

J. P. LAVIGNE.

VALVE.

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1,004,578.

Patented Oct. 3, 1911.

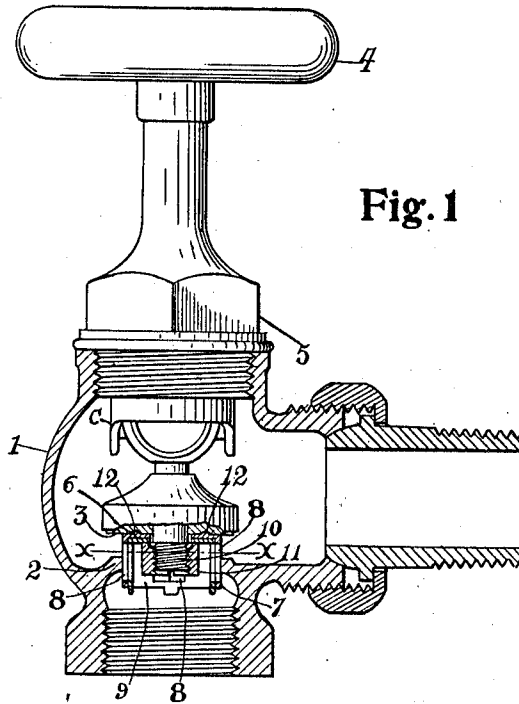


Fig. 1

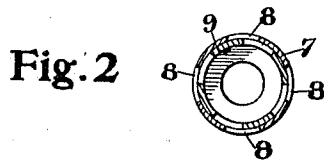


Fig. 2

Witnesses
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UNITED STATES PATENT OFFICE.

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VALVE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH P. LAVIGNE, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Valves, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to valves and more particularly to an arrangement thereof for use in connection with a steam heating system or the like, whereby each valve in such system may be primarily adjusted to deliver any amount of steam or the like within the limits of its capacity.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view, partly in section and partly in elevation of a valve embodying features of the invention; and Fig. 2 is a view in detail of an adjustable gate for the valve, on line $x-x$ of Fig. 1.

Referring to the drawings, a valve casing 1 of standard type, has an inner, annular or apertured valve seat 2 against which a closure 3 is adapted to be seated and to have rotative and longitudinal movement. The latter, preferably of the Jenkins type, is moved toward or from the seat by a hand-wheel 4 on the exterior of the casing, through the medium of any standard mechanism, not shown or claimed *per se*, herein, which is housed in a bonnet 5 of the casing. The closure has a ball and socket connection C with the actuating mechanism, or may be otherwise self-centering on the seat, and preferably is provided with a packing disk 6 on its face.

A cylinder or inverted cup 7 with open outer end and ports 8 in its wall, is secured centrally on the face of the closure 3 to slide in the valve seat 2 as a cut-off. The ports may be opened to a greater or less extent by an inner gate or inverted cup 9 rotatable in the cylinder, that has apertures adapted to be brought into more or less complete register with the cylinder ports 8. Preferably the cylinder is secured against the face of the closure on a stud 10 by a collar 11 in screwthreaded engagement with the stud, the collar acting as a clamp to hold the gate 9 in adjusted position. To prevent

rotation of the cylinder 7 on the closure, it may have projections 12 adapted to be forced into the packing disk, or into interlocking engagement with depressions in the closure face. The outer end of the stud collar is diametrically slotted or otherwise arranged for the application of a screwdriver or the like.

In operation the valve is adjusted by the partial cutting off of the ports to allow only the full amount of desired steam to pass when the valve is fully opened. Thus each valve in a heating system can be set to have any desired capacity within the limits of its construction, thus permitting the exact amount desired at a given point for most efficient results. This is especially desirable in the so-called "vacuum" systems for heating.

Obviously changes in the details of construction may be made without departing from the spirit of the invention and I do not care to limit myself to any particular form or arrangement of parts.

What I claim as my invention is:—

1. In a valve the combination with a casing having an apertured inner flange, a valve consisting of a pair of telescoped inverted cups having apertures adapted to register with each other, and a stem detachably supporting both of said cups for angular adjustment relative to each other, means for firmly securing said cups to the stem, of an actuator movably held in said casing for moving said stem and cups longitudinally in the casing.

2. In a valve, the combination with a casing having an apertured inner flange, a valve consisting of a pair of telescoped inverted cups having apertures adapted to register with each other, and a stem detachably supporting both of said cups for angular adjustment relative to each other, means for firmly securing said cups to the stem, of an independent actuator-stem longitudinally movable in said casing, and flexible means for coupling said actuator and valve stem for co-movement.

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

JOSEPH P. LAVIGNE.

Witnesses:

C. R. STICKNEY,
A. M. SHANNON.