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54 **Method for making freezer baskets.**

57 A method for making baskets for freezer appliances, in which two mutually intersecting groups of metal wires are welded to each other to form a planar grid (8), with said wires (6, 7) projecting the sides thereof by a certain length. A metal rod member (9) is welded to the ends of the wires projecting beyond any of the sides of the grid. The projecting wires are subsequently bent so that the ends of the rod members cooperate with one another to form an upper peripheral frame of the basket, the latter having been subjected to a plastic coating treatment prior to the bending of the projecting wires.

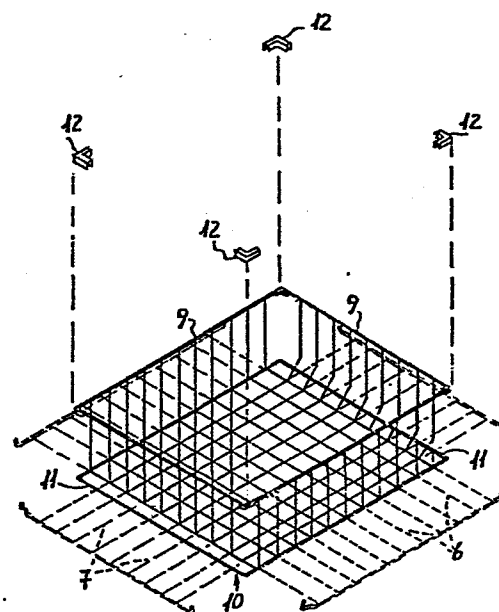


FIG. 4

1 Method for Making Freezer BasketsDescription

5 The present invention relates to an improved method for making baskets for freezer appliances, particularly for domestic deep-freeze appliances of the upright or cupboard type.

10 As generally known, baskets of this type are substantially composed of a lower and an upper peripheral frame, both made of metal rods, and groups of mutually intersecting wires of suitable configuration extending between said
15 frames.

 The manufacture of such baskets usually starts with the formation of two groups of mutually intersecting parallel wires which are welded to each other so as to form a grid,
20 with the wires projecting beyond at least three sides thereof by a certain length.

 The bottom frame is subsequently welded to the thus formed grid, whereupon the projecting portions of the wires are bent upwards so as to form respective sidewalls of the
25 basket. This bending step has to be carried out with considerable precision, because the upper peripheral frame consisting of a suitably pre-formed metal rod and closed by welding the ends of the rod together, has to be welded to the free ends of the bent wires. The basket, the geometrical shape of which is thus substantially completed,
30 is subsequently subjected to a plastic-coating treatment. This treatment is carried out in an automatic manner, employing a tunnel installation operating on the dip-coating principle. As generally acknowledged, such installations should be utilized in the most efficient manner for
35 achieving economical operation on an industrial scale.

 It is thus an object of the present invention to provide

1 a method for makign baskets for freezer appliances readily
lending itself to automatization while being simple and
economical and additionally permitting optimum utilization
of the existing equipment with the consequent economical
5 and productivity advantages.

According to the invention, this object is attained by a
method for making baskets for freezer appliances, in which
at least two groups of mutually intersecting metal wires
10 are welded to each other so as to form a planar grid, with
the wires projecting beyond at least three sides of the
grid by a certain length, a respective metal rod member
being subsequently welded to the ends of the wires on each
side of the grid beyond which the wires project.

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The projecting wires are subsequently bent out of the plane
of the grid so that the ends of the metal rod members
cooperate with one another to form an upper peripheral
frame of the basket, the latter being subjected to a
20 per se known plastic coating treatment prior to the
bending of the projecting wires.

The characteristics and advantages of the invention will
become more clearly evident from the following description,
25 given by way of a non-limiting example only, with reference
to the accompanying drawings, wherein:

fig. 1 to 3 show diagrammatical plan views of successive
steps of a method according to the invention for
30 making a basket for a freezer appliance,

fig. 4 shows a partially exploded perspectiev view of a
basket made by the method-according to the invent-
ion, and

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fig. 5 shows an enlarged detail of the basket of fig. 4.

With particular reference to fig. 1, the manufacture of a

- 1 basket for a freezer appliance starts with providing two groups of metal wires 6 and 7 having a diameter of for instance 2.3 mm and a predetermined length. The wires of the two groups 6 and 7 are arranged in a per se known manner so as to intersect one another, and subsequently welded to each other to form a planar grid generally indicated at 8, with the wires 6, 7 projecting beyond respective sides of grid 8.
- 10 A respective metal rod member 9 having a diameter of for instance 5.3 mm is then welded to the ends of wires 6, 7 on each side (at least threesides) of grid 8 beyond which wires 6 and 7, respectively, project. As shown in fig. 2, rod members 9 extend substantially parallel to respective sides of grid 8 and have predetermined lengths selected in view of the desired dimensions of the upper frame of the finished basket.

A conventional peripheral bottom frame 10 is welded to grid 8, in particular to wires 6 thereof, as shown in fig. 3. Frame 10 is formed in one piece of a metal rod similar to that employed for rod members 9. During this phase wires 7 are preferably retained at a small spacing from frame 10 in a per se known manner. In a subsequent phase, or alternatively a preceding phase or contemporaneously, the ends of rod members 9 are suitably formed for instance as shown in figs. 3 to 5 in a manner enabling them to cooperate with one another for forming an upper peripheral frame of the finished basket in a manner to be described.

According to one aspect of the invention, it is at this point that the basket, which is still of substantially planar configuration, is subjected to a conventional plastic coating treatment, with the advantage that the respective equipment is utilized in an optimum manner as compared to the known method in which the plastic coating treatment takes place with the basket already in a three-dimensional

1 configuration.

Subsequent to the plastic coating treatment the wires 6, 7 projecting from grid 8 are bent upwards as shown in solid 5 lines in fig. 4.

In a preferred embodiment, wires 6 are bent by an angle of about 90° adjacent bottom frame 10, while wires 7 are formed with a double bend inwards of bottom frame 10 and 10 thereabove, so that two opposite sides 11 of bottom frame 10 are left free to slide between opposite guides (not shown) of the freezer appliance for which the basket is intended. It is to be noted that experiments have shown that the bending operation does not in any manner affect 15 the plastic coating of the basket.

Depending on the predetermined geometric dimensions of the various components, bending of wires 6 and 7 results in the ends of adjacent rod members 9 coming into contact 20 with one another, permitting them to be connected to one another, as already explained, as for instance by the employ of angular clamping members 12 of a plastics material, so as to form an upper peripheral frame of the basket.

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As shown in fig. 5, angular clamping members 12 are preferably of inverted U-shaped cross-sectional form provided with longitudinally extending ribs 13 for resiliently engaging the contacting end portions of two adjacent 30 rod members 9.

The connection of rod members 9 may of course be accomplished in a different manner as required. In the same manner the method described may be modified within the scope 35 of the appended claims.

In any case it is evident from the above description that the method according to the invention is particularly

1 efficient and versatile for employ on an industrial scale,
as - in addition to the already noted advantages - the
various steps can be carried out at differetn times and
places. The baskets may for instance be advantageously
5 stored and/or shipped to their destination subsequent to
the plastic coating treatment, i.e. in a state of reduced
volume, to be readily finished at their destination in
the manner described.

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20 Method for Making Freezer Baskets

Patent Claims

- 25 1. A method for making baskets for freezer appliances,
in which at least two groups of mutually intersecting metal
wires are welded to one another so as to form a planar
grid , with said wires projecting beyond at least three
sides of said grid by a certain length, characterized in
30 that a respective metal rod member (9) is welded to the
ends of said wires (6, 7) on each side of said grid (8)
beyond which said wires project, said projecting wires
being subsequently bent out of the plane of said grid so
that the ends of said metal rod members (9) cooperate with
35 one another to form an upper peripheral frame of the
basket, the latter being subjected to a per se known
plastic coating treatment prior to bending said projecting
wires (6, 7).

- 1 2. A method for making baskets for freezer appliances
according to claim 1, characterized in that the ends of
said rod members (9) are formed so as to engage with one
another in forming said upper frame.

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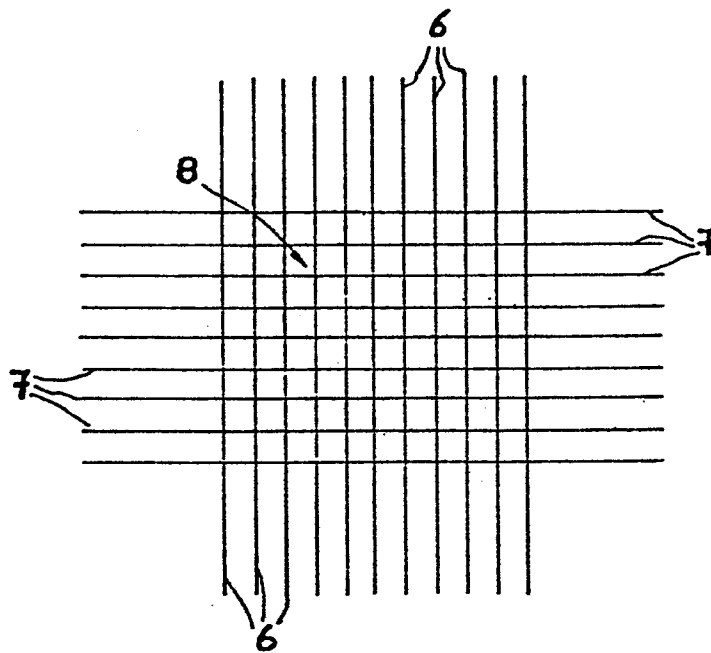
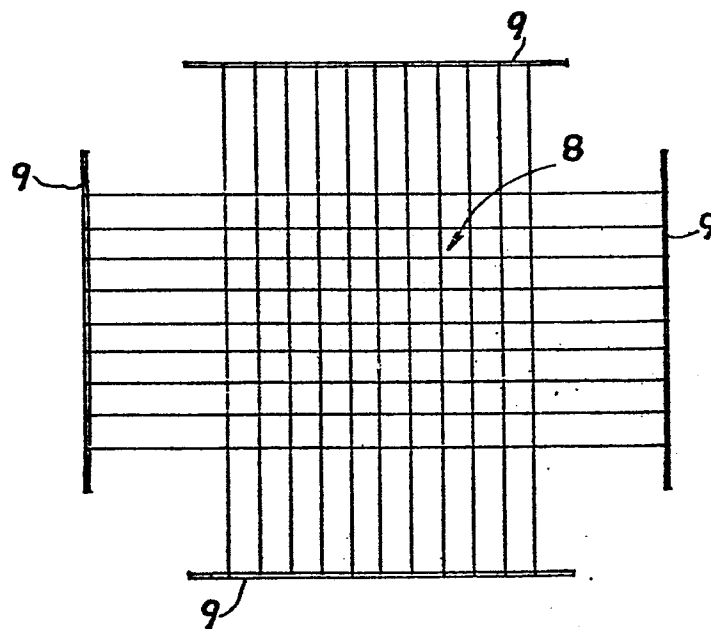
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FIG. 1FIG. 2

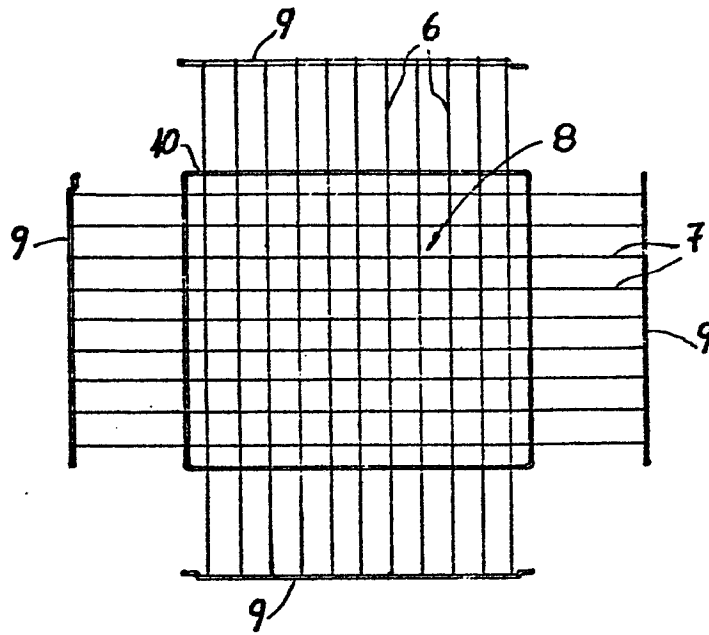


FIG. 3

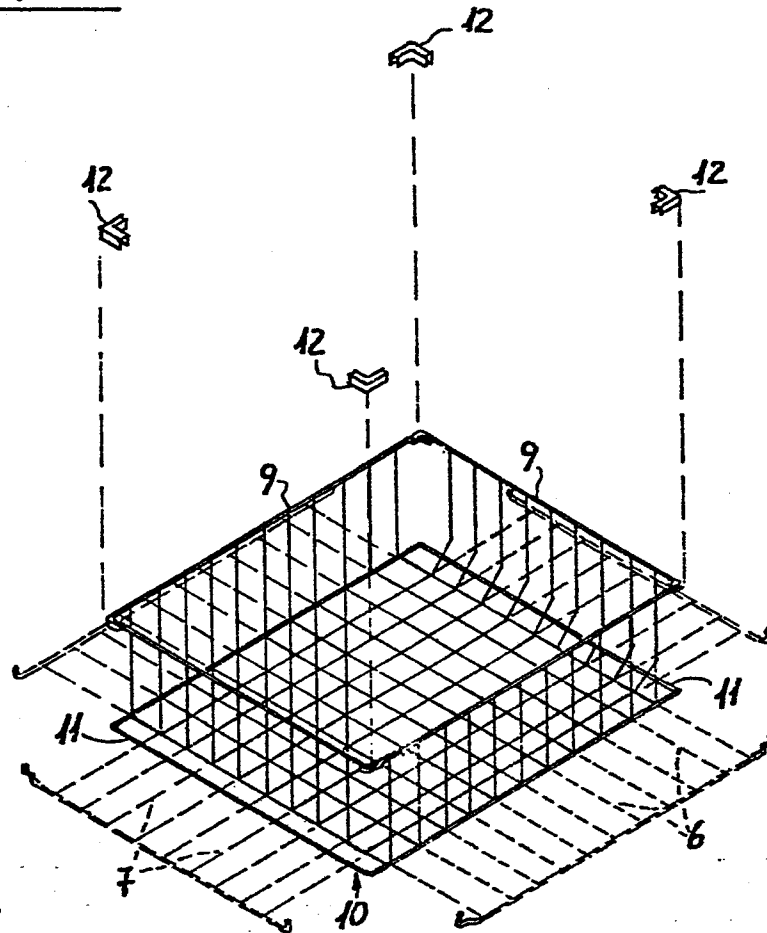


FIG. 4

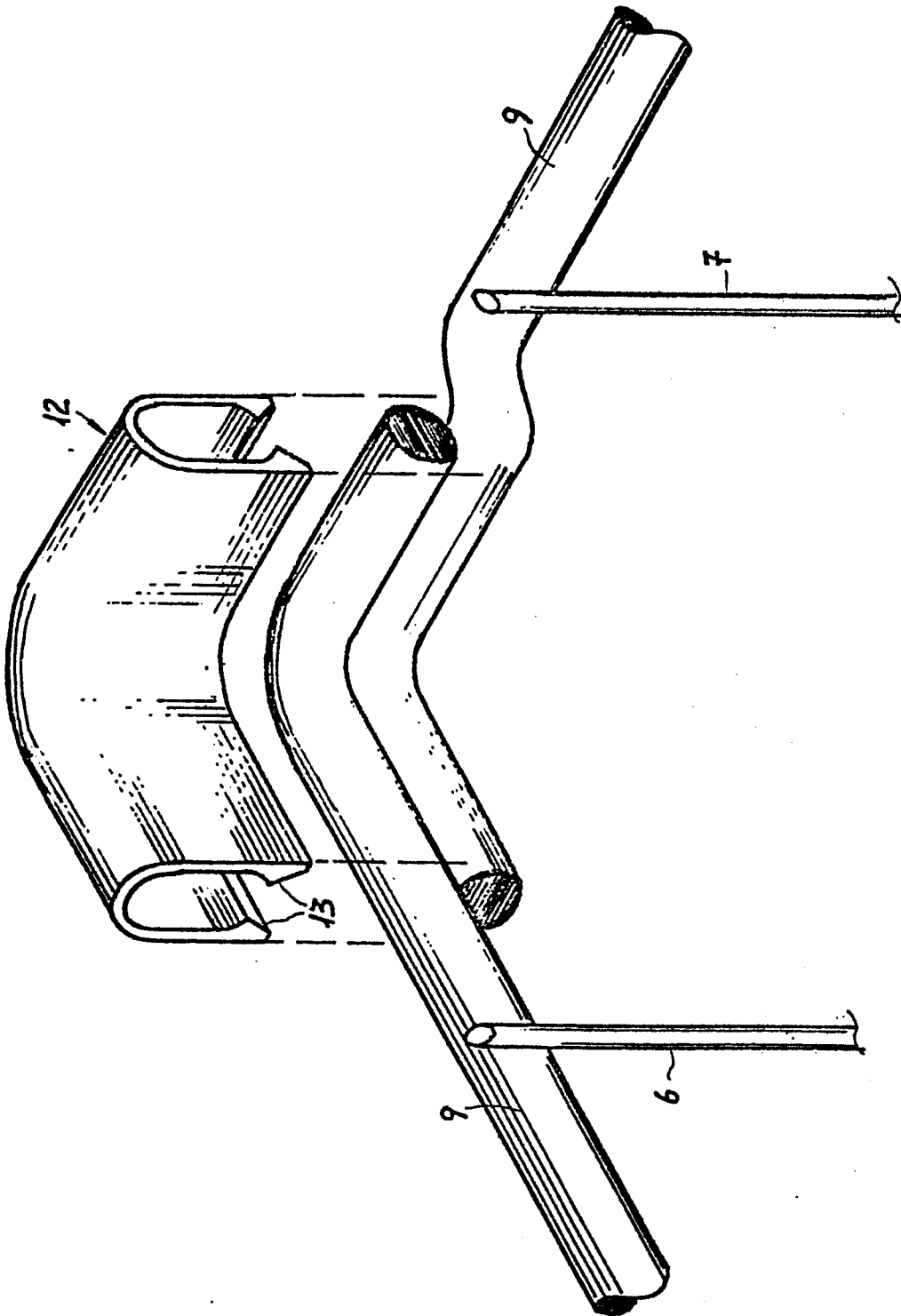


FIG. 5