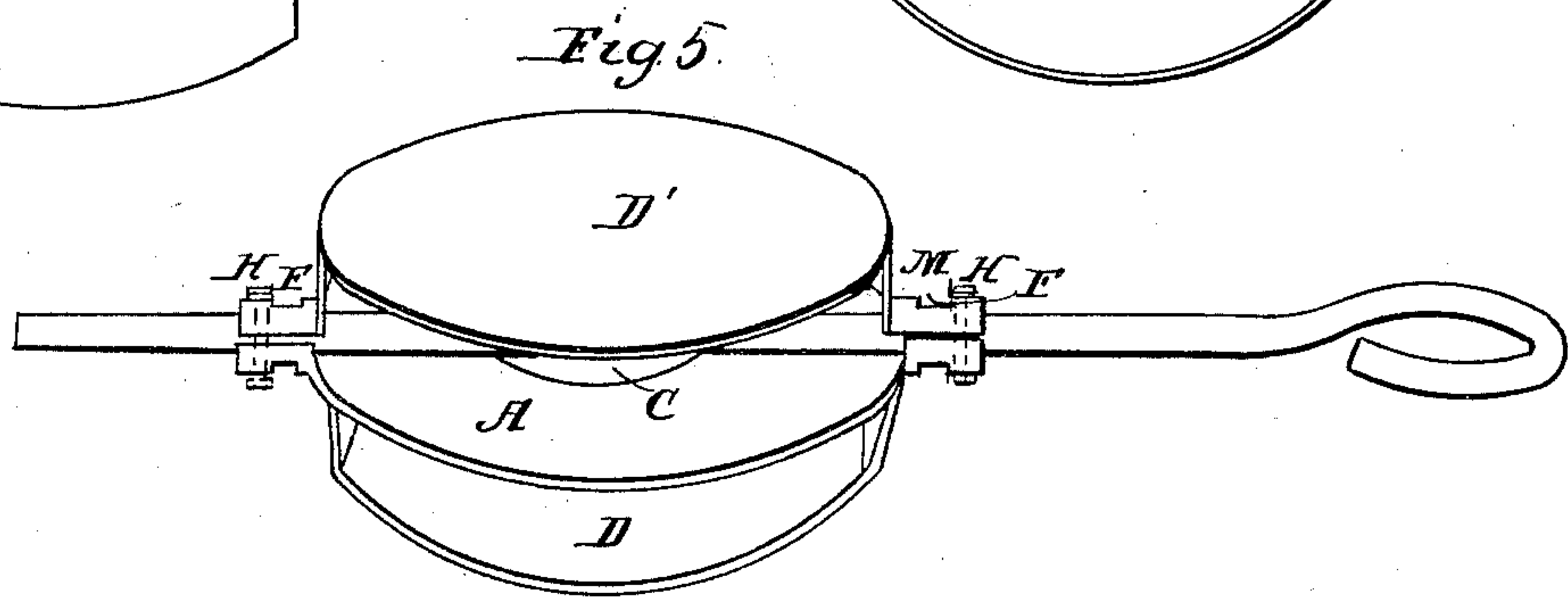
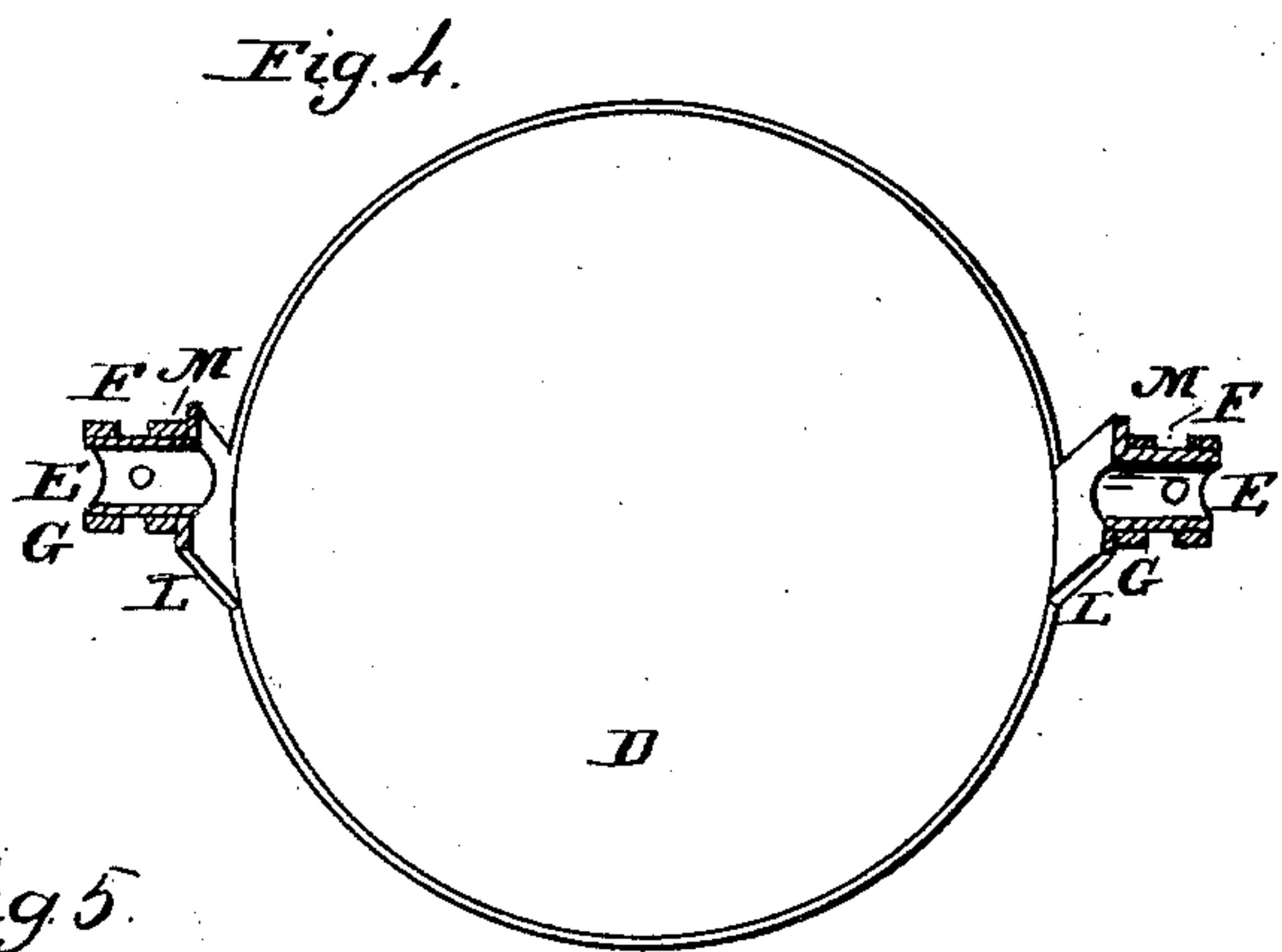
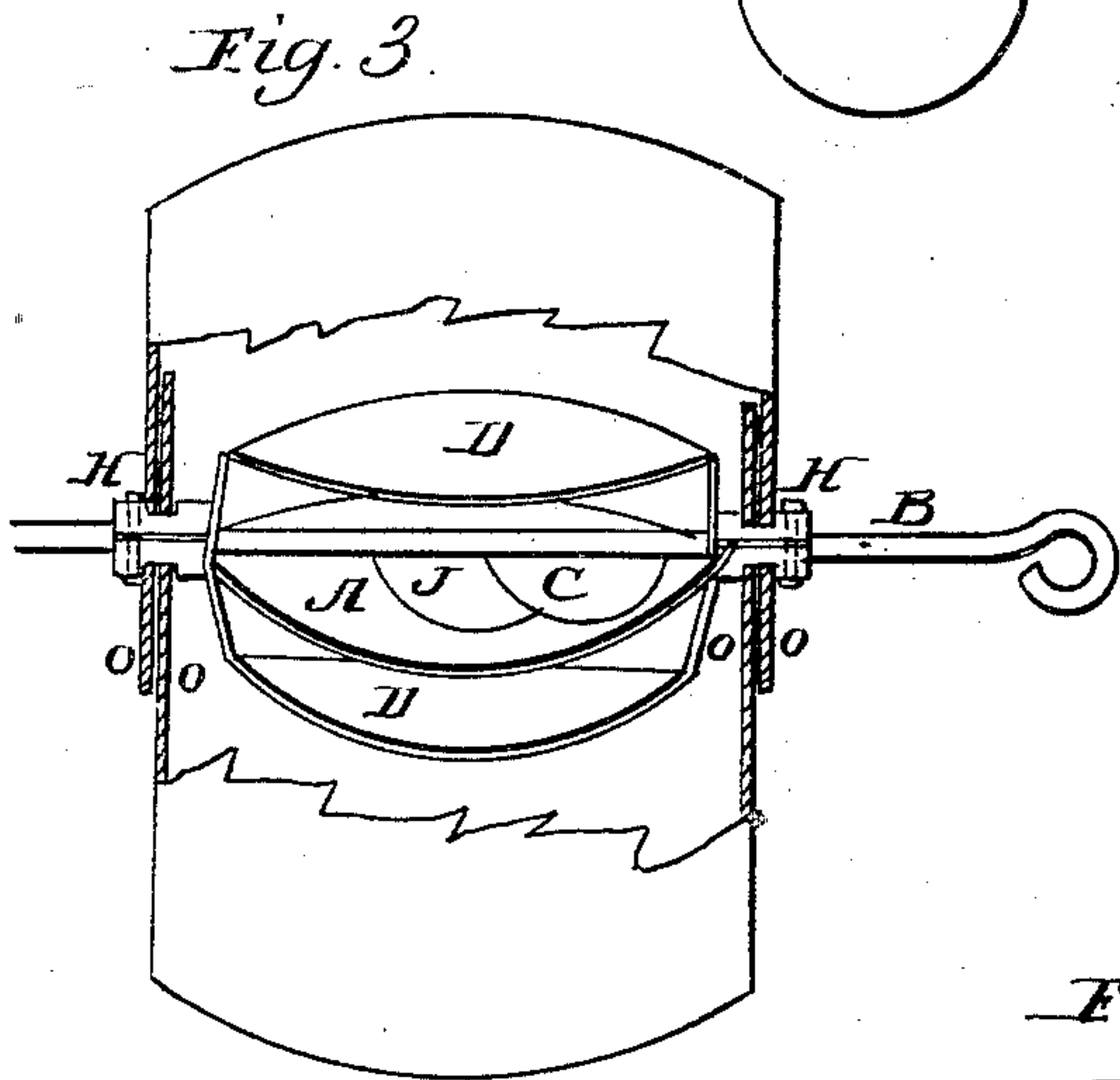
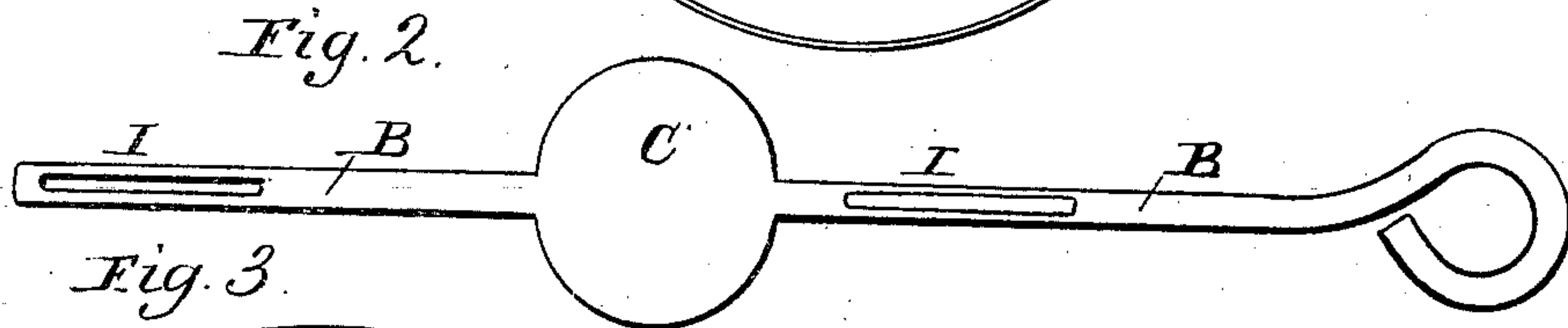
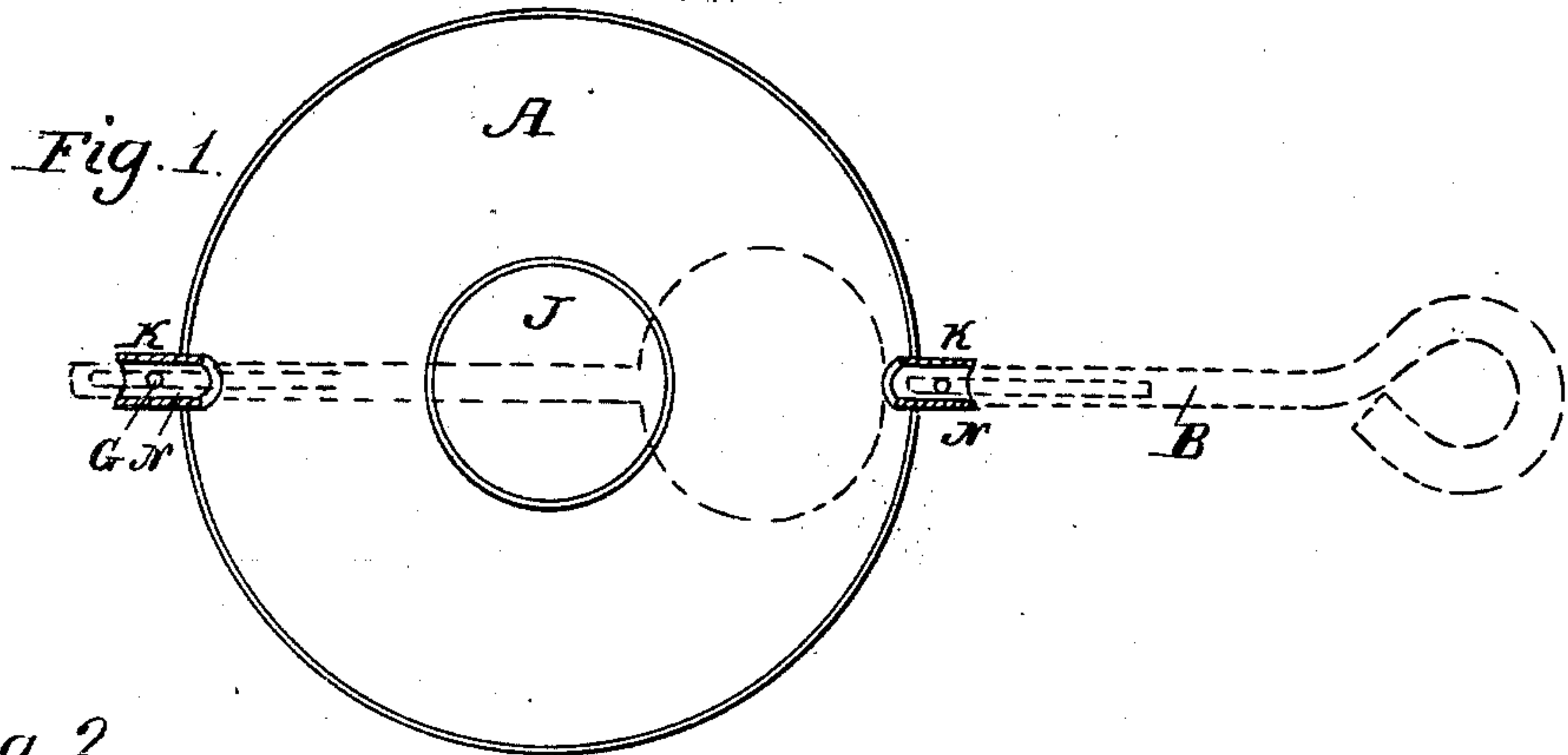


OGBORN & CHAPIN.

Stovepipe Damper.

No. 57,368.

Patented Aug. 21, 1866.



Witnesses:
Wm. C. Cook
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UNITED STATES PATENT OFFICE.

H. OGBORN AND A. T. CHAPIN, OF RICHMOND, INDIANA.

STOVE-PIPE DAMPER.

Specification forming part of Letters Patent No. 57,368, dated August 21, 1866.

To all whom it may concern:

Be it known that we, H. OGBORN and A. T. CHAPIN, of Richmond, in the county of Wayne and State of Indiana, have invented certain new, useful, and valuable Improvements in Heat-Radiating Smoke-Consuming Dampers; and we do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a detached or plan view of the central piece A. Fig. 2 is a detached plan of the rod B and sliding valve C. Fig. 3 is a perspective view of our improved damper as placed in a stove-pipe, with a portion of the stove-pipe broken away. Fig. 4 is a detached plan view of D D'. Fig. 5 is a perspective view of our invention when all the parts are put together.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a machine for radiating heat and preventing its being wasted, and for consuming smoke.

To enable others to make and use our invention, we will proceed to describe its construction and operation.

In the accompanying drawings, A represents the central portion or plate of the damper, in the center of which there is a hole, J, which the smoke and gas pass through when the sliding valve is drawn back, as shown by the green dotted lines in Fig. 1.

H H are rivets that pass through bearings M and K and slot I, to hold all the parts firmly together, and yet allow the rod B to move freely in the groove or cavity N in bearings K K.

D D' are the two outside plates of the damper. L L are projections on plates D D', for holding them in their proper relative position to the plate A.

M M are journals on which the machine turns. F F are grooves on the outside of said journals, on which the edges of the two stove-pipes rest, as shown at O O, in Fig. 3.

E E are longitudinal grooves or boxes in the journals M M, in which the journals K K rest, while the rod B rests partly in the boxes N N and partly in the grooves or boxes E E. Both the journals K K and rod B are securely fast-

ened by the rivets H H in the box E E within the journals M M.

We usually construct our machine of cast-iron, yet it may be made of any other suitable material.

We make the several parts as shown in the various drawings, and place the bearings K K in the boxes E E, the rod B in the box N, then place plate D' on them and pass the rivets H H through them all at G, and rivet firmly.

In using our invention, (the damper being in the stove-pipe or flue, in the manner above indicated,) when it is wished to give a strong blast the machine is turned so the plates D D' and A will have a vertical position. The machine will not obstruct the pipe to any perceptible degree, but allows the fuel to burn quickly. When the fuel is burning well it is desirable that a regular steady heat may be maintained, which is accomplished by turning the damper so the plates will stand in a horizontal position, thus shutting up the pipe except a small circular hole in the middle of the plate A and a narrow space between plate A and pipe O, which will maintain a regular temperature in the room. When it is desirable to shut off the draft, that active combustion may be prevented and fire kept in the stove a long time, it is only necessary (the machine being placed in a horizontal position) to push the rod B as far in as possible, which will close the pipe all up except a narrow strip around the plate A, which will allow the gas generated by the charring of the fuel to pass off, thus preventing active combustion, yet allowing the charring process to go on, so that after the draft has been shut off many hours there will be a brisk strong fire produced by drawing the bar or rod B as far out as possible, thus opening the hole J and allowing a current of air to pass through the fire and up the pipe. When the damper is placed in a horizontal position and the hole J left open the smoke and heat rush upward and strike the lower face of the plate D, (when they are radiated against the pipe O,) then pass up around it and strike the lower side of plate A, when they are radiated again. They then pass to the center of A up through the hole J and strike the inner and lower surface of D', when they are radiated once more, and must then pass between the edge of plate D' and pipe O, when another

portion of the heat will pass through the pipe and out into the room. It not only radiates the heat as it passes through the damper, but retards its escape through the pipe in such a way that nearly all the heat will be thrown into the room. It also forces the smoke through such a small heated space as to consume a great portion of the smoke in passing through.

Having thus described the nature, construction, and operation of our invention, what we claim therein as new and useful, and desire to secure by Letters Patent, is—

1. The bar or rod B, slots I I, and sliding valve C, when used for the purposes and in the manner set forth.

2. The plates A and D D', in combination with bar or rod B, slot I, and sliding valve C, when arranged in the manner and for the purposes set forth.

3. The journals M M, box E E, bearings K K, boxes N N, and rod B, in combination with slots I I, rivets H H, and groove F, when the same are arranged, combined, and operated in the manner and for the purposes set forth.

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Witnesses:

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ENOS HARDIN.