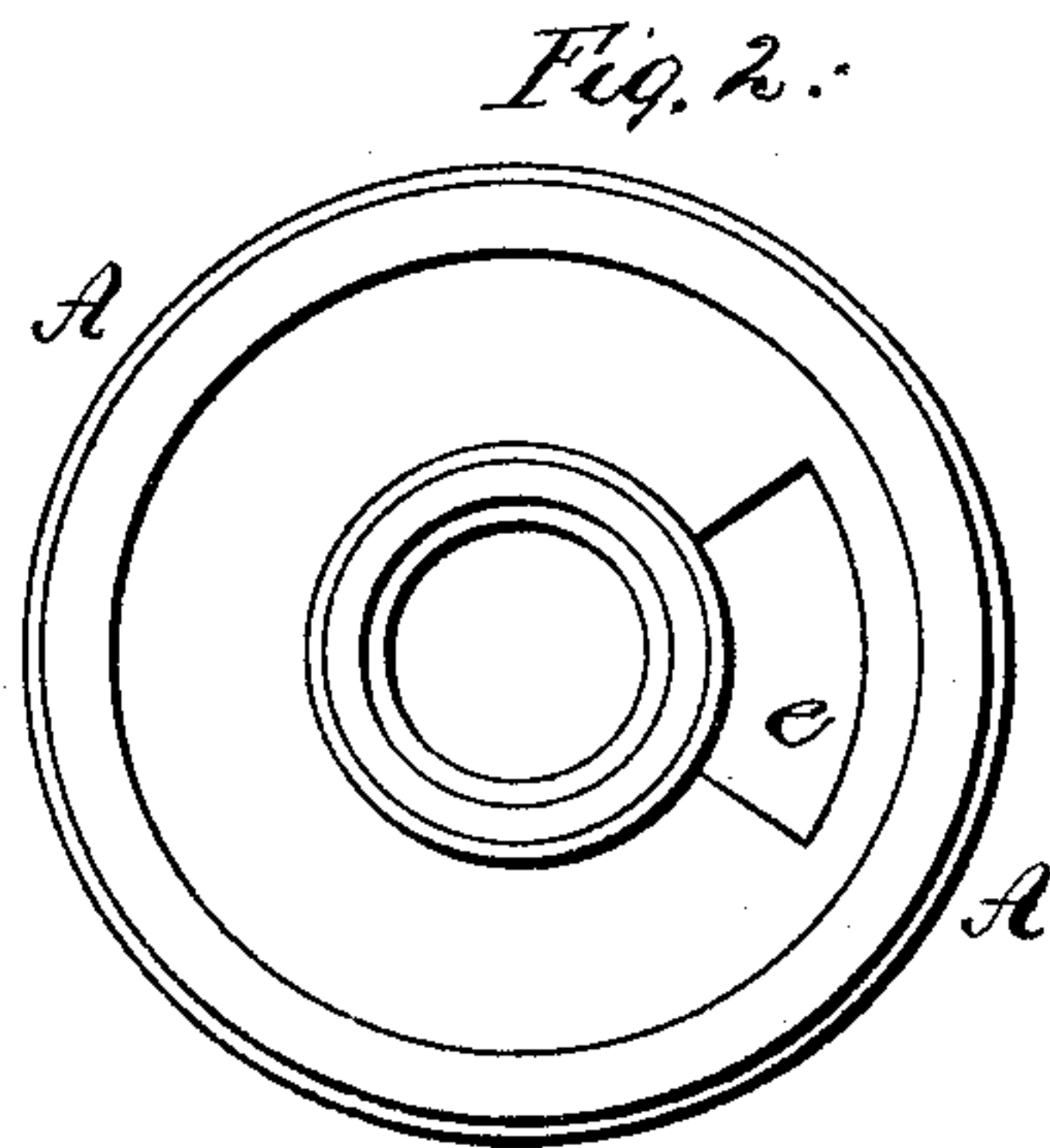
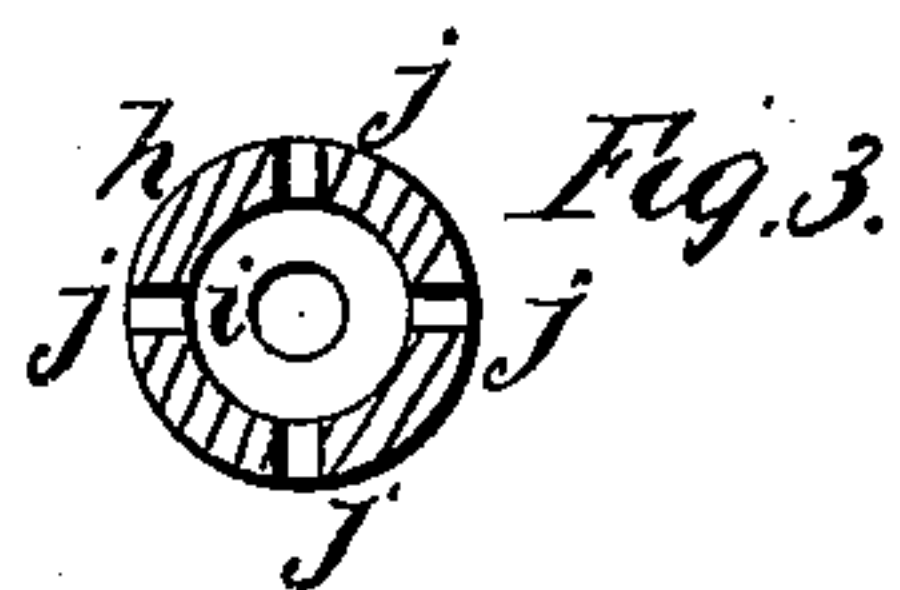
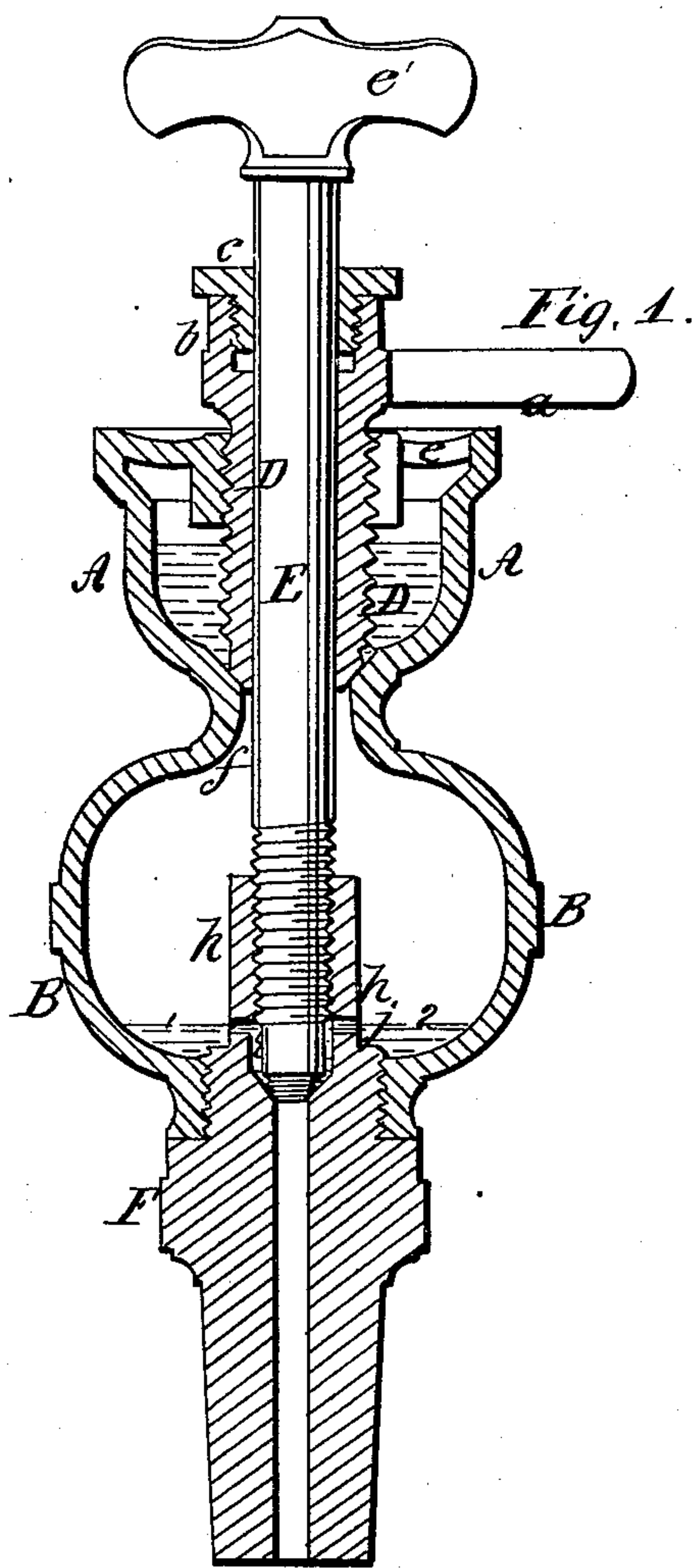


R. Ross.
Lubricator.

N^o 33,508.

Patented Oct. 15, 1861.



Witnesses;

Chas. Howson
Charles Foster

Inventor;

Henry Howson
Atty for R. Ross

UNITED STATES PATENT OFFICE.

ROBERT ROSS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND
RICHARD BOND, OF SAME PLACE.

IMPROVED OIL-CUP OR LUBRICATOR.

Specification forming part of Letters Patent No. 33,508, dated October 15, 1861.

To all whom it may concern:

Be it known that I, ROBERT ROSS, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Improvement in Oil-Cups; 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, and to the letters of reference marked thereon.

My invention relates to that class of oil-cups which are used for lubricating cylinders, steam-chests, &c., and which are so constructed that oil may be introduced without allowing the steam to escape.

My invention consists of a screw-valve with a stuffing-box and an internal screwed valve-spindle, in combination with an annular chamber and certain passages, the whole being constructed and arranged in respect to the upper and lower reservoirs of an oil-cup, as described hereinafter, so as to avoid the faucets which are generally used in this class of oil-cups, and which render the same cumbersome and expensive.

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

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of my improved oil-cup; Fig. 2, a plan view; and Fig. 3 a sectional plan on the line 1 2, Fig. 1.

Similar letters refer to similar parts throughout the several views.

The body of the oil-cup is divided into the upper compartment A and lower compartment B, communicating with each other through a passage *f*, the upper reservoir being closed at the top, with the exception of an opening *e* for the admission of the oil. Into the lower end of the lower reservoir screws a hollow branch F, by means of which the oil-cup is attached to the cylinder or steam-chest requiring lubrication, the upper end *h* of this branch projecting into the interior of the reservoir.

Through the cover of the upper reservoir A passes the hollow screw-valve D, the lower end of which is beveled and ground tightly to a beveled seat formed at the upper end of the passage *f* between the two reservoirs, the

upper end of the screw-valve being provided with a suitable handle *a* and a hollow enlargement *b*, which, together with the gland or follower *c*, forms an ordinary stuffing-box. Through the latter, as well as through the interior of the screw-valve D, passes a spindle E, furnished at the top with a suitable handle *e'*, and having toward its lower end the thread of a screw adapted to similar threads in the projection *h* of the branch F. At the termination of the screwed portion of the spindle the latter is reduced in diameter, so that there may be an annular space or chamber *i* all around it, the extreme end of the spindle being cone-shaped and ground to a similarly-shaped seat within the hollow branch F.

The annular chamber *i* communicates with the interior of the lower reservoir B, through any suitable number of lateral openings *j*. (Best observed on reference to Fig. 3.)

The upper reservoir A is always maintained nearly full of oil, which is admitted to the lower reservoir by unscrewing the valve D, while the lower valve is closed, thereby opening the communication *f*. When a proper amount of oil has been admitted to the lower reservoir, the valve D is closed and all communication between the two reservoirs cut off. The oil thus admitted to the lower reservoir has free communication with the annular chamber *i* through the lateral openings *j j*, so that on unscrewing the valve-spindle E and thereby raising its beveled end from the seat in the branch F the steam passing through the branch will in the first instance displace the oil in the annular chamber and fill the lower reservoir without passing upward into the upper chamber, owing to the valve D, or between the latter and the spindle E, owing to the stuffing-box, through which the said spindle passes. The pressure of steam in the lower reservoir being equal to that in the cylinder or steam-chest to be lubricated, the oil will pass through the lateral openings *j* into the annular chamber *i*, and flow thence down the interior of the branch F to its destination, after which the spindle E is screwed down so that its lower end shall bind tightly to its seat.

By the above-described simple arrangement of screw-valve with its internal valve-spindle, the ordinary faucets which tend to

render this class of oil-cups cumbrous in appearance and expensive in construction are avoided.

I wish it to be understood that I do not claim, broadly, the hollow screw-valve D and internal screw-spindle E, the former for admitting oil to the cup and the latter for allowing the oil to flow from the cup, an equivalent arrangement of valves as applied to oil-cups being shown in the patent granted to E. N. Roland, December 15, 1857; but

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

The screw-valve D, with its stuffing-box and

the screwed valve-spindle E, in combination with the annular chamber *i* and its passages *j*, the whole being constructed and arranged in respect to the upper reservoir A and lower reservoir B, as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT ROSS.

Witnesses:

GEORGE MAGEE,
JAMES MATHEWS.