

Specification of John Reinecke : boilers.

Contributors

Reinecke, John.

Publication/Creation

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

Persistent URL

<https://wellcomecollection.org/works/ehbnervk>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



A.D. 1787 N° 1590.

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

OF

JOHN REINECKE.

—
BOILERS.
—

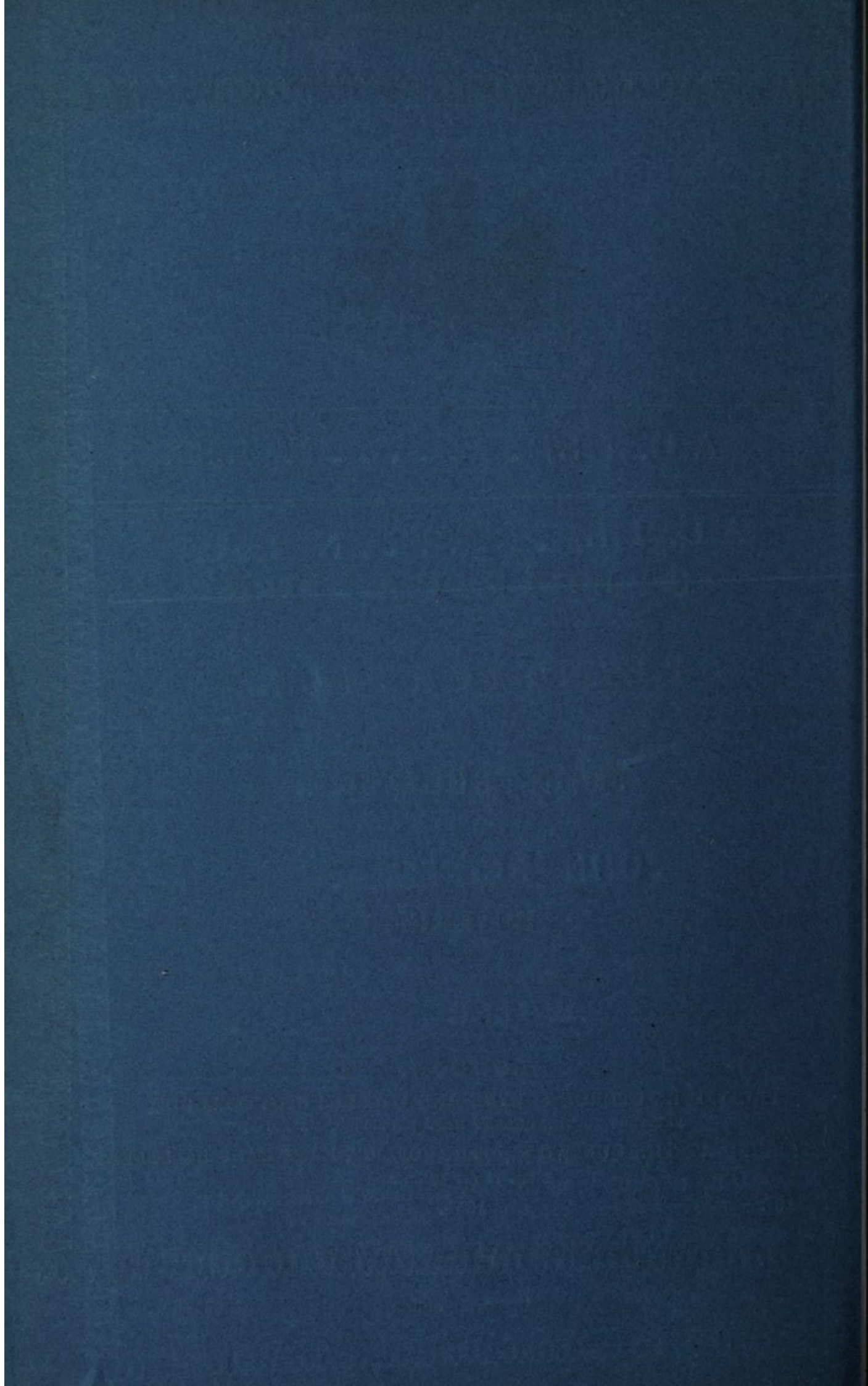
LONDON:

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 9d.

1854.





A.D. 1787 N° 1590.

Boilers.

REINECKE'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN REINECKE, late of Little Bell Alley, Coleman Street, in the City of London, now of Chapel Street, Grosvenor Square, Gentleman, send greeting.

WHEREAS His most Excellent Majesty King George the Third did, by
5 His Letters Patent, under the Great Seal of Great Britain, bearing date the Third day of February, in the twenty-seventh year of His reign, give and grant unto me, the said John Reinecke, His especial licence that I, the said John Reinecke, during the term of years therein expressed, should and lawfully might use, exercise, and vend, within England, Wales, and Town of Berwick upon Tweed, my Invention of "A MACHINE UPON AN ENTIRE NEW CONSTRUCTION, WHICH I CALL THE BRITISH BOILER, TO BE USED IN ALL HOUSEHOLD PURPOSES WHERE BOILING IS REQUIRED, AND IS PARTICULARLY APPLICABLE AND BENEFICIAL TO ALL TRADES AND MANUFACTURES WHERE BOILING, WASHING, DISTILLING, OR EVAPORATING, AND IN ALL MILLS AND WORKS WHERE THE POWER OF STEAM IS MADE USE OF,
15 AND UPON ALL OCCASIONS WHERE ANY LIQUID, SAND, OR SUBSTANCE IS REQUIRED TO BE HEATED, AS IT WILL BE A MOST MATERIAL AND CONSIDERABLE SAVING IN THE ARTICLE OF FUEL OF ALL KINDS, AND WILL PERFORM ITS SEVERAL OPERATIONS IN A MORE EXPEDITIOUS MANNER THAN BY THE MODES HITHERTO PRACTISED;" in which said Letters Patent there is contained a proviso obliging me, the said John Reinecke, under
20 my hand and seal, to cause a particular description of the nature of my said Invention, and how the same is to be performed, to be inrolled in His Majesties High Court of Chancery within one calendar month after the said recited

Reinecke's Improved Machine to be used in Household Purposes.

Letters Patent, as in and by the same, relation being thereunto had, may more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said John Reinecke, do hereby declare that my said Invention is described in the annexed plan and description thereof. 5

In witness whereof, I, the said John Reinecke, have hereunto set my hand and seal, this Second day of March, One thousand seven hundred and eighty-seven.

JOHN REINECKE. (L.S.)

AND BE IT REMEMBERED, that on the Second day of March, in the 10 year of our Lord 1787, the aforesaid John Reinecke 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 written. And also the Specification aforesaid was stampd according to the tenor of the Statutes made for that purpose.

WALKER.

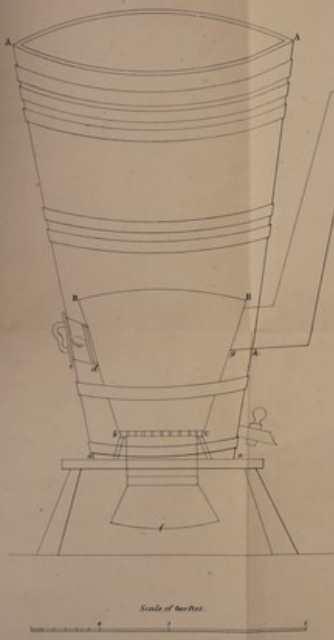
Inrolled the Third day of March, in the year of our Lord One thousand seven hundred and eighty-seven.

LONDON:

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

SPECIFICATION OF REINECKE'S INVENTION.
Principle of this Invention.

Heat has its conductors, as the Electric matter has its own. The best conductors of heat are metals, and stones and air are good conductors of it. It therefore a certain quantity of heat designed to operate upon any fluid, is given in such a manner that it operates more upon the metal, stone, than upon the fluid, and conducted rather from the fluid than towards it, it is natural that the greatest part of it will be lost for the purpose intended. But such is nearly the case in all operations and processes employed in boiling, evaporating or distilling as far as they are hitherto commonly managed. (Consequently the intended aim of these operations will be obtained with a considerable quantity of fuel by providing them upon a principle opposite to that upon which they are now conducted, and of the manner in which I make the application of that principle, arise at the same time, such advantages for the economy of fuel, &c. &c. that I think for myself they are an object worthy their attention. The general method of giving the heat in all operations of boiling, evaporating or distilling, as commonly in use at present, is to allow a vessel of any metal to be fixed in brick work or stone, the fire being put underneath the vessel in such a manner that the heat thereof operates on its bottom and part to on its sides, but it crosses that action but for an instant, and then it goes out at the chimney by the hole of the brick work which contains the vessel. The upper being of metal which is the best conductor of the heat, communicates it very quick and consequently in a great degree to the surrounding air, and the by this leading power the heat is communicated to the fluid contained in the vessel, yet by the very same power it must also be carried out of it again, in respect of so much time, the fluid still remains in the vessel and of the more leading nature of the metal. It is much the same case with the brick or stone frame which encompasses the vessel. The great mass of stone, which requires a great deal of it to be substituted with, and being in it communicates to the air. Every one who has opportunity to observe how much heat and time is expended to make lead in usual furnaces, of water and contained in a great frame of brickwork, and also how long this brickwork still remains hot even after the fire is gone, and finally how great a degree of unevenness reigns round the said brickwork will be completely convinced thereof. The greatest part of the heat loses itself through the chimney which is made so close by water within that it needs no further proof. Instead of a boiler of metal which remains a great deal of heat by its being the best conductor of it. I make use of a vessel of wood, which in comparison with metal is no conductor at all, and being of a mass of brick work which approaches itself to a great part of the heat, and deprives the fluid of it, and then communicates it to the air. I make use of a stone which being put fire into, in that very moment it receives the heat, communicates it not to the atmosphere, but to the body only intended to be acted upon by it, to the fluid itself in which the stone stands, and by which it is increased. Finally instead of losing the greatest part of the heat by the chimney as is the case in the common way, I use the very same chimney like a stove, and by these means the vessels are enabled to keep more and greater advantages of this part of the heat, than by any other hitherto invented. As much of this principle itself the chief point now will be how to approach and employ it. Here a vessel or tub made of wood which by any of its leading power is rendered fit for the purpose, this vessel or tub is principally distinguished from the common ones in that particular that it is narrower at the bottom than at the top, forming an inverted cone, and more or less so as the operation does require. See Figure A A n. For this tub must be made in stone B B of any kind of metal, unalterable however to the nature of the fluid, if it may be made either of a substance, subject to melting, or of such that it is not liable to it, as it stands entirely in the fluid. The figure of the stone, its diameter, its height, and its dimensions unalterable to the tub may be suitably determined, yet each different case requiring different alterations, it is almost impossible to state a general rule. The joining figure is of the following dimensions, viz. the tub is three feet high, the widest diameter A A is 2 feet, and the smallest at n, six feet. The stone is one foot high, the largest diameter B B is 18 inches and the smallest seven inches. The stone has got three openings which are left through the tub by any of pipes and there must be made waterproof the any able substance that understands soldering will know without further explication how this communication is to be done. The third that is necessary to remark that in this case the common way of making waterproof is not to be depended, namely a piece of ground canvas or leather being tacked round the joints, a better method would be to make a neck round the hole the pipe is to be left through, this neck with such metal which easily may be soldered, & soldering upon that being the pipe which for such purpose ought to have a perpendicular border. The first opening in the stone is that by which the fire is lighted, and he supplied with fuel, this hole may be made any where and in any shape or size, in the joining figure it is in C in the upper part of the stone, in order that it may almost be filled up with fuel, and for that purpose this opening should rather be inclined downwards. It is this opening in the stone a pipe is soldered which goes thro' the tub and there is to be combined in such a manner as to be water proof according to what I have said above respecting the principle of the leading power, the pipe should not project to the outside of the tub, but there be made of wood also for that very reason, the tub should not have any ledge or they might be covered with any thing less subject to the leading power. The figure shows a pipe of 4 inches square, the great openings it might be made two inches, the one of it, allowing the opening (e) in the stone a wooden handle may be fixed to it for the better managing it and without burning one's hands, the other (a) on the outside of the tub is to be of wood according to the stated principle. The second opening in the stone is where the ashes fall through and at the same time to give draught to the air, for this end an iron grate as large as the opening in that part of the stone is to be fixed at A C, the smaller diameter of the stone, if the opening also a pipe of smaller diameter must be added in such a manner that the grate may be fixed to that projecting part. I shall not enter at large how to fix the stone in the tub, it being a point which may be obtained very easily in many different manners, in the joining figure it stands on a kind of frame of iron. The third opening is that through which the smoke is carried out, I shall now particular purpose not require any explication, this must also be of an inferior diameter than the receptacle for the ashes, as the air might go thro' a pipe being wide of the beginning and getting narrower and narrower. If the common manner of permit this opening should be higher than that which serves for firing, this opening is in g and is of four inches diameter, this pipe being of the same diameter goes in h, through the tub and there is to be combined with the same as also to be made water proof, like the two others there remains to show how, according to my principles, the heat produced by this smoke pipe may also be made use of and be brought to advantage. The nature of the fire, and communication may occasion various changes in this respect. I need slender almost venture myself to make some general remarks on that head. Upon this generally consists that this pipe is to be made of hot thin metal, and of such as will agree with the fluids, it may then be conducted through a vessel containing any fluid that is to be evaporated or distilled. This operation chiefly depending from the superficies of the fluid, it is necessary that the vessel be constructed of a more flat or shallow than a deep form, in order that the least degree of heat may be able of producing the intended effect. The chimney however to have vessels made different to the common form, and yet there may be a large quantity of fluid, the aim may still be obtained by various expedients. For example by means of a small stove being put in such a vessel. Or the smoke pipe being made in a separate form, or several of such smoke pipes being brought into one use, so that there will be required more than one of these machines in business of great extent, and many more of such expedients the art will easily find out by practice. Moreover I will be more explicit upon this subject in a certain manner to publish and which I promise to join for the better convenience of the Public. In the same Treatise I mean to mention all the several operations where my invented machine may be made use of together with the alterations which will be required in different cases.



The enrolled drawing is colored.

