

E. B. Jacket,

Double Acting Pump.

N^o 57,635.

Patented Aug. 28, 1866.

Fig. 1.

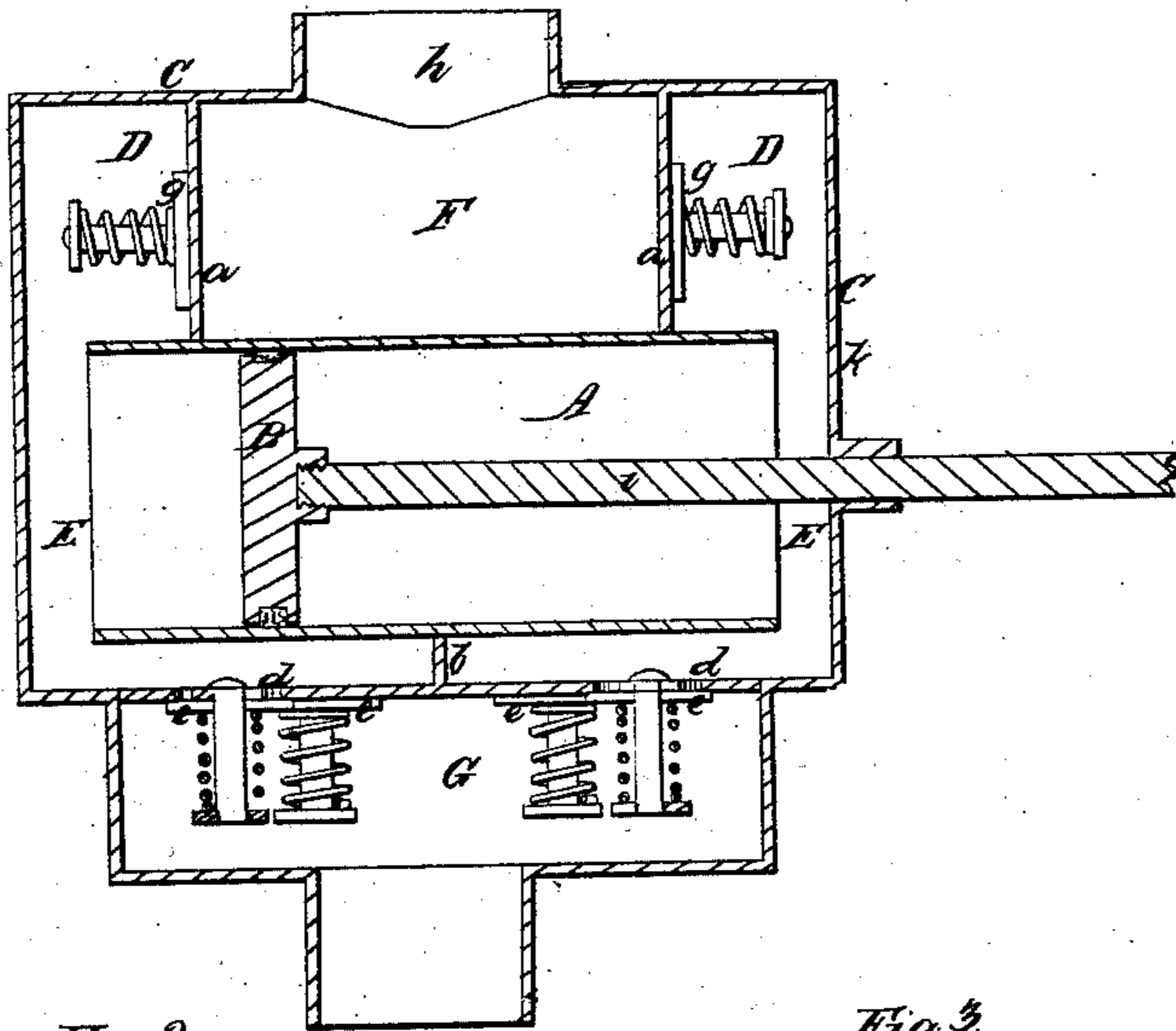


Fig. 2.

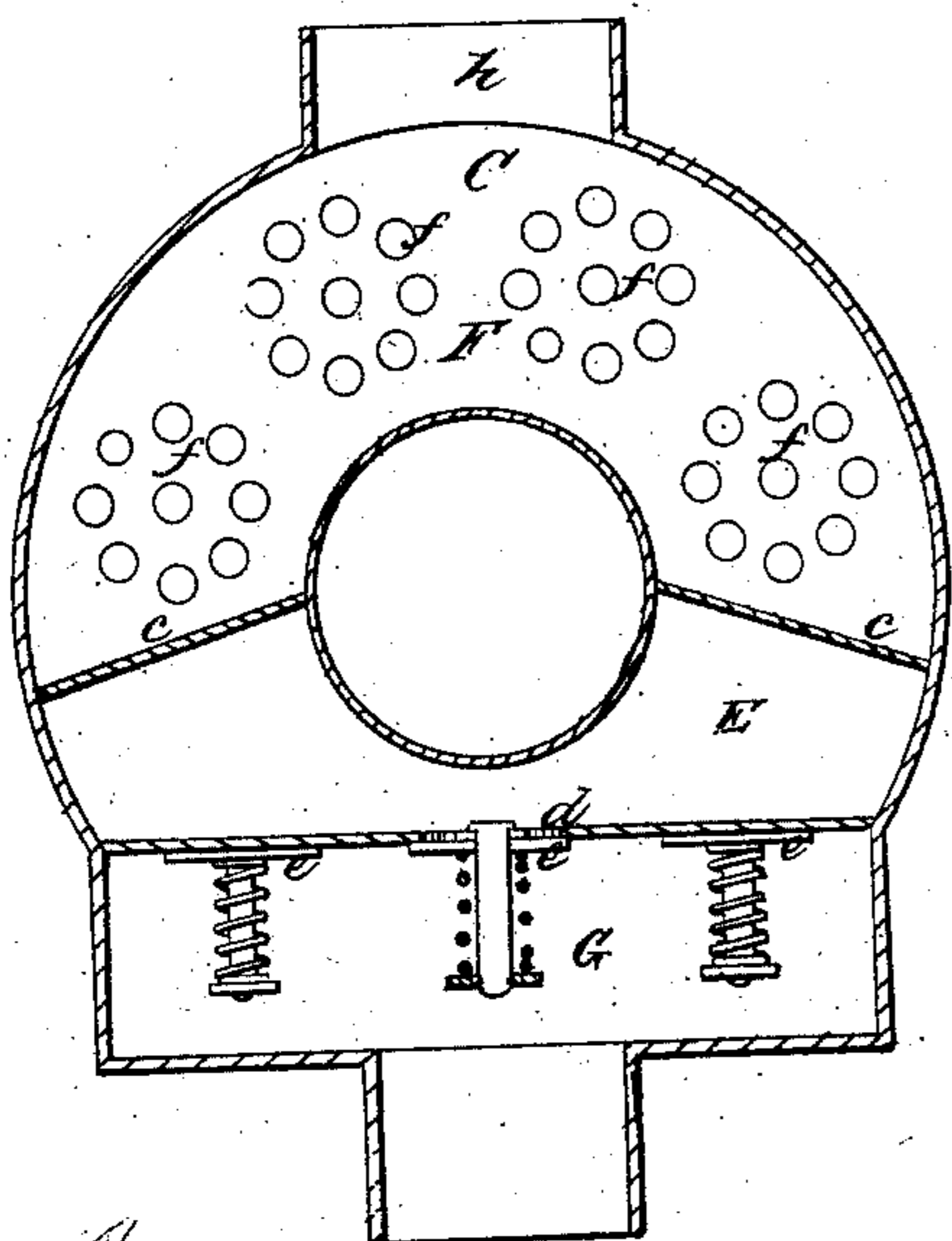
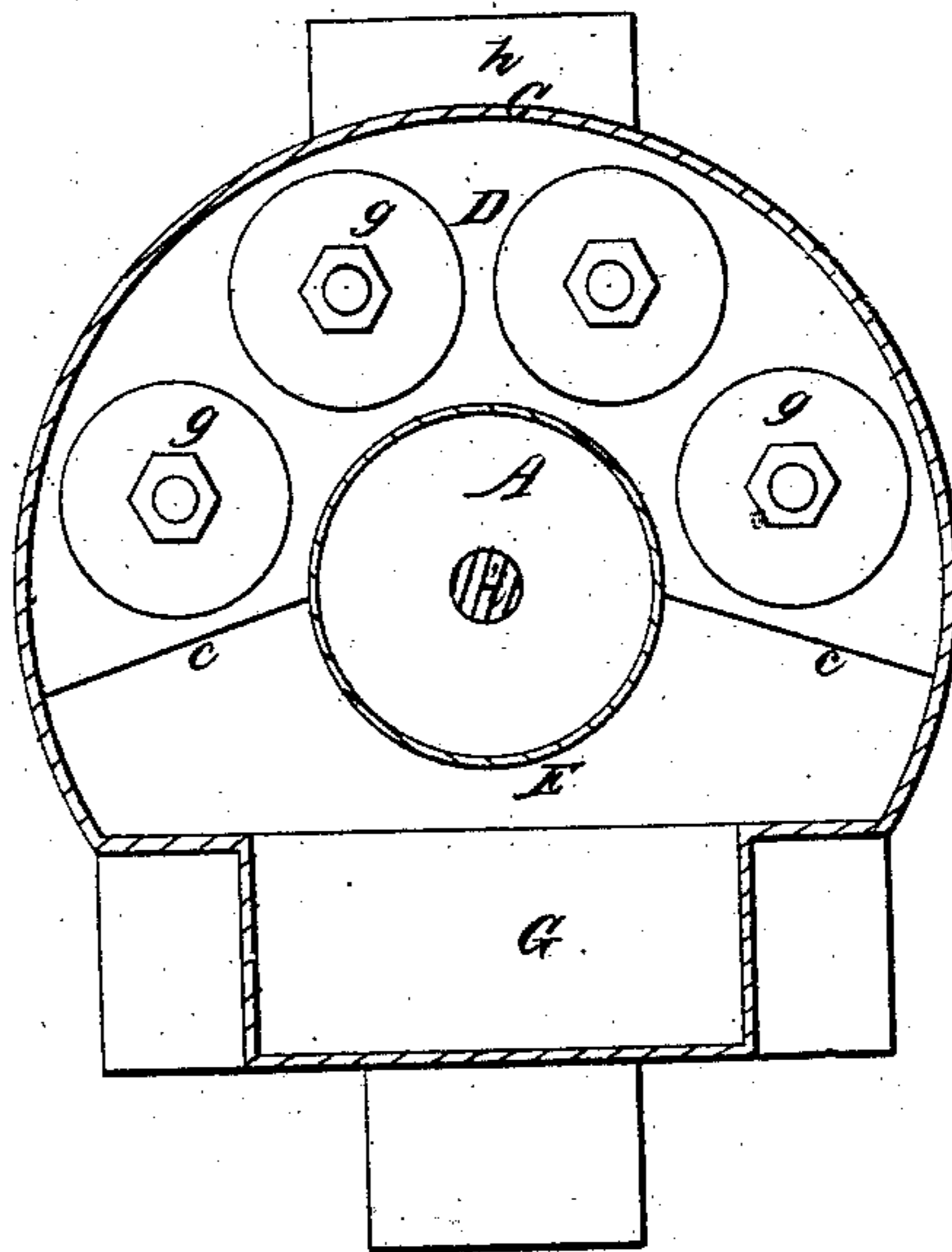


Fig. 3.



Witnesses.
Samuel V. Piper
George Andrews

Inventor.
E. B. Jacket.
by his Attorney
R. W. Eddy

UNITED STATES PATENT OFFICE.

EDWARD B. JUCKET, OF ROXBURY, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND HUNNEMAN & CO.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 57,635, dated August 28, 1866.

To all whom it may concern:

Be it known that I, EDWARD B. JUCKET, of Roxbury, in the county of Norfolk and State of Massachusetts, have invented an Improved Double-Acting Force-Pump, suitable for steam fire-engines or various other uses; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section, and Fig. 2 a transverse section, of such pump. Fig. 3 is a transverse section of one of its end valve-chambers.

In such drawings, A denotes a cylinder or barrel, open at both ends, and provided with a plunger or piston, B. This barrel is arranged concentrically within a segmental case, C, which, by means of three vertical partitions, *a b a*, and two inclined and dial ones, *c c*, arranged within it, as represented, is divided into two valve-chambers, D D, two induction-chambers, E E, and one eduction-chamber, F. The two valve-chambers have the eduction-chamber between them, and each of them opens directly into one of the two induction-chambers.

Below the two induction-chambers is an induction valve-chamber, G, which opens, through valve-seats *d d*, directly into both of the induction-chambers, there being a valve, *e*, to each of such openings, and such valve being arranged within the chamber G.

Each of the vertical partitions *a a* has one or more series of openings, *f f*, leading through it, there being a valve, *g*, to each of such openings or separate series of openings, such valve being arranged within the chamber D next to such partition *a*.

There is an eduction-passage, *h*, leading out of the top of the chamber F. The piston-rod *i* works through one head, *k*, of the segmental case. Each end of the pump-barrel A terminates at a distance from the next adjacent end of the case C.

When a reciprocating rectilinear movement is imparted to the piston, and the pump is connected with a reservoir of water by a conduit opening into the lower valve-chamber, the water will be alternately driven into and expelled from the barrel on each side of its piston-head, and will be thrown into the eduction-chamber, from whence it will be expelled through its escaping opening or passage.

This formation of the pump or arrangement of its parts enables all of it, with the exception of the piston, the valves, and the heads of the case, to be cast in one piece of metal—a matter of much importance as regards economy of construction—and besides it is an arrangement which is very efficient in operation.

I make no claim herein to the inventions described in the United States Patents Nos. 28,644 and 45,722.

What I claim is—

My improved double-acting force-pump, or peculiar arrangement of the valve-chambers D D G, the induction chambers or passages E F, and the pump-barrel A, as described, such valve-chambers to be provided with valves and valve-openings, and such barrel to have a piston to operate as specified.

E. B. JUCKET.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.