

No. 669,281.

Patented Mar. 5, 1901.

F. S. LANG.
PORTABLE AND FOLDING STOVE.

(No Model.)

(Application filed May 15, 1900.)

3 Sheets—Sheet 1.

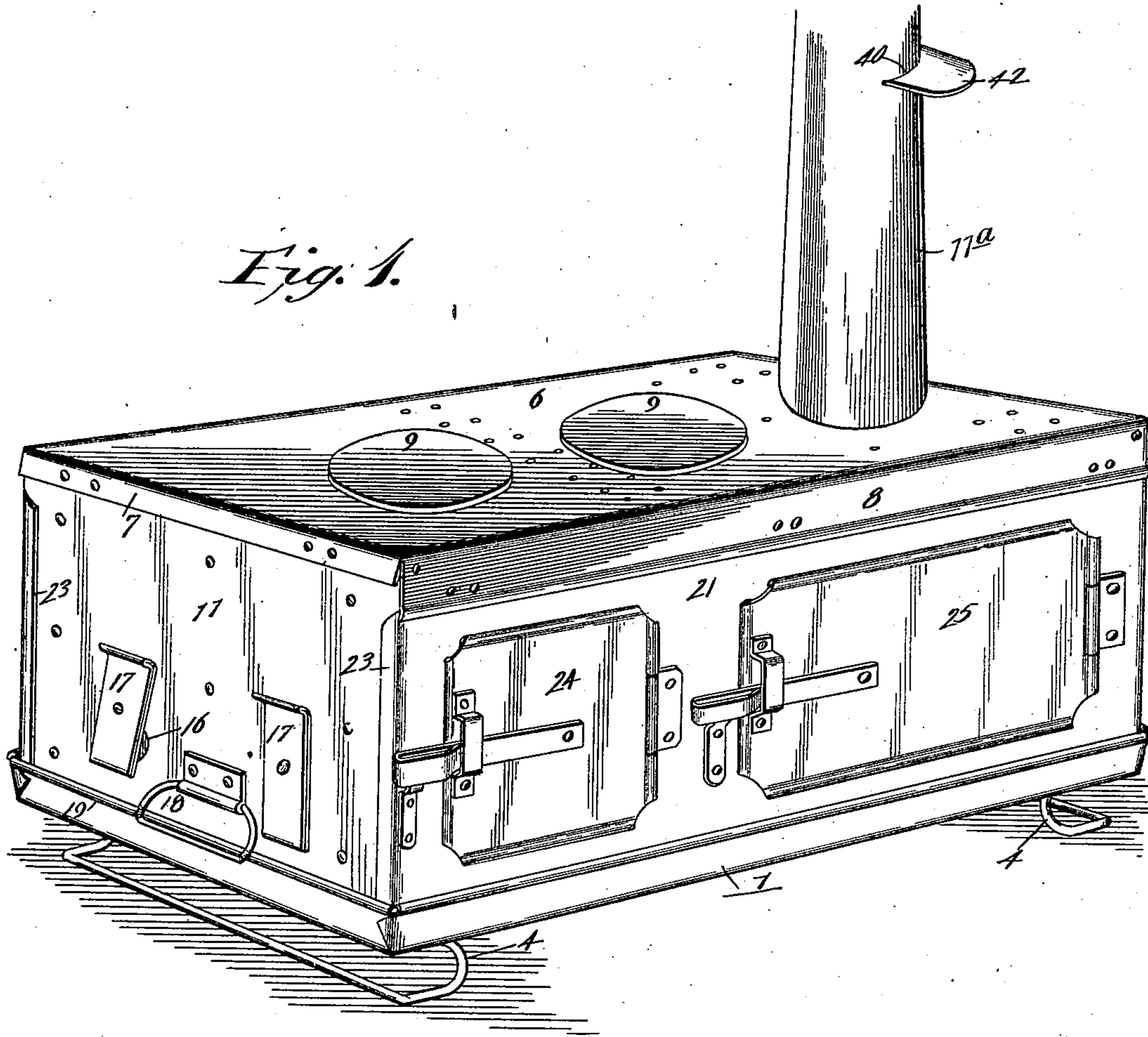


Fig. 7.

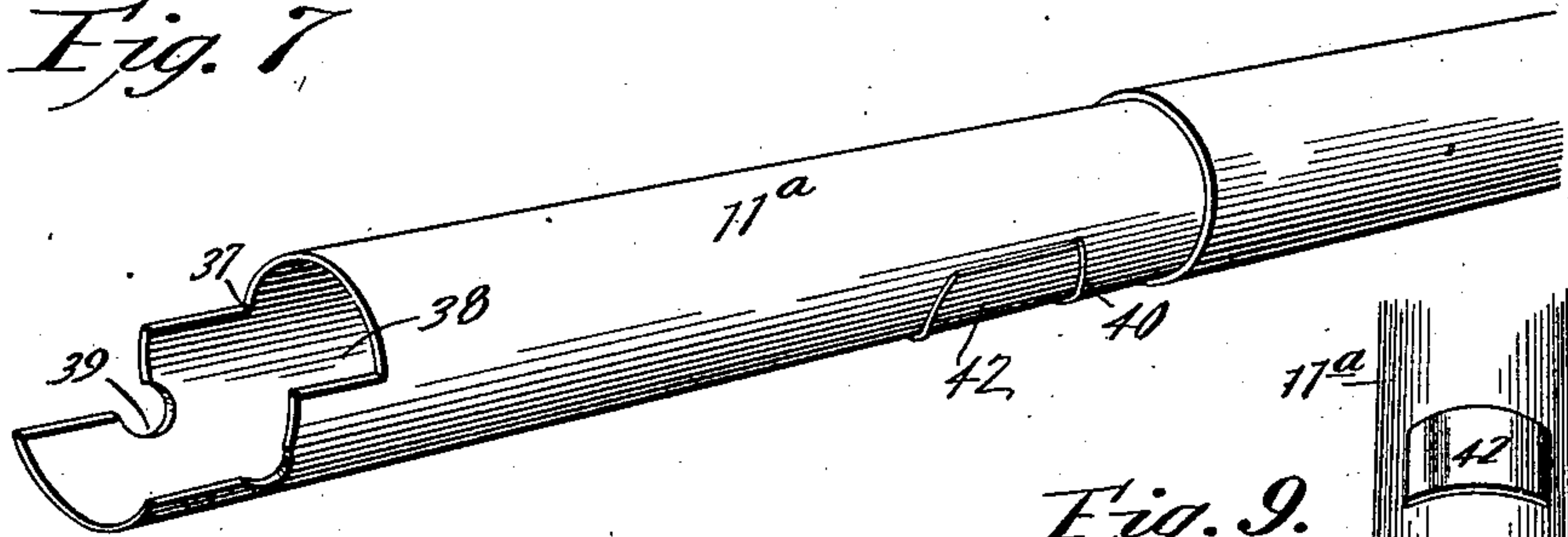
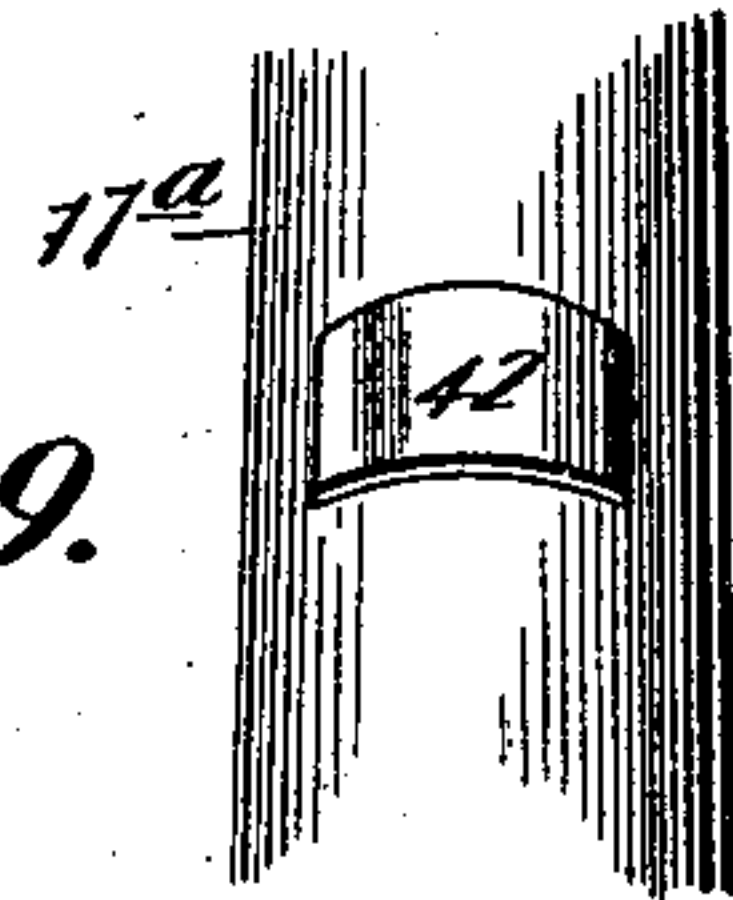


Fig. 9.



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3 Sheets—Sheet 2.

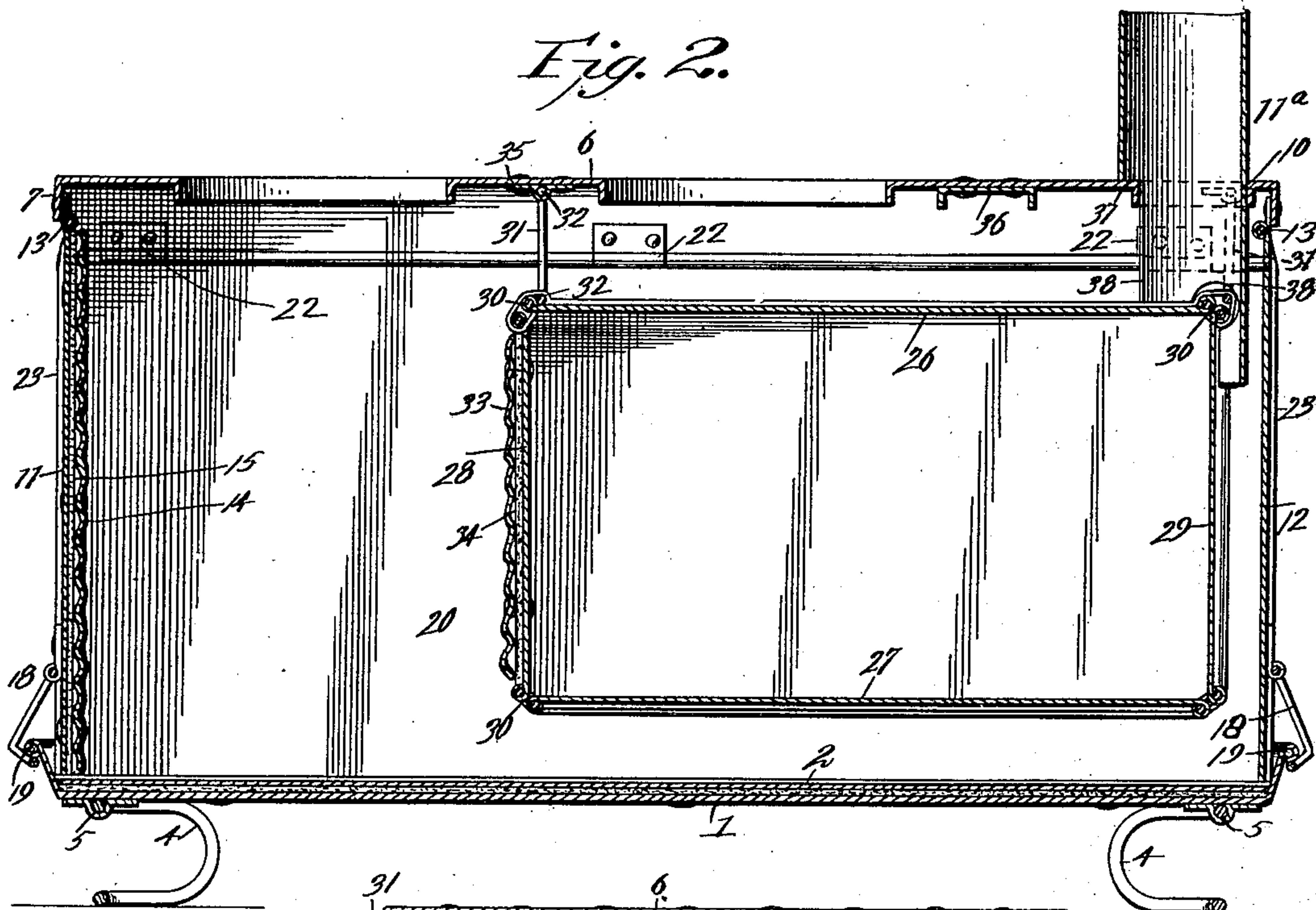
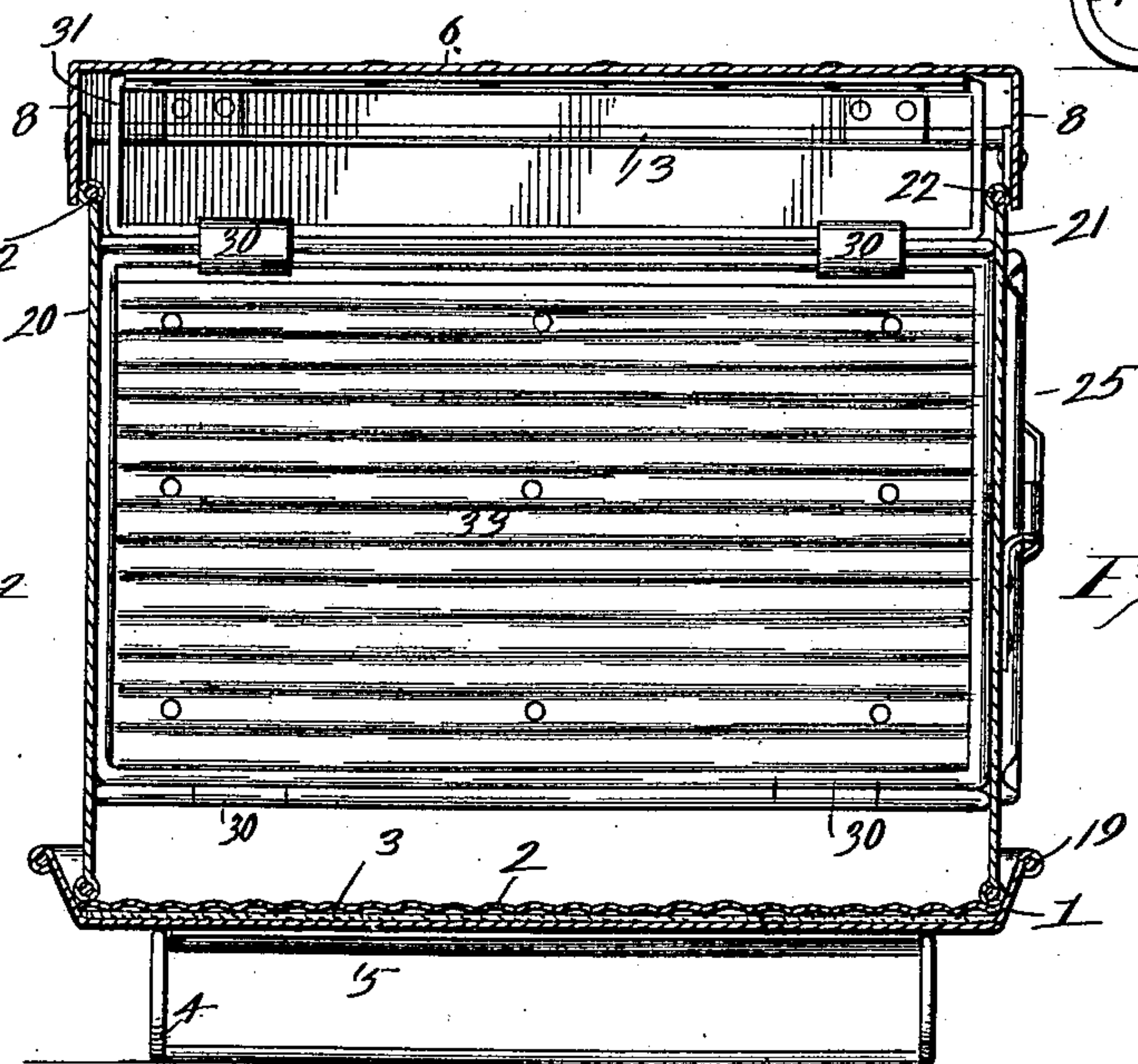
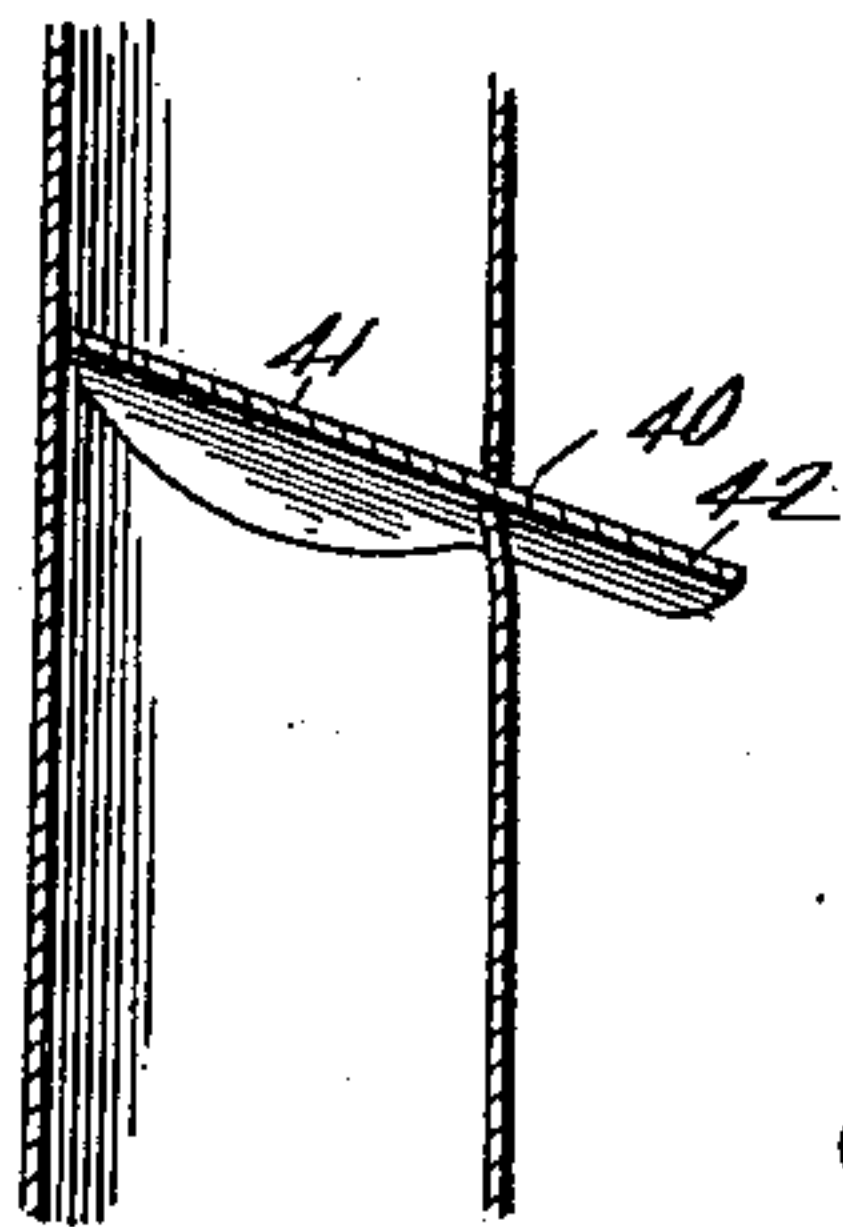


Fig. 8.



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3 Sheets—Sheet 3.

Fig. 4.

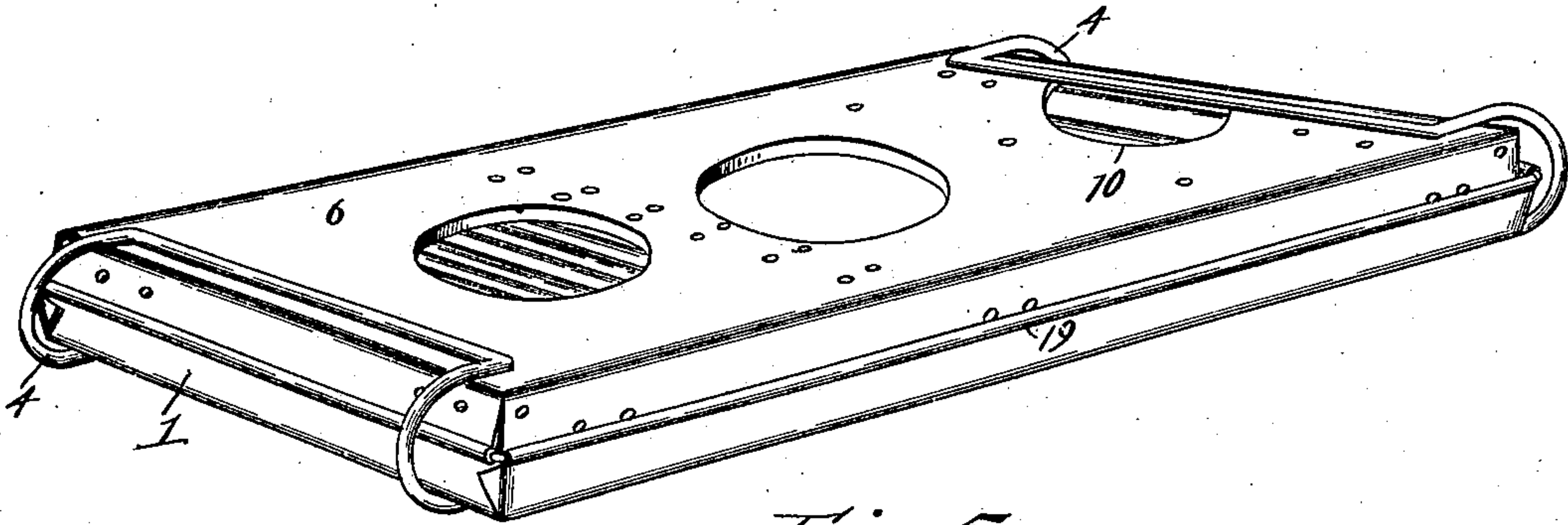


Fig. 5.

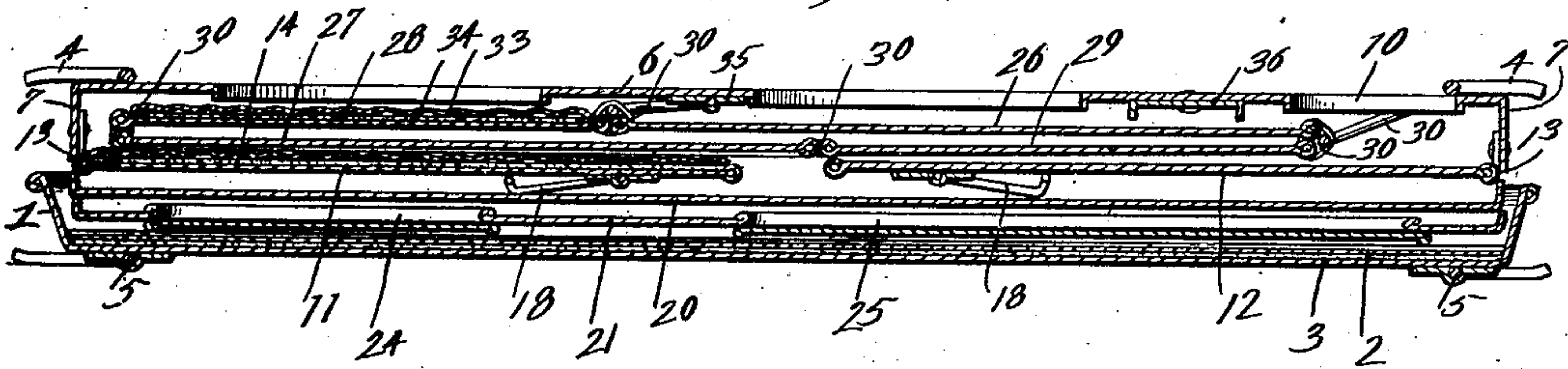
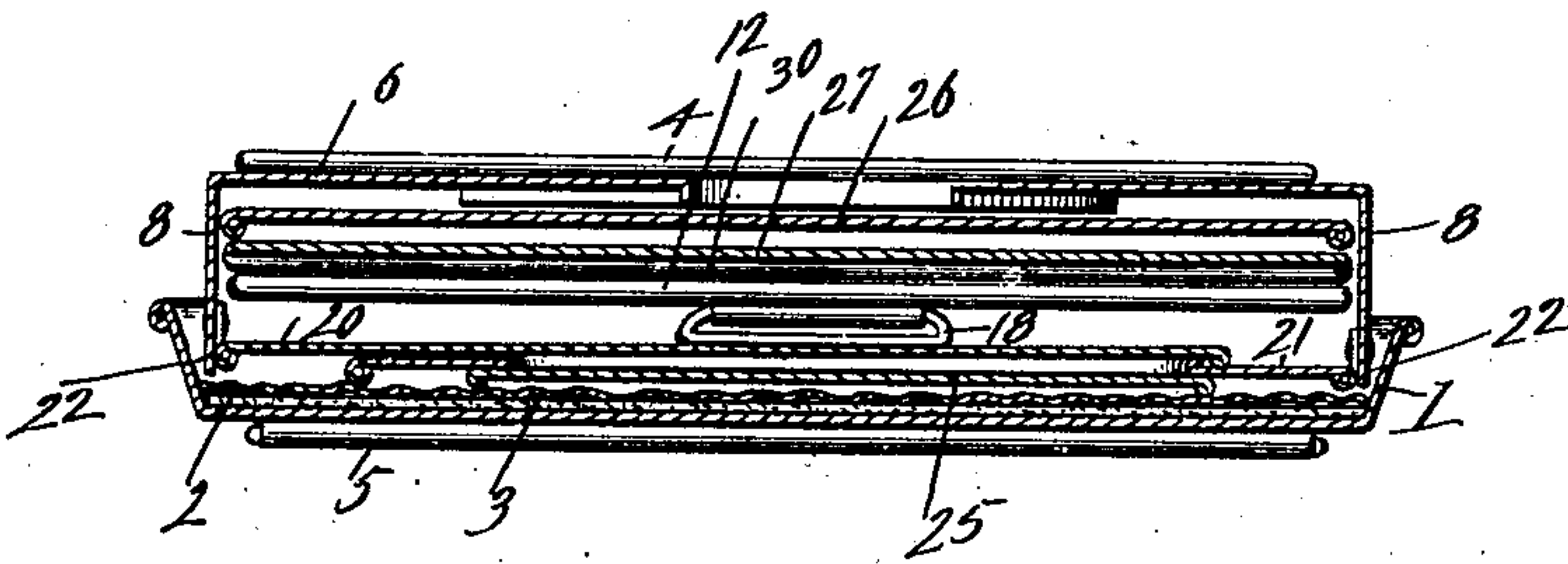


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANK SILES LANG, OF HELENA, MONTANA.

PORTABLE AND FOLDING STOVE.

SPECIFICATION forming part of Letters Patent No. 669,281, dated March 5, 1901.

Application filed May 15, 1900. Serial No. 16,800. (No model.)

To all whom it may concern:

Be it known that I, FRANK SILES LANG, a citizen of the United States, residing at Helena, in the county of Lewis and Clarke and State of Montana, have invented a new and useful Portable and Folding Stove, of which the following is a specification.

My invention is an improved portable folding stove, the object of my invention being to provide an exceedingly light, cheap, and simple stove which is adapted to be folded compactly for transportation or storage when not in use and is particularly adapted for camp purposes for heating, cooking, and baking.

My invention consists in the peculiar construction and combination of devices herein-after fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved portable folding stove, showing the same set up ready for use. Fig. 2 is a vertical longitudinal central sectional view of the same. Fig. 3 is a vertical transverse sectional view of the same, taken through the fire-box. Fig. 4 is a perspective view of the stove, showing the same folded compactly and secured for transportation. Fig. 5 is a vertical longitudinal central sectional view of the same. Fig. 6 is a vertical transverse sectional view of the same. Fig. 7 is a detail perspective view of the lower section of the stove-pipe. Fig. 8 is a detail sectional view of a portion of the stove-pipe, showing the damper therein. Fig. 9 is a detail elevation of the same.

The bottom of the stove is formed of a pan 1, made of sheet-iron or other suitable material, and in which is a false corrugated bottom 2, of sheet metal, and asbestos or other non-conducting filling 3 is preferably interposed between the bottom of the pan and the said corrugated false bottom. The latter is riveted or otherwise suitably secured in the bottom of the pan. Said pan 1 is provided at its ends with bails 4, of the form shown and having their end portions curved or bent, said end portions of the respective bails being curved or bent in opposite directions, and said bails are hinged under the bottom of the pan, as at 5, and when turned downward under the bottom of the pan, as shown in Figs. 1, 2, and 3, serve to support the stove at a

suitable elevation above the ground or floor or table on which it may be located, and when turned upward over the ends of the pan, as shown in Figs. 4 and 5, said bails serve to secure the bottom of the stove to the other portions thereof when the stove is folded for transportation or storage.

The top 6 of the stove is preferably made of sheet-steel, but may be made of other suitable material and is provided with depending end flanges 7 and side flanges 8. The length and breadth of the top of the stove are something less than the corresponding dimensions of the pan which forms the bottom of the stove, so that the top of the stove is adapted to fit within the pan bottom of the stove when the stove is "knocked down" or compactly folded and stowed. Said stove-top is provided with the usual openings 8 and plates 9 to cover said openings, and near one end of the stove-top is an opening 10 for the insertion of the lower end of a section 11^a of stove-pipe. The ends 11 12 of the body of the stove are hinged at their upper sides within the depending flanges 7 at the ends of the stove-top, as at 13, and thereby the said ends 11 and 12 are adapted to be folded inward under the top of the stove. The end 11 is provided on its inner side with a sheet of corrugated iron or steel, as at 14, the same being riveted or otherwise secured to the end 11, and a filling of asbestos or other suitable material, as at 15, is interposed between the end 11 and the corrugated sheet 14. The end 11 is further provided with draft-openings 16 and pivoted plates 17 to close or vary the size of said openings, and thereby regulate the draft, and the ends 11 and 12 are provided near their lower sides with hinged bails 18, which are adapted to be turned downward under and engage the flanges 19 at the ends of the pan-like bottom of the stove, as shown in Figs. 1 and 2, so as to secure the body of the stove on the bottom thereof when the stove is set up ready for use. The sides 20 21 of the stove are hinged at their upper sides within the depending side flanges 8 of the top of the stove, as at 22, and thereby the said sides are adapted to be folded inward under the top of the stove when the stove is folded compactly, and the said sides 20 21 are provided at their ends with inturned flanges 23, which engage the ends 11 12 of the

stove when the same is set up, as shown in Fig. 1. The side 21 of the stove is provided with a door 24, through which fuel may be supplied, and with an oven-door 25. Said sides and ends of the stove may be made of sheet-iron or other suitable material.

The oven of the stove comprises the top and bottom plates 26 27 and the inner and outer end plates 28 29, respectively, said plates being secured together at the corners of the oven by hinges, as at 30, whereby the top, bottom, and ends of the oven are articulated and the same is adapted to be compactly folded. The front and rear sides of the oven are formed, respectively, by the door 25 and the side 20 of the stove, and the oven is suspended within the stove at one end thereof and at a suitable distance from the top, bottom, and end 12 by the links 31, which are pivotally connected to the under side of the top of the stove and to the upper plate of the oven, as at 32, and thereby the said links, while suspending the oven in such position within the stove as to admit of a draft entirely around the oven from the fire-box formed between the end plate 28 of the oven and the end 11 of the stove, permit the plate 26, forming the top of the oven, to be swung in contact with the upper side of the stove when the stove is knocked down. The end 28 of the oven is covered on its outer side with a corrugated plate 33, an asbestos or other suitable non-conducting filling 34 being interposed between said end plate 28 and said corrugated plate 33, and thereby the end of the oven forming the inner side of the fire-box is prevented from being unduly heated.

The top of the stove, at a point between the openings 8, is reinforced by a transverse plate 35, which is riveted to the under side thereof, and which plate forms the pivotal connection between the top of the stove and the link which suspends and supports the inner end of the oven, and the stove-top is further reinforced by a transversely-disposed plate 36, which is riveted to the under side of the stove at a point between the opening 10 and the proximate opening 8.

The lower end of the stovepipe-section 11 is reduced on its front side by a rabbet 37, thereby forming an opening in the front side of the stovepipe, at the lower end thereof, and when the stovepipe is inserted in the opening 10 the opening 38 in the front side of the pipe is presented to the flue above the oven, so that the products of combustion may readily escape through the stovepipe and the latter be securely attached to the stove. The said stovepipe-section is further reduced at its heel or lower end by a rabbet 39, which engages the oven at the upper corner thereof, as shown in Fig. 2, and serves to prevent the oven from swaying or swinging in the stove when the latter is set up.

In the stovepipe, on one side thereof, at a suitable point is made a transversely-disposed slit or narrow slot 40, which is curved, as

shown. A damper 41 is made from sheet-iron and is of suitable form and concavo-convex in cross-section to adapt the same to the contour of the stovepipe and to fit snugly against the same when the damper is open. The said damper is formed integrally with the outer arm 42, which forms an extension thereof and projects through the curved slit or slot 40 in the stovepipe. Hence the said arm is compressed between the sides of the said slit or slot, and owing to the curvature of the latter and the rotundity of the stovepipe said pipe and said arm of the damper form coacting springs which serve to maintain the damper in position either when opened or closed, as will be understood. When the damper is open, the same is disposed in close relation to one side of the stovepipe, entirely out of the way.

No claim is made herein to the stovepipe having a curved slit or slot in combination with a damper constructed as herein described and fitted in said slit or slot, as the same constitutes the subject-matter of a divisional application for Letters Patent of the United States which I am about to file.

Having thus described the invention, I claim—

1. In a folding portable stove, the bails having the U-shaped end portions and pivotally attached to the bottom of the stove at points within the edges thereof, and adapted to be folded under the same to serve as supporting-legs for the stove, said U-shaped end portions forming relatively broad supports for the stove, and also adapted to clear the ends of the stove and be turned upward to engage, overlap and lock the upper portion of the stove to the bottom thereof when the stove is folded, substantially as described.

2. A folding portable stove comprising a pan forming the bottom thereof, a top, and side and end walls hinged to the top and adapted to be folded under the same when the stove is "knocked down" and to fit within the sides of the bottom pan when the stove is set up, and supporting and binding bails having the U-shaped end portions and pivotally attached to the bottom of the stove at points within the edges thereof, and adapted to be folded under the same to serve as supporting-legs for the stove, said U-shaped end portions forming relatively broad supports for the stove and also adapted to clear the ends of the stove and be turned upward to engage, overlap and lock the upper portion of the stove to the bottom thereof, when the stove is folded, substantially as described.

3. A stove provided with an oven having articulated joints whereby the oven is adapted to be folded in the stove, said oven being suspended and supported by links which depend from the top of the stove substantially as described.

4. A portable folding stove comprising a pan forming the bottom thereof, a top, side and end walls hinged to the top and adapted

to be folded under the same when the stove is "knocked down" and to fit within the sides of the bottom pan when the stove is set up, and an oven suspended and supported by 5 links which depend from the top of the stove, the said oven having articulated joints whereby the same is adapted to be folded in the stove, substantially as described.

5. In a folding portable stove, the folding 10 oven suspended by flexible connections from the top of the stove in combination with the

stove-pipe fitted in an opening in the stove and rabbeted at its lower side, to engage the oven, for the purposes set forth, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK SILES LANG.

Witnesses:

O. W. McCONNELL,
F. M. BOWERS.

15