

Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)

The Cambridge Manuals of Science and
Literature

COAL MINING

Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)

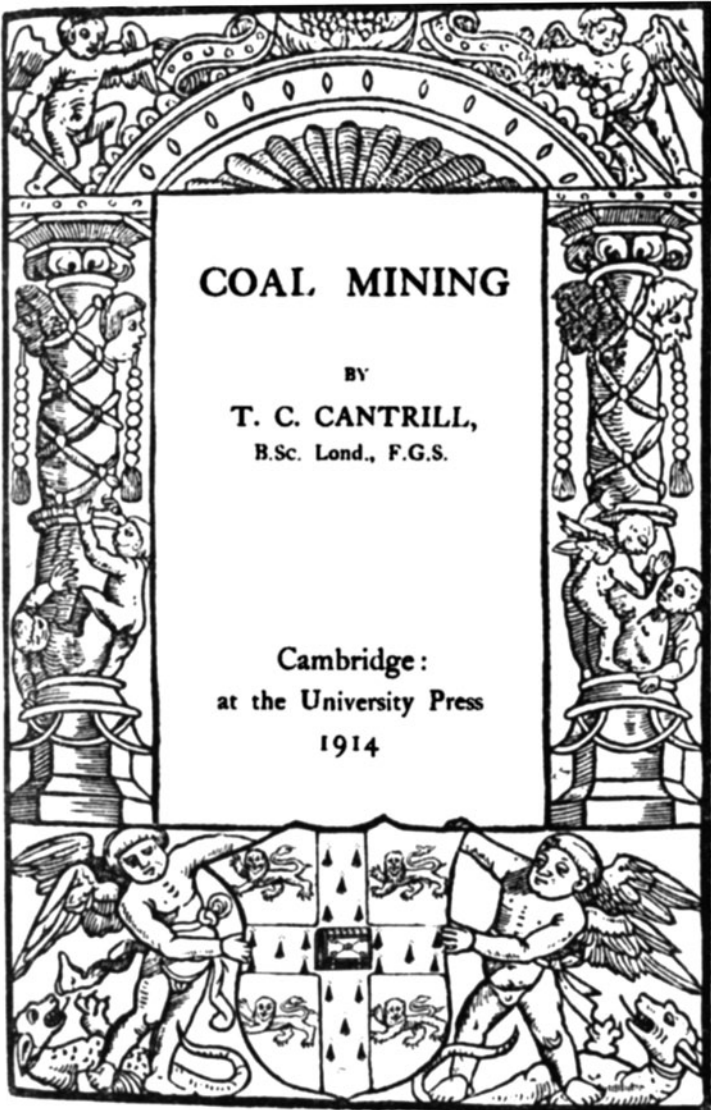
Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)

Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)



The Alexandra Pit of the Wigan Coal and Iron Co., Ltd., Wigan

Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)



Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Tokyo, Mexico City

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org
Information on this title: www.cambridge.org/9781107605817

© Cambridge University Press 1914

First published 1914
First paperback edition 2011

A catalogue record for this publication is available from the British Library

ISBN 978-1-107-60581-7 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

With the exception of the coat of arms at the foot, the design on the title page is a reproduction of one used by the earliest known Cambridge printer, John Siberch, 1521

Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)

PREFACE

IN the following pages an attempt has been made to place before the general reader a slight sketch of the principles of Coal Mining. Not to take too narrow a view of the subject, in the earlier sections I have outlined the evolution of the industry from its primitive beginnings, and have indicated here and there some of the far-reaching effects it has had on domestic and mechanical affairs. I have also introduced such geological considerations as have a direct bearing on the main subject.

The history of Coal Mining in Britain has been written by Mr R. L. Galloway in some fascinating volumes to which I am indebted for the particulars in Chapter I. In the section dealing with leases and royalties I have had the help of Mr H. J. Randall, of Bridgend, who is conversant with the customs obtaining in South Wales and elsewhere. In the Bibliography is given a list of works laid under contribution for the present purpose, and to them the reader is referred for fuller details. The Frontispiece has been kindly supplied by the Wigan Coal and Iron Company, Ltd.

T. C. CANTRILL.

22 December 1913

Cambridge University Press
978-1-107-60581-7 - Coal Mining
T. C. Cantrill
Frontmatter
[More information](#)

TO
DANIEL JONES, Esq., J.P.,
OF DONINGTON, ALBRIGHTON, SALOP;
FATHER OF WYRE FOREST GEOLOGY

CONTENTS

CHAP.		PAGE
I.	INTRODUCTION AND HISTORICAL REVIEW . . .	1
II.	VARIETIES, GEOLOGICAL AGE AND ORIGIN OF COAL	37
III.	THE COAL MEASURES AND THE COAL-SEAM . . .	52
IV.	COALFIELDS, FOLDS AND FAULTS	61
V.	PROSPECTING AND BORING	69
VI.	WINNING THE COAL	77
VII.	WORKING THE COAL	95
VIII.	VENTILATION, DRAINING AND LIGHTING . . .	109
IX.	UNDERGROUND HAULAGE, WINDING, AND SURFACE- ARRANGEMENTS	124
X.	LEASES AND ROYALTIES, ADMINISTRATION, AND STATE REGULATIONS	136
	BIBLIOGRAPHY	150
	INDEX	152

LIST OF ILLUSTRATIONS

	PAGE
Alexandra Pit, Wigan	<i>frontispiece</i>
Fig. 1. The three stages of mining. (After R. L. Galloway)	9
„ 2. A South Staffordshire horse-gin. (From a Geological Survey Photograph)	15
„ 3. Edge-rail and plate-rail	25
„ 4. Coalfields	63
„ 5. Overthrust faults	65
„ 6. Normal faults	66
„ 7. Methods of winning the coal	79
„ 8. Shafts, main levels and inclines	87
„ 9. Recovering the coal beyond a fault	91
„ 10. Recovering the coal beyond a fault	92
„ 11. 'Face' and 'end'	97
„ 12. Bord-and-pillar working. (After C. Pamely)	99
„ 13. Longwall working	104
„ 14. Square-work	107
„ 15. Ventilating levels and bords	115
„ 16. Underground haulage	127

Note.—The Frontispiece shows, on the left, the screens with the winding-shaft (which is also the downcast air-shaft) behind them. The upcast air-shaft and fan-house are not included in the view. The head-gear on the right belongs to a disused pit to the shallower seams.