Oct. 10, 1933. T. E. McCALISTER 1,929,701

HUB CAP

Filed Oct. 15, 1932

Fig. 2

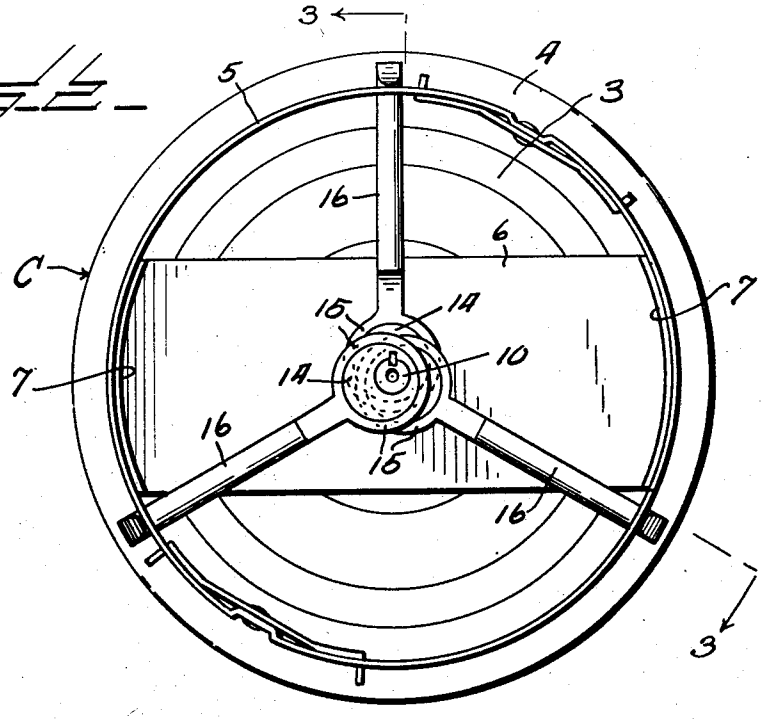


Fig. 3

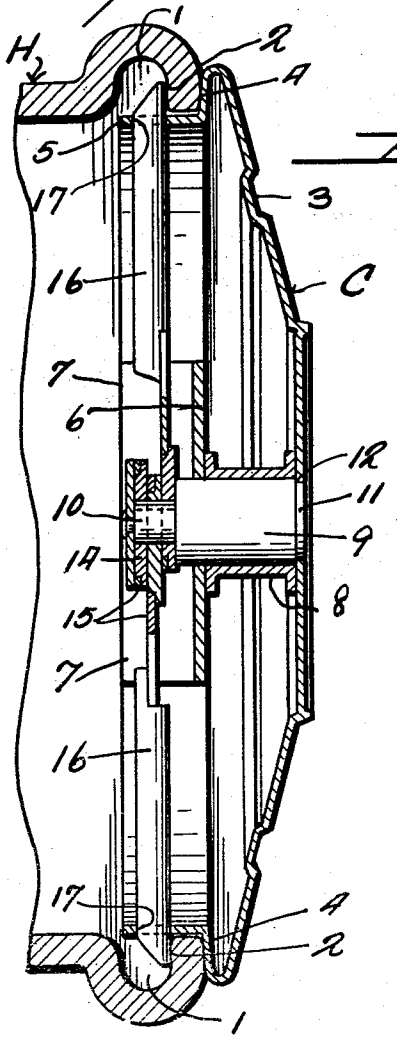
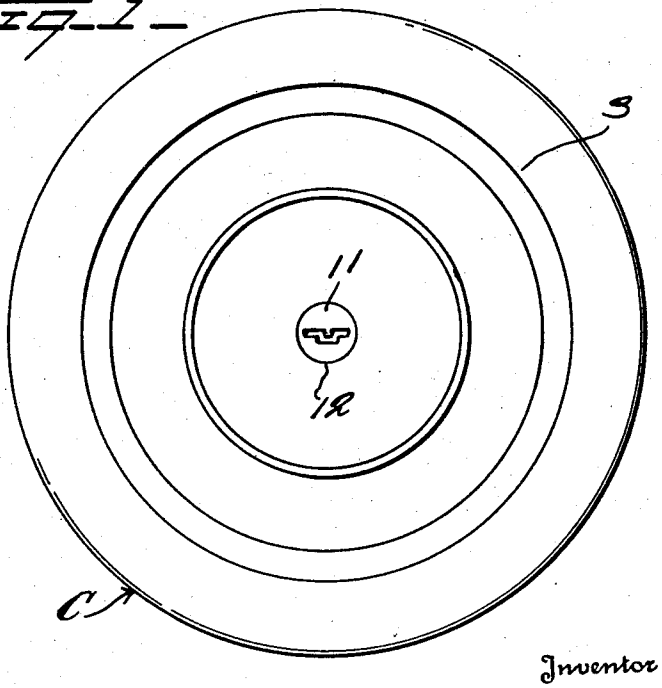


Fig. 1



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HUB CAP

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2 Claims. (Cl. 301—108)

This invention relates to a hub cap, and it is an object of the invention to provide a device of this kind with means whereby the same can be locked or held in applied position in a manner to substantially eliminate unauthorized removal of the cap.

As is believed to be well known, it is the practice to hold a spare wheel to a suitably positioned support through the medium of nuts engageable with bolts or threaded shanks extending out from the support, access to the nuts for removal to release the spare wheel being through the hub of such wheel. It is another object of the invention to provide means for closing the hub against passage therethrough of any instrument or means to effect the removal of such nuts.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved hub cap whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the acompanying drawing, wherein:—

Figure 1 is a view in front elevation illustrating a hub cap constructed in accordance with an embodiment of my invention;

Figure 2 is an enlarged rear elevational view of the cap as herein disclosed;

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 1, the cap being in applied position and the associated end portion of the wheel hub being shown in section.

As disclosed in the accompanying drawing, H denotes the outer end portion of the hub of a wheel such as employed in connection with a motor driven vehicle, said end portion of the hub being provided with an inwardly facing and circumferentially disposed annual groove or channel 1 affording an internal shoulder 2.

The hub cap C may be of any preferred design and comprises a head plate 3 substantially concavo convex in cross section and which has its marginal portion returned, as at 4, to provide a shoulder to butt the outer end of the hub H as illustrated particularly in Figure 3 of the drawing. The portion 4 has at its inner margin the outstanding and rearwardly directed rim 5 which freely enters the outer end of the hub H and which rim 5 is of a length to extend a material distance beyond the shoulder 2 of the hub H when the shoulder 4 of the cap C is in contact with the outer end of the hub H.

Extending radially across the inner or concave face of the head plate 3 of the cap C is a bridge plate 6, the extremities of which are provided with the angular flanges 7 welded or otherwise secured to the rim 5. The bridge plate 6 has its inner face substantially flush with the inner face of the marginal returned portion 4 of the plate 3.

Interposed between the central portions of the plates 3 and 6 is a sleeve or barrel 8 welded or otherwise effectively secured to said plates and in which is securely arranged a casing 9 of a conventional cylindrical lock, said lock also including a rotatable part 10 extending beyond the inner end of the casing 9 and which rotates with a conventional key operated barrel 11 arranged within the casing 9 and which barrel 11 has its key end received within a suitably positioned opening 12 provided in the head plate 3.

Mounted upon the part 10 and keyed or otherwise secured thereto for rotation therewith is a plurality of eccentric disks 14 each of which being snugly engaged within a rigid eccentric strap 15 carried by the inner end portion of a bolt 16.

As illustrated in Figure 2 of the drawing, the bolts 16 are three in number and are substantially equi-distantly spaced with the outer end portion of each of the bolts 16 working through an opening 17 provided in the rim 5. The various eccentric disks 14 have their high points so arranged one with respect to the other whereby upon rotation of the part 10 the bolts 16 will be caused to move in unison either into extended or retracted positions. When the bolts 16 are retracted such bolts, or more particularly the outer end portions thereof, offer no hindrance or obstruction to the passage of the rim 5 within the outer end portion of the hub H when it is desired to apply the cap.

After the cap C has been properly positioned with respect to the hub H upon requisite turning of the part 10 the bolts 16 will be extended a distance sufficient to cause the outer extremities of said bolts 16 to lap the shoulder 2 of the hub H whereby the applied cap C is effectually held against removal. As the rotation of the part 10 is under the control of a separate key insertable within the barrel 11, it is believed to be readily understood that after the bolts 16 have been extended to hold the applied cap C and the operating key for the barrel 11 has been removed it will be a difficult matter for an unauthorized person to take the cap C from the hub H. This is of particular importance and advantage in

connection with a spare wheel which has been secured in a conventional way upon a spare wheel support carried by a motor driven vehicle as is now the general custom. While the cap C is in place upon the hub H access cannot be had through the hub H to the nuts or the like for holding the spare wheel to its support.

I claim:—

1. A hub cap comprising a head plate, the rear face of which is concave, the marginal portion of said head plate being formed for contact with the outer end of the hub to which the cap is applied, a rim carried by the head plate to extend within the end portion of the hub with which the cap is engaged, a bridge plate extending across the concave face of the head plate and secured to the rim, a sleeve supported by the head plate and the bridge plate, a barrel within the sleeve having a part for rotary movement, eccentric disks carried by said part for rotation in unison therewith, bolts slidably working through the rim, an eccentric strap carried by each of said bolts for coaction with an eccentric disk, the high point of each of the disks with respect to the others being such to cause all of the bolts to be extended or retracted in unison upon rotation of said rotatable part, the bolts when extended being adapted to engage an internal shoulder of the wheel hub to hold the applied cap against removal.

2. A hub cap comprising a head plate having its marginal portion returned, said returned portion having its inner margin defined by a rim to extend within the hub of the wheel, a key operated rotating part carried by the head plate at the same side thereof as the rim, a plurality of eccentric disks mounted upon said rotating part for rotation in unison upon rotation of said rotatable part, bolts slidably disposed through the rim of the head plate for locking engagement with the portion of the hub into which said rim is fitted, the inner portions of the bolts having straps, a strap of each bolt surrounding a disk on the rotatable part, the high point of each of the disks with respect to the others being such to cause all of the bolts to be extended or retracted in unison upon rotation of said rotatable part.

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