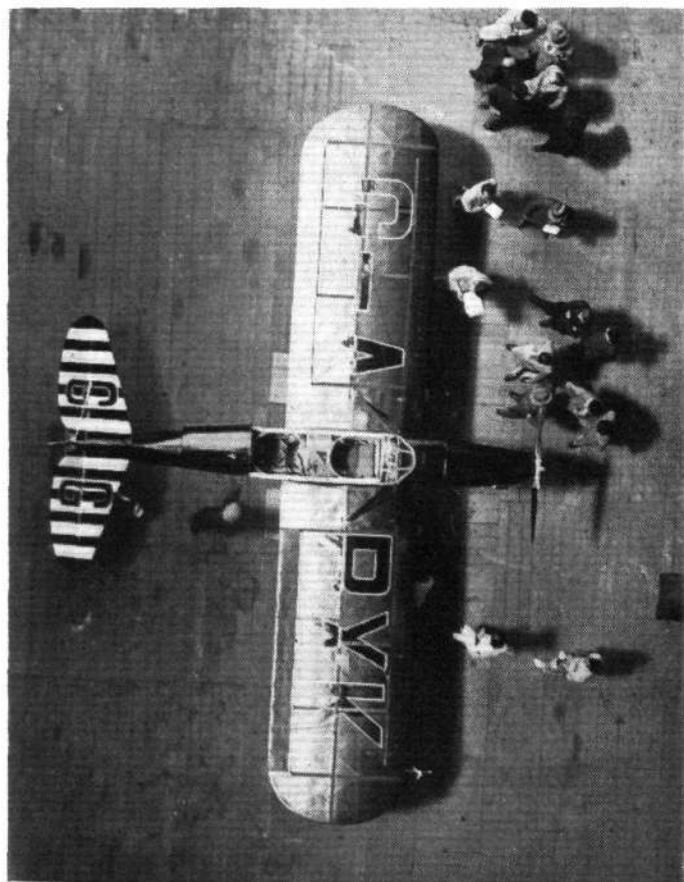


SOME OF THE FOREIGN COMPETITORS: In the foreground the French machines, Guerschais, Potez, Farman and Caudron.



INTERNATIONAL TOURING COMPETITION

OUT of a total of 67 aircraft entered, 43 were ready at the Staaken aerodrome, Berlin, to commence the technical tests which precede the Circuit of Europe in the International Touring Competition for light aeroplanes. Germany having won this competition last year, the German Aero Club is organising this year's contest, and the technical tests, and start and finish of the Circuit of Europe, take place in Berlin.

A number of nations are represented in the International Touring Competition, the following countries and the number of machines representing them being as follows:—Germany, 16; France, 8; Italy, 8; Poland, 5; Czechoslovakia, 4; and Switzerland, 2.

Great Britain is not officially represented, as the maximum weight permitted by this year's regulations is below that of British light planes. There are, however, two unofficial British representatives in the competition, "Mr. John Carberry" and Miss Winifred Spooner. Mr. Carberry is flying a Klemm monoplane with de Havilland "Gipsy III" engine, and Miss Spooner is piloting a Breda 33, also with "Gipsy III" engine. But Mr. Carberry figures in the competition as a German competitor, and Miss Spooner has become, for the purpose of the tour, an Italian representative.

Germany is represented by 6 Heinkel He. 64 monoplanes (Argus and Hirth engines); 7 Klemm K1.32 (Gipsy III, Argus, Siemens and Hirth engines); 1 Darmstadt D.22 (Argus); 1 Monocoupe 110 (Warner Scarab); and 1 Raab-Katzenstein (Argus).

WEIGHED AND NOT FOUND WANTING: A Plan View of Miss Spooner's Breda 33 ("Gipsy III" engine). Miss Spooner herself may (or may not) be recognised near the starboard wing.



ACCESSIBILITY: The Klemm K1 32 ("Gipsy III") entered and flown by Mr. John Carberry.

France's representatives are: 2 Farman 234 (Salmson); 2 Potez 43 (Potez); 1 Caudron "Luciole" (Salmson); 1 Guerschais T.9 (Renault); 1 Mauboussin M.12 (Salmson); and 1 Farman 350 (Gipsy).

All the Italian machines are of the Breda 33 type, 7 being fitted with the Colombo S.63 engine and the eighth (Miss Spooner's) having a de Havilland "Gipsy III."

The Polish machines are of two types: the PZL 19 (Gipsy III), and the RWD 6 (Genet Major).

Of the four machines which represent Czechoslovakia 3 are Praga B.H. 111's (Gipsy III) (illustrated in FLIGHT last week), and 1 Breda 15 S. (Walter Junior).

Switzerland's representatives are 1 Klemm K1.32 (Gipsy III.) and 1 Comte AC 12-E (Gipsy III).

It is extremely gratifying to find so many British engines among the competitors. An even greater number figured in the full entries list, but many were not finished in time, or had troubles of various sort. For example, Pobjoy "R" engines were fitted in the Papenmeyer and Fieseler F.3 "Wespe" machines, but the aircraft did not turn up in time. The troubles were in no instance due to the Pobjoy engines.

The "Missing" Machines

The technical tests are being held at the present time, and as no useful purpose seems to be served by giving scattered and incomplete results, we do not propose to deal with these here, but to reserve them for an article in next week's issue. In the meantime it may be of interest to record quite briefly some of the reasons for the non-appearance of the machines which had originally been entered.

The three tailless machines entered by Fieseler (each with two Pobjoy "R" engines) were, apparently, of too experimental a character, and as two of them sustained damage during tests, Fieseler decided to withdraw all three entries.

The Japanese pilot, Hachisuka, who had entered a Gipsy-Moth, was informed beforehand that his machine was too heavy, and would not be admitted. He, apparently, did not believe this, but turned up with his machine. When it was weighed and found some 200 lb. too heavy, he is reported to have been very surprised.

The Messerschmitt machines were all withdrawn. Two rather serious accidents befell them during tests, the exact nature of which is not clear at the moment, but the designer decided to withdraw all the machines from the



GERMANY'S "WHITE HOPE": The new Heinkel He. 64 ("Argus" engine) is characterised by a very slim fuselage and a longer lever arm for the tail than is usually found in German machines.

competition. Up till then the Messerschmitt machines had been regarded as favourites in Germany. That place has now been taken by the new Heinkel machines. This, as previously pointed out in FLIGHT, is the first time Ernst Heinkel has entered the light plane field, and the performance of his machines is being watched with the very keenest interest. Fraulein Elly Beinhorn had entered one, and had been practising diligently for the take-off and



TWO FRENCH COMPETITORS: The Potez 43 machines are fitted with permanently-open slots.



HEADROOM: The Guerchais T.9 (Renault) flown by Henry Massot.

landing tests, and is reported to have become very adept at handling her machine. However, when the Messerschmitt machines were withdrawn, Fraulein Beinhorn very sportingly handed her Heinkel He.64 (Argus) over to Fritz Morzik, who was to have piloted one of them. Thus Morzik, who has twice won the International Touring Competition, will be well in the running again this year.

Another previous winner, Reinhold Poss, had been entered on a Messerschmitt, and, when that was withdrawn, Herr Siebel emulated Fraulein Beinhorn's example, and handed his Klemm K1.32 (Siemens) over to Pasewaldt, so that Poss could pilot Pasewaldt's machine, a Klemm K1.32 with Argus engine.

Raab nearly "missed the boat" on his Raab-Katzenstein 25-32 (Argus). When he was about to start from Adlershof, his engine refused to start, and by the time he reached Staaken it was one hour after the official "closing time." He still had the option of paying double entrance fee and get in that way. At first he refused to do this, but in the end he agreed (see p. 788).

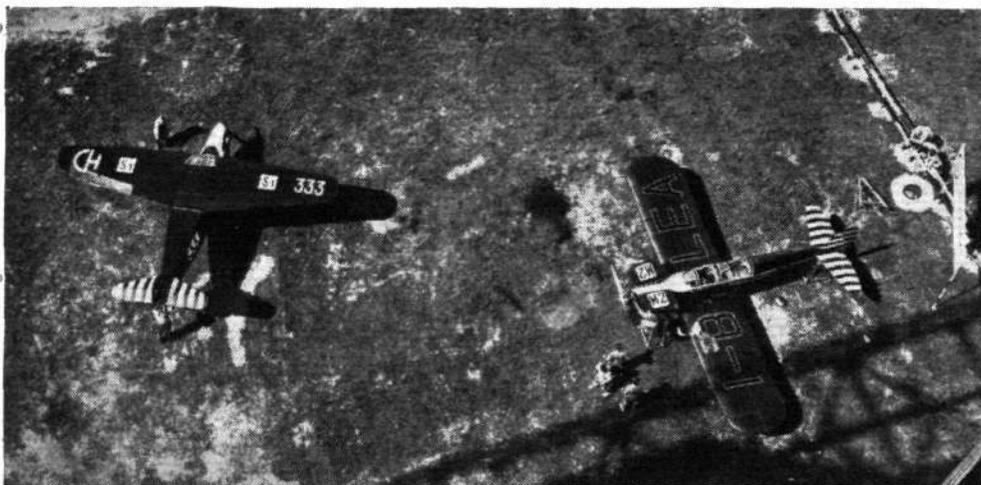
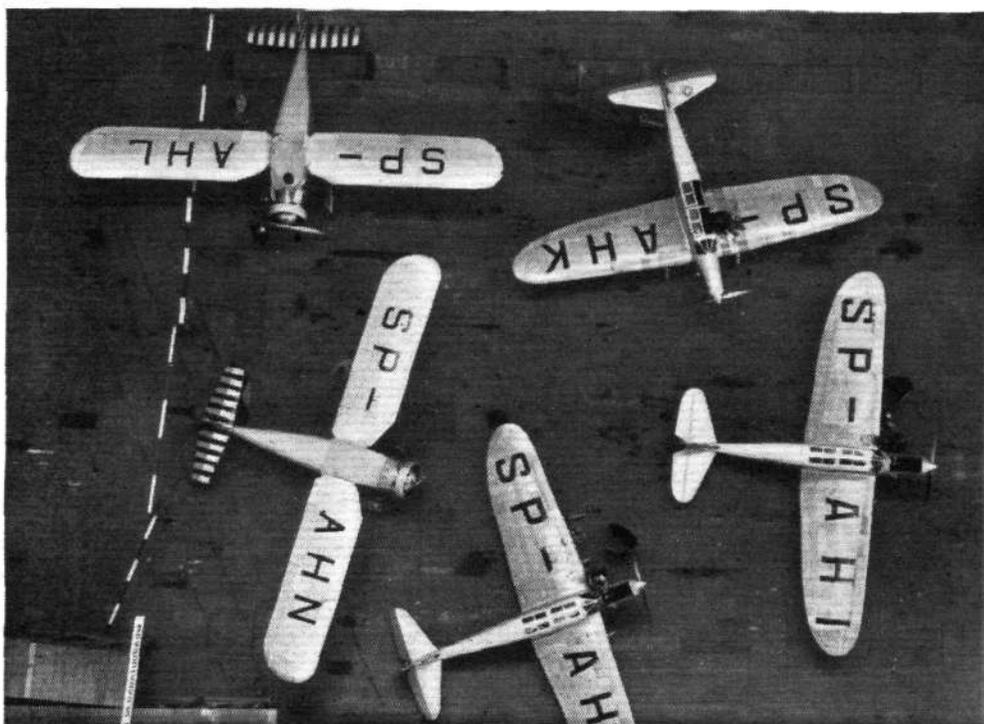
A belated arrival at double fee was also made by the Italian pilot, V. Suster, on a Breda 33, who brought the total number of machines ready to start their technical tests up to 43.

It is expected that the technical tests will be concluded by about midday of Saturday next, August 20, so that the competitors may have a little rest before they start on the Circuit of Europe. In the afternoon of that day the competitors will fly from Staaken, where the technical tests are being held, to Tempelhofer Field, whence the Circuit of Europe will start in the early morning of Sunday, August 21. The Circuit, a sketch map of which was published in FLIGHT

last week, will occupy the whole of the following week. For the benefit of any FLIGHT readers who might care to visit one of the Continental towns at which calls are made by the competing machines, we give the approximate time-table below.

The machines start from Berlin from the early morning of Sunday, August 21, and fly *via* Warsaw, Cracow, Prague, Brno, Vienna, Zagreb, Postumia, Vicenza, and Rimini to Rome, which will be reached during August 22.

Rome will be left on August 23, and the competitors will fly to Paris *via* Florence, Bellinzona, Turin, Albenga, Cannes, Lyons, St. Gallen, Stuttgart, and Bonn. Lyons is roughly the halfway point, and it may be expected that many of the competitors will spend the night of August 23 there, continuing the next morning to Paris, which will



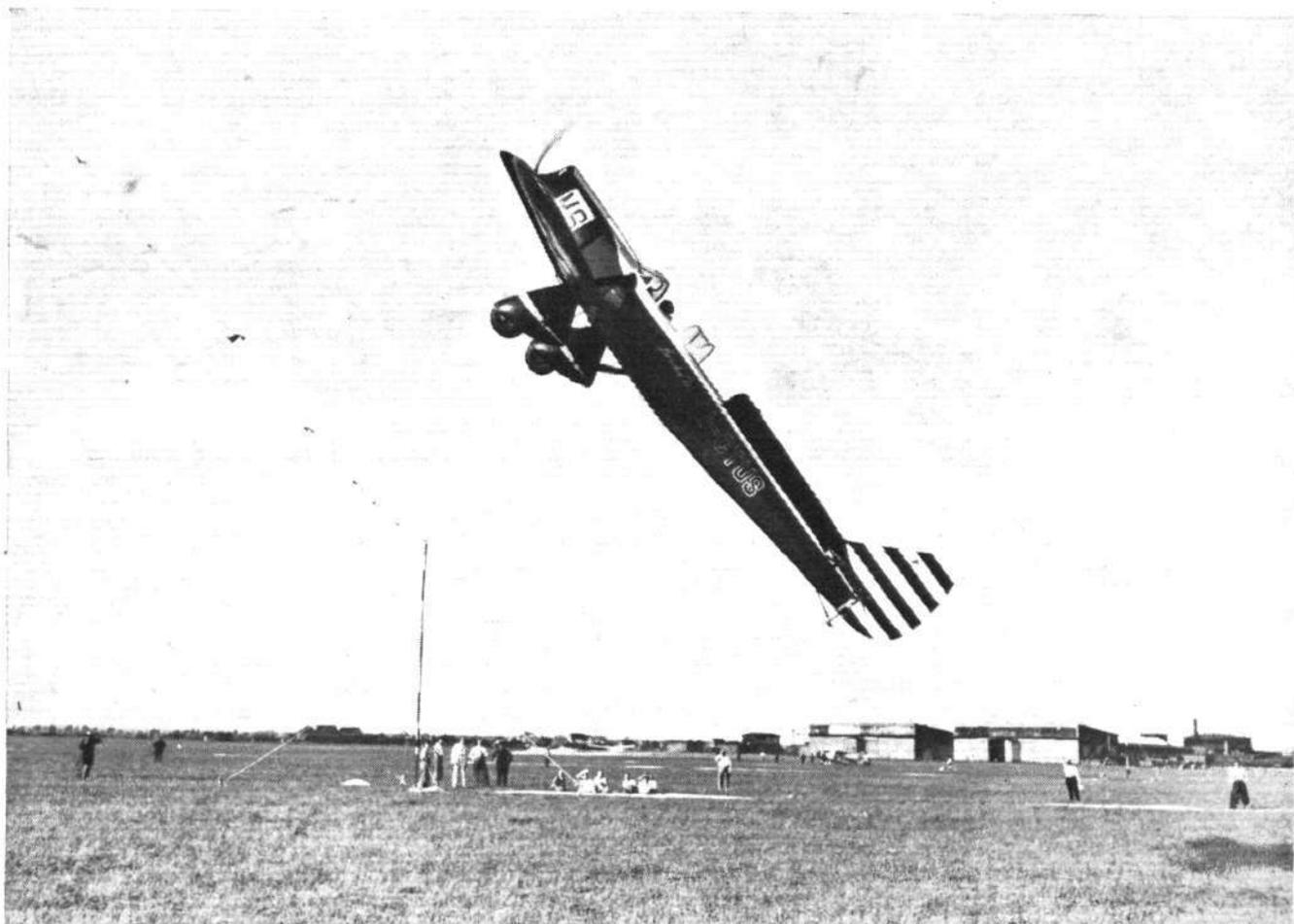
BEETLES AT BERLIN: Above, the Polish competitors, fitted with De Havilland "Gipsy III" and Armstrong Siddeley "Genet Major" engines. Below, on the left the Swiss Comte 12E ("Gipsy III") and on the right one of the Breda 33 (Colombo S.63) monoplanes.



be reached during the afternoon of August 24. Thursday, August 25, has been set aside as a day of rest in Paris.

On August 26 the machines will leave Paris for Berlin and will fly *via* Deauville, Rotterdam, Dortmund, Hamburg, Copenhagen, Gothenburg, Copenhagen and Hamburg. The nearest points to England will be Deauville and Rotterdam, where most of the machines will call during Friday, August 26.

A BRITISH-GERMAN-SWISS ALLIANCE: The K1.32 ("Gipsy III") flown by Fretz.



" THAT'S A BREDA 33 THAT WAS " : Lombardi taking his fences in great style.

THE INTERNATIONAL TOURING COMPETITION

By EDWIN P. A. HEINZE

FAVOURED by excellent weather, the technical tests preceding the European air tour and final speed test of the *Challenge de Tourisme International* began at Berlin-Staaken airport on August 12. By noon of the previous day 41 machines had come in for the trials. Two more competitors availed themselves of the right to compete by paying double fees and coming later, the absolutely last minute for arrival being 4 o'clock of the afternoon of August 12. The original number of 67 entries had thus dwindled down to 43.

Of the original 32 German entries, only 16 were left, these consisting of seven new three-seater "Klemms," six two-seater "Heinkels," an American "Monocoupe 110," and one of the only two biplanes in the contest, the machine built by students of the Darmstadt College of Engineering (Akaflieg).

Among the German machines that have been withdrawn from the competition are, unfortunately, some very interesting new designs, to which reference was made last week.

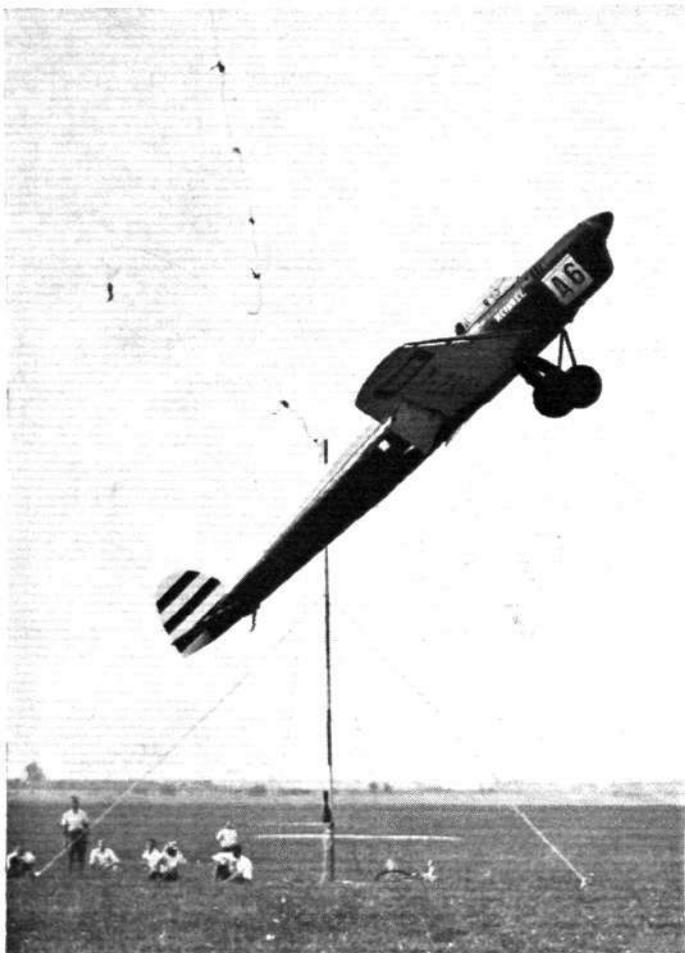
On the French side, two Marcel Bloch, a Caudron "Luciole," and a Mauboussin were withdrawn, while the Italians turned out complete with Miss Spooner, as also did the two Swiss competitors. The Poles scrapped one entry, an RWD-6, and the Czecho-Slovakians three entries.

The demand for greater speed set by this year's regulations has practically ousted the second category of light planes, of which a large number still took part in the last competition, held in 1930. Considerable concessions had been made relative to the permissible weight of the machines, by which they are classified. According to the original regulations, the machines of the first category were to weigh empty not more than 400 kg. (880 lb.) and those of the second category not more than 280 kg.

(616 lb.). But already in 1930 it was found necessary to make an allowance of 15 per cent., and this year it has been raised to 20 per cent., so that in effect the first category machines are allowed to weigh 480 kg. (1,056 lb.) and the second 336 kg. (739 lb.). But even this could not save the small machines, for the minimum speed required on the Circuit of Europe has been raised since 1930 from 60 to 100 km./hr. (62 m.p.h.) on the average. The minimum touring (average) speed of the first category of machines has been raised from 80 to 125 km./hr. (77.7 m.p.h.).

These increased speed requirements have in the first place, of course, to be met by engine designers, and particularly good development work in this direction has been effected by German engineers, who, during the last three years, have succeeded in ousting altogether non-German engines in their country. The Argus and Siemens engines, already conspicuous in the two previous contests, have been improved considerably and a new make, the Hirth, made its debut last year during the German Light Plane Contest. The seven-cylinder Siemens radial engine, which in 1930 developed 110 h.p. with a weight of 1.32 kilogrammes per h.p. output, now delivers 150 h.p. with a compression ratio of 5.3 to 1 and 160 h.p. with one of 6.2 to 1. The h.p. weight has come down to 0.83 and 0.78 kg./h.p. The inverted four-cylinder Argus, once developing 110 to 120 h.p., now gives 150 and 160 h.p. Last year's inverted four-cylinder Hirth engine was brought out in April last with two rows of four cylinders arranged in an inverted Vee, and developing 150 h.p. This engine works particularly smoothly owing to its having eight cylinders.

The very neat six-cylinder Colombo engine of the Italians has likewise benefited by improvements. A large



A GOOD TRY : One of the Heinkel (Argus) monoplanes, piloted by von Massenbach, breaks the tape in a take-off test.

number of Gipsy III engines is being used in this year's contest. Miss Spooner had one fitted in her Breda-33 and has performed excellently with it, especially in the landing and starting tests over the 8-m. obstacle. The Polish PZL low-wing monoplanes are likewise equipped with Gipsy III engines, which are also found on the Czecho-Slovakian Praga B.-H. 111 low-wing monoplanes, on a French Farman, a German Heinkel, the two Swiss entries (a shoulder-wing Comte monoplane and a new "Klemm"). The two Polish RWD-6 shoulder-wing cabin planes have Genet-Major engines with Townend rings. On the whole, the competing planes are more or less all fitted with engines of at least comparable power output, so that the results of this competition will be influenced more extensively than usual by the qualities of the machines and pilots. Only the French planes are somewhat low-powered. The Guerchais has a 100-h.p. Renault; the two exceedingly attractive Potez have six-cylinder radial Potez engines (with Stromberg carburettors) of 100 h.p. output. The Caudron biplane alone has an engine comparable with that of the Italian, Polish and German competitors. It has a seven-cylinder radial Salmson of 135 h.p. output. The Farmans of Arnoux and Puget have 95-h.p. Salmson engines. Nicolle's small Mauboussin, the only second-category competitor, has only a 40-h.p. Salmson engine.

Turning to other technical features one finds that metal variable pitch propellers are being used practically by all competitors. Interesting also is the extensive use made of wing flaps between the ailerons and fuselages. This is a beneficial result of the regulation which provides special points in the equipment rating for the provision of devices preventing stalling and which requires the machines to have a low landing speed coupled with a fast touring speed. The various slot arrangements adopted in some cases together with these flaps have achieved remarkable successes. Machines travelling normally at far over 200 kilometres per hour have actually travelled between 60 and 70 kilometres per hour without losing altitude during the slow flying test! Notable is also the extensive use of Palmer wheels and brakes. Also the tailplane surfaces are in almost all machines adjustable from the pilot's seat during flight. In some cases not only these but also the rudder fins are so adjustable, while in the new Klemms the

ailerons are adjustable together with the slow-speed wing flaps, so continuity of surface between these is ensured in whatever position the wing flaps are locked.

The equipment rating was the first to be carried through. Since it provides for no less than 107 points out of a total of 500, this rating is a very important item and, indeed, it has marred the chances of a large number of competitors, who doubtless thought they would come off much better than they did. The International Committee had a very difficult task in arriving at correct verdicts, as will easily be understood by a consideration of the items for which points had to be awarded:—

(1) Visibility from pilot's seat	up to	13	points.
Visibility from observer's seat	up to	5	..
(If cabin can be opened during flight visibility is tested both in closed and open condition.)			
(2) Safety devices for flying:			
(a) New devices for preventing stalling (such as slotted ailerons, etc.) and especially means for altering the gliding angle		10	..
(b) Heavy oil engine		10	..
(3) Means for altering the trim of the machine other than by means of shifting weights:			
During flight		9	..
On ground		2	..
(4) Good arrangement of instruments		8	..
(5) Metal fuselage (fuselage frame)		5	..
(6) General comfort (perpendicularly and horizontally adjustable seats, adjustable control sticks, arm rests, upholstered seat backs, easy reach of all controls, etc.)		12	..
(7) Cabin for the whole crew		8	..
(8) Escape means (provision for easily leaving the machine in an emergency)		5	..
(9) Seats side by side		5	..
(10) Third comfortable seat, which need not be occupied during the contest		4	..
(11) Fire prevention devices other than those specified as normal requirement (fully automatic extinguishers, reliable fire indicators, etc.)		3	..
(12) Landing gear (divided axle, hydraulic springs)		4	..
(13) Wheel brakes		2	..
(14) Double controls (one set lockable from pilot's seat)		2	..
Total			107 points.

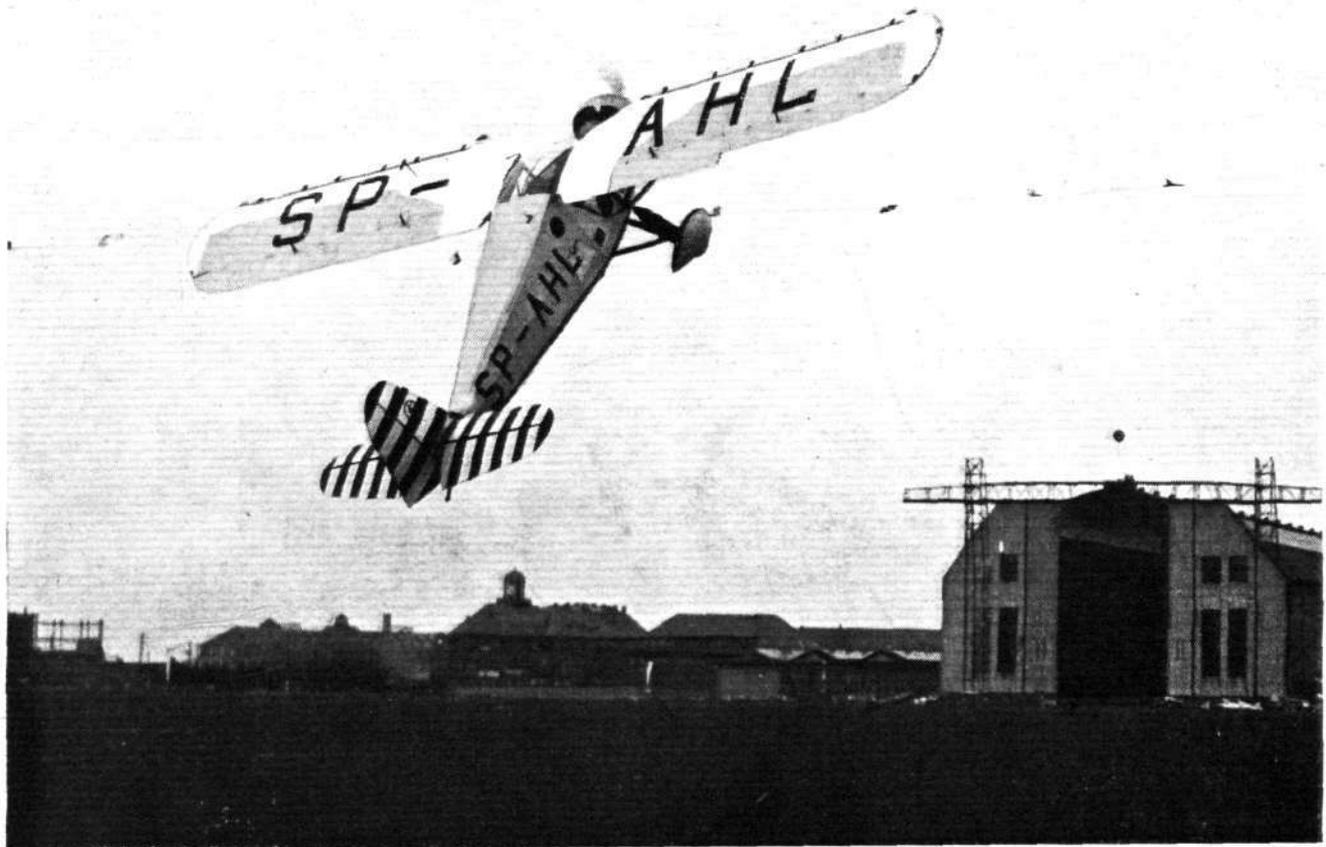


SWITZERLAND, TOO : A Klemm (Gipsy III) piloted by Fretz gets good marks in the take-off, without turning helicopter.

INTERNATIONAL TOURING COMPETITION
Results of Technical Tests

Position	Pilot	Machine	Engine	Points awarded in the individual Ratings								
				Equip-ment	Slow-flying	Dismantling for Transport and re-erecting	Engine Starting	Take-off	Land-ing	Fuel Con-sumption	Total Number of Points	
1	Colombo	Breda 3	Colombo	130	83	50	6	5	40	38	25	247
2	Zwirko	RWD 6	Genet-Major	140	86	50	6	5	37	38	23	245
3	Lombardi	Breda 33	Colombo	130	83	50	5	5	40	34	25	242
4	Miss Spooner	"	Gipsy III	120	83	50	5	3	35	40	25	241
5	Donati	"	Colombo	130	83	48	6	3	38	37	26	241
6	Stoppani	"	"	130	83	48	6	5	37	34	25	238
7	Karpinski	RWD 6	Genet-Major	140	86	50	6	5	37	29	25	238
8	Suster	Breda 33	Colombo	130	83	48	5	5	38	32	24	235
9	Poss	Klemm KL 32	Argus	140	72	42	7	4	39	40	30	234
10	Fretz	"	Gipsy III	120	72	44	6	5	39	38	27	231
11	W. Hirth	"	Hirth	150	71	44	7	4	40	37	27	230
12	Junck	Heinkel HE 64	Argus	140	66	50	6	5	32	36	30	225
13	Morzik	"	"	140	66	48	6	5	35	34	30	224
14	Cuno	Klemm KL 32	Siemens	135	71	42	6	6	38	31	30	224
15	Bajan	PZL XIX	Gipsy III	120	84	40	6	5	34	29	25	223
16	Stein	Heinkel HE 64	Argus	140	66	44	7	5	36	33	30	221
17	de Angeli	Breda 33	Colombo	130	83	46	6	5	37	19	24	220
18	Pasewaldt	Klemm KL 32	Siemens	135	71	40	6	6	38	31	27	219
19	Lusser	"	Argus	140	72	40	7	5	38	28	29	219
20	Osterkamp	"	"	140	72	38	6	5	38	30	30	219
21	Viazzo	Breda 33	Colombo	130	83	22	5	4	38	39	25	216
22	Seidemann	Heinkel HE 64	Argus	140	66	50	7	4	30	28	29	214
23	von Cramon	"	"	140	66	44	6	4	32	31	29	212
24	Giedgowd	PZL XIX	Gipsy III	120	84	24	6	3	34	22	25	198
25	Kleps	Praga BH 111	"	120	80	22	6	5	28	28	27	196
26	Delmotte	Caudron "Luciole"	Salmson	135	44	48	6	6	34	28	26	192
27	Kalla	Praga BH 111	Gipsy III	120	80	22	6	5	27	24	28	192
28	von Massenbach	Heinkel HE 64	Argus	140	66	48	6	3	0	30	30	183
29	Mares	Praga BH 111	Gipsy III	120	80	24	6	5	30	9	29	183
30	Détré	Potez 43	Potez	100	66	38	-15	6	26	39	18	178
31	Duroyon	"	"	100	66	32	-15	6	28	35	19	171
32	Orlinski	PZL XIX	Gipsy III	120	84	30	6	4	0	22	25	171
33	Papana	Monocoupe	Warner-Scarab	110	58	14	-15	6	32	28	27	150
34	Massot	Guerschais T 9	Renault	100	69	16	0	6	21	15	20	147
35	Marienfeld	Akaflieg	Argus	140	54	12	2	5	34	8	30	145
36	Anderle	Breda 15 S	Gipsy III	120	53	18	5	5	30	12	20	143
37	Straumann	A. Comte 12 E	"	120	60	0	-15	5	26	23	28	127
38	Nicolle	Mauboussin M 12*	Salmson	40	44	32	-15	4	3	18	25	111
39	Arnoux	Farman 234	"	95	46	10	-15	0	13	10	25	89
40	Lebeau	Farman 350	Gipsy III	120	46	0	-15	5	0	12	30	78
41	Raab	RK 25/32	Argus	120	45	0	-15	5	0	0	21	56

* The only competitor in the 2nd Category. Results subject to confirmation by Sports Committee.



THE HIGH JUMP : Karpinski, on one of the Polish RWD machines, nearly succeeds in getting his "Genet Major" engine to lift him vertically over the tape, which is caught on the "spats."

In this rating the two Polish RWD—6 shoulder monoplanes, with two seats abreast in cabin, as well as slow-speed flaps, were able to obtain 86 points, the highest number any competitor was able to collect. The other three Polish low-wing planes, with three seats each, were awarded 84 points each. The eight Italian Breda 33 were given 83 points each, while 80 points were allocated to the three Czecho-Slovakian Praga low-wing machines. Then followed the new Klemms with 72 and 71 points. The new Heinkels only managed to collect 66 points, and thus already at the beginning sustained a heavy setback. Massot's Guerchais booked 69 points. All the others ranged between 45 and 58 points.

In the test for the dismantling for transport and re-assembling for flight, for which 7 points could be allocated if completed within one minute, three Klemms and two Heinkels obtained full marks. The majority of the other machines had to be satisfied with 6 and 5 points, which indicates that their crews required 3 and 5 minutes respectively for the work. Only two persons were allowed to do this, and if they required more than 15 minutes they could either go without marks or have a second try, in which case they could gain half the normal number of points or, in the event of failing again, lose 15 points. No fewer than eight machines thus lost 15 points each from their previous sum, including the two Potez, the Monocoupé, the Swiss Comte, Arnoux's and Lebeau's Farmans and the German Raab's modernised old Raab-Katzenstein low-wing monoplane.

The full number of six points for efficient engine-starting appliances, and shortness of starting time, were awarded to Cuno's and Pasewaldt's Argus-engined Klemms only. The majority of other competitors obtained 5 and 4 points, while Arnoux's Farman failed altogether.

The low-speed test was very interesting. During this test, as also in the starting and landing, and fuel consumption tests which followed, each machine had to carry a minimum load of 200 kg. (440 lb.). What was missing on the weight of the crew on this had to be made up by ballast. Also, the second controls, if provided, had to be taken out. The machines had to travel at their lowest speed a definite distance without losing in altitude, and 50 points were to be allocated to the competitors able to travel at no more than 63 kilometres per hour. Two points were deducted for every additional kilometre or part, so that with a slowest speed of 88 k.p.h. no points could be obtained. A repetition of the test with half the normal rating was permissible. No fewer than seven competitors were able to fulfil the conditions and gain full marks. These were the Italians Colombo, Lombardi, Miss Spooner (in the Italian team), the Poles Zwirko and Karpinski (RWD—6) and the two Germans Junck and Seidemann (both Heinkel). Close up with 48 points were the Italians Donati, Stoppani, Suster, the German Morzik (Heinkel),



CZECHOSLOVAK STYLE : Kalla, on one of the Praga B.H. 111 (Gipsy III) monoplanes, goes over the top.

the Frenchman Delmotte (Caudron) and the German von Massenbach (Heinkel).

The take-off test over a flag-lined rope stretched eight metres high over the field proved exceedingly exciting, as the competitors, anxious to gain the maximum number of points, performed some hair-raising acrobatic feats. These, of course, are not actually in keeping with the intentions of the organisers, but they were splendid to behold! This starting test, like the landing test, is less a trial of machines and engines than of the skill of pilots. Colombo lined up 100 metres from the obstacle, which is the longest distance to obtain full marks, and, darting up to the rope, he zoomed up so that the machine all but stood vertically on its tail, barely missing the rope with the wheels. Lombardi's performance looked even more daring. He was evidently in high spirits as he, having lined up only 97½ metres from the rope, merrily put out his tongue to



DISMANTLING AND ERECTING : The Polish pilot, Giedgowd, and his PZL (Gipsy III) monoplane "gatecrashing."

the onlookers as he dashed up the short course and almost turned his machine on its back in repeating Colombo's performance. This test was carried through in groups, and was distributed over several days. So it came about that the feat of these two was not repeated till August 17, when Wolf Hirth accomplished the take-off with a distance of only 91½ metres from the rope. These three competitors thus obtained the full number of marks, namely, 40. Poss in his "Klemm," who must have misjudged his distance from the rope as he lined up 100.3 metres away, i.e., scarcely one foot beyond the full-marks border, was able to acquire only 39 points for this reason, while 38 points were secured by the Italians Viazzo, Donati and Suster, and by the German "Klemm" pilots Osterkamp and Lusser. The Heinkel pilots gained between 30 and 36 points, one dropping out altogether. Miss Spooner was able to collect 35 points and Stoppani and Angeli (Breda-33) as also the Pole Zwirko (RWD-6) 37 points each.

In the meantime two competitors had given up. Carberry had succeeded in gaining 72 points with his new Gipsy-engined "Klemm" in the equipment rating, which was normal for this make, and 32 points in the slow-flying test. He was in no wise handicapped, but, nevertheless, chose to retire from the competition for no apparent reason. The retirement of the Frenchman Puget with his Salmson-engined Farman was more intelligible, since he had only gained 46 equipment points, of which he then lost 15, owing to his inability to complete the dismantling and refitting of his machine twice running within 15 min. Furthermore, he gained no points in the engine-starting test. With these two competitors out, there thus remained 41, which completed the technical tests.

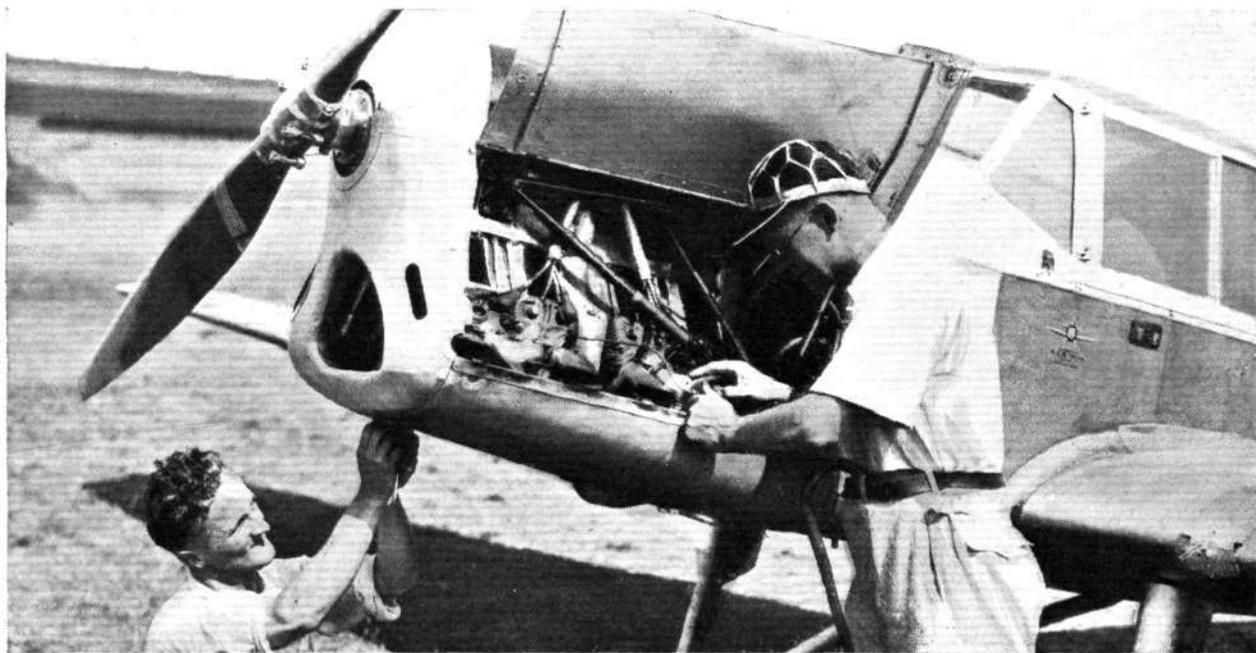
The landing test was similar to the starting, and was very hard on landing gears. During practice several machines had buckled their undercarriage struts, but it was possible to repair these defects within the allowed time, although, for some time, it was doubtful if Wolf Hirth (one of the victims), Delmotte and Seidemann would be able to effect repairs so that they could carry on. In the landing test Miss Spooner excelled all other competitors, as she was able to bring her machine to a standstill within the extraordinarily short distance of 92.4 metres from the rope. Poss ("Klemm") came near her with 97.8 metres. Both gained the full 40 marks. Third was Viazzo with his Breda-33 and a distance of 101.9 metres. He gained 39 points, as did Détré (Potez), who stopped at 102.8 metres. Then followed Zwirko (RWD-6) with a distance of 105.8 metres, who booked 38 points, like Colombo with his Breda for a distance of 107.3 metres. Also the Swiss "Fretz" ("Klemm-Gipsy III"), who stopped at 107.4 metres, collected 38 points. The least number of points, eight, was gained by the Akaflieg cantilever biplane in the hands of Marienfeld.

This machine is scarcely suited for this competition, since it is of the pronounced fast sporting type, which cannot travel under 81 kilometres per hour at best. The machine required 259.6 metres to come to a standstill, which was partially due to inefficient wheel brakes. But the Akaflieg machine was by no means alone, as several other competitors only gained between 9 and 15 points. The majority, however, was able to achieve round about 30 points. Wolf Hirth, with his "Klemm," stopped at 110.9 metres, and was allocated 37 points, of which also Donati in his Breda-33 was recipient.

On Friday, August 19, after a day of rest, the fuel consumption test was carried through over a triangular course 300 kilometres (186 miles) in length. This was the same course over which the race is to go at the finish of the air tour, except that in the latter the competitors will land at the Tempelhof airport, while in the fuel test they landed at the Staaken airport. The competitors were not allowed to make any alterations whatsoever to their engines and carburettors, which had to remain in exactly the same condition, not only during the whole of the technical tests but for the whole air tour. No jet or choke may, therefore, be tampered with. The organisers have also learned from the experience they gained during the 1930 contest, in which the fuel consumption test almost assumed the character of an acrobatic feat, with the planes hanging tail-down on their propellers. This time the speed attained is being taken into account. The 300 kilometres are being added to the air-tour mileage, and too low speed maintained by the competitors during the fuel consumption test will detract from their average speed rating in the air tour. The pilots, for this reason, have an incentive to maintain as fast a speed during this test as is well compatible with economy of fuel consumption.

Machines of the first category were to receive 30 points if they consumed not more than 7½ kilogrammes of fuel per 100 kilometres (26.6 lb. per 100 miles). For every additional ½ kg. used for every 100 km., one point was to be deducted from the 30, so that anyone using as much as 22½ kg. per 100 km. would receive no points. For the second category only 5 kg. were allowed per 100 km., one point being deducted from the 30 for every 0.33 kg. used in excess of 5 kg. Each competitor was allowed a second try in the event of his engine having given trouble during the first attempt, which had to be proved. If also the second attempt failed, the test was cancelled for the competitor, who thus lost the points he could have obtained in it.

The fuel consumption test was a considerable success for the German competitors with Argus engines. The full number of marks were obtained by the Klemm pilots Poss and Osterkamp with Argus engines, and Cuno with a Siemens engine, the Heinkel pilots Junck (with an Argus and not a Gipsy engine as was originally reported),



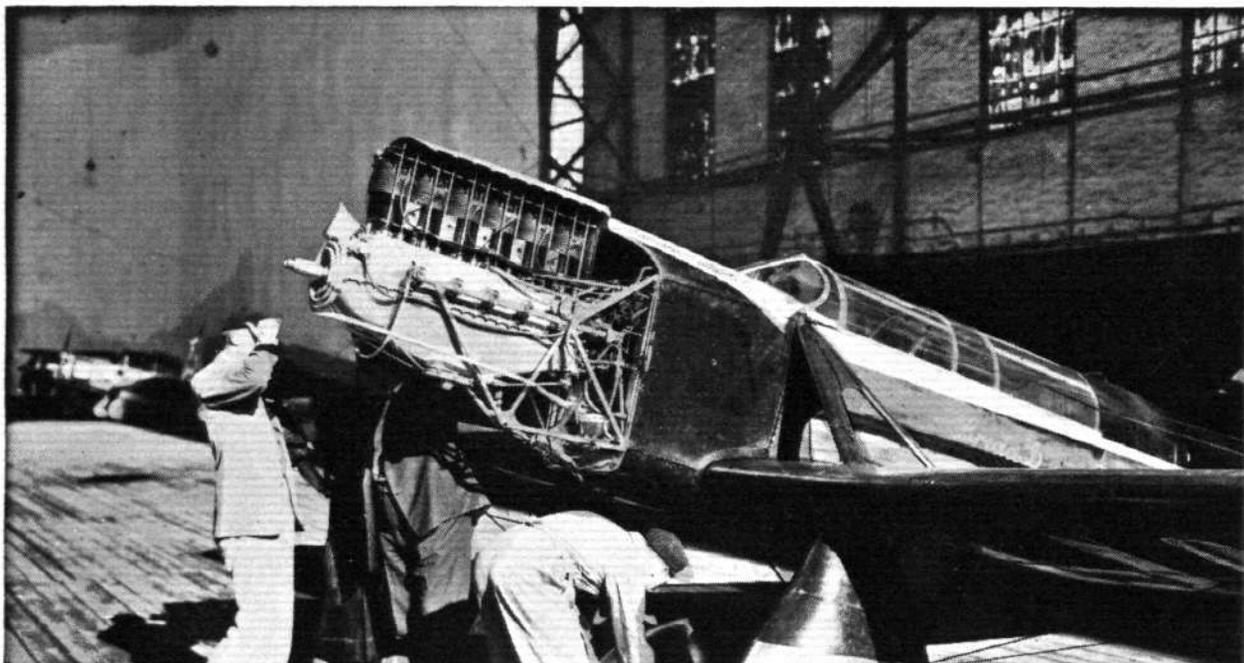
THE NEW HIRTH ENGINE : Herr Wolf Hirth at work on his brother's new 8-cylinder inverted vee engine, which is of 150 h.p.

Morzik, Stein and von Massenbach. Also the Akafleg machine with Argus gained full 30 marks and the Gipsy-engined Farman of Lebeau. Four competitors, Lusser, Seidemann, von Cramon with Argus-engined Klemms and Heinkels, and the Czecho-Slovakian Mares, with his Gipsy-engined Praga, attained 29 points each. The Italians had to be satisfied with 25 and 26 points.

This test concluded the technical events, and now the machines are well on their way on the great Circuit of Europe. To the Germans the results of the technical tests have been all but gratifying. The equipment rating has given them an unexpected setback, and the loss in points they sustained in this they have only partially been able to make good. It almost looks, indeed, as if already these tests have brought the decision for the whole contest to the Italian and Polish machines, and the engines employed in them are not likely to prove less reliable than the German machines and engines. The maximum number of points available for average speed on the air tour is 180, which will be allocated for an average speed of 200 km./hr. (124 m.p.h.) for the large machines, while, in order to

In the meantime we have thought our readers might be interested to learn of certain happenings which, we regret to say, have very much marred what should and could have been a strenuous but thoroughly friendly contest.

The trouble began with Miss Winifred Spooner withdrawing from the contest. On Saturday, August 20, while flying with other competitors from the Staaken aerodrome, where the technical tests had been held, to the Tempelhof aerodrome, from which the Circuit of Europe started, she had a forced landing caused by trouble with the fuel supply. It is reported that when an examination was made, a quantity of dirt and cotton waste was found in her petrol filter. This prevented the flow of fuel and starved the engine. In certain quarters it has been hinted that foul play was suspected, but until more definite information is available it would be very unwise to form hasty conclusions. The only thing certain appears to be that Miss Spooner is definitely out of the contest, which seems a thousand pities after she had been doing so extremely well in the technical tests, gaining fourth place against some of the crack pilots of Europe.



FOR SMOOTH RUNNING : The Colombo engine fitted in the Breda 33 machines is of the 6-cylinder, in-line, type.

gain this number of points, Nicolle's small Mauboussin will have to maintain an average of 175 km./hr. (109 m.p.h.) over the 7,500 km. (4,650 miles) plus the 300 km. (186 miles) of the fuel-consumption test, which is well-nigh impossible of achievement for the small 40 h.p. Salmson engine.

The favourite competitor at the end of the technical tests is Colombo, with his Breda—33, who holds 247 points. He is followed by the Pole Zwirko, with his RWD—6, having 245 points. Lombardi is third with 242 and Miss Spooner fourth with 241 points, which number is also held by Donati. Sixth is another Breda pilot, Stoppani with 238 points, and the Pole Karpinski, with the second RWD—6 machine, as seventh on the list. Then follows another Breda, with Suster, having 235 points, and now comes the first German machine, the Klemm-Argus, of Poss, with 234 points. The Swiss Klemm-Gipsy, of Fretz, holds 231 points as tenth, and is followed by Wolf Hirth's Klemm, with Hirth engine, having 230 points. The first Heinkel, the Argus-engined machine of Junck, is in twelfth position with 225 points, and Morzik's Heinkel-Argus is thirteenth with 224 points, on a level with Cuno's Siemens-engined Klemm.

THE CIRCUIT OF EUROPE

In next week's issue we expect to publish Herr Heinze's account of the events and results of the Circuit of Europe, which concludes the International Touring Competition.

A French pilot, M. Massot, who was flying a Guerchais monoplane, has had all his points from the technical tests cancelled, because he had not carried in the tests the same weight as when he weighed-in before the start.

One of the German pilots, Herr v. Cramon, who was flying a Heinkel monoplane with Argus engine, suffered a broken crankshaft and made a forced landing near Kattowitz. He landed safely, but as a crankshaft may not be replaced, he is out of the competition.

Straumann, on the Comte (Swiss) monoplane, developed wing flutter when approaching Vienna, and persuaded his passenger to jump out by parachute. The passenger landed safely and arrived in Vienna by car. Straumann carried on and reached the Vienna aerodrome safely, but has retired from the contest.

The worst mishaps of all have, however, overtaken the Italian competitors. Suster, flying a Breda 33 (Colombo) was circling the control point at Albenga when his wings broke. The pilot escaped by parachute, but his passenger was killed, due, it is reported, to the failure of his parachute to open properly. It seems likely that the altitude was insufficient.

Another Italian pilot, de Angeli, also flying a Breda 33, crashed near Cannes. It is reported that he had aileron trouble and sideslipped. He and his passenger were, fortunately, unhurt.

As a result of these two crashes the Italian Air Ministry has ordered the withdrawal of all the Breda 33 machines in order not to expose the crews to unnecessary risks. An inquiry is to be held into the causes of the accidents.

The International Touring Competition

By EDWIN P. A. HEINZE

After a most exciting flight around Europe, the 1932 competition has been won by the Polish pilot Zwirko, who was flying a RWD-6 monoplane fitted with Armstrong-Siddeley "Genet Major" engine

PUNCTUALLY at 7 o'clock in the morning of Sunday, August 21, the machines were lined up on the Berlin-Templehof airport for the start on the long air tour, which was to take them 4,530 miles over Europe in six days of flying. However, of the 41 machines that had successfully completed the technical tests now only 39 were left.

The first group of 15 machines was let off between 7 and 7.10 in batches of five, the second group from 7.15 to 7.25, and the last from 7.30 to 7.40 o'clock, arrangements having duly been made to counteract the loss of time sustained by those last started in regard to the closing times at the various landing places en route.

The competitors were given two days to reach Rome *via* Warsaw, Cracow, Prague, Brno, Vienna, Zagreb (Agram), Postumia, Vicenza and Rimini, a distance of approximately 1,550 miles, and with compulsory stops at all these places, barring Postumia, which was solely a turning mark.

Two ratings were given for the air tour, the one for reliability and the other for average speed. To start with, each competitor was credited with 40 points for reliability. Of these, 15 were deducted if the machine spent one night outside one of the compulsory landing places. In the event of this being repeated a second time further 25 points were to be deducted, and a third time was to be followed by disqualification.

The average speed rating was effected on a progressive basis. Machines of the first category averaging less than 125 km./hr. on the air tour, including the speed they attained in the fuel consumption test, were to be disqualified. For speeds between 125 and 130 km./hr. no

points were awarded; for speeds exceeding 130 to 180 km./hr. 3 points were allocated for each km./hr.

To prevent racing, the higher speeds were rated relatively lower. For speeds between 181 and 190 km./hr. 2 points were given per km./hr., and between 191 and 200 km./hr. only 1 point, so the highest number of points anyone could obtain was limited to 180. The rating for second category machines, of which only a single one, the Mauboussin of Nicolle, took part, was on similar lines, but with lower speeds.

The first stage of the air tour began with an interesting duel between the Italian Breda of Colombo and the German machines, which proved very fast and, in this respect, superior. Colombo, who had started with the first group of machines leaving Berlin, immediately took the lead in the air, but he lost it to the Akaflieg biplane of Marienfeld before reaching Warsaw. From there to Brno in Czecho-Slovakia Marienfeld continued to lead, but a prolonged stop at this place allowed Colombo once more to regain the lead, which he then retained till Agram (or Zagreb) was reached, where, in the following stretch, he was passed once more by Marienfeld, who in turn was caught by Seidemann's Heinkel. Also von Massenbach's Heinkel succeeded in overhauling Colombo before Vicenza was reached, where the head group stayed for the

night. The first to arrive in this first Italian stop was Seidemann at 19.10 o'clock, followed at a few yards distance by Marienfeld. Then came in von Massenbach and, as fourth, Colombo, who was followed some time later by Lusser's "Klemm," which landed six minutes before 8 p.m., the official closing time. These five



THE WINNER : F. Zwirko, flying a RWD 6 monoplane ("Genet Major" engine), won the International Touring Competition, 1932, and, as a result, the next contest will be organised by Poland.



TROUBLE-FREE FOR 5,000 MILES : The Armstrong-Siddeley "Genet Major" engine fitted in Zwirko's monoplane helped greatly in producing an Anglo-Polish victory.



THE 'END OF A PERFECT FLIGHT': Zwirko crossing the finishing line on Templehof aerodrome at the end of the speed test.

machines had thus nearly covered the two-days' stage in a single day, having flown a distance of approximately 1,285 miles.

The majority of competitors spent the night at Agram (Zagreb). At Vienna also many pilots took lodgings for the night. The only one to stop at Prague was Nicolle with his Mauboussin. The remainder were stragglers staying at various back ports.

The first two-day stage already took considerable toll. The Argus engine of von Cramon's Heinkel had its crankshaft broken as the lubrication system would not function, although the pilot had already made an emergency landing at Posen in order to attend to it. He had to come down close behind the Polish frontier. At Posen, too,

landed the Italian Donati with his Breda-33. He had trouble with his magneto and lost nine hours. Later on at Prague Donati then gave up finally. At Vienna the Swiss Straumann's flight came to an unexpected termination owing to trouble with his wings. The Praga machine of the Czecho-Slovakian Mare had to make a forced descent near Padua on account of engine failure, and crippled the machine in doing so. Lebeau had to go down with his "Gipsy-engined" Farman near Vicenza. His was a particularly unpleasant experience, as his machine fell into the river Piave, so he and his companion had to reach the shore by swimming in their flying dress. At Rimini the German, Raab, retired on account of engine failure, and so only 33 machines arrived out of 39 at Rome.

It was natural for Colombo to make every effort to reach Rome before his rivals. But his machine could not keep up with the Heinkel of Seidemann and the Akaflieg of Marienfeld. Seidemann landed at Rome on August 22 at 7.54 a.m., followed at 8.03 by Marienfeld and 8.04 by Colombo, fourth this time being von Massenbach's Heinkel, and fifth again Lusser ("Klemm") at 8.13, one minute behind von Massenbach.

A wonderful morning dawned on August 23 over the Roman airport of Littorio, where already at 5 a.m. everything was astir. By 6 o'clock all machines were lined up for the start on the most difficult but also most beautiful stage of the whole tour. The route to be flown led from Rome to Florence, thence over the lakes of Como and Maggiore to the mountain-bound Swiss military airport of Bellinzona, where cloudy weather awaited the competitors. Returning from here to Italian soil the next stop was at Turin, from where the way lay past the turning marks Albenga and Imperia on to the fashionable French seaside resort Cannes. Then followed the rather dangerous stretch across the southern Alps, which nowhere offer a single possibility for an emergency landing, to Lyons. What then follows is still a wonderful landscape but offers no special difficulties. The way continued to St. Gall, Stuttgart and via Bonn on the left bank of the Rhine to Paris.

This day, which started so bright and promising, was, however, to be a fateful one. With the sixth beat of the clock in the morning in Rome von Massenbach's Heinkel, Nicolle's Mauboussin and Orlinski's PZL started together for Florence. Five minutes later followed the "Klemms" of Cuno and Morzik, together with Arnoux's Farman, Détré's Potez and the "Klemm" of Fretz. The next group consisted of Stoppani's Breda-33, Bajan's PZL, the

FINAL RESULTS OF INTERNATIONAL TOURING COMPETITION

Position	Pilot	Machine	Engine	Points after Technical Tests	Air Tour			Race		Total Number of Points.
					Average Speed. Km.p.h.	Speed Points	Reliab. Points	Average Speed. Km.p.h.	Points	
1	Zwirko	RWD-6	Genet-Major	245	191	171	40	214.1	5	461
2	Poss	Klemm	Argus	234	197	177	40	220.7	7	458
3	Morzik	Heinkel	"	224	200	180	40	241.3	14	458
4	Stein	"	"	221	208	180	40	236.8	12	453
5	Fretz	Klemm	Gipsy III	231	197	177	40	211.2	4	452
6	Hirth	"	Hirth	230	203	180	40	136.6	0	450
7	Cuno	"	Siemens	224	198	178	40	215.1	5	447
8	Seidemann	Heinkel	Argus	214	213	180	40	239.0	13	447
9	Lusser	Klemm	"	219	193	173	40	214.3	5	437
10	Karpinski	RWD-6	Genet-Major	238	*	*	*	216.2	5	435
11	Bajan	PZL-XIX	Gipsy III	223	188	166	40	212.9	4	433
12	Kalla	Praga	"	192	191	171	40	214.3	5	428
13	Pasewaldt	Klemm	Siemens	219	185	160	40	213.7	5	426
14	Osterkamp	"	Argus	219	187	164	40	210.4	3	426
15	Junck	Heinkel	"	225	178	146	40	239.3	13	424
16	von Massenbach	"	"	183	206	180	40	235.2	12	415
17	Marienfeld	Akaflieg	"	145	205	180	40	230.7	10	375
18	Giedgowd	PZL-XIX	Gipsy III	198	164	102	40	215.8	5	345
19	Anderle	Breda-15S	"	143	160	90	40	177.8	0	273
20	Delmotte	Caudron	Salmson	192	141	33	40	—	—	265
21	Kleps	Praga	Gipsy III	196	130	0	25	—	—	221
22	Duroyon	Potez	Potez	171	*	*	*	—	—	214
23	Arnoux	Farman	Salmson	89	141	33	40	—	—	162
24	Nicolle	Mauboussin	"	111	105	0	40	—	—	151

* Figures not yet available.

Monocoupe of the Roumanian Papana, who started in the German team, and the Praga of the Czecho-Slovakian Kalla. The fourth group to leave Rome was Seidemann (Heinkel), Hirth ("Klemm"), Colombo (Breda-33), Stein (Heinkel), and Marienfeld (Akaffieg). Then came the remainder. Junck had difficulty in getting his engine going, and could not start for some time.

On this day was cast a shadow. Near the turning point of Albenga on the Italian coast the Breda-33 of Suster crashed down with fearful force as one of the wings had given way suddenly. Suster was able to leave the machine by parachute, but sustained severe injuries, whilst his companion, who could not get out of his cockpit in time, was buried under the debris and instantly killed. The Italian Air Minister, Signor Balbo, immediately ordered the Italian team to withdraw from the contest, as further accidents were to be feared since also de Angeli's machine made a forced descent in the nick of time at Cannes with a fractured wing.

The withdrawal of the Italian competitors has robbed the contest of much of its sporting interest, much to the regret especially of the German pilots.

The day, however, also had its bright side. The German Heinkel pilot, Seidemann, up to this competition a relatively obscure man, accomplished an astounding performance by reaching as sole competitor Paris in a single day, where he arrived 7.50 p.m., ten minutes before closing time, surprising the stewards at Orly, who were not expecting anyone that day, though, of course, they were at their post. He averaged 235 k.p.h. (146 m.p.h.).

The Baron von Massenbach with his Heinkel was in pursuit of Seidemann, but arrived too late at Bonn to be able to risk the trip to Paris, which he reached next morning as first man at 7.45 a.m. He was followed at 9.28 a.m. by Marienfeld, at 9.46 a.m. by Lusser's "Klemm," at 10 a.m. by the Swiss, Fretz, with his "Klemm-Gipsy," at 10.01 a.m. by Morzik in his Heinkel, and five minutes later arrived Poss with his "Klemm." At 10.10 a.m. arrived Kalla with his Praga, followed 13 minutes later by his compatriot, Kleps, also with



SECOND AND THIRD : Morzik (left) and Poss gained the same number of points, the former flying a Heinkel (Argus) and the latter a "Klemm" K1.32 (Argus). Morzik has twice won the International Touring Competition.

Praga. Wolf Hirth was ninth to arrive with his "Klemm" at 10.36 a.m. Then there was a pause for some hours at Orly, where at 1.15 p.m. the first Polish pilot, Giedgowd, with his PZL-XIX, arrived. Eleventh was Stein's Heinkel, which came in four minutes later. At 2.49 p.m. arrived Cuno's "Klemm," at 3.11 p.m. Osterkamp's "Klemm," at 4 p.m. Pasewaldt's "Klemm," which was followed 3 minutes later by Anderle's Breda-S15. As sixteenth followed more than an hour later at 5.05 p.m. Junck's Heinkel. Then, at 5.28 p.m., arrived simultaneously the French Farman of Arnoux and the PZL-XIX of Bajan, the second Polish machine to arrive. At 6.18 p.m. Delmotte's Caudron biplane crossed the line, at 6.35 p.m. Duroyon's Potez, and one minute later the second Potez with Détré, to be followed five minutes later by a third Polish competitor, Karpinski, with his RWD-6. Also Zwirko arrived, but very late, since he flew a rather round-about course to avoid the bad weather in the Alps. Very late at night also Nicolle's small Mauboussin came in. So that altogether 25 competitors finished the second great flying stage. During this stage the Germans have been able to make good a considerable number of points against

the Polish competitors, who still top the list. These have lost a large number of points owing to circuitous flying. Orlinski made several attempts to continue his flight from Lyon, but the weather was so bad that twice he returned to Lyon, where finally he retired. A minute before his last return, at 8.52 a.m. on August 24. Zwirko and Karpinski, the two pilots topping the technical rating after the withdrawal of the Italians, had started and made the circuitous flight referred to, which caused them to arrive at St. Gall not before 11.52 a.m., while their compatriot, Bajan, who flew through the bad weather, already landed at 11.21 a.m. there.

The Last Stage

The third and final air tour stage was completed on August 27, when, at 6.24 p.m., Nicolle's small Mauboussin was the last to reach the airport of Berlin-Staaken. These 1,490 miles from Paris to Deauville, Rotterdam, Dortmund, Hamburg, Copenhagen, Göteborg and back via Hamburg to Berlin did not prove



SECOND AND THIRD PLACE : The Argus engine was fitted in Morzik's Heinkel and Poss's "Klemm." It is here seen in the latter.

difficult, and no more competitors were forced to retire, although partially unpleasant weather was encountered. The fact of so few competitors having this year suffered from engine trouble and that practically all remaining in the competition have gained or rather retained the full 40 marks they were originally credited with for reliability, speaks volumes for the progress made in engine construction. It also demonstrates the untenableness of the opinions held not so very long ago, at least in the ranks of German engine builders, that relatively slow and, therefore, unavoidably large engines are to be preferred. At one time one would not go much beyond 1,800 r.p.m. in engines even of the relatively small type to be employed for planes of the class participating in this competition. Also in this respect the regulations of the competition have had a wholesome influence on design, for the new high-speed engines, coupled with metal propellers, now being employed have thoroughly proved their worth, and have additionally demonstrated their high degree of economy. All round, therefore, it cannot be denied this excellent competition, especially in this year's form, has contributed tremendously to the development of fast and light touring planes and their engines.

Seidemann and von Massenbach with their Argus-engined Heinkel and the German air-transport pilot in charge of the Akaflieg biplane, Marienfeld, who have nothing to lose since they are hopelessly handicapped by the low number of points they scored in the technical part of the contest, opened out all they could after leaving Paris, and completed the tour in a single day. Seidemann reached Staaken at 6.36 p.m. on Friday evening, August 26. Marienfeld crossed the line at 7.19 p.m. and von Massenbach at 7.33 p.m. Theirs was doubtless an excellent performance, which brought just that amount of sensation into the competition that was required to stir public interest to its depths. But there is, of course, no doubt many of the other competitors could easily have followed suit had they chosen to do so. But they had winning chances and did not like risking their engines in fruitless speeding, rather nursing them for the final spurt in the afternoon's race over the triangular 186 miles course. They just flew so as to top the 200 kilometres per hour average required to gain the full number of 180 points and stayed for the night at the one or other compulsory stop.

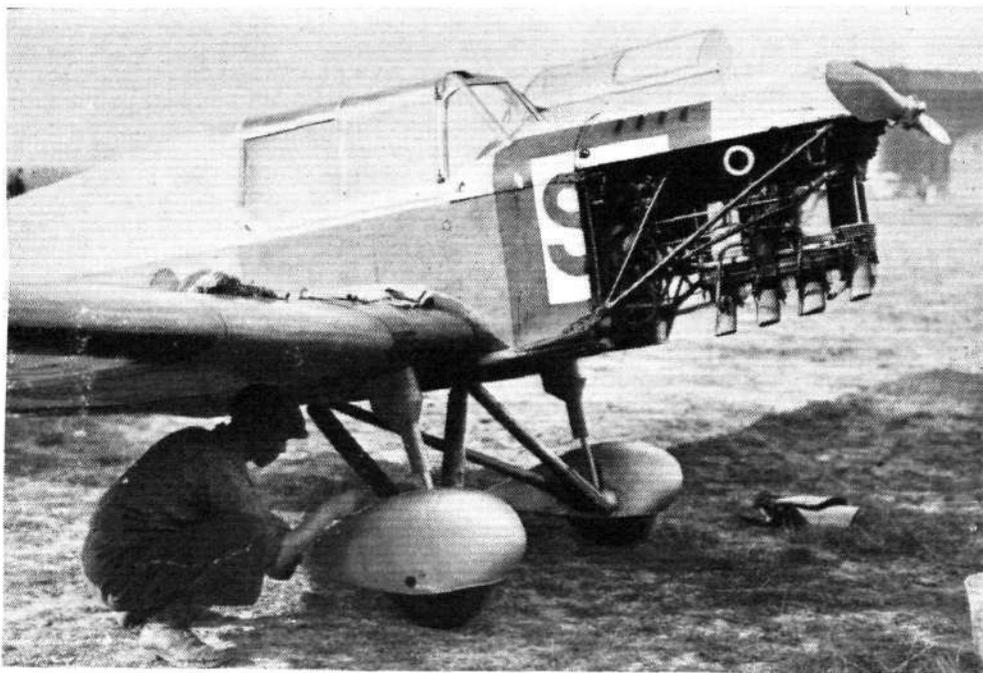
The first to arrive Saturday morning here was the chief pilot of the Heinkel factory, Junck, who passed the line at 7.14 a.m., followed 9 min. later by Osterkamp's Klemm. Five competitors arrived between 9 and 10 a.m., these being at 9.03 a.m., Hirth (Klemm-Hirth) at 9.07 a.m., Stein (Heinkel-Argus) at 9.24 a.m., Morzik, the winner of the last two competitions in 1929 and 1930 (Heinkel-Argus), at 9.33 a.m. Pasewaldt (Klemm-Siemens) and at 9.54 a.m. the Pole, Giedgowd (PZL-Gipsy). Then there was a pause as regards new arrivals.

At 11.27 a.m. on Saturday Lusser's Klemm-Argus dashed over the finishing line at Staaken. A few minutes later the Klemm-Gipsy of the Swiss, Fretz, hove into sight in the western sky and passed the line at 11.31 a.m. The weather was exceedingly hot and visibility not very good, but at Berlin there was at least no rain as had been the case for some time in Hamburg, where many machines had to be replenished with fuel under large umbrellas. At 12.11 noon arrived Arnoux in his Farman, at 12.43 the Pole, Bajan, in his PZL, followed 13 min. later by the Czecho-Slovakian competitor, Anderle, in his Breda 15.S. At exactly 1 p.m. Zwirko's RWD.6, the competitor with the highest number of marks, crossed the line. One minute later came his compatriot, Karpinski, in the second RWD.6 with Genet-Major engine. Delmotte (Caudron) finished at 1.04 p.m., Duroyon (Potez) at 1.15 p.m. The second Potez, with Détré, arrived at 3.36 p.m., behind Poss (Klemm-Argus) and Cuno (Klemm-Siemens), who

crossed the line simultaneously at 3.09 p.m., and the Czecho-Slovakian, Kalla (Praga-Gipsy), at 3.22 p.m. Then, at 4.04 p.m., came the second Praga-Gipsy, with Kleps. The arrival of Nicolle later completed the field of the 25 competitors still taking part.

The Speed Test

It is dull but warm weather in the afternoon of August 28. Rain clouds threaten a deluge, but appear to bethink themselves. A wind of 16 ft. per sec. is blowing from the west, from Staaken way; it is, however, gradually subsiding. The spacious enclosures on the northern border of this airport are thronged with spectators and the restaurant is doing great business, as also are the booths with refreshments. Flags are gaily fluttering in the wind and a big band is playing lively military marches. Spirits run high! Chalked over half the field is a thick white line. That is the finishing line, and the International Committee has been breaking its heads over establishing the handicaps for the start of the competitors. The idea is to



FIFTH: The De Havilland "Gipsy III" engine fitted in the "Klemm" flown by the Swiss pilot, Fretz.

arrange things so that the man first crossing the finishing line after the race (starting at Staaken some 12 miles or so west of Berlin-Tempelhof) will actually be the winner of the whole contest. That is to say, not the fastest machine will be the first to finish, but the one having the highest number of points. The fastest machines, therefore, had to be handicapped to such an extent that, if they actually did come through first they had gained so many points in this race as to catch up and supersede the competitor with initially more points to his credit. So it comes that machines are being let off in Staaken at carefully determined intervals. Coming from there they have to pass over the Tempelhof airport, and fly on to Frankfort-Oder, which is not to be confused with Frankfort-Main down south-west in the Rhineland. Frankfort-Oder is about 62 miles west of Staaken. There the competitors have to round a mark and continue south-west to a small town called Dobrilugk, about 65 miles away from Frankfort-Oder. From Dobrilugk the machines have to turn north back to Tempelhof, another 58 miles or so to the finish. At all turning marks the competitors have to throw off little bags with their numbers as a means of controlling their passage.

Zwirko, who has most points to his credit, 456 in number, is sent off first in Staaken punctually at 3.15 p.m., and presently his machine is sighted in the hazy western sky coming up fairly fast. He comes down slightly to pass over the line, and is soon out of sight over the distant houses bordering the eastern part of the airport. Fully 5 min. later Poss is let off with his Klemm. He has 451 points. One minute after him comes Hirth in his powerful Klemm, with the 8-cylinder engine developed by

his brother, Helmuth. Two minutes later starts the young Swiss, Fretz, in his Gipsy-engined Klemm. They all come over Tempelhof at full speed one after the other. Three minutes after Fretz and fully 11 after Zwirko rises Morzik. Cuno, in his Klemm-Siemens, starts at 3.28 p.m. The last machines start at intervals of 30 sec. and the eyes of the crowd are all turned west to see whether anyone succeeds overtaking another in this short distance between Staaken and Tempelhof. The loudspeakers closely follow the happenings, and in between plays the band. In a pause one hears the whole French team and the Czecho-Slovakian Kleps, who, it transpires, during the last stage of the great air tour, had to come down between Copenhagen and Göteborg with engine defect costing him a night outside the compulsory stops and 15 marks off his reliability credit of 40 points, have chosen not to take part in this race since their machines are too slow to have any chances. Thus six of the 25 competitors drop out.

Now the time approaches for the first report to come through from Frankfort-Oder. Furtively, everyone looks at his watch. Zwirko is the favourite. But there lingers at the back of everyone's mind, of every German's mind, to be more precise, a hope that after all Hirth's powerful engine will pull him through, or that Morzik may accomplish some wonder, Morzik, the idol of the masses, who has twice won this great competition. Then at last—everyone is highly nervous—comes the message. Zwirko has passed Frankfort at 3 hr. 42 min. 47 sec. Poss is presently announced as second. He passed at 3 hr. 47 min. 33 sec., and has thus gained a few seconds. There is no hope of him being able to catch Zwirko in this short race! Then comes news of Hirth having turned the Frankfort mark. He has caught up fully 73 seconds of the 5 minutes on a third of the stretch. Morzik has passed Fretz on the way to Frankfort, and has rounded the mark at 3 hr. 51 min. 2 sec. His handicap of 11 min. has shrunk to 8 min. 15 sec. He has opened out tremendously and is evidently the fastest so far. A keen fight has set in at the head of the field, and impatiently the crowds await the reports from Dobrilugk. At last it comes. The man at the loud-speaker seems to take minutes to come to the point, no, hours these seconds appear. Zwirko is still leading. But

Hirth has now made good three of the six minutes. Poss has dropped to third place and Morzik is fourth, with six minutes made good, so now only five minutes separate him from Zwirko. There are only about 55 miles to go. Will Hirth be able to catch up the remaining three minutes or Morzik the five? Excitement has now reached the heat of frenzy. Minutes before the first machines can possibly appear on the southern horizon amidst the chimney stacks of the Tempelhof factories binoculars and all eyes are turned in that direction. Then a momentary spasm of utter silence. Quite dim, far, far south, appears a small streak. Then a big shout, half disappointment, half joy, goes up. It is unmistakably the shoulder-wing monoplane of the Pole, Zwirko, the one-time Germany Army pilot. While he is coming nearer a second machine comes into sight. It is a low-wing machine. It is Hirth! But really is it? One is not quite sure. In the meantime Zwirko crosses the line amidst cheering and waving, but when he comes down, the masses are too much occupied with the other competitors appearing in the distance. Hello, Hirth is not Hirth—it is Morzik! Tremendous cheering sets in. Hats go up; people are almost weeping. Stupendous excitement! But there is a machine on his tail. It is Hirth. But, the Dickens, what is he doing? He comes gliding down straight on the field without passing the last turning mark in the west of the field. His machine comes to a standstill. Eager air police run to it, and presently it is pushed to the hangar west of the enclosures. The most miserable of ill luck has beset poor Hirth. Within sight of the finishing line the petrol pipe has broken!

Zwirko finished at 4 hr. 42 min. 1 sec. Morzik at 4 hr. 43 min. 24 sec., 1 min and 23 sec. behind Zwirko. Had the race been longer by only a few miles Morzik would doubtless have caught Zwirko. Third was Poss, 67 min. behind Morzik. Yet Poss, in the final rating, which took hours to calculate, was eventually classified as second, because he had attained the same number of points as Morzik, and in cases of a tie the landing and starting performance during the technical tests was to decide. Gradually all the others came in, and thus finished the 1932 International Touring Competition, more full of excitement and interest to the last minute than ever before.



Airport News

FROM HESTON

SUNDAY, August 21 (late news).—Night flying continues in popularity—some of those viewing the lights of London from the air were Visct. Gort, V.C., and daughter, also Lt. Col. W. S. Pilcher, D.S.O., Grenadier Guards, with Mrs. Pilcher, while Mr. and Mrs. Francis Francis both had practice in night landings.

Monday.—Capt. C. D. Barnard, of Banco, brought back "The Spider" from Deauville with six passengers, and Dr. Bonniksen returned from Paris during the evening.

Herr Striwsky, chief pilot to the Jugo Slavian Postal Air Service, arrived in a "Puss Moth," UN-SAA, which has been regularly flown on this service. He is taking back a "Fox Moth" in replacement.

Tuesday.—Miss Winifred Spooner arrived from Berlin in her "Breda 33," as did Mr. Perkins in his "Moth."

The "Fokker" of Surrey Flying Services picked up three passengers and left for Cologne.

Wednesday.—Sir Francis Humphreys, High Commissioner for Iraq, paid a visit to Heston to-day. After lunching with the directors of Airwork, Ltd., he was flown to de Havilland's works at Stag Lane in a "Puss Moth."

The Hon. R. B. Gurdon resumed his flying instruction.

Thursday.—The "Puss Moth" of Personal Flying Services, Ltd., left at 9 a.m. for Le Touquet, returning to Heston with two passengers at 12.20 p.m.

Banco had an urgent charter to take Lady Forbes Robertson to Cannes to visit her sister, who was taken ill while staying there. The machine was off with most commendable promptitude, leaving within ten minutes of the receipt of the order.

A party from the Ladies' Branch of the Hounslow Co-

operative Guild made a tour of the Airport this afternoon.

Friday.—The "Puss Moth" of Banco returned from Cannes, Mr. St. Barbe making the extremely quick time of 3½ hours from Cannes to Paris and 1 hr. 59 min. from Paris to Heston. As he arrived, at 4 p.m., Capt. Barnard, for Banco, left in "The Spider" for Deauville with a passenger list of seven. This is becoming a very popular mode of proceeding to Le Touquet and Deauville.

Mr. F. Flower made his first solo flight, after 6 hr. 10 min. dual instruction.

Saturday.—The bad visibility prevented much instruction being carried out during the morning, but Capt. Ferguson took advantage of this to proceed on a cross-country flight to Canterbury with a School of Navigation pupil.

Personal Flying Services, Ltd., "Puss Moth," piloted by Capt. W. Ledlie, left for Berck with Mr. John Gilbert Goldsmith and Mrs. Beatrice Elizabeth Rayson on their honeymoon. Capt. Ledlie returned to Heston later.

Sunday.—Several machines, after waiting some time for the mist to clear, set off for Littlestone, from where they departed to Dungeness by a special train on the miniature railway, driven by Mr. Nigel Holder. After bathing and lunch the party returned to Littlestone by the miniature railway, and thence to Heston by air.

Lt. Com. Geoffrey Rodd cleared Customs and left in his "Puss Moth," accompanied by Mrs. Mollison for Berck to bathe. They returned to Heston during the evening.

Three large parties from different Motor Cycling Clubs appeared at Heston during the morning.

Sir John Simon was flown to Banbury by Mr. Maurice Jackaman in the "Puss Moth" of Mr. Nigel Norman.