R. V. & T. B. BAILEY.

Pump-Valve.

No. 162,598. Patented April 27, 1875.

Fig. 1.

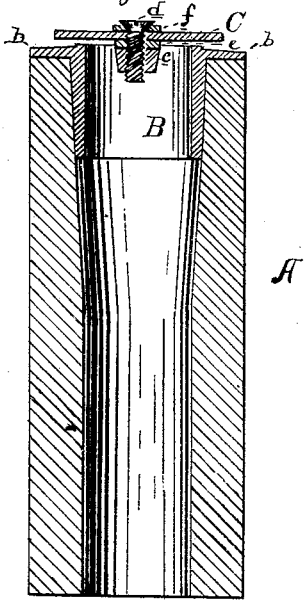


Fig. 2.

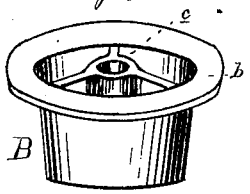


Fig. 3.

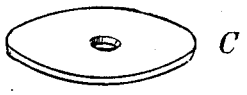
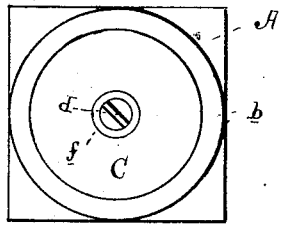


Fig. 4.



Witnesses:
Charles Thurman
R. N. Dyer

Inventors.
Ralph V. Bailey
Thomas B. Bailey
by Geo. W. Dyer & Co
Attys.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

RALPH V. BAILEY AND THOMAS B. BAILEY, OF MENDOTA, ILLINOIS.

IMPROVEMENT IN PUMP-VALVES.

Specification forming part of Letters Patent No. **162,598**, dated April 27, 1875; application filed March 25, 1875.

To all whom it may concern:

Be it known that we, RALPH V. BAILEY and THOMAS B. BAILEY, of Mendota, in the county of La Salle and State of Illinois, have invented a new and Improved Pump-Valve; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The object we have in view is an improvement in pump-valves, whereby the same shall be more efficient in result, and yet be simple in construction; and our invention therein consists in combining, with the lower portion of a pump, a metallic ring provided with a flange and a web extending across the top of the ring, said ring forming a portion of the bore of the lower part of the pump, and having its flange cover a shoulder in the bore of the pump, upon which rests the flap of the valve; and, further, in combination, a flap of rubber, or other suitable material, secured at its center, in any suitable manner, to the web before mentioned.

To enable others skilled in the art to make and use our invention, we now proceed to describe the same in connection with the drawings, in which—

Figure 1 is a sectional view of the lower part of the pump, ring, and flap. Fig. 2 is a detached view of the ring. Fig. 3 is a detached view of the flap. Fig. 4 is a top view of the valve.

Like letters denote similar parts in each figure.

In the drawing, A represents the lower part of a pump, containing the valve, and intended to be inserted into the lower part of the barrel proper, its top being rounded to the size of the bore of the barrel, into which it is driven solidly. It will be seen that the top of this lower part, which we shall denominate the plug, will form a shoulder in the bore of the pump. This plug A is a cylinder whose interior diameter is less than the interior diameter of the cylinder of the pump. In the top of the plug A is inserted a metallic ring, B, which has a flange, *b*, which rests upon and covers the shoulder made by the top of the plug. Across the top of this ring B extends a web, *c*, which consists of several metallic radiuses, meeting in the center, where a hole is pierced to receive a screw, *d*, which holds down the flexible flap C. No particular method of securing this flap is adhered to, the only point of importance being to have it secured in the center. The flap C, made of any suitable flexible material, is of somewhat less diameter than the flange *b*, and is secured at its center by a screw, *d*, or by any suitable fastening. A washer, *e*, is placed between the web and the flap, which raises the flap a very little from the plane of the flange, the object of which is that the water may have ready access into the pump-cylinder, and the weight of the superincumbent water will always keep the valve more effectually closed. In the model a small washer, *f*, is shown between the screw-head and flap. The object of this peculiar arrangement of parts is, that the sand which is drawn up frequently by the suction of the pump, and deposited about the shoulder of the joint, where the check-valve is placed, which chokes up the valve, by jamming its hinge and lodging on the shoulder, cannot remain on the polished metal of our joint, and cannot choke or jam our valve, by reason of its peculiar construction and manner of fastening. It will be seen, also, that this flap is subjected to an equal pressure on all sides, and cannot fail to keep tightly closed when there is any pressure upon it. Its use is not restricted to wooden pumps; but this combination of a flap and a webbed ring, forming a shoulder in the pump-barrel, can be applied to pumps of any other material.

We do not pretend to have been the first to conceive of a flexible flap secured at its center and used as a check-valve; but

Having thus described our invention, and set forth some of its advantages, what we claim as new, and desire to secure by Letters Patent, is—

In combination with the plug A, adapted

to fit the lower portion of a pump-barrel, having on its inside the metallic ring B, forming a part of the bore of said plug, provided with the flange *b* and a web extending across its top, to which a flexible flap, C, is secured at the intersection of said web, its outer edge resting on the metallic flange, substantially as described and shown, for the purpose set forth.

This specification signed and witnessed this 19th day of March, 1875.

RALPH V. BAILEY.
THOMAS B. BAILEY.

Witnesses:
CHARLES A. CROOKER,
S. A. EDWARDS.