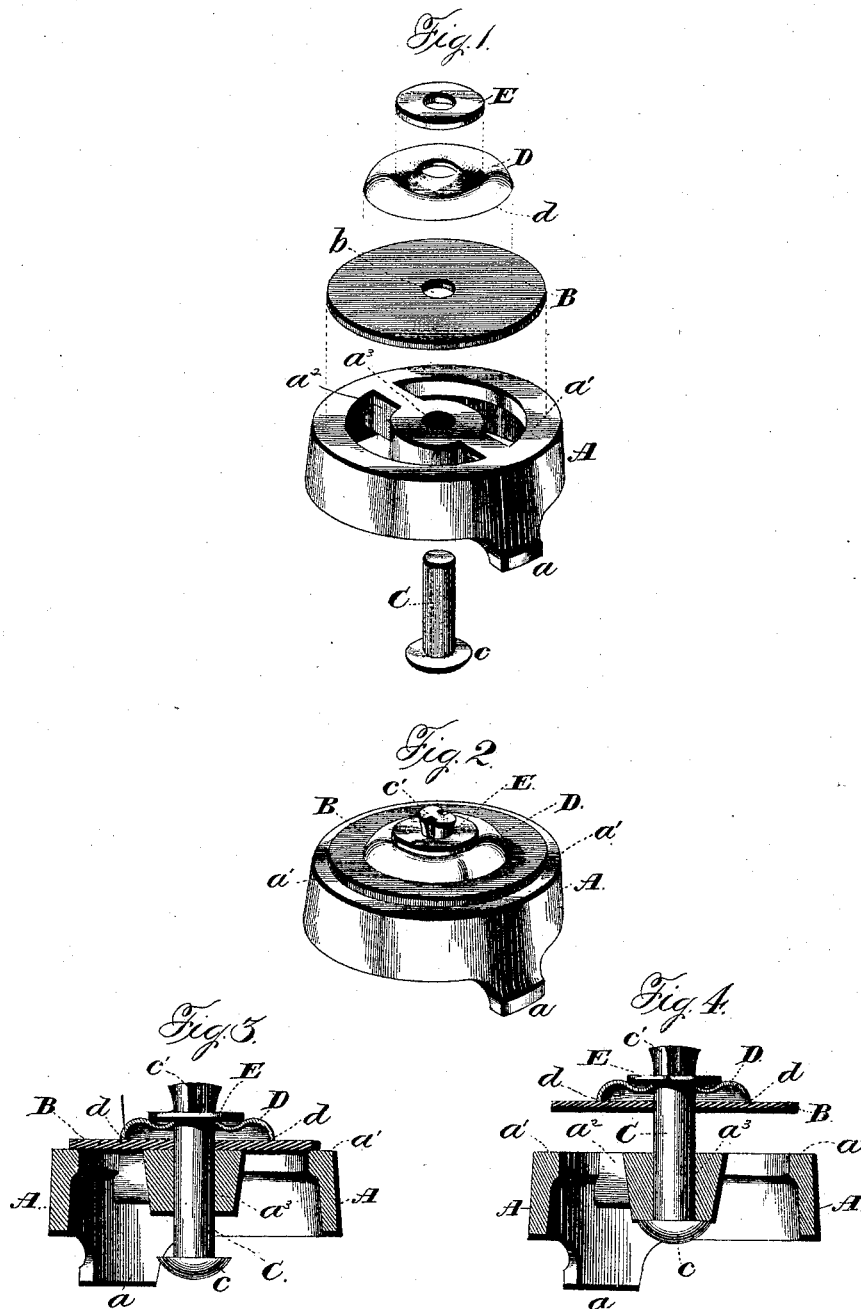


(No Model.)

F. C. WILSON.  
PUMP VALVE.

No. 418,101.

Patented Dec. 24, 1889.



Witnesses  
Chas. Williamson.  
Henry C. Hazard

Inventor,  
F. C. Wilson, by  
Chindle and Russell, his Attys.

# UNITED STATES PATENT OFFICE.

F. CORTEZ WILSON, OF CHICAGO, ILLINOIS.

## PUMP-VALVE.

SPECIFICATION forming part of Letters Patent No. 418,101, dated December 24, 1889.

Application filed January 9, 1888. Serial No. 260,120. (No model.)

*To all whom it may concern:*

Be it known that I, F. CORTEZ WILSON, of Chicago, in the county of Cook, and in the State of Illinois, have invented certain new and useful Improvements in Pump-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the parts of my valve separated from each other. Fig. 2 is a like view of the same when united; and Figs. 3 and 4 are sections of said valve upon a vertical central line, and show, respectively, the position of parts when the valve is in position upon and when raised above its seat.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to lessen the cost of the valves of pumps which are used for handling oil and other liquids in retail stores without lessening their efficiency or durability; to which end my said invention consists in the construction and combination of parts, substantially as and for the purpose hereinafter specified.

In the construction of my valve I employ a frame A, which has the general form of a hollow cylinder, with peripheral lugs *a* and *a* or other suitable devices for engagement with the body of a pump. The upper end of the frame A constitutes a valve-seat *a'*, and has such horizontal width as to adapt it for such purpose. Across the center of said frame at its said upper end extends a cross-bar *a<sup>2</sup>*, which at its longitudinal center is enlarged laterally, and at such point is provided with a vertical opening *a<sup>3</sup>*.

Upon the upper end of the frame A is placed a disk B, of leather, rubber, or other flexible material, which disk extends outward upon the valve-seat *a'*, and preferably is slightly smaller in diameter than the same. Said disk or valve is provided with a central opening *b*, through which and through the opening *a<sup>3</sup>* in the cross-bar *a<sup>2</sup>* is passed a pin C, that is adapted to play loosely within said opening, and is provided at its lower end with a head *c* and at its upper end with an enlargement *c'*, which operate to prevent dis-

placement. Upon the upper side of the valve B, at its center, is placed a metal disk D, which has its edge *d* curved downward, so as to bear at such point only upon said valve. The central portion of the upper face of said disk is preferably countersunk or recessed, and within such recess is placed a plain round washer E, which, together with said disk, fits so loosely upon the pin C as to enable it to move freely upon the same. The device is now complete and in use operates in the usual manner, the upward flow of liquid causing the valve to rise from its seat, while against the downward passage of liquid said valve closes down upon its seat and effectually closes the opening through the frame. The valve-seat and cross-bar furnish a sufficient under bearing for said valve, while the concave disk operates to relieve the central portion of the same from undue pressure, so that, while made from comparatively thin material, said valve is enabled to successfully withstand the required pressure and to act without material wear or injury.

The operative parts of the device are simple, easily constructed and placed in or removed from position, and when in place cost but a fraction of the expense involved by the construction of ordinary valves of equal capacity. In addition to these advantages the thinness and exceeding flexibility of the valve enable it to more readily yield to the upward flow of a liquid and to open a larger passage for the same than would be possible were a less flexible valve employed.

Having thus described my invention, what I claim is—

1. As an improvement in pump-valves, in combination with the valve-stem, a flexible disk mounted loosely thereon, which at its edges is adapted to extend over and upon an annular valve-seat and has a central support, and a disk of metal which is placed upon the upper side at the center of said valve and operates to relieve such portion from downward pressure, substantially as and for the purpose specified.

2. The hollow cylindrical frame provided upon its upper end with a valve-seat and a central cross-bar, the circular flexible valve placed upon and extending over the valve-

seat, the concave metal disk placed centrally  
upon said valve, and the pin having an en-  
largement at its end passing through the  
cross-bar, valve, and disk, said valve and  
5 disk being loosely mounted thereon, all com-  
bined substantially as and for the purpose  
shown.

In testimony that I claim the foregoing I  
have hereunto set my hand this 10th day of  
December, A. D. 1887.

F. CORTEZ WILSON.

Witnesses:

CHAS. P. RANDALL,  
GEO. LANDIS WILSON.