Nov. 7, 1933. J. H. RIDDER 1,934,327

LOCKING DEVICE FOR PUMP SHAFTS AND THE LIKE

Filed Oct. 21, 1932

Fig. 1.

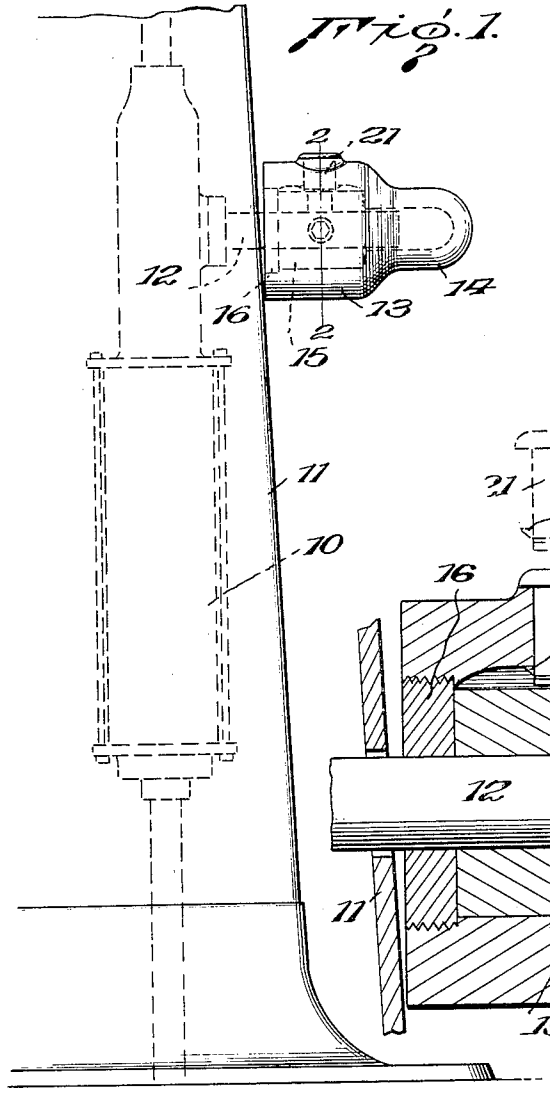
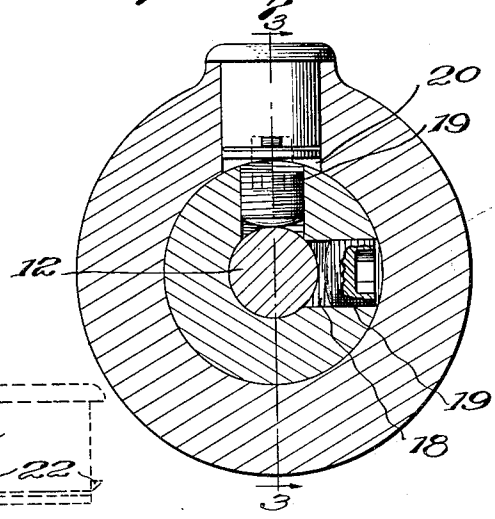


Fig. 2.



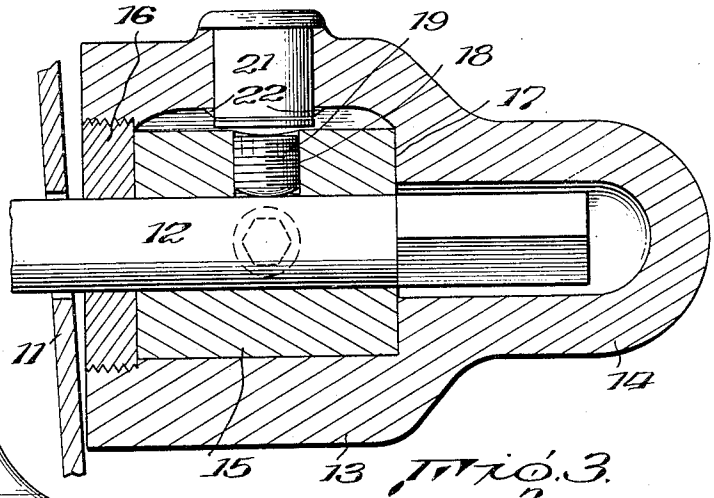


Fig. 3.

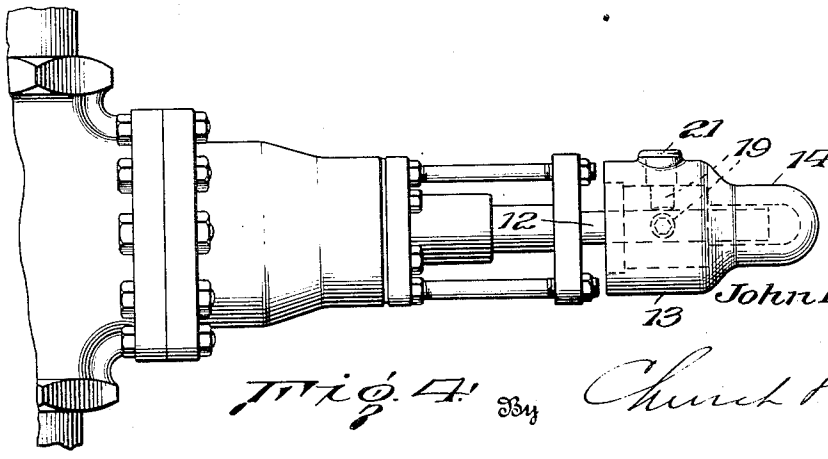


Fig. 4.

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Patented Nov. 7, 1933

1,934,327

UNITED STATES PATENT OFFICE

1,934,327

LOCKING DEVICE FOR PUMP SHAFTS AND THE LIKE

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Application October 21, 1932. Serial No. 638,987

3 Claims. (Cl. 70—122)

This invention relates to improvements in locking devices for shafts and the like and particularly to a locking device for the operating shafts of hand actuated gasoline pumps generally found in present-day gasoline stations.

While especially adapted to the use on gasoline pumps it is readily used in similar situations such as for locking valve stems against movement.

One object is to produce a lock of simple but sturdy construction that can be manufactured at low cost. Not only does its simplicity lend to low production costs but it reduces the possibilities of the lock becoming inoperative. On the other hand it may be easily repaired.

Another object is to provide a lock which, when applied to the shaft of a pump or to a valve stem, operation of the shaft or stem will be absolutely impossible without total destruction of the lock.

With these and other objects in view, the invention consists in certain details of construction and combinations and arrangements of parts, all as will hereinafter be more fully described and the novel features thereof particularly pointed out in the appended claims.

In the accompanying drawing,

Figure 1 is an elevational view of a gasoline pump housing, the pump being shown more or less diagrammatically in dotted lines with the present device applied to the pump shaft.

Fig. 2 is a sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

Fig. 4 is a plan view illustrating the present device applied to a valve stem.

Referring to Figs. 1 to 3, a pump 10 of the type generally used in present-day gasoline stations is indicated in dotted lines within the pump housing 11 of conventional design. The operating shaft 12 of the pump projects from said housing and, in normal operation, is actuated by a handle (not shown) but which may be removed from said shaft when the pump is not to be used, for instance, when the station is closed. In order to prevent the unauthorized operation of the pump after removal of the operating handle, the present invention contemplates the provision of a cap or cover for the exposed, projecting portion of shaft 12.

This cap or cover, indicated at 13, is of tubular construction with a closed end 14 of reduced cross-section. In that portion of the cover of larger cross-section there is a sleeve 15 held against movement longitudinally of the cover by a closure disk 16 screwed in the enlarged end of the cover and by the shoulder 17 formed on the interior of the cover. Said sleeve 15 and cover are, however, capable of relative rotative movement.

Extending radially through sleeve 15 is one or more screw threaded holes 18, each of which contains a screw 19 and extending through the cover is a hole 20 which can be moved into registry with any one or more of holes 18. Hole 20 is adapted to receive a locking device of the type now commonly found on the market, said device comprising a barrel 21, which makes a neat fit in hole 20, and a plurality of lugs 22 adapted to be moved radially of the barrel by a key (not shown) inserted in the barrel, as will be readily understood. As shown in Fig. 3, the lock barrel can be placed in opening 20, and locked therein by lugs 22 engaging against the inner surface of the cover, or by retracting the lugs, the barrel can be withdrawn as indicated in dotted lines in said figure.

To lock the pump shaft against operation, the cover is placed thereon with the shaft extending through sleeve 15 into the reduced end portion of the cover. With lock barrel 21 removed from opening 20, the cover is rotated until said opening registers with a hole 18 in the sleeve. The screw 19 in said hole is then turned with a suitable instrument, said screw preferably having a socketed head, until it takes a firm bite in shaft 12. Lock barrel 21 is then replaced and locked against unauthorized removal. If desired, before restoring lock barrel 21, the sleeve can be again partially rotated and a second screw turned to engage the shaft. In this way, the sleeve is locked on the shaft but due to the fact that the cover is freely rotatable on the sleeve, the shaft cannot be actuated.

Fig. 4 illustrates the present device applied to the stem or shaft 12*a* of a valve 23. In this instance, the cover is applied and functions just the same as in the case of the pump shaft.

What I claim is:

1. In a locking device for shafts and the like, the combination of a tubular cover into which the shaft is adapted to extend there being an opening in the wall of said cover, a sleeve within said cover through which the shaft is adapted to extend, said sleeve and cover being rotatable with respect to one another, means operable through said opening for locking said sleeve against rotation on the shaft, means for preventing relative longitudinal movement of the sleeve

and cover, and a locking device releasably locked in said opening.

2. In a locking device for shafts and the like, the combination of a tubular cover into which the shaft is adapted to extend, said cover having an opening in its wall, a lock mechanism releasably secured in said opening, a sleeve rotatable within said cover but held against movement longitudinally of the cover, said sleeve being adapted to receive the shaft inserted in the cover, and a screw movable in said sleeve radially of the shaft by means insertable through said opening to clamp said sleeve on the shaft.

3. In a device of the character described, the combination of a tubular cover having one end of reduced cross section to form a shoulder in the interior thereof, there being an opening in the wall of the portion of major cross section, a closure adapted to be releasably locked in said opening, a sleeve freely rotatable in that portion of the cover of major cross section and having radially disposed holes therein, one end of said sleeve engaging said shoulder, means engaging the other end of said sleeve to prevent relative longitudinal movement of the sleeve and cover, and screws in the holes in said sleeve accessible through the opening in the cover when said opening closure is removed.

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