

## **Specification of Frederic Howorth Edwards : preventing smoke from furnaces.**

### **Contributors**

Edwards, Frederic Howorth.

### **Publication/Creation**

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A.D. 1871, 14th MARCH. N° 672.

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

OF

FREDERIC HOWORTH EDWARDS.

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PREVENTING SMOKE FROM FURNACES.

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LONDON:

PRINTED BY GEORGE F. EYRE AND WILLIAM SPOTTISWOODE,

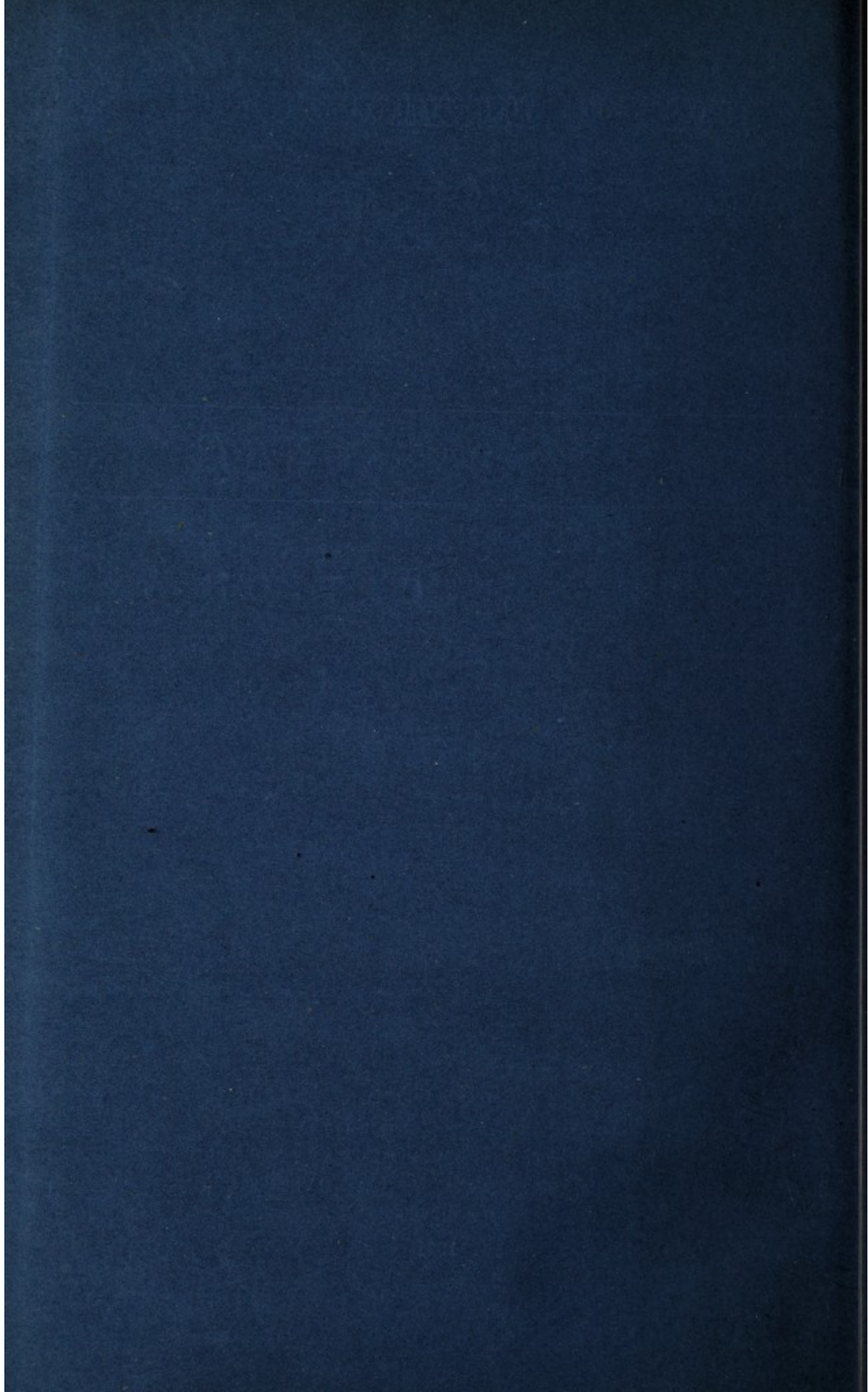
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1871.





A.D. 1871, 14th MARCH. N<sup>o</sup> 672.

## Preventing Smoke from Furnaces.

*(This Invention received Provisional Protection only.)*

PROVISIONAL SPECIFICATION left by Frederic Howorth Edwards at the Office of the Commissioners of Patents, with his Petition, on the 14th March 1871.

I, FREDERIC HOWORTH EDWARDS, of 15, Cambridge Street, Newcastle-  
5 on-Tyne, Civil Engineer, do hereby declare the nature of the said In-  
vention for "IMPROVEMENTS IN THE PREVENTION OF SMOKE FROM CLOSED  
FURNACES," to be as follows:—

Over the fire-doors of the furnace or any other convenient place  
above the fuel I introduce an outer bell-mouthed tube having one end  
10 partly open to the air and the other freely open to the furnace. A tube  
of smaller dimensions and connected with a boiler or other convenient  
source supplies a blast of steam, which, by displacing the air from the  
bell-mouthed tube, induces a strong current from the atmosphere, which  
being deflected on and amongst the rising unconsumed gases becomes  
15 thoroughly mixed with them at a high temperature, causing their  
complete combustion, thereby preventing the emission of smoke from  
the chimney.

I prefer to set the tubes at such an angle that the blast would strike  
the top of the bridge of the furnace if not biassed by the draught of the

*Edwards' Improvements in Preventing Smoke in Furnaces.*

furnace. Or, I can dispense with the outer tube and induce and deflect a current of air from one or more orifices by one jet.

Cocks and valves may be employed with or without self-acting machinery to regulate the admission of steam or air, and it may be advisable in some cases to vary the form and number of such tubes. 5

## CLAIM.

The prevention of smoke by deflecting a strong current of air on the unconsumed gases through the agency of a steam blast pipe, substantially as herein described.

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1871.