from Narrandera, no time was lost in setting out the tow rope, filling up the thermos flask with drinking water, putting in some fruit and checking over the maps and proposed course of flight.

" However, by the time everything was ready it was ten o'clock, and I pulled the release at 1,400 feet at about 10.04 a.m. after a short tow upwind by the ' Tiger ' with M. Waghorn at the controls. The wind was varying between 20 and 25 miles per hour at a guess, and although I had cut loose into a thermal, I drifted rapidly towards the town without gaining much height. However, Jerilderie is quite a small town and I did not have much trouble in keeping on the outskirts while hanging around between 1,000 feet and 2,000 feet. After what seemed a long time, but was probably about a quarter of an hour, I struck a better thermal downwind from the town and this took me up to 3,000 feet, and thereby started the journey south. Although somewhat rough and uneven, the thermals rapidly improved, so that by the time I reached Tocumwal Aerodrome 33 miles away, I had reached 8,800 feet above the take-off point. Tocumwal is right on the border of N.S.W. and Victoria, and I got a great kick out of being the first glider pilot to fly interstate in Australia, and thoroughly enjoyed the sight of the River Murray stretched out below me marking the boundary of the two States.

MELBOURNE IN SIGHT

" I now began to think that I really might make Melbourne, which up till then had been treated partly as a joke by most of us as they all wore a very wide grin and said, ' See you in Melbourne ' when I took off.

" Shortly afterwards, when near Shepparton, I reached my maximum height of 9,000 feet and left a good upcurrent at that, owing to a slight touch of giddiness, not wanting to spoil the flight by air sickness, as I had once done on a flight of 84 miles from Condobolin to Barmedman in 1940.

BEE-LINE FOR THE TARMAC

" I found some good areas of lift without having to circle when approaching Melbourne, and did not fully realise at the time that a change in the behaviour of the ' Gull ' was due to the strength of the wind having increased considerably. With plenty of height to spare (6,500 feet) I cruised joyfully over the suburbs south of Essendon Airport, but got a rude awakening when I turned towards the said airport and found that I could not make any headway without putting the nose of the ' Gull ' down to 55 m.p.h. and more. I was sinking rapidly and thought I would have to pick the softest looking roof-top, but struck another patch of lift and after watching an airliner take off and get out of the way, I made a bee-line for the tarmac. Unfortunately, through flying at a much faster speed than usual, I misjudged my approach somewhat and still had some height to lose at the end of the 'drome, so was compelled to execute a sharp turn low down. As soon as I came around into

wind again, the strength of the latter was such that I only had a forward run of four or five yards after the skid touched down, and I had to crouch forward in the cockpit with the stick pressed forward also to prevent the 'Gull' being blown over. However, the R.A.A.F. boys came to the rescue and offered me the shelter of their hangar, for which I was very thankful.

"The total distance was 169 miles and the time of landing was 2.05 p.m., so that under normal conditions I still had about three more hours' flying time left, which makes it rather unfortunate that I had not prepared myself with maps for a longer flight following the coast down south."

INTER-COMMUNICATION VITAL

At Jerilderie, we were notified of Ryan's landing early in the afternoon of Boxing day; Waghorn and I stayed in Jerilderie with the "Tiger" and the rest set off for Essendon with car and trailer. Next day (27th December) we received a wire from the car party at Essendon, who had picked up Ryan and packed the "Gull" in the trailer, suggesting that we should meet at Parkes on the evening of 28th December. The idea was to proceed still further North from Parkes so as to allow room for long flights with North or North-West winds. However, we made a tactical error in arranging for no means of communication between the car and aeroplane parties before Parkes, for the wind became Southerly and the "Gull" could possibly have done some flying North instead of travelling by road all the way to Parkes. We all duly foregathered at Parkes on the evening of the 28th.

"DOC" HEYDON'S FLIGHT

Next morning, 29th December, I was launched from Parkes aerodrome and landed about 61 miles North at Narromine aerodrome. The day was cloudless, not very hot, and there was a light southerly breeze. I cut loose from the "Tiger" at 11.20 a.m. at 2,100 feet, and with some difficulty reached between 5 and 6 thousand feet over the 'drome and then set off North. I found conditions difficult and thermals poor throughout the flight, except over the two R.A.A.F. aerodromes at Parkes and Narromine, both large areas of sun-baked ground and very hot runways. I reached the town called Peak Hill, about 27 miles from Parkes, at 12.23 p.m., and the town of Narromine (about a mile S.E. of the aerodrome) at 1.51 p.m. Much time was spent on the way in trying to gain height in poor thermals; I was seldom over 3,000 feet, and once was down to 700 and again to 1,000 feet.

NARY A THERMAL

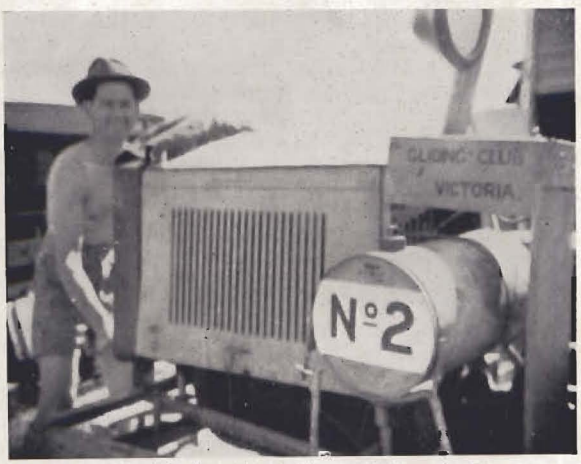
Over Narromine 'drome I reached about 5,000 feet and set off North again, but the red ball remained obstinately well up, and I was soon down to 700 feet; there were no large fields in sight suitable for towing off if I were forced down, and not a single ploughed or dry stubbly wheat field from which to hope for a bit of a thermal; I therefore turned back for Narromine 'drome, reaching it at less than 500 feet. Here lift was again found, and I circled to 5,700 feet at 2.30 p.m. I then thought of trying a return flight to Parkes, but after flying a few miles South with no lift and a head breeze, realised that it was impossible, returned to Narromine 'drome, and



Harry Bartram driving the winch with the assistance of Grace Roberts and Frank Dowling.



"Eagle," primary glider; Leo Schumacher, Ian Lacey, and Dick Egan-Lee.



R. Duckworth starting up the winch.

decided to go no further North in view of the probability of being forced down in sparsely inhabited country with poor roads. I put in some time practising getting in and out of the apparently fairly constant thermal over the down wind corner of Narromine 'drome; getting back to a thermal when I have lost it or getting central from an eccentric position are manoeuvres I have always found difficult. Eventually, having drifted about five miles North of the 'drome, I only just got back, landing at 3.28 p.m. Maximum height reached was 6,100 feet at about 3 p.m. The conditions in this flight contrasted with the very easy, in fact foolproof, ones of my only other long flight, in 1940, when on a windless day cumulus clouds formed the corners of the squares of a regular chess board stretching in every direction; under and in every cumulus was a good up-current.

R.A.A.F. HOSPITALITY

The car and "Tiger" parties arrived at Narromine 'drome during the afternoon, and there we all stayed, being treated very hospitably by the C.O., Flt.-Lt. Meers. Next morning it was found that the steel sheathing of the skid of the "Gull" was badly worn and torn in one place. The morning was spent in repairing it and the afternoon in visiting the Narromine swimming pool.

STATIC CHARGES

Next morning, 31st December, Schultz was towed off and released at 9.35 a.m.; he found little lift and could stay up only 20 minutes. Both green and red balls in the Slater-Cobb variometer were sticking badly. The instrument was taken indoors, the plugs at one end of the two tubes removed and the balls taken out. It was found, as had been suspected, that they had acquired electric charges; if touched with a needle, they would adhere sufficiently to be lifted about; a little rolling about on the table discharged them. This electrification by the friction of the balls in their movement inside the tubes is apparently liable to occur in very dry weather. The trouble had appeared previously, on another very dry day, with a hot northerly wind, during Ryan's flight. The tubes were gently wiped out, the balls replaced, and the holes plugged up again. We thought it possible that by fitting wires through the plugs, which the balls would touch, this trouble might be avoided; the wires would be "earthed" by connection to the metal part of the instrument.

SCHULTZ'S FLIGHT

Schultz was towed off again from Narromine 'drome after the variometer had been replaced, and released at 11.15 a.m. at 2,000 feet. He was forced down after flying South about 52 miles, and landed in a large field about three miles West of Goonumbla Hill, about nine miles N.W. of Parkes, at 2 p.m. The notes he made during the flight record that he climbed to 7,500 feet before flying South from Narromine 'drome at 11.50 a.m.; the temperature was then 50°F.; the shade temperature on the 'drome before he left was 103°F. He reached Peak Hill at 1 p.m. at 8,000 feet, temperature 48°F. After landing at 2 p.m. the thermometer on the strut again showed 103°F. The maximum height reached was 9,000 feet. In the morning of this day the ground breeze was from N.E., by early afternoon it was West, and by this time scattered cumulus clouds had formed at about 10,000 feet, which were drifting very slowly from somewhat South of West. Thus Schultz was not much helped by wind on this flight, and had poor conditions. In 1940 he made the longest flight and best height, this time the shortest.

NEW YEAR'S GIFT

Next day, New Year's day, M. Waghorn was launched and made a flight of about 92 miles from Goonumbla to Gilgandra, reaching 10,800 feet above height of release. His narrative follows:—

"At 10.20 a.m. on the 1st January, 1946, I was launched from the paddock at Goonumbla in which Len Schultz had landed the previous day. The 'Tiger Moth' was being flown by Len, and we were using the 300 feet tow rope.

"The Weather Report which had been obtained from the R.A.A.F. Station at Parkes specified:—

Visibility: Good.
Clouds: Nil or high scattered.
Surface Winds: Southerly.
Upper Air Winds: 0—2,000′—180°—9 knots; 2—5,000′—190°—10 knots; 5—10,000′—180°—12 knots.

"In view of this, it was decided after discussion that I would endeavour to fly North *via* Peak Hill, Dubbo and Gilgandra, and that the trailer would set off along that route also.

"Immediately prior to the take-off it was noted that the air temperature was in the neighbourhood of 100° and that the wind, which was variable, was at the time blowing from the South-west.

10 000 FT. IN 45 MINUTES

"I released in what I thought to be a thermal at 1,200 feet, just down wind of the take-off point, but was unable to locate any lift, and after struggling in areas of turbulent 'no-sink,' returned to the paddock from which the take-off was made, as it appeared likely that height could not be maintained. Whilst commencing the approach for a landing, lift was encountered at 400 feet and rapidly improved after a few circles. I circled continuously in this thermal, which reached its maximum strength of approximately 10 ft./sec. at 8,000 feet, until a height of 10,000 feet was reached at 11.05 a.m.—45 minutes after the launch.

TACKING

"On setting off on a compass course from this height, I found that considerable drift had taken place at right angles to my intended course. In spite of the winds forecast, I found the Westerly drift to be severe enough to necessitate flying approximately W.N. West, in order to return to my previously specified course, and this resulted in a very low ground speed in the direction in which I wished to go.

"On leaving the first thermal, the air was found to be extremely smooth and gave little promise of thermal activity for about 20 minutes. However, at approximately 6,000 feet lift was encountered and the next hour was spent in gaining height in thermals and losing it whilst flying W.N. West. Owing to the strength of the Westerly wind, progress over the ground in a northerly direction was extremely slow.

PUKKA MET GEN

"The town of Peak Hill, approximately 15 miles on my course, was reached at 12.45 p.m. at a height of 8,500 feet, air temperature being 50°C. The minimum height reached whilst in the neighbourhood of Peak Hill was 3,500 feet. Conditions then improved considerably, and the wind now appeared to be blowing from the Souht in accordance with the Weather Forecast. Tomingly was reached at 1 p.m. at 11,000 feet and a small number of widely scattered clouds began to appear. I then changed course to N.N. West, in order to follow the road from Tomingly to Dubbo over a heavily wooded area.

"I found map reading to be extremely simple from the great height at which I was flying, and whilst flying over Tomingly, both Narromine and Dubbo were in sight. At intervals of half-an-hour or so I sipped water through the rubber tube from the vacuum flask, and chewed raisins which satisfactorily prevented me from feeling hungry.

GOLD "C" HEIGHT

"Dubbo was reached at 2.05 p.m. at a height of 12,000 feet air temperature 35°C. Cloud base of the scattered clouds appeared to be approximately 14,000 feet. Although course was changed several times in order to fly under clouds, the resulting lift was never very strong. Ten miles North of Dubbo a bank of clouds was reached. These clouds had been visible since before the launch in the morning. Again the lift beneath the clouds was poor and cloud base was reached at 11,000 feet, air temperature 35°C., in an up-current which appeared to peter out at the point at which cloud was formed.

"A point approximately ten miles from Gilgandra was reached at 3.15 p.m., and I noticed that the clouds in front, which in this locality covered 8/10th of the sky, were becoming indistinct in shape and showers of rain could be seen. Lift became increasingly poor and large areas of 20 ft./sec. sink were encountered.

BLANKET COUNTRY

"Good cumulus activity was visible approximately ten miles to the east, but the country in between was rough and completely wooded. Approximately the same distance to the west the sky was clear of clouds. However, I maintained my course towards Gilgandra rather than risk a landing at a point which would be difficult for the remainder of the party to find, or where telephone communication might not be available. I circled for a short time at 1,500 feet over the town of Gilgandra in an area of 'no-sink' whilst selecting the best landing place, but finally was unable to maintain height and landed at 3.55 p.m. in a paddock on the outskirts of the town."

After Waghorn had got away, the car party proceeded to the R.A.A.F. aerodrome at Dubbo, where the "Tiger" rejoined them next morning, 2nd January. Two tyres had now blown out, and because of the risk of being stranded, tyre shortage being still acute in Australia, it was decided to give up distance flights and to try for out and returns from Dubbo 'drome. But Dubbo is too far East, too near hilly and rough country, to be a good base, especially if there is any West in the wind. Schultz and Warner flew in the "Tiger" to Waghorn's position near Gilgandra, and in the evening, when the air had begun to get calm, Warner in the "Gull" was towed back by Schultz and Waghorn in the "Tiger" to Dubbo aerodrome, about 35 miles.

END OF STRENUOUS FLYING

Next day, 3rd January, Warner was launched from the Dubbo 'drome about midday; he released at under 600 feet and climbed to more than 9,600; he flew to the town of Dubbo, about four miles East, returned to the 'drome against the strong wind and landed about 2¼ hours after release. This day was extremely hot with a N.W. wind of about 25 m.p.h. on the ground and stronger higher up, and extremely turbulent conditions near the ground. There were some thin ill-defined clouds high up, and a few ragged cumuli below them at about 11,000 feet.

There were no other flights on this day, which was about the end of strenuous flying; a return to Sydney was made by stages, and it was finally reached on 9th January. The young members of the party (all but myself, that is) spent several days at Jenolan caves. However, flights were made by everyone on 5th and 6th January from large air strips, constructed during the war, a few miles East of the town of Bathurst, which is some 2,000 feet above sea level and close to the Western edge of the Blue Mountains, as the coastal range of Eastern Australia is called West of Sydney. The weather on these days was cloudless, with a breeze mainly from S.W. No one succeeded in finding much lift except Schultz, who reached 5,000 feet from a release at 1,800 and came down voluntarily after 55 minutes.

TURN AND BANK REQUIRED

We did not succeed in taking the "Gull" into any clouds during this trip. In 1940 I flew in two cumulus clouds, circling in one of them from its base at 8,200 feet above the ground to near its top at 9,100 feet; it was not very turbulent, and I found circling the "Gull" blind easy only if wide circles are made. Ease of tight circling with the minimum of attention is not one of the "Gull's" many virtues under any conditions. We need a sensitive electric turn indicator, using very little current, so that its sensitivity does not fall too rapidly unless an unreasonably large set of dry batteries is carried; such used to be advertised by a German firm.

TIPS

S. Newbigin, who unfortunately could not come on this trip, described our 1940 trip in the SAILPLANE of May/June of that year, and at the end noted certain matters that should receive attention on another trip into the interior:—(1) a sliding blind over the head under the roof of the cockpit; this is a prime necessity, and was installed this time; (2) a spare variometer; though we had one, we neglected to bring it and bitterly regretted it; (3) water; we had a thermos flask fixed to the right of the pilot fitted with a rubber tube through which water could be sucked, and also a full army water bottle in a net fixed under the instrument panel, where maps, etc., were also kept; (4) tying down pegs; a couple for one wing and some rope were carried under the fuselage cover. A parachute was worn on all flights.

THERMALS AT LOW ALTITUDES

(*Continued from page 5*)

It is both discouraging as well as comforting to see that approximately one-half of all thermals at 1,000′ represent the very minimum required for the soaring flight of a utility glider. Discouraging because this means that it will not be very easy to soar regularly from tow; comforting because our past failure to soar from tow is not due to lack of possibilities, but due to lack of "know how."

From "SOARING."

(*To be concluded*).

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LETTERS TO THE EDITOR

15, Kings Orchard,
Eltham, S.E.9.
4th March, 1946.

DEAR SIR,

I have read with interest the condensed results of your glider training questionnaire, and although I did not participate, I would at this late stage like to point out that anybody who has not been connected with glider flying training since before the war is hardly in a position to express an up-to-date opinion.

The A.T.C., as you know, has trained an enormous number of cadets and quite a few instructors during the past four years, and in spite of certain difficulties in the way of obtaining gliders and equipment, they have made tremendous advances and learnt a lot about the initial training. The Primary has been used probably just as much as it was pre-war. The Cadet (please note that this word is spelt with a C), which is now the standard glider, has probably done at least ten times the number of training flights that all the training gliders did altogether in this country pre-war.

The system of initial training in the A.T.C. is, I think, ahead of any method adopted throughout the world. This may sound a " tall " claim, but a few facts are worth considering.

1. Safety. The method of learning one control at a time whilst actually in the air has shown itself to be the safest.

2. Speed. The two-way system makes it possible to do one flight every two minutes with one glider, including the time taken to change pilots. The " one control at a time " also increases the speed with which the pilot picks up the idea.

3. Cost. Two winches are used, and no retrieving car. The pupil flies in most cases from the very start, and although retrieving consists of a slide, the wear and tear on the gliders is considerably less, and if the glider is fitted with a wheel it is less still.

Most of the above refers, of course, to flights up to 10 ft., but as this is 90 per cent. of training to the " A " certificate stage, it is of the greatest importance.

In my view, two-seaters should only be used for initial experience to show the prospective pupil what a glider flight feels like, to judge his reactions to flying and to increase his enthusiasm until the " A " certificate has been taken.

Two-seaters are excellent for training for circuits and upwards, and I prefer the " side by side," which is more intimate and uses only one set of instruments.

Yours truly,
E. J. FURLONG.

The Rowans, Pine Glade,
Farnborough, Kent.
9th March, 1946.

DEAR SIR,

Your eminent reviewer, on page 16 of the March SAILPLANE, disagrees with Dr. Schmidt's statement that a gust overtakes a bird gliding down-wind and causes it to lose lift. I maintain that Dr. Schmidt is quite right.

Defining a gust as an increase in wind speed, it represents an acceleration of air flow with reference to the original wind speed *and to the bird*. True, the acceleration results in a variation of drag on the bird and readjustment to its original airspeed, but it none the less occurs and is nothing to do with consideration of the ground: it is a matter simply of acceleration and inertia. In up-wind flight a gust increases the air-flow against the bird and so increases its airspeed and the lift of its wings. Conversely in down-wind flight the acceleration of air-flow in the gust is in the same direction as the bird (*i.e.* the gust " overtakes " it) and causes loss of airspeed and lift.

This point is of rather more than academic interest since it is the one practical *aerodynamic* reason for the danger of down-wind flight close to the ground. Who has not on occasion " ridden " that sudden gust just before touching down, only to be stalled smartly when the gust dies down? Having learnt the lesson, you do not lift the nose next time to that deceptive increase of airspeed, and all is well. But in down-wind flight it works the other way: the drop in air-speed comes *first* and there may not be room to recover lift before striking the ground.

Yours sincerely,
R. E. PEARS.

NORWAY—(*contd. from page* 3). there is reason to believe that they will be used by the local aero clubs. Already one of them, located near Miss, in beautiful thermal breeding country, is being set aside for gliding instruction. It has facilities to house 100 students, as well as a dozen sailplanes. Situated only an hour from Oslo it will be the meeting place and the official soaring site for the National Association. They expect to resume international meets in **1947**. Strong as the friendship for Britain has always been, the bonds are now even greater. Norway now looks to Britain for sailplanes, for types to manufacture, and for visiting pilots who can show beginners the possibilities of this yachting in the clouds.

JETMUND (JERRY) LITELL.

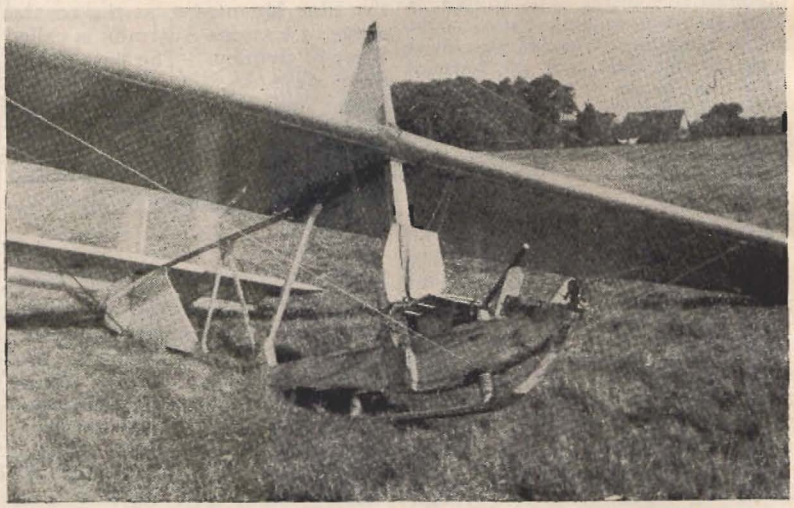
S.G. 38 Flight Tested

By

Philip Wills

Span, 10.41 metres.
Empty weight: 104 kg.
Gliding angle: 1 : 10 at 52 kms./hr.
Minimum sinking speed: 1.30 m./sec. at 48 kms./hour.
Wing loading: 12.20 kgs. per sq. metre.
Aspect ratio: 6.76.

An all-wooden primary with skid sprung on two shock absorbers More stable in flight than the Dagling used in this country, and better-balanced controls. Fitted with a safety quick-release on the lines of the Otfur. Heaven knows how many have been built, I saw a nacelle for one numbered in the six thousands! This would imply at least 30,000 open primaries.



Note Shock-Absorbers on S.G. 38.

Aero-Modelling Section.
Edited by R. H. Warring.

MODEL GLIDERS AND SAILPLANES

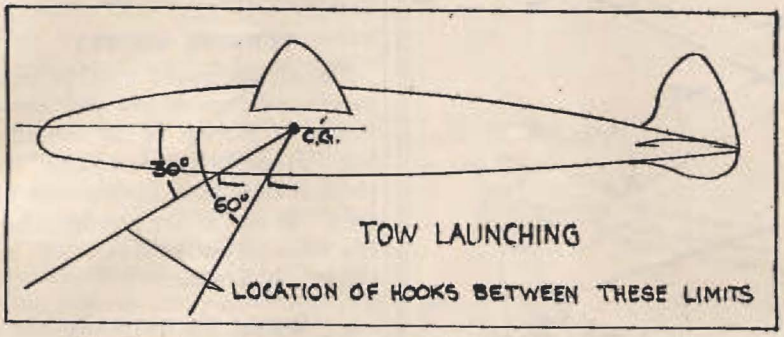


Fig. 1

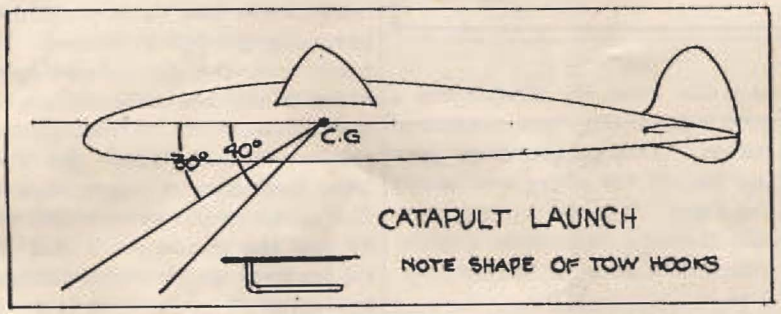


Fig. 2

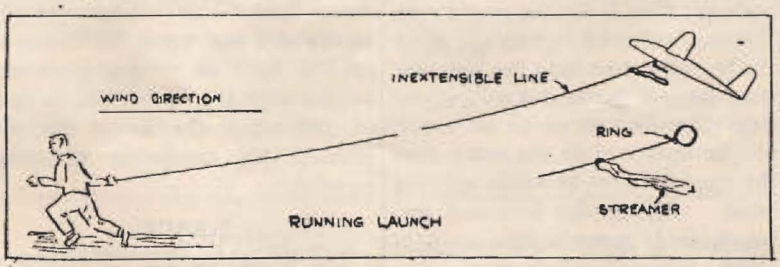


Fig. 3

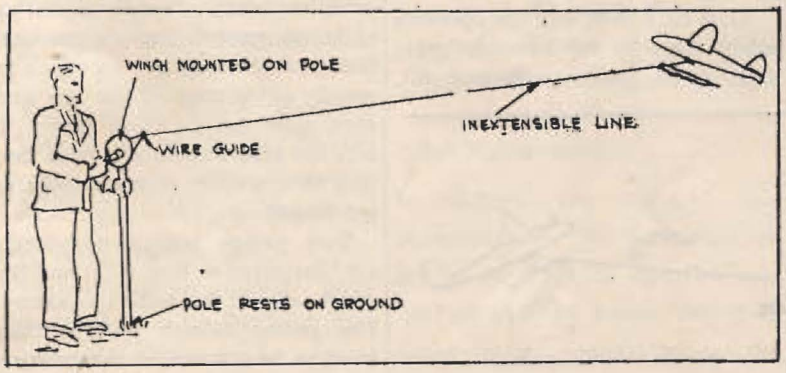


Fig. 4

LAUNCHING TECHNIQUE

OF the many varied methods of launching model gliders the *running launch* is generally favoured as being the simplest and the one giving most control. *Winch launching* is adopted for International competition work, whilst *catapult launching* is attractive for pleasure flying. The latter method was the standard pre-war British competition launch until the 1939 season when F.A.I. rules were applied. During recent years it has fallen into dis-use. A further system, of German origin, is the *pulley launch*, described and developed over here by C. A. Rippon and R. H. Warring in 1942.

TOW HOOK POSITIONS

Whilst stability on the tow line depends to a very marked extent upon the characteristics of the design of the model, certain general rules as to tow hook positioning apply. These differ slightly from full size practice and, for brevity, are described in Figs. 1 and 2.

Tow hook positions given in Fig. 1 are applicable to all systems other than the catapult launch. For the catapult launch the rearward location of the hook should not, as a general rule, exceed the 40 degree line—Fig 2.

Briefly, the farther aft the tow hook towards the C.G. the greater the height that can be obtained during the launch. At the same time stability under tow is adversely affected by rearward positioning. The deciding factor is the design itself. It is possible, with a high degree of tow-line stability inherent in the design, to obtain a height equal (or nearly equal) to the length of the line during a running launch.

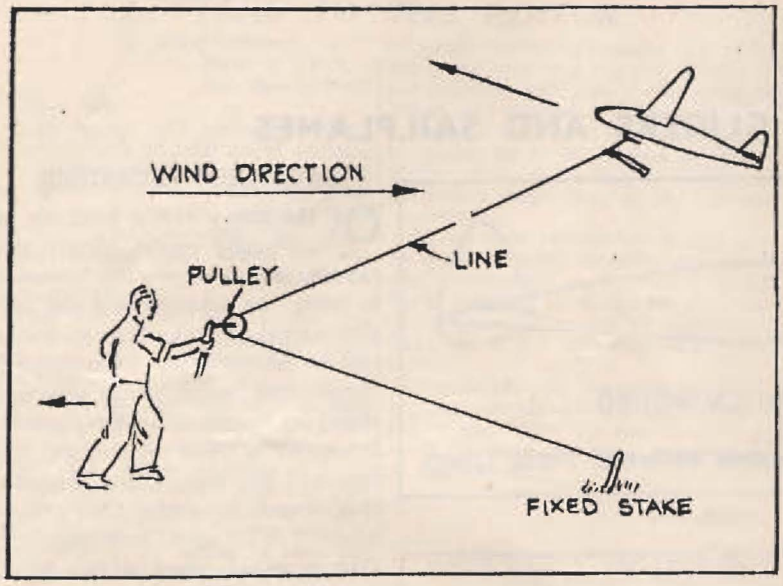


Fig. 5 (a)

VARIATIONS

Variations of this primary scheme include twin tow-hooks, towing bars, auto-rudder control and its various derivatives, etc., and side or offset tow-hooks. These will be covered in a future article.

The running launch method is shown in Fig. 3. The line consists of a length of strong thread (or similar) depending upon the weight of the model. Usual length for competition work is 300 feet.

TECHNIQUE

The launcher—or *operator*, as he is conveniently called, holds the free end of the line. The other end of the line terminates in a ring with a streamer of tissue or silk attached about 9 inches from the ring. This streamer assists the dis-engagement of the ring at the top of the climb and also gives the timekeepers a good sight of the exact moment of release. Timing commences from the instant the glider commences free flight. It is also a competition rule that the entrant in a glider competition shall be the operator.

The line is stretched out downwind and hooked on to the model. An assistant then holds the model with the nose pointing upwards. With the line stretched tight the assistant then releases the model on a signal from the operator (such as a pull on the line) and at the same time the operator runs forwards into the wind. The model is towed forwards and upwards, the rate of climb being determined by the actual *airspeed* of the model.

Thus on a calm day the operator might have to run forwards quite rapidly to obtain sufficient lift, whilst on a windy day little or no effort may be needed, the model rising like a kite on its own. Heavily loaded models require a greater airspeed to gain height than do lightly loaded models.

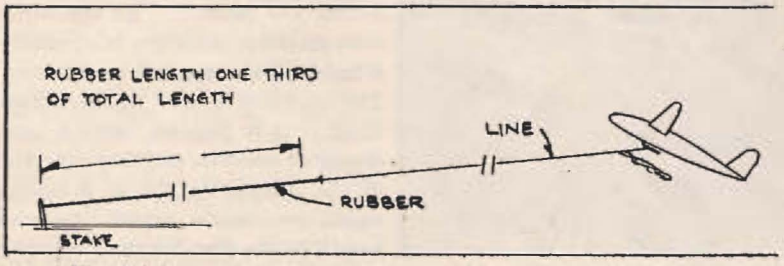


Fig. 6 (a)

TURNING MODELS

Should the model tend to turn to one side under tow and commence to sideslip in the operator can generally correct this by running *away* from the direction of turn. If this is not possible, then the turn must be corrected by rudder adjustment.

WHEN TO RELEASE

Should the model get into difficulties under tow, or show signs of increasing instability it should be freed from the line immediately whilst it still has sufficient height to recover. If necessary, the operator should throw the line away from him to ensure release. The model should *never* be left to fly into the ground whilst still on the line as severe structural damage may result.

The *winch launch* is similar, except that in this case the operator stands still and winds the line in—see Fig. 4. This method gives less control over the model, but in case of difficulties the model can be released by unwinding the line rapidly.

KNACK

The actual method of winching varies and, in common with the other methods, is mainly a matter of knack gained through practice. Some modellers prefer to winch in rapidly at the start of the tow and then slow up. Others prefer to kite the model along slowly at first and then wind in more rapidly to get height.

Two pulley launching systems are illustrated in Figs. 5 (*a*) and (*b*), which should be self-explanatory. The pulley launch gives similar freedom of control to the running launch, but at the same time does

not require rapid movement on the part of the operator. It is particularly suited to heavily loaded models, and can also be used for single-handed launching.

Finally the *catapult* launch—Figs. 6 (*a*) and (*b*). The actual "catapult" effect is quite mild—as, indeed, it has to be!

The catapult is laid out dead downwind. The model is attached to the rig and the operator walks back until the rubber is stretched to about three to five times its normal (unstretched) length. He then releases the model which is pulled forwards and upwards, automatically to release itself at the top of its climb. If the model is pulled up into a stalled position and slips off the line, invariably the fault lies in the rubber being too powerful. The remedy is obvious. Decrease the cross section of the rubber part of the catapult unti the correct strength is found.

In all the launching methods the model should release itself at the peak of its climb by flying off the towline. Provided that the ring is smooth and the tow-hook is "L" shaped, with a reasonable length of horizontal portion of the "L" no trouble should be experienced in slipping the line too quickly, or failing to release.

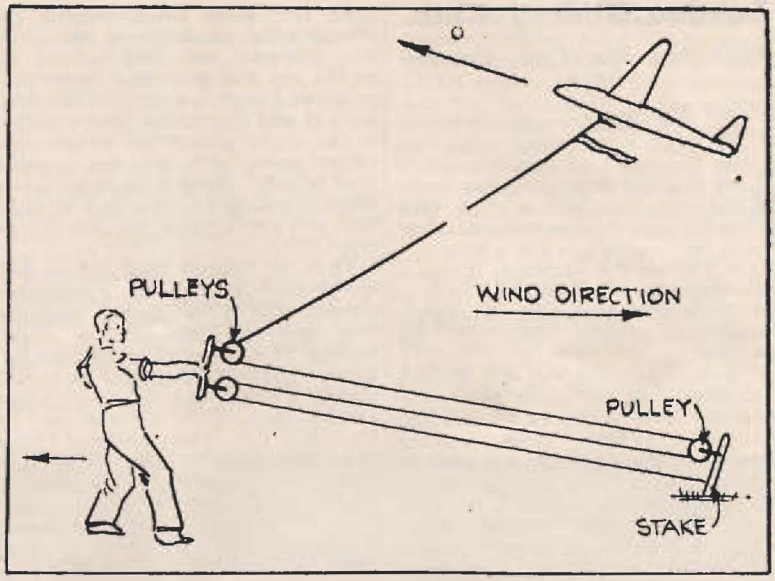


Fig. 5 (b)

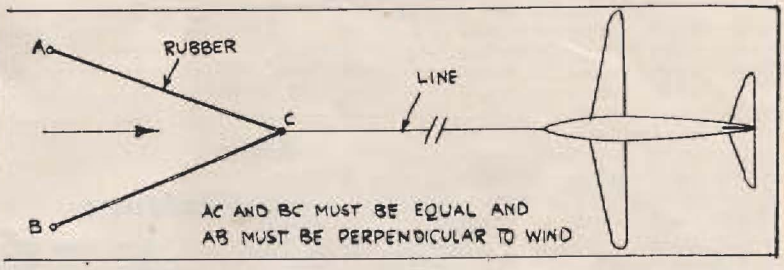


Fig. 6 (b)

(The illustrations to this article are reproduced from 'Glider Launch,' by courtesy of the publishers, Model Publications, Ltd., 21, Lower Green East, Mitcham, Surrey.)

National Glider Competitions, 1946

May 12th. **Model Engineer Cup, No. 1.**

Team glider event, decentralised. Teams of four models representing a club. Models to conform to F.A.I. specification.

May 26th. **Pilcher Cup.**

Individual glider contest. Semi-centralised to be flown on area grounds. Open to any type or weight of glider model conforming to the S.M.A.E. fuselage formula.

July 14th. **Thurston Cup.**

Individual glider contest. Semi-centralised to be flown on area grounds. Models to conform to F.A.I. specification.

In addition, the S.M.A.E. Cup (decentralised), to be flown on September 15th, is open to any type or class or rubber driven *or* glider model conforming to the S.M.A.E. fuselage formula.

NEW WORLD'S RECORD

Since publication of the last F.A.I. World's Records list last month we learn that the present figure has been well beaten by a Swiss model flier, Emil Glunkin. His G.41 model made a timed flight of 2 hours 21 minutes recently, and a world's record claim is being lodged with the Federation Aeronautique Internationale.

No details of this model are available, other than that it is a streamlined shoulder-wing type of about 6 ft. wing span, with underslung fan.

London Gliding Club.

First Post War Cross Country Flight.

THE first Sunday in February brought a promising wind, but it was too much to expect a lot of people to stand around all day in the pelting rain watching one of their number fly, and there was no club-house near enough to retire into.

On February 9, although it was a Saturday, there were enough people to get Greig and Stephenson alternately into the air in their " Blue Gull " for two hours.

The soaring wind was still blowing next day, and the same two pilots flew for two hours each, reaching 800 feet. The Club " Tutor " was out as well, enabling ten pilots to soar for a total of 3½ hours between 12.20 and 4.47, after which circuits were done until 5.16. Pilots were: Ruffle, Riley, Wheatcroft, Sanderson, Lauderdale, Latto, Cole, Wright, Massey and Bradford.

Sunday, February 17, was a bright day with only the lightest of breezes at the bottom of the hill, and though there was a little more wind at the top, it must have been reinforced by sunshine on the slope to enable the " Tutor " to soar. It blew from north-west at first, then died down for a time and sprang up again from the south-west, apparently in connection with some depression cloud which appeared in the distance. The " Tutor " was soared or circuited by Lauderdale, Cooper, Huxley, Rutherford, D. A. Smith, E. and L. Read, Slater and Bolton, and then hopped by Buckley, Spragg, Davidson and Lee. One pilot disturbed the placidity of the proceedings by getting the " Tutor " into a spin directly off a winch launch, and only recovering about 30 feet from the ground. He does not know how it happened, nor does anyone else, but our impression is that he began to turn while still climbing off the release.

Hiscox flew his " Gull " three times, the last and longest being from 3.4 till 4.30, and Stephenson and Greig soared the " Blue Gull."

February 24 was the best day yet, with a hearty west wind and good healthy cumulus clouds with a few streets, in spite of the early date. Club members were allowed up to twenty minutes each, but so many turned up that it grew dark before we reached the end of the list. Half-way through the afternoon the winch got tied up in its own wire, and a few people thought they would make signs to Riley that he could stay up as long as he liked for the present, whereupon he naturally thought that he was being signalled to come down, and did so. There is no code sign for telling a pilot to stay up; or, if there ever was, it has fallen into disuse from superfluity.

At this point Cooper saved the situation by producing a bunjy, so the " Tutor " was man-handled up to the top and given the Club's first post-war bungy launch. Thereafter, both it and the " Blue Gull " landed in the sticky plough at the top and carried some of it into the air with each launch. Stephenson in the latter machine got up to cloud base at 3,200 feet, and rose another 300 feet in the cloud.

Then we noticed that Hiscox had disappeared, and in time a telephone message told us that he had made the first post-war cross-country flight, landing 18 miles away at Panshangar, beyond Hatfield, the site of an A.T.C. gliding school and of the future London Aero Club, as well as for No. 1 E.F.T.S. There he found Paddy Benson working on the " Scud II, " which used to belong to Wright and Horsfield. On the way he had reached 4,000 feet at cloud level, arriving over Panshangar at 2.30, still at about 2,000 feet, and landing at 2.42.

The soaring wind gave out an hour before dark and further hops were given in the " Tutor," including one by Bell, who had not flown for nine years. The machine was finally dismantled by the light of headlamps and pushed home along the linches in the dark.

Our Visitors

JERRY LITELL — American business man of Norwegian descent—writer of article in this issue—is tremendously keen to promote gliding in Norway. Silver " C " pilot and organiser of a club at Hot Springs, California, he has been intimately connected with gliding for many years. Is aiming to translate article on " Subsidising Gliding in Argentine " for Norwegian use, as he says they need some definite plan with which to lay down their own foundations.

WING-COMM. G. E. P. GREEN—writer of last month's article, " Captured Sport "—C.O. 2 Group Gliding School at Oerlinghausen, and one of its chief organisers. Unofficially obtained the qualifications for his " C " at the Gliding Club, and being recently demobbed is going to take it at a civilian gliding club.

JOHN COPELAND—for those who do not know him—Silver " C " pilot of 1938—previous member of Southdown Club (where he began training), London Gliding Club and Reigate Club, where he was the first member to take his " C." One-third part owner of trailer winch with Hiscox and Hatcher, and one-half owner of Cambridge sailplane ! ! (*Impressive during these days*).

APOLOGY

In last month's SAILPLANE an error was made in the feature, " An Announcement," for which we wish to apologise. We stated that Mr. R. H. Warring, who is conducting our Aeromodelling Section, was " for some time Editor of the ' Aeromodeller '." This we have found to be incorrect. Mr. Warring was one of the staff of " The Aeromodeller," and due to incorrect information we were led to believe that he had been Editor.

EDITOR.

IMPORTANT NOTICE

All enquiries for Sales and Service for **SLINGSBY SAILPLANES** should be addressed to :—GEORGE COLLETT, M.B.E., Esq., Messrs. Martin Hearn Ltd., 41, Oxford Street, W.1. (*Tel.* : Gerrard 1397.)

NEW CLUBS

GLIDING ENTHUSIASTS and all others interested in forming a Soaring Club in the Gloucester, Cheltenham, Stroud and Painswick district, please contact Mr. W. Duschinsky, Bide-a-Wee, Shurdington Road, Brockworth, Gloucester. Letters should be marked " Gliding," and mention of previous gliding experience would be helpful.

THE SURREY GLIDING CLUB

The Surrey Gliding Club will reopen near Redhill as soon as adequate facilities for members can be made available.

The Secretary is A. Dukinfield Jones, 23, Rose Hill, Dorking; but in the meantime, prospective members are kindly asked not to write for general information.

RESIGNATION OF *ASSOC. EDITOR.*

AS will be noticed elsewhere in SAILPLANE, **ANN DOUGLAS** has been appointed Hon. Secretary of the British Gliding Association. It will, therefore, be necessary for her to resign her position as Associate Editor of SAILPLANE to the great regret of the Editor and Staff. The trials of an Editor are not few, and present conditions have made them a good deal worse, but with the expert assistance and wide range of knowledge of Mrs. Douglas they have been greatly reduced.

On behalf of all our readers we offer her our grateful thanks and wish her the very best of success in her new activity.

EDITOR.

Yorkshire Gliding Club

NOTES OF CLUB ACTIVITIES

THE first post-war meeting of the Club was planned for the week-end, Saturday and Sunday, the 5th and 6th January, 1946. Low cloud, mist, a good deal of mud and a doubtful wind were all typical Sutton Bank fare in January, and the site, stripped of our buildings long since requisitioned, looked somewhat gloomy. However, the reunion of many people who had not seen each other for years and years, together with the fact that even the most case-hardened requisitioner cannot remove a brick hangar, provided a spot of cheer. A couple of borrowed machines a two-seater and a " Kirby Kite "—were available, and L. H. Barker had the honour of the first civilian flight at Sutton Bank since September 1939. The machine was flown later by Slingsby—Barker and John Leach taking over the two-seater with Billy Sharpe and Hastwell as " second dickeys." A few more flights were made the following day (Sunday), when a number of press representatives arrived—one of them finally descending to the bottom of the hill, and after rendering Spartan service in dismantling and trailer loading, returned to his paper fully convinced that you can land a decent sailplane almost anywhere ! It was flattering to have so much attention from the press, a sign, we trust, of keen public interest in motorless flight. A full Committee meeting was held at the Hambleton Hotel on the same day, and many of the knotty problems before us were examined. It is not the purpose of these notes to discuss high prices of aircraft, subsidies, erection of buildings, etc., but all these things have to be faced in their turn, and only a lot of keenness, enthusiasm, hard work and self-sacrifice on the part of all members will restore to the Club all its pre-war facilities.

TWO-SEATER A.B. INITIO

On the 4th and 5th of February, Barker and Leach made two more flights each, and Clarence Jowett, who has bought a " Kite " privately, made a short test following the work he has been doing on the machine. It was intended to have another flying meeting at the week-end, 2nd and 3rd of March, but the weather put an end to it : a further Committee meeting was held at the Hambleton, and N. H. Sharpe made his report on the B.G.A. Meeting. As matters stand at the moment, it would appear that *ab initio* training, as we knew it before, may be a thing of the past, and that the beginner may find himself training *via* the two-seater—a more expensive process for him, but perhaps cheaper from the crashery angle. In the absence of subsidy, we shall have to find insurers to carry our damage risk—such people are not in business for the sake of their health or for the love of flying, so great care will have to be taken . . . if premiums are to remain at an economic level ! N. H. Sharpe has tendered his resignation from the job of Chief Instructor ; he wouldn't thank anyone for saying exactly how many years he has done this onerous work for us, as well as many other jobs. His enthusiasm and drive have carried the club over many rough patches, and there is no doubt at all that it would never have become the flourishing affair it was before the war without him. His leadership and experience will be a great asset in the tough rebuilding period that lies ahead. Alderson proposed him a vote of thanks for his work as Chief Instructor, which was heartily carried by the meeting. L. H. Barker (known to some as " Tough Tom ") has consented to tackle the job ; his abilities, technically and as a pilot, are well known, and with his executive experience make him a first-class man for it.

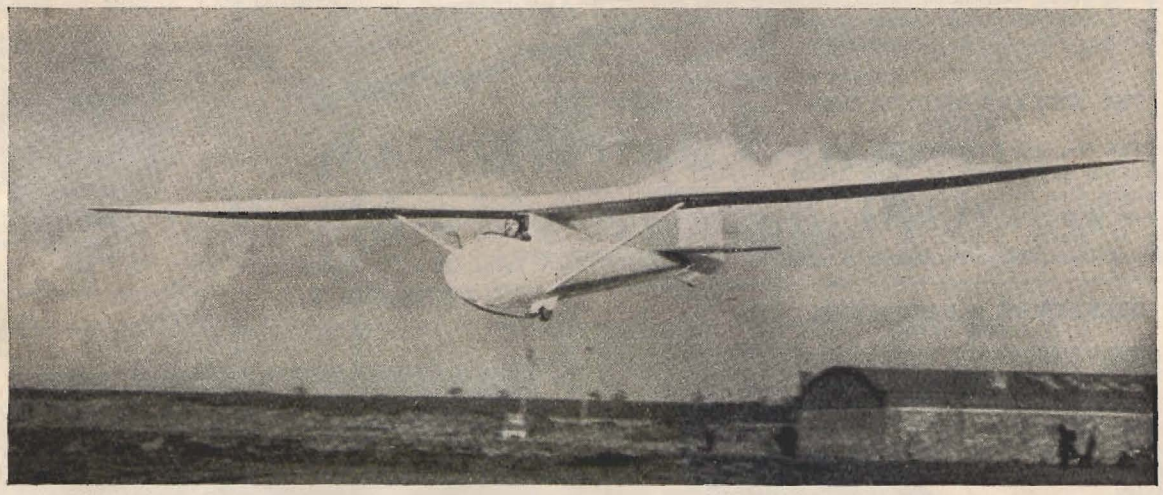
A.T.C. WELCOME

It is proposed to welcome the A.T.C. to the site—subject to the confirmation of details. C. D. Hartness, our old and valued instructor and an officer of the A.T.C. also, will be a strong link between the organisation and the club. Slingsby made the two-seater available for our first meeting, and we are very grateful to him—by the time the SAILPLANE goes to press again we hope that our own will have been delivered. Temporary clubhouse arrangements are being made at Hambleton Lodge—next door to the Hambleton Hotel—pending some decision about, and the thousand and one formalities attendant upon, building a new Clubhouse—to say nothing of paying for it !

The Secretary will be very glad to hear from private owners intending to visit Sutton Bank this year. May we say, with blushing modesty, that no young pilot's training is complete until he has flown at Sutton Bank ? . . and even add that no old pilot should fail to repeat the experience as often as possible !

The President and members of this Club offer congratulations to all members of all clubs returned from service in H.M. Forces, and look forward with pleasure to renewing old aquaintances.

8/3/46. G. A. H.



First post-war meeting of the Yorkshire Gliding Club at Sutton Bank, January 6th, J. W. Leads is landing the Cambridge " Kirby Kite."

ANNOUNCEMENTS

LEICESTERSHIRE GLIDING CLUB

Further news of the Easter Aero-Towing Rally to be held at Leicester is that Mrs. Douglas is flying her own Auster for use at Leicester, and more tugs are hoped for. Competitions have been arranged, and Mr. Dudley Hiscox has provided a large bronze trophy as a prize, for the best out-and-return or goal flight.

In addition to aero-towing, the Leicestershire Gliding Club is continuing its training programme as far as possible, with two winches working. It is hoped, too, that the first Chilton " Olympia " will be on view.

Further details regarding accommodation, etc., can be obtained from *The Secretary, The Leicestershire Gliding Club, Blaby, Leicestershire.*

THE MIDLAND GLIDING CLUB LIMITED

The Secretary invites enquiries *re* post-war programme at Long Mynd. Subscription rates, etc., forwarded to those interested on application to :— F. G. Batty, F.C.A., 2, Lombard Street West, West Bromwich, Staffs.

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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.

ROYAL AERO CLUB GLIDING CERTIFICATES.

" B " CERTIFICATES

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date.*
4086	Alexander William Monteath Thomson	E.108 E.G.S., Ashford	18.11.45
4098	Peter Ambrose Hearne	M.42 E.G.S., Bruntingthorpe	16.12.45
1728	Charles Henry Burge	C.129 E.G.S., Waltham Cross	6. 7.45
2117	Douglas Clement Hay	C.126 E.G.S., Booker	9.12.45
2993	Derek Raymond Elrington	N.W. 185 E.G.S., Barton	6. 1.45
3177	Cyril Howitt	C.130 E.G.S., Cowley	30.12.45
3216	Frederick Charles Pocock	C.130 E.G.S., Cowley	30.12.45
3272	Ian Richard Perowne Abel	S.E.168 E.G.S., Rochester	13. 1.46
4039	Wilfred Jasper Burnett	N.W.188 E.G.S., Cark	9.12.45
4102	Richard Carless Swayne	Air Division G.C., Barntrup	3.11.45
4103	George Beale	Air Division G.C., Barntrup	29. 9.45
4104	Richard Caistor Treweeks	Air Division G.C., Barntrup	20.10.45
4121	John Scott Cooper	S.6 E.G.S., Turnhouse	17.12.44
4131	John Chisholm Ward	84 Group G.C., R.A.F., Salzgitter	21. 7.45
4132	Thomas Stanley Haynes	84 Group G.C., R.A.F., Salzgitter	8. 7.45
4133	Esmond William Arnoll Jefferies	84 Group G.C., R.A.F., Salzgitter	26.10.45
4134	John William Stewart Moore Sudds	84 Group G.C., R.A.F., Salzgitter	23.11.45
4135	Donald Charles Tranter	84 Group G.C., R.A.F., Salzgitter	16.11.45
4136	Piotr Nartowicz	84 Group G.C., R.A.F., Salzgitter	3. 9.45
4137	John Gillespie Slipp	84 Group G.C., R.A.F., Salzgitter	23.11.45
4138	Frederick Sharp	84 Group G.C., R.A.F., Salzgitter	13.10.45
4140	Christiau Marie Joseph Constant Leonce Laurent Eid	84 Group G.C., R.A.F., Salzgitter	3.10.45
4141	Casimir Michael Grigg	84 Group G.C., R.A.F., Salzgitter	12.10.45
4143	John Patrick Smit	84 Group G.C., R.A.F., Salzgitter	30.10.45
4144	Robert Denaston Baker	84 Group G.C., R.A.F., Salzgitter	25.11.45
4145	Albert Sydney Mann	84 Group G.C., R.A.F., Salzgitter	14.10.45
4147	George Charles Lowe	84 Group G.C., R.A.F., Salzgitter	25.11.45
4148	Joseph Donald Thompson	84 Group G.C., R.A.F., Salzgitter	23.11.45
4149	Peter Evelyn Reginald Malcolm	84 Group G.C., R.A.F., Salzgitter	6.10.45
4150	Richard Arnold Merthyn Potts	B.A.F.O. Sailplane & Gliding Club, Minderheide	4. 1.46
4153	Guy Spencer Baker	No. 2 Group, R.A.F. G.C. Aerlinghausen	3.11.45
4166	Frederick Leslie Clark	N.E.26 E.G.S., Greatham	20. 1.46
4167	John Ivor Morris	N.E.26 E.G.S., Greatham	13. 1.46
4171	Leonard William Scotcher	No. 4 Gliding School, Lyttleton, South Africa	3. 7.42

" C " CERTIFICATES

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date.*
3997	Norman Dennis Smith	Air Division Gliding Club	19.12.45
3999	George Alfred Mead	Air Division Gliding Club	19.12.45
4001	Peter Ernest Gordon Plum	Air Division Gliding Club	19.12.45
3077	Jack Eric Lauderdale	London Gliding Club	27. 1.46
4103	George Beale	Air Division Gliding Club	21.10.45
4121	John Scott Cooper	S.6 E.G.S., Turnhouse	14. 6.45
4131	John Chisholm Ward	84 Group G.C., R.A.F., Salzgitter	22. 7.45
4132	Thomas Stanley Haynes	84 Group G.C., R.A.F., Salzgitter	20. 7.45
4133	Esmond William Arnoll	84 Group G.C., R.A.F., Salzgitter	28.10.45
4138	Frederick Sharp	84 Group G.C., R.A.F., Salzgitter	13.10.45
4141	Casimir Michael Grigg	84 Group G.C., R.A.F., Salzgitter	13.10.45
4145	Albert Sydney Mann	84 Group G.C., R.A.F., Salzgitter	17.12.45
4149	Peter Evelyn Reginald Malcolm	84 Group G.C., R.A.F., Salzgitter	9.10.45
4153	Guy Spencer Baker	No. 2 Group G.C., R.A.F., Oerlinghausen	3. 1.46
4171	Leonard William Scotcher	No. 4 G.C., Lyttleton, S. Africa	28. 8.42

Total Gliding Certificates issued in February :—" A" Certificates : 98 (Nos. 4074—4171). " B " Certificates : 34. " C " Certificates : 15.

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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 previovs flying or gliding experience.

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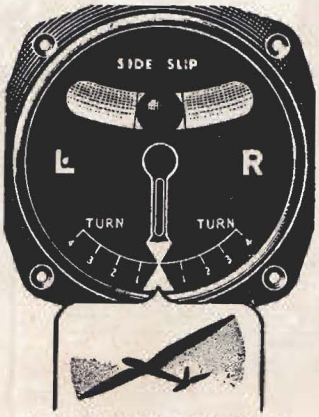
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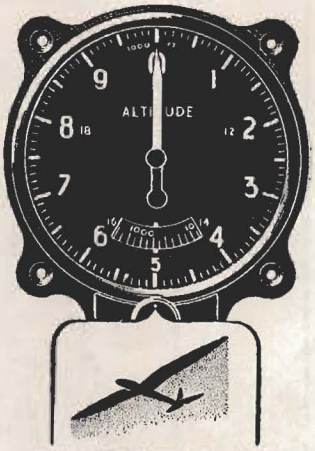
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