Sept. 16, 1952 C. H. WEAVER 2,610,877

ATTACHMENT FOR DOOR KNOBS

Original Filed Feb. 15, 1947

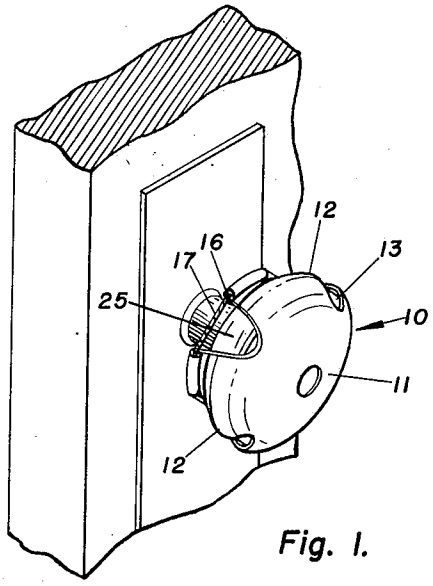



Fig. 1.

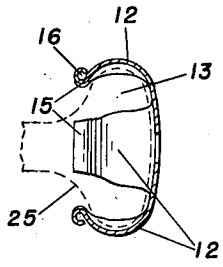



Fig. 2.

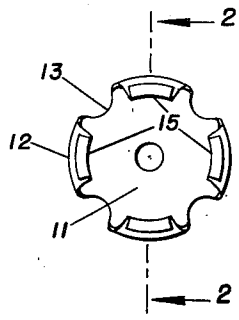



Fig. 3.

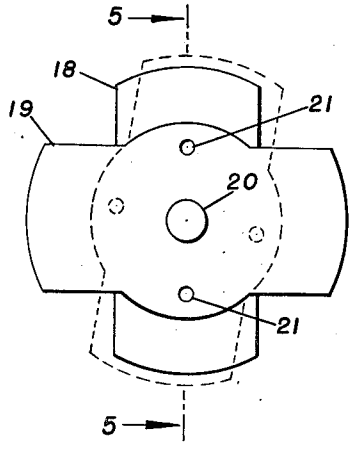



Fig. 4.

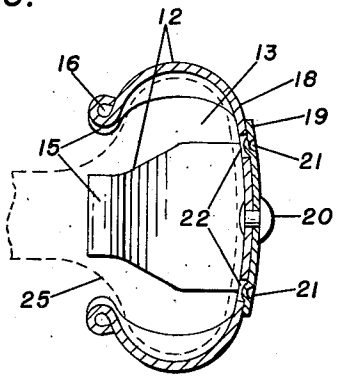



Fig. 5.

INVENTOR.
CLARK H. WEAVER
BY
K. A. Rauchen

Patented Sept. 16, 1952

2,610,877

# UNITED STATES PATENT OFFICE

2,610,877

## ATTACHMENT FOR DOOR KNOBS

Clark H. Weaver, Berkeley, Calif.

Continuation of abandoned application Serial No. 728,901, February 15, 1947. This application March 31, 1950, Serial No. 153,235

5 Claims. (Cl. 292—1)

1

The present invention relates to operating knobs of the type used on doors, cupboards, water taps and the like and aims to provide means adapted to prevent small children from operating such knobs while leaving grown-up persons free to manipulate them in the normal manner.

Broadly it is an object of the present invention to provide means adapted to prevent small children from effectively manipulating knobs on doors, cupboards, water taps, etc., without hindering grown-ups in the effective operation thereof.

It is another object of the present invention to provide operating knob for doors, drawers, cupboards, and the like which is of such construction that small children are unable to turn it effectively, while it may readily be operated by grown-ups.

More specifically it is an object of the present invention to furnish an attachment for manipulating knobs which renders it impossible for small children to turn the knobs while permitting grown-up persons to operate them in the normal manner.

Additionally, it is an object of this invention to furnish an attachment of the type referred to which may readily be applied to door knobs and the like and, when applied, will resist attempts, on the part of small children, to tear it off.

It is still another object of the present invention to furnish an attachment for door knobs of the type described which, while constructed to reliably adhere to the knob to which it has been applied, may readily be detached by the experienced hands of grown-up persons.

Furthermore, it is an object of the present invention to provide a device of the type referred to which is pleasing in appearance.

It is yet another object of the present invention to furnish an attachment of the kind described which is inexpensive and simple in construction and which lends itself readily to mass production methods.

These and other objects of my invention will be apparent from the following description of the accompanying drawing which illustrates certain preferred embodiments thereof and wherein:

Figure 1 is a perspective view of a door knob provided with an attachment according to my invention;

Figure 2 is a sectional side elevation of the attachment shown in Figure 1 with the door knob indicated in phantom lines;

Figure 3 is a rear view of the attachment illustrated in Figures 1 and 2 removed from the door knob;

Figure 4 is a front view of a modified form of my invention, and

Figure 5 is sectional side elevation of the modified attachment shown in Figure 4.

2

The device of my invention is formed by a shell or cover 10 which concentrically surrounds the door knob 25, as shown in Figure 1. The shell 10 is composed of a central dome or disc 11 and a plurality of arcuate legs or prongs 12 projecting from the periphery of said dome in the general direction of its central axis, with each two adjacent prongs forming a window or recess 13. As may best be seen from Figure 2, the initial portions of the prongs 12 diverge from one another to conform with the maximum diameter of the door knob 25 while their end portions converge to a sufficient degree to securely anchor the device behind the knob. The ends of prongs 12 are bent backwards to form rounded camming surfaces 15 and may be looped into hems 16 adapted to receive a cord or wire 17 (Figure 1).

As shown in Figure 2 the diametrical width of the shell formed by dome or disc 11 and prongs 12 is at most points slightly larger than that of corresponding parts of the door knob so as to permit free rotational movement of the shell relative to the knob. Also, the concave area of the shell is of a smooth and rounded nature so that it may glide easily over the surface of the door knob whether the latter is of rounded or polygonal contours.

To position the described appliance over knob 25, the open end of the shell 10 (Figure 3) is pressed against the knob, with its rounded surfaces 15 engaging the face thereof, such that the prongs 12 are pried apart until they pass the maximum width of the knob. The described embodiment of the invention is preferably made of a resilient material to cause the prongs to snap back to their initial positions, once they have passed the maximum circumference thereof.

I have found stainless steel to be very satisfactory because, aside from its pleasing appearance, it may be made of adequate resiliency to permit application of the device in the described man-

ner, and yet will be of sufficient sturdiness to resist any efforts, on the part of children, to tear the shell from the door knob. As an added safeguard against untimely detachment of the device from its knob, it may be of advantage to tie a cord or wire 17 through the hems 16 so as to positively retain the ends of prongs 12 at a relative distance at which it is impossible to pull them over the maximum circumference of the door knob.

Whenever a child wishes to turn a door knob provided with the device of my invention, he will invariably get hold of, and turn, the shell 11 instead of the actual operating knob, and due to the larger diametrical width of the shell and the smoothness of its inner surfaces the shell will readily revolve about the knob without affecting the operative position of the knob itself. Thus, though able to turn what he believes to be the door knob, the child will find himself unable to open the door; and even if a child should accidentally place his hand into one of the recesses 13, and thus get hold of the door knob, his span would be too small to reach an opposite recess with his thumb, which is essential to get an operating grip on the knob.

The same is true, if a device of the type described is arranged over the operating knobs of medicine chests, knob-type water faucets and the like. As a result thereof, parents need no longer fear that their children may unobservedly gain access to potentially harmful pills or medicines, or turn on water taps and cause basins and bath tubs to overflow.

A grown-up person, however, who wishes to operate a knob protected in accordance with my invention, merely grips the knob with his fingers through the recesses or windows 13 formed in the shell 11 and turns it in the usual manner. The circumferential width of the recesses 13 should, therefore, be sufficiently large to accommodate at least one finger of a grown-up person, but should preferably not be large enough to accommodate the whole hand of a child.

Figures 4 and 5 illustrate a modified embodiment of my invention which agrees in all essentials as to structure and function with the previously described attachment. In addition, however, it includes means to permit its application to a door knob, water tap and the like without depending upon the resiliency of the material from which it is made. Accordingly, its shell 11 is divided into two separate parts or segments 18 and 19, respectively, each comprising two diametrically opposite legs or prongs 12. Part 19 is of a slightly larger diametrical width than part 18 and both parts are pivoted to one another by a centrally positioned rivet 20 in such a manner as to permit relative rotation to a position of alignment wherein part 19 will practically embrace part 18 as indicated in phantom lines in Figure 4. In this condition the device may easily be slipped over the knob in lateral direction, and when it is in a position of axial alignment with the knob, parts 18 and 19 are drawn apart around their pivot 20 to assume diametrically rectangular positions relative to one another, as indicated in full lines in Figure 4.

Suitable means are provided to lock parts 18 and 19 in the described rectangular position of relative adjustment, and for this purpose a pair of small projections or beads 21 may be arranged on the inner surface of the outer part 19. Beads 21 are adapted to snap into corresponding dents or cavities 22 provided in the outer surface of the inner part 18 whenever the parts have assumed their proper operative relation. It will be understood that appropriate pressure, applied to parts 18 and 19 in opposite rotational directions, will disengage the described interlock 21, 22 and return the parts to a position of alignment in which the shell may readily be detached from the knob.

The described embodiments of my invention are exceedingly simple, require a minimum in material and are easy to manufacture. They are pleasing in appearance, may be made in any color or finish, and will not disturb the harmony of any drawing room, chest or cupboard. If desired, the recesses or windows 13 may be closed by membranes of flexible material, such as rubber, which will not interfere with the revolvability of the device around its knob if appropriately spaced therefrom, and yet will permit a grown-up person to properly grip the knob through the windows in much the same manner as if the windows had been left open.

While I have described my invention with the aid of two examples, it will be understood that I do not wish to be limited to the particular structures illustrated and described, because many other devices based on the same principles and providing equivalent performance will readily occur to those skilled in the art, without departing from the scope of my invention. Thus, while both the illustrated embodiments possess four lateral windows 13, it will be understood that devices of equal effectiveness may be constructed which have a smaller or a greater number of such windows. Also, while I have stated that I prefer the use of a resilient type of steel for the construction of the first described example of my invention, it will be understood that any other metal and even plastics or wood may be employed in the manufacture of the numerous feasible embodiments of my invention.

This is a continuation of my United States patent application Serial Number 728,901, filed on February 15, 1947, now abandoned.

I claim:

1. A safety device for attachment to knobs to prevent operative rotation thereof by infants, comprising a free shell of firm material proportioned to the knob to which it is to be attached so as to enclose almost the entire frontal surface thereof and adapted to present a smooth sliding surface thereto so as to be freely rotatable around said knob without imparting operative rotation thereto, said shell having a plurality of lateral openings of sufficient size to admit the finger of a grown-up person so arranged as to expose gripping portions of the periphery of the enclosed knob.

2. A handle structure for doors comprising an operating knob adapted to turn about its geometrical center axis for effective operation, and a free shell of firm material arranged around and supported solely by said knob, said shell having a smooth inner surface so as to be freely rotatable around said knob without imparting operative rotation thereto, and possessing a number of lateral openings of a size large enough to admit at least one finger of a grown-up person into contact with the surface of the enclosed knob.

3. An attachment for an operating knob of the type employed on doors, chests and the like, comprising a shell adapted to loosely surround said operating knob and having a smooth inner surface adapted to slidably revolve about said knob; said shell being composed of a plurality of seg-

ments each having two lateral prongs and a cross piece joining said prongs at the front ends thereof, and a pivot connecting said cross pieces for rotational adjustment of said segments relative to one another.

4. Arrangement according to claim 3 including means for locking said segments in predetermined angular positions of relative adjustment.

5. Arrangement according to claim 3 wherein said segments are of different diametrical width to permit relative adjustment thereof to a position of angular alignment.

CLARK H. WEAVER.




## REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 109,342 | Phillips | Nov. 15, 1870 |
| 619,223 | Ramey et al. | Feb. 7, 1899 |
| 853,537 | Dubisee | May 14, 1907 |