April 25, 1939. W. E. SNIPES, SR 2,156,201

REFRIGERATOR

Filed Oct. 29, 1937 2 Sheets-Sheet 1

Fig. 1.

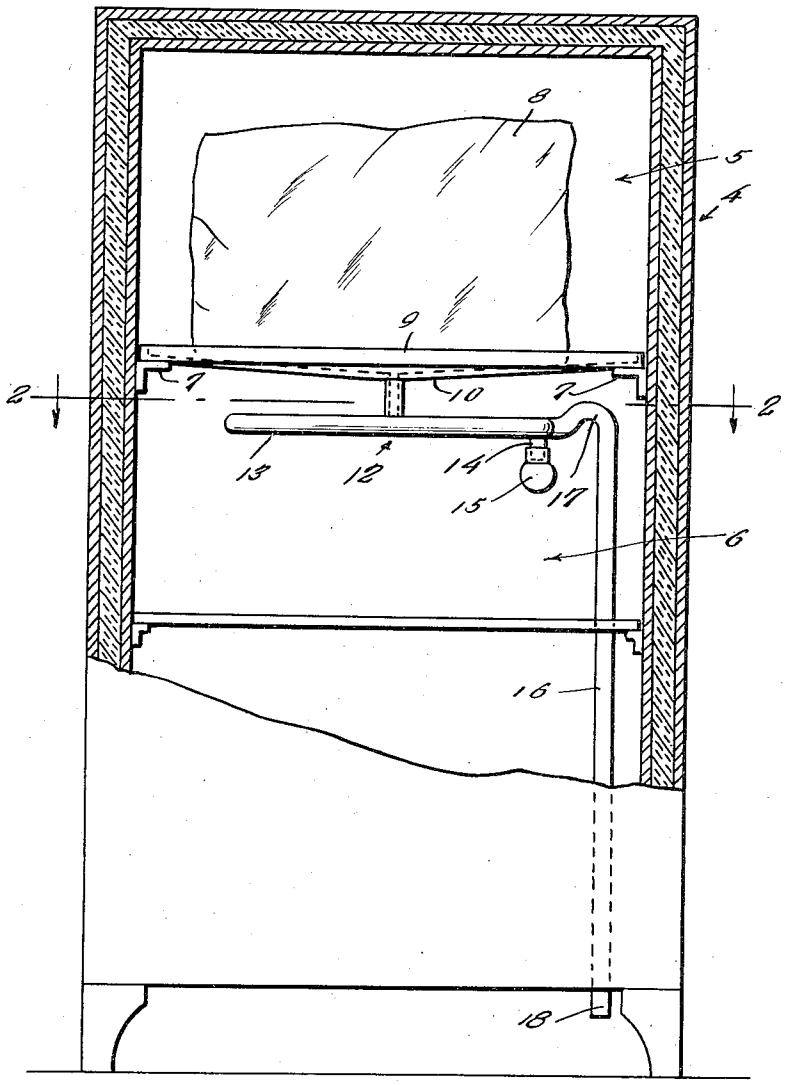

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Fig. 2.

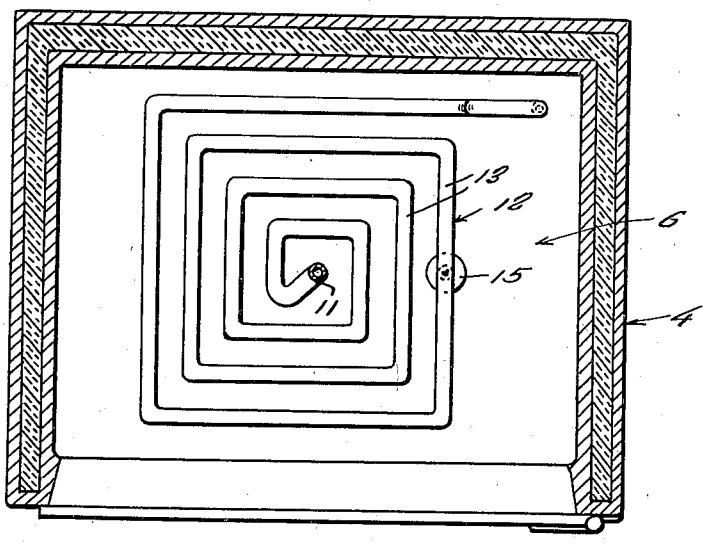
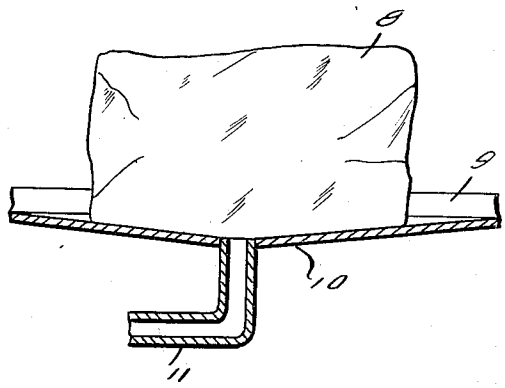


Fig. 3.



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2,156,201

REFRIGERATOR

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Application October 29, 1937, Serial No. 171,779

1 Claim. (Cl. 62—46)

This invention relates to an improved refrigerator of the so-called ice box type, wherein ice man's ice is utilized as the cooling medium, and the simple purpose of the invention is to provide in a structure of this type efficient means which utilizes the melting ice as an added source of refrigerant for cooling purposes in the food compartment.

In reducing to practice the inventive principle of the preferred adaptation, I have found it expedient and practicable to provide a simple ice supporting tray or shelf having associated therewith a coil located in the so-called food compartment, wherein said coil has a depending branch which has the double function of a cooling member or agent as well as a drainage pipe.

Manifestly, it is my chief aim to generally improve upon structures in this general line of endeavor by providing an arrangement characterized by utmost simplicity, convenience, sanitation and such other indispensable factors as must be ever present in ice boxes susceptible of meeting the unqualified demands of present competitive trading.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a view partly in section and partly in elevation showing an ice box constructed in accordance with my ideas and illustrating how the structure is used to advantage in accomplishing the desired results.

Figure 2 is a horizontal section on the plane of the line 2—2 of Figure 1 looking in the direction of the arrows.

Figure 3 is an enlarged fragmentary detail section showing an important phase of the invention.

Referring now to the drawings by distinguishing reference numerals, it will be observed that the cabinet or box, as a unit, is denoted by the numeral 4. This is of any appropriate construction and configuration. It is properly insulated and is divided internally into the upper ice chest or compartment 5 and the customary shelved food compartment 6. In the present arrangement suitable ledges or brackets 7 serve to support a tray or pan for the block of ice 8. The tray includes a marginal confining rim 9 and a tapered bottom 10. The bottom 10 converges to a point forming an outlet into which the melted ice water gravitates and enters the discharge pipe 11 communicating with the cooling coil 12. This part 12 is preferably formed from a series of substantially rectangular convolutions 13 providing a desired radiation surface for cooling the air within the chamber or compartment 6. One of the outermost convolutions is provided with a depending nipple 14 carrying a bulbous receptacle 15 constituting a sediment collecting cup or bulb. This is conveniently accessible for removal and cleaning. The free end of the pipe terminates in a perpendicular or vertical branch 16 joined to the coil by way of a bend or gooseneck connection 17. This perpendicular portion of the pipe 16 constitutes not only a portion of the cooling coil, but serves as a means of conveying the discharging water to the outlet 18 which may empty into a pan or may be connected with an extraneous complementary drainage pipe or hole.

The gist of the invention, it will be seen, resides in the provision of a rim-equipped pan or receptacle forming a support for a cake of ice and serving as a divider in the ice chest to define the upper and lower compartments 5 and 6. This provides an appropriate pan for the ice and also forms a support for the coil 12 suspended beneath said pan and located in the upper portion of the food compartment 6.

Actual experience has shown that, by utilizing the otherwise wasted iced drainage water, it constitutes a refrigerant for slow passage through the coil and associated features whereby to provide a convenient means for maintaining the compartment 6 in a suitably refrigerated condition.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

I claim:

In a refrigerator of the type including an insulated box having one or more article supporting shelves therein, a horizontally arranged ice receiving pan in the upper portion of the box, a horizontally arranged tubular coil located under the pan and above the upper shelf to permit articles to be placed on the shelf between the shelf and said coil, a tube connecting the inner end of the coil with the pan for leading water from the pan into the coil, a gooseneck connected with the outer end of the coil and extending upwardly, a discharge pipe connected with the gooseneck and extending through the bottom of the box, a depending nipple connected with an outer portion of the coil and a sediment collecting cup detachably connected with the nipple.

WILLIE EUGENE SNIPES, SR.