Nov. 13, 1923. 1,473,775

E. W. LEECH, JR

SAFETY LOCK FOR STOPCOCKS

Filed Oct. 13, 1921

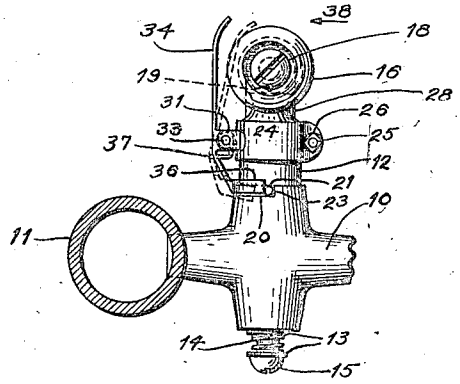

Fig. 2

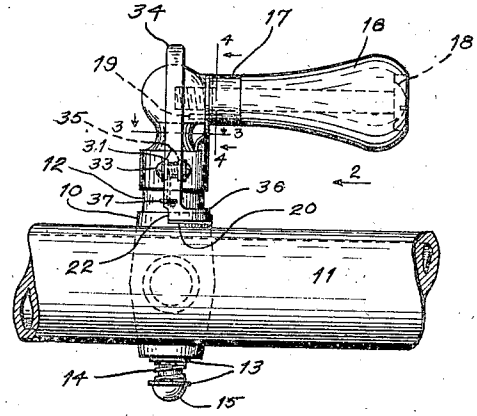

Fig. 1

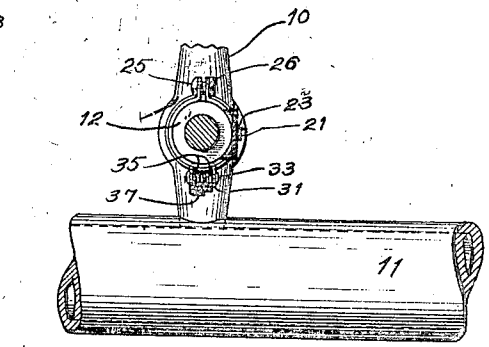

Fig. 3

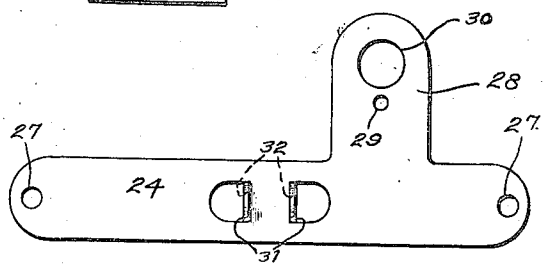

Fig. 5

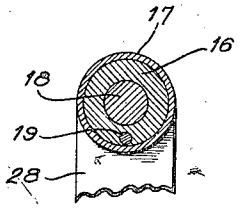

Fig. 4

Inventor

Edward W. Leech Jr.

By John W. Darley.

Attorney

Patented Nov. 13, 1923. 1,473,775

UNITED STATES PATENT OFFICE.

EDWARD W. LEECH, JR., OF BALTIMORE, MARYLAND.

SAFETY LOCK FOR STOPCOCKS.

Application filed October 13, 1921. Serial No. 507,567.

To all whom it may concern:

Be it known that I, EDWARD W. LEECH, Jr., a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Safety Locks for Stopcocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to safety locks for stop cocks.

Among the objects of my invention are:—

To produce a safety lock suitable for use with an ordinary stop cock to prevent the inadvertent operation thereof.

To produce a safety lock for stop cocks capable of easy application thereto.

To produce a safety lock for stop cocks which can be cheaply manufactured and applied by unskilled persons.

In carrying out my invention I make use of the instrumentalities illustrated in the accompanying drawings, in which:

Figure 1 is a view of my improved lock shown as applied to the stop cock of an ordinary gas range.

Fig. 2 is a view of the parts shown in Fig. 1 looking in the direction of the arrow 2 in said figure.

Fig. 3 is a section along the line 3—3 in Fig. 1 looking in the direction of the arrows.

Fig. 4 is a section along the line 4—4 in Fig. 1 looking in the direction of the arrows.

Fig. 5 is an enlarged view of the clamp used in applying my improved lock.

In the drawings:—

10 represents the body of an ordinary stop cock shown as connected to the manifold 11 such as is usually employed in the construction of gas ranges.

The body 10 of the stop cock is provided with a valve 12 having the usual ports which cooperate with the usual duct in the body 10 to permit or terminate a flow of gas from the manifold 11. The valve 12 is retained in place in the body 10 by the washers 13—13, a spring 14 and screw 15, and is turned by the handle 16 having the ferrule 17, said handle being provided with a central hole through which passes the screw 18, the latter being threaded into the top of the valve 12 and serving to secure the handle 16 in position. In order to prevent turning of the handle 16 while the screw 18 is being screwed in place, the pin 19 is provided which fits snugly in a hole in the top of the valve 12 and extends into a hole in the handle 16.

The body 10 is provided with a notch 20 and a pin 21 secured in the valve 12, extends into said notch, and by abutting against the vertical faces 22 and 23 serves to limit the angular movement of the valve 12. When the pin is against the face 23, the flow of gas from the manifold 11 is terminated and when said pin is against the face 22, gas is permitted to flow from the manifold 11.

All the parts heretofore referred to are of the usual or any preferred construction.

The band 24 is clamped around the valve 12 by means of the screw 25 and nut 26 the former of which passes through the holes 27—27 formed in said band. The band 24 is provided with an extension 28 having the hole 29 which fits over the pin 19, and the hole 30 for the reception of the screw 18. The band 24 is provided with ears 31—31 formed from the body of said band and provided with holes 32—32 for the reception of the pin 33 which may be a tight fit in said holes or riveted therein, as desired.

The locking lever 34 is provided with ears 35—35 that are journalled upon the pin 33 between the ears 31—31 and the lower end of said lever is provided with a guard 36 curved to rest against the valve 12 and of such length that it fits between the pin 21 and the face 22. A spring 37 encircling the pin 33 has its ends so disposed as to normally press the guard 36 against the valve 12.

It is to be noted that the band 24 is to be firmly clamped around the valve 12 and the extension 28 is provided so that the engagement of said extension with the screw 18 and pin 19 will prevent the band 24 from slipping around the valve 12.

The operation of my improved lock is as follows:—

The parts being in the positions shown in Figs. 1 and 3 and by full lines in Fig. 2, the guard 36 will prevent movement of the valve 12 because said guard is held by the spring 37 between the pin 21 and face 22. If now it is desired to permit a flow of gas from the manifold 11, the operator moves the lever 34 from the position shown by full

lines in Fig. 2 to the position shown by dotted lines therein, thus removing the guard 36 from the path of the pin 21. The handle 16 can then be moved in the direction of the arrow 38 in Fig. 2 in order to permit the flow of gas. During this movement of the handle 16 the lever 34 may be released and the guard 36 will then rest upon the upper portion of the body 10.

When the flow of gas is to be shut off, the handle 16 is moved in the direction opposite to that of the arrow 38 and when said handle reaches the position shown in Figs. 1, 2 and 3, then the spring 37 will force the guard 36 into the position shown in Figs. 1 and 3 and by full lines in Fig. 2, thus again locking the valve 12.

Thus it will be seen that I provide a simple, cheap and efficient lock for stop cocks which can be readily applied.

While I have shown one preferred movement of my invention, it is to be understood that changes may be made therein without departing from the spirit thereof.

I claim:—

1. The combination with the body of a stop cock, a valve mounted therein, a handle for turning said valve, a notch in said body, a pin in said valve extending into said notch to limit the movement of said valve and a screw for securing said handle to said valve, of a band clamped around said valve and comprising an extension having a hole for the reception of said screw and ears formed integrally with said band, a pin mounted in said ears, a lever pivoted on said pin and comprising a guard extending between said first named pin and a face of said notch and means for holding said guard between said first named pin and face.

2. The combination with the body of a stop cock, a valve mounted therein, a handle for turning, said valve, a notch in said body, a pin in said valve extending into said notch to limit the movement of said valve, a screw for securing said handle to said valve and a steady pin mounted in said valve and extending into said handle, of a band clamped around said valve and having an extension provided with holes embracing said steady pin and screw, a lever pivotally mounted on said band and comprising a guard extending between said first-named pin and a face of said notch and means for holding said guard between said first-named pin and face.

In testimony whereof, I affix my signature.

EDWARD W. LEECH, JR.