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2,653,639

METHOD OF MANUFACTURING LINED BASKETS

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Fig. 2.

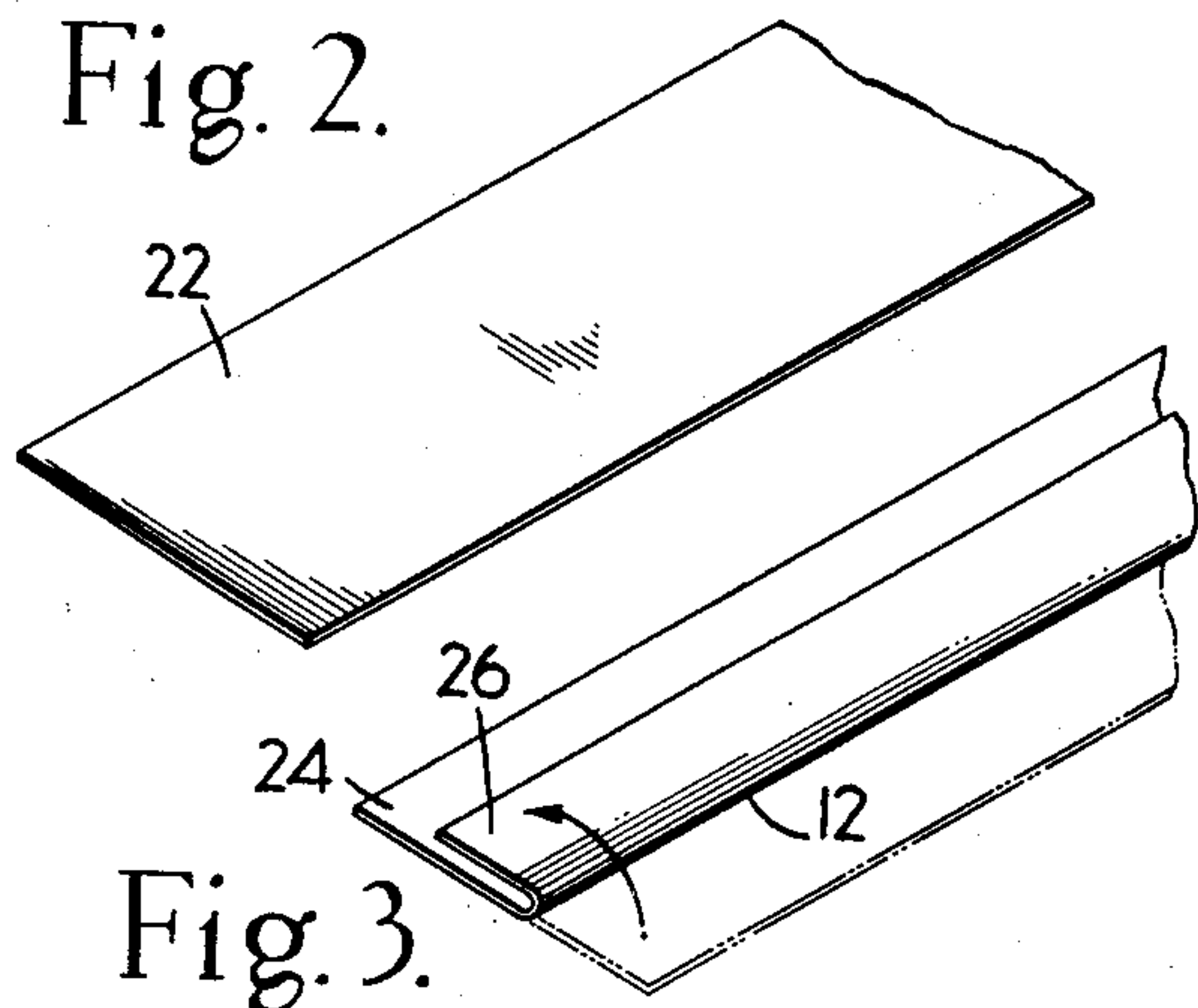


Fig. 1.

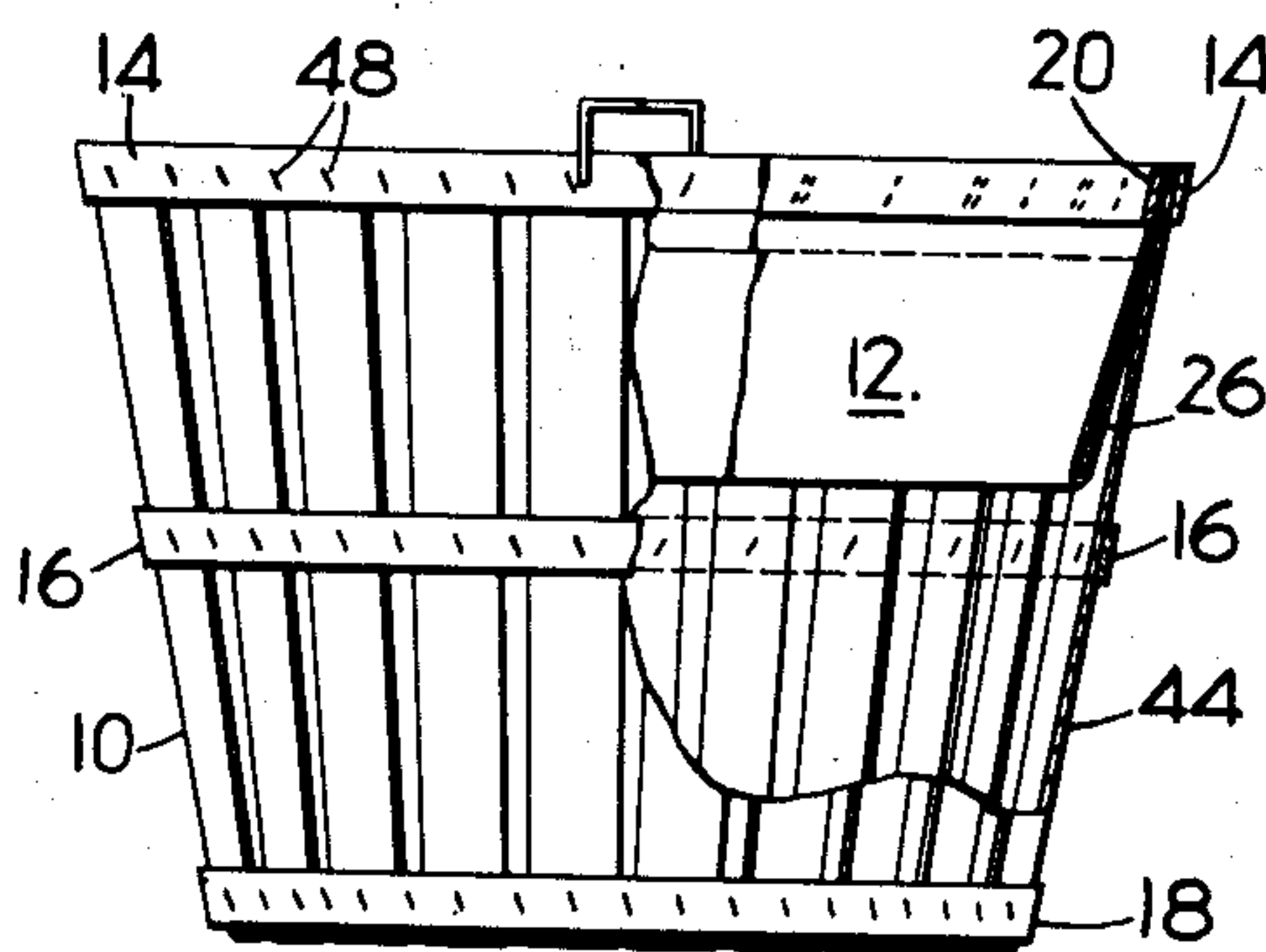


Fig. 3.

Fig. 4.

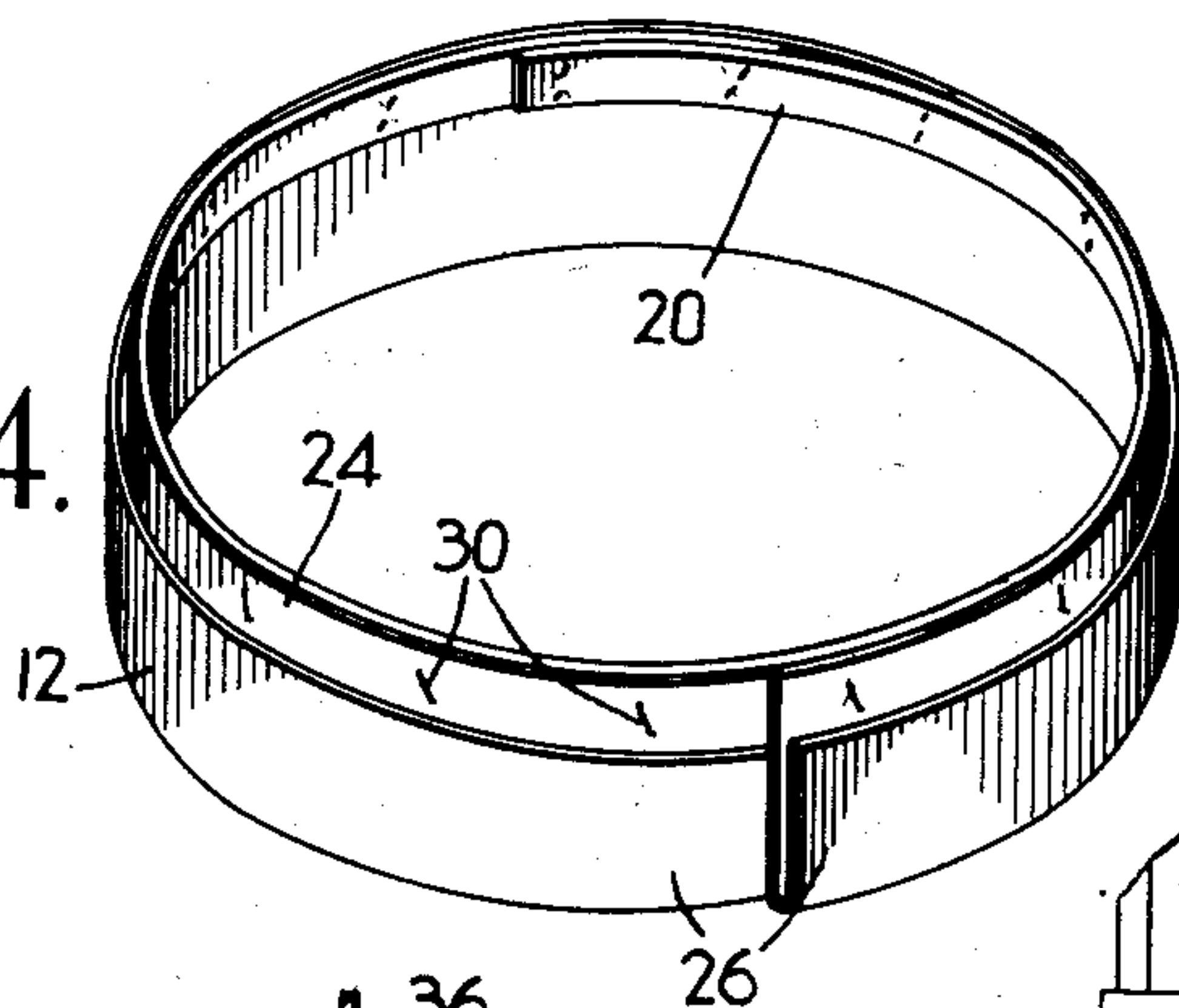


Fig. 6.

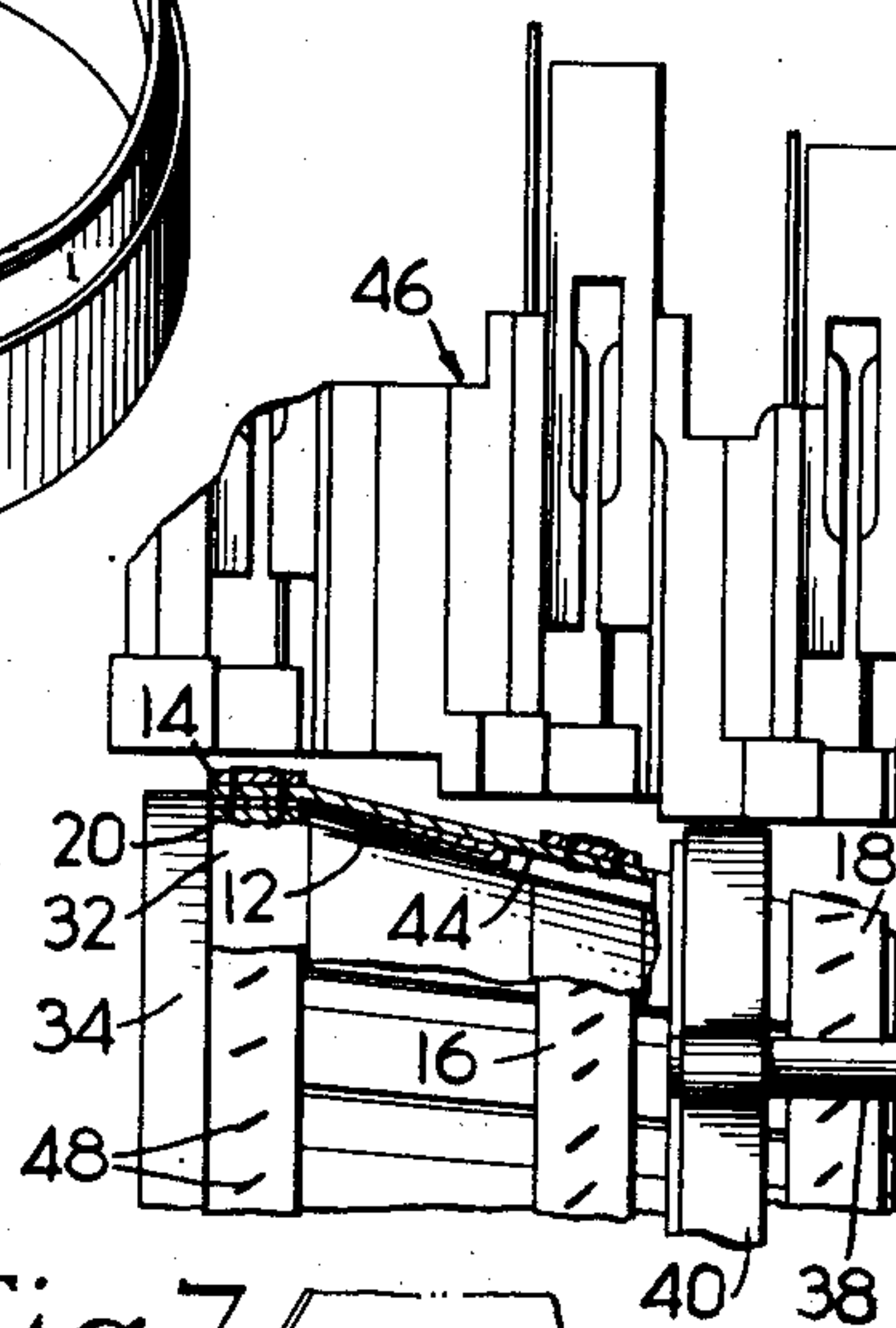


Fig. 5.

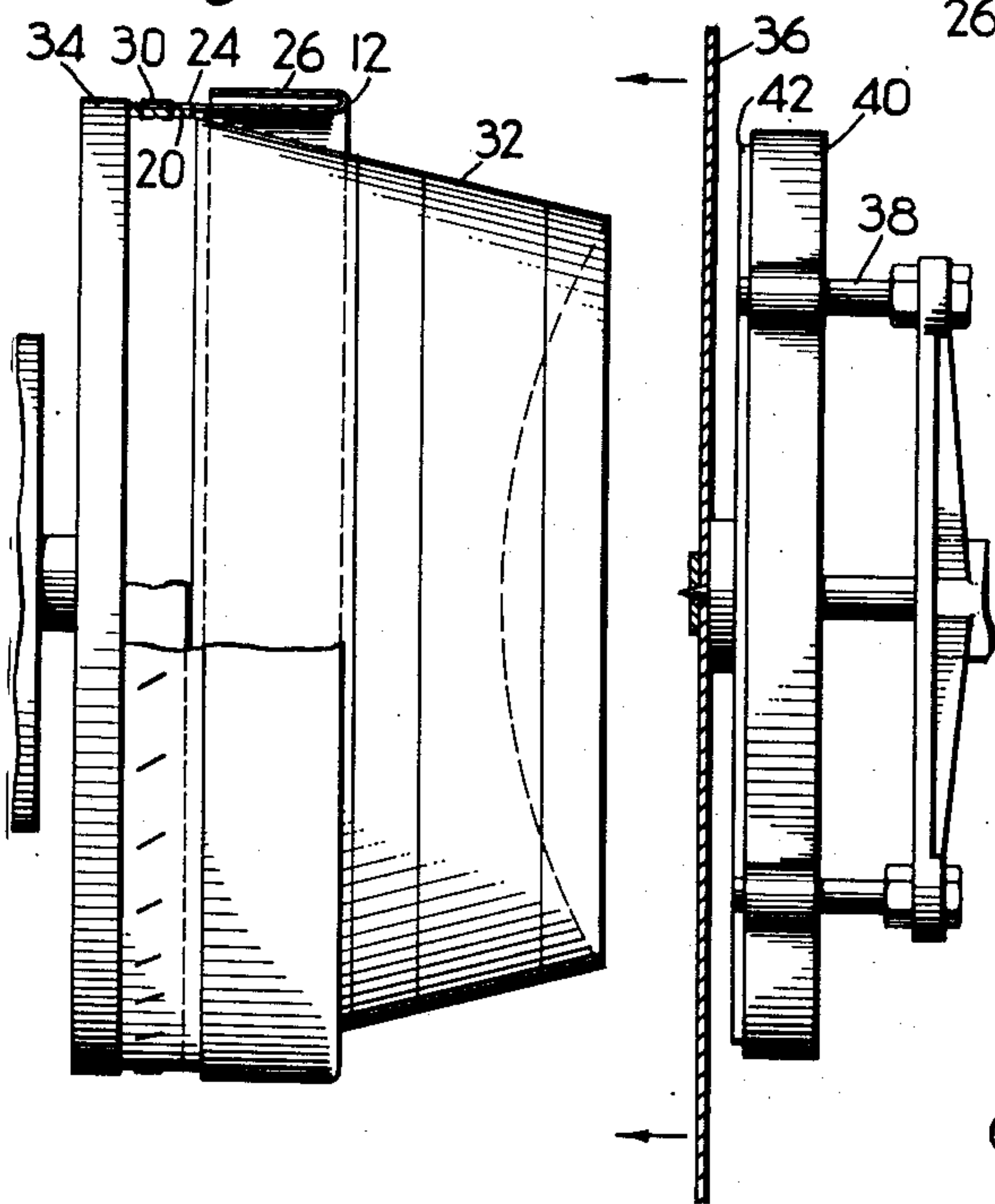
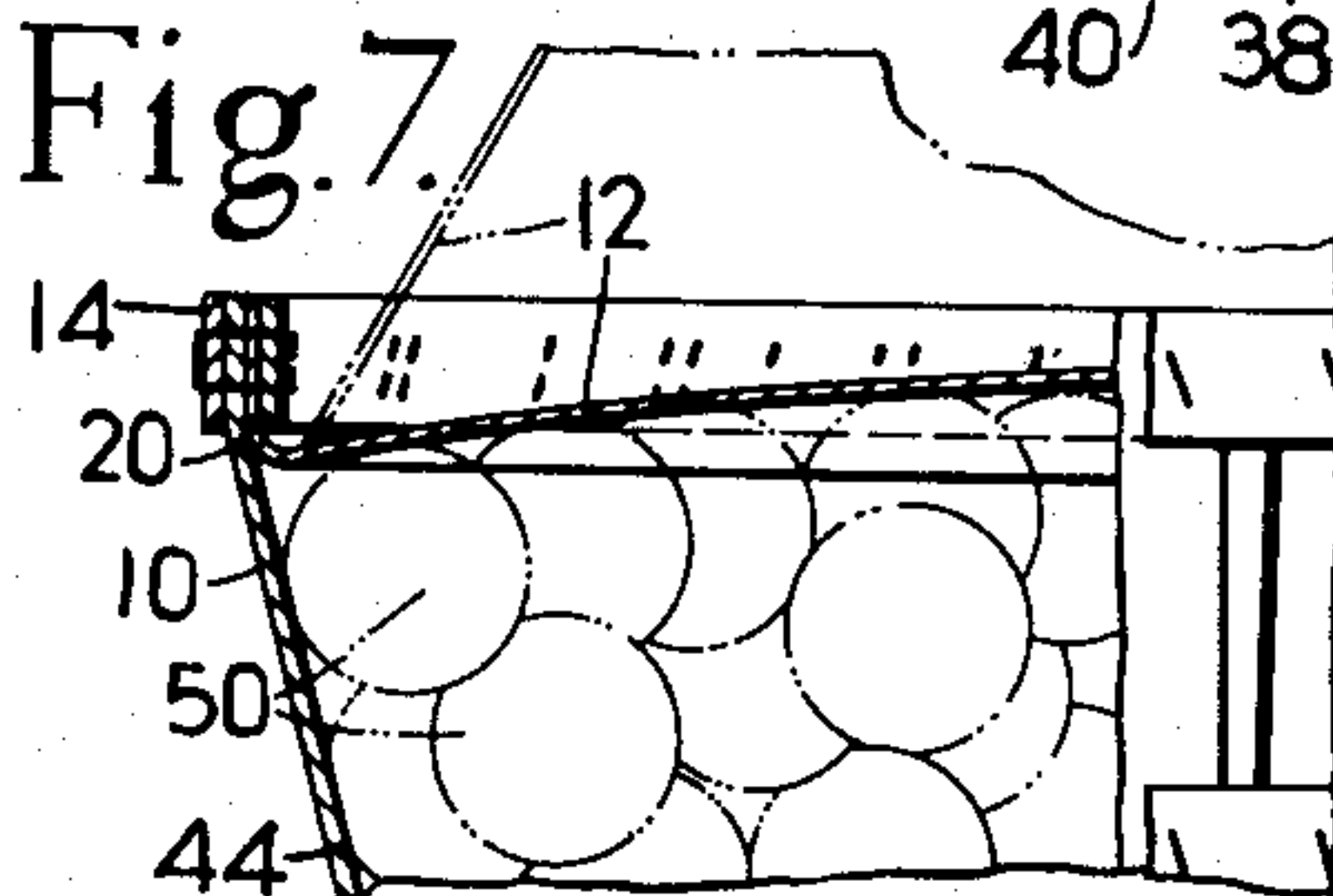


Fig. 7.



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## UNITED STATES PATENT OFFICE

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## METHOD OF MANUFACTURING LINED BASKETS

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6 Claims. (Cl. 147—47)

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This invention relates to a method for manufacturing baskets, and more particularly to means for providing a paper flap at the top of a produce basket or the like so as to protect the contents thereof.

Heretofore, separate paper caps have been provided for use as a top liner in bushel and other produce baskets so as to protect the fruit or vegetables packaged therein from being bruised by the usual wood cover which fits on the top of the basket as a closure means. Such separate paper caps constitute an extra item of expense in manufacture and handling, and fail to provide a tight seal against loss of the contents around the top edge of the basket.

The present invention provides a method of manufacture whereby a paper flap is provided to extend from the basket as a part thereof over the top of the contents and under the cover so that the top edge of the basket will be effectively sealed in cooperation with the usual basket cover and bruising of the contents by the cover will be prevented. Installation of such a flap in a basket presents problems in that the process must be inexpensive and ideally should be adapted for use with the existing basket making equipment. The present invention provides a method of making a basket incorporating such a paper flap so as to satisfy these requirements.

Accordingly, it is an object of the invention to provide a practical method of attaching a protective flap to a basket. It is a further object of the invention to provide a basket making process which incorporates the installation of a protective flap and which may be carried out with conventional materials on presently existing basket making machines. It is another object of the invention to provide a method of producing a basket with a protective flap of strong and durable construction securely anchored in the basket structure. It is still another object of the invention to provide a method of forming and installing a protective flap which is folded so as to facilitate stacking of the baskets prior to use and so as to lie flat over the contents when the same are packaged therein. Other objects of the invention will be apparent from the specification and from the drawings, wherein:

Fig. 1 is an elevation partly in section of a basket manufactured in accordance with the invention;

Fig. 2 illustrates a length of crepe paper or the like from which the basket flap of the invention is made;

Fig. 3 shows a step in the method of the in-

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vention wherein the paper strip of Fig. 2 is folded upon itself;

Fig. 4 depicts a pre-formed hoop with the folded paper strip of Fig. 3 attached;

Fig. 5 shows the pre-formed hoop of Fig. 4 placed on a conventional basket forming machine, in an enlarged scale;

Fig. 6 illustrates another step of the process of the invention wherein the outside hoops are stapled to the basket; and

Fig. 7 shows a method of use of a completed basket equipped with a paper flap in accordance with the invention.

Referring more particularly to the drawing, Fig. 1 illustrates a typical basket 10 made with a protective flap 12 in accordance with the invention. The basket shown is of the straight sided type with three outer hoops 14, 16, 18 and an inner top strip or hoop 20. This type of basket may be made according to the method of the invention on a machine of the kind shown in Figs. 5 and 6, as will be more fully explained hereinafter. Figs. 5 and 6 show parts of a basket making machine such as is conventional in the basket manufacturing industry, the drawings showing the pertinent parts of a machine for making straight sided bushel baskets such as is disclosed in greater detail in Patent No. 1,752,856, granted April 1, 1930, to Albert H. Schmidtke. However, this type of machine is shown for example only, the invention being equally applicable to the manufacture of other forms of baskets such as, for example, round bottom baskets. More generally, the method of the invention is adapted for use with machines which staple or stitch or otherwise fasten the side portions of the formed basket to an inner top hoop or strip member, and has particular utility where the basket side wall portions are formed by the relative movement of an outer basket wall forming device and an inner basket form upon which the inner top hoop of the basket is first placed.

In carrying out a preferred method of the invention, a piece 22 (Fig. 2) of flexible sheet material such as crepe paper or the like is cut to a length slightly greater than the exterior circumference of the top inner hoop 20 of the finished basket. Where the basket is to have a second hoop 16 spaced downwardly from the top of the basket as is usual practice, the piece 22 is cut to a width preferably not greater than twice the distance between the top inner hoop 20 and the second hoop 16 plus the width of the top inner hoop. This piece is then folded unequally as shown in Fig. 3 to form the flap piece



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12 with a free edge 24 at least as wide as the top inner hoop 20 and a folded portion 26 not wider than the distance between the top inner hoop and the second hoop 16. The folded flap piece 12 is then applied to the customary pre-formed inner hoop 20 as shown in Fig. 4, with the folded portion 26 to the outside and the free edge 24 overlying the outside surface of the hoop and fastened thereto by any suitable means such as by stapling or stitching as indicated at 30 for example.

Referring to Figs. 5 and 6, the inner hoop 20 with the attached paper flap 12 is then placed hoop end first on a male basket form 32 in position against a locating shoulder 34 thereon, the folded portion 26 being to the outside so that the hoop can be slipped onto the form expeditiously without danger of the flap being fouled thereby. The remaining steps of the basket manufacture are according to common practice as set forth for example in the above-mentioned patent. A pre-formed basket blank or mat 36 is placed between the tapered basket form 32 and a pusher or ram 38 having a circular frame 40 carrying an interior freely revolving annulus 42, and the ram is brought toward the basket form so that the intermediately placed mat is bent down upon the form by the annulus to provide basket side wall portions 44 which then overlie the previously positioned top inner hoop 20 and its attached flap 12.

A conventional stapling device 46 is then brought into position as shown in Fig. 6 whereupon the basket form 32 is revolved while strips of wood or other suitable material are fed under the staplers and are stapled to the basket to form the top and second and third outer hoops 14, 16, 18 thereof. The staples 48 of the top outer hoop 14 pass through and are clinched inside the inner top hoop 20. In this way the free edge 24 of the flap will be tightly bound between the inner top hoop and the overlying side wall portions of the basket while the folded portion 26 will remain free of the staples of both the first and second outer hoops 14, 16 because of the manner in which it is folded.

The completed basket 10 is then removed from the machine and shipped to the point of use, the flap 12 remaining in its folded condition whereby the baskets may be stacked one inside another without danger of injury to the folded portion 26. When the basket is to be used, the flap 12 will be pulled upwardly out of the basket and unfolded as shown in Fig. 7. After the produce 50 has been packaged within the basket the flap will then be pressed down over the top of the contents in its unfolded condition as shown and secured in that position by a top cover.

Thus it will be appreciated that the method of the invention for providing the protective flap involves the addition of only the crepe paper material 22 over that usually used in the manufacture of a basket, and is adapted to be carried out on conventional basket forming machines. The attachment of the flap to the pre-formed inner hoop 20 provides an effective and simple way to introduce the flap into the basket structure, while such attachment being to the outside of the pre-formed hoop with the flap folded to the outside in no way complicates the placement of the hoop 20 on the basket form 32. Although it is preferred to pre-form the inner hoop 20 and then attach the flap 12 thereto, it will be understood that the folded flap material could be at-

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tached to the hoop material before the latter is cut and formed. Alternatively, the folded flap 12 could be applied to the inner hoop 20 after the latter is in place on the form 32 just before the ram is actuated.

The provision of the fold 26 not only permits easy assembly of the hoop on the form but also permits the use of a flap of sufficient width for adequate protection while permitting the stapling of the second outside hoop 16 to the basket on the usual machine without the staples thereof catching the flap. Where desired the flap could be additionally folded to permit a wider flap and still clear the second hoop 16 during the basket forming operation.

In accordance with the method of the invention the flap is securely anchored and clamped between the top inner hoop and the top side wall portions of the basket so as to form a part of the structure thereof. Furthermore, the anchorage of the flap is such that the flap extends from the side wall of the basket at the bottom of the top inner hoop so that it is clear of the top cover member while providing a complete seal against leakage around the top edge of the basket.

While only one process has been illustrated and described hereinabove, it will be appreciated that the principles of the invention may be otherwise applied within the scope of the appended claims.

I claim:

1. The method of making a basket having a preformed top interior hoop and a top exterior hoop and a second hoop around the basket side-wall and spaced below said top hoops, and a top protective flap, which comprises providing a piece of flexible sheet material at least as long as the top interior circumference of the basket and no wider than the sum of the width of the top interior hoop and twice the distance between the top interior hoop and said second hoop, folding the sheet lengthwise to provide a free edge at least as wide as the top inner hoop and a doubled thickness adjacent thereto, the combined width of the free edge and the doubled thickness being no greater than the interior basket wall distance from the top of the top interior hoop to the second hoop, providing a preformed interior top hoop for the basket, stapling the folded sheet around outside said interior top hoop by the free edge with the fold to the outside and clear of the preformed hoop, forming the wall of the basket so as to overlie the free edge and the fold, forming the top exterior hoop and second hoop on the exterior wall, and stapling the parts in place through said top hoops and said second hoop.

2. The method of making a basket having a pre-formed top interior hoop and a top exterior hoop and a second hoop around the basket side-wall and spaced below said top hoops, and a top protective flap, which comprises providing a piece of flexible sheet material approximately as long as the top interior circumference of the basket, folding the sheet lengthwise to provide a free edge at least as wide as the top inner hoop and a folded portion adjacent thereto, the combined width of the free edge and the folded portion being no greater than the interior basket wall distance from the top of the top interior hoop to the second hoop, providing a pre-formed top interior hoop for the basket, stapling the folded sheet around outside said top interior hoop by the free edge with the fold to the out-



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side and clear of the pre-formed hoop, forming the wall of the basket so as to overlie the free edge and the fold, forming the top exterior hoop and second hoop on the exterior wall, and stapling the parts in place through said top hoops and said second hoop.

3. The method of making a basket having a pre-formed top interior hoop and a positionally corresponding top exterior hoop and a second hoop around the basket sidewall and spaced below said top hoops, and a top protective flap, which comprises providing a piece of flexible sheet flap material at least as long as the top interior circumference of the basket and no wider than the sum of the width of the top interior hoop and twice the distance between the top interior hoop and said second hoop, folding the sheet lengthwise to provide a free edge at least as wide as the top inner hoop and a doubled thickness adjacent thereto, the combined width of the free edge and the doubled thickness being no greater than the interior basket wall distance from the top of the top interior hoop to the second hoop, providing a pre-formed top interior hoop for the basket, stapling the folded sheet around outside said top interior hoop by the free edge with the free edge overlying the same and with the fold to the outside and clear of the pre-formed hoop, placing the pre-formed hoop on a basket form, forming the wall of the basket about the pre-formed hoop and the flap material so as to overlie the free edge and the fold, forming the top exterior hoop and second hoop on the exterior of the wall, and stapling the parts in place through said top hoops and said second hoop, thereby clamping said free edge in place while leaving the remainder of the flap material free.

4. The method of making a basket having a pre-formed top interior hoop and a top exterior hoop and a second hoop around the basket sidewall and spaced below said top hoops, and a top protective flap, which comprises providing a piece of flexible sheet material at least as long as the top interior circumference of the basket and no wider than the sum of the width of the top interior hoop and twice the distance between the top interior hoop and said second hoop, folding the sheet lengthwise to provide a free edge at least as wide as the top inner hoop and a doubled thickness adjacent thereto, the combined width of the free edge and the doubled thickness being no greater than the interior basket wall distance from the top of the top interior hoop to the second hoop, providing a formed top interior hoop for the basket with the folded sheet stapled around outside said top interior hoop by the free edge with the fold to the outside and clear of said top interior hoop, forming the wall of the basket about the pre-formed top interior hoop so as to overlie the free edge and the fold of the attached folded sheet, forming the top exterior hoop and second hoop on the exterior wall, and

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stapling the parts in place through said top hoops and said second hoop.

5. The method of making a basket having a pre-formed top interior hoop and a top exterior hoop and a second hoop around the basket sidewall and spaced below said top hoops, and a top protective flap, which comprises providing a piece of flexible sheet material approximately as long as the top interior circumference of the basket, folding the sheet lengthwise to provide a free edge and a folded portion adjacent thereto, the width of the folded portion being no greater than the interior basket wall distance from the top interior hoop to the second hoop, providing a formed top interior hoop for the basket with the folded sheet stapled around outside said top interior hoop by the free edge with the folded portion clear of said top interior hoop and extending no further from said top interior hoop than said interior basket wall distance, forming the wall of the basket about the pre-formed top interior hoop so as to overlie the free edge and the folded portion of the attached folded sheet, forming the top exterior hoop and second hoop on the exterior wall, and stapling the parts in place through said top hoops and said second hoop.

6. The method of making a basket having a pre-formed top interior hoop and a top exterior hoop and a second hoop around the basket sidewall and spaced below said top hoops, and a top protective flap, which comprises providing a piece of flexible sheet material approximately as long as the top interior circumference of the basket, folding the sheet lengthwise to provide a free edge at least as wide as the top inner hoop and a folded portion adjacent thereto, the combined width of the free edge and the folded portion being no greater than the interior basket wall distance from the top of the top interior hoop to the second hoop, providing a formed top interior hoop for the basket with the folded sheet stapled around outside said top interior hoop by the free edge with the folded portion clear of said top interior hoop, forming the wall of the basket about the pre-formed top interior hoop so as to overlie the free edge and the fold of the attached folded sheet, forming the top exterior hoop and second hoop on the exterior wall, and stapling the parts in place through said top hoops and said second hoop.

ROBERT H. DE HAVEN.

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