

No. 717,437.

H. M. McCALL.  
NEEDLE VALVE.

Patented Dec. 30, 1902.

(Application filed June 26, 1902.)

(No Model.)

*Fig. 1.*

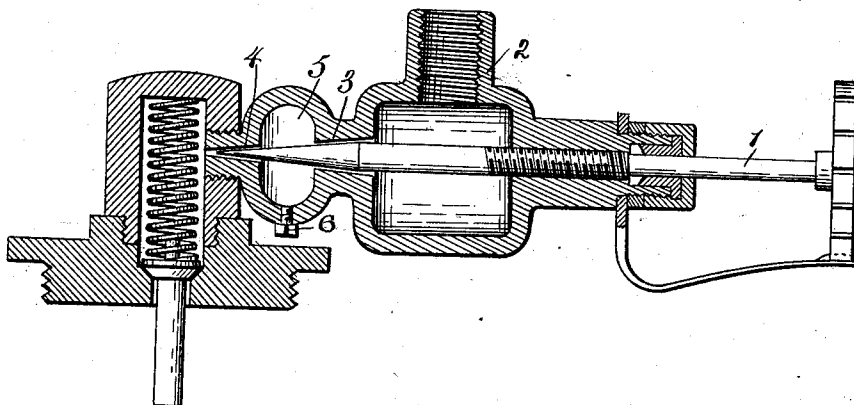


*Fig. 2.*

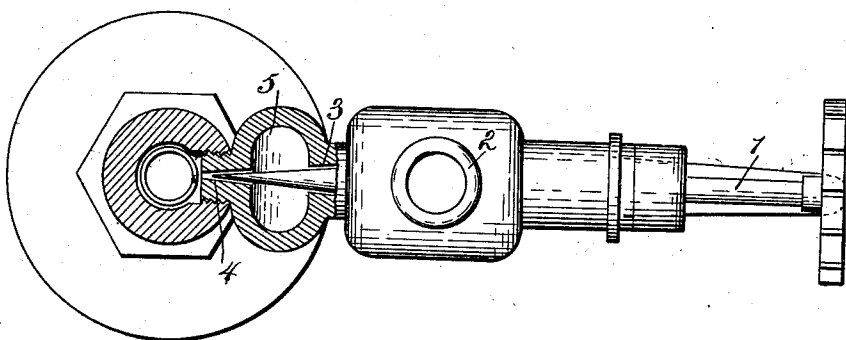
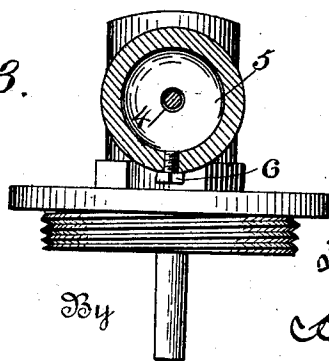


*Fig. 3.*



Witnesses

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# UNITED STATES PATENT OFFICE.

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## NEEDLE-VALVE.

SPECIFICATION forming part of Letters Patent No. 717,437, dated December 30, 1902.

Application filed June 26, 1902. Serial No. 113,351. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY M. McCALL, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Needle-Valves, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to needle-valves; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

The object of the invention is to provide a  
15 needle-valve especially adapted to be used in connections conducting hydrocarbon oil, the valve being provided with a double seat, with a compartment located between the seats in which sediment may collect and free the seats  
20 of the same.

In the accompanying drawings, Figure 1 is a sectional view of the valve-casing and valve. Fig. 2 is a top plan view of the valve-casing, partly in section; and Fig. 3 is a transverse  
25 sectional view of the valve-casing, cut on the line 3 3 of Fig. 1.

The needle-valve 1 is provided with the casing 2, said casing having a valve-seat 3 and a valve-seat 4, with an enlarged chamber  
30 5 interposed between the two said seats. The point of the valve 1 is adapted to engage both the seats 3 and 4 when the valve is closed. When the valve is opened, the capacity of the passage for the oil at the seat 3 being  
35 larger than that at the seat 4 the chamber 5 will fill with oil, the said oil being for a short period of time retained in the said chamber.

The heavy particles carried by the said oil will deposit along the bottom of the said chamber 5, and thus the said seat 4 is relieved of  
40 said deposits, and the seats 3 and 4 are freed of the same. The bottom of the chamber 5 is provided with a cap 6, which may be removed, and the said chamber may be flushed out.

By providing a needle-valve of the construction as shown and described the oil is admitted to a gas-engine or other machine practically freed of all heavy and foreign substances, and thus the valves or valve-seats are  
45 relieved from the wear that such substances cause.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A valve consisting of a casing having an enlarged chamber with two valve-seats located at opposite sides thereof, said chamber adapted to be filled with liquid which for a short period of time remains substantially station-  
50 ary within the chamber, and permits solid or foreign matter to precipitate in the chamber, a valve passing through said chamber and adapted to engage the valve-seats at the opposite sides of the chamber and open or close  
55 the said seats simultaneously said chamber having in its side a means through which the precipitation may be removed.

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

HARRY M. McCALL.

Witnesses:

THOMAS M. REES,  
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