(No Model.)

C. G. WILTSE.

STOP VALVE.

No. 251,668. Patented Dec. 27, 1881.

Fig. 1.

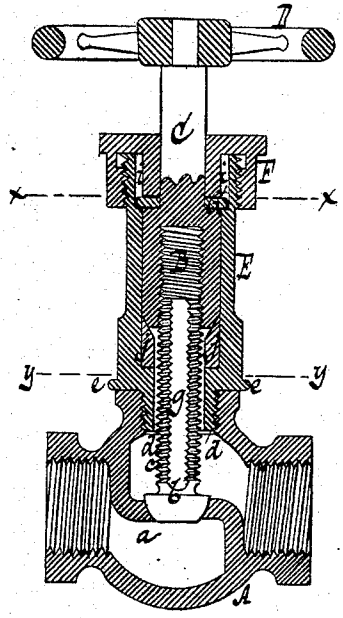


Fig. 2

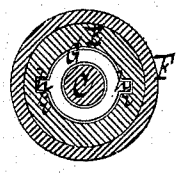
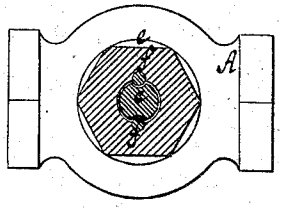


Fig. 3.



Witnesses
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William Miller

Inventor
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his attys.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES G. WILTSE, OF NEW YORK, N. Y.

STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 251,668, dated December 27, 1881.

Application filed May 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. WILTSE, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Stop-Valves, of which the following is a specification.

This invention consists in the combination of a spindle, a head formed on the inner end of said spindle and provided with an internal screw-thread, a chamber secured to the shell of the valve, a screw-cap secured to the outer end of this chamber and forming the guide for the spindle, guide-grooves formed in the chamber, a washer provided with fins engaging with said guide-grooves and bearing upon the head of the spindle, a soft-metal seat formed in the interior of the chamber and corresponding to the beveled end of the head, a screw-stem rising from the valve and engaging with the thread in the interior of the head, longitudinal grooves formed in said screw-stem, and ribs projecting from the interior of the foot of the chamber and engaging with said longitudinal grooves, so that when the screw-cap is screwed down upon the chamber the lower end of the head of the spindle works steam or air tight against the soft-metal seat, and that by turning the spindle the valve is opened or closed, and when the valve is opened no steam or fluid is allowed to escape on the sides of the spindle.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a vertical central section of my valve. Fig. 2 is a transverse section in the plane *x x*, Fig. 1. Fig. 3 is a similar section in the plane *y y*, Fig. 1.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a shell, which is provided in its interior with a seat, *a*, for the valve *b*. From this valve extends a screw-stem, *c*, which engages with a screw-thread in the interior of a head, B, formed at the inner end of the spindle C. A hand-wheel, D, serves to turn the spindle and the head.

On one side of the shell A is formed an internal screw-thread, *d*, with which engages the foot *e* of a chamber, E, and on the inner surface of this foot are formed ribs *f*, Fig. 3, which engage with grooves *g* in the valve-stem *c*, so as to prevent the same from turning round.

On the outer end of the chamber E is secured a screw-cap, F, which forms the guide for the spindle C, and which acts upon a washer, G, so as to depress the same upon the head B. This washer is provided with fins *h*, Fig. 2, which engage with guide-grooves *i*, formed in the interior of the chamber E, so that said washer is prevented from turning by frictional contact.

In the bottom part of the chamber E is formed a soft-metal seat, *j*, (being made, by preference, of Babbitt metal,) which is formed to correspond with the inner beveled end of the head B, so that when said head is depressed by the action of the screw-cap F upon the washer G its end works steam or air tight against the seat *j*.

If the spindle is turned in one direction, the valve *b* opens, and if the spindle is turned in the opposite direction the valve closes. By the seat *j* and the head D the escape of steam or other fluid past the spindle is prevented, no packing being required to effect this purpose, and the spindle works comparatively easy at all times. If the seat *j* should become worn, it can easily be renewed.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, substantially as hereinbefore described, of the spindle C, the head B, with its internal screw-thread, the chamber E, the guide-grooves *i* in said chamber, the washer G, provided with ribs to engage with said guide-grooves, the soft-metal seat *j*, formed in the chamber E, and the feathered screw-stem *c*, extending from the valve *b* and working in the foot of the chamber E.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

CHAS. G. WILTSE. [L. S.]

Witnesses:

J. VAN SANTVOORD,

E. F. KASTENHUBER.