

**Specification of George Duncan and William John Jellicorse :
smoke-consuming furnace.**

Contributors

Duncan, G.
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A.D. 1857 N° 2544.

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

OF

GEORGE DUNCAN
AND
WILLIAM JOHN JELlicORSE.

—
SMOKE-CONSUMING FURNACE.
—

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

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Price 8d.

1858.





A.D. 1857 N° 2544.

Smoke-consuming Furnace.

(This Invention did not proceed to the Great Seal.)

PROVISIONAL SPECIFICATION left by the said George Duncan and William John Jellicorse at the Office of the Commissioners of Patents, with their Petition, on the 5th October 1857.

We, **GEORGE DUNCAN** and **WILLIAM JOHN JELlicORSE**, trading as Co-
5 partners, Printing Machine Manufacturers and Engineers, of Lichfield Street, Birmingham, in the County of Warwick, do hereby declare the nature of our said Invention for "**AN IMPROVED SMOKE-CONSUMING FURNACE**," to be as follows (that is to say) :—

The peculiarities of our Invention will be understood by the following
10 description :—At the back of the fire we construct a bridge, over which the flame and smoke passes. Behind the bridge we form a somewhat large air chamber and dust receiver, from which the smoke and flame passes to a flue ; and which flue, a little beyond its mouth, we divide into two, the one descending, and the other ascending, the descending one being made to take a
15 circuitous course before again emerging into the ascending flue, and at this point the smoke is consumed, for, inasmuch as the flame and heated air pass away through the upper flue, the smoke is impelled forward through the lower one, and coming in contact in a side or opposite direction with the flame complete combustion is there produced ; so that after the necessary heat is got
20 up the application of additional coal or act of raking the fire makes not the slightest difference, as the whole of the smoke that passes over the bridge is consumed at the junction of the flues, rendering high stacks in many instances entirely unnecessary. We sometimes use a valve or damper for regulating the amount of heat that may be required.

A.D. 1857 No. 2514



PROVISIONAL SPECIFICATION
William John Belliss at the Office of the Patent Office
with their Petition on the 21st October 1857

WE GEORGE DUBOIS and WILLIAM JOHN BELLISS of Birmingham, in the County of Warwick, do hereby declare the nature of our said invention for "An Improved Smoke-consumption Apparatus" (that is to say) :-

The peculiarities of our invention will be understood by the following description:—At the back of the tin we construct a bridge, over which flame and smoke pass. Below the bridge we form a combustion chamber and heat reservoir, from which the smoke and flame pass into a chamber and which has a little beyond its mouth, we divide into two descending, and the other ascending, the remaining one being made for a descending course below again emerging into the ascending chamber at this point the smoke is consumed, for instance as the tin is used in a way through the upper flue, the smoke is forced to pass through the lower one, and coming in contact with a fire or opposite the chimney, the complete combustion is there produced; so that after the smoke has run up the application of additional coal is not of taking the tin out of the slightest difference, as the whole of the smoke that passes over the bridge is consumed at the junction of the flues, rendering high stacks unnecessary, and entirely unnecessary. We sometimes use a glass or other material for the amount of heat that may be required.