

No. 639,308.

Patented Dec. 19, 1899.

B. M. STEWART.
REFRIGERATOR.

(Application filed Aug. 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 4.

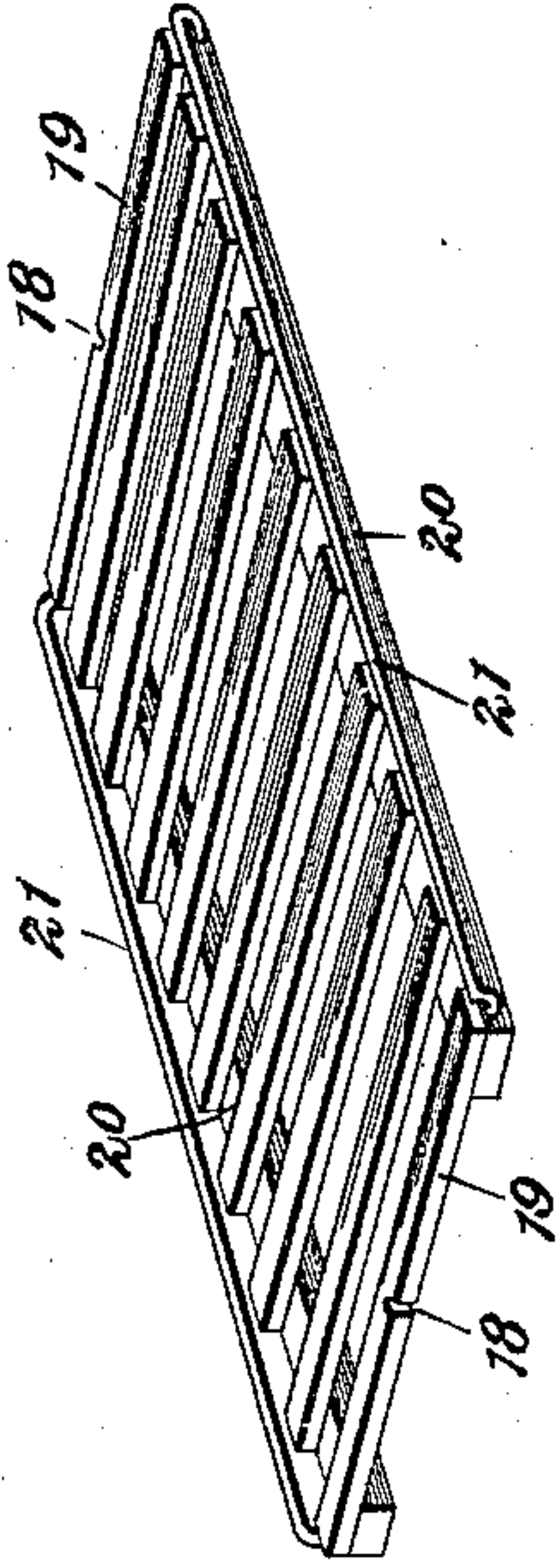


Fig. 5.

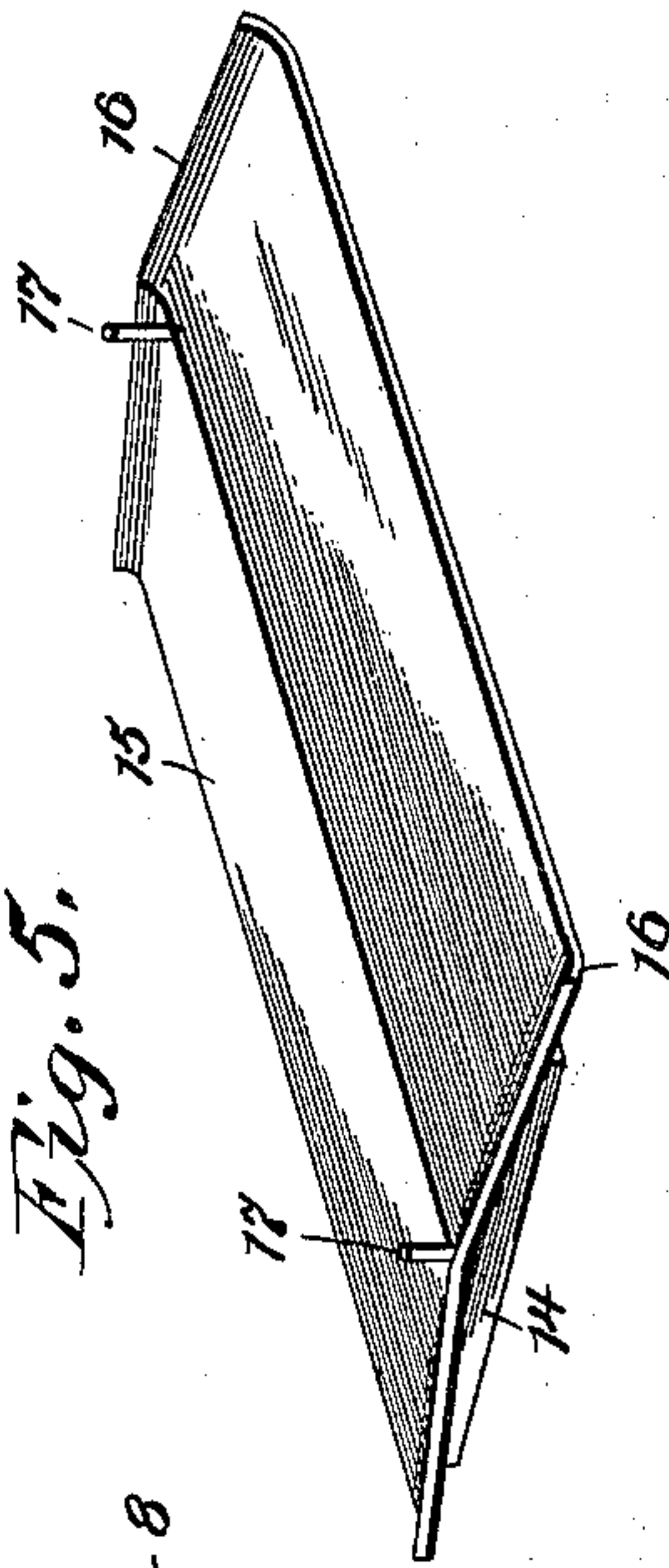
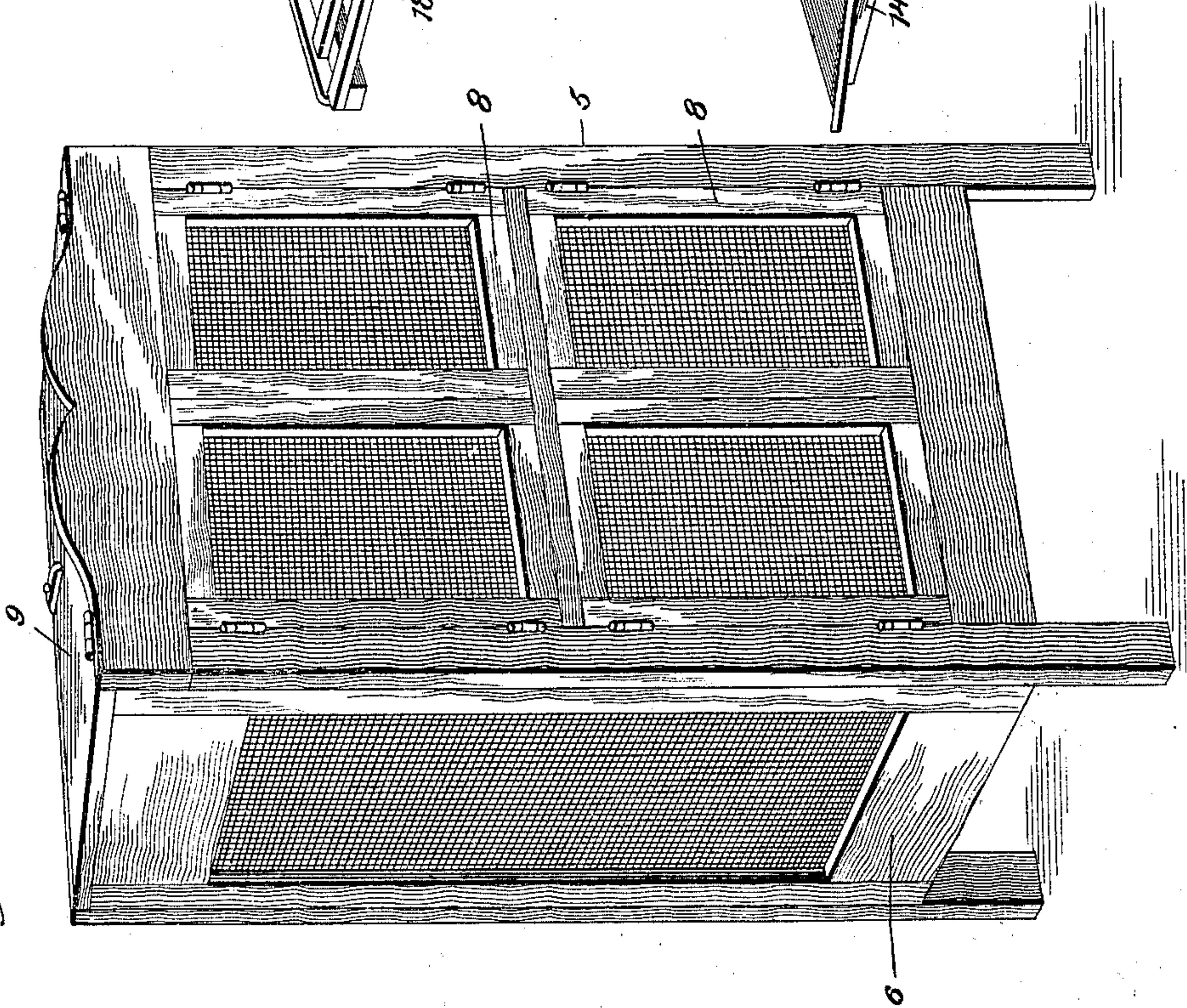


Fig. 1.



Witnesses

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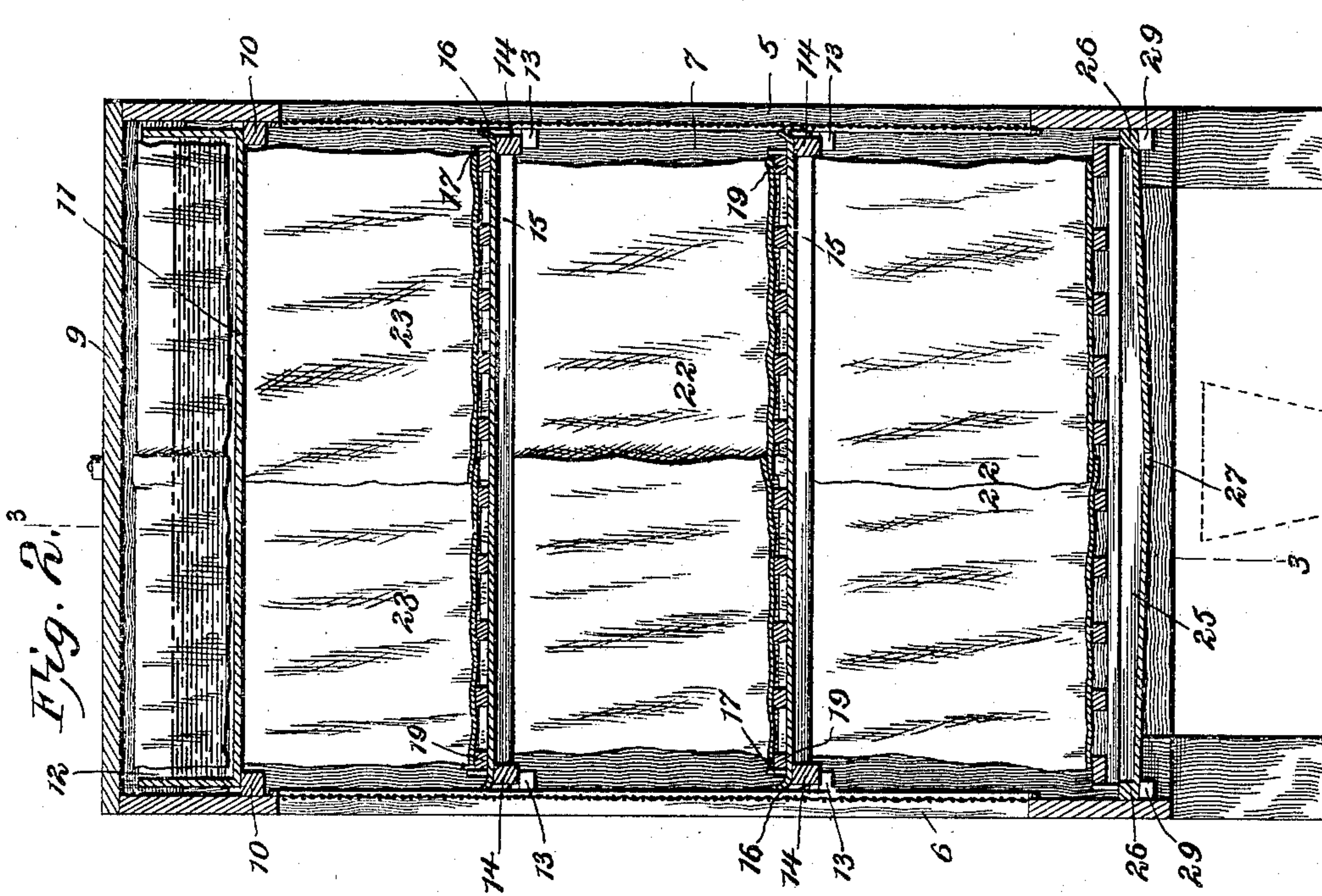
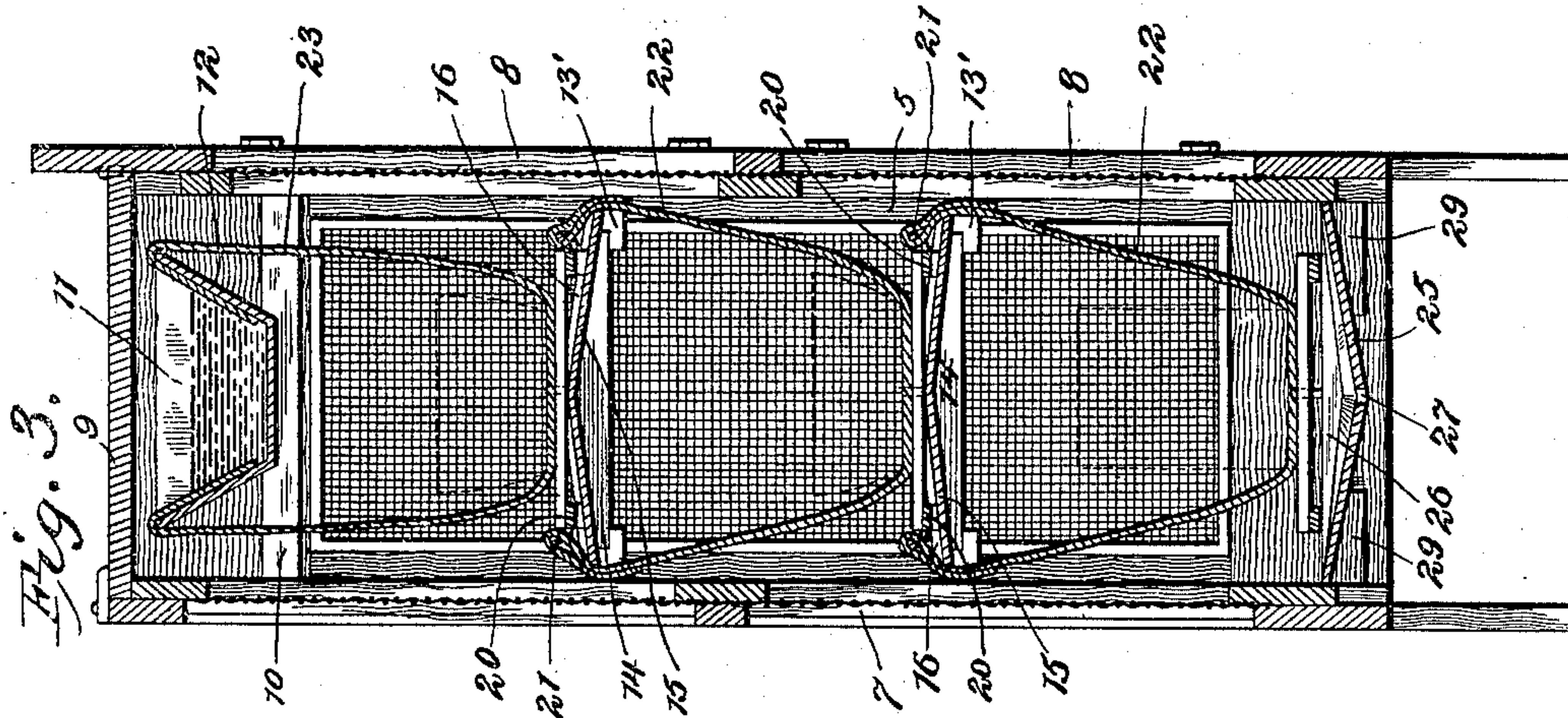
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2 Sheets—Sheet 2.



Witnesses

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UNITED STATES PATENT OFFICE.

BURGESS MODREL STEWART, OF MASON, TEXAS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 639,308, dated December 19, 1899.

Application filed August 9, 1899. Serial No. 726,699. (No model.)

To all whom it may concern:

Be it known that I, BURGESS MODREL STEWART, a citizen of the United States, residing at Mason, in the county of Mason and State of Texas, have invented a new and useful Refrigerator, of which the following is a specification.

This invention relates to refrigerators in general, and more particularly to that class in which the evaporation of water or other liquid is employed to reduce temperature in substitution of ice, the object of the invention being to provide a construction in the general nature of a safe and in which the contents of a vessel at the top of the refrigerator may be caused to pass slowly downwardly and around the articles upon the several shelves of the safe to maintain a cool and moist atmosphere.

Referring to the drawings forming a portion of this specification, and in which similar numerals of reference designate corresponding parts in the several views, Figure 1 is a perspective view showing the exterior of a safe constructed in accordance with this invention. Fig. 2 is a central transverse vertical section. Fig. 3 is a section on line 3 3 of Fig. 2. Fig. 4 is a perspective view of a slatted shelf. Fig. 5 is a detail perspective of one of the drain-boards.

Referring now to the drawings, in a refrigerator embodying this invention are comprised ends 5 and 6 and a back 7, consisting of open frames having foraminous coverings, and also doors 8, consisting of frames having foraminous coverings. A lid 9 is hinged to the top of the casing of the refrigerator and opens into a compartment at the ends of which are fixed rails 10, adapted to receive and support a pan 11, having upwardly-diverging sides 12 and adapted to receive a refrigerating liquid, such as water.

Attached to the sides and ends of the casing are cleats 13, arranged at different levels, the cleats of each level having disposed thereon a drain-board consisting of a cross-piece 14, the upper face of which is converged toward the center, and upon which cross-pieces is mounted a metallic plate 15, bent to lie in planes corresponding to the upper face of the

cross-pieces, the ends of the plate being curved upwardly, as shown at 16. Thus is formed a drain-board comprising two slanting elements meeting at a central ridge. Rising from the ridge of the drain-board are pins 17, adapted to enter the recesses 18 in the end slats 19 of a shelf comprising side sills 20 and a plurality of slats intermediate and parallel with the slats 18 and 19. When the shelf is disposed upon the drain-board, the sills 20 rest upon the upper surface of the latter and the slats lie free of the drain-board, the width of the shelf being less than the width of the drain-board. Fixed to the ends of the sills 20 are the inwardly-directed ends of wires 21, which lie parallel with the side edges of the shelves and are adapted to receive the ends of sections of fabric 22, which are passed around the wires and then outwardly and over the edges of the drain-board and then down and across the surface of the shelf below, a similar fabric 23 lying upon the uppermost shelf and having its ends extending over the side edges of the vessel 11 and into the water therein.

The bottom of the refrigerator 25 has substantially the same shape as the drain-boards thereabove, but is inverted, the lowermost shelf resting with its sills upon the upturned edges 26 of the bottom. Also the central portion of the bottom is depressed below the under faces of the end upturned edges 26, and the lowermost portion of the bottom is provided with a perforation 27. This bottom 25 completely fills the space inclosed by the framework at the lower end of the refrigerator, and thus receives all drip from the elements thereabove and also any water of condensation. In practice a suitable vessel (shown in dotted lines in Fig. 2) is disposed beneath the perforation 27 and receives the water which passes therefrom.

It will be noted upon reference to Fig. 2 that the bottom 25 is supported upon cleats 29, fixed to the inner faces of the ends of the casing of the refrigerator, while the cleats 13', which are arranged transversely of the refrigerator and in the planes of their respective cleats 13, are disposed inwardly from the frame of the refrigerator in order that the

sections of fabric may pass between them and said frame. Also it will be seen that the plates of which the drain-boards are formed project their side edges beyond the cross-pieces 14 and that such side edges lie substantially flush with the outer faces of the cleats 13'.

The operation of the construction is as follows: The lid 9 having been raised, the vessel 11 is placed upon the cleats 10 and a section of fabric 23 of sufficient length has one end placed within the vessel and dipping into a refrigerating liquid contained thereby. The fabric is then brought downwardly to lie upon the uppermost shelf and is passed transversely thereof and then upwardly and over the opposite edge of the vessel 11 and into the liquid therein. A single section of fabric having a width substantially equal to the length of the vessel 11 may be employed, although, as shown in Fig. 2 of the drawings, it is preferable to employ a plurality of sections for reasons that will be evident from the following description: Similar sections of fabric 22 are suspended from the wires 20 of the several shelves, the ends of each section of fabric being passed under the wires at opposite sides of its respective shelf and extending outwardly and over and in engagement with the side edges of the drain-board supporting the shelf, the central portion of the fabric resting upon the shelf below. As shown in Fig. 3 of the drawings, the lowermost shelf is not provided with the wires 20; but it is in other respects the same in construction as the other shelves.

When it is desired to place an article of food or a vessel containing any matter within the refrigerator, the section of fabric engaging the upper surface of the shelf upon which the material is to be placed has one end withdrawn from its support, whether that support be a wire 20 or an edge of the vessel 11, and that end of the fabric is lowered to permit the placing of the article upon the shelf and resting upon the fabric. The free end of the fabric is then engaged with the support, and the door of the safe or refrigerator is closed. In this way each shelf may be filled, and it is obvious that if the fabric of each shelf is in narrow sections it may be more easily adjusted and more convenient of operation.

With the elements in their proper positions, as shown in Fig. 3, the liquid in the vessel 11 will rise in the fabric and over the edge of the vessel and will then pass downwardly upon the shelf next below. From the shelf the water will run to the drain-board, from the side edges of which it will pass to the fabric in contact therewith and will pass downwardly through the fabric to the shelf below, this operation being continued until the liquid finally falls upon the bottom 25, from which it will drain through the opening 27, as above described. With this construction it will be seen that the articles upon the sev-

eral shelves will be inclosed by fabric containing a refrigerant in such condition as to facilitate evaporation thereof and the formation of a cool and moist atmosphere.

It will of course be understood that, if desired, clips may be employed to prevent accidental displacement of the fabrics from their supports and that the specific construction and arrangement shown and described may be otherwise varied in the matter of form, proportions, and material without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. A refrigerator, comprising a casing having a vessel therein, a plurality of downwardly and outwardly sloping shelves below the vessel, a fabric having its ends within the vessel and lying with its portions between its ends upon the shelf therebelow, and an additional fabric having its end portions in contact with the last-named shelf and lying with its portions between its ends upon the shelf therebelow.

2. A refrigerator, comprising a casing having a vessel therein, a plurality of downwardly and outwardly sloping shelves below the vessel, a fabric having its ends within the vessel and lying with its portions between its ends upon the shelf therebelow, and an additional fabric having its end portions in contact with the last-named shelf and projecting thereabove to direct moisture from the shelf to the fabric, and having its portions between its ends lying upon the shelf therebelow.

3. A refrigerator, comprising a casing having a vessel therein, a plurality of shelves below the vessel, a drain-board beneath each shelf, a fabric having its ends within the vessel and having its portion intermediate its ends lying upon the shelf therebelow, and additional fabrics lying upon the succeeding shelves and having their ends attached to the shelves next above, and engaging their respective drain-boards.

4. A refrigerator, comprising a casing having a vessel therein, a series of drain-boards supported below the vessel, a shelf mounted upon each drain-board and having a width less than that of the drain-boards, a support at each side of each shelf, a fabric resting upon the uppermost shelf and having its ends disposed within the vessel, and a fabric lying upon each succeeding shelf and having its ends in engagement with the supports carried by the shelves next above, said fabrics being in contact with the drain-boards of the last-named shelves.

5. A refrigerator having a bottom provided with a drain, a vessel supported in the upper portion of the refrigerator, a plurality of drain-boards supported intermediate the vessel and the bottom of the refrigerator, a shelf disposed upon each drain-board, a shelf upon the bottom of the refrigerator, a support car-

ried by each of the shelves upon the drain-
boards, a fabric lying upon the uppermost
shelf and having its ends within the vessel,
and an additional fabric upon each succeed-
5 ing shelf and having its ends in engagement
with the supports of the shelves next above
and contacting with their respective drain-
boards.

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

BURGESS MODREL STEWART.

Witnesses:

CALVIN THAXTON,
MINNIE HEY.