

Specification of James Ingledew : effecting a saving in the consumption of fuel by the application of heat arising from the calcining of lime.

Contributors

Ingledew, James.

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A.D. 1818 N° 4304.

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

OF

JAMES INGLEDEW.

EFFECTING A SAVING IN THE CONSUMPTION
OF FUEL BY THE APPLICATION OF HEAT
ARISING FROM THE CALCINING OF LIME.

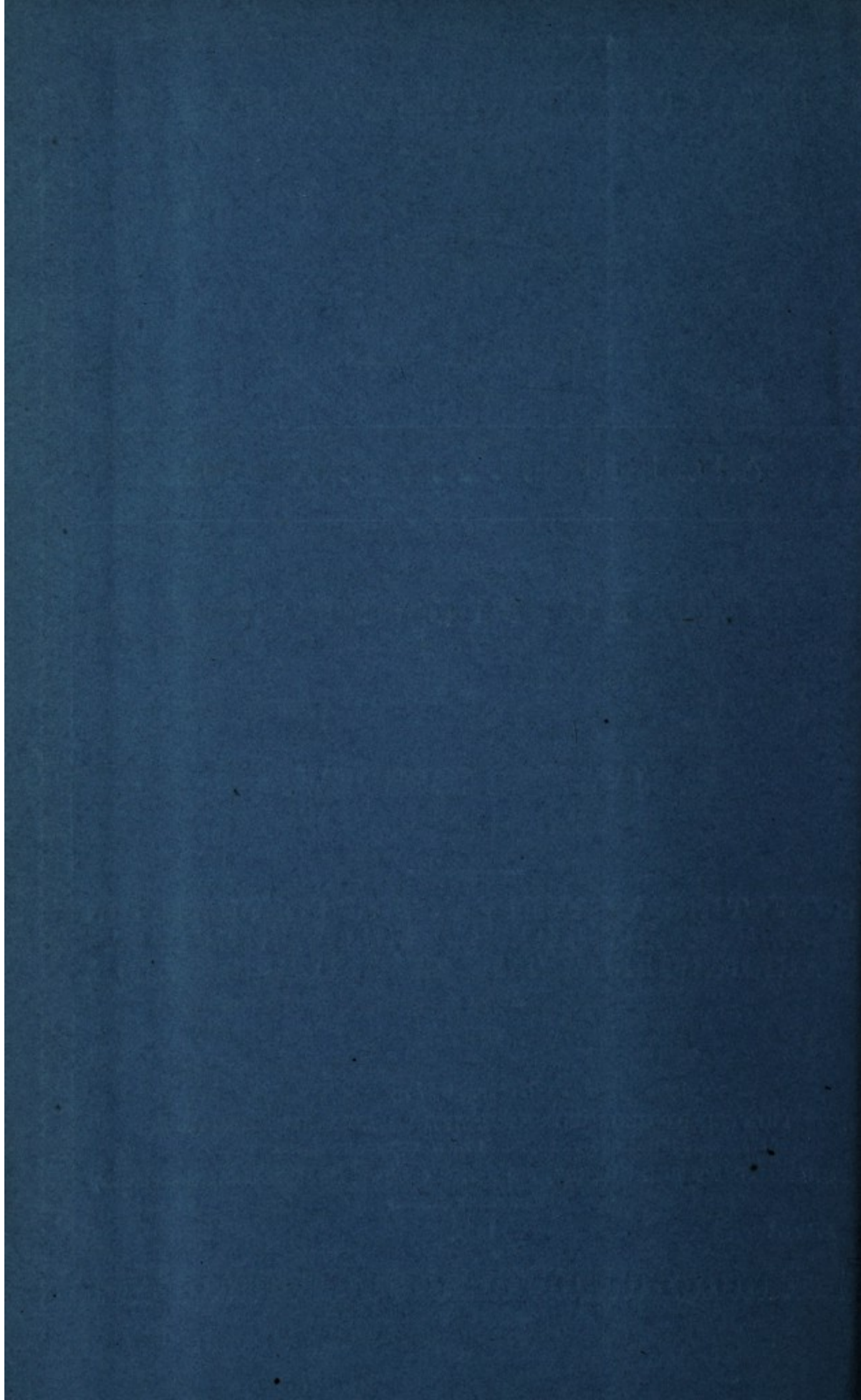
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1854.





A.D. 1818 N° 4304.

Effecting a Saving in the Consumption of Fuel by the Application of Heat arising from the Calcining of Lime.

INGLEDEW'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JAMES INGLEDEW, of Little College Street, Westminster, in the County of Middlesex, Licensed Victualler, send greeting.

WHEREAS I, the said James Ingledew, did, by my petition, humbly represent
5 to His present most Excellent Majesty King George the Third that I had discovered "THE MEANS OF EFFECTING A SAVING IN THE CONSUMPTION OF THE ORDINARY ARTICLES OF FUEL, BY THE APPLICATION OF CERTAIN WELL-KNOWN MATERIALS HITHERTO UNUSED FOR THAT PURPOSE," that I was the first and true inventor thereof, and that the same had never been practised by any other person or
10 persons whomsoever, to the best of my knowledge and belief; and I humbly prayed His said Majesty to grant unto me, my eñors, adñiors, and assigns, His Royal Letters Patent under the Great Seal of the United Kingdom, for the sole use, benefit, and advantage of my said Invention within England, Wales, and the Town of Berwick upon Tweed, and also in all His Colonies and Plan-
15 tations abroad, for the term of fourteen years, pursuant to the Statute in that case made and provided; and whereas His said Majesty, in and by His said Letters Patent under the Great Seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the Tenth day of November, in the fifty-ninth year of His reign, did, for Himself, His heirs and successors, give and
20 grant unto me, the said James Ingledew, my eñors, adñiors, and assigns, His especial licence, full power, sole privilege and authority, that I, the said James Ingledew, my eñors, adñiors, and assigns, and every of them, by myself and themselves, or my or their deputy or deputies, servant or agent, servants or agents, or such others as I, the said James Ingledew, my eñors, adñiors, or
25 assigns, should at any time agree with, and no others, from time to time and

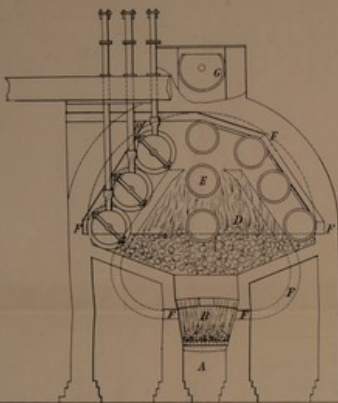
Ingledew's Means of Effecting a Saving in the Consumption of Fuel, &c.

at all times thenafter during the term of fourteen years therein expressed, should and lawfully might make, use, exercise, and vend my said Invention within that part of His United Kingdom of Great Britain and Ireland called England, His Dominion of Wales, and Town of Berwick upon Tweed, and also in all His Colonies and Plantations abroad, in such manner as to me, 5 the said James Ingledew, my exors, admors, and assigns, or any of them, should in my or their discretion seem meet; in which said Letters Patent is contained a proviso that if I, the said James Ingledew, should not particularly describe and ascertain the nature of my said Invention, and in what manner the same is to be performed, by an instrument in writing under my hand and seal, 10 and 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 those His said Letters Patent, then the said Letters Patent, and all liberties and privileges whatsoever thereby granted, should utterly cease, determine, and become void, anything therein contained to the contrary in anywise notwith- 15 standing.

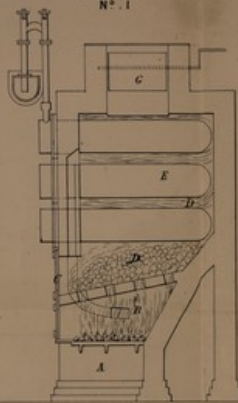
NOW KNOW YE, that I, the said James Ingledew, in compliance with the said proviso, do hereby describe and ascertain the nature of my said Discovery or Invention, and in what manner the same is to be performed, used, and operate, by the Plans or Drawings hereto annexed, and in the follow- 20 ing description thereof, that is to say:—

My Discovery or Invention consists in the application of chalk, limestone, and other calcareous substances convertible into lime, by means of heat, as auxiliaries to the ordinary articles of fuel in the carbonizing of coal for gas, in heating the boilers of steam engines, brewers' and distillers' 25 coppers, sugar bakers' pans and furnaces wherein great heat is required. The manner in which this auxiliary heat is obtained is by employing the ordinary material of fuel not only to the purposes to which it is primarily directed, but to the further purpose of calcining the chalk, limestone, or other calcareous substance, and thereby concentrating and keeping in action a most powerful 30 heat in aid of the ordinary operation of the fuel, so that a less quantity thereof is actually required. This process may be applied in such manner as the skill of the manufacturer may best suggest, reference being had to the uses and purposes intended. In the application of the heat thus produced to the generation of gas, I apply the articles above mentioned in a species of lime chamber 35 above the ordinary fire, the retorts being placed in this chamber; and I have found the chamber, of which I have subjoined Drawings, N° 1, with the proper flues, &c, to answer most effectually. The fire, as before observed, is placed in a furnace beneath the lime chamber, and either coal, coke, wood, or other

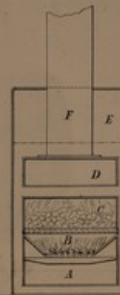
N^o 1
Front view of a bench of Rotates
heated with Lime.



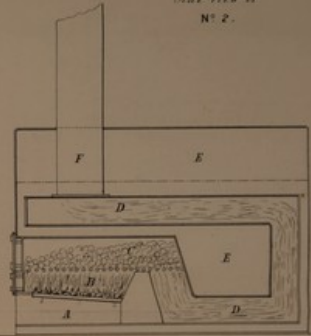
Side view of
N^o 1.



N^o 2
Front view of a boiler
applicable to Steam Pockets.

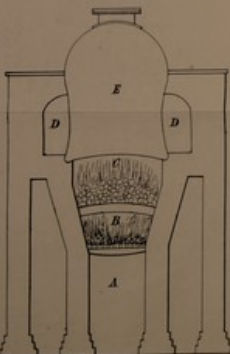


Side view of
N^o 2.

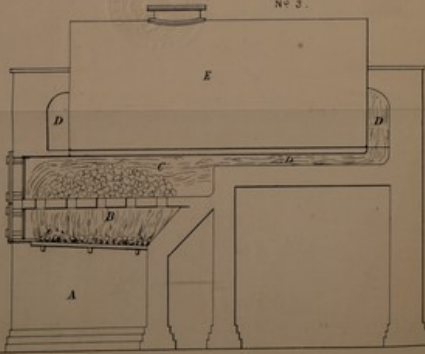


A. Ash Pit. B. Fire. C. Lime chamber. D. Floor. E. Boiler. F. Chimney.

N^o 3
Front view of a wagon boiler with
Furnace and Lime chamber.



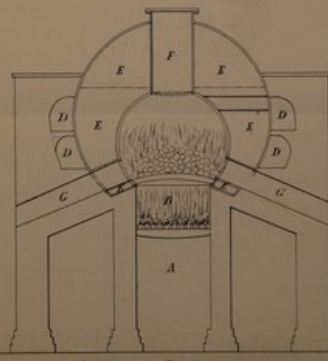
Side view of
N^o 3.



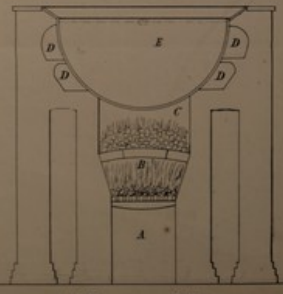
A. Ash Pit. B. Fire. C. Lime chamber.

D. Floor. E. Boiler.

N^o 4
Section of a circular boiler with Lime
chamber in the centre.



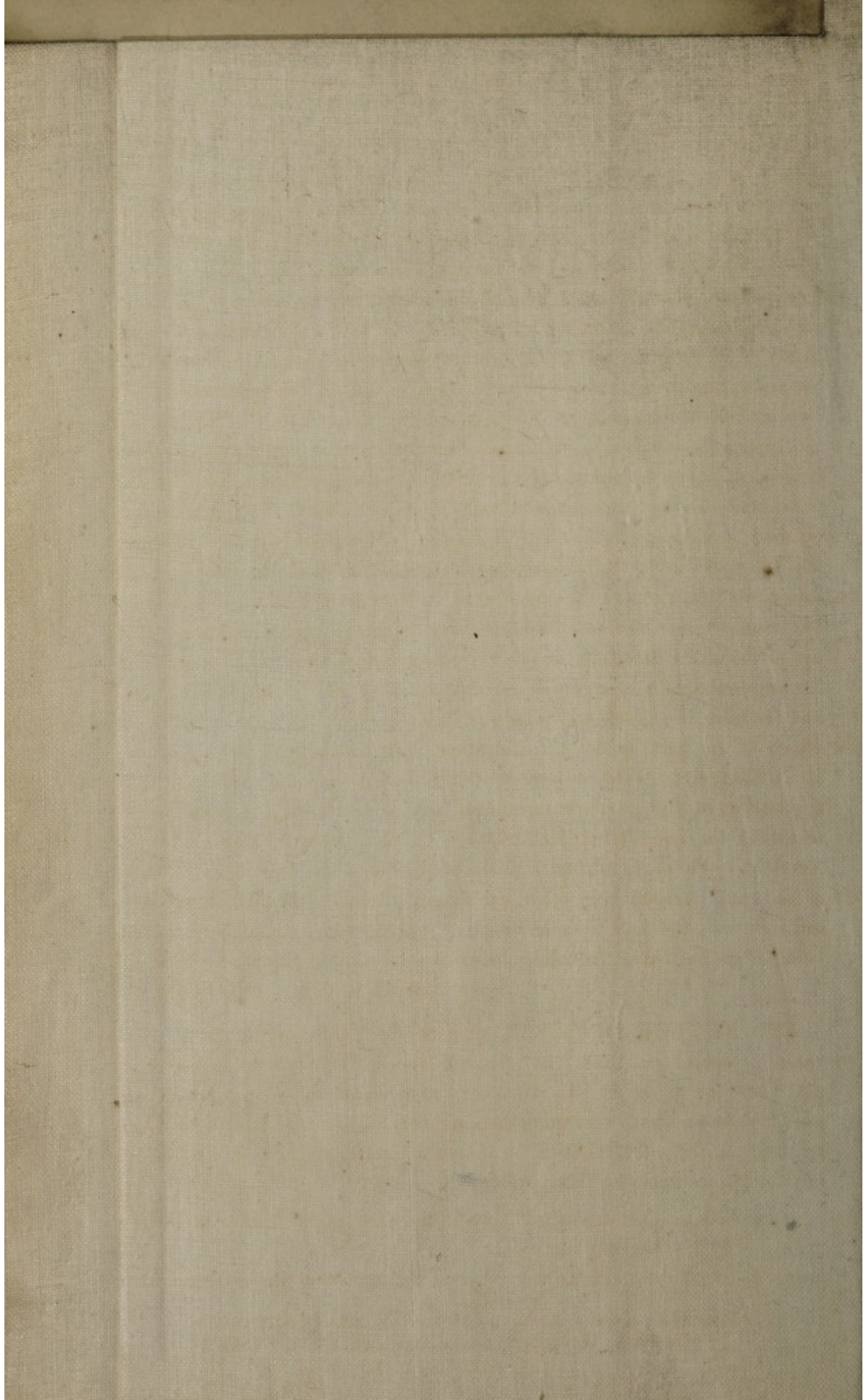
N^o 5
Section of a sugar boilers pan or brewers' copper
with Furnace and Lime chamber.



A. Ash Pit. B. Fire. C. Lime chamber. D. Floor. E. Sugar pan or brewers' copper.

Milly & Sons, Lith.

The engraved drawing is colored.



Ingledeu's Means of Effecting a Saving in the Consumption of Fuel, &c.

articles of ordinary fuel may be used. In the application of the said Invention to boilers for steam engines and brewers and distillers' coppers, sugar bakers' pans, and to other similar purposes, trials have been made with success by using the calcareous substances on the outside of these vessels, and also in a boiler of
 5 a particular construction, the lime chamber being in the centre of the boiler ; and I have subjoined Plans or Drawings, N^{os} 2, 3, 4, and 5, shewing both the external and internal application of my Invention for the combustion of chalk, limestone, and other calcareous substances in aid of the ordinary means of heating boilers, coppers, pans, and furnaces, for the guidance of the public in
 10 the application of the said substances as auxiliaries to, or as a means of effecting a saving in the consumption of the ordinary article of fuel. The particular construction of the lime chambers, boilers, and furnaces above mentioned is not claimed by me as any part of my Invention ; neither am I desirous of claiming any monopoly or privilege in the application of the chalk, limestone, or other
 15 calcareous substances to the domestic or ordinary uses to which fuel is applied, but merely to the uses and purposes above mentioned and alluded to. In the use of the chalk, limestone, or other calcareous substances, it is desirable that the pieces should be nearly of equal size, that they may become calcined at one and the same time, and such chalk or limestone will be found to answer best
 20 which is the least liable to vitrification. The advantages arising from my Invention are two-fold ; first, in the diminished consumption which, from this application of the auxiliery substances above mentioned, has been found to result in the quantity of fuel required to produce any given effect ; and secondly, in the profit arising from the production of the lime in the calcination
 25 of the chalk, limestone, or other calcareous substances applied in aid of the ordinary fuel, the lime thus obtained in this secondary or auxiliary operation being of greater value than the calcareous substance employed to produce it.

JAMES (L.S.) INGLEDEW.

AND BE IT REMEMBERED, that on the Tenth day of May, in the
 30 year of our Lord 1819, the aforesaid James Ingledeu came before our said Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statutes made for that purpose.

STRATFORD.

35 Inrolled the Tenth day of May, in the year of our Lord One thousand eight hundred and nineteen.

LONDON :

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

The first part of the report is devoted to a general
 account of the country and the progress of the
 work during the year. It is followed by a
 detailed account of the various operations
 carried out, and a summary of the results
 obtained. The report concludes with a
 list of the names of the persons who
 have been employed during the year, and
 a statement of the amount of money
 expended.

AND BY THE DIRECTOR, JOHN H. ...
 ...
 ...
 ...