

120 or bias the clip 120 towards preferred angles of rotation with respect to the post 200, if desired. The clip receiving opening 205 provides an opening for at least a portion of the clip 120 to pass through the clip attachment portion 125 and connect or attach to the post 200. This is just one configuration that can enable a clip 120 to be attached to a mask body 105.

5 **[0091]** In another embodiment, the post 200 may be positioned or configured such that an opening 205 may be unnecessary. For example, the post 200 may be attached to the mask body but positioned a distance away from a surface of the mask body. The distance away from the mask body may provide clearance for the clip 120 to connect or attach to the post 200. Other variations on geometry may provide improved functionality and will be
10 described herein.

[0092] Figures 3A-3C show a non-limiting exemplary embodiment of the clip 120. As shown, the clip 120 includes a hook 300, an interference bump 310, a central portion 315 and two outer portions 320, a headgear attachment loop 330 and one or more finger grips 335. The hook 300 is configured to fit around and attach to the corresponding post 200 of the
15 clip attachment portion 125. The hook 300 can have a first leg portion and a second leg portion defining a U-shape or J-shape in cross-section, for example, to define a space for receiving the post 200. The first leg can be attached to the body portion of the clip 120 and the second leg can define a free end of the hook 300. In some configurations, the cross-sectional shape of the hook 300 can allow the hook 300 to wrap around a majority of post
20 200. However, the hook 300 is not limited to any specific cross-sectional shape. The hook 300 includes an inner surface 305, which can be configured to be at least partially cylindrical to match the cylindrical geometry of the post 200. The inner surface 305 is not limited to a partial cylindrical shape and may interface with the corresponding shape of the post 200.

[0093] At the end of the hook 300, the inner surface 305 can be connected to
25 and/or merge into an interference bump 310 that is configured to narrow the hook entrance 312 relative to the diameter of the post 200. When attaching the hook 300 to the post 200, the hook 300 transitions from an undeflected state to a deflected state. In other words, the narrower hook entrance 312 created by the interference bump 310 requires the hook 300 to deflect outward in a direction away from the post 200 in order to widen the hook entrance
30 312 as the post 200 passes through the hook entrance 312. When the post 200 has fully

central portion 315 may not flex or may not be required to flex for the post 200 to enter the space of the hook 300 through the entrance 312. Moreover, the entire arrangement can be reversed between the clip 120 and the mask body 105 such that the post 200 is defined or carried by the clip 120 and the hook 300 is defined or carried by the mask body 105.

5 **[0099]** In another non-limiting exemplary embodiment, as shown in Figure 5A, a clip 400 can comprise a substrate 410 and one or more over-molded portions 420. The substrate 410 can comprise the functional features of the clip being the hook 500 and headgear attachment loop 330. The substrate 410 can be made from a substantially rigid material as per the clip 120 of the previous embodiments. The over-molded portions 420 can
10 be made from a soft and/or flexible material, such as, but not limited to, silicone rubber or a thermoplastic elastomer. The over-molded portions 420 can be configured to provide finger grips 430 on the sides of the clip 400. The finger grips 430 may be non-slip and comfortable to hold.

[0100] In a further variation of this embodiment, shown in Figure 5B, the hook
15 500 of the substrate 410 includes slots 440. The slots 440 can be configured to provide flexibility to the hook 500 in the same way that the slots 325 have been previously described. In this embodiment, the slots 440 can also be configured to be filled with over-molded filler 450. The over-molded filler 450 can be configured to be bonded to the surfaces of the slots 440, thus providing a webbing-like structure between the central and outer portions 460 and
20 470 of the hook. The over-molded filler 450 can be made from a soft, flexible material that has at least some elasticity, such as silicone rubber or a thermoplastic elastomer; in some embodiments, the over-molded portions 420 and the over-molded filler 450 can be the same material. The flexible over-molded filler 450 allows the hook 500 to maintain the flexibility provided by the slots 440 whilst providing additional strength.

25 **[0101]** In an alternative embodiment (not shown), the outer portions 470 of the hook 500 may be created by an over-molding process. The outer portions 470 may have substantially the same geometry as the central portion 460 and be made of a material substantially the same as that described in relation to the over-molded filler 450. The over-molded outer portions 470 can provide increased flexibility during attachment of the clip as a
30 result of the more flexible material.