Oct. 27, 1936. J. KARMAZIN 2,058,593

REFRIGERATING APPARATUS

Filed April 13, 1935

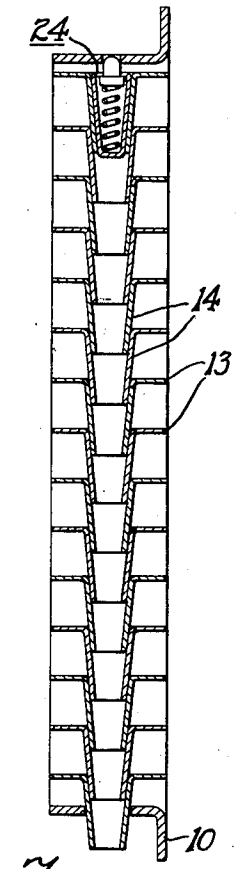

Fig. 2

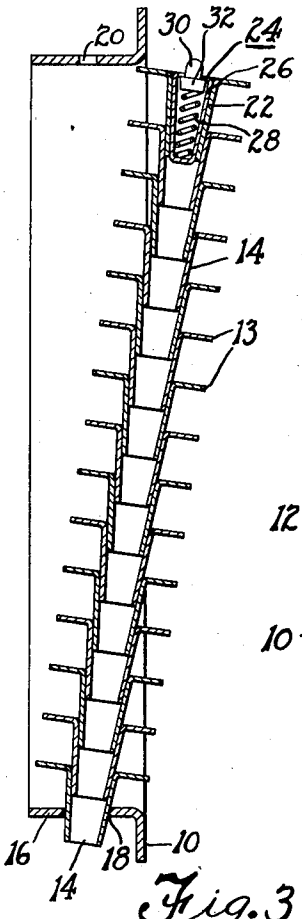

Fig. 3

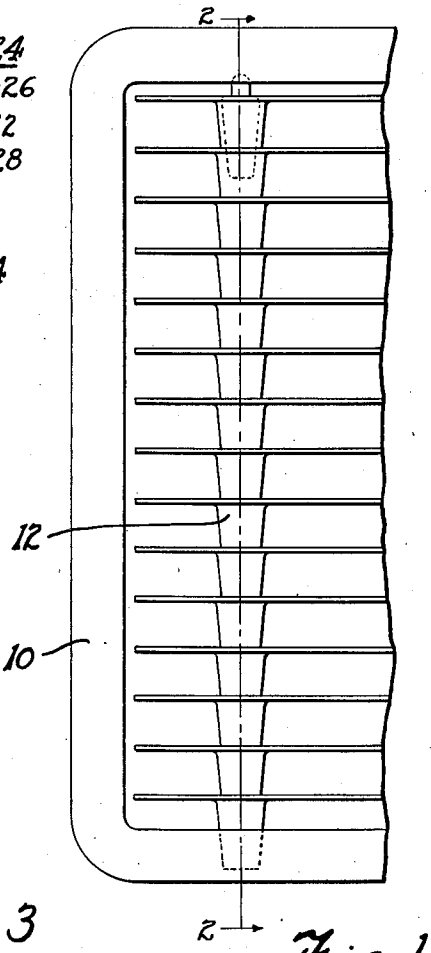

Fig. 1

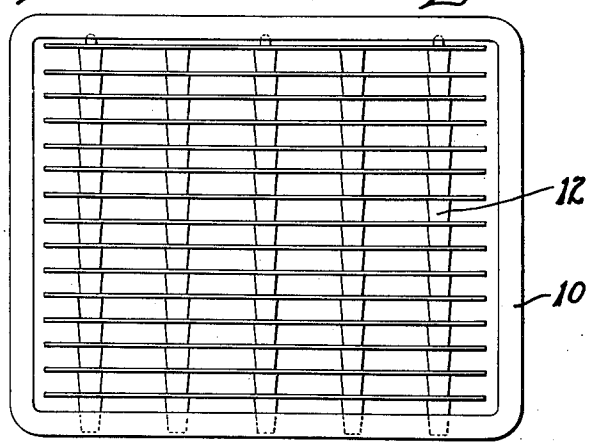

Fig. 4

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REFRIGERATING APPARATUS

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2 Claims. (Cl. 189—84)

This invention relates to refrigerating apparatus and more particularly to a grilled opening structure for use in refrigerating apparatus or other devices where air is delivered or withdrawn through the open end of a duct or conduit.

It is an object of the invention to provide a grilled opening structure of simple and inexpensive construction in which the grille may be retained firmly in the opening but may be readily removed therefrom when desired.

A further object is to provide a simple and inexpensive engaging means for retaining the grille in the opening.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawing wherein a preferred form of the present invention is clearly shown.

In the drawing:

Fig. 1 is a fragmentary front view of a grilled opening structure embodying the present invention;

Fig. 2 is a cross section on line 2—2 of Fig. 1;

Fig. 3 is a cross sectional view corresponding to Fig. 2 showing the parts in a different position; and

Fig. 4 is a front view of a grilled opening structure embodying the present invention.

The structure illustrated in the drawing is adapted to be utilized at the end of an air duct or conduit. Ordinarily, such ducts terminate at the surface of a wall of a cabinet or room. The grille is provided in the opening to direct the flow of air through the opening, to present a neat appearance simulating a continuation of the wall within which the opening is formed, and to prevent the entry of large objects into the opening.

Referring now to Fig. 4, there is illustrated a grilled opening structure comprising a frame member 10 and a grille member 12. The grille member is preferably formed from a plurality of sheet metal fins 13 having tapered spacer portions 14 formed integrally therewith by a stamping operation. A plurality of fins are assembled with their tapered spacer portions interfitted and may be permanently retained together either by friction or by a soldering or welding process. The frame member 10 is provided with an inwardly turned flange 16 which forms the terminus of the duct to which the grilled opening structure is to be applied. The flange 16 is provided on two oppositely disposed walls with apertures 18 and 20 respectively. The apertures 18 are of a size to retain the spacer portions 14 of the lowermost fin in the position illustrated in Figs. 1 and 2. The uppermost fin of the grille member 10 is provided with a plurality of upwardly opening recesses 22 which are formed necessarily by the provision of the tapered tubular spacing portions 14 therein. One or more of these recesses 22 carries a spring pressed plunger assembly 24 comprising a hollow cylindrical member 26 having a closed bottom and an inwardly turned top edge. Within the cylinder 26 there is mounted a compression spring 28 which resiliently projects a plunger or projection 30 upwardly to engage a shoulder 32 thereon with the inwardly turned top edge of the cylinder 26.

The grille member 12 is inserted in the frame member 10 by first inserting the bottommost spacing portions or projections within the apertures 18 in the flange 16 as illustrated in Fig. 3. The upper end of the grille is then moved inwardly to the position of Fig. 2 so that the spring pressed plunger 30 engages in the aperture 20. The grille is thus retained tightly in the frame member 10 and may be readily removed by reversal of this procedure.

While the form of embodiment of the present invention as herein disclosed constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow.

What is claimed is as follows:

1. A grilled opening structure comprising in combination a frame member having an opening therein, a grille member adapted to be removably positioned in said opening, and having sheet metal fins with spacing portions formed integrally with the fins to provide a recess adjacent at least one of the spacing portions, means associated with the frame member forming an aperture on each of two sides thereof, and means associated with the grille member forming projections engageable with said aperture, one of said projections comprising a spring pressed plunger assembly mounted in said recess formed in one of said fins.

2. A structure comprising a frame member and a grille member, said frame member having a series of openings along one edge and one member of a spring pressed plunger assembly along the other edge, said grille member comprising a series of stacked fins, each of said fins having integral hollow spacer lugs engaging corresponding spacer lugs of an adjacent fin, one of said fins having spacer lugs engaging said series of openings on said frame member, and another of said fins having in one of its spacer lugs another member of said spring pressed plunger assembly.

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