Nov. 1, 1955 M. E. FRY 2,722,591

DOMESTIC APPLIANCE

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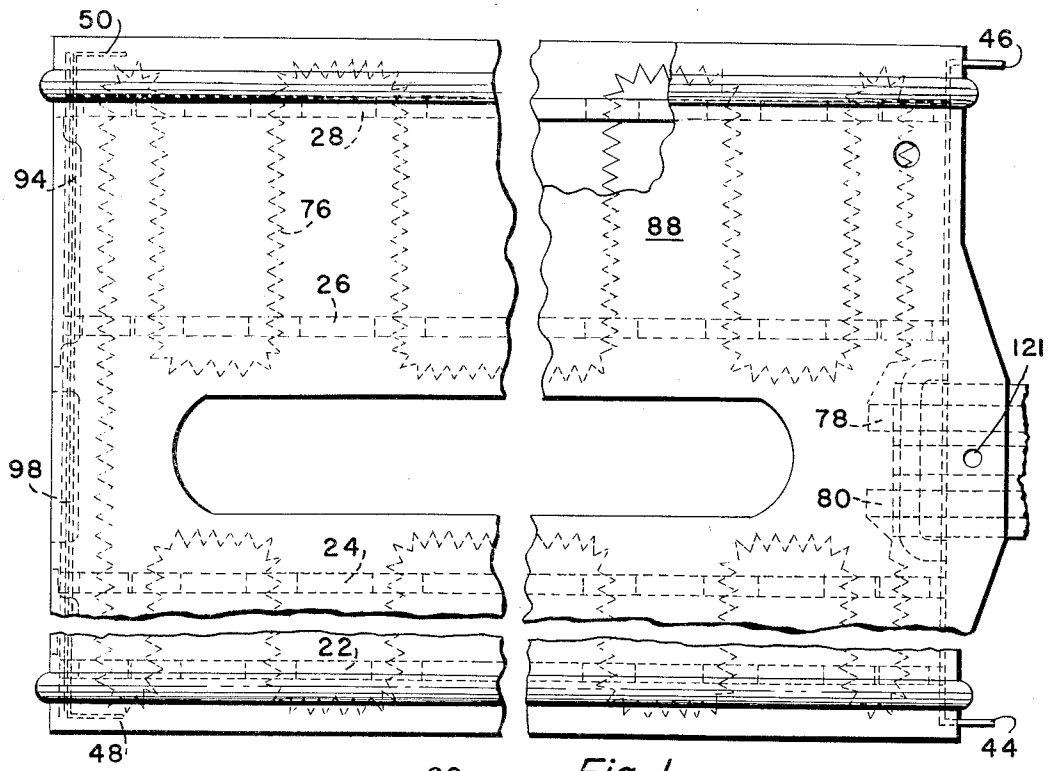


Fig. 1

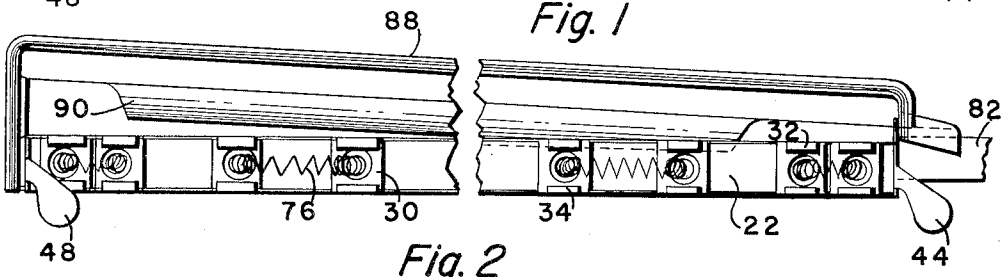


Fig. 2

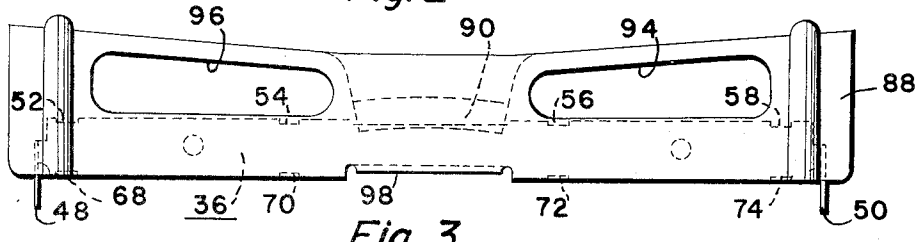


Fig. 3

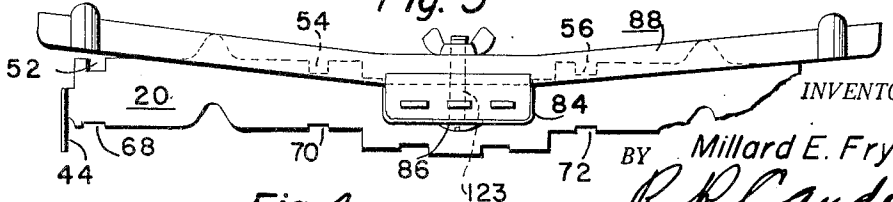


Fig. 4

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DOMESTIC APPLIANCE

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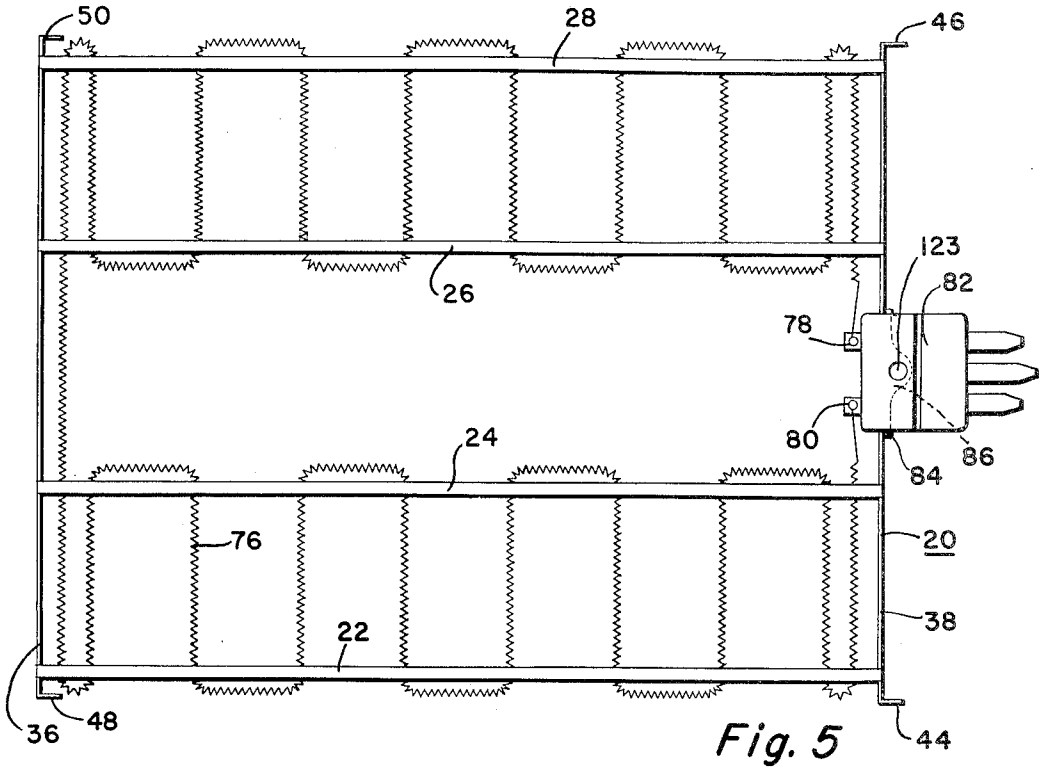


Fig. 5

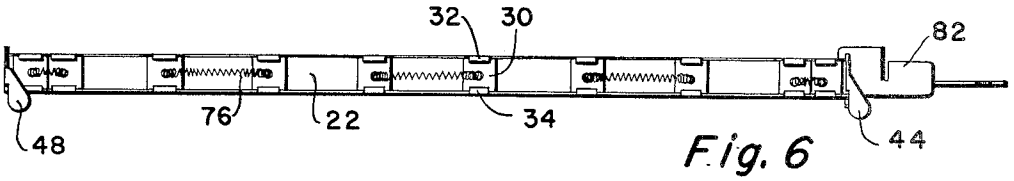


Fig. 6

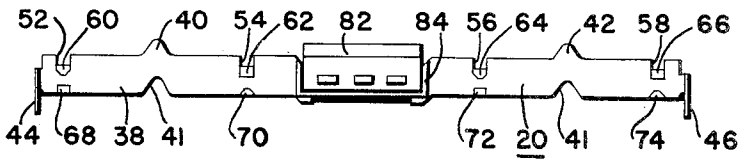


Fig. 7

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DOMESTIC APPLIANCE

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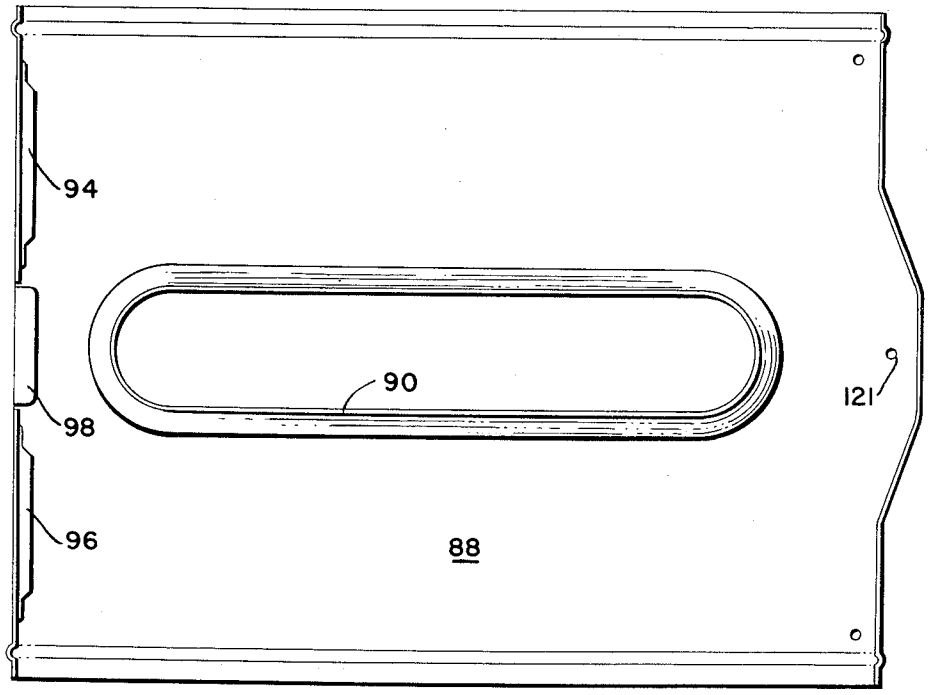


Fig. 8

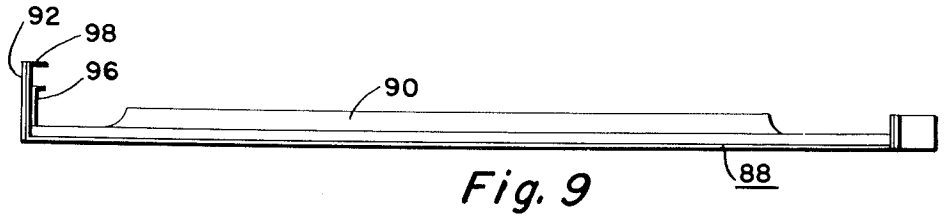


Fig. 9

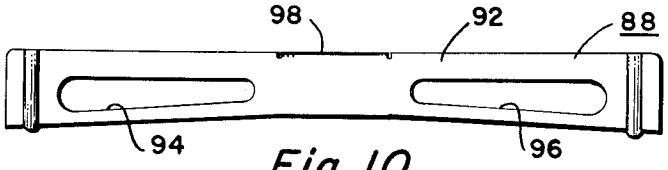


Fig. 10

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2,722,591

DOMESTIC APPLIANCE

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Application March 19, 1953, Serial No. 343,341

5 Claims. (Cl. 219—19)

This invention relates to a domestic appliance and more particularly to a heating unit assembly for electric ovens.

It has been customary to connect the insulated bushing supports to formed rectangular wire frames. Additional wire members connect the front and back ends of the bushing supports. These wire members and frames are somewhat expensive and use considerable material and are not too easily formed.

It is an object of my invention to provide a simple structure for connecting the insulated bushing supports into a framework.

It is another object of my invention to use the insulated bushing supports as the sole structural members extending from the front to the back of the heating unit.

It is another object of my invention to provide an improved baffle for such a heating unit and to provide an improved and simplified connecting arrangement between the improved baffle and such a heating unit.

These and other objects are attained by providing a heating unit in which flat metal strips extend across the front and back of the heating unit and are notched to receive the upper and lower projections provided at the ends of the insulating supports which curl around these strips to form a rigid framework. One of these strips is provided with a centrally located ear. The baffle is provided with flanges between which fit the opposite end of the heating unit while the other end of the baffle and heating unit are connected to the ear with a terminal block by a bolt fastened by a wing nut. The transverse strips are provided with depending legs at each end and upwardly extending projections which space the baffle away from the heating unit.

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

In the drawings:

Figure 1 is a top view of a heating unit assembly embodying one form of my invention;

Figure 2 is a side elevation;

Figure 3 is a left end view of the assembly;

Figure 4 is a right end view of the assembly;

Figure 5 is a bottom view of the heating unit alone;

Figure 6 is a side elevation of the heating unit alone;

Figure 7 is a rear view of the heating unit alone;

Figure 8 is a bottom view of the baffle;

Figure 9 is a side view of the inverted baffle; and

Figure 10 is an end view of the inverted baffle.

Referring now to the drawings and more particularly to Figure 5, there is shown a heating unit embodying one form of my invention. This heating unit generally designated by the reference character **20** includes four insulating supports **22**, **24**, **26** and **28** which extend from the front to the rear of the unit **20**. These insulating supports **22** to **28** are formed of sheet metal into a channel shape with pierced insulating blocks **30** lodged in the channels and held in place by ears **32** and **34**

upon the flanges of the channels which are bent toward each other and into contact with the blocks **30** to hold the blocks in place. The channel members **22** to **28** are provided with enlarged apertures adjacent the places where the insulating blocks are pierced.

Instead of using a wire frame I use thin strips **36** and **38** of aluminum clad steel or other suitable material at the front and rear of my unit **20**. These strips each have two upwardly extending projections **40** and **42** which are used to space the baffle member a proper distance above the heating unit **20**. To make it possible to cut the maximum number of strips from a sheet, each strip has a recess **41** of complementary shape beneath each projection. At each end the strips have downwardly extending ears **44**, **46**, **48** and **50** which are bent at right angles to the remaining portion of the strips **36** and **38**. These ears **44** to **50** support the heating unit upon the bottom of the oven or whatever type of support is provided.

The strips **36** and **38** are provided with four notches **52**, **54**, **56** and **58** on their upper edges. Each of the channel members **22** to **28** are provided with an upper projection at each end designated by the reference characters **60**, **62**, **64** and **66** which extend through the notches **52** to **58** and are bent over in contact with the outer face of the strips **36** and **38**. The channel members **22** to **28** are likewise provided with lower projecting ears **68**, **70**, **72** and **74** which are likewise bent over the lower edges of the transverse strips **36** and **38** to positively lock the transverse strips **36** and **38** to the ends of the channel members **22** to **28**.

A coiled electric resistance unit **76** is threaded through the insulator supports **30** in the four channel members **22** to **28** as shown in Figure 5. Its ends are connected to the terminals **78** and **80** of a terminal block **82**. To hold this terminal block **82** in position, the rear transverse strip **38** is provided with a flanged opening **84** provided with a pierced ear **86**. The terminal block **82** is located in this opening.

In Figures 8 to 10 there is shown in inverted position a baffle **88** which is normally located over the heating unit **20**. This baffle includes a longitudinal flanged aperture **90** upon the axis of the baffle and stiffening ribs adjacent each edge. The front edge of the baffle **88** is provided with a downwardly turned flange **92** which of course extends upwardly in Figures 8 and 10 because of the inverted view. This flange **92** is provided with two flanged apertures **94** and **96** in the locations shown in Figure 10. The flange **92** is also provided with a rearwardly turned lip **98** at its lower edge. The baffle is also provided with a bolt hole **121** at its opposite end.

To assemble the heater **20** and the baffle **88**, the center portion of the strip **36**, which may be notched to accommodate the lip **98**, is placed between the lip **98** and the adjacent flanges of the apertures **94** and **96** as particularly shown in Figure 3. At the opposite end this brings the aperture **121** in registration with the aperture in the ear **86** and a bolt **123** is passed through these apertures as well as the terminal block **82** and fastened in place by a suitable wing nut. This assembly is very simple. Only ordinary care is required to see that the front strip **36** is in its proper place in the front flange **92** of the baffle **88** before the bolt is passed through the apertures in the members **38**, **82** and **88** and fastened by a wing nut. The entire assembly is simple and very useful and can be manufactured at a low cost.

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

What is claimed is as follows:

1. A heating unit assembly including a plurality of

spaced parallel insulator supports formed of metal strips, insulators supported by said supports, transverse thin flat metal strips abutting the opposite ends of said insulator supports, said insulator supports being provided at each end with upper and lower projections which curl around the adjacent portion of the adjacent abutting transverse metal strip to hold the metal strip in abutting relation, and an electric heater supported upon said insulators, the opposite ends of said transverse metal strips being provided with integral downwardly extending projections forming supports for the assembly.

2. A heating unit assembly including a plurality of spaced parallel insulator supports formed of metal strips, insulators supported by said supports, transverse metal strips abutting the opposite ends of said insulator supports, said insulator supports being provided at each end with upper and lower projections which curl around the adjacent portion of the adjacent abutting transverse metal strip to hold the metal strip in abutting relation, an electric heater supported upon said insulators, a baffle extending over said heater and insulator supports, one of said transverse strips having upwardly extending projections for supporting one end of said baffle, the other end of said baffle being provided with a downwardly extending flange resting upon the second transverse strip.

3. A heating unit assembly including a plurality of spaced parallel insulator supports formed of metal strips, insulators supported by said supports, transverse metal strips abutting the opposite ends of said insulator supports, said insulator supports being provided at each end with upper and lower projections which curl around the adjacent portion of the adjacent abutting transverse metal strip to hold the metal strip in abutting relation, an electric heater supported upon said insulators, a baffle extending over said heater and insulator supports, one of said transverse strips having upwardly extending projections for supporting one end of said baffle, the other end of said baffle being provided with a downwardly extending flange provided with a plurality of flanged openings therein, the flanges of at least one of said openings resting upon the second transverse strip.

4. A heating unit assembly including a plurality of spaced parallel insulator supports formed of metal strips, insulators supported by said supports, transverse metal strips abutting the opposite ends of said insulator supports, said insulator supports being provided at each end with upper and lower projections which curl around the adjacent portion of the adjacent abutting transverse metal strip to hold the metal strip in abutting relation, an electric heater supported upon said insulators, a baffle extending over said heater and insulator supports, one of said transverse strips having upwardly extending projections for supporting one end of said baffle, the other end of said baffle being provided with a downwardly extending flange provided with a plurality of flanged openings therein, the flanges of at least one of said openings resting upon the second transverse strip, the flange of said baffle being provided with a projection extending into engagement with said second transverse strip.

5. A heating unit assembly including a plurality of spaced parallel insualtor supports formed of metal strips, insulators supported by said supports, transverse metal strips abutting the opposite ends of said insulator supports, said insulator supports being provided at each end with upper and lower projections which curl around the adjacent portion of the adjacent abutting transverse metal strip to hold the metal strip in abutting relation, and an electric heater supported upon said insulators, said electric heater being connected to a terminal block, one of said transverse strips being provided with a flanged opening having a horizontally extending tab, said terminal block being lodged within said flanged opening, and means fastening said terminal block to said tab.

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