

(No Model.)

J. W. THOMAS.

2 Sheets—Sheet 1.

STOVE.

No. 273,912.

Patented Mar. 13, 1883.

Fig. 1.

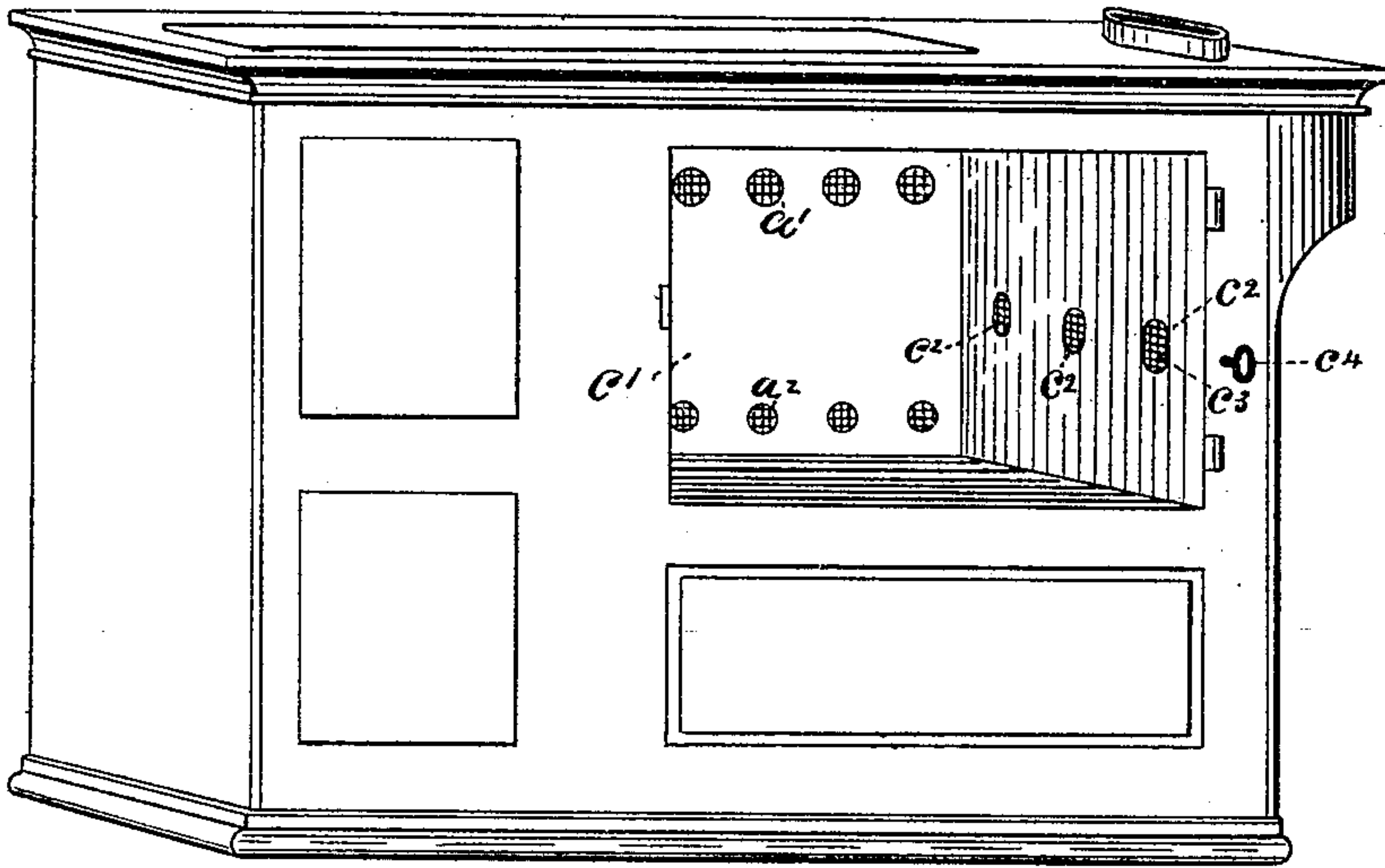


Fig. 2.

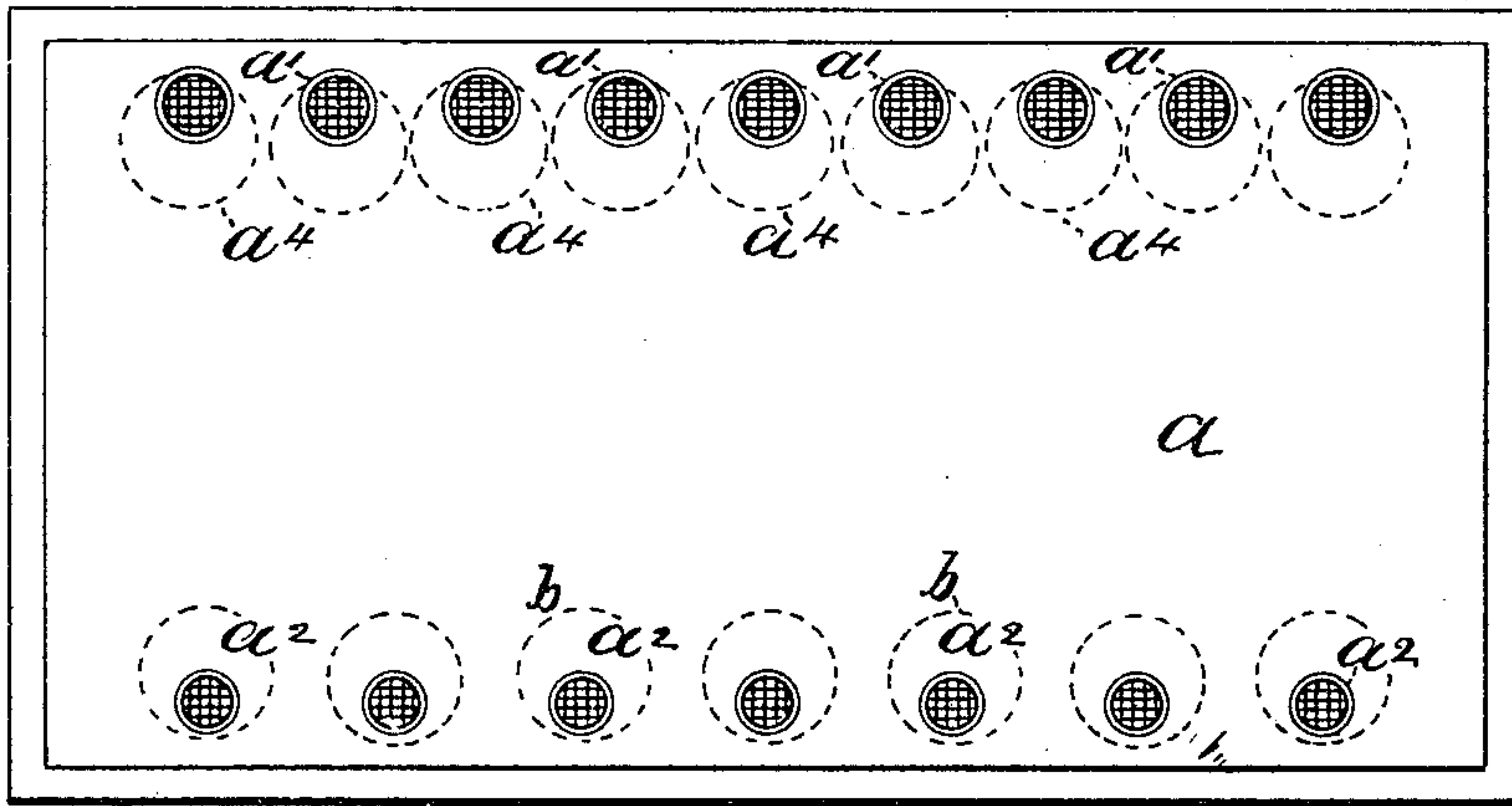
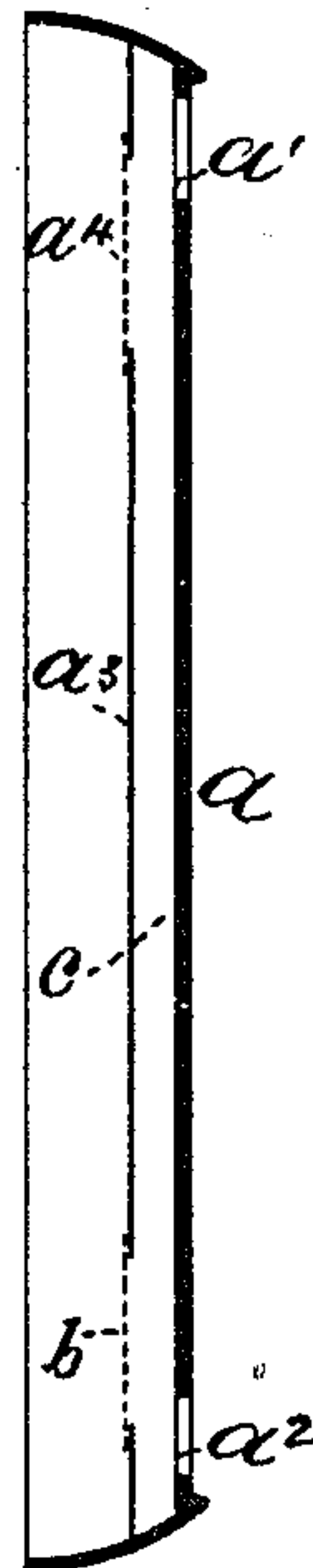


Fig. 3.



Witnesses.

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his Attorney.

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2 Sheets—Sheet 2.

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Fig. 4.

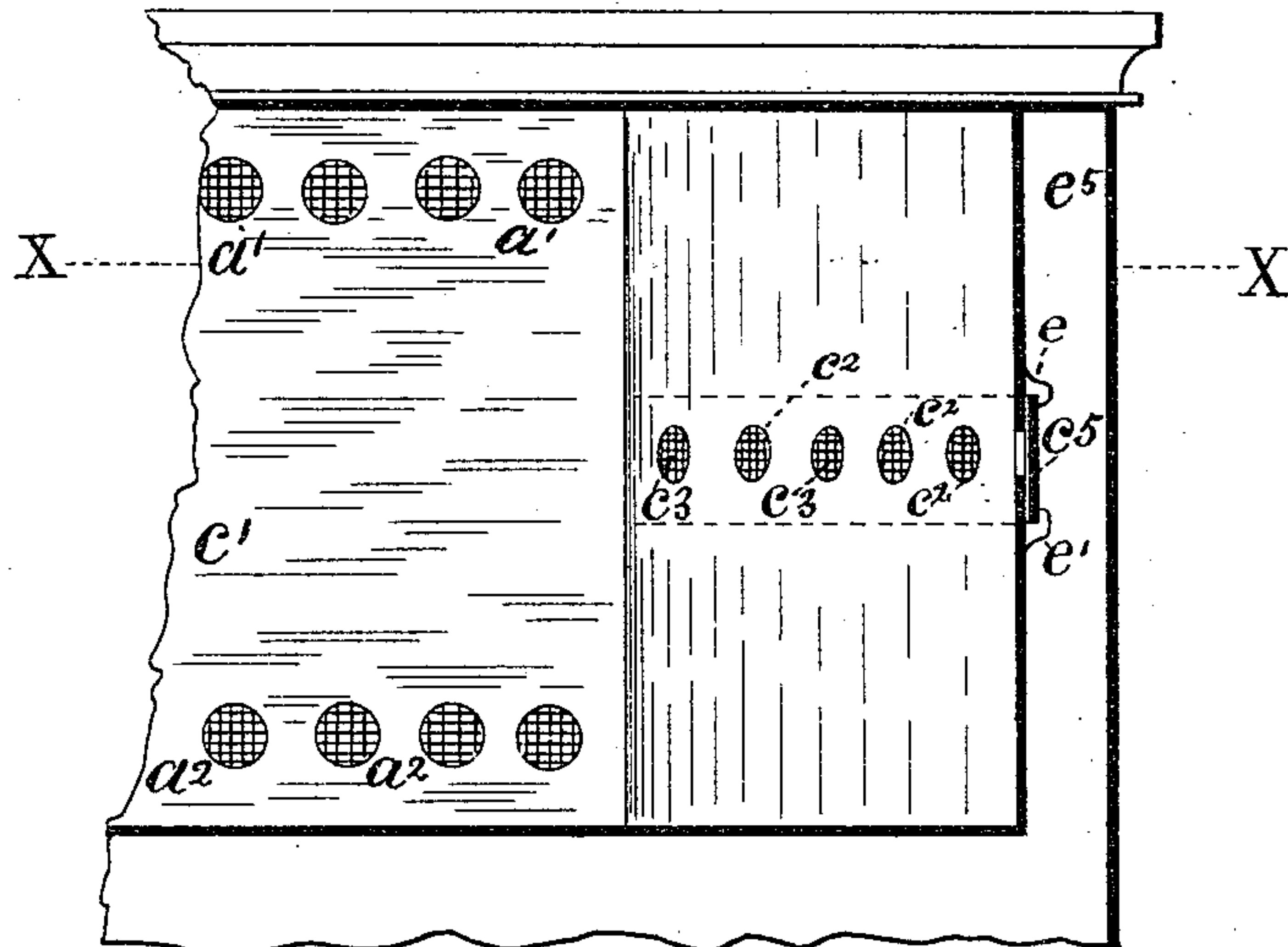


Fig. 5.

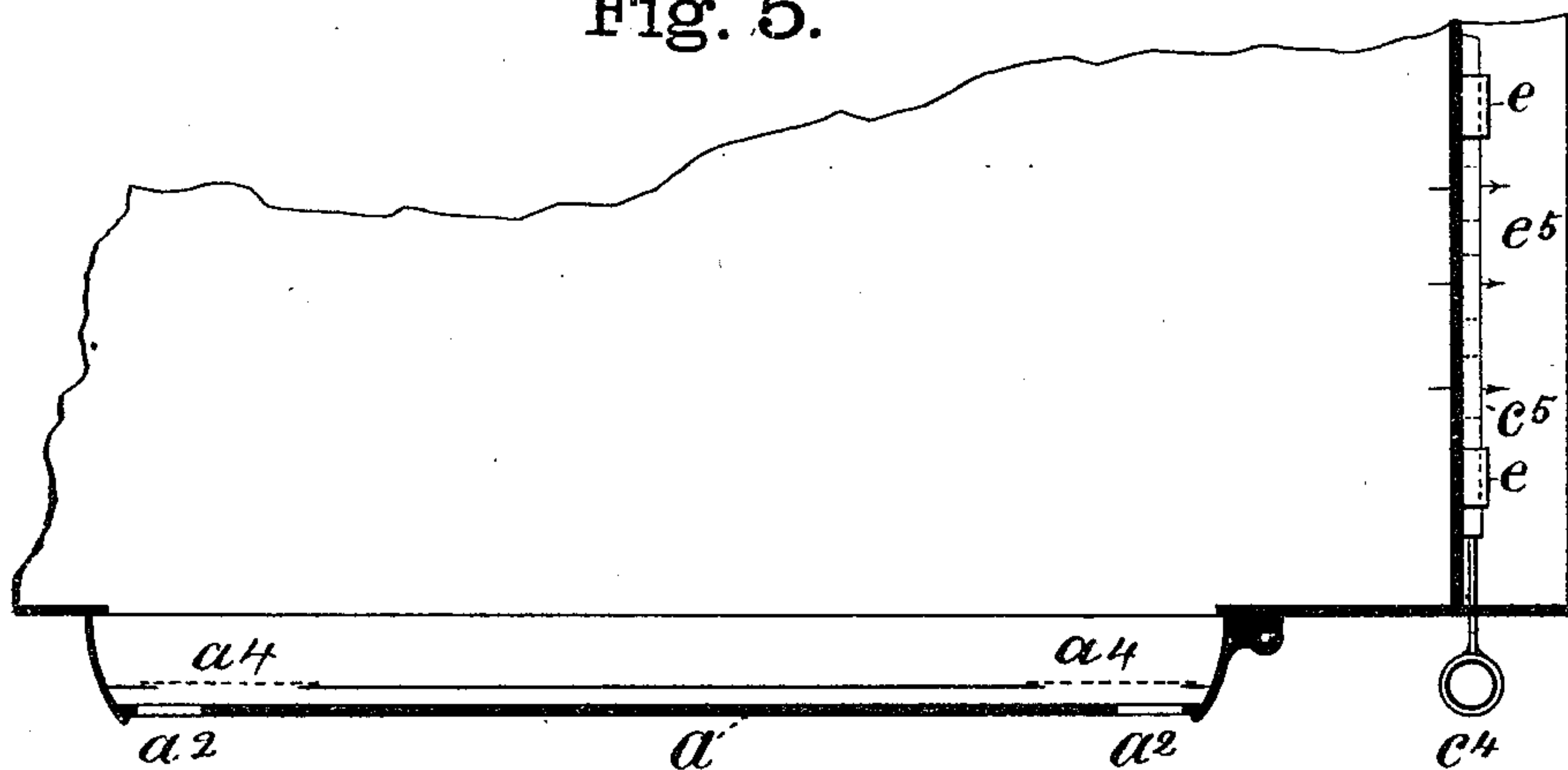
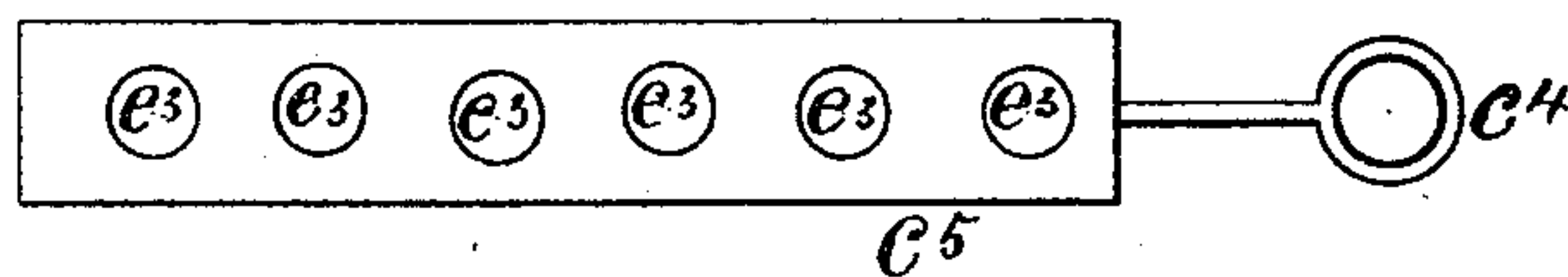


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN W. THOMAS, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO HIMSELF,
AND C. M. WHITMIRE, OF BUFFALO, AND CHAS. S. HOUGHTALING, OF
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STOVE.

SPECIFICATION forming part of Letters Patent No. 273,912, dated March 13, 1883.

Application filed December 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. THOMAS, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Stoves, of which the following is a specification.

The object of my invention is to provide the means for a free circulation and ventilation of the oven during the process of baking or roasting, and for adjusting the amount of circulation of air in the oven, all of which will be fully and clearly hereinafter described by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a range or stove, the oven-door being left off to expose the interior. Fig. 2 is an enlarged front view of a stove-door, and Fig. 3 is a section through line X X, Fig. 2. Fig. 4 is a longitudinal section through a portion of a stove-oven and the back flue. Fig. 5 represents a horizontal section through a portion of a stove oven and door in or about line X X, Fig. 4; and Fig. 6 is a detached view of the damper.

The oven-door *a* is provided at the top with a series of holes, *a'*, and at the bottom with a series of smaller holes, *a''*. Below the face of the oven-door is secured a thin plate, *a'''*, having a series of finely-perforated plates, *a''''*, near the top and a series of smaller plates, *b*, at or near the bottom. The centers of the plates *a''''* are arranged slightly below the centers of the holes *a'*, and the centers of the perforated plates *b* are placed above the centers of the holes *a''*, the object being to cause the air to pass in a short distance in the air-space *c*, between the plates and the side of the door, so as to become heated when it enters the oven. When used in a stove, both doors are constructed in this way. In a range having but one door the door is constructed as above described, and the opposite end of the oven is also made in the same manner. In Fig. 1 I have shown an ordinary cooking-range in perspective. The oven *c'* is provided with a series of holes, *c''*, having a finely-perforated plate, *c'''*, behind them. At the back of the holes *c''* is arranged a damper, *c''''*. *c'''''* is the handle. The damper is made of a thin plate of metal having a series of holes corresponding with the holes *c''*, and is

placed in slideways arranged in the ordinary way, so that when pulled out or pushed in the holes *c''* may be closed or slightly closed or opened, as may be desired. The damper *c''''* is secured in place by the holding and guide pieces *e e'*, so it can be made to slide easily between them. It is provided with a series of holes, *e'''*, which correspond in size, number, and distance apart with the holes in the back of the oven. (See Figs. 4, 5, and 6.) The object in using a series of fine holes along the oven-doors at the top and bottom and in the back of the oven is to distribute the air as it enters the oven more evenly and in very fine jets, and the object in making the fine openings leading to the flue in the back of the oven adjustable by means of the damper *c''''* is to regulate the amount of air passing in through all the said openings through the door, and consequently the circulation throughout the oven and the amount of air and gases that pass out, into, and through the flue *c''''*. A portion of the steam and gases generated during the process of cooking or baking, and air that passes in through the holes *a'* *a''*, pass off through the openings *c''* and plates *c'''*. The object of this damper is to regulate the amount of vapor and gases that pass out into the flue and pipe while roasting or baking, and also to adjust the amount of air that enters the holes *a'* and passes out of the holes *a''*, and it consequently regulates the amount of the air-circulation within the oven. Some kinds of food generate more carbonic-acid gas than others, and therefore require the holes *c''* to be opened more than for other kinds, so as to give a greater circulation and carry off more of such gases, while other kinds of food require less, so that it is necessary that the size of the openings *c''* should be capable of being adjusted.

I claim—

A stove-oven having a double series of holes, *a'* *a''* *a'''* *b*, and an air-space, *c*, in combination with a series of openings, *c''*, in the back of the oven, and an adjusting-damper, substantially as and for the purposes described.

JOHN W. THOMAS.

Witnesses:

J. M. CALDWELL,
JAMES SANGSTER.