

*J. Bean,*

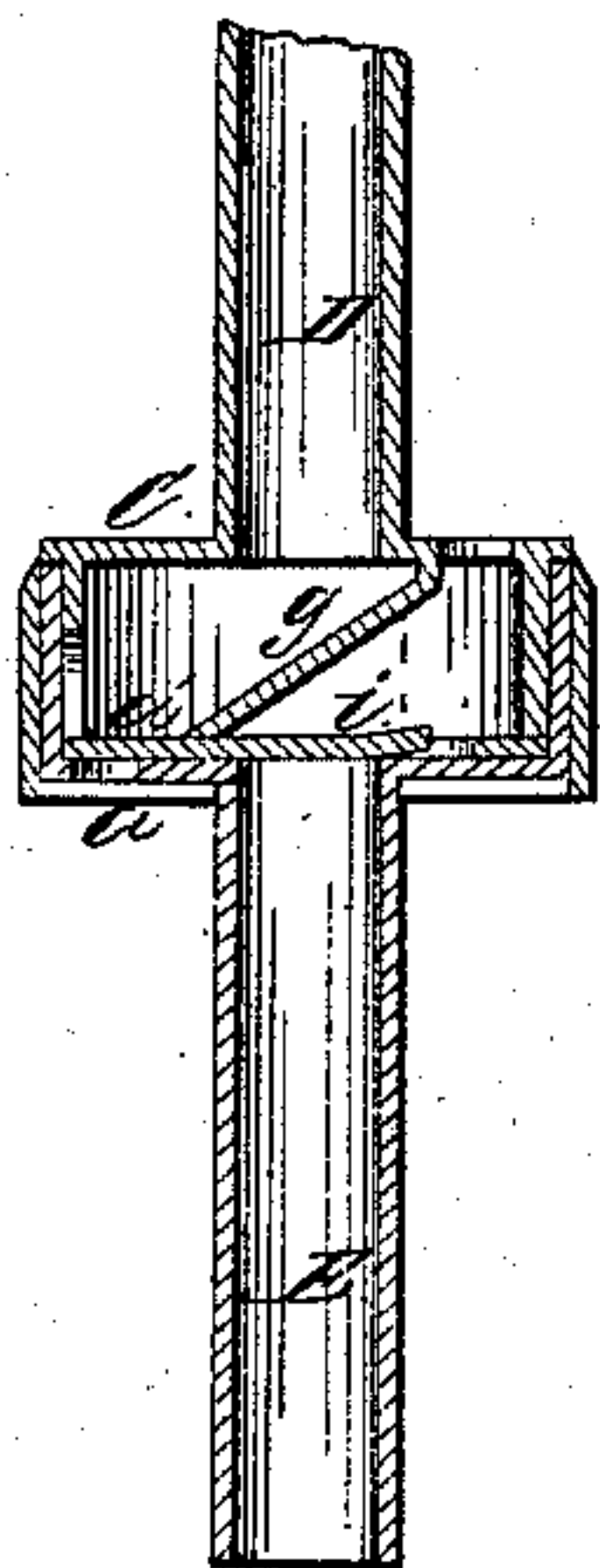
*Pump Lift,*

*Nº 62,247,*

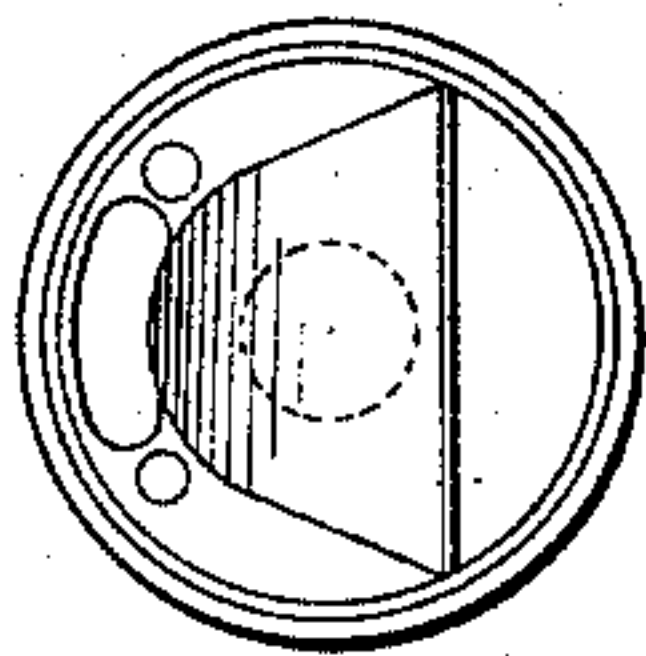
*Patented Feb. 19, 1867.*

*Fig. 1.*

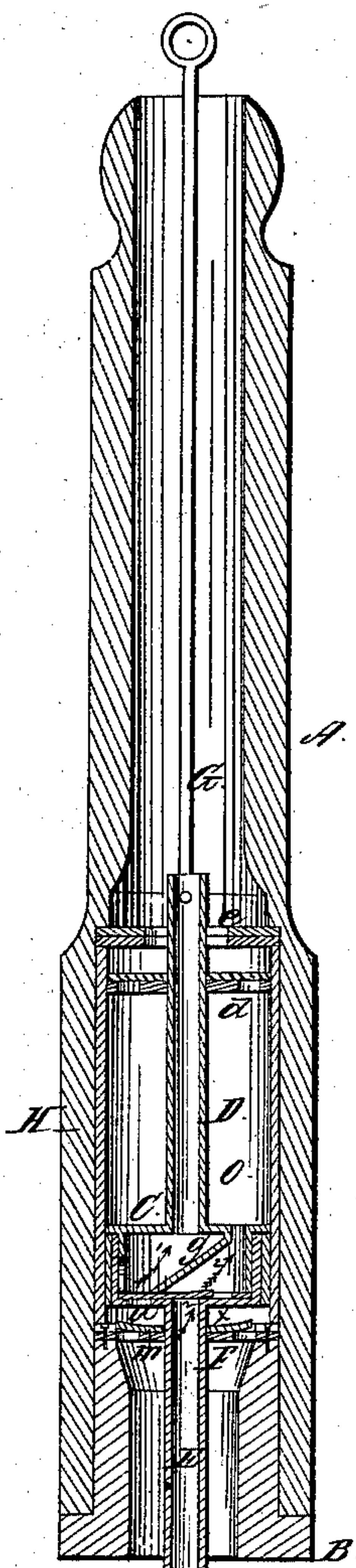
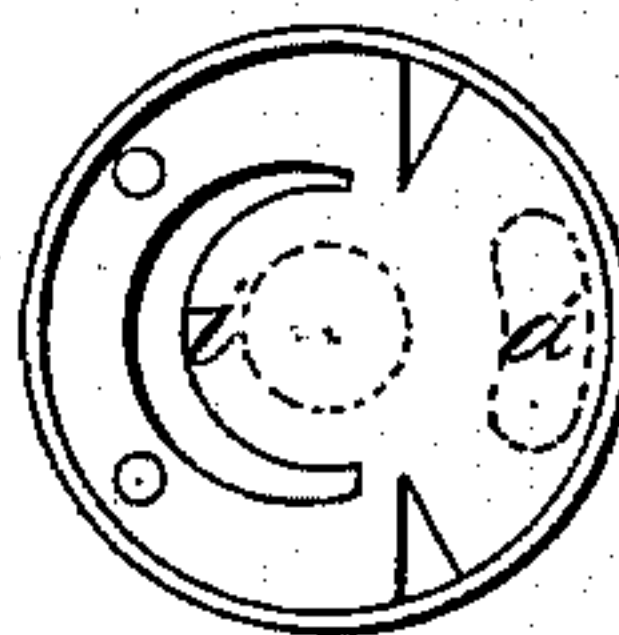
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*  
*W. D. Stockfield*  
*A. A. Yeatman*

*Inventor:*  
*John Bean*  
*per*  
*Alexander J. Mason*

# United States Patent Office.

JOHN BEAN, OF HUDSON, MICHIGAN.

*Letters Patent No. 62,247, dated February 19, 1867.*

## IMPROVEMENT IN PUMPS.

*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, JOHN BEAN, of Hudson, in the county of Lenawee, and State of Michigan, 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, A represents the pump stock, which is provided, a portion of its length, with a glass lining, H, forming a chamber for the sucker to work in. B represents a lower section of the stock, being formed so as to pass into the lower end of the main stock, and provided with a shoulder which allows it to go in only a certain distance. Between the upper end of this section, B, and the lower end of the lining is a metallic plate, F, which is provided with a hole through its centre, through which passes a pipe, E, and also with holes near its periphery, which, in connection with the leather disk *m*, lying immediately over them, serve to form valves for allowing water to pass up into the chamber *x*. C represents a metallic box, which consists of two cups, one made a little smaller than the other, so that, one being placed in the other, they form a box, with a close top and bottom until proper openings are made in them for the passage of water. A pipe, D, passes down, and has its lower end secured in the top of this box, and the pipe E passes up, and has its upper end secured in the bottom of the box. *g* represents a partition, which divides the box into two parts. *a* represents an opening in the bottom of the box, which allows water to pass into it from chamber *x*. *i* represents a leather plate, which lies in the bottom of the box, forming two valves, one for the opening *a*, and the other for the top of pipe E. *d* represents a metallic perforated plate, which is secured in the lining H near its upper end. This plate is covered by a leather disk, forming valves for the perforations, so as to allow water to pass up through said perforations, but not down again. This plate is also provided with a hole at its centre, in which the pipe D fits so as to slide easily up and down. *e* represents packing at the upper end of the lining H. The box C is surrounded with suitable packing to make it fit snugly in the lining H.

In using this pump, the box C with its pipes is pushed down as far as it will go in the chamber O by means of the pump-rod G, and, as it draws up again in said chamber, the water follows it into chamber *x*. As it is pushed down (that is, the box,) the water also passes up pipe E, and through valve *i* into chamber O in the direction of arrow 2. When the box is pushed down again the water in chamber *x* is forced up through valve at *a*, and in the direction of arrow 1, up pipe D, and thence into the chamber above plate *d*. The water in chamber O, as the box works up, is forced through the valves of plate *d*. It will be seen that there are two sets of valves in this pump. The valves of plate F work in connection with valve at *a* in the bottom of the box C, and the valve at *i* works in connection with the valves of plate *d*. The water from chamber *x* passes up through valve *a* and through pipe D, while the water from pipe E and chamber O passes up through plate *d*.

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

1. The box C, constructed as described, and provided with the pipes E and D, substantially as and for the purpose specified.

2. The box C with its pipes, when used in combination with the valve-plates F and *d*, substantially as and for the purpose specified.

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

JOHN BEAN.

Witnesses:

S. R. PEIRSON,  
C. F. AVERY.