Aug. 10, 1954 F. CARAPICO, SR 2,685,779

AIR-FLOW RETARDING BAFFLE FOR REFRIGERATING SYSTEMS

Filed Feb. 4, 1953

Fig. 1.

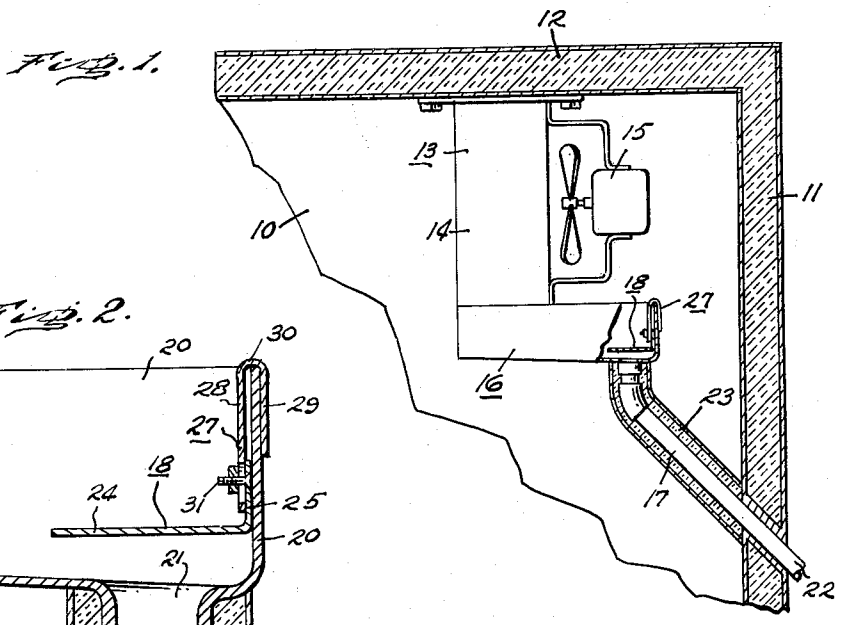


Fig. 2.

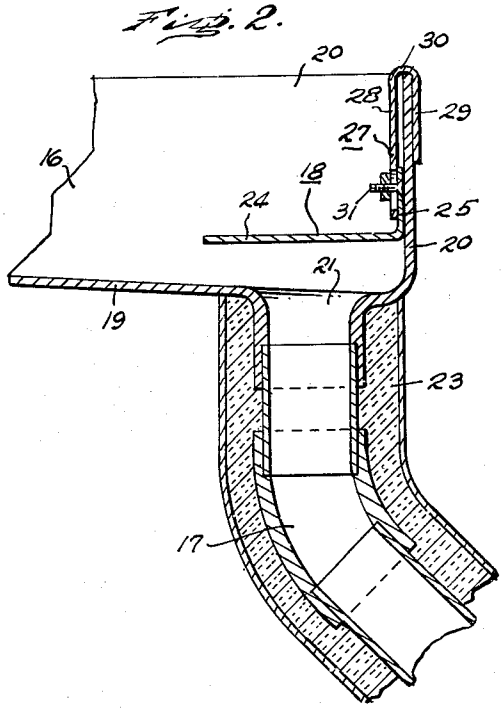


Fig. 4

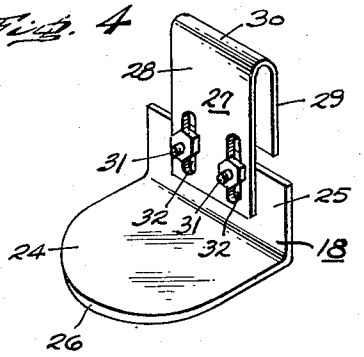
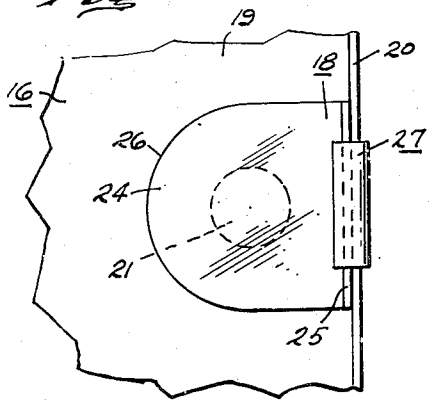


Fig. 3



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AIR-FLOW RETARDING BAFFLE FOR REFRIGERATING SYSTEMS

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Application February 4, 1953, Serial No. 335,060

2 Claims. (Cl. 62—103)

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This invention relates generally to refrigerators and is more particularly concerned with improved means for draining therefrom water formed when a cooling unit housed thereby is defrosted.

A principal object of the present invention is to provide for such a cooling unit a water drain leaving an outlet from said refrigerator and baffle means for retarding any flow of air through said drain.

Another object of the present invention is to provide means as aforesaid simple in design and construction and easy and cheap to make.

Other objects of the present invention will be apparent from the following description, it being understood that the present invention consists substantially in the combination, construction, location and relative arrangement of parts, as described in detail hereinafter, as shown in the accompanying drawings and as finally pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a sectional elevation showing a construction embodying the present invention;

Figure 2 is an enlarged sectional elevation showing the construction at the inlet end of the drain;

Figure 3 is a plan view of the baffle means shown in Figure 2; and

Figure 4 is a perspective view of the baffle means above.

Referring to the drawing, and particularly to Figure 1 thereof, the refrigerator element 10 of the combination comprises a vertical wall 11 and an upper horizontal wall 12, and the cooling unit element 13 of the combination comprises coils 14 and a fan 15. The refrigerator 10 and the cooling unit 13 are of conventional construction, and the latter is conventionally suspended from the horizontal wall 12 in spaced relation to the wall 11 in order to provide for adequate circulation of air.

The drain means of the combination comprises a receptacle 16 suitably supported from the cooling unit 13 and disposed thereunder, a conduit 17 from the receptacle 16 to the outside of the refrigerator 10, and a baffle 18 disposed inside the receptacle 16 and over the inlet opening of the conduit 17.

The receptacle 16 is conventional and comprises a pitched bottom 19 and a rim 20. The conduit 17 also is conventional, being provided with an inlet opening 21 which presents upwardly into the receptacle 16 and an outlet opening 22 which communicates with the outside of the refrigerator 10, a pitch downward from the receptacle 16 and a covering 23 of insulating material.

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The baffle 18 comprises a plate having a flat horizontally disposed imperforate section 24 provided with a rounded edge 26 and integral vertically disposed flange 25. For quick-detachably supporting the baffle 18 from the rim 20 of the receptacle 16, there is provided a hook 27 in the form of a piece of strap material turned upon itself and over the rim 20 to afford a pair of legs 28 and 29 positioned to depend from the strap portion 30 therebetween. The leg 28 of the strap 27 and the flange 25 of the baffle 18 are secured together by a pair of countersunk head bolts 31—31 which are projected through registering apertures therein, the apertures in the flange 25 being countersunk to receive the heads of the bolts 31—31 and the apertures in the leg 28 being in the form of slotted openings 32—32. The inlet opening 21 of the conduit is disposed proximate the rim 20, and the section 24 of the baffle 18 projects inwardly from the leg 28 of the strap 27 and the rim 20 of the receptacle 16 in covering relation to the inlet opening 21 of the conduit 17 and in spaced relation to the bottom 19 of the receptacle 16.

When the cooling unit 13 is defrosted the water from the melting ice drips into the receptacle 16 and flows under the section 24 of the baffle 18 and into the conduit 17 through the inlet opening 21. The conduit 17 being pitched downwardly the water flows therethrough by the force of gravity and leaves the same through the outlet opening 22. It should be observed that the conduit 17 is provided with a much larger cross sectional area than ordinarily would be necessary for accommodating the volume of water flowing therethrough. This is to give warm air from outside the refrigerator access to the conduit 17 at all times. The baffle section 24 being disposed in covering relation to the inlet opening 21 of the conduit 17 and in spaced relation to the bottom 19 of the receptacle 16 the warm air in the conduit 17 is retarded thereby in its movement upward through the inlet opening 21. In addition, cold air in the refrigerator is retarded by the baffle section 24 in its movement downward into the conduit 17 through the inlet opening 21. Thus the baffle section 24 retards the flow of air through the conduit 17, tending to prevent warm air from passing upwardly out of the conduit 17 and also to prevent cold air from passing downwardly into the conduit 17. Consequently, the latter and the area around the inlet opening 21 remain com-

paratively warm, and freezing of water in the conduit or around the inlet opening 21 is effectively avoided, the conduit 17 being thereby kept open to function as intended.

It will be understood that the specific embodiment of the present invention shown and described hereinbefore is for the purpose of illustration only and that it is not intended to be limited thereby. The baffle 18 may assume many forms. For example, as to the section 24 of the baffle 18, the rounded edge 26 is not essential, and, as to the hook 27, this member might be disposed with altogether and the flange 25 of the baffle 18 might be bolted directly to the rim 20 of the receptacle 16. Accordingly, the present invention is susceptible of various changes, modifications and applications, in addition to those already pointed out, which may be made from time to time without departing from the general principles or real spirit thereof, and that it is intended to claim the invention broadly, as well as specifically, as indicated by the appended claims.

What is claimed as new and useful is:

1. The combination comprising a refrigerator, a cooling unit within said refrigerator operable to effect melting of ice formed upon said cooling unit, and drain means for the water from said melting ice comprising a rimmed receptacle for collecting said water, a conduit the inlet opening of which is disposed proximate said rim and presents upwardly into said receptacle for receiving said water from the receptacle and the outlet opening of which is in communication with the outside of said refrigerator, said conduit being adapted for movement of said water therethrough by force of gravity, and baffle means supported from said rim and projected inwardly therefrom in covering relation to said inlet opening for retarding any flow of air through said conduit and being further supported in spaced relation to said inlet opening for facilitating the free flow of said water into said conduit.

2. The combination comprising a refrigerator, a cooling unit within said refrigerator operable to effect melting of ice formed upon said cooling unit, and drain means for the water from said melting ice comprising a rimmed receptacle for collecting said water, a conduit the inlet opening of which is disposed proximate said rim and presents upwardly into said receptacle for receiving said water from the receptacle and the outlet opening of which is in communication with the outside of said refrigerator, said conduit being adapted for movement of said water therethrough by force of gravity, and an imperforate baffle plate quick-detachably supported from said rim and projected inwardly therefrom in covering relation to said inlet opening for retarding any flow of air through said conduit, said plate being vertically adjustable for selected positioning thereof above said inlet opening to facilitate the free flow of said water into said conduit.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
895,962	Chase	Aug. 11, 1908
1,800,255	Hull	Apr. 14, 1931
2,292,032	Atchison	Aug. 4, 1942
2,303,138	Philipp	Nov. 24, 1942
2,442,204	Janos	May 25, 1948