July 17, 1923. 1,462,404

J. F. WHITE

THEFT PREVENTING DEVICE

Filed Oct. 25, 1920

Fig. 1

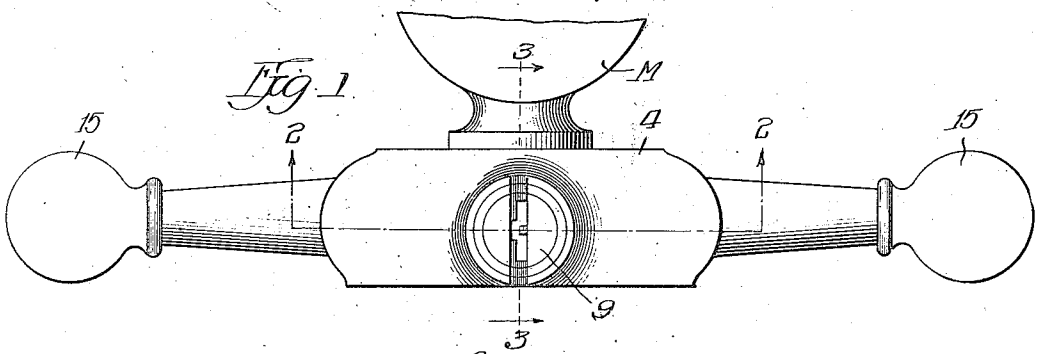


Fig. 2.

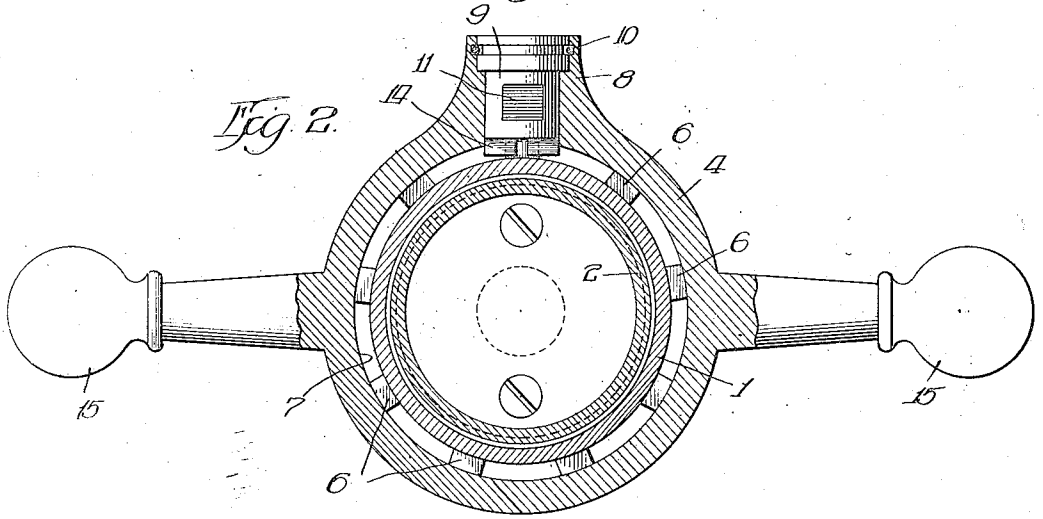


Fig. 3

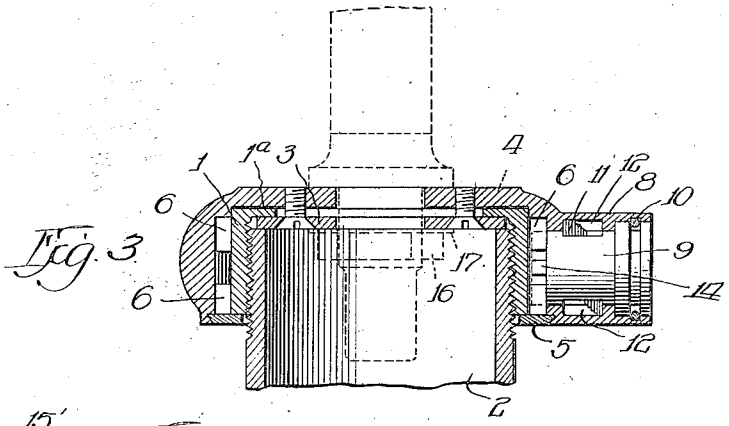
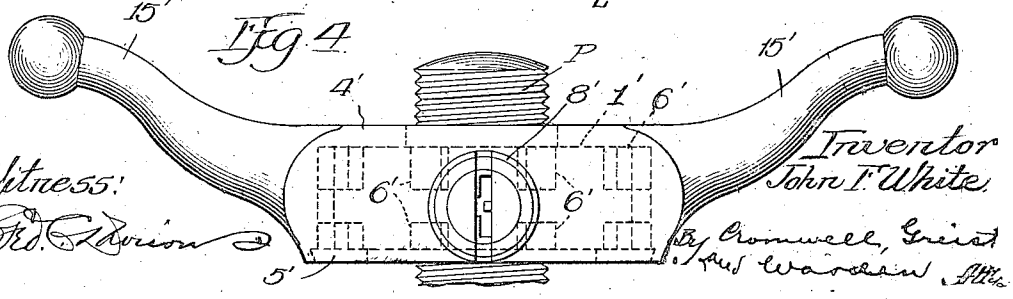


Fig. 4



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UNITED STATES PATENT OFFICE.

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THEFT-PREVENTING DEVICE.

Application filed October 25, 1920. Serial No. 419,402.

To all whom it may concern:

Be it known that I, JOHN F. WHITE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Theft-Preventing Device, of which the following is a specification.

This invention relates generally to theft preventing devices, and particularly to a type of such devices wherein a rotary member, such as a nut, cap, or similar element is utilized to retain the held article on a nipple, screw, post or similar part.

The general object of the invention is the provision of such a device suitable for general application but adapted particularly for use as a radiator cap on automobiles, a lock for retaining spare wheels on the carrying post, and similar use, without requiring any change or special fitting in the mounting to which it is to be connected and which ordinarily constitutes part of the standard equipment of the automobile.

The general object also includes the provision of such a device which is of such simple and such strong construction as to be susceptible of economical manufacture, and continuous use without impairment of its functions.

A more specific object of the invention is the provision of such a device which may be incorporated in a radiator cap and controlled by a key-operated or other locking mechanism, the construction being such that the locking mechanism is protected from unauthorized operation or removal from the device.

Another specific object of the invention is the provision of a device of the character specified which is adapted to accommodate the passage of the post, or screw, upon which it is mounted, entirely through it, in order to permit its being placed at different positions on the screw, as for the retention of different sizes or different numbers of articles.

Another object of the invention is the provision of a suitable retaining device affording a mounting for an instrument in the nature of that sometimes referred to as a motor meter, or some other display device, whereby the connecting means therefor and certain portions thereof may be housed in the radiator nipple.

Other objects of the invention will be pointed out hereinafter or indicated in the appended claims, or will be obvious upon an understanding of the invention as described with reference to the illustrative embodiments shown in the drawings and now about to be described.

In the drawings—

Fig. 1 represents a part front elevation of a form of the invention as applied to use with an automobile radiator cap;

Fig. 2 is a section taken substantially on the line 2—2 of Fig. 1;

Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1 and illustrating further the application of the device to the nipple of the radiator tube; and

Fig. 4 is a front elevation of a form of the invention illustrating its application to a retaining device for mounting spare wheels.

Referring to the drawings by means of the reference characters applied, let it be understood that the numeral 1 designates a retaining member which is operable as a rotatable member, and may be in the form of a bushing, nut, cap, or similar element. In the embodiment shown in Figs. 1, 2 and 3, this retaining member is in the form of a screw threaded collar designed to mesh with the screw threaded nipple on the radiator tube 2, with a marginal flange 1^a arranged to engage over the periphery of a closure plate 3 and accommodate the tube of a motor meter M, or the attaching post of some other sort of display device and to permit rotation of the latter relative to the retaining member. The retaining member is encompassed by a housing 4, mounted co-axially therewith and rotatable relative thereto, the retaining member being held in the housing by means of a ring 5, suitably secured at the lower margin of the latter and underlying the lower margin of the retaining member. The outer face of the retaining member 1 is preferably of cylindrical form, and is provided at intervals with radially extending lugs 6, the outer faces of which are arcuate and are machined to make an accurate sliding fit with the inner face 7 of the housing 4, the lugs thus functioning as guides effective to retain the housing and retaining member in proper co-axial relationship. As may be seen best by reference to Fig. 3, the lugs 6 are not continuous across the outer face of the retaining member, but

are so disposed as to afford an uninterrupted channel-way about the entire periphery thereof.

The housing 4 carries a lateral embossment 8 which is suitably cored and finished to form a mounting for a lock device 9. As illustrated in the present embodiment, this lock device may be of the familiar tumbler cylinder type, mounted for rotation in the lock housing 8 and retained therein by the spring ring 10. Its rotation in the housing 8 is controlled by the tumblers 11, which are retracted to ineffective position in the well known fashion by insertion of the key, and when in effective position, as shown in Fig. 3, are adapted to register in the grooves 12 suitably provided in the lock housing, whereby the cylinder is retained against rotation. At its inner end, the lock cylinder carries an engaging element in the nature of the stud or studs 14 which project into the space between the opposed cylindrical faces of the housing 4 and the retaining member 1. The width of the engaging element is such that, when the cylinder is in one of its rotary positions the engaging element may travel in the uninterrupted channel-way about the retaining member 1; while the length of the engaging element is such that when the cylinder is in another position, the engaging element will interpose between adjacent lugs 6 of the retaining member. In Figs. 2 and 3 the lock cylinder is shown in the first mentioned position and in which position the tumblers 11 are projected into the grooves 12 when the key is not in the lock. I will term this position of the lock the "free" position, as when in such condition the housing 4 is free for rotation relative to the retaining member 1. The position of the engaging element which I will term the "secured" position is illustrated in dotted lines in Fig. 3, and the lock may be turned to this position from the free position by the insertion of the key, which retracts the tumblers, and the rotation of the cylinder in the housing is then permitted. The space between the adjacent lugs 6 is such as to permit the rotation of the engaging element from one of such positions to the other.

In the application of the device to the nipple, or its removal therefrom, the lock is first placed at the secured position. This, by virtue of the engagement of the engaging element against one of the lugs 6, secures the retaining member 1 for rotation with the housing 4, which rotation may be conveniently effected by means of the handles 15 to screw the device onto or off of the nipple. By such manipulation the retaining member may be screwed home and the radiator tube may be closed effectively thereby. The lock then being turned to the free position, further rotation of the housing 4 will have no effect upon the retaining member, either as to moving it further onto the nipple or as to backing it off. Other access to the retaining member 1, whereby it might be engaged by a tool to effect its rotation, is prevented by its envelopment by the housing 4. Once in place therefore, the device cannot be removed without the operation of the lock with a suitable key.

In this embodiment of the invention it will be observed that the stem of the motor meter passes through the top of the housing 4 and is retained by a suitable nut 16, over which is a suitable flexible gasket 17 bearing against the under surface of the top of the closure member. While permitting rotation of the housing 4 relative to the retaining member, this will be effective to prevent leakage of steam around the motor meter from the radiator tube.

In the embodiment illustrated in Fig. 4 the invention is shown incorporated in a device for retaining articles on a post or the like, the particular form illustrated being designed as a retaining member for spare wheels carried on a rack on an automobile. In Fig. 4 the character P designates a post which is adapted to be inserted through a suitable aperture in the retained article. This post is screw threaded or otherwise suitably formed for the retention of the retaining member 1′ at different adjustments longitudinally of the post. The retaining member 1′ is in the form of a nut or similar element movable on the post by rotary movement, and is housed within a rotatable operating member which comprises the housing portion 4′ and the handles 15′. The housing portion is closed at its lower side by the permanently attached ring 5′ which covers the lower face of the retaining member and is formed with an axial aperture for the passage of the post. The retaining member is provided with the peripheral lugs 6′ disposed as above described with reference to the lugs 6 of the other embodiment illustrated. The housing portion 4′ also carries the lateral embossment 8′ which affords the housing for the lock.

By manipulation of the lock in the manner described above, the operating member may be operably connected with the nut so that the latter may be rotated to move it onto or off of the post P or vary its adjustment thereon.

Due to the fact that the operative engagement of the operating member with the attaching member is effected upon the periphery of the latter, the combination provides a simple construction whereby the motor-meter may be maintained in proper position on the cap with its bulb in operative position within the nipple; and in the form illustrated in Fig. 4, an arrangement wherein the post may pass entirely through the

device, thus adapting it for the close retention of articles of different sizes, or of different numbers of articles. As in the embodiment first described, the placing of the lock at the free position renders the operating member ineffective to accomplish adjustment of the attaching member, which circumstance, in connection with the fact that the attaching member is otherwise inaccessible, inhibits removal of the attaching member in any but the intended fashion.

My invention possesses distinct advantage in the fact that it does not require any special fitting or adaptation of the mounting with which it co-operates, and therefore may be made in standard sizes for use on standard sized radiator tubes, wheel racks, other automobile fittings, or other mountings. Furthermore, the construction permits operative engagement of the operating member with the retaining member selectively in different rotative positions, thereby affording accessibility to the lock at any time, and permitting any extent of adjustment of the retaining member on the mounting. The frictional engagement of the closure plate 3 between the flange 1ª and the top of the nipple 2 is effective to retain the operating member in the desired angular position, so that the dial of the motor meter is presented in the proper direction.

While I have shown two embodiments of the invention, it is obvious that these are not exhaustive of all forms in which it may be utilized, and it is to be understood, therefore, that they are to be construed as illustrative of the invention and not as limitations of its scope.

Certain of the features herein disclosed but not claimed are claimed in my co-pending application Ser. No. 411,255 filed September 18, 1922.

I claim:

1. In a theft preventing device, the combination with a mounting, of a retaining member arranged for connection thereto, an operating member housing the retaining member to prevent access thereto and having bearing engagement therewith to maintain said members in co-axial relationship, said operating member and retaining member being provided with axial apertures and means protectively housed by the operating member below the top of the retaining member, said means being operable for engagement with a peripheral portion of the retaining member to enable adjustment of the latter on the mounting by operation of the operating member.

2. In a theft preventing device, the combination of a retaining member arranged for adjustable connection with a suitable mounting, an operating member housing the retaining member to prevent access thereto, said members being connected for relative movement and having axial apertures, and engaging means protectively housed by the operating member for operation at one side of the retaining member said engaging means being adapted for engagement with a lateral portion of the retaining member to enable adjustment thereof on the mounting by rotation of the operating member.

3. In a theft preventing device, the combination of a retaining member adapted for connection with a mounting by rotary movement, an operating member encompassing the retaining member and rotatable relative thereto co-axially about the mounting, and an engaging member protectively housed entirely below the top of the retaining member and engagable with the retaining member at the side of the mounting, whereby the retaining member may be rotated thereon by the operating member.

4. In a theft preventing device, the combination of a retaining member adapted for adjustable connection with a mounting and having an axial opening to receive the end thereof, an operating member housing the retaining member and rotatable relative thereto, said operating member having an opening co-axial with that of the retaining member, and engaging means protectively housed by the operating member for co-operation with a peripheral portion of the retaining member to hold the same for rotation with the operating member.

5. In a theft preventing device, the combination with a mounting, of a retaining member having an axial opening to receive the mounting and adapted to be connected thereto and disconnected therefrom by rotary movement, an operating member housing the retaining member and rotatable relative thereto, said operating member having a top aperture co-axial with the axial opening of the retaining member, and key operated means protectively housed by the operating member and operable to effect engagement with a peripheral portion of the retaining member to permit rotation of the latter by the operating member.

6. In a theft preventing device, the combination of a retaining member adapted for connection with a suitable mounting by rotary movement, an operating member housing the retaining member and rotatably mounted thereon, and a connecting member protectively housed by the operating member for engagement with the retaining member to permit rotation of the latter by the operating member, said operating member including a concealed portion effective to lock the connecting member out of engagement with the retaining member.

7. In a theft preventing device, the combination of a retaining member adapted for rotary connection with a suitable mounting,

an operating member housing the retaining member and having a rotary connection therewith, said members being provided with co-axial apertures, a handle carried by the operating member whereby it may be rotated, and locking means protectively housed below the top of the retaining member at the outer side thereof and operable to secure the retaining and operating members for rotation together.

8. In a closure and the like the combination of a circular retaining member adapted for screw-thread connection to a suitable mounting, an operating member rotatably secured to said retaining member and including a cover portion and an annular skirt portion, the retaining member having a peripheral lug associated with the operating member, an engaging member mounted on the skirt portion and movable into and out of the path of said lug, and means effective to lock said engaging member in the latter position.

9. In a device of the class described, the combination of a retaining member adapted for screw-threaded engagement with a suitable mounting, an operating member rotatably secured to said retaining member and having an annular skirt encircling the same, said retaining member affording an uninterrupted peripheral channel and a stop adjacent said channel, an engaging member supported on the skirt of the operating member and movable to a position to travel in said channel and to a position to engage said stop, and means for locking said engaging member in a selected position.

10. A closure mounting comprising the combination of a retaining member adapted for screw-thread connection with a suitable mounting, an operating member, encompassing said retaining member and formed to accommodate passage of said mounting, said operating and retaining members being connected for relative rotary movement, manipulative means whereby said operating and retaining members may be connected to enable rotation of the latter by the former, and said operating member being provided with laterally extending handles whereby it may be rotated to screw the retaining member to seated position on the mounting.

11. An instrument retaining closure for automobile radiators comprising the combination of an annular retaining member adapted for connection to the radiator nipple by rotary movement, a cap rotatably connected to said retaining member, said cap including a cover portion adapted to close the end of the retaining member and a skirt portion encompassing the retaining member, said cover portion affording a mounting for an instrument with a part thereof extending therethrough, and an engaging member carried below said cover portion and operable between the skirt portion of the cap and the peripheral wall of the retaining member for connecting the two to permit rotation of the retaining member by the cap.

12. An instrument retaining closure for automobile radiators comprising the combination of an annular retaining member adapted for connection to the radiator nipple by rotary movement, a cap connected to said retaining member for rotary movement, said cap including a cover portion arranged to close the end of the retaining member, a skirt portion encompassing the retaining member and laterally extending handles whereby the cap may be rotated, said cover portion being provided with an axial aperture to accommodate an instrument mounted thereon, and an engaging member housed below said cover portion and operable between said skirt portion and a lateral surface of the retaining member for connecting the cap and retaining member to permit rotation of the latter by the former.

13. An automobile radiator attachment comprising the combination of a retaining member adapted for attachment to the radiator nipple, an operating member rotatably connected to the retaining member, said operating member including a cover portion provided with an aperture and affording a mounting for a display device and a skirt portion encompassing the retaining member and carrying radially extending handles whereby the operating member may be rotated, and engaging means concealed between said skirt portion and the retaining member for connecting them for rotation together.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN F. WHITE.

Witnesses:
FRANCES K. GILLESPIE,
C. S. BUTLER.