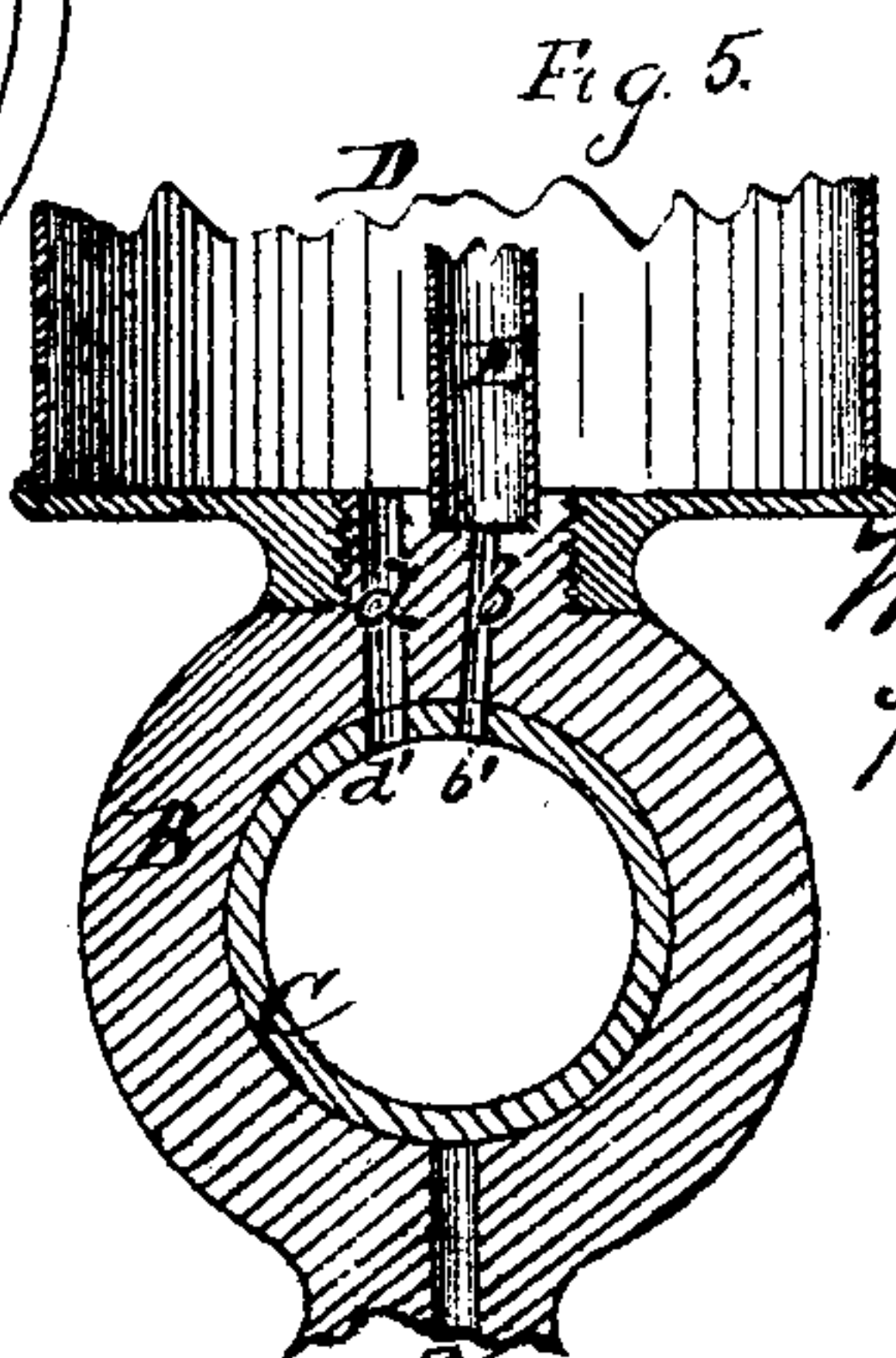
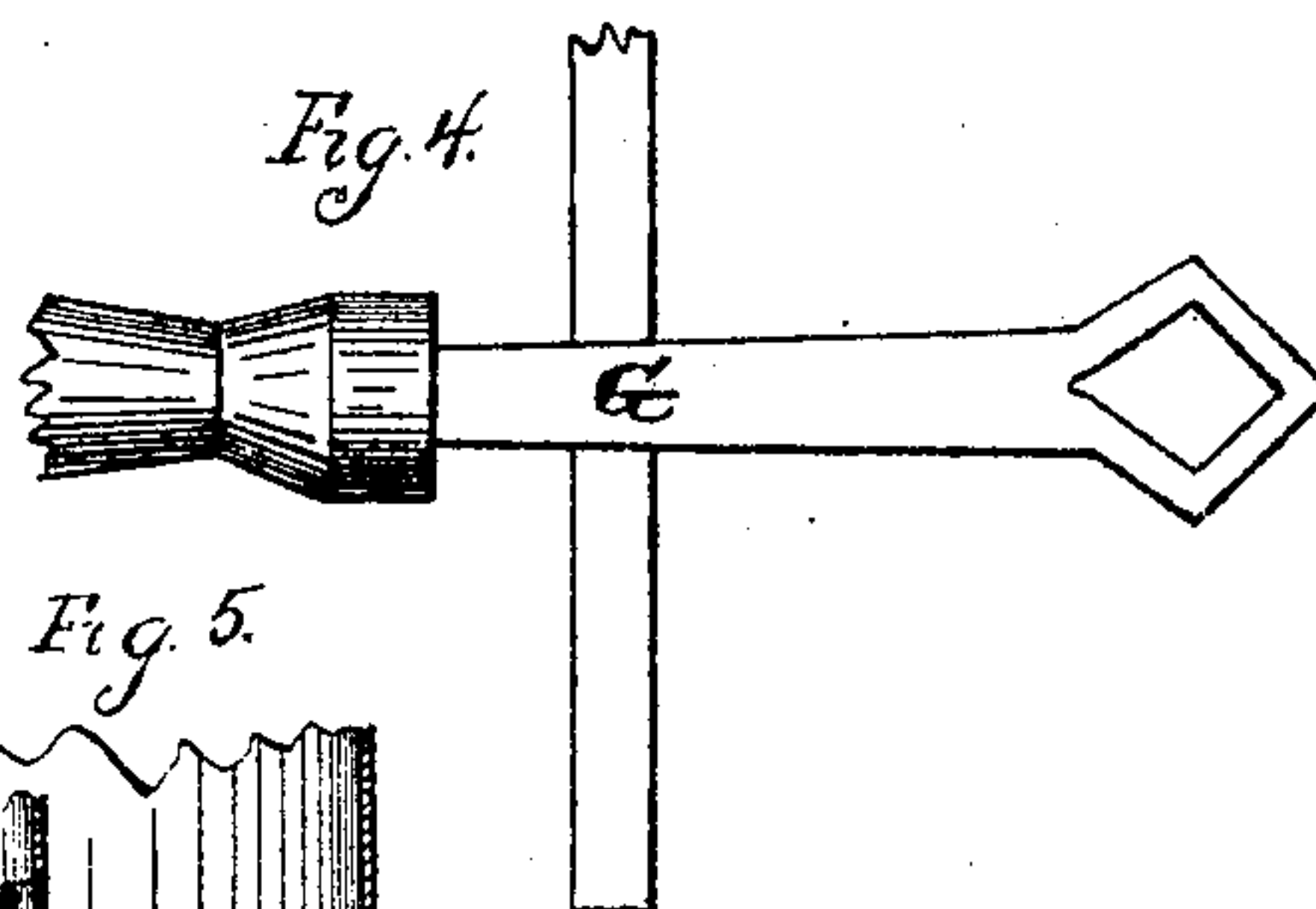
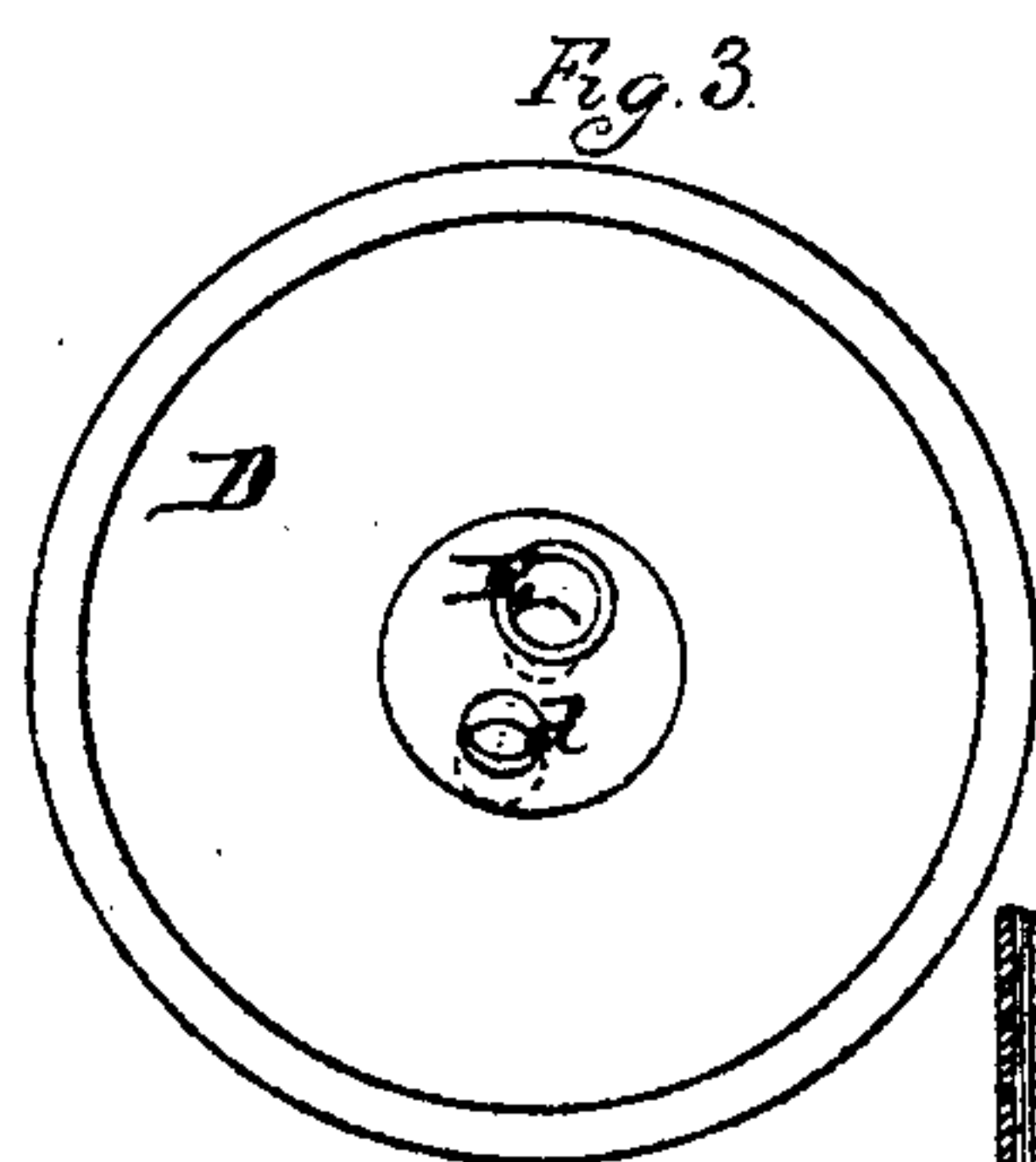
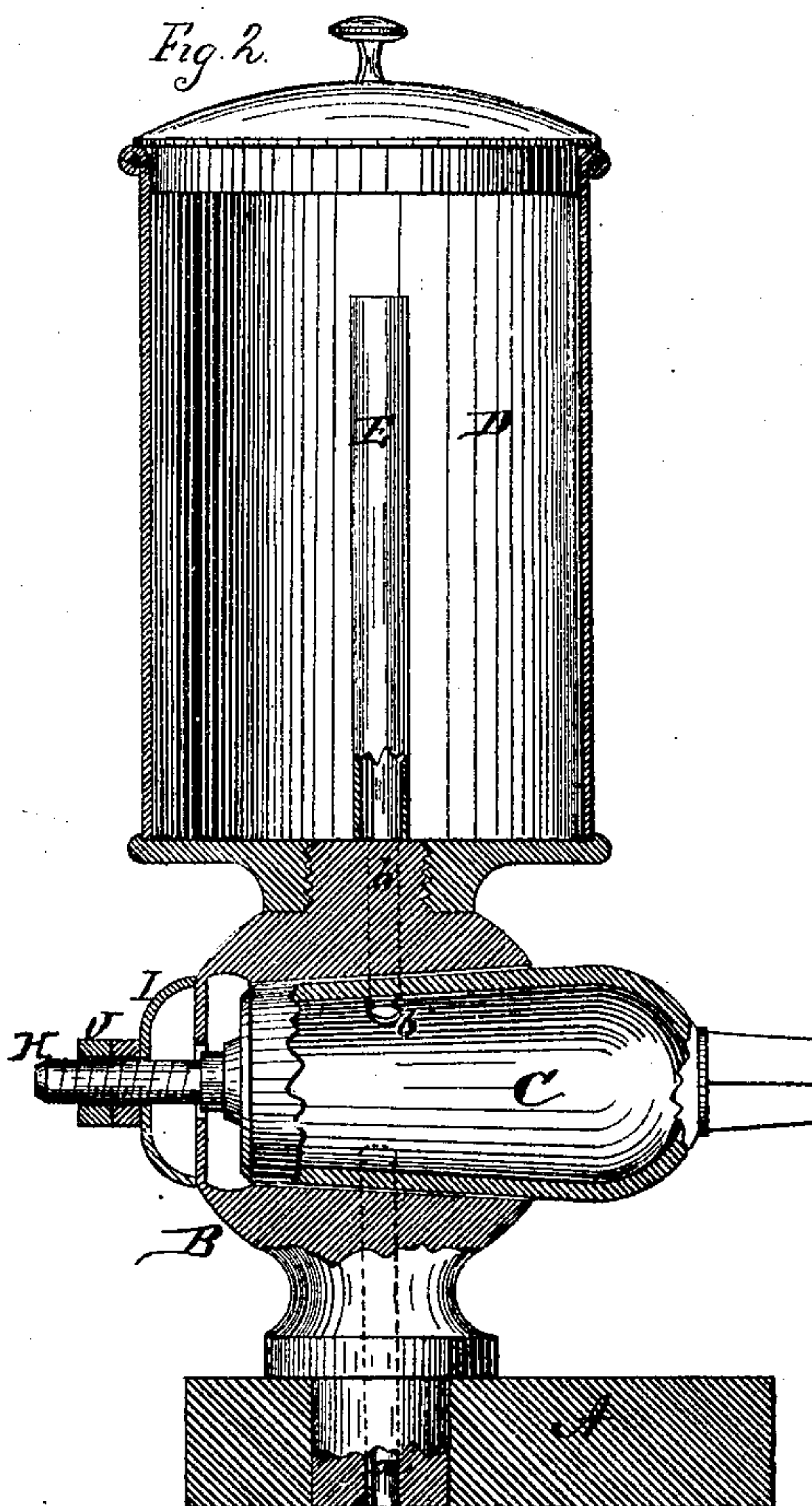
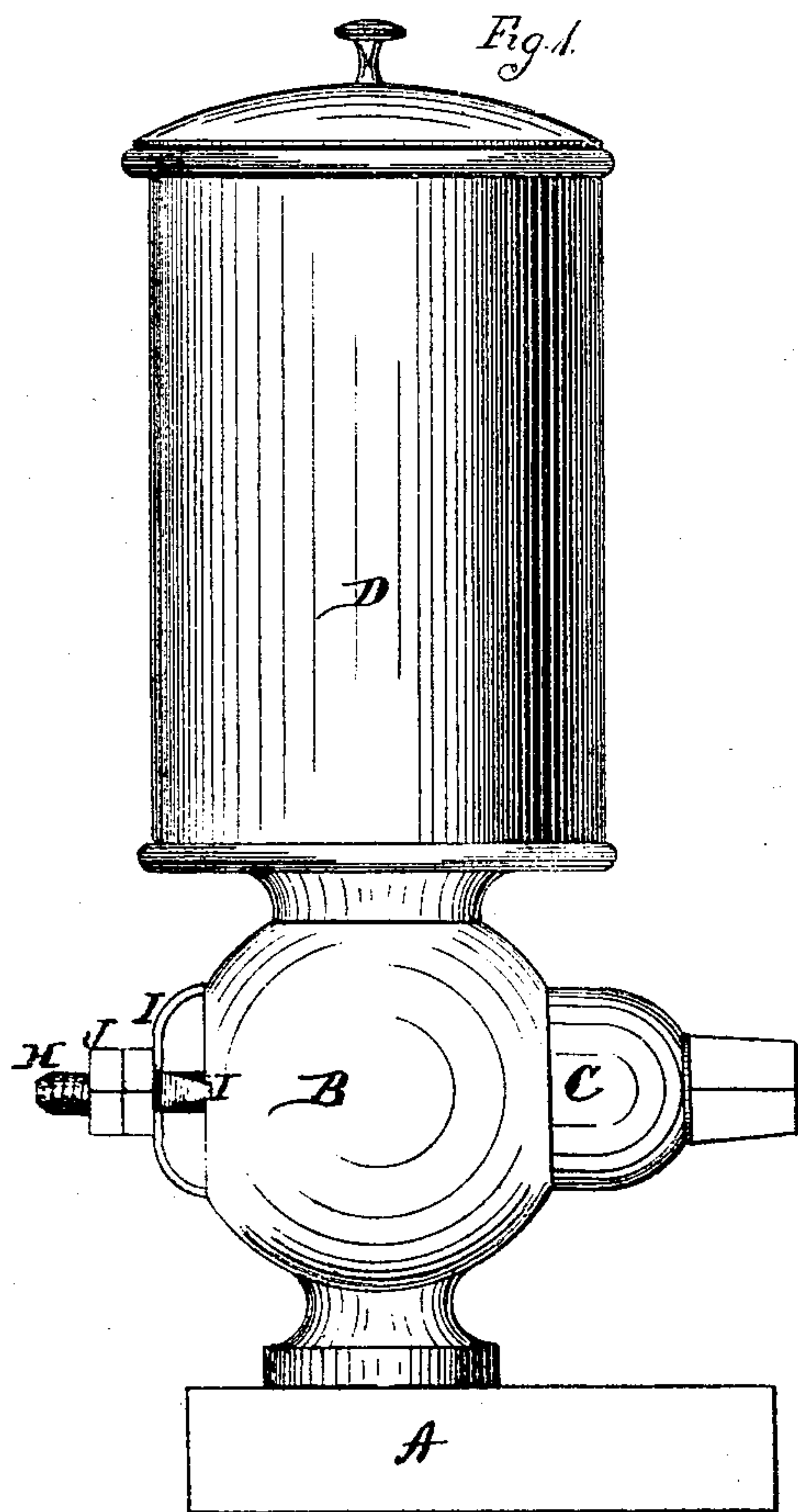


M. MORTON.

Improvement in Lubricators for Steam-Engines.

No. 129,360.

Patented July 16, 1872.



Witnesses:

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 & L. E. Over.

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UNITED STATES PATENT OFFICE.

MATTHEW MORTON, OF ROMEO, MICHIGAN.

IMPROVEMENT IN LUBRICATORS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. 129,360, dated July 16, 1872.

To all whom it may concern:

Be it known that I, MATTHEW MORTON, of Romeo, in the county of Macomb and in the State of Michigan, have invented certain new and useful Improvements in Steam-Cylinder Lubricator; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "steam-cylinder lubricator" for using tallow, lard, or other article that will congeal, said lubricator comprising a heater or reservoir and a lubricator proper, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, and Fig. 2 a longitudinal vertical section, of my lubricator. Fig. 3 is a plan view of the heater or reservoir. Fig. 4 is a side view of the lever by which the lubricator is operated; and Fig. 5 is a cross-section of the lower part of the lubricator.

A represents the cover for the steam-chest, in which is screwed or otherwise secured the bowl B. Through this bowl passes the plug C, and on top of the bowl is screwed or otherwise secured the reservoir D. The plug C is slightly tapering, as shown in Fig. 2, and is cylindrical, with both ends closed, having only two openings, as will be hereinafter described. From the smaller end of the plug projects a screw, H, which passes through a spring-brace, I, and is fastened by a nut, J, the said spring-brace being in the form of a cross with the ends or arms bent inward and bearing against the side of the bowl B. From the bowl B a passage, *a*, leads to the steam-chest, and two other passages, *b d*, connect with the reservoir D. The passage *b* leads into an upright pipe, E, within the reservoir, while the passage *d* communicates direct with the bottom of the reservoir. The plug C is a hollow shell, forming the oil or tallow-chamber, and is provided

with two openings, *b' d'*, corresponding with the passages *b d* of the bowl B. The various passages and openings are so arranged that when the plug is turned one-half around the opening *d* will be opposite to and against the passage *a*, so as to open communication from the plug to the steam-chest. G represents the lever with which the plug C is turned, said lever being in the form of a cross, as shown in Fig. 4. The parts should be so arranged that when the lever is turned to one side, and one of the cross-arms rests upon the cover A, the openings *b' d'* are against the passages *b d*, allowing the melted lubricating material from the bottom of the reservoir D to pass through *d d'* into the plug or chamber C, while any steam or air that may be in said plug passes through *b' b* and pipe E into the top of the reservoir. By turning the lever G one-fourth of a revolution, so that it stands upright, all the passages will be closed; and by turning the lever still another one-fourth of a revolution, so that the other cross-arm rests upon the cover A, the opening *d'* comes against the passage *a* and allows the lubricating material to pass out of the plug or chamber C to the chest and cylinder. The heat is communicated through the bowl to the reservoir, whereby the tallow, lard, or other material becomes melted and fit for use without trouble, instead of having, as heretofore, to melt such material in a separate dish. Thus the reservoir may be filled with hard tallow, lard, or any chilled oil. It is, in fact, a reservoir and heater holding enough to last about two days without further trouble. It will also be noticed that the entire pressure of the steam is in the inside of the plug C, having no communication with the outside to cause friction, sticking, or wear. Thus, if the pressure of the spring-brace I against the bowl should only be one pound, it will still hold the plug in against the pressure of steam, even if that was three hundred pounds. It is, therefore, anti-friction against the pressure of steam, and the wear of the plug, if there is any, is toward said spring-brace, which thus makes the plug self-adjusting, giving the plug no chance to stick, or become loose and leak.

It will be seen that the reservoir D is connected to the bowl B by a male screw on the bowl and a female screw in the bottom of the

reservoir, so that the reservoir may at any time be easily and readily detached.

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

1. The combination of the tapering plug C, closed at both ends, with orifices *b' d'* in its sides and screw H on its ends, with the bowl B, (as constructed,) spring-brace I, and nut J, all substantially as set forth.

2. The combination of the bowl B with its

orifices *a b d*, plug C with orifices *b' d'*, screw H, brace I, and nut J with the detachable reservoir D and tube E, all constructed to operate substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of February, 1872.

MATTHEW MORTON.

Witnesses:

GEO. B. MORTON,
FRANCES BUTTS.