Sept. 17, 1968 F. E. JOHNSON ET AL 3,401,715

TAMPER-PROOF LOCK FOR VALVES

Filed Aug. 3, 1967

Fig. 1

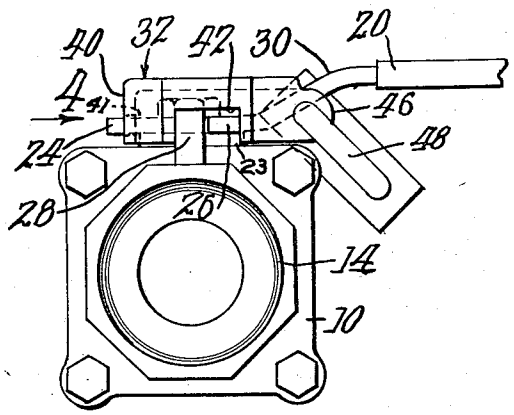


Fig. 2

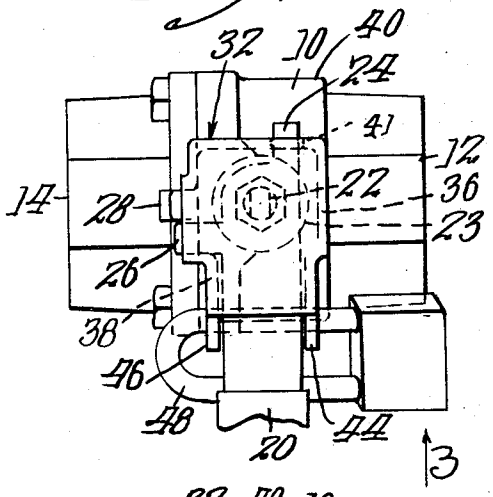


Fig. 4

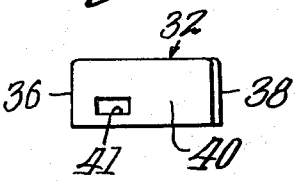
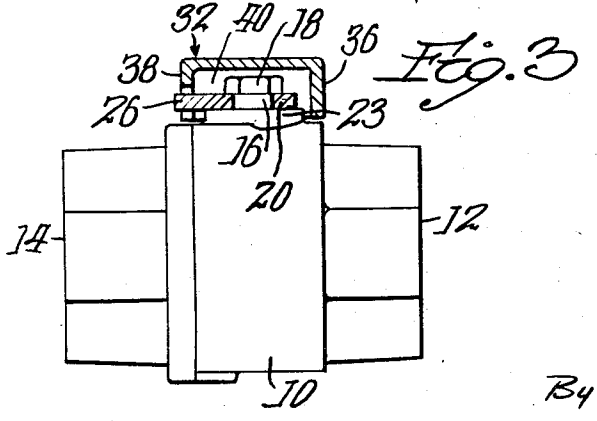


Fig. 3



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TAMPER-PROOF LOCK FOR VALVES

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ABSTRACT OF THE DISCLOSURE

A tamper-proof lock for a valve which comprises a removable cover for a portion of the valve handle, said cover having an aperture in one side thereof for the reception of a projection on the handle in one direction and a notch in a different portion thereof for reception of a projection on the handle which is located at approximately ninety degrees to the first-named projection, in combination with means to connect the handle and cover together as for instance a padlock, whereby the handle cannot be turned and the cover cannot be removed.

This application relates to a new and improved tamper-proof lock construction for valves such that it is necessary to use a key for instance for a padlock or to break a pin or wire or the like sealed in position with respect to a safety cover immobilizing the handle for the valve, in order to remove the cover to allow the handle to turn the valve. The hande can be positioned in either "On" or "Off" position without the danger of unauthorized tampering with the setting of the valve by the use of the safety cover.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which:

FIG. 1 is a view in side elevation illustrating the tamper-proof construction for the valve;

FIG. 2 is a plan view thereof;

FIG. 3 is a view in side elevation partly in section looking in the direction of arrows **3** in FIG. 2, and

FIG. 4 is a view in elevation of the cover looking in the direction of arrow **4** in FIG. 1.

The valve under consideration is of more or less conventional construction and comprises a main body portion or housing **10** which has inlet and outlet portions **12** and **14**. It is provided with a valve stem **16**, the details of the valve and main body portion **10** being conventional.

There is a nut or similar fastener **18** by which the handle **20** is secured to the stem **16**, the handle and the stem having flats shown at **22** in FIG. 2, so that the handle and the stem necessarily turn together. The handle is spaced from the body portion or housing **10** by a flat integral boss **23**.

The handle is provided with a pair of outstanding projections located at angles with respect to each other, in this case ninety degrees. One projection **24** is located in prolongation of the length of the handle although to one side of the axis of stem **16** and the other projection is located at ninety degrees thereto as shown at **26** but offset from the axis of the stem **16**. These projections are used to act as stops against a permanent fixed stop **28** on the body **10**, so that in the illustration in the present case the handle is turnable ninety degrees from a position

wherein projection **26** strikes stop **28** or projection **24** strikes it. It is also to be noted, see FIG. 1, that the handle **20** is offset as at **30** from the forward portion thereof upon which the projections **24** and **26** are mounted so that the main portion of the handle which is grasped to turn the valve, is located in elevated position parallel with respect to the portion of the handle upon which the projections **24** and **26** appear.

In order to lock the handle in either one of the portions, there is provided a locking cover generally indicated by the reference numeral **32**. This locking cover has a plain solid top portion **34** adapted to cover the nut **18** as well as the top of the stem and that portion of the handle which embraces the stem. It is provided with side flanges **36** and **38** as well as a rear flange **40**. The rear flange **40** has an aperture **41** therethrough which receives the projection **24** and side flange **38** has a notch **42** therethrough receiving the lateral projection **26**, and it is large enough to include stop **28**. Thus looking at FIG. 1, the cover **32** cannot be moved in any direction. As shown in FIG. 2, the handle cannot turn in a clockwise direction because the projection **26** contacts stop **28**, and the handle cannot turn in the opposite direction because the edge of the aperture **42** engages the stop **28**. Thus all that remains to do in order to make the valve tamper-proof is to lock the handle and the cover together so that the cover cannot be removed, and this is done by providing the forward portions of the flanges **36** and **38** with ears **44**, **46** which are apertured to receive a latching member such as the arm **48** of a padlock or the like. A headed-over rivet or the like or sealing wires can also be used for this purpose, it being noted that the angular portion **30** of the handle extends between the flanges **38** and **36**. Therefore the handle cannot be turned with the cover in position, and the cover has to be removed in order to turn the handle.

Having thus described our invention and the advantages thereof, we do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what we claim is:

1. A tamper-proof lock for a valve having a valve stem and a handle for turning the valve stem, a projection on the handle, a removable cover for a portion of the handle on which the projection is located, a notch in the cover receiving the projection, and a stop on the valve in fixed position thereon, said notch also receiving the fixed stop, said notch providing a pair of edges in close association with said projection at one side thereof and with the stop at the other side thereof, a second projection on the handle in spaced relation to the first-named projection, an aperture in the cover receiving the second-named projection, and means to connect the handle and cover together so that the handle cannot be turned and the cover cannot be removed.

2. The tamper-proof lock for a valve recited in claim **1** wherein the projections are at angles to each other.

3. The tamper-proof lock for a valve recited in claim **1** wherein the projections are at right angles to each other.

References Cited

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