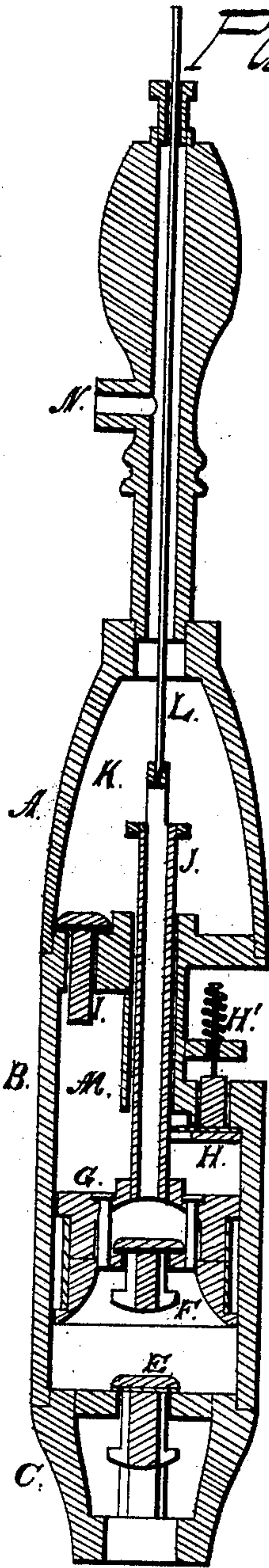


*N. Johnson,*

*Pump Lift.*

*N<sup>o</sup> 57,516.*

*Patented Aug. 28, 1866.*



*Attest:*  
*D. E. Hall.*  
*M. M. Martin.*

*Inventor:*  
*Nils Johnson*  
*per Alexander & Mason*  
*Attys.*

# UNITED STATES PATENT OFFICE.

NIELS JOHNSON, OF RIPON, WISCONSIN.

## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **57,516**, dated August 28, 1866.

*To all whom it may concern:*

Be it known that I, NIELS JOHNSON, of Ripon, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In the annexed drawings, making part of this specification, A, B, and C represent three portions or sections of the pump-stock, which are made hollow and secured together at their points of connection in any of the known and usual ways.

The opening from the lower section, C, to the next section, B, is provided with a valve, E.

In the section B is placed a sucker, G, with valve F. This sucker is provided with a pipe, J, which conveys the water from the valve E, after it passes through the sucker G, up into a chamber, K, in the section A. The upper end of the section B is made close, with the exception of two openings, one for the pipe J, and another for a valve, I. A square-sided groove is cut in the side of section B, as shown, and in the lower kerf of this groove an opening is made into chamber M, and this opening is covered by a spring-valve, H, which opens inward.

K represents a water and air chamber in section A. L represents the pump-rod, which connects to the pipe of the sucker G.

In using this pump the stock is placed in the water so that section C will be covered. The sucker G is then forced down by the pump-rod I and raised again. As it rises water forces up the valve E and follows the sucker. When the sucker is forced down again the water below the sucker passes up through the valve F and up through pipe J into chamber K. When chamber K becomes full of water by successive strokes of the pump-rod the water passes up and out at spout N. At each movement of the sucker downward air is drawn into chamber M through valve H, and at each movement of said sucker upward this air is forced through valve I into chamber K, and assists in expelling the water from said chamber up through section H and out at the spout N.

Having thus fully described my invention, what I claim is—

The arrangement of chambers K and M with the sucker G and valves E, H, and I, substantially as and for the purpose herein specified.

As evidence that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

NIELS JOHNSON.

Witnesses:

W. T. WHITING,  
ALANSON WOOD.