CASH PRIZES FOR READERS' PHOTOGRAPHS

Sailplane and Glider

The First Journal devoted to Soaring and Gliding



SEPTEMBER/OCTOBER 1954

2/-

SCOTTISH GLIDING UNION

BISHOPHILL AND BALADO AIRFIELD

Entrance Fee £1. 1s. : Subscription £3. 3s.

Write to Hon. Secretary

D. HENDRY
THE SCOTTISH GLIDING UNION
BALADO AIRFIELD
MILNATHORT
KINROSS-SHIRE

Soaring ★

One of the few magazines in the world devoted exclusively to motorless flight.

Send 10/- for three sample copies and the booklet—

Soaring in America

Increase your knowledge of soaring. You are invited to send £1 for membership in the Soaring Society of America, which includes a year's subscription to *Soaring*.

SOARING SOCIETY OF AMERICA, INC.,
P.O. Box 71, ELMIRA, N. YORK, U.S.A.

SLINGSBY SAILPLANES LIMITED

DESIGNERS AND CONSTRUCTORS OF SAILPLANES AND GLIDERS TO H.M. GOVERNMENT

★

Training and Sports types in quantity production—

"T 21 B"
DUAL 2-SEATER TRAINER.

"TANDEM TUTOR"
2-SEATER TRAINER.

"PREFECT"
INTERMEDIATE SAILPLANE.

"KIRBY CADET" — "TUTOR"
TRAINERS.

"SKY"
HIGH PERFORMANCE COMPETITION SAILPLANE.
Superior to any Sailplane in production. Gained 1st and 2nd Places in National Gliding Competition 1951.

★

WORKS :—

KIRBYMOORSIDE - YORKS.

"PIONEERS OF BRITISH GLIDING"

Sailplane and Glider

Founded in 1930

and ULTRA LIGHT AIRCRAFT

THE FIRST JOURNAL DEVOTED TO SOARING AND GLIDING

SEPT./OCT. 1954 ★ Vol XXII No 5

Editor :
VERONICA PLATT

Asst. Editor :
RONALD BISHOP

Editorial
and
Advertisement Offices :
8, Lower Belgrave Street
London SW1
PHONE : SLO 7287

The *Sailplane and Glider* will be published on the 1st day of every second month of issue. Price Two Shillings per copy : 12/9 per year or 6/6 for 3 issues posted. Advertising Rates on application.

Published for the licencees, Glider Press Ltd., by the Rolls House Publishing Co., Ltd., and printed by The Mendip Press, Ltd., London and Bath.

CONTENTS

	Page
R.A.F. Introduces Gliding Scholarships	1
France Wins 1954 Contests	2
A New Compass	12
The Adages of a Gliding Club	13
Gliding a World Sport	14
Gliding News from Belgium	15
North Eastern Soaring Contest	16
Spanish National Championships	18
The Flying Winglet	18—20
Midget Sailplanes, Why ?	20
An 'Egyptian' takes a look at Camphill	21
New President for S.S.A.	22
Royal Aero Club Certificates, Club Announcements etc.	23—24

COVER PHOTO :

Nicholas Kernahan is only four years of age but he's real keen about this gliding business. Just look at the way he handles the 'S.G. 38.' The cameraman was J. Ash of Stoke-on-Trent.

R.A.F. introduces GLIDING SCHOLARSHIPS

THE Royal Air Force Gliding and Soaring Association announced recently an important step for the promotion of gliding within the Service.

To extend opportunities to glide and soar to R.A.F. officers, airmen and airwomen not stationed within easy access of a Service gliding club, the Association is to launch forthwith a scheme of gliding scholarships under which it will subsidise gliding at civil clubs at home and overseas. The Association knows of many members of the R.A.F. and W.R.A.F. who would take up gliding were they not stationed too far from a suitable R.A.F. gliding club.

The scheme applies to all ranks, branches and trades of the regular R.A.F. and W.R.A.F. To benefit under it, no previous flying or gliding experience is necessary, since all civil clubs provide instruction.

Candidates must be paid-up members of the R.A.F.G.S.A., but those who are not already members may apply for membership when applying for a scholarship. Candidates will make their own arrangements for joining a civil club, paying all subscriptions, entrance, launching and flying fees themselves in the first instance. The R.A.F.G.S.A., will then refund them the first 2/6d. of the cost of each launch (civilian launches cost anything from 5/- upwards) the first 10/- of the flying and retrieving fees payable for each flight, and, after candidates have completed 50 hours' gliding all subscriptions and entrance fees to date, irrespective of the time taken to complete 50 hours' flying.

Claims for refunds of launching, flying and retrieving fees must be made in writing to the General Treasurer, R.A.F.G.S.A., accompanied by a certificate from a responsible member of the civil club, supporting the claim. Claims for refunds of subscriptions and entrance fees, after 50 hours' gliding has been reached, must be supported by a certificate from the club Treasurer. No refunds will be made to candidates who are no longer members of the regular R.A.F. or W.R.A.F., or who cease to be paid-up members of the R.A.F.G.S.A.

The gliding scholarship becomes operative from the date the candidate's application is accepted in writing by the R.A.F.G.S.A. Fifty scholarsnips will be awarded during the first 12 months of the scheme, after which the position will be reviewed and new arrangements probably made. Although a scholarship is intended, at present, to cover 50 hours' gliding only, candidates on completion of this total may request a subsequent scholarship. Precedence will, however, normally be given to new applicants.

It is hoped that the scholarship system will considerably swell the numbers, already running into hundreds of officers and airmen, and a growing number of members of the W.R.A.F., who are gliding for sport. To-day, R.A.F. gliding clubs on stations dotted about the United Kingdom, and in Germany and the Middle East, are using some £14,000 worth of equipment provided by the R.A.F. Gliding and Soaring Association.

The next issue of *Sailplane* Nov./Dec., will be published on December 5th.

A NEW WORLD CHAMPION



GIRAUD PIERRE

FRANCE WINS 1954 CONTESTS

Camphill, July — GT. BRITAIN'S CLOSE SECOND — By Veronica Platt

RAIN STOPS PLAY

I LIKE the unconscious irony of the tent contractor's name on the big marquee—MUDFORD. Too right, as the Australians say. Mud everywhere, a cold determined wind, lowering grey skies, and a steady dose of rain from drizzle to downpour. That's what we dished out to our foreign competitors, poor

Single-Seaters—Results

Place	*Name*	*No.*	*Country*	*Aircraft*	*Daily Points* 1st	2nd	3rd	4th	*Total*
1	G. Pierre	35	France	'Breguet-901'	959	825	274	898	2,956
2	P. A. Wills	5	Great Britain	'Sky'	835	202	1,000	818	2,855
3	A. Wiethuchter	32	Germany	'Weihe-50'	835	1,000	516	466	2,817
4	P. B. MacCready	18	U.S.A.	'Schweizer 1-23E'	866	798	—	1,000	2,664
5	S. Relander	9	Finland	'Weihe'	835	202	274	943	2,254
6	P. A. Persson	10	Sweden	'Weihe'	1,000	254	—	864	2,118
7	G. Rousselet	19	France	'Breguet-901'	—	895	290	750	1,935
8	M. T. Ara	21	Spain	'Sky'	680	456	516	250	1,902
9	F. Mordej	25	Jugoslavia	'Orao'	557	272	—	909	1,738
10	J. S. Ortner	22	Argentina	'Sky'	680	316	306	364	1,666
11	A. Feddersen	33	Denmark	'Olympia'	691	482	—	—	1,173
12	M. Bar	1	Israel	'Olympia'	—	158	290	693	1,141
13	T. Loef	28	Sweden	'Weihe'	—	237	242	659	1,138
14	G. Stephenson	23	Great Britain	'Olympia 1V'	608	237	—	284	1,129
15	P. Schweizer	34	U.S.A.	'Schweizer 1-23D'	650	342	—	—	992
16	A. Koskinen	27	Finland	'PIK-13'	—	158	—	773	931
17	E. G. Haase	15	Germany	'HKS-1'	—	272	—	636	908
18	N. W. Jensen	17	Denmark	'Olympia'	—	175	—	727	902
19	M. Arbajter	7	Jugoslavia	'Orao IIc'	680	219	—	—	899
20	J. Cuadrado	4	Argentina	'Sky'	—	307	—	500	807
21	F. Vicent	3	Spain	'Sky'	—	421	—	364	785
22	F. Linher	8	Austria	'Superspatz'	—	404	—	227	631
23	A. Pow	16	Canada	'Olympia'	371	158	—	—	529
24	I. de Boer	13	Holland	'Sky'	—	465	—	—	465
25	M. Cartigny	14	Belgium	'Sohaj'	186	211	—	—	397
26	A. Kuhn	11	Switzerland	'Sky'	—	175	—	205	380
27	H. Lasch	24	South Africa	'Air 100'	—	149	—	193	342
28	P. Beatty	6	South Africa	'Skylark T37'	—	—	—	307	307
29	O. P. Koch	30	Holland	'Olympia'	—	—	290	—	290
30	G. Ferrari	2	Italy	'Canguro'	—	—	274	—	274
31	S. V. Owen	12	Australia	'Olympia'	—	202	—	—	202
32	R. Brigliadori	20	Italy	'Spillo'	—	184	—	—	184
33	W. Witter	31	Belgium	'Sohaj'	—	—	—	—	—
	A. Gehriger	29	Switzerland	'WLM-II'	*Retired*				

Multi-Seaters—Results

Place	*Name*	*No.*	*Country*	*Aircraft*	*Daily Points* 1st	2nd	3rd	4th	*Total*
1	Z. Rain B. Komac	42	Jugoslavia	'Kosava'	556	1,000	1,000	500	3,056
2	A. Mantelli L. Braghini	37	Italy	'Canguro'	407	151	—	1,000	1,558
3	S. W. Smith R. Kidder	39	U.S.A.	'Schweizer 2-25'	309	358	813	—	1,480
4	H. Nietlispach B. Muller	45	Switzerland	'SPYR Va'	1,000	—	292	—	1,292
5	W. Hesse E. Neumann	43	Austria	'Musger MG-19'	198	—	323	750	1,271
6	J. Ompre C. J. Dori	36	Argentina	'Condor 1V'	370	—	333	563	1,266
7	L. Welch A. Welch	40	Great Britain	'Slingsby T-42'	506	236	323	—	1,065
8	L. V. Juez R. Bermudez	38	Spain	'Kranich III'	457	—	271	—	728
9	M. Gasnier L. Trubert	41	France	'CM-71'	333	—	240	—	573

Placing for First Day—July 21st

Single-Seater : Free Distance. No Two-Seater Flying.

Place	*Name*	*No.*	*Country*	*Distance*	*Points*
1	Persson	10	Sweden	97 miles	1,000
2	Pierre	35	France	93 ,,	959
3	MacCready	18	U.S.A.	84 ,,	866
4 (equal)	Wills	5	Great Britain	81 ,,	835
	Wiethuchter	32	Germany	81 ,,	835
	Relander	9	Finland	81 ,,	835
7	Fedderson	33	Denmark	67 ,,	691
8 (equal)	Arbajter	7	Yugoslavia	66 ,,	680
	Torrell	21	Spain	66 ,,	680
	Ortner	22	Argentine	66 ,,	680
11	Schweizer	34	U.S.A.	63 ,,	650
12	Stephenson	23	Great Britain	59 ,,	608
13	Mordej	25	Yugoslavia	54 ,,	557
14	Pow	16	Canada	36 ,,	371
15	Cartigny	14	Belgium	18 ,,	186

(*a*) Competition Flying : Launches 47 ; Miles, nearly 1,100 ; Hours, over 170.

Placings at end of Second Day—July 22nd.

Single-Seater Championships.

Place	*Name*	*No.*	*Country*	*Distance*	*Points*
1	Wiethuchter	32	Germany	73 Goal	1,835
2	Pierre	35	France	73 ,,	1,784
3	MacCready	18	U.S.A.	73 ,,	1,664
4	Persson	10	Sweden	28 miles	1,254
5	Fedderson	33	Denmark	56 ,,	1,173
6	Ara	21	Spain	53 ,,	1,136
7 (equal)	Relander	9	Finland	25 ,,	1,037
	Wills	5	Great Britain	27 ,,	1,037
9	Ortner	22	Argentine	37 ,,	996
10	Schweitzer	34	U.S.A.	39 ,,	992
11	Arbajter	7	Yugoslavia	25 ,,	899
12	Rousselot	19	France	73 Goal	895
13	Stephenson	23	Great Britain	27 ,,	845
14	Mordej	25	Yugoslavia	31 ,,	829
15	Pow	16	Canada	19 ,,	529
16	De Boer	13	Holland	53 ,,	465
17	Vicent	3	Spain	48 ,,	421
18	Linher	8	Austria	47 ,,	404
19	Cartigny	14	Belgium	24 ,,	397
20	Cuadrado	4	Argentine	35 ,,	307
21 (P)	Haase	15	Germany	31 ,,	272
22	Lof	28	Sweden	26 ,,	228
23	Owen	12	Australia	24 ,,	202
24	Brigliadori	20	Italy	20 ,,	184
25 (equal)	Jensen	17	Denmark	20 ,,	175
	Kuhn	11	Switzerland	19 ,,	175
27	Koskinen	27	Finland	20 ,,	158
28 (equal)	Bar	1	Israel	20 ,,	149
	Lasch	24	South Africa	20 ,,	149

(No. 21 is a provisional placing for Haase).

Two-Seater Championships.

1	Nietlispach	45	Switzerland	80 miles	1,000
2	Rain	42	Yugoslavia	45 ,,	556
3	Welch	40	Great Britain	40 ,,	506
4	Juez	38	Spain	36 ,,	457
5	Mantelli	37	Italy	31 ,,	407
6	Onipre	36	Argentine	30 ,,	370
7	Gasnier	41	France	27 ,,	321
8	Smith	39	U.S.A.	24 ,,	309
9	Hesse	43	Austria	15 ,,	198

dears, and how they hated it. For most of the time we did our best to convince them that we don't *always* have a summer like this—but what bad luck that 1954 should prove to be the wettest and coldest and generally lousiest summer we have ever had in the memory of man !

Still, spirits were high and people friendly. The caravan-tent living quarters proved a great success if only because the crews were all huddled together in splendid damp isolation from any such time-wasting fripperies as shops or cinemas. There was nothing to do but talk gliding in a wild lingua franca of waving hands, sketching pencils, and feverish searches for an interpreter whenever one was around. Coffee parties, tea parties, maté parties, beer parties —everybody talked at once and waited hopefully for the rain to stop. The really optimistic ones reminded each other that sometimes it has even been hot at Camphill—the rest just counted up the remaining possible Contest days on their fingers and decided that they'd probably had it anyway. One whole week went by and there were only two task days each for single-seaters and two-seaters, and those only the kind of days when everybody remained glued to the slope wind for hours and hours and hours, only to come in despondent with never a mark gained. It was a pretty ruthless way of weeding the sheep from the goats and luck may have played too large a part, but at least the final was about what we had expected in the single-seater class, and the two-seater had looked rather a gamble on paper, though it was obviously well deserved in fact.

It was sad, though, after the immense amount of work everybody had put in, that the weather could not have been a little kinder. The week-end public rolled up amazingly through rain and mud and at least had the satisfaction of seeing the two-seaters take off and stick around—probably more satisfying for them than just watching sailplane after sailplane disappear into the distance. The Sunday story that most pleased the Press was the first flight of an 86-year-old grandmother. And bless her heart, she loved it—but that wasn't exactly the kind of news that we had been hoping for, and certainly not enough to push the racing and the cricket and the rowing off the Sports Page. The pre-publicity for the contest was excellent ; at last, we thought hopefully, the public will take an interest in gliding, the young will be inspired to seek adventure in the air, gliding clubs will spring up like mushrooms all over the country. But the whole thing fizzled out like a wet rocket and our grand opportunity, our World Championship held here in England for the first time, was—thanks to our miserable weather—either ignored altogether or else slipped in amongst the brevities. Well, well, I suppose we should have expected it, but it was disappointing all the same, and the more so since many of our competitors had gone to great expense in money and time to get here. Our only consolation is that it was equally wet and miserable all over Europe.

The Derby and Lancs. Club had done their best to make everybody comfortable and it was a bright thought to turn the old workshop into a double-ended buffet-bar. There were times when it got a bit like the Black Hole of Calcutta, but mostly it was an







Top : John Furlong and Basil Meads
Centre : Midday-Midweek, Midcontest
Bottom : The Belgians hopefully dry off
(Sailplane Photos)

Flying Summary at end of Third Day—July 30th.

Two-Seater : Free Distance.

No.	*Name*	*Country*	*Sailplane*	*Miles*	*Place*
42	Komac	Yugoslavia	'Kosava'	106	Marham
39	Smith	U.S.A.	'Schweizer 2-25'	39.5	Durnham
40	Welch	Great Britain	'T-42'	25	Worksop
37	Mantelli	Italy	'Canguro'	15	Calow
41	Gasnier	France	'C-71'	11	Coal Aston
43	Hesse	Austria	'Musger MG-19'	9	Stubley
38	Juez	Spain	'Kranich 3'	7	Eastmoor

Single-Seater : Free Distance.

5	Wills	Great Britain	'Sky'	62	Asgarby
21	Ara	Spain	'Sky'	32	Gamston
32	Wiethuchter	Germany	'Weihe-50'	32	Retford
22	Ortner	Argentine	'Sky'	19	Bolsover
30	Koch	Holland	'Olympia'	18	Bolsover
1	Bar	Israel	'Olympia'	18	Shuttlewood
28	Loef	Sweden	'Weihe'	15	Chesterfield
9	Relander	Finland	'Weihe'	15	Stavely
25	Mordej	Yugoslavia	'Orao'	15	Chesterfield
7	Arbajter	Yugoslavia	'Lasta'	12	Sheepbridge
4	Cuadrado	Argentine	'Sky'	11	Coal Aston
8	Linher	Austria	'Superspatz'	10	Cutthorpe
18	MacCready	U.S.A.	'Schweizer 1-23D'	10	Baslow
34	Schweizer	U.S.A.	'Schweizer 1-23E'	10	Chesterfield
27	Koskinen	Finland	'PIK-13'	10	Cutthorpe
10	Persson	Sweden	'Weihe'	10	Chesterfield
12	Owen	Australia	'Olympia'	10	Chesterfield
33	Fedderson	Denmark	'Olympia'	10	Sheffield
31	Witter	Belgium	'Sohaj'	4	Grindleford

Flying Summary at end of Fourth Day—July 31st.

Two-Seater : Free Distance.

No.	*Name*	*Country*	*Sailplane*	*Miles*	*Place*
45	Komac	Yugoslavia	'Kosava'	95	Kings Lynn
39	Smith	U.S.A.	'Schweizer 2-25'	78	Boston
36	Ompre	Argentine	'Condor IV'	32	E. Retford
40	Welch	Great Britain	'T-42'	31	Retford
43	Hesse	Austria	'Musger MG-19'	30	Bawtry
45	Nietlispach	Switzerland	'Spyr Va'	28	Worksop
38	Juez	Spain	'Kranich III'	26	Tickhill
41	Gasnier	France	'CM-71'	22	Netherthorpe
37	Mantelli	Italy	'Canguro'	11	Sheffield

Single-Seater : Free Distance.

No.	*Name*	*Country*	*Sailplane*	*Miles*	*Place*
18	MacCready	U.S.A.	'Schweizer 1-23D'	87	Flamborough Head
9	Relander	Finland	'Weihe'	83	Sutton-on-Sea
35	Pierre	France	'Breguet 901'	80	Salt Fleetby
25	Mordej	Yugoslavia	'Orao'	80	Easington
10	Persson	Sweden	'Weihe'	75	Northcoates Aerodrome
5	Wills	Great Britain	'Sky'	72	Sproately
27	Koskinen	Finland	'PIK-13'	67	Asterby
19	Rousselot	France	'Breguet 901'	65	Grimsby
17	Jensen	Denmark	'Olympia'	64	Goxhill Aerodrome
1	Bar	Israel	'Olympia'	62	Barton-on-Humber
28	Lof	Sweden	'Weihe'	57	Saxby All Saints
15	Haase	Germany	'HKS-1'	56	Brough Airfield
4	Cuadrado	Argentine	'Sky'	44	Saxilby
32	Weithuchter	Germany	'Weihe 50'	41	Nr. Gamsboro
3	Vicent	Spain	'Sky'	32	E. Retford
22	Ortner	Argentine	'Sky'	32	R.A.F., Finningly
6	Beatty	South Africa	'Skylark I'	26	Worksop
23	Stephenson	Great Britain	'Olympia IV'	25	Church Warsop
21	Ara	Spain	'Sky'	22	Dinnington
8	Linher	Austria	'Superspatz'	20	Nr. Cresswell
11	Kuhn	Switzerland	'Sky'	18	Sheffield
24	Lasch	South Africa	'Air-100'	16	Stavely
16	Pow	Canada	'Olympia'	11	Sheffield
20	Brigliadori	Italy	'Spillo'	9	Sheffield
12	Owen	Australia	'Olympia'	7	Sheffield
13	De Boer	Holland	'Sky'	5	Millstone Edge
33	Fedderson	Denmark	'Olympia'	4	Calver/Grindleford
14	Cartigny	Belgium	'Sohaj'	4	Hathersage
31	Witter	Belgium	'Sohaj'	4	Hathersage

enormous relief to be able to get somewhere out of the cold and wet, and once our foreign visitors realised it was for their use they flocked in to a much more sympathetic atmosphere than that of the competitors' tent, well set out and elegant though it was. There's something about good old whitewashed stone walls when the wind and the rain are lashing around that no tent can hope to equal! And visitors from the Far South of the world who had wondered why we don't go in for more light and graceful architecture with big expanses of windows became staunch adherents of thick walls and open fireplaces .... the old Derbyshire stone farmhouse snuggled down into its hollow somehow contrived to look very friendly and welcoming, though the gay sunblinds and the little tables in the courtyard had to be abandoned.

There was a solid week of this, a wet day often aggravatingly following a clear and starry night. Worse still, it seemed to be a special brand of weather thought up for Camphill, for only a few miles away on at least two of these days there was glorious sunshine and what looked like an intensely flyable sky. But fortune came at last and though the single-seaters had to lose one day to the two-seaters in order to let them have a chance, the 31st July really gave the teams something to rejoice about—although I expect then there were many who cursed the fact that England was such a small island as they came out along the coast with lots of height in hand. Ten pilots got to the coast and Paul MacCready used up the last inch by going to the extreme tip of Flamborough Head and landing near the lighthouse. This gave him the best single-seater flight—87 miles; but he was beaten in distance by the Jugoslav two-seater which put up a consistently good performance and on this day repeated their direction of the day before. On the 30th they had used a series of waves and achieved 106 miles, and on the 31st they repeated the journey for 95 miles though this time they had to struggle along with only weak lift or zero, a magnificent flight. By their showing throughout the championship contest they well deserved their title.

Perhaps the most interesting feature of the contest was the immense variety in the machines. In the two-seater class all nine competitors flew different makes, and there were no less than twenty different types among the thirty-three single-seaters. This time the well established models were in the lead, but perhaps this might have been different had there been more competition days. Possibly it is a fairer test of pilotage when pilots all fly the same type as was at one time envisaged, but how much more interesting it is to the spectator in general and how much more encouraging to both designer and manufacturer that there is now no such limitation. As it was, several of the new machines had had insufficient time on test; but the variation in design has given us all plenty to think about during the next couple of years. This time three of the first six places went to the 'Weihe.' Of these admittedly one was flown by Persson, an ex-World Champion; but Weithuchter, who came third and who flew a 'Weihe-50,' is almost without competition experience. Pierre and Wills were bound to be fighting it out for first place anyway; would the result have been the same if they had



World Championships 1954

exchanged machines? It is an interesting speculation, for both the 'Breguet' and the 'Sky' figure twice in the first eight. Suppose you could take the first four pilots to some idyllic area where weather and terrain are just right and there let them fly against each other, exchanging machines every two days, say, would the victory go to the man or to the machine? Gliding being the kind of sport it is, my betting is on the man every time. There seems to be a clear line drawn between the natural ace and the first class pilot; it begins to show almost as soon as he strikes out for his Silver 'C' and from there on he leaps ahead. Not every natural pilot is a good competition flyer but if he has the luck to be both I think you will always find him among the first half dozen no matter what he flies nor where. The unknown quantities this time were Wiethuchter and Relander. It will be most interesting to watch them during the next two years and to see if they can hold their position in the next world series.

RESUMÉ

First day. Single-seater class—Free distance. Best flight Persson (Sweden) 97 miles; five others over 80 miles.

Second day. Single-seater class—73 mile race to Boston, Lincolnshire. Two-seater class—Free distance. Only four pilots reached the goal. Weithuchter (Germany) 1 hr. 39½ min.; Rousseler (France) 1 hr. 46 min.; Pierre (France) 1 hr. 52½ min.; and MacCready (America) 1 hr. 54 min.

In the two-seater class Nietlispach and Muller (Switzerland) covered 80 miles, never getting more than 2,000 feet above starting point.

Third day. Both classes—Free distance. (After seven days of no flying). A series of stationary waves were used successfully by Philip Wills (Great Britain) 62 miles, and Rain and Komac (Yugoslavia) 106 miles. Very few of the single-seaters were able to get away at all.

Fourth day. Both classes—Free distance. Best flight MacCready (U.S.A.) 87 miles single-seater, Rain and Komac (Yugoslavia) 95 miles. This was the day when so many reached the coast.

Fifth day. Single-seater—Free distance. Two-seaters—goal race to Derby (31 miles). Good clouds but no lift, so single-seat task had to be cancelled. In the late afternoon four two-seaters got away but only two were able to score so it was adjudged a no-championship day. A similar task was set for the next day—this time a goal race to Sandtoft. Nobody got to the goal but Italy, Austria, Argentina, and Yugoslavia scored points for distance, thus at the last possible moment getting the four days necessary for the Championship to be awarded.

The final marks are on page 3.

43-years-old Capt. John Neilan, a B.E.A. senior

Flying Summary at end of Fifth Day—August 2nd.

Two-Seater : Goal Race to Sandtoft.

37	Mantelli	Italy	'Canguro'	32	Doncaster
43	Hesse	Austria	'Musger MG-19'	21	Connisbrough
36	Ompre	Argentine	'Condor IV'	18	Whiston
42	Komac	Yugoslavia	'Kosava'	16	Sheffield
40	Welch	Great Britain	'T-42'	9	Sheffield
38	Juez	Spain	'Kranich III'	8	Sheffield
45	Nietlispach	Switzerland	'Spyr Va'	4	Grindleford

Provisional Placing at end of Fifth Day—August 2nd.

Place	*Name*	*No.*	*Country*	*Total Points*
1	Pierre	35	France	2,956
2	Wills	5	Great Britain	2,855
3	Wiethuchter	32	Germany	2,817
4	MacCready	18	U.S.A.	2,664
5	Relander	9	Finland	2,254
6	Persson	10	Sweden	2,118
7	Rousselot	19	France	1,935
8	Ara	21	Spain	1,912
9	Mordej	25	Yugoslavia	1,738
10	Ortner	22	Argentine	1,666
11	Fedderson	33	Denmark	1,173
12	Bar	1	Israel	1,141
13	Lof	28	Sweden	1,138
14	Stephenson	23	Great Britain	1,129
15	Schweizer	34	U.S.A.	992
16	Koskinen	27	Finland	931
17	Haase	15	Germany	908
18	Jensen	17	Denmark	902
19	Arbajter	7	Yugoslavia	899
20	Cuadrado	4	Argentine	807
21	Vicent	3	Spain	785
22	Linher	8	Austria	631
23	Pow	16	Canada	529
24	De Boer	13	Holland	465
25	Cartigny	14	Belgium	397
26	Kuhn	11	Switzerland	380
27	Lasch	24	South Africa	342
28	Beatty	6	South Africa	307
29	Koch	30	Holland	290
30	Ferrari	2	Italy	274
31	Owen	12	Australia	202
32	Brigliadori	20	Italy	184
Unplaced	Witter	31	Belgium	

Two-Seater Category.

1	Rain	42	Yugoslavia	3,056
2	Mantelli	37	Italy	1,558
3	Smith	39	U.S.A.	1,489
4	Nietlispach	45	Switzerland	1,292
5	Hesse	43	Austria	1,271
6	Ompre	36	Argentine	1,266
7	Welch	40	Great Britain	1,065
8	Juez	38	Spain	728
9	Gasnier	41	France	573

(All points are provisional and subject to subsequent amendment).



The first gleam of sunshine. Competitors emerge hopefully from the Clubhouse at Camphill

test pilot was the man responsible for setting the daily flying tasks during the competitions.

Married, with one daughter, he lives at Sutton, Surrey.

He started gliding with Yorkshire Club and held the British duration record from 1935 to 1938. Now an instructor in Surrey Gliding Club. He has a share in ' Olympia ' glider with best friend.

Test pilot with Blackburns during the war and various airlines before and since the war.

Contest task setting committee during championships.

Team member with Reid and Kahn in 1949 when they came first in National Championships.

There were four kinds of task :—

Compulsory : I. Distance flights. II. Race over a course fixed by the organizers.

Distance Flights are marked at the rate of 1 mark per mile measured in a straight line from take-off to landing.

Goal Flights, if the pilot succeeds in reaching the goal, earn 1 mark per mile plus an additional bonus of 10 per cent. If the pilot lands on course but short of the goal marks are awarded in proportion to the square distance ; for example, if he goes half the distance, he gets only a quarter of the full distance marks, and no bonus. If the landing is off course, only the projected distance along the course counts for marks.

Races over a triangular or other specified course are marked for distance and additionally (if the course is completed) for speed.

Distance marks are 1 per mile ; and if a landing is made off course, only the projected distance counts.

(*Report continued over page*)



Sweden makes notes

SUPPLEMENTARY WINCHING ARRANGEMENTS.

Tuesday :

A British Gliding Association spokesman made the following announcement :

A meeting of team managers on Monday evening reviewed the winching arrangements for launching the gliders.

The winches already installed on the site are capable of launching the majority of the gliders in the contests. During the past year or so, there has been a big step forward in sailplane design involving much heavier machines and high-speed take-offs. The results have come to fruition, en masse at the present meeting. Many of the continental machines here are far heavier than any predecessors. Additionally most of them are prototypes and consequently present extra technical problems in launching. Consequently, arrangements have been made to supplement the local winches with extra machines from the continent.

Already, a more powerful German winch is installed on the site and in the course of the next week, extra winches will be sent from Germany and France to obviate any possible delay in getting competitors launched.

The circumstances are fully appreciated by all competitors who have expressed their full co-operation.

MANY NEW SAILPLANES AT THE CHAMPIONSHIPS

MANY interesting new types of gliders made their debut at the Championships.

They ranged from large, high performance machines to small models designed with an eye on the purse of the ordinary pilot or small club.

These are some of the latest machines, listed against the countries which flew them :

AUSTRALIA.

The ' EoN Olympia ', produced by Messrs. Elliotts of Newbury and in widespread use, both here and overseas, is a modification of a German type which was accepted internationally as a one-class design for use in the cancelled Olympic Games of 1940. It has a span of 15 metres (49 ft. 3 in.).

AUSTRIA.

The ' Superspatz ' is an enlarged version of a small post-war type, the ' Spatz ' (' Sparrow '), designed by Egon Scheibe. The wing span has been increased from 13.2 to 15 metres (43 ft. 4 in. to 49 ft. 3 in.), but the empty weight still remains low at 125 kg. (276 lb). To increase flying speed on days of strong upcurrents, ballast can be added in the form of two 20 ft. steel rods pushed into the wings just in front of the spar, adding 70 kg. (154 lb.) weight.

The ' Weihe ' (' Kite ') weighs twice as much, with a span of 18 m. (59 ft. 1 in.) ; it was the standard high-performance sailplane in Germany from 1939 on, and is still in widespread use, several ' Weihes ' being entered in these Championships.

FINLAND.

The ' PIK-13 ' is a new design by Mr. Koskinen, of ' shoulder-wing ' type ; span is 17.5 m. (57 ft. 5 in.) empty weight 190 kg. (419 lb.).

FRANCE.

The ' Breguet 901 ' type is a larger and more streamlined development of the ' 900 ' which competed in 1952 ; it has the same ' shapes ' at the wing-tips (resembling drop-tanks), intended to reduce wing-tip eddies. The wing is described as semi-laminar ; span 17.32 m. (56 ft. 10 in.), aspect ratio 20. Empty weight 211 kg.

The ' Castel-Mauboussin 71,' is the type which held the world's two-seater duration record until last April ; span 18 m. (59 ft. 1 in.), empty weight 380 kg. (838 lb.), gliding angle 1 in 26. The V-shaped (' butterfly ') tail is a feature of several modern sailplanes ; the tail drag is lowered by reducing the number of surfaces from three to two.

GERMANY.

The ' HKS ' (' Haase-Kensche-Schmetz ') which, though being flown solo in the contests, is designed as a two-seater, with a span of 19 m. (62 ft. 4 in.) and empty weight of 320 kg. (705 lb.). The design has many novel features, of which the most interesting is that the wing camber (fore-and-aft curvature) can be changed in the manner of a bird, instead of by the usual crude method of lowering and raising a flap ; camber is increased for slow flight in upcurrents and reduced for fast flight between them, and is changed differentially for lateral control. The wings are designed for laminar flow, and for braking a parachute is extruded from behind the ' butterfly ' tail when landing.

It costs about £8,000 to produce.

GREAT BRITAIN.

Deservedly called the finest British sailplane ever produced, the ' Sky ' sailplane first flew in 1951. It was developed from the ' Gull IV ' which was flown in the 1949 National Competitions. The name ' SKY ' comes form SLINGSBY, KIRBYMOORSIDE, YORKSHIRE, using the first letters of the designer's name and address.

Pilots flying the ' Sky ' in Spain in 1952 came 1st, 4th, 5th, 7th, 9th and 11th.

The ' Olympia IV ' differs from the normal ' EoN Olympia ' in that the wings are designed for laminar flow : that is, the air flow close to the surface passes over the greater part of the wing before becoming turbulent, and the performance of the machine is thereby notably improved owing to the reduction of air drag. This is achieved mainly by building a plywood surface which will maintain its shape with extreme accuracy.

The T-42 ' Eagle ' is a new high-performance training two-seater designed by Slingsby Sailplanes, of Kirbymoorside ; wing span 58 ft.

Like the ' Skylark ' (see below) the ' Eagle ' wings are made up of three sections instead of the usual two.

SOUTH AFRICA.

The ' Skylark,' of 45 ft. span produced last year by Slingsby Sailplanes, is designed for low price with performance.

SWITZERLAND.

The ' WLM-11 ' is a laminar-flow version of the ' WLM-1 ' with span increased to 18.5 m. (59 ft. 6 in.) and wing-tip ' shapes.'

AMERICA.

Paul Schweizer with his brother Ernest, designs and manufactures sailplanes at Elmira, N.Y., and the team is flying their products exclusively. The ' 1-23D ' is all-metal and has a span of 50 ft. The ' 1-23E ' is a hotted-up version of it, fitted with D.F.S. type dive brakes. The ' 2-25 ' is a new mid-wing type (wing sprouting from side of fuselage), of 62 ft. span, with an estimated gliding angle of 1 in 30.

YUGOSLAVIA.

The ' Kosava ' is named after a local wind. Its swept-forward ' gull ' wings are of 19.12 m. span (62 ft. 9 in.).

PERSONALITIES AMONGST THE PILOTS

ARGENTINA.

Jose Ortner and his team-mate Jose Cuadrado again flew British Slingsby ' Sky ' sailplanes—the same machines that they used in the 1952 championships in Spain when Cuadrado came fourth in the single-seater class.

AUSTRALIA.

Selwyn Vernon Owen is a thirty-seven years old ' Skymaster ' pilot with Quantas, the Australian airline. During the war, as an R.A.A.F. pilot he was based in Britain. He has over eight thousand hours in his log book for power planes. He has been gliding for fourteen years and came second in the Australian gliding championships at Christmas.

AUSTRIA.

This is the first time the Austrians have attended a post-war world championship.

BELGIUM.

Marcel Cartigny holds the Belgian distance record.

CANADA.

Albert Pow began gliding in 1945 with the De Havilland Club at Toronto and won the Canadian National Contest in both 1949 and 1951. He set up the present Canadian distance record of 256 miles in 1953.

DENMARK.

Harald Jensen of Aarhus is known in his country as ' Cowboy.' A pioneer of soaring in Denmark, he won the first Danish Silver ' C ' badge in 1946 and is the reigning Danish national champion. ' Cowboy ' is the manager of a factory making stainless steel sinks of his own design. Askel Fedderson became the first Danish National Champion in 1951.

FRANCE.

Giraud Pierre won the French National Contest last year and also came first in the German Championships to which he had been invited.

GERMANY.

Ernst-Guenther Haase was leading German pilot at last year's National Championships.

August Wiethuechter took up gliding in 1938 at the age of fifteen and jumped to the fore among German sailplane pilots by finishing third in the German National Contests last year. He has never competed in a World Championship before.

GREAT BRITAIN.

Philip Wills, seeded number one in the British team, was the reigning World single-seater champion. He started gliding in 1933 and when the international gold badge was instituted in 1938 he became the third pilot in the world to qualify for it. He has taken part in all the previous world championships—the only pilot to have done so. He has won the British national contests four times and won the world title in Spain in 1952.

Geoffrey Stephenson is an Ealing, London, electronics expert. He began gliding twenty years ago and in 1939 was the first pilot to soar across the English channel. Last year he won the British National Gliding title.

Lorne Welch has competed at all post-war International contests. His wife, Mrs. Ann Welch, will accompany him as passenger in the two-seater class. She qualified for her pilot's licence while still a school girl, and during the war she ferried all types of aircraft from fighters to heavy bombers as a member of the Air Transport Auxilliary.

As a point of interest, the wives of all three members of the British team helped their husbands in the Championships. Mrs. Beryl Stephenson and Mrs. Kitty Wills are members of their respective husbands' ground retrieving crews, and Mrs. Welch will of course accompany her husband in the two-seater class.

HOLLAND.

Ilbert de Boer of Amsterdam, who is flying a British ' Sky ' is the Netherland champion and holds all the Netherland's two-seater records. His wife, manager of the Dutch team, is the only Dutch woman to fly an ' Olympia ' sailplane. Otto Paul Coch is a K.L.M., Royal Dutch Airlines pilot. He holds the Dutch single-seater record for goal flight and altitude.

ISRAEL.

Menachem Bar and Emil Pohorille, the team manager, are both from Tel Aviv. This entry, which was sponsored by the Manchester Jewish Sportsmen's Committee, marked Israel's first appearance at an International contest.

SOUTH AFRICA.

Helli Lasch, who took part in Switzerland and Spain, and Pat Beatty, former South African Junior champion, are both engineers from Johannesburg.

SPAIN.

Luis Juez is the World Champion in the two-seater class.

SWEDEN.

Per Axel Persson won the International contest of 1948 which was held in Switzerland.

Tage Lof of Stockholm was the winner of the last Swedish National Championships held in 1949.

SWITZERLAND.

Adolf Gehriger is secretary of the Swiss Aero Club and President of the International Gliding Commission. Alwin Kuhn has been first in the Swiss National Competitions four times including the last two. Hans Nietlispach is the holder of three Swiss records. Kurt Fahrlaender, the Swiss team manager, commands a Swiss Air Force ' Vampire ' squadron.

UNITED STATES.

Paul B. MacCready from California is thrice American Soaring Champion. He came second in the 1950 World Championships. His ground crew includes

(*Continued bottom of page* 12)

A NEW COMPASS

A NEW compass will shortly be available to glider pilots and others who require a really quick indication of heading after rapid manoeuvres.

The new instrument will indicate the aircraft's heading *within one second* of resuming normal straight and level flight after rolls, spins, loops, inverted flight and prolonged high rate turns.

Designed by H. Cook of the Derbyshire and Lancashire Gliding Club and made by the Cobb-Slater Instrument Company of Matlock, this compass is a glider pilot's answer to the long felt need of every glider pilot for a compass which will enable him to bring his aircraft on to the heading he wants immediately he stops his tight circling climb.

It will be appreciated that one of the more critical parts of a cross-country flight in a sailplane follows the circling climb into cloud when the pilot must bring his aircraft on to the correct heading to reach his objective while still flying blind. Up to a minute may pass before his compass has recovered from the effects of his circling climb during which time he is losing time and height and may unintentionally fly into the down-draught side of the cloud. The down-draught side of a big cumulus or cumulo-nimbus cloud can be extremely unpleasant.

The Cook compass completely eliminates this delay at the top of the circling climb since the aircraft's heading is indicated immediately the pilot stops the aircraft turning. In addition to this the instrument indicates the E. heading accurately in a left hand turn and the W. heading in a right hand turn so that the pilot can come out of his circling climb on any desired heading by timing himself to stop the turn so many seconds after the accurate E. or W. heading is indicated.

The three British sailplanes in the 1954 World Gliding Championships were equipped with these compasses. The instruments fulfilled all expectations and earned the praise of the pilots who used them.

Reading the compass is unusually easy, both from the point of view of clarity of indication and interpretation. No adjustment is required in flight except to set the grid ring if this is used and no maintenance is required once the instrument has been installed.

The instrument is completely self-contained and is about 3.0 inches high and 1.5 inches in diameter. It is extremely robust although it weighs less than 4.0 ounces.

Further information on these instruments can be obtained from H. Cook at the Derbyshire and Lancashire Gliding Club, Great Hucklow, Derbyshire, or from the Cobb-Slater Instrument Company Limited, Matlock, Derbyshire, England.

MANY NEW SAILPLANES AT THE CHAMPIONSHIPS
(*Continued from page* 11)

his father, Dr. Paul McCready, one of America's leading Ear, Nose and Throat specialists, and Commander Nicholas Goodhart of the Royal Navy who is now stationed in Washington, D.C. Commander Goodhart, whose home is at Inkpen, near Newbury (Berks.) is the inventor of the electrical device which dispenses with a ' batman ' for aircraft landings on carriers.

'THE SKY MY KINGDOM'

By HANNA REITSCH
translated by Lawrence Wilson.

TO many the name of Hanna Reitsch will already be familiar. She was the woman air ace and test-pilot who flew almost every German military aircraft during the war from the famous ' Focke-Wulf 190 ' to the vicious rocket ' Me 163,' which shot up to 30,000 feet in ninety seconds. She played an important part in developing the suicidal piloted ' V1s ' with which the Nazis at last desperately sought to stave off their inevitable defeat. She it was too who flew into Berlin in April, 1945 with the new Chief of the German Air Staff, and was one of the last people to see Hitler alive in his bunker. In Germany she is an almost legendary figure ; and by any reckoning she is one of the greatest pilots the world has known.

This is her own story. It is one of the most illuminating war-books that have come out of Germany, giving as it does an insight into the plans of the Luftwaffe at many stages of the war. Yet it is more than a war-book, for Hanna Reitsch's extraordinary career as a test-pilot was only the most dramatic phase of a life which has been wholly devoted to flying. She is in a real sense a child of the air age, and the sheer joy of flight, whether in gliders or in powered aircraft, has seldom been so vividly communicated as it is in these pages.

The true pioneers of the air have been those who by their example have pointed the way to a new spirit which could give our age a meaning and a purpose : Lindbergh, Saint-Exupéry, Hillary and the other young men who became the pilots of the Battle of Britain. To this small and honourable company must be added the name of Hanna Reitsch. Hers is an enthralling and inspiring story.

Large Crown 8vo. 200 pages. Illustrated 12s. 6d. (*November*).

NOTES

Austria. The firm of Flugzeugbau Mallberg, Lauterach, is the first foreign manufacturer to be building the ' Fauvel AV-36 ' for sale.

Germany. This year there will be no National Contest because all the energies of the gliding movement will be taken up with the World Championships. There will probably be a series of regional contests instead, on which will be based the selections for next year's National.

Argentina. The Club Otto Ballod has completed the construction of the prototype Flying Wing ' H-1b ' designed by Dr. Reimar Horten. This is the twelfth machine to be built by the Club members. A pilot of this same club has just made a flight between Gonzalez Chaves and Balcarce (160 km.), in 1 h. 32 m., along a storm front—an average speed of 104 km./h.

Germany. The first glider pilot to hold world records, Ferdinand Schultz, East Prussian instructor, was killed in an aeroplane crash on the 16th June. In 1925 he soared for 12 h. 6 m., in 1926 he soared a two-seater for 9 h. 21 m. In 1927 he raised his record to 14 h. 7 m., beat the height record with 650 m., and made a speed record over the dunes in East Prussia of 60.2 km.

THE ADAGES OF A GLIDING CLUB

By
PETO A. REEVE.

GLIDING, like all other forms of sport, has its various adages. If this article raises a smile on an experienced pilot's face as he recalls the time when he used that one, or a gleam of hope for the pupil who just can't land in the right place, then it has served its purpose.

The adages in common use can be divided into three main categories :

(*a*) The derisive,

(*b*) the excuse,

and (*c*) the optimistic. (Pessimism being such a rare occurrence amongst sailplane pilots, can be ignored).

Into category (*a*) fall the type of remark to be heard on the field during the course of a particularly good soaring day when a pilot fails to find a thermal and is thereby caused to return to earth much sooner than he wished.

A good derisive remark to pass when the luckless pilot lands is to ask him if he had his blessed spoilers out.

If, however, the sailplane is not fitted with spoilers, don't think for a moment you have escaped a remark from this category because some bright bod is sure to peer down the fuselage for a few seconds and then proclaim in wonderment to his pal that it's very strange but there does not seem to be any lead down there.

If it is desired to make the pilot feel really ashamed then inquire whether he was homesick, but watch out for your eye—it might turn black.

Remarks may be passed regarding the quality of the food being served in the club room although one would be ill-advised to do this lest he or she ends up washing dishes, or worse still, cooking the lunch next week-end.

The next category, excuses, afford plenty of scope for the quick thinker. As most sailplane pilots are of necessity quick thinkers, they are rarely stumped for an excuse if something should go amiss.

If we have a pilot who makes a very rough and bouncy landing then all he need say is that he was unlucky and hit a mole hill or pot hole or something just at the moment of touching down.

The excuse usually favoured for an over-shoot is that the pilot got ' runway lift ' on the approach which, as he should say, lifted him at least 20 feet.

Similarly if the pilot makes a bad undershoot then of course he hit a big ' down ' as he came over the hedge.

A word to pupils here. If you continually make poor landings don't rely on the aforementioned excuses. You are flogging a dead horse if you do.

The excuses offered for a brief flight on a good soaring day are not usually so foolproof.

In the case of the pilot who has obviously got a thermal but loses it, he might bluff his way out by saying that as it is such a good day he felt sure he could find a much stronger thermal than the weak old thing he was in. This, of course, leaves the pilot open to remarks from category (*a*), so this excuse is not to be recommended except in extreme emergency.

A safer excuse, but limited, would be to say that the thermal was such a strong one that you didn't think the old crate would stand the strain. This excuse is limited to the extent that the sailplane must be an old crate and secondly there shall be no barograph record to disprove the ' strong thermal.'

Perhaps after all it would be better to bemoan the fact that the thermal just petered out. This then leaves your fellow pilots to believe that the thermal really did peter out or that you lost it.

It is not always the pilot who is in need of an excuse. The winch driver, that man of great character and tranquility who is content to isolate himself for hours on end and amuse himself watching people wave bats or flash lights at him from the horizon and then to watch the antics of a sailplane on the end of a wire.

His efforts at launching a glider are usually highly esteemed, but they do have cause for comment occasionally.

Let us view the usual cause for a pilot's grumble—speed on the launch. The pilot signals that he requires to be towed faster (or slower) and nothing happens. When the winch driver is confronted by the irate pilot later in the day all he need say is that he did give a little more (or less) speed just in case but that he wasn't very sure whether the antics were meant to be signals or perhaps it was a pupil having a little difficulty keeping a straight course.

A higher percentage of the remarks in category (*c*) concern the weather than any of the other diverse topics in gliding.

Unlike a normal human being, when it rains, who is heard to remark that it looks like it is settling in for the day ; our gliding enthusiast smiles benignly and boldly states that it will only last half-an-hour. He can still be heard stating this four hours later.

If a small patch of blue is observed in an otherwise overcast sky our pilot feels sure that it is heading straight for the airfield regardless of the wind direction.

The gliding enthusiast is also optimistic about unserviceable equipment ; sometimes almost to the point of absurdity.

Should the winch fail to start he will wade in with spanner and screwdriver to the fore : pronounce it will only take a few minutes to fix (he omits to add, when he has found the cause of the failure) and thence continue to assure his audience of advisers that it will soon be fixed. Incidentally, no matter which of the audience gives him a rest they are almost bound to state the same.

Few pilots are as optimistic as this regarding their next flight. Seldom is anyone heard to say they intend to stay up for at least two hours. The reason is a good one. If they do not stay up for two hours then they fall a victim of a few derisive adages from category (*a*) and in no uncertain manner.

This concludes a brief outline of the three main groups of adages but there is another. The combination of derision and optimism. The remarks in this category might almost be called sarcastic but this is a rather hard word for what is really very harmless fun.

An example of this type of remark may be employed when a pilot is just about to be launched from the gliding site situated in Southern England on a very miserable day. Just when he has settled in the cockpit and the canopy is on ask him if he has his maps of Scotland with him or if he has enough money for a trunk call.

Gliding —A World Sport

(*Photographs by* 'SAILPLANE')



Mrs. J. W. Platt who enthusiastically and energetically organised the exhibition

THIS was the title of the International Gliding Exhibition put on by the *Sailplane and Glider* in London during the first week of the World Contest. The venue was the Tea Centre, a modern exhibition hall in the very heart of the West End, fifty yards from Piccadilly Circus. The Tea Centre over the last few years has built up a reputation for small exhibitions of very high quality and thanks to the advice and help of Shell, that is exactly what we put on. Their Display Department worked unceasingly over several weeks to make the show a success, and we are most grateful to Mr. Bergne and to Mr. Linton for the general layout and to Mr. Armitage and the Photographic Unit for films and photographs. We would like also to thank the many other people who lent material—notably the B.G.A. for their array of cups, badges, and books; Dr. Scorer for met. balloons and instruments; the Air Ministry for models and photographs; the Science Museum for the Cayley model and for a case of rare books; the libraries of the meteorological section of the Air Ministry and of the Imperial War Museum for photographs; the London Gliding Club for the model 'Sky'; Messrs. Irvin for two parachutes; Messrs. Pullen for their turn-and-bank indicator; Ken Owen for models; John Furlong for models, barograph, and parachute; and Mr. Gibbs-Smith for his magnificent History of Gliding series. Very fine photographs came in from France, Poland, India, Australia, and New Zealand; and colour slides from America and Canada.

Now for a few words about the general lay-out. The exhibition was essentially modern—clean, clear colours, excellent lighting and printing. Round the walls were a series of deep darkwood frames enclosing alternate blue and terracotta boards, each devoted to pictures of one single country. (To those who complained that their country was not represented I



A Future Champion?

GLIDING NEWS FROM BELGIUM

By A. VAN ISHOVEN.

FROM 9th August till 16th were held the Belgian National Championships at the National Gliding Centre at Temploux. The weather was very bad so that very few good flights were made. These are the results :

De Sauvage/D'Otreppe	Verviers	' Mu 13 E '	1,303	points
W. Witter	Antwerp	' Sohaj '	1,000	,,
Doutreloux/Schepers	Liege	' Prefect '	780	,,
Mrs. Debauche/Watelet	Namur	' Spal 15 '	650	,,
Capt. Ruhling	Military	' Grunau 3 '	570	,,
Mojet/Defosse	Brussels	' Spatz '	534	,,
Haet/Buchet	Verviers	' Grunau '	500	,,
Debauche/Lafosse	Namur	' K-E '	223	,,

A prominent visitor was Wolf Hirt on his way back from the Internationals. Officialdom had its share of fun as some pilots were nearly prevented from taking part because they didn't have the official licence that was made necessary officially a few weeks ago.

On 8th July, 1954, the Belgian duration record was brought to 9 h. 14 m. by Mr. De Nolf of Bruges flying a ' Nord 2000 ' at Issoire, France. Mr. De Nolf like the former holder of the duration record, Guy Storrer, is a member of Ghent Gliding Club.

At the National Gliding Centre at Temploux were made some 2,173 flights between 15/3 and 15/7/54. During the same time 29 ' B ' awards, and 8 ' C ' awards were flown. One gold duration leg was flown and one silver altitude. In all some 1,167 hours were flown on 93 flyable days.

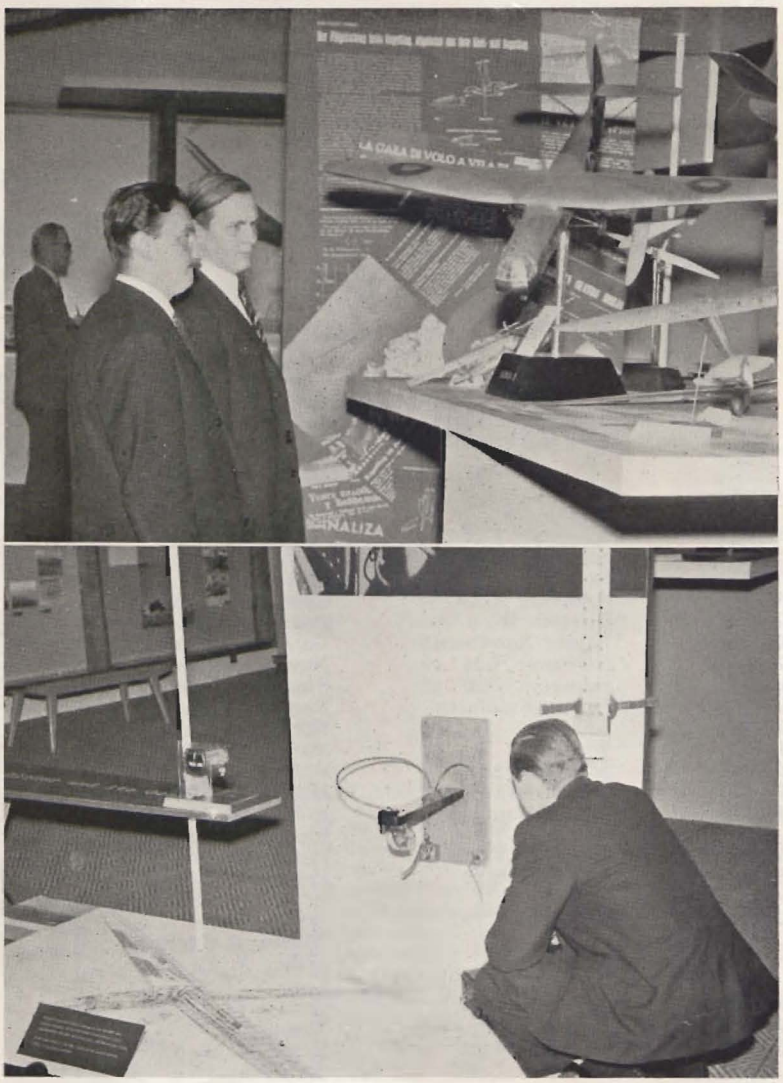
The Air Force as well as the SABENA Belgian Air Line are sending their future student pilots to Temploux to have their primary flying in gliders. In connection with this, rumours have been heard lately of a possible future nationalisation of the Belgian Gliding Movement. Most glider pilots consider this a threat to the sporting side of gliding.

Five C.A.P. (Civil Air Patrol, U.S.A.) cadets on an exchange visit to Belgium stayed some time at Temploux, most of them getting their ' B.'

---

could only say ' Did you send me any pictures ? No ? Well . . . .'). At the entrance was a large map, white outline on a black background of the world with small gliders marking every country that glides, and on large stands of scarlet, yellow, and grey were photomontages, greatly enlarged cloud pictures, instruments, models, plans, and so forth. At the further end of the hall we had a cinema showing three films every hour—' Silent Flight ' (taken at Dunstable), ' Wings for Pauline ' (Camphill), and an Australian short. This was crowded for every performance. The last three stands were devoted to gliding periodicals and press cuttings from all over the world, while outside we had the sales desk for books on gliding, a display case for the cups, three cases from the Science Museum, and an automatic machine showing 48 colour slides of America, Australia, New Zealand, and Great Britain. It had been hoped also to have a couple of full size sailplanes on view but at the last moment this fell through.

We had a total of 1,500 visitors including a number of Air Attaches, high officials from the Admiralty, the High Commissioner for Australia, and many foreign glider pilots. In one day alone we had visitors from sixteen different countries. It was notable though, that among the English mostly the middle-aged and elderly were visible. How is it that gliding apparently makes no appeal to the young ?



Members of the public take an interest

RESULTS OF NORTH-EASTERN SOARING CONTEST

July 3, 4 & 5, 1954—Harris Hill, Elmira, New York

FINAL PERFORMANCE SUMMARY.

Order	*Pilot*	*Ship*	*Final Point Score*	*Class*	*Daily Mileage Sunday 7-4-54*		*Monday 7-5-54*		*Total Mileage*
1	Burr	'1-24'	180	A*	T & S	114	G & S	40	154
2	Carris	'1-26'	159	A	T & S	97.5	G & S	34½	132
3	Smith	'LK Flattop'	133	A	T	65	G & S	42¼	107¼
4	Gehrlein	'1-23C'	122	A	T	65	G	30¾	95¾
5	Bovenkerk	'1-23D'	64	A	R	32½	G	30¾	63¼
6	Frutchy	'1-23'	64	A	R	32½	G	30¾	63¼
7	Ball	'LK-10A'	46	B*	R	32½			32½
8	Klein	'1-23B'	43	A	G	16¼	S	26¾	43
9	Lane	'1-20'	20	C*	S	11	S	9	20
10	Lehecka	'Martin'	16	B	G	16¼			16¼
11	Miller	'1-23'	16	A	G	16¼			16¼
12	Obarr	'BG-6'	11	C	S	7¾	S	3	10¾
13	Brooks	'LK-10A'	10	B			S	9¾	9¾
14	Taupier	'1-19'	10	C			S	9¾	9¾
15	Zauner	'1-19'	7	C	S	6½			6½

* Class Winners. Total Mileage 780 miles.

Description of letters :

T Completion of goal and return task.
T & S Completion of goal and return plus additional distance.
R Completion of goal and return.
G Completion to a predetermined goal.
S Straight distance.

DESCRIPTION OF EACH DAY'S EVENT.

Saturday—July 3rd, 1954 : Spot landing contest.

Sunday—July 4th, 1954 : Goal-and-Return Circuit to Martin Airport at Montour Falls. 16¼ miles one way.

Class A : 2 complete circuits for 40% bonus points. Additional distance permitted at 1 point per air-line mile on course. 65 miles minimum for bonus.

Class B : 1 complete circuit for 40% bonus points. Additional distance as Class A. Minimum distance 32½ miles for bonus.

Class C : Harris Hill to Martin Airport (1 leg). Additional distance permitted as above. 16¼ miles minimum for bonus.

Monday—July 5th, 1954 : Goal-and-Return to Tioga Airport at Owego. 30¾ miles one way.

Class A : 2 circuits as Sunday. 123 miles minimum for bonus. No additional.

Class B : 1 circuit as Sunday. 61½ miles minimum for bonus. No additional.

Class C : 1 leg to Tioga Airport. 30¾ miles minimum for bonus. No additional.

SUMMARY—SHIPS AND PILOTS REGISTERED.

Contest Number	*Ship*	*Pilot*		*Approved Ship*	*Approved Pilot*	*C.A.A. No. Ship*
1—889	'Schweizer 1-26'	Bernard Carris		x	x	N-91889
2—883	'Schweizer 1-19'	Russel A. Pierce		x	x	N-91883
3—880	'Schweizer 1-23B'	James H. Klein		x	x	N-91880
4—881	'Schweizer 1-23C'	Lawrence Gehrlein		x	x	N-91881
5—470	'Briegleb BG-6'	Fred C. Obarr		x	x	N-25470
6—541	'Laister-Kauffman'	Dana L. Darling		x	x	N-57541
7—888	'Schweizer 1-24'	Howard E. Burr		x	x	N-91888
8—840	'Schweizer 1-20'	Frank B. Lane		x	x	N-91840
9—175	'Laister-Kauffman'	Earl F. Brooks		x	x	N-58175
10—085	'LK-10A'	Robert B. Smith		x	x	N-58085
11—635	'Wolf'	Nathan J. Frank		x	x	N-31635
12—863	'Schweizer 1-23'	William E. Frutchy		x	x	N-91863
13—872	'Schweizer 1-23'	Delbert W. Miller		x	x	N-91872
14—427	'Laister-Kauffman'	Robert W. Breiling Richard H. Ball	Team	x	x x	N-60427
15—887	'Schweizer 1-23D'	Hal P. Bovenkerk		x	x	N-91887
16—843	'Schweizer 2-22'	Francis P. Bundy E. D. McCormich	Club with No. 14	x	x x	N-91843
17—500H	'Schweizer 1-19'	Otto Zauner William R. McElwee Arthur A. Heavener Louis S. Rehr	Club	x	x x x x	N-4500H
18—95M	'Schweizer 1-19'	Donald E. Taupier		x	x	N-2295M
19—048	'Laister-Kauffman'	Theodore Pfeiffer		x	x	N-39048
20—857	'Schweizer 2-22'	Edgar D. Seymour Jack Mitchell Donald C. Ryon	Club	x	x x	N-91857

SUMMARY—SHIPS AND PILOTS REGISTERED—*continued.*

21—019	Pratt-Reed '	Dale Gustin	x	x	N-52019
22—733	' Martin M-1 '	Emil A. Lehecka	x	x	N-21733
23—824	' Schweizer 1-19 '	Anthony Guiglianatti	x	x	N-91824
24—191	' Laister-Kauffman '	Jack P. Perine	x	x	N-54191
		Albert Rossie (no glider)		x	

CLUBS ENTERED AND POINTS EARNED BY EACH.

Elmira Area Soaring Corporation	499
Mohawk Soaring Club, Inc.	110
Connecticut Valley Soaring Association ..	31
Mid-Atlantic Soaring Association	20
Metropolitan-Airhoppers Soaring Association ..	16
Southern New Jersey Soaring Club	7
Rochester Soaring Club, Inc.	

INTERESTING FACTS ABOUT NORTH-EASTERN SOARING CONTEST.

169 People registered (plus many children registered as families).
32 Pilots approved to fly.
24 Ships.
7 Clubs—2 new ones never before entered—Connecticut Valley and Southern New Jersey.
106 Flights.
780 Contest miles in two days.
114 miles longest distance.
32 Gliders as follows :

' Briegleb BG-6 '	1
' Laister-Kauffman LK-10A '	5
' Laister-Kauffman ' Flat top	1
' Martin '	1
' Pratt-Reed '	1
' Wolf '	1
Schweizer ' 1-19 '	4
' 1-20 '	1
' 2-22 '	2
' 1-23 ' standard	2
' 1-23 ' Long wing	3
' 1-24 '	1
' 1-26 '	1

Class ' A ' Winner—Howard Burr flying ' Schweizer 1-24.'
Class ' B ' Winner—Richard Ball flying standard ' LK-10A.'
Class ' C ' Winner—Frank Lane flying ' Schweizer 1-20.'

TOW RECORD.

Date	*Chapell* 32071	*Elaerco* 60221	*Totals*
July 3rd, 1954	11	10	21
July 4th, 1954	24	25	49
July 5th, 1954	18	18	36
Totals	53	53	106

SPOT LANDING CONTEST RESULTS—SATURDAY, 7-3-54.

1st Place	Howard Burr	0 inches from flag
	Bernard Carris	0 inches from flag
2nd Place	Dana Darling	11 inches from flag
3rd Place	Emil Lehecka	12 inches from flag
4th Place	Fred Obarr	17 inches from flag
5th Place	Dale Gustin	36 inches from flag
6th Place	William Frutchy	62 inches from flag
	James H. Klein	62 inches from flag
7th Place	Delbert Miller	67 inches from flag
8th Place	Edgar Seymour	84 inches from flag
9th Place	Otto Zauner	12 feet 05 inches from flag
10th Place	Lawrence Gehrlein	13 feet from flag

The spot landing contest was not recognised as an official contest competition. Prizes were not given so this report is merely added for the record.

Spanish National Championships

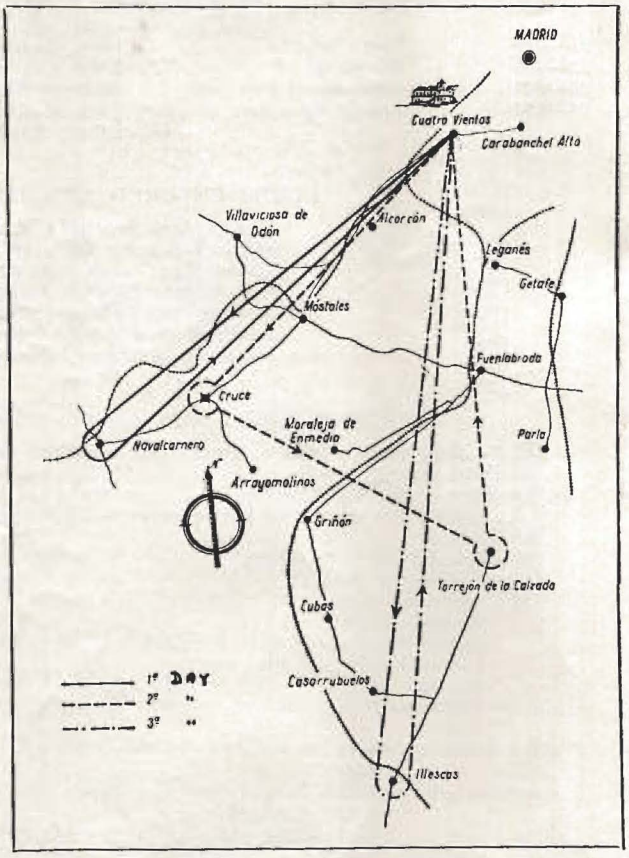
THE First National Contest was held at the aerodrome of Cuatro Vientos, Madrid, between the 12th and 20th May. Thirty-two pilots took part, each flying a ' Kranich II ' of Spanish manufacture. Eighty per cent of those competing had never taken part in any kind of competition before, but the whole test was successfully completed.

12th May. Heavy cumulus over the Sierra and great instability. Task : Out-and-return race, a total of 44 km. round the control point at Navalcarnero. The thirty-two contestants took off five at a time, aerotowed by Fieseler Storchs. A line of storm was advancing from the S.W., and the first away caught strong upcurrents and were soon on their way with altitudes of between 1,000 and 1,800 metres. The storm came up quickly with lightning around Navalcarnero and heavy rain showers. Some pilots tried to bypass these and of twenty-five who continued eight actually succeeded. Best of these was Vicente, whose time for the out-and-back was fifty minutes.

18th May. After six days of bad weather, a really good day. Four of the machines had been damaged in the storms of the preceding week, so only twenty-eight took off on the day's task—speed over a triangular circuit via Guadarrama and Torrejon, 53 km. Cloud base was at 1,500 m., and the first sailplanes were quickly en route. Winner was Carreño who covered the course in an hour and forty minutes, an average of 49.7 km./h.

19th May. A clear blue sky all day ; thermals predicted to 1,500 metres but not strong ones. Out-and-back flight to Illescas, 32 km. away, with extra marks for speed. Winner was Almagro who came back in an hour and twenty-three minutes (46 km./h.), second Vicent (1 hr. 30 m.) and third Nuñez (1 hr. 33 m.). This gave Vicent three points more than Nuñez, which was enough with his previous lead of six points to gain him the championship. For a day without clouds the results were very good, since no less than twenty-one competitors completed the task.

The interesting thing about this contest is that neither the champion nor the second came first in any of the three days, but both were consistently high in their marks throughout the contest. Final results were : Vicent 2,640 points, Nuñez 2,631 points, Salinas 2,227 points, Garcia 2,206 points.



NOTES

Argentina. The first test flight has been made of the new two-seater Flying Wing, the ' Urubu ' or ' I.A. 41.' It is built entirely of wood, has an overall length of 5.8 m., and a span of 18 m.

Germany. Hanna Reitsch and Gunter Haase have been testing the new ' Hortner Ho. 33 ' at the aerodrome of Bonn-Hangelar.

Italy. The Polytechnic of Turin have constructed a single-seater sailplane, the CVT-1 ' Zigolo.' This is a low-cost, simple machine, safe, and of fairly high performance, and it can be dived to 140 km./h., without vibration. Stalling speed 40 km./h.

The Flying Winglet

By ROGELIO BARTOLINI

BY the end of 1949 we knew in our Club in Argentina that Dr. Horten had designed a small and revolutionary sailplane with entirely new characteristics. A little later Dr. Horten suggested to Reinaldo Picchio that he should build one and he formed a group to do so. We talked to Dr. Horten and he gave us all the details.

We began work on the 23rd December, 1949, and by the following May we had 24 ribs traced out in three ply, but by then we were finding problems of space, which were finally solved for us by Señor Carubelli who lent us his carpenter's shop in a suburb of Cordoba. At the beginning of October we were installed and began the search for materials. We found a Roman pine which stood up to our tests with a breaking strain of 6 kilograms (if the grocer's scales were accurate . . . .). Señor Carubelli also found us a piece which gave us more than 7 kilograms and this we reserved for the main spar. Picchio managed to get some 8 mm. three ply and we set to work making the jigs. The first rib was ready by the end of January and the last by the 5th April.

Setting them up gave us a bit of trouble and we were not ready for the next stage till the 4th August,

when we all five gathered together to glue the main-spar, using for this a hundred clamps, for which we had scoured all the ironmongers in Cordoba. By the end of September the ribs were all in place and we began to cover them. We were now reduced to three —Figueroa, Tacchi, and myself, so the last piece was not in place till June, 1952; but in the meantime we had been looking for a good place to fly and had decided on the Pampa of Olaen, a gentle grassy slope lying in the right direction for the wind and very suitable for landing with no " undercarriage.'

When we had covered the leading edge we tested it by supporting the two ends and by three of us sitting in the middle. Dr. Horten leant on it to the tune of another 40 kg., and only then did it begin to wrinkle. Our weights together came to about 250 kg., and Dr. Horten calculated the breaking point at about 400 kg. This means that for a pilot weighing 70 kg., the breaking point would only be reached with an acceleration of 6 g., equivalent to $2n = 12$.

From here on things went quickly. We made the few connections for the controls and fitted them on, then began to cover the rear portion of the ribs, finishing this on the 31st July. Then Figueroa put on the trailing edge, Tacchi began the pilot's rest, and I worked on the ailerons. We finished by September. Then came fabric, dope, controls, cabin, and the space for the pilot. This last gave us a lot of work and we had to undo and re-do it several times.

The transport problem was solved by buying a chassis, which with an axle from Tacchi, two tyres from me, and the purchase of wheels and inner tubes and the fixing of two supports, made a fine trailer. January passed while we were making tests, getting permits, and so forth. We discovered that the centre of gravity was exactly where it ought to be, so that we did not have to add one gram. We decided to test fly her on the first Saturday in February and worked till three o'clock on the night before, but at nine we were on our way and by a miracle the trailer held together and is, in fact, still working admirably.

By 2 o'clock we were at the Pampa de Olaen and had chosen a gentle grassy slope facing the wind which at this moment was about 7 km./h. I put on my wing and began to run, but the wind was not strong enough and I could not get off the ground. I tried again, but still there was not quite enough wind though it was obvious that the controls were working perfectly. The thing was comfortable enough and I was even able to run more rapidly with the wing than without it. Then Scheidhauer tried to take off but with the same result. We set up our tent and decided to sleep, but on the next day conditions were the same—not enough wind. By two o'clock it seemed to be a little stronger and I was able to make a little jump by pulling back the stick, but that was all. The wind velocity never reached 10 k./h., so we eventually gave it up and returned to the city.

We decided that we must either construct a hangar near the site or else that we should find somewhere nearer town, for the journey was too long, especially as bad weather might surprise us en route; after an interview with the ex-president of our Club we were allowed to use a polo field on his estancia only 20 km. away. Here we repeated our test but with the same result—this time we had an anemometer and it never showed 10 km./h.

Tacchi improvised a towing hook and we tried car-tow, but the speed was more than my legs could manage and I had to release or be dragged along the ground. Twice more we tried running on a slope at La Aguada, but again with no result, so we resolved to make a success of auto-tow. Tacchi and Figueroa stayed with the car while Dori, 100 m. further on, watched the anemometer and sang out the speeds—10, 12, 15 . . . When he said 15 we started out. Quicker and quicker we went and just when I thought I could run no further the machine lifted; but down I came at once owing to the wind's variation. Instead of running when we touched down I skidded with stiff legs as if on water skis. The speed improved, we rose again, this time to 3 metres above the ground. The runway was short so I released and dived gently to earth again. At last our winglet had flown! Not very high, certainly, but enough to give us valuable experience.

We tried again but this time the wind did not reach 15 km./h., and I could not keep pace with the car, so we had to give up. But encouraged by our partial success we asked the Club if we might try auto-towing at Juarez Celman and if we might hangar the machine there. They agreed, and in the middle of 1953 we tried again and were successful, gaining an altitude of 5 metres and landing normally. The wind oscillated between 15 and 20 km./h., and all went well, but then it dropped as I was releasing and I landed suddenly; my legs gave way under me and the tip of the left wing caught the ground and broke the corner.

This delayed us a great deal as none of us had the time to do the repairs. It also meant that it was not practical to go on as we were doing, for there is seldom a wind of more than 15 km. in the Sierras and when there is it is often gusty. We thereupon decided to fix a skid and Dr. Horten designed one for us that would not get in the way when running. At the same time we worked out a system of raising or lowering the position of the pilot so that he might be more comfortable either on foot or in the air.

All this took time and we were not ready again till the 9th January of this year. On this day we were able to make four flights of 5, 10, 20, and 30 metres in height. On the fourth flight we tried S-turns and she re-acted beautifully. The prone position of the pilot seemed very comfortable and the visibility was excellent.

On the 7th we tried again this time with an airspeed indicator lent by the Club. I first did a glide to see if this worked, then Tacchi gave me a launch to 80 metres, using a thin rope of 150 metres. I released, turned 180°, did a tailwind glide, turned 180° again; but I still had too much height so with a series of S-turns I came in and landed normally. It was a beautiful flight and the controls acted perfectly. Diving gently the speed built up to 100 km./h., at once. Turns were normal and the response immediate. Tacchi and I continued the tests and were both very content.

We hope to do our next flights on aerotow using an extra light ' Switlik ' parachute.

(*Continued on page* 20)

THE FLYING WINGLET—(*continued from page* 19)

Technical Details : This sailplane was designed by Dr. Horten with the idea of producing a cheap aircraft of similar flying character to the ' Grunau Baby '—an aircraft that would also be cheap to launch, since all it needs is a slope and a pair of legs. It has, in fact, the best points of both the ultra-modern ' Flying Wing ' and the early models of Lilienthal, Chanute, Pilcher, etc. The total cost with its trailer is about $5,000 Argentine (about £70 at the present rate of exchange) and it takes 2,000 hours to build. This could be modified by various changes to take only a little over 1,000 hours, which compares very favourably with the 5,000 hours necessary to build a ' Baby.' The space necessary is only twelve feet by six. It will take off easily by running against a wind of only 15 km. ; we fitted a skid and tried auto-towing only because there is so seldom a wind around here.

Controls : The only controls are those for the aileron which also serves as a rudder. It works in the same way as that of the ' Ercoupe '—inclining the stick towards the left brings the left aileron up, causes turbulence which acts as a brake on the left wing and turns the aircraft to this side.

Characteristics :

Span	7.50 m.
Chord (max.)	2.50 m.
Chord (min.)	0.50 m.
Area	11.20 sq. m.
Weight empty	37 Kg.
Pilot weight	75 Kg.
Weight in flight	112 Kg.
Wing loading	10 Kg./sq. m.
Co-efficient of strength	2n = 10

Structure : It is constructed in one piece with mainspar, ribs, and conventional covering. The spar forms an angle of 45° with the axes of the ribs and has in its central part a hole through which passes the body of the pilot. He is strapped in an upright position, leaning his chest on a board and with his legs free to run. Once in the air the board can be raised and the knees and feet placed in rests. Taking off in towed flight the pilot starts in the prone position and the sailplane rests on its skid. In this position the only thing which rises above the line of the wing is the small cabin for the pilot's head.

Performance (*Theoretical*).

Angle of glide		1:18 at 72 km./h.
Rate of descent	m./s.	1. ,, 56 km./h.
	,,	1.11 ,, 72 km./h.
	,,	1.90 ,, 100 km./h.
	,,	5.25 ,, 150 km./h.
Landing speed		36 km./h.

Czechoslovakia. The firm of Motokov of Prague are advertising the ' Pioneer L-109 ', a training two-seater suitable for all types of flight including instruments for blind flying. No price is mentioned.

Russia. Victor Ilchenko was nominated for the Lilienthal Medal for a flight of 520 miles from Moscow to Stalingrad last year.

Midget Sailplanes : Why ?

IN this issue there is a description of the ' Horten X,' which, when further developed, might become the most important sailplane for the next decade. Not because it is the ' cheapest ' but because it might become the most ' practical ' sailplane and thus provide cheaper soaring per soaring hour than its rivals.

When it is developed into a three-piece sailplane with detachable wings, and with a fully retractable skid and a retractable fairing for its human undercarriage, it will approach the ideal of a midget sailplane as described in a previous editorial (April 1953).

Due to its human undercarriage and low stalling speed it will be possible for the pilot to launch himself by running into slope lift without any other help. Where there are no suitable slopes, he will be able to obtain launches to 1,500 feet with cheap piano wire towed by one single helper mounted on a motorbicycle, horse, camel or motorboat. If the owner's work takes him to a remote spot of the globe hundreds of miles from the nearest gliding club, he will still be able to take his sailplane with him—even by air-freight.

Note that another midget sailplane with a one-piece wing of the same span, with a much higher wing loading and stalling speed and without the possibility of using the pilot's legs for take-off into slope lift, will be much cheaper in initial cost. But also note that it will require the same number of helpers and expensive launching equipment as those required by orthodox competition giants and thus the total cost per soaring hour will be higher than that of the most ' practical ' sailplane.

There are hundreds, possibly thousands of sailplane pilots all over the world who no longer soar because they live too far away from an ' organised ' gliding club. There are many others whose soaring is limited by the expense or the inefficiency of launching methods.

If sufficient numbers of these unfortunates would order the next development of the ' Horten X,' then the initial price could be reduced to well below that of the ' cheapest ' midget sailplane. Large series production is the most effective key to lower costs and would permit an improvement in min. sink and max. glide by increasing the span to 30 feet and even the provision of a raisable trailing edge (as in the Yugoslav ' Kosava ') in order to improve the penetration.

The essential formula for cheaper soaring is NOT a limitation of span by itself, as Fred Hoinville seems to propose, but rather a limitation of stalling speeds which permits the use of the human undercarriage assisted by a retractable skid, which in turn allows the sailplane to be used more frequently and also in terrain where orthodox sailplanes cannot operate. Wider application and expansion lead to larger production and hence to lower initial costs thus reducing the vital ' total cost per soaring hour.' How many of our readers could use such a sailplane ?

O.W.N.

Holland. O. P. Kock flew a distance of 320 km., from Hilversum to land in France at Abbeville.

An 'Egyptian' Takes a Look at Camphill

By J. DE FREITAS

JUST home on leave from Egypt where I took up the gliding game about a year ago, I observed Camphill with a real Egyptian's eyes. Attuned to the dazzling glare of scorching sun on vast expanses of desert, thinly relieved by the green ribbon of the Nile, what greater contrast could there be than to arrive at the gathering on the Derbyshire heights to find a grey and lowering sky, the green of the meadows restfully stretching away into the distance, tents dripping with rain near at hand, and damp but cheerful people all around. The flags of many nations gave a splash of colour to the scene, and brightly painted gliders and caravans gleamed wet against the dark background of the fields.

It was fascinating to see the array of differing types of glider and to compare the various nationalities' developments of pet ideas. The most obvious divergences lay in the placing and shapes of the wings, there being several departures from the prevailing high-wing construction, the all-metal 'Schweitzer' of the Americans favouring mid-wing position, the Spanish (I think) trying the tricky low wing, the Yugoslav and British a forward sweep, and several others gracefully gull-shaped. The Germans were experimenting with variable pitch wings, eliminating ailerons and substituting a tail parachute for airbrakes. An amusing feature of a Swiss machine was a little bulb horn in the cockpit, apparently necessary in the Alps to scare away jay walkers on landing. A refinement I heard about but did not see, was the piperack fitted beside the pilot's seat of one machine, with several filled pipes always ready to add the pleasure of smoking to the thrill of soaring in space!

I was most interested by the development of radio-telephone contact between ground and glider, which must be of inestimable value in competition as well as having evident advantages in training pilots on their initial solo flights. Of particular note was an almost pocket-size set, with a very short aerial, being demonstrated by a Swedish representative; it was carried on his person and has been developed especially for training. In general, however, the ground sets seen at the Competition were elaborate car-mounted affairs operated by numerous personnel. I happened to listen to the exchanges between ground and air of one foreign team and was regaled with some pungent comments on our inclement English weather!

The efficiency of the various teams' ground crews was well worth a remark. I noted the smooth and speedy unloading from trailer and final assembly ready for flight of the Swiss dual machine by a girl and two men—unfortunately I did not get the time taken but it must have been very quick.

During the few hours' flying which the weather permitted, I stationed myself by the battery of winches on the brow of that astonishing 700 ft. drop known as Bradwell Edge. The whole procedure of launching and, to some extent, landing was so different from the simple and generally uneventful launches by car-tow in Cairo, that it was of particular interest to me. The speed of take-off and steep angle of the climb were both new to me and impressive. The Spanish ace, not content with the standard drill, put up a vertiginous performance of almost leaping into the air and climbed at a speed and angle which called forth a murmur of alarm and wonder from the spectators.

That particular day's target was a flight of forty miles for two-seaters and nine craft were winched into the sky to try their luck, but no kindly up-current was encountered, so the onlookers were treated to a couple of hours' display of soaring and swooping in the steady breeze rising over the brow of the Edge, with the nine contestants jockeying for position.

How different the whole thing was from our modest efforts in Cairo! There on the hot, yellow sand we would stretch a thousand feet of cable between a Ford pick-up and the kite—signal to draw taut, then up would go the 'bat' and away would go the car, flat out for half a mile or so. The plane would gently rise to six hundred feet, eight or even nine if you were lucky—release and then the anxious search for thermals, generally the only form of lift—scanning the expanse below for wind-devils, hawks or any other indication, or simply hoping for the lift of one wing-tip. If you get something it was generally good enough for the experts to gain two or three thousand feet, and then to stay almost indefinitely in the sky, savouring the cool blueness of the upper air.

Our Club in Cairo is Government sponsored, the instructors are good, the pilots well trained and strictly disciplined and the whole show is well and enthusiastically run. There are some three hundred members, twelve aircraft of widely varying types, such as the Slingsby 'T.21' and 'Prefect,' the 'Olympia,' an 'Air 100,' a couple of 'Spatz' and so forth. All are well maintained and a most un-'alakefak' air of discipline and purpose prevails—the more so as we operate in the midst of an Egyptian Air Force base, ninety per cent of whose officers are R.A.F. trained.

The Club's achievements to date are a local record of 11,000 ft., in height, 11 hours in endurance and about 240 kilometres in distance. Half-a-dozen of the members hold Silver 'C's' and most of the pupils have achieved their 'A', 'B' and 'C' classifications. The latter is quite hard to get as it involves staying in the air for no less than 10 mins., and rising above the height of launch in a 'Prefect,' which is not easy to keep in the air at the best of times. Over here it seems that the test is not so stiff on time but more exacting on height.

But to return to Camphill. I can say that wet though it was, and although I was able only to get a brief glimpse of the competitors in airborne journey, it was a grand experience and a most enjoyable week-end.

NEW PRESIDENT FOR SSA

LT.-COL. FLOYD J. SWEET, U.S.A.F., has been elected President of the Soaring Society of America, Inc. (S.S.A.), succeeding Jon D. Carsey of Dallas, Texas. Col. Sweet, a native of Elmira, N.Y., after nine years in the Air Force laboratories and project section at Wright-Patterson A.F. Base in Ohio was assigned to the Pentagon in Washington, D.C. in 1953. He has been active in gliding and soaring since 1929 when he built and flew his first primary glider at Elmira.

Other officers of the S.S.A., for 1954-55 all re-elected are :

Honorary Vice President, Dr. Wolfgang Klemperer, Los Angeles, Calif.

East Coast Vice President, Ralph S. Barnaby, Capt. (Ret.) U.S.N., Philadelphia.

West Coast Vice President, Theodore Nelson, San Leandro, California.

Treasurer, E. J. Reeves, Dallas, Texas.

Secretary, Paul A. Schweizer, Elmira, New York.

The S.S.A. is a non-profit organization formed in 1932 for the furtherance of motorless flight in America. At the recent directors' meeting at National Soaring Contest, Elsinore, California, the S.S.A. announced that its membership is at an all time high and that gliding and soaring activity throughout the country is steadily increasing.

The new S.S.A. president was graduated from University of Michigan in 1937, with a B.S. in Aeronautical Engineering. While in college he instructed in the U. of M. Glider Club.

Entering the Armed Services as a 1st Lieutenant in March, 1941, Col. Sweet holds the rating of Glider Pilot in the U.S.A.F. In 1949 he received the Evans Trophy, presented annually for the greatest contribution by a glider pilot of the U.S.A.F. to glider progress. The presentation was made by the late General Hoyt S. Vandenberg.

In gliding, Sweet qualified for the F.A.I. 'C' license on October 12, 1930, when he made a 1 hr. 12 min. flight. He has been a contestant in most of the National Soaring Contests, and has attended all of the 21 held to date. He holds Silver 'C' Certificate No. 17 in the U.S. series. He holds C.A.A. licenses as a private airplane pilot, a Commercial Glider Pilot and a Glider Pilot examiner.

On the Board of Directors of the Soaring Society of America for fifteen years, Sweet was editor of *Soaring*, official magazine of S.S.A. from January, 1940, to July, 1941.

In accepting the presidency of S.S.A., Col. Sweet said :

'One of the chief aims of the Soaring Society of America is to bring gliding and soaring into more prominent use as a medium for capturing and holding the interest of the youth of America in aviation, and thereby creating a large reserve of airminded manpower.'

ULSTER GLIDING CLUB

IF you have not heard from us, it is not for want of activity. We have had, in spite of the climate, a good season. The Oscar must go to C. Nelson Rountree who has put new life into the Club and

(*Continued on page* 23)

FOR SALE

TUTOR. C. of A. expired, but in good condition, £135 o.n.o. Trailer available. Details to Box F7.

'AVIA' Sailplane—C. of A. until August, 1955—Being regularly flown at Midland Gliding Club—First class condition, £225—All metal open Trailer also available.—Lt.-Col. G. Benson, Marston, Pembridge, Leominster, Herefordshire.

'KIRBY KITE I' in first class condition complete with current C. of A. and instruments. Can be seen by appointment. £125. Midland Gliding Club, Church Stretton, Salop.

'OLYMPIA' No. 1 Glider together with Glider Trailer, parachute, etc. £600 o.n.o. Can be seen at Leicester by appointment with Mr. R. D. Rice of Cosby, Leicestershire. Telephone Narborough 2277.

WANTED

WANTED to purchase. Intermediate sailplane and/or 'Tutor' wings. Miss D. V. Phillips, 70, Park Road, Kettering, Northants.

WANTED URGENTLY

Plans of 'Scud I' in any condition at all. Write Box F.6, 'Sailplane,' 8, Lower Belgrave St., S.W.I.

'VUELO SILENCIOSO'

Argentine Gliding Magazine. Monthly. Address : Casilla de Correo 800, Buenos Aires. Price $3 Argentine per copy.

'WINGS' FOR PAULINE'

A 16 mm. sound copy of the film 'Wings for Pauline' is available for hire from 'Sailplane.' Price £1. 1. 0. Write for details.

SMALL ADVERTISEMENTS

If you have something to sell or there is something that you need why not advertise with a small advertisement in *Sailplane and Glider* ? The cost is not high and full details will be sent on request.

Thermik

Die deutsche Monatsschrift für den Segelflug in aller Welt.

Bringt Beiträge über Konstruktion und Bau von Segelflugzeugen und Motorseglern, über Wettbewerbe, Flugerfahrungen, Meteorologie, usw.

Gegründet 1948 und seitdem herausgegeben von Hans Deutsch, Göttingen.

Das Jahresabonnement kostet den Gegenwert von lo, -DM + 2, -DM Porto.

Unser Vertreter in Grossbritannien : H. Erdmann, Hampen House Cottage, Andoversford, Gloucestershire.

ULSTER GLIDING CLUB—(*continued from page 22*).

attracted new members who are willing to put down their money first and fly afterwards. Unfortunately Nelson tried to take the short route to Australia with the result that the Club ' Tutor ' was hors de combat from 30th May to July 11th. The repair work was done by Tommy Pringle and (the Irish duration holder) William Douglas. They gave a great deal of time in their summer evenings and we are most grateful. From April 1st to September 15th we have had 55 launches and 50 hours' soaring. Soaring was possible on 17 days.

We were glad to welcome back Dr. Derek Murphy after his serious illness.

The Ravens were less active this year probably because we started later than usual. However, some members of the Club spent several week-ends on Rathlin Island making a colour movie of Buzzards which has added greatly to our knowledge.

We were glad to sign on R. C. Gibson who was a prominent A.T.C. gliding instructor.

Our most hopeful new member is Tom Heaslip who resides nearby in Coleraine. He and Rountree put up most hours in the ' Tutor.' Liddell and his ' Gull ' grow old together. They spent 34 air hours together during the season and reached 4,000 ft. on one occasion. Liddell (incidentally) has completed 350 hours soaring and intends to continue until he gets his Silver ' C ' distance—in Ireland.

The season has had no outstanding flight but one on August 20th was worthy of note. Approaching at 1,000 ft., to land near sunset, Liddell found lift about a mile from the cliffs, and along the beach the hills could have had no effect whatsoever. The wind was about 20 m.p.h. from due North. The smoke of a gorse fire some 500 yards inland was blowing from due South. It was obvious that the land cooling at sunset after a bright day was giving off its heat in the direction of the warmer sea, in spite of the wind. The two air currents were meeting at the shore. It was possible to soar in a narrow strip and the ' Gull ' reached 2,300 ft. So great was the lift that spoilers had to be used to come down and by that time cars had on their headlights on the roads below. It was a most interesting experience and we believe that it is the first time a Sailplane has soared in the wind gradient between land and sea for any considerable time and free of other lift. The ' Gull ' literally forced its way down and landed just before complete darkness.

W.L.

LETTER

SIR,

My objections to wooden balloons being called ' sailplanes.' The true sailplane, with spherical sail around the fuselage, will tack and reach across high winds and jet-streams from here to Australia. It seems that advances in aircraft design are often, as in this case, laggard perceptions of the obvious.

Record that model ' 1A ' of a true sailplane is being built and will be flown, and another one of those obvious ' laws of flight ' thus dug up : fools will continue to rush in. I lay my head upon the block.

My frabjous—yes, that is the word—discovery of America was a thrill while it lasted.—**A. S. Valentine, 11, Asteys Row, London, N.1.**

'Sailplane and Glider' Photograph Contest

A large number of entries have been received for the September-October Competition which was announced in our last issue. Judging is now taking place and prize winners names and entries will be published in our next number.

Entries for the NOV.-DEC. Competition must be received by October 20th and for the JAN.-FEB. Competition by December 20th.

This is a chance for all our readers with a camera to win a cash prize of £2. 2s. 0d., £1. 1s. 0d., or a year's free copies of ' Sailplane and Glider.' Just send us your best gliding photograph (any size providing it is no smaller than 2¼ inches square). On the back put your name and address in block letters together with a brief description of the picture. Glossy prints preferred. We cannot guarantee to send back your prints unless they are accompanied by a stamped envelope of suitable size.

The competition is open to readers both home and abroad and will remain open until further notice.

We reserve the right to publish any photograph submitted and photos must be the copyright of the Sender.

Send to: Photo Contest, ' Sailplane and Glider ', 8, Lower Belgrave St., London, S.W.1.

Royal Aero Club Certificates

(Issued under delegation by the B.G.A.) **JULY, 1954**

' C ' CERTIFICATES

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date taken.*
5406	J. J. Macklin	No. 89 G.S.	4. 7.54
6421	V. D. Longman	No. 89 G.S.	4. 7.54
10608	R. W. Paverley	Deversoir G.C.	20. 7.54
11750	K. R. Biggs	No. 104 G.S.	4. 7.54
12274	J. F. Rhodes	R.A.F. Cranwell G.C.	24. 4.54
12288	A. M. Wright	R.A.F. Cranwell G.C.	24. 4.54
12376	D. Percy	No. 2 G.S.	8. 7.54
12457	M. J. E. Adams	R.E. G.C.	21. 6/54
14984	K. M. Lazarus	No. 22 G.S.	27. 6.54
15049	J. P. Corrigan	No. 80 G.S.	14. 7.54
15108	J. E. Curtis	Coventry G.C.	7. 7.54
15397	M. Harden	Army G.C.	14. 7.54
15504	J. R. G. White	No. 168 G.S.	20. 6.54
15673	J. Woodward	Oxford G.C.	20. 6.54
15760	B. W. Wilkie	No. 2. G.S.	8. 7.54
15813	J. L. Brimfield	London G.C.	5. 7.54
16065	J. R. Tudgey	Midland G.C.	7. 7.54
16101	F. R. Stace	No. 168 G.S.	26. 7.54
16369	K. P. Butcher	No. 146 G.S.	7. 6.54
16594	B. B. Bowles	No. 122 G.S.	4. 7.54
16749	B. A. Briggs	No. 80 G.S.	14. 7.54
16917	J. T. Francis	No. 80 G.S.	12. 7.54
16952	J. D. Gray	Derby & Lancs. G.C.	12. 9.53
16957	G. A. Cox	Surrey G.C.	15. 6.54
17216	B. Fuller	No. 80 G.S.	23. 4.54
17333	P. G. Kelly	No. 31 G.S.	15. 7.54
17385	S. J. James	Bristol G.C.	11. 7.54
17442	C. Knaggs	Newcastle G.C.	4. 7.54
17530	G. A. Bushell	London G.C.	6. 6.54
17531	A. J. Pike	Surrey G.C.	23. 6.54
17573	Pamela Birds	Surrey G.C.	2. 7.54
17586	D. H. Williams	St. Athan G.C.	3. 7.54
17621	A. W. Strong	No. 80 G.S.	23. 4.54
17665	J. R. Gilbert	No. 168 G.S.	4. 7.54
17871	A. J. R. Oldfield	Surrey G.C.	13. 7.54
17912	J. R. M. Hawkins	Southdown G.C	26. 6.54

Royal Aero Club Certificates

(Continued)

No.	*Name.*	*A.T.C. School or Gliding Club.*	*Date taken.*
18223	A. Sambale	Scottish G.U.	7. 2.54
18227	E. W. Shearer	No. 31 G.S.	16. 4.54
18234	W. J. Sutcliffe	London G.C.	23. 6.54
18238	Sheleagh Aldersmith	Derby & Lancs. G.C.	6. 6.54
18239	J. C. Deas	Surrey G.C.	22. 6.54
18240	C. A. Cough	London G.C.	24. 6.54
18244	B. J. Woodman	R.A.F. Oldenburg G.C.	27. 3.54
18257	B. Brownlow	R.A.F.G.S.A., No. 7 Area	4. 7.54
18266	H. V. Satterly	Deversoir G.C.	12. 6.54
18270	J. J. Lasenby	No. 89 G.S.	4. 7.54
18288	A. J. Fraser	Geilenkirchen G.C.	7. 6.54
18296	J. A. Ockenpen	London G.C.	24. 6.54
18313	H. Greig	R.A.F. Wessex G.C.	2. 7.54
18311	J. J. Daly	Yorkshire G.C.	24. 7.54
18314	L. R. Johnson	No. 166 G.S.	20. 4.54
18315	Ethel Tooby	Midland G.C.	7. 7.54
18339	A. L. Hruska	Moonrakers G.C.	20. 6.54
18342	R. W. Millward	R.A.F. Cranwell G.C.	20. 6.54
18367	G. A. T. Davies	Midland G.C.	23. 7.54
18376	J. J. Brook	Surrey G.C.	27. 6.54
18378	L. J. Du Preez	Surrey G.C.	26. 5.54

SILVER 'C'

464	N. O. Preston	London G.C.	27. 6.54
465	D. W. Stowe	Bristol G.C.	20. 6.54
466	V. Huggett	London G.C.	27. 6.54
467	E. P. Brisco	Midland G.C.	3. 7.54
468	T. J. Primrose	No. 43 G.S.	3. 7.54
469	A. A. J Thorburn	Scottish G.U.	25. 7.54

AUGUST, 1954

'C' CERTIFICATES

8740	K. A. J. Lockwood	Army G.C.	15. 8.54
13832	D. H. Bryce	Scottish G.C.	30. 7.54
14565	R. Lowrence	R.A.F. Wahn G.C.	2. 6.52
15624	E. C. Littlejohn	Midland G.C.	29. 7.54
16667	A. J. Hammond	London G.C.	29. 7.54
16773	J. D. Beckett	Bristol G.C.	24. 7.54
16816	I. Kerr	Scottish G.U.	24. 7.54
16817	I. Paul	Newcastle G.C.	2. 8.54
16846	R. S. Tuxworth	London G.C.	29. 7.54
16987	J. Forrest	Yorkshire G.C.	14. 7.54
17023	D. J. Dulborough	No. 80 G.S.	12. 7.54
17052	J. C. Burgess	Midland G.C.	21. 7.54
17360	M. Berry	Scottish G.U.	24. 7.54
17365	J. E. Torode	Army G.C.	3. 6.54
17436	T. R. Elkins	No. 80 G.S.	23. 4.54
17615	A. W. Newton	No. 92 G.S.	30. 5.54
17689	Daphne M. Wright	Oxford G.C.	31. 7.54
17713	P. L. Harris	No. 105 G.S.	4. 8.54
17828	J. M. Reid	Scottish G.U.	30. 7.54
17869	A. Scott	No. 42 G.S.	16. 6.54
17952	J. E. Wilson	Yorkshire G.C.	29. 7.54
18051	B. Tailby	Midland G.C.	24. 7.54
18064	C. R. Phipps	No. 80 G.S.	15. 8.54
18081	V. P. Snodgrass	Southdown G.C.	26. 6.54
18138	B. G. Gunter	Midland G.C.	21. 7.54
18190	R. A. Smith	Southdown G.C.	26. 6.44
18284	J. Lattaney	Midland G.C.	21. 7.54
18382	H. A. Waller	R.A.F. Deversoir	27. 7.54
18384	H. E. F. Savage	Perak F.C.	30. 5.54
18407	C. Vinten	London G.C.	29. 7.54
18412	K. B. Eyton	Surrey G.C.	22. 7.54
18414	F. R. Dawson	Yorkshire G.C.	15. 7.54
18419	G. C. E. Bircham	London G.C.	18. 7.54
18420	R. J. E. Conant	London G.C.	14. 6.54
18468	H. Corney	R.A.F. Oldenburg G.C.	3. 8.54
18482	F. H. Stirling	Midland G.C.	6. 9.48
18483	T. S. W. Heaslip	No. 203 G.S.	12. 7.53
18489	R. A. F. Farquharson	Midland G.C.	8. 8.54
18551	A. Fairman	Derbyshire & Lancs. G.C.	11. 7.53
18556	Margaret Mieville	London G.C.	24. 7.54
18560	J. C. Green	London G.C.	29. 7.54

SILVER 'C'

470	M. A. Garnett	Bristol G.C.	31. 7.54
471	D. C. L. Chidell	Surrey G.C.	10. 8.54
472	L. A. Cox	R.N.G. & S.A.	30. 7.54
473	R. V. Watson	Surrey G.C.	15. 8.54

THE MIDLAND GLIDING CLUB LIMITED

The Long Mynd, Church Stretton, Shropshire. Telephone: Linley 206.

New members welcome. Ab-initio training by two-seaters. Slope, thermal and wave soaring. Resident engineer. Dormitory. Catering at week-ends.

Secretary: S. H. Jones,
9, Hagley Road West,
Harborne, Birmingham, 17.

THE DERBYSHIRE AND LANCASHIRE GLIDING CLUB

Camphill, Great Hucklow, Derbyshire.

2-seater ab initio instruction, intermediate and high performance flying.

Dormitory and Canteen facilities.

Apply to the Secretary for details of Membership.

THE LONDON GLIDING CLUB LTD.

Dunstable Downs, Beds.
Tel.: Dunstable 419

Flying Membership:
Entrance Fee £6. 6s. 0d.
Annual Sub. £6. 6s. 0d.
(*or* 11/6 *monthly*)

Non-Flying Membership:
Entrance Fee Nil
Annual Sub. £1. 1s. 0d.

Flying Instruction: Every day.

Twelve Club aircraft, including 'Olympias' and 'Sky' Sailplanes.

Aero-towing Available.

YORKSHIRE GLIDING CLUB, SUTTON BANK, YORKSHIRE

Beginners' comprehensive training courses, lectures, hill soaring, dual instruction on aircraft.

RESIDENT INSTRUCTOR.

Facilities for all pilots. Apply to: Miss Sue Parke, Yorkshire Gliding Club, Sutton Bank, Yorkshire. Telephone: Sutton 237.

AT LAST . . .

a Self Binding Device for Copies of 'Sailplane and Glider'

Suitable for copies published since January, 1946. Binders for copies before this can be supplied—details on request.



1. *Note how flat the pages open.*
2. *The journals are easily inserted with steel wires (supplied with the binders), and can be removed and replaced at any time.*
3. *By means of a special device the binder is just as useful when only partly filled as it is when completely filled.*

ORDER YOUR EASIBINDER NOW

and bind your copies month by month

Each Binder will hold 24 Copies

Price of complete binder, including title done in gold lettering—**13/- each,** postage 8d., **25/- for two,** plus 1/4 postage, or **3 for 36/-,** plus 2/- postage.

If years of volumes are required on binders, i.e. 1950-1951, etc., 6d. extra each binder.

From : THE GLIDER PRESS, LTD.,
8, LOWER BELGRAVE STREET,
LONDON, S.W.1

Cash with orders, please.

Sailplane and Glider

8, LOWER BELGRAVE STREET
LONDON, S.W.1. SLO : 7287

The books listed below are available for prompt delivery direct from our offices. Why not make a gift of one of these delightful books, or a subscription, to 'Sailplane' to your friend **today.** *Postage and packing 6d. each book.*

'ON BEING A BIRD'
By Philip Wills
(MAX PARRISH) **15/6**

'MALOJA WIND'
By Felix Peltzer
(HAMMOND) **10/6**

'GLIDING & ADVANCED SOARING'
By A. C. Douglas
(JOHN MURRAY) **16/6**

'GLIDING AND POWER FLYING'
By 'Stringbag'
(OXFORD UNIVERSITY PRESS) **6/-**

'WEATHER FORECASTING'
S.W.C. Pack
(LONGMANS) **25/-**

Subscription to 'SAILPLANE'

***12/9** PER ANNUM* ***6/6** 3 ISSUES*

SPECIAL OFFER

A complete set of 'SAILPLANE'S' for 1953 in the EASIBINDER, leaving room to contain all this year's issues, is offered at the specially reduced price of **35/-**

and—BACK NUMBERS

We possess a small selection of back numbers dating from 1934 onwards. If readers desirous of obtaining copies will state their precise requirements we shall endeavour to accommodate them.

Price : 2/- per copy, January, 1950 onwards ; 2/6d. for all preceding issues.

To SAILPLANE AND GLIDER,
8, LOWER BELGRAVE STREET,
LONDON, S.W.1.

Please send to the address below the following :—

.....

.....

.....

.....

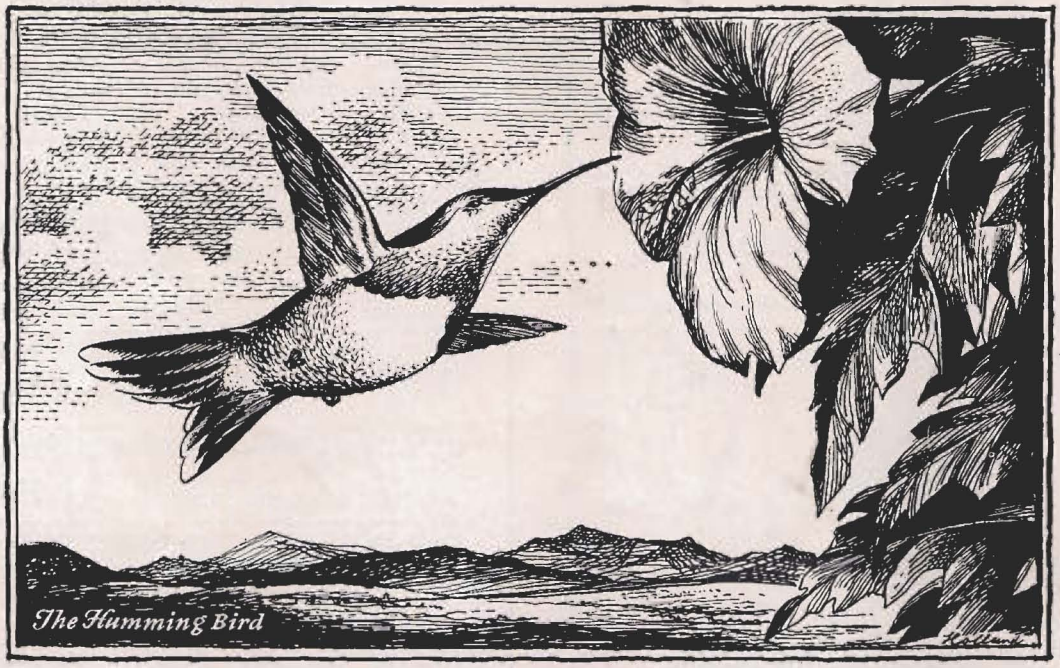
Name .....

Address .....

.....

Cheque/Postal Order for ☐ **enclosed**

Problems of Flight



REFUELLING IN FLIGHT

Refuelling in flight is as old as the earliest hummingbird. Nature devised it as a special solution to special problems. Now man, faced by the same problems, has thought of it too.



The method is the same. The hummingbird's long, tubular tongue is one of Nature's developments of unusual equipment for an unusual purpose. The bird uses it by hovering over a flower, manœuvring until his beak is in position to plumb the heart of the blossom, and then syphoning up the nectar.

There is good reason for this astonishing technique. The hummingbird is tiny. (With his gaudy colouring and his wings beating invisibly fast he looks more like an insect than a bird.) Though he flies so swiftly that you can see only a blur of brilliant colour — though, unique among birds, he can fly backwards — he is vulnerable to a thousand watchful enemies. Landing could be dangerous. His mid-flight feeding is safe, quick and convenient.



In fact Nature, in the hummingbird, has met and overcome some of the same difficulties that man — who knows how many thousand years later — has met and overcome in short-range fighter aircraft.

Pilots who refuel in a more comfortable fashion at airfields all over Britain have come to value the excellent and helpful service of the Shell and BP Aviation Service.

SHELL and BP AVIATION SERVICE

Shell-Mex and B.P. Ltd., Shell-Mex House, Strand, London, W.C.2.
Distributors in the United Kingdom for the Shell, Anglo-Iranian and Eagle Groups.