

Specification of Richard Witty : furnaces and stoves.

Contributors

Witty, Richard.

Publication/Creation

London : Queen's Printing Office, 1854 (London : George E. Eyre and William Spottiswoode)

Persistent URL

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A.D. 1834 N° 6681.

SPECIFICATION

OF

RICHARD WITTY.

FURNACES AND STOVES.

LONDON:

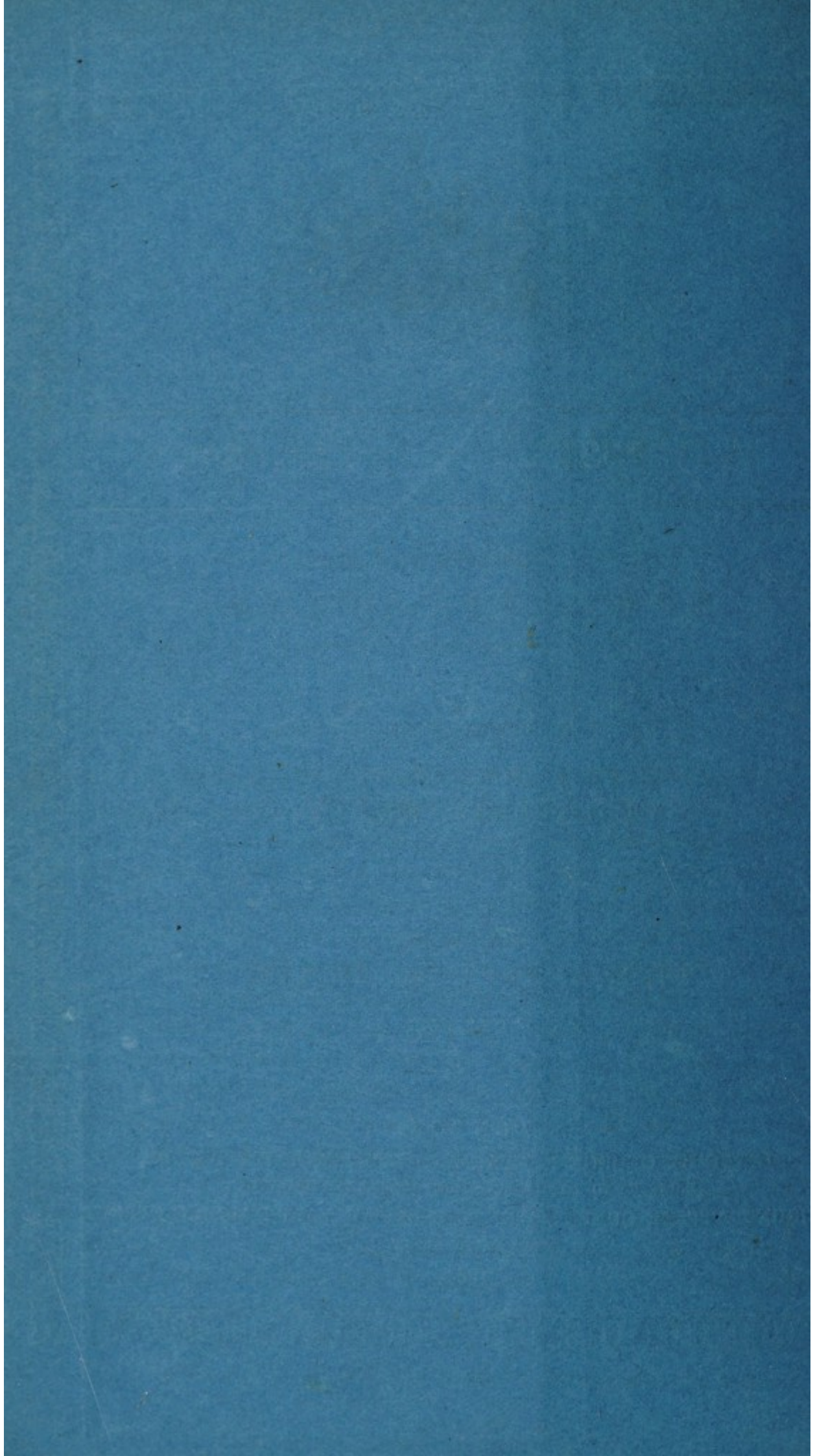
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE QUEEN'S PRINTING OFFICE, EAST HARDING STREET,
NEAR FLEET STREET.

Price 5d.

1854.





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Furnaces and Stoves.

WITTY'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, RICHARD WITTY, of Hanley, in the County of Stafford, Civil Engineer, send greeting.

WHEREAS His most Excellent Majesty King William the Fourth, by His Letters Patent, under the Great Seal of Great Britain, bearing date at
5 Westminster, the Twenty-fifth day of September, in the fifth year of His reign, did, for Himself, His heirs and successors, give and grant unto me, the said Richard Witty, His especial licence that I, the said Richard Witty, my exors, admors, and assigns, or such others as I, the said Richard Witty, my exors, admors, and assigns, should at any time agree with, and no others, from time
10 to time and at all times, during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England and Wales, and the Town of Berwick upon Tweed, my Invention of "**AN IMPROVEMENT OR IMPROVEMENTS IN SAVING FUEL AND BURNING SMOKE, APPLICABLE TO FURNACES AND STOVES;**" in which Letters Patent there is contained a proviso obliging
15 me, the said Richard Witty, by an instrument in writing under my hand and seal, particularly to describe and ascertain the nature of my Invention, and in what manner the same is to be performed, and to cause the same to be inrolled in His Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent,
20 reference being thereto had, will more fully and at large appear.

Witty's Improvements in Saving Fuel and Burning Smoke, &c.

NOW KNOW YE, that in compliance with the said proviso, I, the said Richard Witty, do hereby declare that the nature of my Invention, and the manner in which the same is to be performed, are described and ascertained by the following descriptions thereof, reference being had to the Drawings accompanying these Presents, that is to say:—

My Invention of "An Improvement or Improvements in Saving Fuel and Burning Smoak, applicable to Furnaces and Stoves," consists in the adaptation of certain earthen tubes to the flue of the furnace of a boiler or stove for the purpose of intercepting the smoke and other vapours before they reach the chimney, in order to effect a more complete combustion of the fuel and of the sooty and inflammable matters arising therefrom, which will cause a considerable increased intensity of the heat, and consequently an economization in the quantity of fuel required to be consumed. One mode which I have found eligible in adapting these earthen tubes to the furnace of a steam boiler is shewn in the accompanying Drawings, Figure 1 being a longitudinal section of the boiler, its furnace, and flues; and Figure 2, a transverse section of the same. A is the furnace; B, the bridge of the furnace; C, the flue carried round the boiler in the ordinary way. D represents a number of open tubes placed longitudinally one upon another on the bridge of the furnace, in directions leading from the furnace to the flue. These tubes I make of Stourbridge fire clay, or they may be made of some of the known compounds of plumbago, pumice stone, and other materials which are least liable to be vitrified by heat. I prefer these tubes to be of cylindrical forms, but do not intend to confine myself either to that shape or to any particular dimensions. From nine inches to twenty-four inches in length, and from half an inch to three inches internal diameter, I have found to answer the purpose; the longer the tube, of course the larger should be its bore, and the clay or other material may be from one quarter of an inch to an inch in thickness. The space between the bridge B and the under parts of the boiler should be nearly, if not quite, filled up by the tubes D, placed one upon another. The draught from the furnace to the chimney must, therefore, pass through and between these tubes, which tubes will, by that means, soon become red hot. The soot and inflammable gases evolved from the furnace being, by the draught of the chimney, brought in contact with the heated surfaces of these tubes, the combustible parts will be immediately consumed, and nothing allowed to pass off into the chimney but the mere indestructible vapour. As the method of moulding the fire clay and other materials into tubes, and the subsequent drying and baking of them for use is well understood, and forms no part of my Invention, I do not consider it necessary to explain that process; but, in conclusion, I desire it to be understood

Witty's Improvements in Saving Fuel and Burning Smoke, &c.

that I claim as my Invention the placing of tubes, or forming of narrow or contracted channels, of whatever shape, of fire brick or other suitable material between the furnace and the chimney of a boiler or stove, or other heating apparatus, for the purpose of intercepting the progress of the smoke and other
 5 combustible matters, in order that by the intense heat of their surfaces the soot and inflammable materials evolved from the furnace may become consumed, and a saving of fuel be thereby effected.

In witness whereof, I, the said Richard Witty, have hereunto subscribed my name and affixed my seal, this Twenty-sixth day of January, in the
 10 year of our Lord One thousand eight hundred and thirty-five.

RICH^d (L.S.) WITTY.

Signed, sealed, and delivered by the within-named Richard Witty in the presence of

15

W^m DUTTON, Sol^r, Henley.

AND BE IT REMEMBERED, that on the Twenty-sixth day of January, in the year of our Lord 1835, the aforesaid Richard Witty came before our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and everything therein contained and specified, in form above
 20 written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

DUTTON, Extra.

Inrolled the Seventh day of February, in the year of our Lord One thousand eight hundred and thirty-five.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
 Printers to the Queen's most Excellent Majesty. 1854.

