(No Model.)

C. CARY.

VALVE.

No. 379,446. Patented Mar. 13, 1888.

Fig. 1.

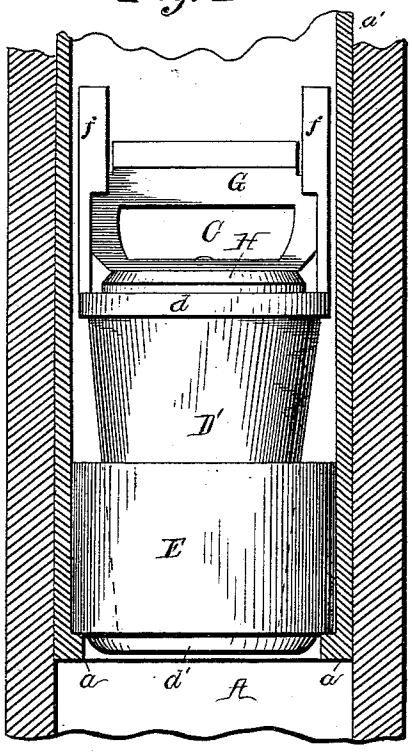

Fig. 2.

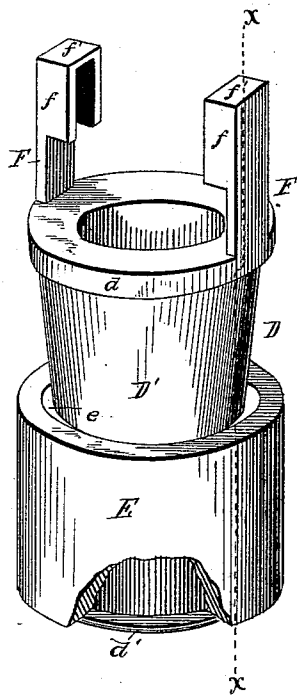

Fig. 3.

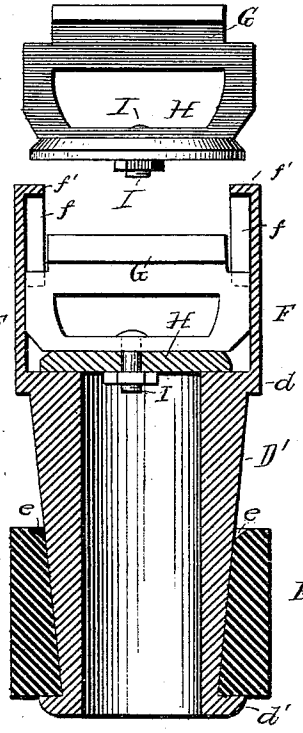

Fig. 4.

Witnesses.
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Inventor:
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UNITED STATES PATENT OFFICE.

CHARLIE CARY, OF ANGOLA, INDIANA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 379,446, dated March 13, 1888.

Application filed November 16, 1887. Serial No. 255,340. (No model.)

To all whom it may concern:

Be it known that I, CHARLIE CARY, a citizen of the United States, residing at Angola, in the county of Steuben and State of Indiana, have invented certain new and useful Improvements in Valves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to pumps, and chiefly to check-valves.

The object of the invention is the construction of a valve which will be guided in its vertical movements by double guideways in which work the sides of a bail fastened to or forming a part of the valve proper, the guideways being integral with the valve-frame.

A further object is to devise a simple means for securing the valve-frame at a fixed point in the pump-stock, and at the same time preserve a tight joint between the said valve-frame and the pump-stock. Any looseness between the valve frame and the pump-stock is taken up by forcing the valve-frame down, said frame having a tapering tubular extension and an elastic packing-ring mounted on the tapering extension to expand the said packing-ring.

The improvement consists in the novel construction and combination of parts, which will be more fully hereinafter set forth and claimed, and shown in the annexed drawings, in which—

Figure 1 is a sectional view of a pump-stock embodying my invention; Fig. 2, a perspective view of the valve-frame; Fig. 3, a side view of the valve, and Fig. 4 a vertical sectional view about on the line *x x* of Fig. 2.

The pump-stock A has an annular stop, *a*, which supports the check-valve C. This stop *a* is preferably formed on the lower edge of a tube or pipe, *a'*, which is fitted within the bore of the stock.

The valve-frame D has a tapering tubular extension, D', which is provided with a shoulder, *d*, at its upper end and a shoulder, *d'*, at its lower end. The elastic packing-ring E sprung over the extension D' has its inner upper corner, *e*, beveled corresponding to the bevel of the shoulder *d'* to obtain a purchase on said shoulder when adjusting the packing previous to slipping it on the extension D'. The guides F, integral with and projecting from the valve-frame, have flanges *f*, which embrace the sides of the bail G, connected with the valve H by the bolt I. The flanges are closed at their upper ends by stops *f'*, which limit the upward movement of the bail and valve H. The sides of the bail converge to permit the ready application thereto of a suitable instrument for withdrawing the check-valve from the pump-stock when desired. The corners of the bail are cut away to allow of a greater length of movement of the bail and valve than they would otherwise have if the upper end of the bail extended flush from side to side. The bore of the packing-ring tapers to correspond with the taper of the extension D', so that its exterior will be of equal diameter throughout its length, or will have straight sides to snugly fit the bore of the pump-stock.

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

1. The combination, with the valve-frame and the guides F, having lateral flanges *f* at their upper ends and having the stops *f'*, of the valve, and the bail G, adapted to work between the flanges *f*, substantially as and for the purpose described.

2. The combination, with the valve-frame having integral therewith the guides F, the flanges *f* at the upper ends of F, and the stops *f'*, of the valve, and the bail G, having its ends embraced between the flanges *f*, and having the upper corners of the bail cut away, substantially as and for the purpose described.

3. The herein shown and described check-valve, composed of the valve-frame having a tapering tubular extension, D', provided with an upper and a lower annular shoulder, and having integral therewith the guides F, the flanges *f*, and the stops *f'*, the packing-ring fitted on the tapering extension D', the valve, the bail having its ends fitted between the flanges *f*, and the bolt I, for holding the bail and valve together, substantially as set forth.

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

CHARLIE CARY.

Witnesses:
FRANK M. POWERS,
CHARLES BEW.