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Cox

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[54] **ARTICLE RETAINER FOR A REFRIGERATOR**

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[51] **Int. Cl.** **A47f 5/00**

[58] **Field of Search** ..... 211/184, 49 S, 153; 312/291, 140.4; 160/351, 354, 368 R, 368 G; 256/19, 12.5, 1; 52/668, 667, 666, 718, 716, 108; 108/27, 61

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[57] **ABSTRACT**

An elongated generally rectangular sheetlike element constructed of a pliable, resilient plastic has its lower edge formed into a plurality of slots arranged in a spacing corresponding to that of the wires or rods forming the refrigerator shelf. In use, the slots are snapped onto the refrigerator shelf wires or rods and the retainer is forced against the sides of the articles, moving them into contact with each other and the inner wall surfaces of the refrigerator, thereby forming a firm and reliable securement for the articles against lateral displacement.

4 Claims, 5 Drawing Figures

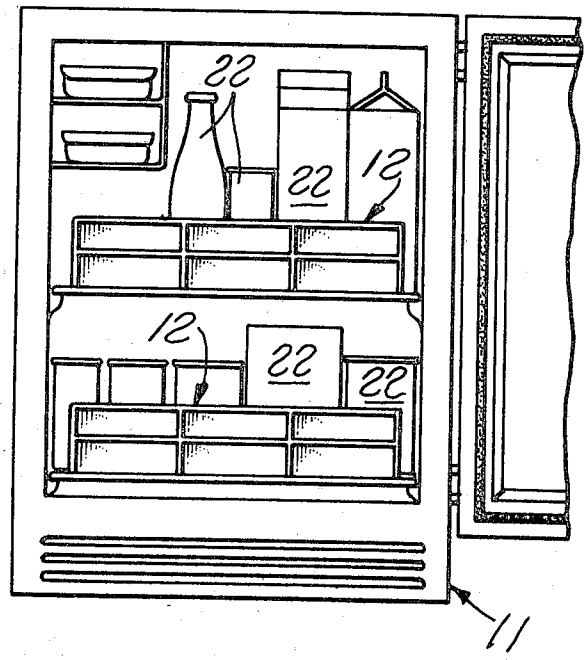


FIG. 1.

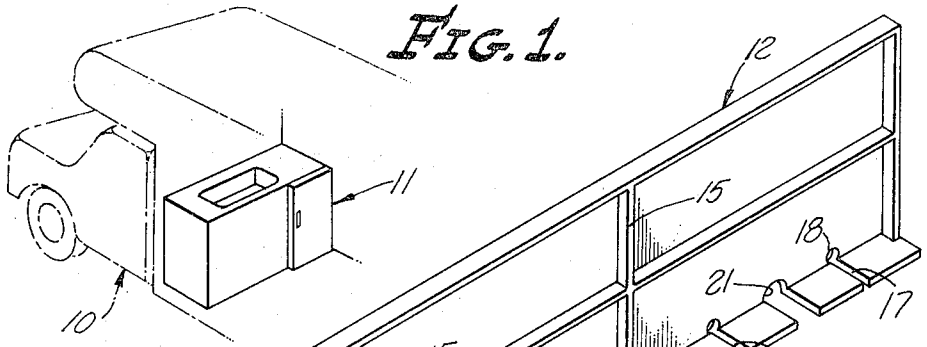


FIG. 2.

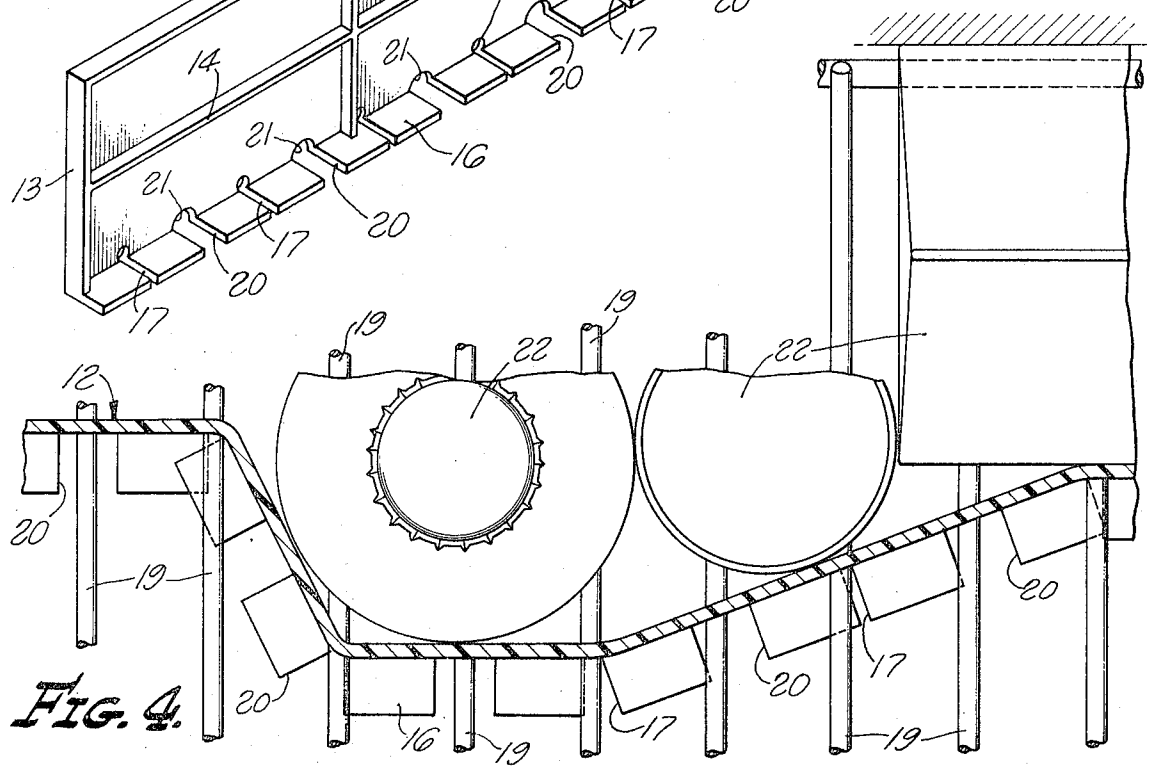


FIG. 4.

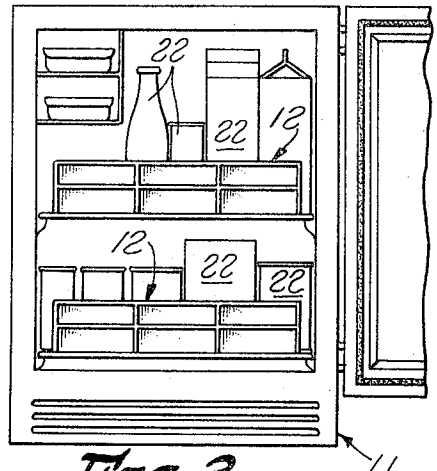
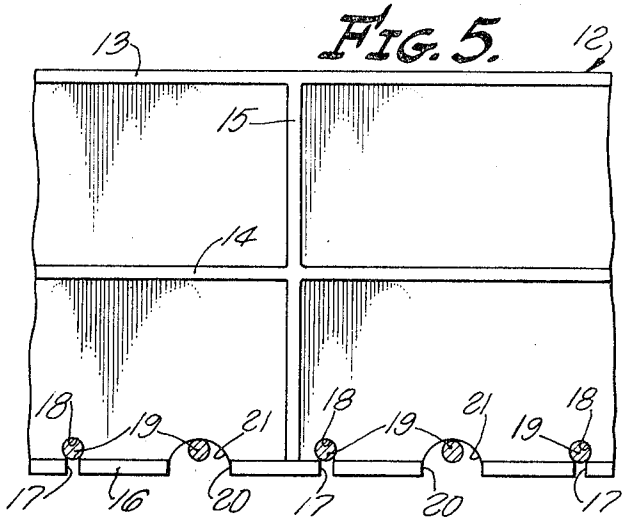


FIG. 3.

FIG. 5.



ARTICLE RETAINER FOR A REFRIGERATOR

The present invention pertains generally to a retainer for a refrigerator shelf, and, more particularly, to such a retainer which is adjustable to conform to and thereby maintain a plurality of articles of different shapes and sizes in an upright condition.

In refrigerators which are carried in trailers or other vehicles, there is a continuing problem that the containers for foodstuffs and the like may be upset or turned over resulting from the vehicle motion. That is, the usual refrigerator shelf includes a plurality of spaced wires or metal rods forming a generally horizontal surface on which food containers and the like rest, but which surface does not secure the containers in any manner against lateral forces that would tend to tip them over. The problem is made even more difficult by the fact that there is no uniformity in size or shape for such containers. For example, milk cartons may be rectangular or if in bottles, typically cylindrically shaped, and such things as salad dressing, mustard, ketchup, soft drinks and the like all have different sized and shaped containers, some of which are relatively stable and others are not.

The problem of food containers tipping over in vehicle carried refrigerators is considerably increased where the vehicle is used as a camper in that the roads on which the vehicles travel are frequently unpaved and may have on occasion relatively steep gradients. In camping vehicles, articles carried in a refrigerator will customarily experience in a relatively short distance severe jostling which may not only empty the contents from the containers by overturning them, but in some cases may break the container where it is made of glass or other frangible material.

It is, therefore, a primary aim and object of the subject invention to provide a refrigerator shelf retainer which is removably affixed to the shelf for securing articles carried thereby against lateral movement.

Another object of the invention is the provision of a removable refrigerator shelf retainer which securingly conforms to the side contours of the articles resting on the shelf.

Still another object of the invention is the provision of a refrigerator shelf retainer element constructed of one-piece plastic which is readily and easily mounted onto the shelf for resiliently pressing against articles on the shelf, preventing their lateral displacement.

The retainer of the subject invention comprises an elongated generally rectangular sheetlike element constructed of a pliable, resilient plastic. The lower edge of the retainer includes a plurality of slots arranged in a spacing corresponding to that of the wires or rods forming the refrigerator shelf. In use, the slots of the retainer lower edge are snapped onto the shelf wires or rods and the retainer is forced against the sides of the articles carried by the shelf, moving them into contact with each other and the inner wall surfaces of the refrigerator, thereby forming a firm and reliable securement for the articles against lateral displacement.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a stylized depiction of a typical camper vehicle including a refrigerator.

FIG. 2 is a perspective view of the refrigerator shelf retainer of this invention.

FIG. 3 is an elevational view taken of a refrigerator showing the shelf retainer in place.

FIG. 4 is a greatly enlarged, plan, partially fragmentary view of the retainer illustrated securing articles on a refrigerator shelf.

FIG. 5 is an elevational, partially fragmentary view of the refrigerator shelf retainer shown received onto a spaced-wire shelf.

DESCRIPTION OF A PREFERRED EMBODIMENT

Reference is now made to the drawings and particularly FIG. 1 thereof in which one form of camping vehicle **10** is shown, including therein a refrigerator **11.** Although the shelf retainer of this invention would be advantageous for use in any refrigerator, it is considered to be especially advantageous when utilized in a refrigerator located in a moving vehicle such as a camper, trailer, truck or an aircraft, for example. The reason for this is that the need for retention and securement of articles carried within refrigerator against falling is multiplied considerably when the refrigerator is moved about, as is the case when it is located within a moving vehicle.

Turning now to FIG. **2,** the retainer of the invention is generally enumerated as at **12** and is seen to include a one-piece, molded plastic construction. Specifically, the retainer is of a generally elongated rectangular shape and has a relatively thin wall with an outer reinforcing border **13** thicker than the thin wall portion, as well as several reinforcing members **14** and **15** extending longitudinally and transversely, respectively, of the retainer. Thee retainer lower edge includes a stiffener or reinforcing member **16** which extends from the edge at substantially 90°.

A plurality of spaced relatively narrow slots **17** are formed in the reinforcing member **16** and terminate in the wall portion of the retainer wall in generally circular openings **18** of a dimension and size for receiving in a snug fitting relationship the wire or rodlike elements **19** forming a refrigerator shelf. The spacing between adjacent slots **17** is such as to permit receipt onto a corresponding set of such rods or wires composing the shelf, although not necessarily on adjacent wires or rods. Intermediate the slots **17** there are provided additional slots **20** of a width at least several times that of the slot **17,** each of which slots **20** terminates in a semicircular opening **21** in the retainer wall of a diameter substantially the same as that of the width of the slot **20.**

In use, assuming the shelf has already been loaded with a collection of various bottles and other containers **22** of different shapes and sizes, these containers and bottles are moved against the side and rear walls of the refrigerator compartment. Next, as is shown best in FIG. **5,** the different slots **17** and openings **18** of the retainer **12** are snapped onto corresponding shelf wires with the slots **20** and openings **21** being loosely received on intermediate shelf wires. The retainer is then pressed against the articles **22** by sliding it along the wires **19** until its side surface comes into contact with the containers at their forward or outwardly facing surfaces, as is shown in FIG. **4.** This movement of the retainer **12** is continued along its entire length thereby gripping the containers and holding them securely to one another and against the side and rear walls of the refrigerator compartment. By virtue of the close fit of

the wires 19 within the openings 18, once the retainer 12 is in place, frictional engagement between the wires 19 and the walls defining the openings 18 in the retainer will prevent it from working loose and releasing the containers 22.

The large slots 20 and openings 21 enable the retainer to be snapped onto the shelf wires and still be configured as required to abut against the sides of the various containers.

Moreover, the larger slots and openings provide compensation for any slight variation in width between the wires or rods 19 which may be encountered in a refrigerator resulting either from manufacturing tolerances or perhaps bending during use.

In a practical embodiment of the invention, a shelf in a camping trailer refrigerator was substantially filled with bottles, cartons, jars, and the like of varying sizes and shapes, all of which were secured by a plastic retainer as described herein. The trailer was then transported over unpaved roads for a considerable number of miles both uphill and downhill, after which on examining the refrigerator interior it was found that all of the containers were unharmed and in an upright position. The retainer of this invention was both before and after use easily snapped off and replaced as desired, and readjusted to accommodate a different container load arrangement.

What is claimed is:

1. In combination, retainer means and a shelf, said shelf constructed of a plurality of parallel spaced elongated wirelike means, said retainer means comprising an elongated member constructed of a pliant material, said member including a shoulder along one of the long member edges extending substantially normally from said member, said shoulder having wall portions defining a plurality of slots extending transversely thereof and each said slot terminating in an associated opening in the member;

certain of said slots and associated openings receiving the wirelike means with the elongated member being flexed about at least one transverse axis to conformingly contact the article and secure it against horizontal movement on said shelf, the diameter of said wirelike means being greater than the width of said slots and being substantially equal to the diameter of said openings, whereby said wirelike means are snapped into said openings.

2. Retainer means for securing articles resting on a spaced wire shelf in a refrigerator, comprising:

an elongated generally rectangular member constructed of a pliant material, said member including a shoulder along one of the long member edges extending substantially normally from said member;

said shoulder including a plurality of slots extending transversely thereof and each terminating in an opening in the member for being individually received onto a shelf wire, certain of said slots and openings being dimensioned to form a tightly fitting relationship with said shelf wires and certain other of said slots and associated openings being of larger dimensions forming a loose fit with the shelf wires.

3. Retainer means as in claim 2, in which the elongated member and shoulder are of one-piece plastic construction, which plastic is sufficiently pliant that the member is deformable to engage the articles on their side surfaces.

4. Retainer means as in claim 2, in which the slots and openings in said shoulder and elongated member are such that they may be snappingly engaged with and disengaged from the shelf wires.

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