

## **Specification of William Tipping : preventing or consuming smoke.**

### **Contributors**

Tipping, William.

### **Publication/Creation**

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Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
E [library@wellcomecollection.org](mailto:library@wellcomecollection.org)  
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A.D. 1869, 16<sup>th</sup> SEPTEMBER. N° 2703.

SPECIFICATION.

OF

WILLIAM TIPPING.

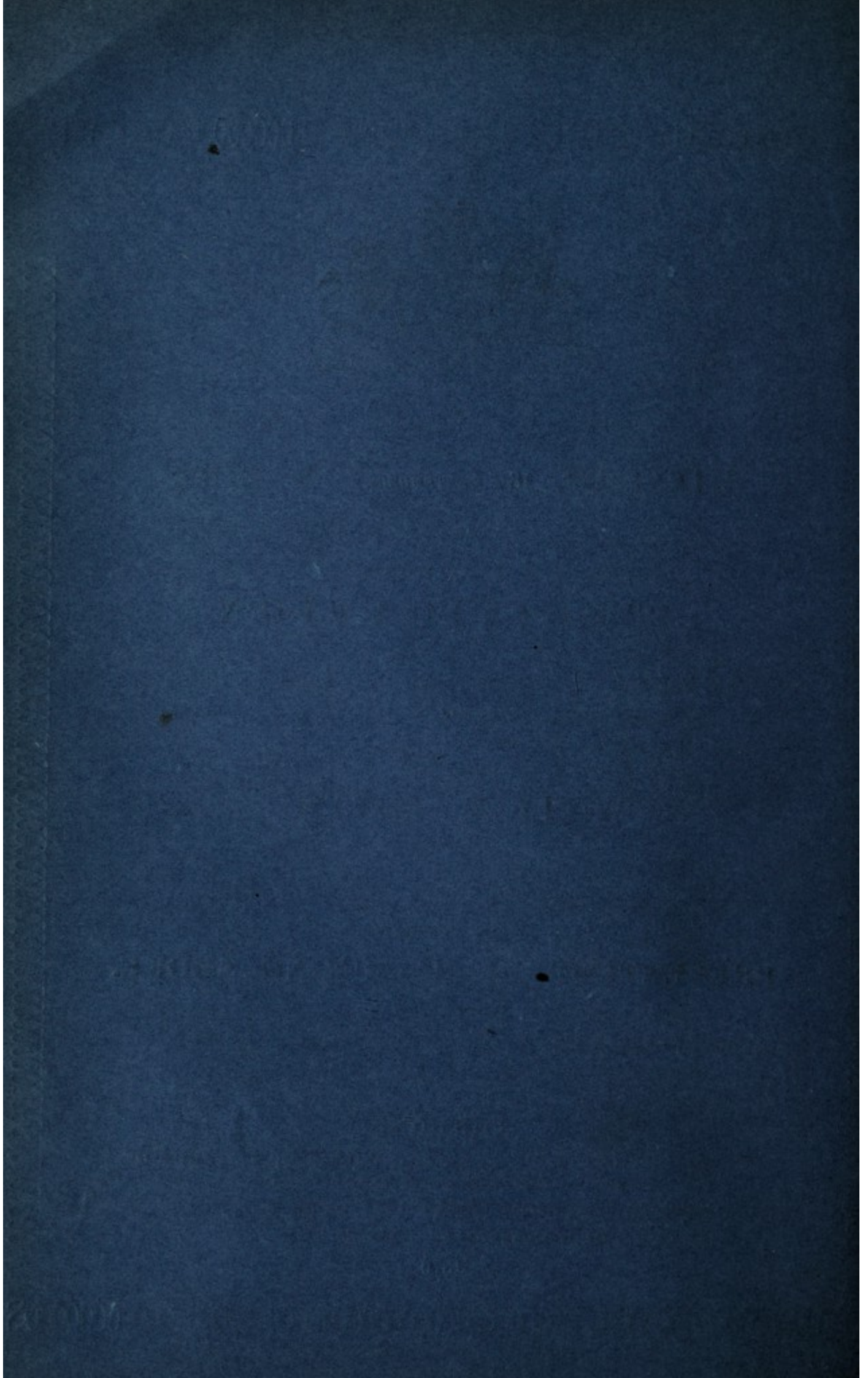
PREVENTING OR CONSUMING SMOKE.

LONDON:

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

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,  
25, SOUTHAMPTON BUILDINGS, HOLBORN.

1870.





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A.D. 1869, 16th SEPTEMBER. N° 2703.

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**Preventing or Consuming Smoke.**

**LETTERS PATENT** to William Tipping, of Wigan, in the County of Lancaster, for the Invention of "**IMPROVEMENTS IN APPARATUS FOR PREVENTING OR CONSUMING SMOKE.**"

Sealed the 8th March 1870, and dated the 16th September 1869.

**PROVISIONAL SPECIFICATION** left by the said William Tipping at the Office of the Commissioners of Patents, with his Petition, on the 16th September 1869.

I, WILLIAM TIPPING, of Wigan, in the County of Lancaster, do  
5 hereby declare the nature of the said Invention for "**IMPROVEMENTS IN APPARATUS FOR PREVENTING OR CONSUMING SMOKE,**" to be as follows:—

My improvements consist of an arrangement of one or more tubes or pipes introduced and inserted from the face of the boiler furnace over the fire, and to deliver air in any direction as required, either at the front  
10 of the bridge or behind the bridge, and either through the ends of the tubes or pipes or through perforations in the same. These tubes or

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*Tipping's Impts. in Apparatus for Preventing or Consuming Smoke.*

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pipes are arranged with valves, so as to admit of being opened or closed at the will of the fireman, or man in charge, or by a mechanical contrivance to effect the following operations:—

When the fire-door marked A on the accompanying outline Drawing is opened the valve at C is opened and the valve at D is closed, and when 5 the fire-door A is shut the valve at C remains open and the valve at D remains shut, and when the fire-door B is opened the valve at D opens and the valve at C shuts, and when the fire-door B is closed the valve at D remains open and the valve at C shut until the operations are repeated. The fire-doors A, B, are connected with the valves at C 10 and D, so as to perform the above operation.

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**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said William Tipping in the Great Seal Patent Office on the 15th March 1870.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM 15**  
TIPPING, of Wigan, in the County of Lancaster, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Sixteenth day of September, in the year of our Lord One thousand eight hundred and sixty-nine, in the thirty-third year of Her reign, did, for Herself, Her heirs and successors, give 20 and grant unto me, the said William Tipping, Her special license that I, the said William Tipping, my executors, administrators, and assigns, or such others as I, the said William Tipping, my 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 25 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 "**IMPROVEMENTS IN APPARATUS FOR PREVENTING OR CONSUMING SMOKE,**" upon the condition (amongst others) that I, the said William Tipping, my executors or administrators, by an 30 instrument in writing under my, 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 be filed in the Great Seal Patent Office within six

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*Tipping's Impts. in Apparatus for Preventing or Consuming Smoke.*

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calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said William Tipping, do hereby declare the nature of my said Invention, and in what manner the same is to  
5 be performed, to be particularly described and ascertained in and by the following statement (that is to say):—

My improved apparatus for preventing or consuming smoke will be clearly understood by the following particular description thereof, reference being had to the figures and letters on the accompanying  
10 Sheet of Drawings, in which Figure 1 is an end elevation, and Figure 2 a longitudinal section of one end of a two-flued boiler.

The improvements consist of an arrangement of one or more tubes or pipes introduced and inserted from the face of the boiler over the fire to deliver air in any direction as required, either at the front of the bridge  
15 or behind the bridge, and either through the ends of the tubes or pipes or through perforations in the same. These tubes or pipes are arranged with valves, so as to admit of being opened and closed by the fireman, or man in charge, or by a mechanical contrivance in connection with the fire-doors.

20 In Figure 1 I represent the employment of several tubes or pipes and valves for each flue, the valves being worked by mechanism connected to them and the fire-doors to effect the following operations:—

When the fire-door A is opened the valves C are opened and the valves D closed, and when the fire-door A is shut the valves C remain  
25 open and the valve D remain closed, and when the fire-door B is opened the valves D are opened and the valves C are closed, and when the fire-door B is shut the valves D remain open and the valves C closed until the operations are repeated.

In the Figures I have represented the application of five tubes and  
30 valves to each furnace, but one tube and valve or any other number may be used as required.

It will be seen that the object of this Invention is to supply air through the tubes or pipes to the furnace when it is fed with fuel, and to maintain the supply of air until another furnace is fed with fuel, and  
35 so on alternately when a boiler has two furnaces, but when there are more furnaces, as in large marine boilers, they may be supplied with air

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*Tipping's Impts. in Apparatus for Preventing or Consuming Smoke.*

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through the tubes or pipes, either alternately or consecutively, the mechanism connected to the valves and fire-doors being modified to suit the requirements.

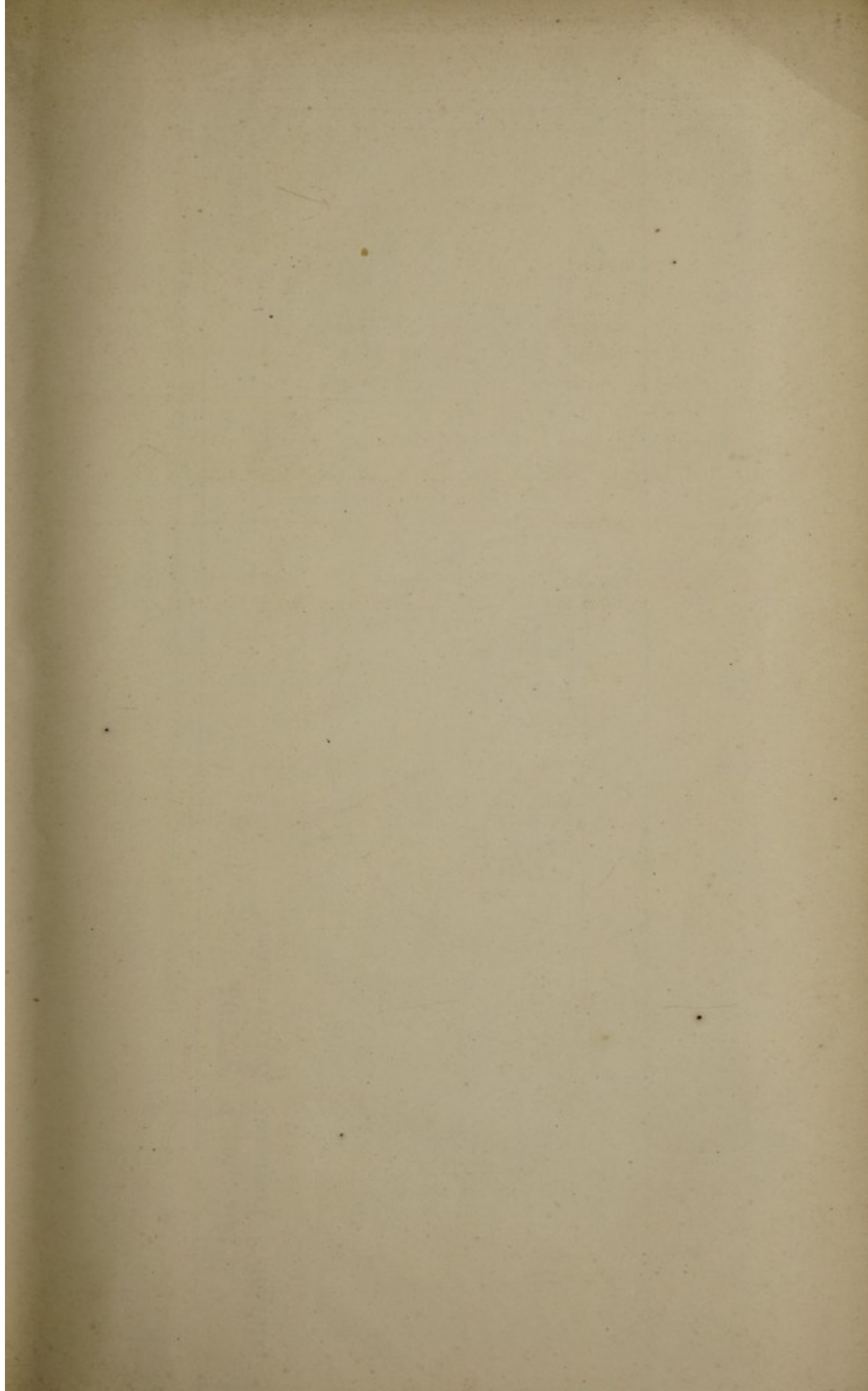
In witness whereof, I have hereto set my hand and seal, the  
Twenty-second day of December One thousand eight hundred 5  
and sixty-nine.

W<sup>M</sup>. TIPPING. (L.S.)

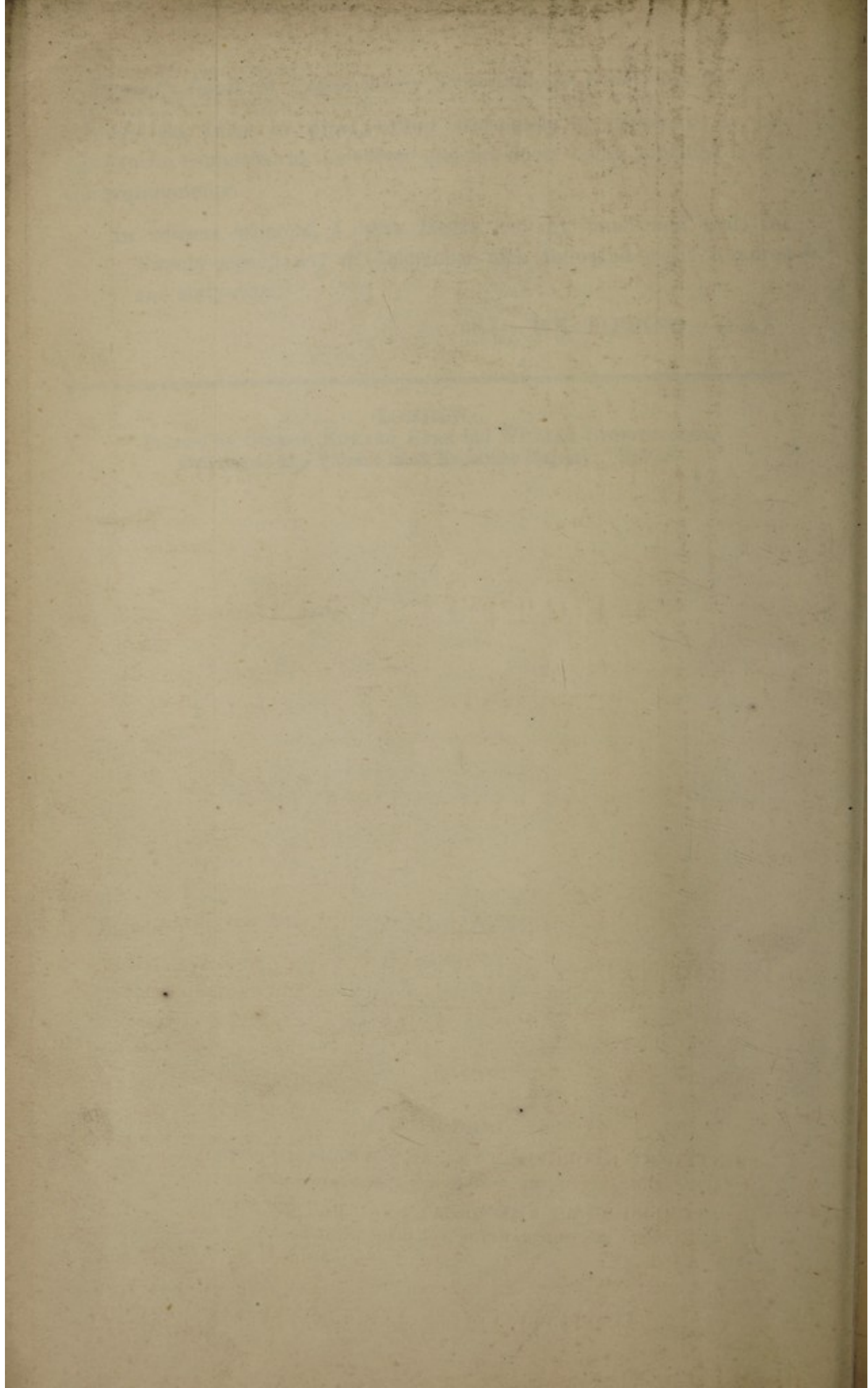
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Printers to the Queen's most Excellent Majesty. 1870.

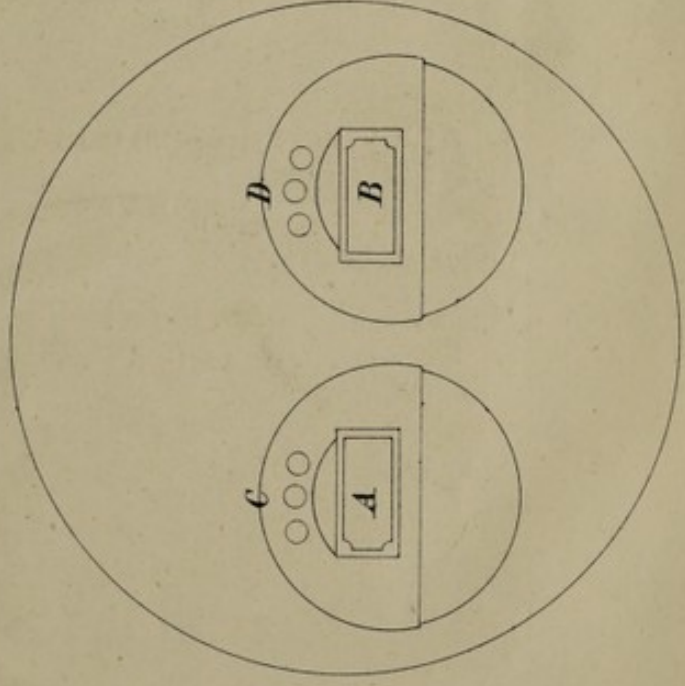






A. D. 1869. SEP. 16. N<sup>o</sup> 2703.  
TIPPING'S PROVISIONAL SPECIFICATION.

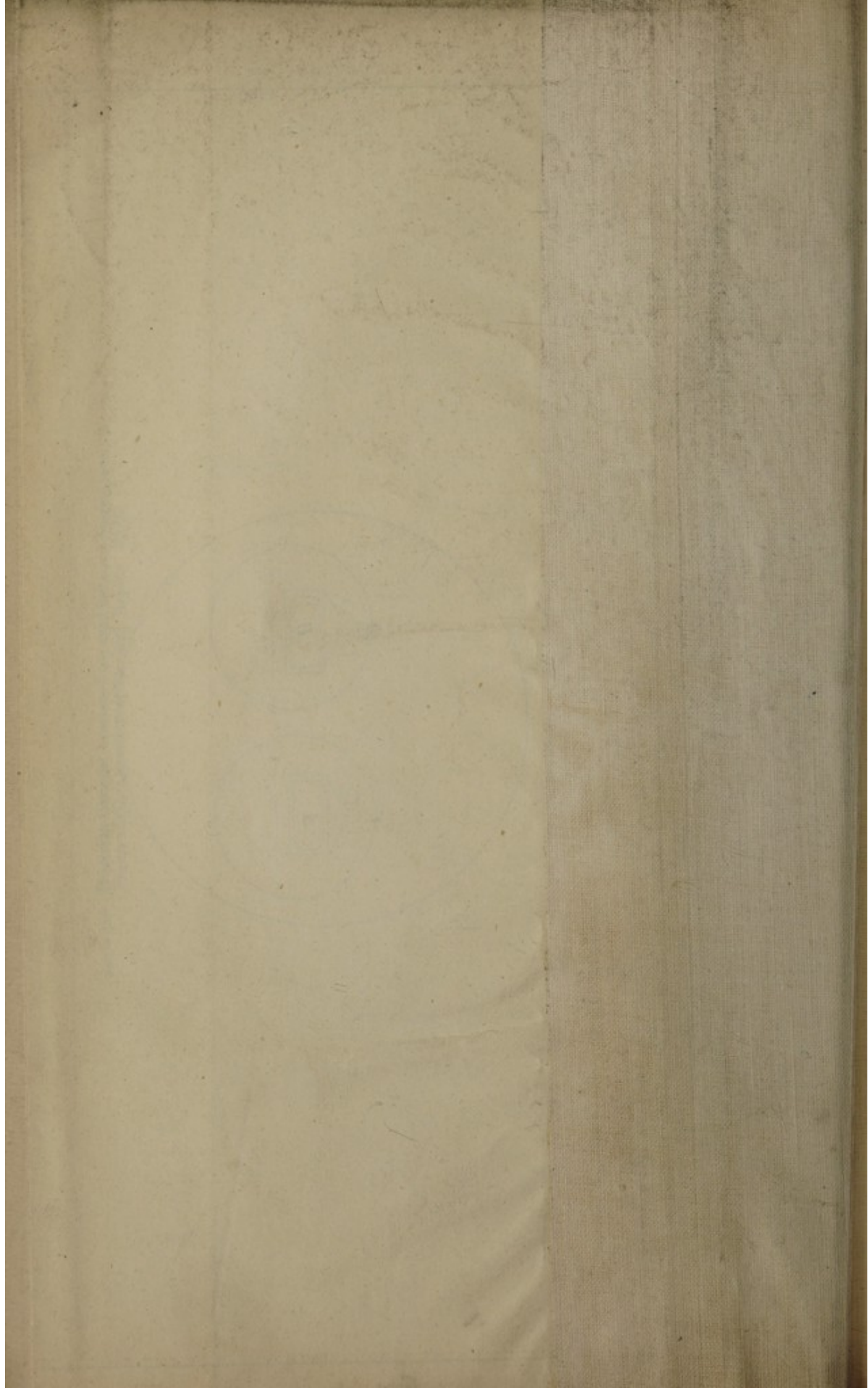
(1 SHEET)



*The drawing left with Provisional Specification is not colored.*

Drawn on Stone by Malby & Sons

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Printers to the Queen's most Excellent Majesty 1870.



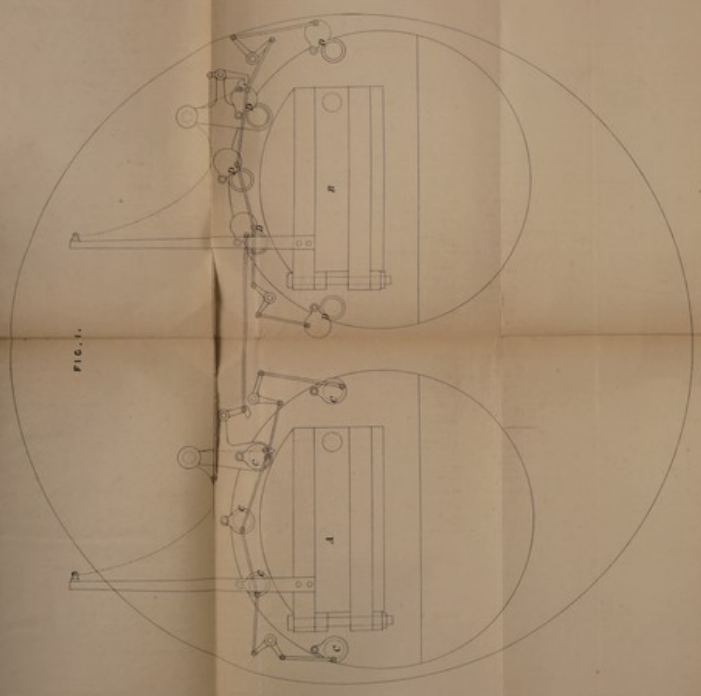


FIG. 1.

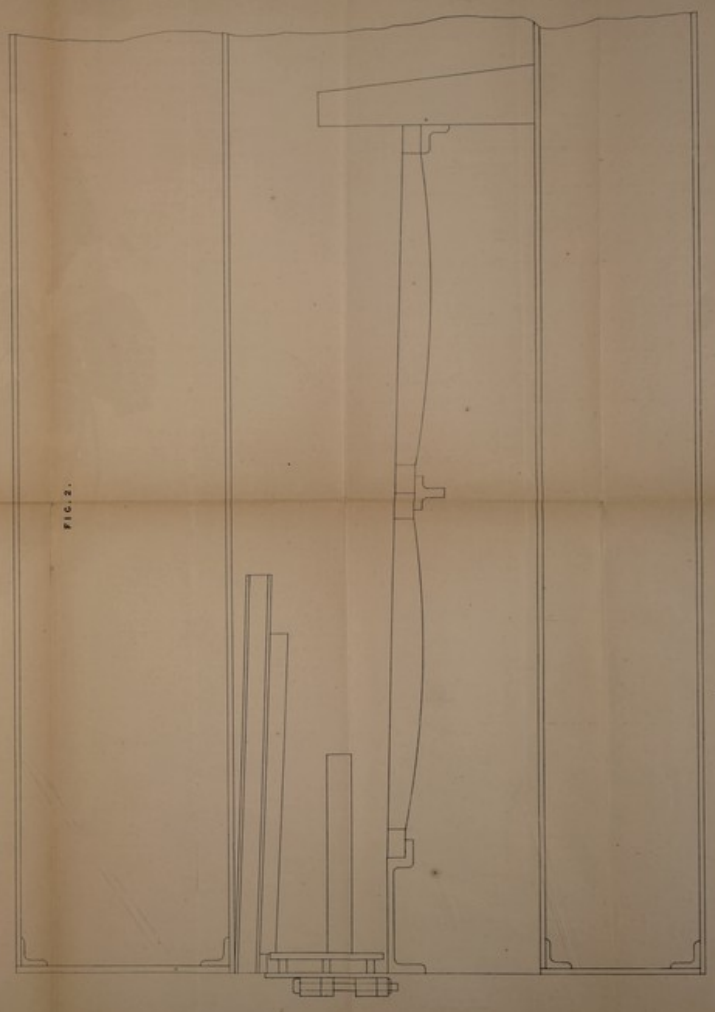


FIG. 2.

