

**CLOCK AND WATCH WORK.  
FROM THE EIGHTH EDITION OF  
THE ENCYCLOPÆDIA  
BRITANNICA, WITH ALL THE  
LATEST IMPROVEMENTS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649482436

Clock and Watch Work. From the Eighth Edition of the Encyclopædia Britannica, with All the Latest Improvements by Edmund Beckett

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**EDMUND BECKETT**

**CLOCK AND WATCH WORK.  
FROM THE EIGHTH EDITION OF  
THE ENCYCLOPÆDIA  
BRITANNICA, WITH ALL THE  
LATEST IMPROVEMENTS**



CLOCK  

---

  
AND  
  
WATCH WORK.

FROM THE  
  
EIGHTH EDITION OF THE ENCYCLOPÆDIA BRITANNICA.

WITH ALL THE LATEST IMPROVEMENTS.

EDINBURGH:  
ADAM AND CHARLES BLACK.  
MDCCLV.

*186. c. 10.*

•  
**ERRATA.**

Page 44, Fig. 10 inverted.

Page 56, line 6 from bottom, insert not after should.

## NOTE.

---

The reader is requested to bear in mind that this is simply a reprint,—or rather a separate issue of the article with this title in the Eighth Edition of the *Encyclopædia Britannica*.

The article *Dipleidoscope* is in like manner reprinted as an appendix, being intimately connected with the main subject of the book.

**Erratum.**

**Page 18, line 20, for 4<sub>1</sub> read 40.**



## CONTENTS.

	Page
INTRODUCTION, . . . . .	1
COMMON EIGHT-DAY CLOCK, . . . . .	3
PENDULUM, Theory of the, . . . . .	5
Revolving or Conical, . . . . .	10
Suspension, . . . . .	12
Shape of Bob, . . . . .	13
Regulation for Time, . . . . .	14
Compensation for Temperature, . . . . .	15
Zinc and Iron (Westminster Clock), . . . . .	17
Wood and Lead, . . . . .	18
Mercurial, . . . . .	19
Other kinds, . . . . .	19
Compensation for Spring, . . . . .	20
ESCAPEMENTS, . . . . .	20
Crown-Wheel, . . . . .	21
Anchor Recoil, . . . . .	22
Dead Escapements, . . . . .	24
Theory of, . . . . .	25
Effects of Friction, . . . . .	31
Pin-Wheel, . . . . .	32
Single-Pin, . . . . .	34
Denison's Three-legged, . . . . .	35
Remontoire, or Gravity Escapements, . . . . .	36
Mudge's, . . . . .	37
Theory of them, . . . . .	38
Mechanical conditions, . . . . .	42
Bloxam's, . . . . .	44
Denison's, . . . . .	46

GOING BARRELS, . . . . .	Page 48
Harrison's, . . . . .	49
Bolt and Shutter, . . . . .	50
Denison's, . . . . .	51
EQUATION CLOCKS, . . . . .	52
STRIKING WORK, Locking Plate, . . . . .	53
Repeating, . . . . .	55
Quarters, . . . . .	58
ALARUMS, . . . . .	60
WATCHMAN'S CLOCK, . . . . .	61
SPRING CLOCKS, . . . . .	62
American Clocks, . . . . .	63
TURRET CLOCKS, . . . . .	63
Royal Exchange, . . . . .	65
Great Exhibition and King's Cross, . . . . .	67
Train Remontoires, . . . . .	68
By Gravity, . . . . .	70
Denison's Spring Remontoire, . . . . .	72
Cast-iron Wheels, . . . . .	75
Cathedral Clock, with Quarters, . . . . .	76
Do., on 4 Belts, . . . . .	78
Mode of Fixing, . . . . .	81
Dials, Concave, . . . . .	83
Size of, . . . . .	84
Illumination, . . . . .	85
Great Westminster Clock, . . . . .	87
ELECTRICAL DIALS, . . . . .	90
Shepherd's, . . . . .	91
Dent's, . . . . .	92
Denison's Dial work, . . . . .	94
Clocks, Shepherd's, . . . . .	95
Time Ball, . . . . .	97
WATCHES and CHRONOMETERS, . . . . .	98
Mainspring and Fusee, . . . . .	99
Solid Key, . . . . .	100
Geneva Stop, . . . . .	101
Regulation of Spring, . . . . .	102
Balance Springs, . . . . .	104
Timing for position, . . . . .	104
Compensation Balance, . . . . .	105
Chronometrical Thermometer, . . . . .	107

## CONTENTS.

vii

	Page
Secondary Compensation, . . . . .	108
Effe's, . . . . .	110
Dent's, . . . . .	111
Lossby's, . . . . .	112
Glass Balance Springs, . . . . .	113
Dent's Prismatic Balance, . . . . .	114
Chronometer trials at Greenwich, . . . . .	115
WATCH ESCAPEMENTS, numerous, . . . . .	115
Vertical, . . . . .	116
Lever, . . . . .	117
Horizontal, . . . . .	119
Duplex, . . . . .	120
Detached, or Chronometer, . . . . .	122
REPEATERS, . . . . .	125
WATCHES Winding without a Key, . . . . .	126
Self-Winding and Pedometers, . . . . .	128
DIAL-MARKER, for observations, . . . . .	129
Split seconds, . . . . .	130
TEETH OF WHEELS, . . . . .	130
Mode of describing, general rule for, . . . . .	133
Lantern pinions, . . . . .	134
Driver and Banner, . . . . .	135
STRIKING CAMS, . . . . .	137
OIL, . . . . .	138
DIFFRIDOSCOPE, . . . . .	140
MERIDIAN MARK, . . . . .	143