Sailplane and Glider

The First Journal devoted to Soaring and Gliding

FEBRUARY 1949

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Sailplane and Glider

and ULTRA LIGHT AIRCRAFT

THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

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OFFICIAL

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ON February 4th the Ministry authorised the B.G.A. to announce that :

(1) " Pilots of gliders not being flown for hire or reward will not be required to hold a licence. Nor will pilots of gliders belonging to a gliding club which are being used for instruction where both the instructor and pupil are members of the club.

(2) " The gliders referred to at (1) will also be exempt from the requirement to be maintained in accordance with approved maintenance schedules and to be certified periodically as safe for flight.

(3) " All gliders to have certificates of airworthiness issued by the Ministry and renewable annually.

(4) " As an alternative to the certification of repairs, overhauls and modifications, by a licensed engineer, certification by an organisation or person approved for the purpose by the Air Registration Board will be accepted. (This will mean in practice some competent individual or individuals in each club will be made responsible to the A.R.B. for certifying work of this kind).

(5) " The pilot of an aeroplane towing such a glider will not be required to have his pilot's licence endorsed for towing."

Thus almost every point fought for by the Gliding Movement has been conceded. A small (and reasonable) price has been paid—a verbal undertaking by the B.G.A. to add an oral examination on the rules of the air to the requirements of the " C " Certificate. Details of this will be issued as soon as possible.

The argument with the Ministry of Civil Aviation has been long drawn out and complicated. The B.G.A. has fought on two grounds : firstly that there was no justification for introducing licences and secondly that if they were to be introduced they must be kept as simple as possible.

When agreeing some concession on the second grounds it was always necessary to remind the Ministry that the B.G.A. were still opposed to any licences at all.

The final, and decisive, meeting took place about fourteen days ago, when Colonel Preston (Secretary General of the Royal Aero Club), and a deputation, met the Minister of Civil Aviation, Lord Pakenham, and convinced him that there was no case for licensing.

The above information was contained in a letter received by the B.G.A. from the Ministry of Civil Aviation. The comment is that of the B.G.A.

We are of course as pleased as the rest of the British Gliding Movement at the outcome of the struggle, but having had some experience of Lord Pakenham in another sphere we were sure that the arguments presented to him would appeal to his sense of reason and objectivity. We hope the result will encourage our brothers in N.Z., Australia, Canada and S. Africa, to stand up to the powers-that-be. This decision of the M.C.A. is an almost complete withdrawal of the proposals. There remains one point. The B.G.A. did not argue that this country is not bound by this ICAO recommendation. We had planned to publish the minutes of the meeting which show how the officials took the bit between their teeth and committed this country—without Parliamentary Authority. However now that England has saved herself by her own exertions, let us hope she has saved the world by her example. Just see what you can do when you try.

SOARING IN FRANCE

Miss Marcelle Choisnet: A Duration Record Breaker

by GUY BORGÉ

MISS MARCELLE CHOISNET has just succeeded in breaking twice inside 2 months the World feminine duration record. Both records were established on the Alpilles slope, 21 miles South of Avignon. This hill, 12 miles long and 1,000 feet high, forms a barrier to the mistral wind between the rivers Rhône and Durance. The soaring airfield, created at Romanin near Saint Remy de Provence by Thoret for his "whirlwind school," seems the best duration site in France to-day.

On the 15th October, 1946, Messrs. Dehocq and Soumille had broken here the French two-seater duration record with 17 hours 10 minutes in a Caudron "C.800." After this record, the Romanin airfield was shared, as a Regional Soaring Centre, between the Marseille, Avignon, Salon and Aix Aero-Clubs. In 1947, Miss Marcelle Choisnet viewed the possibilities of that splendid slope against which the mistral wind strongly strikes, sometimes for several days. She had already twice broken the French feminine duration record at La Montagne Noire with 8 hours 52 minutes and 12 hours 20 minutes (See "Sailplane and Glider," May, 1946), but Mrs. Melk had raised this record to 13 hours 18 minutes and then to 16 hours 44 minutes.

But Marcelle Choisnet wanted to break again not only the French record, but also the international one belonging to Wanda Modlibowska (Poland) with 24 hours 14 minutes.

As a first training, Marcelle Choisnet flew at Les Alpilles 18 hours 59 minutes on the 31st December, 1947, and the 1st January, 1948, in a "Meise." This new French record showed her that she might fly on the Alpilles slope during a longer time than the Polish pilot. In fact, she succeeded in twice breaking her record by the end of 1948.

Her sailplane is the "Air 100 No. 5," which has for this purpose a very complete equipment: including an electrical artificial horizon, some flight lights, and radio. The radio set, very light and small, has a loud-speaker and a microphone preferred to the too tiring laryngophone.

The first world record occurred on the 19th October, 1948, when the met. bulletin broadcasted some mistral wind. Marcelle Choisnet took off at 2.17 p.m.; wind was feeble, and she soared at 1,200/1,400 feet during the first hours. But at 6.30 p.m. the wind became stronger, and she climbed to 4,000 feet. Wind became stronger, and she had to fly at 75 miles/hour to remain above the slope. On the 20th October, at 7.15 a.m., she climbed to 6,300 feet in an absolute calm up-current, which must be a wave effect. But this lift weakened, and the "Air 100" slowly comes down: at 1.00 p.m. she was only at 2,000 feet. At 2.00 p.m. Marcelle broadcasts for the French Radio Programmes her impressions in flight, and the radio announces to her that the world record has just been broken. The wind is not very strong, and becomes weaker; in order not to risk a night landing, she lands at 6.19 p.m., after having raised the world record to 28 hours 2 minutes.

But meanwhile Miss Choisnet was not very pleased with her performance, and she thought that a longer period of mistral could permit her to improve the record still more. Again she took off on the 17th November, 1948, in her nice "Air 100." In flight her radio set gives her the technical met. bulletin, and she climbs to 3,700 feet, the ceiling of the slope lift. But a breakdown of her transmitter occurred, and because she had already experienced the advantages of the radio for a duration performance, she preferred to land immediately (after 2 hours of flight) for repairs. But no radio repairing shop existed at Romanin, and precious time was lost searching for a contact piece.

She took off again at 1.33 p.m., and this time the radio set was in order. The slope lift was very good and she attained the 6,800 feet level. She listened to the last meteorological broadcast and learned that the mistral speed tops 60 m.p.h. at the Ventoux Mountain.

The following table tells the story of the remainder of her flight. Notice the great variations of altitude without changes of the wind speed, certainly due to an unstationary wave effect; these variations must be very tiring during a duration record attempt. It is also curious that the slope lift was always evident between 7.30 a.m. and 10.45 a.m. when there was no wind:

Hour	Altitude	
5.00 p.m.	3,650 feet	
5.30 ,,	1,600 ,,	
7.30 ,,	3,500 ,,	
10.30 ,,	2,650 ,,	
11.00 ,,	4,300 ,,	
Midnight	4,650 ,,	
1.00 a.m.	2,650 ,,	
1.45 ,,	5,650 ,,	
2.45 ,,	2,300 ,,	
3.50 ,,	1,150 ,,	
5.48 ,,	2,150 ,,	
7.30 ,,	1,500 ,,	No wind at the ground level !
8.15 ,,	2,000 ,,	No wind !
8.45 ,,	2,000 ,,	No wind !
10.45 ,,	2,150	Wind rising
3.00 p.m.	2,300 ,,	
6.30 ,,	2,000 ,,	
Midnight	1,600 ,,	No wind
0.36 a.m.	Landed	

Marcelle Choisnet has just lifted the world record to 35 hours 1 minute. But she regrets that the mistral ceased and forced her to land. Including the radio breakdown, she flew 39 hours 40 minutes, and she broke the World Men's Duration Record !

The new record was followed by two events: the Saint Remy de Provence town-council gave Marcelle Choisnet the title of "honour citizen" at St. Remy. Secondly, she married on the 1st January, 1949, at Saint Remy, Captain Gohard, Silver "C" pilot from the Air Sports Service.

GUY BORGÉ.

AUSTRALIAN GOLD 'C' HEIGHT

15,300 ft. A.S.L.

CU-NIM. DOWN DRAUGHT 350ft./sec.

Official Data.

Date: 9th January, 1949. *Pilot*: Keith A. V. Chamberlin, 29 years. *Machine*: Grey "Grunau Baby II," sailplane owned by The Gliding Club of Victoria—originally imported from Germany, 1937—built by Segelflugzeugbau Edmund Schneider, Grunau/Rsgb. No. 767. Test flown Hirschberg-Hartau Aerodrome, 25th June, 1937. *Launch*: Aeroplane to tow 1,200 feet. Lowest point of flight, 600 feet above Benalla drome. *Maximum Height*: Above drome: 14,800 feet. Above sea level: 15,300 feet. *Net Climb*: (above lowest point after release), 14,200 feet. *Minimum Temperatures*: 6 degrees Centigrade at 14,800 feet. Ground temperature before rain: 31 degrees Centigrade (88 degrees Fahrenheit). *Duration*: 4 hours 9 minutes.

By K. Chamberlin

ON Sunday morning the last day of the Gliding Club of Victoria's Second Benalla Gliding Meeting the weather was warm and getting warmer. As time went on it became clear from meteorological reports and visual observations, that this was to be one of the best days of the Camp.

Small cumulus clouds were starting to form in the south east by 9.30 a.m., and by 11.15 a.m. were forming all over the field, and not around it as is usually the case. There was very little wind, so Mr. Radok asked me if I would take an aero tow and see what conditions were like. He was of the opinion that at least 6,000 feet could be reached and the lift would be unlimited—an observation which later proved to be quite correct.

The Grey "Grunau" was taken out and the Tiger Moth (owned by Royal Victorian Aero Club) warmed up. I put on a pair of overalls and as the temperature was then in the vicinity of 80 to 90 degrees, I was feeling very hot and bothered and anxious to get away. Mr. Radok brought out the Meteorograph, checked it and strapped it on to the strut. The Meteorograph records on a chart, pressure, temperature, and humidity. This particular instrument also incorporated an accelerometer. He discussed what I would do; conditions being good enough would I try to stop up for 5 hours and get a leg of the Silver "C" competency certificate. The towline was hooked on the Moth and the "Grunau" and the tow started. After circling the field lift was found over the hangars at 1,200 feet and I released in a thermal of 5—8 feet per second lift. I had been on the tow for 5 minutes and the time of release was 11.35 a.m.

The hangar area proved to be a consistent thermal producer throughout the camp, due, apparently to the large area of roofing. After releasing, the flight was fairly smooth the lift being constant throughout —varying 3-8 feet per second in the turns. I kept with the thermal until I had reached 5,800 feet. From then on the flight was "text book."—a matter of flying under a cloud—go up to cloud base 6,000 feet lose height—pick up another cloud and go up again, the lift being good 10 feet per second in the centre and also very smooth at cloud base. My maximum height varied, one strong thermal taking me above the base of surrounding clouds to a height of 6,400 feet although the thermal was not forming an exceptionally big cloud. At this time I happened to glance at the meteorograph and saw that the clock had stopped—this annoyed me so I flew left hand while I hit it with my right. It started again fortunately. For an hour or more I was not below 4,500 feet. The air was quite warm at this level while at 6,000 feet it was very cold so at times I was glad to get down to lower levels.

After 2 hours I decided to go for the 5 hours Silver "C" qualification, because the conditions were so good, the cumulus clouds being all over the sky—2¾ hours and conditions were not so good—I had dropped down to 3,000 feet and was nearing 2,500 feet and had found no lift and I started to look really hard.

When you have been at 6,000 feet and you drop down to 2,000 feet it seems so low that you feel like making an approach—1,500 feet and a small thermal, but not big enough to go up in—800 feet and I started downwind across the field preparatory to making a crosswind leg and landing and trying to stretch the flight out as I had been in the air 2 hours 55 minutes and I was hoping to get 3 hours. Then I saw my fellow member Reg McConnell (in the Blue "Grunau") over to my right about 1,000 feet and going up. An annoying sight from my point of view—at 600 feet—would it happen? Something of which I had been sceptical—the possibility of getting a thermal at 600 feet. I took on a decided resemblance to an elephant, I happened to be in a thermal of 10 feet per second—I circled back tight and waited those few seconds when you are undecided whether you are in it or not! I was!

600 *feet to* 14,800 *feet* (*above drome*) *Net Climb*, 14,200 *feet*. Up she went and at 3,000 feet I caught up with Reg McConnell after which we both climbed to approximately the same height (although in different thermals) until we reached 6,000 feet together. After circling at this level for some minutes I became aware that I was watching the airspeed and variometer too much (nearly all the time) and not keeping a look out for Reg, and having no desire to run into him I decided to move out of his area.

Then in the south east I saw the cloud with rain falling over a comparatively small strip approximately 3 miles wide and as it was so localised I took little notice. It was later shown that although the storm moved along, it was concentrated on a narrow strip. There was very little rain on the aerodrome and the

centre of the cloud was about 4 miles from the drome where I eventually landed.

The conditions had obviously altered. Where earlier in the day there was a fair percentage of blue sky, the clouds had now closed together—almost covering the sky, although still retaining their round cumulus (form base). I flew north away from the field and after gaining and losing was down to 4,000 feet, so I turned back towards the field. I had now lost sight of Reg. The rain cloud was now East of the drome and on my right. It had a dirty look, but as several other clouds had darkened up and I had been under them with no ill effects I took no notice. I thought I would use the cloud to gain some additional height before going back to the field so I moved underneath.

It was then that Reg McConnell who was in the vicinity, although unknown to me, made radio contact with the ground crew at hangars. He having a "Walkie-Talkie" in his machine with which ground to air communications were being tested. The ground observers being in the position of being able to see the formation and vertical development of the cloud could see its danger (we could only see its base). The advice from the ground was for Reg to get away from the cloud and return to drome and land, but due to bad reception understood that they said "to have a look at the cloud." He moved under the cloud and although 1,500 feet underneath it, it caught hold of him. It was then that Reg with his wider experience realized what had happened. He started to dive at 50 m.p.h. and was still going up—60 m.p.h.—still going up and then at 65 m.p.h. started to pull away and finally he was out of its clutches. He was highly pleased to get clear as he had reached the stage where in the grip of the mighty updraft he was becoming really worried about his safety.

Underneath the cloud the lift was 8-10 feet per second, but smooth. I reached 7,000 feet and as Reg Pollard had already gone to 7,300 I thought I would go to 7,500 feet to get the best climb of the Meeting. At 7,500 feet I headed forward again—I was still below cloud base but as I went forward, I saw that the forward edge of the cloud was below me and rain was falling from its rear part—also I was still going up. My aim was then to fly straight forward on the compass into the side of the cloud and come out through the other side. I bumped up the speed and entered the cloud—there was a queer feeling of quiet due apparently to the visual effect of being able to see nothing but a swirling grey mist. I believe that if I had been able to see the field at this stage I would have observed a lot of ant-like figures running around as from their point of view it was obvious that I was being sucked up into what was a cumulo-nimbus cloud and a very dangerous situation to be sure. As someone remarked—"It looks like a brolly job" and what would they do with the two-seater and Grey "Grunau" wrecked?

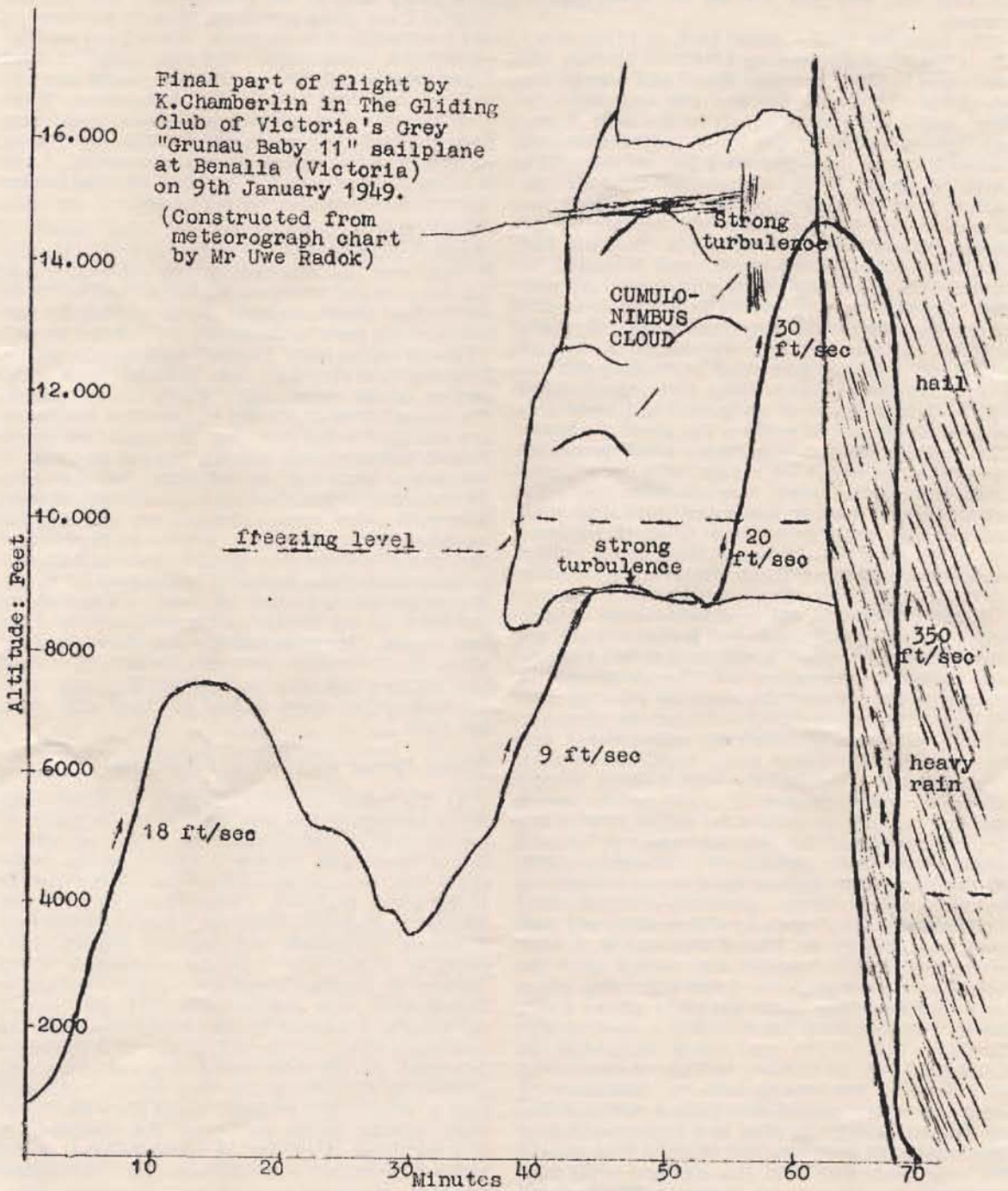
As an item of interest I must mention that the instruments in the Grey "Grunau" consisted of an airspeed indicator, altimeter, ball bank, variometer and compass. Level flying in the cloud lasted about ½ minute—then the fun started! Down went the wing—up went the speed and the game was on. Back with the stick and it stalled off. Down again and this time I tried to anticipate the stall by putting the stick forward before the speed fell too low, but this had the effect of building up the speed again. Even at this stage I still expected to come out the side of the cloud. A few more minutes and I knew that things were not so good.

More stalling and diving, then I caught a glimpse of ground—on an angle of 45 degrees and spinning rapidly—Ah! In a spiral dive! Good! This will get me out of the cloud! Then the cloud closed in—another glimpse of the ground—then the cloud closed over for good.

Time passed and I began to think what is the best thing to do? How long could this stalling and spiralling last? Would the "Grunau" break up, and how high would I go? I thought I would eventually break through the top of the cloud after 3 or 4,000 feet. After a while I found that the stalling diving, etc. (60-65 m.p.h.) was annoying but that it was bearable. A glance at the altimeter showed 9,000 feet. It was getting high!

I then thought of the possibility of jumping out and using parachute, but this was offset by the fact that it would mean the loss of the machine and instruments and as we had already severely damaged the two-seater, we could not afford to lose another machine apart from the fact that I could not afford to pay for a new "Grunau," so I decided to stay in it at least until it broke up. It was later pointed out to me that even if I had jumped I would still have gone up. Fortunately at the time I had not thought of this possibility. Hail stones started coming in from the left and at a downward angle of about 45 degrees. All the hail I encountered on this flight came in from this side. One explanation is that the machine was slipping to the left most of the time. The hail only lasted a short while and it was during this period that I saw a flash of lightning. Then I struck a bad spot—I was diving at 85 m.p.h. so I hauled back on the stick, finding that it took both hands to do so, the controls were so tight. Then I felt some "G's" and was pressed firmly down in the seat and my head went down on my chest and my mouth dropped open. I felt as though the blood was draining from my face. As it was later shown on the meteorograph accelerometer record, that this "pull out" was in the vicinity of 2 "G's," after pulling up I was pressed into the seat for some time and then hung out over the front of the cockpit. This was repeated several times. A possibility to be taken from this is that I did several loops in a row. Hanging over the front of the cockpit was the only time I knew where I was, I knew I was inverted. Then 12,000 feet and further worries—lack of oxygen—remembering that there was literally no warning of blackout. If the "Grunau" broke, there was a chance of jumping but nothing could be done about lack of oxygen. At this stage I was beginning to look for an excuse to jump and would have been quite pleased to see a wing peel off, providing it did not wrap itself around the cockpit. But no such luck, just ever upward—more hail and for a change heavy rain, but this time the hailstones were really solid, averaging ⅜ to ½ inch in diameter and as I

had 60-65 m.p.h. airspeed, these struck with great force. This was proven later by the fact that the cover strip between the wings (sheet aluminium 1/32 inch thick) was covered with dents. The hail was hitting my face and hurting my eyes so I pulled down my goggles but they were fogged. Wiping would not clear them—the fog was on the inside. Some particles of snow flew in. The only thing to do was to put my hands over my face and peer through my fingers. Although there was not anything I could do I still wanted to watch the airspeed. By this time having got tired of trying to counteract the stalling and diving act I pulled back the stick and kept it there, and that no matter what happened



there it would stay. I looked at my watch—it had stopped. Frozen? The "Grunau" was now diving at 55 and no more, and then stalling off. My left hand which was in the airstream as I was hanging on to the side of the cockpit had gone numb. I banged it on the panel to restore the circulation but this did no good. 13,000 feet! I had stopped thinking and was just waiting for something to happen.

The altimeter slowly moved back to 12,000 feet! The altimeter was dropping back! I was on the way down! Then I noticed that I had been in the one position for some time. One wing appeared to be down and I was pressed tightly in the seat. I was in a tight spiral dive or spin! I do not know which! But as I was on the way down I just sat there stick back. A glance at the altimeter—the needle was passing over the graduations at rate of about one a second—this being at least 200 feet per second down. Airspeed was 60 to 65 m.p.h. So I still just sat there, 9,000—7,000—4,000, and I started to consider the possibility of being in a spin although the "Grunau" is supposed to be almost incapable of spinning except with very light pilots. My heels were on the floor with only my toes on the rudder pedals so I tried to lift my foot on to the pedal but I could not move it due to forces of the spiral. 1,000 feet!—then a glimpse of the ground and I was able to see that my rate of rotation was about 4 seconds. This explains the centrifugal force which prevented me getting the use of the rudder. 800 feet! and I broke through the cloud. Opposite aileron and the spiral stopped. I cannot remember whether the stick was still back and I pulled it out or whether it came out of the dive on its own. A later check on the meteorograph showed a pull out of approximately 2½ "G's". Heavy rain was falling.

I glanced around the paddocks—trees—I saw a gap—sideslipped through and landed. I had not the slightest idea where I was, so my first reaction was to get a message to the Benalla drome. I clambered out—pushed the chute up into the nose to keep it out of the rain, and went to move off. I could not stand up straight or walk straight, and for some reason unknown to me could not keep my eyes open—so I would take a look—then stagger off with my eyes closed. Then I became aware that my face felt queer and by feeling it with my fingers found that the left side was swollen and covered with lumps and the left eye nearly closed. 50 yards from the glider I came across a road. A lucky coincidence from a retrieving point of view. I peered around and saw a farmhouse about a ¼-mile away on the opposite side of the road so I went towards it. It was then that the reaction to all the tossing and turning set in. I was sick. Dry retching! For some time I was unable to move. Eventually I got moving again when I saw another farmhouse back on the same side of the road as the "Grunau," and much closer, so I turned back seeing as I did so a car coming from the farmhouse. I went over to the car and one of the 2 men in it told me he had seen the landing and had already communicated with the drome and that the boys were on the way out to retrieve the machine. He then suggested that on account of my swollen face and appearance he would not wait for the others but would take me into the Benalla Bush Nursing Hospital which was quite close to the drome. On the way in we passed Reg McConnell and Uwe Radok on former's motorcycle, then we met the Dodge and trailer which we stopped. After seeing that I was still able to walk they went on leaving Dave Darbyshire to go back to the hospital with me. At the hospital I was given something to settle my stomach and I walked back to the drome, where I was received with much amazement, especially when I said I had reached 13,000 feet. I was soaked through so it was suggested that I have a hot shower. When I undressed I found that I had bruises and lumps from the hail on my left arm and shoulder, even though I had been wearing a pair of overalls. I was sick again after which I returned to the hangar where it was suggested that I lie down.

Uwe Radok, assistant to Dr. Fritz Loewe of Meteorological Section of the University of Melbourne, who had returned by this time came into the hut with the meteorograph record and sat down on the floor beside my bed. As he sat there he just looked at the record and exclaimed "I do not know," "I do not believe it," "The clock must have stopped." This state of perplexity was induced by a small portion of the record, upon which he was gazing. The descent from 12,000 feet to 4,000 feet was shown as a straight line not as a curve. Finally he convinced himself that the clock had not stopped and that it was a true recording, so out came the slide rule. After much sliding of the scales he gave us the amazing information that rate of descent was 350 feet per second or 240 miles per hour. It must be remembered that this is not the true speed of the downdraught as it includes the airspeed of at least 60-65 m.p.h. This latter figure is open to doubt as the airspeed had been giving trouble earlier and it could have been frozen. There was some more discussion after which D. Darbyshire went into Benalla to make a long distance call to Club Secretary R. Duckworth. We then settled down to hear the news come over the radio.

Official Figures on Check of Instruments

As this report has been written a week later and the meteorograph has been checked by the Meteorological Bureau, Melbourne the following, official figures have been verified. The *maximum height* above the Benalla Aerodrome was 14,800 feet or 15,300 above sea level. *Lowest point of flight* was 600 feet making an overall net climb of 14,200 feet. *Minimum temperature* was minus 6 degrees centigrade at 15,300 feet. *Ground temperature* before the rain 88 degrees fahrenheit. *Rate of descent in downdraught*: this reached 350 feet per second. An unknown fraction of this would represent the downward speed of the sailplane. It is hoped to determine this speed by reproducing a similar flying position in still air, in the near future. However even a conservative estimate would place the downward velocity of the air behind the thunderstorm at a minimum of 130 feet per second—equal to the greatest vertical velocities in the atmosphere recorded.

(By permission of Gliding Club of Victoria.)

GLIDING BY MOONLIGHT

by

Veronica Platt

ONE brilliant moonlight night, about five years ago, we of the Albatros in Buenos Aires were sitting on the grass outside the Club waiting for dinner and talking, as soaring pilots always do, of the day's gliding and what the season might bring. It was a superb evening. A light breeze rustled the palm leaves, there was a delicate scent of jasmine, and the cider sparkled cool and refreshing in our glasses. What a moon ! What a night to fly ! Would it be possible to follow the tug by moonlight alone ? While we were still surmising the bell rang for dinner.

It was the end of the soup before the Instructors came in. Tentatively and with no real hope at all one of us suggested flying. There was a startled silence from the Chief, and then a twinkling smile. " Alright—we'll try it." The wine bottles, as yet untouched, were swept off the table, the rest of dinner was forgotten, and with heads together we got down to details. Two were despatched to the village for electric torches, another group to prepare three kerosene flares. Not all of our most experienced pilots were at the Club that night, so someone else dashed to the telephone to see if he could round up the ones who would hate to miss the chance, and the rest of us streamed out to the hangar to prepare the machines. Petrol for plane and towing car, a couple of " Grunau Babies " eased out from behind the high performance sailplanes, and we set off for the other side of the field.

I was desperately afraid I wouldn't be allowed to try, and I was quite sure they were letting me down lightly when the Chief bundled me into the tug plane as passenger on the first flight. But it was heavenly all the same. There was a breath-taking rush towards a dark belt of trees as we took off, then a wide curve towards the moon and further round still, till all the great city of Buenos Aires lay spread out before us, twinkling lines of lights for miles and miles, with a deep heart of red and green and blue above the neon lights of cinemaland. Beyond the City lay the dark width of the River Plate, and far away in the remote distance a few twinkling stars on the horizon which must be the shore of Uruguay. We climbed higher and higher and at last came the familiar little jerk as the " Grunau " cast her cable. Then my pilot went mad. We swished and swam in a series of stall turns till stars and city were inextricably mixed, while the blue flames of the exhaust streamed out overhead. Far too soon came the run in to drop our rope and a very expert gentle landing beside the paraffin flares. I climbed out bewitched by moonlight and in a state of ecstasy I have never experienced since.

The " Grunau " landed close beside me and the pilot said my white flying suit had given him just the idea of height he needed at the last moment, so I was deputed to stand beside the second flare as a marker. Four other flights took place and I was quite resigned to being just a spectator (knowing better than to plead or argue !) when suddenly " Your turn next, Senora ! " Still unbelieving, I climbed into the cockpit and struggled with my parachute and safety straps. The tow plane lay, a dark shape, in front of me. The rope was quite invisible. The moon at my side cast a deep shadow over the instrument board, but I was accustomed to fly by feel and all nervousness vanished as the familiar bumping over rough turf began. We were up—but where on earth was the plane ? Against the dark hedge at the end of the field it was quite hopelessly not there. Still we kept on rising gently, and suddenly the wings of the tug were silhouetted against the starry sky. I was too pre-occupied with keeping station to look at the scenery, but I discovered that at certain angles it was quite easy now to see the dashboard and even to read the instruments. Eighty kilometres—a nice towing speed. Good, he knows I hate being towed too slowly. Relax. This is going to be fun. There are the lights of Merlo just beneath us, all set out in neat little squares. I wonder why new countries build their towns in hundred metre blocks ? So dull to look at ; but very comforting to fly over, for by the size of the squares I can judge my height so exactly that I need no instruments to tell me when to cast loose. Ah, there goes the cable—another couple of tugs at the release to make sure, and then some steep turns so that I can swing the City round and round like a bucket on the end of a string. Heavenly ! Oh, but if I do that it will all be over too quickly ; so I settle down into a nice gentle glide, and sniff in the scent of the moonlight. There's a wood fire burning somewhere, and a nice farmyardy smell on the other side of the village. It's after midnight now and the people are settling down to sleep, though I can still see scattered groups promenading up and down the avenues below and there is a tango coming up from the loudspeakers in the Square. One more turn and I have to come in to land. But where is the Senora's white suit to guide me ? I land with a hearty bump about three feet below ground, or so it seems. But all is well, and alas, that is the last flight of the day.

As it happened, that was also to be the last flight accomplished, for although we were officially congratulated for making local history, we also received a raspberry for flying without lights, moon or no moon. But it looks very nice in the log book. *Luna plena*—12.10 a.m. . . . or rather, 00.10. And I'd like to do it again.

ARGENTINE NATIONAL CONTEST MERLO, B.A.

THIS year teams took part from all over the republic, the following clubs competing: Azúl, Albatros, Cóndor, Córdoba, Esperanza, Morteros, from Córdoba, Otto Ballod, Gonzalez Chaves, Pehuajó, Tandil, Trengue Lauquen, and Tucumán. Each team brought a maximum of 3 helpers, and there were classes for high performance and ordinary training machines. That is to say, "Olympias," "Viking," "Condor," "Spalinger," and "Buzzards," in the first group, and "Grunau Babies" in the second.

There were five types of contest—distance in a straight line, distance out and return, duration with return to starting point, height with return to starting point, and good flight. Launching was by aero-tow. The release height was chosen each day by the Committee. On reaching the required height the pilot was allowed to circle on a thermal hunt of up to 5 minutes before releasing.

Results are not yet to hand, but they will certainly be interesting, as although Merlo is badly situated for distance, being bounded on North and East by the River Plate Delta, high thermals are to be met with. Indeed, Professor Georgii, who is the meteorological expert in charge, predicts possible flights to 20,000 metres when they have suitable machines.

Veronica Platt.

THE SECOND ARGENTINE NATIONAL SOARING CONTEST

by Joe Ortner

Held in Merlo (Province of Buenos Aires—8th to 18th December, 1948)

THE contest was a great success, principally due to the fact that we had the one and only Prof. Walter Georgii with us. Besides the Professor, we had such well known helpers as the two Italian Soaring Pilots, Com. Adriano Mantelli and Plinio Rovesti, who are working in the Motorless flight division in this country.

During the Contest a number of very well known visitors came to see the proceedings, amongst whom were Max Schachenmann (Swiss Golden "C"), Prof. Tank, Dr. Horten (Designer of the famous Horten Flying Wings), and H. Teichmann, Argentine Altitude Record Holder.

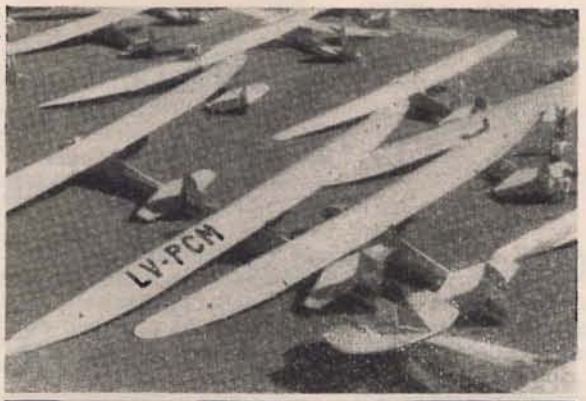
Organization

The competition was divided into three sections, so to speak, as it was organized principally as an Inter-Club Contest, rather than an individual contest. As the number of Sailplanes in this country is rather reduced, it was the intention of the organizers to place as many pilots as possible in exactly the same conditions to enable them to show their real worth.

Each Club could enter with the Gliders they had, into the following classes.

Class 1—Inter Club High Performance Sailplanes, one Glider per Club.

Class 2—Inter Club—"Grunau Baby IIA," Gliders used exclusively, one Glider per Club.



1. *Assembly.*
2. *Prof. Georgii, Schachenman (Swiss Gold 'C') Joe Ortner.*
3. *Prof. Georgii and Sales.*

Class 3—Individual Class—"Grunau Baby IIA," Gliders used exclusively.

The first two classes were composed of teams representing Gliding Clubs, the latter class competed individually and although the point award was the same for everyone, the Individual class was a separate competition in itself. Thus, in the 1st and 2nd Classes the merit of the flights were exclusively of the Club, and the pilot's name was not usually mentioned in the press reports—to my mind a mistake.

The organisation was quite interesting, but of course, it did not allow all the High Performance

Sailplanes in the country to fly, because there are only three clubs, besides the Albatros that have Sailplanes. In view of this, the Albatros offered their four " Rhon Buzzards " to other institutions, only two of which accepted this offer, viz., Pehuajó and Tucumán.

The teams were composed of 2 Pilots per Club and three helpers, in each of the first two classes, and one Pilot and 3 helpers in the individual category. A list of the Clubs that participated is given apart.

Each day the Meteorological division of the Contest, together with Prof. Walter Georgii and the sports committee, gave very precise reports and fixed the type of flight that had to be made. Points were awarded for one type of flight only, with the exception of the distance flights, where speed was also taken into consideration. The following were the flights for which points were given :

Gained Height—with return to starting point.
Duration—with return to starting point.
Distance.
Goal Flights.
Goal and Return Flights.

All the retrieves, where possible, were made by Airplane tow and the day lost in retrieving was not compensated. As things turned out no points were lost in the days following those of distance flights, as in each case these days were not good enough for soaring.

Other interesting circumstances of the contest were the high excitement throughout the duration and altitude events and the competition of the " Spahlinger " of the Albatros and the two " Meises " of the Condor and Otto Ballod clubs respectively.

As a matter of fact, the " Meise " of the Condor was just finished the day prior to the initiation of the contest, and on the first day, which fortunately for the Condor boys was unsoarable, their machine was given the flight trials. These boys worked 24 hours a day, in shifts, for nearly two months before the beginning of the championship in order to finish their " Meise," and everybody got a thrill out of watching it fly on the 8th—and you should have seen the shine in those eyes ! ! !

THE CONTEST

The Clubs that took part in this Second National Soaring Contest, were the following :

In Class I (Sailplanes)

ALBATROS, CONDOR, OTTO BALLOD, PEHUAJO, and TUCUMAN.

In Class II (All " Grunau Baby's IIA ")

ALBATROS, AZUL, CONDOR, CORDOBA, ESPERANZA, OTTO BALLOD, PEHUAJO, TANDIL, TRENQUE LAUQUEN, TUCUMAN.

In the Individual Class, also in " Grunau Baby's IIA," the following were the competitors :

E. AUCHTER, A. CONEMA, M. DOBEL, M. FENTANES, and A. YAKSTAS (all members of the Albatros), R. GORDON (of Azul), and M. RIVELLO (of Pehuajó).

As mentioned above, the first day (8th) was not suitable for Soaring and a few flights were made during the afternoon to enable those pilots who flew for the first time over Merlo, to get their bearings properly.

A general meeting was held that same evening, with Professor Walter Georgii the centre of attraction. His words were gospel to all of us and his ideas about the possibilities of Soaring and breaking all existing world records in this country gave the contest an unusual atmosphere of excitement and expectancy.

On the 9th the Contest really began. The met. dept. together with the sports committee stipulated that the event for the day would be duration. Feverish activity right from the early hours of the morning culminated in Prof. Walter Georgii giving the initial Flag signal for the tow planes to take off. It was really a sight for sore eyes to watch the 8 tow planes taking off in four simultaneous tows, or better said, four tow planes taking off simultaneously, followed by the next four, see the gliders release one after another and start circling in one or more thermals. The tow planes go into their circuit after release, pass over and release the cables, circuit again and land, to pick up the remaining gliders, and so on. It took about 20 to 30 minutes for all the 23 Gliders to be up in the air. (Shades of Bramcote ! V.P.).

The days went by and excitement grew higher especially in the Class 1 (High Performance Sailplanes) Section, as the Albatros and Condor Clubs were fighting neck and neck to gain a lead, the Condor always seeming to have a slight advantage right up till the last day, when the Albatros by gaining a higher altitude accumulated enough points to win the contest by the insignificant point advantage of 126, over a total of 34,445. This can be seen from the point charts enclosed with this report.

In the 2nd Class (Inter Club—" Grunau Baby IIA ") the Albatros Club went into the lead on the second day, and kept this position by drawing each day a little further ahead of their nearest competitor, the Condor.

The individual class was very keenly contested also, with M. Dobel always ahead until the days that the Goal and Return Flight was made. Although Dobel reached the Goal (so he insisted) the observers did not see him, and his flight was not taken into consideration. The Albatros were having high hopes of receiving the two " EON Olympias " they had purchased, which were in the port of Buenos Aires but on account of all the Red Tape that one has to go through to import into this country, they were unable to get them out from Customs.

The outstanding flights of the contest were the following :

Duration

Class I (Sailplane)
Raupenstrauch (Condor), 5 hours 30 minutes.
Laplace (Albatros), 5 hours 11 minutes.

Class II (" Grunau Baby ")
Sturm (Condor), 5 hours 20 minutes.

Individual Category
W. Gordon, 4 hours 55 minutes.

Goal Flight

Class I (Sailplane)
Lehrke (Condor) and Ortner (Albatros), 202 kms. Ortner got there 30 minutes before Lehrke, although flying a slower machine. *Distance* 202 *kms. Merlo—Dolores.*

The Condor's MEISE built just in time for the Contest.

Laplace receiving the Trophy.

Class II (" Grunau Baby ")
Cuadrado (Albatros), 152 kms. *Merlo—Base Aerea Naval " Punta de Indio."*
Individual Category
A. Yakstas, 121 kms. *Merlo—Magdalena.*
Goal and Return Flight. Predetermined point of return for everybody was Navarro, a town 61 kms. S.W. of Merlo.
Class I (Sailplane)
Ortner (Albatros), 3 hours 8 minutes.
Ayup (Tucuman), 3 hours 11 minutes.
Class II (" Grunau Baby ")
Moreno (Albatros), 4 hours 21 minutes.
Individual Category
M. Fentanes, 3 hours 28 minutes.
Distance (In straight line).
Lehrke (Condor), 364 kms.
Laplace (Albatros), 346 kms.
Rivello (Pehuajó), 275 kms.
Sturm (Condor), 129 kms.
Altitude (Gained)
Ortner (Albatros), 2,226 mts.
Raupenstrauch (Condor), 1,710 mts.
Huguenien (Pehuajó), 1,562 mts.

On the 15th December Distance flights were made and it was certainly a special day. Two flights of over 300 kms. in sailplanes and one of 275 kms. in a " GRUNAU BABY IIA " ! ! ! ! ! Prof. Georgii mentioned that this was the longest flight he had heard of, made in a " Grunau Baby IIA," and it was certainly a marvellous day for distance. The pity was that the pilots were stopped by a storm front, as otherwise the 400 kms. would have been surpassed easily. Laplace landed at 4.30 p.m. after 4½ hours flight when on other days one can soar with ease up till 7 p.m.

This same storm front broke up four machines that evening—three " Grunau Baby's " and the " Meise Olympia " of the Otto Ballod Gliding Club, of Ganzalez Chaves. Even though all the machines were very well grounded, the force of the wind uprooted them and threw them on their backs. One of the pilots had to run to save his skin. He was sitting on the wing-tip of his glider and a gust of wind turned it over—his remark later was " You should see how big a " Grunau Baby " looks, when it's sitting on its tail, and coming over."

The Winners of this Second National Soaring Contest were the following :

Class I—Albatros Gliding Club—Pilots R. Laplace and J. S. Ortner, with 34,445 points.

Class II—Albatros Gliding Club—Pilots A. Moreno and J. Cuadrado, with 18,973 points.

Class III—N. R. Rivello (of the Pehuajó Gliding Club), with 11,410 points.

Let us hope that next year the National Gliding Contest will be as successful as this one has been, and that we may again have the luck of having Prof. Walter Georgii amongst us.

THE 1948 SOUTH AFRICAN NATIONAL GLIDING RALLY

THE most successful gliding rally ever held in South Africa took place at Kroonstad last December. The town is situated on the 5,000 ft. high plateau of Southern Africa. Westerly winds at this time of the year sweep over the plain which stretches flat as your hand for two hundred miles before ending abruptly in the massive Drakensberg.

On 7 out of the 10 days devoted to competitive flying, there was lift of up to 20 ft./sec. Cloud streets were formed down-wind at 12,000 ft. above the ground by thermals breaking at intervals from the seemingly endless mealie fields recently ploughed for the season's sowing.

The ground organisation, efficiently controlled by Sgt. Major Heydendrych of the Defence Gliding Club, included a novel tie-up with members of the S.A. Amateur Radio League who had a great time transmitting news to and from all parts of the area of pilots' arrivals. Little time was lost thanks to the Hams discovering where competitors had landed. Most of the launches were by aerotow, and tugs were often back on the deck 8 minutes after take-off, having released at 1,500 ft. Much time was saved in retrieving by aerotow where possible.

All sailplanes bar one, Defence's " Olympia," used in the competitions were of pre-war build and vintage and it was decided by " Baby Grunau " pilots to bar cloud flying. This followed what might have been a tragic opening to the Rally when Sander's plane broke up in cloud on his initial flight. His parachute saved him. In all but two instances there were three competitors to a machine, and therefore a pilot either got away on his first launch or he missed his flying for the day. Thus the 120 hours flown and the 2,000 miles logged was much better than might at first appear.

A total of 15 Golden " C " heights were reached by 9 pilots; 2 Silver " C's " were gained and 6 other pilots scored up to 2 legs for the Silver " C." Training flights during non-competitive days accounted for 6 new " C's " of whom Sgt. Major Heydendrych was one.

The National Championship and the Pidsley Trophy were won by Helli Lasch, Pioneer Club " Minimoa," with 1,768 points. Helli's progress during the past year has been phenomenal. He acquired his Silver " C " from ab initio during a visit to Switzerland in 1947 and since then has put in more soaring hours than any other S.A. pilot. His three scoring flights in the competition were of 122 miles each. A goal flight to Bloemfontein against cross-winds took 6½ hours. At one time he was down to 150 ft. but a dust-devil rescued him and a little later he glided his last 20 miles from 12,000 above the ground. His second and third flights were East to Harrismith (goal) in 3 hours 50 minutes and South East to Witjieshoek, in the Drakensberg foothills, over which he appeared suddenly out of cloud after flying for the previous hour with his compass deranged by electrical storms.

Second with 1,689 points was Pikki Hammond, one of the Union's most experienced pilots and 1946 Champion. He reached Standerton (132 miles) in 4 hours in Defence Club's " Olympia "; failed by about 40 miles in a goal and return flight to Bethlehem (covering 112 miles) and in his third flight made Harrismith despite instrument failure.

Werner Kunze (Pioneer " Minimoa ") came third with 1,196 points. Taking off at 1.30 p.m. he flew to Harrismith in 4 hours. Later he made his goal Bethlehem and then with Hammond became joint holder of the Kelvin, Bottomley and Baird Trophy for the longest flight (Standerton).

Ellis Udwin and Ronnie Aspoas, one of the new Silver " C's " both flew Rand Flying Club's " Baby Grunaus " and their performance in coming fourth and fifth so close behind Kunze in the " Minimoa " is especially noteworthy. Their best flights were to Vereeniging (77 miles), with a gain of 11,500 ft. and to Reitz (75 miles)—longest nominated flight in this class—in 3 hours respectively. They both reached Lindley (49 miles) and each had a further 50 miles flight.

Pierre Retief came sixth and created a new S.A. height record with a gain of 12,800 ft. during a 50 mile flight to Arlington. In cloud at 18,000 ft. a.s.l. ice formed thickly on his " Wolf " (Defence) and entered the cockpit. Then his instruments failed and he tried to spin out.

His barograph record shows that in the early stages of his spin he was still gaining height. Later in the descent the ice on his clothes and in the cockpit melted and he suffered further discomfort on landing when he failed to convince a farmer that atmospheric conditions had forced his descent. Earlier in the competition he flew 60 miles to Gottenburg.

The second Silver " C " was gained by Jackie Pullin (Rand Flying Club " Grunau "). His best flight took him to Bethlehem (79 miles) where thanks to a Ham, he found awaiting him natives for his wing-tips, a tow-car and several witnesses ready to sign his form even before he had finished his landing run.

Other flights of note were: de Preez (Defence " Kite ") in his first cross country flight made Petrus Steyn (54 miles). Later he reached his goal, Senekal (53 miles).

Bomb Finney made goal flights to Bethlehem and Lindley and gained 10,000 ft. " Lew " Kayne reached Heilbron (52 miles) and Peter Leppan flew to Denysville (70 miles) and Kaallaagte (60 miles). All three were Rand Flying Club members flying " Baby Grunaus." Ewan Naude gained Golden " C " height 10,800 ft. above ground flying Defences " Kite " for the first time, and later reached Senekal (53 miles). W. Tite, all the way from Umtali, Southern Rhodesia, gained a Silver " C " leg in flying to Koppies (36 miles).

The Argus Trophy for teams of three was won by Rand Flying Club's " B " team with their " A " team second and the Defence Club's " B " team third.

The above performances demonstrate the progress made in gliding in South Africa since the war and it is confidently expected that with the introduction of modern high performance machines into this Country shortly, international records will be in jeopardy.

G. H. R. ALBU.

Top. Rand Flying Club "B" Team. "Lew" Kayne, Ellis Udwin, Ronnie Aspoas (Silver 'C').
Winners ARGUS TROPHY 1948 Team Competitions.

Bottom. "A" Team "Bomb" Finney, Jackie Pullin, Peter Leppan, (all Silver 'C').
Runners-up in ARGUS TROPHY.

A PERFECTLY ORDINARY FLIGHT
(but such fun)

A REPORT of a perfectly ordinary flight which will be remembered by the author for many years.

I was pleased on plotting a T-diagram for about the fifth time (having been initiated into the appropriate mysteries five days before) to find that its shape looked promising. So I rushed, hopefully, to the aerodrome to forestall any other would-be "Cambridge" pilots.

As I arrived, Jimmy and Chris were just going off in the "Kranich" behind a "Tiger," so with Ted's assistance I prepared "Pous" (as we call our "Cambridge 1") and was towed off as soon as the tug was back again.

It was about my third aero-tow ever and once we had bumped off the deck I sat back in the bright sunshine watching small cu. forming, and growing to respectable sizes in an erstwhile clear blue sky, thinking the while of my first tow a few days before: I had, or so I thought, kept station behind the "Tiger" rather badly and on landing explained apologetically to the tug-pilot that it was my first aero-tow; his reply will not be forgotten for a long time: "Oh, thats O.K.; it was my first one, too."

When at about 1,800 feet I noticed a promising cloud to port so I yawed violently and when the engine-driver looked round to see what was amiss I pointed to where I wished to go, and off we went. Flying free at 2,000 feet and after about half a minute the green ball did its stuff and we were circling in the first, juicy, steady thermal I had experienced. And what a joy it was.

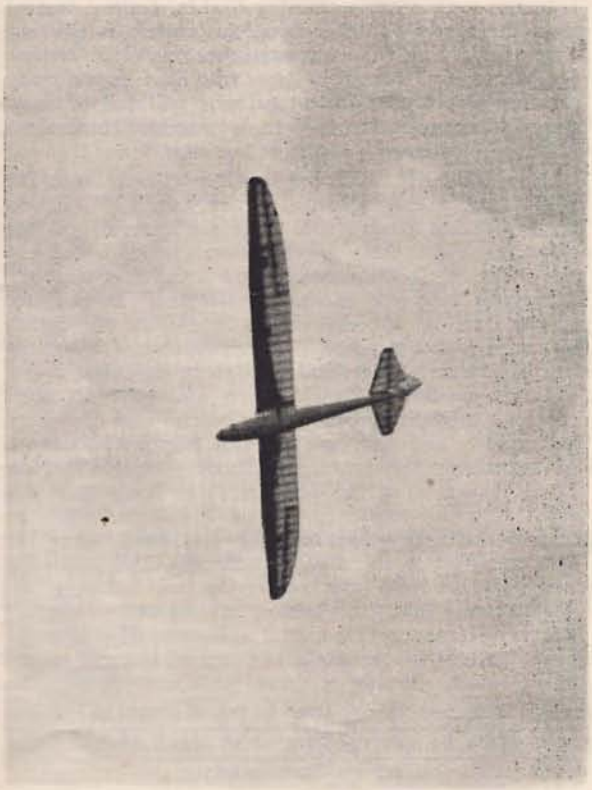
While circling I noticed a worm-like train crawling below me and heard three hoots of encouragement from the engine's whistle. A silver Dakota, gleaming in the May sunshine, droned along below me, and then I was over the airfield at Bottisham, its runways forming a white framework round the brown patch which was its ploughed-up remainder.

I was beginning to sit back and take things easy: the purpose of the flight was to gain experience in flying about the Cambridge area. "Pous" was co-operating in its usual easy manner, which is greatly to its credit after its fourteen exciting years. Its chequered history, however, cannot fail to remind one of the Irishman's cricket bat which had "been in continuous use for fourteen seasons and had had only four new blades and five new handles."

I was fascinated to notice the altimeter needle winding steadily round and round; my little previous soaring had been over a slope and I had not before experienced a prolonged and steady climb.

While I was climbing again, from nowhere the sleek "Kranich" appeared a little below me. We were soon circling a couple of hundred yards apart just below cloudbase at rather over 5,000 feet. We stayed together for five or ten minutes and then the blue monster beetled off southwards.

I was drifting downwind and as I had to return to base I turned back and arrived at 1,000 feet over the aerodrome. A few minutes over the village of



"Cambridge 1."

Feversham, a few more over "Smoky Joe," our local chimney, and then down to earth just too late for lunch!

A perfectly ordinary flight but certainly my most enjoyable so far. The combination of a warm sunny day, the exhilaration of flitting around delightfully aimlessly, and a sailplane to which I had recently graduated and which was more responsive than anything I had flown before, made that hour's flight a landmark in my soaring memories.

SHEER BOOBERY

MOST of the articles published on gliding and soaring flight are success stories. "How I did it, or how it should be done." These undoubtedly are very helpful. The technique explained, and the tips given, plus personal experience help to make further successful pilots. This is all to the good. However there is another aspect of the motorless flight game that needs eternal vigilance. It is the avoidance of the pitfalls that lead to crashery. Any crashery at all is too much, of course, but there is a widespread feeling that since gliding resumed after the shooting ceased (more or less) there has been a spate of unnecessary and avoidable damage. Steps are being taken, under the auspices of the B.G.A. to seek the causes and to suggest remedies.

Now if the study of the success of others is one of the ways of finding out how to climb higher and

to make longer cross country flights, isn't it logical that the study of other people's crashes is the best way of avoiding the same mistakes oneself? If that is agreed may I appeal to those who have experienced crashes to write for all to read who will and tell how they boobed and what they have promised themselves not to do again as a result of the experience?

As a kind of "kick off" will you bear with me while I relate how I broke up my "Gull?" It was at Dunstable during the first summer of gliding after the War. The site is uneven ground and not the only gliding site that is unlevel. At that time the grass was long and in seed, particularly at the foot of the bastion. I came in to land from the South into a North-west wind. That approach is like landing into a saucer, the ground is slightly downhill and I did not expect to touch down and pull up until reaching the uphill of the facing lynch. It is necessary to make a low and not too fast approach because to overshoot the lynch is almost certain disaster. I was conscious of the desirability of keeping to the right so as to avoid sitting on the launching wire and undoubtedly lowered the starboard wing for suddenly the machine swung round. The starboard wing tip had been arrested by the seed-heavy grass. Result; the skid off, the nose stoved in and worse! As the sternpost "landed" sideways the fuselage broke in half immediately in front of the tail plane. All through dipping a wing into long grass. So if one is forced at any time to touch down in corn or long grass be mighty careful to see that one wing does not touch before the other.

Even that lesson was not enough to prevent me very nearly doing the same thing again. It was at the conclusion of my last flight away from Dunstable this past summer. At 4.30 and at 4,000 feet Dunmow and Stanstead were within easy range and I decided I was far enough away for retrieving that evening and to "call it a day." The runways at Dunmow were obstructed anyway, so Stanstead was circled, left handed of course. The grass beside the runways was seen to be long and rank, moreover might conceal old oil drums or anything, so I decided to come in on a runway in spite of the wear on the skid steel. My "Olympia" is wheel-less. Coming down the runway I thought I would be a good boy and land on one side in case there was delay in getting cleared. I landed alright as it happened and then, only then, realised what a fool I had been. By going over to one side I had landed with my port wing over the clear runway and the starboard over the foul long grass. If the wing tip had dipped into it the machine would assuredly have swung round as the "Gull" had done.

Moral: It costs less and takes shorter time to remove a sailplane from the centre of a runway or off the line of the winch wire than it does to mend even a broken skid.

Now who else will come forward with a boob story with its warning to others?

Just one more "famous last word." The longer you have been in the air the more it seems to me to be necessary to pull oneself together and to carefully plan the exact course of the approach and landing.

D.G.O.H.

PROBLEMS OF THE ULTRA-LIGHT AEROPLANE

By A. R. Weyl, A.F.R.Ae.S. (concluded)

It is true that the original design of the "Pou" has cost the lives of *experienced* pilots. In fact, the "Pou" was a sort of pilot's selection *in reverse*: the more experienced they were, the more they were likely to crash (while beginners have scarcely ever been killed). This was because the *original* "Pou" exhibited fatal qualities when the pilot took action in a manner which was perfectly correct with any *conventional* aircraft: when the elevator control ceased to be effective, he pushed the stick forward for more speed; this induced the fatal dives from which no recovery was possible.

The design error of the original "Pou" was remedied by "Mignet" more than 10 years ago. In spite of this, prejudiced and ignorant experts heaped contempt and ridicule on a design which, I maintain, has actually been *the only fool-proof aeroplane for the amateur* which has ever flown. I admit that for an experienced pilot, the "Pou" is far from pleasant to fly. But that is not a point which can concern the interests of ultra-light aviation.

As to the character of a spin, I am heretic enough to contend that, for an ultra-light aeroplane, a *flat* spin will be more desirable than a steep one. If one must crash, it is healthier when the wings take the impact, than to be flattened out on the engine.

AEROBATICS AND OTHER FACTORS

Contrary to popular argumentation, the magnitude of the *stalling speed* is but of little importance. I am perfectly aware that the seriousness of crashes increases with the square of the impact speed. But the stalling speed is a figure which is greatly overrated. The speed with which an aeroplane touches the ground in landing, is for instance, more defined by the control efficiency than by the stalling speed.

It is not so that the aeroplane which lands the *slowest*, is *eo ipso* the safest. Winds with gusts of 15 to 25 miles per hour are prevailing in this country. When you land at much less than, say, 30 miles per hour, the pleasure in effecting repairs will be all yours. For the ultra-light aeroplane, a stalling speed of 40 m.p.h. would seem quite alright, and a limit of 45 m.p.h. (Tiger Moth) would appear to me quite safe, provided that perfect landing qualities are present. (The upper A.R.B. Limit for the ultra-light category is 40 m.p.h. stalling speed).

Factors which contribute towards operational safety in amateur flying, are the ability to vary the gliding angle without great speed variation, a slow acceleration in steep glides, a low terminal-nose-dive velocity, the absence of "floating" near the ground, no tendency to "balloon up" when pump-

handling the stick, and undercarriages which are averse to " bouncing."

I do not fancy *aerobatics* with ultra-lights, unless they are particularly designed for indulging in such manoeuvres. Apart from *structural* considerations, this means that ample of *excess power* is available to carry a pilot through any critical situation which might arise, and that fuel is available for *inverted* flight. Excess power is also the best safeguard against stunting at unsafe heights. Hence, I think, aerobatic single-seaters should have not less than, say, 50 h.p.

Another contribution towards operational safety is the presence of as little as possible of *instruments*, dials, indicators, cocks, valves, levers, scales and other gadgets in the cockpit. Professional pilots may be delighted to have the implements of mighty Wurlitzer Organs displayed around them ; they might view the void of the cockpit of an ultra-light aeroplane with horror (a version of the " horror vacui "). Yet it is a fact that the amateur pilot is embarrassed by such an exhibition of the accessories industry. One will find him afterwards tempted to read his air speed from the oil pressure gauge, and he is bound to mix all available levers and cocks nicely up, when a critical situation arises, quite apart that you cannot expect a proper cockpit drill from him which exceeds three or four items.

Worst of all, with instruments about him and indicators, the beginner feels obliged to pay attention to their scales ; he habitually stares at the dashboard, instead of being on the look-out. This gives cause for collisions, and is a direct source of danger. *Proneness to collisions* is certainly a far greater moment of danger than that from which any instruments might preserve the pilot. I admit that some instruments must be. But these should be the minimum, and they should be positioned in a way that the beginner can watch the outside events instead of a part of his aeroplane.

Robustness is another safeguard. It is safer to expend a few horse power on a really *solid* airframe, than to fly through the air on an edifice composed of matchsticks and 0.5 millimeter plywood. Those who disbelieve, become convinced after their first crash. The reflection of robustness on safety are twofold. First of all, the robust airframe will exclude structural failures, make for reliability, and will render clumsy handling innocuous. Minor defects and deficiencies will not give cause to failure. Less inspection is required, and the repairs are easy.

Secondly, a robustly constructed airframe gives *crash protection*. As it is impossible to exclude incidents—every minute a *potential* crash pilot or " disintegration engineer " is born—the thoughtful designer can do much as to render their consequences harmless. This is, incidentally, one reason why I prefer *low-wing* arrangements for tractor aircraft. Crash protection is also one reason why the design of *safe pusher* presents snags.

But robustness is not everything for crash protection, and there is *one* aircraft component in which robustness might give cause to serious accidents. This is the *undercarriage*. With an ultra-light aeroplane, it sometimes helps in incidents when the undercarriage gives way. Moreover, I dislike certain forms of *robust undercarriages* which are attached to the fuselage, especially with high-wing arrangements ; it is so messy to have the struts through the tummy.

A lot can be done to make an aeroplane " *crashable*," without harming pilot and passenger. Proper safety belts, resilient, smooth parts in front of the seats, controls which cannot cause injuries, stiffening of the cockpit, crash pylons and a number of other simple and inexpensive precautions can effectively help to preserve the health of the crew.

A protection against *crash fires* is, for ultra-light aeroplanes, not quite as vital as for their heavier brethren. Nevertheless, it deserves careful attention —*before*, not after the fire. There are simple remedies which can easily be incorporated, such as e.g., fire-extinguisher bombs which spray their content about when an impact occurs.

A very great contribution towards operational safety is, of course, *reliability*. In this respect, the poor quality of the aero-engines and the often still poorer standard of their installation and accessories, have given the ultra-light aeroplane a very bad name. A popular movement has to do everything to correct this. Premiums should be awarded to aeroplanes proving the greatest reliability, when maintained by amateurs.

ECONOMY

Economy means a robust and simple design, an inexpensive airframe with an inexpensive engine, easy maintenance in the hands of amateurs, and cheapness in repairs and overhauls. The maintenance should cause as little trouble as that of a modern motor car. An easy inspection of the vital parts should be possible.

Operational economy does not express itself in the number of miles flown per gallon, as far as the popular ultra-light aeroplane is concerned. Flying a modern light aeroplane costs at present about £4 per hour. An ultra-light aeroplane handled by amateurs might cost £1 per hour and even less. But it is no use haggling about 2s. 6d. per hour differences, when you get less safety and reliability in exchange. The cheapest thing, you know, is far from being the best. Moreover, a Ministry of Civil Aviation which *so* radiates benevolence towards popular flying, should be in a position to remove the petrol tax of 9d. per gallon from the fuel used for ultra-light aeroplanes.

Simplicity in design and upkeep seems to be a brand-new idea. Modern aeroplanes excel in becoming more complicated and expensive every day. As a result, there are less people who can afford to buy them ; moreover, they seem to get less safety for more money. The ultra-light aeroplane is a return to healthy nature. It is economical, and the taxpayer is not expected to pay for it. Think which overheads would come on top if your ultra-light aeroplane would be provided through the official channels !

The less components, the simpler. The fewer the parts in a component, the cheaper. The less expensive the material in price and in work, the better. Wood (in all its forms) scores for amateur construction easily. For commercially fabricated aircraft, steel-

tube fuselages offer advantages; they give better crash protection too. Wood has the advantage that the amateur can easily effect repairs, and that it is easy to inspect. Moreover, it stands vibrations in an excellent manner. Mild steel is a very good material for all metal parts. It is cheap and easy to manipulate. Best of all, it is reliable, and the amateur cannot harm it. And it may be welded.

The *engine* is still the big problem of the whole ultra-light aviation. It must have excess of power. A throttled engine makes for reliability. It should be as free from vibrations and mass forces as possible. This, too, has a bearing on safety: vibrations act against the reliability of the engine, endanger the airframe, reduce the efficiency and irritate and fatigue the pilot. This condemns engines with less than *four* cylinders.

An important point which is usually overlooked is *noise*. Noise, too, fatigues the pilot, is hence adverse to safety, and makes flying harder to learn. Noise also renders the popular aviation obnoxious to everyone on the ground. It will create an army of bitter enemies to the flying man in the street. Noise should be killed. If no attention is paid to this problem, it might murder popular aviation!

CASTING OUR EYES BACK

Periods of depression have their good sides for aeronautics. They give poeple time and urgency to sit back and to think of something progressive.

After her defeat in 1918, Germany had all aircraft destroyed and the construction of new ones forbidden; as a result the soaring flight was born. It was born because the youth refused to be grounded. When in 1923/24, this country had reduced the R.A.F. to token strength as a measure of economy, the light aeroplane arrived, and club flying was born. In 1936, when the necessity to re-arm depressed minds in this country, the ultra-light aeroplane was given complete liberty. When in 1938, the superiority of the Luftwaffe over the R.A.F. was realised, the Civil Air Guard was born.

To-day, club flying has to be curtailed as subsidies are refused, and the Civil Air Guard is forgotten. Let it be the beginning of a popular aviation with ultra-light aeroplanes!

ULTRA LIGHT AIRCRAFT ASSOCIATION

Bulletin

Volume 2, No. 9.

IN these present times it seems that "to plan" or "to have a plan" is the thing, and in this respect the Association cannot be considered unfashionable. Obviously nobody save only the most improvident, is going to argue that planning, in whatever sphere one's interests lie, is unnecessary. What men will argue about is the degree to which planning is desirable and necessary, and therein lies a wide diversity of opinion. We venture to suggest for example, that if more planning had gone into pre-war civil flying, as a whole, the position would be a lot healthier than it is to-day.

It would be idle to pretend that "having a plan" is the panacea for all the social and financial ills that beset private flying in these difficult times. Planning is a means to an end and for its own sake is not, repeat not, as many would have us believe, desirable. A good plan is one which is going to make possible the achievement of certain objects or conditions, and one which the planners have not only the necessary resources and ability to carry out, but also the good will and co-operation of those for whose benefit the plan is formulated, and upon whom in the final accounting, the successful working of the plan will fall. As a case in point, we would remind our members of Aims and Objects. How many of these can be achieved without the willing co-operation of all?

With the advent of the New Year it is a good thing to examine our plans, both as Individual and Group members, for the coming flying season. Plans for Group activities should, by now, be well forward. We, as an Association, want to see as many of our members as possible get into the air in the coming year, and all the planning that we may do to help to achieve this object can be frustrated, if not completely nullified, by the failure of members to try and help themselves—it should at all times be remembered that the whole basis of cheap flying for the million rests on self help—group or individual.

A very practical form of self help lies not only in the planning of one's flying activities for the future, but of informing the Association's officers and executives of these plans—in order that they may not only be conversant with and sympathetic to each individual and group plan, but can also, by fitting the pieces together, obtain a clear overall picture of the state of ultra light flying. Given this overall picture, power is added to our elbow when we take up cudgels on behalf of our members.

It must not, however, be assumed from the foregoing plea that we are in ignorance of the state of affairs and plans for the future of our groups. The greater majority of our members do keep us informed of their plans when they have them. All we are stressing is that we welcome details of future plans of both group and individual members and that careful planning is a necessity if the resources available are to be utilised to the full. The master plan, both for Group and Association should be to get as many members into the air as cheaply and as safely as possible.

Major F. B. Halford

We are proud to welcome Major Frank B. Halford the aero engine designer, as our sixth Vice President. Major Halford may be known as the designer of such famous engines as the Sabre, Goblin, and Ghost. His first outstanding successful effort will be recalled affectionately by our members who were active in the early days of flying, this was the 60 h.p. Cirrus.

Perhaps we shall again see a successful 50-60 h.p. engine from the same stable. Who knows?

GROUP NEWS

1. Aerotech No. 1 Club

The group's "B.A.C. VI" two-seat glider is now complete and the group hope to be flying the machine shortly. During the last few weeks they have been busy brushing up their launching technique (auto towing) and are now all set for their first flight tests.

2. (R.M.A.S. Flying Club) Army Flying Club

S/Ldr. D. J. Roe, D.S.O., D.F.C., Hon. Secretary of the Club writes us that the Club has changed its name to that of the Army Flying Club, and will offer flying to Officers and other ranks of the Army. Operations to date have been confined to gliding and 1,500 launches have been successfully carried out. "A" Licences, "B" Licences and three "C" Licences have been obtained. This group which is acquiring a "Motor Tutor" through the Kemsley Trust scheme hopes to show how easy conversion from gliders to powered flying can be.

3. Brookside Flying Group

Mr. L. Benjamin, the Hon. Secretary, writes that the committee and officers, in accordance with their own wishes and the prearranged plan, have resigned and a new committee and officers have been elected. The theory being that all members of the group should in turn serve as either committee men or officers and thus learn how to run a group the "hard way." Whilst the idea commends itself to us, it does seem a little drastic and the Association favours the method whereby a certain number of the old committee remain or offer themselves for re-election in order to guide and help new members until they have a good grasp of all administrative policy. However, we will watch with great care the outcome of this very interesting move.

All enquiries should therefore, be addressed to Mr. B. A. G. Woodward at 29a, Bellingham Crescent, Hove, 4, Sussex, the new Hon. Secretary of the group.

4. Cardiff U.L.A.C.

After the loss of their "Piper Cub" last summer the group set itself to the task of raising money for the purchase of another aircraft. This aircraft, the "Tipsy B," has now been acquired, part of the money required being raised by a very successful Christmas Dance.

They hope to be flying very soon and we sincerely hope that they have better luck this time!

5. Clydeair Group

Mr. Gibb writes to tell us the sad news, that, due to lack of support the group will have to be disbanded. The keen members will join the Association as Individual Members in order to keep in touch and hope to restart the group when conditions are more favourable. We offer our sympathies to Mr. Gibb and wish him better luck for his future efforts.

6. Community Flying Club

To celebrate their first anniversary the club held a dance at the Falcon Hotel, Woodley. The club now has a "Moth Minor" in addition to the "Piper Cub."

7. Flintshire Aviation Group

This group continues to search for a suitable site for aircraft operation. Mr. McLellan the Hon. Secretary writes that they have examined several sites and hope to be able to secure one of the more suitable ones. If they are successful this group will be the first of our groups to operate from a site other than an established aerodrome.

Meanwhile the group is pressing ahead with its plans for "ground training" until such time as they have sufficient funds to purchase an aircraft.

8. South Hants U.L.A.C.

Mr. Haigh writes to tell us that the Heath "Parasol" is now complete and will undergo flight trials early in January. We wish them the very best of luck and hope to report on their successful first flights in our next issue.

DESIGN SUPPLEMENT

Contributed by G/C. E. L. Mole—Chairman, Design Sub-Committee

New Amateur Design of U.L.A.

10. We have heard from Flight Cadet B. G. Rendle of the R.A.F. College, Cranwell, who is designing his own U.L.A. which is to be powered by a 37 h.p. Aeronca J.A.P. engine. It is to be a conventional low wing, single seat monoplane of the simplest possible construction with a view eventually to being produced in kit form. Rudder and elevators are to be interchangeable. Wooden construction is to be used, with covering of unstressed Dural sheets attached to light wooden frames by means of press studs. Specification and performance estimates are as follows:—

Span	18 feet
Length	14 feet
Empty weight	335 lb.
All-up weight	637 lb.
Wing area	87.5 sq. feet
Wing loading	7.3 lb./sq. feet
Power loading	(37 h.p. J.A.P.) 17.2 lb. B.H.P.
Stalling speed	(Without flaps) 42 m.p.h.
Maximum speed	115 m.p.h.

11. We are always interested to hear of new U.L.A. design projects, and are anxious to do everything possible to encourage such commendable enterprise. We strongly advise Mr. Rendle, and other amateur designers, to keep closely in touch with our A.R.B. approved Design Team at all stages of their work so as to obtain final design approval without having to incorporate a mass of alterations into their finished drawings.

Suggested U.L.A. Helicopter Design

12. We have received an enthusiastic letter from Mr. J. J. McLellan, Hon. Secretary of the Flintshire Aviation Group recently affiliated to

U.L.A.A., who feels that there is a requirement in the N. Wales area for an ultra light helicopter capable of operating from very small fields. Mr. McLellan proposed to design and build one himself and asked our assistance. He suggested a lay-out similar to the " Hoppi-Copter " but with a cabin cockpit and a comfortable seat, and powered with one of our 37 h.p. Aeronca J.A.P. engines.

13. Now, whilst greatly admiring his initiative, we are unable to encourage him in such a project. The design and stressing problems of helicopters are highly specialised, and even though one member of our Design Team is a helicopter expert, we feel that Mr. McLellan would be put to considerable trouble and expense in getting his design finally approved by A.R.B. Moreover, since the rotor drive mechanism is all vital to the safety of the aircraft, A.R.B. would insist on the parts being made up by an approved firm with adequate machine tools for the job, and from approved materials. The design, construction and subsequent development trials would be extremely costly, and we have advised Mr. McLellan to contact the manufacturers of the " Hoppi-Copter " in this country with a view to exploiting that aircraft in the N. Wales area as soon as it is available. For his immediate flying requirements we recommended Mr. McLellan to consider the Slingsby " Motor Tutor," which has remarkably short take-off and landing runs and should be eminently suitable for operation from small fields.

Proposed 50 h.p. Monaco Engine

14. We have had a recent discussion with the Managing Director of the Monaco Engine Co. Ltd., who is interested in the U.L.A. field. This firm have developed a successful flat four engine of 100 h.p., and are in the running for a contract for a six cylinder version to satisfy a requirement for an engine of 140 h.p. Should this contract materialise, the firm would be in a position to utilise existing cylinder components, pistons, con-rods, etc. from their production line to make up a flat twin suitable for our use.

We were shown a F.A. drawing of the proposed Monaco U.L.A. engine and were very impressed with its simplicity and neatness. The engine capacity is 1,800 c.c., and it should develop 50 b.h.p. at 2,800 r.p.m. The cylinder barrels are of steel with aluminium alloy fins cast on to them by a new process. The cylinder heads are of alloy with push rod operated overhead valves. A neatly finned oil sump is fitted integral with the crankcase. Dual ignition is used, but utilising one " duplex " magneto to enable a single drive to be used.

16. The cylinder components of this engine have already been thoroughly tested in a single cylinder rig. Should the firm, therefore, go ahead with the scheme we are hopeful that our long anticipated 50 h.p. engine will be realised without too much delay. We shall do all we can to bring this about !

Reflections after High Speed Flying

17. Having recently completed a conversion course on Meteor jet-planes, the writer is more than ever convinced that the ultra light provides the real joy of flying. The clipped wing Meteor IV, of course, has a magnificent performance and handles superbly at extremely high speeds, but no one would pretend that it feels comfortable below about 160 m.p.h. Indeed, the novice on his approach to land suffers an acute disinclination to slow the aircraft down to 125 m.p.h., the recommended speed over the hedge for landing.

18. There is an undoubted thrill in the effortless performance of a jet-plane, once one has collected one's senses after the take-off ! It really is quite fascinating to watch the A.S.I. and altimeter needles going round like clocks out of control, the fuel indicators, of course, behaving somewhat similarly in the reverse direction ! At high speeds, however, attempting to turn within a reasonable radius leads to pronounced discomfort and a tendency for the eyes to black-out, and makes it only too easy to lose the airfield—which, when fuel is running low, can give rise to some anxious moments. Moreover, bumps at high speed feel solid and their jarring effect is far from pleasant.

19. The writer's main impression whilst being thrust forcibly around the countryside at astonishing speeds, was a longing to get back again to the ultra light with its manoeuvrability and ease of handling. How much more pleasant to have time to think, to admire the countryside and how comforting the thought that one can land safely practically anywhere at will ! How reassuring to feel that disaster will not follow if one's judgment is at fault ! How convenient to be able to turn the aircraft around almost within its length, so that in bad visibility flying practice can be safely carried on by circuiting inside the perimeter of the airfield ! Without doubt, the ultra light provides the means of experiencing the true joy of flying.

AN ULTRA LIGHT AIRSHIP

The President of the South Hants U.L. Air Club is Lord Ventry. To his friends he is known as the " Lord High Balloonatic," for he is one of the greatest exponents of, and enthusiasts for, lighter-than-air flying, I rather think that he has some ideas under that venerable-looking shock of hair for an ultra light airship.

Here is a paragraph from that fine book " The Old Flying Days " by Major C. C. Turner, F.R.Ae.S., describing an airship built and designed by a young Welshman, E. T. Willows in 1910.

" In 1910 he had so improved this machine that he was able to make a cross-country flight of about 40 miles from Cheltenham to Cardiff to London by night, this being the longest trip by airship made in Great Britain up to that date. His airship was fitted with a 35 h.p. J.A.P. engine, and was 82 feet in length."

Later he flew the airship from London to Paris, and after making several flights over Paris, he flew back to London.

The famous old Army airship " Beta " of that same year, was also powered by a 35 h.p. motor.

Those were the days of real enterprise, when enthusiasts did the job themselves, and did not always wait for someone to lead them.—G.D.

NEWS FROM THE CLUBS

BRITISH GLIDING ASSOCIATION NEWS

During the week-end of January 29th, 30th, the Association held a conference of Chief Instructors at the premises of the London Gliding Club at Dunstable.

The objects of the conference were to find ways and means of improving the existing methods of solo training, both by interchange of the experiences and ideas of the different Clubs, and by a raising of such standards as were found necessary, and secondly: to gain information on 2-seater instruction in gliders from those who had used this method.

The Conference was very well attended, and apart from the primary objects, enabled Instructors to get to know their counterparts in other and distant Clubs.

Delegates were addressed by Mr. Peter Devitt of Lloyds, Messrs. L. Welch, H. T. Testar, G. O. Smith and P. Blanchard of the B.G.A. Instructors Panel; also by J. S. Sproule, E. J. Furlong, and M. Chantrill, and was under the General Chairmanship of P. A. Wills, C.B.E.

The resolutions produced showed that the Clubs are very alive to the problems with which they have to deal, and in spite of lack of money forcing them to use unsuitable equipment in many cases, are making a most serious and successful attempt at efficient operation with the means at their disposal.

The final resolution passed was that the Chief Instructors Conference should become an annual event, to be held in the late winter so that information gained in the previous year should be available to all Clubs before the new season's flying commenced.

The problem of the 1949 National Gliding Contests is still with us. No Club has either the money or the staff to run a National Meeting, as well as continue its own work. The Derby Club is considering holding an informal meeting, but suggests that the National Contests are held on a points basis for the best flights made throughout the season as they were last year.

This provides, of course, no real practice for future International Team Members, as pilots are never flying in direct competition with each other under the same rules and conditions. Beggars, however, have never been able to be choosers, and we should be thankful to the Derby Club for offering to run an informal meeting where, at least, pilots can get together and fly, although the circumstances imposed by serious contest flying will not exist.

The B.G.A. is pleased to approve the application for associate membership of the Perak Flying Club. The leading light in this Club is Stanley Haynes, one of the pioneers of B.A.F.O. Gliding, being the main rescusitator of Salsgitter, which developed a most successful method of training immediately after the war.

LONDON GLIDING CLUB

December

It was fortunate that we passed our 2,000 hours target last month, as December turned out to be the worst month of the year, bad weather and the short days permitting only 49 hours 48 minutes of flying. This brings our grand total for the year to 2,065 hours or nearly double our 1947 figure.

There was only one certificate gained during the month; Gilewicz took an "A" thus bringing our total of certificates taken during 1948 to 48 "A," 59 "B," and 74 "C." Silver "C" flights were: duration 17, distance 9, height 10. Gold "C" height 1.

A review of the figures for the year shows that while November and December were the two poorest months, June and August were the two best, with March a close third, so far as flying hours were concerned. For cross-country weather however, April was by far the best month, with no less than 11 cross-countries, while June was next with 8. The average length of cross-country flight during April was, moreover, 5 miles longer than in June, which is very difficult to explain, unless it is just another manifestation of "that spring feeling." Although July saw few cross-countries made from Dunstable, this was mainly due to the large number of members who attended the Cranfield meeting, where they flew some 600 miles.

Although Dan Smith was runner-up in this year's National Competitions, and retains the Firth-Vickers Trophy in the Club, he was the only member to enter, as we were under the misapprehension that at least three point-earning flights had to be made to qualify.

Figures showing the financial position of the club will shortly be available, but already advance information indicates that, like the nation, we are finding it a hard job to close the Gap between what comes in and what goes out, even though we operate on the most austere lines. We can offer the cheapest flying in the country (8/- per hour, dual or solo), only if each and every member does his or her utmost to keep down expenses. It is that broken spring on the retrieving car, that hole in the "G.B." that nobody knows anything about, that parachute which had to be repacked because "someone" left it out in the rain, which is going to decide whether or not the flying-charges will have to be raised during 1949.

The Annual General Meeting will be held on March 26 this year, at the clubhouse, Dunstable, and it is hoped that all members will do their best to attend, and take this opportunity of playing their part in the running of THEIR club.

January, 1949.

January started with a Bang. (In fact it started with a number of bangs). First of all there was the House Warming of New Year's Day, which has already been widely reported, so it only remains to say that the House Committee did us proud in every detail. We never were much good at counting noses, but it is reliably reported that between two and three hundred people were milling around during the peak load. Mr. Whitney Straight did a good job at the official opening ceremony,

and from then on everything went with a swing; metaphorically at first, later in a more literal sense.

Amongst a whole host of gliding folk from many clubs, we were especially pleased to see Mr. and Mrs. C. Espin Hardwick, and could not help wondering how many in the company were aware that Mr. Hardwick's generous assistance to the L.G.C. during its financial difficulties in the early 'thirties, was largely responsible for the consolidation of the club on its present site, and hence for that air of permanence engendered by the substantial block of buildings in which we were now gathered.

A not-so-joyful bang occurred the next day, when an "Eon Baby" loaned to us by the manufacturers for trial flying by a select band of experts, was badly crumpled by Charles Ellis, in the lee of the lynchets. He was doing an unnecessarily tight turn very near the ground when an ill-mannered wind gradient upset his apple cart and tipped him over so that his lower wing hit the ground. We say "unnecessarily tight," as there would have been no need for it if the Hangar Ridge had not been obstructed by an attenuated line of thoughtlessly parked aircraft. Folk who slope off to lunch (even though it is raining), and leave their aircraft lying about in this way, deserve to find a heap of rubbish waiting for them upon their return. (Unfortunately there is liable to be a body underneath it). So if you are daft enough to attempt a crossing of the lynchets below 50 ft., for Heaven's sake make sure you are flying straight and level, and don't attempt to start an approach unless you are satisfied that the landing ground is clear. It does not seem to be generally realized that the field immediately north of the club ground is ideal for emergency landings, as it slopes upwards in all directions (i.e. it is saucer-shaped). Pilots who are forced down when the landing ground is obstructed cannot do better than land there, but don't tell Farmer P. that we said so!

Yet another loud bang occurred on the second week-end this year, when Russell lost half his wing on an iron fencing post while making a panic-stricken exit through the Tradesmen's Entrance. This time it was the club's "G.B." that suffered. The cause of this crash was lack of a Plan—having decided that an emergency had arisen the pilot had no plan of action ready at hand, the result was a lot of dithering, which can only have one ending. This is the second time in three months that we have had to report accidents that could have been avoided by a little careful thought prior to take-off.

The best day this month was Sunday the 16th when we put in about 37 hours, and had 11 machines in the air at one time. These were the club's "Kadet," "Tutors" Nos. 3 and 4, "T.21," "Gull IV" and the "Prefect" on loan from Slingsby's, and the privately owned "Minimoa," "Scud I," "Scud II," and Red and Blue "Olympias." We have been aware for some time that few modern machines are superior to the veteran "Scud II" in min. sink at low speed, and Jan. 16th was a day when this quality was much in evidence. What did surprise us however, was to see that the even more ancient "Scud I" had almost similar properties. Such is progress! (It appears however that certain modifications to the original design have been made by its present owners, a group from De Havillands led by Costin).

The week-days, Jan. 17-21, provided some good flying weather, but few members were able to take advantage of it. (Evidently it must have been a bad Xmas for the barrow boys). Warminger cut things pretty fine when he flew his Silver "C" duration on the 12th, with 1 minute to spare. Gilewicz took his "B" on the 23rd, and J. E. Allen his "A" and "B" on the 29th.

M. and Mde. Gervais of the Challes Soaring Centre, France, paid us a visit on the 15th, but unfortunately it was too wet for flying.

Summary of Flying for January

Launches, 287.

Flying hours, 96.

Certificates taken, "A"—1
"B"—2

Silver "C" duration, 1.

Stop Press

Applications for our Summer courses are coming in fast. Anybody thinking of a "Gliding Holiday" had better book early. For dates, see advert. at back of this issue.

CAMBRIDGE UNIVERSITY GLIDING CLUB

Our silence in these pages for the past six months has certainly not been due to inactivity; far from it.

Our summer camp with our Midland Club friends at the Long Mynd was, after an unfortunate "Tutor" prang on the first day, a great success with a good number of hours for everyone. Five hour flights were carried out by Farr, Ward, Phillips, and Blanchard, the last mentioned claiming afterwards that he had been practically asleep in the supine luxury of the "Olympia." Two good cross country flights were made during the camp by J. W. S. Pringle and A. D. Dick.

The club team (John Pringle, Jimmy Grantham and David Dick) in the decentralized national comps. of 1948 is to be congratulated on its fine effort in winning the Du Garde Peach Trophy; and John Pringle again on being awarded the Londonderry Trophy as the highest scoring individual member of a club team.

We have had a fair crop of certificates, including Silver Badges for Paul Blanchard, David Dick, John Edwards, and Jimmy Grantham. John Free's too, should not be far off, as he is in the comparatively unusual position of lacking only the height qualification.

Several shorter cross country flights have also been made, including one recently by the "Kranich" after spinning practice, when Marshall's Airport "disappeared," and a field about a mile away had to be used; certain of us are now a little more familiar with the rigging and de-rigging of the large machine!

In December, just after the end of the Michaelmas Term, a small group of our incurable optimists (of the brand found in every gliding club) took the good old "Cambridge" to Dunstable for the week-end. The disobliging weather, however, would supply only faint easterly puffs, so that

circuits provided the only flying they had there. They could not help remarking what a fine club house the London Club has—to say nothing of their friendly hospitality.

In such a report as this the mildly spectacular news is dealt with first; but it would be euphemistic to say that the report would be incomplete without mention of training. This, the most vital aspect of the Club's activities, has been continuing steadily at Bourn on up to five days a week during term time. We are hoping that we do not get sufficient snow to cause any stoppage.

DERBYSHIRE AND LANCASHIRE GLIDING CLUB

Club Notes

Sunday, December 12th

Nine launches in the "Primary" and one in the "Cadet."

Saturday, December 18th

Wind S.E. 10. Seven circuits in the "Cadet."

Sunday, December 19th

Wind East 10. Ten more circuits in the "Cadet" and fifteen in the "Tutor." Gray, formerly with the R.N.V.R. took his "A" by circuiting the "Cadet."

Tuesday, December 28th

Wind S.S.W. 30. In spite of the wind speed and direction, there was a disconcerting lack of lift and no one managed to stay up more than 7 minutes. Four "Olympias" and the Club "G.B." shared seven launches.

Totals for December

59 launches, 9 hours 35 minutes. 1 "A" and 1 "C" certificates.

Sunday, January 2nd

Wind N.W. 30 m.p.h. A good start for the new year. Twenty-two launches produced 21 hours 34 minutes. A minor standing wave, not very clearly defined, gave additional uplift to conditions already favourable themselves. The first "Olympia" was launched at 11.17 and reached 3,500 feet quickly. Roper and Bulling in the "G.B." reached 2,500 and Armstrong, Taylor and Smith in "Olympias" reached nearly 4,000 feet. Gerry Smith flew down wind in the hope of finding another wave and landed at Mansfield 24 miles S.E. of Camphill. Harry Cook had the "Cadet" all to himself and had two enjoyable rides somewhere around 1,500 feet. Bill Elrington who has been patiently awaiting his first soaring flight at our site, had a worthy introduction in the "Tutor." The arrival of Bill Buckle at lunch time was greeted with restrained enthusiasm by our "Grunau" pilots. Bill is the new owner of Club "Grunau No. 1" bought from Fred Coleman at the end of 1945. We have been fortunate enough to have had the use of this machine in the owner's absence. It is now going south and we hope that Bill will have many hours of fun with this excellent machine.

Sunday, January 9th

Wind N.N.W. 15 m.p.h. We were expecting a good day but the wind steadily refused to back until 11.30 when Roger Dickson managed to keep his "Viking" up for half an hour. After lunch conditions were excellent but although the sun shone out of a clear blue sky, the visibility at 1,000 feet was as bad as anything we have ever had. At 1,800 feet visibility in all directions was much better. Four "Olympias" and the "Viking" were out, also the "Cadet," "Tutor" and "T.21." Once again, the "Cadet" pilots were lucky and Cook, Blomfield, and Pat Dickson had soaring flights, the two latter obtaining "C" certificates.

Totals—40 launches, 15 hours 49 minutes.

Whatever December may have lacked in flying, it made up for in parties. Many members turned up on Sunday, December 26th, and stayed until Tuesday evening. On the Sunday evening there was the usual unofficial party provided by the instructors and organised by the ladies. Q.B.I conditions explained the absence of Father Christmas but there was a suitable gift for everyone under the Christmas Tree. The Chairman and Chief Instructor received an Admiral's pinnace and a free ride in the "two-seater" respectively. Louis Slater received a framed picture of the Ladybower Reservoir with the exact spot where he landed marked with a cross (see Club Notes, September 18th, 1948). We were pleased to see Harry Midwood and Barbara Richards with us once again, if only for a week-end.

As usual, there was enough left over from the Sunday party to make another on Monday night and on Tuesday we did at least take out two or three machines even if we did little more than give them an airing.

On January 2nd we had another little standing wave. The rolls to the west were well defined but the wave cloud which should have been just behind us was thin and elusive. Gerry Smith climbed as high as he could and then set off down wind to look for the next wave. He reached Mansfield in half an hour without contacting another wave. Nevertheless it was something to have had a try for the Kemsley award so soon after its publication. It is hoped that the effect of this flight will be to encourage keen competition amongst our members so that more data on the wave will become available.

Sunday, January 16th. Wind N.W. 40 m.p.h.

The first launch was a car bungy launch and before going any further it might be as well to mention the circumstances which led to it. The bungy launching slope on the west edge is quite adequate but it is fairly steep and will be rough and stony for some time. In order to save man-power and obtain greater use of the bungy slope, Gerry Smith designed a substantial pulley and roller box to be set in concrete on the Edge. The car runs parallel with the Edge and the bungy extends between the car and the pulley box, rope only is used between the box and the machine. Starting points for the machines and starting and stopping points for the car have been carefully measured and marked out.

Not everyone was in favour of this new method and it was good tactics to put the most critical down for the test launch.

A successful launch would disarm criticism and an unsuccessful launch might at least prevent the pilot from adding anything further to what had already been said !

Needless to say, the launches surpassed the most sanguine expectations and the machines crossed the Edge like bullets. The wind was too strong for any Club machine that we had available but three "Olympias" and the "Viking" had nine launches totalling nine hours ten minutes. Cloudbase was nine-tenths at 1,200 feet and extended to 3,000 feet most pilots reached 2,000 feet but B. Thomas in the red "Olympia" contacted the standing wave with his usual luck and reached 5,200 feet above the launch. In searching around for the other 5,000 he encountered strong sink. He landed on Sickleholme golf course 3 miles away and spent the rest of the day trying to explain why he had not landed at Lincoln, 50 miles away.

Totals—9 launches, 9 hours 10 minutes.

Sunday, January 23rd. Wind S.S.W. 15 to 20 m.p.h.

The first "Baby Eon" arrived last Sunday too late to fly. It was rigged yesterday and the first flight of the day was an extended circuit by Gerry Smith in the new machine. Seven pilots flew it and the general opinion was that it was going to be a useful and attractive addition to our fleet. Some of the novel features are obviously the result of much thought and the laudable desire to produce a workmanlike machine. The wind was on the south west point and it was not a particularly good day. Stan Armstrong took his "Olympia" right down the south slope to Eyam where he found better lift at first, but on returning to Gt. Hucklow he contacted what appeared to be a minor wave and climbed above cloud to 3,000 feet.

Derek Roper and Fred Breeze both had their first "Olympia" trips. Cooper retired modestly behind the moor wall—and took the "Cadet" with him.

Totals—43 launches, 9 hours 35 minutes.

Saturday, January 29th. Wind West 15 m.p.h.

Although it was not possible to commence operations until after 3 p.m., a total of 11 launches and 3 hours 16 minutes was achieved. Conditions were good, particularly at first. Stan Armstrong gave the new "Eon Baby" a thorough test and several other pilots flew it. Perhaps the best performance of the day was by Harry Cook, who sat, on top of everyone, in the "Cadet," firmly upheld by what is now known as Cook's 'ook.

Sunday, January 30th. Wind N.W. 5 m.p.h.

A new "Gull 1" arrived last night and was rigged first thing this morning. It was good to see a "Gull" back again at Camphill after nearly ten years, and the present example is fitted with a built-in wheel and spoilers and is a first-class example of the type. With the "Gull," we can say with some justification, that the Club fleet is about complete. Louis Slater had the best trip in the "Gull," keeping it up for 11 minutes by circling over the north west point. No-one managed to keep anything else up. The "Cadet," "Tutor," and "Baby" paddled around without any great excitement.

Bill Elrington had his first trip in the "Baby" and Harry Cook had a circuit in the "Tutor."

Totals—41 launches, 2 hours 10 minutes.

The January which has just ended has probably been the best January we have ever had. We have had 61 hours' flying, 166 launches and two "C" certificates. We have had standing waves on January 2nd (3,800 ft.), 16th (5,200 ft.), and 23rd (3,000 ft.) also one cross country flight of 25 miles.

SCOTTISH GLIDING UNION

The first Sunday of the New Year was brought in at Balado

by a small party of six of us, who ate, drank and made merry in our hut, surrounded by glassy runways and snow-covered hills. The weather provided a good omen for 1949—plain evidence of a Standing Wave over the Ochils; there were two layers of cloud, with snow-trails giving a clear indication of the air movements.

On the 8th and 9th of January, David Hendry (now, by the way, our Secretary) and his henchmen dismantled our new hut at Tealing Aerodrome, while training went on as usual at Balado. On the two following week-ends, during bad weather, the trailer was completed, with a great saving of time and labour due to Mr. Fyfe's generous offer of the use of his Factory accommodation and tools. There was one " Cadet " circuit made by Allan Moncur on the 23rd, but it took place in strong wind and gusts of rain, and gliding was then given up for the day. The Bishop Hill gliders are now at Balado for C. of A. renewal.

THE GLIDING CLUB OF VICTORIA

The Club's 2nd Benalla Gliding Meeting resulted in a total of 397 winch launches and 44 aero-tows for 68 hours 56 minutes soaring. All thermal soaring from a flat aerodrome at Benalla, 120 miles north east from Melbourne. I have also received news of good flights by the Slingsby Gull in New South Wales. Fred Hoinville did 222 miles and there were other flights of 128, 125, 80, 68, 56 miles. Hoinville should be Australia's first Gold " C."

ARGENTINA

In a letter from Joe Ortner, of the Albatros Club, Buenos Aires, we hear that Prince Bira is hoping to get his Gold " C " distance. Rumour has it that he has now achieved this, and that Ortner himself has broken the Argentine distance record with a flight of 457 kilometres. This is a magnificent flight and carries on the precedent begun by Laplace and Chourrout, since Ortner in his turn is now President of the Albatros and at the same time holder of the distance record. Congratulations, Joe !

ROYAL AERO CLUB GLIDING CERTIFICATES.

(Issued under delegation, by the B.G.A.).

DECEMBER, 1948

GLIDING CERTIFICATES: " A " .. 97 (Nos. 9357—9454 incl.)
" B " .. 28
" C " .. 8

SILVER " C " .. 1 (No. 183)

" B " CERTIFICATES

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
3547	Douglas William Bellairs Hatch	Bristol G.C.	21.11.48
5121	Reginald Glenn	107 G.S.	21.11.48
7617	Brian Wood	182 G.S.	19.12.48
8924	Roderick Glyn Thomas	87 G.S.	24.10.48
9184	Alan Thomas Barter	Hereford G.S.	5.12.48
9244	Ian George Le Messurier Girling	104 G.S.	5.12.48
9290	Albert Edward Smith	104 G.S.	12.12.48
9294	Roy Lionel Yates	Shoreditch T.C.	20.11.48
9342	M. Mamduh Accad	Army Flying Club	21.11.48
9356	Peter Michael Healey	Southdown G.C.	27.12.48
9357	Peter Denis Brock Stevens	139 Wing G.C.	6. 8.47
9360	Alyn Keith Thomas	Oerlinghausen G.C.	10.11.48
9366	Peter William Taylor	Gutersloh	31. 7.48
9368	Thomas Arthur Horwood Dennison	Bristol G.C.	20.11.48
9369	Kenneth Vincent Bullock	S.4 Abbotsinch	21.11.48
9370	Richard Denison Rowan Hawkesworth	Royal Navy	17. 9.48
9371	Jean Lennox Bird	Surrey G.C.	21.11.48
9373	Michael Alec Garnett	Bristol G.C.	13.11.48
9376	John Royds Armitstead	123 G.S.	21.11.48
9398	Clarence Dawson	Shoreditch T.C.	20.11.48
9405	Robert Martin	A.H.Q. B.A.F.O.	16. 6.48
9408	Ernest Campbell Smith	4th Armoured Brig.	21. 9.47
9428	Ivor Leslie Selman	Bristol G.C.	21.11.48
9429	Colin Wilfred Anderson	Hameln G.C.	26. 6.48
9438	Douglas Fowlie Clark	5 Dyce G.S.	28.11.48
9442	Wilfred Small	Portsmouth G.C.	18.12.48
9443	Derek Richard Marks Bray	Bristol and Somerset	16. 6.48
9448	Patrick Dale Wood	Surrey G.C.	19.12.48

" C " CERTIFICATES

7934	John Hulme	105 G.S.	20. 7.48
8804	Ronald Greenslade	A.H.Q. B.A.F.O.	2.10.48
8809	Jack Alfred Lyddiard	Newcastle G.C.	28.11.48
9357	Peter Denis Brock Stevens	139 Wing G.C.	13. 9.47
9360	Alyn Keith Thomas	Oerlinghausen G.C.	16.11.48
9370	Richard Denison Rowan Hawkesworth	Royal Navy G.U.	18. 9.48
9408	Ernest Campbell Smith	Surrey G.C.	15. 8.48
9429	Colin Wilfred Anderson	Hameln G.C.	21. 8.48

SILVER " C " CERTIFICATES

183	R. D. Poland	6367	5.12.48

JANUARY, 1949

GLIDING CERTIFICATES: " A " .. 134 (9455—9588 inc.)
" B " .. 29
" C " .. 16

SILVER " C " .. 2 (184 and 185)

" B " CERTIFICATES

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
2019	Ronald Victor Brown	123 G.S.	14.11.48
2680	David Alexander Ogilvie	Cambridge U. G.C.	5.12.48
2873	Clive Patrick Francis	Martin Hearn Ltd.	5. 8.48
4424	Dennis John Stanford	166 G.S.	2. 1.49
7165	George Wills Blomfield	Derby and Lancs. G.C.	30.10.48
8160	Geoffrey Albert Philip Gordine	166 G.S.	2. 1.49
8207	Talbot Charles Daniels	161 G.S.	23. 1.49
9186	Bernard William John Scott	83 G.S.	2. 1.49
9311	Alan John King	R.E.F.C.	12.12.48
9458	Christopher Hughes	Southdown G.C.	26.12.48
9471	Peter Joseph Sullivan	Cambridge U. G.C.	20.11.48
9486	Albert Powell	Ulster G.C.	3.10.48
9490	Peter James Hutton	R.N. G.U.	21. 9.48
9501	James Robert Cooper	141 G.S.	25. 7.48
9517	Ian Derrick Hart	R.E.F.C.	10. 7.48
9523	Alan James Bridge-Butler	H.Q. B.A.F.O. G.C.	17. 7.48
9524	Henry Cook	Derby and Lancs. G.C.	28.11.48
9536	Donald Kenwrick-Cox	R.E.F.C.	17. 7.48
9540	Charles Michael Sinclair	Oerlinghausen G.C.	10.11.48
9543	John James Ellis	125 G.S.	9. 1.49
9546	Richard Edward Black	Air H.Q. B.A.F.O.	27. 8.46
9550	Cyril Walter	Oerlinghausen G.C.	4. 9.48
9563	Graham Moffat Grindall	Midland G.C.	4.12.48
9568	Jack Randell	125 G.S.	9. 1.49
9572	John Thomas Leech	Fulmar G. and S.C.	11.10.48
9574	Stanley Alexander Steele	Newcastle G.C.	7.11.48
9578	Stanislaw Rys	London G.C.	10.10.48
9579	Geoffrey Mellanby Russell	Derby and Lancs. G.C.	28. 9.47
9588	Brian Watson Pollard	Cambridge U.G.C.	15. 2.48

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"C" CERTIFICATES

No.	*Name*	*Certificate No.*	*Date gained*
2350	Norman Henry John Cant	83 G.S.	24. 9.48
4176	Roy John Jennings	168 G.S.	23. 1.49
6222	Robert Lindsay Davies	R.N. G. & S. Assoc.	24. 5.48
7165	George Wills Blomfield	Derby & Lancs. G.C.	9. 1.49
7800	Kenneth William Henry Driver	Newcastle G.C.	2.10.48
7891	Douglas George Collier	A.H.Q. G.C.	26. 6.48
8247	Donald Claydon Snodgrass	Southdown G.C.	23. 1.49
9490	Peter James Hutton	R.N. G.U.	21. 9.48
9523	Alan James Bridge-Butler	H.Q. B.A.F.O. G.C.	12.12.48
9524	Henry Cook	Derby & Lancs. G.C.	4.12.48
9540	Charles Michael Sinclair	Oerlinghausen G.C.	18.11.48
9550	Cyril Walter	Oerlinghausen G.C.	2. 1.49
9563	Graham Moffat Grindall	Midland G.C.	16. 1.49
9578	Stanislaw Rys	London G.C.	17. 0.48
9579	Geoffrey Mallanby Russell	Derby & Lancs. G.C.	24. 4.48
9588	Brian Watson Pollard	Cambridge U. G.C.	2. 6.48

SILVER "C" CERTIFICATES

No.	*Name*	*Certificate No.*	*Date gained*
184	E. C. Rigg	8199	2.10.48
185	A. H. Warminger	7297	12. 1.49

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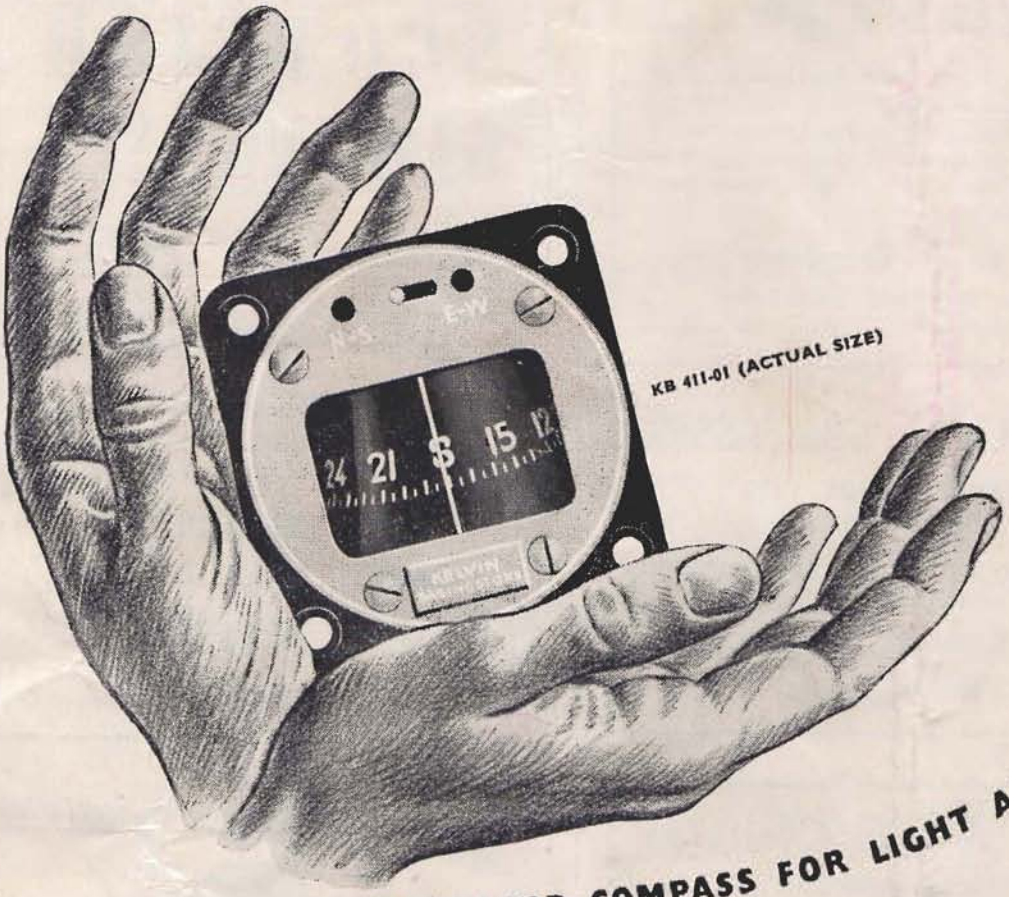

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