

E. B. Winship *Pump Piston.*

N^o 60,605.

Patented Dec. 18, 1866.

Fig. 2.

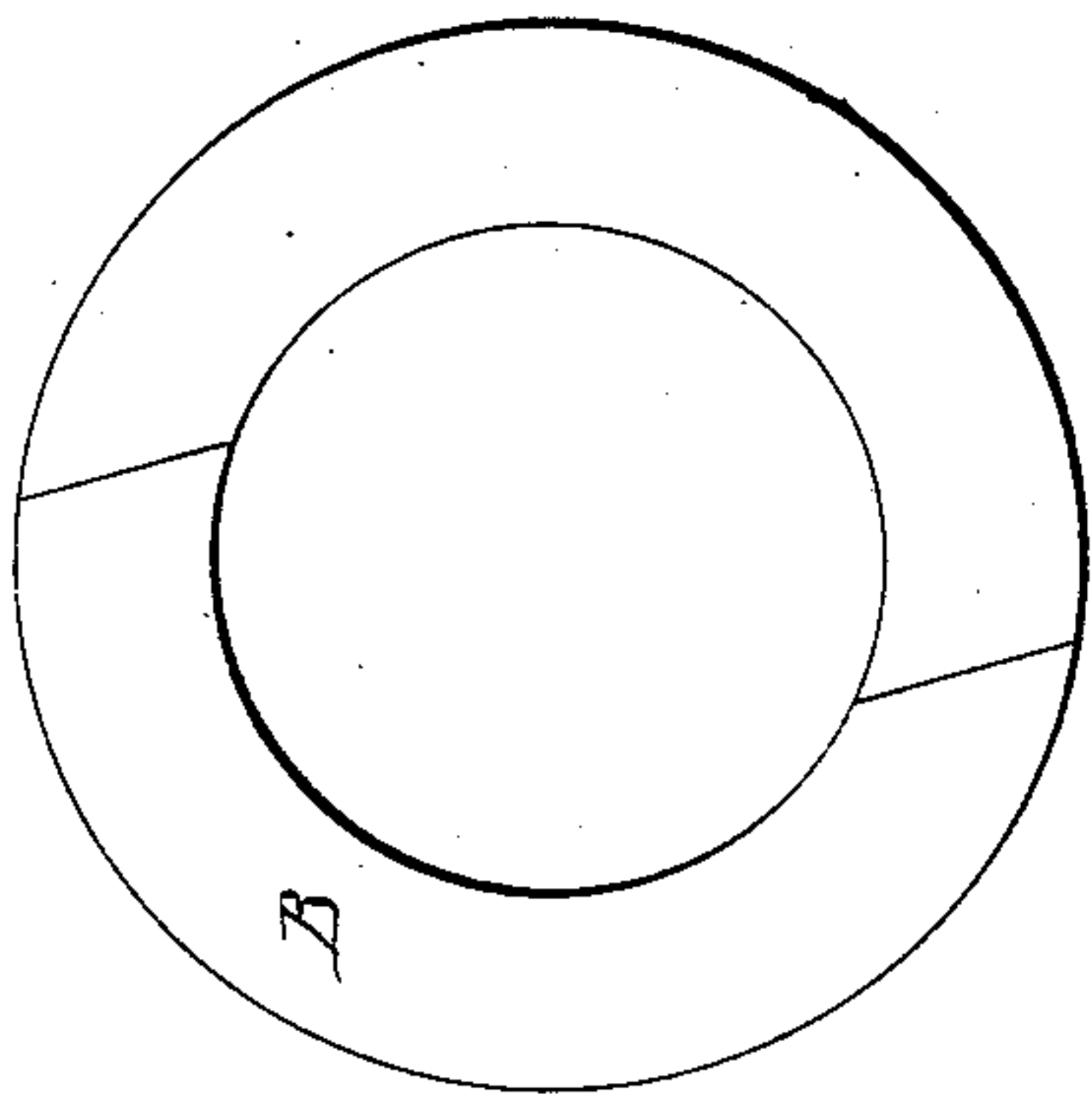


Fig. 3.

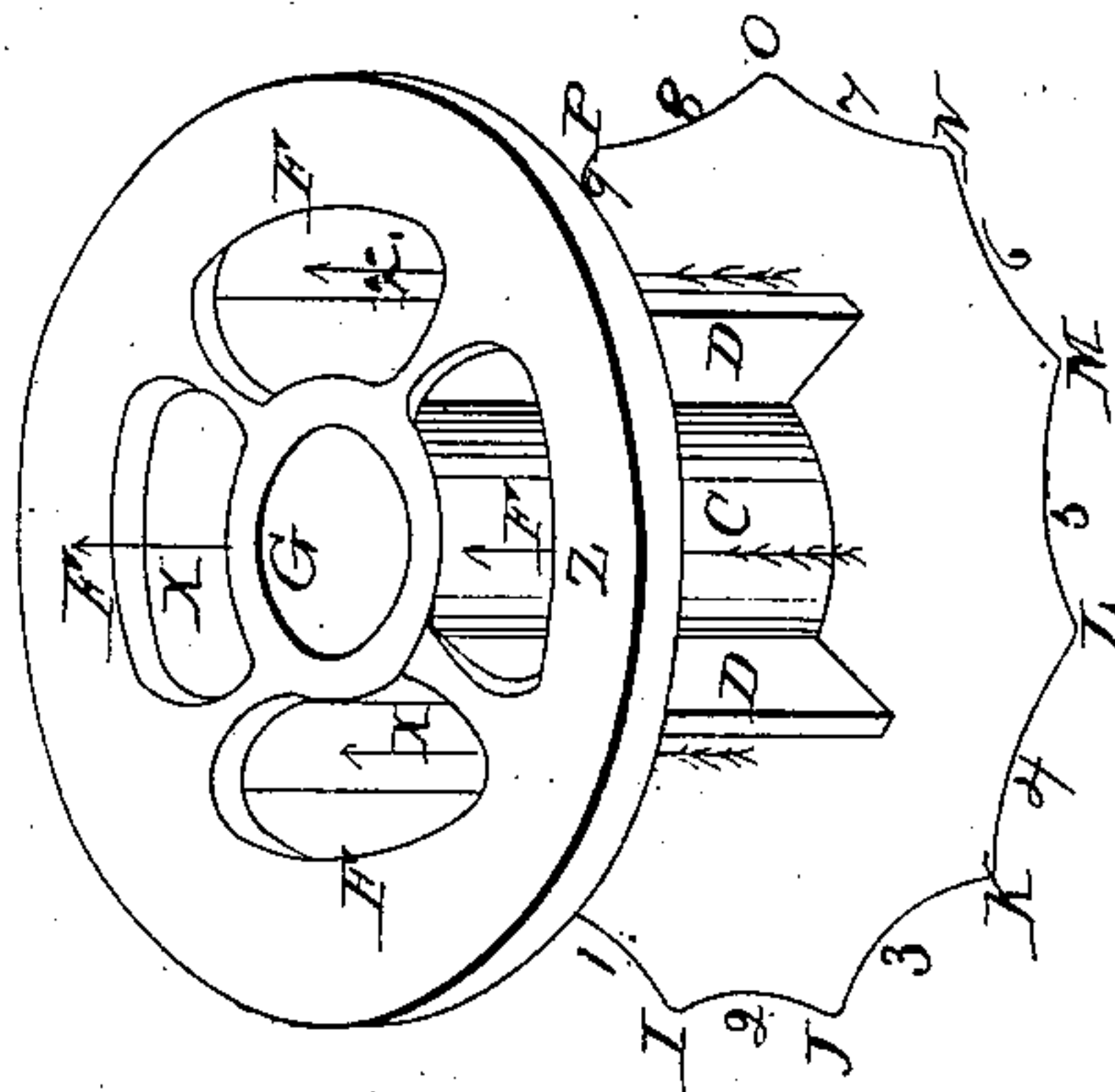
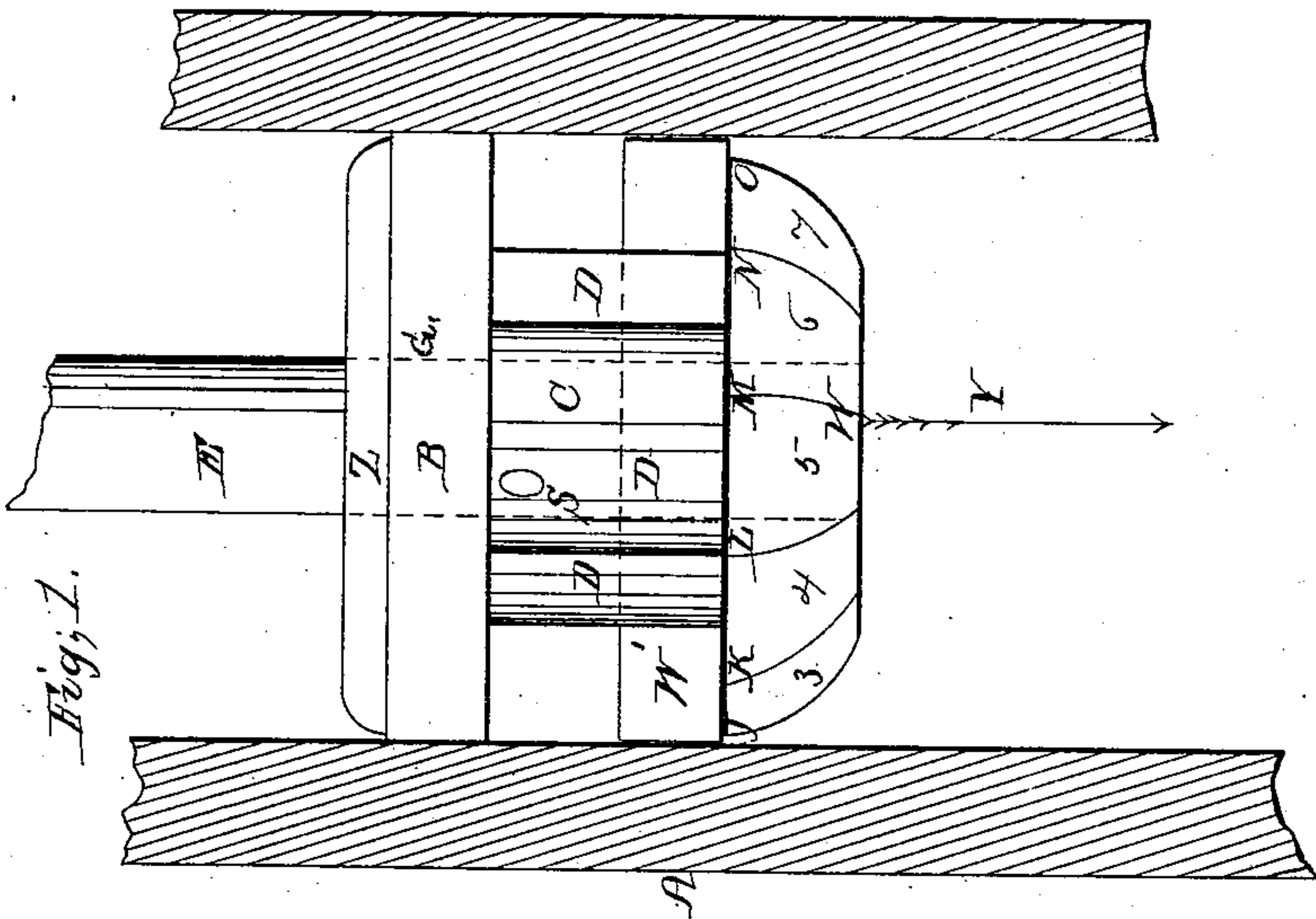


Fig. 1.



Witnesses;
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IMPROVEMENT IN PUMPS.

E. B. WINSHIP, OF RACINE, WISCONSIN.

Letters Patent No. 60,605, dated December 18, 1866.

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, E. B. WINSHIP, of Racine, in the county of Racine, and State of Wisconsin, have invented a new and useful Improvement in Pistons for 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 drawings and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is an elevation of my pump-piston, including a section of the pump-stock in which the piston operates.

Figure 2 is a plan view of the packing.

Figure 3 is a perspective representation of the piston with the packing removed.

The object of my invention is to improve David S. Wood's piston, patented July 10, 1866, which consists in a two-part packing operating in an enlarged annular space or groove. And its nature consists in so arranging the piston that no check-valve is required, in consequence of making openings through the upper rim of the piston, through which the water passes upward, outside of the annular space. And further, in attaching ribs to the back of the annular space for the purpose of keeping the packing at every point an equal distance from the centre of the piston; and in making curved depressions in the edge of the lower flange for the purpose of allowing the water to pass between the packing and the annular space, when the piston is forced downward. By this arrangement a very great improvement is made on Wood's piston, so much so that nothing is retained of his device except the two-part packing and the space in which it works. And further, the cost of a check-valve is obviated, from the fact that the packing is made to answer both the purpose of preventing the raising column of water from passing downward at its external or internal surface. Another advantage is gained by the use of my piston, as the enlarged part of the pump-stock need not be more than one-half of the usual length, thus making a saving of material and labor.

A shows a section of the cylindrical pump-stock, in which the piston, C, is supposed to operate; W shows the lower flange, in the edge of which are made the depressions, 1 2 3 4 5 6 7 8, &c., for the purpose of allowing the water to pass into the annular space when the piston is forced downward. By this arrangement the projections, I J K L M N O P, &c., provide a sufficient support for the packing when the piston is being forced upward, carrying the raising column of water. Z represents the upper flange through which are made the holes bounded by the lines, F, in order that the desired quantity of water may pass to the top of the piston; D represents the ribs projecting outward from the shell of the piston, in order to keep the packing in the proper place, and allow sufficient space for the water to pass between the inner surface of the packing and the back of the annular space. The piston-rod, E, can be put through the hole, G, and secured by the pin shown at S.

Operation.

In fig. 1, the packing is in the position it will occupy when the piston is forced downward, which will allow the water to readily pass through the holes F, fig. 3. The red lines, W', represent the position which the packing, B, will occupy when the piston is forced upward, carrying the water in the usual manner.

Having thus fully described my device, I do not claim the two-part packing B, operating in the enlarged annular space; but what I do claim, and desire to secure by Letters Patent of the United States, is—

The combination and arrangement of depressions 1 2 3 4 5 6 7 8, flange W, loose packing B, ribs D, and openings F, substantially as set forth and described.

E. B. WINSHIP.

Witnesses:

GEO. L. CHAPIN,

A. HAYWARD.