

D. W. Clark . Pump Valve .

Fig. 1

108237

PATENTED OCT 11 1870

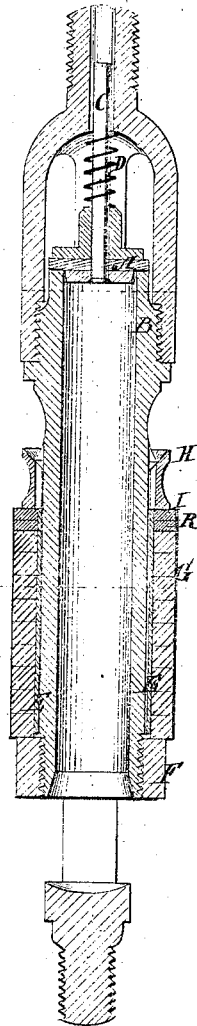
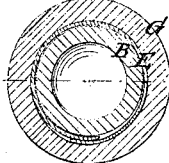


Fig. 2.



Witnesses:

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United States Patent Office.

DAVID W. CLARK, OF TIDIOUTE, PENNSYLVANIA.

Letters Patent No. 108,237, dated October 11, 1870.

IMPROVEMENT IN PUMP-VALVES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, DAVID W. CLARK, of Tidoute, in the county of Warren and State of Pennsylvania, have invented a new and useful Improvement in Pump-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to pump-valves, and consists in a certain improved combination, construction, and arrangement of parts, as hereinafter described.

Figure 1 is a sectional elevation of my improved valve, and

Figure 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

I propose to employ a flat valve, A, instead of the ball-valves commonly used, and to arrange it on the top of the tube B, or in a horizontal seat in the said tube, and provide it with a guiding stem, C, and a spring, D, the guiding stem being arranged in any suitable way or guide, by which the valve will work perpendicularly to its seat, so that it will support the spring D, arranged to force the valve down, the object being to prevent the gas from raising the valve, or preventing it from closing, as is often the case where there is a strong current of gas escaping from the well.

For packing the tube B, I place a spring jacket, E, of brass around it, above a nut, F, and fit thereon leather or other packing, G, of the proper size to fit against the working barrel, and above the jacket and

packing-rings, I arrange a cup-shaped ring, H, with holes from the bottom leading down to the jacket E, so that the water above the valve will have access between it and the tube, and the force of the water lifted will be applied between the rings G and the tube B, to force them out against the working barrel and pack tightly against it as long as the leather rings last.

The water is prevented from escaping below the packing-rings by the nut F, which clamps the rings between it and the shoulder I, below the cup H.

The spring jacket bears outward against the leather rings and maintains a space behind it for the water.

In order to prevent any slack between the nut F and shoulder I, which may arise from the compression of the leather rings, I propose to introduce between the said nut and shoulder, preferably next to the shoulder, one or more India-rubber rings, K, sufficiently compressed to compensate by expansion from all slack that may occur. This will always keep the joint at the nut F tight, and prevent the escape of the water thereat.

Having thus described my invention,

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

The combination, with a flat valve A, tube B, and spring guiding-stem C D, of a brass spring-jacket, E, cup-ring H, leather rings G, and nut F, all relatively arranged as and for the purpose described.

DAVID W. CLARK.

Witnesses:

E. H. MORRISON,

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