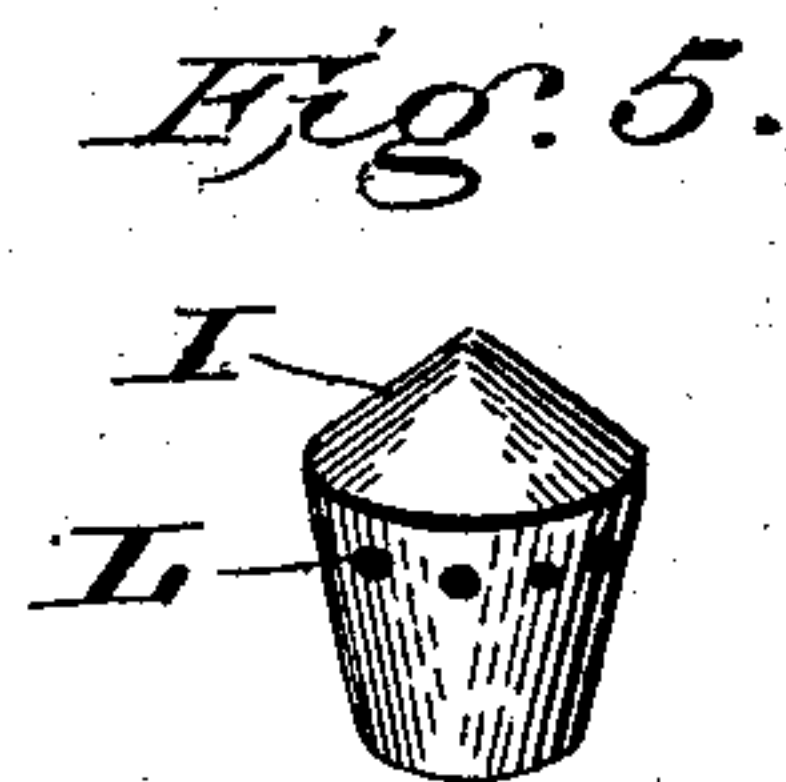
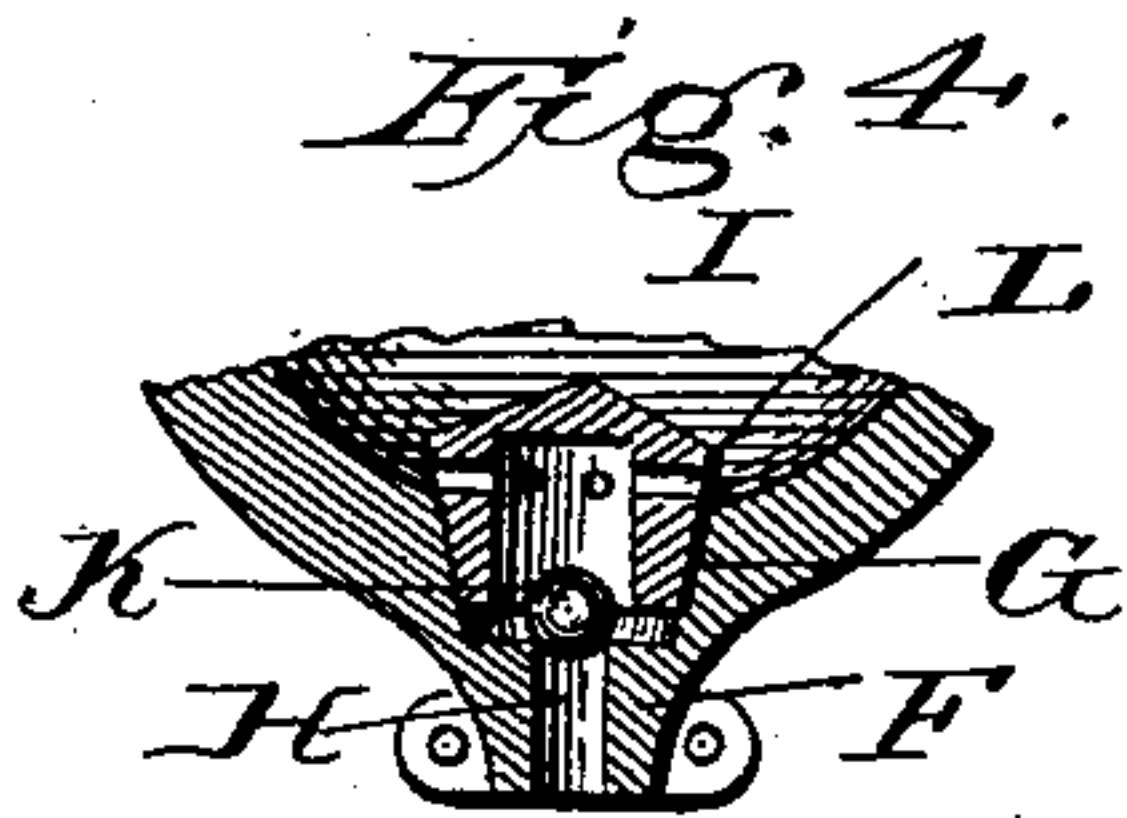
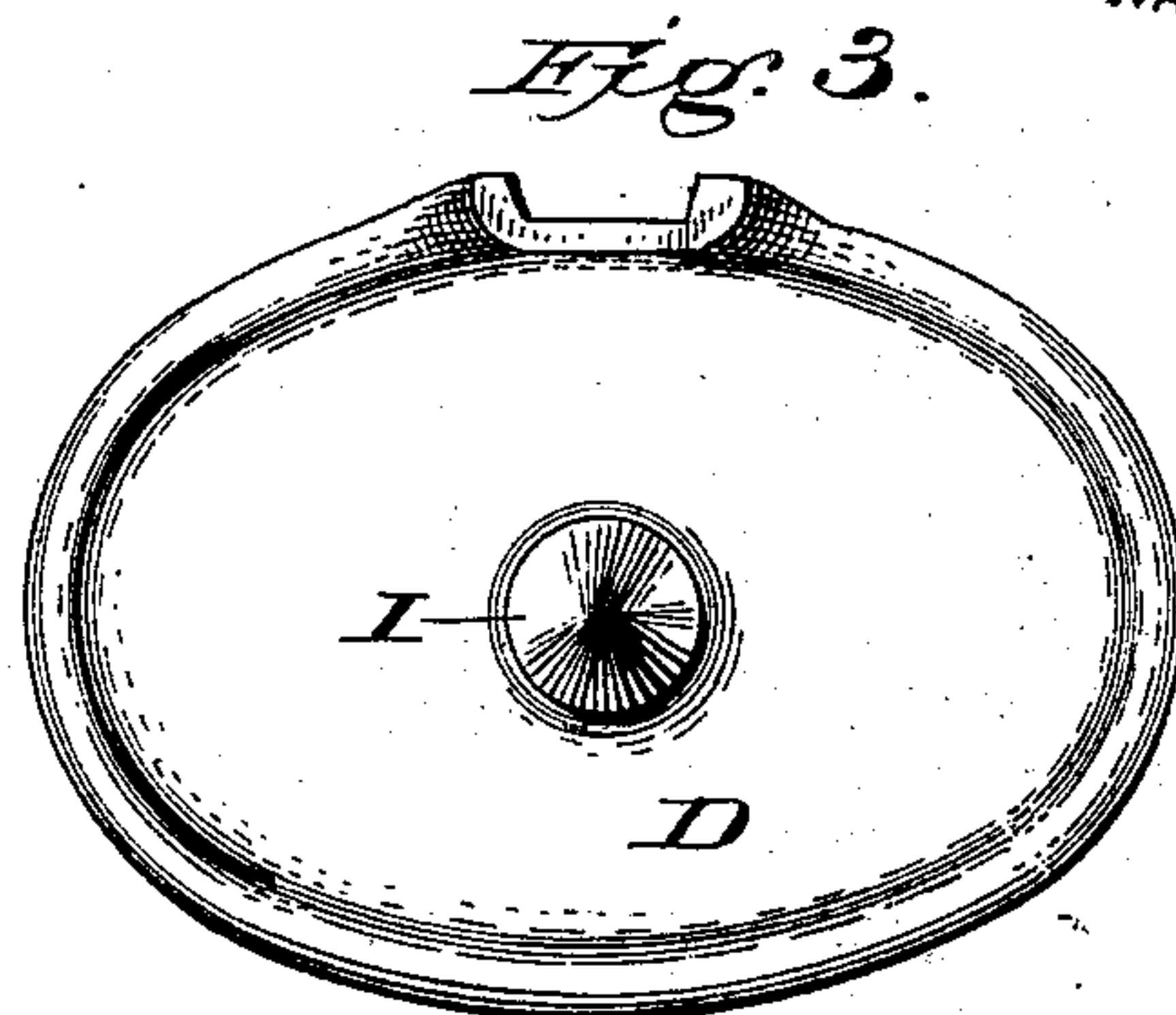
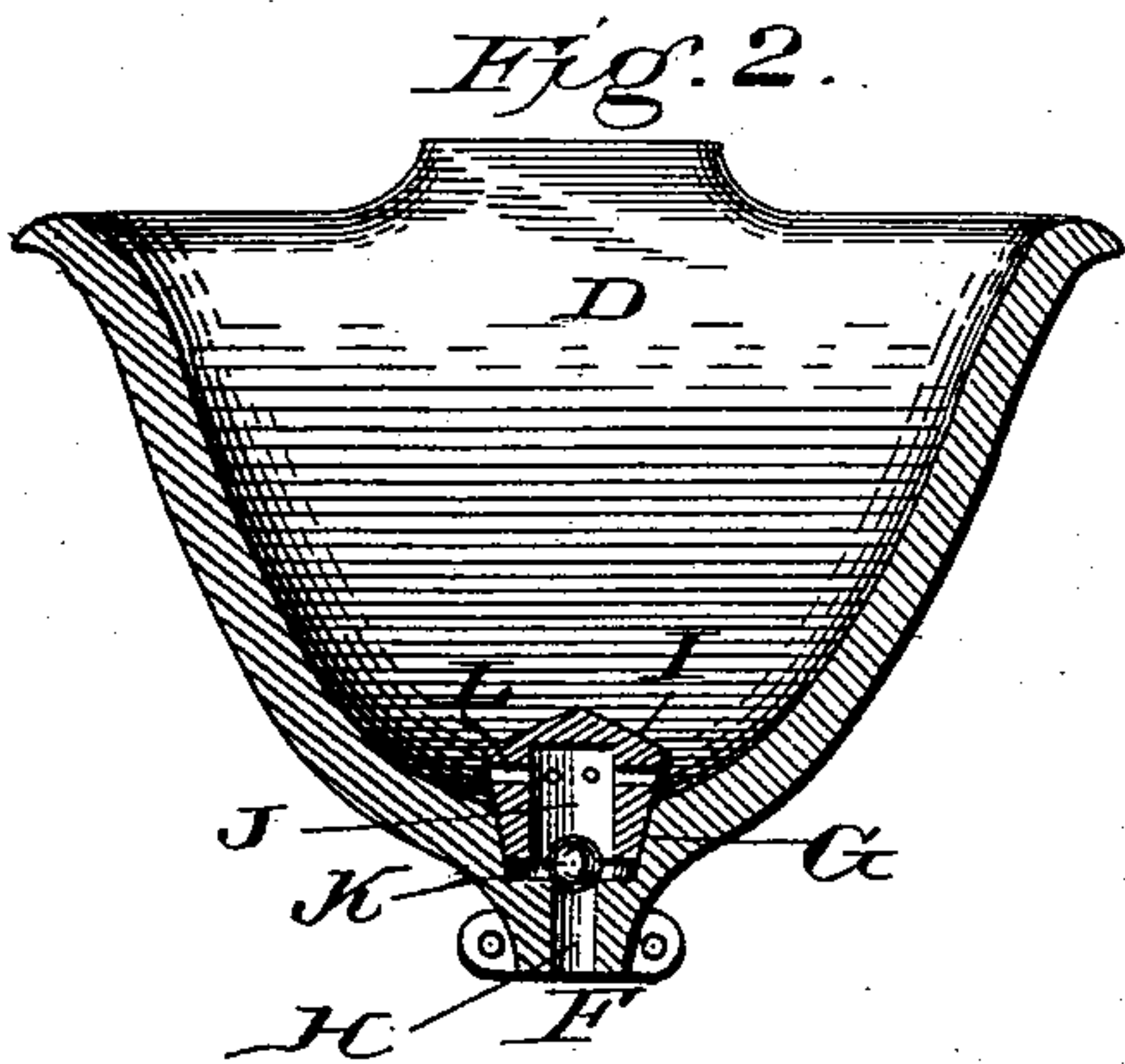
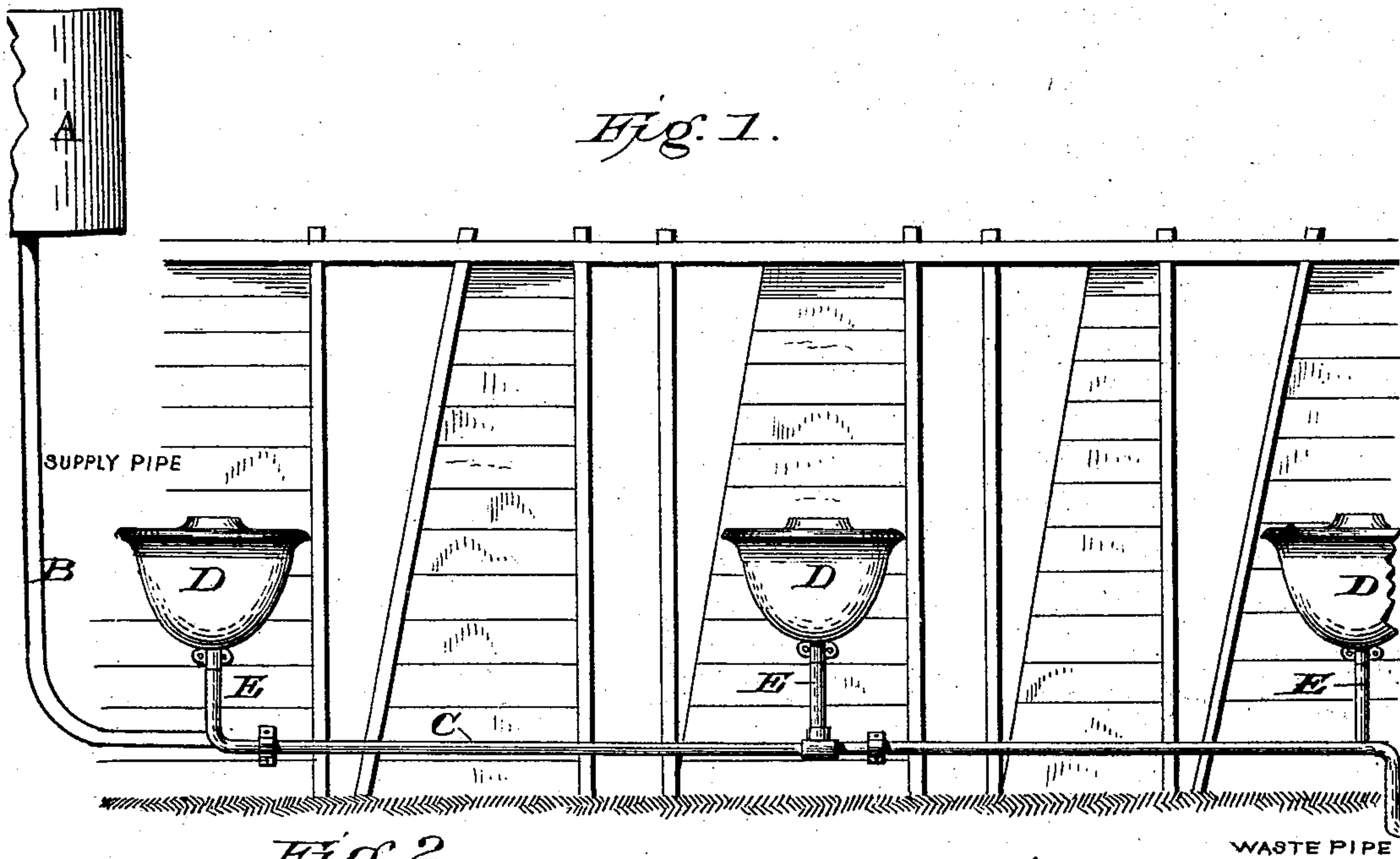


(No Model.)

H. CARROLL.  
STOCK WATERING TROUGH.

No. 491,077.

Patented Feb. 7, 1893.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

HIRAM CARROLL, OF PAWLING, NEW YORK.

## STOCK WATERING-TROUGH.

SPECIFICATION forming part of Letters Patent No. 491,077, dated February 7, 1893.

Application filed April 14, 1892. Serial No. 429,181. (No model.)

*To all whom it may concern:*

Be it known that I, HIRAM CARROLL, a citizen of the United States, residing at Pawling, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Stock Watering-Troughs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in stock-watering troughs.

The object of my invention is to provide a water receptacle having its contour composed wholly of curves with its valve and valve seat arranged below the bottom of the receptacle and the valve cage or casing retained in its seat by frictional contact only, whereby the valve and cage may be easily removed and the receptacle quickly cleansed of sediment.

With these objects in view, the invention consists in the novel construction and combination of parts of a watering trough as will be hereinafter fully described and claimed.

In the accompanying drawings forming part of this specification and in which like letters of reference indicate corresponding parts: Figure 1 is a side elevation, showing the manner of connecting a series of water receptacles. Fig. 2 is a vertical longitudinal sectional view through one of the receptacles showing the contour of the receptacle, and also the construction and arrangement of the valve and the valve cap. Fig. 3 is a top plan view of one of the receptacles. Fig. 4 is a sectional view of the lower portion of one of the receptacles, showing more particularly the construction of the valve seat, and Fig. 5 is a detail view of the valve cap.

Referring to the drawings, A designates a water reservoir, B a supply pipe for feeding water thereto, C a distributing pipe connecting with the reservoir, D a number of troughs or water receptacles, and E pipes connecting the receptacles with the distributing pipe. As the above arrangement is clearly shown in the patent to Charles E. Buckley, No. 445,920, no claim is laid to it herein.

The receptacle, D, which constitutes the

subject-matter of the present invention, is approximately conoidal in inverted elevation, and substantially elliptical in cross section. This form presents a vessel having neither interior nor exterior angles, so that there are no recesses presented into which extraneous matter can find lodgment. Extending below the bottom of the receptacle is a teat or lug, F, which may be either integral with the receptacle or secured thereto, which teat is formed with a combined tapered cap and valve seat, G, terminating in an orifice, H, and to this teat is secured the pipe, E.

I designate the valve cap, which is tapered to fit the valve seat, G, and is retained in position therein by frictional contact. The interior of the cap is chambered as at J, and in this chamber works the valve, K, which is by preference a ball valve, the upper portion of the cap having a plurality of escape openings, L, through which the water from pipe, E, flows into the receptacle.

As the operation of this device will be obvious, it is deemed unnecessary to give a detail description of the same, excepting in so far as it relates to the peculiar advantages of the water receptacle herein described. As before stated, by having the lines forming the interior all curved, instead of straight, there is no possibility of foreign substances finding any lodgment. Secondly, by having the valve seat arranged below the bottom of the receptacle, its cleansing is still further facilitated; and, thirdly, by having the valve cap held in place frictionally, instead of by screws or bolts, no tools are required when its removal is desired.

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

In a stock watering device, a receptacle having the lines of its interior composed wholly of curves, a tapering combined cap seat and valve seat arranged below the bottom of the receptacle, a valve located in said seat and a tapering cap retained in said seat by frictional contact and provided with openings.

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

HIRAM CARROLL.

Witnesses:

HENRY PEARCE,  
F. F. HOAG.