

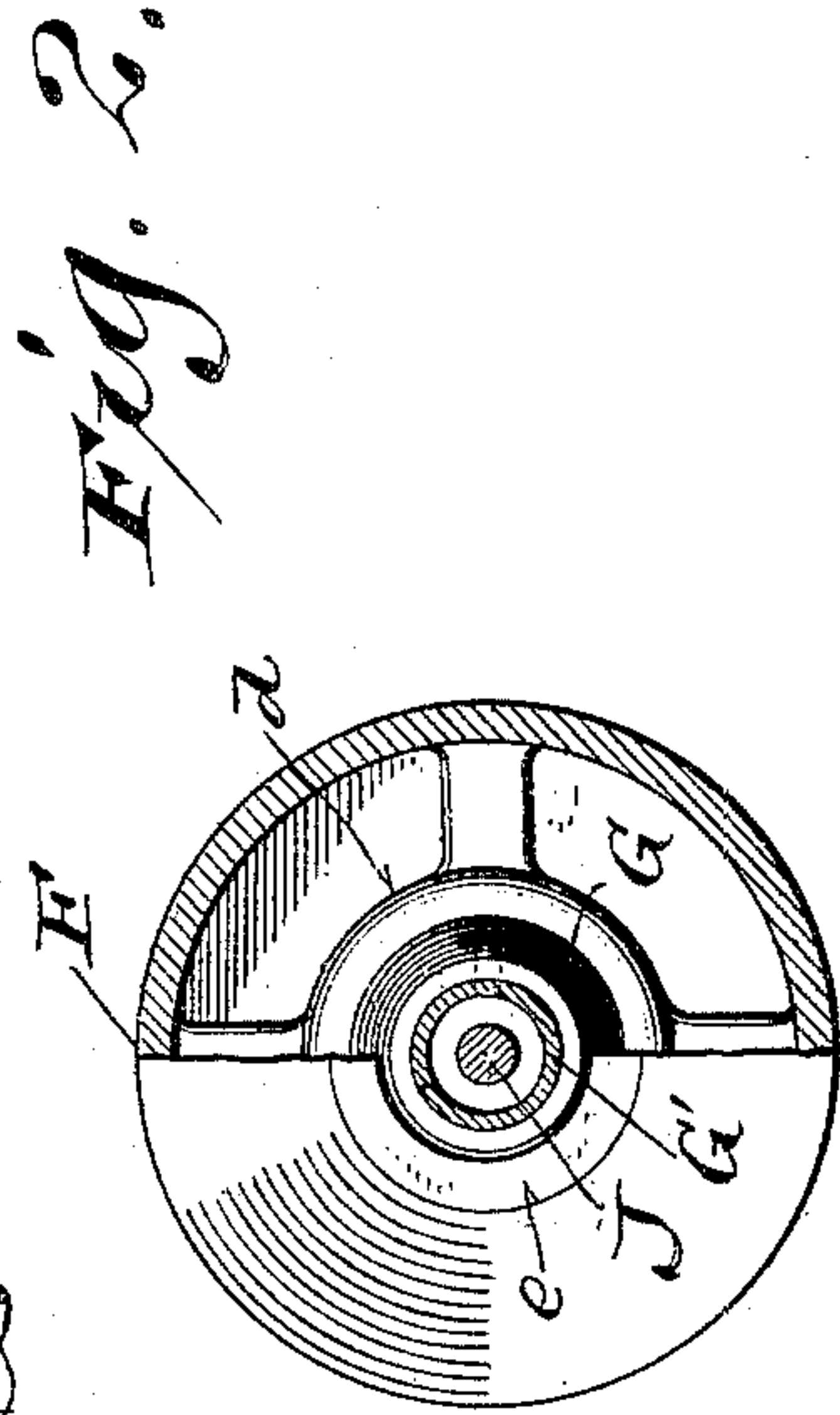
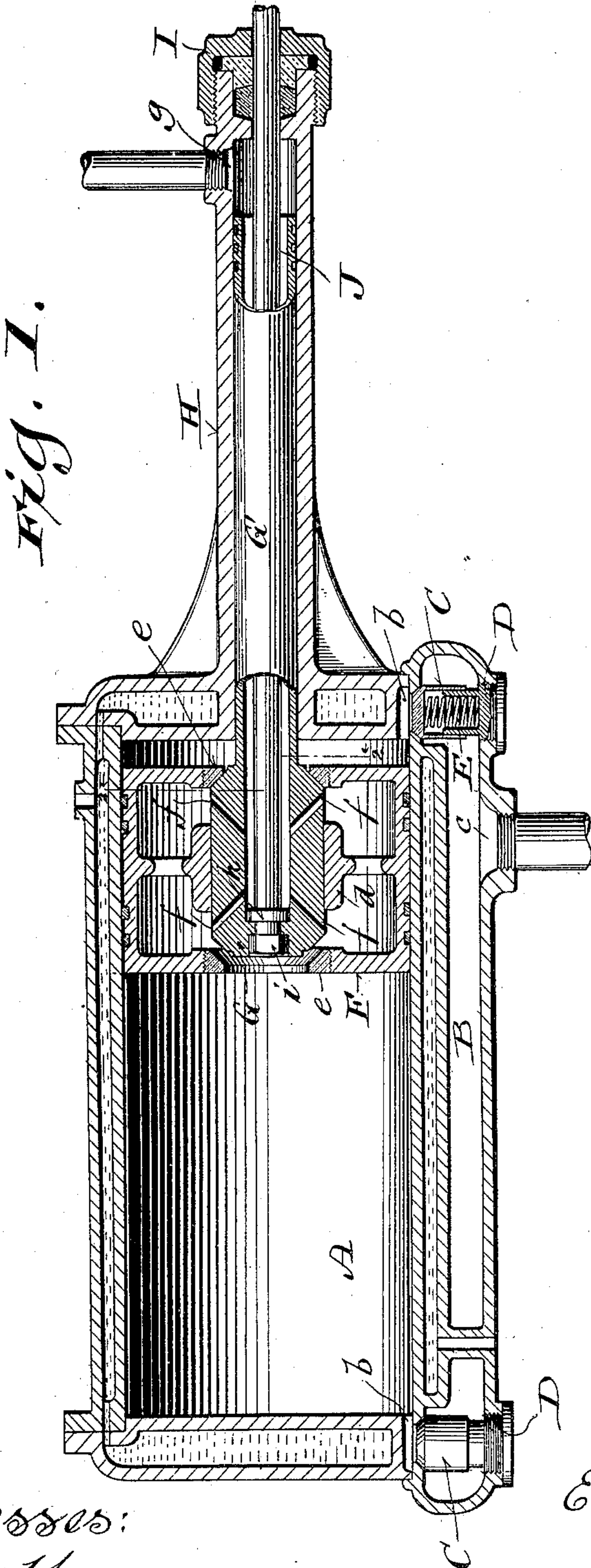
No. 706,861.

Patented Aug. 12, 1902.

E. SETTE.
FLUID COMPRESSOR.

(Application filed Dec. 6, 1901.)

(No Model.)



Witnesses:
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EDWARD SETTE, OF IRONRIDGE, WISCONSIN.

FLUID-COMPRESSOR.

SPECIFICATION forming part of Letters Patent No. 706,861, dated August 12, 1902.

Application filed December 6, 1901. Serial No. 84,892. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SETTE, a citizen of the United States, and a resident of Ironridge, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Fluid-Compressors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide simple economical compressors for fluids, especially air or gas or a mixture of the two; and it consists in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a vertical longitudinal section view of that portion of a fluid-compressor to which my improvements relate; and Fig. 2, an end elevation of the compressor-piston and a valve therewith, partly in section, as indicated by lines 2 2 in the first figure.

Referring by letter to the drawings, A indicates the cylinder of my improved compressor, provided with a water-jacket space and having head-ports *b* in valve-controlled communication with a chamber B, provided with an outlet *c* for compressed fluid accumulating therein. As a matter of detail the check-valves C, controlling communication between the cylinder-ports *b* and chamber B, are taper end caps in sliding engagement with recessed plugs D against interposed springs E, said plugs being in screw-thread engagement with apertures provided in said chamber.

The piston F of the compressor is a hollow shell having a central guide *d* and end seats *e* for a reciprocative hollow valve G, provided with body-apertures *f*, said seats being in screw-thread engagement with end apertures of the piston, so as to be readily removable. A hollow shank G' of the valve has fluid-tight reciprocative engagement with a neck H, that extends from one of the cylinder-heads, this neck being provided with an air-inlet *g* and

an outer end stuffing-box I, this stuffing-box being a guide for a rod J in connection with said valve. As a matter of detail an end of the valve is clamped between a collar *h* and a nut *i* on the rod, the nut being preferably within a countersink of said valve.

By means of rod J reciprocative motion is imparted to valve G and the piston F, said valve having initial play ahead of said piston, whereby it shifts from one to the other of its seats at the beginning of a stroke in either direction of movement. Air or other fluid accumulated in the cylinder A ahead of the valve-closed end of the piston is forced out into the chamber B to find its way to the point of utilization, one of the check-valves C having been forced away from its seat by fluid-pressure in excess of spring resistance. Atmospheric air or other fluid entering inlet of cylinder-head neck H finds its way through valve-shank G', valve G, and open end of piston F into cylinder A when said piston and valve are on stroke in either direction of movement and is subsequently expelled under pressure into the aforesaid chamber.

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

A fluid-compressor cylinder having head-ports in valve-controlled communication with a chamber provided with an outlet, a hollow piston in the cylinder provided with valve-seats in its ends, an apertured hollow valve guided in the piston and having a hollow shank, a valve-shank guide in the form of a cylinder-head neck having a fluid-inlet, and a rod that being in rigid connection with the valve extends through a stuffing-box with which the outer end of said neck is provided.

In testimony that I claim the foregoing I have hereunto set my hand, at Ironridge, in the county of Dodge and State of Wisconsin, in the presence of two witnesses.

EDWARD SETTE.

Witnesses:

G. F. MELCHER,
T. E. MELCHER.