PATENTS EXAMINATION BOARD

Subject: The Drafting of Patent Specifications - Paper 1

Date: July 2019

Time: 09h00 -13h00 (although candidates requiring extra time are entitled to an additional two hours)

Examiners: L Cilliers
V Williams

Moderator: J D Whittaker

Question 1

Your client writes to you as follows:

"*I have invented a protective cover for a cellular phone.*

Such protective covers generally include a sleeve into which a cellular phone may be inserted. Broadly speaking, there are two types of known protective covers. The first type is of an 'open sleeve' design, having no closure for the sleeve into which the device is inserted. Although a phone inserted into the open sleeve of such a cover is adequately protected when the sleeve is substantially upright, the phone may fall out of the cover, and become damaged, when the open sleeve is tilted or turned upside down.

The second type of known protective covers includes a flap which may be extended over the sleeve opening and secured in position by one or more fasteners. The flap serves to safely retain the cellular phone within the sleeve irrespective of the orientation of the sleeve. However, the flap and fasteners on these designs usually take some time to open and close, and this can impede fast and easy access to the phone when, for example, the phone is ringing.

There is a need for a protective cover for a cellular phone which can hold the phone securely in the cover in use, even when the cover is tilted or turned upside down, and which allows the phone to be accessed relatively quickly and easily, when necessary.

Attached are some drawings of my invention (FIGS. 1 to 3B). FIG. 1 shows my protective cover held upside down by a user 24. The cover includes a sleeve 2 with an outer border 4. The sleeve 2 defines an opening 6 at a first end 8 thereof, and has a closed second end 12. With reference also to FIG. 2, extending between the first end 8 and the second end 12, and between opposed sides 14 and 14', are external, front and rear fabric walls 16 and 16'. The width 20 and the depth 32 of the internal pocket 34 defined by the sleeve 2 are sized to accommodate a cellular phone. In FIG. 1, a cellular phone 22 has been inserted into the internal pocket of the sleeve 2, via the opening 6, and is retained within the sleeve despite the effect of gravity acting in the direction of the arrow "D".

Inside the sleeve 2 is an internal fabric layer 18 which serves to hold the cellular phone within the internal pocket of the sleeve. The fabric layer 18 is formed from a napped fabric, i.e. a fabric which has undergone a special finishing process, such as where the surface of the fabric has been brushed or treated so as to raise the fibre ends to the surface and cause them to stand upright. Napping is done for many purposes, such as to give a softer, warmer feel. However, because the nap has a definite direction, I have found that napped fabrics are suitable for retaining the cellular phone 22 within the internal pocket 34 of the sleeve 2.

With specific reference to FIG. 2, the fabric layer 18 has a stiff directional nap 28, in which the fibre ends are angled at approximate 45 degrees to the base material 18. The angle of the nap 28 permits quick, slidable insertion of the cellular phone 22 into the pocket 34. However, when the sleeve 22 is tilted or turned upside down, the angle of the nap 28 engaging the cellular phone 22 serves to provide a resistance to the removal of the cellular phone from the pocket 34, and thereby retains the device within the sleeve 2 against the effect of gravity. In other words, the angle of the directional nap 28 allows the device 22 to glide easily into the pocket 34 with minimal resistance, and thereafter prevents the device 22 from falling out of the pocket 34. The material 18 is typically constructed from a polyester/cotton mix, but may be any suitable or desired types of material with a stiff directional nap.

Referring now to FIG. 3A, an optional, resilient foam layer 26 is located between the external fabric walls 16 and 16' on the one hand, and the internal fabric layer 18 on the other hand. The foam layer 26 is compressed in a lateral direction (see arrows "F") when the cellular phone 22 is inserted into the pocket 34. Once compressed, the foam layer 26 ensures that the internal fabric layer 18 is pressed against the smooth surfaces of the phone 22 so that the stiff directional nap 28 can operate to retain the phone 22 within the pocket 34.

FIG. 3B shows the cellular phone 22 at an initial moment of removal from the pocket 34. As can be seen, the directional nap 28 is physically drawn upwardly by the upward displacement of the phone 22.

In use, the cellular phone 22 may simply be slid into the pocket 34 by a user. Once the phone 22 is inside the pocket 34, the sleeve 2 of the cover may be tilted or turned upside down. When so tilted or turned, the stiff directional nap 28 resists displacement of the phone 22 out of the pocket, thereby retaining the phone 22 within the sleeve 2. To remove the phone 22 from the sleeve 2, a user simply uses a thumb and index finger to grip and gently pull the phone 22 out of the sleeve 2 with a force sufficient to overcome the resistance provided by the stiff directional nap 28."

The candidate is required to identify the inventive feature(s) of the invention, and to draft up to three claims to protect the above invention.

FIG. 1

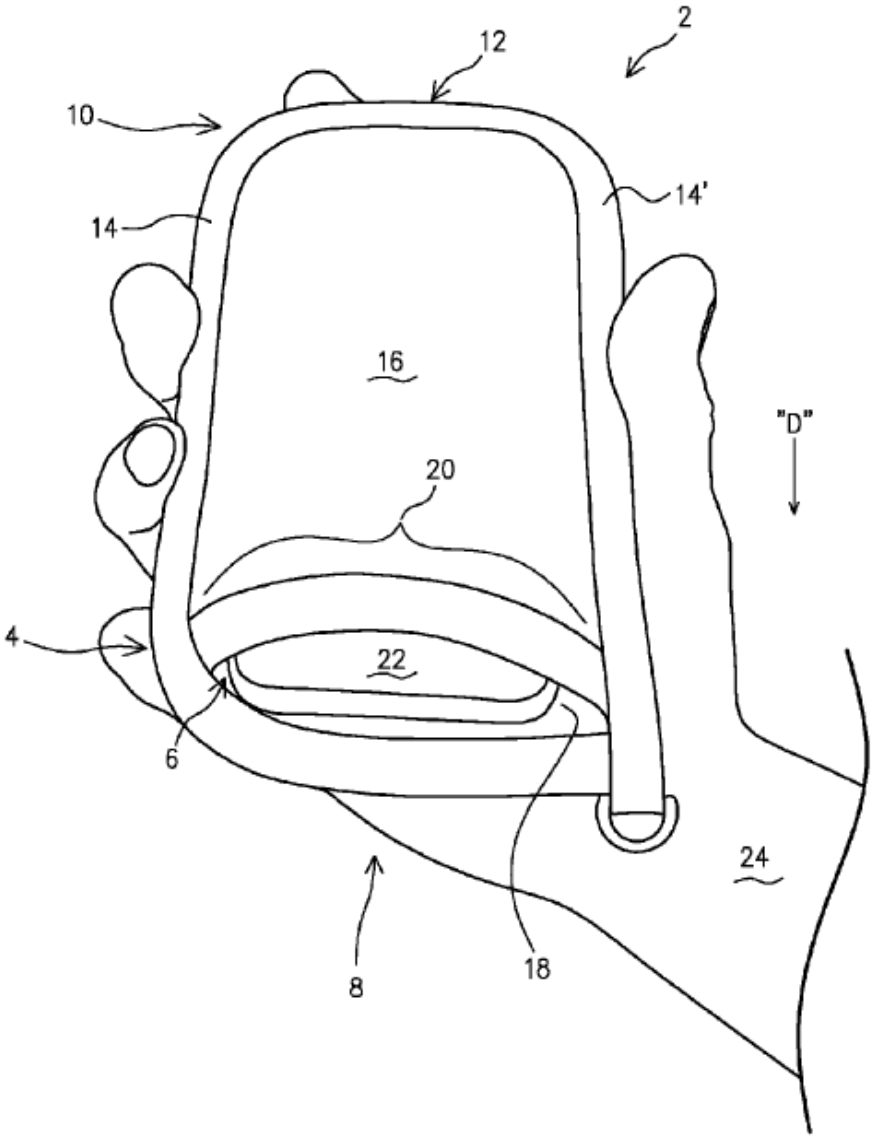

FIG. 2

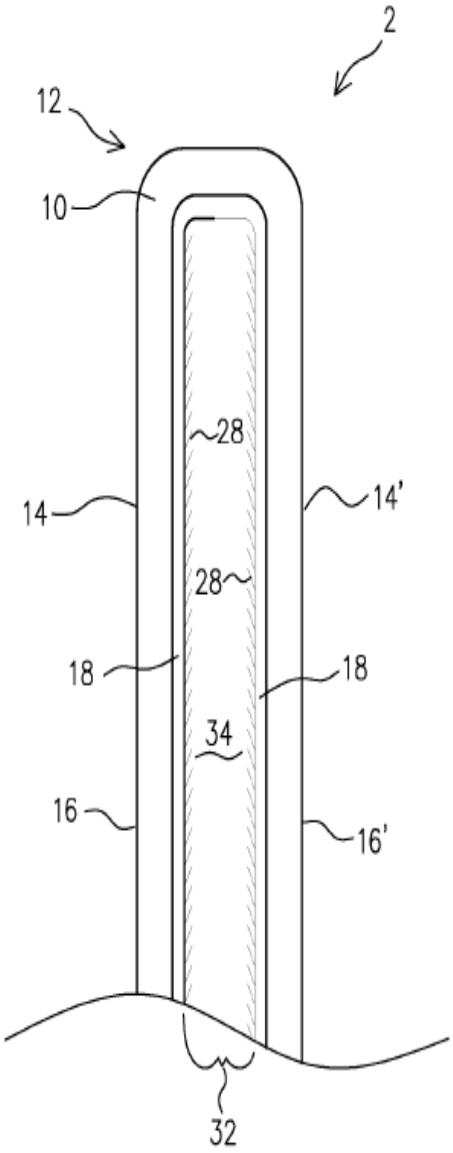

FIG. 3A

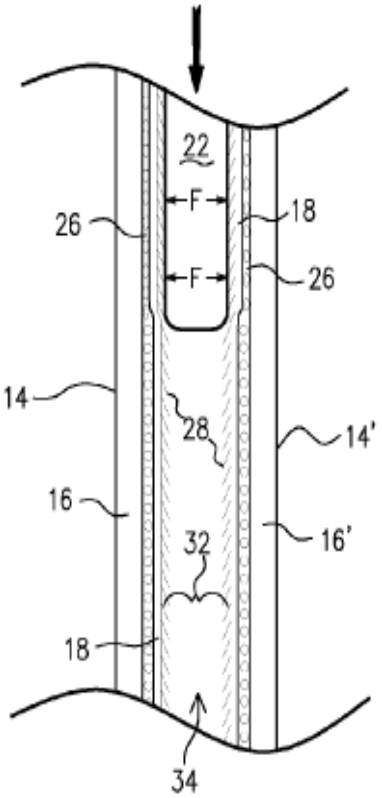
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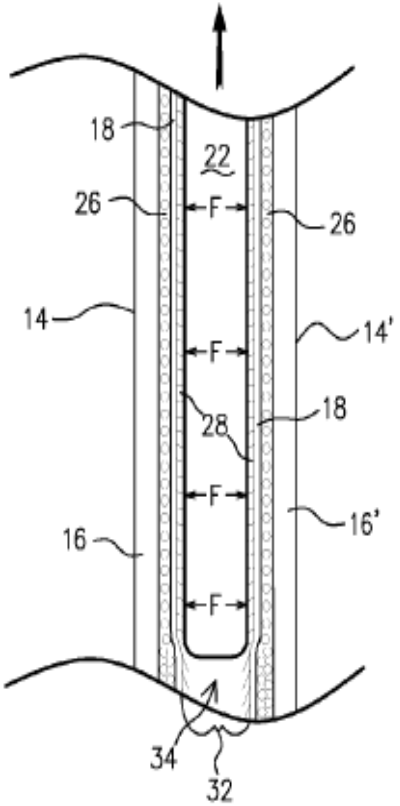
FIG. 3B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Question 2

You meet with a client who shows you her new buckle which combines the properties of a belt buckle with those of a carabiner.

Your client explains her invention to you (with reference to drawings marked FIGS. 1 to 6) as follows:

"*One version of my buckle 100 is illustrated in FIGS. 1 to 3 of the drawings. As can be seen, the buckle 100 has a generally rectangular shape, and includes a base member 120 which connects a rear limb 140 to a front limb 160. At their upper ends, the rear limb 140 and the front limb 160 carry inwardly directed, opposed upper members 180 and 200, respectively. A gap is defined between the opposed free ends of the upper members 180 and 200, as shown in FIG. 3. The buckle 100 is also provided with a gate 240 for closing the gap between the upper members 180 and 200. A first end 260 of the gate 240 is connectable to the upper member 180 by way of a pin 360 so that the gate 240 may pivot inwardly, carabiner fashion, as shown in FIG. 2. Preferably, a spring 300 (see FIG. 3) is used to bias the gate 240 into a closed position, as shown in FIG. 1. A second end 280 of the gate 240 has a female formation for engaging a corresponding male formation on the upper member 200, as shown in FIG. 3.*

A belt 400 is connectable to the buckle 100 via a connector component 380. The component 380 defines a recess for receiving one end 412 of the belt 400 (see FIG. 3), and this end of the belt 400 is retained in the recess by securing screws 405 and 410.

A prong 420 extends across the buckle 100 as shown. A first end 440 of the prong 420 includes a prong twirl 480 which pivotally connects the first end of the prong to the rear limb 140. A second end 460 of the prong 420 is designed to extend through an aperture (not shown) in the belt 400 in a conventional manner, and to rest in a formation in the front limb 160 when the belt has been fastened to the buckle 100.

FIGS. 4 and 5 show another embodiment of my buckle according to the invention in which, instead of the spring 300 for biasing the gate 240 into the closed position, the gate 240 includes a rotatable locking sleeve 340 which is engageable with a thread on the upper member 200 to secure the gate in the closed position illustrated in FIG 4.

FIG. 6 shows yet another embodiment of my buckle according to the invention. In this embodiment, the gate 240 is incorporated into a front end of the buckle. To accommodate this, the free end of the prong 420 rests against a middle portion of the gate 240 when the belt 400 has been fastened to the buckle.

The advantage of my buckle 100 is that, in addition to forming part of a belt 400, in use, the buckle may also be used as a carabiner. I suspect that this will make the buckle popular with campers, hikers, mountain climbers and the like."

After describing her buckle to you, your client shows you five conventional carabiners which she has brought to the meeting. These carabiners are shown in the photograph below. Your client explains that, when looking in a clockwise direction from top left, what can be seen is a D-shaped wire gate carabiner, a D-shaped straight gate carabiner, an oval straight gate carabiner, a pear-shaped auto locker carabiner and a D-shaped screw locker carabiner.

The candidate is required to identify the inventive feature(s) of the invention, and to draft up to three claims to protect the above invention.

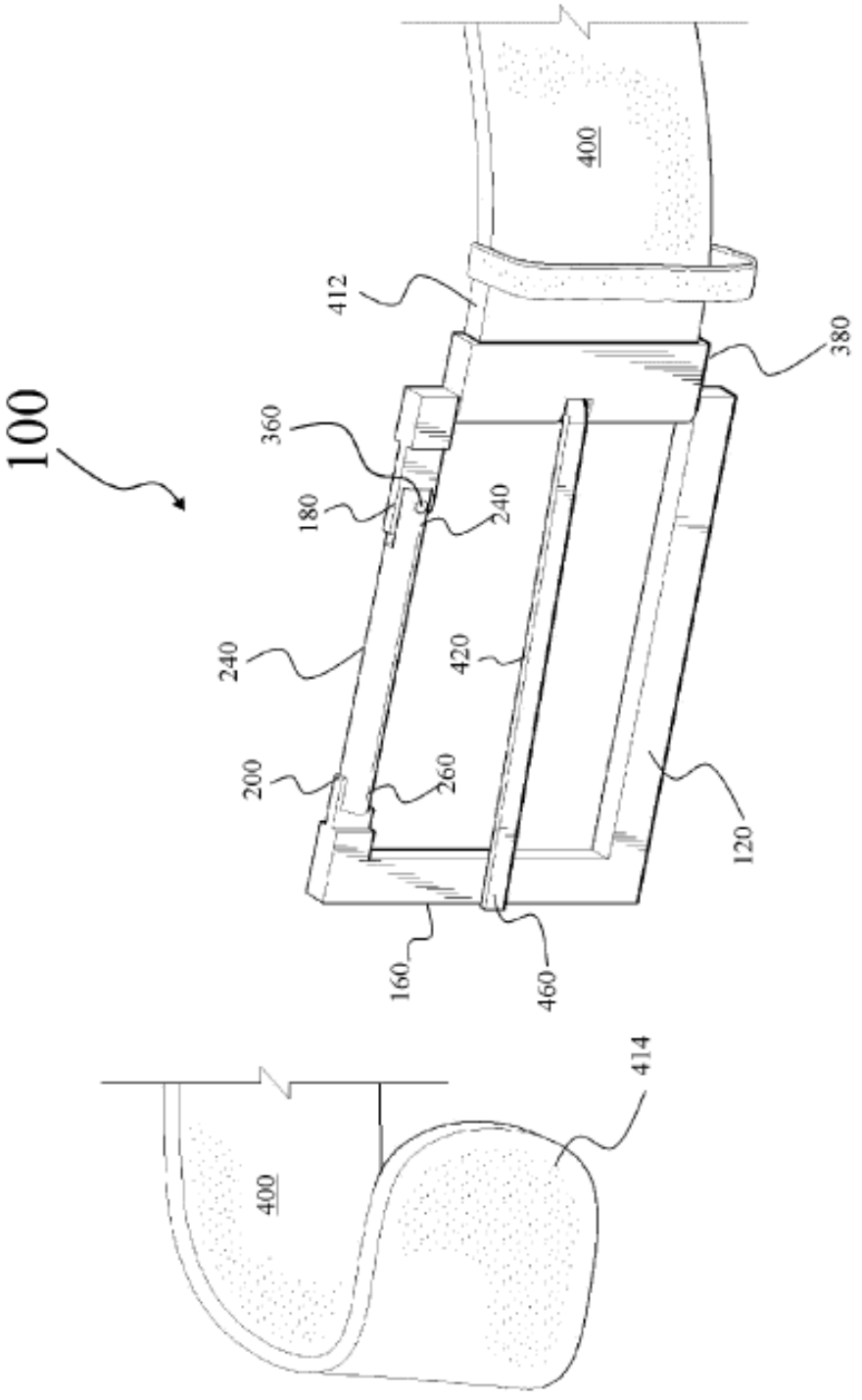

FIG. 1

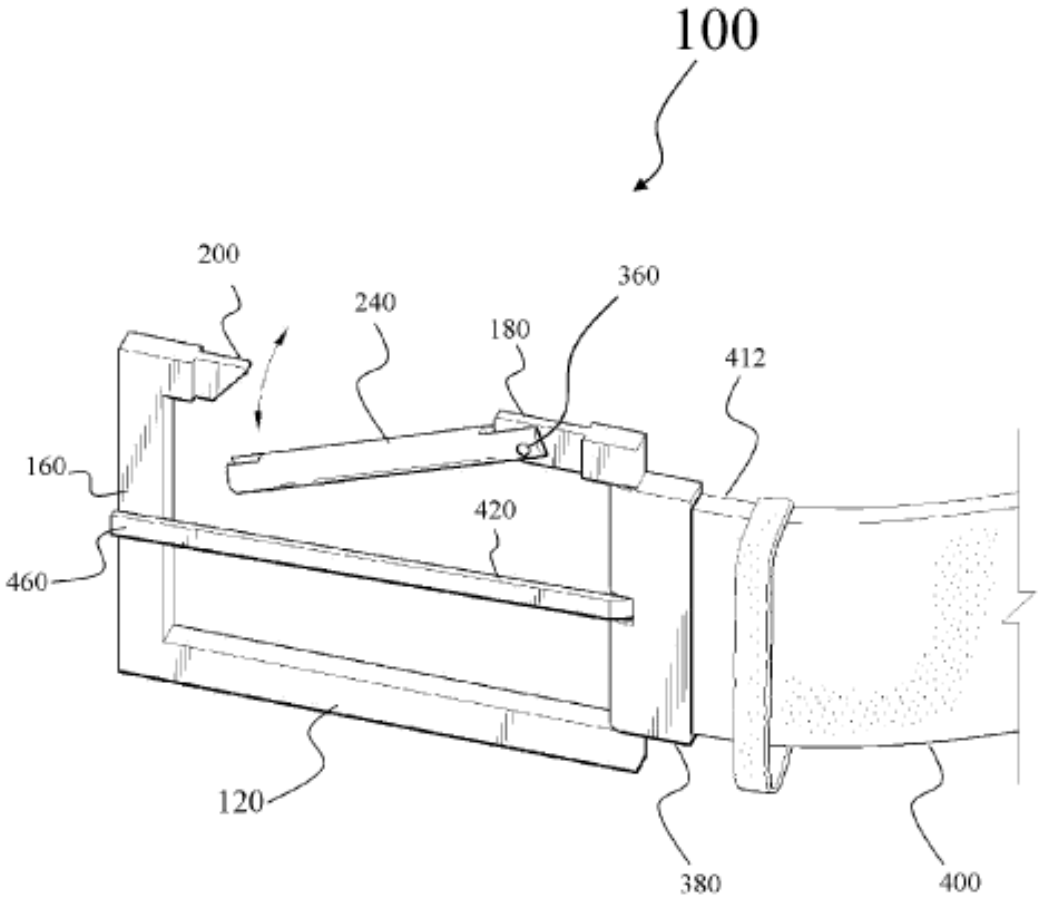

FIG. 2

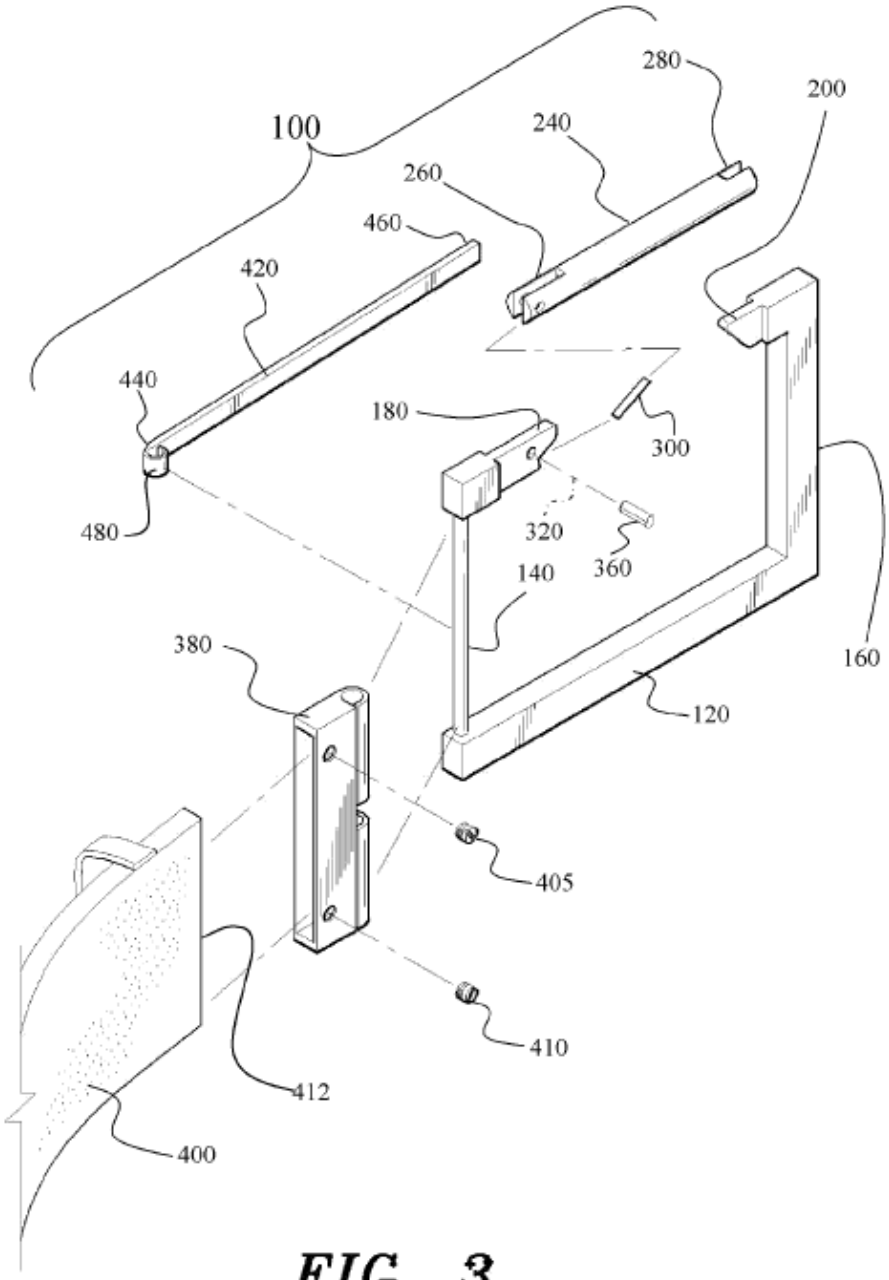
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FIG. 3

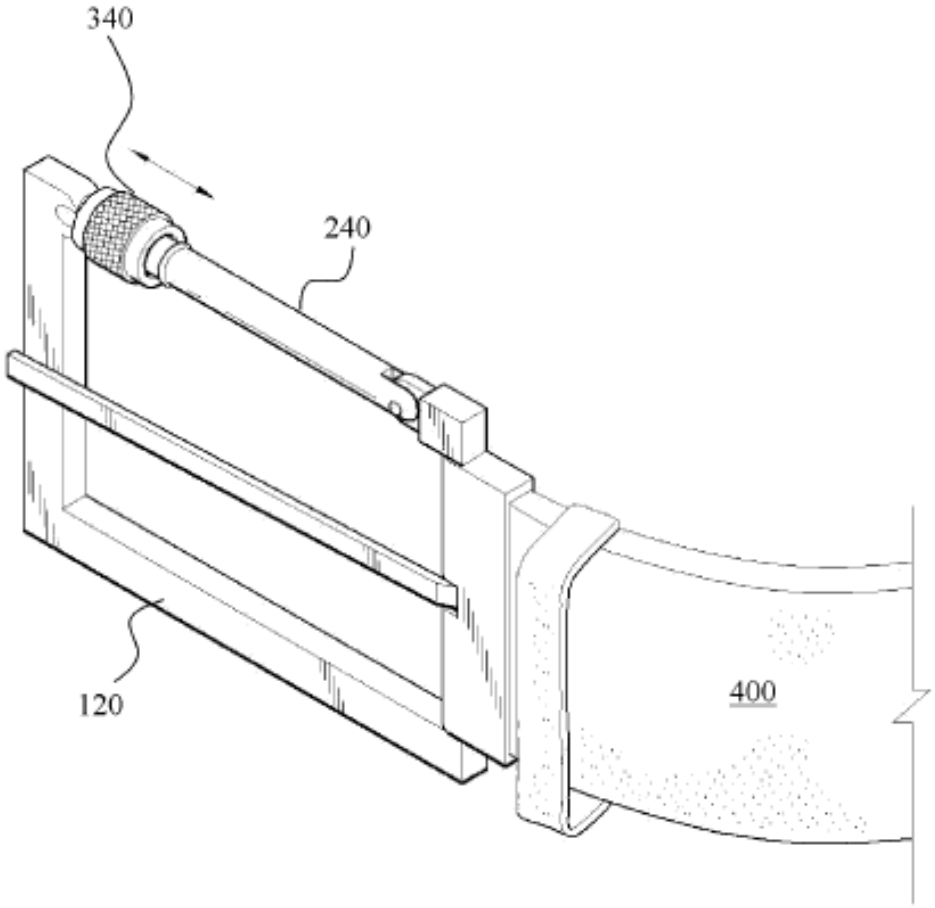

FIG. 4

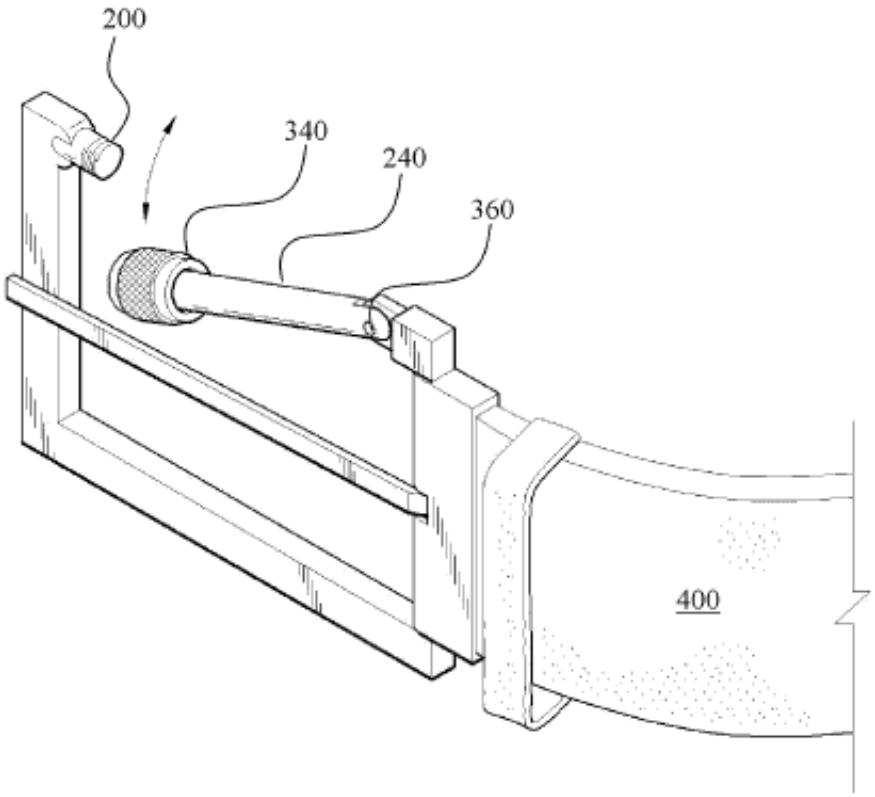

FIG. 5

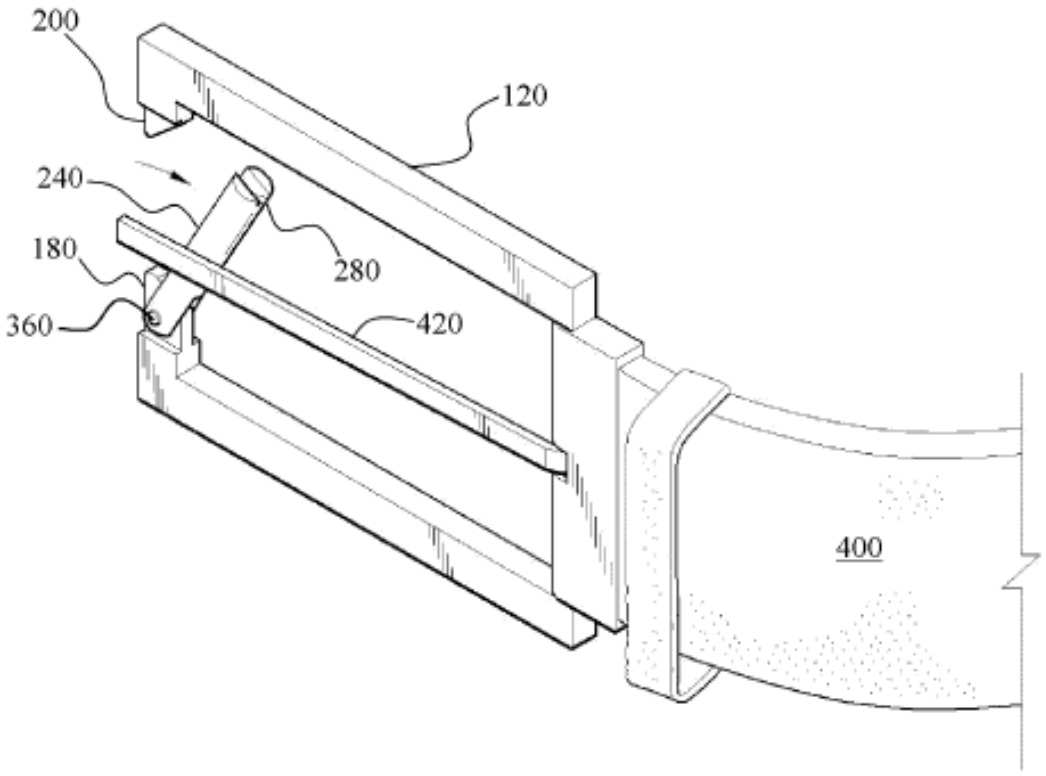

FIG. 6