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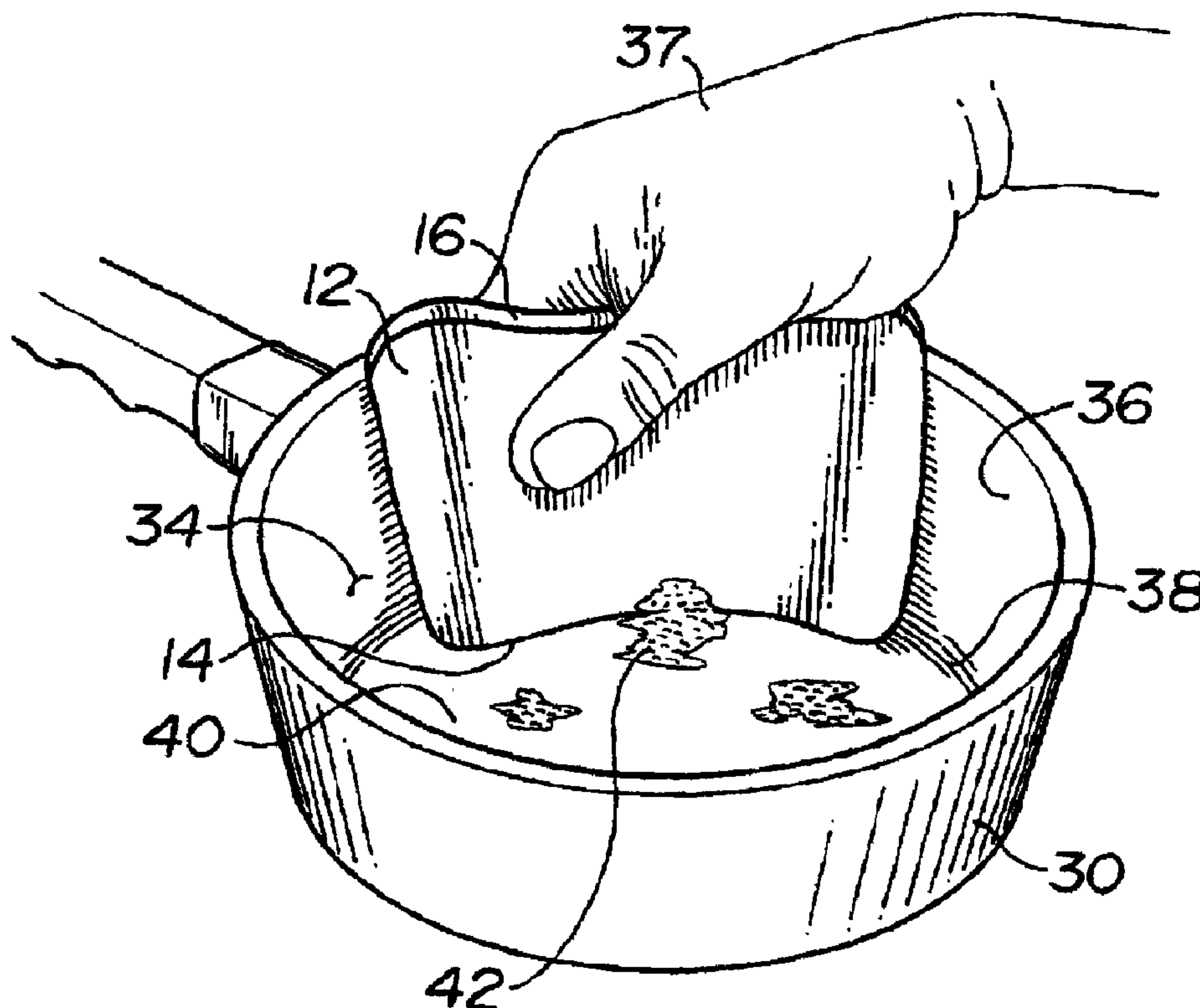
(72) Inventeur/Inventor:
BLOUIN, BERNADETTE DARLENE, CA

(73) Propriétaire/Owner:
BLOUIN, BERNADETTE DARLENE, CA

(74) Agent: THOMPSON LAMBERT LLP

(54) Titre : GRATTOIR

(54) Title: SCRAPER



(57) Abrégé/Abstract:

A method and apparatus for cleaning an interior cavity of a container including the following described steps. Firstly, insert a hard pliant card with rapid elastic recovery to within 96% of original into an interior cavity of a container. Secondly, exert a force upon the card until the card deforms to assume an arcuate shape substantially conforming with the interior contours of the container. Thirdly, move the card along the interior contour of the container in a scraping action such that an edge of the card scrapes residue from the interior contour of the container.



ABSTRACT OF THE DISCLOSURE

A method and apparatus for cleaning an interior cavity of a container including the following described steps. Firstly, insert a hard pliant card with rapid elastic recovery to within 96% of original into an interior cavity of a container. Secondly, exert a force upon the card until the card deforms to assume an arcuate shape substantially conforming with the interior contours of the container. Thirdly, move the card along the interior contour of the container in a scraping action such that an edge of the card scrapes residue from the interior contour of the container.

The present invention relates to a method of cleaning an interior cavity of a container and a scraper.

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BACKGROUND OF THE INVENTION

A scraper is used to scrape residue from an interior cavity of containers such as a pots, pans, bowls, and the like. Two commonly used form of scrapers are rigid blades mounted on handles and abrasive pads. There are several locations on every pot that are particularly hard to clean. One location is a circumferential interior sidewall, especially those with tight radiused curves. Another location is a substantially 90 degree corner formed where the circumferential interior sidewall meets the bottom. Scrapers with rigid blades cannot reach these hard to clean areas. Abrasive pads can reach these areas with the application of pressure with one's fingers, but this tends to be hard on the user's hands.

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SUMMARY OF THE INVENTION

What is required is a method of cleaning an interior cavity of a container which is better suited to clean areas such as circumferential interior sidewalls and substantially 90 degree corners formed where the circumferential interior sidewall meets the bottom of the container.

According to one aspect the present invention there is provided a method of cleaning an interior cavity of a container including the following described steps. Firstly, insert a hard pliant card with rapid elastic recovery to within 96% of original into an interior cavity of a container. Secondly, exert a force upon the card until the card deforms to assume an arcuate shape substantially conforming with the interior contours of the container. Thirdly, move the card along the interior contour of the container in a scraping action such

that an edge of the card scrapes residue from the interior contour of the container.

With the method, as described above, the scraper conforms
5 to the contours of the surface being cleaned. This provides
a superior cleaning action. It is preferred that the card is
made of a polymer plastic material. The described method is
most useful with tightly radiused circumferential interior
sidewalls, where the circumferential interior sidewall is an
10 arcuate surface with between a 1 inch and 6 inch radiused
curve. An example of such an application is a muffin pan.
Regardless of the size of the pan, the method is also useful
in cleaning a substantially 90 degree corner formed where the
circumferential interior sidewall meets a bottom of the pan.

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According to another aspect of the invention there is
provided a scraper which includes a hard pliant card capable
of assuming an arcuate shape to conform with an interior
contour of a container with rapid elastic recovery to within
20 96% of it's original shape and having at least one edge adapted
for scraping.

It is preferred that the card be made of a polymer plastic
material. It is preferred that the card be substantially
25 rectangular in shape, although some success has been obtained
with other shapes.

Although beneficial results may be obtained through the
use of the card, as described above, there are additional
30 features that can be added for the convenience of the user.
The card is more comfortable to grip when it has a gripping
edge contoured with an arcuate indent, so that the gripping
edge substantially conforms to the contours of the human hand.
In addition the card can be provided with a beaded gripping
35 edge which is easier and more comfortable to grip. The card
will normally sink in water, so it is also advantageous if the
beaded gripping edge is buoyant thereby enabling the card to

float. There are some applications in which greater leverage is desirable. A removable handle can be provided for such applications. The handle has a gripping end and a card attachment end. The card attachment end has a key hole opening
5 adapted to receive the beaded gripping edge of the card.

For best results it is preferred that the card is capable of assuming between a 1 inch and 6 inch radiused curve and conforming to a substantially 90 degree corner.

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BRIEF DESCRIPTION OF THE DRAWINGS

These and other features of the invention will become more
15 apparent from the following description in which reference is made to the appended drawings, wherein:

FIGURE 1 is a side elevation view of a scraper manufactured in accordance with the teachings of the present invention.

20 **FIGURE 2** is an end elevation view of the scraper illustrated in **FIGURE 1**.

FIGURE 3 is a front elevation view of the scraper illustrated in **FIGURE 1** with handle attachment.

25 **FIGURE 4** is an end elevation view of the scraper illustrated in **FIGURE 3**.

FIGURE 5 is a side elevation view of the scraper illustrated in **FIGURE 1**, showing the correct manner of gripping the scraper.

30 **FIGURE 6** is a perspective view of the scraper illustrated in **FIGURE 1** in use with a pot.

FIGURE 7 is a side elevation view in section of the scraper illustrated in **FIGURE 1** in use with the pot illustrated in **FIGURE 6**.

35 **FIGURE 8** is a top plan view of the scraper illustrated in **FIGURE 1** in use with a muffin tin.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment, a scraper generally identified
5 by reference numeral 10, will now be described with reference
to **FIGURES 1** through **8**.

Referring to **FIGURE 1**, scraper 10 includes a hard pliant
rectangular polymer plastic card 12. Polymer plastic card 12
10 is preferably the size of a credit card. Polymer plastic card
12 must be hard in order to function as a scraper. The
properties of polymer plastic card 12 are critical. It must
be capable of assuming an arcuate shape to substantially
conform with the interior contours within the interior cavity
15 of a container, as will be hereinafter further described. It
must have a rapid elastic recovery to within 96% of it's
original shape. Polymer plastic card 12 has an edge 14 adapted
for scraping. A gripping edge 16 is positioned opposite to
scraping edge 14. Gripping edge 16 is axially contoured on a
20 plane coincident with plastic card 12 thereby forming an
arcuate indent 18. Referring to **FIGURE 2**, it is to be noted
that gripping edge 16 is beaded. It is preferred that beaded
gripping edge 16 be made buoyant either through choice of
materials or by filling with a gas. Care must be taken to keep
25 beaded gripping edge sufficiently thin that gripping edge 16
remains substantially as pliant a plastic card 12. Referring
to **FIGURES 3** and **4**, a handle 20 is adapted to fit onto scraper
10 to provide additional leverage. Handle 20 has a gripping
end 22 and a card attachment end 24. Card attachment end 24
30 has a key hole opening 26. Key hole opening 26 receives beaded
gripping edge 16 of card portion 12 of scraper 10.

The preferred method of use for apparatus 10 will now be
described with reference to **FIGURES 1** through **8**. The
35 environment in which scraper 10 is intended to be used will
first be described. Referring to **FIGURES 6** and **7**, there is
illustrated a pot 30. Referring to **FIGURE 8**, there is

illustrated a muffin tin 32. Although only pot 30 and muffin tin 32 are illustrated it will be understood that the described method is equally applicable to pans, deep dishes and the like. Referring to **FIGURES 6 and 7**, pot 30 has an interior cavity 34.

5 Interior cavity 34 has an interior contour which includes a circumferential interior sidewall 36 and a substantially 90 degree corner 38 formed when circumferential interior sidewall 36 meets a bottom 40 of pot 30. Referring to **FIGURE 8**, muffin tin 32 also has an interior cavity 34. Interior cavity 34 has

10 an interior contour which also includes a circumferential interior sidewall 36 and a substantially 90 degree corner 38 formed when circumferential interior sidewall 36 meets a bottom 40 of muffin tin 32. **FIGURE 5** illustrates how gripping edge 16 contoured to place the hand 37 of the user in a comfortable

15 position. The fact that gripping edge 16 is beaded providing some comfort for the hand of the user when pressure is applied.

The method consists of the following steps. Firstly, scraper 10 is inserted into interior cavity 34 of pot 30, as

20 illustrated in **FIGURE 6**. Secondly, a force is exerted upon card 12 until card 12 deforms to assume an arcuate shape that conforms with one of the interior contours of pot 30. Referring to **FIGURE 6**, card 12 is illustrated conforming with circumferential interior sidewall 36. Referring to **FIGURE 7**,

25 card 12 is illustrated conforming to corner 38. Thirdly, card 12 is moved circumferential interior sidewall 36 or along corner 38 where circumferential interior sidewall 36 meets bottom 40 in a scraping action. When this is done scraping edge 14 of card 12 scrapes food residue 42 from pot 30.

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The key to scraper 10 is its flexibility. Scrapers used in the past were unable to conform to a 90 degree corner 38 as illustrated in **FIGURE 7**. Similarly, scraper used in the past were unable to conform with a 1 inch radiused curve of muffin

35 tin 32, as illustrated in **FIGURE 8**.

Some additional features can be added to scraper 10 for the convenience of the user. Where greater leverage is desirable beaded gripping edge 16 of card 12 can be slid into key hole opening 26 of handle 20 to attach handle 20 as
5 illustrated in **FIGURES 3 and 4**. Card 12 does not normally float. It can be more convenient if beaded gripping edge 16 is adapted to make card 12 buoyant.

Scraper 10 is quick and easy to use regardless of whether
10 the use is right or left handed. It does not damage the finish of the pot, pan or dish; although it is recommended that the pot, pan or dish be left soaking in dish water to soften food residue 42 prior to scraping, as opposed to scraping when food residue 42 has dried. It takes little storage space and is
15 easy to clean. It is used on hard to reach surfaces where persons previously had to use either abrasive pads or their fingernails.

It will be apparent to one skilled in the art that
20 modifications may be made to the illustrated embodiment without departing from the spirit and scope of the invention as hereinafter defined in the Claims.

1. A method of cleaning a circumferential interior sidewall of a container, comprising the steps of:
 - a. firstly, inserting a hard pliant card with rapid elastic recovery to within 96% of original into an interior cavity of a container, the hard pliant card having three scraping edges and a beaded gripping edge, the hard card being sufficiently pliant to conform to a one inch radiused curve and to a substantially 90 degree corner;
 - b. secondly, exerting a force upon the card until the card deforms to assume an arcuate shape substantially conforming with an interior contour of the container; and
 - c. thirdly, moving the card along the interior contour of the container in a scraping action such that an edge of the card scrapes residue from the interior contour of the container.
2. The method as defined in claim 1, wherein the card is of polymer plastic material.
3. The method as defined in claim 1, wherein the interior contour is a circumferential interior sidewall.
4. The method as defined in claim 3, wherein the circumferential interior sidewall is an arcuate surface with between a 1 inch and 6 inch radiused curve.
5. The method as defined in claim 1, wherein the interior contour is a substantially 90 degree corner formed where a circumferential interior sidewall meets a bottom.

6. A scraper, comprising:
a hard pliant rectangular card with three scraping edges and a beaded gripping edge having axial contouring on a plane coincident with the card thereby forming an arcuate indent, the card being of polymer plastic material sufficiently pliant to conform to a one inch radiused curve and to a substantially 90 degree corner with rapid elastic recovery to within 96% of its original shape.

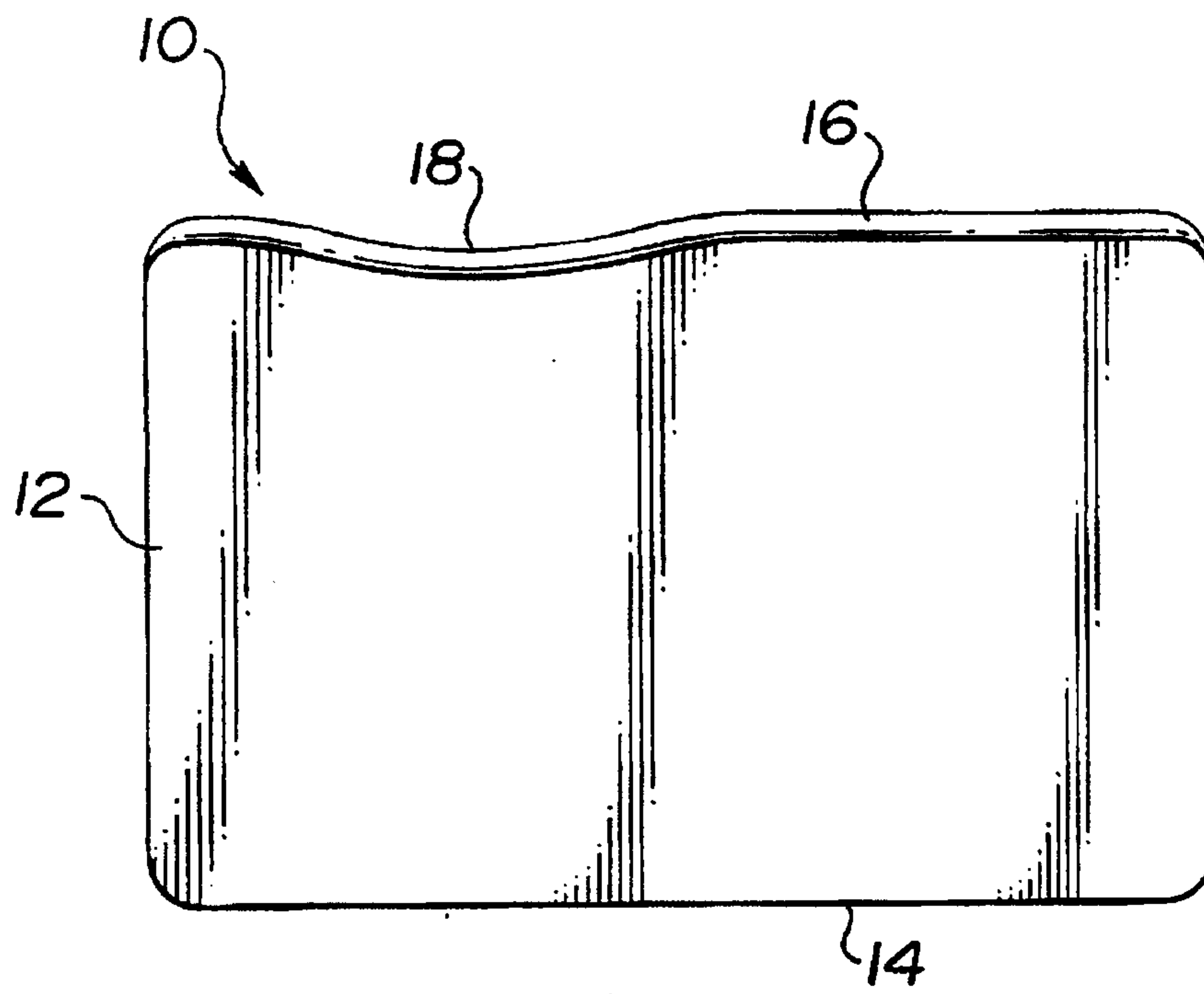


FIG. 1.

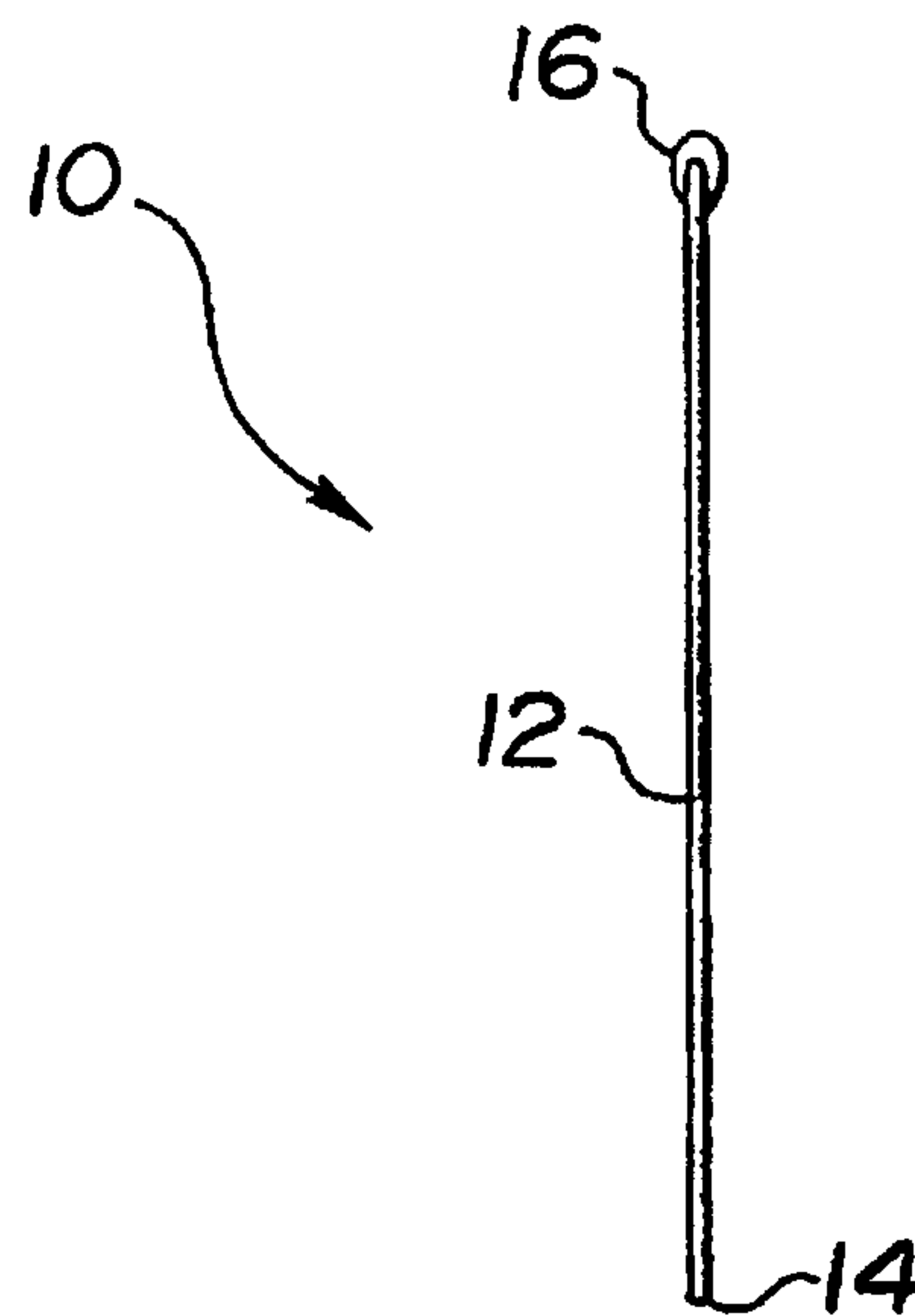
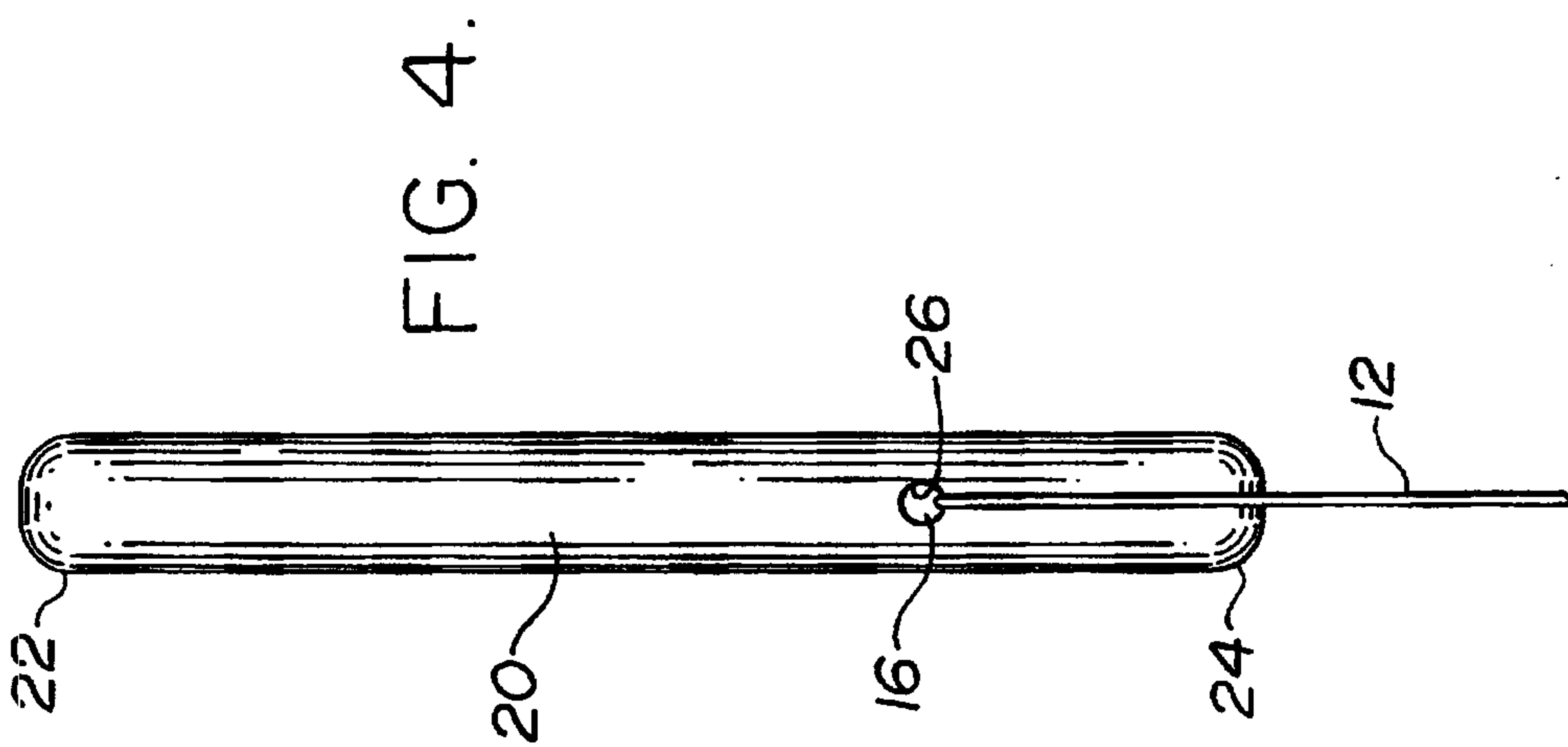
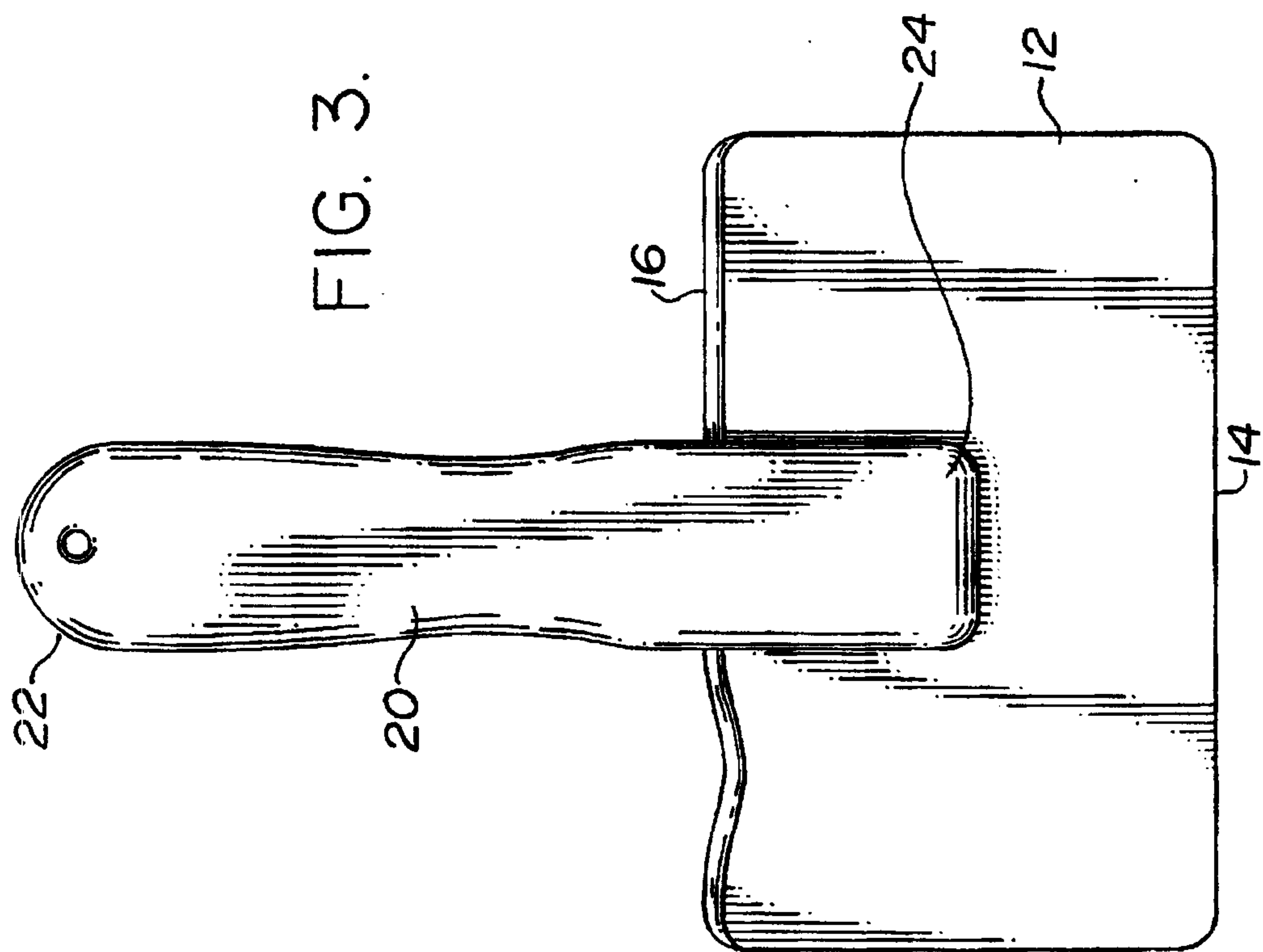
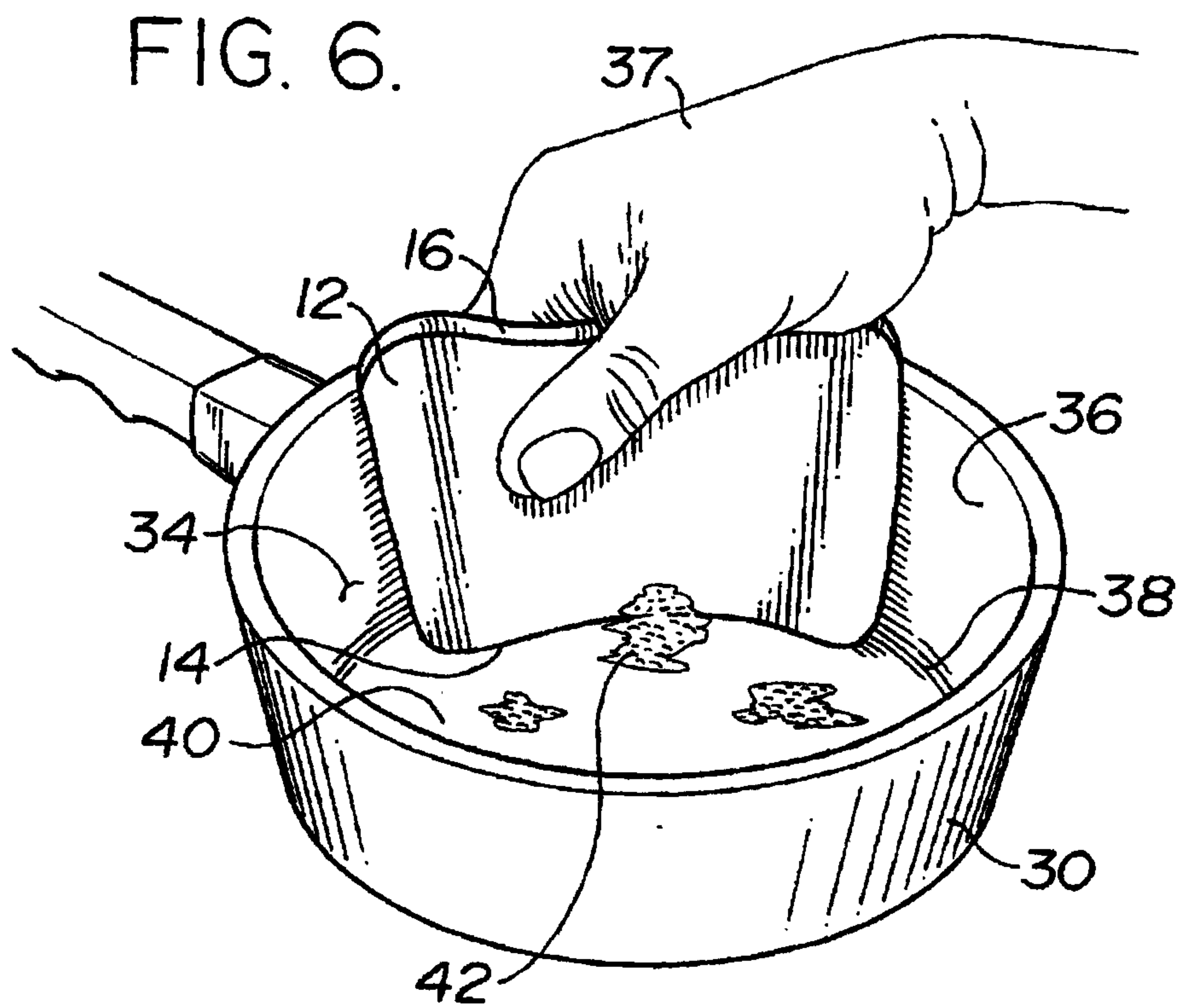
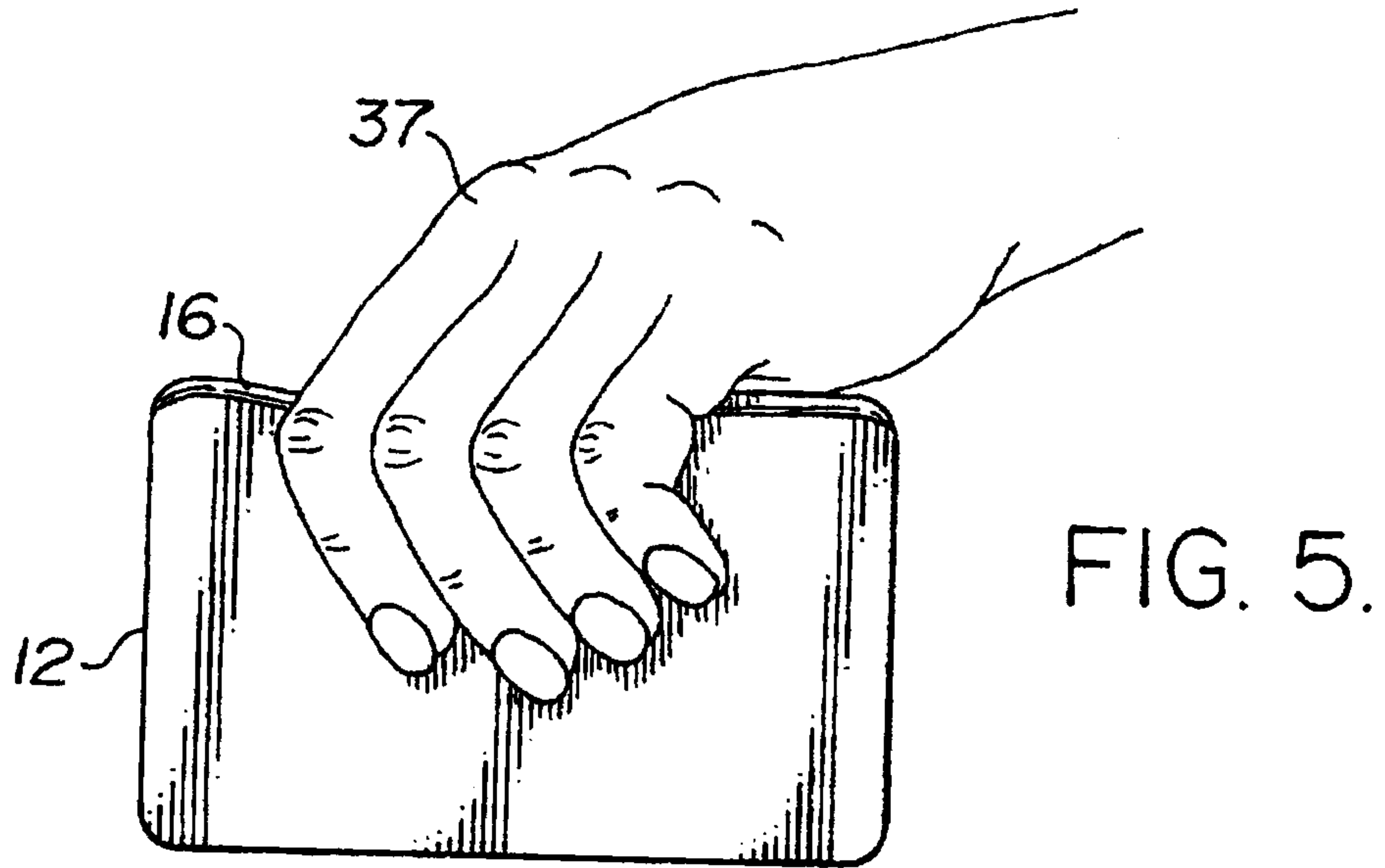


FIG. 2.





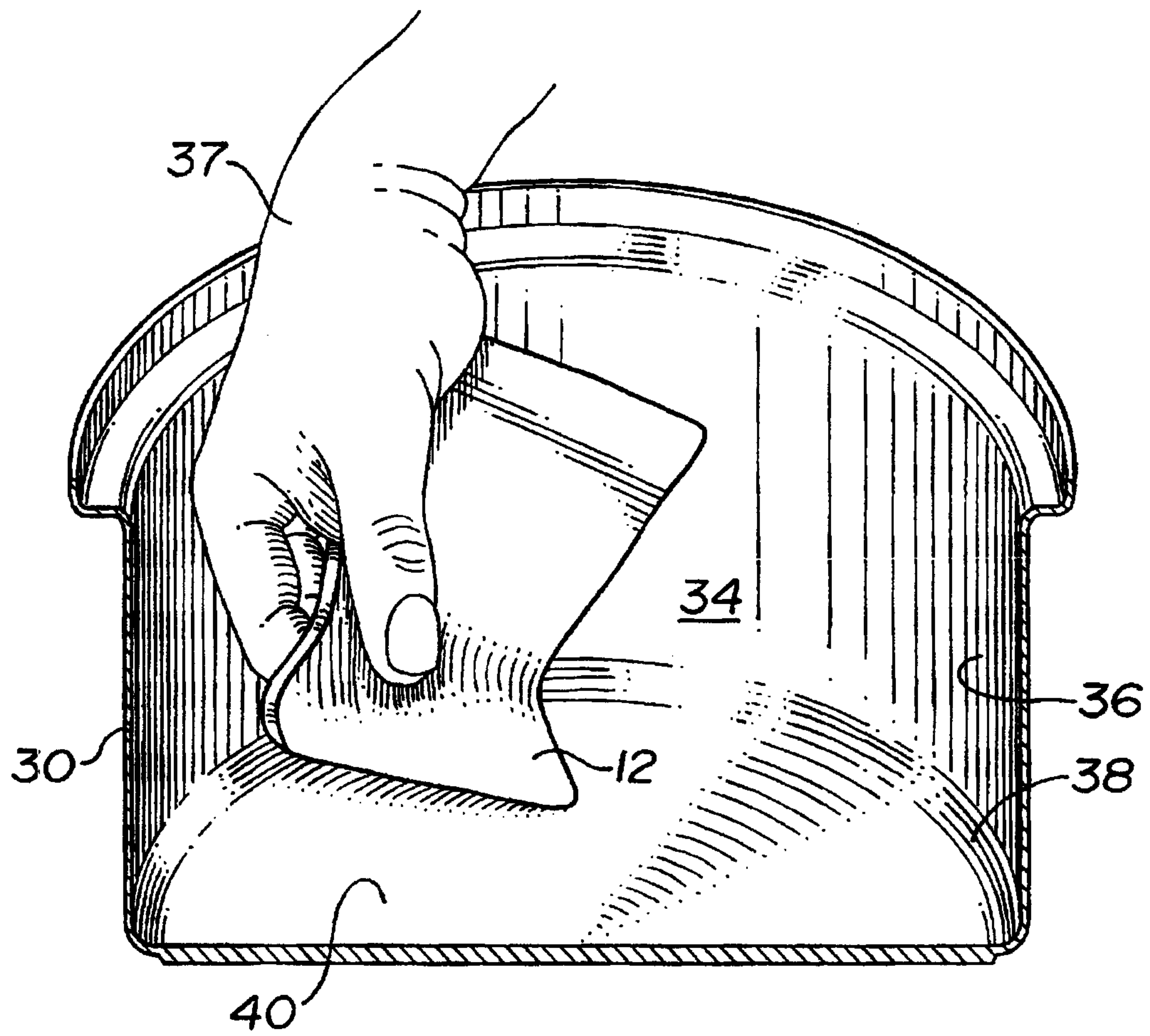


FIG. 7.

