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W. M. SWARTZ

3,236,410

BASKET

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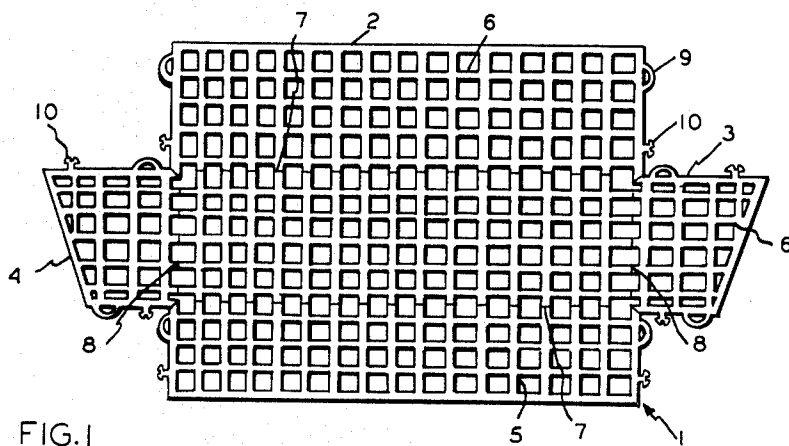


FIG. 1

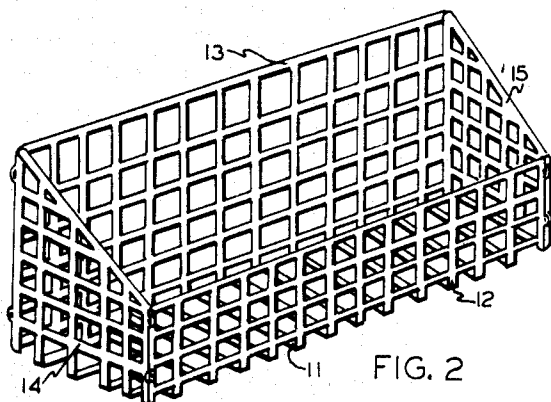


FIG. 2

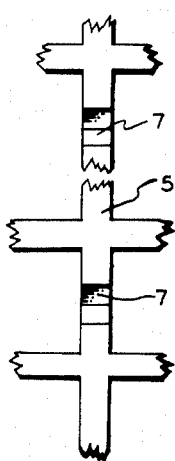


FIG. 3

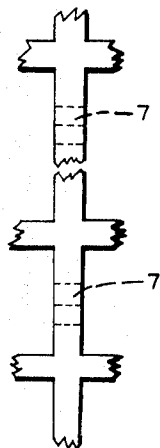


FIG. 4

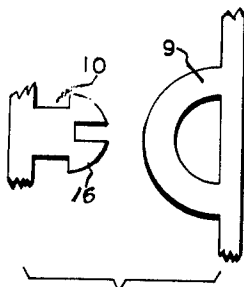


FIG. 5

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This invention relates to baskets and blanks for forming baskets. More particularly this invention relates to baskets made of plastic material.

Wire baskets are well known and are used for various purposes for carrying and displaying goods. These baskets, in order to impart the desired rigidity to them, must be made of relatively heavy metal wire which renders the baskets heavy. These baskets must be produced in the factory in final form and shipped to the user in final form. Baskets are bulky articles and the cost of shipping and handling the baskets is so great as to render their wide distribution almost prohibitive. Due to the shipping and handling costs they are not usually shipped great distances, but must be manufactured in proximity to the place of use. Salesmen who sell baskets cannot carry a large number of them as samples due to their bulkiness. The user, usually maintains a supply on hand and due to their bulkiness, they occupy a large amount of space which adds to their cost.

Metal wire baskets cannot be made in different colors at a reasonable cost and they usually have the drab appearance of metal such as steel. The metal of these baskets has a tendency to rust which impairs the appearance and shortens the useful life of the baskets and the individual wires or the basket as a whole may be easily bent out of shape by a strong blow.

It is accordingly an object of this invention to provide a basket which is relatively rigid yet light in weight and which overcomes the defects of the prior art baskets.

It is a further object of this invention to provide a basket made of an open mesh integral sheet of plastic material.

It is a still further object of this invention to provide a basket for display purposes which is made of plastic material having any desired color or which is multi-colored and one which will not rust and cannot easily be bent out of shape.

It is another object of this invention to provide a blank in the form of a flat open mesh sheet of plastic material which blank may be easily erected in the form of a basket, so that a number of blanks may be shipped, handled and stored at a fraction of the cost of shipping, handling and storing a like number of preformed baskets.

Other objects and advantages of this invention will appear to those skilled in the art from the detailed description given below when taken in connection with the accompanying drawing.

In the drawing:

FIG. 1 is a plan view of the open mesh sheet which forms the blank.

FIG. 2 is a perspective view of the basket which may be formed from the blank of FIG. 1.

FIG. 3 is a perspective view of one of the rods forming the blank as viewed from the rear of the blank showing the two grooves formed in the rod.

FIG. 4 is a view of the rod similar to FIG. 3 as viewed from the front of the blank.

FIG. 5 is a perspective enlarged view of the locking means.

Referring to the drawing, 1 generally designates the novel blank. Blank 1 comprises a flat rectangular section 2 having projections 3 and 4 extending from the ends thereof. The projections 3 and 4 are, as shown in FIG. 1, of less width than the rectangular section 2 and are

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positioned inwardly from the longitudinal edges of the blank. Furthermore, the longitudinal edges of the projections 3, 4 are of unequal length and the lateral or end edges of the projections 3, 4 are at an acute angle to the longer of the longitudinal edges of the projections 3, 4. Section 2 and projections 3 and 4 are each formed of a plurality of intersecting rods of plastic material 5 and 6 integrally united together. Each of the rods 5 forming the section 2 is scored or formed with a groove 7 on one side thereof at two spaced points to form plastic hinges to enable the rods to be bent up at an angle, to the plane of the blank. The grooves 7 on the rods are positioned in substantial alignment with each other along the length of the blank and in substantial alignment with the longitudinal edges of the projections. The portions of each rod 6 forming the two projections 3 and 4 are similarly scored or formed with grooves 8, the grooves being in substantial alignment with each other and with the lateral edges of the section 2 and serve a purpose similar to grooves 7.

Each portion of the rods 6 forming the longitudinal edges of the projections 3 and 4 and each of the rods 5 forming the lateral edges of section 2 are provided with cooperating retaining or locking means 9 and 10 to retain the walls of the basket in upright position when the rods are bent up to form the basket shown in FIG. 2.

The entire blank 1 including the retaining means is formed as an integral structure. The blank may be conveniently formed in a single molding operation such as by injection molding or casting in a suitable mold. The grooves 7 and 8 may also be formed during the molding operation, or the rods may be molded smooth and the grooves later cut therein. The specific manner in which the blank is formed is not here claimed and the blank may be formed in any suitable manner. Thus preformed rods of plastic material of suitable length may be assembled in the manner indicated in FIG. 1 and the rods fused together at their points of intersection by the use of heat or solvent. Also groups of rods may be integrally molded and a number of groups then fused together.

While the retaining means 9 and 10 are shown as integral with the edge rods, the retaining means may be made separate and may be made of plastic material or metal. Also the retaining means may not be of the exact type shown in the drawing. Any suitable means capable of retaining the walls of the basket in upright position may be used.

Any suitable plastic which is capable of forming rods of sufficient rigidity to be self-sustaining yet light in weight and which plastic is capable of being bent without cracking, may be used to form the rods. Thus plasticized cellulose acetate, nylon, vinyl resin, polyethylene and many other plastic materials may be used to form applicant's novel blank. Applicant, however, has found that polypropylene is ideally suited for this purpose, since it has the strength and rigidity required to produce a strong light weight basket and the rods may be bent numerous times without cracking.

The rods may be formed of clear transparent plastic or they may be formed of colored plastic having any desired color, in order to enhance the appearance of the basket. The coloring of the plastic may be accomplished by incorporating a suitable pigment or dye in the plastic material prior to the molding of the blank or rods. If the rods are formed individually or in groups and then fused together by heat or solvent to form the blank, the individual rods or groups of rods may be colored as described above or in any suitable manner with different colors and then fused together to form a multicolored integral blank and basket. The blank or individual rods thereof may also be embossed or otherwise formed with

decorative or advertizing matter during the molding thereof.

While the individual rods forming the blank are shown in the drawing as being straight, this need not be so, but the individual rods may be molded to have a slight curvature or a zig-zag or any other desired configuration for decorative purposes. Also, the rods need not be circular in cross-section but may be of flattened or fluted cross-section as desired.

The erected basket is shown in FIG. 2 wherein 11 is the bottom of the basket, 12 and 13 are the side walls formed by bending up the portions of the rods 5 of section 2 along the grooves 7 and 14 and 15 are the end walls formed by bending up rods 6 of the projections 3 and 4 along grooves 8. It will be noted from FIGS. 1 and 2 that the fold line forming grooves 7 divide the central part of the blank into a back wall 13, bottom wall 11 and front wall 12 with the front wall 12 being shorter than the back wall 13. The walls 12, 13, 14 and 15 are held together in upright position by engagement of locking or retaining means 9 and 10. As shown, 9 is a semicircular loop and 10 is a protrusion having an enlarged split head 16 thereon. In erecting the basket, after the side and end walls are bent, the heads 16 are compressed by the fingers and passed through the loops 9, which are of a size just sufficient to permit the compressed heads to pass therethrough. Upon release of the pressure, the heads expand to their original size due to the resiliency of the plastic material and lock the side and end walls in position. When the use of the basket is no longer required, it may be "knocked down" by again compressing the heads of rods 10 and forcing them out of the loops and bending the walls 12, 13, 14 and 15 back and return the basket to flat blank form. Due to the resiliency of the plastic material the erection and knock down of the basket may be performed a number of times.

Thus the manufacturer may ship the blanks to the purchaser or the salesman carry his samples in flat condition thereby materially reducing the cost of shipping and the space requirement. The purchaser may store the blanks until he desires to use them in a fraction of the space required to store like baskets of the prior art. When the purchaser or salesman desires to use or display the baskets, they may be easily erected at the point of use by bending up the rods at the grooves and engaging the locking or retaining means. No tools are necessary. When it is desired to again store these baskets, the locking means may be disengaged and the blank returned to its flat condition for easy storage.

The basket being formed of plastic material, the individual rods thereof cannot rust, and when struck by a blow are not bent permanently, since the springiness of the plastic material will cause them to return to their molded shape.

Modifications may be resorted to within the scope of the appended claims.

I claim:

1. An open mesh basket comprising a flat blank formed of a single piece of plastic having intersecting rods that extend in the longitudinal and transverse directions of the blank and which are united at their intersections by the material of the plastic to constitute an open grid

pattern, said blank having a central rectangular portion and a projection extending outwardly from each of two opposite sides of the central portion, each projection having two margins that extend substantially at right angles to the sides of the central portion and with said margins of one projection being in substantial alignment with the corresponding margins of the other projection, each projection also having an end that intersects one of the two margins of the projection to form an angle, the rods of said central portion that run in one of the two directions each having a pair of grooves that reduce the thickness of the rods transversely thereof and with the grooves forming substantially straight parallel fold lines that extend substantially from one of said sides of the central portion to the other and which are substantially in alignment respectively with the said margins of the projections, the fold lines dividing the central portion into three adjacent substantially rectangular sections with one of the sections being adjacent to one of the margins of the projections and having a width approximately equal to the length of said last-mentioned margin, a second of the sections being bounded by the fold lines, and the third of the sections being adjacent to the other of said margins of the projections and having a width approximately equal to the length of said other of said margins, the rods in said second section that run in the other of the two directions each having a pair of grooves that reduce the thickness of the rods transversely thereof and form substantially straight parallel fold lines that are at right angles to the first mentioned fold lines and are at the junctures of said projections and said second of the sections and which extend substantially throughout said junctions, each of the grooves lying remote from the intersections of the rods and the grooves of each fold line being endwise spaced apart, said blank being foldable about said fold lines so that the second of the sections forms the front wall thereof, the third of the sections forms the back wall thereof, and the projections form the side walls thereof with the ends of the projections extending from the top edge of the back wall to the top edge of the front wall to form therewith an opening into the basket, and cooperating means on the said margins of the projections and the adjacent sides of the front and back walls for securing the walls of the basket together to retain its shape when the basket is formed.

2. A basket according to claim 1 in which said cooperating means comprises loops and protrusions projecting through the loops, each protrusion having a split head of such size as to permit the head to be compressed to pass through its associated loop and thereafter expand to prevent retraction of the protrusion from the loop.

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