June 20, 1950 J. A. ROOK 2,512,440

KNOB FOR AUTO DOOR LATCHES

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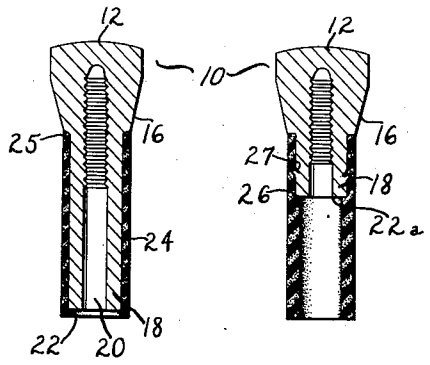

Fig. 1

Fig. 2

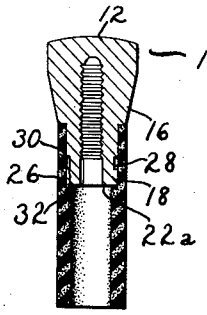

Fig. 3

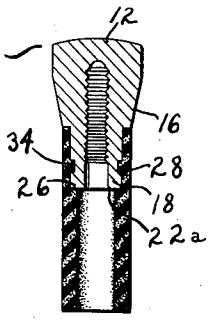

Fig. 4

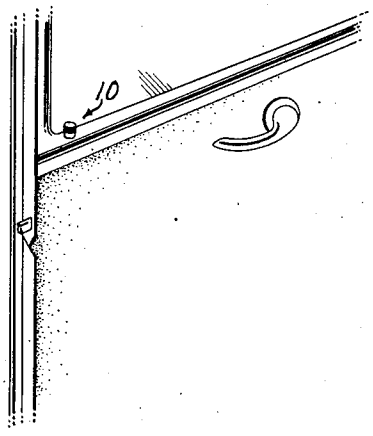

Fig. 6

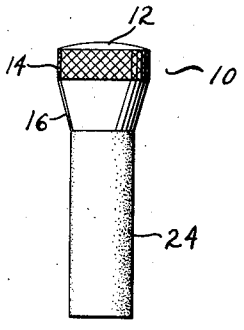

Fig. 5

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KNOB FOR AUTO DOOR LATCHES

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6 Claims. (Cl. 16—121)

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This invention relates to a composite operating-knob for an automobile door latch, or the like.

In the past such knobs have been formed of hard rubber in which threads were cut by screwing the knob onto the lock activating arm which is located in the body of the automobile door, the latch operating conventionally by depression of the top of the knob protruding from the door edge adjacent the auto window, and conversely the knob being pulled up to unlatch the door. As currently made these knobs tend to become loose and accordingly rattle in the door frame, or again they may break off or the threads strip due to their fragile nature, so that in any event, from time to time, they must be replaced.

Accordingly, it is an object of the present invention to produce an improved knob of the type described which may be used either as an original installment or as a replacement and is especially designed for superior service which will outlast the life of the car, and may, if desired be transferred from one car to another. In particular, the present knobs are adapted to eliminate their rattling in the door frame, and also to do away with the possibility of the knob breaking off or stripping its threads. By my invention there is provided such a knob having a shock resistant sleeve securely mounted thereon, said sleeve being disposed, however, so as not to receive any of the strain between the locking arm and its attached knob, the mounting threads being permanently formed in the body of the knob, allowing the locking arm to be seated therein and securely attached.

Other objects and advantages of the invention will be apparent from the following description and claims, the novelty consisting in the features of construction, combination of parts, the unique relations of the members and the relative proportioning, disposition, and operation thereof, all as more completely outlined herein and particularly pointed out in the appended claims.

Referring to the drawings which form part of the present specification:

Figures 1 to 4 are longitudinal sectional views through several different forms of my improved knob;

Figure 5 is an elevational view of the knob; and

Figure 6 is a perspective view of part of an auto door showing the knob mounted in operating position.

As seen particularly in Figure 5, generically such knobs are characterized by a generally annular head portion 10, having a convex top or dome

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12, a peripherally knurled band or roughened section 14 directly below the dome, an inwardly tapered neck 16, and a dependent cylindrical section 18 therebeneath, said knob having an axial aperture 20 opening from the bottom end 22 to permit attachment to the activating arm of the lock (not shown). As here illustrated, the aperture 20 is tapped for screw-threaded attachment to the locking arm.

According to the present form the cylindrical section 18 of my knob, which is preferably made of metal, is formed of a smaller diameter to allow its insertion into a corresponding sleeve 24 formed of shock absorbing material such as rubber, cork or other suitable elastomeric or compressible material, the upper terminus or periphery of the sleeve 25 being disposed flush with the lower extremity of the tapered neck. Such a structure is illustrated in Figure 1. By further modification an internal shoulder 26 is provided within the sleeve and adapted to abut against the shortened end 22a of the cylindrical section, as shown in Figure 2. This permits a non-slipping attachment of the sleeve while eliminating the lower guide portion of the cylindrical body. Further anchoring of the sleeve may be attained by reason of an upwardly directed peripheral barb 27 cut in the cylindrical section.

Another embodiment is made by providing a peripheral groove 28 formed in the cylindrical section and axially spaced from either end thereof. By this construction the top and bottom edges 30 and 32 respectively of the groove provide additional points of resistance to removal of the sleeve frictionally held upon the knob, since the adjacent surface of the snugly fit sleeve tends to expand into the groove. In addition, the sleeve may be provided with an inner peripheral rib 34 adapted to seat in the groove 28. This produces a highly effective locking device unusually resistant to strains tending to disengage the two parts of the assembly. In the alternative it may be employed to mount a sleeve which does not form a tight fit on the cylindrical section.

While I have shown and described in some detail a few presently preferred embodiments of my knob, it is to be understood that various modifications may be made in the construction and use thereof within the scope of the subsequently claimed invention which is to be construed broadly and limited only by prior art.

The invention claimed is:

1. An article of the character described including: a generally annular head having a dome shaped top, a peripheral roughened grasping

surface and an inwardly tapered, dependent neck sloping therefrom to a dependent, axially restricted cylindrical section, said section having a peripheral groove therein and having a longitudinal, internally threaded aperture, open at the bottom and closed at the top; and a sleeve of shock absorbing material mounted snugly on said cylindrical section, its periphery being co-extensive with the periphery of the lower terminus of said tapered neck, said sleeve having an internal rib seated in the peripheral groove of said cylindrical section and an internal annular shoulder adapted to abut against the bottom of said section and being open at the bottom for insertion therethru of a mounting arm for engagement with the internal threads of the cylindrical section.

2. An article of the character described including: a generally annular head having a peripheral roughened grasping surface and an inwardly tapered, dependent neck sloping therefrom to a dependent, axially restricted cylindrical section, said section having a peripheral groove therein and having a longitudinal, internally threaded aperture, open at the bottom and closed at the top; and a sleeve of shock absorbing material mounted snugly on said cylindrical section, its periphery being co-extensive with the periphery of the lower terminus of said tapered neck, said sleeve having an internal rib seated in the peripheral groove of said cylindrical section and being open at the bottom for insertion therethru of a mounting arm for engagement with the internal threads of the cylindrical section.

3. An article of the character described including: a generally annular head having a peripheral roughened grasping surface and an inwardly tapered, dependent neck sloping therefrom to a dependent, axially restricted cylindrical section, said section having a peripheral groove therein and having a longitudinal, internally threaded aperture, open at the bottom and closed at the top; and a sleeve of shock absorbing material mounted snugly on said cylindrical section, its periphery being co-extensive with the periphery of the lower terminus of said tapered neck and being open at the bottom for insertion therethru of a mounting arm for engagement with the internal threads of the cylindrical section.

4. An article of the character described including: a generally annular head having a peripheral roughened grasping surface and an inwardly tapered, dependent neck sloping therefrom to a dependent, axially restricted cylindrical section, said section having a peripheral, upwardly directed barb and having a longitudinal, internally threaded aperture, open at the bottom and closed at the top; and a sleeve of shock absorbing material mounted snugly on said cylindrical section, its periphery being co-extensive with the periphery of the lower terminus of said tapered neck and being open at the bottom for insertion therethru of a mounting arm for engagement with the internal threads of the cylindrical section.

5. An article of the character described including: a generally annular head having a peripheral roughened grasping surface and an inwardly tapered, dependent neck sloping therefrom to a dependent, axially restricted cylindrical section and having a longitudinal, internally threaded aperture, open at the bottom and closed at the top; and a sleeve of shock absorbing material mounted snugly on said cylindrical section, its periphery being co-extensive with the periphery of the lower terminus of said tapered neck, said sleeve having an internal annular shoulder adapted to abut against the bottom of said section and being open at the bottom for insertion therethru of a mounting arm for engagement with the internal threads of the cylindrical section.

6. An article of the character described including: a generally annular head having a peripheral roughened grasping surface and an inwardly tapered, dependent neck sloping therefrom to a dependent, axially restricted cylindrical section and having a longitudinal, internally threaded aperture, open at the bottom and closed at the top; and a sleeve of shock absorbing material mounted snugly on said cylindrical section, its periphery being co-extensive with the periphery of the lower terminus of said tapered neck and being open at the bottom for insertion therethru of a mounting arm for engagement with the internal threads of the cylindrical section.

JAMES A. ROOK.

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