

Specification of John Muckart : combustion of fuel, &c.;

Contributors

Muckart, John.

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A.D. 1857 N° 2276.

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

OF

JOHN MUCKART.

COMBUSTION OF FUEL, &c.

LONDON:

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

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Price 3d.

1858.





A.D. 1857 N° 2276.

Combustion of Fuel, &c.

(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 John Muckart at the Office of the Commissioners of Patents, with his Petition, on the 28th August 1857.

I, JOHN MUCKART, of Montrose, in the County of Forfar, North Britain, Starch Manufacturer, do hereby declare the nature of my said Invention
5 for "IMPROVEMENTS IN EFFECTING THE COMBUSTION OF FUEL, AND THE CONSUMPTION OR PREVENTION OF SMOKE, APPLICABLE TO BOILER FURNACES," to be as follows, that is to say:—

This Invention relates to the arrangement and construction of boilers with duplex furnaces, each furnace being supplied with fuel and worked in such a
10 way that its unconsumed gaseous products shall be operated upon and turned to practical account by the heat of the incandescent fuel of the other furnace. The Invention may be carried out in practice under various modifications. In one of these as arranged for a cylindrical boiler, with one central continuous flue, the boiler or furnace flues are fitted at their front up-take end with
15 proper dampers or closing valves, which are alternately opened and closed to vary the course of the gaseous currents; thus whenever fresh or green fuel is supplied to one furnace, the flue door on that side is closed, the one on the other side being simultaneously opened. The result of this arrangement is, that the gaseous matters from the newly supplied furnace pass all round the
20 boiler through the proper flues, until they enter the other furnace and are

Muckart's Improvements in Effecting the Combustion of Fuel, &c.

consumed by the incandescent fuel therein, the current finally passing off by the open door in the up-take of that furnace. When the second furnace is charged, the positions of the two flue doors are changed, and the gaseous matters from this furnace are consumed by the incandescent fuel in the furnace, and so on. 5

In another arrangement the dampers or doors for alternating the flue currents, are disposed at the furnace bridges, still carrying out the principle of causing one clear furnace to consume the gaseous matter from the other.

In a third plan the gaseous matter from the newly fed furnace is carried all round the boiler, bringing it out by a port in the dumb plate of the other 10 furnace, and thence over the incandescent fuel in that furnace, the dampers or flue doors being in this case in the dumb plates.

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Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1858.