

THE RAILWAYS OF SPAIN

BY

GEORGE L. BOAG

AUTHOR OF

“MANUAL OF RAILWAY STATISTICS.”

LONDON :

THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W. 1

1923

CONTENTS.

CHAPTER I.

Origin and Development—Growth of the Companies and their Financial Position—The Railways and the Government	1
---	---

CHAPTER II.

The Principal Lines and Connections—Time-tables and Speeds—Passenger Accommodation and Transport of Merchandise—Stations	19
--	----

CHAPTER III.

Staff	33
---------------	----

CHAPTER IV.

Statistics	45
--------------------	----

CHAPTER V.

Fares and Rates and other charges	63
---	----

CHAPTER VI.

Permanent Way, Signals, Rolling Stock	80
---	----

CHAPTER VII.

The Future of the Railways—Government Intervention—Nationalisation	93
--	----

CHAPTER VIII.

The Railways of Portugal	107
----------------------------------	-----

LIST OF ILLUSTRATIONS AND DIAGRAMS.

Atocha Station, Madrid	<i>Frontispiece</i>
Madrid Turning Shop	Facing page 1
Bridge over Guarrizas River	" " 8
Bridge over the Montesa Mayor	" " 9
Bridge at Castejon	" " 17
Bridge over the Jucar	" " 18
El Chorro Gorge	" " 19
Railway Map	Pages 20 and 21
Northern Railway of Spain Maximum Engine Loads	Facing page 24
Longitudinal Sections: Paris - Irun; Irun- Madrid	" " 25
Murcia Station, Madrid, Saragossa and Alicante Railway	" " 32
Carthagena Station, Madrid, Saragossa and Alicante Railway	" " 32
Sabadell Station, Madrid, Saragossa and Alicante Railway	" " 33
Seville Station, Madrid, Saragossa and Alicante Railway	" " 33
Organisation of a Spanish Railway	" " 34
Amounts paid for Compensation, Great Northern Railway of Spain	" " 45
Merchandise transported by the Madrid, Sara- gossa and Alicante Railway, 1913 and 1918	" " 54
Amounts paid as Compensation for Lost and Damaged Goods	" " 59
Typical Cross Section of Modern Double Track Section of Rail, Section of Rail Joint and Plan showing Spacing of Sleepers.. .. .	} Facing pages 80 and 81
Cross Sections of the Bridge on Jalon River	}
Armoured Concrete Bridge over Double Track.. .. .	
Minimum Construction and Maximum Loading Gauges	Facing page 82
Disc Signals and Point Indicators	" " 83
Locomotives	87 and facing 92
Passenger Carriages	88 " " 93