

DANIEL JOHNSON.

Improvement in Pump-Pistons.

No. 119,852.

Patented Oct. 10, 1871.

Fig. 1.

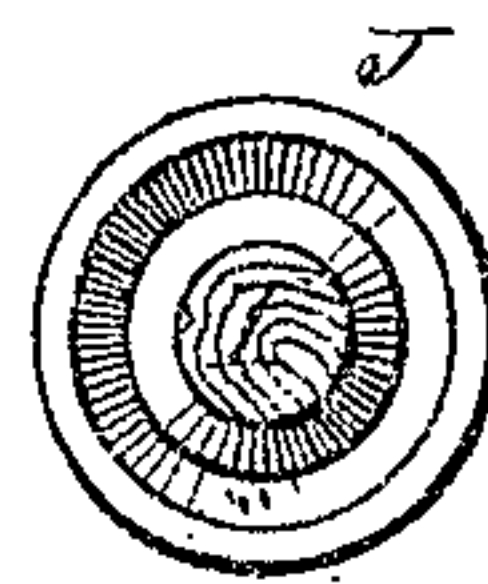
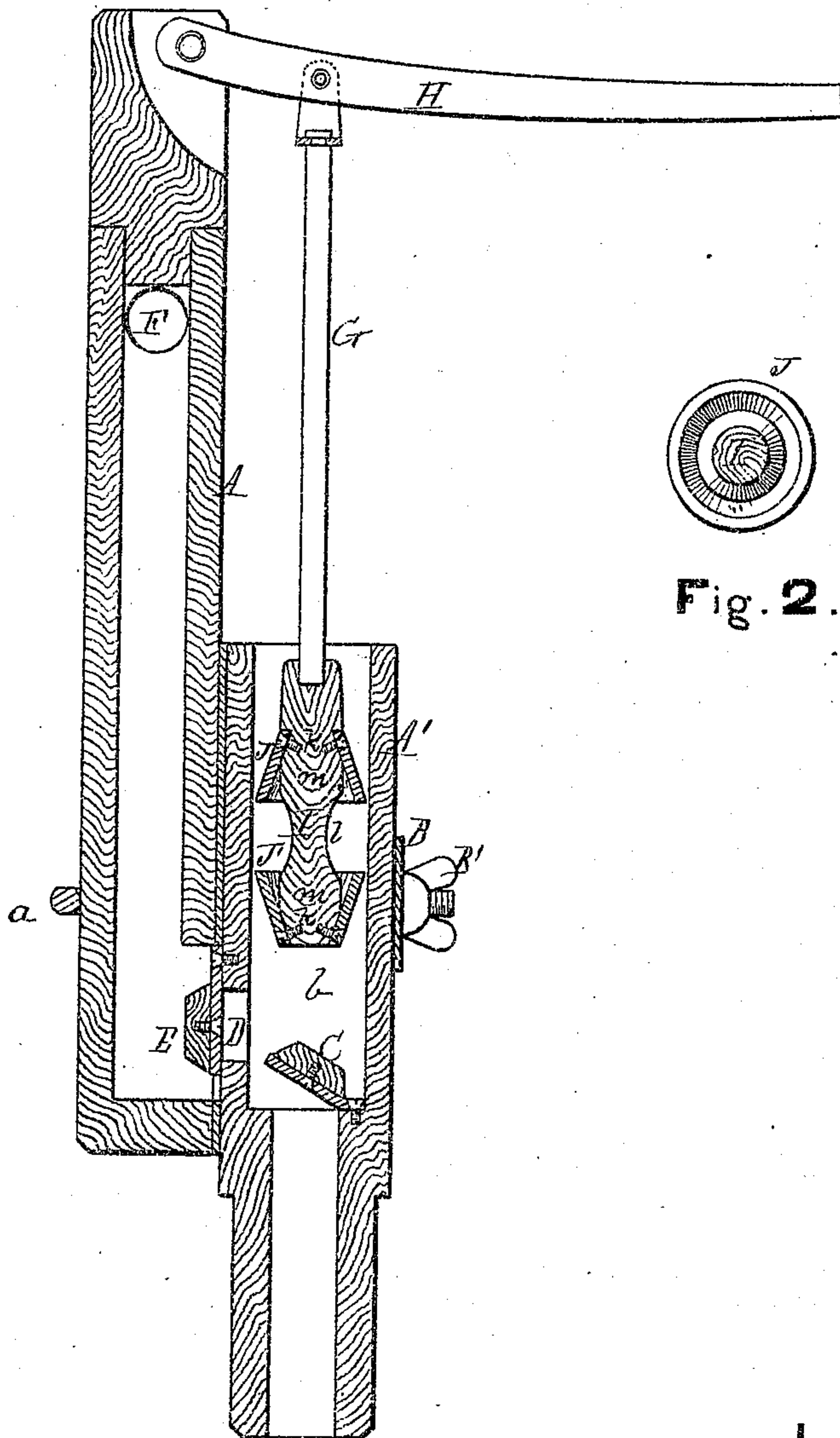


Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

DANIEL JOHNSON, OF ASHLAND, OHIO.

## IMPROVEMENT IN PUMP-PISTONS.

Specification forming part of Letters Patent No. 119,852, dated October 10, 1871.

*To all whom it may concern:*

Be it known that I, DANIEL JOHNSON, of Ashland, in the county of Ashland and State of Ohio, have invented a new and valuable Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical section of my invention. Fig. 2 is a face view of pump-bucket.

This invention has relation to pumps; and consists in the novel construction of the double-acting piston, whereby it is designed to be well adapted for its purpose. This improved construction consists in providing for the attachment of the cone-shaped leathers, a central body or column formed with spreading conical ends, and between and connecting them a central stem curving inwardly from each expanded end.

Referring to the accompanying drawing illustrating this invention, A A' represent two pump-tubes placed side by side, one extending above the other in the ordinary manner. They are held together in this position by means of the clamps a B. The tube A' extends down into the well, and is widened at its upper part to form the piston-chamber. C represents a valve hinged at the lower end of said chamber. D is an aperture by means of which the tubes A A' communicate with each other. E designates a valve hinged so as to open toward the tube A, and adapted to close and open the aperture D. F represents the discharge-aperture at the upper part of the tube A. G designates the piston-rod pivoted to

the handle H, which is pivoted to the top of the tube A. I represents the block or center piece at the lower end of the piston-rod, to which are attached the brackets J J'. This block I is provided with the conical ends k k, expanding toward each other and connected by the center column l, which is made small at its middle portion and expands in a curved manner toward the conical ends k k. Between the conical portions of each end to which the latter is fastened, and the curved tapering stem, a cylindrical surface, m, is formed, which regulates the contraction of the bucket and prevents it from getting out of shape. When the piston is raised the lower bucket is designed to expand and lift the valve C by its suction, drawing the water from the well into the chamber b. When the piston is lowered the upper bucket expands while the lower contracts and forces the water through the aperture D through the tube A. The recessed exterior of the stem l is designed to make a large space between the buckets for the reception of the water, thus creating a water-packing.

What I claim as my invention, and desire to secure by Letters Patent, is—

The piston herein described, provided with the conical leather buckets J J', and the block I having conical ends k k connected by cylinders m to the center stem l, tapering from each end toward its middle portion, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DANIEL JOHNSON.

Witnesses:

J. A. McCLUSKY,  
B. JOHNSON.

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