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VALVE LOCKING ATTACHMENT

Filed Jan. 21, 1966

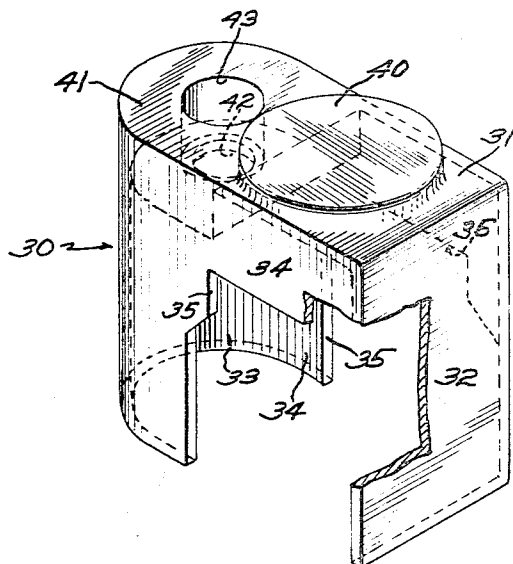
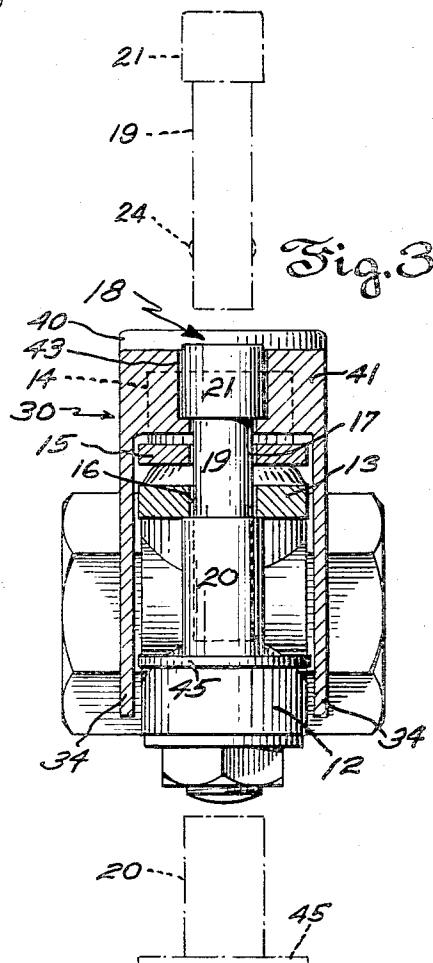
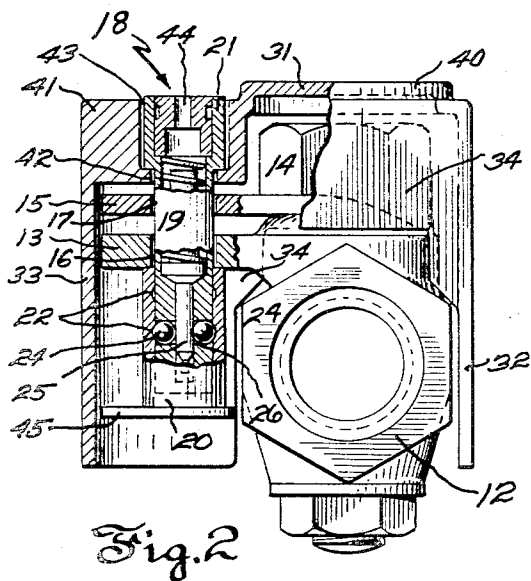
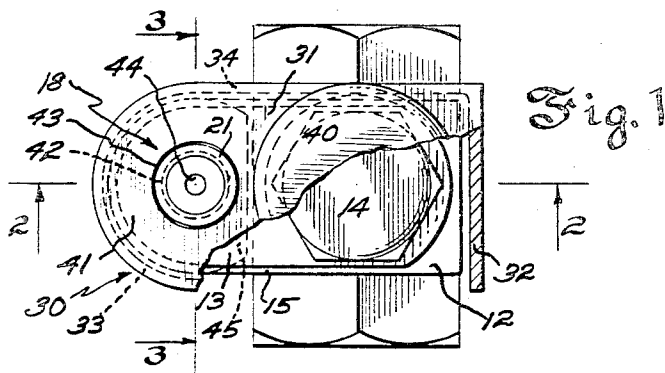


Fig. 4

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VALVE LOCKING ATTACHMENT

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4 Claims. (Cl. 137—382)

ABSTRACT OF THE DISCLOSURE

A valve such as controls the supply of gas or water to a residence from the lines of a utility company doubly safeguarded against unauthorized opening by a combined fastener and shroud, each of which is separable from the valve and from each other. The fastener can be used to lock the valve closed with or without the presence of the shroud, and when the shroud is used it is locked to the valve by the same fastener that locks the valve.

This invention relates to a lockable attachment for obstructing unauthorized access to a turnable valve member by means of which the valve is opened and closed. Generally it is desired to safeguard the valve against unauthorized opening, as for undetected use of gas or water service.

It has been proposed for this purpose to house the whole valve in an unremovable casing, or as an alternative to couple the turnable valve member to the valve body in a way to prevent valve opening. When a plunger type of lock has been employed for so immobilizing the valve opening member, the lock has been exposed to predatory attack by saws or other simple metal cutting tools.

An object of this invention is to guard the valve against tampering by the use of such tools which otherwise might be employed to sever the coupled together parts of the valve or to break the lock itself.

A particular objective is to accomplish this purpose by use of a shroud that is releasably fastened in its valve shielding position by a lock which also couples the movable valve member to the body of the valve.

These and other objects of the invention will be clear in fuller detail from the following description of a preferred embodiment of the improvement, wherein reference is had to the accompanying drawing wherein:

FIG. 1 is a plan view of a lockable attachment embodying the present improvements showing a portion of the shroud broken away.

FIG. 2 is an elevation of the valve taken partly in section on the plane 2—2 in FIG. 1.

FIG. 3 is a view taken partially in section on the plane 3—3 in FIG. 1 looking in the direction of the arrows and showing in broken outline the separable members of the lock in exploded positions.

FIG. 4 is a perspective view of the shroud detached from the valve showing a portion of the walls broken away.

In the drawings a valve body 12 is shown equipped with an anchorage lug 13 and having a valve stem head 14 turnable in body 12 and fixedly carrying an anchoring lug 15 which is swingable to and away from valve closing alignment with body lug 13. Each of lugs 13 and 15 has a hole or aperture so located that both holes 16 and 17 are in register when lugs 15 are in alignment and the valve closed.

When the lugs are so aligned a lock 18 made of separable telescopically assembled shank and cap members 19 and 20 can extend through the registering holes in both lugs as is shown in FIG. 1 of the drawing in a copending application, Ser. No. 443,787 of common

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ownership with the present application. A similar kind of lock is disclosed in U.S. Patent No. 3,002,368. Such locks are sometimes termed plunger locks or draw locks.

Since the general construction of lock 18 is known in the art it is necessary herein only to explain that the lock comprises but two axially separable straight telescoped tubular parts such as the hollow main shank 19 with its enlarged head 21 and the cap 20, which is provided with one or more internal annular grooves 22, 23. Within one or another of such grooves hard balls 24 can seat which may be regarded as "bolts" of the lock. The balls are held so seated by a plunger 25 which blocks the balls from moving radially inward through transverse bores 26 in the cylindrical wall of shank member 19. This retains cap 20 secured against removal from the shank member 19 of the lock. The aforesaid copending application also discloses a key for removing the plunger 25 from its position to block the balls 24 whereby to unlock the cap 20 and permit it to be pulled off from the lock shank 19 as indicated in broken lines in FIG. 3.

According to the present improvements there is combined with the valve parts above described a rigid armoring shroud 30 having a roof wall 31 and apron walls depending therefrom. The apron wall 32 is flat and of full length and closely flanks the face of the valve body opposite the lock 18. The apron wall 33 curves about and flanks the lock with sufficient closeness to preclude the insertion of sawing tools and thereby resists attempts to "break" the lock by predatory tampering therewith. The oppositely disposed side apron walls 34 closely encompass lugs 13 and 15 and complete the enclosure of the valve because cutouts 35 in the latter walls conform to the piping inlets and outlets of the valve as is evident from FIGS. 2 and 4.

The aforesaid roof wall 31 of the shroud has a shallow dome portion 40 that can accommodate the stem head 14. Adjacent thereto is a much thickened section 41 of the roof wall apertured by a hole 42 through which the shank member 19 on lock 18 can be inserted. Hole 42 is enlarged by a counterbore 43 which affords a recess in the thickened section 41 of roof wall 31 of size to seat and surround the head 21 of the lock thus leaving exposed only the key hole 44 through which a key can be inserted to open the lock as described in the aforesaid copending application Ser. No. 443,787.

To make it similarly inaccessible to metal cutting tools, the cap member 20 of the lock is shaped to include a flange 45 which sufficiently fills the cross sectional space in the curved apron wall 33 to preclude the insertion of simple tools such as saws, which otherwise might be used to free the cap member 20 from the lock shank 19.

The foregoing structures are susceptible of various modifications in shape and arrangement within the scope of the invention as defined by the appended claims which therefore are intended to cover all modifications that would be taught by the disclosure herein.

I claim:

1. In a lockable valve and shroud attachment the combination with a valve body having a projecting anchorage lug and a valve member turnable in said body having an anchoring lug swingable relatively to said anchorage lug, said lugs having apertures positioned to register when the valve is closed, of a rigid armoring shroud closely encompassing said lugs having an opening in register with said apertures when the valve is closed, and a fastener comprising telescoped separable sections joined by a shank extending through said apertures and said opening and containing mechanism to lock together and release for separation said telescoped sections, each of said sections having an end portion too large to pass through said opening or either of said apertures.

2. In a lockable valve and shroud attachment the com-

combination defined in claim 1, in which the end surface on the enlarged portion of one of the said separable sections contains a hole adapted to admit a key, only said end surface being exposed externally of the said shroud.

3. In a lockable valve and shroud attachment the combination defined in claim 2, in which the said fastener has an end surface of the other of the said separable sections comprising a flange of sufficiently large girth to substantially fill the environmental space between the said valve body and the said shroud.

4. In a lockable valve and shroud attachment the combination defined in claim 1, in which the said shroud has a roof wall, one part of which overlies the said valve

member and another part of which is laterally offset from the said valve body and contains the said opening, together with apron-like walls depending from said roof wall flanking said valve body and said fastener.

References Cited

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