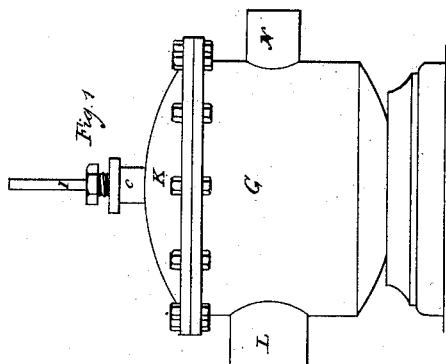
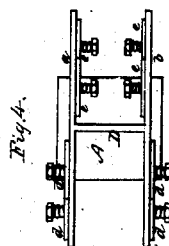
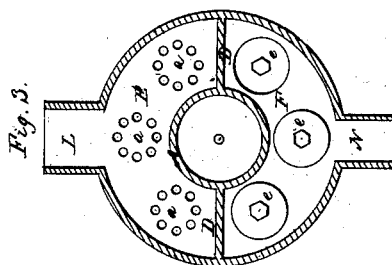
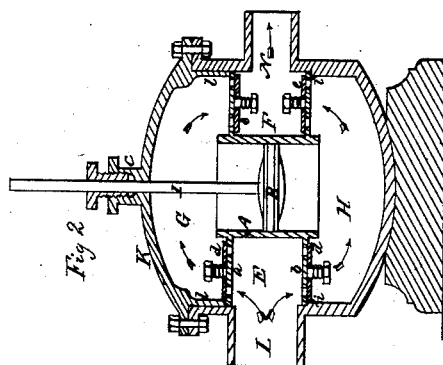


E. B. Sacket,
Double-Acting Pump,
No. 45,722, *Patented Jan. 3, 1865.*



Witnesses.

William H. Clark
Rufus Sanford

Inventor.

E. B. Sacket
By his atty
John E. Coile

UNITED STATES PATENT OFFICE.

EDMUND B. JUCKET, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 45,722, dated January 3, 1865.

To all whom it may concern:

Be it known that I, EDMUND B. JUCKET, of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Pumps; and I do hereby declare the following to be a full, clear, and exact description of the same, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a vertical central section; Fig. 3, a cross central section, and in Fig. 4 a view of the cylinder and valve-plates separated from their case.

Similar letters indicate corresponding parts.

My invention relates to an improvement in suction and force pumps; and it consists in the peculiar construction of the cylinder and valve-seats, whereby much labor is saved in fitting up the pump.

To enable others skilled in the art to construct a pump in accordance with my invention, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the pump-cylinder, cast with plates *a* *b* entirely around it, and of such size as to fill the outer case, *c*, as seen in Figs. 2 and 3. A partition, *D*, *D*, between the two said plates divides them into two chambers, *E* *F*. The outer case is of sufficient height to form an upper and lower chamber, *G* *H*.

B is the piston, worked by its rod *I* through a stuffing-box, *e*, in the cover. The cylinder, with its plates, is independent of the outer case, *C*, as seen in Fig. 4. The chamber *E* is fitted with valves *d*, opening inward, which are the inlet-valves. The valves *e* in the chamber *F* open outward, and are the outlet-valves.

I form the case *C* with a ledge, *i*, around it upon the inside. Upon this ledge, properly

packed, I set the cylinder and valves after they are properly fitted. (See Fig. 2.) I cast the cover *k* with a flange, *l*, which sets into the case and down upon the upper plates, as seen in Fig. 2.

The piston and rod are constructed and inserted in the usual manner. Bolt the cover to the case, as denoted, and the pump is complete. Thus it will be seen there is little or no fitting about the case, the work being all performed on the cylinder and plates before they are placed in the case, and, being so much lighter than when the whole is combined, much labor and time are saved in handling, &c., and the fitting of the lower head is entirely avoided.

L is the inlet, and *N* the outlet. When the piston is drawn up, water enters the lower chamber, *H*, through the lower valves, *d*, and as it descends the lower valves, *d*, are closed, and the water first drawn in is forced out through the lower valves, *e*. At the same time water is drawn into the upper chamber, *G*, through the upper valves, *d*, and when the piston again ascends the water drawn into the chamber *G* is forced out through the upper valves, *e*. Ascending and descending, the piston operates to draw and force in the usual manner for similar pumps.

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

The combination of the cylinder and valve-plates, constructed independent of the outer case, substantially as and for the purpose specified.

E. B. JUCKET.

Witnesses:

JOS. T. SISSON,
HENRY A. MULIGAN.