

(No Model.)

2 Sheets—Sheet 1.

R. L. SNYDER.
WATER COOLING REFRIGERATOR.

No. 490,511.

Patented Jan. 24, 1893.

Fig. 1.

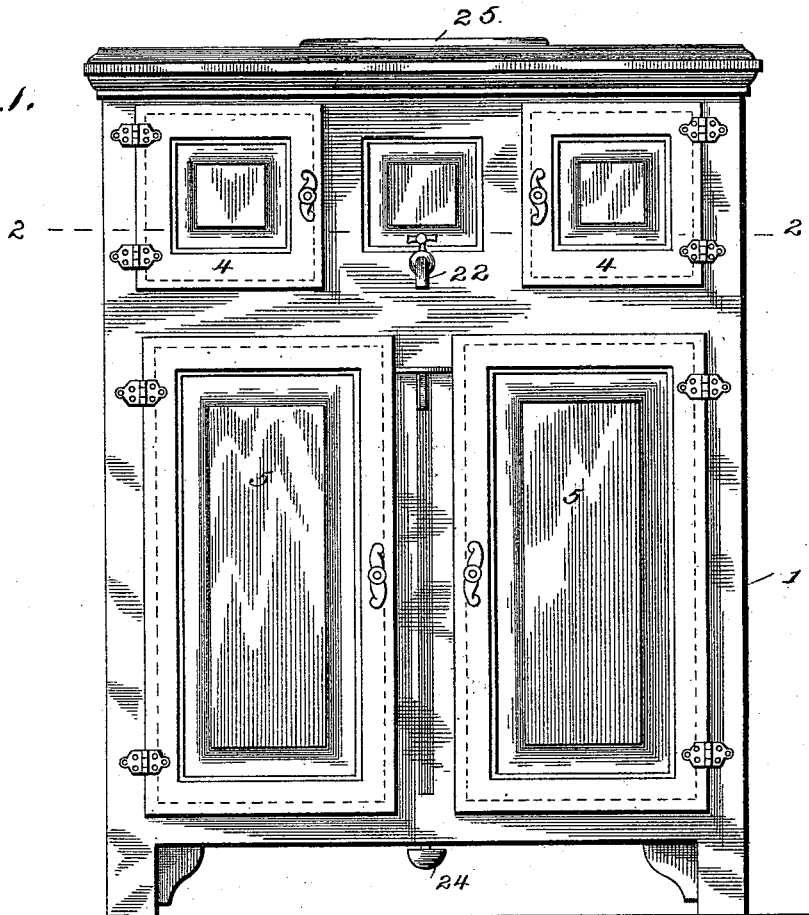
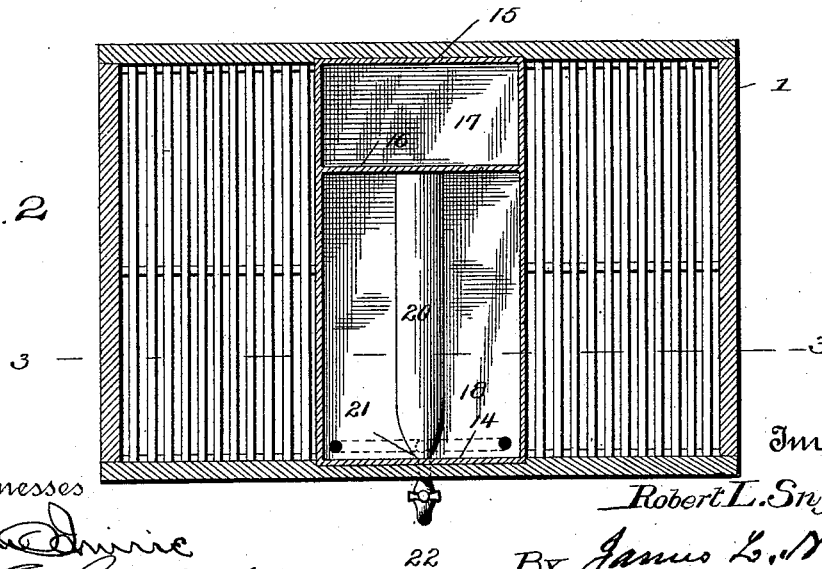


Fig. 2.



Witnesses

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Fig. 3.

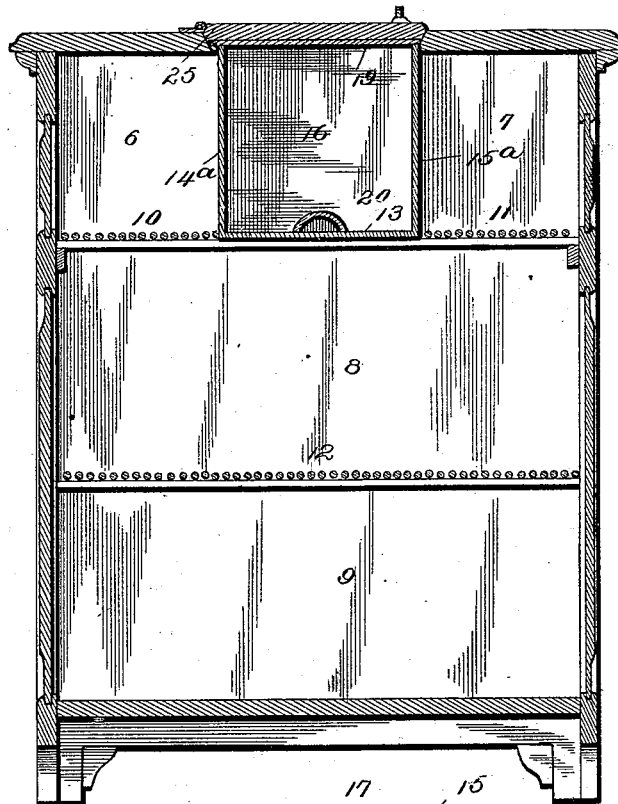
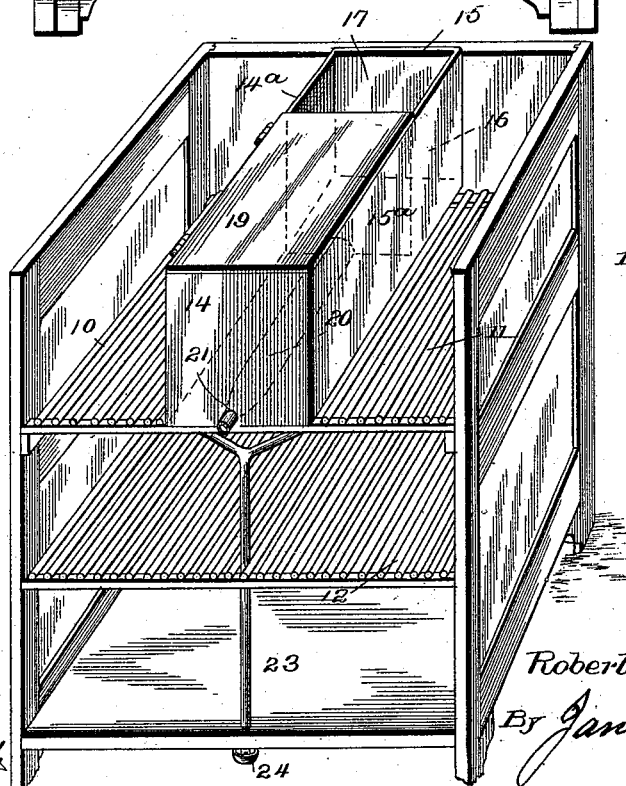


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT L. SNYDER, OF CHATTANOOGA, TENNESSEE.

WATER-COOLING REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 490,511, dated January 24, 1893.

Application filed September 3, 1892. Serial No. 444,980. (No model.)

To all whom it may concern:

Be it known that I, ROBERT L. SNYDER, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented new and useful Improvements in Water-Cooling Refrigerators, of which the following is a specification.

This invention relates to refrigerators designed for domestic use to preserve perishable articles and provide a supply of water cooled by ice located outside the water chamber.

The object of my invention is to provide a new and improved water cooling refrigerator wherein the water and ice holder is simple, economical and effective and of such construction that the ice lies in contact with thin metallic walls separating the water chamber and water conduit from the ice, thereby producing extremely cold water with a minimum quantity of ice and enabling the consumption of the latter to be materially reduced.

The invention also has for its object to provide such a simple construction that the water chamber has no communication with the interior of the refrigerator and the water chamber and ice box, as an integral structure, can be quickly removed and thoroughly and conveniently cleaned interiorly and exteriorly and then replaced without disturbing articles in the refrigerating chambers of the refrigerator.

To accomplish these objects my invention involves the features of construction and the combination or arrangement of parts herein-after described and claimed, reference being made to the accompanying drawings, in which:—

Figure 1, is a front elevation of a domestic refrigerator embodying my invention. Fig. 2, is a horizontal sectional view taken on the line 2—2, Fig. 1. Fig. 3, is a vertical sectional view taken on the line 3—3, Fig. 2., and Fig. 4, is a perspective omitting the front and top walls of the refrigerator structure.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein

The numeral 1, indicates a refrigerator structure having its front wall provided with a pair of upper doors 4, and a pair of lower doors 5, all of which are adapted to open for

gaining access to corresponding refrigerating chambers 6, 7, 8 and 9 Fig. 3. The bottoms of the chambers 6 and 7, comprise removable and replaceable racks 10 and 11, and the chambers 8 and 9 are separated by a similar rack 12. The racks are each composed, preferably, of parallel metallic rods secured at their ends to cross strips, as clearly shown in Fig. 4, but they may be otherwise made of any material suitable for the purpose in hand. The ice and water box or case is of a length co-extensive with the depth of the refrigerator structure and lies horizontally at the center thereof to separate the upper refrigerator chambers from each other. The box or case is made entirely of galvanized iron or other metal and comprises a bottom wall 13, front and rear walls 14 and 15, side walls 14^a, and 15^a, a vertical partition 16, dividing its interior into a water chamber 17 and ice-chamber 18, a hinged lid 19, for the ice-chamber, and a rectilinear water conduit 20 running from the water chamber to the front wall 14, where it is contracted into a neck 21, secured to a faucet 22, located outside the front wall of the refrigerator structure at a point centrally between the upper pair of doors 4. The water conduit is composed of an arched metallic plate, Fig. 3, preferably galvanized iron, secured along its longitudinal edges to the bottom wall 13 of the ice chamber 18, so that the said bottom wall constitutes the bottom of the water conduit. A waste water pipe 23, leads from the ice-chamber and is provided with a suitable trap 24, at its lower end. The upper end portion of the pipe is bifurcated and the bifurcations communicate with the ice-chamber, the construction being such that the waste-pipe does not interfere with the removal of the water and ice box or case whenever it is desired to clean the same. The construction described makes the water and ice-chambers an integral structure of galvanized iron or other metal, which can be readily removed and quickly and conveniently cleaned interiorly and exteriorly in a very efficient manner. The ice in the box or case can rest in direct contact with the vertical partition 16, and conduit 20, thereby producing extremely cold water with a small quantity of ice and rendering it possible to economize in the consumption of ice. The top wall of the refrig-

erator structure is provided with a suitable door 25 for the withdrawal of the ice and water box as an integral structure, and this door (one or more) serves to close the open top of the water-chamber 17. The top portion of the water and ice box projects into the door opening in the top wall of the refrigerator structure so that the water chamber has no communication with the interior of the refrigerator and therefore the water cannot become affected by the articles contained in the refrigerating chambers.

Having thus described my invention what I claim is:—

1. The combination with a refrigerator structure having an opening and closing door in its top wall, of a water cooler and ice holder composed of an iron box removable through said door and having a metallic bottom, side and end walls, a vertical metallic partition separating the box into a water and an ice chamber, and a metallic water conduit leading from the partition through the ice-chamber and connected with a discharge faucet, substantially as described.

2. The combination with a refrigerator structure having an opening and closing door in its top wall, of a water cooler and ice holder composed of a metallic box removable through said door and having a metallic bottom, side and end walls, a vertical partition separating the box into a water chamber and

an ice chamber, an arched plate secured to the bottom wall of the ice chamber to form a water conduit which connects with the vertical partition, a lid hinged to the upper edge of one of the vertical side walls of the iron box directly beneath the door in the top wall of the refrigerator structure, and a faucet located outside the refrigerator structure and communicating with the said conduit, substantially as described.

3. A domestic refrigerator having a pair of refrigerator chambers and racks in its upper portion, an opening and closing door centrally along its top wall, a water cooler and ice-holder composed of a metallic box interposed between the said pair of racks in coincidence with said door so as to be removable there-through, said box comprising a bottom, side and end walls, a vertical partition separating the box into a water and an ice chamber, a lid for said ice-chamber, and a water conduit leading from the partition through the ice-chamber and connected at its outer end with a faucet outside the refrigerator structure, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

ROBERT L. SNYDER. [L. S.]

Witnesses:

ALBERT H. NORRIS,
J. A. RUTHERFORD.