Feb. 19, 1929. 1,702,511

P. A. KARLOVICK

HANDLE

Filed May 2, 1927

Fig. 1.

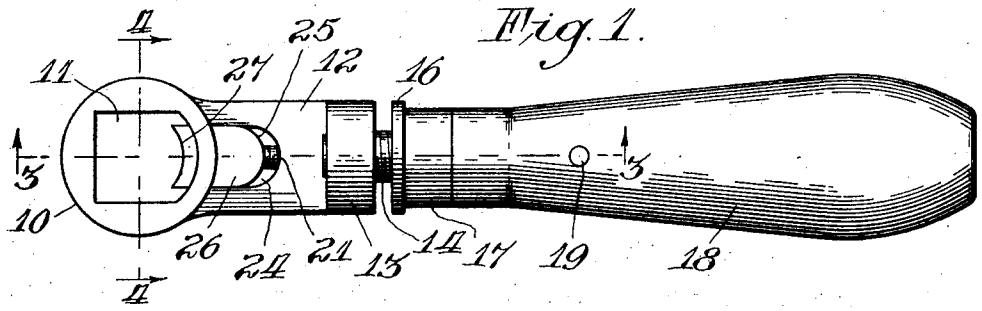


Fig. 2.

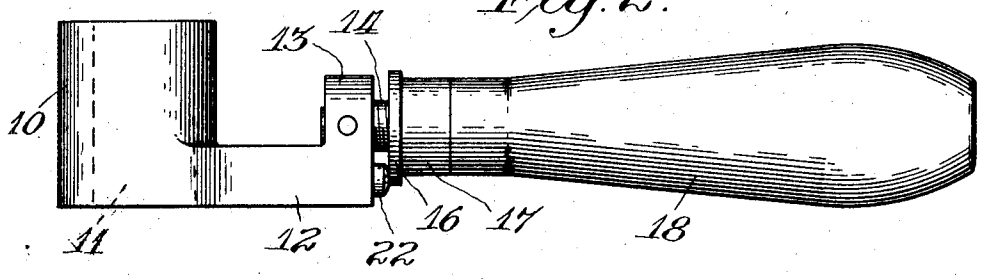


Fig. 3.

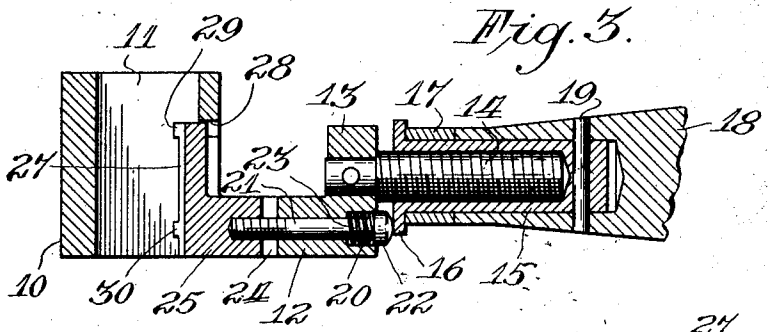


Fig. 5.

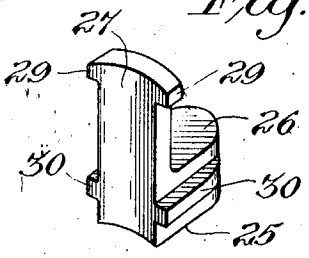
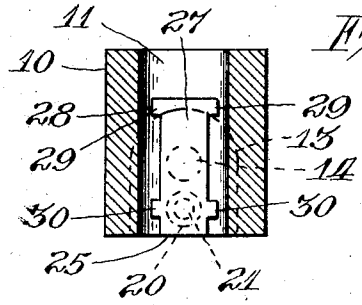


Fig. 4.



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UNITED STATES PATENT OFFICE.

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HANDLE.

Application filed May 2, 1927. Serial No. 188,133.

This invention relates to an adjustable handle adapted to be locked with the stem control of a valve, such for example as the air valve stem control for the air brakes of vehicles.

Primarily the improved handle of this invention has been designed for the air brake control stem of a street car, although obviously it may be utilized with equal effectiveness in any kind of a control means embodying an operating stem or shaft. It is important, in the case of street cars, that a quickly detachable handle be provided for connection to the air valve stem which controls the brakes. Such handle should be simple; it should embody an effective locking means; such locking means should be quickly responsive for attachment to or detachment from the stem; and the control means for such lock should be simple and not likely to get out of order.

With these general thoughts in mind it is the object of this invention to provide an improved valve stem operating handle which will achieve all of the requisites above recited. Further objects should be apparent to those skilled in this art as the present disclosure progresses.

Briefly these very desirable objects are achieved in a handle construction embodying a cast metal body of a form to be engageable with a control stem or shaft. Said body is provided with a particularly formed movable locking block adapted to secure the body to the control stem upon rotation of a handle carried on a stationary threaded support in a manner to permit the handle to travel along the support to engage the spring pressed head of a plunger member locked in the movable locking block.

Looking now to the accompanying sheet of drawings illustrating one form which this invention may assume in practice, it will be seen that:

Figure 1 is a general top plan view of the improved handle;

Figure 2 is a general side elevational view of the handle;

Figure 3 is a side sectional view of the handle as seen along the line 3—3 of Figure 1, looking in the direction of the arrows;

Figure 4 is a vertical sectional view along the line 4—4 of Figure 1 looking with the arrows; and,

Figure 5 is a detail perspective view showing the movable locking block.

The handle embodies an upright sleeve or body portion 10, which may be cast, said body having therein a vertical opening 11 designed to fit over the stem or shaft control member of an air valve for the brake mechanism of a street car, for example. Formed integrally with the body's bottom portion is a rearward extension 12 terminating in an integral upright stop wall portion 13.

Secured in this wall portion is a rearwardly extending threaded shank 14 which is surrounded by a complementarily threaded sleeve 15, embodying a flange portion 16. Adjacent the flange, the sleeve carries a ferrule 17 against which abuts the end of a wooden handle 18 carried on the sleeve 15 and made fast thereto by a lock pin 19.

At the rear end of the portion 12 below the seat of the shank 14 in the wall 13 is a socket 20 communicating with a smaller longitudinal bore into which is slidably fitted a plunger 21 having a head 22 fitting the socket 20, there being a spring 23 in said socket acting normally on the head 22 to move the plunger rearwardly. The forward end of this plunger is threaded and extends into a vertical, central opening 24 in the portion 12, where said threaded end is locked in a locking block 25 having a rear portion 26 fitting the opening 24 and an enlarged upright portion 27 fitting an opening 28 in the rear wall of the body 10. The upper part of the portion 27 of the block is formed with opposite guide extensions 29 while its lower end is provided with similar opposite guide flanges 30 which latter extensions are continued back along the sides of the part 26 of the block. Of course, the openings in the body and portion 12 thereof are complementarily formed closely to fit the particular block formation just described.

In use the handle part 18 is rotated on the shank 14 in one direction to move said handle axially rearwardly so that the flange 16 will be retracted from the head 22 of the slidable plunger 21, whereupon the spring 23 is free to exert its normal tendency to move back the plunger and of course with it the block 25 as the plunger is threaded fast thereinto. This now leaves the opening 11 in the body 10 unobstructed to permit said body to be readily put down over the operating stem of a valve or similar shaft control member. By rotating the handle 18 now in the reverse direction, the same moves ahead on the threaded shank permitting the flange 16

to engage the head 22 of the plunger 21, to cause said plunger to be moved against the spring pressure in a manner to advance the block 25 and its portion 27 into close, frictional locking engagement with the stem as will be obvious. The guides 29 and 30 make the block 25 slide positively and uniformly without wobbling.

Thus, it must now be appreciated that this invention provides a simple, effective, and improved adjustable handle control for the purposes set forth.

It is the intention to cover all such changes and modifications of the illustrative embodiment herein disclosed which do not depart from the spirit and scope of the invention as is indicated in the appended claims.

What I claim is:

1. A handle, comprising a body having a stem engaging opening, a lock block slidable in the body, a plunger connected to the block, means for moving the plunger to move the block, and guide extensions on opposite sides of the block.

2. A handle comprising a body having a stem engaging opening and a side opening, a lock block slidable in the body through the side opening into the stem engaging opening, and means for moving the block, said block and side opening including complementary oppositely arranged guide portions.

3. A handle comprising a body having a stem engaging opening and a side opening, a lock block slidable in the body through the side opening into the stem engaging opening, a plunger connected to the block, a shank on the body, operating means on the shank for moving the plunger to move the block, and guides formed on the block cooperating with complementary guide grooves in the block opening in the body.

4. In a handle, the combination of an upright sleeve having a vertical bore to fit over a control stem, an offset extension connected to the sleeve, said extension terminating in an upright wall, there being a through opening in the rear wall of the sleeve, said opening extending centrally part way into and vertically through the extension, a lock block slidably arranged in said opening, a threaded shank carried by the wall, a handle including a threaded sleeve carried on said shank, a flange integral on the sleeve, and a spring pressed plunger in the extension and connected to said block, whereby rotation of the handle and sleeve causes the flange to engage and move the plunger and the block, said block moving through the aforementioned opening to engage the control stem.

5. In a handle, the combination of an upright sleeve having a vertical bore to fit over a control stem, an offset extension connected to the sleeve, said extension terminating in an upright wall, there being a through opening in the rear wall of the sleeve, said opening extending centrally part way into and vertically through the extension, a lock block slidably arranged in said opening, the side walls of said opening in the extension and in the sleeve wall being formed with grooves, guide extensions on the lock block fitting said grooves, and operating means for moving the block through the opening to engage the control stem.

6. In a handle, the combination of an upright sleeve having a vertical bore to fit over a control stem, an offset extension connected to the sleeve, said extension terminating in an upright wall, there being a through opening in the rear wall of the sleeve, said opening extending centrally part way into and vertically through the extension, a lock block slidably arranged in said opening, the side walls of said opening in the extension and in the sleeve wall being formed with opposed grooves, guide extensions on the lock block fitting said grooves, there being another set of grooves in the sleeve opening spaced from the first mentioned grooves, extensions in the block fitting these grooves, and operating means for moving the block through the opening to engage the control stem.

Chicago, Illinois, April 29th, 1927.

PAUL A. KARLOVICK.