

No. 629,449.

Patented July 25, 1899.

J. J. LOCKE.
CHECK VALVE.

(Application filed Apr. 17, 1899.)

(No Model.)

Fig. 1.

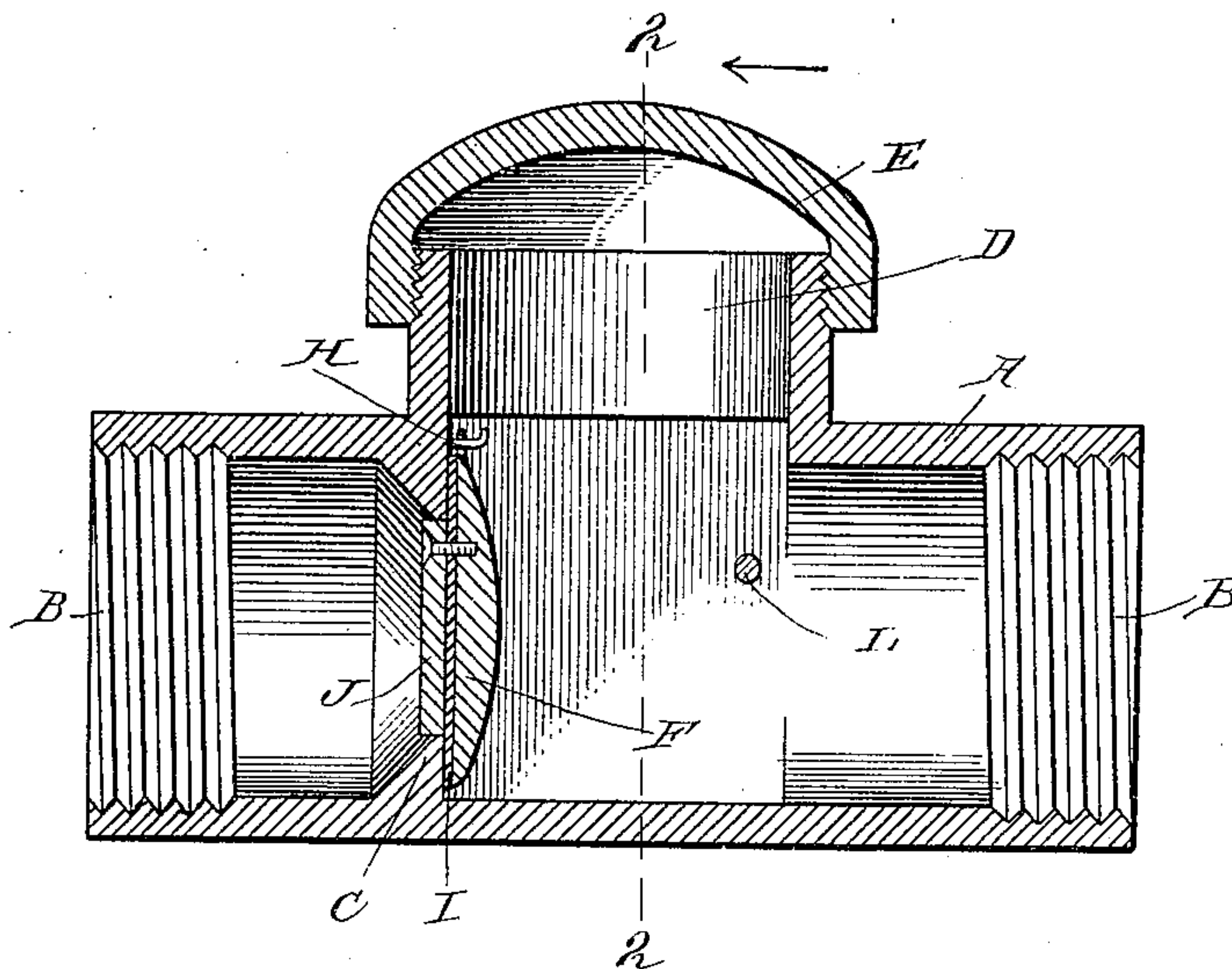


Fig. 2.

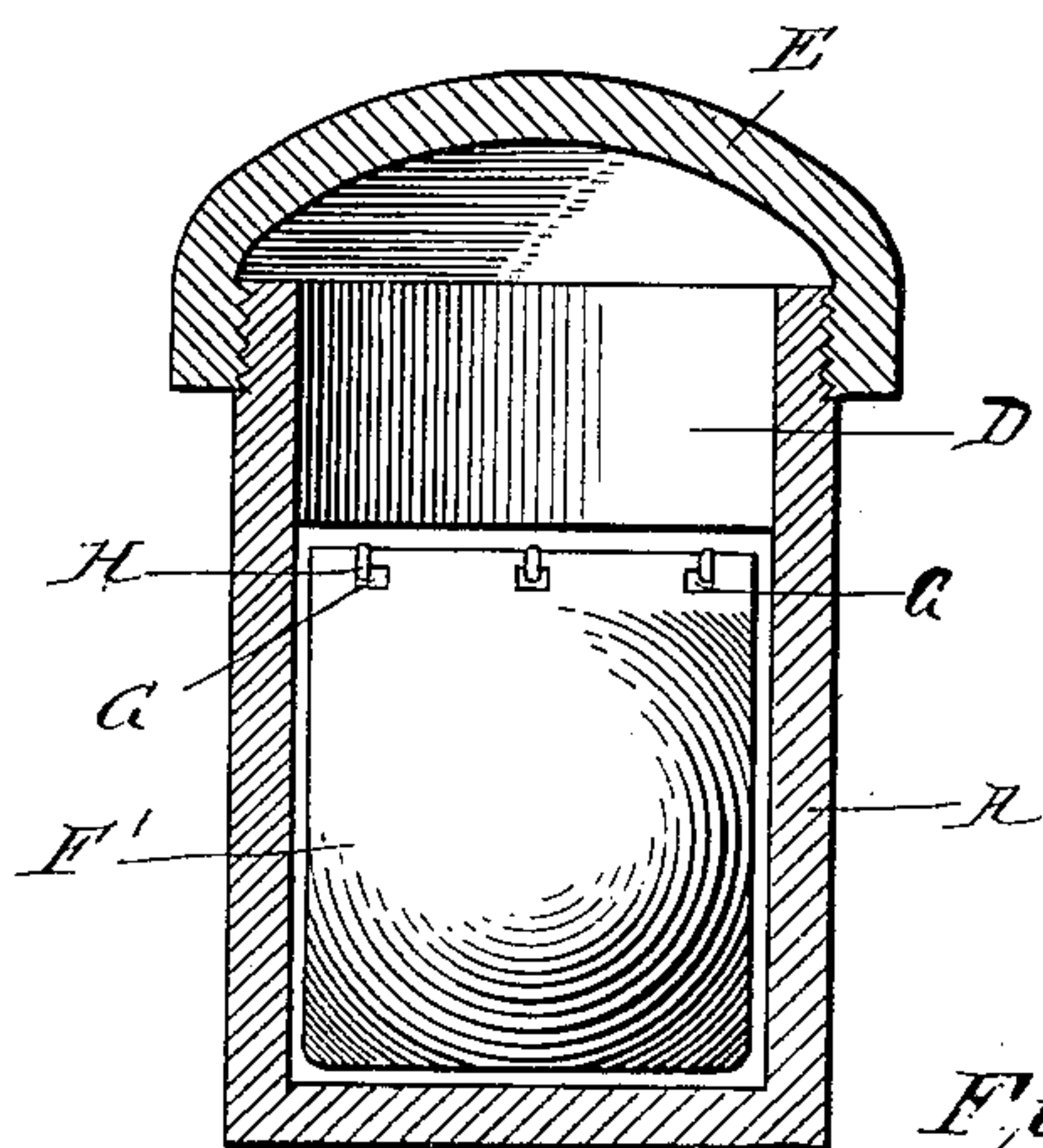


Fig. 3.

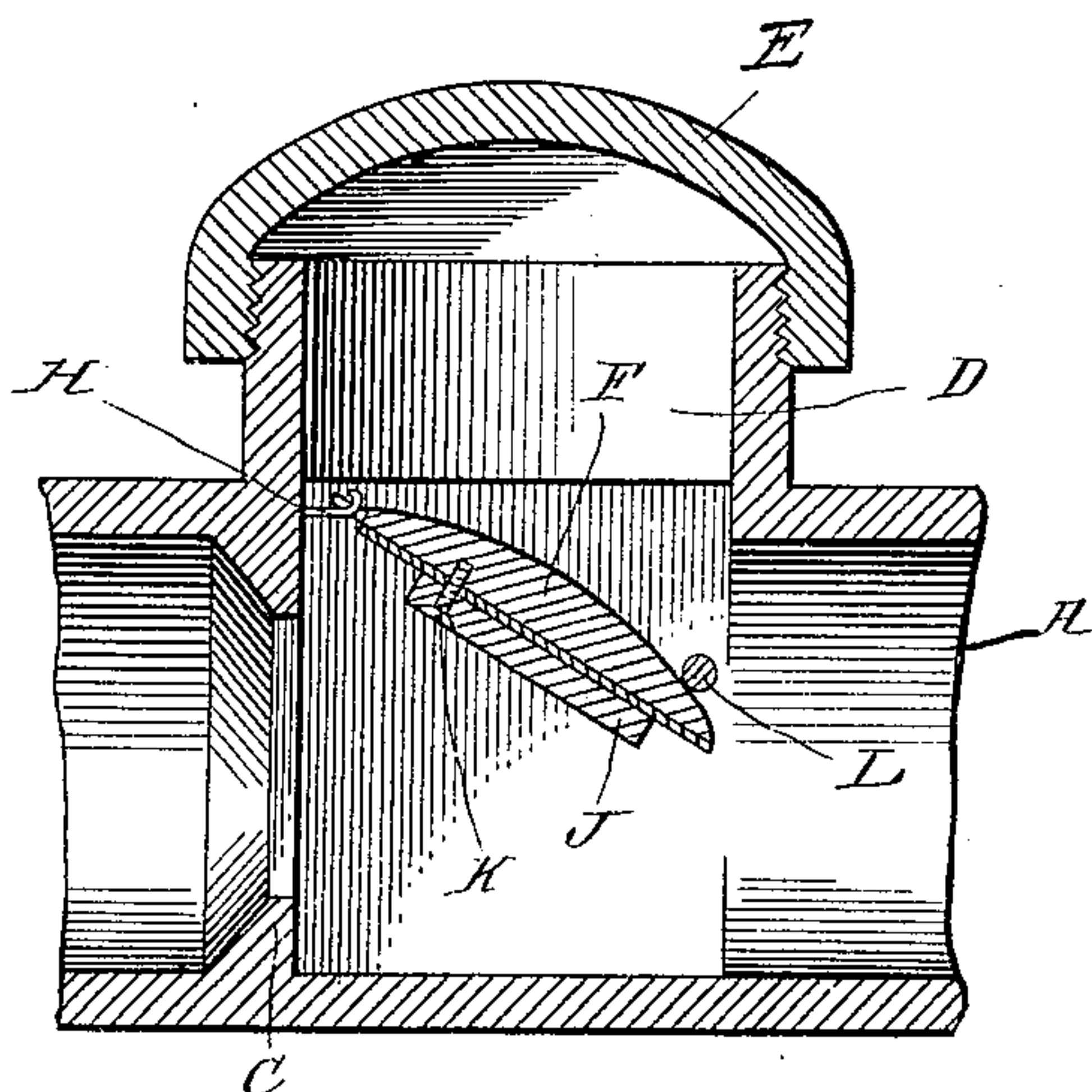
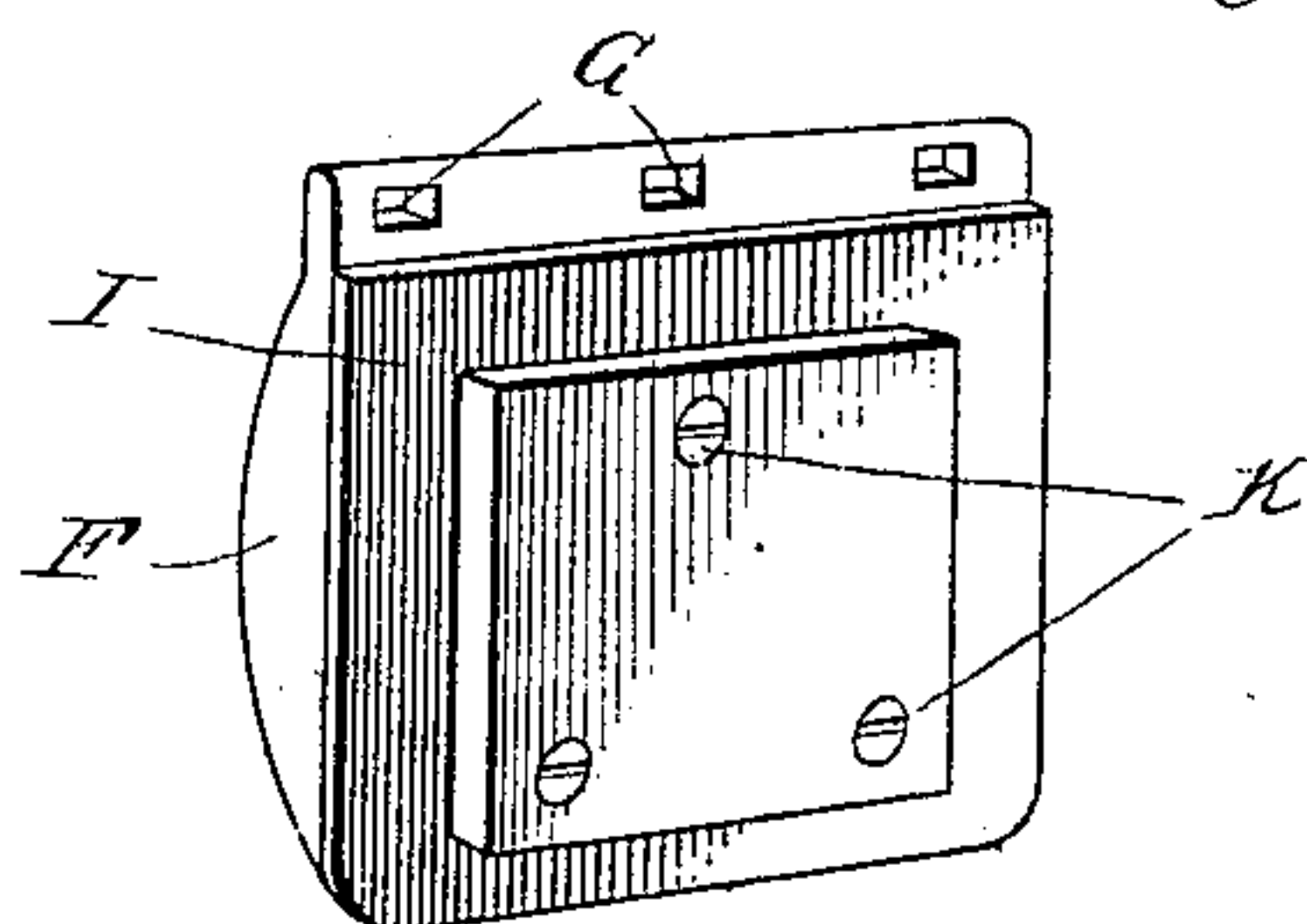


Fig. 4.



Witnesses

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CHECK-VALVE.

SPECIFICATION forming part of Letters Patent No. 629,449, dated July 25, 1899.

Application filed April 17, 1899. Serial No. 713,350. (No model.)

To all whom it may concern:

Be it known that I, JAMES JOHN LOCKE, a citizen of the United States, residing at Chickalah, in the county of Yell and State of Arkansas, have invented a certain new and useful Check-Valve, of which the following is a specification.

My invention relates generally to check-valves, and more particularly to that class of check-valves adaptable for use in the feed-water pipes of steam-boilers, the object of the invention being to provide a strong, neat, cheap, reliable, and durable valve the use of which will avoid many of the accidents and difficulties encountered in the use of ordinary check-valves.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, having reference to the accompanying drawings, forming part hereof, in which—

Figure 1 is a vertical sectional view on a plane cutting longitudinally through a check-valve constructed in accordance with my invention, the valve being closed. Fig. 2 is a transverse vertical section taken on the plane indicated by the dotted line 2 2 of Fig. 1, looking in the direction of the arrow. Fig. 3 is a similar view to Fig. 1, the valve being open and the ends of the case broken away. Fig. 4 is a detail perspective view of the valve removed from the case.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by letters, A indicates the casing or frame of the valve, which has cylindrical threaded ends B B to receive pipes, a cubical central chamber in which the valve works and in one side of which is the valve-seat C, and a vertical extension D of the central box or chamber, through which the valve can be inserted or removed, said extension being closed by the screw-cap E.

F indicates the valve, which is made, preferably, of brass or analogous metal, is rectangular in outline, has a flat rear face and a convex front face, and is provided with a series of slots G near its upper edge to engage over hooks H, and thereby pivotally support the valve with a normal tendency to hang in its closed position.

On the rear flat face of the valve F is a square sheet I of asbestos packing, in position to lie between the valve and its seat when the valve is closed, such packing being held in place on the valve by a clamp-plate J, secured by screws K, the clamp-plate being of less diameter than the opening in the valve-seat, so as not to interfere with the seating of the packing, as clearly shown in Fig. 1.

L indicates a stop-pin to prevent the valve from rising too high when opened by the passage of the water.

The operation of my invention will be readily understood from the foregoing description. Water will freely pass through the valve from the outside, (from the left as indicated in Figs. 1 and 3,) tipping up the valve to the position shown in Fig. 3 if the flow is sufficiently strong; but any back flow or pressure will at once close the valve down to position of Fig. 1, and the heavier the back pressure the tighter the valve will be closed.

The advantages attending the use of my invention are numerous. The water has a straight passage, without crooks or turns, to increase friction, and has no dead-weight to raise, as in a lift-valve. The asbestos packing will not stick and cause trouble in the water-feeder. The packing is pressed to the seat by back pressure, and leakage is impossible. The valve is loosely mounted on the hooks and can be lifted out freely and easily replaced by simply unscrewing the cap. It can also be easily taken apart and cleaned or new packing attached by simply removing the clamp-plate.

While I have illustrated and described efficient means for carrying out my invention, I do not restrict myself to the exact forms and constructions shown, as many slight changes might be made therein without departing from the spirit of the invention.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a check-valve, the combination with the case or body having a cubical chamber and
5 a valve-seat in one side thereof, of hooks arranged above the valve-seat, the valve proper provided with slots to pass over said hooks, whereby the valve is suspended thereon, and a stop-pin to prevent the valve from rising too
10 high when open, substantially as described.

2. The valve-plate herein described, rectangular in outline, having a flat rear face, a convex front face, and a series of suspending

slots near its upper edge, a sheet of asbestos
packing on the rear face, and a clamp-plate 15
of less area than the orifice on the valve-seat secured by screws to the plate and holding the packing in place, in combination with the valve-case, the valve-seat therein, the suspending-hooks over the valve-seat, the stop- 20
pin, the upward extension-chamber, and the cap therefor, substantially as described.

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Witnesses:

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