

V. Giroud,

Lubricator.

N^o 49,624.

Patented Aug. 29, 1865.

Fig. 1.

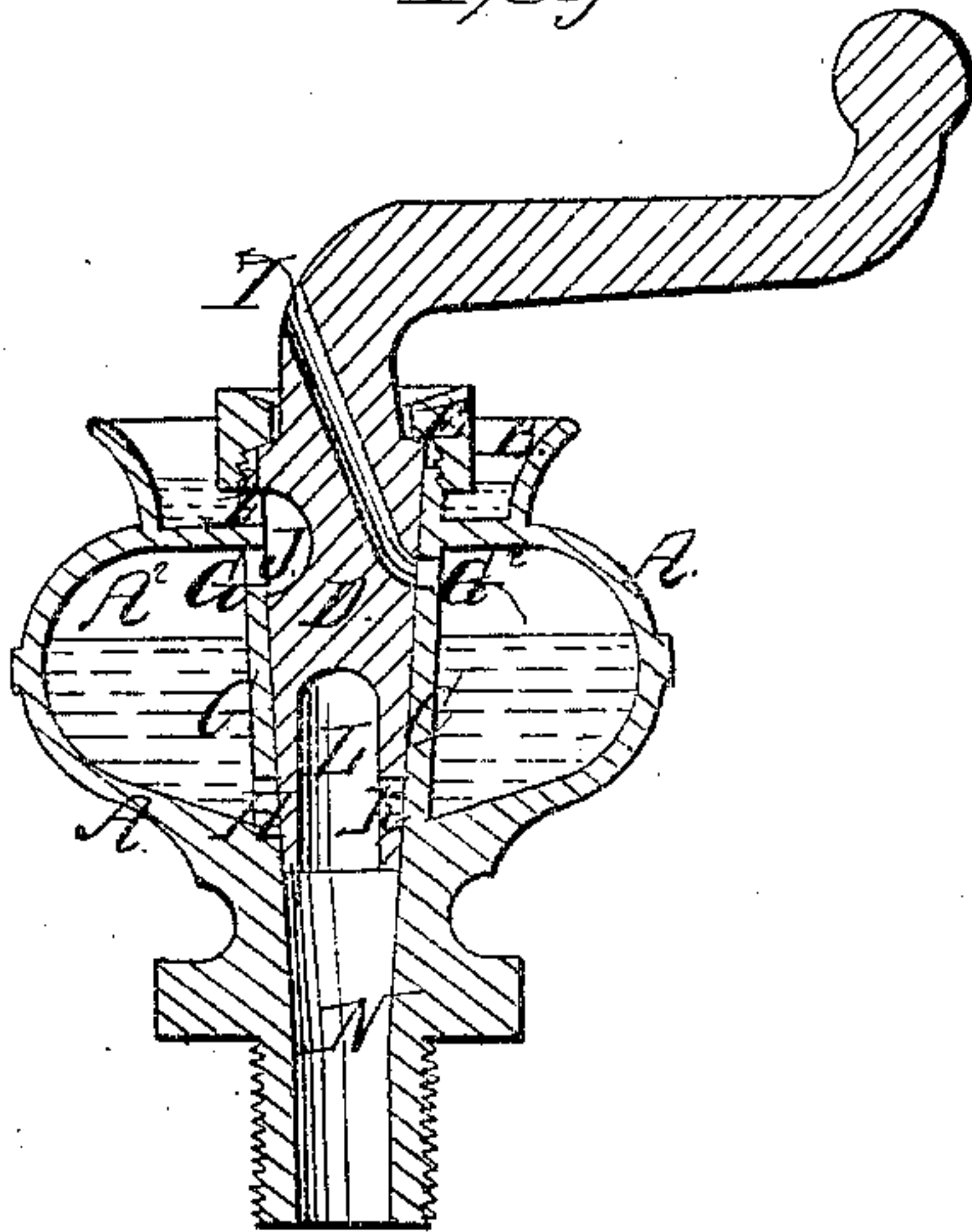


Fig. 2.

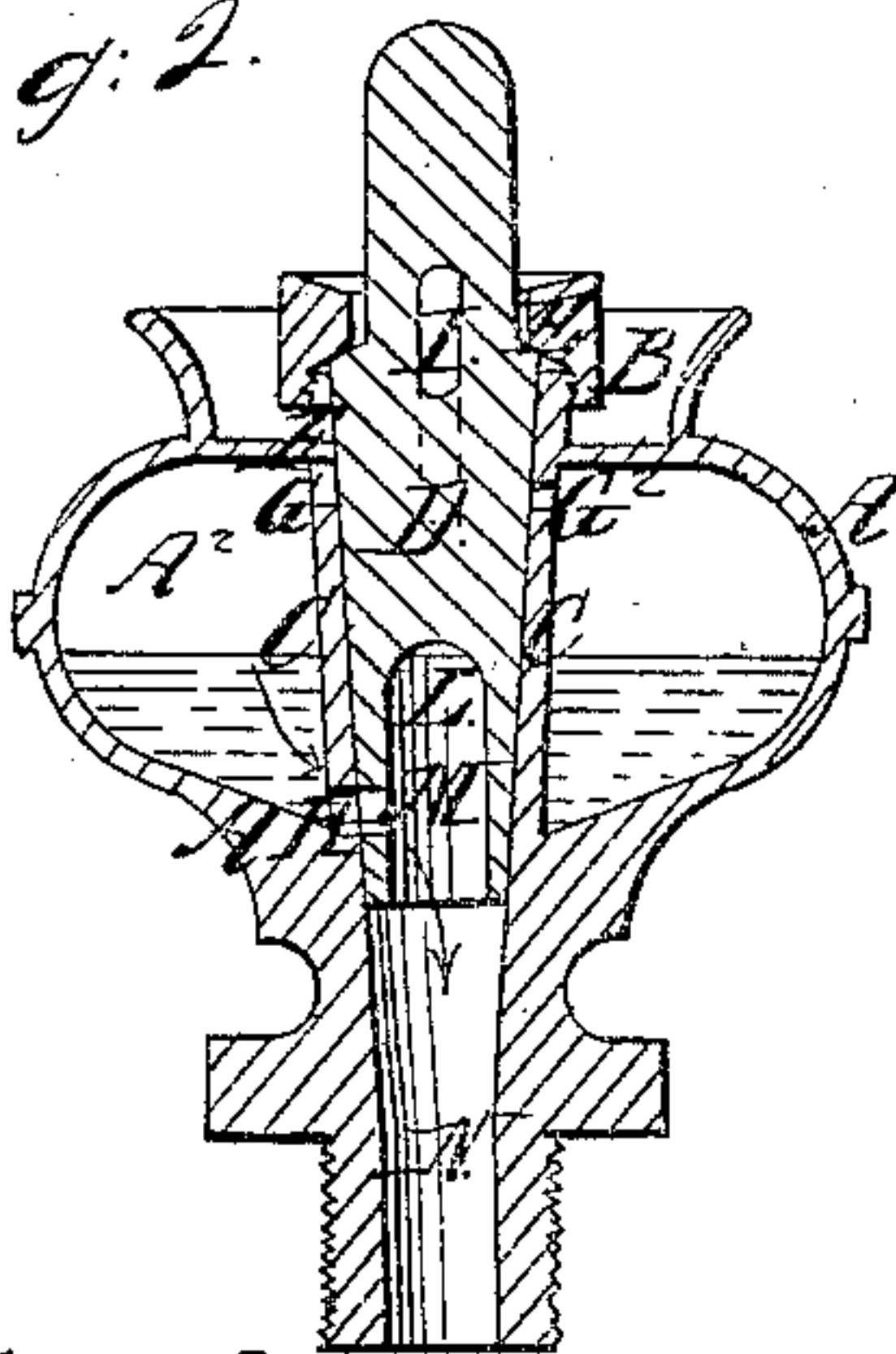
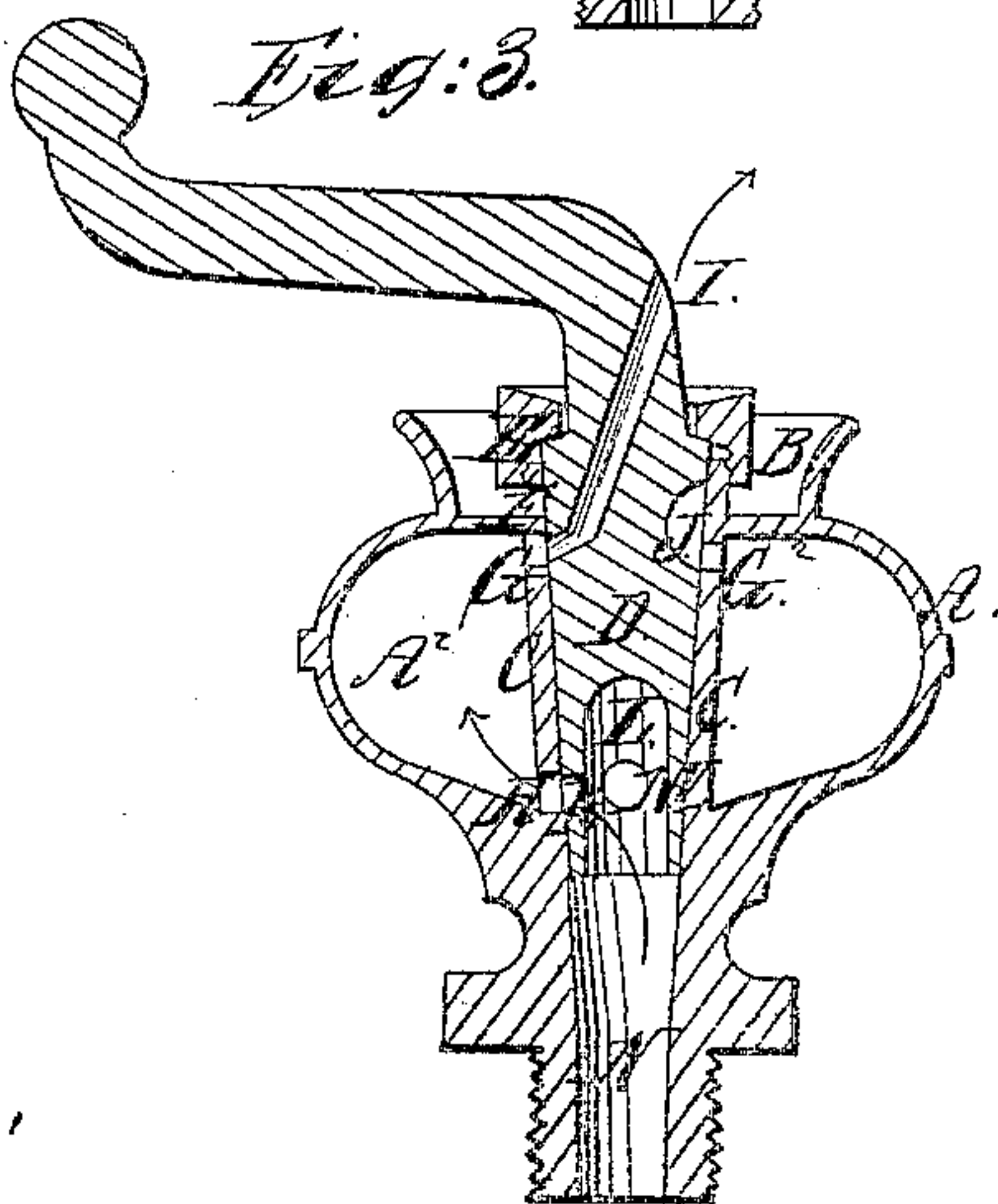


Fig. 3.



Witnesses:

*J. W. Corbitt
Geo. W. Reed.*

Inventor:

V. Giroud

UNITED STATES PATENT OFFICE.

VICTOR GIROUD, OF NEW YORK, N. Y.

IMPROVEMENT IN GLOBE OIL-CUPS.

Specification forming part of Letters Patent No. 49,624, dated August 29, 1865.

To all whom it may concern:

Be it known that I, VICTOR GIROUD, of the city, county, and State of New York, have invented a new and useful Improvement in Globe Oil-Cups for the Valve Chests and Cylinders of Steam-Engines and for other Purposes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central vertical section of my invention with the plug or spigot of the cock upon the oil-cup in a position for admitting the oil into the globe part of the cup. Fig. 2 is a similar section, in which the plug occupies a position at right angles to that represented in Fig. 1, for allowing the oil to run from the globe to the place where lubrication is required. Fig. 3 is also a central vertical section, with the plug in a position directly opposite to that represented in Fig. 1, for blowing out any obstruction from the passages.

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

The object of my invention is to enable one cock in a globe oil-cup for steam-valve chests and other apparatus to serve the purpose of the two or more cocks commonly applied to such oil-cups.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The outer shell of the oil-cup has formed upon its upper part, above the globe A, an open receiver, B, into which is poured or placed the oil or other lubricating material. Within this outer shell, and concentric therewith, there is an inner shell, C, which forms the socket for the plug or spigot D, and which is secured steam-tight in the top and bottom of the globe. This inner shell, C, extends right through the globe or shell A into the receiver B, and has a male thread cut upon the exterior of its upper part, above the globe, for the purpose of receiving upon it a cap, E, with a female thread cut upon its interior vertical surface. This cap has a central opening in its upper part, which slides over the lever d^2 of the plug, and is screwed down upon the screw cut upon the shell C till it bears upon the shoulder d of the plug D, to hold the latter in its place.

The inner shell, C, is provided in its periphery with four openings or ports, F G H G^2 , the three latter of which are inside of the globe part of the cup, and the first one is situated immediately above the globe part and in the receiver B. F, G, and H are in the same axial planes, G being close to the top of the globe and H near the bottom, and G^2 being opposite to G. The plug D has in its lower part a central cavity, L, which is open at the bottom. It has also in one side, above this cavity L, a cavity, J, which ranges with the ports F and G. It has further three ports, I K M. The port I extends obliquely from one side through the top of the plug, its lower orifice ranging with the two ports G G^2 in the shell C.

The ports K and M, which communicate with the cavity J, range with the port H, K being in the same axial plane with I, and M being in the same plane of rotation with K and at ninety degrees therefrom.

When the plug is situated in the position shown in Fig. 1 the oil or other lubricating material placed in the receiver B is allowed to flow through the port F in the shell C into the cavity J in the plug, and from there it runs through the port G into the globe part of the cup A². Any air which has been contained in the globe A is displaced and forced out by the lubricating material through the port G^2 in the shell C, thence through the port I in the plug D into the atmosphere. The port H, at the lower part of the shell C, which communicates with the interior of the chest or chamber to which the cup is applied, is in the last-described position closed, allowing no oil to escape downward into the vessel or steam within the vessel to escape upward. The lubricating material having been thus introduced within the cup, in order to allow it to be conducted to the steam chest or chamber on which the cup is situated, the plug D is turned to the position shown in Fig. 2, which is at about ninety degrees to that which it occupies in Fig. 1, and the ports which were open in that position of the plug will be now closed, and the interior A² of the globe will be entirely shut off from any communication with the external air; but the communications between the cup and the steam-vessel—in this instance by means of the port H in the shell C and the port M in the

cavity L in the plug—are opened, so as to allow the oil or other material to flow into the steam chest or cylinder by its gravity being greater than the fluid into which it is allowed to run; or in an engine-cylinder or steam-chest from which the steam has been discontinued, and is still running, a partial vacuum is produced by the motions of the piston, which assists the conduction of the lubricating material into the steam-chest, as in the case of a locomotive running down a grade with the steam shut off, under which circumstances lubrication is most required.

In practice it often becomes necessary to blow out or through the oil-cup to clear the cup and ways of any solid matter which may become lodged therein. In order to do this the plug D must occupy a position, as represented in Fig. 3, which is directly opposite or one-half a revolution of the plug from the position shown in Fig. 1, the ports H and K being thus brought opposite to each other to com-

municate with the steam chest or chamber, and the ports G and I, being opposite each other, communicate with the atmosphere, so that the steam or confined fluid within the vessel will force its way through the central cavity, L, in the plug, through the port K, thence through the port H in the inner shell to the interior of the globe-cup, whence it passes out by the port G in the shell C, and thence through the port I into the atmosphere.

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

The plug D, with ways or ports I, J, K, L, and M, in combination with the inner shell, C, with ways F, G, G², and H, the globe A², and receiver B, the whole arranged and operating substantially in the manner herein described, for the purposes set forth.

V. GIROUD.

Witnesses:

J. W. COOMBS,
GEO. W. REED.