W. H. THOMAS, dec'd.

CHARLOTTE THOMAS, Executrix.

PUMP-VALVE.

No. 181,497. Patented Aug. 22, 1876.

Fig. 1

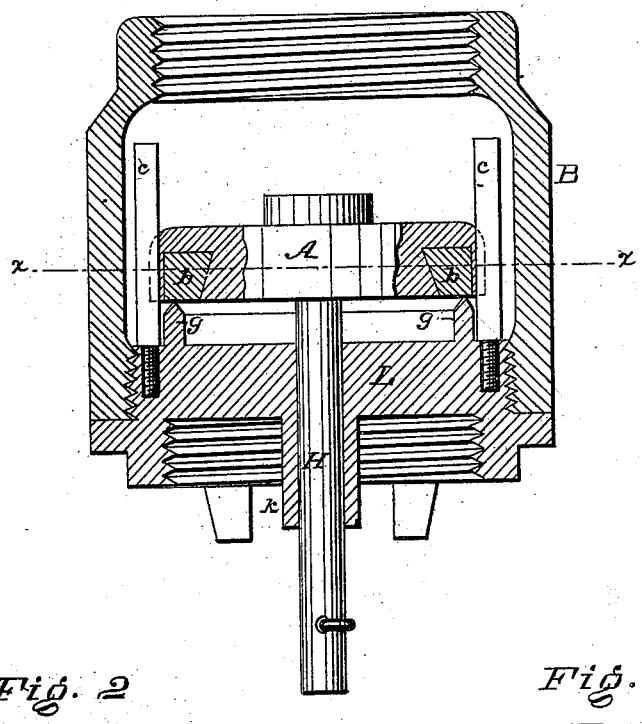


Fig. 2

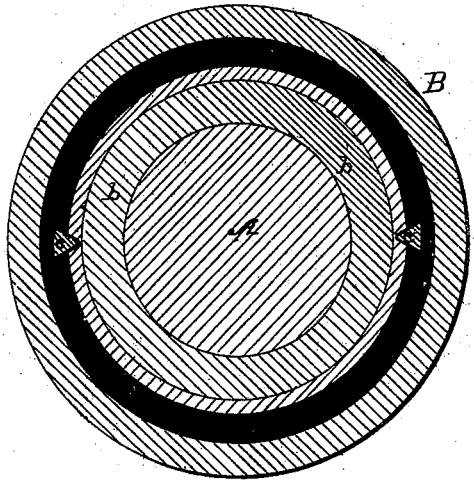
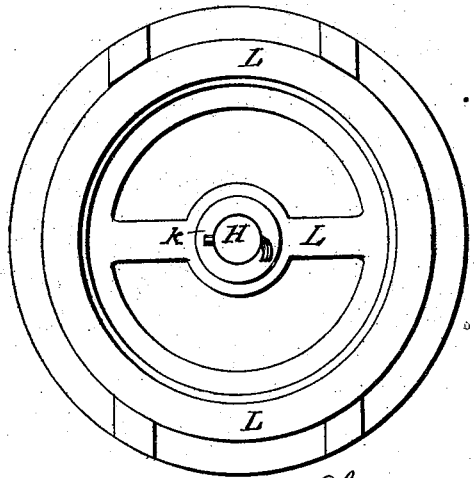


Fig. 3



WITNESSES:

C. C. Kenon

C. A. Pettit

Charlotte Thomas
Executrix of the last
Will and Testament of
W. H. Thomas
BY
Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLOTTE THOMAS, OF SACRAMENTO, CALIFORNIA, EXECUTRIX OF WILLIAM H. THOMAS, DECEASED.

IMPROVEMENT IN PUMP-VALVES.

Specification forming part of Letters Patent No. **181,497**, dated August 22, 1876; application filed April 10, 1876.

To all whom it may concern:

Be it known that W. H. THOMAS, deceased, late of the city and county of Sacramento, State of California, did invent a certain Improved Pump-Valve; and the following specification is a full and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section. Fig. 2 is a cross-section on line *x x* of Fig. 1, and Fig. 3 a bottom-plan view of the valve and its case.

The object of the invention is to provide an improved substitute for puppet-valves heretofore in use.

To this end the invention relates particularly to the valve-seat, composed of hard metal and having a beveled rim, the metal valve having an annulus of soft metal secured in a suitable cavity, and the vertical guides for causing the valve to seat itself accurately, these elements being conjoined under the particular arrangement hereinafter described.

Referring to the drawing, B is the cylindrical valve-case; A, the valve, provided with the annulus *b*, of soft metal, and having a stem, H, working in a guide. *g* is the beveled valve-seat, formed on the removable head L of the case, and *c c* are the parallel vertical guide-bars projecting from the head L, and fitting in notches in the edges of the valve. The annulus *b* is composed of lead or other soft metal, run into a cavity in the valve, which is dove-tailed in cross-section, so that the metal cannot be removed or displaced by the jarring occasioned by the operation of the valve. The raised valve-seat *g* is circular in form and beveled to a sharp edge, as shown, so that it will embed itself in the soft-metal annulus *b*. The stem H of the valve guides it with considerable accuracy; but to insure a perfectly water-tight joint it is necessary to employ the guide-bars *c*, in order to prevent the valve turning on its axis, and compel it to seat itself in such a manner that each part of the beveled rim will always strike in the same part of the annulus. If the valve were allowed to turn on its axis a water-tight joint would be seldom formed, since the beveled rim will usually wear unequally, and the soft-metal annulus is ordinarily not perfectly homogeneous in quality.

A valve provided with a soft-metal rim is not claimed; but

I claim—

The combination of the raised beveled rim or seat *g*, the notched valve, provided with the soft-metal annulus *b*, secured in a dovetail cavity, the vertical parallel guide-bars *c c*, projecting from the head L, as shown and described, to operate as specified.

CHARLOTTE THOMAS, *Executrix.*

Witnesses:
T. B. REID,
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