

# FROG

Registered Trade Mark

CAT. No. F.163

1/72nd SCALE

# VICKERS VIMY

## ASSEMBLY INSTRUCTIONS:

**NOTE:** Starboard Wing is not shown on the instruction sheet. (Same as Port Wing assembly).

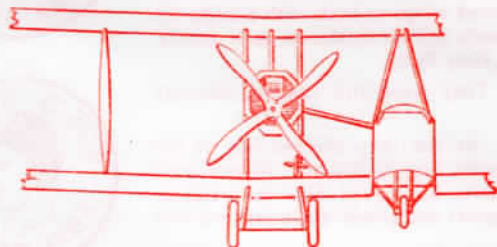
1. Locate and cement together Parts 1 to 6.
2. Locate and cement in position Parts No. 7. Allow to dry.
3. Locate and cement together Parts 8 to 14 to make engine assemblies, making sure that Parts 8 are able to rotate.
4. Cement and locate Parts 15 to 19 to engine assemblies Parts 8 to 14, then cement and locate the complete units in position with Part 20. See Figs. 1 and 2 for position.

It is recommended Use Frog or Britfix Paste. Paint all small parts. See manufacturer's instructions for details of paint required. Paint all small parts. See manufacturer's instructions for details of paint required.

5. Locate and cement in position.
6. Locate and cement in position.
7. Locate and cement in position. These are movable.
8. Locate and cement in position. These are movable.
9. Locate and cement in position.
38. To retain spread ends.

PAINT HELMET AND COAT SERVICE BROWN

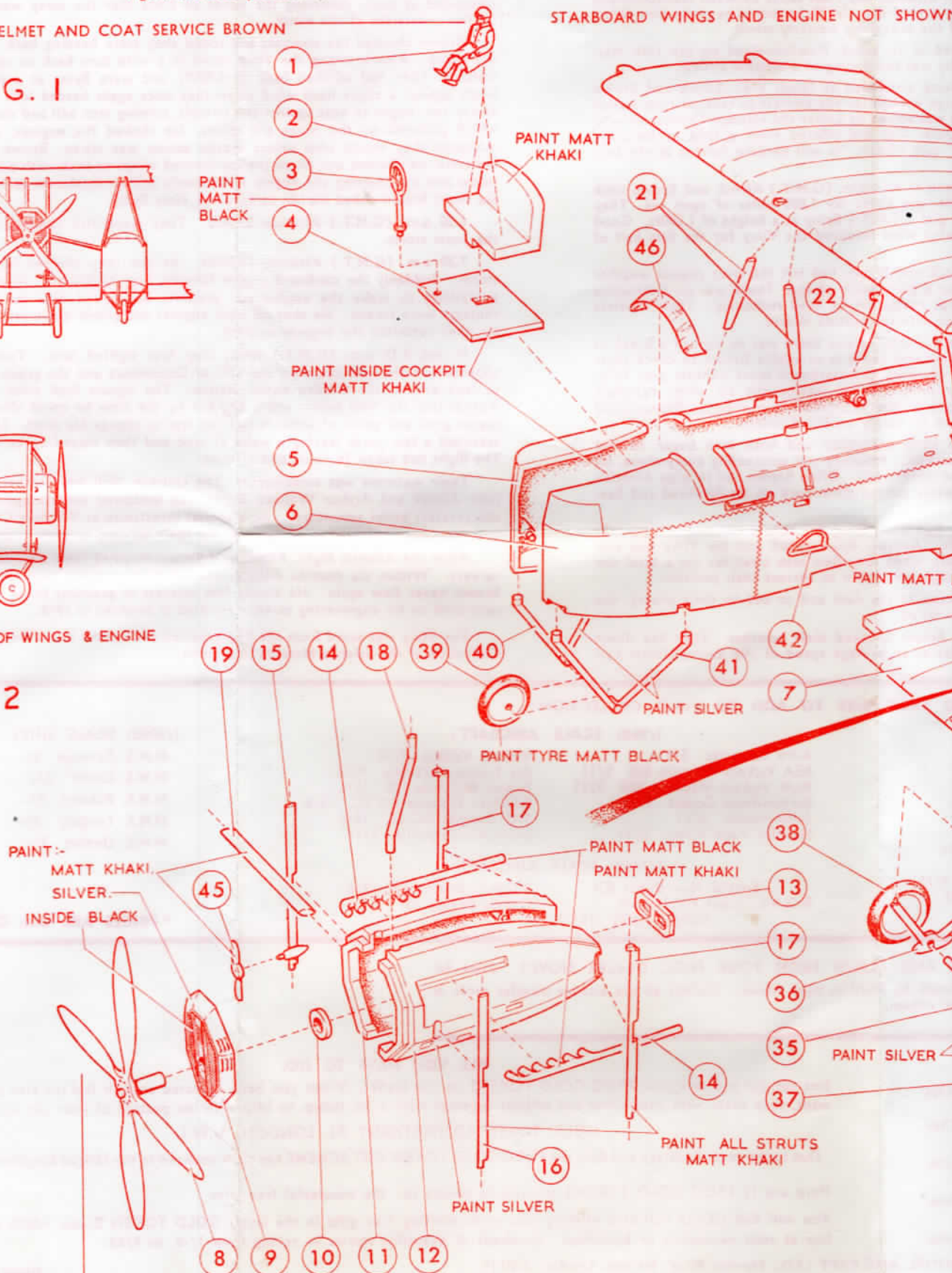
### FIG. 1



ASSEMBLED VIEW OF WINGS & ENGINE

### FIG. 2

PAINT SERVICE BROWN

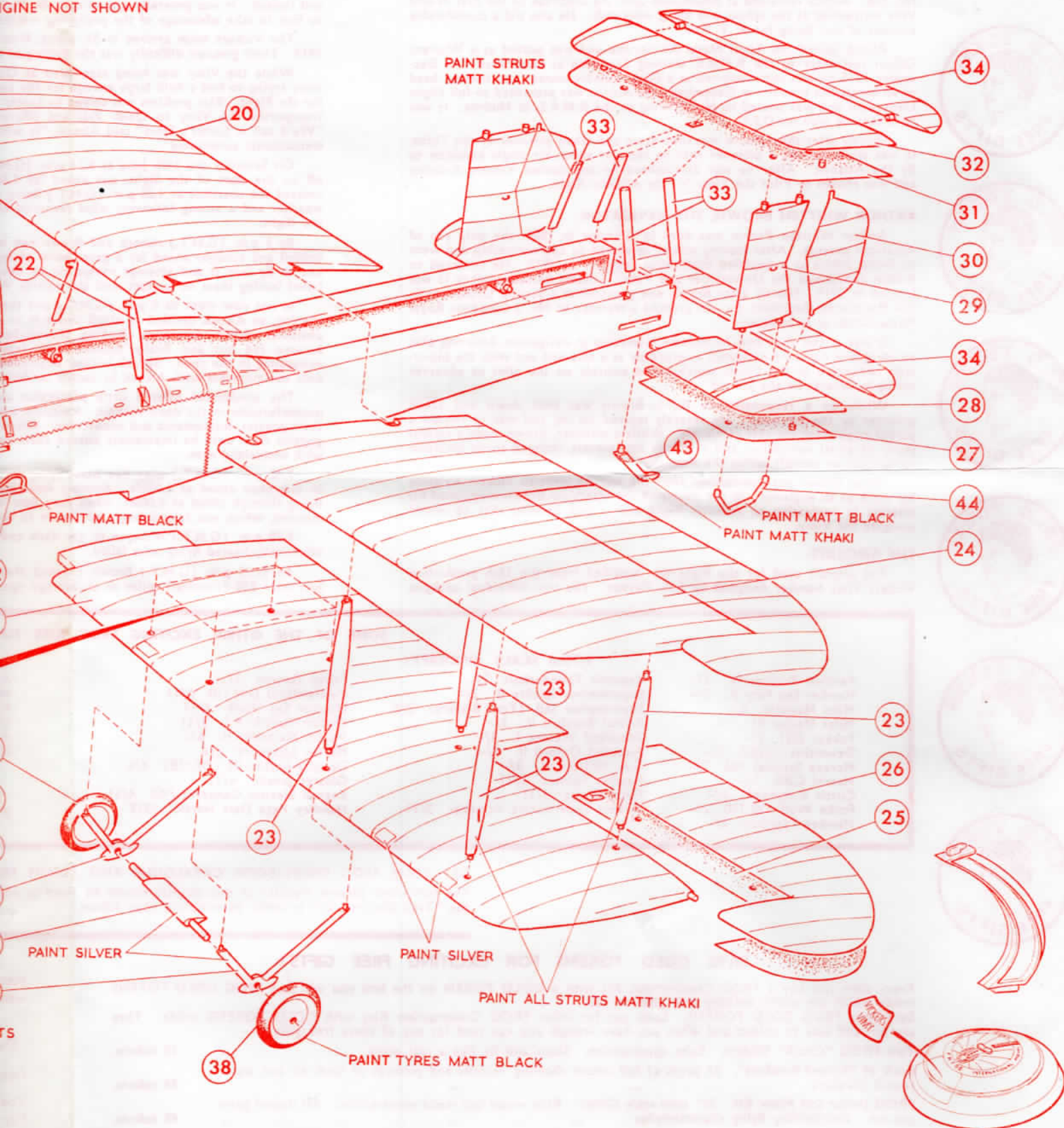


It is recommended that the instructions and exploded view are studied and assembly practised before commencing. Use Frog or Britfix Polystyrene Cement and Frog or Humbrol Paints. It may be necessary in some cases to mix two or more colours to obtain shades required. Paint all small parts before assembly. Keep cement well away from face, eyes and clothing. Our model is of the "Vimy" as constructed by the manufacturer but Parts 39, 40, 41 and 44 were not fitted to the aircraft for the Transatlantic flight.

1. Locate and cement in position Parts 21 and 22.  
 2. Locate and cement in position Parts 23 and 24. Allow to dry.  
 3. Locate and cement in position Parts 25 and 26, making sure that they are movable.  
 4. Locate and cement in position Parts 27 to 34, making sure that Parts 30 and 31 are movable.  
 5. Locate and cement in position Parts 35 to 37. Locate in position Parts 38 and 39 to retain spread ends of pins on Parts 35 with a hot knife blade.

10. Locate and cement in position Parts 39 to 41, making sure that Part 39 is movable.  
 11. Locate and cement in position Parts 42 to 46.  
 12. Apply transfer. Dip into water for about half a minute, slide off backing into position on stand base.  
 13. Cement together stand and locate arm of stand in slot on model.

ENGINE NOT SHOWN



The Vickers Vimy flown by Alcock and Brown was the first aircraft to fly the Atlantic non-stop from West to East.

### JOHN ALCOCK, THE PILOT.

John Alcock was born in Heaton Moor, a suburb of Manchester on 5th November, 1892. At the age of 16 he became an engineering apprentice, during which time he worked on and became interested in aircraft. In 1912 Alcock became permanent mechanic to Maurice Ducrocq, one of the French 'Aces' who ran a flying school at Brooklands, and proved himself to be a first-class aeroplane mechanic. Whenever possible, Alcock flew as a passenger and in a short time he was piloting an aeroplane himself.

On 16th November, 1912, he flew Ducrocq's Farmen biplane before the Royal Aero Club observers and was immediately granted his pilot's certificate No. 368. Alcock remained at Brooklands until the outbreak of the first World War instructing at the school and flying weekends. He also did a considerable amount of test flying for A. V. Roe.

Alcock joined the Royal Naval Air Service and was posted as a Warrant Officer instructor to the R.N.A.S. training Squadron at Eastchurch. In December 1915 he was commissioned as a Flight Sub-Lieutenant and became head of an aerobatics school. In December 1916 Alcock was promoted to full Flight Lieutenant and was posted to No. 2 Wing of the R.N.A.S. at Mudros. It was here that he won his D.S.C.

Shortly after this, Alcock was shot down and taken prisoner by the Turks. It was while he was a prisoner that he thought about his single ambition to fly the Atlantic. After he was demobilised he approached Vickers Aviation and was chosen to Pilot the Vimy for the Atlantic flight.

### ARTHUR WHITTEN BROWN, THE NAVIGATOR.

Arthur Whitten Brown was born in Glasgow in 1886, the only son of American parents. After leaving school he served an apprenticeship and went to South Africa as a qualified mechanical engineer in 1912. He returned to Britain and joined the Universities and Public Schools Battalion when it was formed in 1914. Shortly after Brown was gazetted as a Second Lieutenant in the Manchester Regiment, he was granted a transfer to No. 2 Squadron Royal Flying Corps as an observer.

It was at this time that he became interested in navigation, believing that an aeroplane could be navigated as precisely as a ship and not with the hit-or-miss navigation of the times, which relied entirely on the pilot or observer seeing landmarks on the ground.

While on a reconnaissance flight, Brown was shot down and taken prisoner by the Germans. He severely injured his leg and was to remain a partial cripple for the rest of his life. While a prisoner, Brown made a careful study of aerial navigation, and gradually his interest changed to an ambition to navigate an aircraft across the Atlantic.

When Brown was demobilised after the war, he went to Vickers Aviation for work as an engineer. In the course of the interview Brown mentioned his interest in navigating an Atlantic flight and it was decided that he would navigate the Vimy.

### THE AIRCRAFT.

The aircraft used for the flight was modified from the 13th production Vickers Vimy bomber designed by Rex Pierson. The two individual cockpits

were combined into one, to enable the crew's skid was removed and replaced by a wheel. The fuselage was strengthened by extra fuel tanks. In case of a forced landing the aircraft was fashioned as a buoyancy raft, and a small cockpit was added to the tail section to hold emergency supplies.

The specifications of the Vimy were: wing span 100 ft., cruising speed 90 m.p.h., landing speed 45 m.p.h., powered by two Rolls-Royce Eagle Mark VIII engines developing 360 h.p. each.

### THE FLIGHT.

The Daily Mail had offered a prize for the longest distance in one stage and the shortest distance was 1,880 miles from Newfoundland to Ireland. It was generally agreed that the flight was to East to take advantage of the prevailing westerly winds.

The Vickers team arrived in St. Johns, Newfoundland on June 19, 1919. Their greatest difficulty was the finding of a suitable field.

While the Vimy was being assembled at the field, the team were trying to find a field large enough for the aircraft. This problem was solved by Lester, who had been transported the Vimy to Quidi Vidi and offered to offer them a field. "We'll call it Lester's Field" said Alcock, "it was a transatlantic aerodrome".

On Saturday the 14th June at 4.13 p.m. (G.M.T.) the aircraft took off on the start of the flight, and ahead lay 1,880 miles. It crossed the coastline at 4.28 p.m. (G.M.T.) flying in clear weather and a strong following wind favoured the flight.

By 5 p.m. (G.M.T.) Alcock and Brown had reached the coast and behind and straight ahead lay a great bank of fog. They tried to fly into it and attempt navigation by daylight but failed leaving them no contact with the outside world.

It was now close to 6 p.m. (G.M.T.) and the fog was so thick Alcock decided to climb above it to get a position. While they were climbing, the stars became red hot and finally melted away, leaving the cockpit exhausting in the open. Speech became impossible and they could only communicate with Alcock by hastily scribbled messages.

The windscreen offered little protection and was uncomfortable in the open cockpit. Moisture vaporized on their goggles, instruments and windscreen. Often the goggles were clear until he impulsively pushed them with unshielded eyes.

At 7.40 p.m. (G.M.T.) they had been flying for 10 hours in unbroken cloud at 5,000ft. Another hour passed flying through cloud at 6,000ft. when they flew for 15 minutes, which was long enough for Brown to see the coast.

At 9.30 p.m. (G.M.T.) it began to get dark and the electrically-heated flying suits failed.

At 12.25 p.m. (G.M.T.) Brown checked the instruments and found they had just over 850 (nautical) miles at an average speed



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le the crew to sit side by side. The nose  
a wheel. The bomb spaces were replaced  
forced landing in the sea, one of the tanks  
and a small compartment was fitted into the  
plies.

y were : wing span 67ft., length 42ft. 8ins.,  
speed 45 m.p.h., range 2,440 miles, and  
e Mark VIII. water cooled twelve cylinder

prize for the first aircraft to fly the Atlantic  
nce was 1,880 miles between Newfoundland  
d that the flight should be made from West  
revailing westerly winds.

St. Johns, Newfoundland on the 13th May,  
the finding of a suitable airfield.

sembled at Quidi Vidi, Alcock and Brown  
ough for the aircraft to take off fully loaded  
olved by Lester the Haulage Contractor who  
Vidi and offered them a field of his own.  
Alcock, "it will become famous as the first

4.13 p.m. (G.M.T.) Alcock and Brown took  
l ahead lay 1,880 miles of open sea. They  
(G.M.T.) flying at a height of 1,200ft. Good  
ind favoured the Vimy for the first half of

d Brown had left the clear coastal weather  
reat bank of fog. There was no alternative  
avigation by dead reckoning. Their wireless  
n the outside World.

(G.M.T.) and there was no sign of a break in  
b above it to enable Brown to check their  
ing, the starboard inner exhaust pipe split,  
ed away, leaving the six inner cylinders  
came impossible from then on, Brown could  
hastily scribbled notes.

protection and both men began to feel  
. Moisture was condensing everywhere, on  
screen. Often Brown had to wipe Alcock's  
pushed them back on his forehead and flew

een flying for over 3 hours and were still  
nother hour passed and the Vimy was still  
hen they flew into clear sky for a brief ten  
or Brown to correct their position.

o get dark and to add to their misery, the  
d.

n checked their position. They had flown  
an average speed of 106 knots, almost half

the distance. From now on there could be no turning back. To save straining  
the engines, Alcock took the Vimy down to 4,000ft.

3 a.m. (G.M.T.) Alcock and Brown had been airborne for close on eleven  
hours and all was well. Ireland was barely 600 miles ahead of them, and they  
were flying at a good average speed of 105 knots.

The Vimy was dodging in and out of the clouds when suddenly they flew  
into clear sky only to be confronted by a towering mass of black storm clouds.  
They flew straight into the centre of the storm and were tossed about like a  
falling leaf. At this point disaster nearly overtook them, the Vimy stalled  
tilted over and dropped in a steep spiral dive.

At 60ft. above the water they emerged into clear air. In the same instant  
Alcock centralised the controls and pushed open the throttles. The Vimy  
responded at once, skimming the waves so close that the spray was beating  
on the undersides of the wings.

Brown checked the compass and found they were heading back to New-  
foundland. Alcock swung the Vimy round in a wide turn back on course for  
Ireland. They had climbed back to 6,500ft. and were flying at a steady 90  
knots against a slight head wind when they once again headed into a storm.  
Heavy rain began to beat against the aircraft, turning into hail and then snow,  
which gathered on the wings and struts. Ice choked the engines, in a few  
moments they would stop unless drastic action was taken. Brown did not  
hesitate, he climbed out on to the ice-covered wings to hack with a knife the  
snow and ice covering the engine instruments and air intake on each nacelle.  
Six times Brown risked his life to keep the Vimy flying.

6.20 a.m. (G.M.T.) Altitude 9,400ft. They were still climbing through  
the snow storm.

7.20 a.m. (G.M.T.) Altitude 11,000ft. At last they climbed out of the  
storm. Suddenly the starboard engine faltered then back-fired. Alcock tried  
everything to make the engine run properly but found that the radiator  
shutters were frozen. He shut off both engines and glided down into warmer  
air, then restarted the engines at 500ft.

It was 8.15 a.m. (G.M.T.) when they first sighted land. Two specks  
appeared on the horizon, then the hills of Connemara and the green expanse  
of land around the Clifden Radio Station. The Signals Staff tried to warn  
Alcock that the field below was a bog but by the time he could identify the  
marsh grass and pools of water it was too late to change his mind. The Vimy  
travelled a few yards leaving a wake of mud and then tipped up on its nose.  
The flight had taken 16 hours and 27 mins.

Their welcome was tumultuous. The courage, skill and perseverance of  
John Alcock and Arthur Whitten Brown had bestowed success upon one of  
the greatest aerial adventures. At a special investiture at Windsor Castle the  
two men were knighted in recognition for their services to their country.

After the Atlantic flight, Alcock and Brown resumed their own respective  
careers. Within six months Alcock was killed in a flying crash in France,  
Brown never flew again. He slowly lost interest in practical flying and con-  
centrated on his engineering career. He died in Swansea in 1948.

The Vimy was saved from the bog, repaired and is now in the Aeronautical  
Collection of the Science Museum in London.

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VIMY