

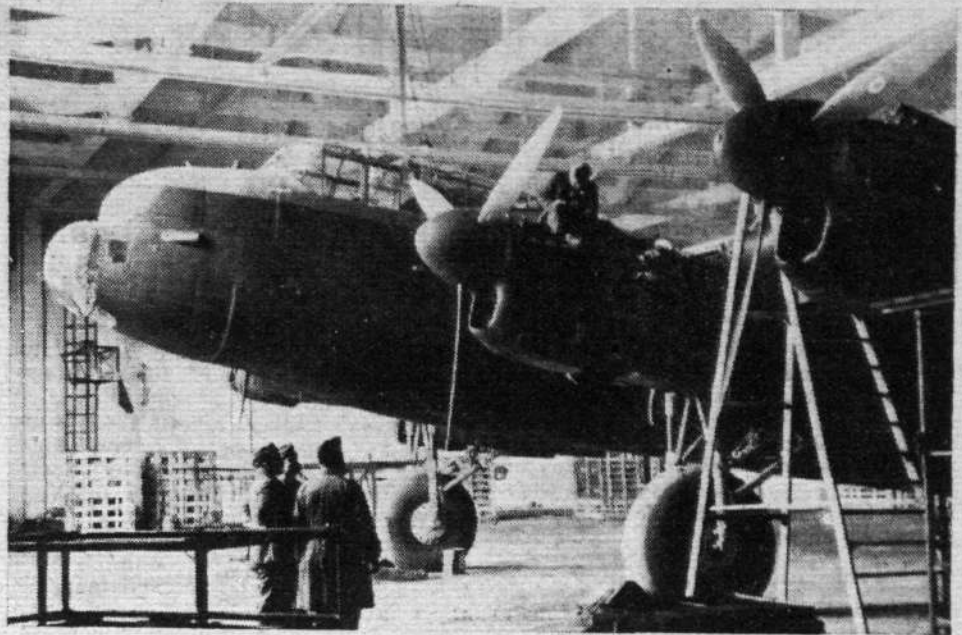
INVASION CLOSE-UP

With the Canadian-built Lancaster the story is rather different. About 1,000 man-hours' work has to be put in on each of them before they can take their place as front-line aircraft. The imported Lancaster has the Packard-built Rolls-Royce Merlin engines and Hamilton Standard airscrews. When the Lancasters fly the Atlantic on their delivery flight they do not carry any gun turrets and these have to be fitted by the maintenance units after arrival. It is this last fact which accounts for many of the man-hours.

When an aircraft is finished it is added to the list of available machines and is then allocated either for immediate use, temporary open-air storage or hangar storage. In the event of the latter a special maintenance programme is carried out in order that the aircraft may remain in operational condition.

To cope with the most urgent replacement of men and machines there are at the maintenance stations special Group Support Units which comprise a pool of aircraft and operational pilots who are posted as required to the group to which they are attached.

Now a final note on air cover. There was a time when we were losing ships at such a rate that the whole progress



Working on a Canadian-built Avro Lancaster. Turrets are fitted after arrival in Britain.

FIRST ATLANTIC FLIGHT CELEBRATED

THE first direct transatlantic flight by Capt. John Alcock and Lieut. Arthur Whitten-Brown, which was dealt with fully in last week's issue, was celebrated at an informal luncheon given in London by the directors of Vickers-Armstrongs, Ltd., and Rolls-Royce, Ltd., on June 13th. Sir Arthur Whitten-Brown was the guest of honour and paid a handsome tribute to those who had made the flight possible—Vickers, Rolls and, last but not least, the men who groomed the machine for the flight, and a special one to Air Comdre. H. G. Brackley, who, Sir Arthur said, had lent him an Abney level without which he could not have worked out his position from the few sights obtained.

Sir Arthur recalled that this country had fought for the freedom of the seas and had made of it a gift to a somewhat unappreciative world. He expressed the hope that as a result of peaceful agreement we should similarly have freedom of the air, and that the R.A.F. would be maintained at a strength sufficient to maintain that freedom in peaceful security.

Speeches were also made by Major Kilner (of Vickers-Armstrong's), Mr. Sidgreaves and Mr. Hives (of Rolls-Royce), Air Marshal Sir Frederick Bowhill (chief of R.A.F. Air Transport Command), and by Lord Rothermere.

Major Kilner, referring to post-war aviation, said he had sufficient confidence in our designers, pilots and workpeople not to be worried on that score, but he was perturbed about the start of the race and afraid that this country might be caught still putting on its running shoes. Not only so, but he thought we might be forgiven if we sometimes wondered whether the starting pistol had not already been fired before we had begun to change. Our future Empire should be built on the air just as the Empire in the past had been built on the mastery of the sea. Those in authority should look to it that aviation is not made a plaything in politics.

Sir Frederick Bowhill emphasised that the crossing of the Atlantic is not yet the routine affair which one might believe from the thousands of flights that have been made successfully. Every flight still has to be carefully studied and planned beforehand, but with good organisation the Atlantic had been flown day and night, winter and summer, sometimes in the most appalling weather.

Mr. Sidgreaves uttered a warning that unfortunately air transport looked like becoming a political and not a technical issue. Certain things could only be settled in agreement with other nations, such as freedom of air passage, freedom of faci-

ties, and freedom of air trade, but others could and should be settled now. Aviation demanded all the things which a recent civil service report admitted that the civil service lacked: initiative, imagination, enterprise, departure from precedent, and the taking of risks. With too much Government interference these things were likely to be missing. "The red light is beginning to glimmer," Mr. Sidgreaves said, and we should not let it happen for our own sake and for the sake of our children.

JET PROPULSION

RECENT attacks on Southern England by German pilotless jet-propelled aircraft have revived the subject in a somewhat acute form. Doubtless many of our readers will wish to study the many different forms of jets and gas turbines which have been suggested or developed from time to time. They could find no better guide to the subject than the book, *Gas Turbines and Jet Propulsion for Aircraft*, by G. Geoffrey Smith, M.B.E., the third edition of which is now ready and obtainable from our offices, price 6s. net, 6s. 4d. by post.

The third edition has been brought up to date by many additions, including chapters on the working cycle of turbine-compressor units, on the relative merits of jets and airscrews, and on boundary layer control, the latter being a feature with great possibilities but difficult of achievement except in conjunction with jets.

In a foreword to the third edition Sir Geoffrey de Havilland writes: The younger generation is watching the possibilities with eager interest. In this book, and in no other, all the steps leading to the present development are described clearly and with a background of knowledge of the fundamental requirements.

SPITFIRES' EIGHT-TO-ONE VICTORY

THREE Spitfire Squadrons of the R.A.F. Second T.A.F. scored an eight-to-one victory over the *Luftwaffe* a few days ago in one of the biggest fighter engagements so far in the battle of Normandy. Out of a formation of approximately thirty Fw 190s and Me 109s they shot down six Fw 190s and two Me 109s for the loss of one R.A.F. machine, the pilot of which was seen to bale out.

The fight lasted little more than fifteen minutes and the surviving enemy pilots lost no time in taking violent evasive action.

Some of the R.A.F. machines landed at one of the emergency landing strips in Normandy to refuel and rearm.