

No. 630,921.

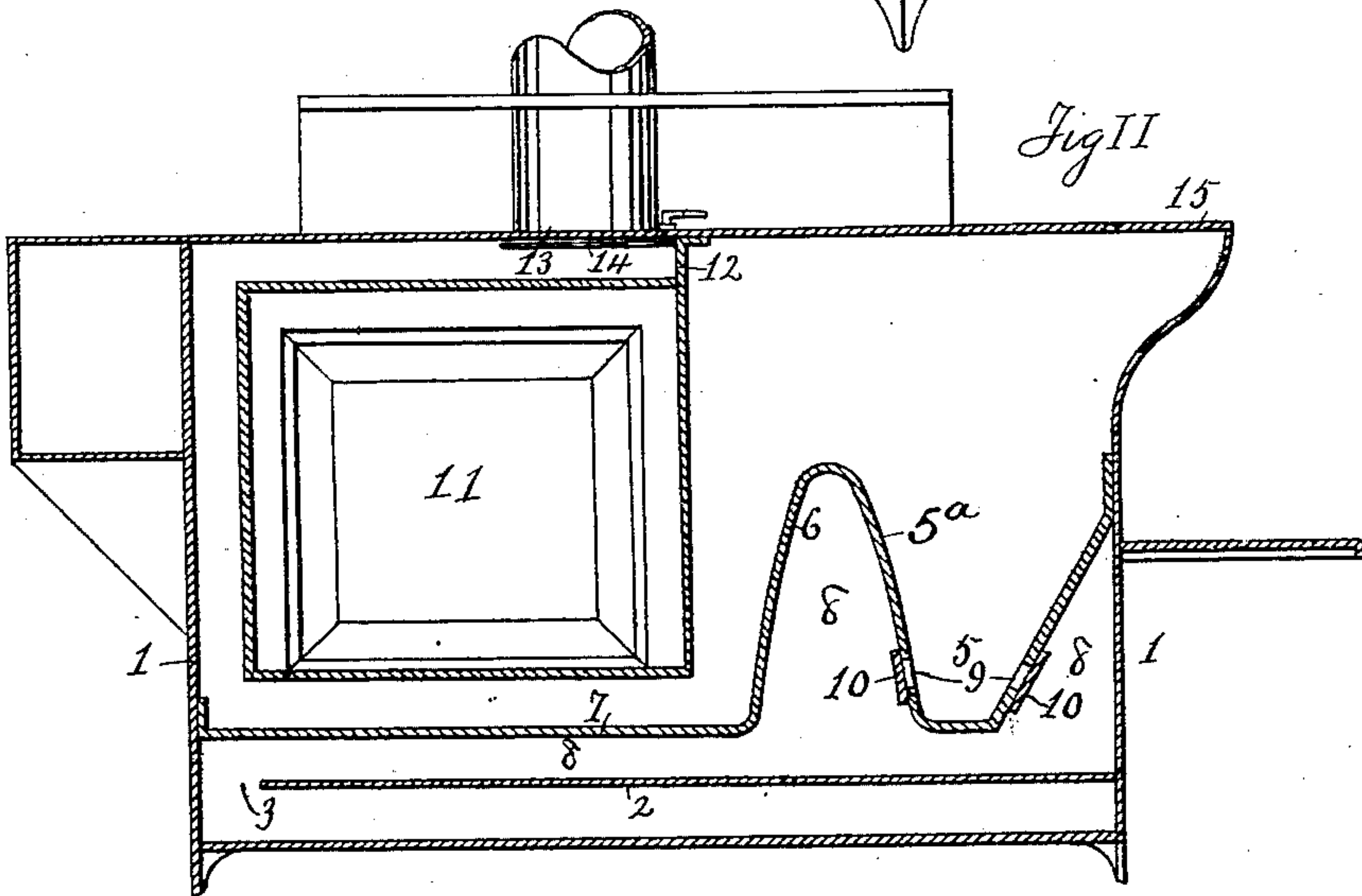
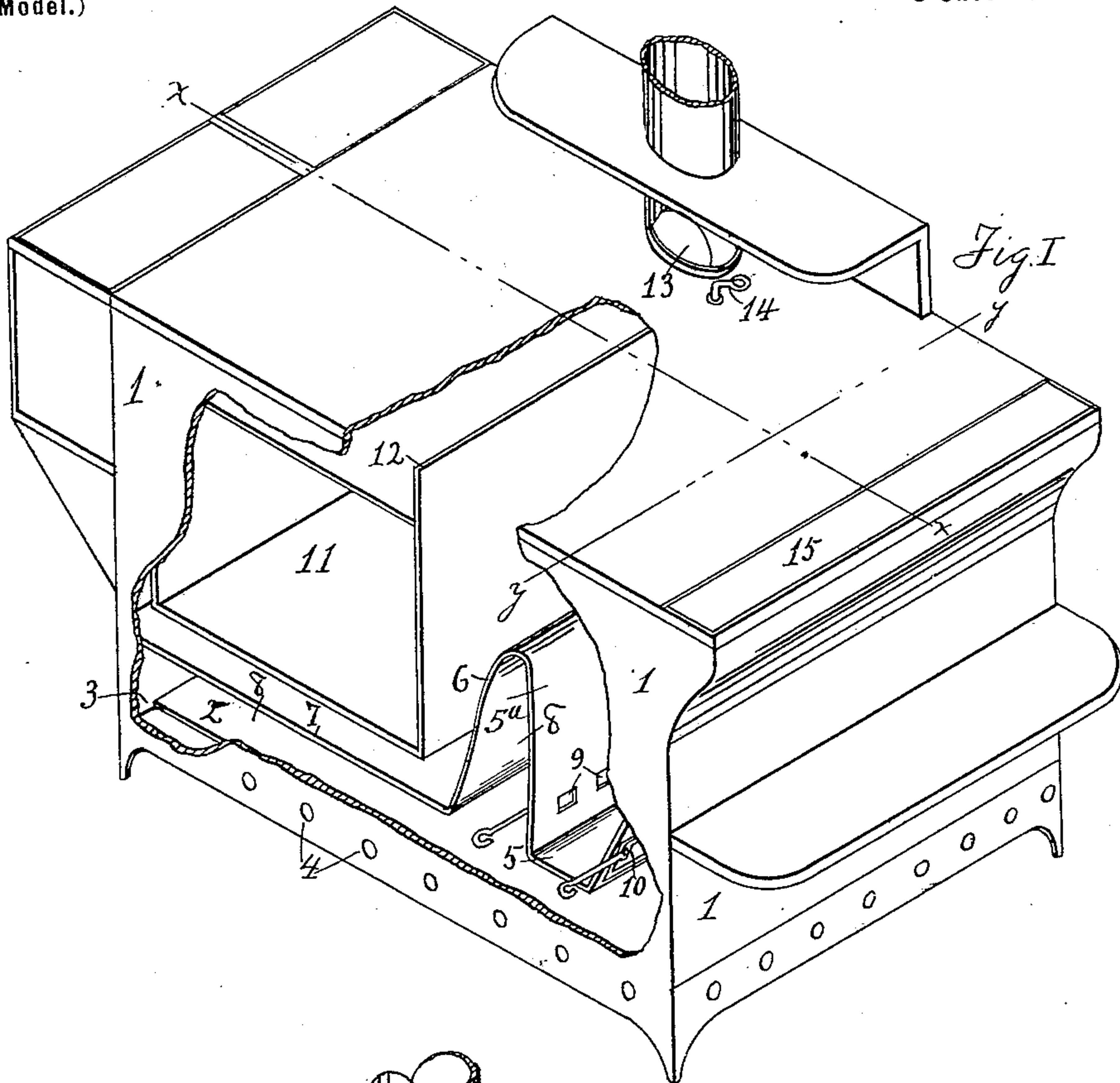
Patented Aug. 15, 1899.

C. OLSTED.
COOKING STOVE.

(Application filed Dec. 30, 1897.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses,

A. B. Jacobs.

John M. Parry.

By

Inventor

C. Olsted

J. S. Brown
Atty.

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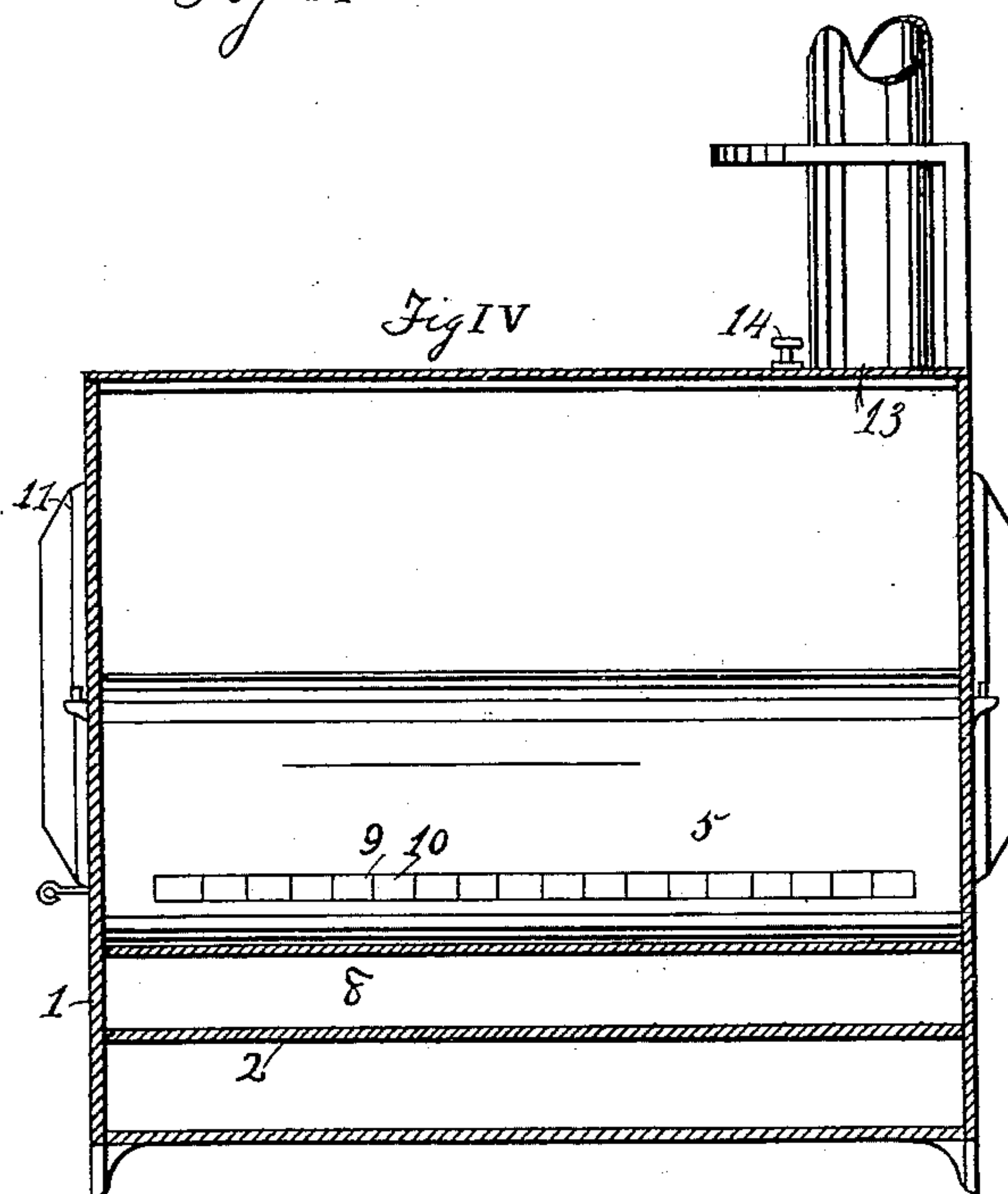
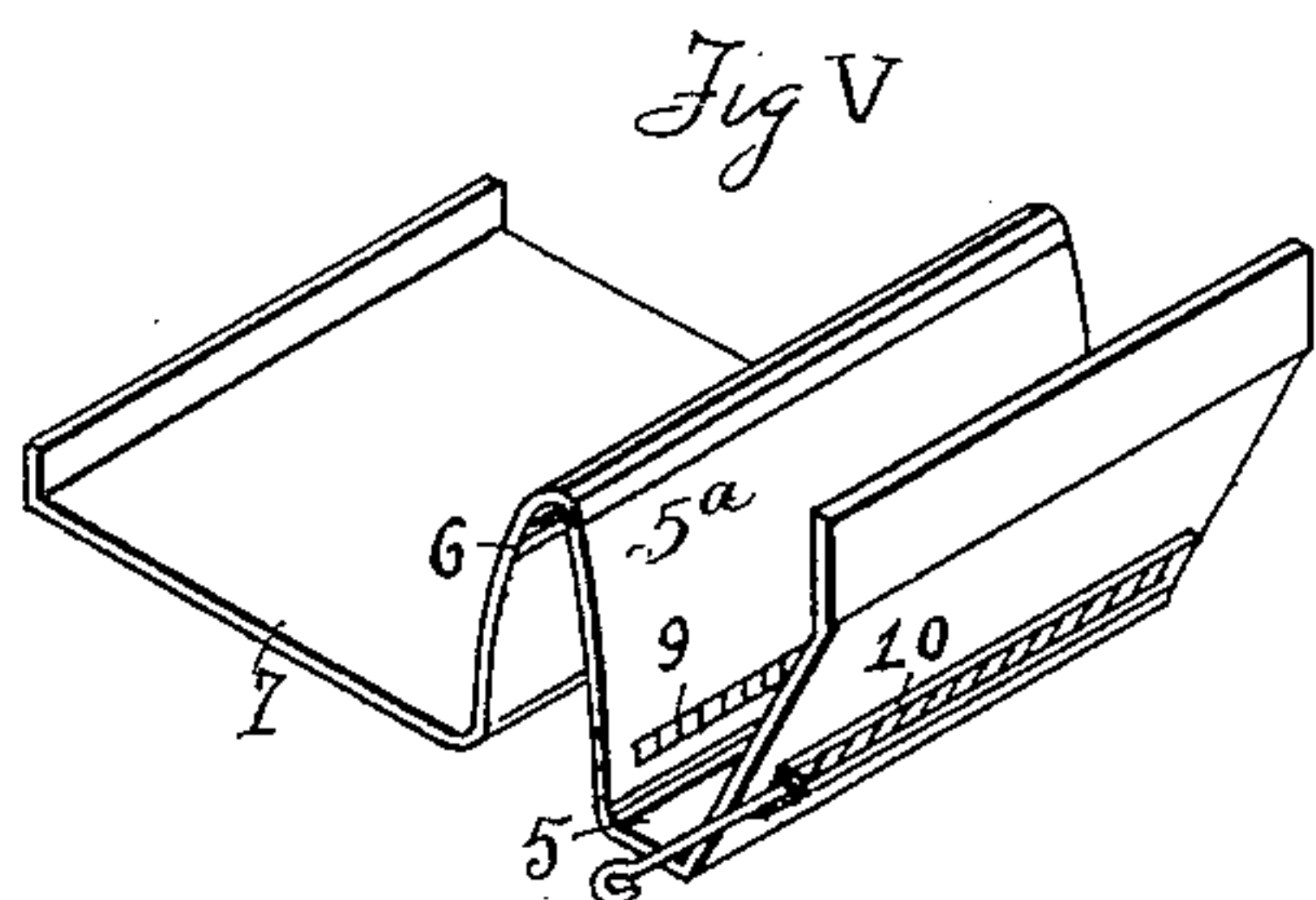
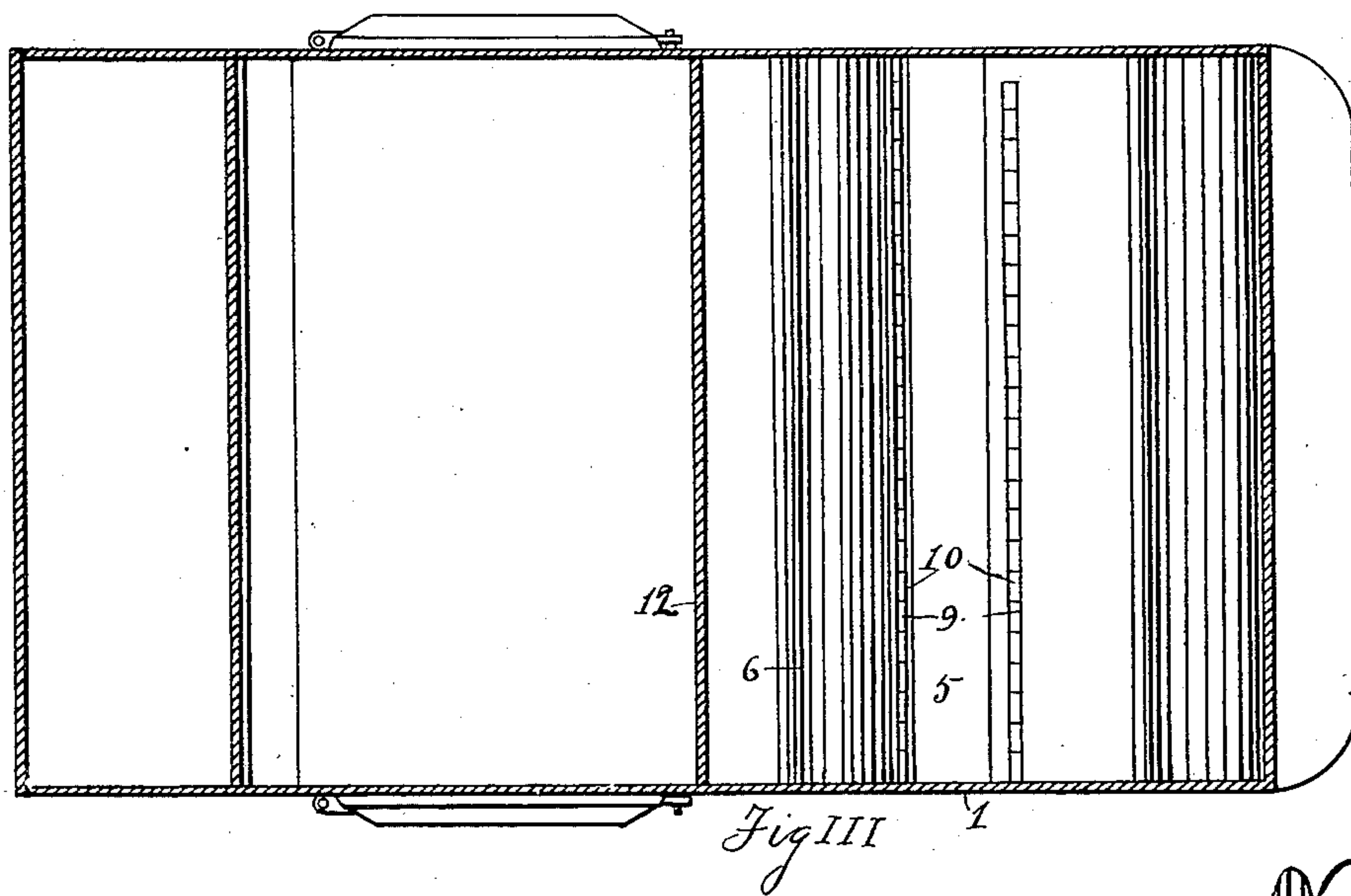
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3 Sheets—Sheet 2.



Witnesses

A. B. Jacobus

John M. Tarry

Inventor

C. Olsted

By

J. S. Brown

Atty.

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3 Sheets—Sheet 3.

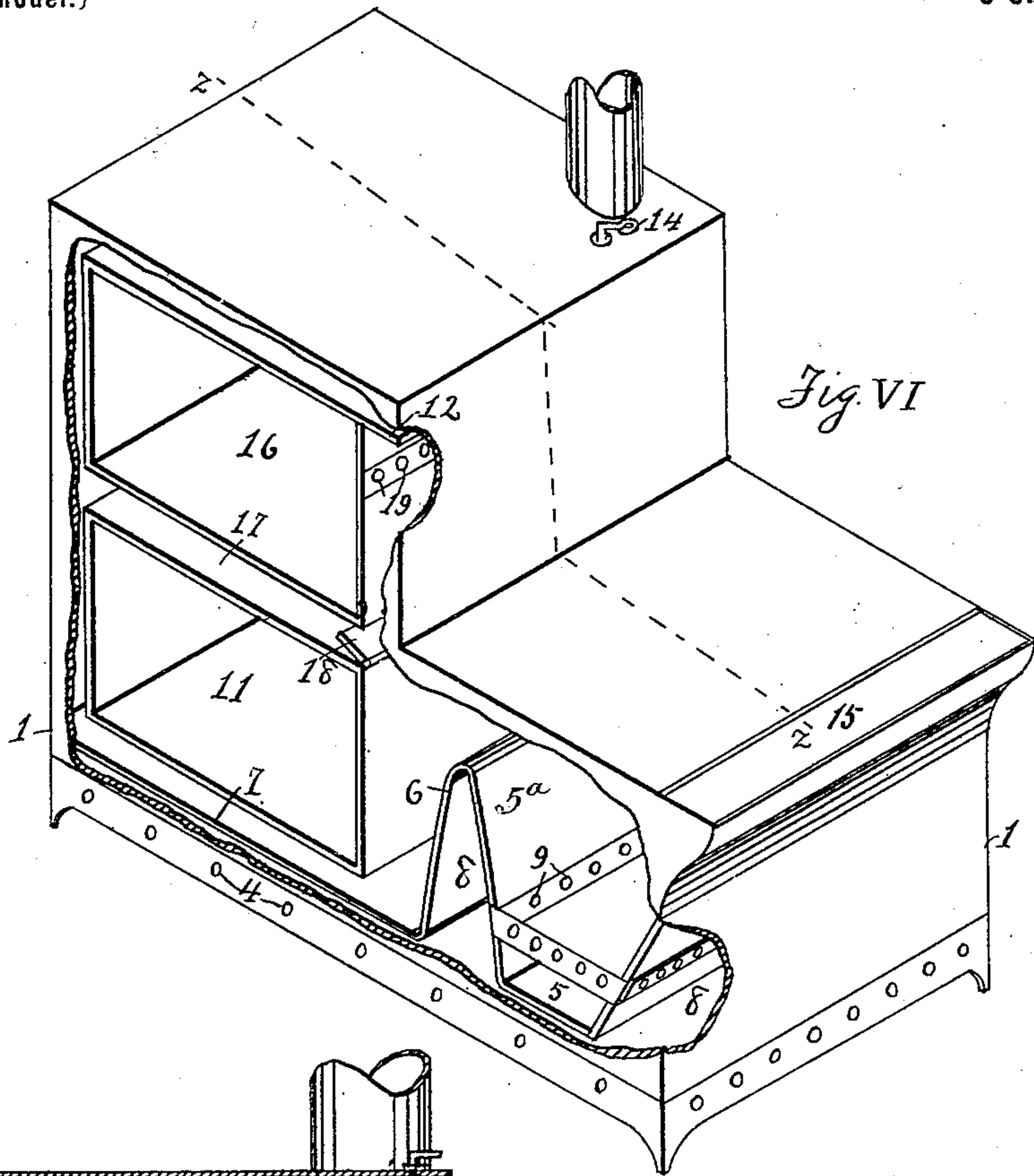


Fig. VI

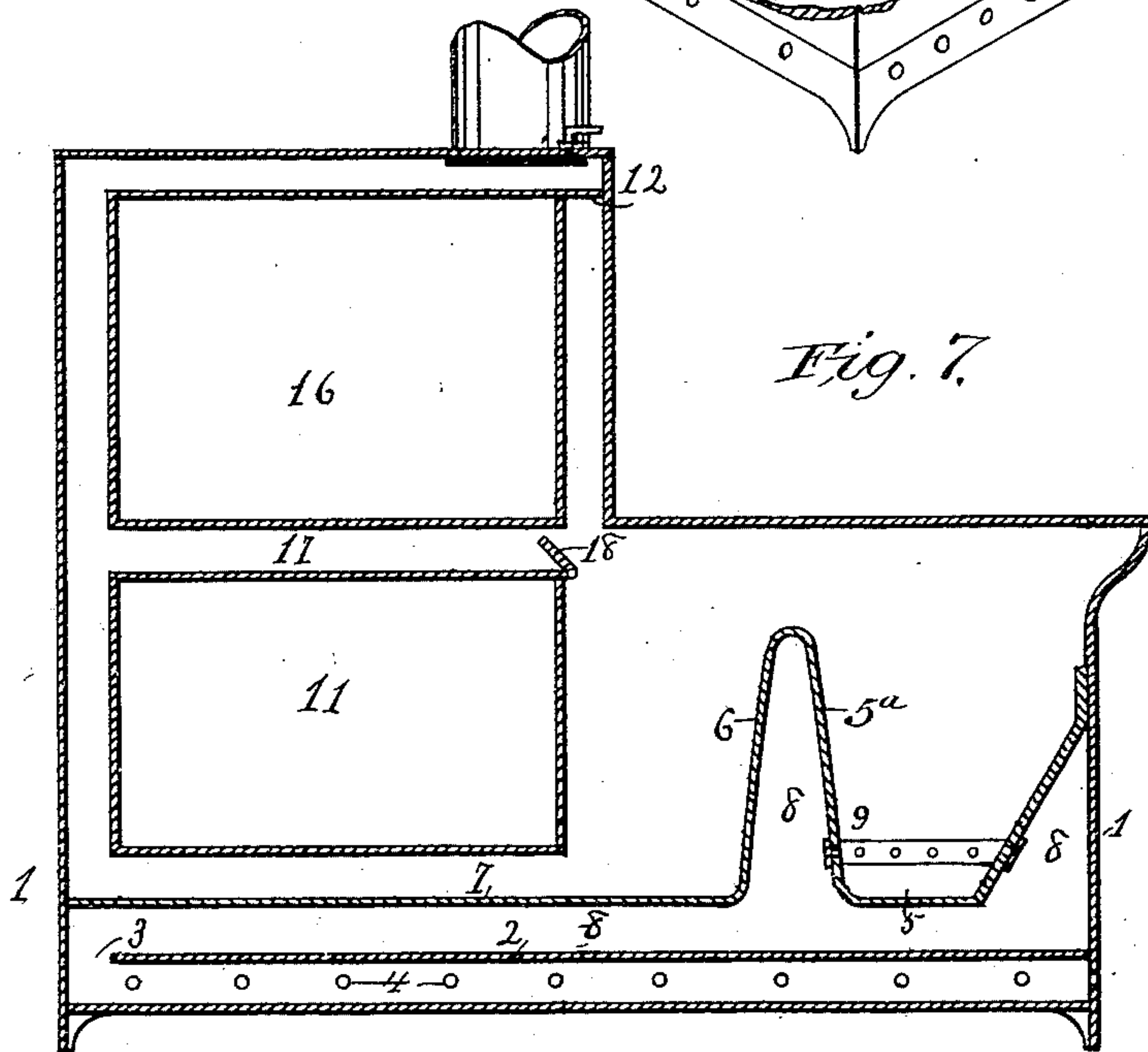


Fig. 7.

Witnesses

A. B. Jacobus

John M. Perry

By

Inventor

C. Olsted

J. S. Brown

Att'y.

UNITED STATES PATENT OFFICE.

CHRISTIAN OLSTED, OF TONGANOXIE, KANSAS.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 630,921, dated August 15, 1899.

Application filed December 30, 1897. Serial No. 664,666. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN OLSTED, a citizen of the United States, residing at Tonganoxie, in the county of Leavenworth, in the State of Kansas, have invented certain new and useful Improvements in Cooking-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in cooking-stoves, having more particular reference to the application to a cooking-stove of the improvements in stoves set forth in my application for Letters Patent executed by me on the 18th day of December, 1897; and my invention consists in certain features of novelty hereinafter described, and pointed out in the claims.

Figure I represents a perspective view of a cooking-stove embodying my improvements, the outer casing being partly broken away to show the internal construction. Fig. II represents a cross-section on the line xx of Fig. I. Fig. III represents a plan view with the top removed. Fig. IV represents a cross-section on the line yy of Fig. I. Fig. V represents a detail perspective of the fuel and combustion chamber. Fig. VI represents a perspective view of a cooking-stove, showing the application of my improvements to a stove provided with a second oven. Fig. VII represents a cross-section on the line zz of Fig. VI.

Similar numerals refer to similar parts throughout the several views.

1 represents an outer casing forming the body of the stove. Said casing is provided with a double bottom, the upper plate 2 of which not extending completely over said bottom leaves an opening 3, preferably at the rear of the stove, to be further hereinafter mentioned. Said outer casing where it incloses said double bottom is provided with a number of openings 4.

At the front of the stove I arrange a casing 5^a, forming the fire-box 5. The plate forming the casing 5^a from the upper inner extremity of the fire-box I extend diagonally downward and backward a certain distance, as shown at 6, and thence horizontally, as shown at 7, to the rear of the outer casing. Said plates 7 and 6 and the casing 5^a of the

fire-box with the front of the outer casing and the plate 2 of the double bottom form a hot-air chamber, which at the front surrounds the fire-box, communicating therewith through draft-openings 9 in the sides thereof, and extending horizontally rearwardly between plates 7 and 2 communicates through the opening 3 with the cold-air chamber formed by the double bottom.

10 represents a draft-regulator arranged upon the casing 5^a of the fire-box to regulate and control the draft through the draft-openings 9.

11 represents an oven supported by and arranged within the outside casing to the rear of the fire-box, the plate 12 of the oven extending to the outer plate of the stove, so that the circulation and draft must be under and around the oven to the opening 13, leading to the smoke-pipe. The bottom plate of the oven forms with the plate 7 a heat-passage, which serves to heat the air in passage through the horizontal extension of the hot-air chamber 8. 14 represents a damper for closing said opening 13.

15 represents the feed-door for supplying fuel to the fire-box.

As shown in Figs. VI and VII, a second oven 16 may be arranged above the oven 11, supported in the same manner by the casing. A draft-space 17 is provided between the top of the oven 11 and the bottom of the oven 16 and a damper 18 arranged to close said space. When said damper is turned down, the draft is through said space 17 to the outlet 13, and when said damper is turned up the draft is carried around under the oven 11 and thence to the outlet 13. It is apparent that as the draft through the space 17 is more direct than when around the oven 11 this construction shows an advantage when the fire is first started, and the bottom of the oven 16 becoming heated to a greater extent than the top of the stove the ordinary cooking may be done in this oven, the openings 19 being provided for the escape of the steam and gases into the heating-space around the oven, and the unpleasant and penetrating odors do not fill the house, as when the cooking is done on the top of the stove. A plate 20 (shown in dotted lines) is provided at the ends of the fire-box, leaving a space, so that the hot-air

chamber completely surrounds the fuel and combustion chamber.

In the operation of this stove the cold air passes into the cold-air chamber through the openings 4 and thence to the hot-air chamber through the opening 3 between the two chambers. In this hot-air chamber the air is heated and in this heated condition is supplied to the fuel in the fire-box through the draft-openings 9, the principle of its operation being the same as in the stove of my application above mentioned. The heat from the fire-box being shut off by the plate 12 from a direct course to the pipe is caused to circulate and pass around the oven or ovens, as shown by the arrows, to the exit-opening 13. The air being heated before being admitted to the fire-box, the combustion is very free and very complete, scarcely any smoke and gases passing off to the pipe and but little ashes being left. The circulation being around the oven to the pipe, the oven is at all times heated and ready for work and it is not necessary to wait for the oven to heat, as in the stoves now in use, and the draft being under perfect control by means of the draft-regulator 10 the heat on the oven may be regulated to a very great nicety and the fire in the stove kept for a long time without going out.

Having thus fully described my improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

1. In a cooking-stove the combination of a fire-chamber, arranged in the front of the stove, having an imperforate bottom, and sides provided with suitable dampered draft-openings, at a distance from its bottom, a hot-

air chamber surrounding said fire-chamber and communicating therewith through said draft-openings and extending horizontally to the rear of the stove, an oven in the rear of said fire-chamber arranged relative to the horizontal portion of the hot-air chamber to form an independent heat-passage for heating the air passing through the same, and a cold-air chamber under said hot-air chamber and communicating therewith; substantially as set forth.

2. A cooking-stove consisting of an inner casing forming a fuel and combustion chamber arranged in the front of the stove, having an imperforate bottom, and sides provided with suitable dampered draft-openings, at a distance from its bottom, a plate extending from the rear wall of said fuel-chamber diagonally and horizontally to the rear of the stove, an outer casing forming with said inner casing and said diagonal and horizontal plate a hot-air chamber surrounding said fuel-chamber and communicating therewith through said draft-openings and extending horizontally to the rear of the stove, an oven in the rear of said fuel-chamber arranged relative to the horizontal portion of said plate to form an independent heat-passage for heating the air passing through the horizontal portion of said hot-air chamber, and a double bottom in said outer casing forming a cold-air chamber under said hot-air chamber and communicating therewith; substantially as set forth.

CHRISTIAN OLSTED.

Witnesses:

F. E. MILLER,
T. H. RIDDLE.