

(51) International Patent Classification:
H02G 3/14 (2006.01)**Christine, Anne** [US/US]; 7691 Sedgewick Ridge Road,
Lewisville, NC 27023 (US).(21) International Application Number:
PCT/US2010/001807(74) Agents: **OAKES, Brian, C.** et al.; Tyco Electronics
Technology Resources, Inc., 4550 New Linden Hill Road,
Suite 140, Wilmington, DE 19808 (US).(22) International Filing Date:
23 June 2010 (23.06.2010)(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,
SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/497,909 6 July 2009 (06.07.2009) US(71) Applicant (*for all designated States except US*): **TYCO
ELECTRONICS CORPORATION** [US/US]; 1050
Westlakes Drive, Berwyn, PA 19312 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ASHBY, Robert**
[US/US]; 2014 Hearthwood Court, Greensboro, NC
27407 (US). **GARRETT, Greg, G.** [US/US]; 404 Lee
Parks Road, Lexington, NC 27292 (US). **DOOLEY,**(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,

[Continued on next page]

(54) Title: FACEPLATE ASSEMBLY AND LABEL COVER

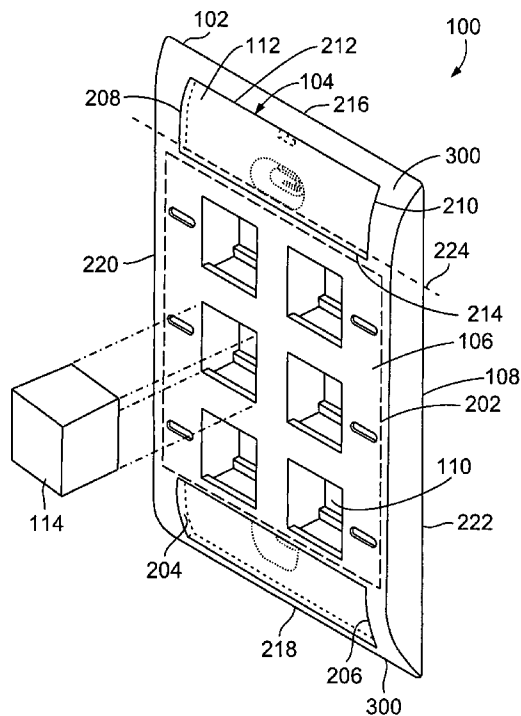


FIG. 1

(57) Abstract: A faceplate assembly (100) includes a faceplate
body (102) and a label cover (104). The faceplate body (102) has a
front surface (106) and an opposite back side (108). The front sur-
face includes (106) a panel area (202) and a label area recessed
from the front surface (106). The panel area (202) includes a port
(110) extending through the front surface (106). The label area in-
cludes a hinge element (600). The label cover (104) is coupled to
the faceplate body (102) and is disposed in the label area. The la-
bel cover (104) includes a hinge protrusion and a retention tab.
The hinge protrusion is rotatably coupled to the hinge element to
permit the label cover (104) to rotate toward and away from the
front surface (106). The retention tab engages the faceplate body
(102) along a perimeter of the label area to secure the label cover
(104) in a closed position against the faceplate body (102).



EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, **Published:**

LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

— *without international search report and to be republished
upon receipt of that report (Rule 48.2(g))*

FACEPLATE ASSEMBLY AND LABEL COVER

[0001] This invention relates generally to faceplate assemblies, and more particularly, to faceplate assemblies that include labels.

[0002] Faceplates are mounted to the exterior surfaces of walls and devices over one or more connectors and/or switches that are mounted behind the faceplates in the walls or devices. The faceplates may include ports that correspond to the connectors and/or switches mounted behind the faceplates. In the case of connectors, mating connectors may be inserted into the ports of the faceplates to mate with the connectors mounted behind the faceplates. The faceplates can be used to provide a more aesthetically pleasing appearance to the connectors and/or switches that are mounted to the walls or devices.

[0003] Some known faceplates include labels or indicia on the front surfaces of the faceplates. These labels or indicia may provide information about the connectors and/or switches that are mounted behind the faceplates and/or the mating connectors that are inserted through the faceplates to mate with the mounted connectors. For example, the labels or indicia may describe the particular connectors and/or switches that are mounted behind the faceplate, the data rate at which such connectors communicate information, and the like. In some faceplates, the labels or indicia are printed directly on the front surfaces of the faceplates. But, printing the labels or indicia on the faceplates may limit the use of the faceplates as the connectors mounted behind the faceplates may be changed. For example, the mounted connectors may be swapped out and replaced with different connectors, thereby rendering the labels printed on the faceplates incorrect.

[0004] Some other known faceplates include labels or indicia that may be periodically replaced. For example, the faceplates may include labels printed on cards that are inserted into the faceplate. The labels may be removed and replaced if the information printed on the labels is no longer accurate. These faceplates include label covers that are light transmissive elements placed in front of the labels. The labels are located between the label covers and the faceplates. The

label covers may be fixed to the faceplate using, for example, screws and other fasteners. But, securing the label covers using screws or fasteners prevents a user from easily and quickly removing the label covers to replace the labels. In environments where the number of labels that need to be replaced or inserted into the faceplates is relatively large, unscrewing or unfastening a large number of screws or fasteners can be a time- and labor-intensive process. Some other label covers are removably coupled with the faceplates. For example, the label covers may be separated from the faceplates in order to replace or insert the labels. But, the label covers may be lost or damaged when removed or separated from the faceplates.

[0005] A need exists for faceplates having label covers that may be more easily opened to remove and/or insert labels behind the covers while preventing separation of the label covers from the faceplates.

[0006] The solution is provided by a faceplate assembly. The assembly includes a faceplate body and a label cover. The faceplate body has a front surface and an opposite back side. The front surface includes a panel area and a label area recessed from the front surface. The panel area includes a port extending through the front surface. The label area includes a hinge element. The label cover is coupled to the faceplate body and is disposed in the label area. The label cover includes a hinge protrusion and a retention tab. The hinge protrusion is rotatably coupled to the hinge element to permit the label cover to rotate toward and away from the front surface. The retention tab engages the faceplate body along a perimeter of the label area to secure the label cover in a closed position against the faceplate body.

[0007] The invention will now be described by way of example with reference to the accompanying drawings in which:

[0008] Figure 1 is a perspective view of a closed faceplate assembly in accordance with one embodiment.

[0009] Figure 2 is a perspective view of an open faceplate assembly in accordance with one embodiment.

[0010] Figure 3 is a perspective view of a label cover shown in Figure 1 in accordance with one embodiment.

[0011] Figure 4 is a fragmentary and partial cross-sectional view of the faceplate assembly in accordance with one embodiment.

[0012] Figure 1 is a perspective view of a closed faceplate assembly 100 in accordance with one embodiment. Figure 2 is a perspective view of an open faceplate assembly 100 in accordance with one embodiment. The faceplate assembly 100 includes a faceplate body 102 that is joined with one or more label covers 104. The faceplate body 102 extends from a front surface 106 to an opposite back side 108, between opposite upper and lower edges 216, 218, and between opposite side edges 220, 222. The faceplate body 102 includes label areas 116 and a panel area 202 (shown in Figure 1). While two label areas 116 and a single panel area 202 are shown in Figure 2, alternatively, a different number of label areas 116 and/or panel areas 202 may be provided.

[0013] In the illustrated embodiment, the faceplate body 102 includes rounded edges extending around the perimeter of the panel area 202. For example, the areas of the front surface 106 of the faceplate body 102 that extend between the panel area 202 and each of the edges 216, 218, 220 (shown in Figure 2), 222 (shown in Figure 2) may include rounded surfaces 300 (shown in Figure 1) that are rounded, or non-planar in shape. In contrast, the panel area 202 may be a substantially planar surface that is not rounded.

[0014] The faceplate body 102 includes several ports 110 that extend through the faceplate body 102 in the panel area 202. The ports 110 are configured to receive mating connectors 114 (shown in Figure 1) and/or provide access to switches that are mounted behind the faceplate body 102 but are accessible through the ports 110. For example, the faceplate assembly 100 may be mounted to

a wall or panel (not shown) that includes several connectors and/or switches (not shown) in the wall or panel. The faceplate assembly 100 may cover the connectors and/or switches to provide a more aesthetically pleasing appearance to the wall or panel. Mating connectors 114 may mate with the connectors behind the faceplate assembly 100 through the connector ports 110. The size, shape, quantity, and/or dimensions of the ports 110 may be varied to accommodate a wide variety of mating connectors 114. The mating connector 114 is generically illustrated as a cube to demonstrate that the faceplate assembly 100 may be used in conjunction with a wide variety of mating connectors 114.

[0015] The label covers 104 are located in the label areas 116 of the faceplate body 102. The label areas 116 are elongated and extend from one end 204 to an opposing end 206. The label covers 104 also are elongated between opposite ends 208, 210 in one direction and extend between opposite upper and lower edges 212, 214 in a perpendicular direction. In one embodiment, the label covers 104 rotate about a rotation axis 224 that is disposed at or near the lower edge 214 of each label cover 104. Alternatively, the label covers 104 may rotate about a different axis. For example, the label covers 104 may rotate about an axis that extends along one of the ends 208, 210, 212. In the illustrated embodiment, the rotation axes 224 of the label covers 104 are located closer to the panel area 202 than the upper edges 212 of the label covers 104. Alternatively, the rotation axes 224 may be located farther from the panel area 202 than the lower edges 214 of the label covers 104.

[0016] The label covers 104 may be used to enclose labels or other indicia between the label covers 104 and the faceplate body 102. For example, a label that includes a description or other information relevant to the connectors and/or switches (not shown) that correspond to the various ports 110 may be placed between one of the label covers 104 and the faceplate body 102. The faceplate body 102 includes label areas 116 behind the label covers 104. The label areas 116 are portions of the faceplate body 102 that are recessed from the front surface 106. The label areas 116 are recessed to receive the labels between the faceplate body 102 and the label covers 104. The label areas 116 form elongated cavities in the faceplate

body 102 that extend between opposing ends 118, 120. While two label covers 104 are shown in the illustrated embodiment, alternatively, a different number of label covers 104 may be provided.

[0017] The label covers 104 are rotatably coupled to the faceplate body 102 so that the label covers 104 can rotate toward and away from the front surface 106 of the faceplate body 102 without separating the label covers 104 from the faceplate body 102. For example, the label covers 104 may be independently rotated away from the front surface 106 while retaining the label covers 104 to the faceplate body 102. The label covers 104 are shown in a closed position in Figure 1. The label covers 104 may be rotated away from the front surface 106 to an open position (as shown in Figure 2) to remove labels from behind the label covers 104 and/or to insert labels behind the label covers 104. The label covers 104 may then be rotated back toward the front surface 106 to the closed position shown in Figure 1 in order to enclose the labels between the label covers 104 and the faceplate body 102.

[0018] In the illustrated embodiment, the label covers 104 (shown in Figure 1) recede into the faceplate body 102 when the label cover 104 is in a closed position. The label covers 104 may recede into the faceplate body 102 sufficiently far such that the front surfaces 112 of the label covers 104 are flush with the front surface 106 of the faceplate body 102. For example, the label covers 104 may have a rounded shape such that the front surfaces 112 of the label covers 104 may have a rounded shape that is similar or identical to the rounded surfaces 300 of the faceplate body 102. The front surfaces 112 of the label covers 104 may follow the contour of the front surface 106 of the faceplate body 102. The front surfaces 112 of the label covers 104 may be flush with the rounded surfaces 300 of the faceplate body 102 in the areas where the label covers 104 are located, such as, for example, between the panel area 202 and each of the edges 216, 218.

[0019] One or more of the faceplate body 102 and the label covers 104 may include, or be formed from, a dielectric material. For example, the faceplate body 102 and the label covers 104 may be separately molded from one or

more polymers. Alternatively, the faceplate body 102 may include, or be formed from, a material other than a dielectric material. The label covers 104 are light transmissive bodies. For example, the label covers 104 are formed from one or more materials that permit at least some light to pass through front surfaces 112 of the label covers 104 so that the labels or indicia that is held behind the label covers 104 may be visible through the label covers 104.

[0020] Figure 3 is a perspective view of the label cover 104 in accordance with one embodiment. The label cover 104 extends between the front surface 112 and a rear surface 500. The front and rear surfaces 112, 500 may both be convex, rounded shapes. Alternatively, the front surface 112 may have a rounded shape while the rear surface 500 has a different shape, such as a planar shape.

[0021] The opposite ends 208, 210 include hinge protrusions 502 that protrude from the ends 208, 210 in opposite directions. Alternatively, only one of the ends 208, 210 includes the hinge protrusion 502. The hinge protrusions 502 are shown as posts that are elongated and oriented along the rotation axis 224 of the label cover 104. The hinge protrusions 502 are received in the faceplate body 102 (shown in Figure 1) to secure the label cover 104 to the faceplate body 102 while permitting the label cover 104 to rotate about the rotation axis 224 relative to the faceplate body 102.

[0022] As shown in Figure 3, the rotation axis 224 is disposed proximate to the lower edge 214 of the label cover 104. For example, the rotation axis 224 may be located slightly above the lower edge 214 while remaining substantially adjacent to or near the lower edge 214. The lower edge 214 is a rounded edge in the illustrated embodiment. The lower edge 214 may be rounded to permit the label cover 104 to rotate about the rotation axis 224 and avoid interference between the lower edge 214 and the faceplate body 102 during rotation of the label cover 104. Alternatively, the lower edge 214 may be a flat or sharp edge.

[0023] The ends 208, 210 include retention tabs 504 that project from the respective ends 208, 210 in opposite directions. Alternatively, a different

number of retention tabs 504 may be provided. The retention tabs 504 extend from the ends 208, 210 in directions that are parallel to the rotation axis 224. The retention tabs 504 are set back from the front surface 112 of the label cover 104. For example, the retention tabs 504 may be disposed on the ends 208, 210 in positions that are closer to the rear surface 500 of the label cover 104 than the front surface 112. One or more of the retention tabs 504 may protrude from a different portion of the label cover 104. For example, one or more retention tabs 504 may extend from the upper edge 212.

[0024] The label cover 104 includes a recessed area 506 that forms a cavity along the upper edge 212. Alternatively, the recessed area 506 may be located elsewhere, such as along one or more of the opposite ends 208, 210. The recessed area 506 is located at an interface between the label cover 104 and the faceplate body 102 (shown in Figure 1) when the label cover 104 is in a closed position against the faceplate body 102. The recessed area 506 may be shaped to receive a tool to open the label cover 104. For example, the recessed area 506 may be shaped to receive the end of a screwdriver to pry the label cover 104 away from the faceplate body 102 and rotate the label cover 104 to an open position.

[0025] Figure 4 is a fragmentary and partial cross-sectional view of the faceplate assembly 100 in accordance with one embodiment. The label cover 104 is shown in a fragmentary view while the faceplate body 102 is shown in a fragmentary and cross-sectional view. The faceplate body 102 includes a recess 606 that laterally extends into the faceplate body 102 from the label area 116. The recess 606 extends behind the front surface 106 of the faceplate body 102 to form a cavity behind the front surface 106.

[0026] The faceplate body 102 includes a hinge element 600 disposed in the label area 116 along the back side 108 of the faceplate body 102. The hinge element 600 receives the hinge protrusion 502 of the label cover 104 to rotatably couple the label cover 104 to the faceplate body 102. The hinge protrusion 502 is seated in the hinge element 600 to permit the label cover 104 to rotate relative

to the faceplate body 102 without separating the label cover 104 from the faceplate body 102. Alternatively, the hinge protrusion 502 may extend from the faceplate body 102 while the hinge element 600 is included in the label cover 104.

[0027] In the illustrated embodiment, the hinge element 600 includes a hinge tab 602 and an opening 604. The hinge tab 602 rearwardly extends from the front surface 106 of the faceplate body 102 in the recess 606 toward the back side 108. The opening 604 is formed by the separation between the hinge tab 602 and the faceplate body 102 below the recess 606 along the back side 108 of the faceplate body 102. The hinge protrusion 502 of the label cover 104 is seated in the opening 604 and secured between the hinge tab 602 and the faceplate body 102 in the recess 606. The hinge protrusion 502 is able to rotate within the opening 604 relative to the faceplate body 102 to rotate the label cover 104.

[0028] The recess 606 forms a retention ledge 608 behind the front surface 106. The retention ledge 608 extends from the front surface 106 toward the back side 108 along a portion of the perimeter of the label area 116. For example, a different retention ledge 608 may extend along each of the ends 118, 120 (shown in Figure 2) of the label area 116. Alternatively, the retention ledge 608 may be provided along a different portion of the perimeter for the label area 116. By way of example only, the retention ledge 608 may be located along a top edge 122 (shown in Figure 2) of the label area 116 that extends between the ends 118, 120. The retention ledge 608 has a thickness dimension that is smaller than a thickness dimension of the faceplate body 102 between the front surface 106 and the back side 108. For example, the retention ledge 608 may be thinner than the faceplate body 102 in locations other than the label area 116.

[0029] The retention tab 504 engages the retention ledge 608 to secure the label cover 104 in a closed position. For example, the label cover 104 may be rotated toward the faceplate body 102 until the retention tab 504 contacts the retention ledge 608. As the label cover 104 continues to be rotated toward the faceplate body 102, one or more of the retention tab 504 and the retention ledge 608

may be slightly biased to permit the retention tab 504 to pass the retention ledge 608. The retention tab 504 passes the retention ledge 608 and interlocks the label cover 104 with the faceplate body 102. The retention tab 504 interlocks with the retention ledge 608 when the retention ledge 608 is disposed between the retention tab 504 and the front surface 106 of the faceplate body 102. The interlocking engagement between the retention tab 504 and the retention ledge 608 prevents the label cover 104 from being inadvertently separated or rotated away from the faceplate body 102.

[0030] Engagement disengagement between the retention tab 504 and the retention ledge 608 may provide an audible and/or tactile notification to a user of the faceplate assembly 100 that the label cover 104 is secured to the faceplate body 102 in a closed position. For example, when the label cover 104 is rotated toward the faceplate body 102 and the retention tab 504 contacts and snaps past the retention ledge 608, the retention ledge 608 and/or retention tab 504 may make an audible click sound. The engagement between retention ledge 608 and the retention tab 504 also may be felt by a user of the faceplate assembly 100 when the retention tab 504 snaps past the retention ledge 608. The audible and/or tactile notification may be created when the label cover 104 is rotated from the closed position toward the open position. For example, rotating the label cover 104 away from the faceplate body 102 such that the retention tab 504 moves from behind the retention ledge 608 to outside of the faceplate body 102 may create an audible and/or tactile notification to the user that the label cover 104 has been opened. The audible and/or tactile notifications may help to ensure that a user is aware of when the label cover 104 has been snapped back into a closed position against the faceplate body 102 and when the label cover 104 has rotated to an open position.

WHAT IS CLAIMED IS:

1. A faceplate assembly (100) comprising:

a faceplate body (102) having a front surface (106) and an opposite back side (108), the front surface including a panel area (202) and a label area (116) recessed from the front surface (106), the panel area (202) including a port (110) extending through the front surface (106), the label area (116) including a hinge element (600); and

a label cover (104) coupled to the faceplate body (102) and disposed in the label area (116), the label cover (104) including a hinge protrusion (502) and a retention tab (504), the hinge protrusion (502) rotatably coupled to the hinge element (600) to permit the label cover (104) to rotate toward and away from the front surface, wherein the retention tab (504) engages the faceplate body (102) along a perimeter of the label area (116) to secure the label cover (104) in a closed position against the faceplate body (102).

2. The faceplate assembly (100) of claim 1, wherein the label cover (104) is rotatably retained to the faceplate body (102) when the label cover (104) is rotated to an open position.

3. The faceplate assembly (100) of claim 1, wherein the label area is elongated between opposing ends, the retention tab (504) of the label cover (104) engaging the faceplate body (102) at one of the ends of the label area (116).

4. The faceplate assembly (100) of claim 1, wherein the label area (116) is elongated between opposing ends and the faceplate body (102) includes a retention ledge (608) extending along at least one of the ends, further wherein the retention tab (504) engages the retention ledge (608) to secure the label cover (104) in the closed position.

5. The faceplate assembly (100) of claim 4, wherein the retention ledge (608) extends from the front surface (106) toward the back side (108) of the faceplate body (102).

6. The faceplate assembly (100) of claim 4, wherein the retention ledge (608) is thinner than a thickness dimension of the faceplate body (102) along the at least one of the ends.

7. The faceplate assembly (100) of claim 4, wherein the retention ledge (608) is disposed between the front surface (106) of the faceplate body (102) and the retention tab (504) when the label cover (104) is in the closed position.

8. The faceplate assembly (100) of claim 1, wherein the hinge element of the faceplate body (102) includes an opening disposed at the back side (108) of the faceplate body (102), the hinge protrusion of the label cover (104) received in the opening to permit rotation of the label cover (104).

9. The faceplate assembly (100) of claim 1, wherein the label cover (104) includes a recessed area at an interface between the label cover (104) and the faceplate body (102), the recessed area configured to receive a tool to disengage the label cover from the faceplate body (102) and to rotate the label cover (104) away from the front surface of the faceplate body (102).

10. The faceplate assembly (100) of claim 1, wherein engagement between the label cover (104) and the faceplate body (102) provides at least one of an audible notification and a tactile notification when the label cover (104) is at least one of rotated to the closed position and rotated away from the closed position.

11. The faceplate assembly (100) of claim 1, wherein the label cover (104) includes a rounded lower edge disposed proximate to a rotation axis of the label cover (104).

12. The faceplate assembly (100) of claim 1, wherein a front surface (106) of the label cover (104) is flush with the front surface (106) of the faceplate body (102) when the label cover (104) is in the closed position.

13. The faceplate assembly (100) of claim 1, wherein the faceplate body (102) extends between opposite edges and the front surface (106) of the faceplate body (102) is rounded between the panel area (202) and at least one of the edges.

14. The faceplate assembly (100) of claim 13, wherein the label cover (104) has a rounded shape that follows a contour of the front surface (106) of the faceplate body (102) between the panel area (202) and the at least one of the edges.

1/3

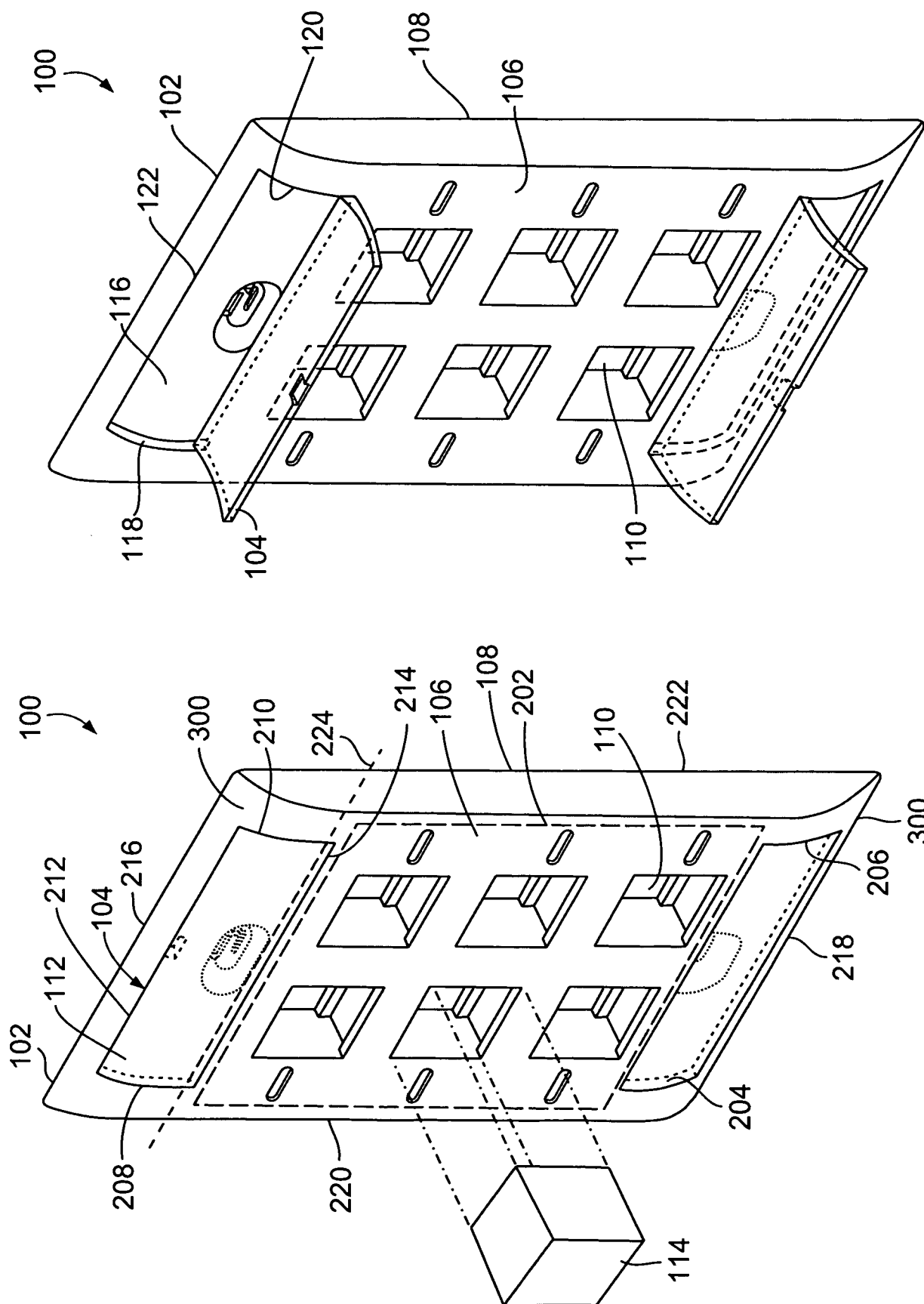


FIG. 2

FIG. 1

2/3

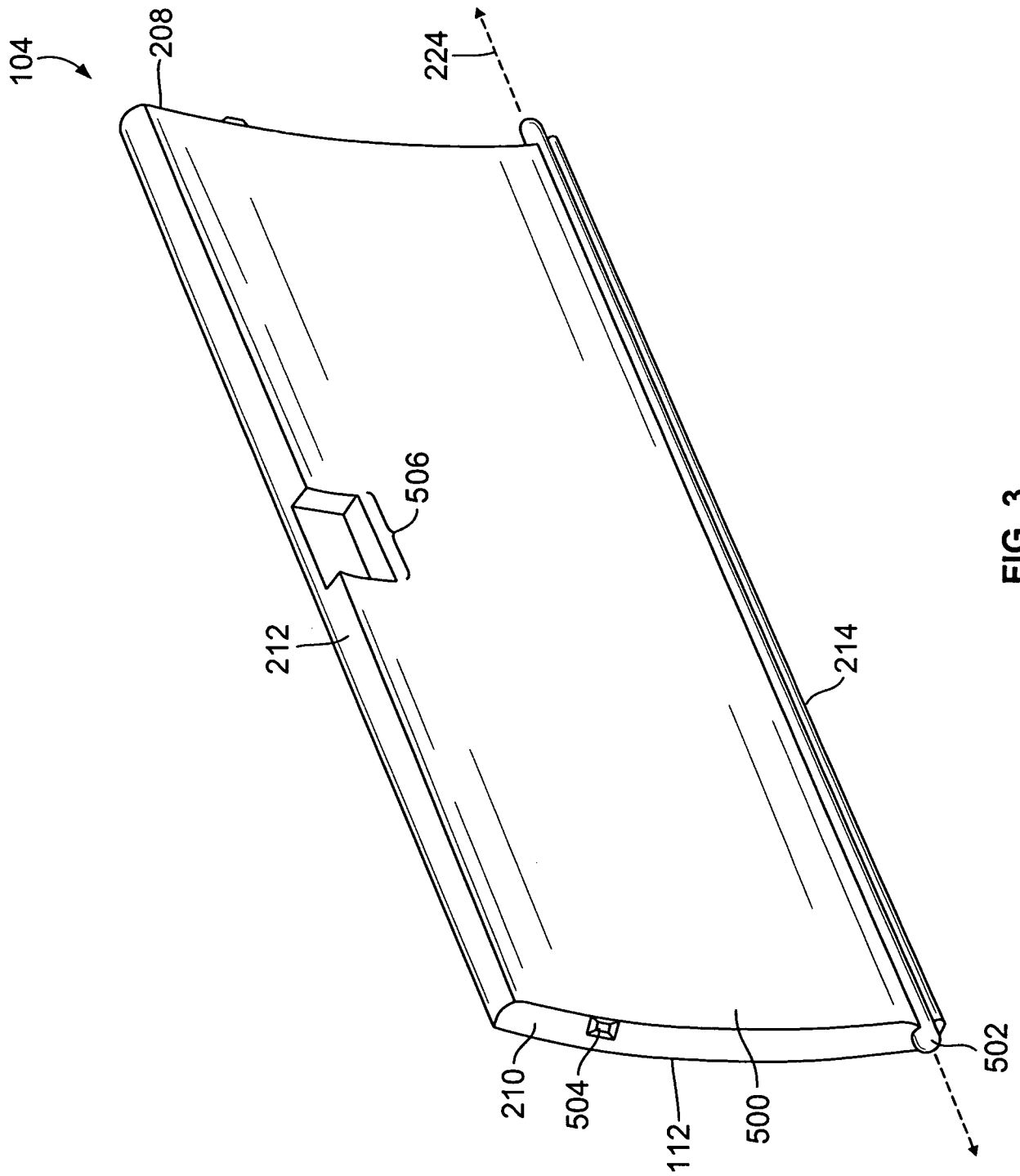


FIG. 3

3/3

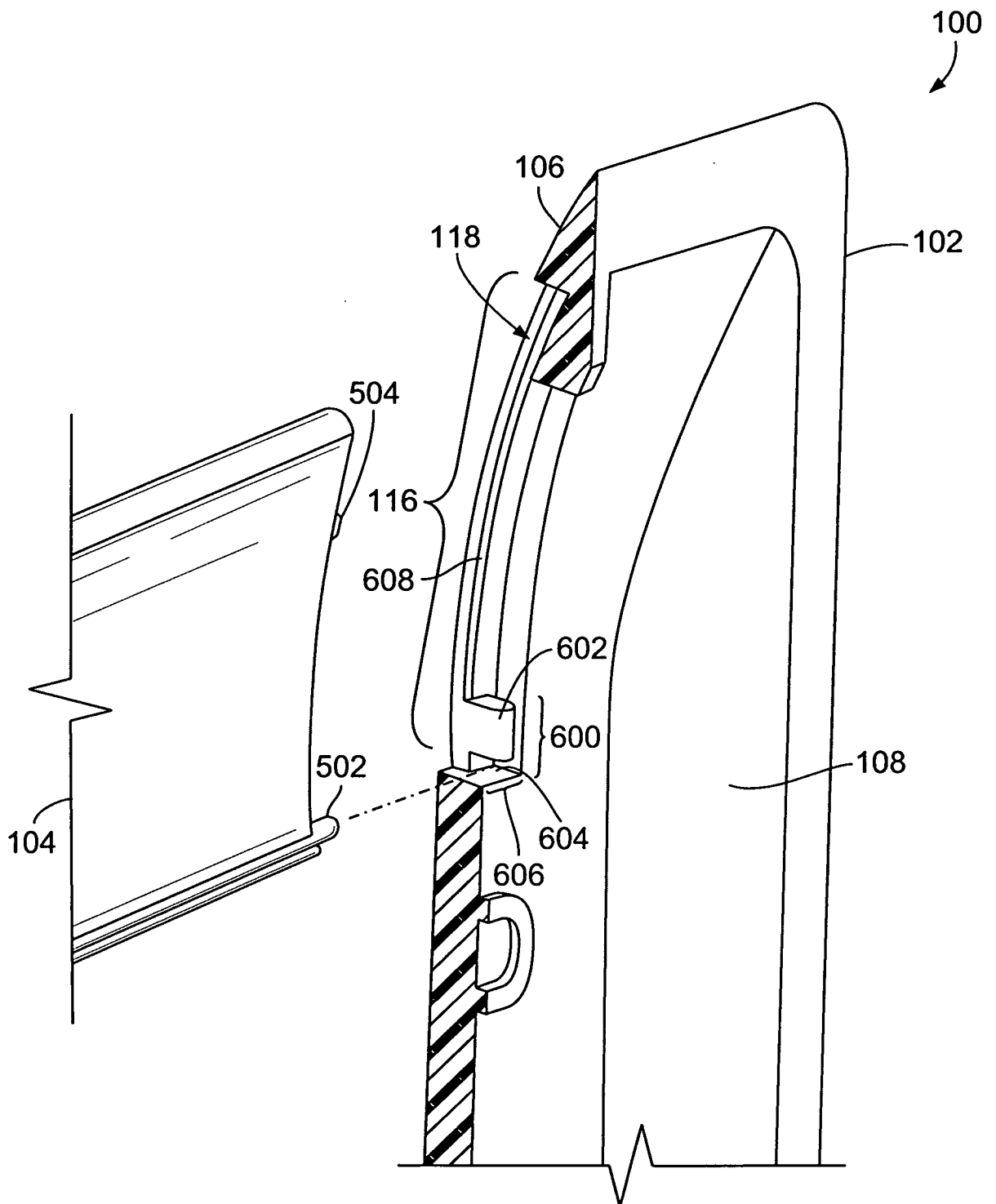


FIG. 4