## BRITISH EXPRESS LOCOMOTIVE DEVELOPMENT

1896-1948

## EDWARD CECIL POULTNEY

O.B.E.

Member of the Institution of Locomotive Engineers

Foreword by

R. A. RIDDLES, C.B.E.

Member for Mechanical and Electrical Engineering The Railway Executive

LONDON

GEORGE ALLEN AND UNWIN LTD
RUSKIN HOUSE MUSEUM STREET

## CONTENTS

		PAGE
	Author's Preface	6
	Acknowledgments	8
	Some Early Recollections	15
CHAPTE	R .	
1.	The Railway Races of 1895	19
2.	The Caledonian 'Dunalastair'	29
3.	Early Four-Cylinder Locomotives	34
4.	The Atlantic Type Locomotive	40
5.	Six-Coupled Locomotives	44
6.	The Coming of the Big Engine	49
7.	Four-Coupled Express Passenger Locomotives	56
8.	The Keystone of the Arch	66
9.	The 'North Star'—Swindon 1906	70
10.	Some Notable Locomotives 1903-1911	76
11.	Boiler Proportions and Locomotive Performance	84
12.	Compound Locomotives	92
13.	Superheated Steam	104
14.	Boiler Steam Pressures	112
15.	Notable Locomotives 1910-1920	120
16.	Locomotives of 1921-1930	127
17.	Boiler Proportions, Value Sizes and the Balancing Problem	. 150
18	Modern High Powered Locomotines	1.0