

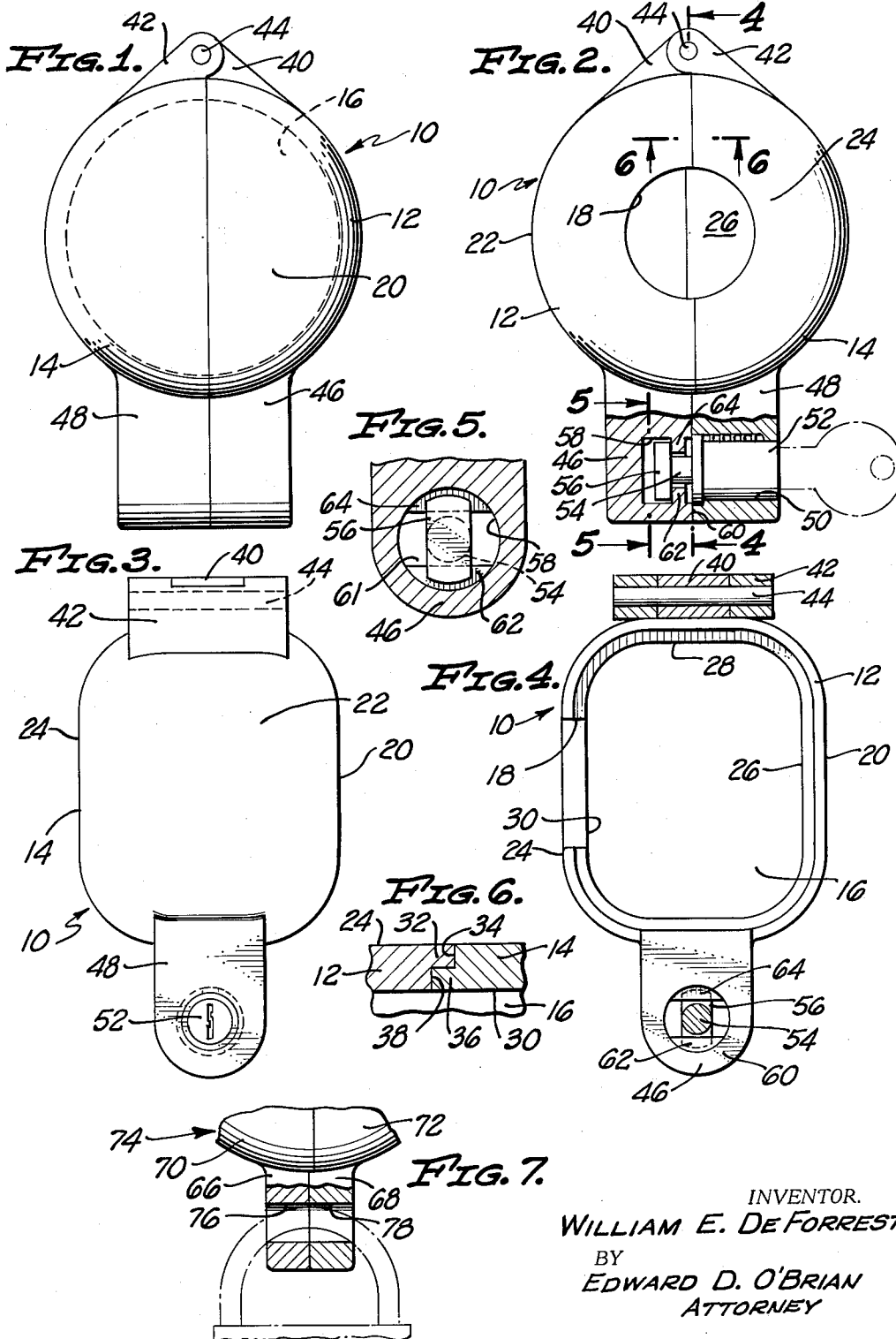
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KNOB PROTECTOR

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3,245,240

KNOB PROTECTOR

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This invention is directed to a knob protector which is in the form of a locking protective device for securement over door knobs and similar structures to prevent access to them and thus prevent their actuation by unauthorized personnel.

Door knobs are placed on doors to pull the door bolt upon rotation of the knob to permit the opening of the door. Of course, such opening of the door permits access to the space on the other side thereof. In order to prevent unauthorized personnel from entering such space locks of many varieties have been developed. The development and use of locks necessitates the making of keys and the distribution thereof to persons authorized to enter. The loss of a key or the non-operation of a lock immediately renders the lockability of questionable value. In other situations it is temporarily desirable to limit the openability of the door to a group smaller than the group which possesses a key thereto. Such situations occur in hotels and motels where the employees have keys or pass keys to the locks on the doors entering various units, and the renter thereof has no control over the additional keys, other than the one that was rented to him.

Accordingly it is an object of this invention to provide a knob protector capable of being installed over a door knob, and locked thereon so that it cannot be removed by persons not having a key thereto, and so that the knob cannot be reached for insertion of the key in the lock therein or the rotation thereof.

It is another object of this invention to provide a knob protector arranged in two halves which can be closed and locked to embrace around the door knob to prevent access thereto, to prevent turning thereof and to resist tampering with the knob protector and the knob.

It is another object of this invention to provide a knob protector which is completely portable and substantially universal so as to fit a plurality of different sizes and types of knobs to protect them against turning.

It is another object of this invention to provide a knob protector which is economic, strong against tampering therewith and easy to use, so that it is conveniently useful and secure to people requiring protection thereby.

Other objects and advantages of this invention will become apparent from a study of the following portion of the specification, the claim and the drawings in which:

FIG. 1 is a front elevation of the knob protector of this invention;

FIG. 2 is a rear elevation thereof with parts broken away;

FIG. 3 is a left side elevation thereof;

FIG. 4 is a section taken along the line 4-4 of FIG. 2;

FIG. 5 is an enlarged partial section taken along the line 5-5 of FIG. 2;

FIG. 6 is an enlarged partial section taken along the line 6-6 of FIG. 2; and

FIG. 7 is a partial, sectional view of another embodiment of the knob protector of this invention.

As an aid to understanding this invention it can be stated in essentially summary form that it is directed to a knob protector adapted to be placed over door knobs to prevent access thereto and turning thereof. The knob protector comprises a pair of halves defining a knob receiving cavity having an axis. The halves are hinged

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together on a hinge axis substantially parallel to the cavity axis and the two halves inter-engage in a lap joint to prevent access to the interior of the protector when it is closed. A standard tumbler lock is mounted in one half of the knob protector on the opposite side of the central axis from the hinge axis so as to properly secure the halves together. The lock is of standard tumbler variety with a twist bolt which locks beneath lands in the other half to thus secure the halves rigidly together. In an alternative construction, the tumbler lock is replaced by hasp loops so as to accept a standard padlock for the securement of the halves together.

This invention will be understood in greater detail by reference to the following portion of the specification wherein the drawings are described. The knob protector of this invention is generally indicated at 10 and comprises two inter-engaging halves 12 and 14. The halves, taken together, define the knob protector 10 which for the most part is an article of revolution. When the halves are together they define a knob receiving space 16 which opens to the outside through the knob shank receiving opening 18. Thus, the two halves define a front 20, a generally cylindrical outer surface 22 and a back 24 in which the knob shank receiving opening is located. Front 20 and back 24 are substantially planar, with the planes substantially parallel to each other.

Similarly, the interior of the knob protector 10 is defined by an inside front surface 26, an inside peripheral surface 28 and an inside back surface 30. These surfaces are also generally surfaces of revolution about an axis forming the cylindrical axis of surface 28. These surfaces define the knob receiving space 16 and are open through knob shank receiving opening 18 to the exterior. Opening 18 is also generally defined by cylindrical surface having an axis coincident with the axis of space 16. Space 16 is relatively smooth on its interior surface and is of such dimensions as to conveniently accept most standard door knob sizes. Similarly, its nature is such that the knob protector 10 cannot be cocked or twisted upon the door knob on which it is engaged to turn the door knob.

As is seen in FIG. 6, the halves 12 and 14 are formed with a lap joint along the adjoining edges thereof so that if the halves are slightly open, access is still not permitted into the space 16 thereof. The lap joint comprises a tongue 32 around the outside edge of portion 12 engaging in a recess 34 around the outside edge of portion 14. This structure inherently results in a tongue 36 on the inside face 30 engaging in recess 38 in the portion 12. This lap joint construction provides added security in the knob protector 10 of this invention.

In order to retain the two halves 12 and 14 of the knob protector 10 together, they are each equipped with hinge halves 40 and 42, respectively, which inter-engage together. These hinge halves are formed as an integral part of the portions 12 and 14 and provide for a hole in which hinge pin 44 is secured. The axis of the hinge pin is generally parallel to the axis of opening 18 and surface 28 so that opening about the hinge axis causes the moving apart of the major portion of the knob protector halves 12 and 14. Thus, the knob protector can be installed and removed from a knob. The hinge pin 44 is secured in place so that it cannot be easily removed.

Locking is provided in the knob protector 10 by means of a pair of locking means containing lugs 46 and 48, respectively, formed integrally with the halves 12 and 14 of knob protector 10. Lugs 46 and 48 are positioned on the opposite side of the central axis from the hinge pin 44. Lug 48 has a passage 50 passing therethrough of such nature as to accept a standard cylinder lock 52. Lock 52 is removably secured therein in such

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a manner that it cannot be turned or removed when it is in locked position and the key is removed. Lock 52 has a shank 54 to which is secured a T head 56. When a proper key is inserted in lock 52 the structure is such that the key may be turned and this action turns shank 54 with its associated T head 56. The half 12 is formed with a recess 58 which is of generally cylindrical form and of such dimension as to permit the T head 56 to rotate freely therein. The recess 58 is open to the juncture 60 of the two halves by means of a slot 62 of such dimension as to permit the T head 56 to pass there-through when in one position, but where the T head 56 is retained behind lands 62 and 64 when it is in another position. The T head is retained behind the lands when the lock 52 is in the locked position. Accordingly, closing of the two halves to a position shown in FIG. 2 and turning of the lock 52 to the locked position causes the T head 56 to engage behind lands 62 and 64 to retain the two halves together in locked association. If the key is then removed from lock 52, the two halves are locked together to form the lock knob protector 10. When the two halves are thus locked together over a door knob, access is prevented to the knob. If the knob is such that a key is required to be inserted therein, the door is locked to all persons who do not have a key to both the protector and the door. If the door knob is unkeyed the knob protector prevents rotation of the knob by all persons except those who have a key to the knob.

Another significant and important use of the knob protector of this invention includes its use to contain the key to the door to which it is locked. The knob receiving space 16 is a cavity of sufficient size to permit it to contain a standard door knob as well as the key for the same door. This capacity is of particular importance where it is desired to give access to the door to a larger number of persons, possibly on a temporary basis, without making a plurality of keys. This is an important use to real estate dealers, where each dealer has a key to the knob protector and thus has access to the door key within the knob protector.

As is seen in FIG. 7 an alternative form of the locking portion of the knob protector is shown. In this form lugs 66 and 68 are respectively formed on the halves 70 and 72 which are identical to the halves 12 and 14 except for the different form of lugs. These together form knob protector 74. The lugs 66 and 68 have coaxial holes 76 and 78 therethrough of such dimension as to accept the hasp of a standard padlock. Such structure may be desirable where a padlock is more desirable for use, or where a specific padlock is required for other reasons. As shown, a padlock will retain the halves together for security of the knob.

As is readily understood from the above description, this invention is capable of numerous embodiments and modifications without the exercise of the inventive faculty. Accordingly this invention is defined by the scope of the following claim.

I claim:

A knob protector, said knob protector comprising: first and second knob protector halves hingedly associated with each other, said first and second halves joining together along a substantially planar juncture, said halves, when associated together along said juncture substantially forming a body of revolution, said body of revolution having an open interior adapted to receive a door knob, said body of revolution having a closed front wall and a closed substantially cylindrical circumferential wall, said

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body of revolution having a back wall and having an opening in said back wall to the hollow interior of said body of revolution, said opening in said back wall being of such size as to accept a door knob shank and being smaller than the interior of said body of revolution so that when said body of revolution encloses a door knob, the door knob is substantially completely enclosed;

said juncture between said first and second halves lying substantially on the axis of revolution of said body of revolution, said juncture being defined by surfaces on each of said halves, one of said surfaces on each of said halves being formed as a tongue and the other of said surfaces on each of said halves being formed as a recess, the tongue on each half being associated with the recess on the other half so as to define an overlapping juncture, said juncture extending across said front wall, across said periphery and across said back wall to said opening in said back wall so that said overlapping juncture extends around the juncture between said first and second halves forming said body of revolution;

a hinge having first and second hinge halves, said first hinge half being secured to said first half and said second hinge half being secured to the second half, said hinge halves being secured to and positioned externally of said circumferential wall, said hinge having a hinge pin, said hinge pin lying substantially in the plane of said juncture and lying substantially parallel to the axis of said body of revolution;

locking means adapted to releaseably secure said first and second halves together so as to maintain said juncture in overlapping relationship, said locking means comprising first and second lugs respectively secured to said first and second halves, on said circumferential wall, a first opening in said first lug, a land in said first opening, said land having a face facing away from said juncture, a second opening in said second lug, a rotatable lock positioned in said second opening, said rotatable lock having a rotatable shank, said shank carrying a T head thereon, said T head being engageable with such face when said first and second halves lie together along their juncture so as to maintain said first and said second halves together, said lock being rotatable so as to move said T head away from said face so as to permit said first and second halves to swing away from each other about said hinge pin, said lock lying on an axis perpendicular to the plane of said juncture so that a knob may be enclosed within said interior of said body of revolution and said lock locked so as to maintain said first and second halves together whereby access is prevented to the door knob.

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