

W. S. BARKER.
 REFRIGERATOR OR COLD STORAGE APPARATUS.
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976,619.

Patented Nov. 22, 1910.

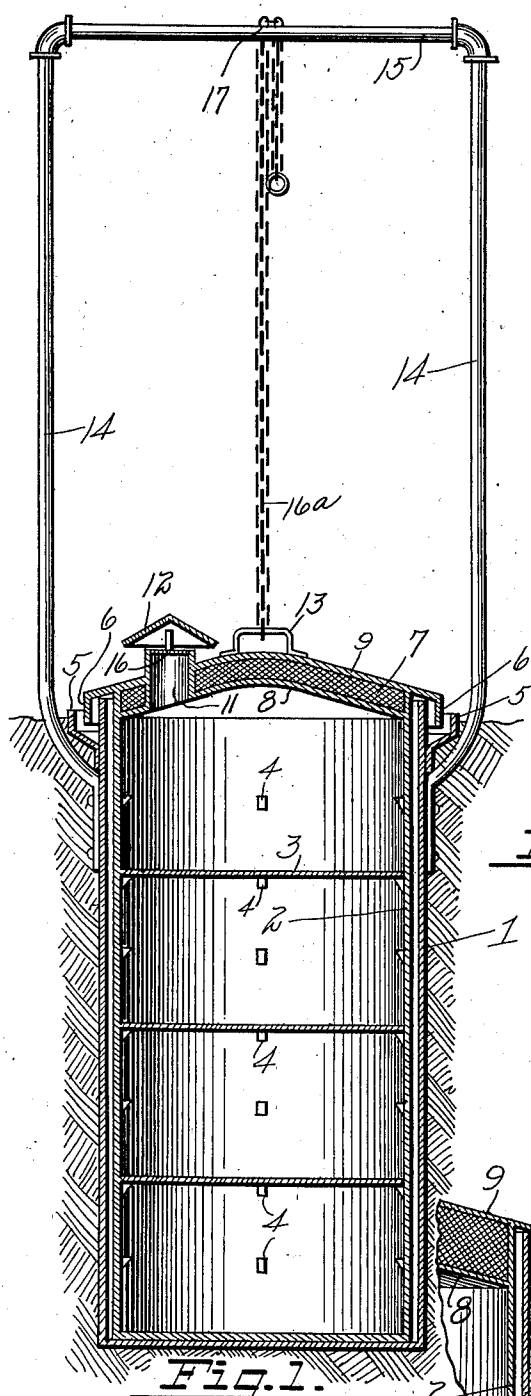


Fig. 1.

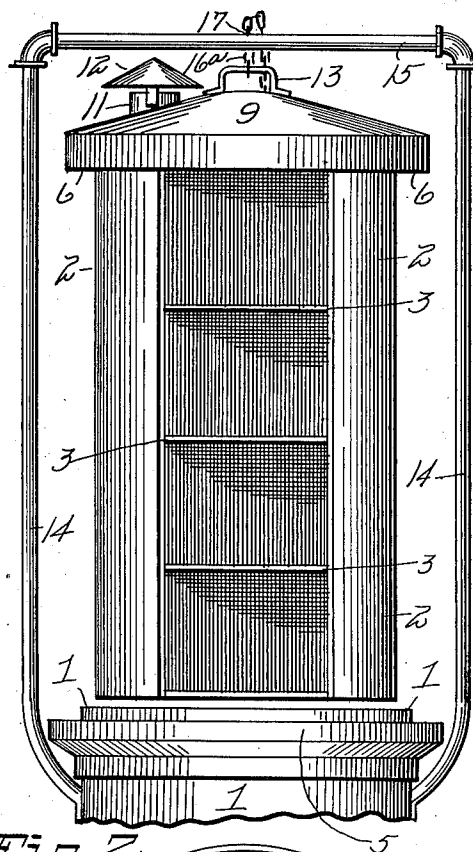


Fig. 2.

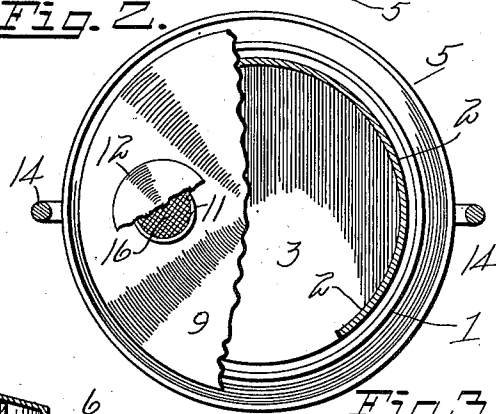


Fig. 3.

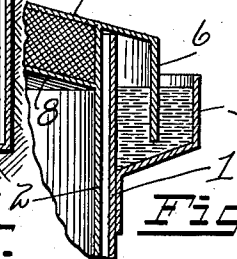


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM S. BARKER, OF DAYTON, OHIO.

REFRIGERATOR OR COLD-STORAGE APPARATUS.

976,619.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM S. BARKER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Refrigerators or Cold-Storage Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in refrigerators or cold storage apparatus.

The object of the invention is to provide a cold storage apparatus in which articles of food may be kept and which does not require any of the usual means such as ice or cold air for preserving a low temperature.

In the accompanying drawings, Figure 1 is a vertical longitudinal section. Fig. 2 is a side elevation, the lower portion of the casing being broken away and the receptacle being elevated. Fig. 3 is a top plan view with the head broken away to show the interior of the apparatus. Fig. 4 is a sectional detail view of the upper portion of the apparatus. Fig. 5 is an enlarged view of a portion of the upper horizontal frame member showing the means for securing the chain when the inner member is elevated.

The casing 1 is constructed preferably of galvanized iron and is of a cylindrical form and of suitable depth to serve the purposes of a refrigerator. This outer casing is embedded in the ground and the upper end thereof should be a suitable distance above the surface of the earth, approximately as shown in Fig. 1. Secured to the opposite sides of said casing are the vertical members 14 which are joined to an upper horizontal member 15 which members constitute a frame above the ground. Within the casing 1 is loosely placed a cylindrical receptacle 2 which may be freely moved in or out of said casing in a manner presently described.

The receptacle has an open side throughout its length, as shown in Fig. 2, and a series of shelves 3 which are supported on lugs 4 arranged on the interior of said receptacle. These shelves may be placed a greater or less distance apart, as may be

required. Upon these shelves the various articles are placed, such as the usual household articles commonly kept in refrigerators. As the receptacle 2 is inclosed, the food upon the shelves 3 will not be contaminated by dust when the receptacle is above the ground; the open side of the receptacle may be turned away from the direction of the wind in case there is any air stirring; and further, when the receptacle is within the casing the food is protected from any mold that may accumulate on the inner side of the casing. The upper end of the casing 1 is provided with an annular gutter 5, the upper end of which lies below the upper end of said casing. This gutter or trough like member is provided with water which forms a seal preventing insects from entering the interior of the apparatus. The upper end of the receptacle is provided with a head consisting of two metallic parts 8 and 9 between which is placed a suitable non-heat conducting material, such for example as mineral felt 7. The upper member 9 of said head extends outwardly beyond the circumference of the receptacle and has its extreme circumferential edge projected downwardly into the water seal 5, as shown at 6 in Fig. 4. Such an extension of the edge of said cover into the water in the annular trough 5 prevents the possibility of insects entering the apparatus from the surface of the ground. The receptacle may be supported upon the upper end of the casing or upon the bottom of said casing.

Owing to the fact that the water trough 5 terminates at a point below the upper extreme end of the casing, the water can never enter said casing from the trough. In the head of the receptacle, as just described, there is a vent or opening 11 consisting of a tubular member which extends above the upper side 9 of said head. The upper end of this vent 11 is provided with a wire screen 16 which prevents any dirt entering the interior of the apparatus while at the same time it does not obstruct the free circulation of air. Owing to the extension of the vent 11 above the upper member of the head rain is prevented from entering the interior of the receptacle from the upper side of the head. It will be noted that the head is of tapered form and that water falling thereon will run down the side to the annular trough 5. The vent is provided with a cap 12 which is rigidly secured thereto and lies a suitable

distance above the vent. The receptacle is elevated whenever it is desired to remove articles therefrom or to place articles therein, by means of a chain 16* which is attached to a loop 13 secured to the upper side of the head. This chain is carried over the upper horizontal member 15 of the frame and said member affords means for supporting the chain while the receptacle is being elevated. When the receptacle is elevated, as in Fig. 2, the chain may be secured to a fastener 17 located on the cross member 15.

The usual temperature of the ground will preserve the articles placed in the apparatus in a condition which renders the use of ice unnecessary. The construction of the head of the receptacle is such as to give it the necessary weight so that the weight alone will maintain the cover or rather the receptacle in position. The head being integrally united to the receptacle, renders it impossible for access to be had to the apparatus unless the receptacle is elevated. The water seal around the upper end of the casing is effectual in preventing insects from finding their way to the interior of the apparatus. The construction of the vent is such as to prevent the ingress of water or dust while it does not prevent a free-circulation of air.

I claim:

In an apparatus of the type specified, an outer casing adapted to be placed in the ground, an inner cylindrical receptacle within said casing, said receptacle having a series of shelves on the interior thereof, said receptacle having a longitudinal opening in one side thereof through which access may be had to the shelves, said receptacle inclosing the shelves from communication with the space between the receptacle and the outer casing at all other points than said opening, a head integrally joined to said receptacle and consisting of inner and outer members inclosing between them a non-heat conducting material, the inner member of said head lying within the circumference of the receptacle, and the outer member of said head being extended circumferentially beyond the circumference of the outer casing and adapted to form a seal in connection with a trough on said outer casing, and a vent in said head, all constructed and arranged substantially as shown and described.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM S. BARKER.

Witnesses:

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MATTHEW SIEBLER.