J. W. PRIOR.

VALVE MANIPULATOR FOR RADIATORS.

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1,288,985. Patented Dec. 24, 1918.

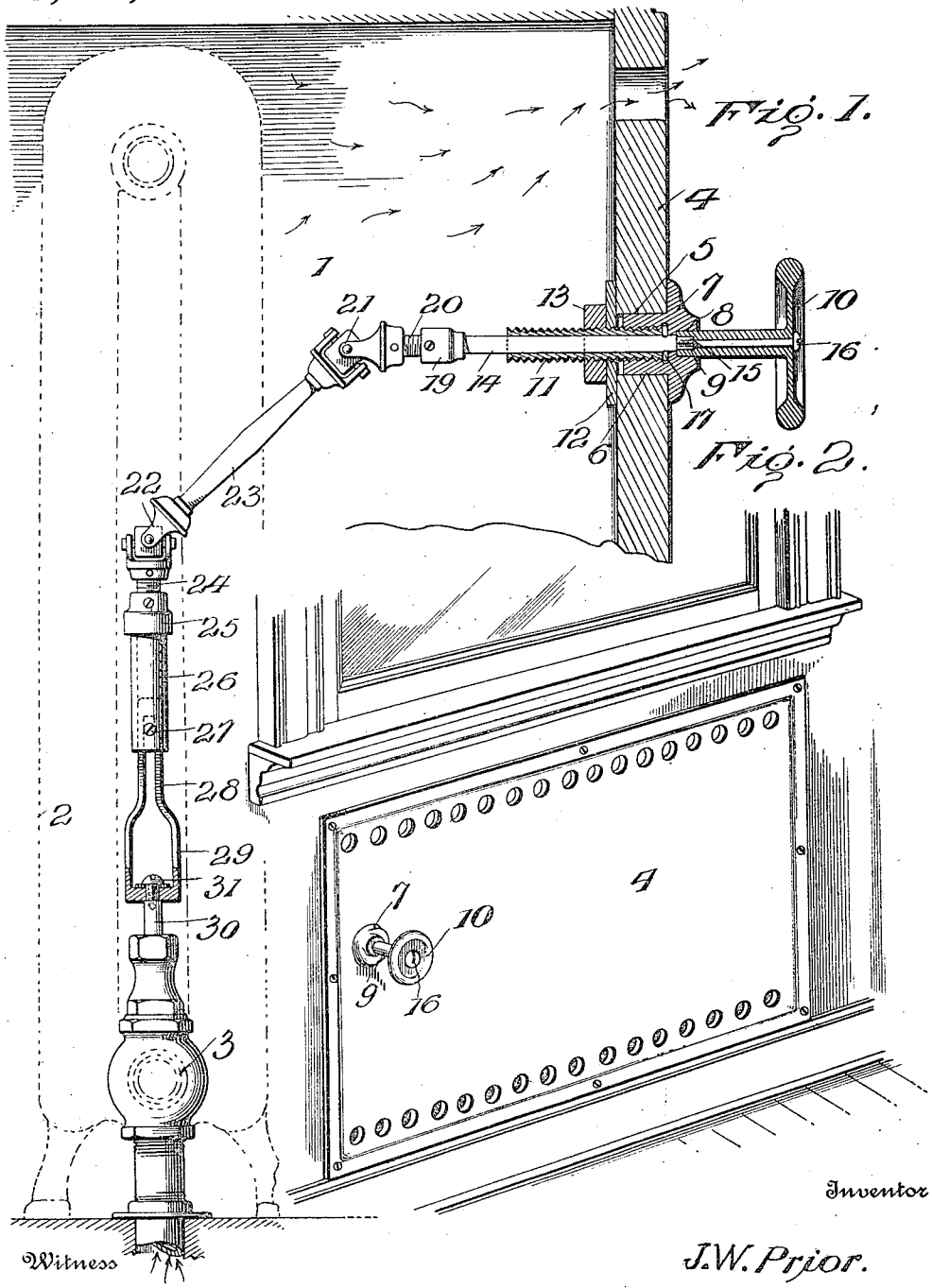


Fig. 1.

Fig. 2.

Witness

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VALVE-MANIPULATOR FOR RADIATORS.

1,288,985. Specification of Letters Patent. Patented Dec. 24, 1918.

Application filed March 17, 1916. Serial No. 84,950.

To all whom it may concern:

Be it known that I, JED W. PRIOR, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Valve-Manipulators for Radiators, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in valve manipulators for radiators, and is especially adapted to be used in connection with concealed radiators used in indirect heating; the object being to provide a manipulator by means of which the valve can be readily actuated without having to insert the hand through an opening in the cover of the chamber containing the radiator.

Another object of my invention is to provide a valve manipulator which is exceedingly simple and cheap in construction and one which can be readily attached to an ordinary form of radiator valve, so as to enable the same to be readily manipulated.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawing—

Figure 1, is an elevation of my improved construction of manipulator showing the application of the same to a radiator arranged within a chamber; and

Fig. 2, is a perspective showing the application of the same, the hand wheel being in position on the closure of the chamber to allow the same to be readily operated.

Like numerals of reference refer to like parts in the several figures of the drawings.

In the drawing, 1 indicates a chamber formed in the wall, 2 the radiator, 3 the radiator valve and 4 the closure for said chamber, which is herein shown formed of wood and is provided with air inlet openings adjacent its lower edge and outlet openings adjacent its upper edge to allow the heated air to escape from the chamber, the above description being given so that the operation of my improved construction of manipulator can be readily understood when connected to a concealed radiator.

The closure 4 herein shown is of wood, but it is, of course, understood that it can be formed of marble, brick or any other material, and it is provided with an opening 5 in which an internally threaded sleeve 6 is arranged having an annular flange 7 engaging the face of the closure 4 and provided with a circular socket 8 in which is adapted to be arranged the key portion 9 of a hand wheel 10.

Working in the internally threaded portion of the sleeve 6 is an externally threaded bearing sleeve 11 on which is mounted a washer 12 and a nut 13 so as to clamp the flange 7 of the sleeve 6 against the face of the closure 4 and it will be seen by this construction that I have provided means for clamping the sleeve 6 in position in closures of different thicknesses.

Revolubly mounted within the bearing sleeve 11, is an operating rod 14 having a square portion 15 to receive the key portion 9 of the hand wheel 10, the end of said square portion being provided with a threaded bore into which extends a screw 16 for locking the key in position thereon within the socket 8 of the flange 7. In order to prevent the operating rod 14 from moving lengthwise within the bearing sleeve 11, I provide the same with a transverse pin 17 which works within an annular groove 18 formed in the sleeve 6 so as to relieve the key of the end thrust of the shaft.

Secured on the end of the rod 14 by a set screw is a coupling 19 which is preferably provided with a threaded socket into which extends a nipple 20 which is locked in one of the coupling members of a universal joint 21 by a pin as clearly shown.

By providing a threaded nipple in connection with the coupling 19 and universal joint 21, the distance between the coupling and universal joint can be adjusted.

The universal joint 21 is connected to a universal joint 22 by a connecting rod 23 and in constructing these members, the rod 23 is preferably formed integral with the members of the universal joints at its ends, although, of course, the particular construction and manner of connecting these members can be varied without departing from the spirit of my invention.

One of the members of the universal joint 22 has secured therein by a pin, a threaded nipple 24 which is mounted within a threaded bore of a coupling member 25 and locked

by a set screw as clearly shown, so that the distance between the coupling and universal joint can be adjusted.

The coupling member 25 carries a sleeve 26 having a transverse pin 27 adjacent its lower end which passes through a slot formed in the neck 28 of a stirrup 29 in order to provide a sliding connection between the sleeve and neck of the stirrup.

Secured within the stirrup 29 is a valve stem 30 of the valve 3, said stirrup being preferably provided with an opening in its base through which the valve stem 30 passes and which is secured by a screw 31 and washer, as clearly shown in Fig. 1.

In the construction of valve manipulator as shown, it will be seen that I have provided a series of rods universally connected so as to allow the rods to adjust themselves when they are rotated by the hand wheel 10 and by providing the sliding connection between the coupling 26 and stirrup 29, the stirrup is free to move within the coupling member as the valve rises in opening the same and to drop within the coupling member as the valve is closed.

From the foregoing description, it will be seen that I have provided a valve manipulator which is so constructed that the same can be readily attached to the ordinary form of radiator valve now in use and mounted within the closure of the chamber in which the radiator is arranged, so as to allow the valve of the radiator to be manipulated through the exterior of the chamber by simply turning the hand wheel which corresponds to the hand wheel now in use on radiator valves.

I claim:

1. A valve manipulator, comprising a bearing sleeve having means for securing the same in a support, an operating rod mounted in said bearing sleeve, a wheel having a key portion connected to said operating rod, a coupling carried by said operating rod, a nipple adjustably mounted in said coupling, a second rod, a universal joint connecting the second rod to said nipple, a universal joint carried by the second rod, a nipple connected to said last-mentioned universal joint, a coupling connected to said nipple, a stirrup slidably mounted within said last-mentioned coupling, and means for connecting said stirrup to the valve of a radiator.

2. In a valve manipulator for radiators, the combination with a radiator valve having a valve stem, of a stirrup fixed on said valve stem, a coupling having a sliding connection with said stirrup, an operating rod, a bearing for said operating rod, a hand wheel having a key connected to said operating rod, and a universal connection between said operating rod and coupling.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JED W. PRIOR.

Witnesses:
B. E. Bristol,
H. D. Winter.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."