

Specification of William Alltoft Summers and Nathaniel Ogle :

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A.D. 1830 N° 5927.

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

OF

WILLIAM ALLTOFT SUMMERS

AND

NATHANIEL OGLE.

STEAM-ENGINE AND OTHER BOILERS.

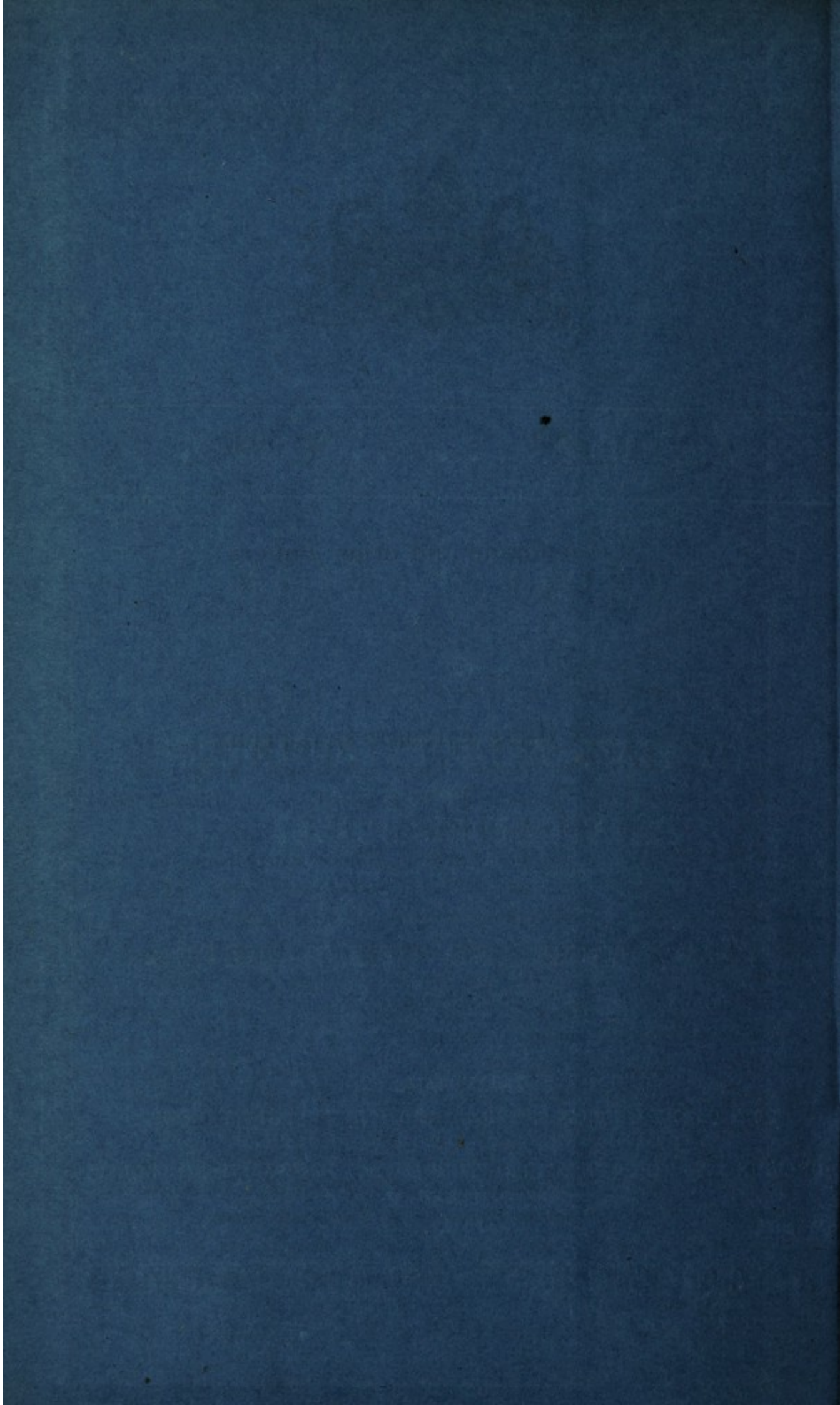
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1854.





A.D. 1830 N^o 5927.

Steam-engine and other Boilers.

SUMMERS AND OGLE'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, WILLIAM ALLTOFT SUMMERS, of Saint George's Place, Saint George's in the East, in the County of Middlesex, Engineer, and NATHANIEL OGLE, of Milbrook, in the County of Hants, Esquire, send greeting.

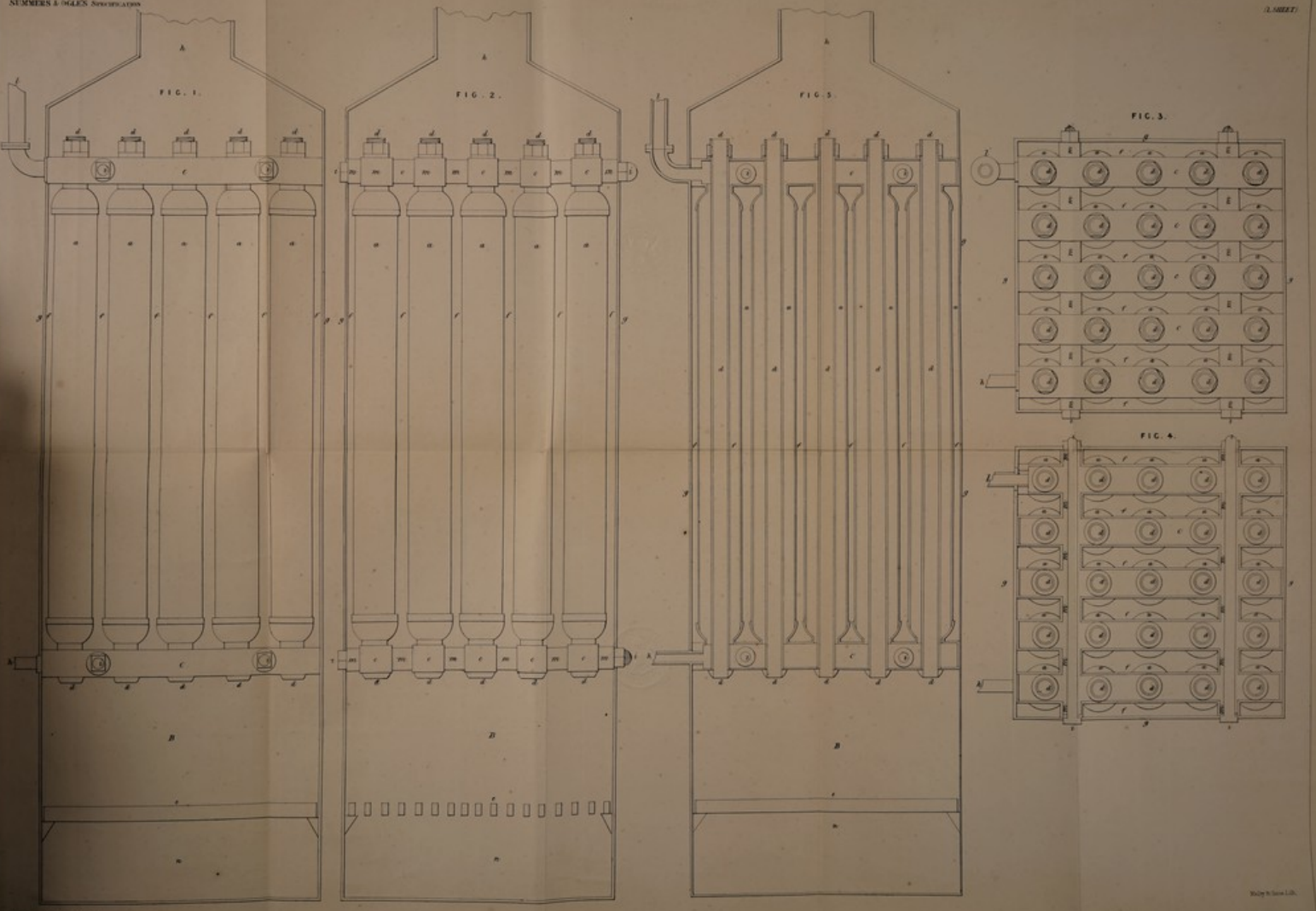
5 **WHEREAS** His present most Excellent Majesty King George the Fourth did, by His Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Fourteenth day of April, in the eleventh year of His reign, give and grant unto us, the said William Alltoft Summers and Nathaniel Ogle, His especial licence that we, the said William Alltoft Summers and
10 Nathaniel Ogle, our exōrs, adñiors, and assigns, and such others as we, the said William Alltoft Summers and Nathaniel Ogle, our eñors, adñiors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick upon
15 Tweed, and also in all His said Majesty's Colonies and Plantations abroad, our Invention of "**CERTAIN IMPROVEMENTS IN THE CONSTRUCTION OF STEAM-ENGINE AND OTHER BOILERS OR GENERATORS, APPLICABLE TO PROPELLING VESSELS, LOCOMOTIVE CARRIAGES, AND OTHER PURPOSES;**" in which said Letters Patent is contained a proviso that we, the said William Alltoft Summers and Nathaniel Ogle, or one
20 of us, shall cause a particular description of the nature of our said Invention, and in what manner the same is to be performed, to be inrolled in His said

Summers & Ogle's Impts. in the Construction of Steam-engine Boilers, &c.

Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, we, the said William Alltoft Summers and Nathaniel Ogle, do hereby declare that our said Invention is fully described and ascertained in and by the Drawing annexed, and to the Figures and letters marked thereon (that is to say):—

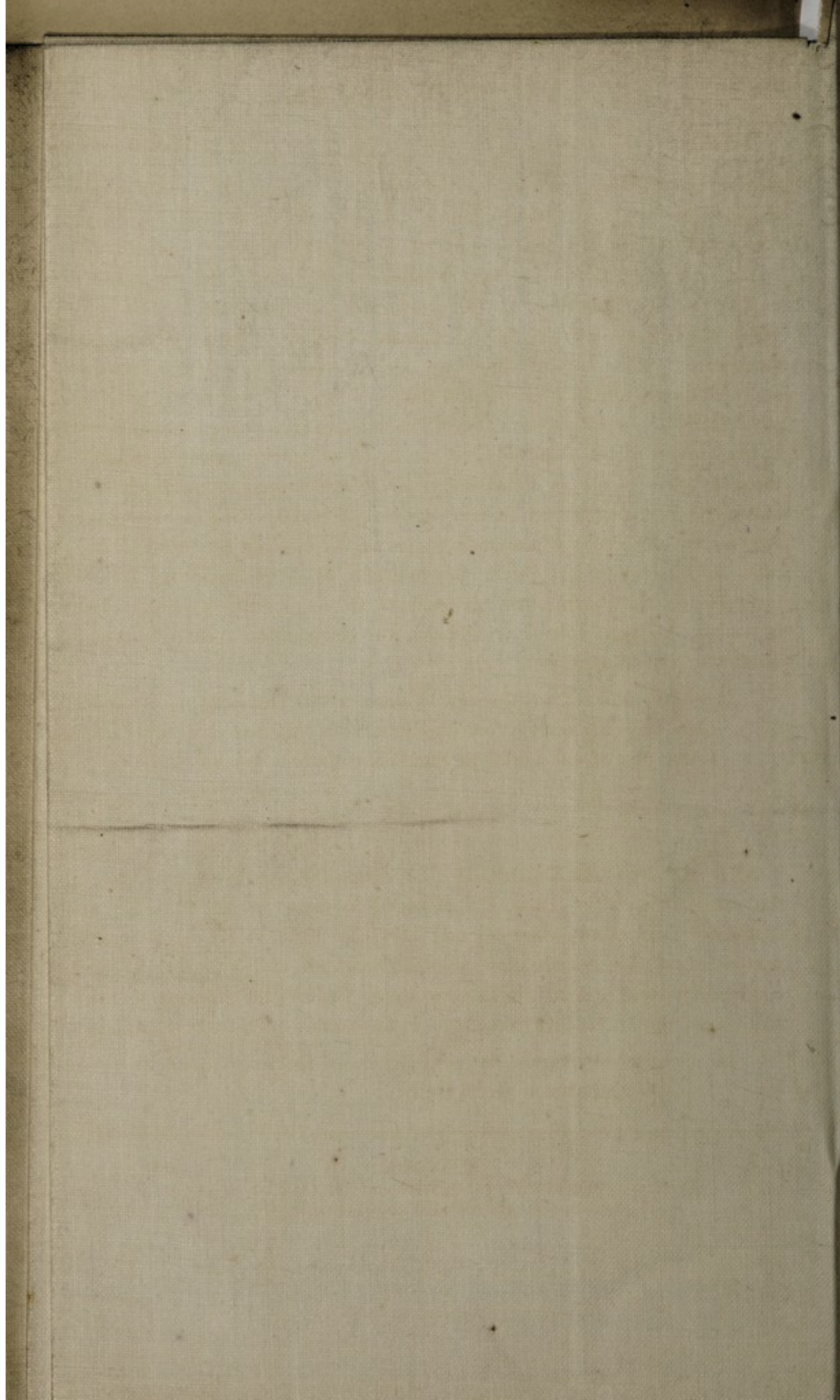
Our said Invention consists in placing any number of tubes or vessels, of any convenient dimensions or form, and made of wrought iron or copper or of any other proper material, exposed to the heat of a furnace or furnaces in an upright or perpendicular or vertical position, each of the said tubes or vessels having an inner flue or tube of any convenient dimensions or form (for the escape of heated air or gas arising from the fire) running through the inside of it and out at the top, and which said inner flue or tube is also placed in an upright or perpendicular or vertical position; by this arrangement, as represented in the annexed Drawing, it will be seen that the whole, both of the inside surface or surfaces of each of the inner flues or tubes, and the outside surface or surfaces of each of the larger tubes or vessels, may be exposed to the action of the heated air or gas arising from the fire, thereby causing the water which is contained between the outside surface or surfaces of each of the inner flues or tubes, and the inside surface or surfaces of each of the larger tubes or vessels, to be exposed to a very large surface of heated metal, and procuring a very rapid generation of steam, which may be applied for propelling vessels, locomotive carriages, and for other purposes. But in order that the nature of our said Invention may be clearly understood, we have hereunto annexed a Sheet of Drawings or Plans, which will illustrate one means of carrying our Invention into effect. The same characters or letters of reference denote the same parts in all the Figures. Fig. 1 is a front view of a boiler or generator constructed according to the principle of our Invention. Fig. 2 is an end view. Fig. 3 is a ground plan or view of the top; Fig. 4, a section of the top; and Fig. 5 is an upright or perpendicular or vertical section of the same. *a, a, a*, are tubes or vessels placed over the furnace B in an upright or perpendicular or vertical position. *c, c*, are tubes or pipes for connecting the tubes or vessels *a, a, a*, together. *d, d, d*, are the inner flues or tubes which run through the inside of the tubes or vessels *a, a, a*, and out at the top, and which flues or tubes are also placed in an upright or perpendicular or vertical position, and are for the escape of the heated air or gas arising from the fire, which may be made on the furnace bars *e*, or in any other way that may be found convenient. *f, f, f*, are flues or spaces which also serve for the escape of the heated air or gas arising from the fire. *g, g*, are the



The vertical drawings in ink.

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Wiley & Sons, Ltd.



Summers & Ogle's Impts. in the Construction of Steam-engine Boilers, &c.

sides of the furnace; the front is supposed to be taken away, in order to shew the boiler or generator. *h* is the chimney. *i, i, i,* are bolts for screwing the tubes or pipes *c, c,* together. *k* is the feed pipe for supplying the boiler or generator with water. *l* is the steam pipe to convey the steam to the engine. *m, m, m,* are tubes
 5 or pipes to connect the tubes or pipes *c, c,* together. *n* is the ash pit. The water which is contained between the tubes or vessels *a, a, a,* may be pumped into the boiler or generator to any height at which it may be found most convenient, and a safety valve may be attached in the usual way. We wish it to be understood that we do not limit our claim of Invention to the precise forms exhibited
 10 in the Figures of the parts of which our boiler or generator is constructed, as the tubes or vessels may be elliptical or of any other convenient form which would answer the purpose; but we claim as our Invention, the placing an inner flue or tube for the escape of the heated air or gas arising from the fire inside a larger tube or vessel in an upright or perpendicular or vertical position, the said
 15 inner flue or tube running through inside of the larger tube or vessel and out at the top, the larger tube or vessel being also placed in an upright or perpendicular or vertical position.

In witness whereof, we, the said William Alltoft Summers and Nathaniel Ogle, have hereunto set our hands and seals, this Sixteenth day of June,
 20 in the year of our Lord One thousand eight hundred and thirty.

W. A. SUMMERS. (L.S).

NATH^l OGLE. (L.S).

AND BE IT REMEMBERED, that on the Sixteenth day of June, in the year of our Lord 1830, the aforesaid William Alltoft Summers and
 25 Nathaniel Ogle 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 stamped according to the tenor of the Statute made for that purpose.

Inrolled the Fourteenth day of October, in the year of our Lord One
 30 thousand eight hundred and thirty.

LONDON :

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

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