

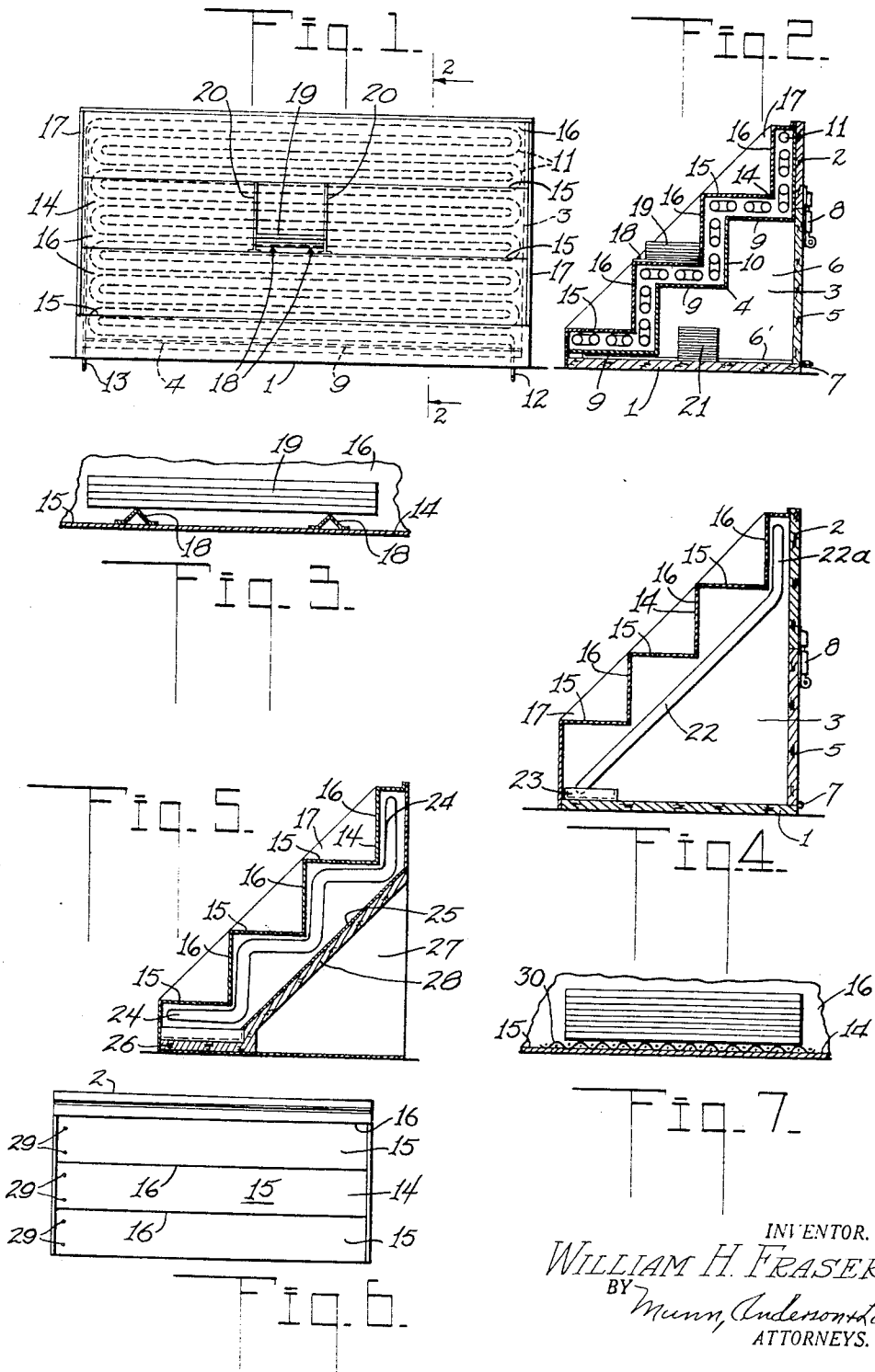
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REFRIGERATED OPEN DISPLAY RACK

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REFRIGERATED OPEN DISPLAY RACK

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8 Claims. (Cl. 62—89.6)

My invention relates to improvements in a refrigerated open display rack, and it consists of the combinations, constructions and arrangements hereinafter described and claimed.

5 An object of my invention is to provide a refrigerated open display rack which has an open shelf with a plurality of steps and risers therein. A refrigerated coil may be positioned in back of the steps or risers or in back of both, and may
10 either contact with the shelf or be placed adjacent thereto, so that the shelf will be maintained at a cool temperature. The shelf or display rack is designed to support articles such as candy bars, etc., which usually become soft due to high
15 summer temperatures. The purpose of the invention is to support these candy bars and other meltable articles in full open view on a rack where they may be readily removed by the purchaser. The candy bars are kept in a cool condition by contacting with the metal shelf or rack
20 which in turn is kept cool by the coil.

The display rack has a rear compartment which is also maintained at a low temperature by the same refrigerating coils. The compartment is provided with insulating walls and acts
25 as a cold storage space for the candy bars prior to placing them on the shelf.

The entire device may be made portable and the coils may be cooled by any type of refrigerant desired such as sulphur dioxide, methol chloride, ammonia, etc. The device is made to
30 closely resemble in appearance a standard display rack for candy and yet the candy will be kept in a cool condition by their contact with the refrigerated surfaces of the shelf. The device is extremely simple in construction and is durable and efficient for the purpose intended.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed
40 out in the appended claims.

My invention is illustrated in the accompanying drawing forming a part of this application, in which

45 Figure 1 is a front elevation of the device;
Figure 2 is a section along the line 2—2 of Figure 1;

Figure 3 is a sectional detail illustrating one way of supporting the candy bars;

50 Figure 4 is a view similar to Figure 2, but shows the refrigerating coils in a different shape;

Figure 5 is a transverse section showing still another type of refrigerating coil and also illustrates a non-refrigerated compartment;

55 Figure 6 is a top plan view of a modified form

of the device, showing how the upper surface of the steps may be drained of moisture; and

Figure 7 is a sectional view similar to Figure 3, but showing a screen for supporting the candy bars.

In carrying out my invention, I provide a casing with an insulating bottom 1, an insulating rear wall 2, and insulating end walls 3. The insulating material used may be of any type desired, such as cork. A drip pan 4 of the shape
10 shown in Figure 2 is placed in the casing. One or more doors 5 give access to a refrigerated compartment 6 or dead air space of an enclosure member, formed by the walls 1, 2 and 3, and the drip pan 4. I show the door 5 hinged at 7 and
15 provided with a latch 8.

In the form of the invention shown in Figure 2, the drip pan 4 has steps 9 and risers 10 formed therein. A refrigerating coil 11 is placed over the drip pan 4 and Figure 1 shows the sections
20 which it comprises extending longitudinally from end to end of the drip pan. The sections are placed in back of the risers and under the steps, although it is obvious that they might be disposed only in back of the risers or only under the
25 steps. In Figure 1, I show an inlet conduit 12 connecting with the lowermost coil section and an outlet conduit 13 connecting with the top coil section. The refrigerant is pumped from a refrigerating plant, not shown, to the conduit
30 12 and is forced through all of the sections and then is finally conveyed through the conduit 13 back to the refrigerating mechanism. Any type of coil may be used such as the plain coil or the fin type coil. A drain pipe 6' leads from the lowest step 9 of the drip pan 4.

A display shelf 14 is placed over the sections or coils and has steps 15 therein and risers 16. At each end of the display shelf, I mount end pieces 17. The shelf may be removably secured
40 to the casing and may either directly contact with the coils 11 or be disposed adjacent thereto. The display shelf is entirely open at its front and this will permit any candy bars supported by the shelf, to be readily removed by the purchaser.

45 From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

In Figure 3, I show one of the steps 15 of the shelf 14 and I further show movable rails 18
50 disposed on the step. These rails may be disposed in any desired position on the step and are designed to support candy bars 19. In Figure 2, the candy bars 19 are further shown as contacting with the riser 16 associated with the
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step. The steps may have ridges crimped therein to take the place of the rails, if desired. The rails prevent the moisture on the step from contacting with the bars.

The refrigerant flowing through the coils 11 will cool the steps and risers of the shelf to a point below the atmospheric temperature. The candy bars in contacting with the rails or rods 18 and also in contacting with the riser 16, will be kept cool due to conduction. The chocolate in the bars will therefore remain firm and this will enhance the sale of the articles. As a further aid in keeping the articles cool, I mount metal partitions 20 on the steps, see Figure 1, and these partitions contact with the ends of the candy bars. The partitions are kept cool by contacting with the steps and risers. The partitions also separate the different varieties of candies from each other. It is obvious that the partitions may rest upon the rails 18 or screen 20.

The drip pan 4 also is maintained at a cool temperature by the coils 11. The temperature in the compartment 6 will therefore be kept at a lower point than the atmosphere and candy bars stored in the compartment and indicated at 21 can thus be kept in a refrigerated condition preparatory to their display on the shelf 14.

In Figure 4, I show a slightly modified form of the device. The coil 22 extends at an angle under the steps and risers of the shelf 14 and the upper end of the coil is bent at 22a to project upwardly and in back of the topmost riser. The lengths of the coils extend from top to bottom of the casing instead of lengthwise as shown in Figures 1 and 2. A drip receptacle 23 is placed at the lower end of the coil 22 and receives any condensation. The parts of this device which are similar in construction to the form shown in Figure 2 will have corresponding reference numerals applied thereto. In this form of the device, the compartment 6 is kept refrigerated and so is likewise the shelf 14.

Another modified form of the invention is shown in Figure 5. The coil 24 is arranged in a stepped formation to parallel the steps and risers in the shelf. The lengths of the coils 24 extend from the top to the bottom of the device and the coils are positioned over an inclined drip plate 25. The plate conveys any moisture down to a drip receptacle 26 and the receptacle is removably disposed in the device. The compartment 27, in this form of the device, is not refrigerated and therefore an insulating member 28 is disposed adjacent to the drip plate 25 to cause the coil 24 to cool only the shelf 14. It is obvious that any type of coil shown in Figures 2, 4 and 5 may be used with or without a refrigerated compartment.

Should it be desired to drain the moisture from the top surfaces of the steps 15, I have shown in Figure 6 the steps provided with openings 29 at one end. The steps are inclined slightly from the horizontal so that moisture will gravitate to the openings 29 and these openings will permit the moisture to drip upon the drip pan 4. In all other respects this form of the device is identical to that shown in Figure 2.

A slightly modified form of candy bar supporting means is shown in Figure 7. A screen 30 is placed upon the step 15 and the candy bars 19 are positioned directly upon the screen. The

screen will prevent any moisture on top of the step from contacting with the candy. It is obvious that the shelf may be designed with any number of steps and the steps or risers may be inclined in any desired manner and be of any desired size. Although I have shown the shelf made of metal, I do not wish to be confined to this particular type of material because any type of material which will transfer cold or heat may be used. With the device any article may be displayed that otherwise might be affected by heat.

While I have shown only the preferred forms of my invention, it should be understood that various changes or modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A refrigerated display rack comprising a shelf, a refrigerating coil placed adjacent to the shelf, and a storage compartment associated with the coil, whereby the shelf and compartment will be cooled by the coil.

2. In a refrigerated display rack, a shelf, a refrigerating coil to keep the shelf cool, rails movable over the shelf into any desired position, said rails being designed to support candy bars and to keep them cool while supporting them above the shelf.

3. In a refrigerated candy display rack, a shelf, a refrigerating coil for keeping the shelf cool, and a screen contacting with the shelf and supporting the candy above the shelf.

4. In a refrigerated candy display rack, a shelf, a refrigerating coil for cooling the shelf, movable partitions supported by the shelf and designed to contact with candy bars supported by the shelf, said partitions being cooled by contacting with the cold shelf and in turn keeping the candy cool by contacting therewith.

5. In a refrigerated candy display rack, a shelf having steps and risers therein, a refrigerating coil disposed adjacent to the shelf for cooling it, the steps in the shelf being inclined slightly and having water drain openings at their lower ends.

6. A refrigerated candy display rack comprising a shelf having steps and risers therein, a refrigerating coil having steps and risers therein and placed adjacent to the shelf, and a drip pan having steps and risers therein and placed under the coil.

7. A refrigerated candy display rack comprising a shelf having steps and risers therein, a refrigerating coil having steps and risers therein and placed adjacent to the shelf, and a drip pan having steps and risers therein and placed under the coil, and a storage compartment associated with the coil and cooled thereby.

8. A refrigerated open display rack having imperforate steps and imperforate risers therein for supporting food at different levels on the open side of the rack, a refrigerating coil composed of sections, at least each of the steps having one of the sections subjacent thereto for maintaining the respective step at a reduced temperature, and an insulating enclosure member disposed on the side of the coil opposite the rack, aiding in defining a dead air space in back of and on the underside of the rack.

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