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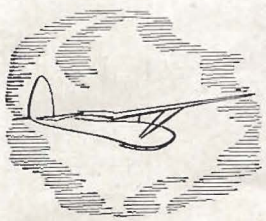
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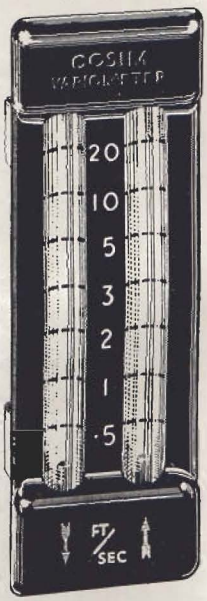
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THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

DECEMBER 1948 ★ Vol XVI No 12

EDITOR:
VERNON BLUNT

ASST. EDITOR:
VERONICA PLATT

ADVERTISING
and
EDITORIAL OFFICES:
139 STRAND, W.C. 2

PHONE: TEMPLE BAR 6451/2

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COVER PHOTOGRAPH:
Oerlinghausen. "Minimoa," taken by D. L. Barker, 1/100, F16, super XX, 2X Yellow Filter.

REGULATIONS

A FEW months ago the Chairman of the Yorkshire Gliding Club, in his speech at the Annual Meeting of that club, appealed to England to " Wake-up "—and not only about Gliding. It is a pity there is not more of that spirit about.

For the past fifty years, men of spirit in this country have been as mesmerised as a rabbit before a stoat in all things political. The exceptions to this mesmerism have been very few and far between, but they have been the great men of our time, and one of them, Winston Churchill, the greatest man of the Age. In war, our men of spirit have found things at hand to do, brave, incredible things, and done them selflessly, nobly, and exceedingly well. We will fight for Freedom in War, but in Peace we give up, and any jackanapes with a theoretical Plan can put it over and fetter the mutts who, if they fight at all, do not fight hard enough, or long enough, and uncompromisingly enough.

The case in point again is the proposed Gliding and Power Flying Licences, which the Ministry of Civil Aviation have indicated that they intend to enact.

As we showed last month the only real reason they can give is that they are bound to do so because they agreed to do so at an International Air Organisation Conference.

To do them justice, the B.G.A. and the Association of Flying Clubs, have argued long and strenuously against the proposals and have secured some modification of some of them. But the whole process has taken place in an atmosphere of " Hush-hush," and what has leaked out has come out of the back door. This is typical of the methods of the present Government (and of the Civil Service under their ægis), whose methods are receiving some nauseating publicity at the present time. By such means the liberties which have been our proud heritage for generations, have been, and, are being filched away from us in the name of Planning. This time we have proved that the Planning is unnecessary, but that will not stop the Planners. What will ?

We believe we are right in saying that the new Regulations cannot be brought into force under any Act of Parliament now in being and that a new Air Navigation Act must pass through Parliament. But even if we are wrong in this belief, any Orders under the existing Act must lie on the Table of the House, and a Prayer can be presented, and a Debate initiated into the proposals, at which not only can the counter view receive publicity, but a vote can be taken. If the proposals can only be validated by a new Air Navigation Act they must be debated. Under our present rubber stamp Government it is perhaps too much to hope for that the proposals will be thrown out, and the essential right of Englishmen to order their own affairs be vindicated. Yet it is no less than that right and that issue which is in question. Are we as a Nation to be bound to regulate our lives (against our will) at the behest of foreigners, are we as a Flying Community to regulate our flying in our own country at the behest of foreigners and a Ministry of Civil Aviation, whom we know not to possess the practical " know-how " of Aviation, or are we to be masters of our own fate in our own land ?

What we can do about it, if the Ministry do not, or will not realise, that these proposals are as unpopular as they are unsound, is to write to our M.P., every one of us, and ask him to vote against the Order, or the Act, whichever it may be. We can demonstrate and finally we can flatly refuse to carry out the provisions of the Order. In short we can exercise the right of every working man to " Go on Strike." It is time the non-Trade-Unionists organised some strikes of their own.

We believe that not until England has shaken off the shackles which bind her and regains her vital freedom will she ever be great again. Too long have we " put up with it " and allowed our Freedom to be curtailed in the dubious interests of more dubious Planning. It's time to put our feet down—let's start here.

GLIDING ON THE COTE D'AZUR

The Fayence Regional Centre

by GUY BORGÉ

THE Fayence Soaring Centre, in South East France, is 40 miles from Nice, and 27 miles from Cannes. It shares an old Air Force field with the Cannes and Nice Aero-Clubs under the name of " Association Aéronautique de Fayence."

This year, the Association organized gliding and soaring courses at low rates : a daily cost of 500 francs (11s. 7d.), including bedding, food, accommodation, and flights. Among the great variety of Holiday Soaring Camps, I chose Fayence, which offered plenty of different meteorological situations, giving interesting flights and good soaring practice. Another reason for this choice was the absolutely constant fine weather on the Côte d'Azur, in South East France. In fact, August, 1948, was wet and stormy in the greatest part of Europe, but meantime the weather at Fayence remained splendid, and each day soarable.

The Fayence Instructors, Messrs. Landi and Soyez, both Silvèr " C," dispose of important equipment : " Caudron C. 800 " and " Castel 25 " two-seaters, a " S.G. 38 " (not used), a " Castel 30 S," an " Emouchet," 3 " Nord 1300," and a " Nord 2000 Olympia." This last one is fitted for high altitude work with oxygen bottles behind the seat and a complete instruments panel. For launching and transport we had a Ford winch, a Morane 502 plane, a Jeep, Dodge, and Ford lorries.

This equipment is sufficient for all forms of flying : instruction from ab initio to Silver " C " standaid, high altitude performances in waves or aerological survey of the country.

The airfield, bombarded during the war, is not absolutely flat, and an altitude difference of 30 feet exists between its south edge and the centre. This circumstance gives many surprises to beginners when they try to land. They think they are going to touch our Mother Earth, but it disappears, and they are still flying.



" C 800 "

The aerodrome is situated in a sort of hollow, opened where it faces the Mediterranean Sea, high mountains surround it. Plenty of lift is found on these mountains in good south or east winds, giving possibilities of enjoying some long trips. During the mistral, which blows from the north west here, the corner of the hill upholding the Fayence village is soarable, and one acquires strong impressions in this lift by flying close to houses and the church. The mistral is generally fast and turbulent, although strong and periodical thermals may then arise in the wind-shadowed hollow between the Fayence hill and the next mountains. I once found some 12 feet/second up, but I had to fly at 45 m.p.h. because of the turbulence. I neglected any lift inferior to 5 feet/second : the wind was too strong, and the height acquired remained insufficient in proportion to the drift.

Thermal Soaring remains the most frequent at Fayence, because of the strength of sunheating, which creates plenty of blue thermals. They climb quicker and higher than anywhere in France, but their habits are very capricious. On certain days, it is very difficult to soar without a good knowledge of the field and " soaring intelligence." One must look carefully at the wind sock ; and watch the smokes, for convergence.

Without that technique, it would be impossible to soar : after casting off at 700 feet, a 6 feet/second down-current would give just time for landing.

It is then comprehensible why the instructors want to increase the number of useful smoke candles. According to their words, they would pay very much for permission to put a flag on the Fayence bell-tower.

On other days, soaring is easier, and lift exists anywhere on the field. A batch of " C " badge holders are put in the " Emouchet," irrespective of style.

But the thermal currents are too uncertain, and have never produced a Silver " C " duration. I was lucky to achieve at Fayence the best duration in thermals : 4 hours 7 minutes, the local record being 5 hours 15 minutes by Mr. Landi in slope lift. I thought I might exceed five hours, but this hope vanished in a brutal down draught.

Some very interesting trips are possible in this country owing to its mountains and hills ; it is nice to soar above the Côte d'Azur. It should be easy to achieve Silver " C " distances on a triangular circuit, but the difficulties reside in the necessity of having observers ready in time at two predetermined places. In straight line, cross countries are not easy for pupils, in such mountainous country, where the landing fields are rare. Once Mr. Landi went to Saint Auban, his goal (49 miles), and Mr. Soyez to Cavaillon (86 miles).

In the February number of *Sailplane*, I spoke of the altitude flights at Fayence in waves. How



The Fayence School.

Mr. Landi, winched in a " C. 800 " two-seater, had climbed to 20,300 feet and broken without official barographs alas, a world record. Wave lift was found several other times, and numerous outstanding flights performed.

A pupil, Mr. Favot, reached in a " Nord 1300 Baby " the 14,800 feet level, but did not climb higher because he believed he had only a 13,150 feet barograph, and he was afraid of spoiling the chart for his " C " badge.

It is very interesting to compare the wave flights accomplished at Saint Auban and Fayence. For instance, one notices that it was not possible to soar at Fayence when the Saint Auban pilots achieved outstanding climbs; conversely, Saint Auban does not find anything when the Fayence people are getting excellent lift. At Saint Auban, the lenticular clouds are sure indicators of the wave ascending currents. At Fayence, all the altitude flights so far have been made without lenticular clouds in the sky. Whenever these occurred, they must have shown a lift at too high a level; and it was impossible to soar on these days.

During my stay at Fayence, in August, I noticed during the mistral some splendid " text-book " lenticular altocumulus, certainly at great heights. On the Friday, 13th August, they were spreading everywhere in the sky at Fayence and above the Côte d'Azur from Nice to Cuers (see the map printed in the February issue) and over the Mediterranean Sea. I think that some extraordinary wave flights could be attempted in summer here, but only very high, and a long aero-tow would be necessary to catch the lift.

At Fayence I saw also some strange flights, giving existence of new up-currents unknown in kind. For instance, on the 11th August, 1948, the instructors had just rigged their new " Castel 25 " two-seater, and they wished to try her through calm air. In her, Mr. Landi was winched at 7.30 p.m. with a pupil. Wind was variable in speed, and in direction around the 360 degrees circle. Sometimes it blew from the east, and brought the Grasse perfume smells; sometimes it came from the west, and gave my skin a hot sensation by a foehn effect. At the precise time when the wind was changing, Mr. Landi found at 160 feet a 10 feet/second up current, narrow and very turbulent, in which he circled to 2,700 feet. Although this lift was still alive, he had to come down because of the arrival of night, and he landed in the dark. This flight surprised everybody, and nobody could explain it. The only certainty was the relation between the wind veering and the existence of the lift, and this fact had been observed in several other flights. But what sort of up current was it, if one puts aside thermals or waves or a slope lift or a storm lift explanation.

All these characteristics show the variety of aerological conditions prevailing at Fayence and the interest in soaring under so fine a climate, in so nice a country: the Côte d'Azur.

THE LUNAK L-107

ANOTHER CZECHOSLOVAK HIGH-PERFORMANCE SAILPLANE

By Jacques Cochemé

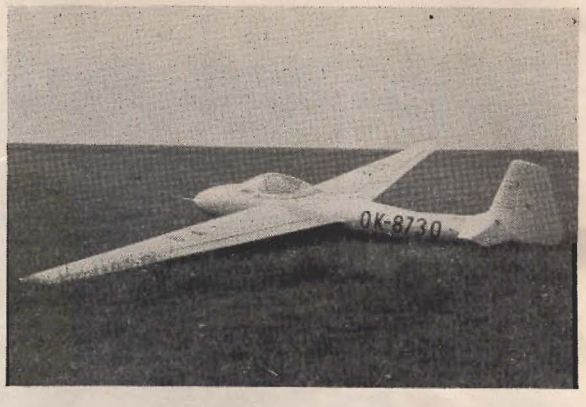
THE "Lunak L-107" appears to be a small high performance sailplane of the "fast" and "hard" variety. This type of glider which was represented at the Swiss International by the Swiss "WLM" was beaten there by the lighter and relatively "soft" and "slow" machines, which we owe to the genius of Herr Jacobs and the skill of his followers, because of its relatively high rate of sink (imposed both by its weight and speed) during the days and the intervals of light lift. However the performance of the "WLM" during the races against time and aerobatic display was impressive. Such a type has obvious advantages and would do very well in conditions of the kind found in Russia and Texas when achievement is limited by time. It would be very interesting to see to what use it could be put by a deep instability exploiter like Axel Peisson. Its fast towing speed allows for a great variety of tugs and fast retrieve; especially in a head wind (which they often are).

Whether a machine of this category is desirable in this country for all round soaring remains to be proved. The nearest approximation to it which we are likely to see here, unless it becomes once more possible to hold international competitions, is the long awaited "T.M.2" of the Hawkridge Aircraft Company.

The "L-107" is a mid-wing cantilever sailplane made of pine and birch plywood. All the fittings are of aluminium alloy and protected against corrosion. The wings have a main box spar and are entirely covered with diagonal plywood. The main spars of the half wings are joined together by two taper pins; and the half wings are hinged at their attachment to the fuselage for ease of assembly, an arrangement with which we are familiar. The wing is fitted with dive brakes and landing flaps, the control system of the latter being coupled with the control system of the ailerons, in such a way that, at landing, the ailerons are deflected as landing flaps without loss of ailerons control.

The oval fuselage is of orthodox construction, but the one-piece plexiglass hood moves longitudinally on three rails and is opened by pushing backwards. If this works properly, and leaves the cockpit draught and leak proof, it will constitute an admirable solution to a problem which can be an infernal nuisance. The visibility of the pilot is claimed to be excellent and should be at least good. The landing gear consists of a wheel and main and tail skid. The monospar stabilizer is made of one piece and attached to the fuselage at three points. It is adjustable on the ground. It is covered with plywood as well as the fin. The elevator and rudder are fabric covered and fitted with ball bearings. The elevator is statically balanced and equipped with a trimming tab controlled by the pilot.

The flight controls are of the normal type but the rudder bar is adjustable. Transmission of the forces to the surfaces is by rod, wires and cables.



The "Lunak L-107."

All moving parts are running on ball bearings. The landing flaps and ailerons are lowered by means of a crank placed on the left hand wall of the cockpit. On the same axis a small lever controls the elevator tabs. The dive brakes are controlled by a lever also placed on the left hand wall of the cockpit.

The seat is arranged for back type parachute. The instrument panel comprises: airspeed indicator, altimeter, variometer, turn indicator, compass, clock and towing release.

Dimensions:

Span, 45.93 ft.
Length, 21.8 ft.
Height, 4.82 ft.
Wing Area, 140.08 sq. ft.

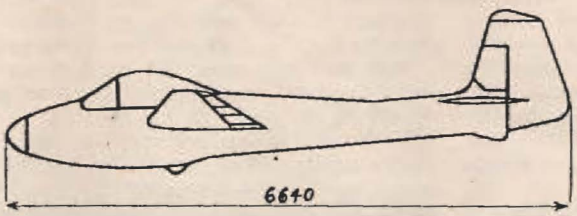
Weights:

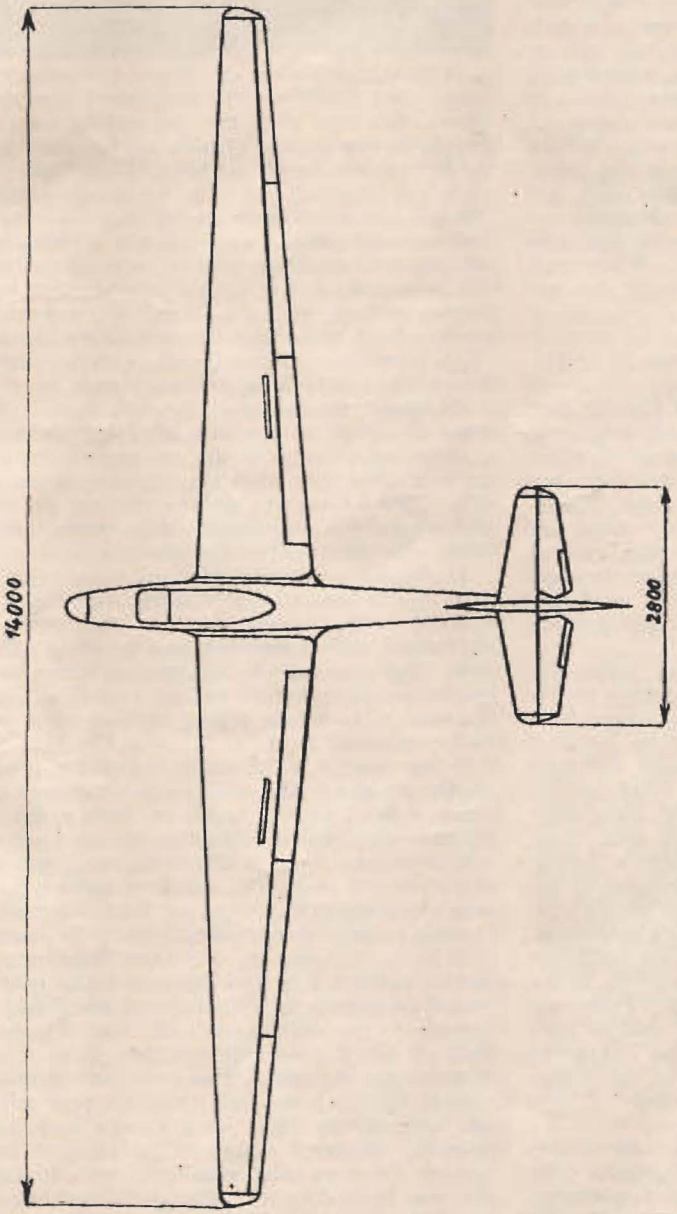
Empty, 429.9 lb.
Loaded, 650.45 lb.
Wing loading, 4.64 lb./sq. ft.

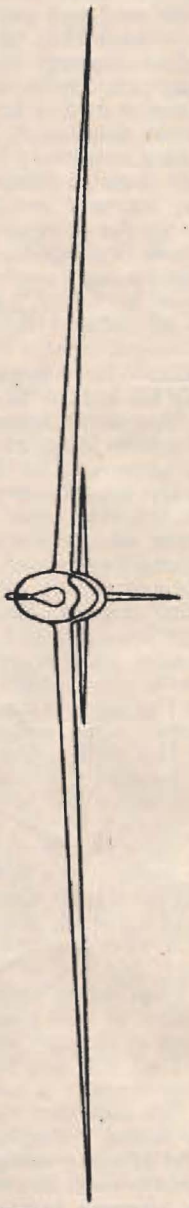
Performance:

Gliding angle, 1:24 at 49.7 m.p.h.
Minimum sinking speed, 2.78 f.p.s.
Sinking speed, 5.4 f.p.s. at 68.3 m.p.h.
Optimum speed, 62.1—74.5 m.p.h.
Landing speed, 34.1 m.p.h.
Maximum permissible diving speed, 217.5 m.p.h.
Maximum permissible diving speed with dive brakes extended, 155.3 m.p.h.
Maximum permissible speed with landing flaps down, 74.5 m.p.h.
Maximum permissible towing speed, 155.3 m.p.h.

If the stalling speed is not given because it is thought that with modern gliders this quantity has lost its significance, such an opinion can only be respected, but I would have liked to know the sinking speed with the flaps down in order to decide whether they could be used for narrow circling. By giving an optimum range the makers no doubt wish to imply that the polar curve, which would make interesting reading, has a useful long flat top.


6640


14000
2800



COMPETITION
"IS IT WORTH WHILE?"

DUNSTABLE 1948

By DAVID PRICE

TEN weeks after the end of the London Gliding Club's August Course, I was sitting opposite the Headmaster at lunch. He looked at me over the chrysanthemums and demanded: "Dicky Bird, Dicky Bird. What's that for?" I blushed, for the badge was new. "That, sir, is the 'B' Gliding Badge; G" I added as an afterthought, "stands for Great Britain, not gliding."

Eleven weeks before I had stepped into the gas lit rain on Dunstable Town Station, and splashed over to the bus stop by the "First and Last."

"Rifle Volunteer only," called the sleepy conductress, and as I put my suitcase down by a dirty crate of miserable hens, she rang the bell and we jerked off through the wet darkness, stopping by glowing noisy pubs and silent dripping trees. At each stop a gust of air blew in, cold and damp . . .

In the morning it was fine and keen. With a few other coursers, I went out to watch the flying. Twelve days to learn to glide. Twelve days, but for us, six were non-flying weather. Monday was fine. In the afternoon the first taste of the beast in motion. I climbed on the "Primary." Wheatcroft, the instructor, came solicitously over: "Are you strapped in tight?" he asked gently.

"Yes," almost inaudibly.

"Can you breathe?" Most solicitous.

"Yes." I swallowed hard.

"THEN YOU ARE NOT IN TIGHT ENOUGH!" With that shout apprehension vanished, and I was able to listen to my instructions with some attention. Then came: "One flag!" And the nose ring rattled as the cable swept straight and tight. Then: "Two!" And with a jerk we began rattling and bumping at an alarming pace over the ground, correcting hastily and late amidst the crashes and bumps and rattles; and the roar of the wind, and the panic of speed. Then silence, as the winch stopped, and the wing dropped.

Tuesday was the perfect training day, warm and fine with only a light wind. I was posted to the "Red Dagling" first and rattled off with instructions to correct much earlier. We went at an immense speed this time, really alarming. I kept the stick right forward; almost keeping my head on my knee to shove the thing forward. Bang, right wing, crash, correct, rudder, other side, rattle, roar, bang, crash, right rudder; and, suddenly, came a slightly larger bump. In a second the wind changed as the ground came right away, and then came the greatest shock of all which shook me from coccyx to occiput. With a last despairing rattle of aileron cable we stopped, and out of the corner of my eye I saw both wings droop forlornly earthwards. There was a moment of wild panic. I had been told to push the stick to the high wing, but never had I expected this. I sat still and looked pensively at the daisies showing through a rent in the plywood. It was quiet. My back hurt. I felt rather sick.

The sliding "Dagling" was useless, and so too was the hopping machine; for a dirty great boot had gone through its nose on its first run. Depression. As we returned to the hangar, Wheatcroft smiled and said: "We will engage a new winch driver." Awe for the C.F.I. changed to hero worship.

Followed four miserable earth bound days, when we "Daglers" monopolised the transport; during which those with "A's" and "B's" went on to "C's"; and it was not until Saturday that training began again. Then, gradually, low hops succeeded slides, and high hops, low hops; we progressed to high hops with turns, and gloom was gradually dissipated.

On Sunday, the "pukka" members took charge, even of the transport, but most of us daglers had some sort of a flight. In the evening I climbed into Furlong's "T21-B" with him, and rose on the wire into the cool clear air. Below, the earth stretched green and shadowed to the misty horizon, and above, the sky, with the sun setting crimson and purple in the west. Quietly we hummed over the ridge, over the bowl, and back to the Knob; feeling each rise and fall firmly in the seats of the pants. After a few minutes we swung over to Whipsnade's less crowded slope, watching the Sunday evening trippers below. There were the polar bears, posturing for buns, and the lions, asleep and aloof, and the zebras in their paddock—which is rumoured to be an excellent emergency landing ground. A group of the earth bound waved, and we, in our superiority, found it not unbecoming to wave back.

Overhead, far overhead, a red "Olympia" turned from the slope, diving towards Ivinghoe, and then, calmly and silently, turned over on its back, down and up again, into a stall turn and then back to the hill. The setting sun glinted crimson on its blood red wings, running lightly over each classic line: there was the poetry of motion.

During the week which followed, training progressed fast, and at last, after a familiarisation circuit in the "State Barge," came the "A" attempt. I put my usual two sorbo cushions on the "Cadet's" seat, and checked the control movements: more to occupy myself than to find out if, in fact, they did work; nervously pulled the plug once or twice, and swallowed hard.

"One flag!" The cable bowed the grass as it swept straight. We rolled an inch forward and the tail rose. "Two!" And away with a snatch, and up and up and up, until the B on the nose seemed over the boundary hedge. The cable ring grated and rattled in the nose. The winch shut down; and the nose came up as I released. I began to turn. How beautiful and silent everything is! Facing the club house, I corrected. But there didn't seem to be any response. I looked down and the winch crew waved frantically at the centre of the field. Dimly I pushed the stick a little forward to reach the field at all, for we were waffling over the power wires. As the earth came nearer, frantically, I shoved the stick towards the high port wing. As we touched the right wing slowly had begun to respond. Bump! Now, why did that happen? Except for a puzzled wonder, I was unperturbed. But was anybody else? Wheatcroft seemed to have had kittens and lost them again.



" Cadet " over the Downs.

" Nice ride ? " he said, " Quiet and sweet up there ? Dagling for you, my boy." Early bed and despondent sleep.

In the morning, I was shown the " Dagling," had a high hop, and then was handed the " Cadet," with injunction : " To curve round in one big circle, not half a dozen small ones." So that's what had happened ! " One flag ! " And yet again the earth opened out beneath, spreading fresh and green below in the sharp morning sun. The air blew fresh in my face, as B passed over the boundary fence and the winch shut down. I pulled the plug twice, just to make sure, and checked the rise of the nose. With a firm wind on my face and trepidation in my heart, I went into a right turn. Facing the cross-roads. Straight. Over the club house. " S " turns to take off my surplus height. Down over the hollow to a smooth landing on the other side. That, at last, was the " A." 103 seconds. Easy !

Then followed circuit after circuit, to practice keeping the nose down and take a " B." But also preparations for leaving. Farewell to Mrs. Turvey who fed us so well. Arrangements for an early call. Signing and checking of log books and certificate sheets.

Back in the West I thought that it was a wonderful sport but that I couldn't carry on : " Look at the expense ! " But I had done that before and come to the conclusion that I would have to get the money, somehow. " Where can I glide here. I should have thought of all this before." As a matter of fact I had, but found that it made not the slightest difference, even if I had to go a hundred miles each weekend. So, regretfully, I turned my back on the king of sports for the time being, and prepared to remain earthbound.

I cycled next morning to the village shop. At the cash desk I fumbled and dropped my wallet and everything spilt. The proprietor helped me pick it up, and, turning over my log book, he said : " Oh ! A gliding type, eh ? " A great sorrow welled up in my heart. " Mind if I look ? ' B,' live here ? Be here next week ? Pity ! " He handed the book back to me. " Well," he said, " care to glide with the A.T.C. next holidays ? "

Would I care to glide . . . . ?

See you in December, A.T.C.

GLIDING IN THE CENTRE OF FRANCE

FROM Monsieur Geoffrey Thiesson, " Moniteur de Vol sans Moteur," Gliding Instructor, at the Aerogare Civil d'Aulnat-Nord, Clermont Ferrant (Puy de Dome), we have received a letter which gives interesting details not only of the activities of his club, which bears the beautiful name of " Les Ailes Populaires d'Auvergne," but also of the way in which private flying is organized and officially encouraged in France.

When, says Monsieur Thiesson, there exist in any French town a group of people, ex-service flyers or merely private individuals, who are interested in the local fostering and spreading of things aeronautical, these people form a club. In order that its activity be properly represented officially this club joins the rest of the other French clubs within the " Federation Nationale d'Aeronautique." The Government on the other hand, runs a Department called : " Service de l'Aviation Legere et Sportive," which, in consultation with the Federation, appoints key instructors and controls their professional qualifications, and also controls the allocation of equipment (gliders, winches, cars, tugs, launching cables, etc. . . . . and aeroplanes), WHICH EQUIPMENT IS LENT BY THE STATE.

Furthermore at five important national centres young men below the age of 21 receive priority gliding training free of charge, all the year round.

The club where Monsieur Thiesson, who is therefore a Civil Servant, works is in a mountainous region which should be good for soaring. Not very far away is the " Centre National de la Banne d'Ordanche," a site on which Kronfeld once flew in the " Austria II." The club uses the following gliders :

1 " C 800," two-seater side by side trainer.
1 " Castel 30 S," single seater trainer.
1 " Emouchet," single seater trainer.
2 " Nord 1300," (French " G.Bs.").
1 " 40 P," high performance sailplane.

They operate a French Ford winch with two drums (probably similar to those which were so much admired at Samedan) and a light German retrieving winch. 1,000 metres of cable is used. One of the club's aeroplanes is equipped for towing. Broken and worn out material is replaced free of charge. But the club must pay for its upkeep and also buy its own petrol and oil and pay part of the Instructor's salary. Courses of lectures in theoretical subjects are run free of charge.

The number of flights done is about 500 per month in summer and 200 in winter. In 1947, 345 hours were flown for 4,294 launches.

Most charmingly Monsieur Thiesson ends his letter thus :

" Always at your disposal should you desire additional information. I wish all the gliding and light flying clubs in Great Britain a prosperous and growing activity and success in all undertakings." Thank you Monsieur Thiesson.

MET. AT THE SAMEDAN INTERNATIONAL SOARING COMPETITION

UNDER this title Dr. Eichenberger has written in the Swiss "Aero Revue" an extremely interesting account of the organisation and running of the meteorological service during the 1948 F.A.I. Competitions. It is introduced by a letter from M. Gehriger, the General Secretary of the Aero-Club de Suisse, in which we learn that Dr. Eichenberger, who was in charge of the service had been delegated by the "Office Aerien Federal."

The met. staff was also composed of Dr. Gensler and Dr. Zenone who, by kind permission of Dr. Jean Lugeon, Director of the Swiss Meteorological Central Station, each gave up a week of their annual leave to come and forecast for the soaring pilots. Mlle. Stiefel, also of the Swiss Meteorological Office, equally gave up her leave and was there for a whole fortnight, assisting the Doctors. This strikes an echo in my memory. Could it be that, even in enlightened Switzerland, gliding is too much fun, and the forecasting of the weather for it too truly meteorological a form of practical meteorology for it to fall under the Official Heading of WORK? We like to think that the explanation and the answer to this question is that Official Bodies the world over, scientific or otherwise, are by nature slow and conservative and that it will not now be long before, following the example of other countries, the study and forecasting of soaring weather becomes one of the normal activities of the Meteorological Services in Switzerland, in Great Britain, and elsewhere.

Dr. Eichenberger begins by describing the organisation of the service which he ran. He tells us that it was an improvisation (a very satisfactory one, from what I have heard), using, however, the experience gained during the competitions of the previous year.

Disparate elements had to be gathered and coordinated besides the personnel of volunteers. The importance of local soundings had been appreciated and the Aviation Department of the D.C.A. had provided a pilot, M. Kurt Sempert, and a Service "C-35," for high altitude ascents which were beyond the reach of the private aircraft available. The readings were gathered by means of carefully calibrated meteorographs. In this country direct human observations are preferred; but there is no doubt that a satisfactory meteorograph well calibrated can save a lot of trouble. Equipment necessary for making synoptic observations was already partly available at Samedan: the panoply was completed by borrowing from the Swiss Meteorological Office and from the Service Meteorological Organisation; and in the same way the paraphernalia of forms, charts, and diagrams with which the meteorologist at work surrounds himself was also procured. Finally, a teleprinter, most indispensable stuttering story teller, was installed.

About the location of the meteorological office at Samedan the Doctor is not very enthusiastic: "... the most uncomfortable shack, by the side of a dusty road, and as dark as one could ever wish it to be. The door was kept constantly open, not through hospitality, but in order that we might see. Through it dust and visitors came in, endless interruptions to a work which it was necessary to do quickly."

Dr. Eichenberger, although I was not there, I think that I understand; and I sympathise with you.

The next section of the article details the functioning of this improvised and specialised meteorological service. Its main task was, every morning, to inform the organisers of the suitability of the various types of flights included in the competition. To the same end, a long range forecast was required every afternoon, for the planning of the activities of the next day.

In the case of certain of the tests it was in fact necessary to make a final decision on the previous day to give the Official Observers time to reach their stand on distant peaks. The daily curriculum ran thus:

"05.15. Plotting of the latest charts. Isobaric and frontal analysis for the area Europe and Atlantic being obtained by teleprinter. Drawing of a detailed 4 o'clock synoptic chart comprising Switzerland, North Italy, South and South East France, Southern Germany, Austria and West Yugoslavia.

"06.00. Take off of 'C-35' for vertical sounding to 7,000 metres. Simultaneously, weather permitting, a pilot balloon was sent up for wind finding.

"07.00 to 08.00. Working out of the soundings. Plotting of radiosonde ascents from Strasbourg, Lyons and, only too seldom, from Milan. The radiosondage from Payerne would come in between 8.15 and 8.30 and smartness was required to have it plotted on the form in time.

"08.30. Briefing of the pilots. The met. man would generally appear at the last moment to give the competitors an idea of the soarability of the Engadine and neighbouring areas.

"Before the briefing, often with the help of data still incomplete, it was necessary to decide whether the test which had been selected for the day should be flown or replaced by another."

Forecasting for the Engadine, the Doctor points out, is difficult as the area is astride the north and the south slopes of the Alps. The fact that it was a soaring forecast which was required did not make the task any easier.

A problem which has long worried me, and which I have been able to consider from, so to speak, both ends, is to decide how far the forecaster should advise

the pilots, and those whose duty it is to control them, in the actual making of flight planning decisions. It is common to hear people say: "So and so is a good meteorologist, unfortunately he does not know much about gliding and, consequently, he is not as useful as he might be." There is no doubt that, during the war, very successful forecasts were made by men who had flying experience, but those very men, having thrown the weight of their knowledge in the hesitating scales of operational decision sometimes took more than their just share of the anxiety and regret brought about by mistaken moves. It might be argued that those people who complain of a lack of specialisation on the part of a forecaster are themselves responsible for this inefficiency in a liaison the weak link of which is their insufficient knowledge of meteorology. A pilot should not expect the forecaster to tell him what to do on a particular day any more than he expects the aerodynamicist to tell him at what speed to fly. That it is the duty of the forecaster to give as clear and detailed a description of the weather situation and of the developments expected; and that his tasks ends there: as additional responsibilities are unfair to him and might vitiate his judgment.

The meteorologist who goes out of his way to tell soaring pilots what to do is the most likely to hear the stupid reproaches prompted by their frustration. Let us therefore take a middle course and decide that the forecaster should know enough about soaring to recognise the weather features on which he should enlarge, or even emphasise, and leave to others the onus of making decisions about which advice, if given should be strictly, "off the record."

The duration of the meeting was graced with a period of unstable air. To assess the soarability of such air and its other important attributes such as condensation and freezing levels, soundings are necessary, better still, lines of soundings which will provide a cross section.

"The soundings from Strasbourg, Payerne, Samedan and Milan made it possible to reconstruct a section of the atmosphere across the Alps. Whilst those from Samedan, Payerne and Lyons gave an indication of the changes westwards. Unfortunately a sounding from Milan was seldom obtained so that one was usually left in a state of uncertainty concerning the south slope of the Alps."

"In the afternoons a fresh wind finding sounding was often made; in order to obtain additional data on the forecasting and the study of the Majola wind."

Even over flat country, the forecasting of the cloud base from aerological data, such as soundings, without the corrective of the intelligent use of long local experience, is a very difficult business. In this country, the height of cloud base is almost invariably underestimated in soarable weather. To have to come to a decision on this single item of forecasting alone must have proved a formidable task. All the more formidable that it was obviously important to decide whether the cloud bases were stuffed with mountains or not. This task, and that of forecasting the force and direction of the wind below a certain height, I certainly do not envy Dr. Eichenberger and his colleagues for all the beautiful mountain scenery in the world!

JACQUES COCHEMÉ.

(To be concluded next month).

A VISITOR FROM THE ARGENTINE

WE were delighted to see JUAN B. CHOURROUT this autumn and did our best to show him some soaring in not very suitable weather. One Sunday at Dunstable he had a trial trip in the "21B," along the ridge. Then Laurence Wright lent him a "Gull" for an hour's slope soaring. Verdict: slopes are attractive, but incredibly easy by comparison with pure thermals over flat country.

He was most impressed by the Club buildings, already shining with new paint, and the enormous variety of machines and trailers, some of which date back to well before the War. On a second visit we saw the Hawkridge workshop, where he was able to inspect the "Horton IV" and several new types.

Another Sunday we visited Redhill. There Anne Douglas gave him an aero-tow in the scarlet "Olympia." It was no day for soaring, but the tow was high enough to be able to test the "Olympia" well and truly, and he confirmed an order from the Albatros Club for a couple of these machines. They should arrive in time for the 3rd Annual Contest, which will be held this year in December at Merlo, Buenos Aires, and it will be interesting to watch their performance.

DONALD F. GREIG.

ON Sunday, 14th November, the ashes of Donald F. Greig, who met his death flying in the Italian Alps, were scattered on Dunstable Downs.

The simple ceremony was conducted by the Rev. W. French, M.A., King's Chaplain and Vicar of Dunstable, who was attended by a surpliced cross bearer.

The casket containing the ashes was carried by Geoffery Stephenson.

The selected spot was that part of the Downs owned by the London Gliding Club, from which thousands of hand launches have been made and from which countless pilots commenced their adventures in soaring flight.

D.H.

OFFICIAL NOTICES

THE ROYAL AERONAUTICAL SOCIETY

SINCE the accident in February this year in which Robert Kronfeld met his death there has been a growing desire amongst those who knew him and his work, to pay tribute to his memory. Such tribute could well take the form of a memorial fund to stimulate gliding and soaring in this Country.

Most people will be aware that Kronfeld had been prominent as an exponent of the art of gliding and soaring flight for over 20 years. It might even be said he was its greatest exponent. It was his achievement in winning the "Daily Mail" prize offered in 1930 for a double crossing of the Channel by glider which first brought him to the notice of the British Public, though he already held the Continental records for distance, duration and height.

Four years later, in the face of the Nazi invasion of Austria, Kronfeld came to reside in England and thereafter was active in gliding and in the design of low powered aircraft. He became a naturalised British Subject and in 1939 offered himself for military service. He was commissioned in the R.A.F. and engaged in development work on gliders for the Airborne Forces attaining the rank of Squadron Leader. In 1943 he was awarded the A.F.C.

After demobilisation he became a Consultant Test Pilot engaged in ab initio research on Tailless types of Aircraft. This was in association with General Aircraft Ltd. and Armstrong Whitworth Ltd., and apart from a special journey to Canada at the request of the National Research Council for similar research, he so continued until his death.

He was killed whilst carrying out critical tests of a tailless glider connected with the General Aircraft programme.

He is greatly missed. His enthusiasm and ability were invaluable to the gliding and soaring movement. His exceptional skill was matched by his personal courage.

It is therefore, proposed to create by public subscription a fund which will have for its main object the encouragement of the gliding and soaring movement as a tribute to his memory.

The undersigned friends of Robert Kronfeld have constituted themselves a Committee for the purpose of making this appeal and receiving subscriptions, which should be sent to Mr. Lawrence Wingfield, c/o The Royal Aeronautical Society, 4, Hamilton Place, W.1., marked Kronfeld Memorial Fund.

F. F. Crocombe,
B. A. G. Meads,
J. Laurence Pritchard,
S. Scott Hall,
Lord Sempill,
B. S. Shenstone,
P. A. Wills,
L. A. Wingfield (*Chairman*).

December 3rd, 1948.

THE BRITISH GLIDING ASSOCIATION

Londonderry House,
19, Park Lane,
London, W.1.
2nd December, 1948.

WITH the object of stimulating interest in gliding during the winter months and to encourage research into winter flying conditions the Kemsley Flying Trust has deposited cash prizes to the value of 100 guineas with the British Gliding Association, to be competed for between 12th December 1948 and 20th March 1949, both dates to be inclusive.

The prizes will be awarded as follows:—

For the longest cross-country flight with aero-tow launch in a sailplane—£42. 0s. 0d.

For the longest cross-country flight commencing with a winch or "bungy" launch in a sailplane—£42. 0s. 0d.

A donation of £10. 10s. 0d. will be awarded in each case to the Gliding Club from whose premises the flights commence.

The competition is open to pilots of "C" Certificate category and above, and is limited to flights in the British Isles.

Qualifying flights may be made in Club owned or privately owned aircraft.

The minimum qualifying distance is 15 miles taken in a straight line from the point of take-off in the case of a winch or bungy launch, and in the case of aero launch from behind a line drawn through the starting site at right angles to the line joining the starting site to the landing point.

All current Airworthiness Requirements and Air Navigation Act Requirements, so far as they apply to pilot or aircraft, must have been complied with.

In the case of an aero-tow launch, release must be at a height no greater than 2,000 feet above the point of take-off.

There is no need for pilots to give prior notice of their intention to compete for the prizes, but qualifying flights should be registered with the British Gliding Association as soon as they have been made, and supported by the following documents and information:—

(1) Aircraft type, owner, C. of A. number and date.

(2) A certificate over the signature of two witnesses, preferably Royal Aero Club or British Gliding Association observers, testifying the exact place, date and time of departure, and method of launch. The pilot's name and C. of A. number of the aircraft must also be given on this document.

(3) The signature of two reliable witnesses who should testify as to the date, time and exact place of landing.

(4) A barograph chart of the flight duly certified by a Royal Aero Club or British Gliding Association official observer, or alternatively two responsible persons.

(5) A recent calibration chart of the barograph. (The Judges will reserve the right to ask for re-calibration of the instrument if it is considered necessary).

(6) A pin-point reference to the landing place, taken from a ¼-in. map.

(7) A short narrative of the flight, with details of the meteorological conditions prevailing and phenomena encountered.

Qualifying flights together with all relevant documents and information must be lodged with the Secretary of the British Gliding Association not later than the first post on Tuesday, 29th March, 1949.

The following have kindly consented to act as Judges :—

Colonel R. L. Preston, C.B.E.

Captain A. G. Lamplugh, C.B.E.

A. Goodfellow, Esq.

The decision of the Judges on all matters concerning the competitions is final.

PROBLEMS OF THE ULTRA-LIGHT AEROPLANE

By A. R. Weyl, A.F.R.Ae.S.

THE ultra-light aeroplane is new in name only. The prefix " ultra " arose of bitter necessity. Most " *light* " aeroplanes sail under a false flag to-day ; they have grown to enormous weights, carry families and whole tribes ; for people of average income, they have become far too expensive. And they require genuine pilots, not amateur fliers.

Actually, the ultra-light aeroplane is as old as aviation. It is the expression of the desire of ordinary people for a very personal device with which everybody can fly through the air. The man in the street does not want complicated " flying machines " fit for engineering experts. This longing for personal flight and for a popular aviation, i.e. for a " *bicycle of the air* " is still not yet fulfilled. The technical possibilities for a popular aviation in which everybody can join in, exist. But as the result of all promises made in this respect, the man in the street invariably discovered, that some privileged individual flew through the air, while he was among the crowd who made him fly and paid for it.

The history of the ultra-light aeroplane goes back thirty years and more. Yet its conception and application was persistently misguided and misinterpreted.

Well-meant, but senseless " *efficiency* " competitions, stubborn, dogmatic designers and the exclusiveness of professional pilots always succeeded in leading the beginnings of a popular aviation into blind alleys. Record-breaking aircraft were bred which were as little use to the man in the street, as a racing horse to a milkman's cart. Pocket racers of suicidal qualities for the expert pilot, or underpowered flimsy contraptions were created, with which the man in the street could not possibly have anything to do. If this was not sufficient to deter the development of a popular aviation, government authorities stepped in with restrictive practices which were based on the pretext of public safety, but which effected little else than keep the ordinary man from flying.

Some past experience provides excellent teaching. About 1909/1910, the Brasilian " Santos Dumont " and the German " Hans Grade " offered the world types of ultra-light aeroplanes which were cheap, safe and very easy to fly, *after self-tuition*. The " Demoiselle " of " Santos Dumont " fell into the hand of professional exhibition pilots, was hotted up and adapted for stunt flying. The " Grade " monoplane, on which most German pre-1914 pilots learned to fly, with the lowest accident figure (in spite of a tempermental two-stroke engine), was " murdered " by the military, because it had unorthodox controls. What happened to the ultra-light aeroplanes of the Lympne Competitions (1923/1924) ? Flown by professional pilots, they excelled in marvels considering the miles flown per gallon. What little does this mean for the man in the street. He does not want to buy miles ; he wants *to fly*. No real attempt was made to base a popular aviation on the few British designs which were really worth further development. Instead, the De Havilland " Moth " was selected, distinctly not the flying motor-cycle of the man in the street. It was expensive, far beyond the means of an average youth, and you could not build it yourself. You had to be certificated to maintain it. Since then the " Moth " has grown from 60 h.p. into a 130 h.p. trainer, and nobody would buy it in order to fly it just for fun. It is a military basic trainer.

For a popular movement on the basis of safe and inexpensive aeroplanes to succeed, it should be realised that the aircraft category to be fitted for this, can neither be a *minimum*, nor a *maximum* aircraft.

Minimum horse power, minimum weight, minimum size, minimum performance and minimum safety are no objects with which the aim can be achieved. And the maximum of miles flown per gallon is of exactly as little value than the maximum velocity, the maximum lift co-efficient or the maximum lift/drag ratio.

Any effort for performance, *apparent* convenience and *apparent* economy with an ultra-light aeroplane for popular use, reflects ill on the *actual* economy and is adverse to safety.

Minimum size, for instance, is so convenient for construction and housing. Yes, it is. But once you have flown such a minimum-size aeroplane, you will definitely forget all about this convenience.

The number of miles flown per gallon are so terribly important for saving petrol expenses, you might think. Should you be in the habit to collect miles, you might be surprised to find afterwards, that expenses *additional* to the petrol are very likely to make up for the difference. In fact, the petrol costs are but of minor importance. Hours flown are far more interesting. Initial costs and upkeep matter quite a lot.

What a practical popular ultra-light aeroplane should do, is to allow an amateur to take-off from and to land on *small fields* (aerodrome flying is expensive,

and there is no reason why hordes of amateurs should invade them), to carry its pilot and an eventual passenger with *safety*, and to do all this at little cost *per flying hour*. Moreover, all this should be performed with the same absence of spectacular publicity as a hockey match on the village play ground. And all this should be accessible for everyone.

From this results, that the design of a popular ultra-light aeroplane must be governed by two principles. One is *safety*, the other *economy*. When both are not excluding each other, an ultra-light aeroplane is born.

Apart from this, it must be stated that such a popular aircraft serves a *practical* purpose just as little as a hockey stick or a cricket bat. Like the sailplane, it has no direct commercial or military value. It, too, is no vehicle of regular transport: the dream to replace the 8.45 for the daily travel to the city will not be fulfilled by it, unless your employer is satisfied with your sporadic appearance at rather peculiar times. Also, there is reason to doubt if the professional pilot will be thrilled to perform in such a popular aeroplane. Yet, the real fun of flying through the air will be all yours !

The ultra-light aeroplane should cater for the *amateur pilot*. Many people long to fly, but cannot afford it. Moreover, not everybody has an aerodrome at his doorstep. For these, the ultra-light aeroplane of the kind discussed here, offers prospects. Moreover, there is no necessity to buy an aeroplane or to hope for a government subsidy. You may build it yourself.

Of course, not everyone who can drive a nail into a coffin, can lay claim to have a future as an aeroplane constructor. And the design of an aeroplane, however small, is not a matter for the amateur. But a group of eager hobbyists who approach the subject of home construction with a sense of responsibility and a desire to find out by learning from experience, will be in a position to construct a sound and airworthy aeroplane, provided that they have a design suited for it.

In addition, there are groups of technicians (in particular, ground engineers) and of engineering students who are well befitted to approach the construction of ultra-light aeroplanes, from approved drawings. These groups, too, have in many cases access to workshops in which they may work on their cloud-soarers.

SAFETY AS A DESIGN PRINCIPLE

Safety for the amateur pilot demands that the aircraft is easy to fly, that it " forgives " stupid manoeuvres, that it is free from vices, and that it is reliable.

Moreover, as humans are fallible, in the event of a mishap, the crew should have fair chances to survive in health and beauty. This is now being termed " *crashworthiness* " in official publications, leaving it open to imagination who is worthy to be crashed, when, where and why.

Generally, it is thought that an aeroplane which shall be easy to fly, must be *very* stable. However, too much stability is far from being amusing, especially when there are a few gusts about. Stick-free static stability is not even required for an ultra-light aeroplane.

But what counts much towards easiness to fly are absence of sensitivity, a good field of vision and a seat position which is as *low* to the ground as possible.

Non-flying designers usually fail to realise how much easier an aeroplane is to handle when its pilot can view his past, present, and future, instead of merely having a *guess* at it. It also makes directly for greater safety. The importance of a *low* seat arrangement for beginners is usually unknown. Yet it is an important factor too.

This does *not* mean that the *tractor parasol* deserves preference. Most parasols either have a restricted field of vision or the seats are inaccessible. In a very good ultra-light parasol I knew, a professor of aeronautical engineering had to be sawn out of the seat, because he was otherwise unable to extricate himself alive.

The question of low *sensitivity* is not alone, as commonly thought, one of dimensioning of control surfaces or control gearing (though this, too, reflects on it). One factor is the *wing loading*.

Apart from those who believe in " *dwarf racers*," most people seem to assume that a *low* wing loading is best. It is not. It would be, were ultra-light aeroplanes flown only in perfectly calm weather. As in our climate, gusts and wind of 20 miles per hour are quite normal, a wing loading of less than, say, 5 pounds per square foot would seem unpractical. This distinguishes the *motor glider* from the practical ultra-light aeroplane. Too low a wing loading has also made the progress of the little " Klemm " two-seater impossible, here and in the U.S.A. With a wing loading of only 3.1 lb./sq. ft. (when fully loaded), it was lovely to fly in calm weather, but on a sunny day with a few gusts about, the pilot needed skill not to damage the aircraft.

Small spans and *short* fuselages give very lively aeroplanes with sensitive controls. For the amateur, such aeroplanes are *perfectly useless*. For the experienced pilot they may be potentially dangerous, as such ultra-light aeroplanes convey the impression of a single-seater fighter, but usually lack the excess horse power of the latter.

The exclusion of a short span and a small fuselage means shattering of the dream of the " *pocket* " *aeroplane* which can be built on the kitchen table and assembled in the bathroom. Yet, as far as the conventional aeroplane is concerned, there is no great hope that this dream can be fulfilled in a way which would serve the interests of the amateur pilot.

A consolation is offered by the fact that *large spans* will not do either. This is because undue sensitivity in pitch under action of gust should be eliminated. The sensitivity in pitch against gusts is connected with the slope of the lift curve. This is the steeper, the higher the aspect ratio of the wing. The desire for a larger range of useful incidences makes lower aspect ratios more attractive.

FREEDOM FROM VICES

Serious accidents in amateur flying under reasonable weather conditions have two main causes : Inadvertent stalling and collisions.

The *stall* is hence the greatest danger for the

popular ultra-light aeroplane. Commonly, it is imagined that the *spin* is the trouble. This is far from being the whole truth.

On *conventional* aeroplanes, the tail is subjected to *downwash* from the wing. The downwash is the result of the lifting airflow over the wing. *Stalling* means that the lifting airflow over the wing is disturbed. Hence the downwash changes, when stalling occurs. In consequence, on a stable aeroplane, a tendency to *dive* appears. This tendency cannot be corrected by the elevator before the aeroplane has picked up speed again. The more stable the aeroplane, the more expressed is the nose dive following the stall, provided that the aeroplane does not easily fall into a spin.

It is this *nose dive* which causes the most serious accidents when aeroplanes are being stalled near the ground. The better the aerodynamic characteristics, the more serious will be the consequences. A " wire cage " of a vintage of, say, 1912 is, hence, less dangerous. This is one of the reasons which make aerodynamically efficient ultra-light aeroplanes less safe for beginners. Specific designs for solo-training beginners will, hence, be practically separated from those for the more proficient amateur.

Retaining the conventional formula, we can do nothing to exclude stalling altogether. The best means to prevent *inadvertent* stalling is to provide no reason for the pilot to stall. Dangerous stalling takes place—excluding foolishness of the pilot in stunting—when a pilot tries to take off over obstacles from a field which is too small, or when the engine quits its service soon after leaving the ground.

Excess of power with a resultant *steep* climb is hence one great contribution to safety, and an engine which is reliable, robust and has a simple fuel feed, another. Both will practically exclude all stalling accidents. A pilot who is in a position to climb out of any spot, he has landed his aircraft in, has a *safe* aeroplane, though it may not be foolproof. Motorcycles are not foolproof either.

The *steepness* of the climb, notthe velocity of climb, is essential for safety. This proves that too high a power loading and erratic, though light powerplants are detrimental to the interests of popular aviation. We must take care to avoid this trap.

This, of course, does not exhaust our measures to fight the menace of the stall. Modern wing shapes tend to give *vicious wing dropping* when the stall is approached, aided by loss of aileron control. I have proved that this need not be, and that the remedy can be as simple as effective, without introducing complications by slots and slats.

The manner in which the *incipient* stall takes place, reflects greatly upon safety. First of all, we must demand that *warning of the approaching stall* is being given. Aeroplanes which display no stall warning, ought to be crashed on their first flight and never rebuilt. The absence of a stall warning is a grave menace to everyone, the experienced pilot and the amateurish beginner alike.

Aeroplanes with *docked* control surfaces so as to make them appear safe from stalling, should also be condemned. Moreover, most of these " safety " contraptions have their centre of gravity so far forward that unhealthy nose dives follow, once a stall is induced.

SPINNING

Whatever publicity departments may claim, the vice of spinning is inherent in *every conventional* aeroplane with conventional aerofoils. There is always a range of incidence at which autorotation is possible, though this range may either be very close to the incipient stall or at still higher incidences. When a conventional aeroplane cannot be made to spin, it can only be concluded that the controls (alone or in combination) are not effective enough, as to reach the incidence at which autorotation becomes possible. The provision of *slots*, incidentally, does not exclude the ability to spin, though it delays it to very high incidences, and two-control arrangements are no absolute protection either.

I know only of *one* actually built and flown aeroplane—a rather *unconventional* type—which seems to be fool-proof enough as to be considered safe against spinning (and perfectly safe to stall). This has been the " *POU-DU-CIEL* " of HENRI MIGNET. When autorotation should at all be possible at this " *flying slot* "—which I doubt on theoretical grounds—it must be so at quite improbable incidences ; no " POU " has ever been known to spin, either in free flight or in full-scale laboratory tests.

(To be concluded)

THE FUTURE OF A.T.C. GLIDING

WITH the formation of Reserve Command, gliding in the Air Training Corps has been under constant review. In October 1947 it was decided to reduce the number of gliding schools. At that time the Command had 84 schools for a total of 188 lines; but the number of cadets trained and passed was too small for this number of schools and their cost. It was therefore proposed to reduce this number to 50, for 100 lines, all remaining schools being over permanent sites such as R.A.F. Stations with the exceptions of a few advanced instructors sites such as Jalesand and Sutton Bank. On these R.A.F. Stations cadets could be accommodated at weekends, and the equipment was more secure. Schools are now reduced to 53, further equipped with the material reduced by the reduction. Working more efficiently they are training as many cadets as before.

Proposals have been put to the Air Ministry for new equipment which includes two-seaters, a new type of sailplane and new modified winches and retrieving cars. The new equipment has been approved by the Standing Committee of the Air Council, but not yet by the Treasury. With its introduction, cadet training will be raised to the circuit stage and the instructors, flying two-seaters, will find their work more interesting.

In anticipation for this instructor training has been stepped up : 13 instructors courses have been held at BAFO and nearly the same in the United Kingdom, resulting in an all round increase in instructors' standards.

The 50 remaining schools should reach a high standard of efficiency with their new equipment and pass out many more cadets at a more advanced stage and much more economically. Thus a desirable standard will be set for future development.

ULTRA LIGHT AIRCRAFT ASSOCIATION

WITH the publication of this Bulletin the Association reaches the end of the second year of its life, and before looking back on some of the events of the past year, we are very pleased to be able to announce that we have received two " birthday presents."

The first comes in the form of official approval of the new Ultra Light Category C. of A. Requirements by the Ministry of Civil Aviation. As our members know negotiations have been going forward for a considerable period and with this successful conclusion we may well be satisfied.

The introduction of this new category allots a definite and, in our opinion, much overdue place to the ultra light in the aircraft heirarchy, and with its concessions in design and material requirements should go a very long way toward cheapening the production of ultra light aircraft.

As all our members are aware, the old " Permit to Fly " which the new category C. of A. replaces, was suspended on the outbreak of war in 1939; what sort of catastrophe will be necessary to delete a C. of A. Category we do not care to contemplate ! However, from the design requirements side the movement can now be regarded as on firm foundations. Members designing and constructing to the new requirements know for certain that their aircraft will be allowed to fly.

The second present comes to us, but is primarily intended for our Groups. As our Groups will already know, our thanks for this present are due to the Kemsley Flying Trust with whom negotiations are proceeding—agreement having been reached in principle—for the purchase of six Slingsby " Motor Tutors." These " Motor Tutors " will be allocated to our Groups who will buy them on—so far as we know—a novel scheme of " pay-as-you-fly." The Groups will pay an initial deposit on taking over the aircraft and will thereafter pay an agreed sum for each hour flown with the aircraft until the full cost of the aircraft is met; it then becomes the absolute property of the Group.

These machines should be in the bands of the Groups by early spring of 1949 and appear to offer to many Groups a chance of getting into the air more rapidly than they had hoped. We hope that full advantage will be taken of this scheme. We can then really look forward to having something to show for our efforts beyond a great deal of paper work. The Groups who are lucky enough to obtain a " Motor Tutor " may rest assured that the Association will do its share to ensure the success of the scheme.

To look back for a moment on the past year it has included some first experiences. The staging of the Association's first Air Display and the first—albeit very small—Summer Training Camp. From both these events valuable lessons have been learned which we hope to put to good use on future similar occasions.

Another " first " has been the taking over of the production of this Bulletin by the members of the Executive Committee. The expenditure on a duplicator has been more than covered by the saving of outside agencies' costs within the first five months of operation.

Other achievements include the successful conclusion of the C. of A. negotiations discussed above, the formation of our own Inspection Organisation under Capt. K. M. Sturton and our own Design Team under Mr. A. R. Weyl, A.F.R.Ae.S.

Our affiliated Groups now number twelve and several more are approaching the stage of affiliation. Group membership has almost doubled since last year, whilst Individual Membership has remained static, almost as many members have " lapsed " as new members have enrolled. This is, let us face it, an unsatisfactory state of affairs and one which can be caused by either lack of publicity or lack of enterprise and activity. Publicity is an expensive item and has certainly not been indulged in to any great extent due to its heavy calls on our rather light resources. We have done our best by personal contacts to increase the membership, but our circle of friends, like everyone else's, is limited. We should like to see a better response to our appeal of two months ago for new members. One of your friends who is not a member of the Association must be interested in aviation. Get him to join. Now.

Sir Alan Cobham

It is with great pleasure that we announce that Sir Alan Cobham, K.B.E., A.F.C., has consented to become a Vice-President of the Association. Sir Alan, famous the world over for his many great pioneering flights during the 1920's, needs no introduction from us !

By his interest in our movement Sir Alan shows that his pioneering spirit is very much alive. We are proud that he is to be associated with us in our venture.

Assistant Hon. Secretary

As a result of our appeal, we are very pleased to welcome Mr. T. R. Swift to the post of Assistant Honorary Secretary of the Association. Mr. Swift will undertake duties which include attention to enquiries for membership and all matters pertaining thereto. He will also relieve the Acting Hon. Secretary of other routine duties. The committee extend a cordial welcome to Mr. Swift and look forward to a period of fruitful co-operation.

GROUP NEWS

Brookside Flying Group

Since the commencement of operation last April the Group has now completed some 200 hours flying without mishap of any description. Ten ab initio pupils have flown solo to date. New members will be welcomed. Enquiries should be sent to

Mr. L. Benjamin, 44, Pembroke Crescent, Hove, 3, Sussex.

Experimental Group

After considerable delays and setbacks the Group hope to have their "Bibi" through its C. of A. within the course of the next month.

Aerotech Club

For the past few months the Group has been busy completing the "BAC VII" which should shortly be ready for flight trials. There is a possibility that this Group and the Experimental Group, with whom they share hangarage facilities, will shortly enter into discussions on the possibility of a joint training programme.

Thames Valley Flying Group

Our member Mr. D. Ogilvy, who is Hon. Secretary of this Group, sends us a news sheet; the first, we hope, of many. This news sheet tells us that arrangements have been made to share facilities with the Community Flying Club, at Reading. The arrangement covers use of each other's aircraft, and Thames Valley's use of hangarage and club house facilities belonging to the Community Flying Club.

Mr. Ogilvy writes subsequently that his Group is having difficulty in raising the funds required for the purchase of the "Chilton" which the Group hope to acquire. He will therefore, be very pleased to hear from "A" Licence holders interested in communal ownership, at his address, 9, Imperial Road, Windsor, Berks.

WANTED—VOLUNTEERS !

As members of the Association know, we have acquired the complete stock of Aeronca J.99 engines and spares from Messrs. J. A. Prestwick, the makers. These engines and parts have now, by dint of some very hard work on the part of some members of the Executive Committee, been transferred to Messrs. Maxim Engineering Ltd., of West Row, Ladbroke Grove, W.10, who are undertaking the overhaul and testing of the complete batch.

There are, however, apart from the assembled engines, considerable quantities of spares which require sorting and indexing. Such work if paid for by the Association would add considerably to the prices that we shall have to charge members for both engines and spares. We would, therefore, be very pleased to hear from any of our members who are prepared to help us in this task. It is not heavy physical work—the Committee Members have done most of that—and access can be had to the stock either in the evenings or at weekends, Mr. Rose Dale having very kindly consented to working parties being on the premises out of working hours.

We hope that members will come forward and offer their services. Those doing so should state the times and days on which they would be prepared to attend and we will endeavour to make up working parties to suit all volunteers.

All offers should be addressed to the Chairman, Materials Sub-Committee, 24, St. Georges Square, Westminster, S.W.1.

DESIGN SUPPLEMENT

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

U.L.A. Engine

1. Members are aware that for some time past we have been trying to interest the Government authorities in the need for a suitable engine of about 50 h.p. for ultra light aircraft. The supply of such an engine is vital to the whole future of our movement, but unfortunately the cost of engine development is too heavy to be undertaken by manufacturers without the certainty of a market. We are convinced that the market (both at home and overseas) will grow rapidly once the engine is available, and consequently feel that our case justifies government support to start the ball rolling.

2. Not wishing to prejudice negotiations in progress, we cannot yet make any formal announcement on this matter. In order, however, to encourage members to maintain their patience a little longer, we would like to inform them that an important step has at last been taken and that we have received some support for our proposals. Let us hope it won't be much longer before general agreement is reached and an engine is put into production.

"Herald" Progress

3. Members will be interested to learn that Hants & Sussex Aviation Ltd. designers of the "Herald" U.L.A., have now obtained hangar accommodation at Portsmouth Airport and anticipate speeding up the construction of their prototype aircraft in the near future. The "Herald" is a promising new design, a single seat, low wing monoplane of metal construction, which we described in last April's *Bulletin*. The first aircraft is to be powered with a 37 h.p. Aeronca J.A.P. engine.

4. Members and Groups in Southern England will be interested to learn that the firm also intends to undertake repairs and overhauls of aircraft and engines as soon as their new workshops have received A.R.B. approval.

U.L.A. Wheels and Tyres

5. We have received catalogues from the Goodyear Tyre & Rubber Co. Ltd., of Wolverhampton, showing their range of wheels and tyres. The smallest genuine aero wheel and tyre available is of 17½ ins. overall diameter, and is built to withstand a maximum static wheel load of 1,200 lb. This wheel includes a hydraulically operated brake, but the price is prohibitive for our purposes—being about £40 a pair !

6. Goodyear's have a full range of aero tyres and tubes to offer from 10 ins. overall diameter and upwards, which they suggest could be used with ex-R.A.F. tailwheels from disposal sources. They quote, for instance 3½ ins. × 4 ins. tyres (10 ins. overall diameter and 975 lb. static load) at about 25s. 6d. per cover and tube. Having a fair stock in this size, they can offer immediate delivery.

7. The most interesting item in their catalogues from our point of view, however, was a plain

aluminium " aero " wheel designed to accept a straight axle with plain bearings. This will take their 16 ins. × 4 ins. " barrow and trolley " tyre of 16.1 ins. overall diameter and 784 lb. static load. They offer us, as aircraft constructors, a special price for these wheels at £1. 0s. 3d. per pair, complete with tyre and tube ! Naturally, brakes are not fitted, but if the aircraft concerned requires brakes we would suggest a simple installation on the lines of Mr. Tips' ingenious design as fitted to the Fairey " Junior."

8. Since A.R.B. in their recently issued U.L.A. category C. of A. have accepted the principle of using commercial materials and accessories (except in the primary airframe structure), it would appear that their approval for the use of these " barrow " wheels on our aircraft is well worth obtaining. We are prepared to assist designers and constructors in this matter if they will let us have details of their aircraft maximum all-up weights and landing speeds.

OPERATIONS SUPPLEMENT

Contributed by F/O. I. G. Imray. Chairman, Operations Sub-Committee

The Zaunkoenig Training Scheme

The Zaunkoenig ultra light aeroplane which has aroused so much interest amongst our members has now been transferred from M.O.S to M.C.A., and through the good offices of our friend Mr. Peter Masefield, it is to be made available to the Association for test flying and experimental work in the field of training. The handling qualities of the machine were described in the Operations Supplement of the June *Bulletin*, but to repeat the main points, it is easy to fly and very safe, and accidents should only happen through serious misjudgment on the part of the pilot.

It has been claimed for the machine by its designer that anyone could fly the machine after only half an hour's instruction but so far this claim has not been substantiated. It is to be hoped that this Association will be able to do so. R.A.E. have stated that they have convincing evidence that the machine is an excellent " morale builder," and we hope to put it to good use as such.

The Operations Sub-Committee have drawn up a training scheme based on the " Zaunkoenig." which is given in outline below, and has categorised pupils into ten different classes. It is felt that Association members should be given the first opportunity to volunteer to fill the various categories and not only get themselves some flying training, but, as " guinea pigs," provide some very useful data for the Research Sub-Committee to sort out. Those members, therefore, who fall into one of the categories enumerated below, who live within easy reach of Gatwick (the present home of the " Zaunkoenig "), who can afford the time, probably weekends only, and who would like to volunteer are requested to write to the Chairman, Operations Sub-Committee, giving all relative information. At this stage no information can be given as to the possible date of the commencement of the programme.

Briefly then the sequence of instruction is as follows :

1. Familiarisation with the cockpit layout and operational data.
2. Slow taxying—straight and with use of rudder.
3. Faster taxying—straight with tail up.
4. Low hops gradually increasing distance.
5. Medium hops and landings.
6. Circuit flying.
7. General flying practice to " polish up."

Pupils have been categorised as follows :—

Group A—Power Pilots.

1. Pilots with small power experience (under 20 hours solo) and pilots out of flying practice for a considerable period of time.
2. Student Pilots with varying degrees of dual instruction but who have not gone solo.

Group B—Glider Pilots

3 " C " certificate holders with some dual powered instruction.
4. " C " certificate holders with no dual powered instruction.
5. " B " certificate holders with some dual powered instruction.
6. " B " certificate holders with no dual powered instruction.
7. " A " certificate holders with some dual powered instruction.
8. " A " certificate holders with no dual powered instruction.

Group C—Novices

9. Persons with varying degrees of air experience who have handled the controls of a light aeroplane in flight but who have had no dual instruction in the true sense of the word.
10. Persons with varying degrees of air experience as passengers.

RALLY AT CHRISTCHURCH

Sunday, 19th September, was the occasion of the first Ultra Light Rally and " get together " organized by the South Hants Ultra Light Air Club. It was also the first Rally to be organized by a Club or Group affiliated to the Association. Our congratulations to them for being first in the field. Group Captain Mole and I were present as the U.L.A.A. official representatives.

Situated at Christchurch, this go ahead Club is very fortunate in being able to share the hangarage and workshop accommodation of the local A.T.C. Gliding School, whose Commanding Officer is a keen member of the Club. It is very encouraging to see this grand spirit of co-operation between a U.L.A.A. Group and the A.T.C. ; it indicates the fulfilment in that area of one of the Association's main objects. The Club is very fortunate in having Lord Ventry as its Chairman, and Sir Donald Bailey as its Vice-Chairman. It has an active and live Committee of men all connected with the aircraft industry, as also are a number of its members.

At the present time the Club is concentrating on the overhaul and re-building of its Heath " Parasol,"

and I was informed that many willing and capable hands were available and the job should not take very long now. At the same time, the Club are negotiating for the purchase of a Taylor " Cub " (40 h.p. Continental, 1,050 lb. a.u.w.) which will be used chiefly for training purposes. Rather unfortunately they were " pipped at the post " in their negotiations to purchase an " Aeronca."

The object the Organizers had in view when arranging this Rally was chiefly a general display of representative types of ultra light aircraft. In this respect the Rally was somewhat disappointing, but a very useful purpose was served by our having the opportunity to meet the Organizers of one of our affiliated Groups, and to be able to discuss first hand with them the many and various points which it is rather awkward to discuss by mail, and also for visiting pilots from other Clubs and Groups to be able to visit their fellow Association members and compare notes. On the Club's behalf, the Association approached a number of ultra light owners and operators inviting them to attend. It is deplorable to have to state that the majority of our letters remained unanswered. The value to the ultra light aircraft movement of such Rallies cannot be over emphasised, and it is in members' own interests to attend these Rallies if it is at all possible.

However, there were assembled at Christchurch the Mikron engined Fairey " Junior," a " Tipsy " two-seater, one " Aeronca 100," a Taylor " Cub," and a Comper " Swift." The " Zaunkoenig " was unfortunately u/s and could not attend. It would have been most interesting to see the reactions of the Gliding Instructors to the Slingsby " Motor Tutor," but this machine was also prevented from attending owing to a prior engagement with a Battle of Britain display in Yorkshire. The demonstration of the " Junior," complete with aerobatics was undoubtedly the highlight of the afternoon, although a glider " beat up " followed by a down wind landing caused a bit of excitement. The other machines showed their paces, generally finishing with a " beat up " of the crowd.

In spite of the dearth of ultra lights and flying generally, it is felt that this Rally served a very useful purpose. Whilst thanking the Club for its hospitality we wish them the best of luck. May we hope that their next Rally will meet with the response from Association members that such occasions so richly deserve.

Siddeley Challenge Trophy

Our congratulations to Individual Member A. L. Cole was obtained second place in the Siddeley Challenge Trophy at Wolverhampton on Sunday, 17th October. Mr. Cole was flying a 15 year old Comper " Swift " G—ABUS, and averaged 122 m.p.h. Good show !!

PULL YOUR ULTRA LIGHT FINGERS OUT !

Contributed by Geoffrey Dorman, A.R.Ae.S., Chairman, General Purposes Sub-Committee

When I was asked to become Chairman of the General Purposes Sub-Committee of the U.L.A.A., I agreed with great pleasure, because I am glad to do anything which will enable the present generation to get as much fun from flying as my generation was able to get after the 1914-19 war. I had imagined that I would be in continual contact with the enthusiasm and impatience of youth which would be the driving force behind the U.L.A.A. in its efforts to get cheap flying once again ; and in this I was not mistaken.

I found that members of the Committee, most of whom are themselves young enthusiasts, do very much more besides the necessary paper work of committee men. They shift motors about and do work on JAP engines and whatever aircraft are available so that the Association as a whole shall benefit. But members of some Groups do not seem to be showing similar enterprise in their own areas. If they are to get anything done, they must realise that it is up to them to go to their airfields and get to work on their own aircraft and engines. Then we shall be much nearer to the day when we shall see plenty of young men flying group-owned ultra lights.

Do not wait to be led ; let us see more of the spirit of leadership which in the past distinguished the British from other races. Don't let lack of leadership in the private flying movement cause us to fall behind other nations, as we have so regrettably fallen behind in other matters.

You all know now that much is being done behind the scenes to get a few Slingsby " Motor Tutors " made available next spring, and I am constantly advocating that at the Annual General Meeting of the Association next March, we should be able to say that the " Motor Tutors " are now available, and are not still " pie in the sky." All the same I should like to hear a bit more clamouring from members for flying NOW and a bit more positive action on their part. But you must show some signs of local leadership, do not be content to follow like sheep.

Also, do not expect to get your flying for nothing. Always remember that what you get for nothing is, in most cases, worth just that. If your Group is one of those that will be lucky enough to get one of the " Motor Tutors," do not forget that you will have to buy it. The Kemsley Trust will advance the money, but you will have to pay it back. A proportion of the money that you pay for flying must go into a fund to repay the Kemsley Trust.

To qualify for a " Motor Tutor " you must, therefore, be a Group of substance. You must be able to find at least £100 in your Group in the first year. £50 of that will be repaid to the Kemsley Trust and nearly another £50 will go on the expensive but very necessary insurance.

So now is the time for all good men to come to the aid of the Association. Do not let winter lethargy set in. Organize some dances and other forms of terrestrial entertainment which will help you to raise some of that £100, then go ahead for the second or third hundred pounds. But do it yourself. Lead on ; do not wait for others to give you the lead or you will find yourself an " also ran," not even an " also flew." Pull those fingers RIGHT OUT.

Letter to the Editor

Dear Mr. Editor,

Will you be kind enough to allow me the privilege of using your well-known columns in order to say good-bye to the many friends I have made in the gliding fraternity during my three-year stay in England ?

Those years have been the happiest I have so far spent in my life, and it is with the utmost regret that I now find myself on the eve of departure with so much gliding to do in the short time left to me.

I have heard it said, and have read, so often that British gliding and soaring finds itself a little low with the lift giving out in these years immediately following the war. There is no subsidy it is true, but the Clubs of this country have made great progress in the field of self-help and determination. As one who arrived in this country at the end of the war and found " thermalling " starting once more, and as one who is about to leave and begin a very different life in Ceylon where there is not even an A.R.B. with whom to exchange stormy correspondence, I feel qualified to almost entreat those of you who have gliding at heart to stand by your own Clubs and make every effort to put British gliding where it so rightly deserves to be, in the middle of the map.

It is my wish to take back to the youth of Ceylon the example of fine sportsmanship and team spirit displayed by the gliding clubs of Great Britain, the last stronghold of sport for sport's sake.

My whole life is saddened when I think of the close friends and companions I am shortly leaving behind. But I take heart at the thought of possibly starting a gliding club in Ceylon, and if all my friends pay me the visits I hope they will, then it is on my part the easiest matter to assure the very warmest of welcomes.

So au revoir to you all, may we meet and soar together again, and many thanks for the hand of friendship you so readily extended to me.

Yours " thoimally ",
P. Ray Wijewardene.

NEWS FROM THE CLUBS

THE SHOREDITCH TECHNICAL COLLEGE GLIDING CLUB

This club was founded in October, 1947. The first to be formed in a Training College ; its aims are clear and succinct : " to provide the cheapest gliding in Great Britain ; to train glider pilots to take " A " and " B " licences, who will then be fully qualified to join a fully equipped club for further training ; to train useful ground personnel." For anyone not acquainted with the resource and the energy of the young men who formulated it this would sound like an ambitious programme.

The French poet Verlaine was for a time English Master in a French school. With great originality and disregard for routine methods he started off by asking his pupils to speak French with an English accent. The Shoreditch Technical College Gliding Club began life with no equipment and no money. It was therefore necessary for them to start off with acquainting themselves with the theoretical aspects of the great sport which they wished to practice. However, with great resource, they avoided " depressing and musty discussion on the theory of flight and replaced it by a syllabus of the active flying conditions to be met during efforts to obtain the various Royal Aero Club Certificates of gliding ability." They also implemented in their theoretical instruction their original wish to train useful ground personnel. The results speak for themselves

" . . . eight members of the club visited Dunstable prior to the Easter vacation. As it was a weekday the London Gliding Club were not present in force, but a few pilots were there and anxious to take off for an afternoon's soaring. It is pleasant to record that our club members smoothly took over the ground organisation and launched or retrieved all aircraft safely."

But enthusiasm cannot indefinitely be fed on visions. The members of the Shoreditch Club meant to glide and they knew that it was up to them to do something about it. Early in 1947 a damaged " S.G. 38 " was purchased from the London Gliding Club. With characteristic generosity the Big Brother by the Downs only asked for what the Shoreditch people described as a fantastically



Leith and the " S.T.C.G.C. Dagling."

low price. The keel of the "Primary" was shattered and its port wing was broken. There was a lot of skilled work to be done before it could actualise the aspirations of the Shoreditch Club. But "Shoreditch is one of the finest craft colleges in the country both in wood and metal work . . . Jerry Hull, maintenance engineer to the club, has the responsibility of planning and drawing the various alterations. His hobby before the war was building sailplanes, and during the war he had an active time as a parachutist."

The other members of the Executive Committee are Louis Leith, also the instigator and mainspring of the club, Roy Yates, the Secretary, and Harold Wright the Treasurer. With such a combination of will and ability the job of repairing the "Primary" was in good hands. But even so these repairs always take much longer than forecast because of the lack of continuity in the efforts and the absence of the professional knowledge of dodges and short cuts. It was hoped to use the "Primary" during the summer but it was not intact before Sunday, the 14th of November, that the test flight took place. It proved satisfactory, and it was not long before three "A's" and one "B" had been won on it.

Help to these patient efforts of one year had been provided by Mr. J. Ford who dealt with difficult problems. A. H. Vane and Co. supplied fabric for the wings at a surprisingly low price thus making their contribution to the eventual success.

A "Wings" parade was held at the College, conducted by Mr. A. G. Scrivens, M.A., B.Sc., the Principal. There is no need to enquire into the nature of the principal ornament of the function. It was an object weird and angular and yet efficient in appearance, a thing only a little better than a broomstick which we all have once approached with deference and elation and which now, in black ingratitude and half baked superior aptitude, we sometimes ride in derision.

But the moral of this story is not an outburst of emotion on the subject of primary trainers. It is this: At a time when many of our young men and women who would like to glide and cannot afford it feel that, especially with the present form of Government, it is illogical, wasteful, and ungrateful that gliding should not be subsidised, and feel all the more frustrated when they hear of other countries, no better off and reputed to be less advanced, where this essential encouragement is provided. At such a time, it is comforting to see men organizing themselves to wait in the best possible manner for the rectification of what they consider is an injustice. They wait by helping themselves.

LONDON GLIDING CLUB
October

If you were to ask anyone what they thought of this month they would almost certainly say, "not much." Yet the fact remains that we carried out 105 hours of flying during this period, which is average by last year's standard. Now, it seems, a month has to provide at least 200 hours if it is not to be regarded as "poor." It is therefore not surprising to find that so far this year we have put up 1949 hours, which still leaves us two months to reach the 2000 mark set as the target for 1948 by our chairman at the last Annual Dinner. Over the same period we have trained pilots to earn 47 "A," 59 "B," and 74 "C" Certificates, a performance which we think will bear comparison with any standard; metric or gold varieties included.

Although the L.G.C. is widely regarded as the metropolitan club, it has always drawn a considerable proportion of its members from more remote corners of the British Isles, and even further afield. Latest additions are Allen Ash, of Australia, and Dick Georgeson, of New Zealand. Visitors this month included J. B. Chourrout, of the Argentine, who flew our "Gull IV," and some Eastern potentate who was shown all those things such types are usually shown. A visitor who arrived by air was Mr. Lobley of Airways Flying Club, Denham, who arrived in an "Aeronca" at dusk on the 21st, being unable to continue his flight in the dark. He came over the next day in an "Auster" to retrieve his machine, bringing our old friend Burdett as passenger. We have since received a letter from his club, thanking us for the facilities placed at his disposal by our staff.

Certificate winners this month were Newley and Rys, who took "B's" on the 3rd, and Rys, Fletcher, Burns and Cotter who took "C's" on the 17th, 20th, and 23rd.

The only cross-country flight was by Hall of the C.O.A. club, who flew their "G.B. II" from Dunstable to Bushey via Watford, a distance of 19 miles. Using mile wide circles he had some trouble with hailstones on the way.

One particularly pleasant aspect of the month's operations was the absence of any serious item of crashery, apart from some slight damage to the "Kadet" on the 10th, when Newley landed heavily through failing to check.

Summary of flying for the month:
Number of launches—341.
Number of hours flown—105.
Certificates taken—2 "B," 4 "C."

THE BRISTOL GLIDING CLUB
October

Unfavourable weather and the reduced hours of daylight has curtailed our activities to those of ab initio training and the preparation of a programme for the repair and overhaul of our equipment.

The 415 launches during October produced 17.4 hours' flying and included the Silver "C" duration flights by Messrs. Hinton and Jennings at Long Mynd and mentioned in last month's notes. Eight "A" and one "B" Certificated were obtained during the month.

The expenditure on launching cable has always been a major item in our Balance Sheet and with a view to reducing it, we have introduced cable log sheets which give a full history of the number of launches and breaks (with the reason for same) during its life. We therefore anticipate that we shall be able to draw some definite conclusions as to whether 10 cwt. or 15 cwt. cable (preformed or otherwise) is the most economical.

We should be very interested to hear from any Club, who have

any particulars on the "life" of launch cables and the information should be sent to our Chief Ground Engineer, J. M. Heron, "Ashleigh," 3, Southdene, Westbury-on-Trym, Bristol.

We are very grateful to the Cambridge Gliding Club for the information they have so generously supplied us on "hard" wire launching. We have made a series of auto tow launches with 13 gauge "piano" wire and an average height of 850 feet has been obtained from a 1,300 foot length of wire. Two launches, in a light wind, have exceeded 1,000 feet. The price of the wire is 30/- per 1,300 feet as against about £13 for an equivalent length of 10 or 15 cwt. cable.

Our maintenance programme for the coming months includes a complete overhaul for a "Beaverette" and the design and construction of a trailer.

SOUTHDOWN GLIDING CLUB

On August 7th disaster overtook the club when the newly erected hangar was blown down on all the aircraft.

The first machine to be repaired, took the air on 18th Sept., and as this was the "T21B," flying recommenced for everyone. Many members had worked almost every hour of the intervening weekends at Friston, under conditions of great discouragement. For instance, a hand pump paint spray was provided, using which it was possible, but not easy, for three strong men to cover two square centimetres with dope in a quarter of an hour.

Meanwhile work on the "Cadet" was proceeding in Brighton, Ray Brigden putting in most nights of the week in addition to a prodigious amount of work at weekends. The "Cadet" flew again on 31st October and as a C. of A. was accomplished at the same time as the repairs, this machine is now in excellent shape. Work on the "Grunau" has proceeded more slowly, a C. of A. is also being included, and it is now hoped to fly the machine by mid December. One of the "S.G. 38's" was test flown on the 14th November and ab initio training started at once. The value of the "T.21" in familiarisation with the action of flying controls, immediately became evident.

On Oct. 3rd we were visited by a number of members of the London Gliding Club, with the "Blue Gull," a "Rhonbussard," and two "Olympias." It was not possible to soar in the very light S.W. wind, although Frank Foster managed to stay up for 40 minutes in the "Buzzard," and some pleasant flying was had by everybody.

Work on the hangar was now put in the hands of a contractor. After a couple of week's work, a slight snag occurred owing to the hangar blowing down. This time, though, the breakages were a pair of steps only, and the foreman's heart. Now once again the hangar is up, this time for good—it is said. The clubroom, a lean-to building on the side of the hangar, is being finished off. Johnny Billinness completed the transformation scene here by installing a stove and lighting a fire whilst the rest of the working party was absent for a few minutes.

All repair work to the machines has been done without recourse to any outside organisation and the A.R.B. inspector has expressed himself pleased with the quality of the workmanship.

Now for a big effort to operate as much as possible in order to make up for the loss of flying time during the past three months.

DERBYSHIRE AND LANCASHIRE GLIDING CLUB

Club Notes for October 1948

Saturday, 2nd. Wind W.S.W. 15 m.p.h.

The first batch of machines took off about 1.30 and Derek Roper, Gerry Smith and Fred Coleman had enjoyable flights for an hour or so in lifts up to 1,000 feet. After the first two had landed, Fred was joined by Fred Breeze in the Club "Kite" and George Thompson in the "Viking." The three machines gradually increased their height until they reached about 4,000 feet, where they were eventually joined by two more "Olympias." The machines were obviously using a standing wave but the rate of climb was negligible. One "Olympia" persevered and after nearly three hours reached 7,800 feet above take off. As usual the strato-cumulus covered the sky and cloud base descended to 200 feet above hill top level. Ron Booth took his "C" in the "Cadet" and the "Grunau," "Tutor" and "T.21" were all kept busy.

Totals: 33 launches. 20 hours 54 minutes. 1 "C" Certificate.

Sunday, 3rd. Wind West 10-15 m.p.h.

The good weather continued. Disdaining the winch, all the machines were bungy launched except the "Cadet" and "Tutor." Unfortunately it was rather rough and many pilots who could have done with an hour or so in the "Cadet" or "Tutor" were unable to have it. Maximum height did not exceed 1,000 feet but the air was full of machines all day.

Totals: 75 launches. 40 hours 25 minutes.

Saturday, 9th. Wind South 5-10 m.p.h.

We were having a lazy afternoon as the wind was so light until Brian McGraw, having his first flight in the "Kite," managed to stay up for 30 minutes over the south slope. Shortly afterwards Curly Bulling took the "G.B.," followed by Roger Dickson in the "Viking." The lift was dead smooth, well out from the hill and extended up to about 2,500 feet. The strato-cu was miles in front and never approached the south slope at all. About a mile back from the edge a large lenticular cloud formed and remained for an hour or so. Unfortunately no one flew back to find out if there was any lift in front of this cloud. Flying continued until dark in increasingly bad visibility. All the evening it was almost impossible to see the Club from the far end of the south slope.

Totals: 22 launches. 7 hours 57 minutes.

Sunday, 10th. Wind South 10 m.p.h.

Just not quite good enough. The first two "Olympias," following the custom now firmly established, made a dash for the Eyam end of the south slope and managed half an hour of patchy and uneasy soaring conditions. Both pilots considered themselves lucky to get back and for the remainder of the day there was nothing but extended circuits. Eric

Taylor gathered the primary squad together and launched them to great heights in the "Primary;" amongst the survivors McQueen took his "A" with a flight of 50 seconds and Phil Dennis landed safely in the car park.

Totals: 86 launches. 6 hours 31 minutes. 1 "A" Certificate.

Sunday, 17th. Wind West 25 m.p.h.

Two candidates for five hours were dispatched the first thing. Margaret Swale unfortunately gave up after a couple of hours during a lull but Curly Bulling in the "G.B." carried on to the bitter end. Trying to land close up to the edge presented some difficulties and there was a tendency to land out of wind. Fred Breeze put the "Kite" down more firmly than necessary, tore the skid off and shook the machine rather badly.

Totals: 37 launches. 34 hours 55 minutes.

Saturday, 23rd. Wind West 25 m.p.h.

A nice quiet afternoon's soaring. Lift was not particularly good and the maximum height did not exceed 800 feet. The bungy parted whilst the "T.21" was being launched; fortunately the only damage was to the fabric and to the pitot head, which was torn off.

Totals: 22 launches. 15 hours 50 minutes.

Sunday, 24th. Wind West 25 m.p.h.

A similar day to yesterday, although at times it was fairly rough. The "G.B." (ex Fred Coleman) recently reconditioned, was involved in an accident which lead to some heart searching amongst the higher-ups. Briefly, the machine turned on to its back whilst being towed to the bungy launching slope. Ground handling accidents are caused through ignorance or carelessness and no self respecting club can afford to be complacent about them. Hard and fast rules about handling and retrieving would inevitably restrict legitimate flying activity and it is therefore necessary to rely to a large extent on general morale and discipline.

On the whole, new members are willing and anxious to help even if they lack experience; the majority of the experienced pilots have sufficient initiative to see what needs doing and to see that it is done and, generally speaking, have reached that stage so necessary in club gliding when they can summon up as much enthusiasm for other people's flying as for their own.

Between these two extremes there seems to be a fairly large group of pilots who have reached the stage when they have achieved the competence necessary to enjoy their own flying but have not yet been able to raise any enthusiasm for anyone else's. These debating societies and recuperation parties watch proceedings from the back wall with critical but tolerant amusement. It's a wonder their ears don't burn sometimes. To launch machines efficiently it requires a man to take the wing tip, wire, signals, time sheet and to hold back, without having to be told. It is also necessary to have at least two for a Beaverette crew. Anyone who fails to see that these essential tasks are being properly performed does not deserve to have a flight. No instructor should ever have to take his hands out of his pockets.

Totals: 23 launches. 20 hours 31 minutes.

Saturday, 30th. Wind S.W. 5 m.p.h.

Circuits in the "Cadet." George Blomfield did three circuits to obtain his "B" Certificate.

Totals: 11 launches. 8 minutes 1 "B" Certificate.

Sunday, 31st. Wind S.W. 5 m.p.h.

In spite of low cloud and miserable conditions, Heck Booth brought the "Cadet" out and gave trainees some high hops and circuits.

Total: 19 launches.

Totals for the month:

Launches: 349.

Time: 149 hours 49 minutes.

Certificates: 1 "A," 1 "B," 1 "C," 1 5 hour test.

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SCOTTISH GLIDING UNION

Although October on Bishop Hill gained us six " C " Certificates (Norman Edwards and David Young gained theirs, as well as the four pilots mentioned in last month's *Sailplane and Glider*). November weather set the accent on Balado and primary training. On the 7th, Ian Sproul hastened to catch up with Robert Brown's flights of the week before, when A. F. Milne took his " A " and " B " Certificates, and Bert his " B " Certificate. Mr. Fyffe also gained his " A." Jim Anderson and Eddy Thomson took their " A's " on Nov. 14th, while Alan Moncur had 38 minutes off the Bishop, the only soaring flight possible that day, made mainly in cloud, as far as we could see from Balado. On 21st November, training continued at Balado, and again the enthusiasts who toiled up the Bishop were unlucky; although David Hendry flew the " Tutor " for 1 hour 5 minutes, the uncertain north-westerly sent Alan down to the bottom of the Hill, which was fortunately where we wanted the " Cadet," since our trailer is now ready and in use.

These last few weekends with the S.G.U. have been anything but holidays for the Catering Committee. But Marie Ainslie, Mary Shaw and Dorothy Lawson, with George Whyte and Laurence Ainslie, have generously and cheerfully overcome all difficulties, and give us snacks on the airfield and meals after flying-hours which are something to remember with gratitude and look forward to with good appetite and appreciation.

VICTORIAN MOTORLESS FLIGHT GROUP

Newsletter No. 9—Sept-Oct., 1948

Things are going well in all directions. The hangar is now well on the way to completion and looks quite imposing as indeed it should, with its 60 ft. by 44 ft. measurements, and its double saw-tooth roof. A few newsletters ago, your correspondent made a crack about how work should really be quite an enjoyable part of activities (sneering savagely to herself the while). Well, those taking part in the hangar-building job are finding that this is really so. With the smooth green airfield before us, white clouds sailing overhead in the blue sky (sometimes) and the hangar steadily taking shape, it is easy to indulge in day dreams of how much easier things are going to be when we start flying again.

Then, too, an unexpected blessing has come our way. Water, clean beautiful running water, is being laid on to the hangar. No longer will those little wrigglers add body to our billy tea, no more will we anxiously rap the tank to see if we can have a wash, never again will we scoop muddy water from the billabong to fill radiators and wash down machines. Ah frabjous day, callooh, callay, indeed.

The Pea Pickers

From our good friend, Kevin Sedgeman of the S.A. Gliding and Soaring Club, comes the following contribution to these pages:

" Since joining the gliding fraternity many jobs have I done and many men have I tried to imitate, but picking is really back-breaking. To-day, we arrived on the field to fly, but alas, a 30 m.p.h. crosswind was blowing, keeping even the birds under shelter. The manager of the property we use for our field had a pea crop being rapidly burnt by the hot dry wind. All the locals were helping to salvage it. We chose this time to ask him if he might be able to give us shelter for our kite and winch, to save us transporting them back 20 miles each day. He said, " NO, sorry."

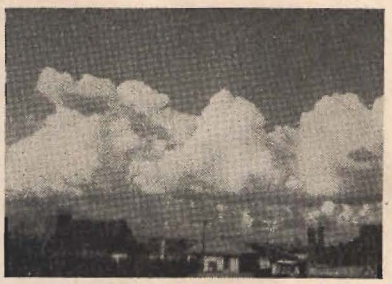
I then offered the services of ten staunch and true types to ease his picking. " Well," he says, " all right." Then I proceeded to our lads with mixed feelings of rashness and remorse. What would they do to me? How could I tell them that nature was to be studied from below instead of above? At first, nobody seemed interested in botany or market gardens, so I came clean and told them I had offered their services to our potential benefactor, the farmer, to pick peas. I am happy to say that as nobody had ever picked peas before, they allowed themselves to be led to the site, had kerosene tins placed in their hands and were shown to action stations.

About 30 bushels were picked before some looked up and noticed that the edge of the field seemed a long way off and the other end even further. When Alan Beaton, ex VMFG, more conscientious than his fellows, was groping for the stray pea under the bush, he hastily changed colour as he picked a handful of rather prehistoric type of lizard. The lizard, also, was a beautiful shade of green, and was all set to fight it out with our worthy member. After numerous peas were fired down his gaping jaws, the lizard slunk away to find another bush. We constantly prayed silently for the wind to drop and release us from our bondage, but it was not until nearly 60 bushels were picked that this great relief arrived. We finished our picking at this, and refused to be paid off like common pea pickers. We booked it up to good will.

Good will then produced a shed on the property for the housing of our machine and winch. A little more talking got us permission to alter the end to facilitate entry and exit. Thus, we had a successful day, profitable, at least, and happy with the thought that our members would at least be taking home a week's supply of fresh green peas."

Kevin finished this stirring tale with the information that he was writing while lying in some agony on his back, trying to get it straight again.

We can only salute such enterprise—and hope to heck it never happens to us!



Australian Convection.

HOUSE OF COMMONS

EXTRACT from the Official Report (HANSARD) for 10th November, 1948, Col. 1532.

Oral Answers to Questions

..18. MR. TURTON asked the Parliamentary Secretary to the Ministry of Civil Aviation whether he will introduce legislation to make grants towards the maintenance and repair of the aircraft and equipment used for training by British gliding clubs, or if not what assistance he proposes to ensure that persons of moderate means can take part in the gliding movement.

MR. LINDGREN: As I indicated in my reply to the question put by my hon. friend the Member for West Coventry (Mr. Edelman) on 3rd November, ways of helping flying clubs are at present under consideration, and the position of gliding clubs is being borne in mind in this connection.

MR. TURTON: Does the Minister appreciate that, meanwhile, only those with substantial means can afford to go in for gliding? As this industry gave so much to the Government during the war, both in machines and in personnel to train other people for gliding, will he make an early decision in this matter?

MR. LINDGREN: Yes, Sir. The general relationship of air-mindedness to air transport is one of the considerations we have in mind.

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The Schweizer Aircraft Corp., Elmira, N.Y., announces production plans for the "1-23," a high-performance sailplane based on the "1-21" which won the American National Championship in 1947; and which will cost 2,195 dollars.

In spite of the sturdy all metal construction, which includes Alclad skin, the "ship" only weighs 358 lb. The design speed is 123 m.p.h., and the minimum design load factor 8.34. The wing span is 43 ft. 10 ins. A prototype has been thoroughly tested and flew in this year's national glider meet.

For those who live in the tropics and have dollars this might be of interest.

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

GLIDING CERTIFICATES: "A" .. 165 (Nos. 9008—9172 incl.)
"B" .. 52
"C" .. 44
Silver "C" 8 (Nos. 173—180 incl.)

"B" CERTIFICATES

No.	Name	A.T.C. School or Gliding Club	Date taken
2532	Bernard Latour Eppy	Gutersloh G.C.	23. 7.48
2620	John Desmond Overton	41 G.S.	18. 7.48
6366	Thomas Sinclair Millar	R.A.F. Luneburg G.C.	3. 7.48
7718	Arnold Mellors	Gloucester G.C.	17.10.48
7967	Alan George Essex	148 G.S.	9. 9.48
8159	John Lechmere Hogarth Tudor	R.A. Aero C.	3.10.48
8376	Norman William Peel	Bristol G.C.	26. 9.48
8416	Keith Robert Obee	Handley Page G.C.	10.10.48
8722	Frank Kinder	Surrey G.C.	26. 9.48
8779	John Peter Quinlan	Ditto	5. 9.48
8817	Alexander Walter Mackie	Scottish G.U.	3.10.48
8944	Marion Josephine Grindley	Hereford G.C.	10.10.48
8945	Oliver John Coode Cotton	Ditto	10.10.48
8982	Kenneth Cyril Forty	Gloucester G.C.	17.10.48
8988	Peter James Billing	125 G.S.	19. 9.48
9033	John Hallowes Stenning	R.N. G.U.	6. 7.48
9037	David John Bennett	Gloucester G.C.	17.10.48
9041	Brian Frederick Hills	Wahn G.C.	27. 6.48
9042	John Alexander Budd	R.A.F. Lubeck G.C.	10. 6.48
9043	Antony Neilson Lord	R.A.F. Luneburg G.C.	20. 6.48
9051	Anthony John Stone	Portsmouth A.C.	10.10.48
9053	Tom Anderson Smith	London G.C.	15. 9.48
9054	Charles Frederick Toms	Bristol G.C.	2.10.48
9055	Donald Percy Cooper	106 G.S.	13. 6.48
9061	William Gordon Watson	Surrey G.C.	17. 9.48
9062	Joseph Brian Madden	R.N. G.U.	20. 9.48
9063	Roderick Broun Davies	R.E. F.C.	17. 7.48
9064	Roy Ellicock	Blackcap G.C.	25. 9.48
9065	Clifford John Pears	Portsmouth A.C.	2.10.48
9076	Randolph Booth	Derby & Lancs. G.C.	29. 8.48
9077	Andrew William Bloomer	R.N. G.U.	17. 9.48
9079	Albert Charles Stevenson	Air H.Q. B.A.F.O. G.C.	26. 8.48
9080	Edward Henry Leschallas	Gloucester G.C.	3.10.48
9081	Leslie Walter Moodie	R.A.F. Houiley G. Group	28. 7.48
9082	John David Price	London G.C.	20. 8.48
9083	Neil Anderson Davis McCance	R.M.A.S. F.C.	25. 9.48
9091	Frederick Percy Newley	London G.C.	3.10.48
9095	Michael John Gerald Kirby	R.N. G.U.	31. 8.47
9100	Alexander William Cameron	R.A.E. Technical College G.C.	8. 6.47
9101	Michael Olsen Jones	London G.C.	16. 9.48
9103	John Scotter Owen	R.M.A.S. F.C.	10.10.48
9111	Henri Paul Michel Mayoux	Uetersen & District G.C.	28. 8.48
9132	Leslie Alfred Cox	R.N. G.U.	17. 9.48
9135	Philip Hugh Fillingham	Ditto	17. 9.48
9136	Charles William Wiles	R.A.F. Lubeck G.C.	21. 6.47
9157	Noel Leslie Kent Robson	Condor G.C.	7. 3.48
9159	Sims William Reeves	Gloucester G.C.	24.10.48
9160	Bryan Fisher	26 G.S.	16.10.48
9162	William Brownie Garden	2 G.S.	7. 7.48
9163	Thomas Frederick Carter	Bristol G.C.	9. 9.48
9169	Frederick Charles Worley	Gloucester G.C.	3.10.48
9171	John William George	68 G.S.	9. 9.48

"C" CERTIFICATES

No.	Name	A.T.C. School or Gliding Club	Date taken
1810	Charles V. Webb	Oerlinghausen G.C.	8.10.48
2532	Bernard Latour Eppy	Gutersloh G.C.	30. 7.48
2828	Derek Leslie Collingwood	26 G.S.	17.10.48
3473	Samuel George Tolman	Oerlinghausen G.C.	19. 9.48
3957	Allen Frank Robinson	43 G.S.	27. 9.48
3970	John Burns	London G.C.	21.10.48
4825	Ian Gordon Peter Kinsellah Fletcher	Ditto	17.10.48
5667	David Young	Scottish G.U.	3.10.48
5989	Gerald Bird	Midland G.C.	20. 9.48
6242	John William Frederick Bettell	R.N. G.U.	21. 9.48
6366	Thomas Sinclair Millar	R.A.F. Luneburg	10.10.48
6496	Hugh Lambert Reilly	166 G.S.	21. 7.48
6648	Douglas Frederick Bampton	Midland G.C.	16. 9.48
6870	Spencer Rivers Henry Bailey	68 G.S.	18. 7.48
7029	John Aubrey Brown	London G.C.	16. 9.48
7145	Andrew Reid	28 G.S.	19. 9.48
7236	Derek Charles Meadowcroft	Midland G.C.	28. 9.48
7864	Douglas Edward Ince	Midland G.U.	29. 9.48
7854	William Ronald Flockhart	Scottish G.U.	17.10.48
7876	Eric Albert Cotter	London G.C.	23.10.48
7951	John Keirl	31 G.S.	2.10.48
8085	Robin Beadon Lisle Foster	College of Aeronautics G.C.	26. 6.48
8422	Hugh Railton	Midland G.C.	28. 9.48
8628	Guy Alfred Eric Stares	163 G.S.	16. 9.48
8814	Duncan McGeorge Aitchison	Scottish G.U.	17.10.48
8975	Kenneth Kurt Lion	Newcastle G.C.	2.10.48
9041	Brian Frederick Hills	Wahn G.C.	29. 8.48

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Aug. 29—Sept. 9.	Sept. 19—Sept. 30.

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"C" CERTIFICATES

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
9042	John Alexander Budd	R.A.F. Lubeck G.C.	25. 7.48
9043	Antony Neilson Lord	R.A.F. Luneburg G.C.	30. 7.48
9053	Tom Anderson Smith	London G.C.	16. 9.48
9062	Joseph Brian Madden	R.N. G.U.	20. 9.48
9063	Roderick Broun Davies	R.E. F.C.	19. 8.48
9076	Randolph Booth	Derby & Lancs. G.C.	2.10.48
9077	Andrew William Bloomer	R.N. G.U.	17. 9.48
9079	Albert Charles Stevenson	Air H.Q. B.A.F.O.	2.10.48
9100	Alexander William Cameron	R.A.E. Technical College G.F.	12. 9.48
9101	Michael Olsen Jones	London G.C.	16. 9.48
9132	Leslie Alfred Cox	R.N. G.U.	21. 9.48
9135	Philip Hugh Fillingham	Ditto	17. 9.48
9136	Charles William Wiles	R.A.F. Lubeck G.C.	26. 4.48
9157	Noel Leslie Kent Robson	Condor G.C.	28. 8.48
9160	Bryan Fisher	26 G.S.	17.10.48
9162	William Brownie Garden	2 G.S.	14. 7.48
9171	John William George	68 G.S.	9. 9.48

SILVER "C" CERTIFICATES

No.	*Name*	*Certificate No.*	*Date taken*
173	R. D. Roper	7292	18. 9.48
174	P. Murden	6553	25. 9.48
175	J. Grantham	6179	21. 9.48
176	L. Redshaw	716	3.10.48
177	W. Jennings	6380	2.10.48
178	A. Coulson	6493	16. 9.48
179	J. H. Evans	7461	15. 5.48
180	A. Pratt	4446	3.10.48

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LETTER TO THE EDITOR

DEAR SIR,

Would any recent member of/or visitor to "Reinschlen Gliding Club" (late 4th Armoured Brigade G.C.) kindly communicate with the writer, c/o Bonstead & Co., Ltd., Singapore, who is most interested in news of its progress.

D. M. KING.

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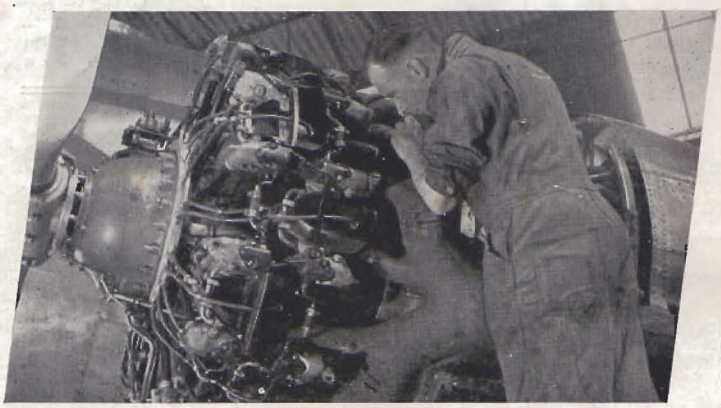
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