

**ON THE CONSTRUCTION OF FIRE-
ENGINES AND APPARATUS, THE
TRAINING OF FIREMEN, AND THE
METHOD OF PROCEEDING IN
CASES OF FIRE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649031214

On the Construction of Fire-Engines and Apparatus, the Training of Firemen, and the Method of Proceeding in Cases of Fire by James Braidwood

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

JAMES BRAIDWOOD

**ON THE CONSTRUCTION OF FIRE-
ENGINES AND APPARATUS, THE
TRAINING OF FIREMEN, AND THE
METHOD OF
PROCEEDING IN CASES OF FIRE**

12/13/12
74

ON THE
CONSTRUCTION
OF
FIRE-ENGINES AND APPARATUS,
THE TRAINING OF FIREMEN,
AND THE
METHOD OF PROCEEDING IN CASES OF FIRE.

BY JAMES BRAIDWOOD,
MASTER OF FIRE-ENGINES IN EDINBURGH.

Now come the Men of Fire to quench the Fire.—*Rejected Addresses.*

EDINBURGH:
SOLD BY
BELL & BRADFUTE, AND OLIVER & BOYD;
AND BY W. J. TILLEY, FIRE-ENGINE AND HOSE MAKER,
No. 166, BLACKFRIARS' ROAD, LONDON.

1830. ✓

P R E F A C E.

NOT having been able to find any work on Fire-engines in the English language, I have been led to publish the following remarks, in the hope of inducing others to give farther information on the subject.

FOR the style of the work I make no apology ; and as I presume no one will read it except for the purpose of gaining information, my aim will be obtained if I shall have succeeded in imparting it, or in directing the public attention to the advantage which may be derived from the systematic training of Firemen.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

CONTENTS.

	Page
DESCRIPTION of a Fire-engine,	1
On the Keeping of ditto,	13
On Engine-houses,	15
Description of Articles attached to each Fire-engine in Edinburgh,	17
On the Different Modes of supplying Engines with Water,	36
Description of a Fire-cock,	40
— On the Training of Firemen,	44
On the Means of Escape from Fire,	57
— On the Causes of Fires, and the Means of preventing them,	64
General Remarks,	91

APPENDIX.

1. General Regulations to be observed at Fires in Edinburgh,	99
2. Regulations for the Edinburgh Firemen,	104
3. Statement of Expense of the Edinburgh Fire-engine Establishment,	107
4. Report by the Commissioners of Police on the Edinburgh Fire-engine Establishment, from October, 1824, to October, 1826, with Abstract of Expense for these two Years,	110
5. Report by ditto, from October, 1826, to October, 1827,	121
6. Report by ditto, from October, 1827, to October, 1828,	125
7. Report by ditto, from October, 1828, to May, 1829,	129
8. A Table of the Number and Nature of Fires which have occurred since 1824,	132
9. Extract from the Scots Magazine of 1813,	133
10. List of Articles belonging to the Edinburgh Fire-engine Establishment,	134

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that the data management processes remain effective and aligned with the organization's goals.

ON
THE CONSTRUCTION
OF

FIRE-ENGINES AND APPARATUS.

DESCRIPTION OF A FIRE-ENGINE.

IN order that the reader may have a distinct idea of a fire-engine, I shall here endeavour to give a description of such a one as I conceive best adapted to general purposes,—the description being chiefly taken from those made by W. J. Tilley, fire-engine maker, No 166, Blackfriars-Road, London.

Plate 1st is a perspective view of a fire-engine.

The elevation, plan, and section, in figs. 1 of plates 2, 3, and 4, represent a fire-engine of six-inch barrels and seven-inch stroke. The cistern marked A in the figures above referred to, is made wholly of oak. The upper work B, and side-boxes or pockets C, are of Baltic fir. The sole D, (in figs. 1 of plates 3 and 4,) upon which the barrels stand, and which also contains the valves, is of cast iron, with covers of the same material, which are screwed down, and the joints made good with

common or artificial leather. The pieces E, at each end of the cast-iron sole D, in figs. 1 of plates 3 and 4, are of cast brass, and screwed to the cast-iron sole D, with a joint the same as above. In one of these pieces is the suction-cock F, and to the other is attached the air-vessel G, made of sheet-copper, joined at R, and attached to the piece E, by a screw. The exit-pipe H, in figs. 1 of plates 2 and 4, is attached to the under side of the casting E, by a swivel-screw. The valves I, in fig. 1, plate 4, are of brass, ground so as to be completely water-tight. The barrels K, in figs. 1 of plates 3 and 4, are of cast brass. The bushes L, in figs. 1 of plates 2, 3, and 4, are of the same material. The engine is set on four grasshopper springs M. The hind axle is kneed at the cistern. The shafts O, of the levers P, are of lancewood. The box S, in fig. 1, plates 2 and 4, is used for keeping wrenches, cord, &c.: it has a false bottom, and the space T below it, is used for keeping the materials necessary for a fire-escape, viz. a chain-ladder of 80 feet, a large canvass bag, and two strong belts; in the fore part of the cistern A, and the box B above the cistern, the hose is kept: the directors and suction-pipes are carried in the side-boxes or pockets C; the rest of the tools and materials are kept along with the above-mentioned articles, or strapped on the outside of the engine, in such situations as not to interfere with the working. Y is a bar for locking the shafts, to prevent them from interfering with the wheels, when the engine turns.