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(54) **Title:** LEVER DOOR HANDLE LOCK

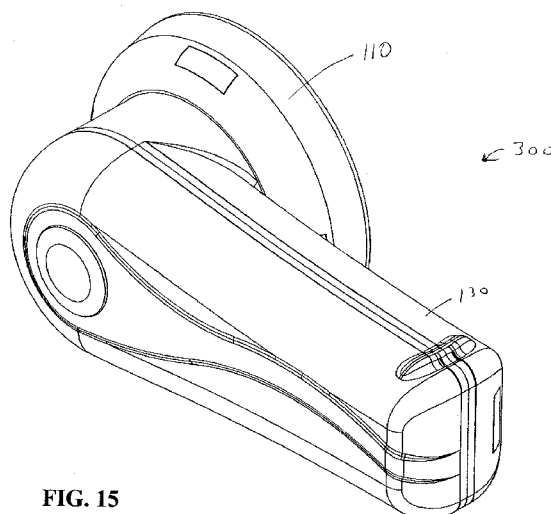


FIG. 15

(57) **Abstract:** A lever door handle lock is provided which includes a base configured to be coupled to a door, a housing coupled to the base and configured to enclose a lever door handle attached to the door, and a locking member coupled to the housing. The locking member has an unlocked position and a locked position. In the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle, and in the locked position, the housing is substantially fixed relative to the base to prevent rotation of a lever door handle. The door handle lock also includes an actuator configured to move the locking member from the locked position to the unlocked position.



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LEVER DOOR HANDLE LOCK

FIELD

The present disclosure is directed to a door handle lock specifically configured for a lever-style door handle.

DISCUSSION OF THE RELATED ART

Various types of door handle locks are known for preventing access through a door. Such locks are generally removably coupled to a door handle and they are designed to “childproof” the door, i.e. to prevent young children from being able to open the door.

Door handle locks are widely available for use with knob-style door handles. Some door handle locks exist for use with a lever-style door handle, but many suffer from also locking the other side of the door handle. Thus, when in a locked position, they prevent access through the door from either side of the door.

SUMMARY

According to one aspect, a lever door handle lock is provided. The lever door handle lock includes a base configured to be coupled to a door and a housing coupled to the base, the housing being configured to substantially enclose a lever door handle attached to the door. The handle lock also includes a locking member coupled to the housing. The locking member has an unlocked position and a locked position. In the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle enclosed within the housing, and in the locked position, the housing is substantially fixed relative to the base to prevent rotation of a lever door handle enclosed within the housing. The door handle lock also includes an actuator coupled to the housing, where the actuator is configured to move the locking member from the locked position to the unlocked position.

According to another aspect, a lever door handle lock is provided. The lever door handle lock includes a base configured to be coupled to a door, the base including at least one notch, a housing coupled to the base, the housing configured to at least partially enclose a lever door handle attached to the door, and a locking member coupled to the

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housing. The locking member has an unlocked position and a locked position. In the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle enclosed within the housing, and in the locked position, a portion of the locking member is moveable into the at least one notch in the base such that the housing is substantially fixed relative to the base to prevent rotation of a lever door handle enclosed within the housing. The door handle lock also includes an actuator coupled to the housing, where the actuator is configured to move the locking member from the locked position to the unlocked position.

According to yet another aspect, a lever door handle lock is provided. The lever door handle lock includes a base configured to be coupled to a door, a housing coupled to the base, the housing configured to substantially enclose a lever door handle attached to the door, and a locking member positioned within the housing, the locking member pivotally coupled to the housing. The locking member has an unlocked position and a locked position. In the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle enclosed within the housing, and in the locked position, the housing is substantially fixed relative to the base to prevent rotation of a lever door handle enclosed within the housing. The door handle lock further includes an actuator coupled to the housing, where the actuator is configured to move the locking member from the locked position to the unlocked position. The locking member is configured to not affect the movement of an opposing lever door handle positioned on an opposite side of the door.

Various embodiments of the present invention provide certain advantages. Not all embodiments of the invention share the same advantages and those that do may not share them under all circumstances.

Further features and advantages of the present invention, as well as the structure of various embodiments that incorporate aspects of the invention are described in detail below with reference to the accompanying drawings.

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BRIEF DESCRIPTION OF DRAWINGS

The foregoing and other objects and advantages of the invention will be appreciated more fully from the following drawings, wherein like reference characters designate like features, in which:

FIG. 1 is a perspective view of a lever door handle lock according to one embodiment;

FIG. 2 is a top view of the lever door handle lock shown in FIG. 1;

FIG. 3 is a front view of the lever door handle lock shown in FIG. 1;

FIG. 4 is an exploded assembly view of the lever door handle lock shown in FIG. 1;

FIGS. 5 and 6 are exploded assembly views of a door handle lock from a right perspective view and a left perspective view;

FIG. 7 is a perspective view of a lever door handle lock according to one embodiment with the housing partially cut away to show a locking member in a locked position;

FIG. 8 is a perspective view of a lever door handle according to one embodiment with the housing partially cut away to show a locking member in an unlocked position;

FIG. 9 is a rear view of the lever door handle shown in FIG. 7 with the locking member in a locked position;

FIG. 10 is a rear view of the lever door handle shown in FIG. 8 with the locking member in an unlocked position;

FIG. 11 is a front view of a lever door handle according to one embodiment with the housing shown partially cut away to show a door handle enclosed by the housing;

FIG. 12 is a perspective view of the lever door handle shown in FIG. 11 with the housing shown partially cut away to show the door handle enclosed by the housing;

FIG. 13 is a perspective view of a locking member according to one embodiment;

FIG. 14 is a perspective view of a portion of the housing of a lever door handle lock according to one embodiment;

FIG. 15 is a perspective view of a lever door handle lock according to another embodiment;

FIG. 16 is a top view of the lever door handle lock shown in FIG. 15;

FIG. 17 is a front view of the lever door handle lock shown in FIG. 15;

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FIG. 18 is an exploded assembly view of the lever door handle lock shown in FIG. 15;

FIG. 19 is a perspective view of a lever door handle lock according to one embodiment with a partial cut-away view to show a locking member in a locked position;

FIG. 20 is a perspective view of a lever door handle according to one embodiment with a partial cut-away view to show a locking member in a locked position;

FIG. 21 is a rear view of the lever door handle shown in FIG. 19 with the locking member in a locked position;

FIG. 22 is a rear view of the lever door handle shown in FIG. 20 with the locking member in an unlocked position;

FIG. 23 is a front view of a lever door handle according to one embodiment with a front portion of the housing removed to show a door handle enclosed by the housing;

FIG. 24 is a perspective view of the lever door handle shown in FIG. 23 with a front portion of the housing removed to show a door handle enclosed by the housing; and

FIG. 25 is a perspective view of a locking member according to one embodiment.

DETAILED DESCRIPTION

Applicant developed a unique handle lock configured for use with a lever-style door handle. As noted above, Applicant recognized that many of the existing commercially available lever door handle locks suffer from locking the door from both sides. Thus, in a locked position, not only does the lock prevent access through the door from one desired side, but it also undesirably prevents access through the other side of the door. Typically, such locks are used to “childproof” and it is only desirable to have the door locked from one side (i.e. the side of the door where the child is located). Thus, one aspect of the invention is directed to a lever door handle lock with a locking member that is configured to not affect the movement of an opposing lever door handle positioned on an opposite side of the door.

Applicant also recognized that some of the existing commercially available lever door handle locks are either difficult to operate and/or less effective at preventing a child from opening the door. Thus, other aspects of the invention are generally directed to a

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handle lock with an improved configuration that is easy for an adult to mount and/or operate, and/or is effective at preventing a child from opening the door.

As set forth in greater detail below, the lever door handle lock may include two primary components, a base and a housing. The base may be coupled to a door and the housing is coupled to the base and may enclose at least a portion of a lever door handle that is attached to the door. In an unlocked position, the housing may be rotatable relative to the base such that the door handle can be rotated to open the door in its normal fashion. In a locked position, the housing may be stationary relative to the base such that the stationary housing prevents movement of the door handle to prevent the door from being opened.

Turning now to the figures, one embodiment of a lever door handle lock 100 will now be described. As illustrated in FIGS. 1-6, the handle lock 100 has a base 10 which is configured to be coupled to a door (not shown), and a housing 30 which is configured to be coupled to the base 10. The housing 30 may be configured to substantially enclose a lever style door handle 200 (see FIGS. 11-12) that is attached to the door. In another embodiment, the housing 30 may be configured to enclose only a portion of a door handle. As shown in FIGS. 4-6, the handle lock 100 has a locking member 80 which is configured to be coupled to the housing 30. The locking member 80 is movable between at least two positions, which may be defined as a first unlocked position (see FIGS. 8 and 10) and a second locked position (see FIGS. 7 and 9). In the unlocked position, the housing 30 is rotatable relative to the base 10 to permit rotation of a lever door handle 200 enclosed within the housing 30, whereas in the locked position, the housing 30 is substantially fixed relative to the base 10 to prevent rotation of the lever door handle 200 enclosed within the housing 30. As shown in FIGS. 2 and 4-6, the lock 100 further includes an actuator 60 coupled to the housing 30. The actuator is configured to move the locking member 80 from the locked position to the unlocked position.

It should be appreciated that the base 10 may be configured to be coupled to a door in a variety of ways, as the invention is not limited in this respect. In one embodiment, an adhesive may be used to secure the base 10 to a door, such as a double-sided tape. In another embodiment, a fastener such as, but not limited to, screws or nails may be used.

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In one illustrative embodiment, the base 10 includes a plurality of components, including a mounting plate 12 which may be configured to be directed coupled to a door, and a collar 14 which is configured to be coupled to both the mounting plate 12 and the housing 30. In one illustrative embodiment, the collar 14 is substantially annular-shaped, but other shapes are also contemplated. The mounting plate 12 may include one or more latches 16 which mate with corresponding slots 18 in the collar 14 to attach the collar 14 to the mounting plate 12. As shown, the mounting plate 12 and the collar 14 may each include an opening such that they can be placed around the door handle. It should also be appreciated that in another embodiment, the base 10 may be made of one component, and in another embodiment, the base 10 may be made of more than two components, as the invention is not so limited.

As mentioned above, the base 10 is fixed relative to the door and the door handle 200, and the housing 30 is rotatable relative to the base 10. In one embodiment, the base 10, and in particular, the collar 14 of the base 10 includes an annular lip or flange 22 that is configured to engage with the outer rim 42 of the housing 30 such that the housing 30 can rotate relative to the base 10. One of ordinary skill in the art would appreciate that there are other various ways in which the housing 30 may be configured to be rotatable relative to the base 10, and the invention is not so limited.

The base 10 may include at least one feature that is configured to interact with the locking member 80 to prevent rotation of the housing 30 relative to the base 10 when the locking member 80 is in the locked position. As shown in FIGS. 5-6, in one embodiment, the base includes at least one notch 20, and in the locked position, at least a portion of the locking member 80 is moveable into the notch 20 to prevent movement of the housing 30 relative to the base 10. As set forth in greater detail below, in one embodiment, the locking member 80 includes a pin 84 configured to selectively engage the notch 20.

In one illustrative embodiment, the locking member 80 is pivotally coupled to the housing 30 and the locking member 80 pivots between the locked position and the unlocked position. As shown in FIGS. 4-6, 13 and 14, the locking member 80 may pivot about pivot pin 82. As also shown in FIGS. 4-6 and 14, the housing 30 may include one or more circular recesses 40 configured to receive the pivot pin 82 such that the locking member 80 is pivotally attached to the housing 30. In another embodiment, it is also

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contemplated that the locking member moves linearly between the locked position and the unlocked position. It is also contemplated that the locking member 80 is configured to move both linearly and pivotally between the locked position and the unlocked position, as the invention is not necessarily so limited.

The actuator 60 moves the locking member 80 from the locked position to the unlocked position. In one illustrative embodiment, the actuator 60 is linearly slideable relative to the locking member 80 to adjust the position of the locking member 80. As set forth below, the actuator 60 may be linearly slideable relative to the locking member 80 to pivot the locking member 80 from the locked position to the unlocked position.

Turning now to FIGS. 7-10, the interaction between the actuator 60 and the locking member 80 in some embodiments will now be discussed in greater detail. FIGS. 7 and 9 illustrate the lock 100 in a locked position, whereas FIGS. 8 and 10 illustrate corresponding views of the lock 100 in an unlocked position. In FIGS. 7-10, the housing 30 is shown partially cut away to illustrate the components therein. As the actuator 60 moves from its position shown in FIGS. 7 and 9, away from the pivot pin 82 of the locking member 80, and toward its position shown in FIGS. 8 and 10, the locking member 80 rotates in a counterclockwise direction about its pivot pin 82, with respect to the front views shown in FIGS. 7-8. As shown, this counterclockwise movement of the locking member 80 causes the locking pin 84 on the locking member 80 to move from a locked position within the notch 20 in the base 10 to an unlocked position outside of the notch 20. Once the locking pin 84 is disengaged from the notch 20, the housing 30 is rotatable relative to the base 10, thus, unlocking the lock 100. As also shown in FIGS. 7-10, as the actuator 60 moves back toward the pivot pin 82 of the locking member 80 and toward its position shown in FIGS. 7 and 9, the locking member 80 rotates in a clockwise direction about its pivot pin 82, with respect to the front views shown in FIGS. 7-8. As shown, this clockwise movement of the locking member 80 causes the locking pin 84 to move back into the notch 20, thus locking the lock 100 and preventing rotation of the housing 30 relative to the base 10.

In one embodiment, the locking member 80 is biased in the locked position. As shown in FIGS. 7-8 and 13, the locking member may include a spring 88 configured to bias the locking member in its locked position. One of ordinary skill in the art would readily appreciate that the locking member 80 may be biased in various ways, including,

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but not limited to leaf springs, helical springs, flip springs and living hinges. It is also contemplated that the locking member may be biased in the unlocked position. In some embodiments, the actuator may be arranged such that the actuator can move the locking member both from the locked position to the unlocked position, and from the unlocked position to the locked position.

As shown in FIGS. 7-8, the actuator may include a button 60 and a track 62. The end of the track 62 may include an arm 64 that is configured to interact with the locking member 80. As illustrated in FIGS. 13-14, the locking member 80 may include a first end, which may be configured as a locking pin 84 to interact with the base 10. The locking member 80 may also include a second end configured to interact with the arm 64 of the actuator 60. In this particular illustrative embodiment, the locking member 80 pivots about a pivot pin 82 that is positioned between the first end and the second end of the locking member. As shown, the pivot pin 82 may be approximately equally spaced between the first and second ends of the locking member 80. In one embodiment, the second end of the locking member 80 includes a ramp 86 which is configured to interact with the arm 64 of the actuator 60. As mentioned above, the first end of the locking member 80 may include a locking pin 84 configured to engage the base 10 in the locked position, and may for example, interact with a notch 20 on the base.

As noted above, one aspect of the invention is directed to a lever door handle lock with a locking member that is configured to not affect the movement of an opposing lever door handle positioned on an opposite side of the door. Many conventional doors are arranged such that the two door handles move together. Thus, locking one side locks the other side. The locking member 80 is configured to not affect the movement of an opposing lever door handle positioned on an opposite side of the door. As shown in FIGS. 7-10, in a locked position, the locking member 80 is configured to prevent movement of the door handle 200. However, the locking member 80 is configured such that rotation of a door handle on the other side of the door will move the locking member 80 into the unlocked position such that the door can be opened.

As mentioned above, the actuator 60 may be configured to linearly slide relative to the locking element 80. In one embodiment, the actuator 60 is configured to be moveable in at least two directions to move the locking member 80 from the locked position to the unlocked position. The two directions may be substantially perpendicular

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to each other. For example, the actuator 60 may be configured as a button which must be both pressed in a direction perpendicular to the track 62 and slid in a direction substantially parallel to the track 62. In one embodiment the actuator 60 is configured to include multiple components such as a cam and a cam follower. Such a configuration may enable an adult to readily lock and unlock the locking member 80 with one hand. It is also contemplated that such a configuration which requires the actuator 60 to be moved in two different directions would be more difficult for a young child to operate. It should be appreciated that other types of actuators are also contemplated as the invention is not necessarily limited in this respect.

As shown in FIGS. 2 and 4-10, in one illustrative embodiment, the actuator 60 is positioned on a rear side of the housing 30. In this respect, the actuator may not be readily visible from the front of the lock 100, as shown in FIGS. 1 and 3. It is contemplated that such a configuration would prevent a young child from attempting to move the actuator 60 to unlock the door.

In another embodiment, as illustrated in Figures 15-26, a lever door handle lock 300 includes an actuator 160 which moves in a direction perpendicular to the length of the housing 130. In the embodiment illustrated in Figures 1-14, the actuator moves in a direction along the length of the housing. Of course, in other embodiments, the actuator may be configured to move in a direction other than shown in the illustrated embodiments. For example, in some embodiments, the actuator may move at an angle relative to the housing length that is other than a ninety degree angle. In other embodiments, the actuator may move along a curved path. In still further embodiments, the actuator may move only in and out of the housing such that the actuator does not move relative to the height or length of the housing.

FIGS. 15-17 show one embodiment of a housing 130, a base 110, and the actuator 160. An exploded view of the lock 300 is shown in FIG. 18. The locking arrangement operates in a similar manner to the embodiments described above. A locking member 180 is pivotally coupled to the housing 130 and the locking member 180 pivots between a locked position and an unlocked position about a pivot pin 182. The actuator 160 is linearly slideable relative to the locking member 180 to adjust the position of the locking member 180. For example, movement of the actuator may pivot the locking member 180 between the locked position and the unlocked position.

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FIGS. 19, 21, 23 and 24 show the lock 300 in a locked position, while FIGS. 20 and 22 show corresponding views of the lock in an unlocked position. As the actuator 160 moves downwardly from its position shown in FIGS. 19, 21, 23 and 24 toward the position shown in FIGS. 20 and 22, the locking member rotates in a clockwise direction about its pivot pin 182 with respect to the front views shown in FIGS. 19 and 20. This clockwise movement of the locking member 180 causes a locking pin 184 to move from the locked position within a notch 120 to the unlocked position outside of the notch 120, similar to the operation of the embodiments described above with reference to FIGS. 1-14.

The actuator 160 may include an arm 164 which pushes on the locking member to bring about the rotation. Of course, other suitable arrangements may be used to actuate movement of the locking member. For example, in some embodiments, a squeeze actuator may be used such that two actuator components are moved toward one another simultaneously to move the locking member from the locked position to the unlocked position.

The locking member 180 may be biased toward the locked position, for example by a spring 188 as shown in FIG. 25, or by any other suitable means.

In some embodiments, the actuator 160 may require a force and/or movement toward the inside of the housing 130. For example, the actuator may include a button that needs to be pushed before the actuator is linearly moveable to push on the locking member. The requirement that the actuator 160 be moved in two different directions may make actuation by a young child more difficult. In still further embodiments, a button or other push-type actuator may be used alone to move the locking element.

To facilitate installation of the base 110 around a rose of the door handle, one or more breakoff assemblies 202 may be included, as shown in FIG. 21 by way of example. The breakoff assemblies may be formed with any suitable material, such as metal or plastic, and include score lines or cutouts which allow an installer to selectively remove one or more breakoff portions 204. In this manner, the installer can adjust the internal dimensions of a mounting plate 112 to suitably fit the rose of the door handle. For example, when installing the mounting plate 112 around a circular door handle rose, the installer can remove breakoff portions from the mounting plate 112 until the mounting plate fits around the rose, and then the remainder of the breakoff assemblies can be used

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to center the mounting plate 112. The mounting plate can then be mounted with screws through holes 114, double-sided tape, or any other suitable mounting method.

While four breakoff assemblies are shown in FIG. 21, one, two, three, or five or more breakoff assemblies may be used in some embodiments. In certain configurations, the breakoff assemblies may permit the installer to fit the mounting plate 112 around a non-circular rose or other door handle component. In some embodiments, the breakoff portions may be curved such that they follow the contour of a door handle rose. For example, each breakoff portion could have a radius of curvature that would match a door handle rose.

The housing 30 may be configured in a variety of ways, as the invention is not necessarily limited in this respect. In one illustrative embodiment, the housing 30 includes at least a first portion 34 and a second portion 36 which are configured to together substantially receive a lever door handle 200. Such a configuration may more easily enable the housing to substantially enclose the handle 200. As shown in FIGS. 4-6, the first portion 34 may form a top portion and the second portion 36 may form a bottom portion which may, for example, snap together. In one illustrative embodiment, the housing 30 further includes a third portion 38 which is configured to be removably coupled to the first and second portions 34, 36 to selectively access a portion of the lever door handle when the housing 30 encloses the handle 200. The third portion 38 may be configured to align with a key hole (not shown) on the door 200, such that the key hole can be accessed even when the lock 100 is coupled to the door handle 200.

The housing 30 may include one or more features designed to assist a user operating the lock 100. For example, as shown in FIGS. 1-3, in one embodiment, the housing 30 may include at least one flange 32 configured for a user to grip when the housing 30 is being rotated. The housing 30 may also include one or more internal ribs for strength.

In one embodiment, the lever door handle lock 100 is configured to be used with both a lever door handle that is configured to pivot in a clockwise direction and a lever door handle that is configured to pivot in a counterclockwise direction (i.e. with double doors, one door handle is configured to pivot in one direction and the door handle on the other door is configured to pivot in the opposite direction). In this respect, the lock 100 is versatile and can be used with either type of door handle. In one embodiment, one or

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more portions of the lock 100 are configured with features that are configured to be a substantially mirror image of another feature such that the components can be rotated around depending upon the orientation of the door handle. For example, as shown in FIGS. 9-10, the base 10 may include at least two notches 20. As shown, one notch 20 is configured to interact with the locking member 80, and the other notch is configured to interact with the locking member 80 if the lock 100 was oriented in the opposite direction. Additionally, the first portion 34 of the housing 30 may be configured to be a substantially mirror image of the second portion 36 of the housing 30. As mentioned above, the second portion 36 of the housing 30 may include a circular recess 40 configured to receive the pivot pin 82 to pivotally attach the locking member 80 to the housing 30. A similar recess 40 may be provided on the first portion 34 of the housing 30 to receive the pivot pin 82 if the lock 100 was oriented in the opposite direction. Furthermore, the flanges 32 may be located on both portions 34, 36 of the housing 30.

The above described components of the lever door handle lock may be made of a variety of different materials. In one embodiment, one or more components are made from plastic.

It should be appreciated that various embodiments of the present invention may be formed with one or more of the above-described features. The above aspects and features of the invention may be employed in any suitable combination as the present invention is not limited in this respect. It should also be appreciated that the drawings illustrate various components and features which may be incorporated into various embodiments of the present invention. For simplification, some of the drawings may illustrate more than one optional feature or component. However, the present invention is not limited to the specific embodiments disclosed in the drawings. It should be recognized that the present invention encompasses embodiments which may include only a portion of the components illustrated in any one drawing figure, and/or may also encompass embodiments combining components illustrated in multiple different drawing figures.

It should be understood that the foregoing description of various embodiments of the invention are intended merely to be illustrative thereof and that other embodiments, modifications, and equivalents of the invention are within the scope of the invention recited in the claims appended hereto.

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CLAIMS

1. A lever door handle lock comprising:
a base configured to be coupled to a door;
a housing coupled to the base, the housing configured to substantially enclose a lever door handle attached to the door;
a locking member coupled to the housing, the locking member having an unlocked position and a locked position, wherein in the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle enclosed within the housing, and wherein in the locked position, the housing is substantially fixed relative to the base to prevent rotation of a lever door handle enclosed within the housing; and
an actuator coupled to the housing, wherein the actuator is configured to move the locking member from the locked position to the unlocked position.
2. The lever door handle lock of claim 1, wherein the locking member is pivotally coupled to the housing such that the locking member pivots between the locked position and the unlocked position.
3. The lever door handle lock of claim 1, wherein the locking member is biased toward the locked position.
4. The lever door handle lock of claim 1, further comprising at least one notch in the base, wherein in the locked position, a portion of the locking member is moveable into the at least one notch in the base such that the housing is substantially fixed relative to the base to prevent rotation of the lever door handle enclosed within the housing.
5. The lever door handle lock of claim 1, wherein the actuator is linearly slideable relative to the locking member to adjust the position of the locking member.

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6. The lever door handle lock of claim 2, wherein the actuator is linearly slideable relative to the locking member to pivot the locking member from the locked position to the unlocked position.

7. The lever door handle lock of claim 6, wherein the actuator is linearly slideable in a direction along the length of the housing.

8. The lever door handle lock of claim 6, wherein the actuator is linearly slideable in a direction perpendicular to the length of the housing.

9. The lever door handle lock of claim 1, wherein the actuator is a button which is configured to be movable in two directions to move the locking member from the locked position to the unlocked position, wherein the two directions are substantially perpendicular to each other.

10. The lever door handle lock of claim 1, wherein the housing includes at least a first portion and a second portion which are configured to together substantially receive a lever door handle.

11. The lever door handle lock of claim 10, wherein the housing further includes a third portion which is configured to be removably coupled to the first and second portions of the housing to selectively access a portion of the lever door handle.

12. The lever door handle lock of claim 1, wherein the actuator is positioned on a rear side of the housing.

13. The lever door handle lock of claim 1, wherein the actuator includes a button and a track.

14. The lever door handle lock of claim 1, wherein the base further includes: a mounting plate configured to be directly coupled to a door; and

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a substantially annular-shaped collar configured to be coupled to the mounting plate and the housing.

15. The lever door handle lock of claim 1, wherein the housing includes at least one flange configured for a user to grip when the housing is rotated.

16. The lever door handle lock of claim 1, wherein the lever door handle lock is configured to be used with both a lever door handle that is configured to pivot in a clockwise direction and a lever door handle that is configured to pivot in a counterclockwise direction.

17. The lever door handle lock of claim 2, wherein the locking member further comprises:

- a first end configured to interact with the base in the locked position;
- a second end configured to interact with the actuator; and
- a pivot pin positioned between the first end and the second end.

18. The lever door handle lock of claim 17, wherein the first end of the locking member includes a pin configured to engage the base in the locked position.

19. The lever door handle lock of claim 17, wherein the second end of the locking member includes a ramp configured to interact with the actuator.

20. The lever door handle lock of claim 17, wherein the locking member further comprises a spring configured to bias the locking member toward the locked position.

21. A lever door handle lock comprising:
a base configured to be coupled to a door, the base including at least one notch;
a housing coupled to the base, the housing configured to at least partially enclose a lever door handle attached to the door;

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a locking member coupled to the housing, the locking member having an unlocked position and a locked position, wherein in the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle enclosed within the housing, and wherein in the locked position, a portion of the locking member is moveable into the at least one notch in the base such that the housing is substantially fixed relative to the base to prevent rotation of a lever door handle enclosed within the housing;

an actuator coupled to the housing, wherein the actuator is configured to move the locking member from the locked position to the unlocked position.

22. The lever door handle lock of claim 21, wherein the locking member is pivotally coupled to the housing such that the locking member pivots between the locked position and the unlocked position.

23. The lever door handle lock of claim 21, wherein the locking member is biased toward the locked position.

24. The lever door handle lock of claim 21, wherein the actuator is linearly slideable relative to the locking member to adjust the position of the locking member.

25. The lever door handle lock of claim 22, wherein the actuator is linearly slideable relative to the locking member to pivot the locking member from the locked position to the unlocked position.

26. The lever door handle lock of claim 25, wherein the actuator is linearly slideable in a direction along the length of the housing.

27. The lever door handle lock of claim 25, wherein the actuator is linearly slideable in a direction perpendicular to the length of the housing.

28. The lever door handle lock of claim 21, wherein the actuator is a button which is configured to be movable in two directions to move the locking member from

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the locked position to the unlocked position, wherein the two directions are substantially perpendicular to each other.

29. The lever door handle lock of claim 21, wherein the housing includes at least a first portion and a second portion which are configured to together substantially receive a lever door handle.

30. The lever door handle lock of claim 21, wherein the housing further includes a third portion which is configured to be removably coupled to the first and second portions of the housing to selectively access a portion of the lever door handle.

31. The lever door handle lock of claim 21, wherein the actuator is positioned on a rear side of the housing.

32. The lever door handle lock of claim 21, wherein the actuator includes a button and a track.

33. The lever door handle lock of claim 21, wherein the base further includes:
a mounting plate configured to be directly coupled to a door; and
a substantially annular-shaped collar configured to be coupled to the mounting plate and the housing.

34. The lever door handle lock of claim 21, wherein the housing includes at least one flange configured for a user to grip when the housing is rotated.

35. The lever door handle lock of claim 21, wherein the lever door handle lock is configured to be used with both a lever door handle that is configured to pivot in a clockwise direction and a lever door handle that is configured to pivot in a counterclockwise direction.

36. The lever door handle lock of claim 22, wherein the locking member further comprises:

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a first end configured to interact with the base in the locked position;
a second end configured to interact with the actuator; and
a pivot pin positioned between the first end and the second end.

37. The lever door handle lock of claim 36, wherein the first end of the locking member includes a pin configured to engage the at least one notch in the base in the locked position.

38. The lever door handle lock of claim 36, wherein the second end of the locking member includes a ramp configured to interact with the actuator.

39. The lever door handle lock of claim 36, wherein the locking member further comprises a spring configured to bias the locking member toward the locked position.

40. A lever door handle lock comprising:
a base configured to be coupled to a door;
a housing coupled to the base, the housing configured to substantially enclose a lever door handle attached to the door;
a locking member positioned within the housing, the locking member pivotally coupled to the housing, the locking member having an unlocked position and a locked position, wherein in the unlocked position, the housing is rotatable relative to the base to permit rotation of a lever door handle enclosed within the housing, and wherein in the locked position, the housing is substantially fixed relative to the base to prevent rotation of a lever door handle enclosed within the housing;

an actuator coupled to the housing, wherein the actuator is configured to move the locking member from the locked position to the unlocked position; and

wherein the locking member is configured to not affect the movement of an opposing lever door handle positioned on an opposite side of the door.

41. The lever door handle lock of claim 40, wherein the locking member is biased toward the locked position.

- 19 -

42. The lever door handle lock of claim 40, further comprising at least one notch in the base, wherein in the locked position, a portion of the locking member is moveable into the at least one notch in the base such that the housing is substantially fixed relative to the base to prevent rotation of the lever door handle enclosed within the housing.

43. The lever door handle lock of claim 40, wherein the actuator is linearly slideable relative to the locking member to pivot the locking member from the locked position to the unlocked position.

44. The lever door handle lock of claim 43, wherein the actuator is linearly slideable in a direction along the length of the housing.

45. The lever door handle lock of claim 43, wherein the actuator is linearly slideable in a direction perpendicular to the length of the housing.

46. The lever door handle lock of claim 40, wherein the actuator is a button which is configured to be movable in two directions to move the locking member from the locked position to the unlocked position, wherein the two directions are substantially perpendicular to each other.

47. The lever door handle lock of claim 40, wherein the housing includes at least a first portion and a second portion which are configured to together substantially receive a lever door handle.

48. The lever door handle lock of claim 47, wherein the housing further includes a third portion which is configured to be removably coupled to the first and second portions of the housing to selectively access a portion of the lever door handle.

49. The lever door handle lock of claim 40, wherein the actuator is positioned on a rear side of the housing.

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50. The lever door handle lock of claim 40, wherein the actuator includes a button and a track.

51. The lever door handle lock of claim 40, wherein the base further includes:
a mounting plate configured to be directly coupled to a door; and
a substantially annular-shaped collar configured to be coupled to the mounting plate and the housing.

52. The lever door handle lock of claim 40, wherein the housing includes at least one flange configured for a user to grip when the housing is rotated.

53. The lever door handle lock of claim 40, wherein the lever door handle lock is configured to be used with both a lever door handle that is configured to pivot in a clockwise direction and a lever door handle that is configured to pivot in a counterclockwise direction.

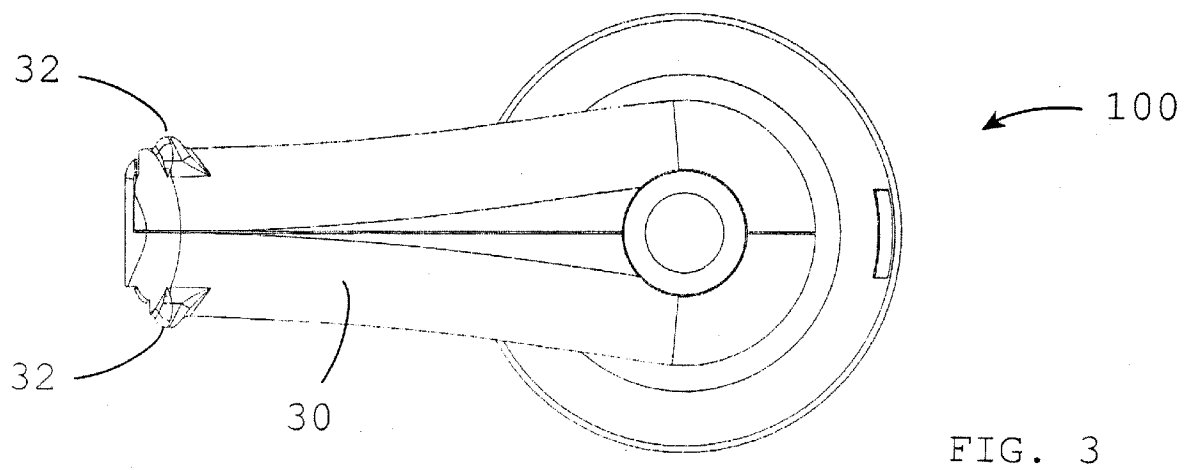
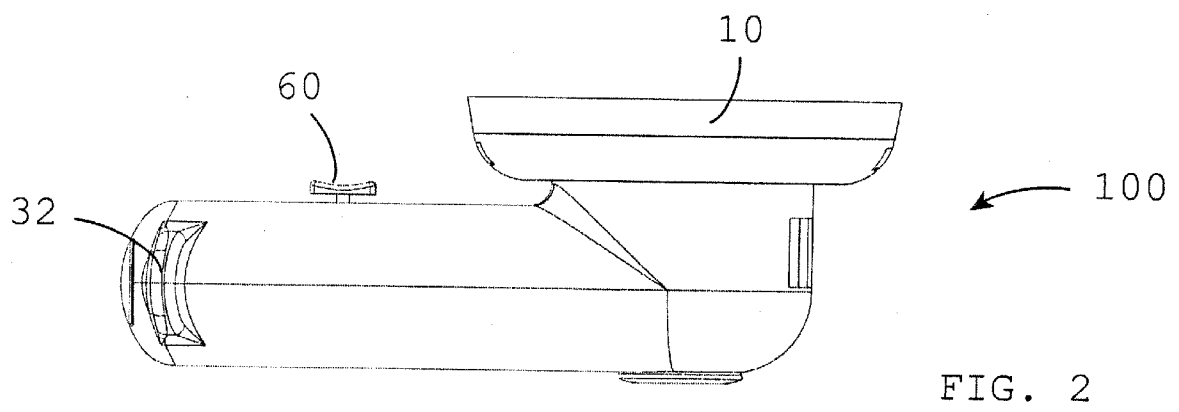
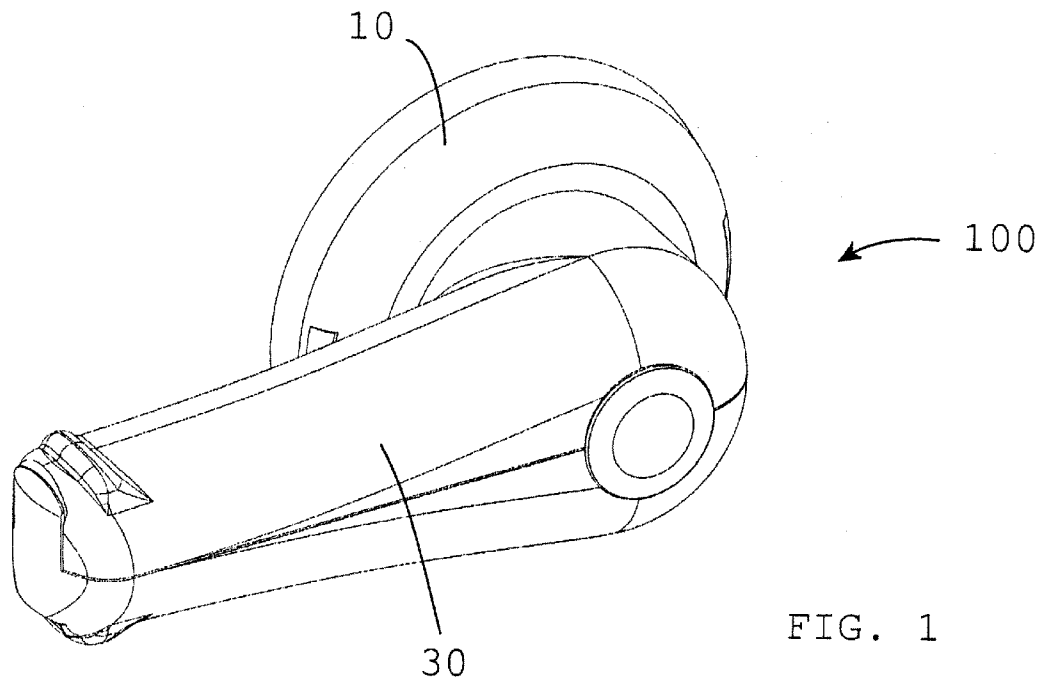
54. The lever door handle lock of claim 40, wherein the locking member further comprises:

a first end configured to interact with the base in the locked position;
a second end configured to interact with the actuator; and
a pivot pin positioned between the first end and the second end.

55. The lever door handle lock of claim 54, wherein the first end of the locking member includes a pin configured to engage the base in the locked position.

56. The lever door handle lock of claim 54, wherein the second end of the locking member includes a ramp configured to interact with the actuator.

57. The lever door handle lock of claim 54, wherein the locking member further comprises a spring configured to bias the locking member toward the locked position.



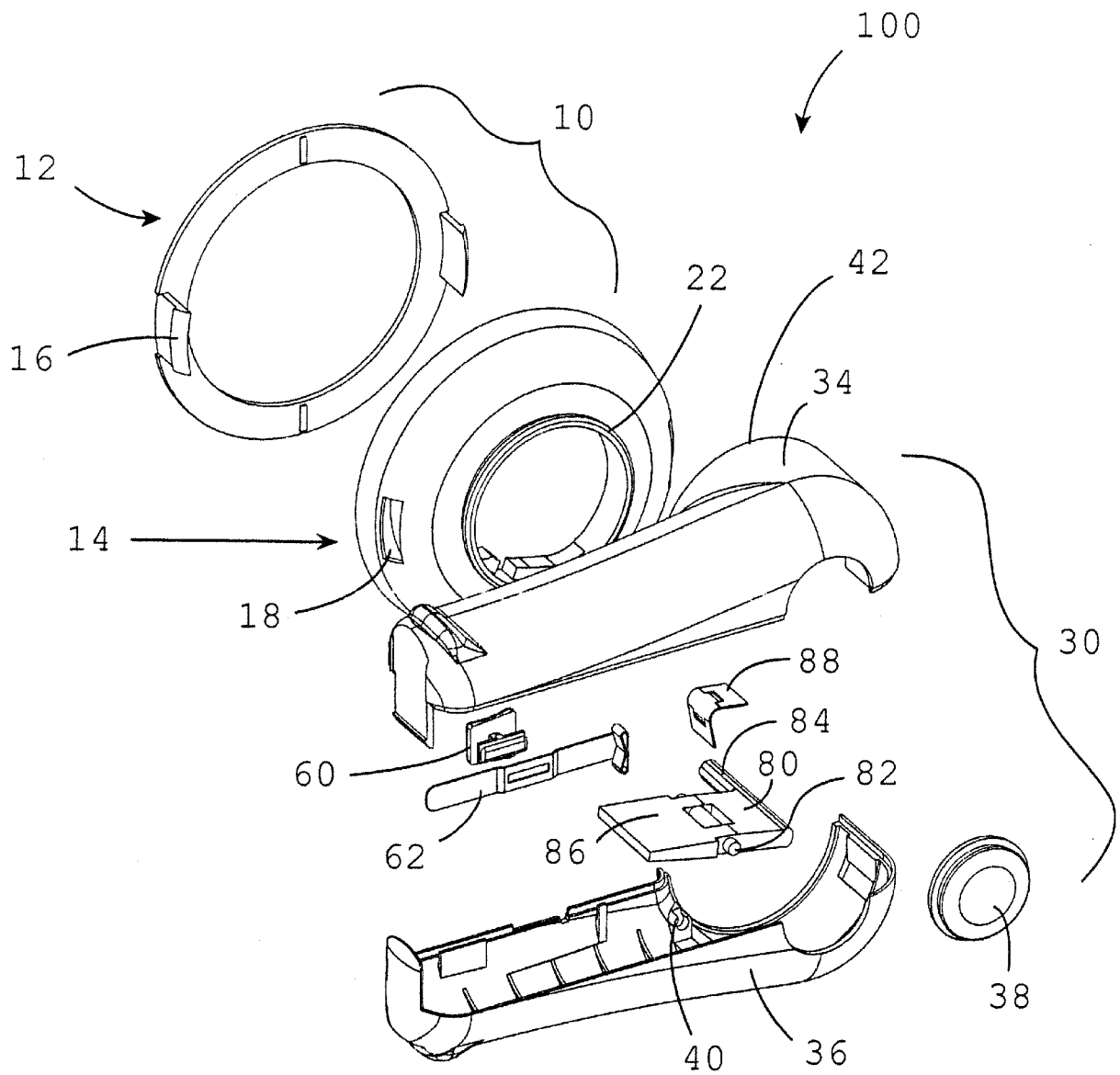


FIG. 4

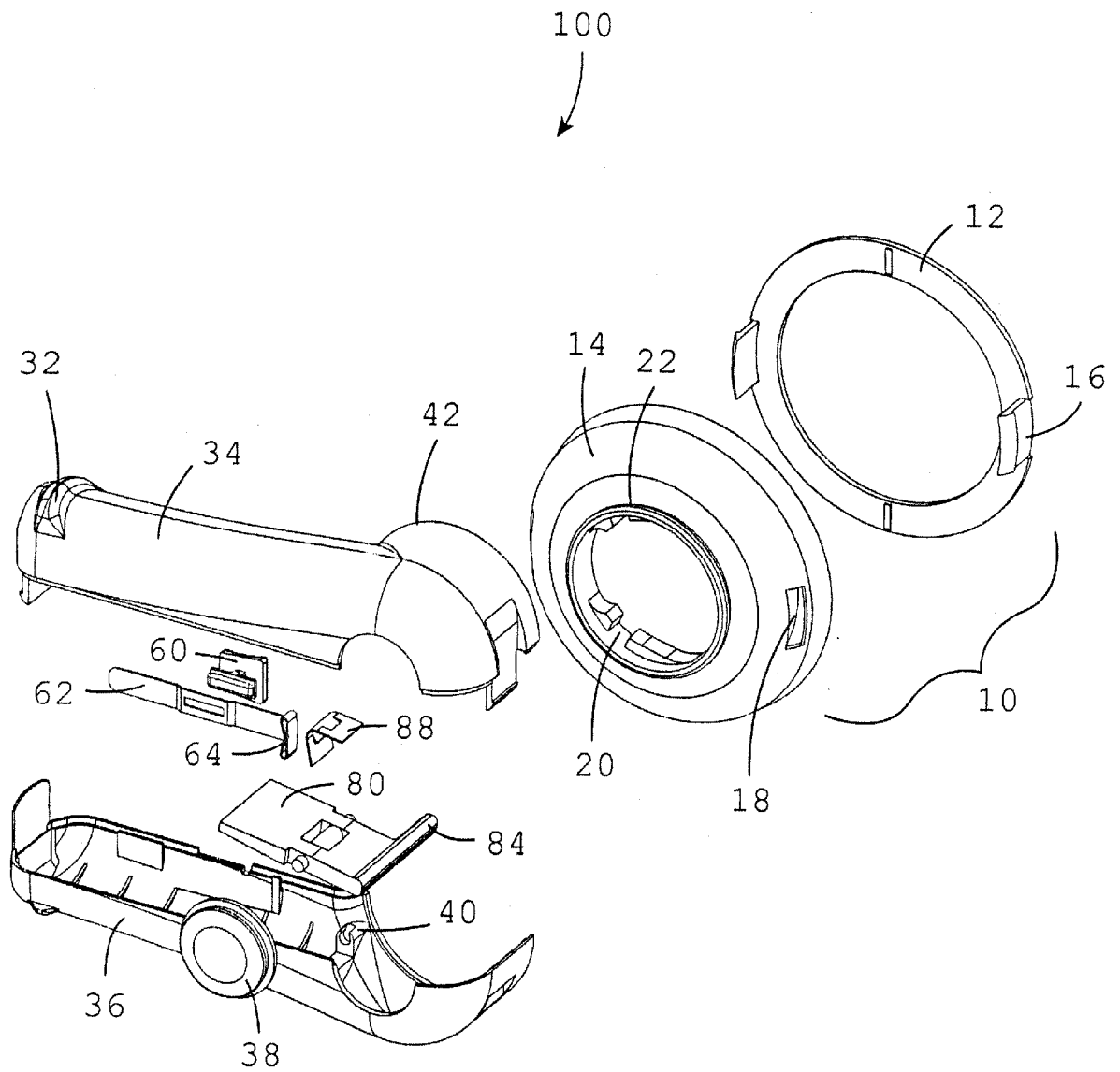


FIG. 5

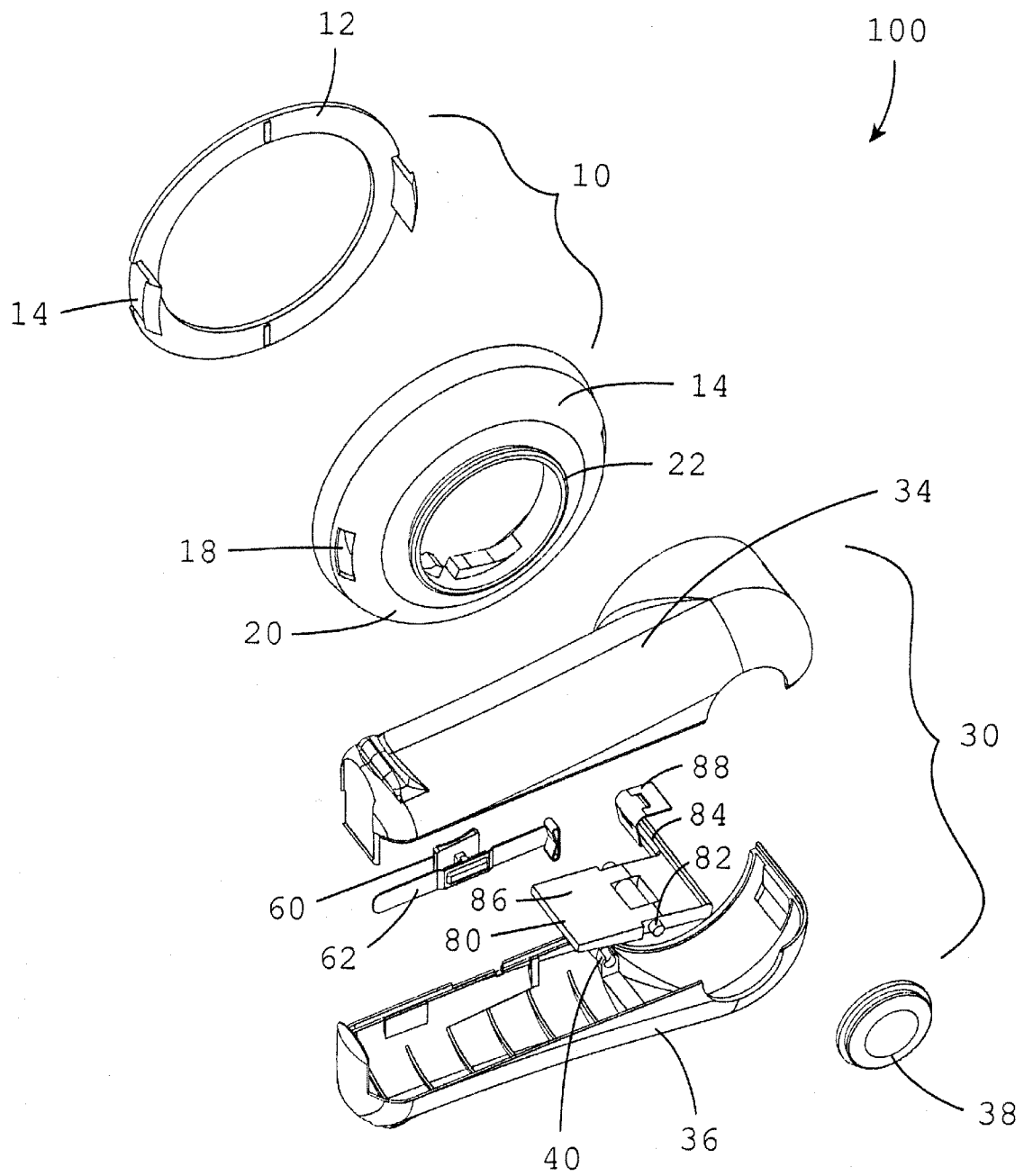


FIG. 6

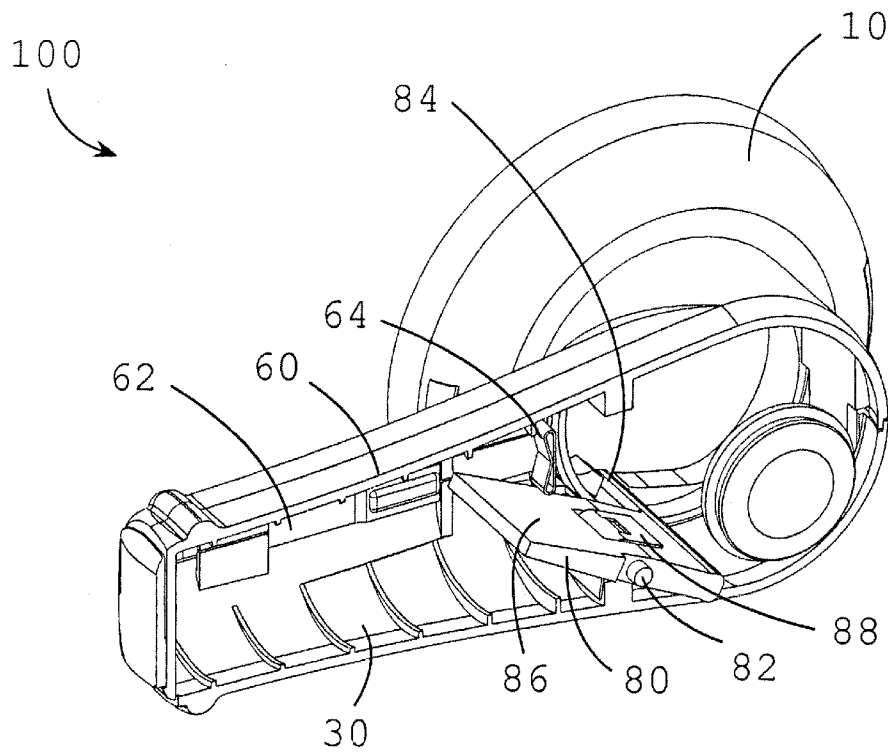


FIG. 7

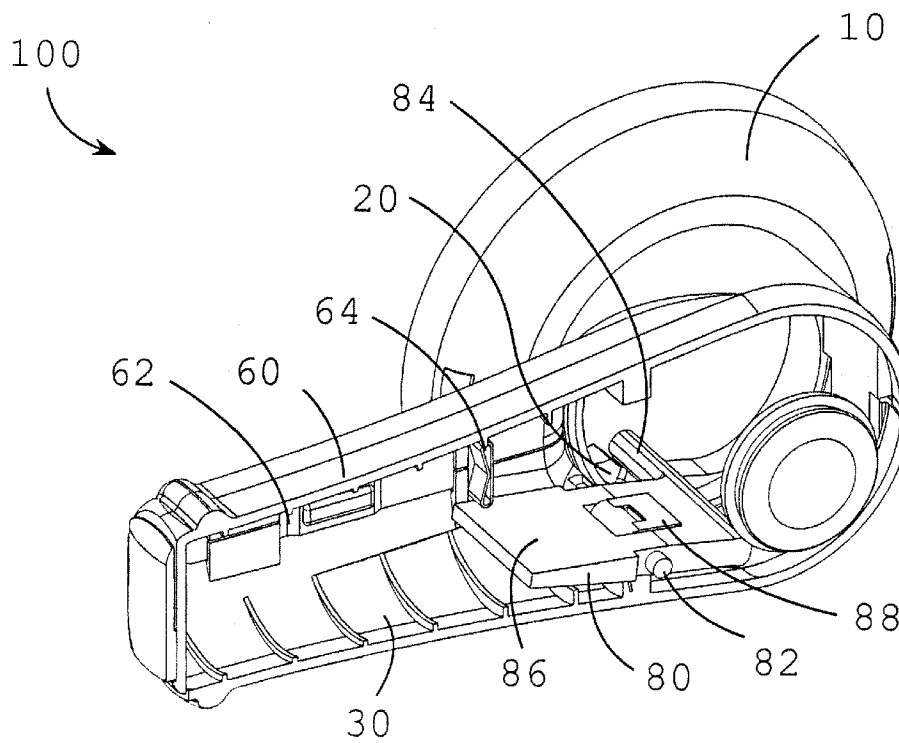


FIG. 8

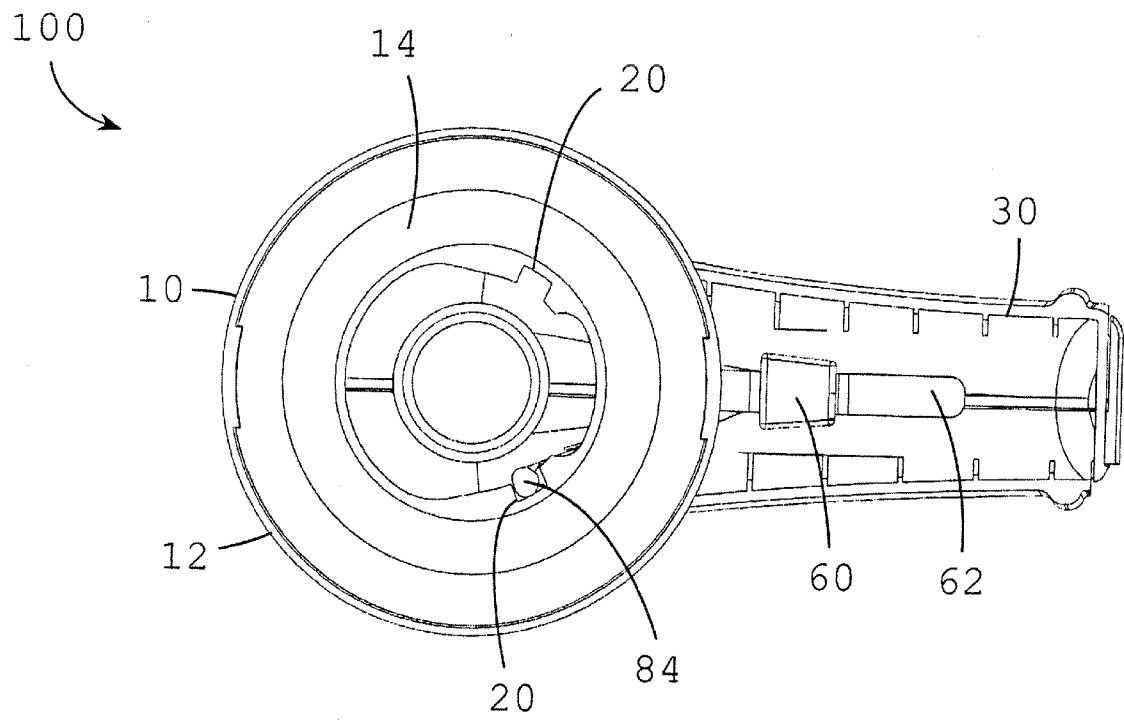


FIG. 9

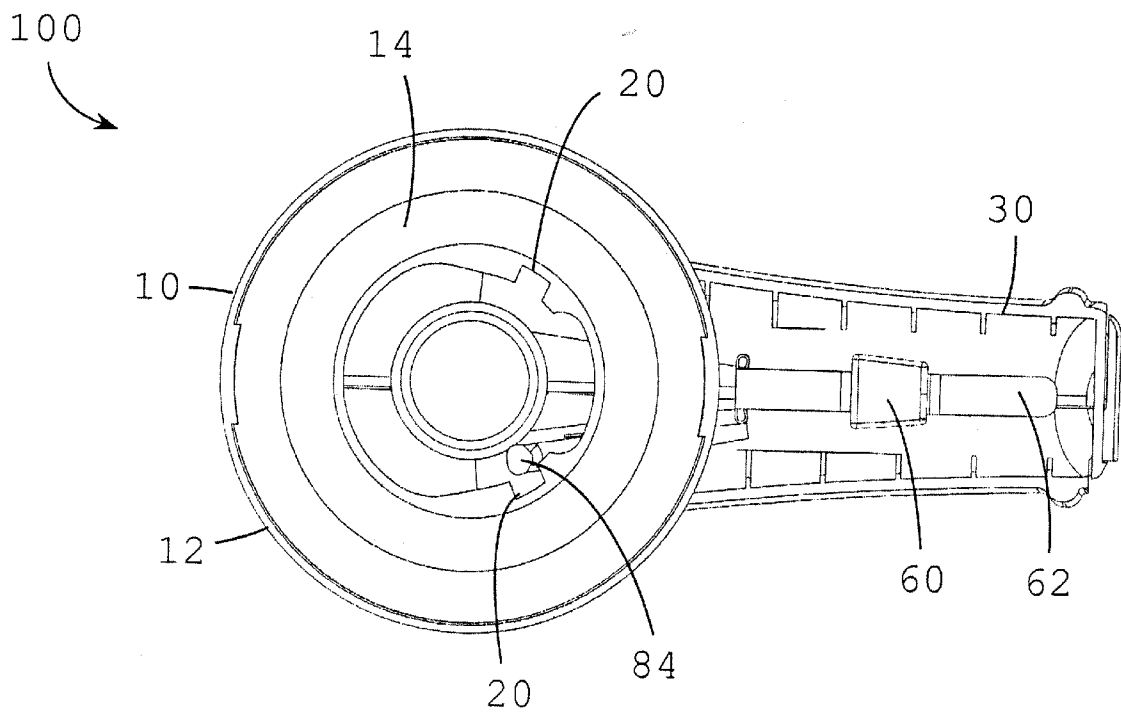


FIG. 10

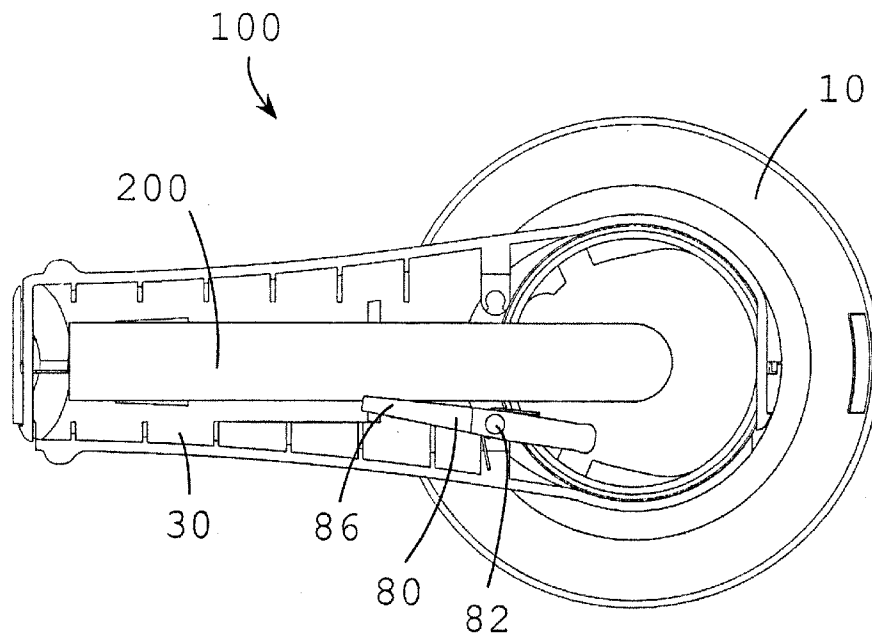


FIG. 11

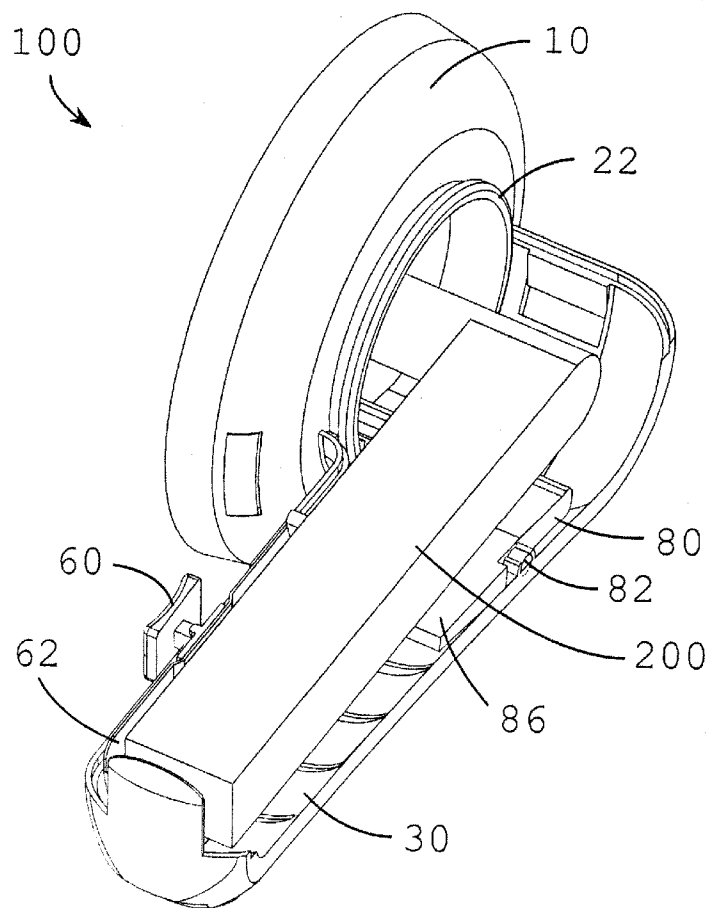


FIG. 12

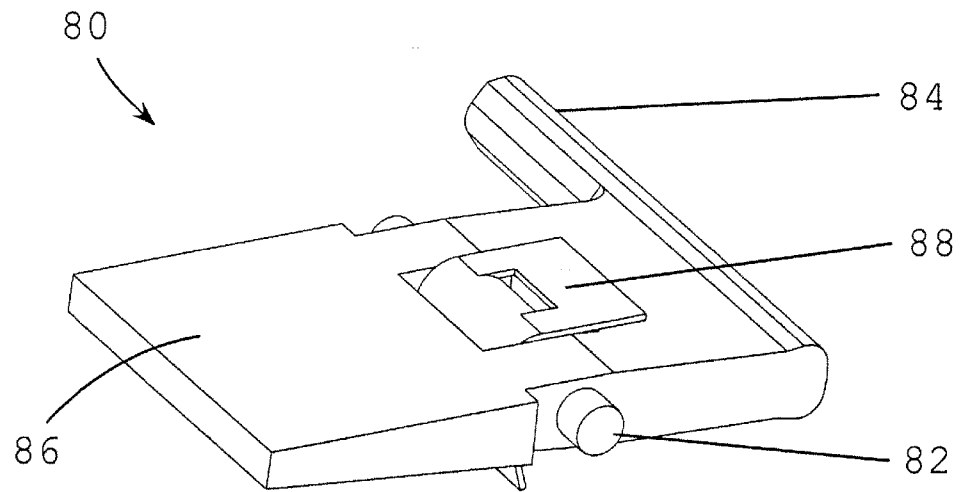


FIG. 13

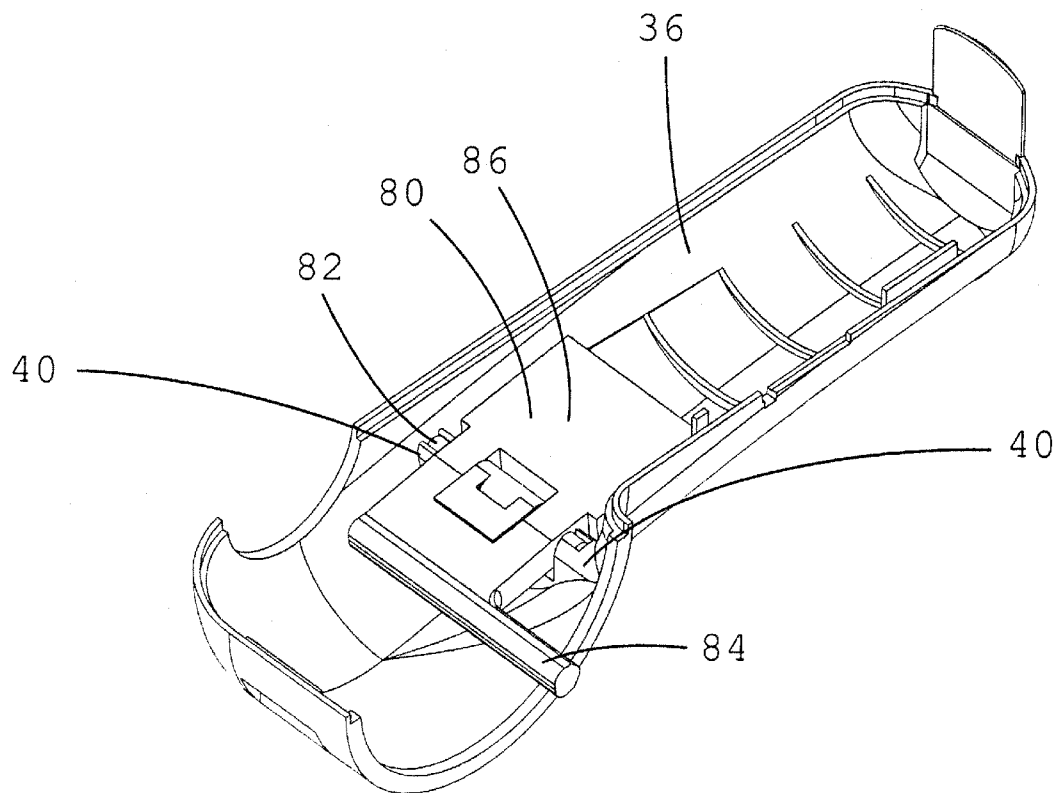


FIG. 14

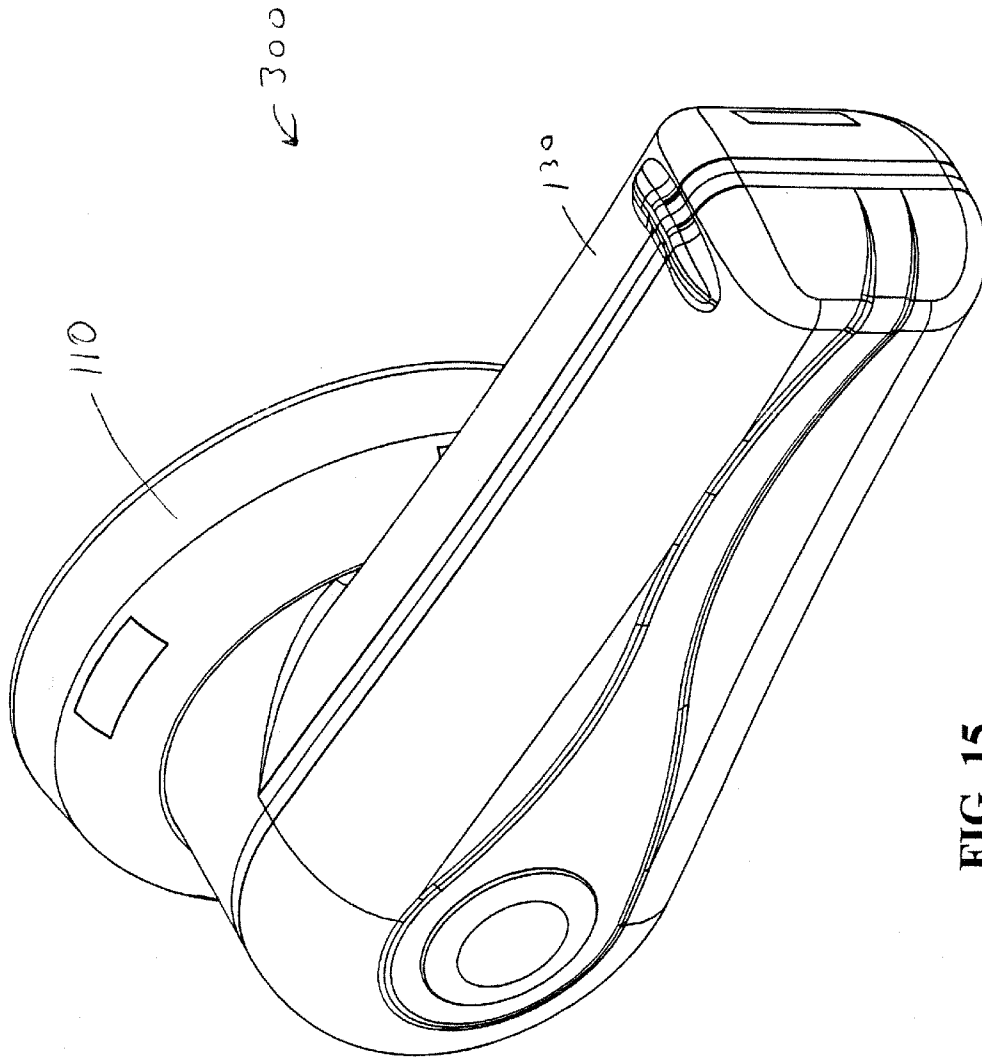


FIG. 15

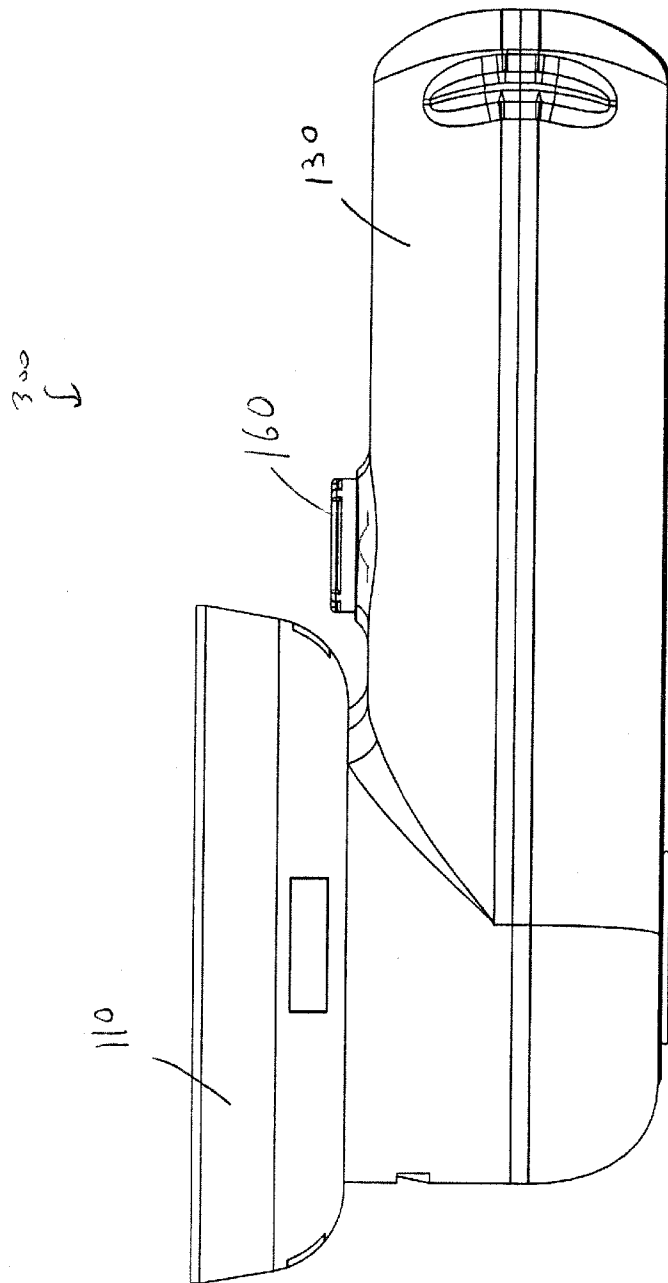


FIG. 16

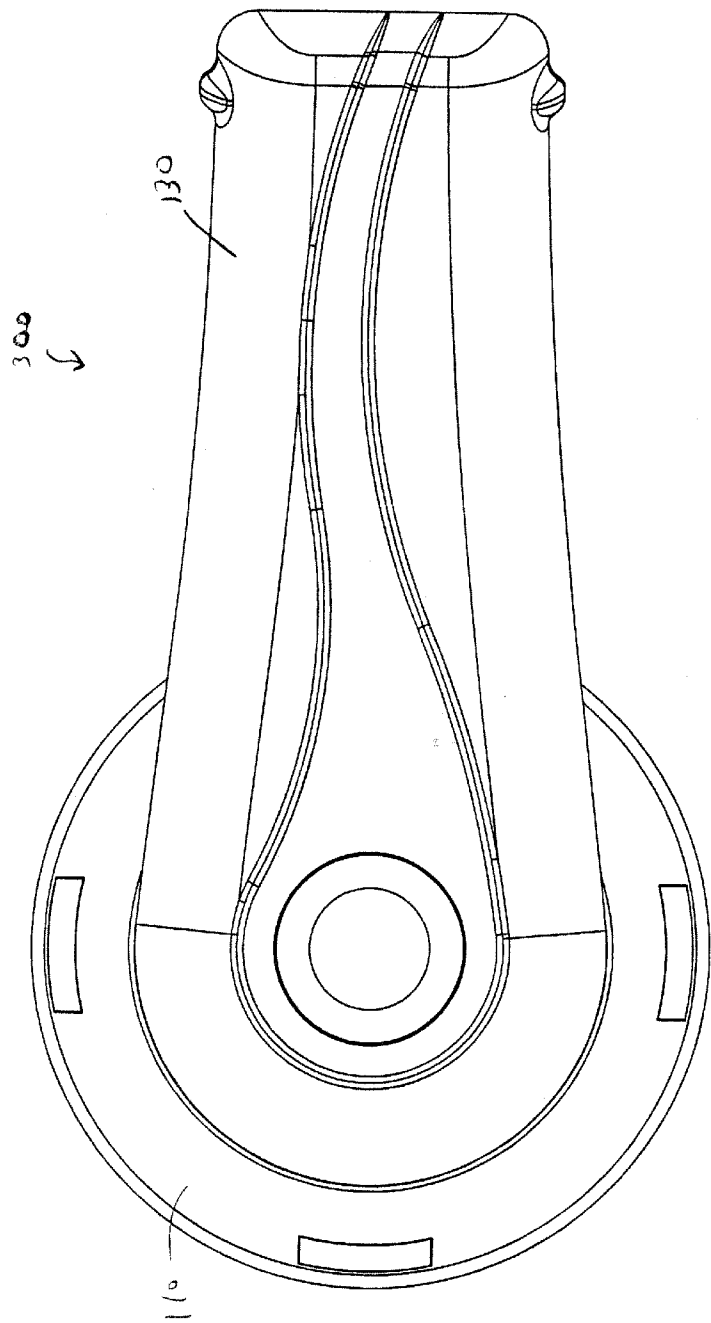


FIG. 17

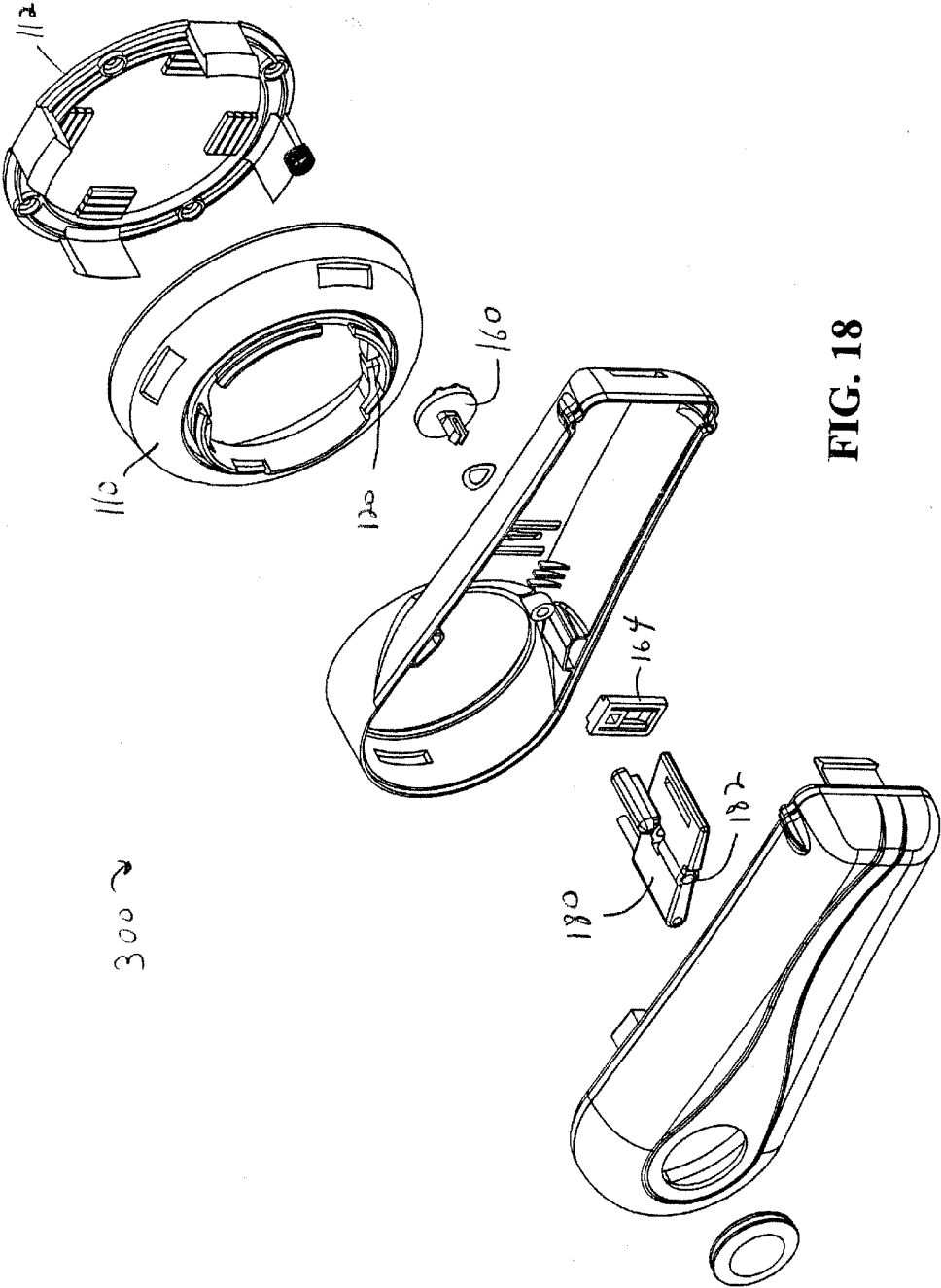
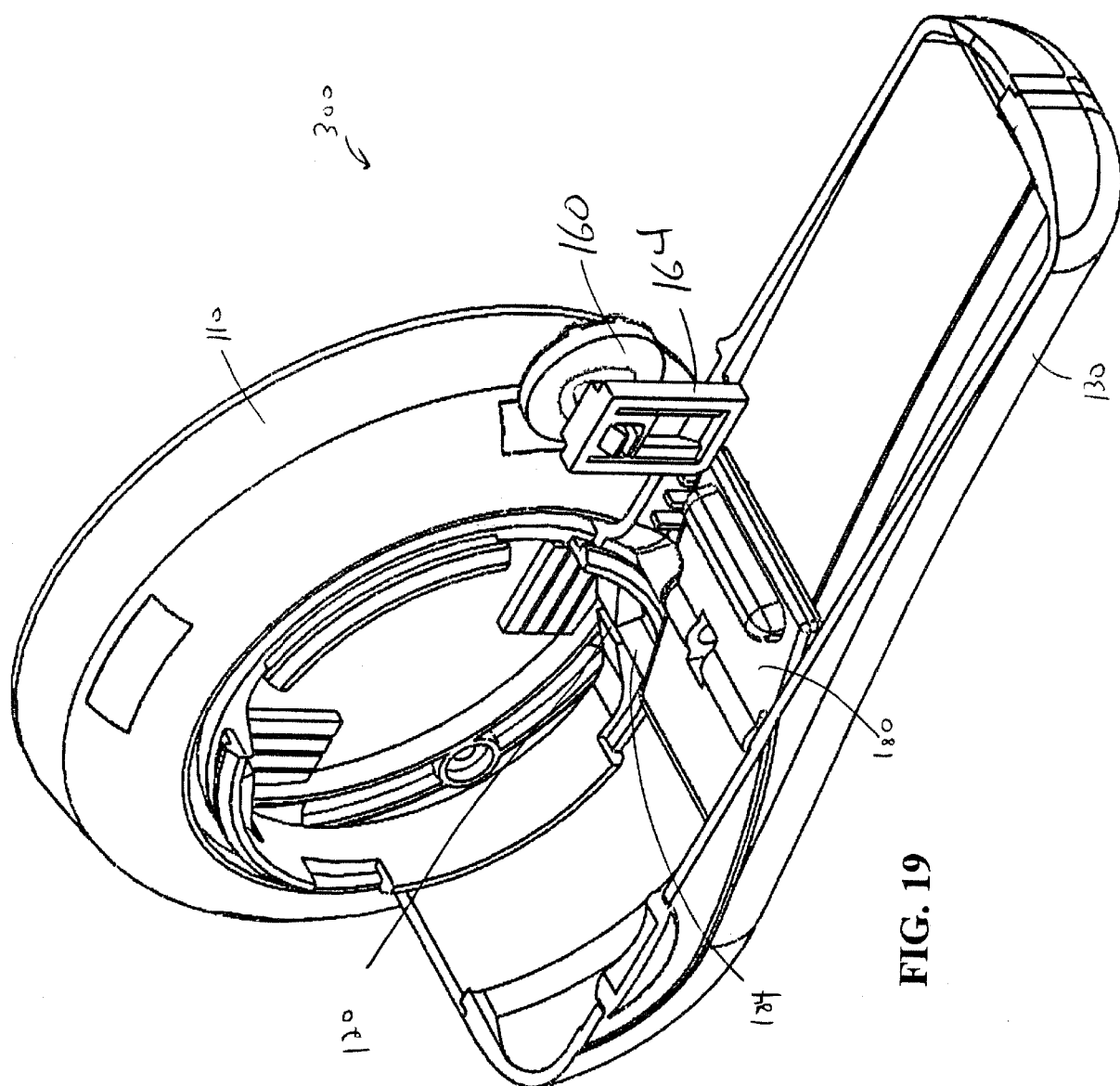


FIG. 18



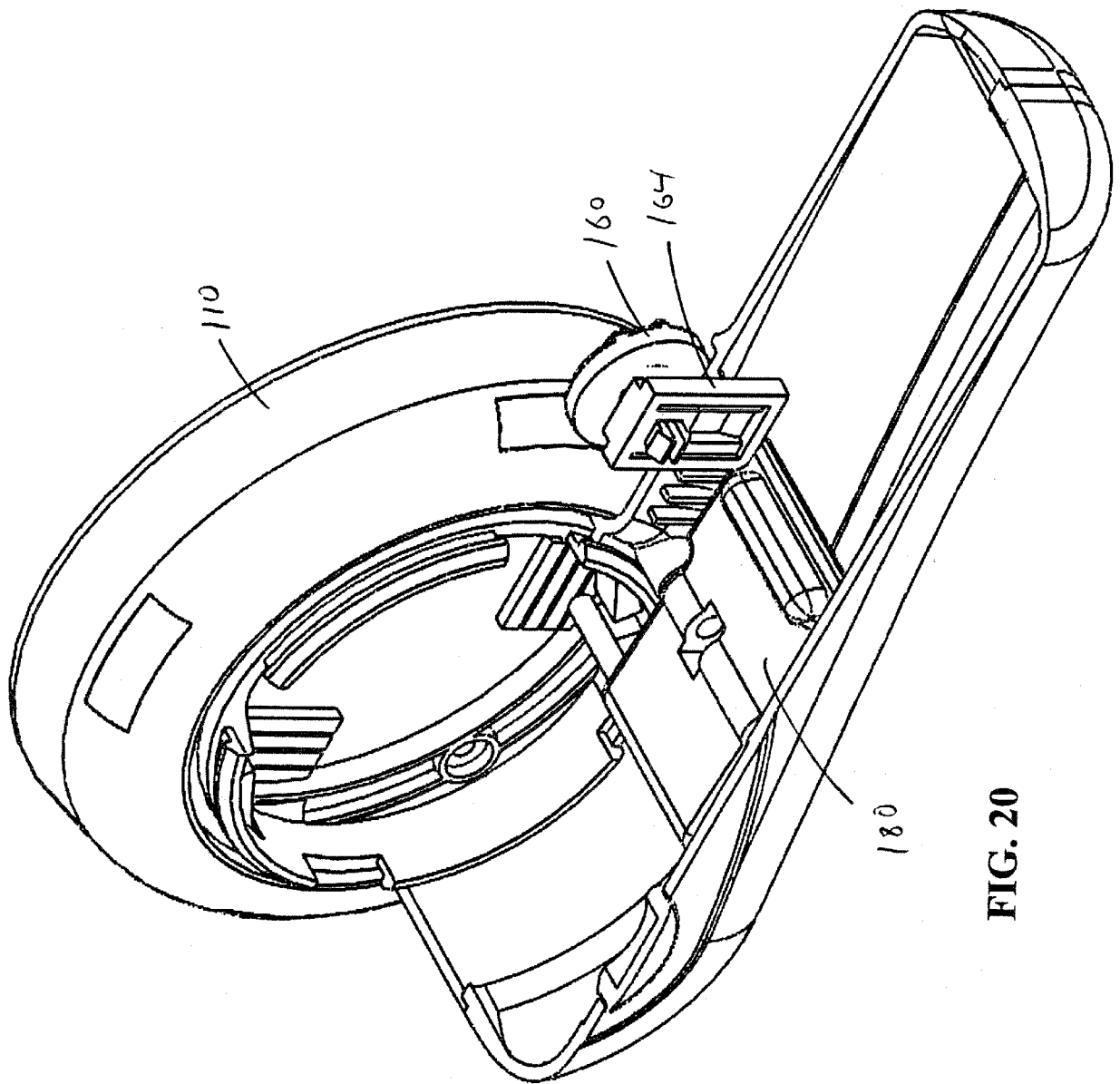


FIG. 20

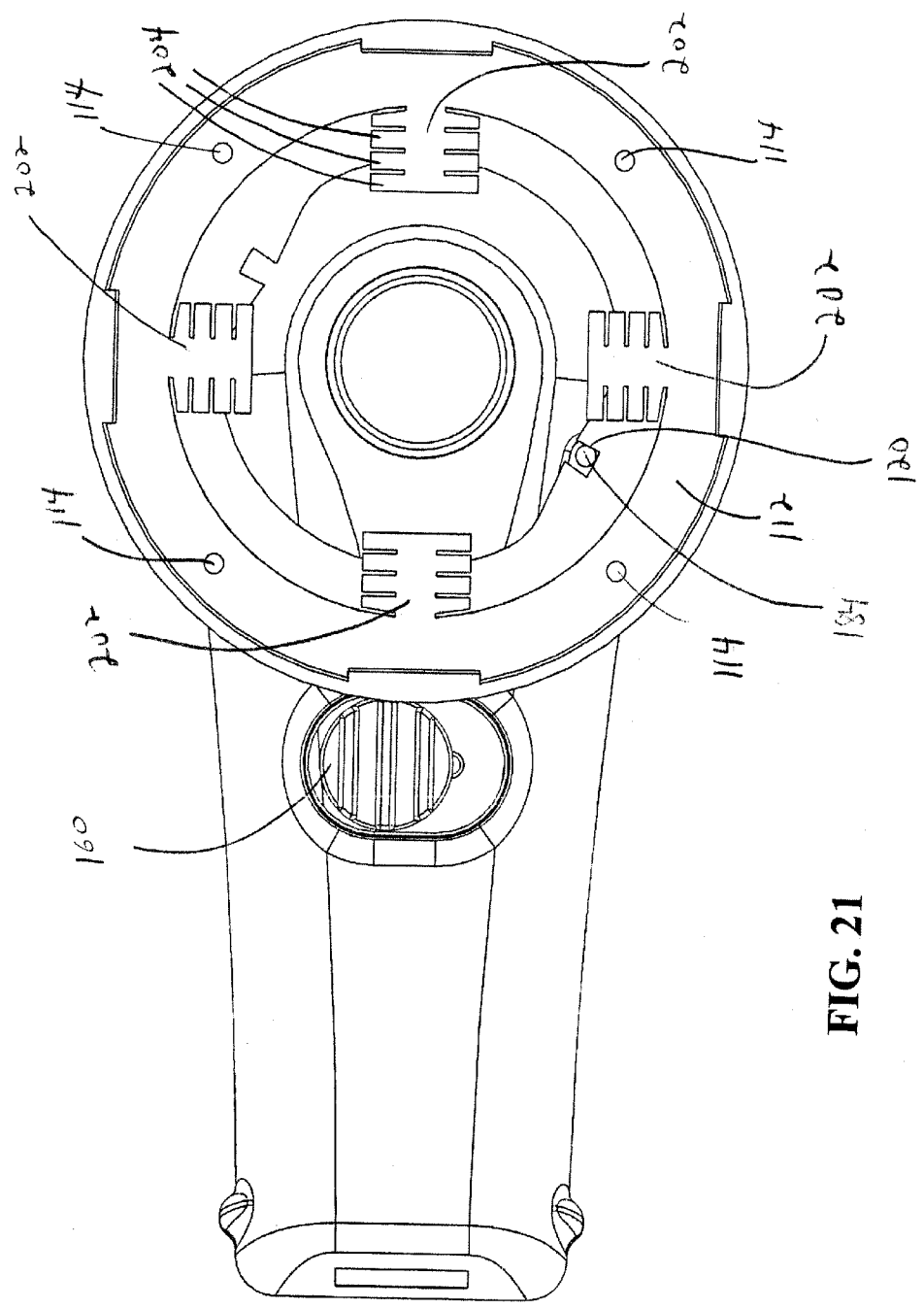


FIG. 21

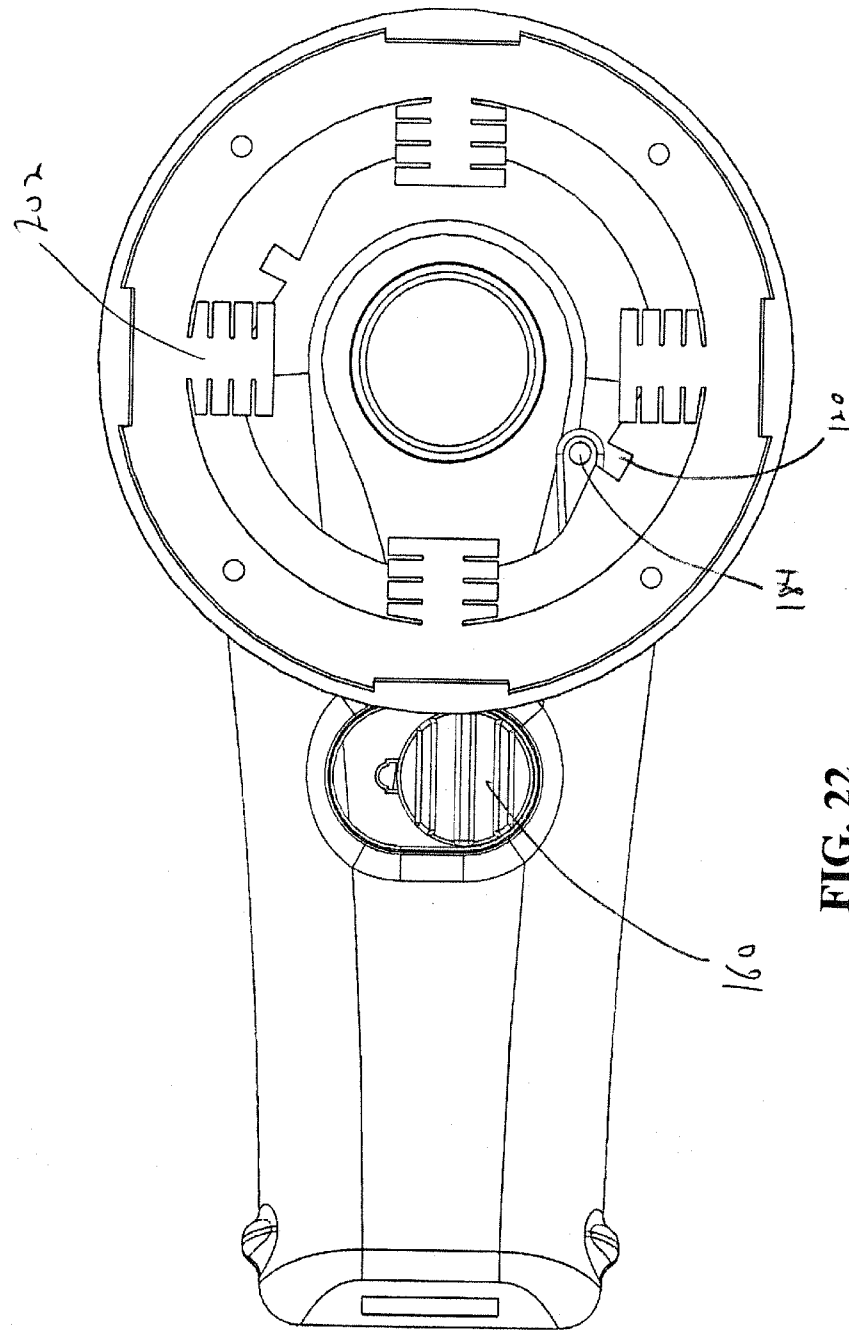


FIG. 22

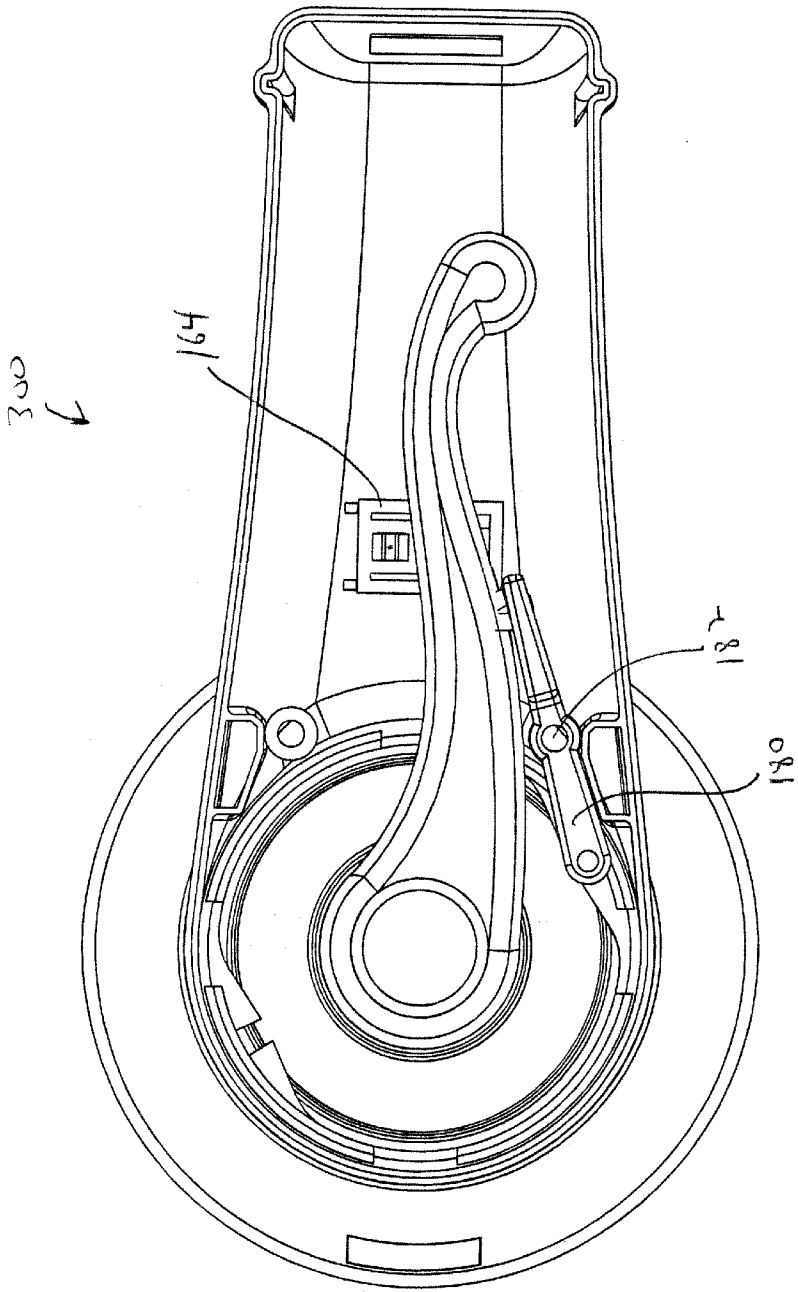


FIG. 23

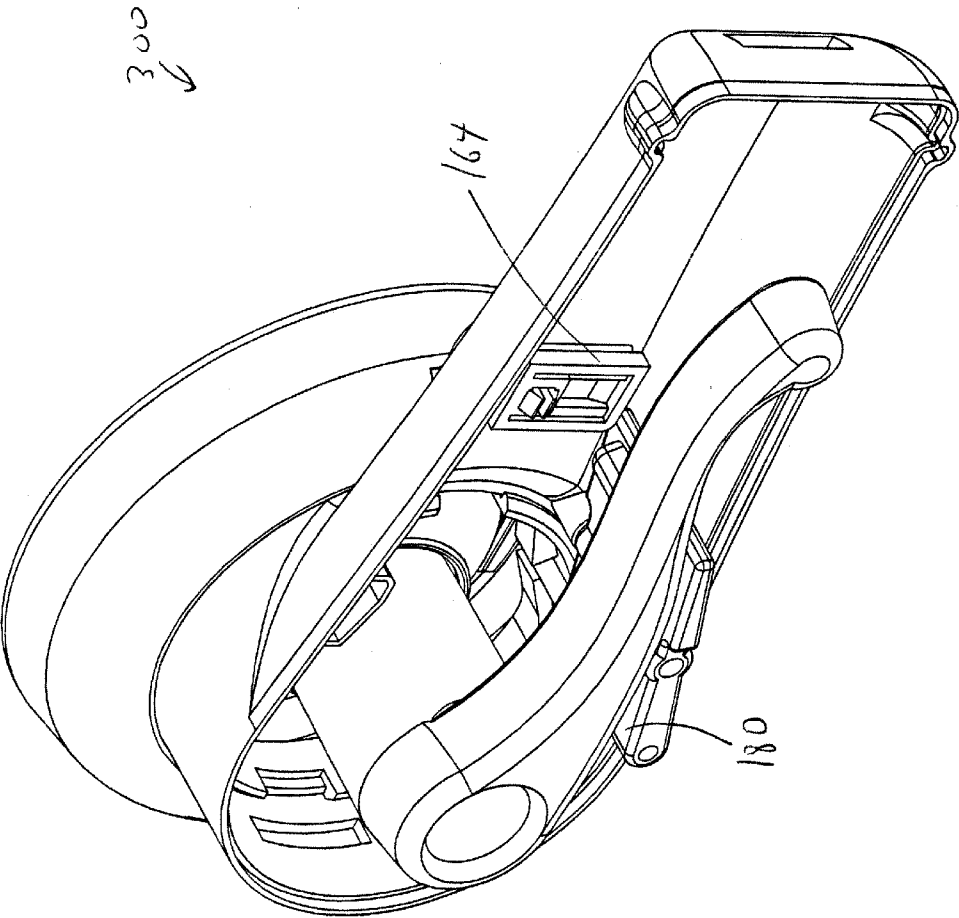


FIG. 24

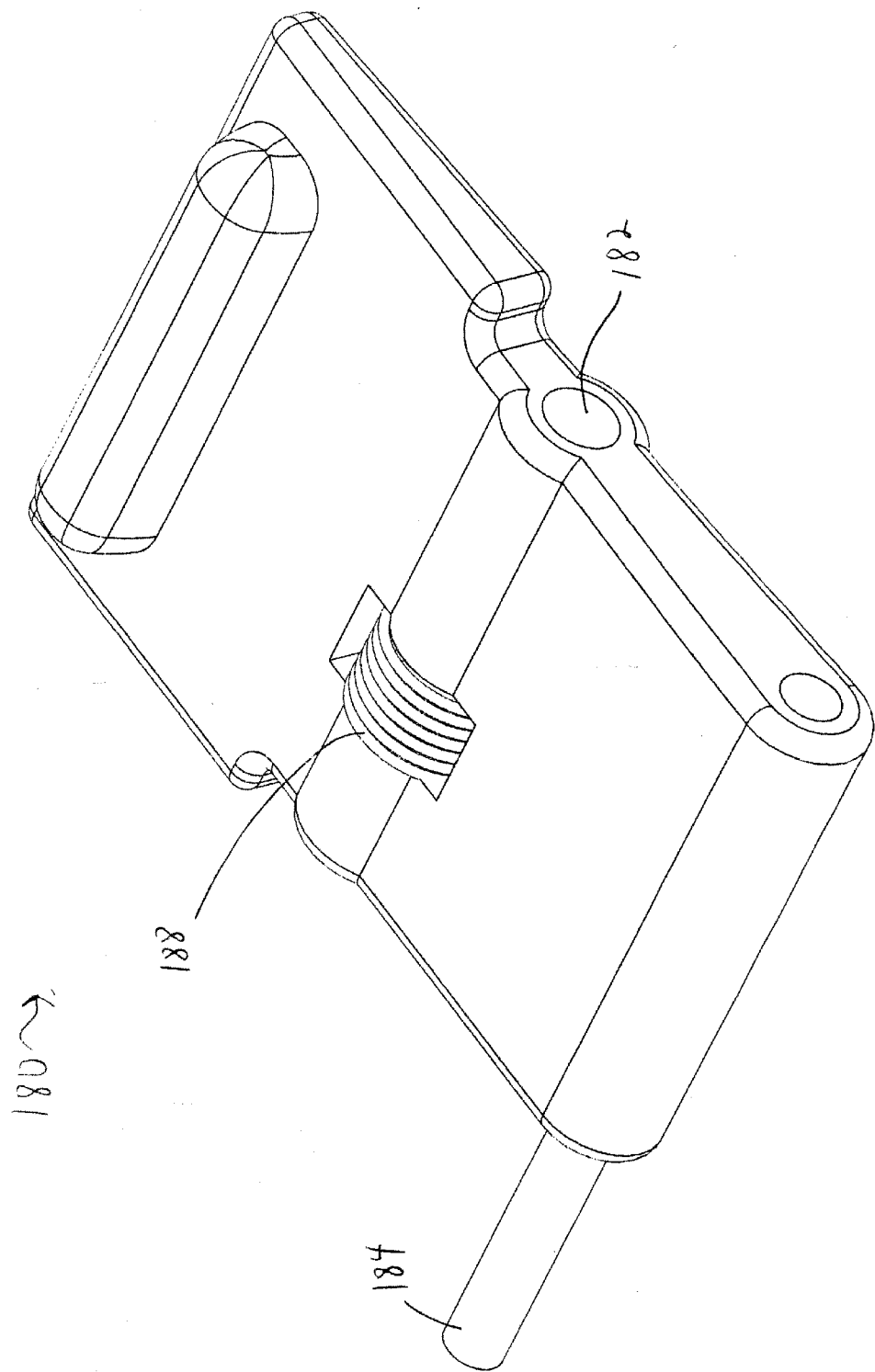


FIG. 25