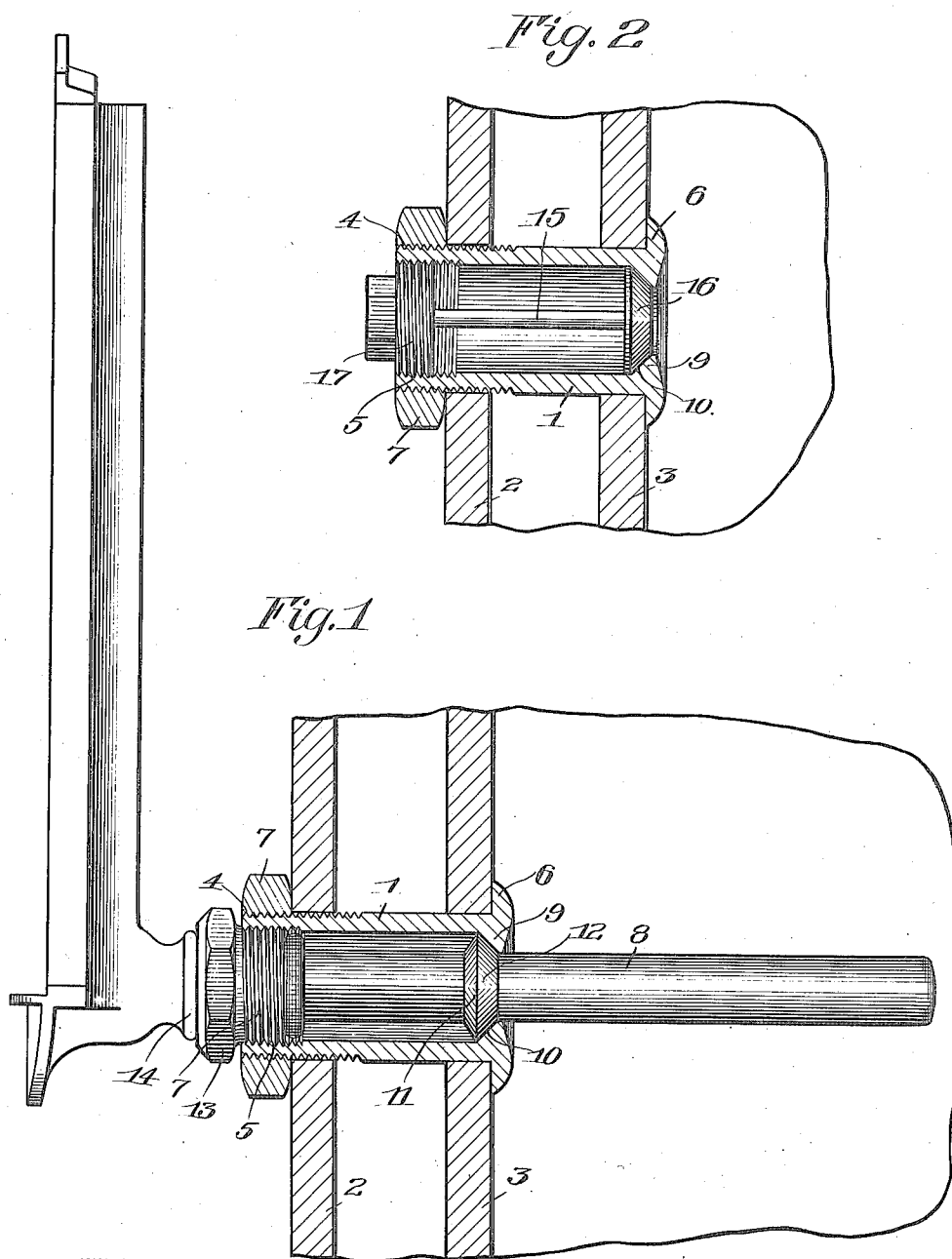


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THERMOMETER HOLDING DEVICE FOR TANKS AND THE LIKE.  
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1,233,385.

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WITNESSES:  
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# UNITED STATES PATENT OFFICE.

HENRY W. MAURER, OF ROCHESTER, NEW YORK, ASSIGNOR TO TAYLOR INSTRUMENT COMPANIES, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

THERMOMETER-HOLDING DEVICE FOR TANKS AND THE LIKE.

1,233,385.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, HENRY W. MAURER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Thermometer-Holding Devices for Tanks and the like; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My invention has for its object to afford an improved construction for use in connection with tanks, vats and the like to enable a thermometer to be readily inserted from the exterior to the inside of the tank, and to make provision for removing the thermometer when it is desired to clean the interior of the tank. A further purpose of the improvement is to employ a structure which does away with any projecting parts on the interior of the casing when the thermometer is not in use, thereby facilitating the cleaning operation and making a construction that is more sanitary in every respect. To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Figure 1 is a sectional view showing the application of my improved device to the wall of a tank, and

Fig. 2 is a sectional view with the thermometer removed and the valve or plug inserted.

Similar reference characters throughout the several figures indicate the same parts.

In the present embodiment of the construction there is employed a sleeve 1 which is shown as applied to a double walled tank or vat, which includes the walls 2 and 3 arranged in spaced relation to each other for insulation, but the invention is not confined in its application to this particular style of tank, as it may be applied with equal facility and used efficiently on a single wall structure. The sleeve 1 is threaded both interiorly and exteriorly at its outer end, as designated at 4 and 5 respectively for a purpose that will be mentioned presently. At its inner end, the sleeve 1 carries a flange

6 which forms a shoulder for engagement with the side or inner wall of the tank, to hold the sleeve tightly against the wall, although any means may be employed at the inner end of the sleeve for accomplishing this end. The sleeve is held in place by a securing nut 7 which engages the exteriorly threaded portion 4 at the outer end, and by contact with the outer surface of the tank, acts to draw the retaining flange 6 tightly against the inner surface and thus hold the sleeve in fixed position.

The sleeve is also provided at its inner end with an opening through which the thermometer casing 8 is inserted in the manner shown in Fig. 1, and surrounding said opening is an inwardly projecting portion or shoulder 9 which is inclined at 10 to form a seat for collar 11 carried by the thermometer casing. The collar 11 includes a surface 12 which is inclined correspondingly with the seat 10 and engages the same tightly when the thermometer is in operating position. The thermometer is held in the position shown in Fig. 1 by means of a nut 13 which is loosely arranged on the neck 14 of the thermometer case, the nut 13 being arranged to engage the interiorly threaded portion 5 of the bushing and to abut against a shoulder on the thermometer casing. It will be seen that by this arrangement the thermometer can be tightly secured within the sleeve and in a manner which effectually closes the opening through which it projects, and thus prevents the outflow of any liquid from the tank. When the thermometer is not in use, it may be removed from the tank after it is emptied of its contents and in order to clean the tank under such conditions I provide a supplemental means for closing the opening in the sleeve before the cleaning liquid is poured in while at the same time leaving a practically smooth inner surface on the inside of the tank.

To this end, I employ a plug member consisting preferably of a rod 15 carrying a plug 16 to engage the seat 10. The rod 15 is also provided with a threaded nut 17 adapted to engage the interiorly threaded portion 5 of the sleeve, as shown in Fig. 2. When the thermometer is not in use, it may be removed, and the plug member can then be positioned in the manner explained, and serves to close the opening in the sleeve, and

prevent the contents of the tank from running out.

I claim as my invention:

1. The combination with a receptacle wall  
5 having an aperture and a tubular sleeve fitting the aperture, having an annular seat at its inner end approximately in alinement with the inner surface of the wall of the receptacle, of a thermometer casing adapted  
10 to project through the sleeve into the receptacle and provided with a shoulder cooperating with the seat and a securing member cooperating with the outer end of the sleeve and the thermometer casing and serving to  
15 force the shoulder on the latter into contact with the sleeve seat.

2. The combination with a receptacle wall having an aperture, a sleeve fitting the aperture having screw threads at its outer end  
20 and provided at its inner end approximately in the plane of the inner surface of the receptacle wall with an annular seat, of a thermometer casing adapted to project through the seat into the receptacle and having  
25 a shoulder cooperating with said seat, a nut engaging the threads of the sleeve and operating against the thermometer casing to force the shoulder thereon against the seat on the sleeve and a closure for the sleeve,

when the thermometer is removed, comprising a head portion fitting the seat and a nut cooperating with the threads of the sleeve to force the head against the sleeve seat.

3. The combination with a receptacle wall provided with an aperture, and a tubular  
35 sleeve fitted therein having a restricted inner end portion forming a seat substantially in alinement with the inner surface of the receptacle wall, of a thermometer casing extending through the sleeve and projecting  
40 through the seat into the receptacle having a collar slidably fitting the sleeve and engaging the seat a securing device engaging the thermometer casing and sleeve and serving to force the collar on the former into  
45 contact with the sleeve seat, a closure interchangeable with the thermometer casing also adapted to slidably fit within the sleeve and engage the seat therein, when the thermometer casing is removed, and means  
50 cooperating with the outer end of the sleeve and engaging said closure to force it into contact with the sleeve seat.

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Witnesses:

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