

Imprint page

Claire Welch and
Dr Jonathan Little
to be credited as
authors

Half title page



Contents

Introduction	6
A History of the Steam Engine	34
Early Engines	72
A New Way to Travel	106
Famous Locomotives	142
How It Works	182
The Big Four	228
The Fall of Steam Railways	270
Index	300

Main: These locomotives (No 6016 King Edward V, No 5993 Kirby Hall and No 6976 Graythwaite Hall) are ranged around the turntable at Ranelagh Bridge depot, near London's Paddington station in 1953.



Introduction

It could never have been predicted in the early 19th Century that, over 200 years later, British steam trains would ultimately come to be viewed with so much affection and nostalgia.



Steam engines were not originally intended to carry passengers, but freight; railways were at first derided as blots on the landscape, and in no way regarded as the scenic wonders they later became - integral to, and enlivening, the British countryside (with all their accompanying architectural splendours - in the form of picturesque and imposing branch and mainline stations, and hundreds of innovative, cleverly-designed bridges, tunnels and viaducts).

Indeed, the very concept of these fearsome mechanical monsters scything their way through the unspoiled British countryside, carrying fire in their bellies and relentlessly belching out smoke and steam, was certainly regarded with abhorrence by the great 19th Century landowners - until the day finally arrived when these same landowners not only came to admire the thrilling sight of a passing steam train, but to demand their own local, or even private, railway station.

Main: Steam travel experienced a revival in the second half of the 20th Century as enthusiasts began rescuing locomotives and rolling stock and writing about preserving the heritage. This modern version of the Orient Express is still extremely popular in the 21st Century.





Furthermore, early steam engines, carriages and rolling stock, were very far from safe – the rough ride they often provided was occasionally terminated by such major disasters as derailments (often due to cracked rails), rock falls, all-too-frequent boiler explosions, tunnel crashes, and sometimes even bridge collapses – most notably culminating in the confidence-shattering Tay Bridge disaster of 1879, resulting in the loss of an entire train and of the lives of all 75 souls believed to have been aboard. But after every such tragedy, important lessons were learned, and safety and engineering improved.



Main: A drawing from the Illustrated London News depicting steam launches and a dice's barge searching for bodies and survivors of the Tay Bridge disaster in Dundee. Seventy five passengers died when their train was plunged into the Tay as the bridge collapsed underneath them in stormy weather on New Year's Eve 1879.

Above: A man balances on the edge of the Tay Bridge to view the disaster scene.



Above: Scottish engineer James Watt (1736-1819) was an inventor who was at the forefront of the development of steam engines – a vital driving force of the Industrial Revolution. In 1774, together with his business partner Matthew Boulton (1728-1809), he established a factory manufacturing steam engines in Soho, near Birmingham, of which this is a view.



By a process of the most relentless technical innovation, and through constant improvement and evolution – with numerous patents relating to steam engines (and indeed railways in general) being applied for each year from the late 1700s onwards – every aspect of Britain’s sophisticated railway system was to lead the world technologically for much of the 19th Century, and well into the 20th. Thanks to a cycle of continuous economic investment (often speculative), British railways did much to drive the increasingly frenetic pace of life and industry – both fuelled by, and fuelling, the boundless entrepreneurial spirit of the age – such that British steam ultimately became a crucial factor in the development of businesses both great and small, and indeed in all the other complex regional and national enterprises that helped to build and maintain the largest and most sophisticated commercial trading empire that the world had yet seen.



Main: The Industrial Revolution that saw a transition to new manufacturing processes began in Britain around 1760 and within a few decades had spread to Western Europe and the United States.