

IMPERIAL AIRWAYS GAZETTE

AUGUST 1937

NO 8

VOL 9





The Postmaster-General, Major the Right Hon. G. C. Tryon, M.P., placing the King's letters in the special mail bag.

To the left of the Postmaster-General is the Secretary of State for Air, the Right Hon. Viscount Swinton, G.B.E., M.C.

[Sport and General

THE INAUGURATION OF THE EMPIRE AIR MAIL PROGRAMME

THE IDEAL

In 1887, her Majesty Queen Victoria convened the first Colonial Conference which was charged to try to discover means of improving communications within the British Empire. Her Majesty had said a year previously, in a speech from the throne, that she had been 'led to the conviction that there is on all sides a growing desire to draw closer in every practicable way the bonds which unite the various parts of the Empire.'

THE EMPIRE AIR MAIL PROGRAMME

On 29 June 1937, was forged one of the most important of those links by which the Empire has in the intervening half century been more closely drawn together. On that day Imperial Airways' *Empire* flying-boat, the *Centurion*, took off from Southampton with 3,500 lb. of non-surcharged mail matter consigned to South and East Africa.

This marked the first stage of an all air Empire mail programme for the carriage by air, as the normal means of transmission and without surcharge, of all first-class mail dispatched to Empire countries on the Empire air routes to South Africa, and to India, Burma, Malaya and Australia.

THE CEREMONY

This great contribution to Empire corporate unity was the occasion of a ceremony when the Secretary of State for Air, Viscount Swinton, handed to the Postmaster-General, Major G. C. Tryon, a letter from his Majesty the King to the Governor-General of South Africa. The Royal Mail and the special mail was then hand-stamped by the Postmaster-General and placed in a silk bag which was tied and sealed by a postman and returned to the Postmaster-General. The bag was next handed to Sir George Beharrell, Chairman of Imperial Airways, who gave it to Captain F. J. Bailey, Commander of the *Centurion*.

A short time later the 250 guests of Imperial Airways at the inauguration saw the *Empire* flying-boat take off on her 7,260 miles journey to Durban which she reached on schedule on Monday, 5 July.

Before handing over the mail the Secretary of State for Air said he had been commanded by the King to deliver Royal letters to be carried by the *Centurion* to his Majesty's representatives served by the new air service. The King was greatly interested in the Imperial air mail enterprise, a scheme

which showed both faith and vision. It had called for hard work. Its accomplishment was a great achievement, and the first stage in the establishment of a great Imperial partnership. His only regret was that Sir Eric Geddes had not lived to see the scheme, for which he had worked so hard, brought to fruition. The Empire air mail and the great air liners which would carry it were a fitting memorial to him.

The Postmaster-General, who spoke after Lord Swinton, said 'This is a great day in the history of the Air Ministry, and the Post Office, and of Imperial Airways. We are inaugurating the first stage of the Empire air mail scheme. This scheme has been founded on a great Imperial partnership.' He then explained that fifteen countries of the Empire were taking part in the first stage of the scheme and that many more would join in at the second stage and finally, Australia and New Zealand would complete the number of the partners. All the countries concerned had agreed to contribute to the cost of the scheme. Nowhere outside the British Empire was it possible to send a letter by air over such immense distances for 1½d. a half ounce. Where hitherto there had only been one ordinary mail a week to South Africa, there would now be three and it was hoped eventually to reach East Africa in two-and-a-half days and South Africa in four days. He wished all success to the various services co-operating with Imperial Airways in the scheme.

Senator the Hon. C. F. Clarkson, Minister of Posts, Telegraphs and Public Works for the Union of South Africa, said that the service would help to make people in South Africa and Britain realise more fully how dependent they were on the other.

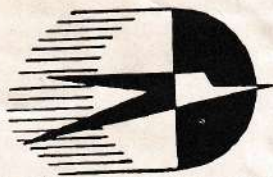
'The arrangements,' Senator Clarkson said, 'that have been made for conveying first-class mail at such a cheap rate, are a tangible proof of the co-operation that exists between South Africa and Great Britain in all essential matters to the mutual advantage of both.'

Sir George Beharrell, Chairman of Imperial Airways, speaking later at a luncheon given by his Majesty's Government, said: 'This is indeed an important day in the history of the British Empire—a day which generations to come may well regard as of crucial importance in Empire consolidation and development. You may think I am placing undue importance on the occasion, but I would ask you to cast your minds back to one hundred years ago and try to imagine what the world was like before Rowland Hill introduced his penny post. The effect of that step upon the relations between our people has been incalculable and I think that in time to come the introduction of the Empire air mail programme will be regarded as being just as important. Indeed, its effect may be even greater in view of the increasing tempo of the life of to-day.' He, his co-directors and the whole staff of Imperial Airways were proud of their association with the programme. Sir George said his great regret was that his life-long friend, Sir Eric Geddes, whose inspiration, encouragement and vision had made Imperial Airways and the Empire air routes, was not there to see the inauguration of the new services.

He also paid tribute to the late George Holt-Thomas and the late Sir Sefton Brancker, who seventeen years ago suggested to the Government that all first-class mail should be sent by air on selected routes. Sir George referred to the formation of Imperial Airways by the amalgamation of four companies in 1924, and said how great a pleasure it must be to all, that the founders of two of these companies, Sir Samuel Instone and Mr. Scott-Paine, his co-directors, were with them at the inauguration of the scheme.

The immediate steps leading to fruition of the scheme were mentioned and Sir George explained how services to the Empire countries on the route would be augmented and speeded up in the near future, and how it is hoped that by next year the full scheme will be in operation providing flying-boat services to Central and Southern Africa, India, Malaya and Australia and landplane services to Egypt and India.

Among those who attended the inauguration were Sir Thomas Gardiner, Director General of the Post Office; Sir Francis Sheldermine, Director-General of Civil Aviation; Sir Donald Banks, Secretary of the Air Ministry; Mr. Charles de Water, High Commissioner in London for the Union of South Africa; Sir Alan Cobham and Colonel Charles Lindbergh.



IMPERII VIAE EXPLORATOR VOLITO

IMPERIAL AIRWAYS GAZETTE

The *Imperial Airways Gazette* is published every month for the information of the agents of the company and for others who are interested in air transport. A copy will be sent free of charge every month to *bona fide* applicants from the Traffic Manager's Office, Imperial Airways, Ltd., Airway Terminus, London, S.W.1. School children must make their application through their Schoolmaster or Schoolmistress.

THE SERVICES OF IMPERIAL AIRWAYS

Full information about the services of Imperial Airways, of its associated companies and those for which it acts as agents, viz. the Belgian Air Lines (S.A.B.E.N.A.), the German Airways (D.L.H.) and Swissair, may be obtained from Imperial Airways, Ltd., Airway Terminus, London, S.W.1, or from Airways House, Charles Street, S.W.1. Telephone: VICTORIA 2211. Telegrams: 'Impairlim, Telex, London,' or from any office of the company. Airway Terminus is open day and night. The principal travel agents can also supply details of the times and fares of the services operated by these and other companies.

AS OTHERS SEE US

A passenger, on the first scheduled voyage made by flying-boat right through from Southampton to Durban over the new marine air route, which is now in regular operation between England and South Africa down the East African coast, remarked on alighting from the *Canopus* that she considered the journey one of the wonders of modern aviation. A week before she had been lunching with friends in London, and she had since then flown 8,000 miles. 'It was a magnificent flight,' she said, 'Our big flying-boat *Canopus* was more comfortable than an ocean liner.'

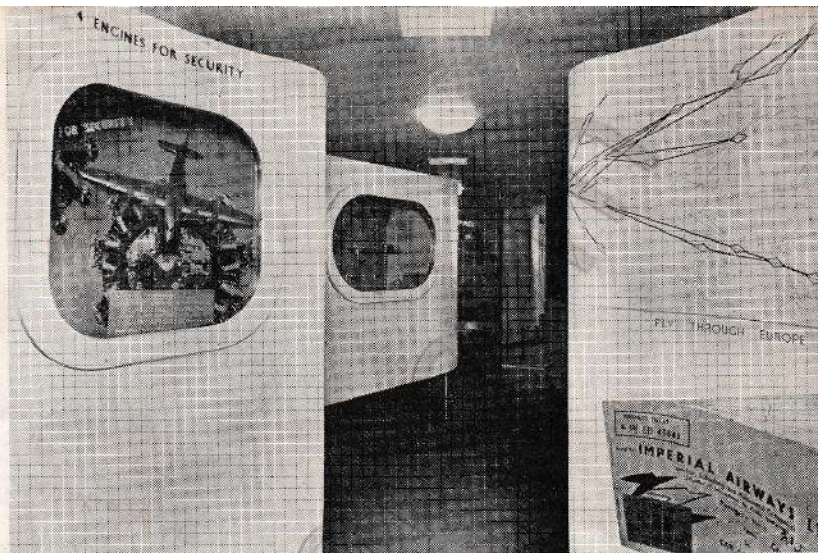
THE EMPIRE'S EXHIBITION TRAIN

BY A VISITOR

To-day I have had one of the best 'two-penny-worth's' for a long time. Being of that generation who were taught to believe that the horse is a 'noble animal' and that motor-cars are noisy nuisances, I cannot really account for the fact that I spent tuppence to go and see the *Empire's Airway Exhibition Train*. I think probably it was the shining sky-blue sides of the coaches with their intriguing announcement in red letters 'The aeroplane in the sky carries us above mediocre things.' It was a hot day; I went in.

Conclusions should I know, really come at the end, but in my case the conclusion is so certain, so prominent and so surprising to me, that I drag it in here. As I left the exhibition I wanted to fly with Imperial Airways. Gone was my previous feeling that if and when I have had my fill of life, then will I risk my neck in the clouds. Here was something impressive in its solidity; efficient and 'new fangled' only to back-numbers such as I have been.

But to describe the exhibition. Two dear old railway brake vans of Victorian vintage have been converted cleverly into a travelling exhibition which is, I understand, to tour the country. For tuppence you enter a door like, so well have I learnt my lesson, the door of an Empire air liner. Inside there are working models to impress how safe is flying of to-day, models of aircraft showing, in comparative sizes, the Imperial Airways flying-boats and land liners of to-day and the craft of 1924, a model combined land and marine airport (amazing in its minute detail), sectional models, and photographs. Nor must I forget the miniature pillar box with its letter just disappearing to begin its three-halfpenny flight with no special stamps or marking all the 7,000 miles to



Two Views of Imperial Airways' Exhibition Train [Fox Photos]

John Citizen of South Africa—the Empire air mail scheme. Most impressive are the sectional models letting you peep into the inside of the new *Empire* flying-boats—the class that just flew the Atlantic—and the new *Ensign* land liner. The passenger accommodation looks like an improvement upon my old friend Pullman—adjustable chairs in which you sit up and take notice, or sleep, bored with the changing scene that passes below you at 170 m.p.h. There are berths, promenade cabin, tables for a charming lunch, tea or dinner, and the etceteras one scarcely expects in the air. There are baggage and mail holds, wireless room, kitchen and, most important of all, shown in another model in larger scale, the control room, where the Captain—and mine is the one with the beard who has flown a million miles and ten thousand hours—sits with his First Officer at the dual controls. The liners are very impressive in their comfort and yet impressive in another way—no company would bother with sleep and food unless their service was so sure that they had time to consider such trivialities. You see how the Captain brings his 'plane in safely in a fog, and the wireless set by which the navigator is in constant touch with the ground, learning his exact position even though he is 10,000 feet above the clouds and 1,000 miles from home. It was a good 'two-penny-worth' and if it comes to your town, as I hope it will, go and see it and take the children. If the Imperial Airways keeps up its present rate of progress the children will be glad to remember the funny things that to-day seem so marvellous and so safe to us.

EMPIRE'S AIRWAY EXHIBITION TRAIN

It was stated in the May issue of *Imperial Airways Gazette*, that by arrangement with, and the courtesy of, the Great Western, the London, Midland & Scottish, the London & North Eastern and the Southern railways, the *Empire's Airway* exhibition will tour England.

This exhibition is now an accomplished fact, being built into two railway coaches. It portrays aspects of the organization of the company and secondly, the effect upon the British Commonwealth of Nations of the Empire air mail programme. There are models of the company's aircraft, sectional models showing the accommodation on the air liners operating the Empire routes and models of both land and marine air ports, together with many photographs.

The exhibition, after being inspected by the Secretary of State for Air, Lord Swinton, and Government officials, left Victoria station, London, on 15 July to begin its tour. Admission to the exhibition is 2d. and below is the itinerary of the exhibition to the middle of August. A further itinerary will be published in the next issue of the *Gazette*.

13-15 July	London, Victoria Station.
16-19 "	Eastbourne Station.
20-22 "	Brighton Station.
23-26 "	Portsmouth and Southsea Station, Dock Road.
27-29 "	Bournemouth Central Station.
30 July-2 Aug.	Exeter, Central Goods Yard.
3-5 Aug.	Taunton Station, Inner Chard Bay Line.
6-9 "	Bristol, Temple Meads Station.
10-12 "	Cardiff, General Station.
13-16 "	Swansea, High Street Station.
17-19 "	Gloucester Station, Cheltenham Bay.

THE NORTH ATLANTIC FIRST COMMERCIAL SURVEY FLIGHTS BY IMPERIAL AIRWAYS AND PAN AMERICAN AIRWAYS

A TRIUMPH OF ORGANIZATION

On the afternoon of 5 July the Air Ministry meteorologists forecast that during the coming night there would be an almost constant westerly wind blowing across the North Atlantic with a speed of 20-25 m.p.h. Late that night Imperial Airways flying-boat the *Caledonia* took-off from Foynes, on the western Irish coast, to head into this wind on her way to Newfoundland, nearly 2,000 miles away. Three hours after the *Caledonia* had disappeared across the horizon the Pan American *Clipper III* took off from Botwood, Newfoundland, for Foynes.

From time to time during that night radio stations on either side of the Atlantic received curt and matter-of-fact messages from the captains of the two flying-boats giving positions, and at times confirming the weather conditions that the meteorologists had said they would discover. Except for an exchange of wishes of good-luck between the two captains as they passed in mid-Atlantic about 6 o'clock in the morning, there seems, on the face of it, little else to be said about these first survey flights across the Atlantic. They knew what the weather would be; they knew that the flying-boats could do it; they had ample supplies of fuel and the captains had each already flown something over 1,000,000 miles each. It was for the crews of the flying-boats no more than routine work.

At 10.0 a.m. G.M.T. the *Caledonia* landed at Botwood having made the 1,993 mile crossing against a head wind in 15 hours and 3 minutes and 44 minutes later the *Clipper III* arrived at Foynes. The *Caledonia* landed two hours ahead of her schedule time, while the *Clipper III* made the crossing in 12 hours and 34 minutes; 2 hours and 26 minutes under an estimated time of 15 hours.

It was not, however, quite as easy as it sounds, and possibly of as great importance as the actual flights themselves have been the years of work and research that have made this first survey flight of the North Atlantic so successful and so easy of accomplishment.

The *Caledonia* is the result of 14 years' experience by Imperial Airways operating services to Europe, Africa and the Far East and is representative of the first type of aircraft designed in

Great Britain which by reason of size, ample reserve of engine power, and large capacity for fuel is pre-eminently suitable for long-range survey work on the North Atlantic. She is identical in design with Imperial Airways fleet of 28 *Empire* flying-boats and differs from them in service only by reason of the fact that she has been equipped with additional fuel tanks in the wings and has no passenger accommodation.

The *Caledonia's* wing span is 114 feet, the length 88 feet 6 inches and the height on a beaching chassis 29½ feet. She is a monoplane of all-metal construction. Four Bristol *Pegasus* engines are fitted, each rated at 740 h.p. and provide 910 h.p. each at 2,475 r.p.m. for 'take-off' purposes. Her maximum speed is 200 m.p.h. and the cruising speed is 165 m.p.h.

The Pan American *Clipper III* is of the same class as the flying-boats at present in use by that company on the New York-Bermuda service, being an S42B Sikorsky flying-boat fitted with four Pratt and Whitney 750 h.p. engines. Her dimensions are much the same as the *Caledonia's*, while her maximum speed and cruising speed are slightly lower.

While Imperial Airways and Pan American Airways have been working for several years in perfecting their aircraft for these experimental flights, a great deal of data in regard to weather conditions on the Atlantic has been gathered by Air Ministry and Imperial Airways experts.

Much of this information has come from the daily observations made by officers of ships operating in the Atlantic sea lanes. Day by day for years past, weather information has been passed on to be correlated by a special department of the Air Ministry. Further, for some months before the flights an Air Ministry official has been travelling backwards and forwards across the Atlantic in a cargo steamer. Each day he obtained upper air weather data by the use of small hydrogen-fitted balloons which were released from the ship. Then to supplement all this previously gained knowledge of Atlantic weather, during the flight shore radio stations received constant reports from shipping which were passed on to the captains of the flying-boats. Finally, the captains were able to tell each other of conditions they had respectively left behind them, so Captain Wilcockson of the *Caledonia* was able to send the following message to Captain Gray of the *Clipper III*:

'Best of luck to you and your crew, old man, from *Caledonia*.

From Foynes to longitude West 35, we had an almost constant layer of cloud varying from 300 feet to 2,000 feet with patches of rain. For you there is a favourable wind of 25 m.p.h.'

It will be seen that no matter how perfect the flying-boat may be, how skilled the crews, the key to such long-range flights is the wireless organization which is not only used for transmission of weather reports but, in addition, is responsible for directing the aircraft to their destination.

Not only were the radio stations at the terminal points in constant operation giving bearings, but Air Force stations in this country, as well as Canada and the U.S.A., were active, and the flying-boats could take bearings from any of these stations. Ships as well gave bearings, and at 23.10 G.M.T. Captain Wilcockson reported:

'G-ADHM calling. We have been in touch with *New York City* in Latitude 62.36 North, 17.55 West. He gave me bearing 224 degrees and think this bearing was relative to his ship's head and not true bearing so am going to change wave 600 metres to check again.'

A sample of shore to ship bearing was that of 20.33 G.M.T. from the shore station at Newfoundland to the *Caledonia*:

'Botwood calling G-ADHM. Your bearing is 67 degrees doubtful at 00.33 G.M.T.'

Finally, the men themselves. Captain Wilcockson is one of Imperial Airways original pilots, is a Master Pilot and holds a First Class Navigator's license. He has been flying for over 20 years and has covered more than a million miles. His First Officer, though only 26 years old, holds a First Class Navigator's license and Ground Engineer's A and C licenses, in addition to a wireless operator's license. Captain Gray of the *Clipper III* is well used to ocean flights, so well used, that on landing at Foynes he said: 'Just a pleasant joy ride for us.' Both captains were full of enthusiasm for the service that it is hoped will be in operation in a year or two. Captain Wilcockson summed it up by saying: 'It was a great trip. Weather conditions, however, were not very brilliant... It is a promising fact for future flights that two planes can take off in different directions and both fly to schedule.'

So the first step has been taken by a commercial concern for the establishment of a regular air service between the Old and the New World. The enterprise will be in three distinct stages:—

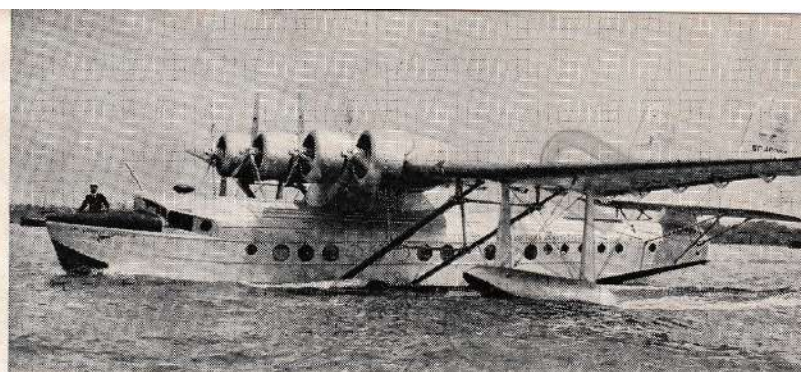
- (1) A period of survey and experimental flights.
- (2) The operation of a mail service to be inaugurated as a result of the experience gained on the survey flights, and which will afford actual experience of the regular carriage of commercial loads.
- (3) When suitable aircraft can be designed from the data provided by earlier operations—a service for passengers as well as mails.

It is possibly not 'dreaming dreams' to say that before another ten years have passed, passenger flight between London and New York will be as much an accepted fact as to-day are the frequent services between London and Paris.

For the benefit of those who are interested we give in chronological order a representative collection of messages from the two flying-boats during the crossing and from the shore stations at Botwood and Foynes.

G.M.T.

- 20.35 *Caledonia*, Wilcockson depart Foynes 18.57 G.M.T. for Botwood—Control Officer, Foynes.
- 20.50 G-ADHM calling Position 20.50, 52.12 N., 14.50 W.
- 21.08 Control Botwood calling NC16736 Gray depart Botwood for Foynes 21.10 G.M.T.
- 21.35 G-ADHM calling Position 21.35 G.M.T., Lat. 52.10 N., Long. 17.20 W.
- 22.00 G-ADHM calling Position 22.00, 52.00 N., 18.35 W.
- 22.30 NC-16736 calling Position 22.30 G.M.T., Lat. 49.48 N., Long. 51.20 W. dead reckoning.
- 23.00 NC-16736 calling 23.00, 11,000 feet, 50.08 N., 49.24 W. dead reckoning.
- 23.10 G-ADHM calling. We have been in touch with *New York City* in Lat. 62.36 N., 17.55 W. He gave me bearing 224 degrees and think this bearing was relative to his ship's head and not true bearing so am going to change wave 600 metres to check again—*Caledonia*.
- 23.20 G-ADHM calling. Position 23.20 G.M.T., 51.49 N., 21.28 W.
- 23.30 NC-16736 calling 23.30. 50.27 N., 47.35 W. dead reckoning—Gray.
- Midnight G-ADHM calling. Position midnight, 51.40 N., 23.22 W., total darkness. 10/10 cloud.
- 00.11 NC-16736 calling 00.11. Have marked GLKM in Lat. 52.47 N., Long. 20.55 W., and he has true bearing of me but will go back to 600 metres and get it.
- 00.15 NC-16736 calling 00.15. Position Lat. 49.32 N., Long. 53.04 W. fix wind south average in climb over light between Penquin Island and Deadman's Point at 21.48—Gray.
- 00.29 Foynes calling G-ADHM. Your bearing is 270 degrees 2nd class at 00.29 G.M.T.
- 00.33 Botwood calling G-ADHM. Your bearing is 67 degrees doubtful at 00.33 G.M.T.
- 01.00 NC-16736 calling, 01.00 G.M.T. 11,000 feet 51.12 N., 42.52 W.
- 01.00 G-ADHM calling, 01.00 G.M.T. 51.32 N., 26.18 W. Total darkness, 10/10 cloud.
- 01.50 G-ADHM calling. Position 01.50: 51.18 N., 29.00 W. Total darkness.
- 02.30 NC-16736 calling. Position 02.30: 52.13 N., 36.38 W. Fix.
- 04.00 G-ADHM calling. Position 04.00 G.M.T. 50.56 N., 36.10 W.
- 04.25 G-ADHM calling 04.25, position dead reckoning 50.47 N., 38.00 W. obtained Fix from Jupiter and Arcturus 20 S. of Rhumb Line Track. G.M.T. 03.26 Fix. 50.32 N., 34.50 W.
- 04.29 G-ADHM calling 04.29. Marked VCE (Cape Race) on 600 metres.
- 04.52 G-ADHM calling 04.52. Position 51.08 N., Long 32.13 W. Total darkness, 10/10 cloud, rain showers.
- 05.00 G-ADHM calling. Position at 05.00 G.M.T.: 50.42 N., 39.50 W. Total darkness. (Remainder incomplete through interference).



Clipper III just after alighting at Southampton and moving up to her moorings at Imperial Airways base

[London News Agency Photos Ltd.]



The Commander of the Clipper III (Captain H. E. Gray) and his crew being greeted on arrival at Southampton. On the left of Captain Gray is Sir Francis Sheldermine, Director General of Civil Aviation, and on his right the Mayor of Southampton, Alderman Chick, and Mr. Hubert Scott-Paine, a Director of Imperial Airways

[London News Agency Photos Ltd.]



The Caledonia just before she left the base at Foynes

[The Associated Press]



The crew of the Caledonia, from left to right—Wireless Operator T. A. Valette, The Commander, Captain A. S. Wilcockson, First Officer C. H. Bowes, Wireless Operator T. E. Hobbs

[Planet News]

05.15 NC-16736 calling. Position 05.15: 52.30 N., 27.48 W., dead reckoning.
 06.00 NC-16736 calling 06.00. 10,000 feet. Position 53.03 N., 22.35 W., speed 150 m.p.h.
 06.30 G-ADHM calling. Position 06.30: 50.25 N., 44.40 W., over cloud.
 06.30 NC-16736 calling. Position 06.30: 53.22 N., 21.07 W.
 07.02 VOAB calling G-ADHM. Your bearing is 72 degrees doubtful.
 08.20 G-ADHM calling 08.20. Position 50.00 N., 51.00 W., Two icebergs sighted in this position.
 08.30 NC-16736 calling. Position 08.30: 52.21 N., 13.12 W. due 09.30.
 09.20 Botwood calling. Latest of G-ADHM passed coast of Newfoundland 09.20.
 09.44 Control Officer Foynes calling Pan American flying-boat NC-16736 arrived Foynes 09.44 G.M.T.
 10.00 NF 19 (Botwood) calling. G-ADHM Wilcockson landed Botwood 10.00 G.M.T., moored 10.13 G.M.T. • See also Stop Press, page 7.

REBATES ON CIRCULAR AIR JOURNEYS IN EUROPE

For the first time in the history of European air transport, it is now possible to offer travellers a reduction of 10 per cent. off the price of single tickets for air journeys in Europe. These 'C.T.' air tickets will be used for circular air trips, for the main condition of issue is that the traveller should begin and end his journey at the same airport. These tickets are valid for 60 days and the journey must be made by air except when no air service exists between any two places. Each passenger will be allowed the usual 33 lb. of luggage and excess baggage will be charged at the usual rates. Tickets for all stages of the trip must be bought before the journey begins. Full particulars of the scheme may be obtained from Imperial Airways.

'ALL UP' AIR MAILS

We reprint with acknowledgment a recent article from *The Times* newspaper which explains the agreement between the State and Imperial Airways for the new Empire air mail programme, its operation and the aim of the Government for Empire mail communication.

NEW SYSTEM ON AFRICAN ROUTE POSTAGE BELOW COST PRICE

The Postmaster-General has stated that all first-class mails between Great Britain and South Africa will be carried by air from the end of June.

THE PLAN

'This first instalment of the plan to send all first-class mails by air to Empire destinations will mark the success of one stage in the development of Empire air routes. Once more the Post Office is to take an expensive step in order to place fast transport at the service of the ordinary writer of letters. If speed at a cheap price should evoke bigger mails the Post Office may cover the loss it contemplates at present, but this will be at the expense of Imperial Airways. That company must carry for a fixed annual sum all the mail loads, up to a generous maximum, which the Post Office offers. The curious situation may thus arise of a carrying company, in the period of its greatest expansion, finding itself subject to the law of diminishing returns.

'That gloomy possibility has not been overlooked, and the provision made in the company's agreement with the State for the review of the terms of the contract every three years should secure either side against the worst inequalities. Too big a profit on the mail contract in the unlikely event of a reduction in the mails will thus be adjusted and too big a sacrifice of passengers to mails will be made good by revision of the subsidy payments. Nevertheless in any three years' period Imperial Airways may find itself contributing heavily to the cost of the boon which the Governments of the Empire have decided to confer on the public. The outcome of the scheme which is to start within a few days should thus be of

the utmost value to the Post Office, Air Ministry, and Imperial Airways as a guide to the two further extensions of the system due in the next six months.

SOME UNCERTAINTIES

'There is plenty of evidence as to what the size of the loads would be if there were no incalculable influences to disturb the averages. The carrying company knows, for instance, that the weekly first-class mails to the Sudan, to the East African Colonies, to the Rhodesias, and to the Union of South Africa amount to about six tons. Divided between three flying-boats, each capable of carrying a payload of 3½ tons, this should not mean any drastic reduction of the passenger complement, yet there must remain some uncertainty until the new system has got into its stride, for neither postal experts nor traffic managers can estimate the bulk of second-class mail, such as circulars, price lists, and periodical business announcements which the senders may consider worth sending at 1½d. a half-ounce instead of at the usual ½d. rate in return for the vast saving in time.



'On the other side of the balance there is no hope whatever that Imperial Airways will make a profit out of the conservative correspondent who might still prefer not to trust his letters to the aeroplane. The sender of a letter to an African destination will have no choice as to its mode of transport after the end of the month. Whether he likes it or not, his letters will be sent by air and the postal fee will be 1½d. a half-ounce, as against 1½d. an ounce under the system of shipping transport. The custom of sending duplicates of important letters by air mail and by sea will thus have to be amended. The duplicate will now have to follow the original letter on the next air mail and so will contribute to the distension of the mail loads the aircraft will have to carry.

'The bulk of the load on this route will have to be carried the whole of the way to South Africa and it represents just about six times the weight of mail which has hitherto paid extra postage for air transport along the same route. The total weekly load which is expected to leave Southampton is about 13,140 lb., as compared with the average weekly dispatch by air at present of 2,244 lb. Whereas 396 lb. of air mail is being delivered to Uganda, Kenya, Tanganyika, Zanzibar, and Nyasaland, and 1,760 lb. to the Rhodesias and South Africa, the new loads are expected to be 2,250 lb. and 10,340 lb. respectively. The loads for South Africa will be carried by two services a week as in the past, and the new aircraft, which, south of the Great Lakes, will have to handle the extra 8,580 lb., have a payload capacity greater by only about 2,000 lb. each than that of the *Atalanta* type which they will supersede. From this it may be deduced that every service will carry something nearer full load than it has up to the present.

THE BIG UNIT

'That was one of the considerations underlying the present scheme. The demand for better air mail communications might have been met either by promising the carrying company more subsidy or by providing it with bigger loads. The latter method was adopted by the Governments. In consequence, Imperial Airways was able to adopt bigger aircraft in the hope of deriving the large benefit which has been shown to proceed from using the big unit of transport, and faster aircraft to allow of immediate acceleration in the operating schedules, and aircraft of a type which may most safely be flown by night as well as by day. The *Empire* flying-boats have been in service long enough to show that they can fulfil all the specifications. They are big enough to afford sleeping accommodation for passengers when night flying is undertaken. They are at least 60 miles an hour faster than the older liners. Their diversion to the coast at Mombasa means that over the greater part of the route they will not have to accept the hazard of high ground in the course of night flying.

'The change of route which has preceded this plan for what have been called "all up" air mails has left free a variety of feeder routes for operation by local companies. There will be a link from Kisumu to Nairobi. Wilson Airways, which will be responsible for that service, will also work a weekly service between Nairobi and Lusaka, the new capital of Northern Rhodesia. South of Lusaka there will be two sets of services, one by Union Airways working northwards from Johannesburg, and another by Rhodesian and Nyasaland Airways working through Blantyre and Salisbury to Beira, in Portuguese East Africa, where the main route will again be tapped.

'It is likely that mails for interior destinations in the East African Colonies will be disembarked at Kisumu and handed over to the associate company of Imperial Airways for distribution. Mails for coastal destinations will be carried on by the flying-boats and those for the Rhodesias will be handed over to the Rhodesian operating company at Beira. Again at Durban the work of distributing the mails throughout the Union will be undertaken by Union Airways. The new system thus provides mail loads for a series of smaller operating companies, and these in turn will offer air transport in their mail aeroplanes to passengers. This alternative route to South Africa in reality constitutes a third service each week for passengers, if not for mails, and a third service of Imperial Airways will give through connexion from England with this service. In fact there will be two mail dispatches each week to South Africa and three to East Africa instead of the existing one service a week by surface transport. It is hoped that business houses will not continue to save up mails for the old dispatch day.

PREPARING THE ROUTE

'How great a change has been wrought can only be realised by those who, in the last two years, have taken a hand in the preparation of the route and by those who have travelled by the new system during its probationary period. Not only have marine stations had to be created throughout the length of Africa with all the apparatus for mooring and refuelling the aircraft and for disembarking passengers, but there have had to be great improvements in the system of communications all along the line. With the prospect of night flying it has been necessary to establish a chain of wireless direction-finding stations between Cairo and Durban. In the past the aircraft did their own direction-finding by the process of "homing" on to the wireless stations. They may still have to do this when electrical storms interfere seriously with medium-wave communication, but the chance of interference has been reduced by the installation of short-wave transmitters at many stations. It is sometimes possible to measure the bearing of a medium-wave signal at a direction-finding station when the signals themselves are not clear enough to carry a message; and such bearings may in those cases be communicated to the flying-boat by short-wave wireless, which is less susceptible of interference.

'Between Alexandria and Durban twenty-one new direction-finding stations of the Marconi-Adcock type are being set up. The section between Cairo and Khartoum, which is likely to be the first where night flying will be undertaken, is ready for work. That part of the route between Khartoum and Portuguese East Africa will probably be fit for night flying by

September, and the five stations in Portuguese East Africa may be in full use soon after that time. The provision made on the new route now gives medium-wave and short-wave communication with stations at intervals of about 300 miles. In many cases stations are joined too by land lines, so that even the worst cases of electrical interference are not likely to defeat communication.

SPEEDING UP

'The prospect of such acceleration as will enable South Africa to be reached in four days is therefore good. Already the time of the journey is to be reduced to little more than six days. The flying-boat which leaves Southampton at 7.30 G.M.T. on a Tuesday will be at Durban at 11.46 G.M.T. the following Monday. In the intervening six days four hours 16 minutes the passengers and mail will have travelled the 7,500 miles and have stopped on successive nights at Rome, Alexandria, Khartoum, Kisumu, Dar-es-Salaam, and Beira. The first "all up" service in the opposite direction will probably leave Durban on a Wednesday and, making the same night halts, will be due at Southampton on the following Tuesday. Thereafter services will leave Southampton for Durban on Tuesdays and Saturdays and for Kisumu only on Fridays. On the homeward run the services will leave Durban on Sundays and Wednesdays and will leave Kisumu on Fridays.

'The experience to be gained in the next few months on the Africa route will be of great value in organising the changes of a similar nature on the route to India and Australia. It is possible that the "all up" system may be applied to that section of the route ending at Singapore by September. It may come into operation throughout the whole route between Great Britain and Sydney at the beginning of next year. By that time plans will have been laid for the extension of the route to New Zealand, and some sort of scheme should have been made for the further extension of the route ultimately across the Pacific to Canada. In the meantime progress should have been made in the experiments over the Atlantic.

'Some day it may not matter whether the letter bearing a 1d. stamp is sent to Australia by way of India or by way of Newfoundland, Canada, and New Zealand. The Post Office at present contemplates paying to the operating company £900,000 a year for carrying all the first-class mails on the Africa and Australia routes, and it expects to recover only £700,000 in postage. It has not yet been announced that a similar scheme is intended on the ocean routes which must soon come into operation; but the precedent which will be created when the mails go out by flying-boat from Southampton Water a fortnight hence will probably prove irresistible when the Dominion of Canada and other parts of the Empire are served by the commercial aeroplane.'

STOP PRESS

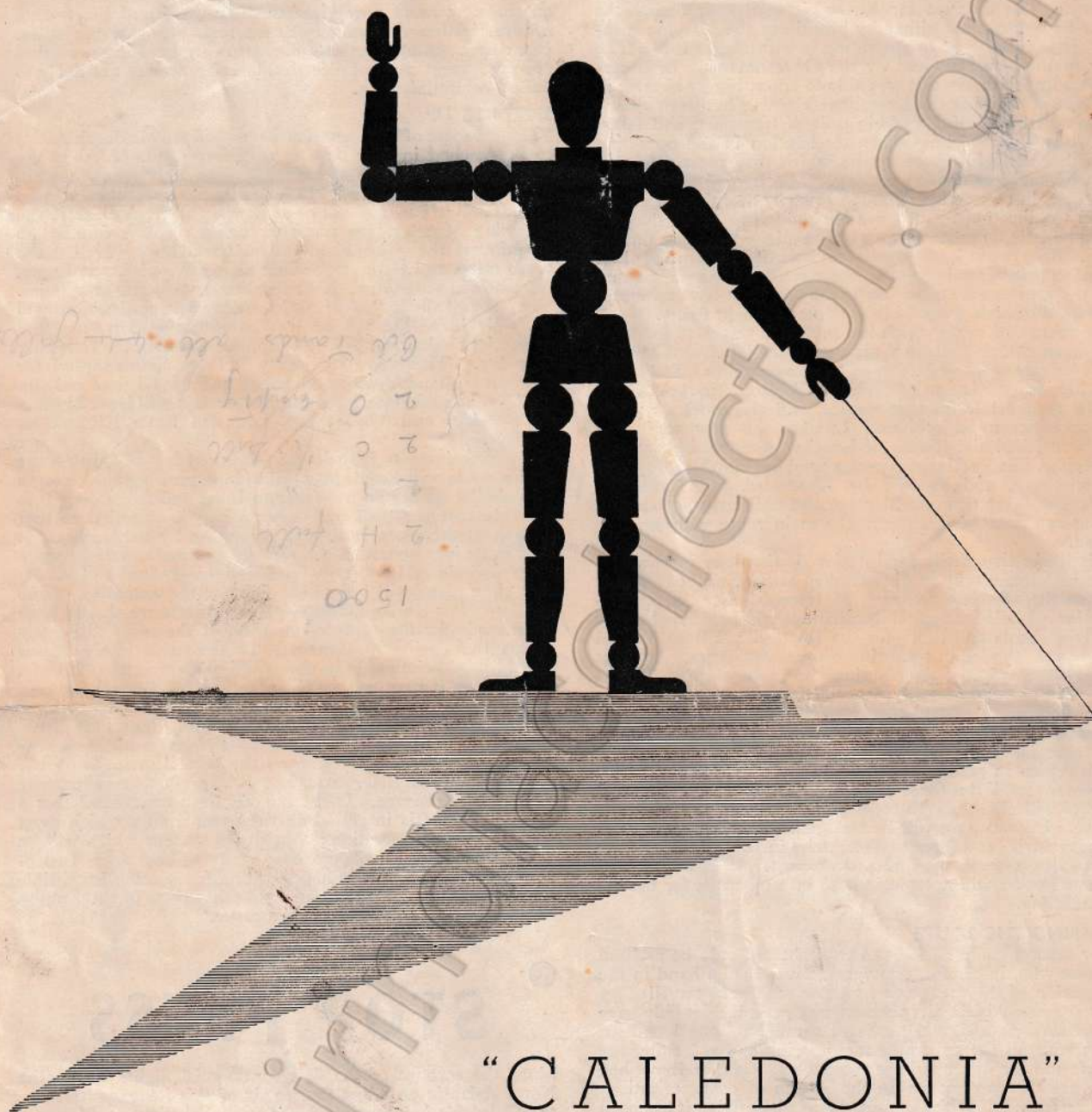
Since the account of the first commercial flights across the North Atlantic on pages four to six of this issue was written, the *Caledonia* has continued her westward flight to Montreal and New York, and both flying-boats have safely accomplished their respective return journeys.

Our cover picture shows the *Caledonia* flying over New York City on the conclusion of her outward journey.

The return journeys were singularly uneventful and again wireless messages from the two captains contained little more than positions and the condition of the weather.

The *Caledonia's* time on the return flight from Botwood to Foynes was 12 hours and 7 minutes, as compared with her westbound time of 15 hours 3 minutes.

On the return journey to Newfoundland the Pan American Airways flying-boat did the journey in 16 hours and 26 minutes, as compared with her eastbound timing of 12 hours 34 minutes. At the time of going to press Imperial Airways flying-boat, the *Cambria*, sister ship of the *Caledonia*, has just left Southampton for Foynes which she is scheduled to leave on 29 July for the second survey crossing to Newfoundland.



"CALEDONIA"

ON BOTH HER ATLANTIC CROSSINGS

USED

SHELL LUBRICATING OIL