



V. F. BARBARO.

COOLER.

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928,420.

Patented July 20, 1909.

2 SHEETS—SHEET 2.

Fig. 4

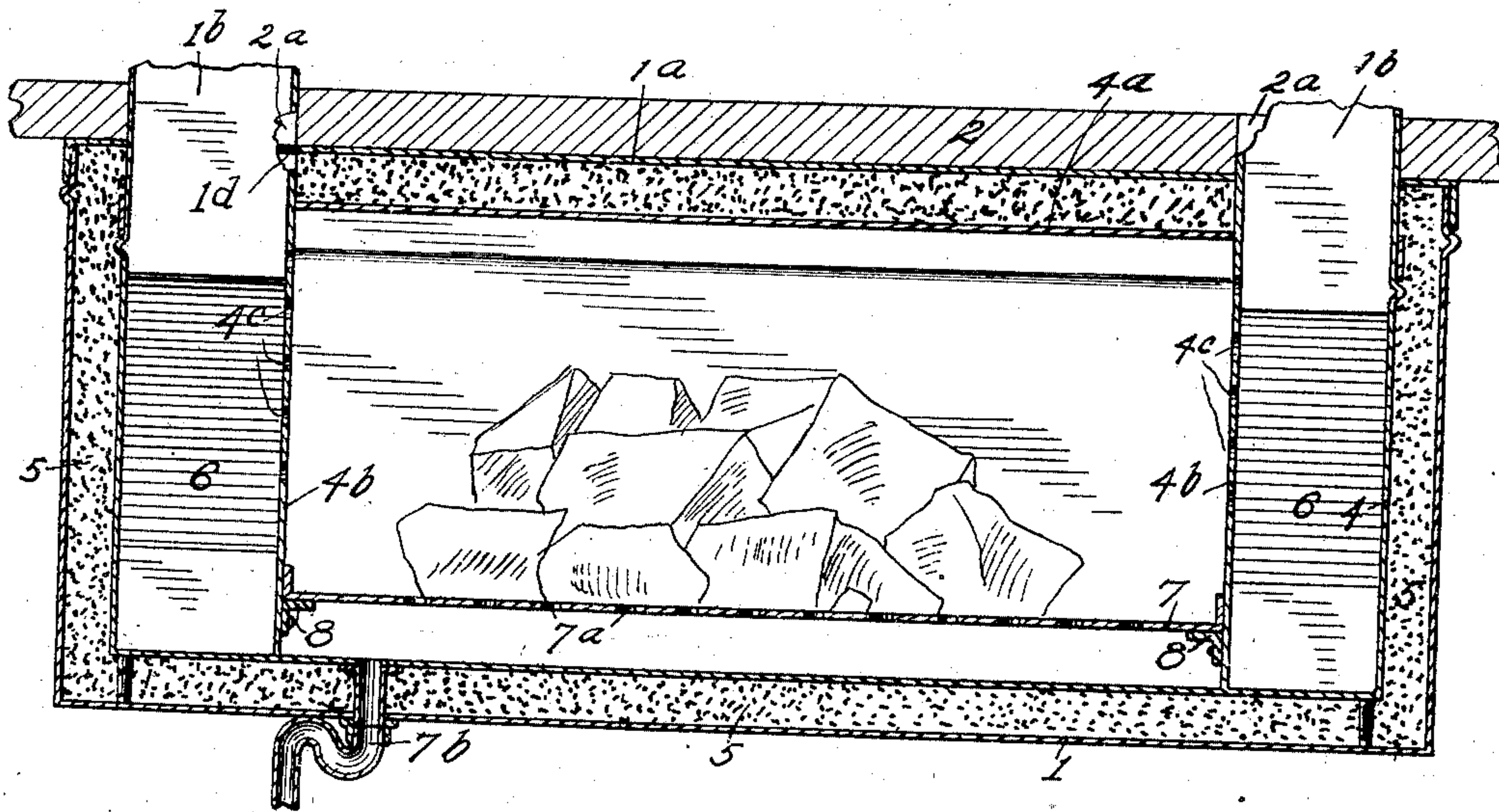
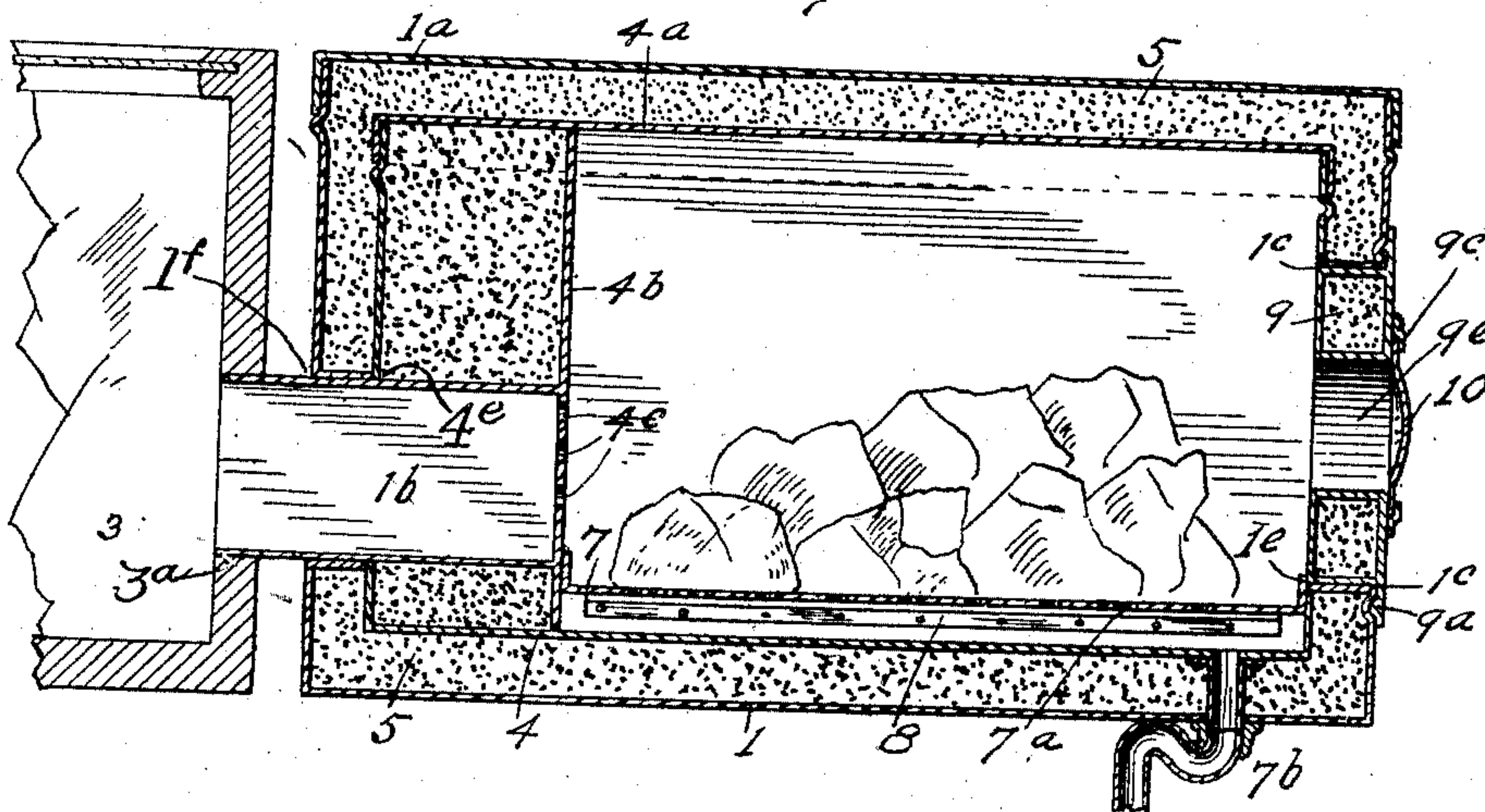


Fig. 3

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# UNITED STATES PATENT OFFICE.

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## COOLER.

No. 928,420.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed April 2, 1906. Serial No. 309,413.

*To all whom it may concern:*

Be it known that I, VINCENT F. BARBARO, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Coolers, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use my said invention.

This invention relates to coolers such as are used by confectioners or others making similar products to cool their products and maintain same at an even temperature.

The general purpose of the invention is to provide a cooler which shall be strong, light and easily handled, so constructed and arranged that it may be used to cool confections or the like displayed in a show-case, without being objectionable in appearance and without interfering with the proper display of the articles in the case.

With this end in view my invention consists in the novel features of construction and arrangement of parts shown in the annexed drawings to which reference is hereby made, and hereinafter particularly described and finally recited in the claims.

Referring to the drawings in which similar reference numerals designate like parts in the several views; Figure 1 is an isometric projection of a cooler embodying my improvements, in connection with a show-case; Fig. 2 is an enlarged vertical section through the cooler and the counter on the line 2-2 of Fig. 1; Fig. 3 is an enlarged vertical section on the line 3-3 of Fig. 1; and Fig. 4 is a sectional view illustrating a modified form of the cooler, the cold air flue being at the end of, instead of at the top of the cooler.

The main structure of the cooler is preferably of galvanized sheet iron, but other suitable material may be used.

A rectangular outer box, 1, is provided with a cover, 1<sup>a</sup>, fitting on top of the box. A rectangular inner box, 4, is suitably supported within the box 1, and has a cover, 4<sup>a</sup>. Flues, 1<sup>b</sup>, secured on the cover 4<sup>a</sup> of the inner box extend upward through openings 1<sup>d</sup> in the cover 1<sup>a</sup> and through openings 2<sup>a</sup> in the counter 2, and communicate with the interior of the show-case 3. The space between the inner box and the outer box is filled with non-conducting material, 5, such as sawdust or asbestos fiber. The inner box may be easily removed from the outer box, and the

covers of both boxes may be removed, for convenience in cleaning the cooler.

In assembling the parts the inner box will be placed inside of the outer box and the cover will be placed on the inner box; the space between the boxes will then be filled with the non-conducting material and it will also be spread on top of the cover of the inner box and the cover of the outer box will then be placed on that box. This construction and arrangement of the boxes greatly facilitates the insertion or removal of the non-conducting material and is of practical advantage because if the non-conducting material becomes musty or becomes contaminated in any other way, to an extent likely to affect injuriously the quality of the manufactured product or article contained in the show-case, the contaminated material may be easily removed and fresh material supplied; furthermore the shipping weight of the cooler is less than that of other coolers of like capacity, by reason of the fact that it may be shipped without the filling and the filling may be afterward supplied.

Vertical walls, 4<sup>b</sup>, are secured within the box 4, parallel to the side walls thereof and have openings, 4<sup>c</sup>. Inclined walls, 6, are secured to the walls 4<sup>b</sup> of the box 4, and extend across the space between the partition walls 4<sup>b</sup> and the outer walls of the inner box 4 and form a support for the non-conducting material filling the space above the inclined walls 6. The space under the inclined walls 6 and between the partition walls 4<sup>b</sup> and the outer walls of the inner box 4 is air space and communicates with the flues 1<sup>b</sup>.

A tray 7 is supported on rails, 8, secured on the walls 4<sup>b</sup> and is adapted to contain ice. In the bottom of the tray are perforations, 7<sup>a</sup>, to permit the escape of water. The water from the melted ice passes down into the space under the tray and thence outward through the pipe 7<sup>b</sup>.

A door frame 9<sup>f</sup> fits in the opening 1<sup>c</sup> and is suitably secured on the outer box 1 and matches a corresponding opening 4<sup>d</sup> in the wall of the inner box 4. A door, 9, connected with the box 1 by hinges, 9<sup>b</sup>, fits in the frame 9<sup>f</sup>, and has beads, 9<sup>a</sup>, fitting in corrugations 1<sup>e</sup> in the front wall of the box 1. The beads fitting in the corrugations serve to exclude air from the inner box. The door has double walls and the space between the walls is filled with non-conducting material. Parallel horizontal rails 9<sup>c</sup> are secured on the



front of the door. A perforated plate, 10, slides between the rails 9<sup>c</sup> and has a handle, 10<sup>a</sup>, for moving the plate. The plate 10 covers an opening, 9<sup>e</sup>, extending through the door and the plate may be slid to open or close the opening so as to control the supply of air within the box at the pleasure of the user. The opening 1<sup>c</sup> is large enough to admit the tray 7.

10 In practical use, suitable openings to accommodate the flues 1<sup>b</sup> are made in the counter 2. The cooler is then secured in position under the counter, with the flues projecting upward through the counter and the show-case being provided with openings matching the flues—is placed upon the counter. A supply of ice is then placed in the tray and the tray is placed within the inner box and the door 9 is closed. The articles to be cooled are then placed in the show-case and the slide 10 is adjusted to control the supply of air as may be necessary for the proper regulation of the temperature within the show-case.

25 I have shown and described the cooler in connection with a show-case, but it obviously may be used to equal advantage with any other receptacle containing articles to be cooled.

30 In the cooler of the construction illustrated in Fig. 4, the rectangular outer box 1 has a cover 1<sup>a</sup> fitting on top of the box. The rectangular inner box 2 is supported within the box 1 and has a cover 4<sup>a</sup>. A vertical partition 4<sup>b</sup> is stationary within the inner box 4 and has perforations 4<sup>c</sup> suitably placed to communicate with the interior of the flue 1<sup>b</sup>. A flue 1<sup>b</sup> extends inwardly through the flue opening 4<sup>e</sup> of the inner box 4 and outwardly through the flue opening 1<sup>f</sup> of the outer box 1. The inner end of the flue 1<sup>b</sup> abuts against the vertical partition 4<sup>b</sup>. The provision chamber 3 is adjacent to the outer box 1 and has a suitable opening 3<sup>a</sup> in which the outer end of the flue 1<sup>b</sup> fits, and cold air from the inner box 4 passes through the flue 1<sup>b</sup> into the provision chamber 3. When the parts are assembled as described the space

between the inner box and the outer box and the space surrounding the flue 1<sup>b</sup> between the partition 4<sup>b</sup> and the wall of the inner box 4 are filled with non-conducting material, such as asbestos fiber. The door opening 1<sup>c</sup>, the door frame 9<sup>f</sup>, the door 9, and connected parts, the tray 7, the rails 8, and the outlet pipe 7<sup>b</sup> are the same as shown in Figs. 1, 2 and 3 and already described.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The combination of an inner box and an outer box provided with a door-opening extending through a wall of both boxes, the outer box having corrugations adjacent to the door-opening, a door fitting in the door-opening and having an opening communicating with the interior of the inner box and also having beads fitting in the corrugations of the outer box, and means for connecting the door with the outer box, parallel rails secured on the door and a perforated slide slidable between the rails and controlling the supply of air through the opening through the door.

2. The combination of an outer box having a door frame opening and a flue opening, a cover fitting on the outer box, an inner box having a flue opening and a door opening, a cover fitting on the inner box, a provision chamber adjacent to said outer box, a flue extending through the flue-opening of the outer box and matching the flue opening of the inner box and communicating with said provision chamber, a door frame secured in the door-frame opening of the outer box and matching the door-frame opening of the inner box, a door fitting on said door-frame and a damper on said door controlling the supply of air through the door.

In witness whereof I have hereunto subscribed my name at Springfield, Illinois this 28th day of February, 1906.

VINCENT F. BARBARO.

Witnesses:

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