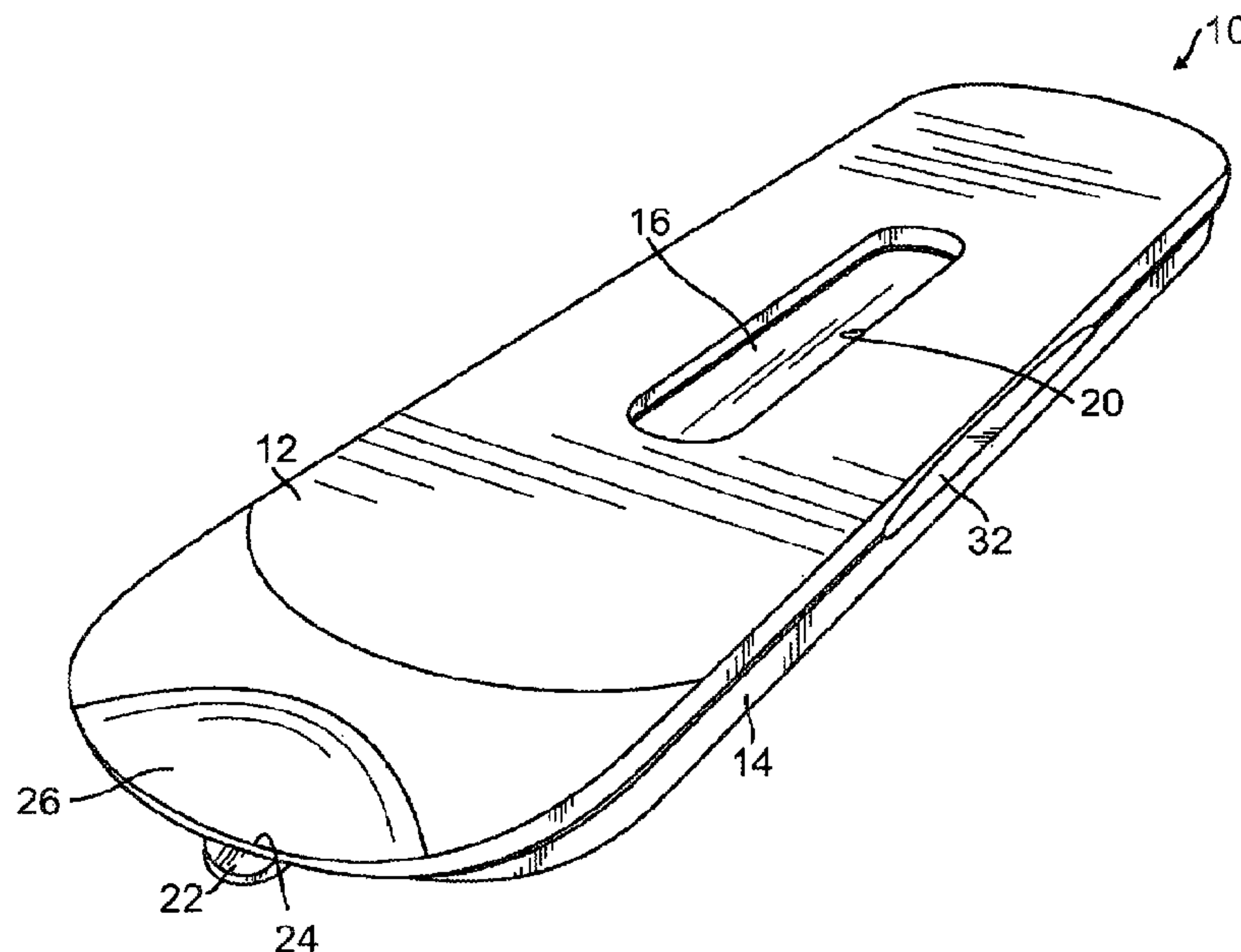




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(57) Abrégé/Abstract:

A nail file case of the kind having a generally clam shell type configuration is described, with an upper lid and a lower base, the lid being connected to the base by a flexible hinge. The case further includes a slot extending along an upper surface of the lid, the slot being sized to receive a finger nail tip therethrough. A cuticle pusher also is formed on the case, the cuticle pusher including a blade being configured for pushing a cuticle of a finger nail. In addition, a nail cleaner is formed on the case, the nail cleaner including a projection extending from the case being configured for insertion beneath a finger nail for scraping out dirt lodged thereunder.

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(54) Title: NAIL FILE CASE WITH INTEGRATED FEATURES

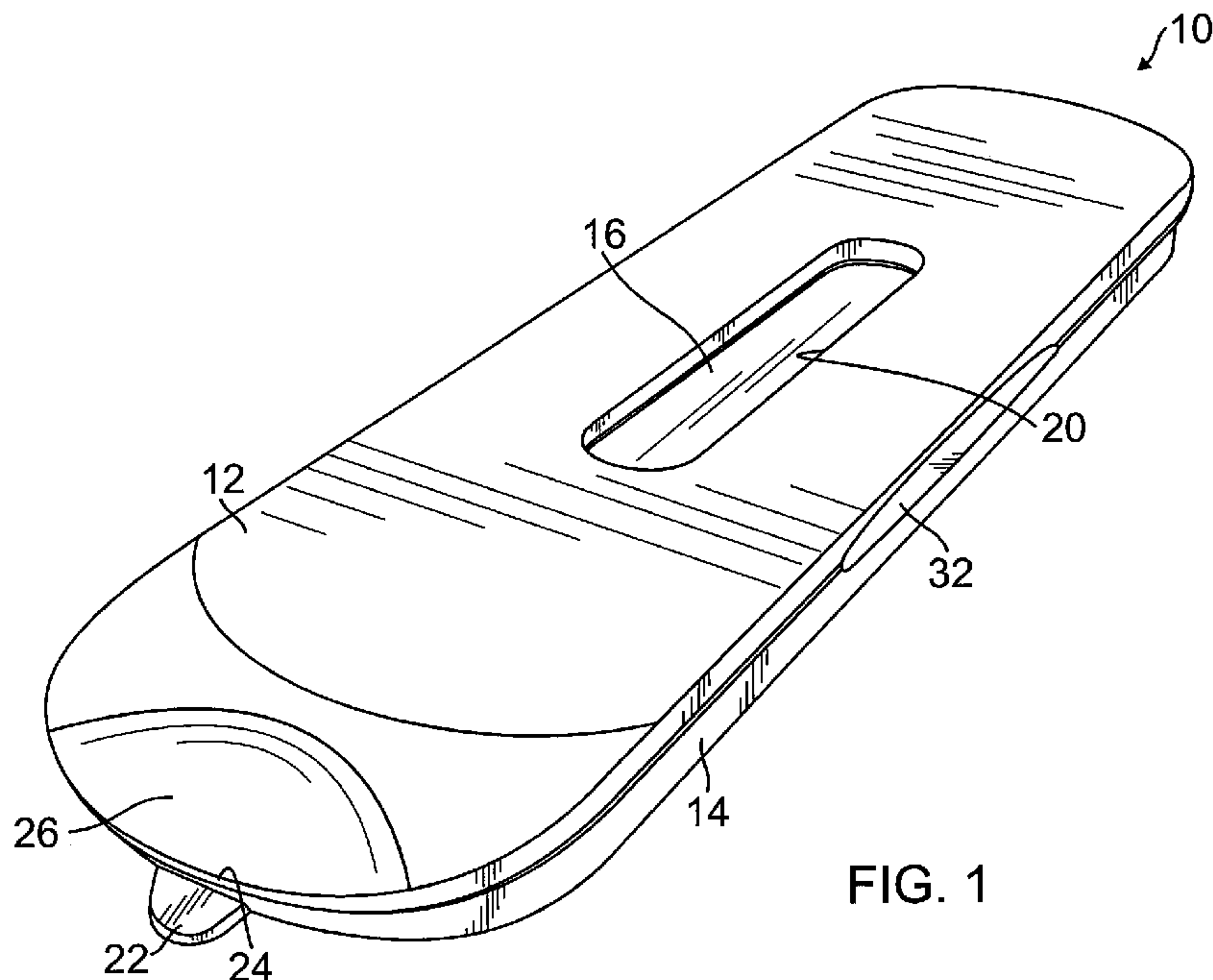


FIG. 1

(57) Abstract: A nail file case of the kind having a generally clam shell type configuration is described, with an upper lid and a lower base, the lid being connected to the base by a flexible hinge. The case further includes a slot extending along an upper surface of the lid, the slot being sized to receive a finger nail tip therethrough. A cuticle pusher also is formed on the case, the cuticle pusher including a blade being configured for pushing a cuticle of a finger nail. In addition, a nail cleaner is formed on the case, the nail cleaner including a projection extending from the case being configured for insertion beneath a finger nail for scraping out dirt lodged thereunder.

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1 NAIL FILE CASE WITH INTEGRATED FEATURES

2 BACKGROUND

3 [0001] The present invention relates to nail care systems and methods, and in particular,
4 to a nail file case with integrated features.

5 [0002] Nail files are well known in the art. Nail files have traditionally been made from
6 stainless steel, with serrations scored into the surface of the metal to provide a rough abrasive area for
7 filing a nail. Often, steel nail files have included hard shaped ends for pushing back the cuticle and for
8 cleaning out dirt under the nail. These all-in-one steel files however, suffer from the fact that they are
9 relatively expensive, and while intended to be permanent, once they become blunt, they are no longer
10 effective. Also, they can become dangerous, as they represent a fairly sharp object which is intended for
11 carrying about the person.

12 [0003] More recently, disposable nail files have been made from plastic and/or foam
13 cores which have an abrasive-coated surface attached to one or both sides of the core, making the file
14 both abrasive and flexible. These files are sometimes sold inside a plastic container for protecting the
15 file and for facilitating transport of the file inside make-up bags, travel kits, purses, or the like, without
16 damaging adjacent items by abrasion. These files avoid many of the problems associated with steel nail
17 files.

18 [0004] However, they do have problems of their own. One problem arising with plastic
19 or foam core nail files is the fact that they do not lend themselves to having hard shaped ends formed
20 onto them for pushing back the cuticle or for cleaning out dirt under the nail. Thus, users are typically
21 obliged to possess additional tools to accomplish these tasks. This adds to the inconvenience of having a
22 nail file, and also to the cost, because additional tools must be purchased to accomplish the same tasks as
23 could be accomplished by the older stainless steel files.

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Accordingly, in one aspect the present invention resides in a nail file case having two opposed ends and comprising: a base; a lid hingably and closably attached to the base between the two opposed ends such that, when the lid is closed on the base, the base and the lid define a region inside the case and a region outside the case, the region inside the case carrying an abrasive member, the lid further comprising an inner surface that faces the region inside the case, and an opposing outer surface, a slot in the lid, the slot comprising a hole that extends from the inner surface of the lid to the outer surface of the lid, the slot thereby exposing the region inside the case to the region outside the case such that the abrasive member is exposed to the region outside the case when the abrasive member is present in the region inside the case, a blade joined to the lid or the base and joined to one of said two opposed ends and said blade being formed by a concave depression, and a projection joined to the base or the lid and joined to said one of said two opposed ends and said projection having a concavity on its top surface and being adapted to scrape a fingernail and wherein the blade and the projection are in stacked relation to one another on said one of said two opposed ends of the case.

1 **[0009]** These and other advantages and features of the invention will become apparent
2 from the following detailed description, taken in conjunction with the accompanying drawings, which
3 illustrate, by way of example, the features of the invention.

4

5 BRIEF DESCRIPTION OF THE DRAWINGS

6 **[0010]** FIG. 1 a top perspective view of a nail file case, including a nail file, having
7 features of the present invention, shown in a closed condition.

8 **[0011]** FIG. 2 is a top perspective view of the nail file case, including a nail file, of FIG.
9 1, shown in an open condition.

10 **[0012]** FIG. 3 is a top plan view of the nail file case of FIG. 1, shown in a closed
11 condition.

12 **[0013]** FIG. 4 is a side view of the nail file case shown in FIG. 3.

13 **[0014]** FIG. 5 is a rear plan view of the nail file case of FIG. 1, shown in a fully open
14 condition.

15 **[0015]** FIG. 6 is a schematic view of the nail file case of FIG. 1, being used to file a nail.

16 **[0016]** FIG. 7 is an enlarged, fragmentary, elevational view of an end portion of the lid of
17 the nail file case of FIG. 1, showing the cuticle pusher in greater detail.

18 **[0017]** FIG. 8 is an enlarged, fragmentary, perspective view of an end portion of the base
19 of the nail file case of FIG. 1, showing the nail cleaner in greater detail.

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21 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

22 **[0018]** As shown in the drawings for purposes of illustration, the invention is embodied
23 in a nail file case 10 preferably of the type having a clam shell construction with an upper lid 12 and a
24 lower base 14 connected to each other by a flexible hinge 28 (FIG. 5) extending at least part way along

1 adjacent edges of the lid and the base, respectively. When the case is closed (as seen in FIG. 1) the lid
2 and base are held together in a closed position by a snap closure 30 (FIG. 2). When closed, the case can
3 be opened with the aid of a finger grip 32 formed in the side of the case. Typical dimensions for such a
4 case are 5 inches to 7 inches in length, 0.8 inches to 1.2 inches in width (when closed), and 0.25 inches
5 to 0.35 inches thick (when closed).

6 **[0019]** A standard plastic or foam core nail file 16 may be positioned inside the case 10,
7 as seen in FIG. 2. To facilitate containment of the file, an upper recess 18 may be provided in the lid 12,
8 and a lower recess 19 may be provided in the base 14. Thus, when the lid is closed onto the base as in
9 FIG. 1, the file 16 resides within the case 10 positioned within the upper recess and the lower recess. In
10 a preferred embodiment, the recesses are dimensionally configured in terms of length and width to hold
11 the file in place without appreciable movement inside the case.

12 **[0020]** In accordance with the present invention, a slot 20 is included in the lid 12 to
13 provide finger nail access to a file 16 inside the case when the case is closed. The slot can have different
14 configurations and orientations but in a preferred embodiment, the slot extends longitudinally along the
15 length of the lid terminating short of the ends. The slot extends completely through the lid, so that the
16 abrasive surface on the file 16 is visible and accessible through the slot from the outside of the case.
17 (FIG. 1) Preferably, the case is dimensionally configured in relation to the file so that the upper surface
18 of the lid 12 in the vicinity of the slot, is separated from an upper surface of the file 16 by between 0.05
19 inch and 0.1 inch. The slot width S 1 (FIG. 3) is preferably 0.2 inches to 0.4 inches. The slot length S2 is
20 preferably 1.5 inches to 2 .5 inches.

21 **[0021]** In some embodiments, a cuticle pusher in the form of blade 24 is formed into the
22 upper lid 12 at a terminal end of the case,. The blade is shaped for pushing the cuticle of a finger nail
23 backwards. Preferably, the blade 24 is formed with a concave depression 26 on an exterior surface of the
24 lid 12 which creates a thin leading edge along the terminal end of the lid adapted to act as a blade for

1 pushing or scraping a cuticle. Preferably, the depression has a width K1 (FIG. 5) between 0.3 inches and
2 0.5 inches, a length K3 between 0.3 inches to 0.6 inches, and a radius of curvature R1 (FIG. 7) between
3 2.77" and 4.00". The blade 24 has a curved shape for accommodating curves in the shape of the cuticle
4 at the base of a nail, and a crisp edge with sufficient bite for pushing or scraping a cuticle. Preferably,
5 the blade 24 has an edge thickness K2 (FIG. 7) of between 0.02 inches and 0.06 inches.

6 [0022] In further embodiments, a finger nail cleaner is provided in the form of a
7 horizontal projection 22 on the lower base 14, also at a terminal end of the case. The projection is
8 configured for inserting under the nail, and scraping out dirt that may have lodged there. In a preferred
9 configuration, the projection extends longitudinally from the terminal end of the base, tapering in
10 thickness and width from the base to a rounded tip 34. A longitudinal depression or concavity 36 is
11 formed on an upper surface of the projection, the sides and end of which curve upward from the central
12 maximum depth to form an upwardly facing edge 38 around the perimeter of the projection for scraping
13 under the nail. Preferably, the projection has a maximum width B1 (FIG. 5) of between 0.3 inch and 0.6
14 inch, a thickness B2 (FIG. 8) at the tip of between 0.05 inches 0.2 inches, and the projection extends
15 away from the lower base by an amount B3 which may be between 0.1 inches and 0.3 inches in length.
16 The concavity preferably has a radius of curvature R2 (FIG. 8) of between .018" and .022". The
17 projection is preferably positioned below the blade 24 and dimensioned to be smaller than the blade 10
18 so that the projection does not extend beyond the outer perimeter of the blade when the case is closed.
19 If desired, the position of the nail cleaner and cuticle pusher can be reversed, so that the nail cleaner is
20 formed on the lid while the cuticle pusher is formed on the base. Alternatively, both the nail cleaner and
21 cuticle pusher can be formed on the same lid or base, but on opposite ends thereof.

22 [0023] Armed with the nail file case 10 and a nail file 16 contained therein, the user may
23 accomplish the following manicure actions:

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1 **[0024]** First, the user may file a nail while the case is closed by inserting a tip of the nail
2 through the slot 20, as seen in FIG. 5, and rapidly moving the nail up and down along the length of the
3 slot. This action will abrade the nail and smooth or touch-up rough nail edges. The surface of the lid 12
4 prevents the user's skin from coming into contact with the abrasive surface of the nail file 16 during the
5 filing action. The separation between the finger and the nail file surface also provides an additional
6 safeguard feature, in which the nail cannot be filed shorter than the depth of the upper lid 12.

7 **[0025]** Second, the user may use the blade 24 to push back the cuticle of a finger nail in a
8 manicure procedure. In order to accomplish this action, the user may turn the case upside down with the
9 lid closed, and advance what would then be a lower surface of the case towards the cuticle, pushing it
10 back, using the depression 26 as a surface to slide over the nail plate and help to prevent the blade from
11 slipping off the nail when in use. Alternatively, the user may turn the case right side up with the lid
12 open, and advance the blade towards the cuticle using the depression 26 as a registration point adapted
13 to receive a pad of the forefinger of the operator's working hand when the tool is gripped for use. In this
14 way, the forefinger can be used to impart control and thrust to the blade.

15 **[0026]** Third, the user may use the projection 22 to scrape out dirt from under the finger
16 nail and collect the removed material in the void or shallow bowl created by the concavity 36. In order
17 to accomplish this action, the user will typically open the case, as seen in FIG. 2, so that the full extent
18 of the projection may be inserted under the nail.

19 **[0027]** From the foregoing, it will be appreciated that the nail file case of the present
20 invention solves problems present in the prior art in an efficient and inexpensive manner. The nail file
21 case may be molded in a single piece from plastic or other polymer compounds. The integrated nail care
22 features described herein may be molded into the case without a large additional expense using plastic
23 material capable of holding a sharp edge. These additional features bring the plastic or foam core nail
24 file back up to the level of the old stainless steel nail files in terms of convenience features, while adding

1 further useful features that were not present in steel files, such as providing a protective carrying case for
2 the nail file. The present invention may, of course, be carried out in other specific ways than those
3 illustrated and described above without departing from the spirit and scope of the invention. The present
4 embodiments are, therefore, to be considered in all respects as illustrated and not restrictive, while the
5 scope of the invention is set forth in the claims that follow.

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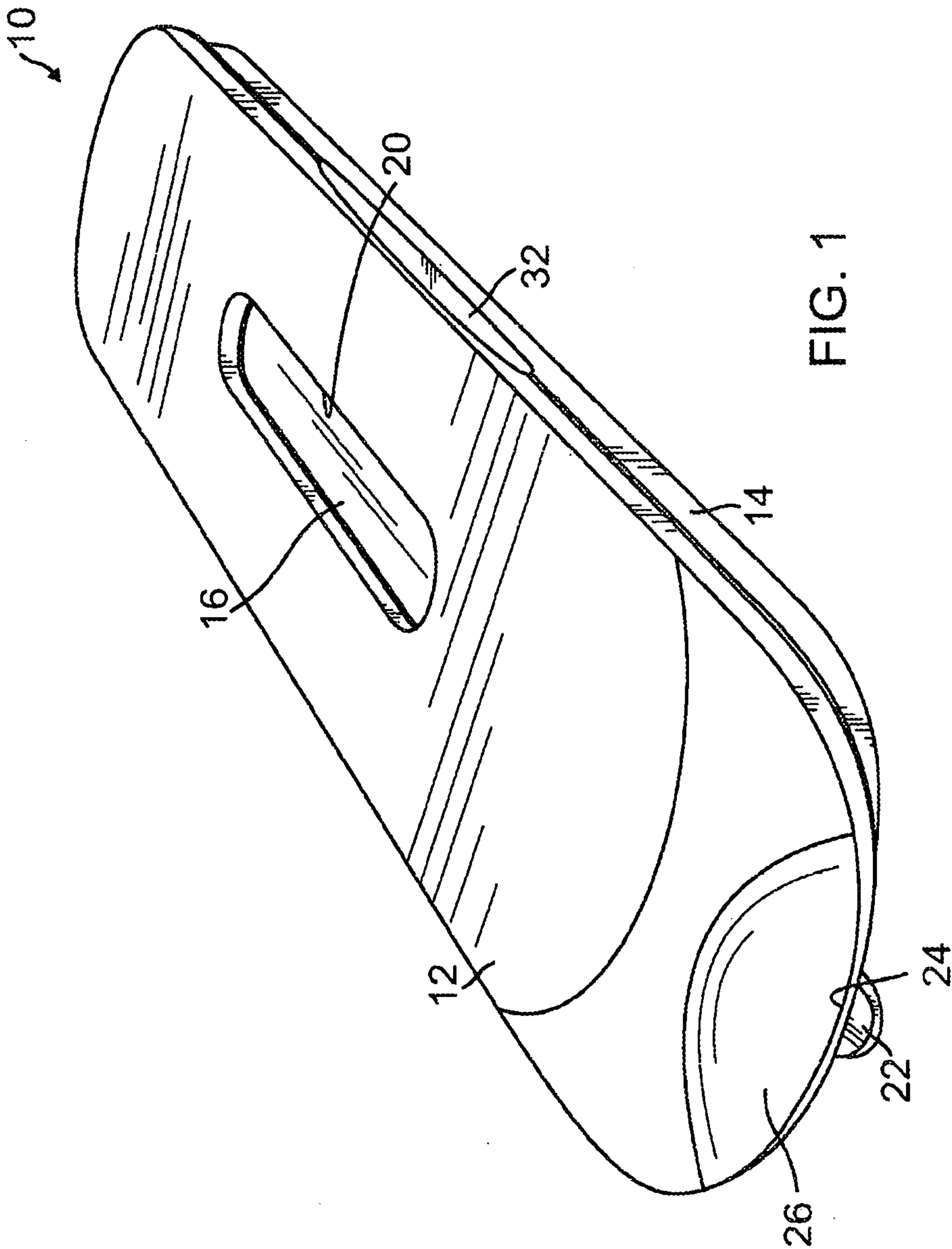
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We claim:

1. A nail file case having two opposed ends and comprising:
 - a base;
 - a lid hingably and closably attached to the base between the two opposed ends such that, when the lid is closed on the base, the base and the lid define a region inside the case and a region outside the case, the region inside the case carrying an abrasive member, the lid further comprising an inner surface that faces the region inside the case, and an opposing outer surface,
 - a slot in the lid, the slot comprising a hole that extends from the inner surface of the lid to the outer surface of the lid, the slot thereby exposing the region inside the case to the region outside the case such that the abrasive member is exposed to the region outside the case when the abrasive member is present in the region inside the case,
 - a blade joined to the lid or the base and joined to one of said two opposed ends and said blade being formed by a concave depression, and
 - a projection joined to the base or the lid and joined to said one of said two opposed ends and said projection having a concavity on its top surface and being adapted to scrape a fingernail and wherein the blade and the projection are in stacked relation to one another on said one of said two opposed ends of the case.
2. The case of claim 1, wherein the base and lid are attached with a flexible hinge.
3. The case of claim 1, wherein the abrasive member is a fingernail file.
4. The case of claim 1, wherein the abrasive member is a buffer.
5. The case of any one of claims 1 to 4, wherein the base further comprises a recess adapted to receive the abrasive member.
6. The case of any one of claims 1 to 4, wherein the lid further comprises a recess adapted to receive the abrasive member.
7. The case of any one of claims 1 to 6, wherein the concave depression of the blade has a radius of curvature between 2.77-4 inches.

8. The case of any one of claims 1 to 7, wherein the concavity of the projection has a radius of curvature between 0.018-0.022 inches.
9. The case of any one of claims 1 to 8, wherein the slot is dimensioned to have a width of between 0.2-0.4 inches, a length between 1.5-2.5 inches, and a depth of 0.05-0.1 inches.
10. The case of any one of claims 1 to 9, wherein the blade is dimensioned to have a length of 0.3-0.5 inches and an edge thickness of 0.02-0.06 inches.
11. The case of any one of claims 1 to 9, wherein the projection is dimensioned to have a length of 0.1-0.3 inches and a width of 0.3-0.6 inches.
12. The case of claims 1 to 11, wherein the slot extends along a centerline of the lid.



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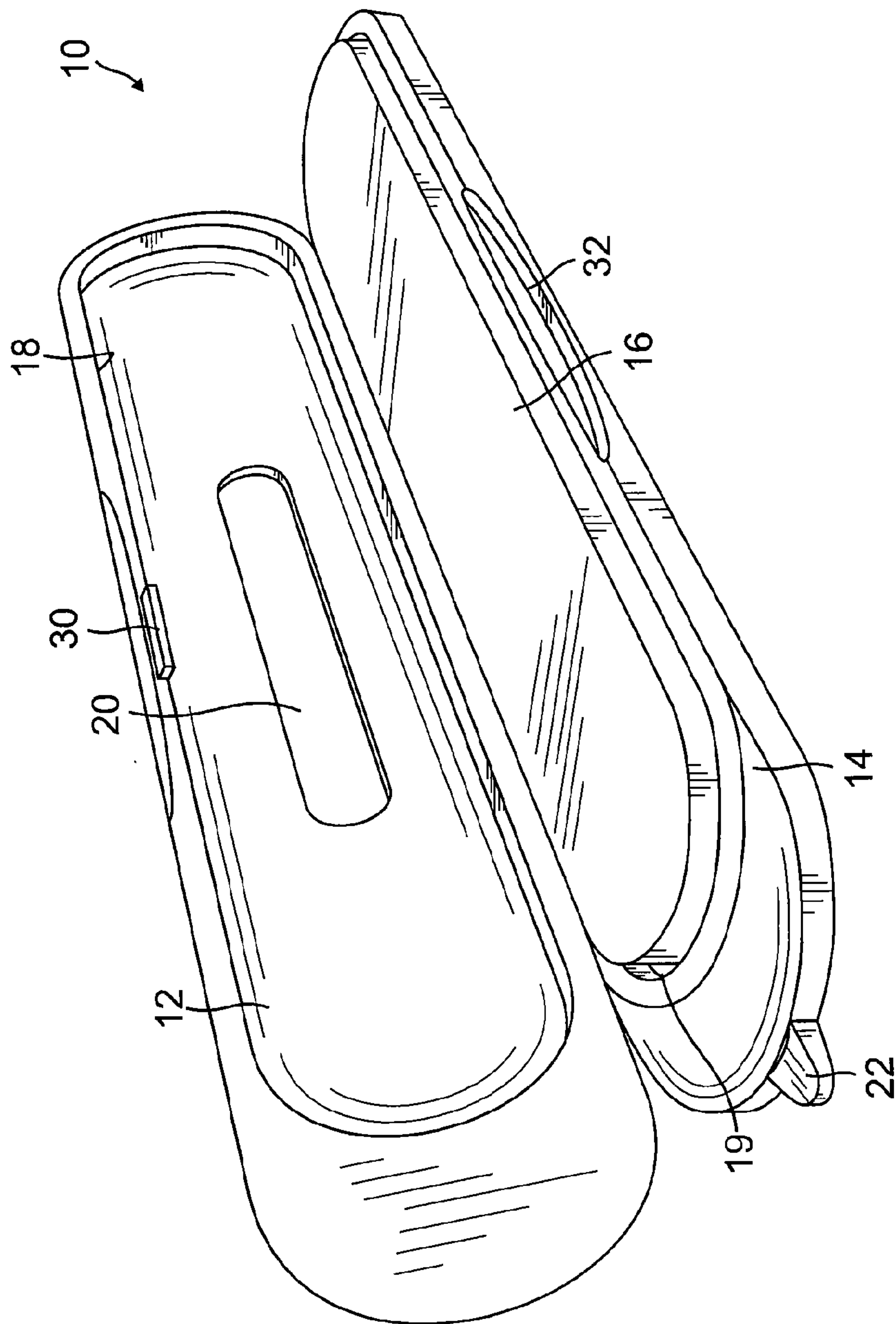


FIG. 2

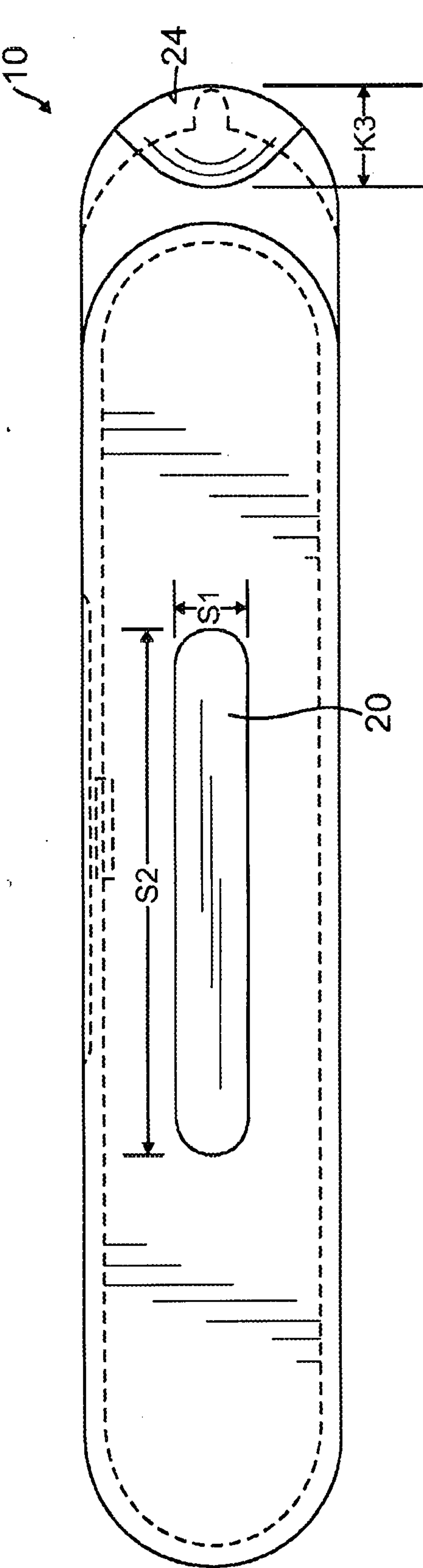


FIG. 3

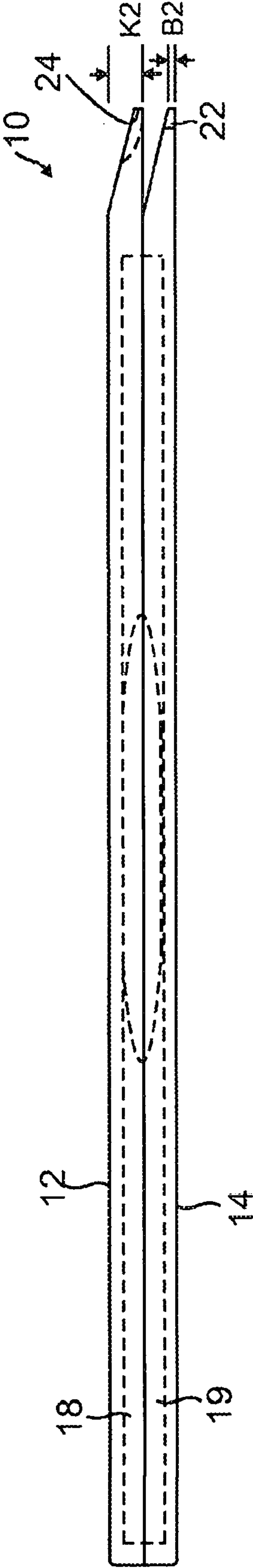
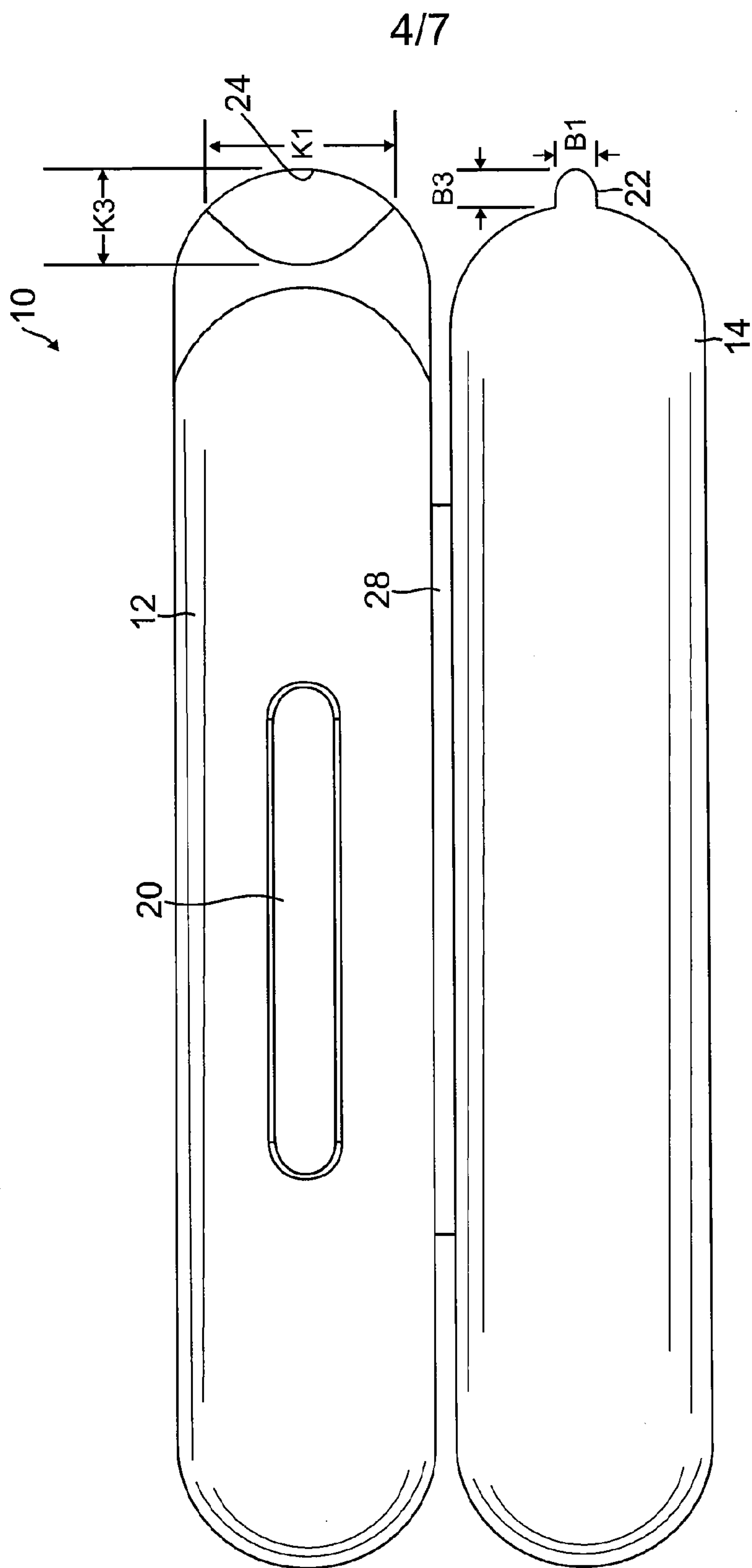
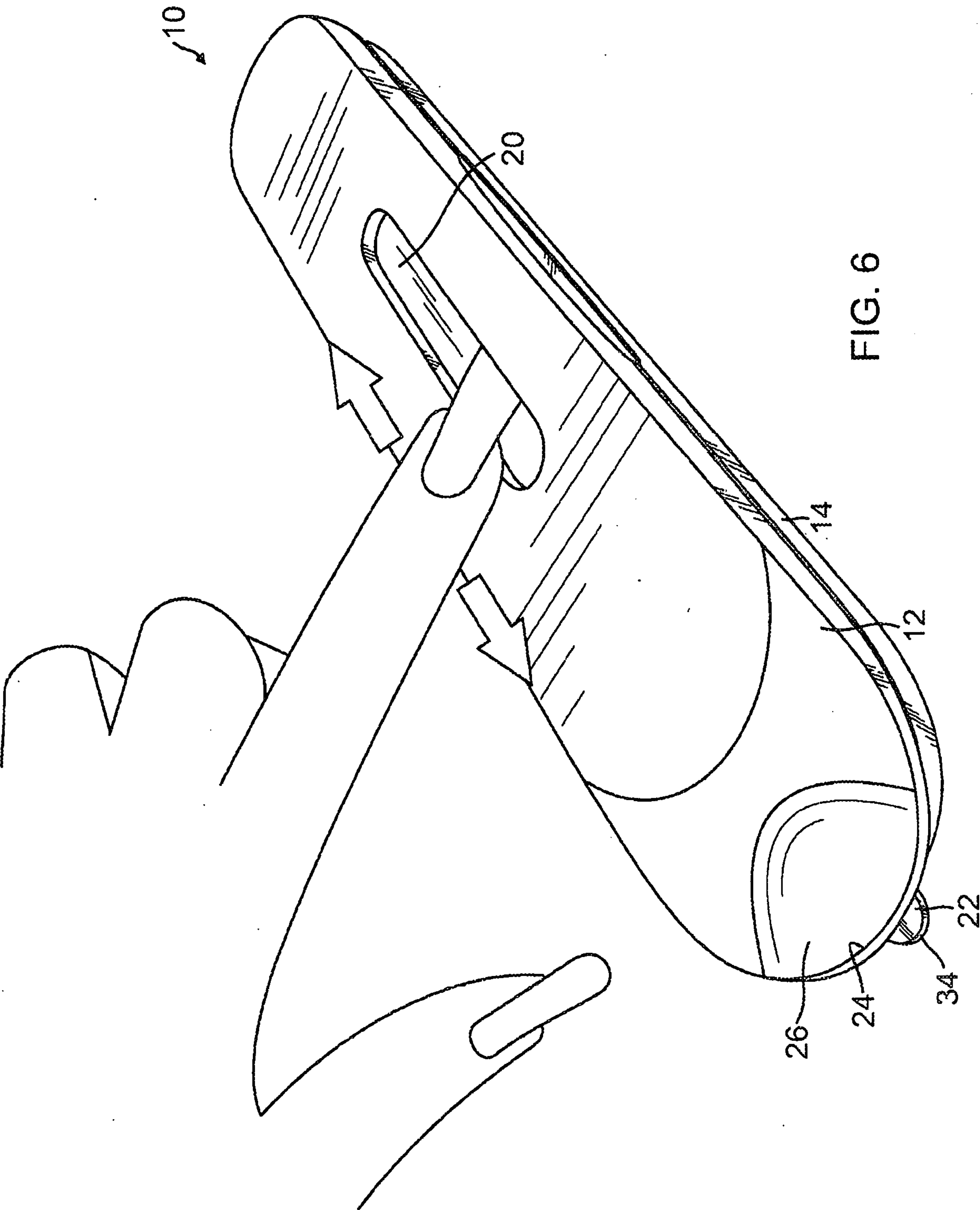


FIG. 4



Replacement Sheet

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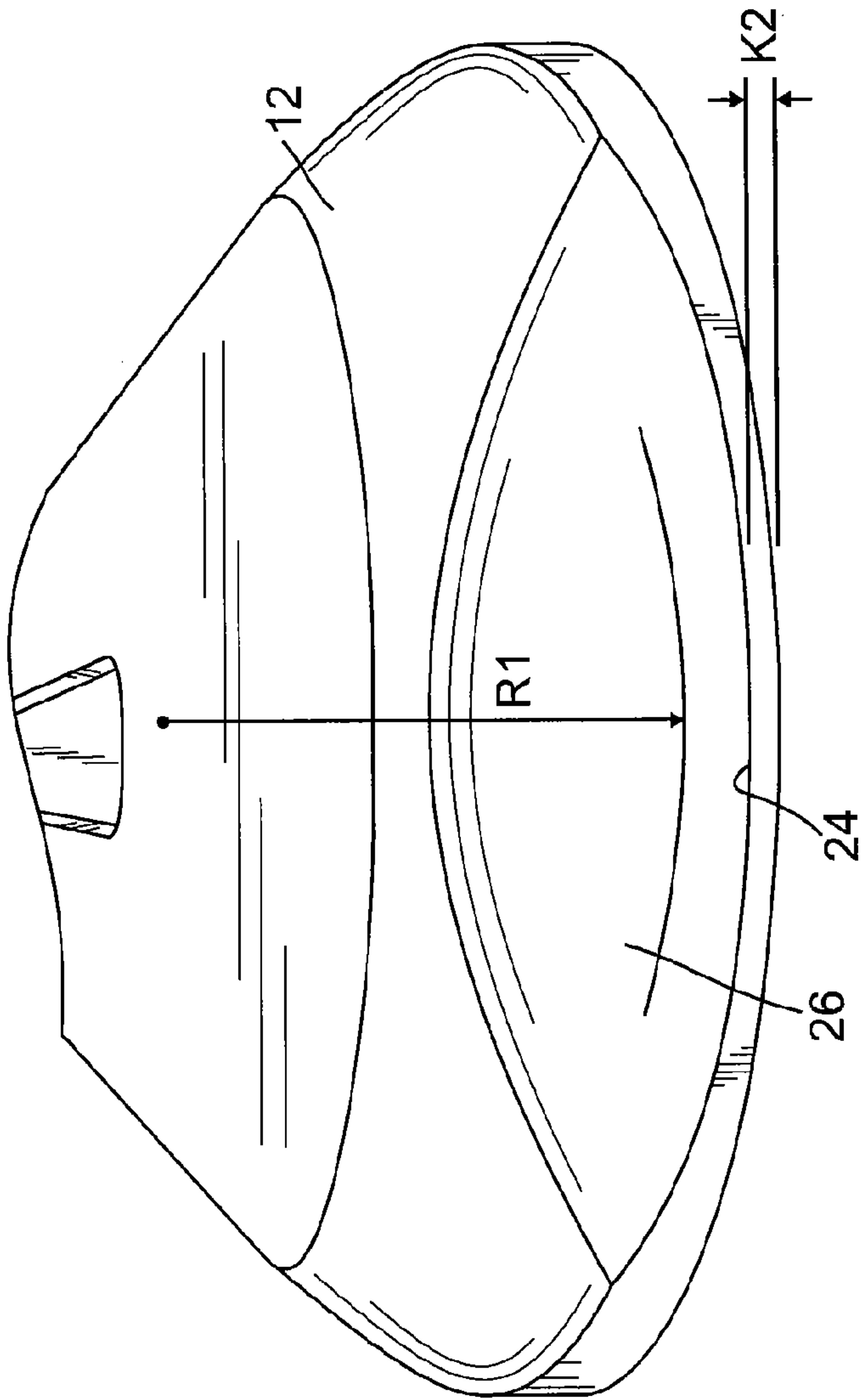


FIG. 7

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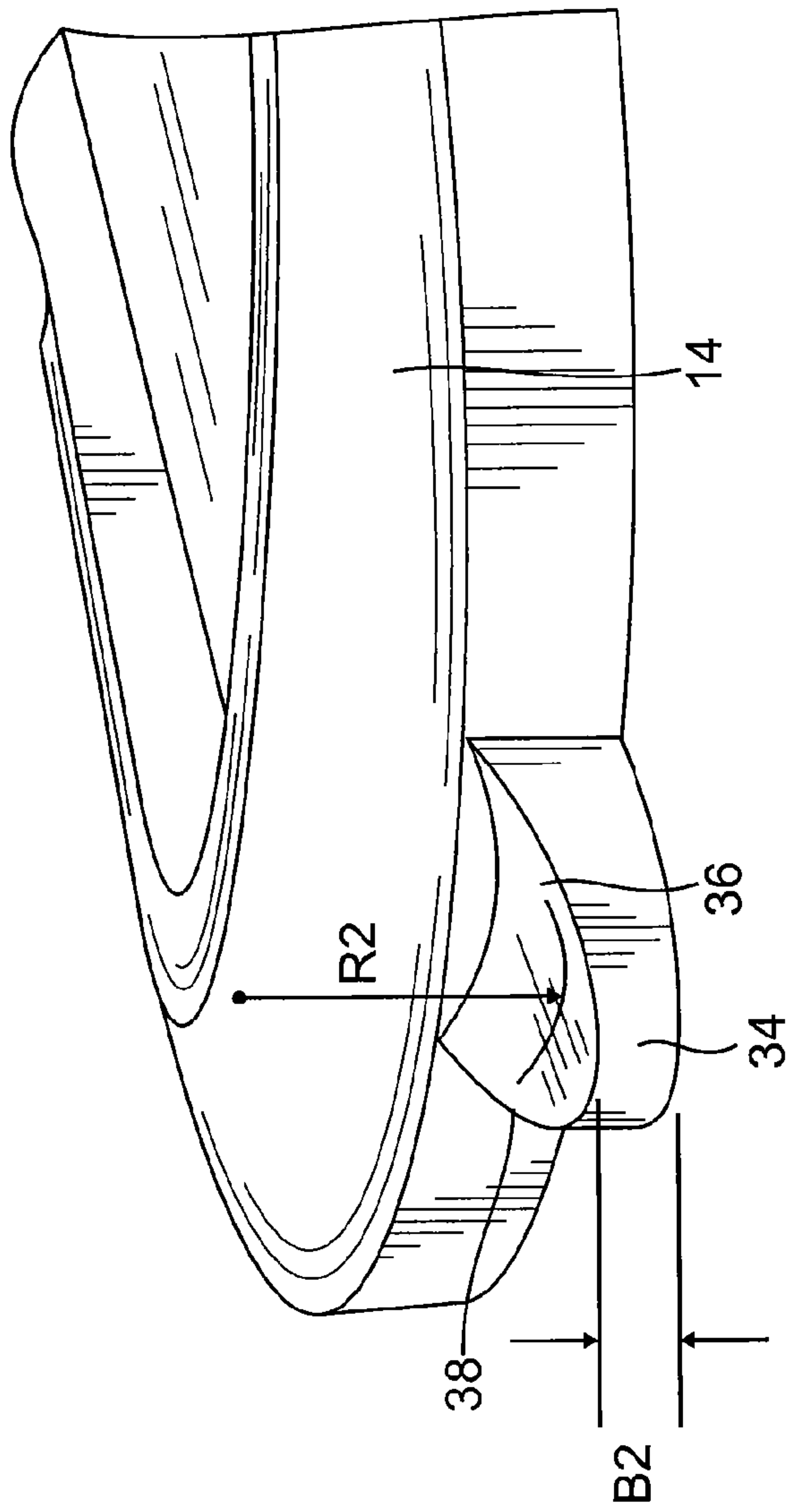


FIG. 8

