

AIRCRAFT

News

MARCH

1950

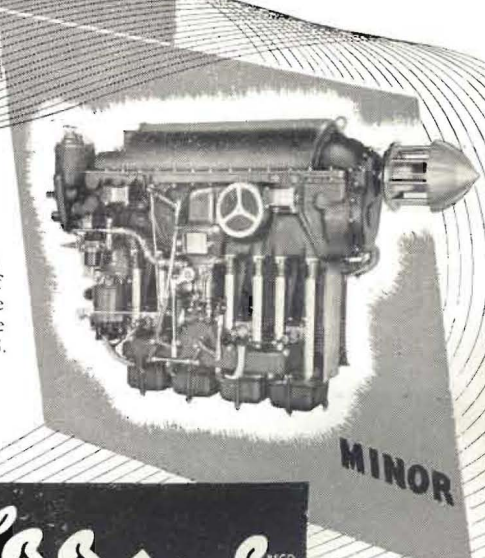




MAJOR

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AIRCRAFT NEWS

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MARCH, 1950

Editorial

IT IS BUT A FEW SHORT MONTHS since we were engaged in preparing three aircraft for duties in the Antarctic. Two Auster Mk. 6 aircraft were to accompany the combined British-Scandinavian scientific expedition to Queen Maud Land, and an Auster Mk. 5 was required to assist in the rescue of eleven scientists marooned on Stonington Island.

At the time we were working on these aircraft the future seemed to hold so many doubtful factors that we wondered at times whether the Austers would really receive suitable opportunities to prove their worth. However, it appears that we need never have entertained such ideas.

One Auster 6 was successfully launched from the expedition ship *Norsel*, and, after reconnaissance, was able to shepherd the ship through the pack-ice to a suitable landing-base on Queen Maud Land. Subsequently, further flights were made by Sq./Ldr. Walford and Flt./Lt. Tudor over the snow-capped land mass, and much useful work was accomplished.

Simultaneously, in a different region of the same southerly extremes, the Auster 5 was undertaking reconnaissance flights which eventually led to five of the marooned scientists being rescued by another aircraft. Further efforts were, however, rendered unnecessary by the survey ship *John Biscoe* being able to reach Stonington Island to take off the other scientists.

Important features of both of these ventures have been the successful control of man over machine, and then the satisfactory combination of man and machine against nature. In regions where nature has in the past generally presented a considerable barrier against the intrusion of man it is gratifying to note that man appears to be definitely

gaining supremacy. From our side we are pleased to have been associated with these latest exploits, and at the same time we salute the handful of men whose skill, courage and fortitude has been the ultimate factor in defeating great odds.

* * *

S.O.S.

ONE OF OUR REGULAR READERS, probably overseas, is doubtless wondering what has happened to his supply of the *Aircraft News* for the last month. Actually we have them here, because they were received loose by the postal authorities and returned. So if the person in question will kindly contact the Editor, arrangements will be made to forward them on immediately.

General Election Reflections

IF YOU ARE HOPING to read a few words tinted with red, white or blue we are sorry that you will be disappointed. No, there are plenty of other publications which give many colourful arguments on politics. All we would say here is that the desire of the flying fraternity is that any Government shall give due acknowledgement and encouragement to private, club, and charter flying, firstly by words, then by action.

Our reflections on the General Election concern the varied methods of transportation used. Almost anything on wheels was brought into action, and in at least three instances aerial travel was employed, Austers being the aircraft concerned in two of these. Overseas readers will be interested to note that postal voting facilities were available, but presumably those who travelled by air to their polling station had omitted to make the necessary postal arrangements in time.

The photograph opposite shows Mr. David Eastwood (right) with Mr. B. Racionzer on their return to Rearsby after flying to White Waltham aerodrome so that Mr. Racionzer could record his vote at nearby Cookham-on-Thames. Mr. Racionzer is partner in a Leicester engineer-

ing firm, but his home is at Cookham. The aircraft is a 2-seater Auster series J.4. Mr. Eastwood took off at 11 a.m., and made the 200-mile round trip comfortably in 3 hours, which included a considerable period of waiting time at White Waltham.

The other case in which an *Auster* was used occurred when a candidate for Orkney and Zetland, Sir Basil Neven-Spence, made an eve-of-poll flight to North Ronaldshay, the northermost island in the Orkney group. This was



the only occasion that any of the three candidates had visited the 300 inhabitants during the election.

Twice Sir Basil Neven-Spence had tried to reach the island by sea, but heavy seas and gales prevented his succeeding. He therefore used the *Auster*, although the day in question was far from perfect—in fact the mail and passenger steamer *Stola* was stormbound at Stromness and was unable to make her daily trip to the Scottish mainland.

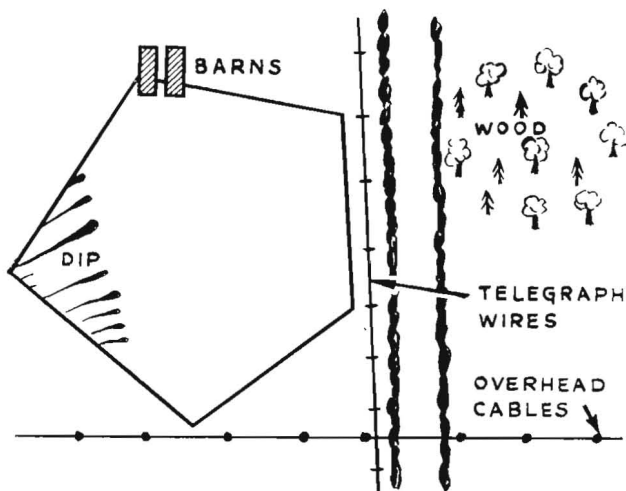
News from the Clubs

Cheltenham Aero Club

THIS CLUB, operating at Staverton Aerodrome, Cheltenham, utilises its *Auster Autocrat*, G-AIPW, in all the usual ways, and also in many unusual ways apparently. G-AIPW takes the club members from place to place smoothly and, thanks to an efficient silencer and remarkably good engine, quietly; even when taxiing she is a nice specimen, and is free from unwelcome undercarriage noises regardless of the rough state of the runways at Staverton.

She is fitted with a glider tow-bar, and, when weather conditions are favourable for gliding, the Gloucestershire Gliding Club makes good use of her services in this capacity.

During eleven weeks of the summer last year the Cheltenham Aero Club Secretary, F/Lt. A. Reeves, flew G-AIPW to and from his home *every day*. His private landing field leaves much to be desired; it is five-sided, 200 yards along each of the five sides, adjoins a main road that boasts particularly prolific telegraph wires with a wood of tall trees beyond the road, a set of low-power cables at right angles to the road, two barns at the opposite side of the



field from the cables, and a severe dip in one corner of the field.

As if these factors were not sufficient, during two of these eleven weeks there were bales of hay scattered about the field for the *Autocrat* to worm her way among when landing and taking-off. Also, it was generally approaching darkness before she landed each night. But she always did the job without fuss, and on occasion lifted three people plus canteen supplies out of the field.

G-AIPW is also used for limited panel instrument-flying instruction. For this purpose a special screen has been made that completely blanks off the pupil's vision of the outside world but leaves the whole instrument panel, and the compass, clearly visible. The only thing the pupil cannot see is the fuel gauge. But the instructor can see everything, *almost* everything anyway, for the upper half of the pupil must be excluded from this statement. The screens can be fitted, or removed, in a few seconds.

Yet another of her uses is as a navigational trainer. She has no drift recorder, but it is hoped to fit one shortly. The navigation pupil in the back seat has his paraphernalia around him. A handy socket is provided for plugging in an aldis lamp or sextant. The sextant readings, taken through the perspex roof, are recognised as being somewhat inaccurate because of uncorrected refraction, but the exercise of actually taking and reducing the shots is all that is expected.

On the occasion of the "Battle-of-Britain" Display at the Central Flying School the Club's C.F.I., F/Lt. Paul Bowry, was at one side of the aerodrome whilst the Mosquito which he was to fly in the Display was at the other side. So he just took "PW" and flew across the aerodrome and landed beside his Mossie: one wonders what would have happened had he tried to bring the Mosquito to the *Autocrat* in similar way . . . even C.F.S. Instructors have their limitations. But "PW" has been landed in some queer places at times just to show that she could do so—hangar aprons and short stretches of road on the aerodrome being favourite venues for demonstration.

"Hurry and tell the foreman this trench must be shored—it's dangerous."

"He knows. We're just digging him out."

A Guide to Repair Schemes, etc.

WE ARE SURE THAT OWNERS, operators and other interested people who apply to us for repair schemes, or for clearance of special installations, etc., do not receive the service they might expect because they fail to submit all the necessary information when making enquiries.

Perhaps if customers were fully aware of the Air Registration Board procedure, which has to be followed by the Company in clearing such repair schemes, etc., it would assist them to supply the necessary data.

Typical of the scanty information we generally receive would be a letter stating merely that "we have an *Auster* with a crack in a main plane spar at 3 ft. from the wing tip. Will you please send a repair scheme by return."

Such vital information as the mark of *Auster*, which spar is affected, precisely what form the crack takes (including apparent depth), and the registration number and C. of A number of the aircraft has been completely ignored. Furthermore, a sketch showing the damage is not often submitted.

The repair of a component such as a spar is regarded as a major item and, as such, any repair scheme prepared and approved by us also has to be submitted to the A.R.B. for final approval. It therefore follows that even though we may be able to prepare a repair scheme from somewhat scanty information, the A.R.B. must have full details in order to give their approval.

Consequently, instead of being able to give a customer service in a matter of hours, we usually have to write for further information, then write to the A.R.B. to pass on the information, and in all probability await their reply before sending the repair scheme to the customer.

If all the necessary information is supplied at the time of the first application, the procedure is so very much simplified. We prepare a drawing to cover the repair, which is duly signed and approved by ourselves, and a copy of the drawing is sent immediately to the customer so that repair work can proceed. For this we invoice a charge based on the number of hours spent in preparing the scheme. Obviously, the more complete the information supplied by the customer, the less time will it take our technical staff

to unravel the details, and therefore the smaller will be the charge made to the customer. At the same time as the drawing is sent to the customer, two copies are sent on to the A.R.B. Head Office. If, as is usually the case, the A.R.B. have no comments to offer, they will immediately pass one of their copies to the A.R.B. Surveyor resident in the customer's area, who will inspect the repair only on receipt of the drawing from his own Head Office. He will not accept the aircraft against the customer's copy of our drawing. This procedure is a safeguard, since should the A.R.B. have cause to query the repair scheme in any way, there is no danger that the machine will be inspected and flown until that query has been cleared.

The other copy of our drawing sent to A.R.B. is passed on to their Surveyor in this Company's area, who signs off our modification sheet which introduces the repair scheme during one of his subsequent visits to our Works. The whole thing can work very easily with no "red tape" providing the customer helps us to help himself by supplying all relevant information.

It is suggested that, if you have cause to write in for a repair scheme or similar information, you use the following table as a guide:—

1. State the mark of *Auster* affected.
2. State the registration markings of the aircraft.
3. State the C. of A. number.
4. Specify the component affected, e.g. port mainplane front spar, or port mainplane rear spar, as the case may be.
5. Submit, if possible, a sketch showing all available information regarding the damage, e.g. its location, extent of crack, extent of buckling and, particularly when applied to steel tubes, the depths of dents and whether the dents are severe or in the nature of smooth hollows. In this last case, particularly, smooth damage can usually be regarded as negligible and does not require any repair. Thus, by stating this information, the customer may save himself the expense of a repair scheme and repair work.

(Continued on page 16)



An attractive line-up of Auster T. Mk. 7 aircraft prior to delivery to the aircraft are from No. 2 Ferry Pool and under the leadership of familiar with the Mk. 7, it is a side-by-side seat training aircraft whose difference internally is that the Mk. 7 can be easily converted to an same ideal trainer

The Operation of Light Aircraft from Confined Spaces

NEITHER AUSTERS nor any other light aircraft are claimed to be able to land or take-off in an orthodox manner from the small back-garden surrounded by houses or trees. It seems though that some pilots like to try this out for themselves occasionally, if not from the garden, at least from certain unsuitable fields. However, the British Ministry of Civil Aviation has recently deemed it necessary to circularise pilots and advise them to use care when assessing the value of fields as suitable take-off points.

Austers in particular are extremely rugged and able to operate from confined areas quite inadequate for most other types of aircraft. Nevertheless, we certainly echo the Ministry's words, which are reproduced below. British pilots will doubtless be aware of the context of the notice, but, for the benefit of our overseas pilots, Information Circular No. 9/1950 reads as follows :—



services. The R.A.F. members who had been flown in by Anson to collect Lt. R. B. Sillars (second from the right). For those who may not be generally similar externally to the Air O.P. Anster Mk. 6. One big O.P. aircraft, but the Mk. 6 cannot be conversely adapted to give the performance as the Mk. 7.

1. A number of accidents have occurred to light aircraft when taking off from fields, and these appear to have been due largely to failure on the part of the pilots concerned to observe the elementary requirements of airmanship. Pilots of light aircraft are, therefore, reminded of the necessity for carefully assessing before take-off the prevailing conditions on the lines suggested in Paras. 2 and 3 below. It is recommended that the attention of pupils undergoing training for Private Pilot's licences should also be drawn to this point from time to time.

2. When operating from confined spaces particular attention should be paid to the length available for take-off and to the height of nearby obstructions in relation to the published performance of the aircraft. In this connection it should be borne in mind that the take-off performance can be adversely affected by a number of factors such as long grass, rough surfaces, uphill slopes, down-draughts which may exist in the lee of clumps of trees, buildings, ground undulations, etc., and high summer temperatures.

3. Pilots should ensure that they are familiar with the take-off procedure (especially the correct use of the flap system) for the particular mark of the aircraft type in question. Correct loading of the aircraft is also of special importance in these circumstances.

4. Information Circular No. 19/1949 is cancelled.

Need any more be said !

Of course, having become safely airborne don't start patting yourself on the back. Some pilots have apparently been getting a bit "giddy". But Eagle-eye knows all about it! So Information Circular No. 21/1950 states :

AIRCRAFT IN WHICH SPINNING IS PERMISSIBLE

1. There is evidence that some pilots have been performing spins in aircraft which have Certificates of Airworthiness in the Normal category only. This may be due to a misapprehension arising from the fact that recovery from the spin is a usual training exercise.

2. Pilots are reminded that intentional spinning is an aerobatic manoeuvre, and as such may only be carried out in aircraft which are certificated in the Aerobatic category, or in the Semi-Aerobatic category when such a manoeuvre is not prohibited by the terms of the Certificate of Airworthiness. This applies to all aircraft, including those used for training purposes.

Expedition to Queen Maud Land

SO FAR FIRST-HAND INFORMATION on the activities of the R.A.F. unit in Queen Maud Land is somewhat scanty, but we have obtained a few brief details which will doubtless prove of interest to most readers.

The *Norsel* reached Queen Maud Land, and a base was set up at about 71.03 deg. S., 11 deg. W. The huts for the winter quarters have been built and the *Norsel* left on the 20th February for Cape Town with the R.A.F. unit on board.

We are advised that details of the R.A.F. reconnaissance in the *Austers* Mk. 6 up till the 5th February are as follows :

1. On February 1st, S/L. Walford flew west approxi-



The R.A.F. unit which were the eyes of the Expedition to Queen Maud Land. Left to right: Cpl. W. B. Gilbey, Sq.-Ldr. G. B. Walford, Fl.-Lt. H. M. H. Tudor, D.F.C., Cpl. L. A. Quar and Sgt. P. D. Weston, B.E.M.

mately along lat. $67^{\circ} 30'$ from 6 to 12° W., following the outer margin of the ice.

2. On February 2nd, F/L. Tudor flew south from 12° W. with Captain Jakobsen as observer, and found scattered ice due south of the ship's position.

3. In the evening of February 3rd, after the *Norsel* had reached Cape Norvegis, S/L. Walford flew south and found that Seal Bay was covered by unbroken ice.

4. In the morning of February 4th, F/L. Tudor flew north-east and found open water along the barrier, and believed he could see possibilities for landing because the barrier was low.

5. On Sunday, February 5th, F/L. Tudor took Captain Gjaever up to an altitude of 2-3000 m., from which it could be ascertained that many square miles of the barrier were on the point of breaking off, so that landing would be impossible.



The above photograph shows the Norsel at Cape Town when petrol and oil for the Expedition was being loaded on the outward journey. One Auster is shown on top of the large crate, which houses another Auster with its wings removed. When the Norsel left London both aircraft were crated, as described in previous issues of the News.

No further news is as yet available, but it is understood that since this last date the pilots were very active in reconnoitring alternative landing places for the visit next year. The Royal Geographical Society has received a message of appreciation from the leader of the expedition for the part played by the R.A.F., and the excellent performance given by the *Austers*. This is of course in somewhat general terms, but it appears that so far as is known, the aircraft have given the fullest satisfaction, and it is almost entirely due to the air reconnaissance which had been carried out, that the expedition landed at all.

FLYING FANNY doesn't like her captain any more..... He told her she was full of the aviation spirit, and now someone else has told her that aviation spirit is gas !

Three-Seaters to Four-Seaters



In a past issue of the *News* it was pointed out that any 3-seater *Auster* could be converted into a 4-seater quite easily by installing a bench-type of seat in the back of the cabin. It is felt though that this statement may not give readers a clear idea of the revised arrangement. As the existing third seat faces the side of the aircraft many people might think that something similar applies if a fourth person is to be carried. This is not the case, but to obviate any doubt we publish the photograph above.

The front seat backs are shown hinged forward to illustrate that two people can quite comfortably be carried in the rear of the cabin, thereby making a very nice family plane.

Auster Personalities

No. 3. HAZEL RAYNS

IN THIS ISSUE we are including a personality whom you will probably never see or hear of unless you walk through our assembly hangar. For Hazel is typical of the many members of this Company who unobtrusively play an important part in the production of every *Auster*, but who never meet the public eye.

Our photograph shows Hazel pausing for a moment in her work of stringing fabric to a mainplane. You see, Hazel's job is to completely fabric-cover *Auster* mainplanes. This involves machining smaller fabric panels together to form a complete cover, and then securing this large cover to the mainplane structure by transparent dope and stringing. Before fixing the fabric Hazel also has to cover the rib booms with cellophane tape to prevent chafing etc. of the fabric.

Altogether this is quite a task, but Hazel, having spent seven of her nine years with the Company on this type of work, is very proficient and can, single-handed, complete a mainplane comfortably in one day.

Knowing that Hazel had been here nine years I said "That means you have almost grown up with Austers." "Hardly that," she replied, "I think most Austers have grown up with me." Which is quite a subtle distinction.

Hazel is married, so presumably after leaving Rearsby each day she is often faced with considerably more sewing at home. The prospect doesn't appear to prevent her remaining cheerful though. Perhaps it is her other interests such as reading, dancing, the cinema and roller-skating which keep her going.

When asked if anything amusing or even disastrous had happened at work she replied "Nothing that I can particularly remember—it is always interesting though." I believe something *did* happen once, but as it came in the "personal disaster category" I couldn't get to know much about it. I still wonder though what might be the result if anybody unfortunately happened to get a little too close to the blind side of a mainplane when Hazel was speedily pushing the stringing needles through.



Hazel Rayns

A Guide to Repair Schemes—Continued

6. Customers should not submit their own repair schemes or even details of the damage direct to the A.R.B., since if there are major items concerned, only the Company has complete access to the strength calculations. Therefore, only the Company can prepare the necessary repair scheme, and to send it to the A.R.B. in the first instance is merely causing unnecessary delay.

Three blood transfusions were necessary to save a woman patient's life at a hospital. A brawny young Scotsman offered his blood. The patient gave him £10 for the first pint, £5 for the second pint, but the third time she had so much Scots blood in her that she only thanked him.

CLASSIFIED ADVERTISEMENTS

FIRE !!

No. 3 A.M. Fire Extinguishers with A.R.B. release always available from stock. National Fire Protection Co. Ltd., Essex House, Station Road, Leatherhead, Tel. Leatherhead 2208. Essex Works, Feltham (Midx.).

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THE NEW HYDRA-STATIC TWO LEADING SHOE AIRCRAFT BRAKE



THIS brake consists of two self-aligning shoes operated by two wheel cylinders spaced diametrically opposite.

Each wheel cylinder has two pistons of a different form: one having a slot at right angles to the axis of the bore, which operates the shoe when the brake is used in forward rotation, and the other with the slot inclined at an angle to the bore which forms the abutment for the other shoe in similar condition.

This inclined slot has a predetermined angle which allows the shoe to accurately align itself to the drum as well as forming the abutment. The total shoe reaction is transmitted via a shoulder on the piston to the cylinder body.

By this arrangement, two-leading shoe operation is obtained in either direction, and greater power for a given input and greater stability is obtained.

TYPICAL FIGURES

$5\frac{7}{8}'' \times 1\frac{1}{2}''$ Approximate maximum dynamic torque 2,950 lbs. inches, at 60 lbs. per sq. inch lining drag. Two $\frac{5}{8}$ ins. diameter cylinders.

$7'' \times 1\frac{1}{2}''$ Approximate maximum dynamic torque 4,200 lbs. inches, at 60 lbs. per sq. inch lining drag. Two $\frac{3}{4}$ ins. diameter cylinders.

Master cylinder for use with the above brakes is a $1\frac{5}{32}$ ins. diameter x $1\frac{1}{2}$ ins. stroke design.

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