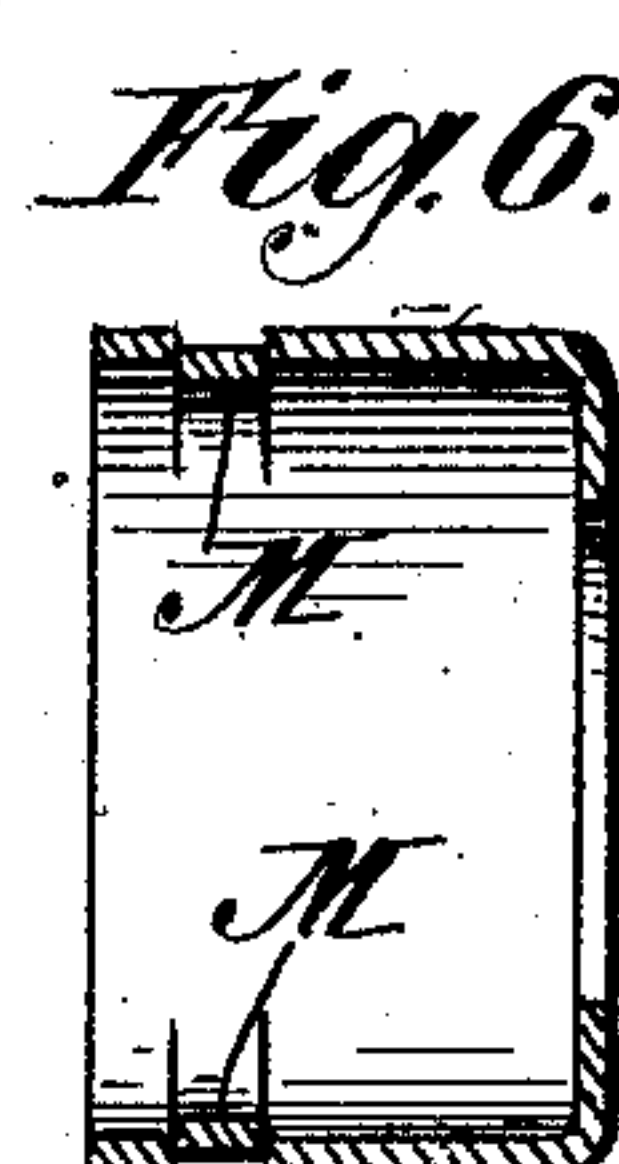
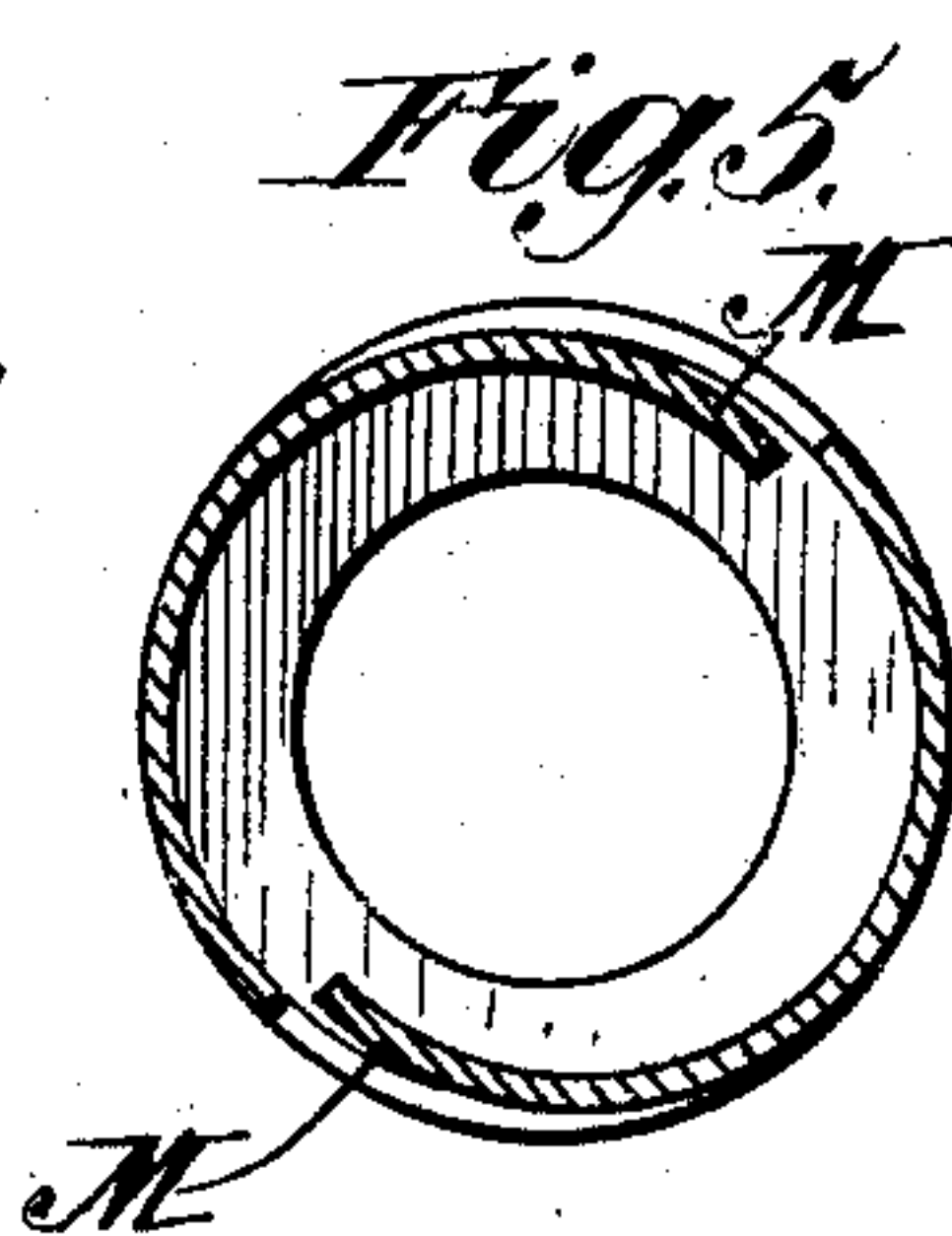
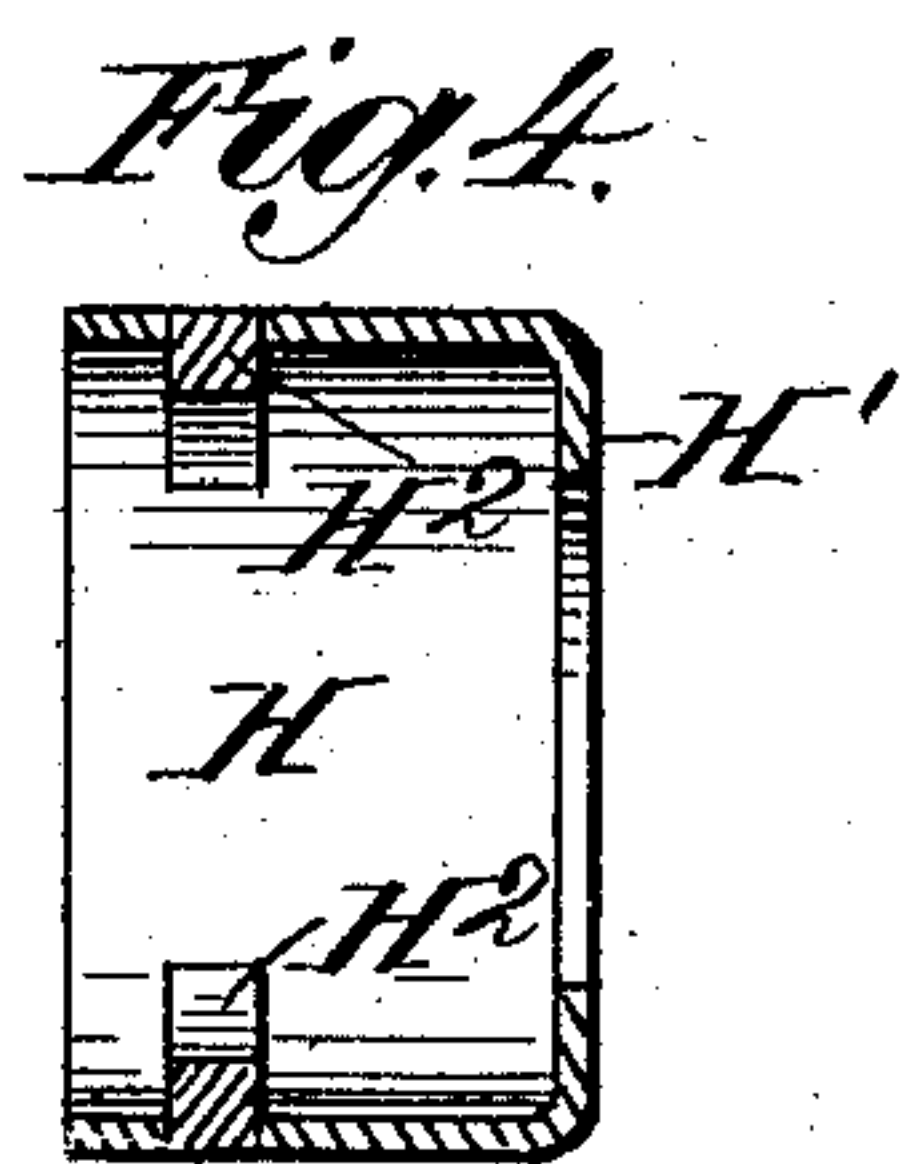
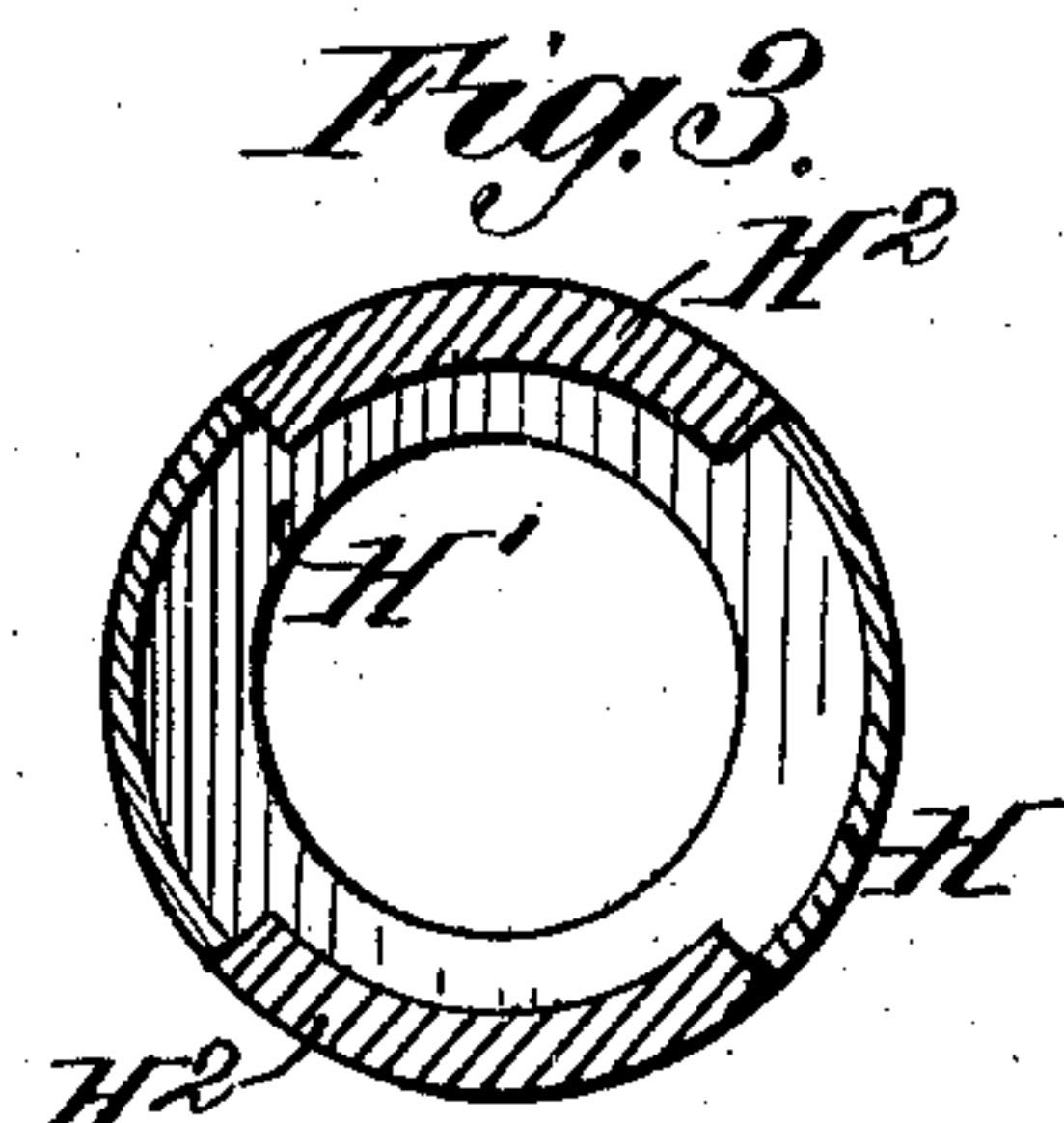
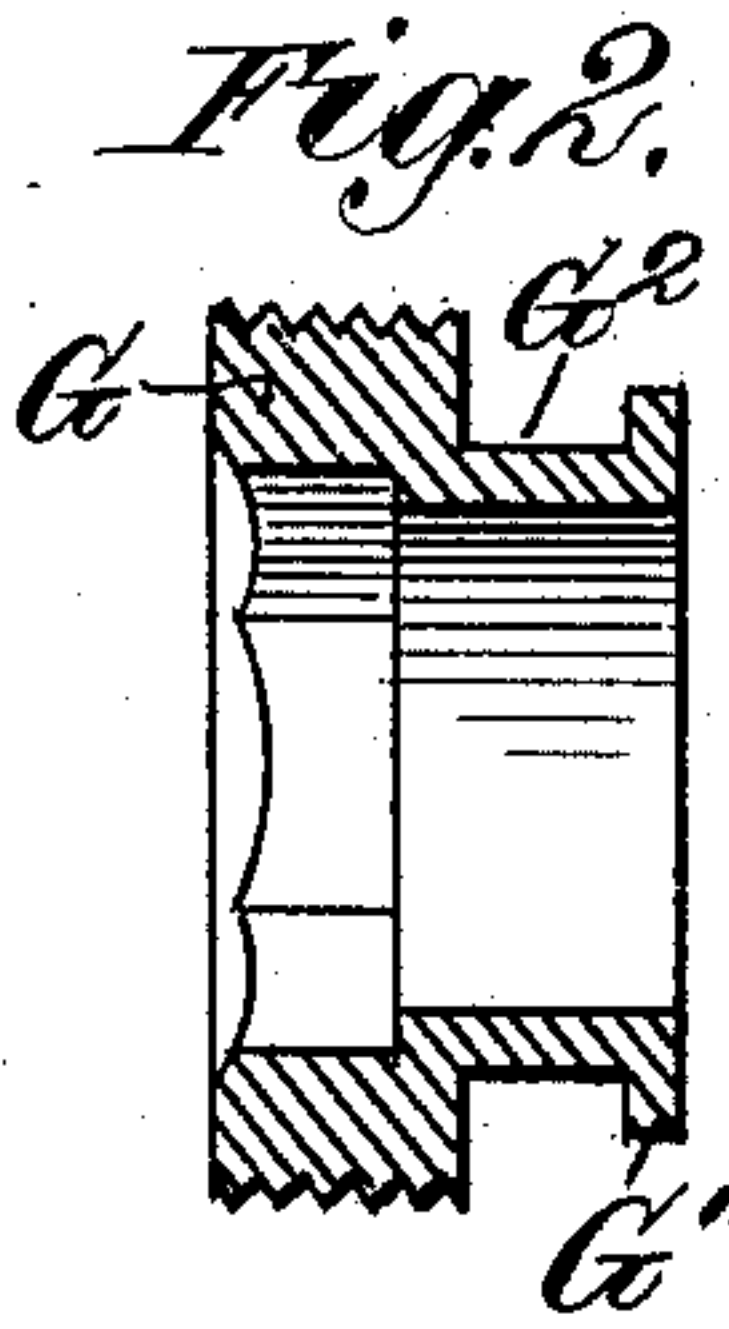
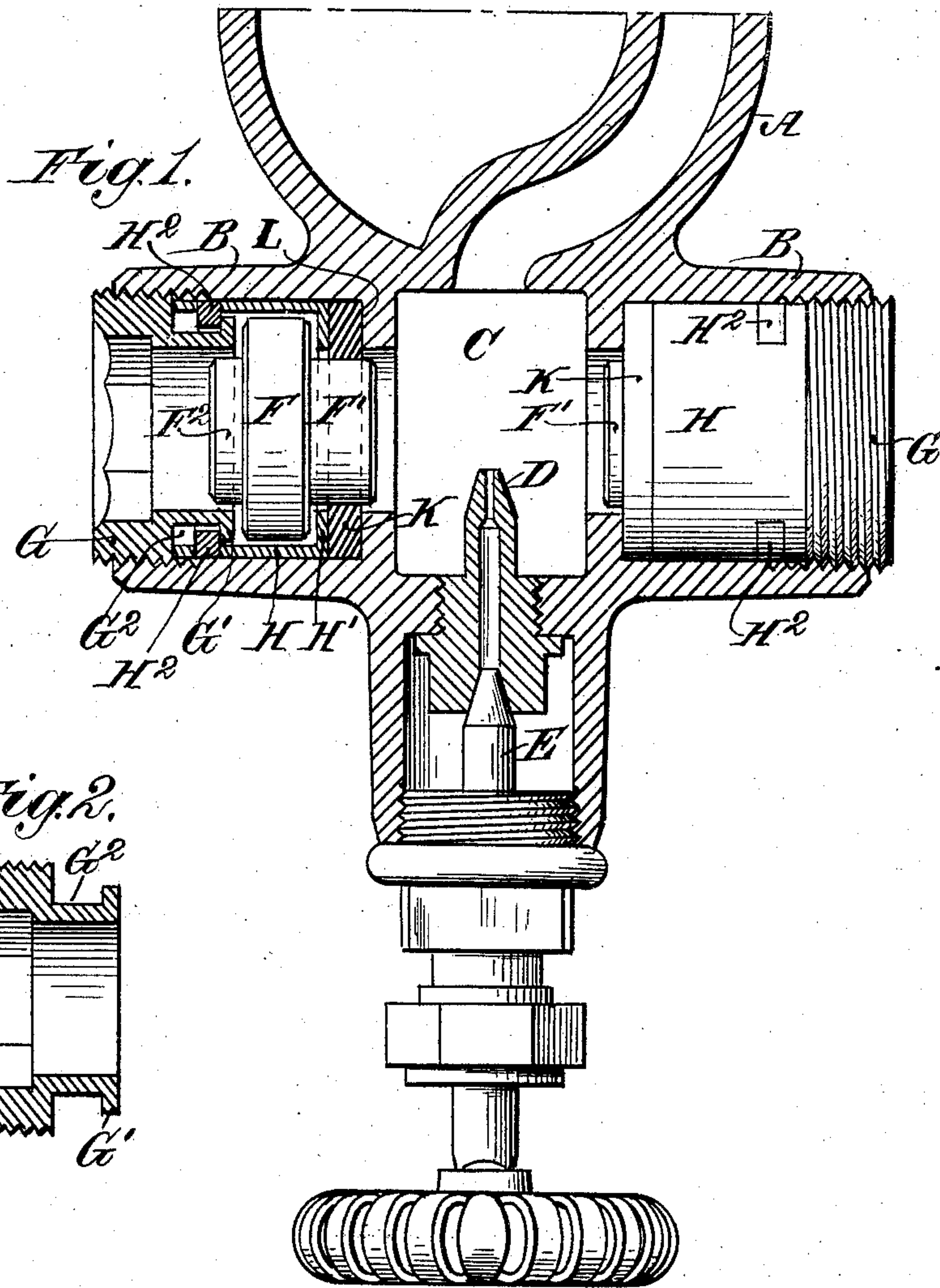


No. 850,711.

PATENTED APR. 16, 1907.

W. L. ABATE.
SIGHT FOR LUBRICATORS.
APPLICATION FILED FEB. 27, 1907.



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UNITED STATES PATENT OFFICE.

WALTER L. ABATE, OF MOUNT VERNON, NEW YORK, ASSIGNOR TO NATHAN MANUFACTURING COMPANY, OF NEW YORK, N. Y.

SIGHT FOR LUBRICATORS.

No. 850,711.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed February 27, 1907. Serial No. 359,252.

To all whom it may concern:

Be it known that I, WALTER L. ABATE, a citizen of the United States, residing in Mount Vernon, in the county of Westchester and State of New York, have invented a new and useful Improvement in Sights for Lubricators, of which the following is a specification.

This invention relates to the sights of sight-feed condensation-displacement lubricators of the "bull's-eye" type—that is to say, lubricators in which a solid thick glass disk is used instead of a tubular glass for observation purposes.

The object of the invention is to provide simple and efficient means for readily inserting the glasses and holding them in place in their casings so that they will form a tight joint therewith and for conveniently removing them for purposes of inspection, cleaning, or replacement.

Under my invention the glass is contained in a shell through and beyond the inner end of which the inner end of the glass protrudes, this end of the glass being surrounded by a washer confined between the inner end of the shell and an annular shoulder in the casing in which the shell is contained. With the shell is combined a follower adapted to screw into the casing, which is swiveled to the shell, so that while the two move lengthwise together they, together with the glass, can be inserted in and removed from the casing bodily and together, the follower bearing against the sleeve and acting to advance the latter against the washer, which is thus compressed between the inner end of the sleeve and the annular shoulder in the casing and around the protruding neck or inner end of the glass, with which it makes a fluid-tight joint.

In the accompanying drawings, to which I shall now refer for a better understanding of my invention, Figure 1 is a vertical section of the preferred form of my invention as applied to a locomotive-lubricator, only so much of the lubricator being shown as needed for purposes of explanation. The remaining figures represent detached parts of the device. Fig. 2 is a longitudinal axial section of the follower. Figs. 3 and 4 are a cross-section, partly in elevation, and an axial section, respectively, of the shell. Figs. 5 and 6 are like sections of a modified form of shell.

A is as much of the body of a lubricator of

any approved construction as needed for purposes of explanation. The body is provided with the usual cylindrical casing B for the sight-glasses, the intermediate portion C of which forms a water-chamber, through which the oil from the feed-nozzle D passes upwardly in drops in the usual and well-known manner. E is the usual regulating-valve. The outer end portions of the casing are internally threaded.

The glass is of the form shown in Patent No. 844,281 of February 12, 1907, consisting of a cylindrical intermediate portion F and two end portions F' F² of less diameter than the intermediate portion F, the latter thus constituting, in effect, a flange, by which the glass is held in the shell with its inner end protruding beyond the shell, as will be presently described.

G is a cylindrical tubular follower, externally threaded to engage the corresponding thread in casing B. The inner portion of the follower beyond its threaded head is reduced in diameter and terminates in an annular flange G', thus forming on the exterior of the follower, between its externally-threaded head and the flange G', a wide circular groove G². At its outer end the follower is provided with a hexagonal interior for the reception of a suitable wrench, by means of which the follower may be screwed into or out from the casing.

H is a metallic shell of cylindrical contour fully open at its outer end, so that the follower-flange G' and the larger cylindrical portion F of the glass may readily pass into it, and having its opposite end partly closed by an annular flange H', which leaves in the inner end of the shell an opening of the size and shape to permit the passage therethrough of the inner portion F' of the glass.

In the walls of the shell near its outer end are formed two diametrically opposite segmental slots in a plane at right angles to the axis of the shell, into each of which slots is detachably fitted a correspondingly-formed metallic segment H², which segments project through the slots into the interior of the shell to act as retaining-shoulders. The thickness of these segments is about twice that of the shell, and they are so located that when the parts are assembled they will be opposite to and enter the groove G² in the follower, which will thus be connected to the shell by a joint,

which will permit it to swivel or revolve freely on the latter.

K is an annular washer, of rubber or other approved material, which is seated against an annular shoulder L in casing B and is designed to encircle the inner portion F' of the glass, which protrudes through and beyond the shell, said portion F' being made long enough for this purpose.

In assembling the parts the segmental pieces H² are removed. Then the glass is first placed in the shell and next the follower, with its head resting on and bearing against the outer end of the shell, after which the segments H² are replaced, their projecting inner portions entering the groove G² in the follower and holding the latter securely to the shell, while permitting it to freely swivel or revolve independently of the latter.

The parts thus assembled are inserted as a unit in the casing, in which the washer K has previously been placed against its seat L, and the follower is then screwed into the casing. In thus advancing the follower bears upon the end of the shell and pushes it forward. The flanged inner end of the shell is thus caused to bear against and compress the washer, which under this compression will spread laterally, so as to close tightly around the portion F' of the glass and make therewith a fluid-tight joint. On the other hand, when the follower is screwed out its flange G' will be retained in engagement with the shell by the segments H², and the glass will be retained in the shell by its larger cylindrical portion, which brings up against the flange H' of the shell, and thus the whole arrangement—shell, glass, and follower—will pull out of the casing as a unit in the most simple and effective manner. The washer K will remain bedded in the casing; but, if desired, it may be easily removed by means of an ordinary hooked wire.

In place of using separate segment-pieces, like H², the arrangement shown in Figs. 5 and 6 can be employed. In this modification strips or tongues M are punched from the body of the shell corresponding in width and locality to the segments H².

In assembling the parts after the glass and follower have been inserted in the shell as already described these tongues are pushed or bent inwardly to enter the groove G² of the follower, where they serve the same purpose as the segments H², whose place they take.

These tongues, if desired, may have spring action, being set so that they normally project inwardly. In such event they would of course be drawn back and held out of the way until the follower had been fitted in place in the shell, after which they would be released and allowed to engage the groove in the follower.

Having described my invention and the manner in which the same is or may be carried into effect, I state in conclusion that I do not desire to be understood as restricting myself narrowly to the structural details hereinbefore set forth, since manifestly the same can be varied to some extent without departure from the spirit of my invention; but

What I claim herein as new, and desire to secure by Letters Patent, is as follows:

1. In a sight for lubricators, a casing, a shell, a glass contained and held in the shell, and a follower connected to, but capable of revolution independently of, the shell, the shell, glass and follower adapted to be inserted in and withdrawn from the casing as a unit, substantially as and for the purposes hereinbefore set forth.

2. In a sight for lubricators, a casing provided with a seat for a washer, a shell adapted to fit in the casing and bear against the washer, a glass held in the shell with its inner end protruding therefrom through the washer, a follower engaging the casing and connected to, but capable of revolving independently of, the shell, and adapted to push into, or pull out from, the casing, the shell and its contents as a unit, substantially as and for the purposes hereinbefore set forth.

3. In a sight for lubricators, a shell with a flanged inner end, a glass provided with an intermediate portion which rests against the flange in the shell, and with an end portion of less diameter which protrudes through the flanged end of the shell, a follower having an externally-screw-threaded head and a circular external groove in that portion of it beyond the head, and retaining means on the shell to enter and engage said groove, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER L. ABATE.

Witnesses:

LEO ARNSTEIN,
LEOPOLD KASSANDERY.