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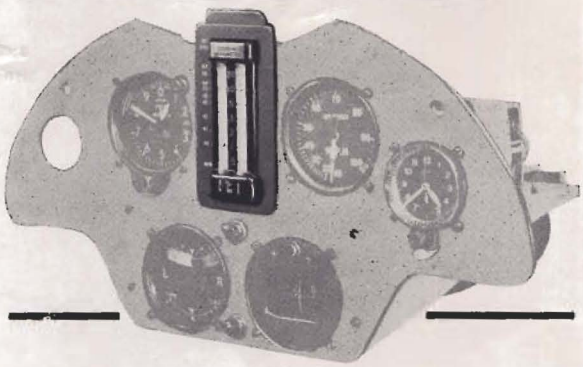
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THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

OCTOBER 1950 ★ Vol XVIII No 10

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COVER PHOTO:

The prototype "Moswey IV" in flight, piloted by René Comte.
Photo: Heimgartner.

Editorial

WELL, well. So far there has been no reply to the questions we addressed in our last issue to the Chairman of the B.G.A., whom we asked how he acquired his "Weihe" in which he has five times won the British National Gliding Contests since the War. Nor any reply from the British Gliding Association whom we asked whether the consent of the members of the B.G.A. was necessary to the use of its funds for the International Contests, when it had been announced that the funds were being conserved for the 1952 Contests, and there was no mention of their proposed use for this year's contests in the Annual Budget presented at the A.G.M. in March. Nor have the Surrey Club displayed any willingness to submit the results of their "Research" to our scrutiny or that of our interested readers, who appear to be very interested. Indeed, we have been surprised by the warmth and strength of the support we have received by letter, telephone, and personally, since last month's issue was published. True there have been inimical comments as well, both from those who deplore a split in the movement, those who think we ought to be grateful for any gliders we can get, and one who thinks our comment "in bad taste". To the latter gentleman we replied that the whole thing stinks, but it is not our fault. We have only taken the lid off. In general we have received great encouragement in our attempt to get these matters ventilated. It is surely disgraceful that any but British Machines should be used in our National Competitions, when there are so many British Machines to be had. It is more disgraceful that only one British machine should be used in the International Competitions, even if we would have lost even more handsomely, although there is no proof of that since Pete Mallet in a "Gull IV" beat two of the pundits who were flying "Weihe's." However eloquent may be the silences of those who have not replied, we doubt if next year's competition will be won in a "Weihe." If the Club members, on whom in the last resort, depend the personnel who go to make up the Council of the B.G.A., do not insist on some radical changes in personnel, policy and rules, before next year's contest, then we have completely misinterpreted the high spirits and the idealism of those, who when they soar into the high heavens, and in the words of the late Flying Officer Megee, "touch the face of God". You cannot touch the face of God with a guilty conscience. And with that we leave this unpleasant subject.

For the next two months or more *Sailplane* will be without its regular Editor and Assistant Editor. The Editor will be in U.S.A. and Canada on his own business affairs. Mrs. Platt, who has been described as Britain's chief Air Ambassadress, is going round the world by air and sea, and will spend some weeks in Australia and New Zealand, where she may be contacted by our Antipodean readers through the nearest *Shell* Office. She will be glad to meet as many gliding people as possible. So will the Editor, who, in addition to revisiting Elmira, also hopes to call in at Dallas, and Bishop. He may be reached c/o Wings Club, Biltmore Hotel, New York.

In consequence we count ourselves fortunate indeed in securing the help of Lionel Alexander, Silver "C", late Secretary of the Cambridge University Gliding Club, as Editor. In his safe hands we are glad to leave *Sailplane*, most exigent of task masters these seven years now without a break.

Late News.

As we go to Press we have received a letter from a well-wisher who so strongly agrees with the stand we took in our last Editorial that he has made an offer of financial help which will enable us to make the following announcement:

Sailplane will pay the sum of Eight Guineas for the copyright of all acceptable authenticated personal accounts of Gold "C" leg or Diamond flights, made by a British Pilot in Britain in a British made machine. Barographs and maps to be attached, and Ten Guineas for all similar accounts of British record flights made at home in British machines, until further notice. To which we add, please send photos (which will be paid for) as well. Accounts should be about 1,200 words.

V. B.

GOLD "C" & DIAMOND in THREE DAYS

By GUY BORGÉ

ACT I: THE DISTANCE.

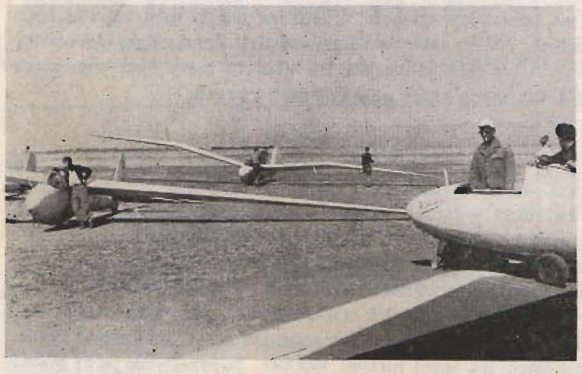
In August 1950, I returned during my holidays to the soaring centre of Pont Saint Vincent. But I had no great hopes of getting my 300 Km. distance because flights to Germany had just been forbidden by the S.A.L.S., and the only wind riding to France was rare during this period.

My first trip in a "Weihe" from Pont Saint Vincent to Troyes (exactly 100 miles) confirmed my depression. However, on the 11th August, weather appeared favourable with numerous cumulus pushed by a North-East breeze. As a test, I made a first flight at 10.30 a.m. The base of the clouds at 1,500 feet did not let me stay up more than 20 minutes and I was very sorry to hear the bad met. news: *impossible* to attempt any 300 Km. trip because of lightness of the wind, low base of the cumulus and a cloudy sky. We could only fly 60 miles up country.

However, I received the instructions to fly from M. Maurice Lamort, who thought that it was worth it. Without great hopes I chose the nearest goal to the 300 Km. border, Villefranche sur Saône (198 miles); I could take Lyons, my own town, but I preferred to decrease my ambitions and to increase the tiny possibilities of success.

I took off at 11.30, my "Weihe" behind the small "Stampe" bi-plane, and casting the wire at 1,600 feet, I followed very soon the bearing of my goal. I had a bad start because I was standing between two consecutive clouds with the variometer completely down. I thought of landing 6 miles away from the airfield, but just at that moment I found some lift and from 330 feet I climbed to 2,600, the base of the cumulus, and I again flew straight towards Villefranche.

The following part of my travel was uneventful because the cumulus base reached 3,600 feet and I could use the great speed range of the "Weihe" for easily crossing the down currents. Just before Gray, the sky became very cloudy (8/8) and I did not find any lift. At 250 feet above the ground I was very sorry to be obliged to land after so good a beginning and to prove that the weather forecasting was right. But luck was with me and during the last circles prior to landing, I found a small lift that improved and raised me to 3,600 feet. Like the variometer and the altimeter I became optimistic again and I went on.



"Air 100," "Minimoa" and "Weihe" at Pont St. Vincent. (Photo: Borgé.)

I crossed Dole and in the last cumulus of the day topped 4,600 feet, of which 650 feet inside the cloud. But it seemed very late to hope to perform 186 miles; without finding any up, I glided to Macon, where I crossed the Saône river. The altimeter indicated 1,600 feet—the watch 5.30 p.m.—the map that there was still 25 miles to Villefranche. Without believing it, I found above Macon half-an-inch of climb per second in which I soared as slow as possible to gain in the drift more mileage. I followed the Route Nationale, No. 6 from Paris to Lyons, but so lazily that even the bicycles overtook me.

6.30 p.m., Belleville sur Saône, and 1,000 feet in hand, not enough for reaching my goal, and I became more and more careful to keep in hand those precious feet. I looked at the fields in the case of landing after an abrupt down draught. But with some weak lift I circled in some "zero" at the vario and went on. Villefranche sur Saône in view, variometer in fall. I flew over the town at 300 feet, very close to the roofs and especially the chimneys. The airfield lay on the other side, happily without trees at its border. The "Weihe" dived at 60 m.p.h., jumps above a last hedge and lands tailwind in the middle of the airfield. 30 feet less height and I had missed my goal. It was 6.45 p.m., a late hour indeed, and in 7 hours 12 minutes of flight I flew 198 miles at the average speed of 28 miles per hour. A poor figure that confirmed the opinion of the meteorologists.

But I was glad to get a diamond leg, and, as in Bridge where one must make one's contract and no more, totalize just the required tricks, I had just flown the correct No. of kilometres.

The return trip in a Dodge towing the trailer took 12 hours on the morrow. Reasons: mechanical failures, but also the fact that we crossed some famous wine districts to test a few famous local products—Beaujolais, Maconnais, Mercurey, Meursault, Pommard, Beaune Nuits Saint Georges, Clos-Vougeot Chambertin and so on. A few only for safety.

Conclusion: if you want an happy return trip choose a goal in a good wine country. The next time I shall take as my goal from Pont Saint Vincent: Bordeaux and the Bordelais vintages.

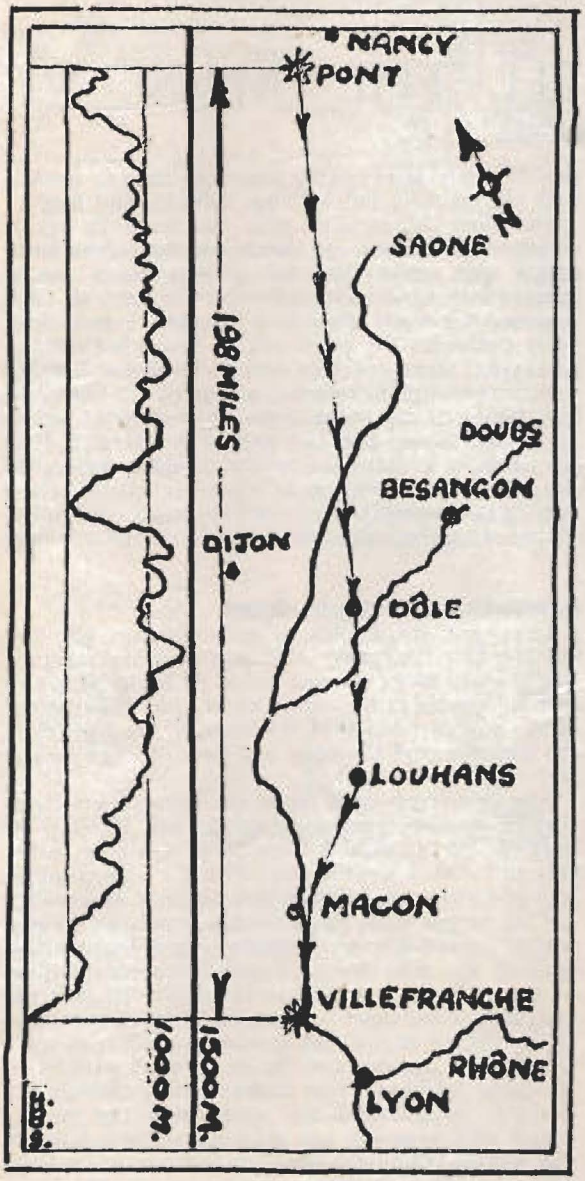
ACT II: THE ALTITUDE LEG.

Three days later, on the 14th August, the met. news forecasted some tantalizing cumulus of which the top reached 16,500 feet, thus offering the possibility of ending beautifully my "Golden C" without the use of waves.

For several years, so many pilots have so easily got their 3,000 metres, at Saint Auban for instance, that the instructors of the other Centres don't give

them great acknowledgment. Whether this opinion is right or not, I do not want to open a controversy about the subject fearing passionate discussion. I saw myself that on certain days the picking of the wave lift offered many difficulties, so great was the turbulence and so small the up-currents. On certain days, the lift inside the big cumulus is perfectly calm with easy use.

But I preferred to climb for the 3,000 metres by cumulus. And because I had got the distance leg, the Pont instructors thought that first I must try my altitude. For this purpose they gave me the best sailplane, one " Air 100 " completely equipped with artificial horizon. But I contended that this, like the electrical turn indicator did not work correctly. Instead of the " Air 100 " I therefore took the first sailplane ready to start, an " Olympia "— the Nord 2000 nr. 90. The " Olympia " admits to some poor performances at speed, but I am confident about its strength and its handling in turbulence is better than the " Weihe."



I took off in morning, casting at 990 feet, and I found a weak lift of 1 foot/second under the cumulus. Their base was very low indeed, 1,600 feet above the 'drome. Inside the lift became stronger, 6, 10 and then 15 feet/second. Without difficulties but not without turbulence I reached 8,000 feet. But suddenly I entered a strong gust, and I spun. In recovering the normal position I fell in the down-draughts and lost 6,900 feet. Finding again the ground, I saw that I was very far from the airfield and I became anxious to come back. But a 6 feet/second down current ruined this hope and I found myself at 250 feet above a small field where I wanted to land. However, one thermal took me again and gave enough height for going home. My previous distance flight had taught me to climb from the lowest heights above the ground-level.

I was sorry not to have acquired my altitude leg. Happily, M. Maxime Lamort decided to give me another chance in the same " Olympia," and I left my tow-plane at 850 feet above Pont Saint Vincent, just under a big cumulus. I entered it at 3,600 feet and started the turn indicator. Its engine will run for one hour, the total duration of my stay inside the clouds.

To my opinion, it is very tiring to fly a long time "blind," especially when the lift is capricious and gusty. This white mass which surrounds the pilot, against which the noise of the plane seems to fade, which makes him dizzy, in which one seems to enter a new world close to heaven, creates quite an experience for the beginner pilot in blind flying. As experience of this sort, I possessed 25 hours of link-training (with English instructors) and about 400 hours of soaring flight with only a few incursions in clouds. Blind flying then was completely new to me, because I found the link-trainer experience very different. Its controls are much more sensible, its instruments panel much more complete than those in sailplanes.

Choose a link-trainer experienced pilot, and give him a turn and bank indicator, a variometer, a magnetic compass. Suppress the A.S.I., the artificial horizon, the directional gyro, run the link artificial gusts, and I am sure that he will be very annoyed at these changes to his well-known link.

I was such a pilot when I entered again a big cloud, and I was glad to gain at once 4,000 feet without difficulties when I entered an unbelievable zone of turbulence. Suddenly the ship lost its speed and spun, descending by 820 feet. Taking the horizontal position, I again circled and reached 8,200 feet. It was raining as in the open air, giving the impression too of a bath room rather than a sailplane cabin. A great disturbance swung the " Olympia " and made fools of the instruments needles, especially the variometer which oscillated between minus and plus 13 feet/second. The airspeed, as I estimated it by sound (the ASI has naturally become unserviceable) must vary from 25 to 75 m.p.h.

A big knock, and I again spin, anxious enough about the end of that adventure. Too much speed, and I open the marvellous DFS airbrakes for limiting it to a reasonable limit. After 2,600 feet lost, the sailplane follows a more human path. But shall be able to climb higher? At each time I improved my previous altitude, and very soon I gave away a great part of it. I felt I should be glad to get this flight over, and with such a method I could fly during several hours without reaching the wished for 3000 metres.

Rather than follow the airfield direction and return in the clear air, I take the opposite direction and searched again for the capricious lift. + 3, + 6, then plus 16 feet/second, I reach my previous altitude and pass it. No need to observe the variometer, the altimeter finger turns steadily and quickly. I find a heavy rain, very uncomfortable to endure. Since the level of the 0 degree centigrade isotherm is only 8,500 feet and the level of the minus 10 degrees one 11,800 feet, I felt icing with so much water. 10,800 feet, and the canopy begins to become entirely frozen, similarly the wing leading edges. The rain went on falling and its shock against the icy hood is so noisy I did not hear the air whistling. The water solidified in new ice sheets and increased weight of the " Olympia " but I always climbed at the same rate of 16 feet/second. At 15,680 feet above the sea level, giving me a gain of 13,500 feet (I shall learn it after checking of the barograph chart) I opened my brakes and lose all those feet in the quickest possible way.

And just after my landing, I was allowed to wear the Golden badge with one diamond.

CIRCUITS MAKETH THE MAN

By JOHN FREE

ONE reason for embarking on this article is the firm personal belief that, one of the main ways of reducing the present high accident rate, is the adoption of the " square circuit " technique to glider flying as standard practice.

This rather sweeping and unoriginal statement falls hard on the heels of a review of accidents during the course of several years past, during which it became alarmingly apparent that a high proportion of serious and avoidable mishaps occurred *somewhere down-wind on the circuit and approach.*

With the advent of two-seater training in the Service and Clubs, it is now possible to demonstrate, to permit the pupil to try, and then himself make mistakes, to put him right and try again, and finally to let him practice and acquire experience safely.

Launches, circuits, approaches and landings—lots of them—bring experience, teach him where he should be in terms of height, airspeed and distance at any given time and in all weather conditions; and make a forced landing something to be accomplished with accuracy and ease.

This paper is not a Bible. It does not strive to convert the unbelievers with the doctrine of the dogmatist. It is a guide only, but in the majority of cases it has been found to work. Therefore, it is hoped to help those who wish to clothe their flying with method and a little polish, and perhaps even to be instrumental in preventing the odd accident or two.

Instructors' Notes.

Wind conditions for first circuit attempts should be moderate, with a well-defined horizon, pupils not being permitted to fly until a satisfactory air-test has been carried out by the Instructor. Pupils should also do at least one good high hop on the same day on which the first circuit is undertaken. And in the case of dual training a solo check is essential before the first solo hop and circuit.

Useful high launches should be ensured on the first few attempts so that the pupil has plenty of time to settle down, giving him more time to correct with the controls and to judge distance and height.

The first circuit may take the form (if space permits) of a gentle and continuous 360 degree turn within the aerodrome, the landing being made directly into wind in the centre of the airfield. All subsequent circuits should be " square ", and until fairly proficient the pupil will be instructed not to go beyond the down-wind boundary of the airfield.

It is a good point to get pupils to circuit both left and right, if consistent with the safety of other flying operations, but care should be taken not to give definite points over which to make turns, as this can quickly develop bad habits. In any case, turning points on the circuit and approach, constantly change with the wind velocity.

Introduction to the Square Circuit.

Carry out the launch as normal, then put the machine into the correct gliding attitude and operate the release knob several times. Check that the aircraft is flying at the correct airspeed by the attitude of the nose in relation to the horizon, the " feel " of the controls, and the noise and flow of wind on the face.

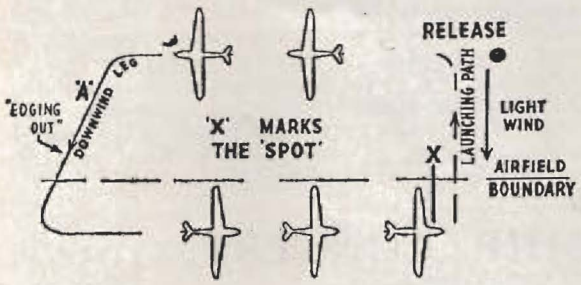
The first across-wind leg of the square circuit can then be started by making a gentle turn through 90 degrees. If the wind is fairly fresh it will be necessary to " crab " considerably, with the nose pointing well into wind so as to counteract drift (see diagram 2).

This across-wind leg, upwind, serves as a very useful " dummy run " because, depending on the amount the pilot has to " crab " the machine, so he can estimate roughly how the *drift* will affect the approach down-wind. Now this first across-wind leg should not be too long, so when settled, turn again through 90 degrees and fly down-wind parallel to the take-off and proposed landing paths. Remember that the across-wind and down-wind legs of the circuit and approach are not necessarily parallel to the airfield boundaries.

A Word about the Down-wind Leg.

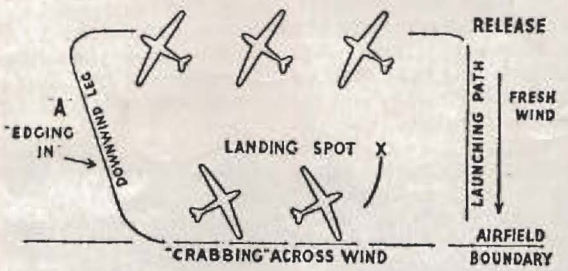
When flying down-wind do not be tempted to fly slowly and perhaps stall, because, in relation to the ground, the aircraft may appear to be flying very fast. This is an illusion only, due to the fact that the ground speed is greater, because of the wind blowing from behind. Caution must be exercised here because the glider pilot has no opportunity to experience this while low flying, which is a common enough practice for his power-flying brother.

If a high launch was obtained and the aircraft is still at a good safe height down-wind, then this is the time to become familiar with the stalling



characteristics, and later to practice 360 degree turns, incipient spins and side-slips. Slow flying high up is excellent landing practice also. It shows the landing attitude and gives the feel without actually doing it.

The pre-solo circuits in the two-seater will enable the pupil to recognise the slow flying and stalling characteristics of the machine : the stick aft and nose high above the horizon, the loss of control in the ailerons, the silence, the absence of wind on the face, perhaps a gentle vibration and judder from somewhere near the tailplane, together with that ominous feeling of " just hanging in space ".



All these things, and much later, the use of air-brakes, can be practiced at a good height on the down-wind leg of the circuit, the point being that if difficulty is encountered, there will be ample altitude and time in which recovery can be made.

When the time comes, and you are thinking of thermal soaring, but have lost height to this point, you can always continue in a leisurely manner to complete a safe approach and land. If, however, you run into some lift on the down-wind leg, then so much the better, because you are in a very useful position to be able to make use of it to the best advantage. But if for reasons best known to yourself the thermal doesn't help much, well, you can still use the back door and slip smartly home.

The Square Approach.

We leave the circuit and commence the approach approximately halfway down-wind (as at " A " on diagrams). The pupil should now watch the point at which he proposes to touch down, and, if he appears to have too much height for the short distance he has to travel, and the wind is fairly light, he should edge out a little on the remainder of the down-wind leg per diagram 1.

If the machine is still high, the down-wind leg can be prolonged before making the third 90 degree turn across-wind, when, in such light wind conditions, it will not be necessary to " crab " at all on the final across-wind leg.

In diagram 2 the wind is fairly fresh, and the pupil finds himself running out of height at point " A " for the long distance he has to cover in order to land at the spot. He should now edge in towards the airfield on the down-wind leg.

In such fresh wind conditions the aircraft must *not* be flown far down-wind, the third 90 degree turn being made earlier, followed by a " crabbing " track counteracting drift. In the case of the wind being stronger than previously estimated, turn the nose further into wind.

The Final Across-Wind Leg.

The final approach should be so judged that this leg is quite long, in order to judge the final 90 degree turn into wind at a safe height. This is the vital turn, and it must be right. It will be appreciated that if the approach has, in fact, been misjudged, it will always be possible for the pupil to turn into wind and land on the airfield at any point on this final across-wind leg.

Airspeed should now be INCREASED to that at which the landing is to be made, taking into account turbulence and wind gradient near ground level, and ensuring that the final turn is neither slow nor low.

Plan so that the aircraft has excessive height across-wind and there is absolutely no danger of UNDERSHOOTING. The final across-wind leg of the approach can then be used for side-slipping (and later the use of spoilers or air-brakes) and if there is still too much height, a slipping turn can be utilised for the final turn into wind.

DO NOT DO S-TURNS AS THEY ARE VERY DANGEROUS. The mere fact that a pupil has to resort to S-turns proves that the approach has been badly planned.

Remember, the final turn into wind must be made with plenty of air-speed, and it must not be a low turn. The aircraft will then have a straight and fairly long (but not low) run into wind, during which time the pupil will be able to make final corrections for wind gradient and drift and concentrate on the landing ahead. It will be a help if he looks well ahead also, finally aiming during the check and hold-off stages of the landing to reproduce the picture he sees while sitting in the cockpit waiting to take-off.

Flying in conditions of fresh to strong wind it is easy to make an error of judgment, resulting in the final turn into wind being made much lower than intended. Such a turn will probably look rather odd owing to the fact that the machine is turning low and drifting at the same time. Don't worry provided the aircraft is being turned with adequate air-speed and bank; the odd appearance of the turn is largely an illusion.

But it is definitely not pleasant to continue side-slipping close to the ground, particularly in gusty conditions, as some training aircraft have a nasty habit of not responding to the controls quickly enough.

To Sum Up about the Square Approach.

Always have plenty of air-speed, particularly during the final turn into wind.

Avoid making low turns.

Don't undershoot, as most accidents are caused by pilot error at various points down-wind on the approach.

Do not make the final stages of the approach so as to turn, and run in, over obstructions such as trees, aircraft, hangars, etc.

When landing stop turning at a safe height and then go straight ahead whether into wind or not, not forgetting to point the aircraft's nose away from such things as hedges, fences, roads, buildings, trees and other machines parked on the ground.

Concluding the Square Circuit.

In principle, then, the circuit and approach are square. A good landing depends on the pupil's ability to make a good circuit and approach. A good measure of safety depends on this also.

Practice only, we are told, brings success at making skilful soaring flights. And good, consistent, well-judged circuits and approaches represent a big step in that direction, and are, like all polished flying, a joy to watch.

AMERICAN CHAMPIONSHIP CONTEST, 1950

THE 17th National Soaring Contest held this year for the second time in Texas, started with the meekness of a lamb and wound up a great success. There were 59 registered contestants, 42 gliders, 30,000 feet of tow ropes; business men, architects, doctors, engineers, Generals, blondes, brunettes, red-heads, and baldheads; crews, wives, sons, daughters and a mother-in-law or two. All these fine people came from 16 different states for a grand lot of fun and to contribute their skills and talents to make the 17th National Soaring Contest one to be long remembered.

The much advertised Texas super-soaring weather was indisposed come the starting day of the contest Monday, August 2nd, and a no contest day was declared.

The first pilot's meeting was held Monday, August 1. Contestants were briefed on the Contest Rules and Regulations. Bill Coverdale served as chairman during the discussion of Contest Rules. In general the rules were accepted as written with exception of the accelerated point award system for scoring. In lieu of the proposed accelerated method the contestants voted for and adopted the simpler and straight point per mile, 25 and 50% bonus points for goal, and goal and return flights, respectively. The contest executive board was established. Officials elected to serve on the board were Ben Shupack, Chief of Barograph and Statistics, Contest Director and three persons (serving alternately) chosen from among the contestants. The chosen three were Dick Lyon, Crew Chief; Paul Schweizer and Herman Stiglemeier.

August 2nd.

Tuesday, August 2nd, opening day was very disappointing. At pilots meeting Ted Lange (U.S. Weather Bureau), Contest weather forecaster, came up with a thumbs down report on the prospects for contest soaring. The Board declared the day as such. The balance of the meeting was devoted to discussions and the drawing of contest numbers. You may well guess the "boos" that arose when E. J. Reeves drew No. 1, but when Wally Wiberg drew No. 2, the roof rocked. After meeting adjourned pilots and crews scattered to go places, fly or work on ships or equipment.

August 3rd.

Wednesday, August 3rd, Ted Lange offered a little more encouragement in the weather. After his report was presented and some idea of where thermal conditions might be best the Contest Board established a set task using three goals to north-west. Goals established as task goals were the airports at the Texas cities of Bowie, Wichita Falls, and Quanah. Distances to each are 74, 122 and 190 miles respectively.

No goals were attained. E. J. Reeves turned in the best distance flight of the day of 99 miles landing at Henrietta, Texas. Thus Reeves took the lead. Johnson was next with 95 miles, followed by Coverdale with 80 miles for third place. Other standings were as tabulated.

August 4th.

Thursday, August 4th offered little if any, more in the weather reports that gave any hope for long-distance flights, so again set task contesting was chosen. This time goals to the North were selected on the basis of Lange's reports. The set goals were Wiley Post Airport, Oklahoma City, Okla., 198 miles; Ardmore Airport, Ardmore, Okla., 108 miles, and Municipal Airport, Denton, Texas, 34 miles.

There were 34 trys; of these 34, 26 made contest flights, ranging from 6 miles to the longest flight by Dick Johnson of 90 miles. Johnson landed just across the Red River at the town of Orr, Okla. David Boone was the only pilot to complete his chosen set task goal, Denton, 34 miles.

August 5th.

Saturday, August 5th was more of the same. The weather reports were again discouraging to distance. In view of promise of many thunder storms brewing all directions due to the uncertainty of conditions



General view at the 17th National Soaring Contests at Grand Prairie, Texas, August 2nd to 13th. Sailplane in foreground (both pictures) is the new all-metal "Prue 215."

the regular 8.30 a.m. Pilots Meeting was adjourned with announcement that a second meeting would be called at 11.30 a.m. to determine whether a contest day was feasible or not.

At meeting No. 2 the prospects looked favourable for an out and back flight of short distance or a triangular course. Either of these would have served as speed events. The latter would have been in accordance with the requirements set forth in the Beechcraft Special Speed Event. For which $500.00 in divided prizes was offered by Beech Aircraft Company of Wichita, Kansas.

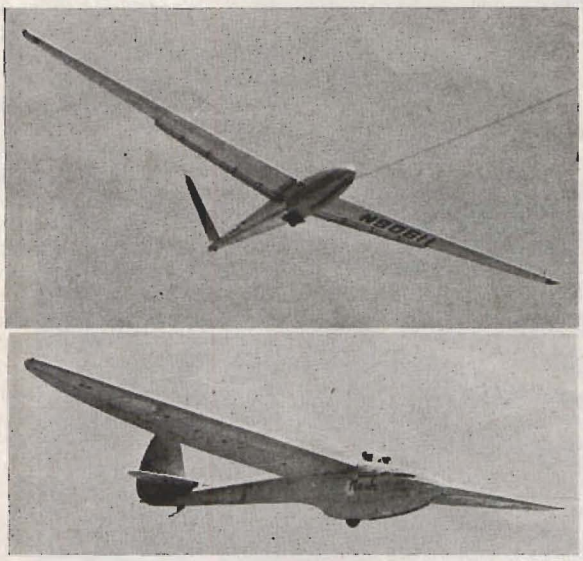
Conditions proved too doubtful to attempt a triangular course so the out and back was chosen as most likely. The goal selected was the Eagle Mountain Lake Naval Base Airport located about 15 miles North and slightly West of Fort Worth and North-west of Grand Prairie, 33 miles. Contestants were told to stand by for take-off around 1.00 p.m.

As the planned take-off time approached so did a big dark cloud bank directly from N.W., by 3.00 p.m. all hope was gone, the devil and his big cloud won. All pilots were advised that the day was no-contest and they could go drink sody pop and watch Coverdale " scratch " pool over at Leon's.

Saturday evening the Contest Committee, under the direction of Becky (Boo) Simmons and her assistant Jim (fugitive from a side pocket) Simmons, gave a very wonderful evening of fun for every one. A square dance in the hangar.

August 6th.

Sunday, August 6th was the day for spectator events. Herman Stiglmeier was given the full job of running the air show, which he and S. S. Montgomery so carefully planned. The pilots did one of the finest shows we have ever seen. They are to be highly commended for superior team work and skilful flying. Their audience was most fascinated with it all and thrilled by Kim Scribner's inverted low-level tow and the screaming " dive from 1500," to deck level then up through an outside loop rolling out at the top. Kim's aerobatics are daring, but smooth. The crowd was kept informed of the acts and manoeuvres, the ships' pilots and the principles of sailplaning by Jim Spurgeon. Jim did a bang-up job as the show's M.C. We were very fortunate to have him for this job and are indebted to him for rendering an excellent performance.



Top. The " Prue 215 " on tow.
Bottom. The modified 2-seat " Pratt.Reed."

August 7th.

Monday, August 7th, was back to contesting and the fly boys and gals were rearin' to saddle up their cloud busting machines and ride those Texas thermals to the bitter end. Ted Lange had been given two free days in which to brew thermals and what does he do at Monday's pilot's meeting but stand up and say conditions are about the same. Well a weather man doesn't make the weather he only predicts it. After the briefing another set task was decided upon as best for the contest. Three goals to North and more conservative were picked, Durant, Oklahoma, Sherman and McKinney, Texas, whose respective distances are 90, 66 and 38 miles.

Three flights to Durant, four to Sherman and two to McKinney were accomplished. Johnson, Reeves and Wiberg landed at Durant; Malloy, Boone and Irvine hit Sherman; and Kohls and Miller made McKinney. Maxey went down at Sherman short of his chosen goal at Durant. This day's flight offered more encouragement to all of us.

August 8th.

August 8th offered little more in weather than we had been getting all along. The C.B. decided the contestants had been held to enough set task competition and should be granted an opportunity to exhibit their meteorlogical skill by selecting their own task, so this day was declared open.

Flights were made in all directions with distances ranging from 6 miles to the longest flight thus far in the meet. 110 miles to Paris, Texas, made by Chuck Kohls and passenger in the strange double-bubble " Pratt-Reed "—Chuck's popularity with his sponsor, Nash Motor Car Company, was definitely improved. This flight put him ahead of Malkemus giving him top position in Class " B " Category. Johnson made 105, Maxey 95, and Wiberg 95.

August 9th.

Wednesday, August 9th, two pilot meetings were called. At the meeting (8.30) Lange could offer very little encouragement for any better conditions than the day before. The joint I.A.S.-S.S.A. Technical Sessions was scheduled for the day, and according to the original schedule, the day was to have been no contest. However, two contest days had been lost and the majority of pilots were in favour of flying all remaining days possible. The final decision was to have another weather briefing at hi-noon and allow those who wanted to attend the morning sessions of the technical conference to do so. Ted Lange gave no encouragement at the noon briefing, so a no-contest day was declared. Most everyone was in favour of attending the afternoon session of the conference. The very interesting subjects combined with the air conditioning at the Grand Prairie Uptown Theatre,

where the meeting was held, had greater appeal than promise of only mediocre soaring conditions.

Wednesday evening a dinner was held in the Adolphus Hotel, Dallas. This was the Technical Session's finale. Dr. August (Gus) Raspet reported on the International Soaring Contest and the U.S. Progress in Soaring compared to the European countries.

After the session many gathered at Leon's to see Coverdale " rip the felt."

August 10th.

Thursday, August 10th and old man weather started to play ball and the boys and girls went to bat. The Contest was wide open. Gliders and gidders went all directions. It proved to be a field day and the morale stock went way up. There were six goal and return flights ; the longest by Reeves, 60 miles to Mineral Wells, Texas, and back. Two goal flights one by Johnson, 157 miles to Abilene, Texas ; the other to Gainesville, Texas by Betsy Woodward. Betsy could have claimed a Woman's National goal distance record if her barograph had not faltered.

August 11th.

Friday, August 11th proved better. More goal and greater distances were turned in. The Humming Bird team scored the longest goal and return of the Meet, 79 miles to Waco, Texas, and back, beating Coverdale's G. & R., 156 miles out and back to Stephenville. From the number of G. & R. turned in by the Humming Bird suggests the more fitting name of " Homing Bird." Probably a lazy crew didn't want to crank up the engine. Bill Ivans made the longest flight to date, 225 miles to San Angelo, Texas. Johnson made another goal flight to San Angelo, 220 miles. Maxey landed just 30 minutes behind Johnson on the same airport.

Reeves tried to go East and was forced down by rain, 82 miles out, dropping to third place. Ivans jumped from 8th to 5th. Coverdale passed Wiberg and Reeves moving into number two position.

One of the outstanding flights of the day was that of Margaret Downsbrough, a goal and return flight to Cleburne, Texas, a distance of 70 miles for a new National Woman's Record ! (Subject to Homologation).

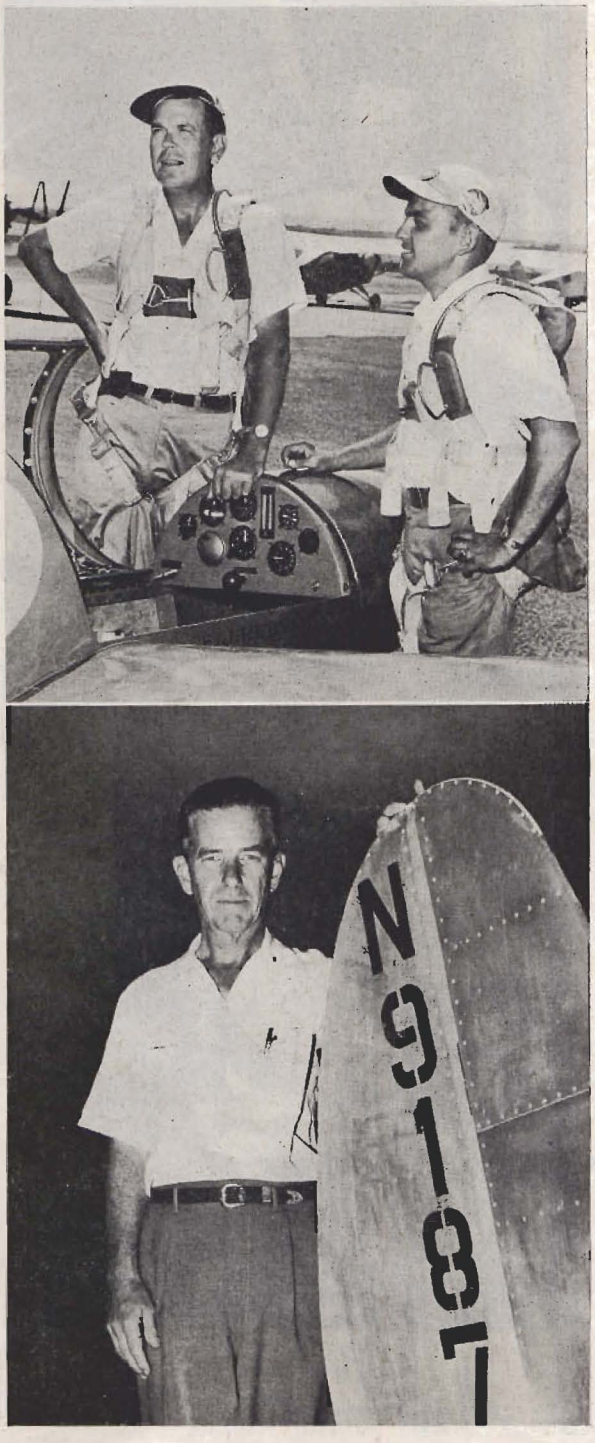
August 12th.

The Contest Board made this final day a set task. The task was set in such a way as to force the top boys to continue across country and to give those who had run up against tough going a chance at the Beech craft speed dash triangular course extending from Grand Prairie, west by south-west to Russel Field, south edge of Ft. Worth, then south-east to Don's Air Park at Waxahachie and back to Grand Prairie. The total distance was 77.5 miles. The task served its purpose and resulted in a new goal distance record in addition to other notable flights.

The Beechcraft event was won by Kim Scribner. The best flight of the contest was made on this day by Dick Johnson, who made Odessa his goal for F.A.I. purposes and completed it for a new (Subject to Homologation) American Predetermined Goal Record. Great circle distance 318.14 miles.

Conclusions.

From a standpoint of competition, the weather was



Top : E. J. Reeves and B. Cooley " Schweizer 1-23."

Bottom : John D. Carsey, new President of the Soaring Society of America.







Top to bottom :

Mrs. Downsborough in " Schweizer 1-23."

Scribner in " Schweizer 1-23."

Pop Krohne in " LKJ 10-A."

(American National Contests—1950.)

in a true sense most favourable for testing the skill of the pilots and the machines under all conditions. As conditions improved so did the performances. The standings held steady and close. To the very last no one of the top men could be sure of his place. The contest is primarily to determine the Nation's Soaring Champion. It was no walk-away for the champ. This is in itself an attribute to both him and his fellow competitors. Analyse the statistical data presented and you will agree.

It requires skilled pilots and good sailplanes to turn in outstanding performances, but they must have the full support of these people who stand faithfully by. They are crewmen, statisticians, computers, operations personnel, headquarter personnel, tow pilots, and others. We take this opportunity to thank all for the time and effort they so willingly contributed to the success of the contest, especially those who took time from their businesss throughout the long preparation period and those who used their vacations to do the hard work of operations.

In concluding, I wish to say that all of the fine performances, efforts, and achievements turned in by contestants of the 17th National Soaring Contest my hat's off to Bill Ivans.

HAL CRONKHIPE,
Contest Director.

Comment from U.S.A.

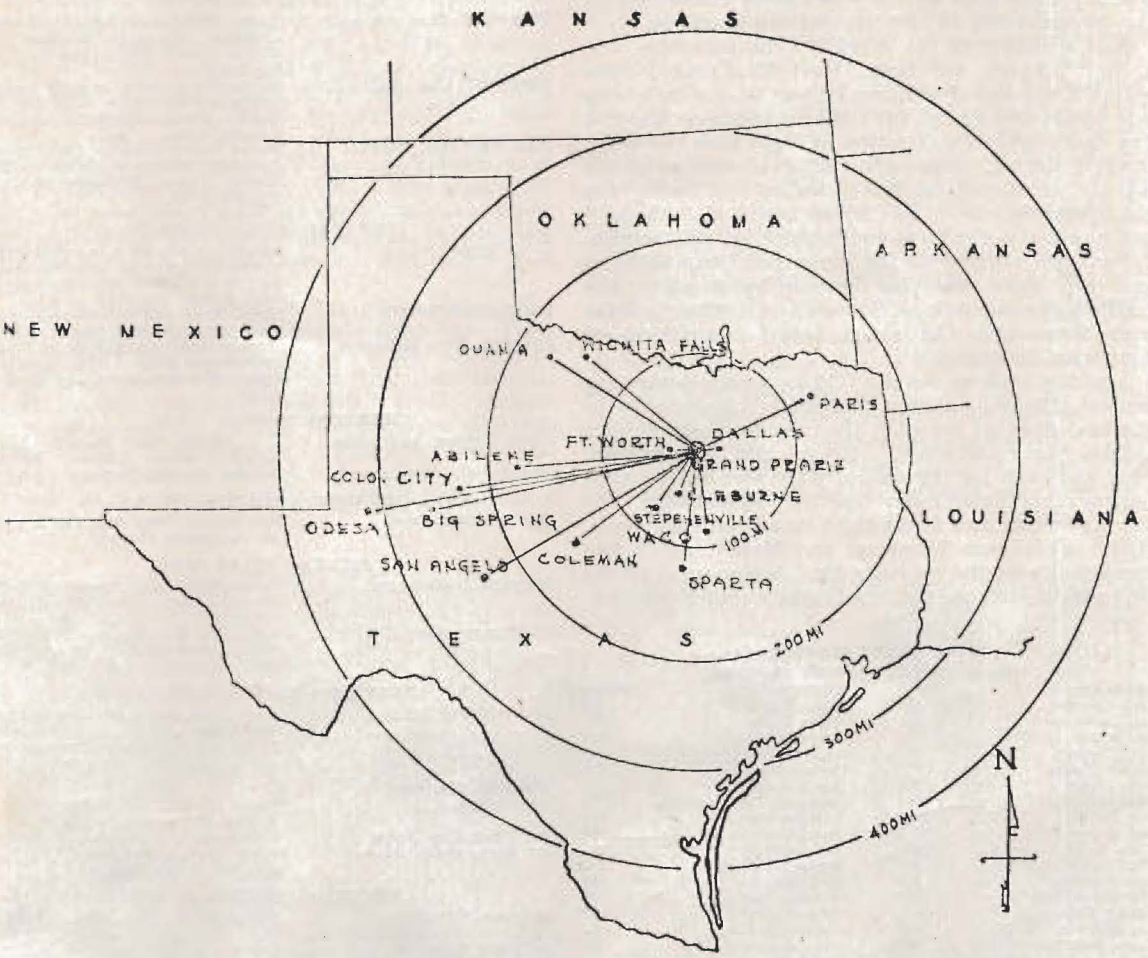
Social affairs at the contest were well planned and thoroughly enjoyed. The first scheduled was a Square Dance in the hangar attended by most contestants, crew members, observers and T.S.A. members, including enough do-si-doers to make about 5 squares. Next was the Swimming and Water Melon Party at Grand Prairie Park where about 75 participants got awful wet and awful full of good ol' Texas water melon. Then the T.S.A. Party on the Carsey's lawn where about 100 Glider Guiders, Crew members, T.S.Aers, Meteorologists, Aerodynamists, Wave Investigators and Observers gathered to fill with liquid refreshments of their choice and fried chicken, picnic style, after which conversation flowed freely until early miornng.

" **Comparisons.** We like to think of the 17th as one of the really great National Contests and we think perhaps it was. A soaring contest is probably great by reason of many things but mainly we think for three principal things. (1) Accomplishment of exceptional performances. (2) The number of machines competing and, (3) The variety of machines taking part.

Based on the three above mentioned elements and comparing the 17th with the Worlds Championships which were concluded in Sweden about two weeks before our National, we stack up about like this :—

	Sweden	Texas
Number of a/c in competition	29	42
Number of different designs	11	16
Best distance attained	260 miles	320 miles
Best altitude attained	10,000 ft.	15,000 ft.
Best distance to goal	150 miles	320 miles

This comparison would indicate that maybe American Soaring is not doing too badly. Another interesting fact is that of the 29 Contestants participating in the International tournament all, save



SOME OF THE PRINCIPAL FLIGHTS OF THE 17th NATIONAL SOARING CONTEST

Places	*Distances*		*Names*
Abilene	157 Miles		Johnson, Mulloy, Schweizer, Wiberg
Big Spring	265 ,,		Ivans
Cleburne	35 ,,	Goal and Return	M. Downsbrough
Coleman	120 ,,		Cooley
Colorado City	220 ,,		Reeves
Henrietta	103 ,,		Smith
Odessa	318 ,,	Goal	Johnson
Paris	110 ,,		Kohls
Quanah	170 ,,		Coverdale
San Angelo	225 ,,	Goal	Maxey, Johnson, Ivans, Coverdale
Sparta	115 ,,		Malkemus
Stephenville	78 ,,	Goal and Return	Coverdale
Waco	79 ,,	,, ,, ,,	Nelson and Perl
Wichita Falls	130 ,,		Schweizer, Stiglmeir

possibly three were partially or totally subsidized by the governments of their respective countries.

And speaking of the World's Championships, one of our number one boys, Paul MacCready, came within a whisker of winning, he was second by a very few points and except for freakish winds on the last day that required a direction of flight over the worst possible terrain, which was to the advantage of the Swedes, Paul would have walked off with the championship. Paul was flying a rented "Weihe" and he could not risk the equipment over bad terrain.

Paul has twice won the American Championship and you don't win that honour by default. His brilliant performance in Europe has shown the folks over there and the entire world, something of American Soaring skill.

Looking back we see the 17th as a very interesting contest, though Johnson was fairly comfortably in the lead most of the way, the next four places were fought "fang and claw." Reeves and Wiberg were neck and neck for the second place slot but by such narrow margin that every time they looked back they saw Coverdale and Ivans right smack on their heels. Right behind was Schweizer and Maxey, which two incidentally wound up tying for 6th place and all the way possibilities for the first brackets under Johnson.

FINAL POINT STANDING
17th NATIONAL SOARING CONTEST

Contestant	Points	Contestant	Points
Dick Johnson	1211	Ruth Petry	356
Bill Coverdale	851	Dave Boone	341
Bill Ivans	844	Virginia Bennis	328
E. J. Reeves	837	Noel Cunnyngham	308
Wally Wiberg	758	Eugart Yerian	219
Lyle Maxey	694	Joe S. Irvine	274
Paul Schweizer	694	Margaret Downsbrough	270
Ray Parker	680	Geo. Lambros	221
Pat Mulloy	612	Jack Stephenson	186
Chas. Kohls	490	Dallas Wise	158
Dick Ball	463	Betsy Woodward	144
Pop Krohne	463	Earl Menefee	109
Howard Klitgord	454	Andrew Tagliafico	106
Shelley Charles	451	Ken Flaglor	97
Del Miller	446	Ralph Salisbury	84
Dave Malkemus	433	Fred Matteson	82
B. B. Cooley	432	Ralph Watkins	64
Kim Scribner	394	Steve Bennis	56
Thayer Smith	391	Curt Holzhauser	32
Herman Stiglmeier	364	Frank Goff	10
By Baker		7	

Teams	Points	Clubs	Points
Arnold—Nelsou—Perl	641	T.S.A.	926
V. Bennis—S. Bennis	384	A.G.C.S.C.	857
Holzhauser—Stephenson—Hansen	218	N.C.S.A.	676
Matteson—Tagliafico	188	AIRHOPPERS	470

REPORT OF THE CONTEST AWARDS COMMITTEE
17th NATIONAL SOARING CONTEST
GRAND PRAIRIE, TEXAS

NATIONAL SOARING CHAMPION

Dick Johnson .. DuPont Memorial Trophy.
2nd place, Bill Coverdale .. High-Speed, High-Altitude Pioneer Parachute.

NEW RECORDS ESTABLISHED

National Goal Record by Dick Johnson, Grand Prairie to Odessa, Texas —318 miles. **National Woman's Goal and Return Record** by Margaret Downsbrough, Grand Prairie to Cleburne, Texas and return to Grand Prairie—35 miles. (Subject to homologation).

NATIONAL WOMEN'S CHAMPION

Ruth Petry .. Silver Bowl given by Southern Bankers Mutual Life Ins. Baylor Watch given by Zales Jewelry Company. Plaque by McKinley Iron Works
2nd place, Virginia Bennis .. Picnic Set given by B. F. Goodrich Company. Trophy by Stanco Company. 2-year subscription to Cross-Country News.

CATEGORY CHAMPIONS

Class "A" Dick Johnson .. Baylor Watch given by Zales Jewelry Company. Plaque by McKinley Iron Works. 2-year subscription to Cross-Country News.
Class "B" Chas. Kohls .. Baylor Watch given by Zales Jewelry Company. Plaque by McKinley Iron Works. 2-year subscription to Cross-Country News.
Class "C" Geo. Lambros .. Baylor Watch given by Zales Jewelry Company. Plaque by McKinley Iron Works. 2-year subscription to Cross-Country News.

TEXAS SOARING CHAMPION

E. J. Reeves .. Silvaire Trophy by Luscomb Division of TEMCO. Trophy, gold medal and $100.00 cash award given by Aeroquip Sales & Eng. Company.
2nd place, Wally Wiberg .. Silver Medal and $50.00 cash award by Aeroquip Sales & Eng. Company.
3rd place, Dave Malkemus .. Bronze Medal and $25.00 cash award by Aeroquip Sales & Eng. Company. 2-year subscription to Cross-Country News.

CHAMPION SOARING CLUB

Texas Soaring Association .. B. B. Cooley, Dave Malkemus, E. J. Reeves, Wally Wiberg awarded Douglas Aircraft Trophy.

CHAMPION SOARING TEAM

Hummingbird Team .. Ted Nelson, Harry Perl, Les Arnold—Air Accessories Trophy.

SILVER "C" AWARDS

Margaret Downsbrough .. First woman to gain Silver "C" during Contest—Alexis Dawydoff cash award $20.00.
Bill Cunnyngham .. First man to complete Silver "C" rating during Contest. Briggs-Weaver Mach. Compauy cash award, $25.00.

BEST TWO-PLACE PERFORMANCE

Hummingbird Team .. Harry Perl and Les Arnold—Nylon Tow Rope; donor, Alexis Dawydoff. 2-year sub. to Cross-Country News.

AEROBATIC EVENTS

Aerobatic Champion,
Kim Scribner .. Texas Private Fliers' Trophy. T.V. Hanlon, Jr. cash award, $100.00
2nd place, Ray Parker .. Parker and Co. cash award, $50.00
3rd place, Wally Wiberg .. Texas Stetson Hat given by Elastic Stop Nut Corporation.

BEECHCRAFT SPEED EVENT

1st place Kim Scribner	36.5 m.p.h.	—	$150.00
2nd place Lyle Maxey	35.2	—	$125.00
3rd place RayParker	29.8 m.p.h.	—	$100.00
4th place Les Arnold and Harry Perl	27.7 m.p.h.	—	$75.00
5th place Dave Malkemus	26.1 m.p.h.	—	$50.00

GOAL PRIZES

Dick Johnson	Odessa, Texas	337 miles	cash prize	$150.00
Dick Johnson	Abilene, Texas	157 miles	cash prize	$150.00
Paul Schweizer	Wichita Falls, Texas	122 miles	cash prize	$150.00
Lyle Maxey	San Angelo, Texas	220 miles	cash prize	$150.00
Beaumont Cooley	Coleman, Texas	153 miles	cash prize	$100.00
		by J. W. Stafford.		
		by F. S. Oldt.		
		by Ralph Harper.		
		by E. L. Dalton Co.		
		by Chamber of C.		

STROUKOFF AWARD for GOAL AND RETURN FLIGHTS

1st place, Hummingbird Team .. Ted Nelson, Harry Perl, Les Arnold. Grand Prairie to Waco and return—79 miles, $200.00.
2nd place, Bill Coverdale .. Grand Prairie to Stephenville and return—78 miles, $100.00.
3rd place, Ray Parker .. Grand Prairie to Navarro and return —63 miles, $50.00.

NORTHRUP AWARD

(for best flight for pilots under 21 years of age)
Irving Gere—15 years old .. For an altitude gain of 9,309 ft. above release in California, July 3, 1950. Cash Award, $100.00.
Fred Obar—20 years old .. 78 miles goal flight made March 22, 1950 at Mississippi State College. Cash Award, $100.00.

WARREN E. EATON MEMORIAL TROPHY

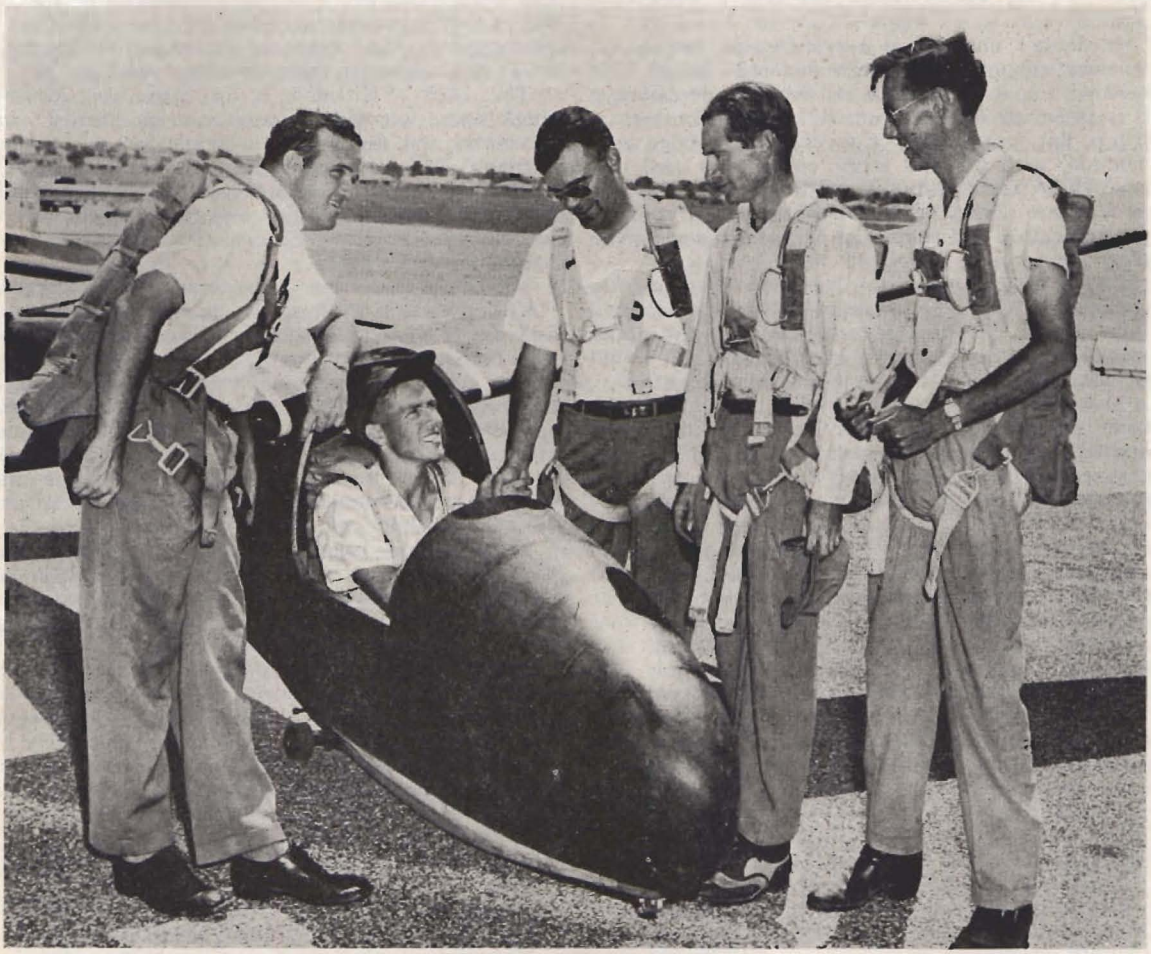
Paul McCready, Jr. .. For greatest contribution to Soaring during 1949-50.

Even before the contest there was no question in anyone's mind what Johnson might do if his new " RJ-5 " turned out to be a good machine. Coming as he did with a new and unproven machine of rather revolutionary design, there was considerable doubt in many minds. Those first days of very weak thermals were really the test of whether or not the " RJ-5 " was a versatile machine. It did not take long for Johnson to prove his " RJ-5 " in weak hard going, he went ahead after the second day and never relinquished the lead from there on out, proving not only the metal of the machine but that of the pilot as well.

After these first days the observers began wondering what Johnson could do on a really good day. They did not have long to wait, for when the last day of the contest dawned fair and hot with good thermal developments, Johnson turned his " RJ-5 " on and let her have an all-out run. Seven hours and 320 miles distance, a flight against a quartering head wind and there was doubt no longer in anyone's mind, the " RJ-5 " is one of the world's finest high performance sailplanes and Dick Johnson is exactly the right man to be at the controls of such a machine.

Winning all the way as he did and against the best machines and pilots in America, we think Dick Johnson will go in the books as one of America's great soaring pilots. The basic design and a good part of the construction of the " RJ-5 " was by Harlan Ross and this is the third great performance sailplane created by him. This combination of pilot skill and excellence of design and construction, puts Ross and Johnson in soaring's hall of fame.

The photo finish of Coverdale in 2nd and Ivans in 3rd, with Reeves 4th and Wiberg 5th, made for a hair-raising finish. Ivans of California is a comparative newcomer to tournament soaring and proved himself to be a great competitor. Coverdale of course has now for some time been one of the top boys and we think Wiberg's performance with practically a standard " LK " was most noteworthy. The Schweizers " 1-23's " proved again and conclusively that they are one of the best performance sailplanes."



Left to right—Scribner, Johnson (" RJ-5 "), Paul Schweizer, Raymond Parker, Wally Wiberg.

ULTRA LIGHT AIRCRAFT ASSOCIATION

EXTRACTS FROM SEPTEMBER BULLETIN

DESIGN SUPPLEMENT

Contributed by Group-Captain E. L. Mole, Chairman, Design Sub-Committee.

The Ilgen " Junior " Two-Seater Trainer.

We have received a very comprehensive design study of an ultra light two-seater trainer by Mr. H. R. Ilgen of The Hague, Holland. This study was based on a summary of the U.L.A.A. specification which was published in " Flight " from our detailed requirements given in the Bulletin of October, 1949.

The design study has been beautifully made up in brochure form, and is liberally illustrated. Mr. Ilgen, whom we are glad to welcome as a new member of the Association, has been good enough to present us with the study which is available for loan to any Design Group interested. It has already been studied by Mr. F. C. Kirkpatrick, who is supervising the two-seater trainer project in hand by the apprentices at Messrs. Short Brothers and Harland Limited.

Mr. Ilgen's machine is a side-by-side two-seater, low wing monoplane, with an enclosed cockpit, and fitted with split flaps and a tail wheel undercarriage. It is intended to be powered by the Continental 65 h.p. flat four engine. Conventional wooden construction, with ply and fabric covering is used and although extremely simple in design, the machine has a smart and attractive appearance. Details of its specification and estimated performance are given below.

The writer considers the design to be eminently practical, and his only criticism is that the designed all-up weight has been set at 1,200 lb.—the upper limit of the ultra light category of C. of A. It would be wiser to design to a rather lower weight (say, 1,100 lb.) in order to allow a margin, should the airframe weight come out heavier in practice than expected (as it nearly always does !). This would prevent the useful load being cut in order to keep down to the 1,200 lb. all-up weight limit.

Mr. A. R. Weyl, head of our Design Team, has studied Mr. Ilgen's design, which he considers to be a very detailed and most valuable study. His main criticism is that the equal chord, cantilever, two-spar wing will be rather heavy in view of its thin section. Although such a wing is, of course, cheaper and easier to construct, Mr. Weyl recommends the adoption of a tapered wing having 18 per cent root thickness, instead of 12 per cent as designed. He suggests that a tapered wing, besides having greater bending strength, would also improve the appearance of the machine.

Specification.

Span	34.1 ft.
Length	21 ft.
Height	6.37 ft.
Wing area	150 sq. ft.
Aspect ratio	7.75
Empty weight	713 lb.
All-up weight	1,200 lb.
Useful load	487 lb.
Wing loading	8 lbs./sq. ft.
Fuel Capacity	130 galls.

Estimated Performance.
(65 h.p. Continental Engine).

Max. speed	100 m.p.h.
Cruising speed	93 mp.h.
Stalling Speed (flaps down)	39.4 m.p.h.
Rate of climb	542 ft./min.
Take-off run (still air)	112 yds.
Landing run (still air)	131 yds.
Range (still air)	279 miles
Endurance	3 hours

The Dart " Kitten "

Congratulations to Dart Aircraft Limited who have re-built a pre-war Dart " Kitten " belonging to Mr. W. G. A. Harrison, a member of the Association. This aircraft has been completely re-conditioned and has been re-issued with its Permit-to-Fly by the M.C.A. It has been accepted by the A.R.B. as a prototype for the purpose of continuing official flight trials with a view to the issue of a Type C. of A.

The Dart " Kitten " is an attractive looking, single-seat, low-wing monoplane of sturdy construction, and fitted with a simple tail-skid undercarriage. It is powered by the 36 h.p. Aeronca J.A.P engine, with which the machine flew very successfully before the war and earned high praise from several well known test pilots. Specification and performance figures are given below.

We have had the opportunity of flying the " Kitten," which we found to be extremely pleasant and docile to handle, and with quite a remarkable take-off and rate of climb for such a low powered engine. The stall was completely innocuous, lateral control being maintained throughout—thanks to the special design of wing section giving a wash-out effect at the tips. An excellent forward view greatly assisted the approach to land, and landing was simplicity itself—touching down at a low speed and with a very short run.

The machine, being devoid of any frills such as flaps, brakes, etc., is quite suitable for the home-constructor to build, and we are glad to state that Dart Aircraft Limited propose, as soon as the Type C. of A. has been obtained, to supply the " Kitten " in kits of parts for this purpose. The kits will consist of all the metal fittings together with a complete set of wing ribs, and will cost about £235 (less engine and propellor—which can be obtained separately for £60 and £18 respectively). We should be glad to sponsor applications from suitable constructional Groups for loans from the Kemsley Flying Trust for their purchase.

Specification.

Span	31 ft. 9 ins.
Length	21 ft. 4 ins.
Height	7 ft. 11 ins.
Wing area	129 sq. ft.
Empty weight	510 lb.

All-up weight	752 lb.
Wing loading	5.7 lb./sq. ft.
Fuel capacity	10 galls.
Performance.	
(36 h.p. J.A.P. Engine).	
Max. speed	95 m.p.h.
Cruising speed	83 m.p.h.
Stalling speed	38 m.p.h.
Rate of climb	600 ft./min.
Take-off run (still air)	90 yds.
Range (still air)	340 miles
Endurance	4½ hours

The Coventry Victor Engine

We recently visited the Coventry Victor Motor Co. Ltd., in Coventry, to see the latest developments of the 50 b.h.p. engine they are preparing for us. As members already know, this engine is a conversion of the Coventry Victor " Neptune " engine which has been well tried and proved during the past 15 years, and is in quantity production. The conversion is being undertaken as a private venture by the firm's Managing Director, Major W. A. Weaver, as a favour to the Association whose work, he feels, is in the national interest. Major Weaver is a member of the Association, and must have been one of this country's original amateur constructors, having designed and built his own aircraft (complete with variable pitch propellor) away back in 1908.

The " Neptune " is a 1½ litre air-cooled, flat four cylinder engine of extremely simple and robust design. The first step in its conversion has been to fit the standard commercial engine with a strengthened crankshaft and a propellor thrust race. At the time of the writer's visit, this engine was running on the test bed, and was obviously extremely smooth—indeed, the disconnecting of each ignition lead in turn led to no noticeable increase in vibration.

The present engine is heavy, weighing 190 lb., but as a second step it is to be modified by fitting an Elektron crankcase (complete with a larger oil sump), and by using alloy cylinders with steel liners instead of the present cast iron ones. Major Weaver considers the weight can be brought down to 140 lb. or less.

If the present engine cannot be tuned to reach 45 b.h.p. at 3,000 r.p.m., the existing side-valve cylinder heads will be exchanged for O.H.V. ones which have already been designed and tested. Major Weaver is confident that the engine would then deliver the required 50 b.h.p., or even more.

The Association is deeply grateful to Major Weaver for his public spirited action in going ahead with this development, which is vital to the whole progress of the ultra light movement and to the future of the sport of flying. We are negotiating with the Kemsley Flying Trust for assistance in building a suitable ultra light aircraft with which to undertake the flight tests of the engine. These are required before it can be cleared by the A.R.B. for general use.

Steel Castings for U.L.A. Fittings

We have heard from Mr. R. G. Carr, designer and builder of the interesting " Wren " aircraft and engine, and who is head of a firm of precision engineers, that he is producing steel castings by a new process which he feels might be of value to the U.L.A. movement for aircraft components and fittings. Mr. Carr writes as follows :—

" Steel castings : This process is possible due to a new refractory material which is processed in an electric furnace and glazes the moulded form. The steel is melted electrically and poured after the gases are released, porosity is almost non-existent (about 0.01%) and is thoroughly understood.

Most small castings without much shrinkage can be cast to plus 15/1000 ins., a larger allowance is given where experience has shewn it to be necessary to give more, and this is largely to reduce machining scrap. We regularly use cast-steel to replace forgings and stampings and our policy is to use a better quality steel than the original.

In aircraft work, where metal abuts on wood, the cast surface would be quite good enough. We could deliberately put on a wavy surface to give the clamping effect greater strength without pulling up the clamping bolts any further. The waves could be (say) 25/1000 ins. and ½ in. between crests, or anything to suit, either parallel with the grain of the wood where there was bending, or across the grain when in tension. This would have the effect of not utilising the projected area of the bolts to take the shear, thus the whole of the shear could be taken by the surface of the plates.

PERMITS TO FLY CERTAIN ULTRA LIGHT AIRCRAFT.

Arrangements have been made between the Ministry of Civil Aviation and the Ultra Light Aircraft Association to help owners of certain ultra light aircraft of pre-war design to get permits to fly their machines.

Some owners have had difficulty in obtaining permits owing to their inability to establish that the aircraft are in all essential respects similar to types which flew before the war, or because they are unable to provide for the Air Registration Board the necessary evidence as to the materials and methods used in carrying out repairs and minor modifications.

The Ministry, on the advice of the Air Registration Board, have now agreed that the design and inspection departments of the Ultra Light Aircraft Association may be put at the disposal of owners of ultra light aircraft for the purpose of investigating the airworthiness of machines which have not yet been granted a permit.

The object of these arrangements is to enable aircraft already built or under construction before August 1947 to be flown under adequate safeguards for the rest of their useful lives.

Owners of aircraft who wish to take advantage of these arrangements or to obtain a permit under the ordinary procedure through the A.R.B. should apply to the Ministry of Civil Aviation without fail before November 30th, 1950.

The obvious advantage of using high quality steels is that they can be heat-treated, and it is on this basis that they become economical. The structure can be about one-third the size of a structure involving welded components, and also the availability of steels gives the designer a completely new field in their utilisation.

We could advise on the detailed design of castings to give the cheapest and simplest form of casting for light aircraft use and also make patterns where the quantity merits a metal pattern, but a well finished wooden pattern is quite good enough provided the corners are nicely filleted. Even a pencil mark on the wood is reproduced on the steel.

We have used these castings in several kinds of steel including stainless (machinable) varieties."

This process sounds very promising and we shall be glad to put any members interested in touch with Mr. Carr for further information. We would point out, however, that before such components could be used in primary structures of aircraft, both the process itself and the design of the cast steel components would have to be approved by the A.R.B. We would be prepared to submit the idea to the Board for consideration if sufficient interest is shown in it.

The Fate of The " Wren "

In his letter above, Mr. Carr mentioned that he has dropped his " Wren " aircraft entirely, and disposed of it as scrap. This seems a great pity, as the design included some ingenious ideas in construction which enabled (so Mr. Carr claims) a fuselage to be built up in half a day by a man and a boy, for a total materials cost at present prices of £7. It was unfortunate that he completed the design and construction of his aircraft, together with a flat-four two-stroke engine for it, without realisation of the official regulations. When subsequently faced with the expense and complication of getting his machine through the airworthiness requirements, he became discouraged and threw up the job. Such a waste of enterprise and ingenuity can only be deplored. Had our Design Team been in existence, and our " Notes for the Guidance of Amateur Designers and Constructors " been available, Mr. Carr would have gained an additional aircraft—and an attractive one too.

Engine Construction Offer

In his letter, Mr. Carr also stated that he is now only interested in the engine side of " ultra lights," and if funds could be found he would be prepared to give unstinted assistance to produce a small inverted four. He firmly believes (and we agree) that nothing much can materialise until this small engine can be produced at a reasonable price. He concluded his letter with the suggestion that if we could find anyone sufficiently interested, and with business ability, who would like to get into the engine production business, he could possibly make a proposal which would interest them.

CONSTRUCTION SUPPLEMENT

Contributed by H. Lewellen Pitt, A.R.Ae.S.

Amateur Construction Projects

Our Editorial last month mentioned that the Association was in touch with about 23 Amateur Construction Projects which were either being worked upon, or had already been completed.

We are giving below further details of these projects, and hope that the examples set by these enthusiasts in spite of difficulties (which to some extent are now lessened) will encourage many others to embark on similar projects.

Name of Aircraft and Reg. Number	Engine and h.p.	Details of Project and Owner
Aeronca 100 G-AEVT	J.A.P. 36 h.p.	Completely stripped and reconstructed by P. Simpson of Pinner, Middlesex. Passed A.R.B. Inspection and gained C. of A. The workmanship of this reconditioning was first-class throughout.
Aeronca 100 G-AEWV	J.A.P. 36 h.p.	Completey stripped and reconstructed by Lt.-Cdr. J. S. Sproule, of R.N.A.S., Gosport. Passed A.R.B. Inspection and gained C. of A. The workmanship of this job was first-class throughout.
Chilton G-AFGI	Carden-Ford 32 h.p.	Built up from partly completed new components obtained from the firm by Lt.-Cdr. J. S. Sproule of R.N.A.S., Gosport, and fitted with an extremely neat sliding hood. It is of excellent workmanship. Passed A.R.B. Inspection and obtained Permit-to-Fly.
Chilton G-AFSV	Train 44 h.p.	Reconditioned by the Pupils of the College of Aeronautical Engineering at Redhill Aerodrome. Passed A.R.B. Inspection and now awaiting issue of Permit-to-Fly.
Comper-Swift G-ABTC	Popjoy 75 h.p.	Presented to the Association by Mr. A. Malcolm and now being completely stripped and reconditioned by Sqn.-Ldr. G. Banner, D.F.C., with a constructional group at the R.A.F., Farnborough. We hope to see Sqn.-Ldr. Banner racing this aircraft next season.
Comper-Swift G-ABUS	Popjoy 75 h.p.	Completely stripped and reconditioned after the war. Passed A.R.B. and obtained C. of A. Tony Cole is well known for his successes in this machine in past Air Races (King's Cup. 1949. 3rd).
Comper-Swift G-ACTF	Popjoy 75 h.p.	Reconditioned by Mr. R. E. Clear, Test Pilot at Messrs. Airspeed Ltd., of Christchurch. Passed A.R.B. and obtained C. of A.
Dart Kitten G-AERP	J.A.P. 36 h.p.	This was the original prototype Dart Kitten previously fitted with a French AVA 2-stroke engine. It is being reconditioned by its owner, Mr. J. Ogilvie of the Herts and Essex Aero Club, Broxbourne, and has been modified to take a JAP engine.
Dingbat G-AFJA	Carden-Ford 32 h.p.	The original prototype of a pre-war design by Messrs. Taylor & Watkinson of Teddington. Now owned by the Experimental Group of the U.L.A.A. who are reconditioning it with a view to obtaining a Permit-to-Fly.
Drone G-ADPJ	Bristol Cherub 34 h.p.	Entirely rebuilt from pre-war aircraft and fitted with Cherub by Mr. A. C. Waterhouse of Clifton, Rugby. The construction, which has been extremely well carried out, is completed and awaiting Permit-to-Fly.
Drone G-AEKV	Carden-Ford 32 h.p.	Pre-war Aircraft completely stripped and rebuilt by the ground staff of the R.A.F. Station, Upper Heyford. Passed A.R.B. Inspection and awaiting Permit-to-Fly.

Name of Aircraft and Reg. Number	Engine and h.p.	Details of Project and Owner
Heath Parasol G-AFZE	Blackburn Tomtit 26 h.p.	An aircraft of pre-war design built entirely by Mr. R. H. Parker of Esher, Surrey. This is a really splendid example of first-class workmanship and industry. Obtained Permit for test flight, but with Tomtit engine was somewhat underpowered. Mr. Parker is considering the installation of a 36 h.p. JAP engine instead.
Heath Parasol G-AJCK	J.A.P. 36 h.p.	A new machine of pre-war design as above. Construction was started by the South Hants U.L.A. Club and completed by the Airways Aero Club at Hurn Airport. Passed A.R.B. and obtained Permit-to-Fly.
Luton Minor G-AFIR	J.A.P. 36 h.p.	Pre-war machine completely stripped and rebuilt by Mr. Arthur Ord-Hume of Pinner, Middx., a member of our Construction Sub-Committee. Airframe is completed and engine installation is now in progress. This aircraft was actually rebuilt at home —i.e., indoors and in the garden.
Luton Minor G-AGEP	J.A.P. 36 h.p.	New machine being built to pre-war design by Mr. L. R. Miller of Seaton, Devon. Airframe is completed and the engine installation is now in hand.
Luton Minor G-AMAW	Bristol Cherub 34 h.p.	New machine built to pre-war design by Flt.-Lieut. J. R. Coates of R.A.F. Station, Oakington, Cambridge. The aircraft is completed and has passed Final Inspection, and is now awaiting Permit-to-Fly.
Luton Minor	J.A.P. 36 h.p.	New aircraft built to pre-war design entirely unaided by Mr. F. H. Brown of West Stanley, Co. Durham. Airframe is completed and was fitted with a 5-cyl. radial engine built entirely by Mr. Brown himself to his own design, and with this engine has done taxying trials. However, as such an engine could not qualify for a Permit-to-Fly with this airframe, Mr. Brown is contemplating fitting a 36 h.p. JAP.
Luton Minor	Scott Flying Squirrell 34 h.p.	A new aircraft built entirely to pre-war design by Mr. D. E. Felce of Hinckley, Leicestershire. Aircraft completed and undergoing propeller and taxying tests.
Luton Minor	J.A.P. 36 h.p.	New aircraft being built to pre-war design by Mr. J. Miller of Alnmouth, Northumberland.
Luton Minor	J.A.P. 36 h.p.	New aircraft being built to pre-war design by Mr. W. Petrie of St. Margaret's Hope, Orkney. Mr. Petrie is also building his own hangar to house the machine.
Taylor Cub G-AEXZ	Continental 40 h.p.	Pre-war aircraft being reconditioned by Mr. E. V. Pyle and associates at Whitchurch Aerodrome, Bristol.
Taylor Cub G-AFJP	Continental 40 h.p.	Pre-war aircraft completely stripped and reconditioned by the members of the S. Hants U.L.A. Club. Passed A.R.B. Inspection and obtained C. of A.
Wren Golderest	Scott 34 h.p.	Aircraft designed and built by R. G. Carr of Kirklinton, Carlisle. Prototype completed but has been abandoned as designer found C. of A. procedure too complicated and expensive to undertake. Mr. Carr also designed his own engine for the aircraft—a flat 4-cyl. two-stroke of 1 litre capacity. This reached bench trials and showed great promise but unfortunately work was also abandoned for the same reason as the airframe.

The 1950 W.J.A.C./U.L.A.A. Combined Summer Training Camp

The Camp was held at Redhill Aerodrome from the 20th August until the 3rd September, and was a great success despite indifferent weather conditions. Our thanks are due to the indefatigable Mrs. Gabrielle Patterson, Chairman of our Training Sub-Committee, for organising and running the Camp with the usual efficiency and enthusiasm. We are also indebted to Miss Jean Bird for assisting with the flying instruction, and for using her " Moth Minor " for this purpose.

A full report on the Camp will be published in next month's Bulletin.

HOME CONSTRUCTION IN THE UNITED STATES

Contributed by Hon. Editor

Following post-war agitation by the American Airmen's Association, under its President, George Bogardus, to the Civil Aeronautics Administration, restrictions on the home construction and flying of aircraft which come approximately in the British ultra-light category—in the United States, a wing-loading of less than 10 lb./sq. ft., and a landing speed of less than 50 m.p.h. has been specified—have recently been lifted.

There has always been tremendous enthusiasm in the United States for home-constructed aircraft, since the 1930's, and an amazing variety of designs has been built and flown—with varying results. Before the Club initiated the American light aeroplane movement in a way similar to that of the " Moth " in Great Britain, small home-made aircraft were hopping uncertainly from cow pastures and other open spaces. Despite the lack of a suitable power plant—a parallel with the present position in this country—some of these old designs had remarkable performances on a handful of horse-power, and one of the more successful, the " Heath Parasol," is still in evidence today.

Amateur design and construction was given a tremendous boost in the mid 1930's when a reliable and smooth-running low-powered engine became available in the four-cylinder horizontally-opposed Continental A.40 of b.h.p. This engine was progressively developed, and at 65 b.h.p., now powers many of the smaller types in the U.S. Another air-cooled power plant which was fitted to many of the home-built designs and used with success was the 40 b.h.p. Salmson radial engine.

Constructional and design supervision of these older types varied from State to State, but in general, there was little control over amateurs who wished to put anything with wings into the air. Plans and kits of parts had no guarantee of official approval, and although there were few fatalities attributed to structural failure, many designs were far below acceptable safety limits.

Restrictions on designs naturally increased, until after the war, it became necessary for the crusade by the A.A.A. to resuscitate amateur construction, in co-operation with the C.A.A. Only last year, home-constructed aircraft became eligible for experimental Cs. of A., although C.A.A., like their corresponding organisation in this country, discourage the renewal of permits of older non-standard types.

(To be concluded)

NEWS FROM THE CLUBS

A Schweizer " 2-22 " has been sent to Tel-Aviv, Israel. This is the first American glider ever sold to that country where a glider training programme is being developed in a big way.

At a general meeting of the Schweizer Aircraft Corp., Paul Schweizer announced that the Company had received a large order for tow targets from the U.S. Navy. Tooling will start at once and considerable expansion is anticipated to care for this additional work.

Texas groups plan to make Dallas the " glider capital "—so states a recent article in a Dallas paper quoting a speech from Col. Byrd of the Civil Air Patrol. Because of the excellent Texas soaring weather and the fine situation of the Arlington College Airfield, Dallas plans to oust Elmira from its position of Glider Capital of the World. Dallas obtained for itself the contest this year and intends to make it an annual affair to which air cadets from England, France, Switzerland, Portugal and Italy will be invited under an official exchange programme. High ranking military and naval officers are expected to attend and special air shows in addition to the soaring contests will be laid on. It is whispered that 2,000 dollars in goal prizes are in already.

CAMBRIDGE UNIVERSITY GLIDING CLUB.

Round about this time every year somebody gets around to writing a thing which starts off " Unfortunately, owing to pressure of examinations, no Club Notes have appeared for three months . . " This is it.

We took the " Cambridge " to a camp at the Mynd in June. Nothing really startling happened. No one abandoned the Rolls on the hill, trudged through the snow and climbed into a locked clubhouse through a window. No one slept on the hangar roof. No one went on a retrieve with a full trailer. Of course, we did get three five-hour flights in one day, starting at 05.30 hours ; we did do 49 hours in 10 days ; the " Cambridge " did get to 4,200 feet in the wave. But on the whole it was a quiet, pleasant and well-ordered camp. And Alex was getting quite good as a waker-upper by the end of the week.

Just before the Comps, a great upheaval swept the Club. We left Bourn. The Cambridge Club, the pioneers of auto-towing on runways, the inventors of piano wire, went over to winching. Thanks to the great kindness of Marshall's Flying School, all our flying now occurs at Cambridge Airport. All that remains of the Club at Bourn now is a few happy memories, a few crushed patches of corn, at least one broken female heart, an enormous heap of old piano wire, and, distributed evenly over the aerodrome, about 150 sets of lost launching rings.

We learnt quite quickly about winching. Within a few weeks we had found out that there is no future in launching in bottom gear, that the winch does not run well on a 50/50 mixture of petrol and water, that cylinder head gaskets can be changed in an hour, and so on. The members of the old school who reckoned that we shouldn't get such good launches as with auto-towing have been confounded : Bluebell, our " T.21B " (a name we rather prefer to Sedbergh) got 2,910 feet one day, and gets 1,400 feet pretty regularly. But the day we are all waiting for is when the Martlew-Clayton double-drum winch comes into action. The Club has been rather baffled by the methods used by the two Davids to make this contrivance. First of all, they made drawings, of all things. Still, they reckon this unheard of procedure may produce something equally unheard of—a really serviceable piece of Gliding Club machinery. Basil Bell's fertile imagination has conceived a wonderful body for the Brute (as the mobile winch has become known), so the " C.U.G.C." in future will roll up in a 3-ton Ford towing a trailer ; they will sleep in

SCHEME TO RELIEVE FLYING AND GLIDING CLUBS OF EXTRA PETROL TAX BURDEN.

Flying and gliding clubs can now claim relief for extra expenditure incurred since April 5, 1950, as a result of the increased petrol tax. The scheme, first announced in Parliament on July 26, has been worked out by the Ministry of Civil Aviation in consultation with the Association of British Aero Clubs and Centres, the Ultra Light Aircraft Association and the British Gliding Association.

In order to qualify for this relief, clubs must get the Ministry's approval for their participation in the scheme. The three Associations have agreed to act in this matter on behalf of their affiliated clubs and will receive applications for grants from their members and make payments on behalf of the Ministry, but unaffiliated clubs and groups should write direct to the Secretary (ASC2), Ministry of Civil Aviation, Ariel House, Theobalds Road, London, W.C.1. giving full information about their membership, objects, aircraft and other flying or gliding facilities, and enclosing a copy of their rules.

For flying clubs the basis of calculation for the payment of the grant will be the number of qualifying hours multiplied by the rate of relief laid down by the Ministry for each type of aircraft. These rates will be based on the average petrol consumption in each case. Payment to gliding clubs will be made on the basis of receipted petrol bills or audited accounts for petrol used for the towing, launching and retrieving of gliders by powered aircraft, winches, bungeys or road vehicles. Payments of the grant will be made six-monthly in arrear.

it, cook in it with Calor gas, listen to Airmet (pause for hollow laughter) on its radio, winch with it, retrieve with it, go down to the local in it, etc. Maybe. Still, the winch part is promised for mid-September.

You will have heard all about the Comps. You will have heard about Africa, the largest and darkest tent on the site, about the drainpipe cooking stove which cleared all the tents and caravans down-wind of it, and about the " Kranich," which started so well, but regrettably got bent half-way through. However, Ted Warner has done a lovely job on the fuselage, and hopes to have the wing finished in a few weeks.

At Cambridge, flying has carried on practically every day of the week. Passengers are flocking in, new members ditto, pupils are bashing around in " Bluebell," being flung off solo in the " Cambridge," and generally we are mastering the technique of winching on a grass aerodrome. The aged " Cambridge" (of which a recently re-joined pre-war member said " Good Lord, is it still flying? It was old in my day ! ") is cross-countrying madly. Siegfried Neumann (he who flew at 05.30 hours afore-mentioned) did two trips, both unfortunately short of 50 km. Gerry Ibbotson did a very nice trip to Southend, finishing up there at 4,000 feet ; he would have pressed on further if he hadn't had an important appointment that evening.

In fact, even though it is out of term-time, the " C.U.G.C." is flourishing.

PORTSMOUTH GLIDING CLUB.

Sunday, 28th May. A fresh westerly wind and chubby little cumuli dotting the sky promised a good day's sport in spite of the " Met. merchants " rather doleful predictions.

The " Ventura " and " Grunau " were soared by almost everyone present. On two occasions Bert Parslow and Alan Hillyer went away together over Langstone Harbour, which is four miles wide, and caused much heart flutter as they slowly beat back against the wind. On a third flight Alan took off at 17.47 hours and cruised around the countryside for 1½ hours reaching 3,540 feet. Peter Sullivan of the Cambridge University Gliding Club joined in the fun and seemed to enjoy himself on both the " Dagling " and the " Grunau."

We were delighted to welcome Basil Meads who dropped in for a short visit. He admired the " Ventura " but owing to being rather behind in his time schedule he declined from flying it (what self control !) After staying with us much longer than he had intended he pressed on northwards.

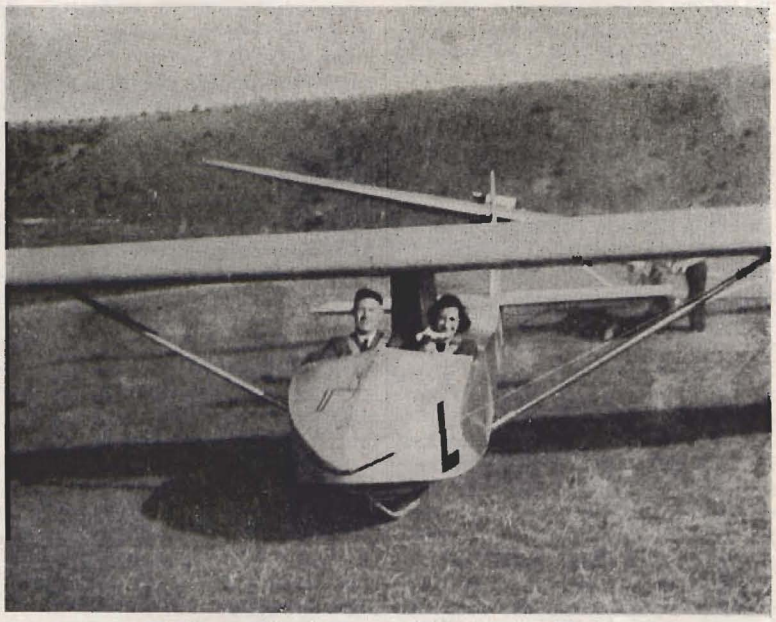
Monday, 29th May. An overcast sky and a strong wind continued all day ruling out all but advanced flying. Sixty-seven circuits were made thus enabling all eligible pilots to have just as much flying as they wanted.

Tuesday, 30th May. Most members had their noses back on the grindstone but a small contingent of Airspeed members carried on training and Sid Hillman got his " A " and " B " certificates.

Later in the evening the " Grunau Baby " was circuited by Audrey Johnson and Terry Townsend who are almost ready for their " C " certificate.

Much training without the slightest suspicion of green air.

Ray Jefferies obtained his " A " on the 2nd of July. The " Grunau Baby " was withdrawn from service for its C. of A. overhaul and the inclusion of spoilers. After much sweating it was got ready the evening before our departure for Friston.



Dudley Hiscox, Mrs. Hiscox, and offspring Marilyn (aged 3) in the L.G.C.'s " TJ21A."

GLIDING CAMP AT FRISTON.

Sunday, 30th July. The "Grunau" was rigged and after one or two snags were ironed out it was given two test flights by Ken Fripp who pronounced the spoilers a great success. Circuits continued for the rest of the day but although the wind was on the cliff it was not strong enough to be soarable. However, it enabled everyone to become accustomed to working an extra gadget—if necessary.

Monday, 31st July. A great day for us. A nice South-west wind of sufficient strength to provide lift to 700 feet and " C " certificates to six pilots. Jack Willard started the ball rolling by getting his " C " with 40 minutes and was followed by Frank Charles who cruised along the cliff for 1 hour 34 minutes. Thinking he might get tired and muff his landing (it has been known) Bert Parslow flew alongside waving wildly for him to land, whilst the others on the deck cursed him roundly for hogging it, fearing that the wind might drop before they too qualified.

Audrey Johnson, Johnny Pears,

Terry Townsend and Sid Hillman followed with nicely judged flights before the wind finally became unsoarable.

During the proceedings Ken Fripp watched points from a lofty perch in " Ventura," purring with satisfaction and occasionally shouting down a word of advice.

Flying times in "Grunau" were:—Willard, 40 minutes; Charles, 94 minutes; Audrey Johnson, 37 minutes; Pears, 32 minutes; Townsend, 33 minutes; and Hillman 39 minutes. Parslow and Fripp flying " Ventura " put in 76 minutes and 170 minutes respectively.

Dixie Dean, June Humphries and Peter Bogue benefitted from soaring flights in the Southdown " T.21B " under the expert eyes of Dave Parsey and Chris Hughes. Parslow and Fripp flew the " Tutor I."

Tuesday, 1st August. The wind was still on the slope and everyone soared. Although the length of the beat was more restricted and the lift not so strong as yesterday, it gave the new " C " pilots plenty of practice in observing the rules of the road in the more congested conditions.

Wednesday, 2nd August. A very strong wind of almost gale force blew all day long, the skies opened and down came the rain during the morning. Ken Fripp flew the " Ventura " in the afternoon, to relieve the boredom, and had a most exhilarating ride for over an hour. The gusts were so strong that it was possible to climb quite respectable heights on each one

Thursday, 3rd August. At a fairly early hour conditions were quite good and Lee of the London Gliding Club and Squeege Ashton were having a frolic in the " T.21B " for some 30 minutes whilst Dave Parsey floated around in the " Tutor I."

Audrey Johnson was the only Pompey pilot who had a nibble at the cloud lift but it soon petered out, leaving us circuiting whilst wizard mountain ranges of CU. NIM. built up a few miles inland.

June Humphries, Dixie Dean, Peter Bogue and Jimmy Colbourne received instructions in the "T.21B" and to reciprocate Dave Parsey flew " Ventura " whilst Ray Brigden and Squeege Ashton flew the " Grunau."

Friday, 4th August. Conditions were very similar to yesterday and so as not to be caught napping Fripp was first off in " Ventura." Just when he was about to give up hope and start his approach he found some green air and spiralled up. The lift was very rough and strong, 6 metres per second at times, but it faded away at cloud-base 1,900 feet and no amount of coaxing could persuade " Ventura " to take a peek inside. After a visit to the east slopes of Firle he found nothing but strong down currents all the way home. Meanwhile there had been much activity to contact the lift, only to discover that it had rapidly moved inland soon after the first launch.

The " T.21B " was kept hard at it all day—Chris Hughes and Dave Parsey training June Humphries and Dixie Dean. Ken Fripp checked Peter Bogue, Sid Hillman, and introduced Johnny Pears to incipient spins.

Soon after 16.00 hours the evening Thermal visited us and everyone and everything was sent aloft. Bert Parslow flew " Ventura" for 1½ hours and all our new soaring pilots flew about half-an-hour each, performing well in the gentle lift, where accurate flying was necessary to keep up.

Dave Parsey had a busy time by flying the " Grunau " for 33 minutes and then instructing Colbourne during a 15 minutes and 28 minute flight in the two-seater.

Ken Fripp took off at dusk and after some 30 minutes, during which he found that the quality of lift was improving and the area extending all the time, landed in the dark with the aid of car headlights.

Saturday, 5th August. Ray Brigden, the Southdown C.F.I. checked out June Humphries, Peter Bogue and Jimmy Colbourne and promoted them onto the " Tutor " and later onto circuits. Lots of flying was put in and good progress was made.

Sunday, 6th August. Another day with not a smell of lift but nevertheless much hard work was put in training.

Monday, 7th August. Our last day of flying and everyone feeling pretty sad about leaving. Our spirits rose however with another visit of the Evening Thermal and it was fitting that on our last day every machine was soared high and hard. Peter Bogue deserves special mention for flying a very pretty " C " of 33 minutes on his first flight in the " Grunau." Michael and Conrad Fripp sat together for a flight with " Pop " in the two-seater and " Mum " was persuaded to leave the gang behind to enjoy a trip along the cliffs.

June Humphries tried hard to qualify for her " C " but couldn't quite manage it, but nevertheless quite happy having obtained her " A " and " B " in the week.

A social was held in the club house one evening which was enjoyed by all and the buzz of hangar flying went on well past midnight. To sum up, it was a grand holiday spent amongst grand types. We did some cliff soaring, thermal soaring, cloud soaring and evening thermal soaring and obtained 2 " A " certificates, 2 " B " certificates and 7 " C " certificates.

Since returning to Portsmouth Airport there has been no soaring to report but there has been plenty of hard work. On the flying side Dixie Dean has obtained his " A " and Eileen Willard, Christine Mears, Bernard Snook and Tony Bevan have begun training. The " Cadet " is progressing well and the " Studebaker " is undergoing an overhaul.

Congratulations to Goldsworthy who turned up the other day with his Silver " C " obtained on a holiday in France.

Saturday and Sunday, 26th and 27th August. We were delighted to welcome Chris Hughes and John Murray from the Southdown Gliding Club and on the Sunday we were able to arrange a little bit of thermic in their honour. John Murray managed 1,900 feet and the best flight of the day was one by Gordon Dollery who reached 2,600 feet during a 36 minute flight.

THE SCOTTISH GLIDING UNION

The Annual General Meeting is the high light, or the Artic night, of any club year. Not only does it give the executive their one and only opportunity to boast discreetly of their performance and to adroitly cover up any skeletons that may show a tendency to rattle from the cupboard, but it is also the opportunity for the members to show their vitality, interest and ideas. The Scottish Gliding

AIR SCOUTS.

Many of our readers will have heard that the Air Ministry has agreed to recognise Air Scouting and to give considerable help to Air Scout Troops which reach a sufficiently high standard.

It is a decision which cannot fail to add to the attraction of Air Scouting; but while it offers a great opportunity it also brings a problem. More Air Scout leaders and more part-time instructors in technical subjects are needed if this youngest branch of the Scout Movement is to expand as fully as it can.

There must be many former Scouts with Air experience among our readers who could help and many who, while not wishing to wear Scout uniform and undertake active Scouting would yet be prepared to sacrifice an occasional evening to passing their knowledge and experience to air-minded boys.

If there are any who wish to help but do not know of any Air Scout Troops in their vicinity, The Boy Scouts' Association, 125, Buckingham Palace Road, S.W.1., would gladly give full details. Your help is urgently needed.

Union A.G.M., held on Sept. 2nd, was no exception to this, and the whole proceeding, under the dominating chairmanship of bustling, gliding old timer Eric Anderson moved swiftly along its pre-ordained course to its pre-ordained end.

We were glad to learn that at last the Ministry of Civil Aviation has recognised our presence at Balado, where we have squatted without any legal tenancy (as the term implies) for the post war period. For just this length of time, we have been apprehensive of a summary eviction. Now there is good reason to hope for a clarification of the position and an ultimate Government blessing. Financially, we learnt that our tangible assets top the £2000 mark, and that they are equally and heavily balanced by the Kemsley Loan and the £600 that is still to be repayed to these members who put up this stake immediately after the war. There has been a loss on the flying side of some £60, but although the financial side is anything but good, there is a distinct trend towards greater stability. It was also pointed out that the increased cost of petrol has dealt a particularly heavy blow to auto towing. Technically this method of launching has been a great success, but the cost of a launch is now 1/6 for the petrol alone.

A general discussion was intricately woven into the financial statement, and several points were brought up and browsed upon. Once or twice a little feeling crept into the meeting, but in general the tone was most conciliatory, all business was formally concluded in just under two hours. The number of Directors was pruned from sixteen to a far more workable number of nine, and it can be said that those elected comprise the core who turn up every week-end, whose efforts have been heroic and for whom the need is paramount. The familiar names are: Tom Davidson as C.I.F., David Hendry (Secretary), Bill Lawson (Treas.), George Whyte, Hal Thorburn, Andrew Thorburn, Peter Pearce, Alex Fyfe and Robert Parker.

One of our more social attainments is to keep a posse of ambassadors, who have spent several instructive week-ends visiting English clubs. One of their number, George Whyte, is at present in the U.S. where he is visiting three of the East Coast clubs. Ian Sproule, playing the role of the wandering Scot whose heart is in the right place, visited Dunstable and Redhill and was greatly impressed with what he saw. The object of these visits was not however purely social. We do feel that there is tremendous scope for gliding in Scotland, which we cannot do with our limited performance gliders. We wish to encourage and entice the more experienced English pilots to glide in Scotland.

Although this has been the worst summer that many can remember, we have put in a record amount of flying time. The most encouraging feature has been the increased length and duration of flights both from the Bishophill and from Balado, with the two-seater playing a prominent part. Last month, flying in this machine, Peter Pearce had worked himself into an excellent position for his first promising cross-country when he was forced to return after half-an-hour because of an indisposed passenger. The other achievement of note was Dorothy Lawson's "C" certificate flight from the Hill. This was destined to be made in time for the National Competitions, but Destiny somehow got his dates wrong.

THE GLIDING CLUB OF VICTORIA

Taking Stock

At this time of the year, when stock taking is the general thing, it seems appropriate that we should mentally take stock of our position as a club. Taking things generally the results of the year's operations are very satisfactory. As all active Members know, flying has been somewhat restricted owing to the construction of the Club's workshop at Merlynston. This project, which is one of the outstanding achievements in the Club's history, provides us with a home base of our own where major building and repair work on aircraft can be carried out under ideal conditions. Besides its value on the practical side, it represents a very valuable asset to the Club in the form of real estate, an asset which as time goes on will grow in value. This has only been made possible by the foresight of the Members who first instituted the scheme and the Members who carried it through to its completion by giving up their flying and devoting their week-ends to hard work. Future flying activities will undoubtedly be greatly aided by the possession of this workshop.

A further asset is being added to the Club's stock in the form of a Jeep for road transportation and/or retrieving purposes. This vehicle which is in almost brand new condition will fill a long felt need for a reliable, road worthy Club towing-car. It will enable flying operations to be carried out more smoothly and represents a step forward in the Club's policy of bringing Club equipment up to the highest possible degree of efficiency in order to step up flying time.

Now that the workshop is nearly completed, plans are being made for increased training. The next major job on hand is to rebuild the

" Merlin " two-seater and get it flying again as soon as possible in order to give dual instruction to trainees. In the meantime, new Primary Training groups are to be formed and the first of these groups is to be started very shortly. The " Kadet," which has been awaiting modifications to the aileron control system, will also very soon receive attention. The Club " Grunau " and " Utility " which have borne the brunt of this year's flying are still going strong. We are happy to say that there has been no major crashery this year, and we hope that this state of affairs will continue.

A disappointment in the year's events has been the remarkable lack of support given to the Club Dances. Every dance has proved a financial loss and the Social Committee had no alternative but to cancel the rest of the series. It reveals an alarming lack of interest amongst the majority of Club Members when they refuse to bestir themselves one night a month to come to a very good little dance and at the same time help the Club's funds. I feel that we should here say how grateful we are to Mr. Charles De Kuyper and his Band for continuing to come along and play for the few people who did turn up. It must have been very disheartening for him and I am not sure that many other bands would have seen it through.

As a summing up, I can only say that during this past year, the Club has made the most of a period of consolidation and that the future looks bright. There have been many people wanting to join as new members, among them being a number of New Australians who have had gliding experience overseas and who wish to continue this grand sport in their new homeland. We feel that we are now approaching the stage where we can consider increasing the membership but it will call on renewed enthusiasm and co-operation from present members to keep Club equipment in serviceable condition in order to get the most out of Club machines.

Resignations

We regret to announce that the President Mr. N. Hyde the Hon. Secretary Mr. R. Duckworth and the Hon. Treasurer Mr. J. Kelleher, have resigned their positions. It has been known for some time that these gentlemen have desired to be released from their duties owing to the pressure of their private affairs. A vote of thanks was passed and recorded by the Committee as a mark of appreciation of the fine service that these Members have given the Club over the years. Mr. Duckworth has held the position of Honorary Secretary to the Club for the past fourteen years and his loyalty and devotion to the Gliding Club of Victoria in that time is in a large measure the reason for the Club being in such a strong position today. Mr. Hyde and Mr. Kelleher have held office for lesser periods but each in his own way has given a great deal of personal time and labour to the Club. We can only say " Thanks chaps for a job well done."

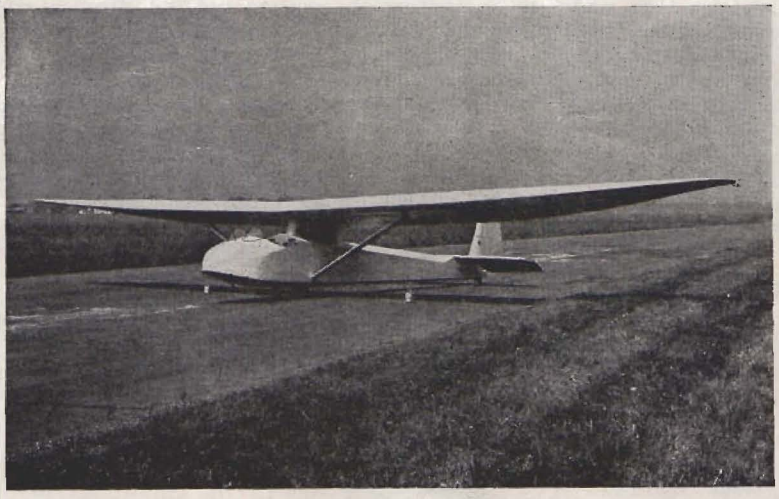
New Office Bearers

The Committee have appointed the following office bearers :

PRESIDENT :—Mr. R. McAliece
HON. SECRETARY :—Mr. L. Beck
HON. TREASURER :—Mr. J. Barton

We welcome the above gentlemen and thank them for accepting their new, responsible positions. We feel sure that in every way they will uphold the high standard of service set by their predecessors.

On Service—for The Service



The T21B, 2 seater is now in quantity production for the Reserve Command Royal Air Force as well as for export to foreign governments.

Slingsby Sailplanes Ltd., Kirbymoorside, Yorks.

Letter to the Editor

17, Hollymead Drive,
Guisborough.
Yorks.

14th September, 1950.

Dear Sir,

Many civil gliding club members, particularly those in clubs which were not fortunate in obtaining a " research " machine via the B.G.A., will read with interest and approval your editorial remarks in the September issue of the " Sailplane " on the distribution of German machines from the Ministry of Supply. But when you suggest that foreign machines should not be used in National Contests are you not getting somewhat in the clouds yourself ? The simple and sickening fact about gliding in our welfare state is that, except where it is subsidised in some way—by the Services, by Lord Kemsley, or what have you—it has the greatest difficulty in keeping alive at all. We cannot afford any high moral tone about using machines from any source and I suggest that the best service any journal can do for gliding is to have less interest in machines, and more in any direction which will help to produce ordinary performance machines which clubs whose members pay for their gliding can afford to buy. I am, of course, aware that it is difficult to accomplish much in this respect, but I do think it unhelpful to have so much interest in cake when bread is getting beyond the purchasing power of all but a very small minority.

Yours faithfully,
L. H. BARKER.

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ROYAL AERO CLUB GLIDING CERTIFICATES

(Issued under delegation, by the B.G.A.) AUGUST, 1950

GLIDING CERTIFICATES : "A" .. 172 (12213-12384 inc.)
"B" .. 93
"C" .. 48
Silver "C" 14 (272-285 inc.)
Gold "C" —

"B" GLIDING CERTIFICATES

No.	Name	A.T.C. School or Gliding Club	Date taken
1306	Lionel Bianchi Tate	Newcastle G.C.	6. 8.50
3284	Anthony John Walker	Bristol G.C.	27. 7.50
3846	John Edward Talbot	Bristol G.C.	27. 7.50
4513	John Hannah	2 G.S.	29. 7.50
4652	Peter Ernest Jefford	Bristol G.C.	23. 6.50
6267	Albert John Emmins	146 G.S.	13. 8.50
6421	Derek Vernon Longman	106 G.S.	13. 8.50
7597	Kenneth Cheslett	Fassberg G.C.	26. 4.50
8153	John Ralph Tucker	84 G.S.	5. 7.50
8567	Roger Brading	84 G.S.	25. 6.50
8685	John Lewis-Lloyd	R.A.F. College, Cranwell	12. 3.50
8969	Donald Mackay	27 G.S.	13. 8.50
9394	Michael John Neil	92 G.S.	6. 8.50
10153	Richard Brown	24 G.S.	6. 8.50
10202	James Davey	166 G.S.	5. 8.50
10227	John Frederick Allard Franklin	166 G.S.	3. 8.50
10425	Roy Alan Edward Goode	23 G.S.	6. 8.50
10479	Maxwell James Hancock	192 G.S.	3. 8.50
10534	James Douglas Campbell White	42 G.S.	4. 8.50
10608	Robert William Paveley	192 G.S.	1. 8.50
10611	Robin Richard Green	166 G.S.	2. 8.50
10620	Angus John Duke	166 G.S.	5. 8.50
10694	Arthur Collin Rotherham	Bristol G.C.	28. 7.50
10757	David Gerard Horton	Bristol G.C.	27. 7.50
11952	Clifford John Sanderson	31 G.S.	29. 7.50
11016	Ronald William Henry Tarling	89 G.S.	7. 8.50
10185	Stuart Burleigh Mead	143 G.S.	5. 8.50
11168	John Salford Lewis	89 G.S.	17. 6.50
11196	Derek Ashley Chittenden	168 G.S.	23. 4.50
11536	Frank Hughes	42 G.S.	28. 5.50
11574	David Harry Collings Hambly	84 G.S.	13. 8.50
11804	Keith Edwin Mortimer	R.A.F. Celle G.C.	11. 5.50
11885	Derek Kenneth Allder	166 G.S.	22. 7.50
12126	Michael Henry Wilson	Midland G.C.	6. 8.50
12213	Peter William Felton	Scharfoldendorf G.C.	20. 5.50
12216	David Colin Stevens	Surrey G.C.	24. 5.50
12223	Philip Arthur Brown	Halton Apprentices G.C.	19. 7.50
12238	Margot Elaine Thompson	Wahnerheide G.C.	25. 7.50
12239	Walter Edward Ginger	Portsmouth Naval G.C.	26. 7.50
12240	William Greenall	Luneburg G.C.	6. 3.49
12241	Cecil Gerald D. Jonklass	R.A.F. College, Cranwell	25. 6.50
12242	Mian Sadruddin	R.A.F. College, Cranwell	4. 6.50
12243	David Churchill Luck	R.A.F. College, Cranwell	17. 6.50
12244	Michael Edward Dark	R.A.F. College, Cranwell	1. 7.50
12245	Philip John Jevons	R.A.F. College, Cranwell	2. 7.50
12246	Douglas Arthur Maddieson	R.A.F. College, Cranwell	1. 7.50
12247	Ian Colin Bernard Brettell	R.A.F. College, Cranwell	25. 6.50
12248	Richard John Littlejohn	R.A.F. College, Cranwell	14. 6.50
12249	David John Bowden Keats	R.A.F. College, Cranwell	25. 6.50
12256	Eric Bourne	R.A.F. College, Cranwell	24. 6.50
12257	Thomas Reginald Gribbie	R.A.F. College, Cranwell	25. 6.50
12258	Richard John Leslie Newman	R.A.F. College, Cranwell	19. 6.50
12259	Richard Charles Fairfax Peirse	R.A.F. College, Cranwell	1. 7.50
12260	Ivor Arthur Simmons	R.A.F. College, Cranwell	17. 6.50
12262	William Ronald Shortridge	R.A.F. Celle G.C.	10. 5.50
12263	Calhoun Ancrum	Wahnerheide G.C.	15. 7.50
12264	Matteo Albert S. Pickering	Oerlinghausen G.C.	25. 5.50
12269	Raymond Kenneth Woods	166 G.S.	5. 8.50
12270	Robert Braidwood Forrest	Halton Apprentices	10. 7.49
12274	John Francis Rhodes	166 G.S.	6. 8.50
12286	John Hall Stephens	Newcastle G.C.	30. 7.50
12287	Kenneth John Dawe	R.A.F. Tech. College G.C.	22. 7.50
12288	Anthony Maynard Wraight	166 G.S.	5. 8.50
12299	Bryan Leslie Webber	84 G.S.	25. 6.50
12300	Arthur Calderbank	Derby & Lancs. G.C.	6. 8.50
12302	Peter William Ball	Hameln G.C.	2. 7.50
12307	Claud Andrew Rennie	Bristol G.C.	5. 6.48
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12310	John Richard Holton	23 G.S.	10. 8.50
12311	Thomas Charles Appleton	Luneburg G.C.	5. 3.50
12312	Donald Macey	R.E. Hameln G.C.	12. 4.50
12314	Anne Margaret Pickering	Gannet G.C.	24. 7.50
12321	Alan Tinsley Cowham	23 G.S.	8. 8.50
12333	Donald Edgar Millar	23 G.S.	8. 8.50
12338	Peter Rayner	Portsmouth Naval G.C.	18. 5.50
12339	Derrick George William Eeles	106 G.S.	6. 8.50
12340	Frank Brierley	Bristol G.C.	17. 8.50
12344	Frank Gerald Carter	Oerlinghausen G.C.	11. 6.50
12345	Miles Milward Bason	Bristol G.C.	11. 8.50
12360	Philip James Colbourne	Portsmouth G.C.	6. 8.50
12361	June Louise Humphries	Portsmouth G.C.	6. 8.50
12362	Alfred Sidney Hillman	Portsmouth G.C.	30. 5.50
12365	Alan Harold Adams	Fassberg G.C.	2. 7.50

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12370	Gareth Sinclair Jones	23 G.S.	8. 8.50
12371	William Dayne Markham	23 G.S.	10. 8.50
12378	Patrick Alexander Fell	R.A.F. Celle G.C.	4. 6.50
12379	David Whittle Bartlett	Southdown G.C.	19. 8.50
12380	Kenneth Holloway	Bristol G.C.	16. 9.48
12381	William Beale	Oerlinghausen G.C.	20. 5.50
12382	Christopher John Audland	Wahnerheide G.C.	25. 7.50
12383	Denis Vere Hunter	Portsmouth Naval G.C.	18. 6.50

"C" GLIDING CERTIFICATES

No.	*Name*	*A.T.C. School or Gliding Club*	*Date taken*
2146	Robert James Curry	203 G.S.	6. 8.50
3281	John Kyrle Hankinson	Wahnerheide G.C.	16. 7.50
6052	Frank William Keith Charles	Portsmouth G.C.	31. 7.50
6617	Ivor George Scott	82 G.S.	7. 8.50
7300	Thomas Julian Cresswell	R.A.F. College, Cranwell	8. 6.50
7597	Kenneth Cheslett	Fassberg G.C.	4. 6.50
8685	John Lewis-Lloyd	R.A.F. College, Cranwell	12. 7.50
8381	Dorothy Stedman Lawson	Scottish G.U.	13. 8.50
8859	Robert James McCullough	203 G.S.	21. 7.50
9065	Clifford John Pears	Portsmouth G.C.	31. 7.50
9638	Thomas Joseph Robinette	203 G.S.	6. 8.50
10142	Robin Lovell Holmes	Surrey G.C.	13. 8.50
10586	John Herbert Willard	Portsmouth G.C.	31. 7.50
10721	Audrey Patricia Johnson	Portsmouth G.C.	31. 7.50
10850	Terence John Townsend	Portsmouth G.C.	31. 7.50
10881	Les Haselden Haynes	Southdown G.C.	28. 5.50
11036	William Robert Eric Harrison	Southdown G.C.	28. 5.50
11052	Prosper George Matthew Wallace	Newcastle G.C.	15. 7.50
11054	Anthony Walter Petrie	R.E. Hameln G.C.	2. 7.50
11188	Douglas Nicholls	22 G.S.	17. 8.50
11199	Dennis James Sansom	Gannet G.C.	18. 6.50
11264	Alfred Norman Kinkhead	203 G.S.	6. 8.50
11581	Hamish MacAskill	Scottish G.U.	6. 8.50
11690	Leonard Bracey	48 G.S.	7. 8.50
11804	Keith Edwin Mortimer	R.A.F. Celle G.C.	4. 6.50
11925	Peter James Bogue	Portsmouth G.C.	7. 8.50
11978	David Edwin Cooke	R.A.F. College, Cranwell	15. 8.50
12051	Richard Charles Duke	105 G.S.	19. 8.50
12062	Donald William Fraser Muir	R.A.F. College, Cranwell	2. 7.50
12132	Douglas Hugh Keary	R.A.F. College, Cranwell	8. 8.50
12213	Peter William Felton	Scharfoldendorf G.C.	14. 6.50
12216	David Colin Stevens	Surrey G.C.	17. 6.50
12240	William Greenall	Luneburg G.C.	3. 9.50
12262	William Ronald Shortridge	R.A.F. Celle G.C.	17. 6.50
12263	Calhoun Ancrum	Wahnerheide G.C.	16. 7.50
12264	Matteo Albert S. Pickering	Oerlinghausen G.C.	8. 7.50
12270	Robert Braidwood Forrest	Halton Apprentices G.C.	15. 6.50
12302	Peter William Ball	Hameln G.C.	2. 7.50
12307	Claud Andrew Rennie	Bristol G.C.	13. 3.50
12311	Thomas Charles Appleton	Luneburg G.C.	16. 7.50
12312	Donald Macey	R.E. Hameln G.C.	21. 4.50
12344	Frank Gerald Carter	Oerlinghausen G.C.	13. 6.50
12362	Alfred Sidney Hillman	Portsmouth G.C.	31. 7.50
12365	Alan Harold Adams	Fassberg G.C.	9. 7.50
12378	Patrick Alexander Fell	R.A.F. Celle G.C.	7. 8.50
12380	Kenneth Holloway	Bristol G.C.	16. 9.48
12381	William Beale	Oerlinghausen G.C.	9. 7.50
12383	Denis Vere Hunter	Portsmouth G.C.	9. 8.50

SILVER "C" CERTIFICATES

No.	*Name*	*Club*	*Certificate No.*	*Date gained*
272	R. D. Dickson	Derby & Lancs. G.C.	4514	29. 5.50
273	W. Greenall	Luneburg G.C.	12240	16. 7.50
274	H. C. N. Goodhart	R.N.G. & S. Assn.	1055	26. 7.50
275	J. M. Heron	Bristol G.C.	6458	25. 7.50
276	P. Rivers	Handley Page G.C.	5807	2. 8.50
277	I. R. Hinde	R.A.F. College, Cranwell	6767	9. 8.50
278	P. Collcutt	Wahn G.C.	10092	6. 8.50
279	A. W. Bedford	Empire Test Pilots S.	10461	29. 7.50
280	P. W. Ball	Hameln G.C.	12302	5. 8.50
281	D. E. Goldsworthy	Troyes G.C.	10963	12. 8.50
282	D. Macey	Hameln G.C.	12312	6. 8.50
283	P. K. Renshaw	London G.C.	1011	1. 8.50
284	K. C. Fitzroy	Surrey G.C.	3105	20. 8.50
285	G. M. Bacon	R.A.F. College, Cranwell	8984	8. 8.50

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