



The Letters Business of The Post Office

Feature Release

Public Relations Department

130 Old Street
LONDON
EC1V 9PQ

Fax 071 320 7437
Telephone 071 320 7443

Written for: General Distribution
Subject: Royal Mail Stamps
Title: DISCOVERING SCIENCE - ON ROYAL MAIL STAMPS
Length: 620 words
Author: Brian Hickman

Science 1

Nowadays we live in a technological age where electricity power, computers, jet flight and radar - a by-product of which has been the microwave oven - are essential features of the modern world that are taken for granted.

But, less than two centuries ago, aspiring young inventors such as Michael Faraday, known as the "father of electricity", and computer pioneer Charles Babbage, were exploring new horizons that stretched the frontiers of science.

Much later, British inventiveness was exemplified when Frank Whittle pioneered the development of the jet engine, and Robert Watson Watt discovered the principle of radar - a crucial element in the defence of Britain in the Second World War.

The ingenuity of some of Britain's best-known inventors is now captured on a set of four Royal Mail stamps which go on sale from March 5, devoted to pioneering scientific and engineering achievements.

EYE CATCHING

The eye-catching stamps mark the bicentenaries of the births of Faraday and Babbage and also the 50th anniversaries of the first flight of Whittle's jet engine and the use of radar during the last war.

Said Mr Keith Fisher, General Manager of Royal Mail Stamps: "These stamps reflect some of the great scientific achievements which have spurred Britain's technological growth and added new dimensions to our lives.

"The Royal Mail is delighted to recognise, through this issue of stamps, the wealth of invention that has played such a vital role in the nation's progress."

Two talented designers, Peter Till and John Harwood, have created the stamps. John Harwood also designed the recent issue of gallantry stamps.

NEW CONCEPTS

The two 22p stamps in the set feature profiles of Faraday and Babbage with representations of their work, illustrating their ability to create entirely new concepts that had far-reaching impact on scientific developments.

Faraday, the son of a poor blacksmith, left school at 13 and became an apprentice bookbinder. His vital asset was an active imagination which, coupled with a fascination for electricity and chemistry, led him to discover the principle of both the electric motor and electric generator.

He then capped these outstanding achievements by defining the laws that link electricity and chemistry. Thus Faraday made the fundamental discoveries that underlie almost all our uses of electricity.

DAWN OF COMPUTERS

Babbage displayed a similar ability to create entirely new concepts. Initially he invented a machine called the Difference Engine to compile mathematical tables.

He then conceived the idea of a better machine which could perform not just one mathematical task but any kind of calculation.

The Analytical Engine, which he called it, was the forerunner of today's computers, but there was no support for it at the time. Not until the Second World War did the computer finally appear.

It was the last war which also sped the development of both the jet engine and radar. Radar, shown on the 31p stamp, was the brain-child of Robert Watson Watt who was interested in the way radio waves reflected from objects - the basis of his concept.

CRUCIAL ROLE

With government backing, Watson Watt headed a team that developed the first practical radar system, which played a crucial role in Britain's defence when war broke out in 1939.

Other British scientists greatly improved radar with the invention of the cavity magnetron, which enabled the device to be carried aboard aircraft. Many discoveries have unexpected spin-offs - the magnetron led to the microwave oven.

Whittle, who left school at 16 to become a fitter in the RAF, realised in 1929 that high-speed flight would be possible only with an engine that expels a powerful jet of air.

He had to battle with officials to develop his invention, and at one stage his patent lapsed for want of £5 to renew it. But, despite many engineering problems in development, Whittle succeeded and the first flight of his jet engine - depicted on the 37p stamp - took place in 1941. His pioneering work led to the modern propulsion systems used in aviation today.