

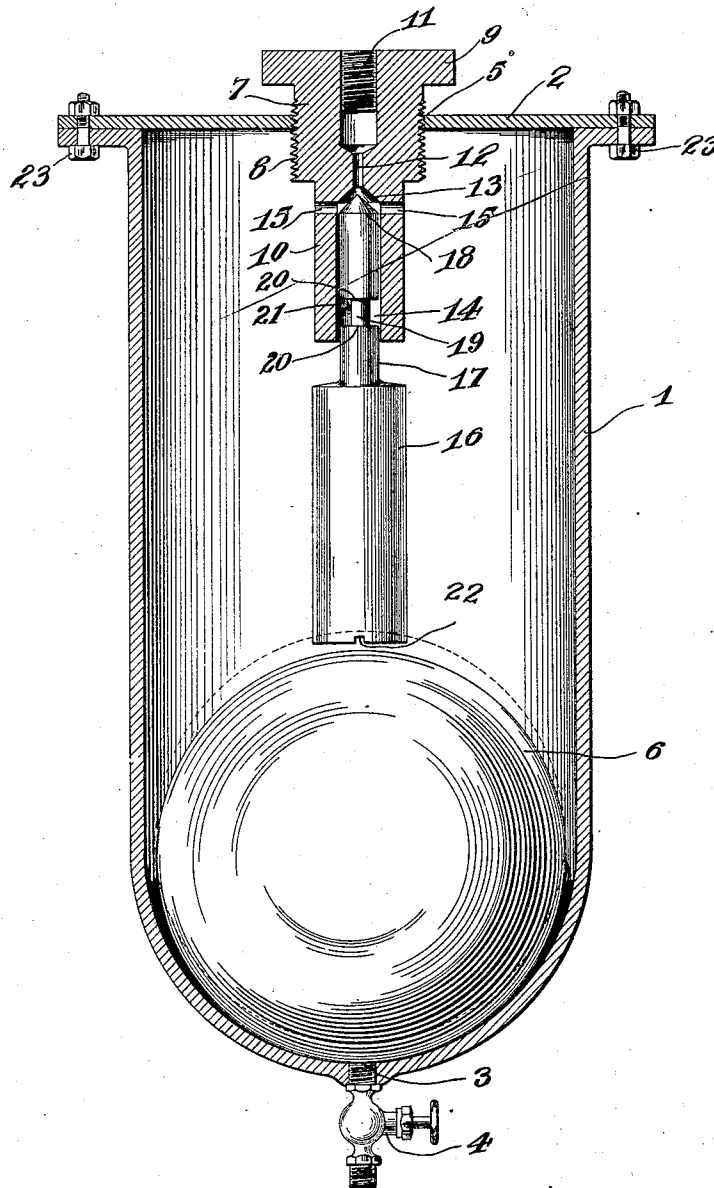
Dec. 2, 1924.

1,517,459

P. H. REITER

VENTING DEVICE

Filed Oct. 14, 1922



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VENTING DEVICE.

Application filed October 14, 1922. Serial No. 594,670.

To all whom it may concern:

Be it known that I, POLA H. REITER, a citizen of the United States, residing at Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Venting Devices; 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 its appertains to make and use the same.

This invention relates to an improved device for venting tanks or pipe systems of air, steam or gases.

The object of the present invention is to provide a device of the character indicated of an improved and simplified construction, and more particularly to an improved valve lending itself to easy removal and quick and economical regrounding or adjustment when necessary.

The invention consists in the novel construction, arrangement and combinations of parts as hereinafter more particularly described and claimed.

One sheet of drawings accompanies this specification as part thereof, in which like reference characters indicate similar parts throughout.

The figure is a vertical transverse sectional view showing parts of the device in elevation.

In accordance with my present invention, a housing 1 is provided preferably of cylindrical form and having one end formed closed in a semispherical shape. A cover plate 2 is provided and adapted to close the other end of the container. The curved or bottom end of the container is provided with a threaded orifice 3 adapted to receive valve 4 adapted to be connected to the tank or pipe system which it is desired to vent. The top closure member 2 is provided with a centrally located threaded orifice 5 adapted to receive the valve structure. A float 6 slightly smaller than the interior diameter of the container is provided and adapted to operate freely therein.

The improved valve structure comprises a cylindrical body 7 exteriorly threaded as at 8 and adapted to seat in orifice 5 of the closure plate 2. The top of this member is headed as at 9 to receive a wrench or other suitable tool for applying and removing the valve and the lower end of this member is of slightly reduced diameter as at 10. A

longitudinal bore 12 extends throughout this member, said bore being enlarged adjacent its upper end and interiorly threaded as at 11 and again enlarged adjacent its lower end as at 14. A conical valve seat 13 is provided intermediate the portions 12 and 14 of the bore and lateral passages 15 are provided adjacent said conical valve seat. A cylindrical weight 16 of a diameter substantially the same as that of reduced part 10 of the valve member and not exceeding the interior diameter of the orifice 5 in the top closure member 2 is provided with an upwardly extending valve stem 17 having upon its upper end a conical valve seat 18 adapted to co-mate with the valve seat 13. The valve stem 17 is further provided with a circular groove defining oppositely disposed shoulders 20 and a pin 21 passed transversely through part 10 and bore 14 of the valve member is adapted to ride within the said groove in the valve stem and contact with said shoulders 20—20 to limit the longitudinal motion of said valve stem within the valve member. The lower end of the weight 16 may be provided with a transverse tool slot 22 for use in re-grinding the valve.

In operation, air, steam or gases arising in the tank or pipe system communicating with the casing 1 through valve 4 will gravitate upwardly into container 1 and force the water or other fluid from the container, thus permitting the falling of float 6 to a position illustrated in the drawing. The weight 16 will then withdraw valve stem 17 from the bore 14 unseating the valve and permitting the escape of the air, steam or gas through the lateral passages 15 and bore 12 and thence as desired through any suitable piping connected to the threaded portion 11 of the bore, but not illustrated. The escape of the accumulated gases will permit the fluid from the tank or pipe system to again rise in container 1 thus elevating float 6 which will contact the bottom of weight 16 again projecting valve stem 17 upwardly in bore 14 to close the valve.

In connection with the structure thus described it will be noted that the entire valve part may be readily removed from casing 1 by unscrewing part 7 and withdrawing the valve through orifice 5, thus making it unnecessary to remove the top 2 or break the gasket or other joint connecting the top to the casing, such joint being usually made by

a plurality of bolts 23 as herein illustrated. It will further be noted that by means of the groove 19 in the valve stem 17 and the securing pin 21, the conical valve seats may be readily re-ground without removing the valve stem, and being free to rotate will tend to maintain themselves normally in good condition.

Having thus fully described my invention, what I claim is:

1. In a device of the character described, a venting valve comprising an exteriorly threaded body having a longitudinally extending bore, a valve seat within said bore, a laterally directed port through said body and communicating with the bore adjacent and below the valve seat, a valve stem adapted to reciprocate within said bore having on its upper end a valve part and on its lower end a weight of less diameter than that of the exteriorly threaded part of the body, and means limiting the longitudinal movement of the valve stem but permitting its free rotation in said bore.

2. In a device of the character described, a venting valve comprising a body adapted to be removably secured in the wall of a container, having a longitudinal bore and a transverse bore in communication therewith, a valve seat in said longitudinal bore adjacent and above the transverse bore, a valve stem carrying at its upper end a valve adapted to coact with the valve seat, a weight attached to the valve stem of a diameter not exceeding that of the valve body and means for securing said valve stem in the longitudinal bore of the valve body to permit it a limited longitudinal motion and an unlimited rotary motion substantially as specified.

3. In a device as described in claim 2, having the valve stem provided with an annular groove defining oppositely disposed shoulders and a pin carried by the valve body extending secantially through the bore and adapted to ride in said annular groove.

In testimony whereof I affix my signature.

POLA HARVEL REITER.