

E. Parker

Bellows.

N^o 44,649.

Patented Oct. 11, 1864.

Fig. 1.

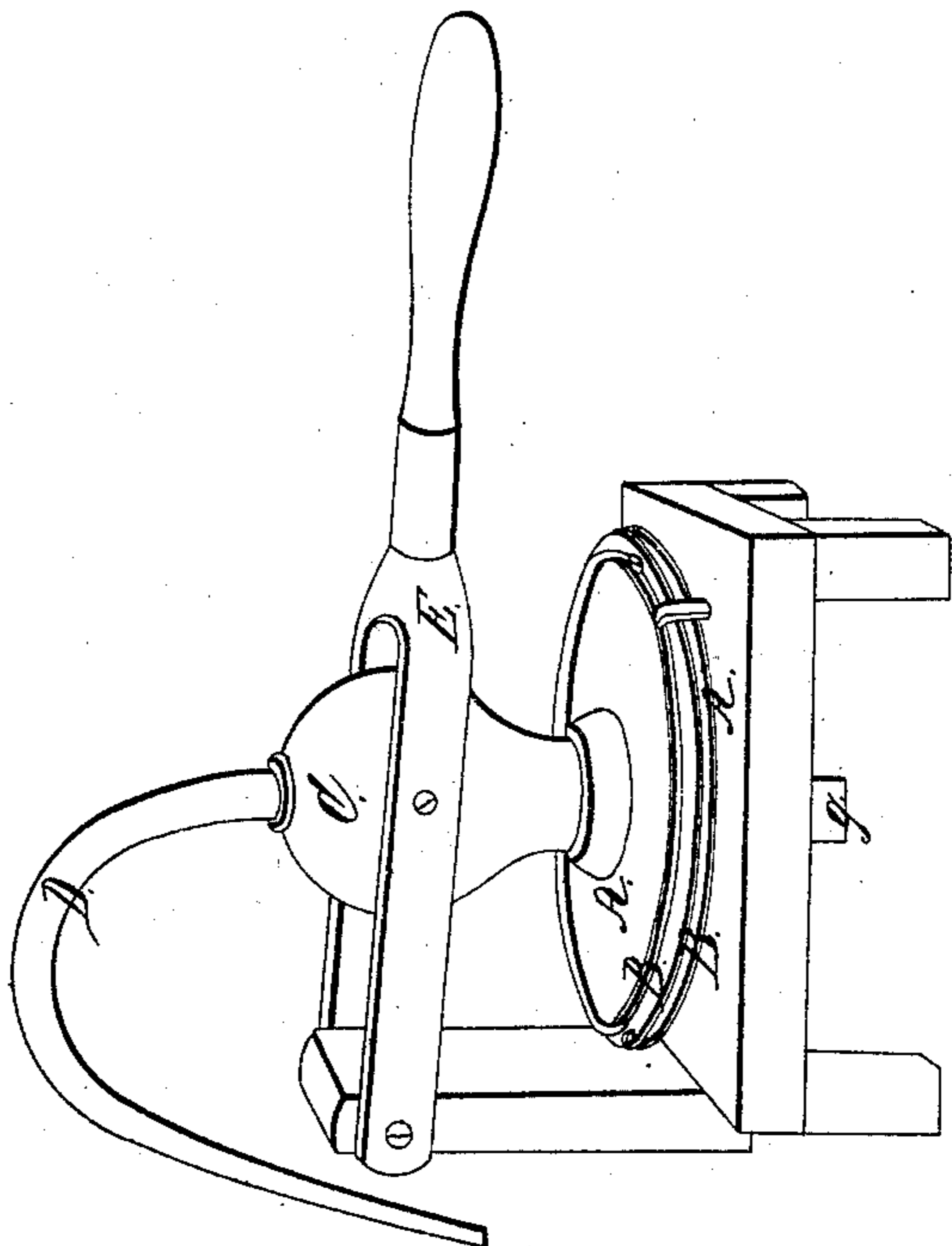
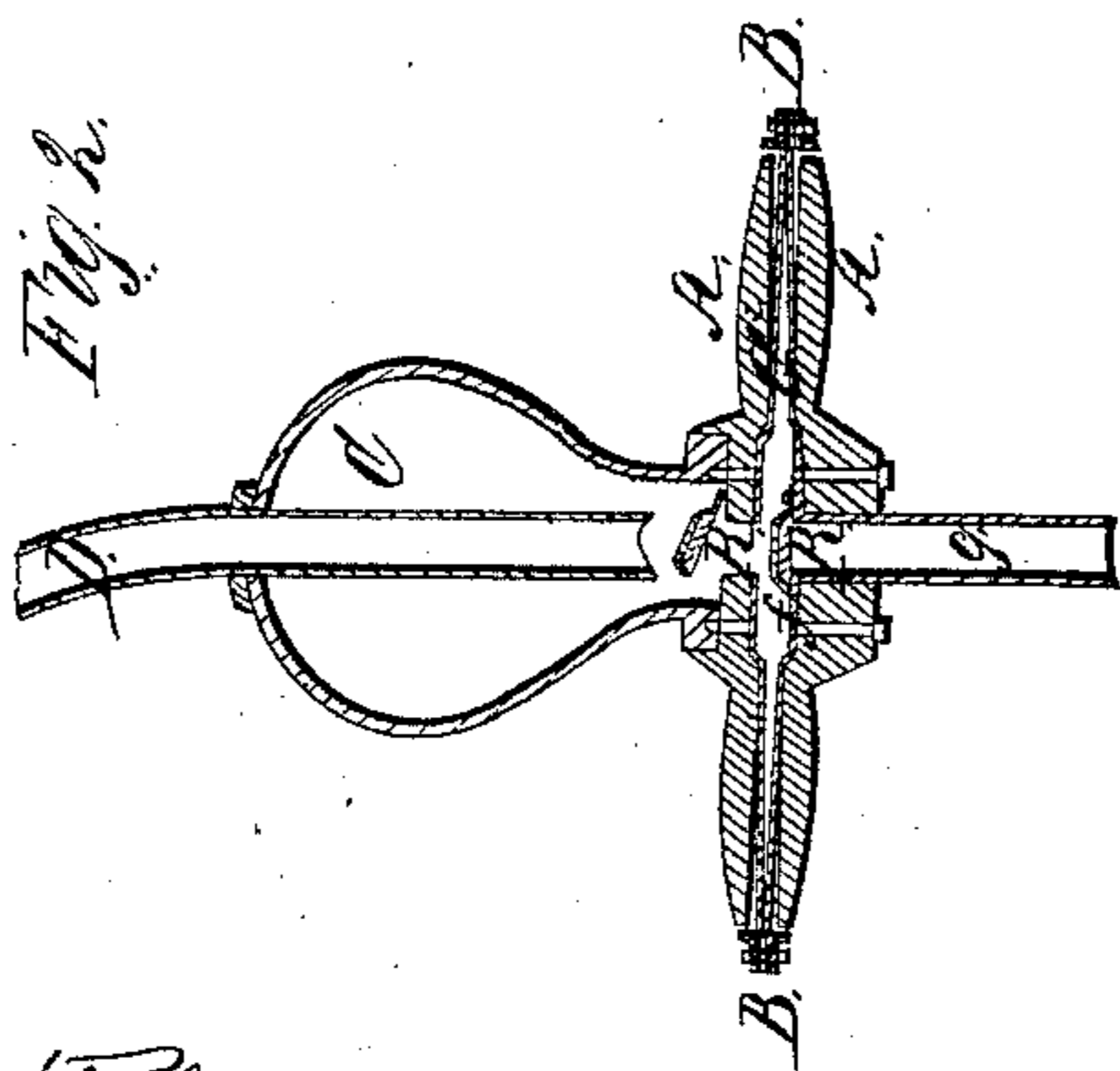


Fig. 2.



Witnesses;

J. J. Barr.

R. R. Prentice.

Inventor;

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UNITED STATES PATENT OFFICE.

EZRA PARKER, OF BEVERLY, OHIO.

IMPROVEMENT IN BELLOWS-PUMPS.

Specification forming part of Letters Patent No. 44,649, dated October 11, 1864.

To all whom it may concern:

Be it known that I, EZRA PARKER, of Beverly, in the county of Washington and State of Ohio, have invented a new and useful Pump; and I do hereby declare that the following is a full and clear description of the same, reference being had to the annexed drawings and the letters marked thereon.

Figure 1 is a perspective view of my pump. Fig. 2 is a vertical section through the center of the pump, showing the valves, &c.

The construction of my pump is so simple that a few words will explain it. It is made of two round pieces of leather or gum cloth, of any diameter desired, fastened together at the edges by screws or rivets through two flat rings of metal. Fastened to these leather disks, in a circle round the center, are metal plates. These plates are on the outside, and nearly fill the inner circle of the aforesaid flat rings. Near the center, where the said plates are fastened to the leather or gum cloth, are other thin small plates, through which and the leather small bolts or rivets pass to hold the leather firmly to said large plates, and these small plates also form valve-seats for valves made in the usual form and fastened to said plates. To the upper large plate an air-chamber is fastened, and to the lower large plate a supply-pipe of any desired length is attached. This large plate is fastened to the floor or a platform. The upper one is loose and free, and has a lever attached to it. This lever is forked, an arm passing each side of the air-chamber with a pivot-screw in arm and into little holes in the air-chamber, for the purpose of allowing the lever to move freely up and down. The ends of the arms pass back to a post or fulcrum to which they are hinged. The other end of said lever has a handle turned on it. The aforesaid air-chamber has an exhaust-pipe, which can be turned to discharge on either side.

A in Fig. 1 is the large upper plate. A A in Fig. 2 are the upper and lower large metal plates. B B are the outer or flat rings for holding the leather or gum cloth together. C is the air-chamber attached to the upper plate A. C² is the leather or gum disks. D is the discharge-pipe in air chamber. E is the lever attached to the said air-chamber for raising and pressing said large plate A. *f f* are the small plates or valve-seats (shown in Fig. 2) to which the exhaust and supply valves *h h* are hinged. G is a pipe for entering cistern or wells.

The operation of my pump is as follows: The lever raised up, the plates of leather or gum are drawn apart, leaving a vacuum between; the water rushes in and fills it. The lever then pressed down, the water is forced up through the upper valve into the air-chamber, and out through the discharge-pipe, the lower valve being shut the while. As the lever is raised, the upper valve shuts and the lower opens, allowing the water again to fill vacuum as before, thus making one of the most simple and effective pumps, having no friction and, of course, not any wear of plungers, as in ordinary pumps. It also requires but a very short and little movement of the lever.

After having thus fully described my pump, what I claim as new, and desire to secure by Letters Patent, is—

The combination and arrangement of the upper and lower plates, A, flat rings B, air-chamber C, leather or gum disks C², discharge-pipe D, lever E, small plates or valve-seats *f*, supply and exhaust valves *h*, the whole arranged substantially as specified, for the purpose set forth.

EZRA PARKER.

Witnesses:

R. R. PRENTICE,
J. J. BARR.