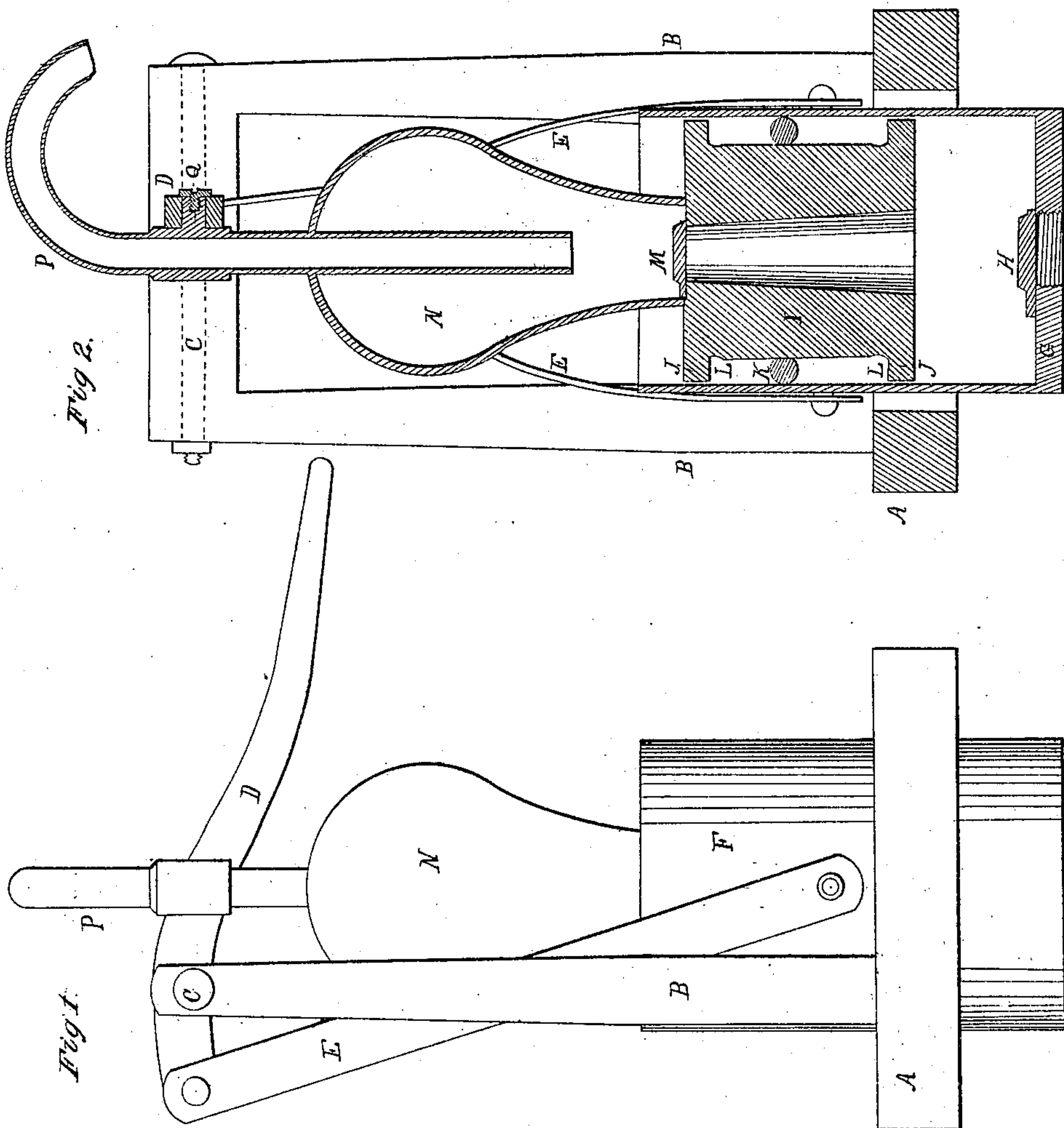


C. Bollinger,

Pump Piston,

Nº 41,174.

Patented Jan. 5, 1864.



Witnesses.

J. Durand
Secy

Inventor
Cornelius Bollinger

UNITED STATES PATENT OFFICE.

CORNELIUS BOLLINGER, OF HARRISBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JOEL K. BOLLINGER, OF MANCHESTER, MARYLAND.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 41,174, dated January 5, 1864.

To all whom it may concern:

Be it known that I, CORNELIUS BOLLINGER, of Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Pumps; and I do hereby declare that the same are described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my improvements, I will proceed to describe their construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is an elevation of my improved pump. Fig. 2 is a section of it, showing Fig. 1 cut perpendicularly through the center.

The nature of my invention and improvements in pumps consists in the peculiar construction and arrangements of devices hereinafter described and claimed.

In the accompanying drawings, A is the floor or covering of the well, supporting the posts B B, which are connected at the top by the bar C, which forms the fulcrum of the lever D, and on which it vibrates when the pump is worked. This lever D may be made in the form shown or in such other form as will answer the purpose and adapt the pump to hand or other power. The links E E connect the lever to the cylinder F, which traverses or works up and down through the floor A. This cylinder is open at the top to receive the piston, and has a bottom, G, with a hole in it for the suction-pipe, which is to supply water to the pump. The hole in the bottom G is closed by the valve H. (Shown in Fig. 2.)

The piston I is made with flanges J J, one at each end, with a space between them for the packing-ring K, of india-rubber, which

rolls from one flange to the other when the pump is worked. This piston is made smaller next to the flanges than it is midway between by making scores L L or otherwise, so as to form a seat for the packing-ring next to each flange and allow it to spread when the pump is not worked. This piston has a hole through it with a valve, M, at the top opening upward into the air-chamber N, which is fastened to or forms part of the piston. This air-chamber may be made in the form shown, or made partially or wholly in the piston, and the discharge-pipe P made to extend down a proper distance into it to prevent the air from being forced out by the water. This discharge-pipe extends up from the air-chamber, and is bent over, as shown in the drawings, to discharge the water downward, and it has a pivot at Q, extending into the lever D on the opposite side of the fulcrum of the lever from the links E E, to work the piston and traverse it in an opposite direction to the cylinder in pumping.

I believe I have described and represented my improved pump so as to enable any person skilled in the art to make and use it without further invention or experiment. I will now state what I desire to secure by Letters Patent, to wit:

1. The scores L L on the piston, or making it smaller next to the flanges than it is midway between them, to form seats for the packing-ring when it comes to the flanges.

2. In combination with the piston and packing above claimed, the cylinder arranged to traverse alternately in an opposite direction to the piston.

CORNELIUS BOLLINGER.

Witnesses:

J. DENNIS, Jr.,
DANL. ROWLAND.