

W. H. Howland.

Rotary Valve.

Nº 91,337.

Patented Jun. 15, 1869.

Fig: 1.

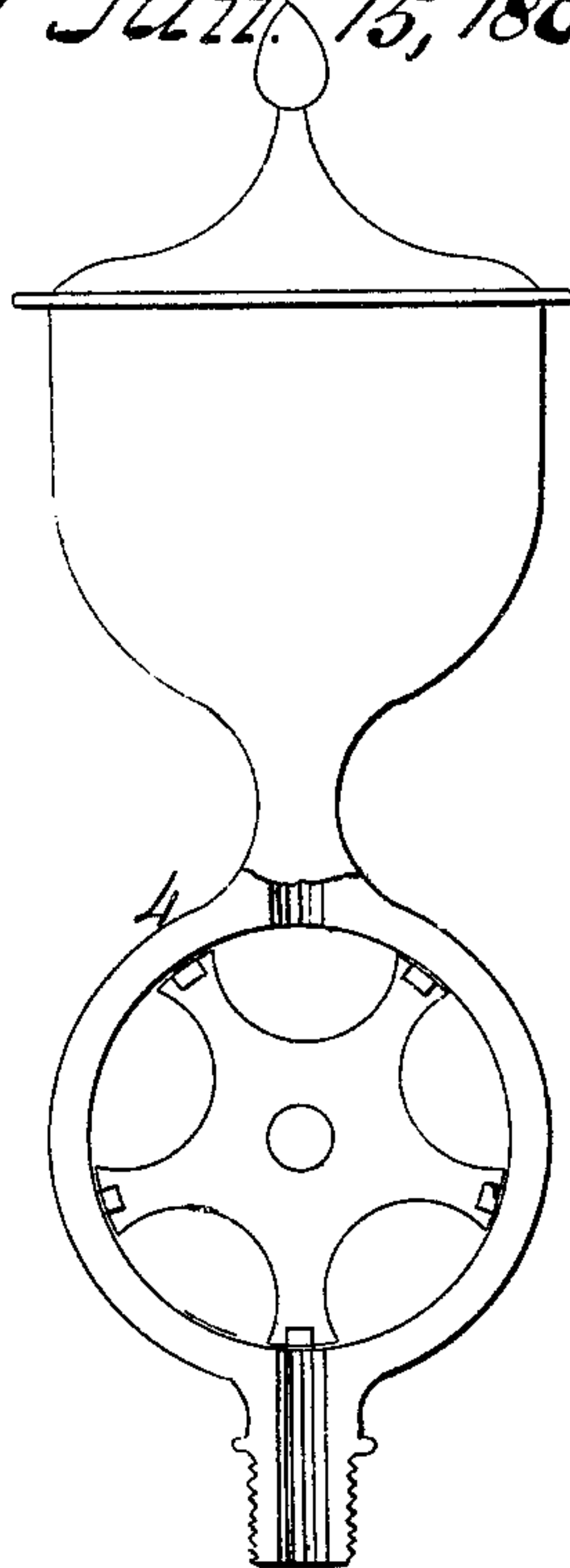
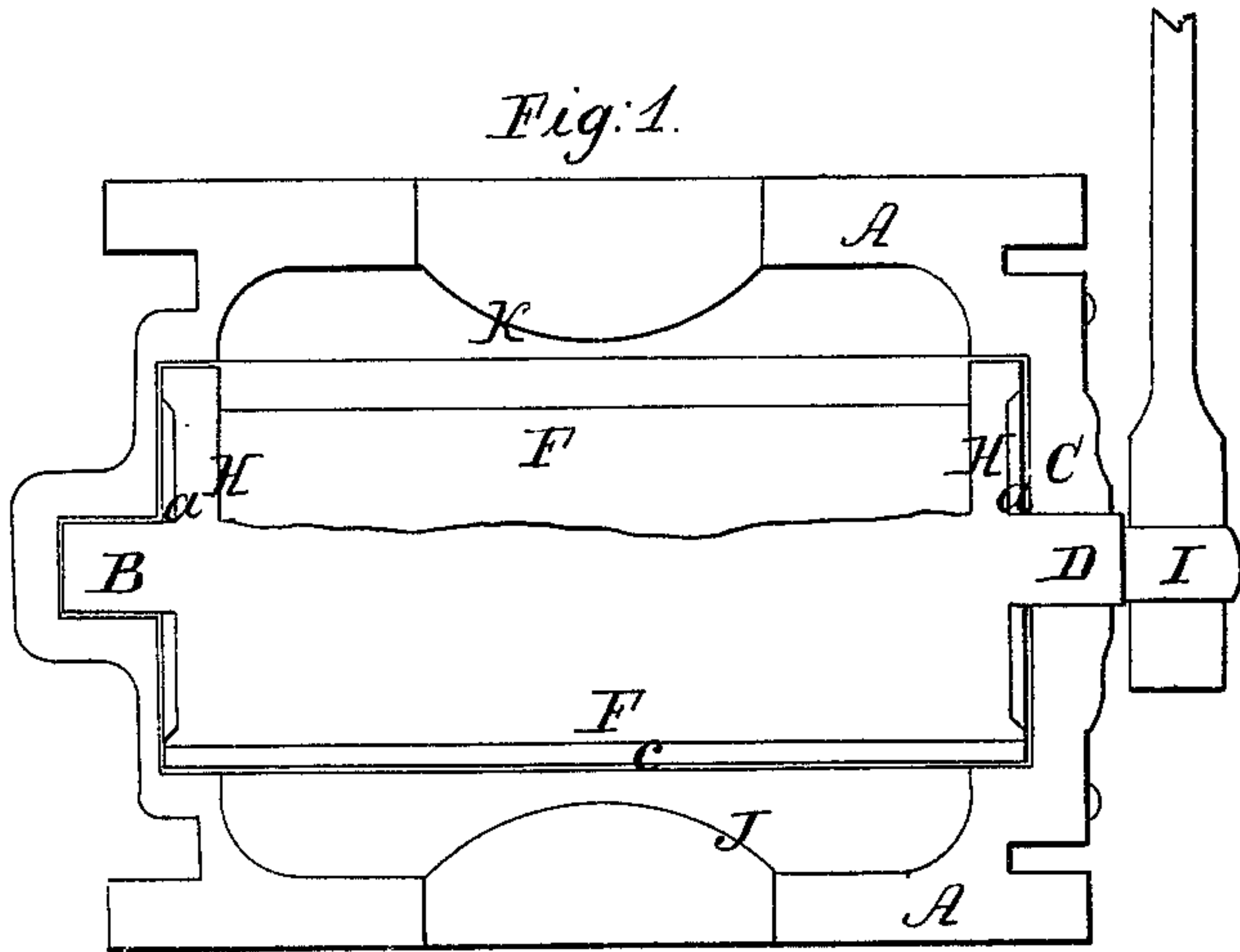


Fig: 2.

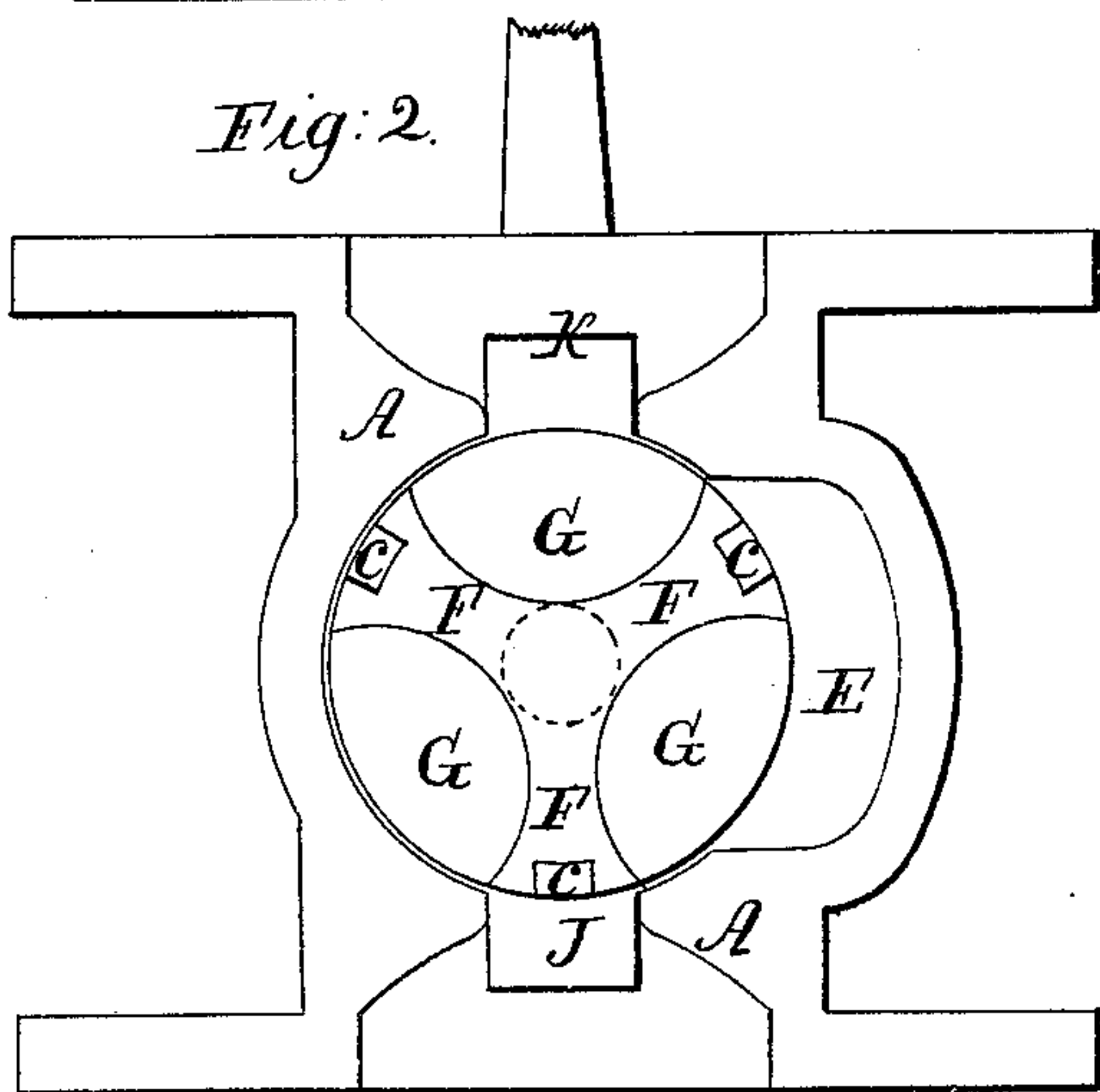
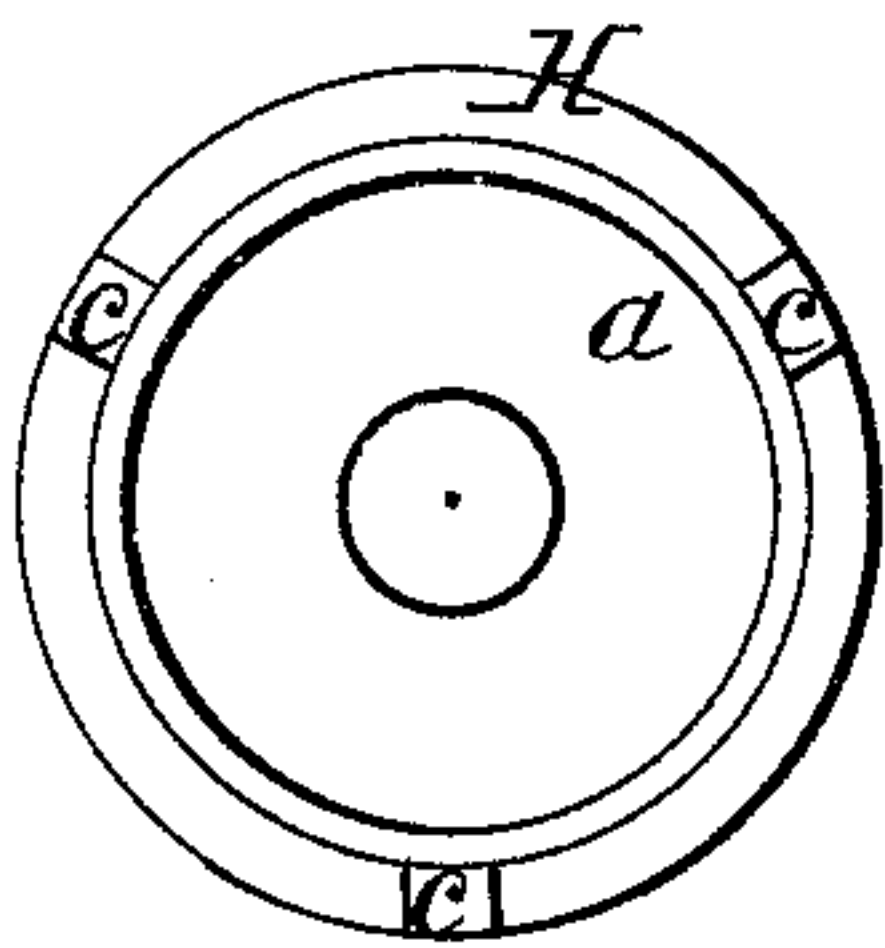
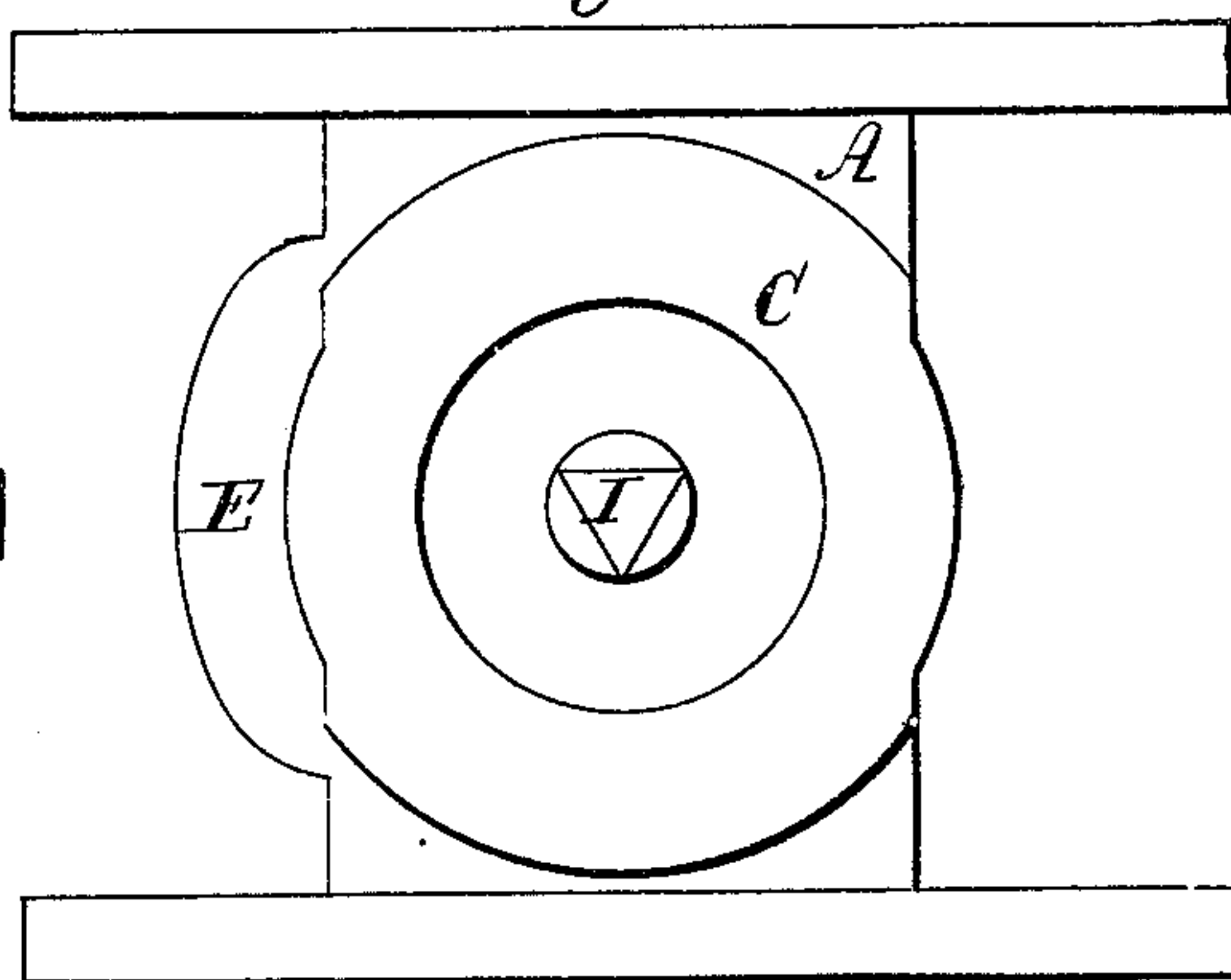


Fig: 3.



Witnesses;
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United States Patent Office.

WILLIAM H. HOWLAND, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 91,337, dated June 15, 1869.

IMPROVEMENT IN STEAM-ENGINE STOP-VALVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM H. HOWLAND, of the city and county of San Francisco, State of California, have invented an Improved Stop-Cock and Valve; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use my said invention or improvements without further invention or experiment.

The object of my present invention is to provide an improved cock, which may be used as a gauge-cock for steam-boilers, or an oil-cup, which shall introduce a certain quantity of the lubricant at any time.

It may also be used as a faucet for beer and other liquids, throttle-valve for steam-pipes, and for all purposes where an ordinary stop-cock is used, but with the advantage of always remaining tight without being tapered, while it is not liable to become fast in its seat, and can be constructed at a much less cost than other cocks.

Referring to the accompanying drawings for a more complete explanation of my invention—

Figure 1 is a side sectional view of the cock.

Figure 2 is a sectional view taken through *y y*.

Figure 3 is an end view.

Similar letters of reference, in each of the figures, indicate like parts.

A is the outside shell or case, which may be cast and then reamed out, a small journal being made at one end, within which the projecting stem or spindle B from the valve turns, so as to keep it steady.

The other end is fitted with a cap, C, through which the stem D extends.

The chamber of the case is extended on one side at E, so as to allow a free passage when the valve is open.

The valve may be made with any number of arms, F, and chambers, G.

It is made with a flange, H, at each end, which is faced to fit against the end of the case, this also being faced smooth.

The end of the valve is recessed at *a*, so that the wear all comes on the outer edge, and it is thus always kept tight.

Each of the arms F has a slot made the entire length of its bearing-face, and this slot is filled with soft packing-metal, *c*, and the whole is then turned to fit the chamber of the case A. The greater expansion of the soft metal keeps the valve constantly tight without undue friction.

The end, I, of the stem D, is made with as many sides as there are chambers in the valve, and the operating-handle is so placed upon the stem that the angles are opposite, or in a line with the arms F, so that it is easy to see, at any time, whether the valve is opened or closed.

The valve is so placed in the case, that when closed one of the arms F stands directly over the egress-port J, while one of the chambers, G, is opposite the ingress-port K, the pressure thus obtained preventing any leakage.

By turning the valve toward the open port E of the case, the passage is opened more or less, as desired.

The ingress and egress-ports J and K are made to extend the whole length of the valve, so that when the valve is opened to any distance, whatever amount of steam or liquid is let through can pass freely without choking.

When used as an oil-cup, the case may be made without the chamber E, and the valve can be turned entirely around, as shown in red at 4.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The construction and arrangement of the above-described valve, with reference to the case A, provided with the recess E, and the ports K and J, substantially as specified.

2. The soft-metal packing *c*, when arranged longitudinally through the face of the arms F, substantially as described.

In witness whereof, I have hereunto set my hand and seal.

WILLIAM H. HOWLAND. [L. S.]

Witnesses:

J. L. BOONE,

GEO. H. STRONG.