

## **Specification of Robert King and Kenneth Robson : consuming smoke.**

### **Contributors**

King, Robert.  
Robson, Kenneth.

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A.D. 1861, 18th May. N° 1277.

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

OF

ROBERT KING AND KENNETH ROBSON.

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CONSUMING SMOKE.  
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LONDON:

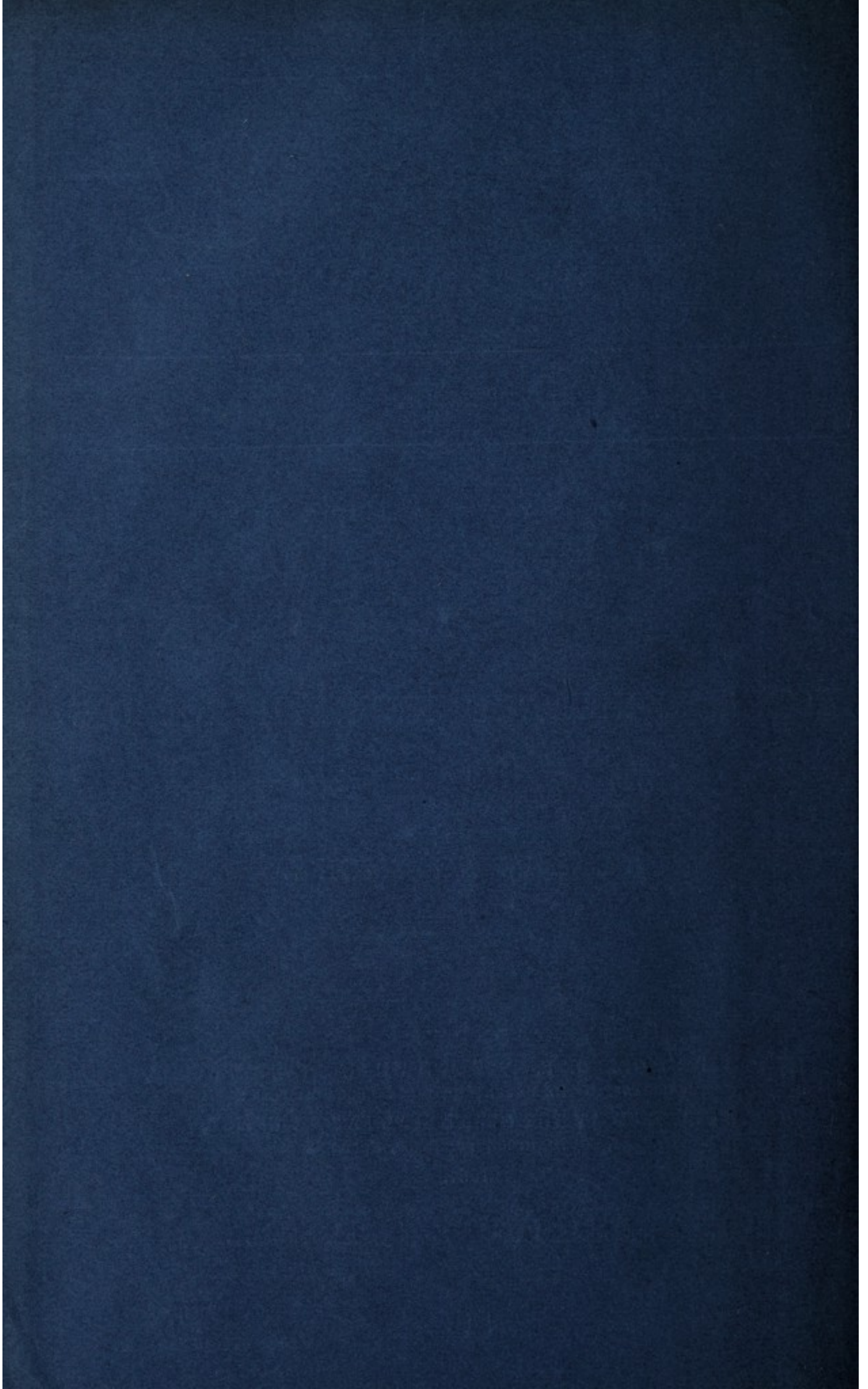
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A.D. 1861, 18th MAY. N° 1277.

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### Consuming Smoke.

**LETTERS PATENT** to Robert King, of Granville Street, Sheffield, in the County of York, Printer, and Kenneth Robson, of Granville Street, Sheffield, aforesaid, Printer, for the Invention of "**CONSUMING AND DESTROYING SMOKE AS EMITTED FROM ENGINE OR OTHER CHIMNIES, AND FROM ALL OTHER FLUES FROM WHICH SMOKE IS EMITTED.**"

Sealed the 15th November 1861, in pursuance of an Order of the Lord Chancellor, and dated the 18th May 1861.

**PROVISIONAL SPECIFICATION** left by the said Robert King and Kenneth Robson at the Office of the Commissioners of Patents, with their Petition, on the 18th May 1861.

We, **ROBERT KING**, of Granville Street, Sheffield, in the County of York,  
5 Printer, and **KENNETH ROBSON**, of Granville Street, Sheffield, aforesaid,  
Printer, do hereby declare the nature of the said Invention for "**CONSUMING  
AND DESTROYING SMOKE AS EMITTED FROM ENGINE OR OTHER CHIMNIES, AND FROM  
ALL OTHER FLUES FROM WHICH SMOKE IS EMITTED,**" to be as follows:—

This Invention consists in consuming or condensing the smoke from furnace  
10 or other flues in such a manner that when emitted from the shaft or chimney  
it shall be comparatively colorless. We propose drawing the smoke as  
emitted from the furnace, by means of a fan, pump, or propeller worked by  
any suitable power, through a downcast pipe or tube into a vessel of water  
at the lower part of the chimney or shaft, so that the smoke, however dense,  
15 shall pass into or through the water, thus depositing the narcotic properties



*King & Robson's Method of Consuming Smoke.*

of the smoke at the bottom of the water, leaving the rarefied portion to pass upwards into the chimney or shaft perfectly free from soot or other impurity; by which means, when such smoke is emitted into the atmosphere, it assumes more the appearance of steam, or almost a colorless vapour. The same means may also be adopted for carrying off the unpleasant smells arising from soap-boiling, chemical, or other works. When applied to locomotives it will be found that the velocity with which they travel will be sufficient to drive the smoke by means of an inverted funnel or other suitable contrivance through a pipe into a suitable water vessel without the necessity of a fan, pump, or other appliance.

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**SPECIFICATION** filed in pursuance of the conditions of the Letters Patent, and of an Order of the Lord Chancellor, by the said Robert King and Kenneth Robson in the Great Seal Patent Office on the 18th December 1861.

**TO ALL TO WHOM THESE PRESENTS SHALL COME**, we, ROBERT KING, of Granville Street, Sheffield, in the County of York, Printer, and KENNETH ROBSON, of Granville Street, Sheffield, aforesaid, Printer, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eighteenth day of May, in the year of our Lord One thousand eight hundred and sixty-one, in the twenty-fourth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto us, the said Robert King and Kenneth Robson, Her special licence that we, the said Robert King and Kenneth Robson, our executors, administrators, and assigns, or such others as we, the said Robert King and Kenneth Robson, our executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**CONSUMING AND DESTROYING SMOKE AS EMITTED FROM ENGINE AND OTHER CHIMNIES, AND FROM ALL OTHER FLUES FROM WHICH SMOKE IS EMITTED,**" upon the condition (amongst others) that we, the said Robert King and Kenneth Robson, our executors or administrators, by an instrument in writing under our, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to



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*King & Robson's Method of Consuming Smoke.*

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be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent. †

NOW KNOW YE, that we, the said Robert King and Kenneth Robson, do hereby declare the nature of our said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

Our Invention consists in consuming or condensing the smoke from furnace or other flues in such a manner that when emitted from the shaft or chimney it shall be comparatively colorless. We draw the smoke as emitted from the furnace, by means of a fan, pump, or propeller worked by any suitable power, through a down-cast pipe or tube into a vessel of water at the lower part of the chimney or shaft, so that the smoke, however dense, shall pass into or through the water, thus depositing the narcotic properties of the smoke at the bottom and top of the water, leaving the rarefied portion to pass upwards into the chimney or shaft perfectly free from soot or other impurity; by which means, when such smoke is emitted into the atmosphere, it assumes more the appearance of steam or almost a colorless vapour. The same means may also be adopted for carrying off the unpleasant smells arising from soap-boiling, chemical, or other works. When applied to locomotives it will be found that the velocity with which they travel will be sufficient to drive the smoke by means of an inverted funnel or other suitable contrivance through a pipe into a suitable water vessel without the necessity of a fan, pump, or other appliance.

In order to explain our said Invention as completely as possible, we now proceed to describe the best means we are acquainted with for carrying the same into practical effect, as follows:—

The smoke arising from the combustion of fuel in a steam boiler or other furnace passes into the flue in the ordinary course, whence it is drawn by a rotary fan or blower, or by any of the well-known mechanical contrivances for effecting such a purpose (worked by any suitable gearing, such as a driving wheel, band, and pulley), and forced downwards through a pipe or continuation of the flue into a reservoir of water (into which the pipe descends) situated at the lowest part of the chimney or shaft, by which means the soot and other impurities of the smoke are retained by the water, and the colorless vapour alone allowed to be carried up the shaft by the action of the draft; the result is not only that the emission of black vapour or smoke is entirely obviated, but that the products of the combustion of coal or other fuel in the furnace are collected and preserved, and may be made available for many valuable and useful commercial purposes.



*King & Robson's Method of Consuming Smoke.*

Having now described the nature of our said Invention of "Consuming and Destroying Smoke as emitted from Engine and other Chimneys, and from all other Flues from which Smoke is emitted," and the manner in which the same is to be performed, we would remark, in conclusion, that we do not confine ourselves to the precise details herein described, as other means may 5 be adopted, substantially the same, for effecting similar purposes without in any way departing from the principle of our Invention; but what we claim as our Invention, and therefore desire to be secured to us by the herein-before in part recited Letters Patent, is, the method of consuming or condensing and purifying the smoke or vapour as emitted from engine or other shafts or 10 chimnies in the manner herein described and set forth.

In witness whereof, we, the said Robert King and Kenneth Robson, have hereunto set our hands and seals, this Fourteenth day of November, in the year of our Lord One thousand eight hundred and 15 sixty-one.

ROBERT KING. (L.S.)

KENNETH ROBSON. (L.S.)

Witness,

THO<sup>s</sup>. RAYNER, Sol<sup>r</sup>.,

Sheffield.

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LONDON:

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Printers to the Queen's most Excellent Majesty. 1861.