

Specification of James Robertson : furnaces or fire-places.

Contributors

Robertson, James.

Publication/Creation

London : Great Seal Patent Office, 1855 (London : George E. Eyre and William Spottiswoode)

Persistent URL

<https://wellcomecollection.org/works/bfarrjwp>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



A.D. 1854 N^o 1532.

S P E C I F I C A T I O N

OF

JAMES ROBERTSON.

FURNACES OR FIRE-PLACES.

L O N D O N :

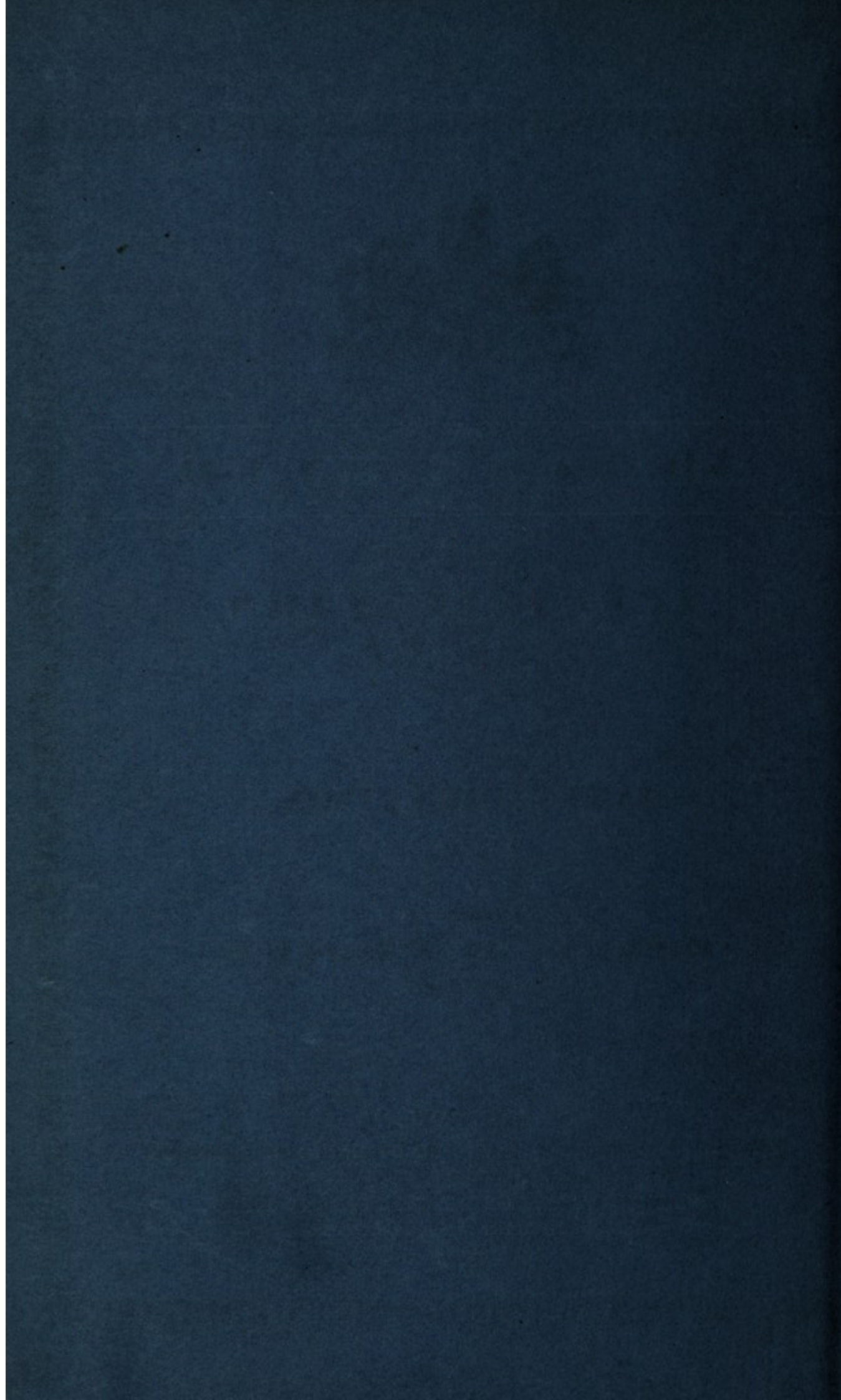
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1855.





A.D. 1854 N° 1532.

Furnaces or Fire-places.

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by James Robertson at the Office of the Commissioners of Patents, with his Petition, on the 12th July 1854.

I, JAMES ROBERTSON, of Kentish Town, in the County of Middlesex, Cooper, do hereby declare the nature of the said Invention for "**IMPROVE-
5 MENTS IN THE CONSUMPTION OR PREVENTION OF SMOKE**" to be as follows:—

This Invention relates to a peculiar arrangement of furnaces or fire-places for effecting the consumption of smoke and unconsumed products of combustion, wherein the fire is contained in a much smaller superficial space than in ordinary furnaces, and a greater degree of heat will be obtained, whilst the products
10 to be consumed are brought nearer to the mouth of the furnace, and are consequently more under the controul of the fireman. The furnace bars employed are much shorter than usual, and are situated lower down, in order that a greater depth of fuel may be carried thereon. The bridge is made to overhang the bars considerably in the direction of the furnace door, and immediately in
15 front of this overhanging portion of the bridge is fitted a moveable inclined grating or series of bars, which oscillate upon a fixed centre at the back of the stationary furnace bars. This grating is inclined at considerable angle over the burning fuel in the direction of the furnace door, with which it is connected by a chain, which is so arranged, that on opening the door to supply fuel, the
20 grating is caused to oscillate slightly on its fixed centre, in the direction of the furnace door, and press upon the fuel at the back. On feeding the fire, the fuel

Robertson's Improvements in the Consumption or Prevention of Smoke.

is thrown back against the inclined grating, which, when the door is closed resumes its original position, by the aid of a weighted lever or other suitable arrangement. By this means a space is always left between the face of the grating and the mass of fuel, whereby a free ingress for the oxygen is afforded. The air enters partly through the furnace bars in the ordinary manner from the ash pit, and partly by a separate and distinct pipe, which has an expanded mouth, in the front of the ash pit, and communicates with air passes formed in the front of the bridge, immediately behind the oblique or inclined grating, herein-before described. The air which enters from the back impinges upon the surface of the fuel, and, from the peculiar form of bridge, the heated air and gases from the back of the furnace will have to traverse forward under the projecting portion of the bridge before they can escape into the flues, and by this means they will encounter the smoke and unconsumed gases from the front portion of the furnace, which will thereby be effectually consumed before entering the flues.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1855.