

(No Model.)

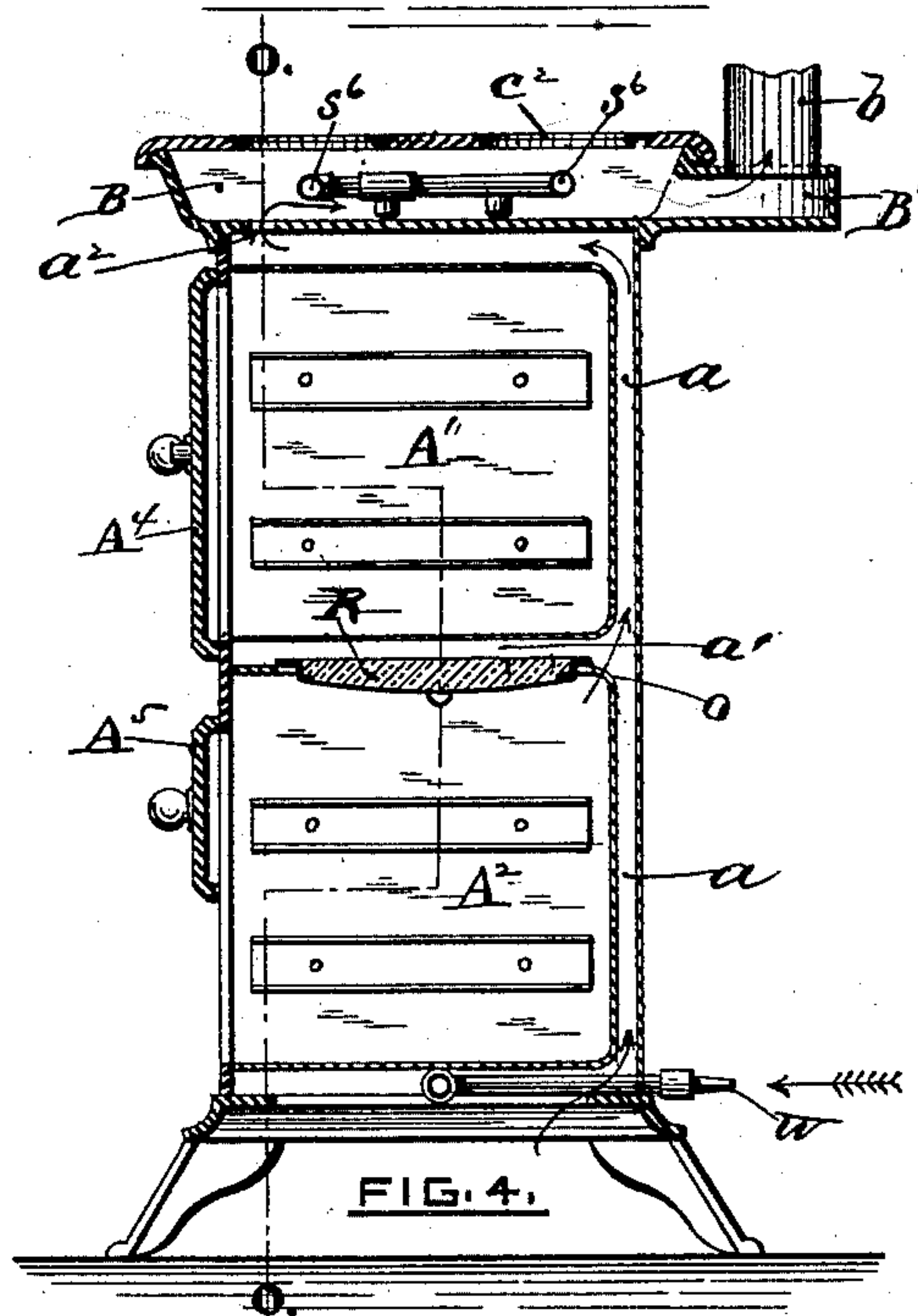
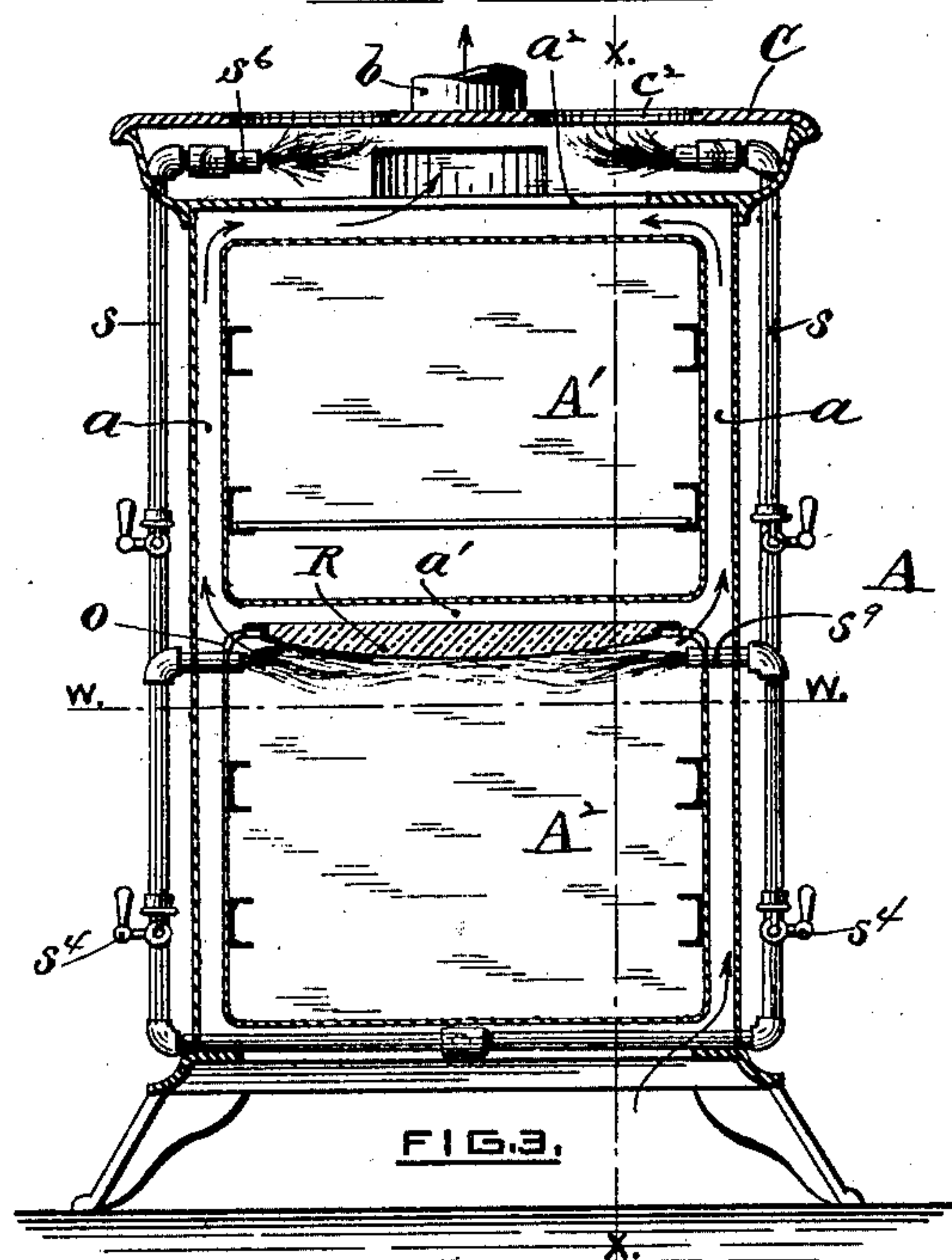
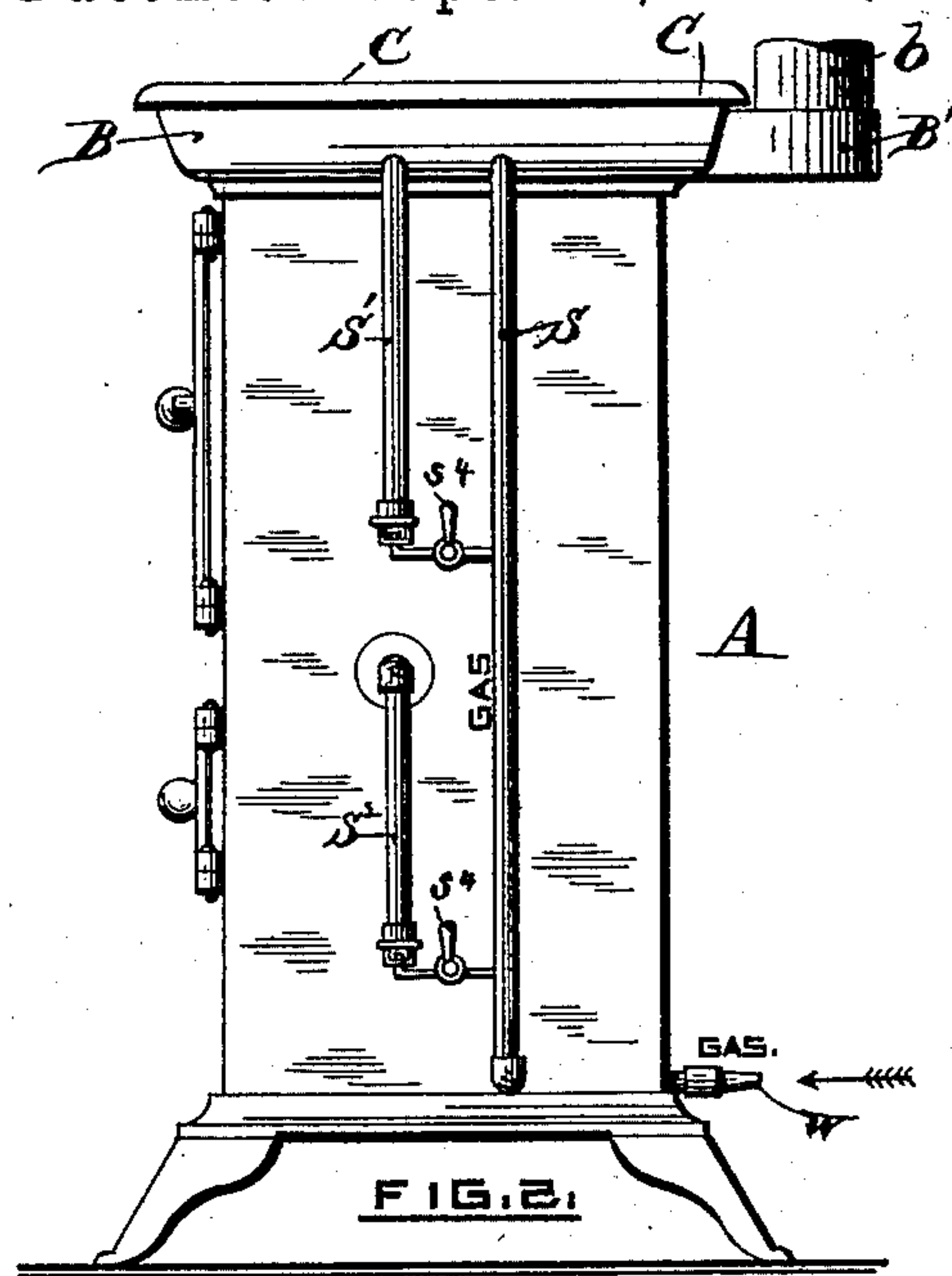
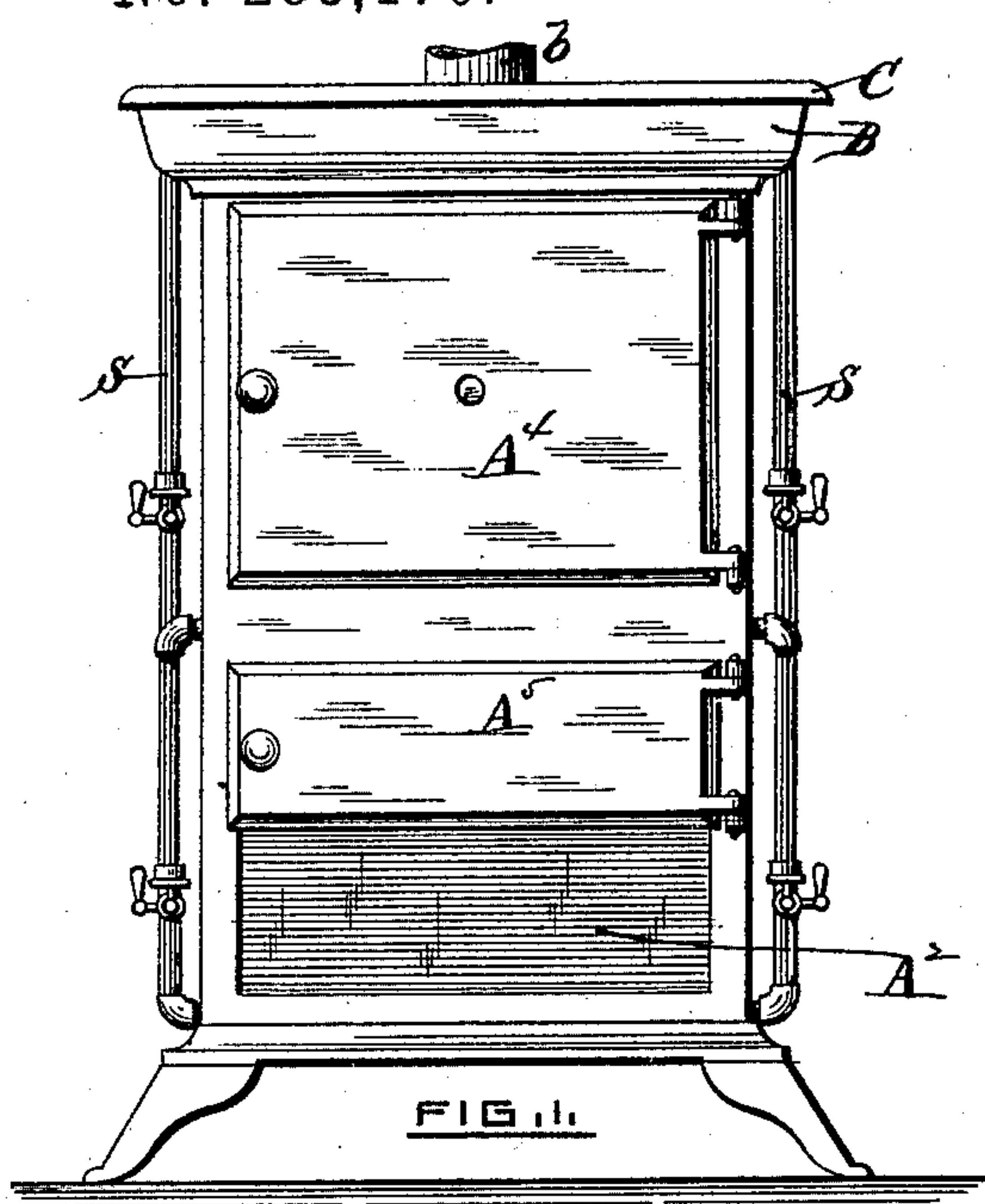
2 Sheets—Sheet 1.

H. H. SHELDON.

GAS STOVE.

No. 285,170.

Patented Sept. 18, 1883.



WITNESSES.

INVENTOR.

Charles Hennigan.  
Frank B. Grater

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By Geo. H. Pennington  
Atty.

(No Model.)

2 Sheets—Sheet 2.

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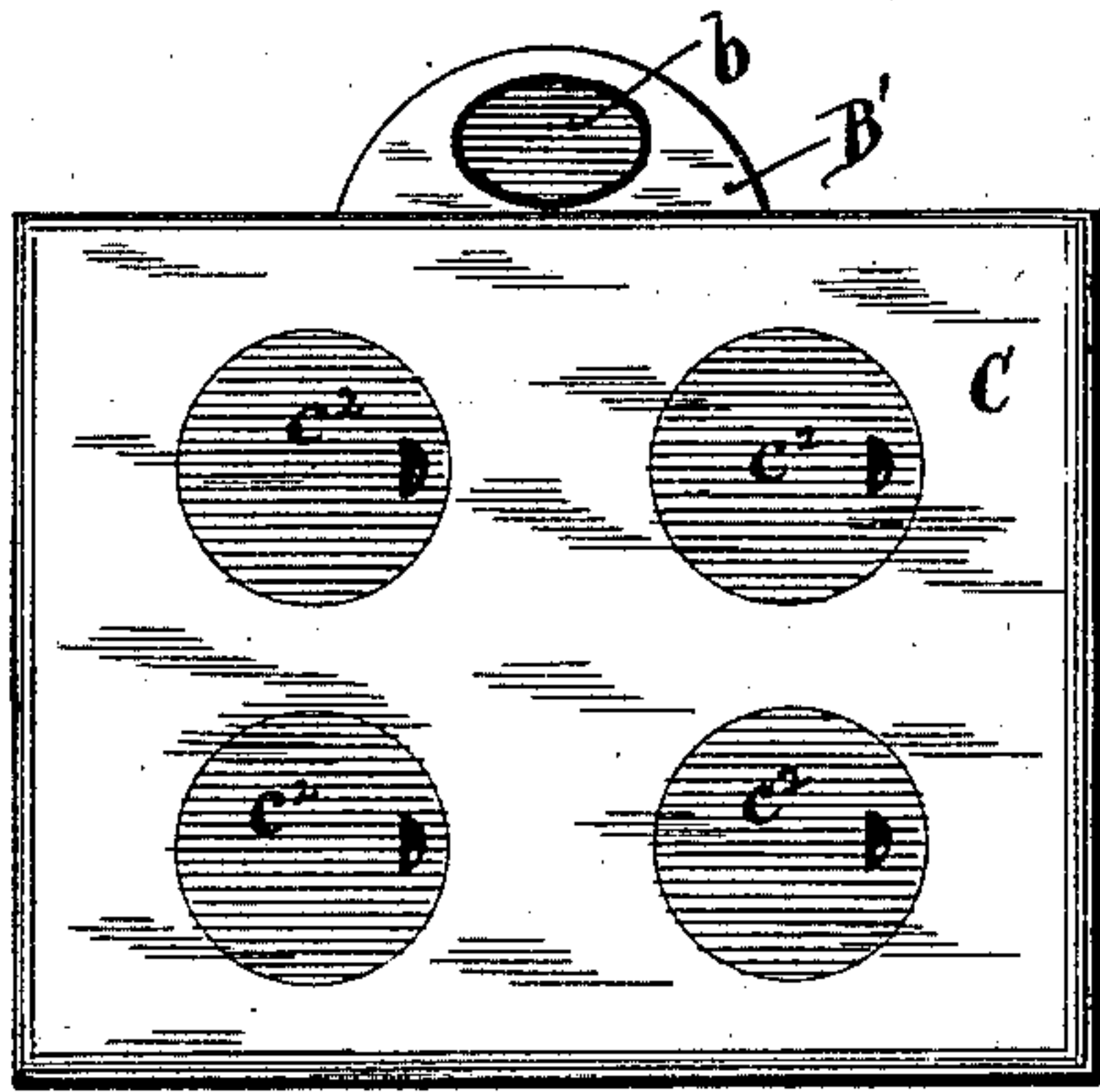


FIG. 5.

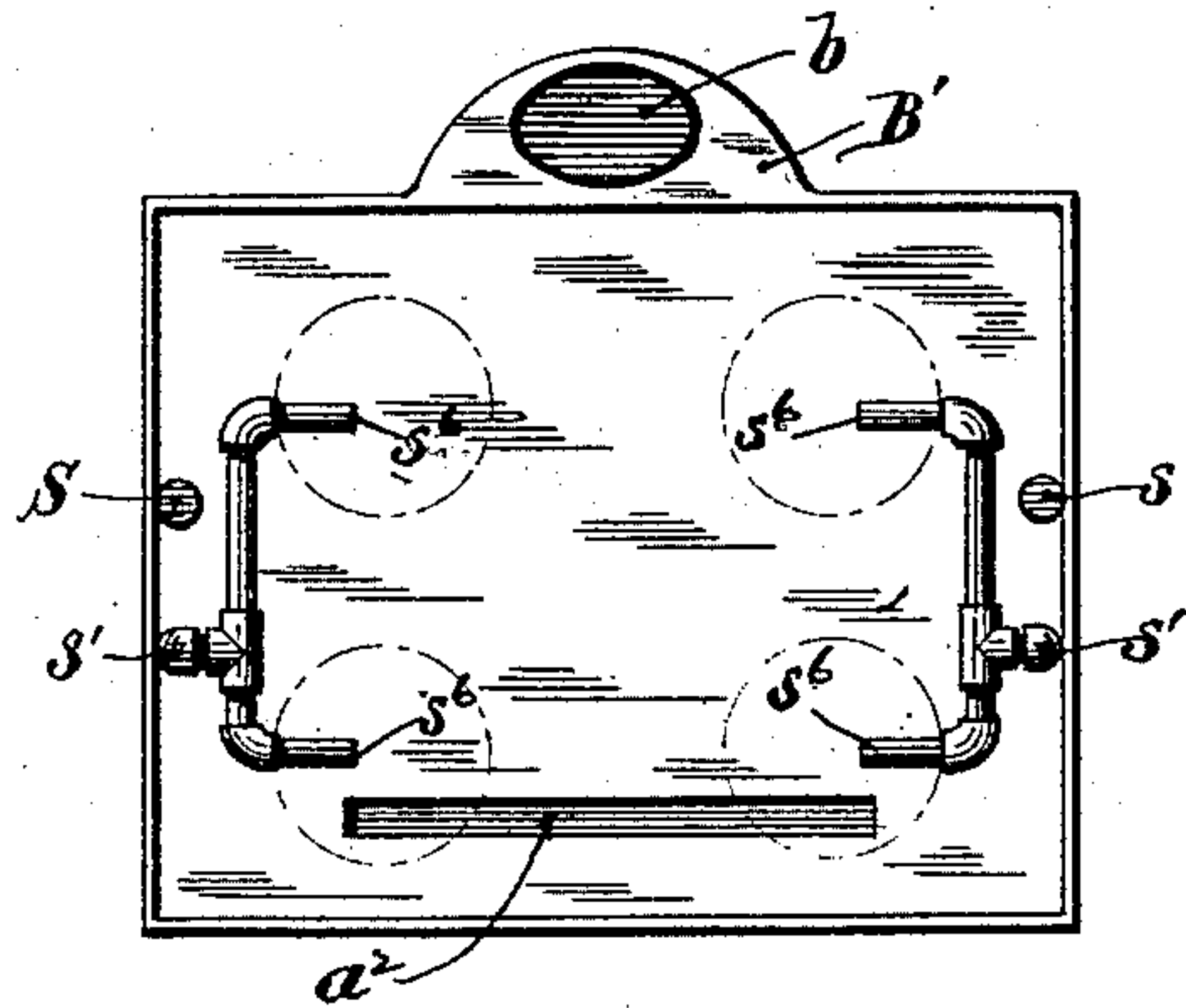


FIG. 6.

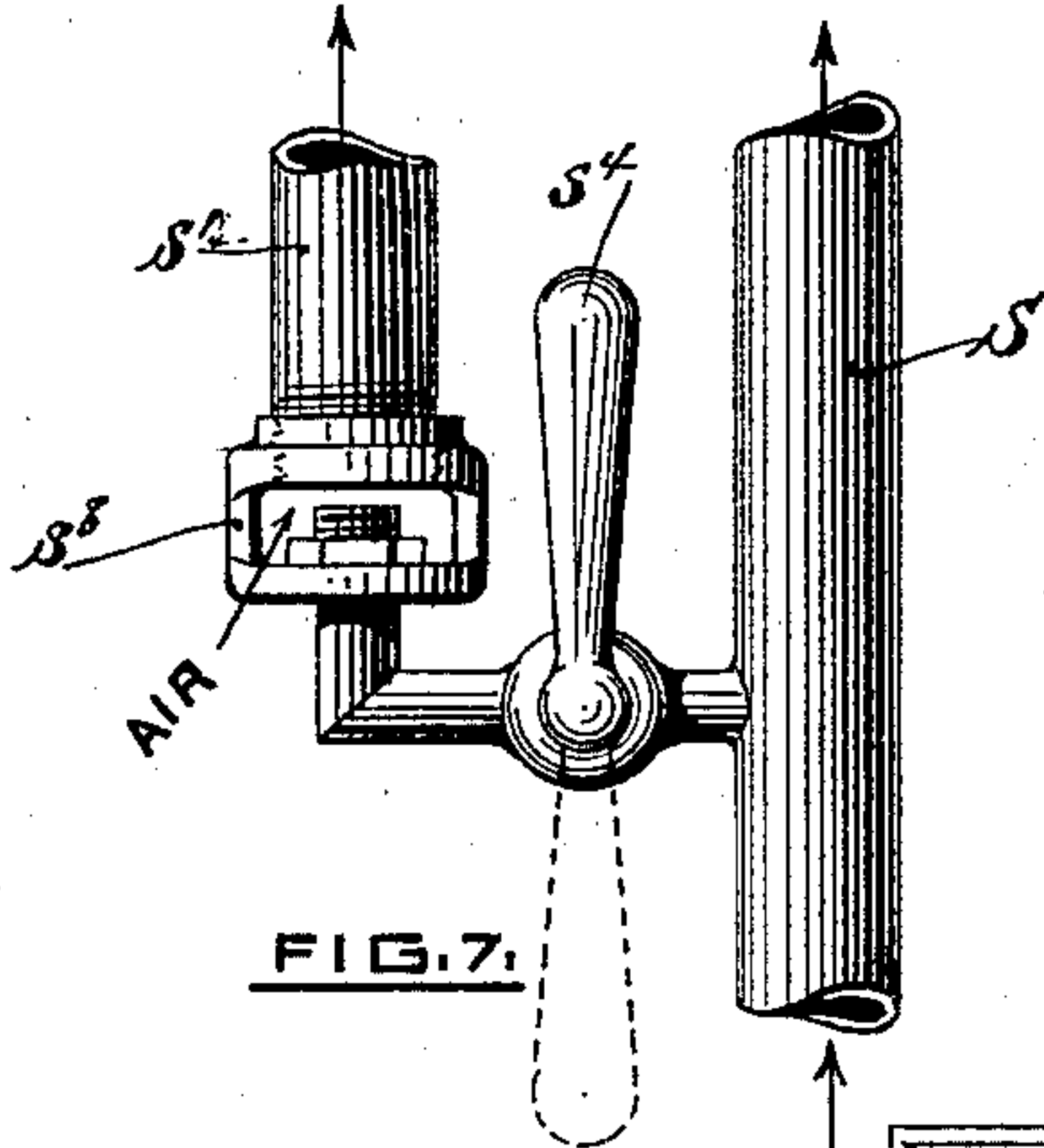


FIG. 7.

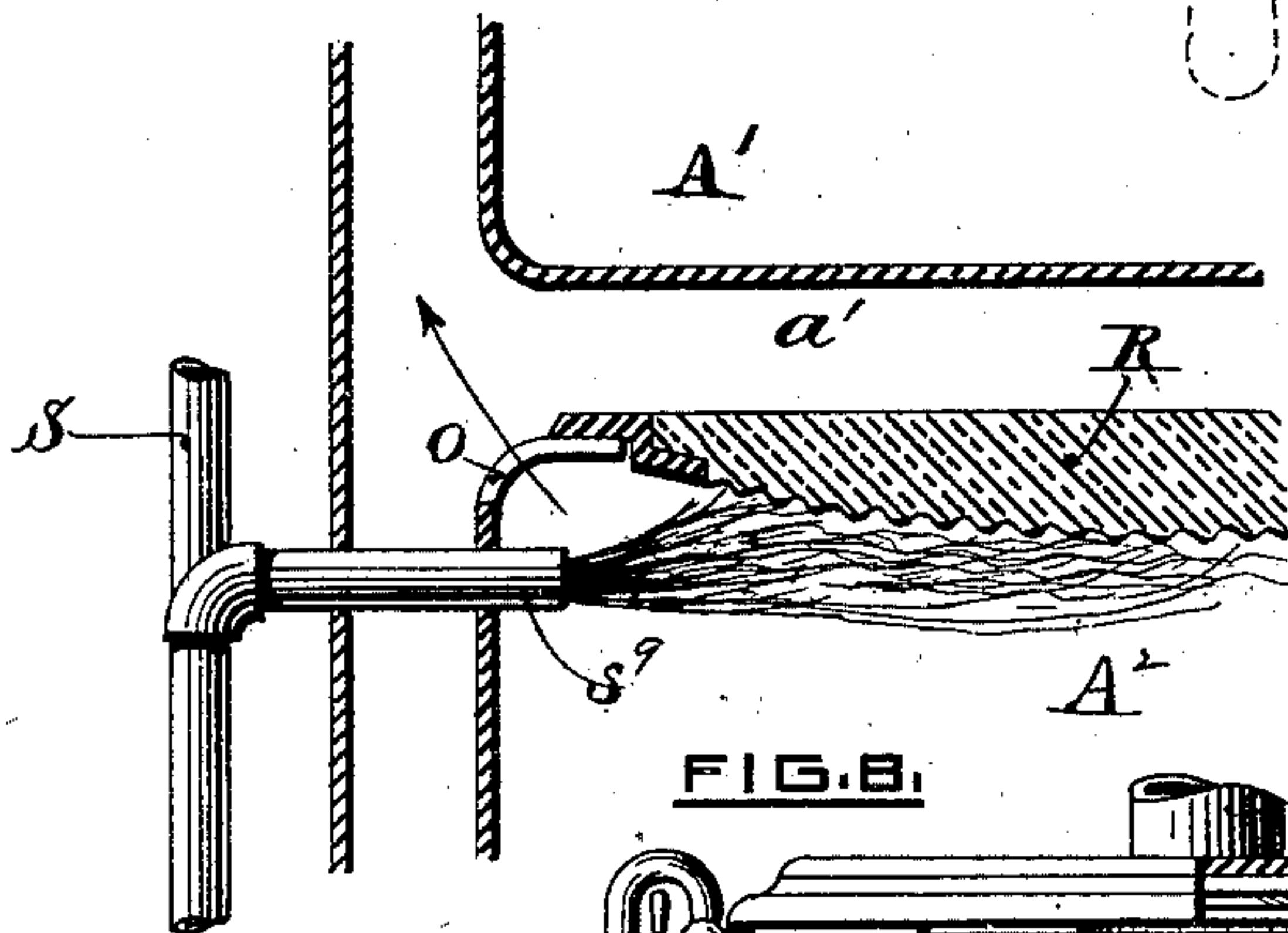


FIG. 8.

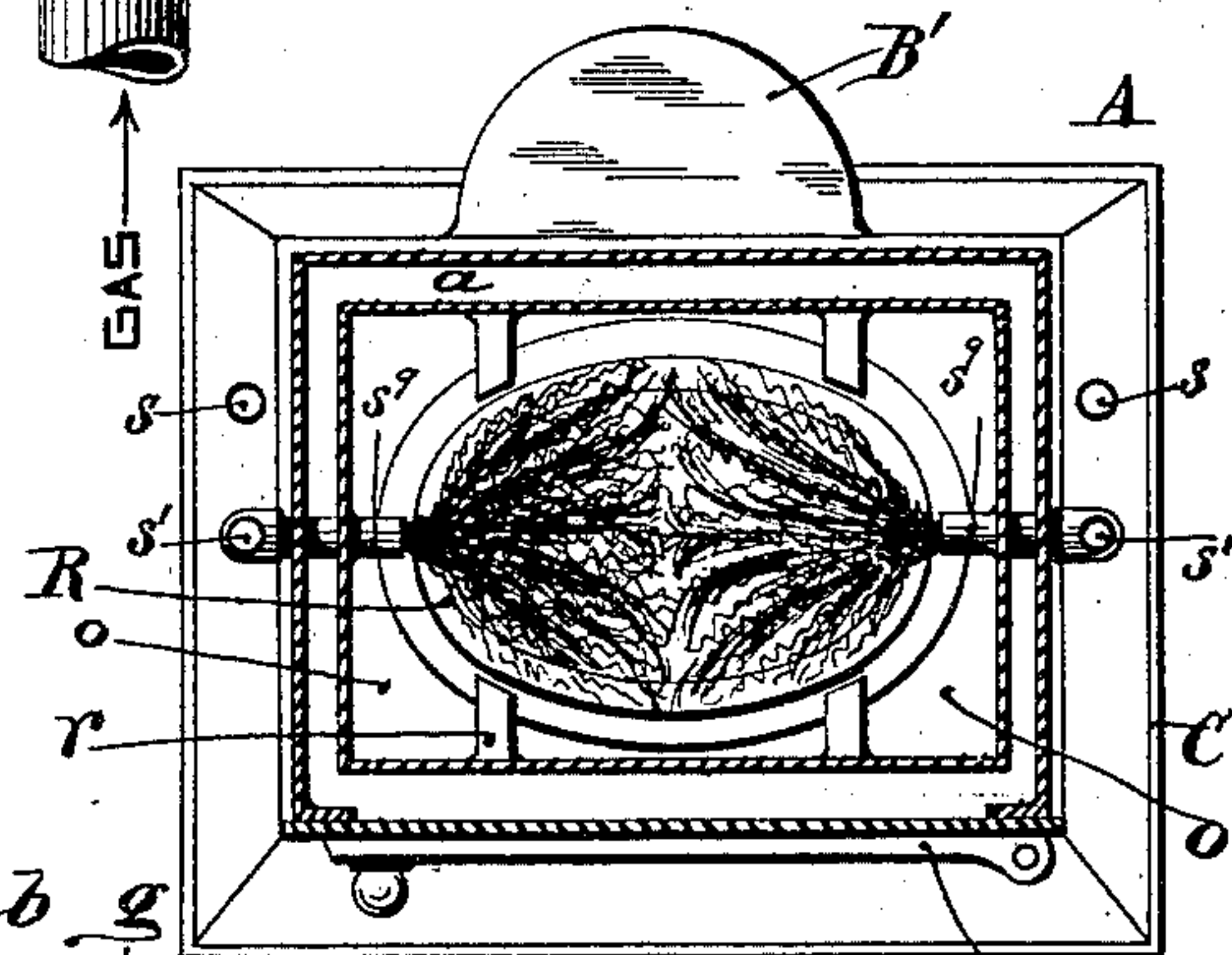


FIG. 9.

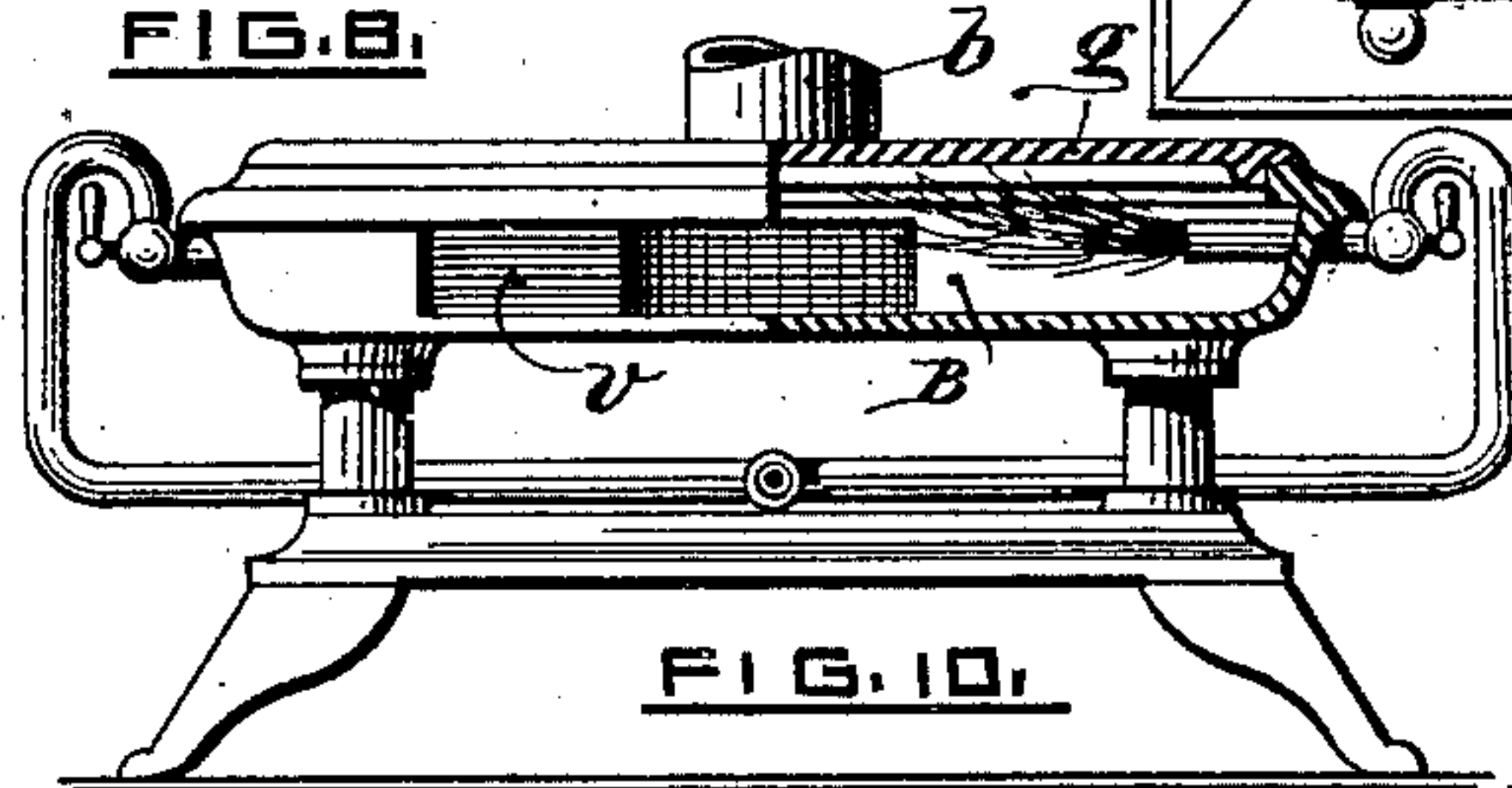


FIG. 10.

WITNESSES.

INVENTOR.

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*Frank B. Grater*

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# UNITED STATES PATENT OFFICE.

HENRY H. SHELDON, OF PAWTUCKET, RHODE ISLAND.

## GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 285,170, dated September 18, 1883.

Application filed May 7, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY H. SHELDON, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Gas-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My present invention relates to certain improvements in gas ranges or stoves; and it consists of a closed combustion-chamber in combination with burners for heating the top portion of the stove.

My invention further consists of a detachable deflector, made of iron, fire-clay, soapstone, or other suitable material, having a convex form on its underside. Said deflector is placed between the oven and roasting-apartment of the range. The sides of the range are made hollow, thereby admitting air from the bottom of the range through the said sides and into the combustion-chamber, the latter being provided with a flue which is adapted to connect with a chimney, thereby making a forced blaze, the waste gases from which are conveyed to the said flue and chimney.

In gas-ranges heretofore manufactured the top portion, in which the burners are located, is perforated on the sides and often on the top, thereby allowing unpleasant odors and injurious gases to escape into the room.

With my improved closed combustion-chamber this defect is entirely overcome, all as will be more fully hereinafter set forth.

In the accompanying two sheets of drawings, Figure 1 represents a front view of the range complete. Fig. 2 represents a side view of the same. Fig. 3 is a vertical section through the range on line *o o* of Fig. 4, showing the interior construction of the top combustion-chamber, also the oven, roasting-apartment, together with the arrangement of the detachable deflector and burners. Fig. 4 is a vertical section through line *x x* of Fig. 3, showing the other view of the parts enumerated above.

Fig. 5, Sheet 2, represents a top view of the range. Fig. 6 represents a view of the bottom of the closed combustion-chamber with top removed, and showing the burners and air-communicating flue, and also the exit-flue. Fig. 7 represents a device for combining the gas and air previous to combustion, and also showing stop-cock and connections, enlarged scale. Fig. 8 represents a partial section of the deflector, oven, roasting-apartment, and flue around the same, and also showing one of the burners in operation, enlarged scale. Fig. 9 represents an inverted cross-sectional plan on line *w w* of Fig. 3, showing the burners and deflector in position. Fig. 10 represents a modification of the range, having only the top combustion-chamber, the whole arranged for broiling or similar culinary operations.

The following is a more detailed description of my invention and the manner of operating the same.

A represents the range or stove, provided with the oven *A'*, beneath which is the roasting-oven *A''*, said ovens having doors *A'''* *A''''*.

B represents the top combustion-chamber, having closed sides, and provided with the extension *B'*, which latter is adapted to convey the foul gases to the chimney by means of the flue-pipe *b*. Said chamber is further provided with a top plate, *C*, adapted to receive griddles or covers *c'*. (See Fig. 5.)

*a* represents the air-space between the ovens and outer shell of the stove. Said space communicates with the fresh air at the bottom of the stove, as shown in Figs. 3 and 4. This space *a* is also connected with the top chamber, *B*, and flue by means of the aperture *a''*.

*R* represents my improved deflector, having a convex under surface. Said deflector is adapted to be removable, and is placed between the ovens *A'* *A''*, before referred to, leaving an air-space, *a'*, between them, as shown, or it can be secured to the bottom of the oven *A'*. Said deflector rests upon lugs (see Fig. 9) when in use.

The following is the manner of operating my improved gas stove or range: A gas-tube is connected at *W* to the gas-pipe *s*, which latter extends upwardly on two opposite sides of the stove, as shown. At *s'* are stop-cocks and connections for admitting the gas to the burn-



ers.  $s^2$  represent pipes, into which the mingled gas and air is admitted at  $s^8$ , Fig. 7, which, issuing from the open burner or pipe  $s^9$ , is then ignited, thereby heating the deflector or R, which serves both as a radiator and flame-distributor. (See Figs. 3 and 9.) Said deflector is also used for heating the oven  $A'$ . The air entering into combustion with this flame is admitted below the door  $A^5$  and escapes through openings  $o$  (see Fig. 9, &c.) into the space  $a$ , leading to the chimney. The form of this deflector is such as to spread out the flame, which in practice completely covers its convex surface. Said deflector may be corrugated, as shown in Fig. 8, for the purpose of impinging the flame more effectively therewith.  $s'$  represents similar pipes and connections for heating the top chamber, B. Said pipes terminate in four open burners,  $s^6$ . The oxygen necessary to combine with the burning gas in this chamber B is admitted at the bottom of the stove and into the space  $a$ , (see arrow direction,) thence into or through the aperture  $a^2$  of the bottom plate of said chamber, and finally into the flue  $b$ , before referred to.

In Fig. 10 I have combined the chamber B with a supporting-base. The air enters the chamber B through an opening, V, thence to the burners, and into the flue  $b$ .

$g$  represents a plate or griddle, which can be adapted for broiling or similar culinary purposes.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. In a gas stove or range, the combination of Bunsen or atmospheric burners (in which the gas and air are united before entering the stove) with a combustion-chamber having closed sides and top, and adapted to receive air and waste gases through its bottom side, and said chamber being further provided with an exit-flue for conducting the products of combustion into a suitable pipe or chimney, substantially as shown and described.

2. In a gas stove or range having hollow side walls and provided with the baking-oven  $A'$  and roasting-oven  $A^2$ , the combination of the convex deflector R with burners  $s^9$ , introduced through the sides and near the top of said roasting-oven  $A^2$ , and air-passages  $o$ , substantially as shown and described.

3. The combination, in a gas stove or range, A, provided with hollow sides  $a$ , gas-tubes  $s$ , stop-cocks  $s^4$ , tubes  $s' s^2$ , and ovens  $A' A^2$ , of the removable convex deflector R and closed combustion-chamber B, the latter adapted to connect with the said hollow sides  $a$ , and provided with the flue-exit  $b$ , the whole arranged and adapted for use substantially as shown and set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY H. SHELDON.

Witnesses:

WM. R. DUTEMPLE,

GEO. H. REMINGTON.