

Cambridge University Press  
 978-0-521-10975-8 - *Sheffield Steel and America: A Century of Commercial and Technological Interdependence, 1830-1930*  
 Geoffrey Tweedale  
 Table of Contents  
[More information](#)

---

## CONTENTS

List of tables and map	ix
Preface	xi
Acknowledgements	xiv
Abbreviations	xvi

Introduction: Sheffield and the genesis of the American trade	I
---	---

### PART ONE: SPECIAL STEEL TECHNOLOGY

1 The birth of the American crucible steel industry	13
2 Science and art: Sheffield and American crucible steel technologies contrasted	31
3 The response to a new technology: electric steelmaking	46

### PART TWO: THE DEVELOPMENT OF SPECIAL STEELS

4 The rise of alloy steels	57
5 The evolution of high-speed steel	66
6 Contrary to nature: the discovery of stainless steel	75

### PART THREE: SHEFFIELD STEELMAKERS AND TOOLMAKERS IN AMERICA

7 Transatlantic special steels I: the crucible steelmakers	87
8 The rise and decline of Sheffield's high-speed steel trade with America, 1900–30	100

Cambridge University Press

978-0-521-10975-8 - Sheffield Steel and America: A Century of Commercial and Technological  
Interdependence, 1830-1930

Geoffrey Tweedale

Table of Contents

[More information](#)

viii

*Sheffield steel and America*

9	Transatlantic special steels II: steel casting enterprises	112
10	Quality pays? Sheffield and American cutlery manufacture	128
11	Innovation and adaptation: the evidence of the sawmaking trades	144
12	Men <i>versus</i> machines: the story of the file	158
13	'How Sheffield lost the American trade': aspects of the marketing of Sheffield products in America	165
	Conclusion: a century of commercial and technological interdependence in steel	184
	Appendix: US production of steel ingots and castings by processes (gross tons) 1867–1930	188
	Notes	190
	Bibliography	263
	Index	289