

(No Model.)

J. O. BENTLEY.
STILL.

No. 557,102.

Patented Mar. 31, 1896.

Fig. 2

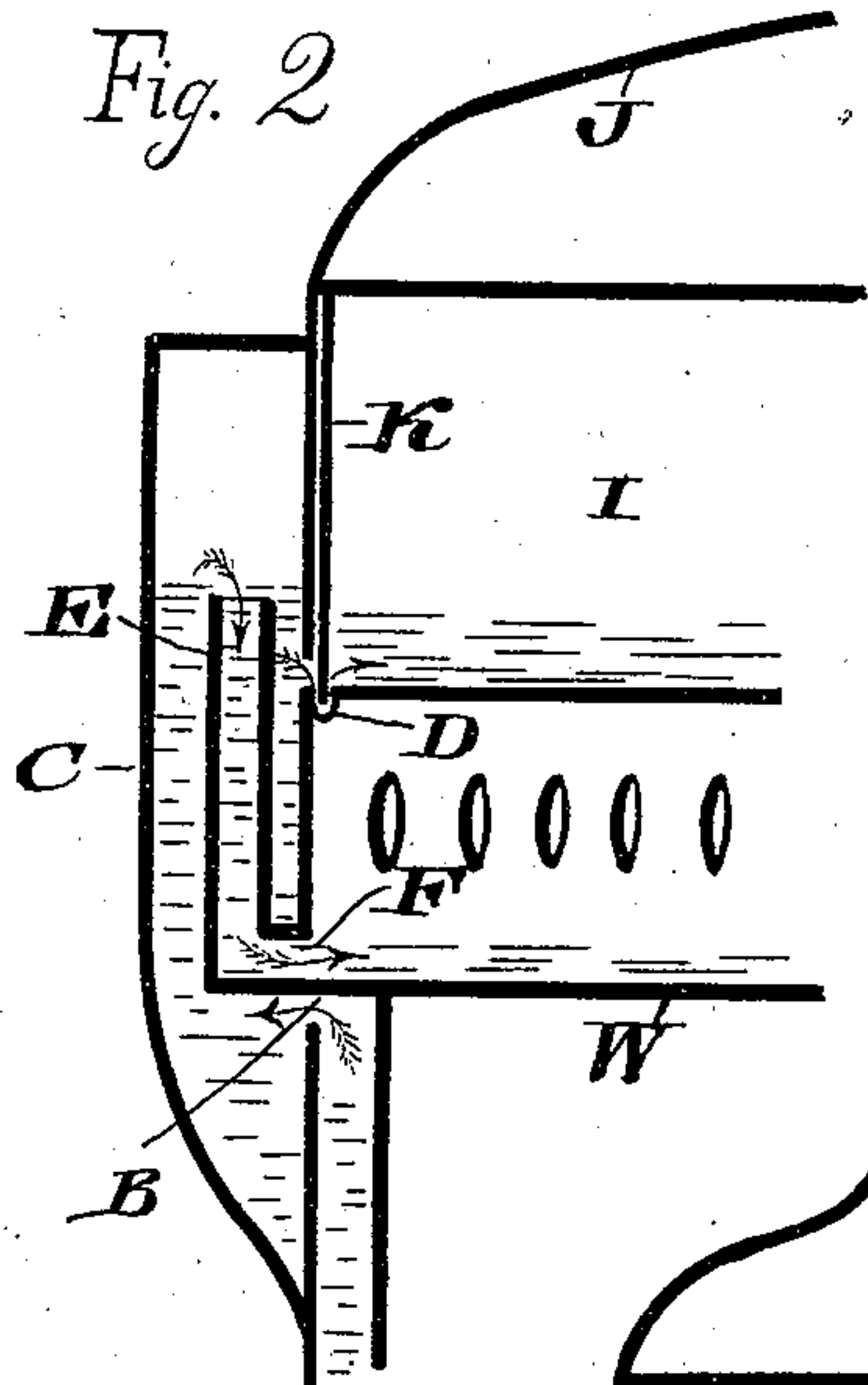


Fig. 3

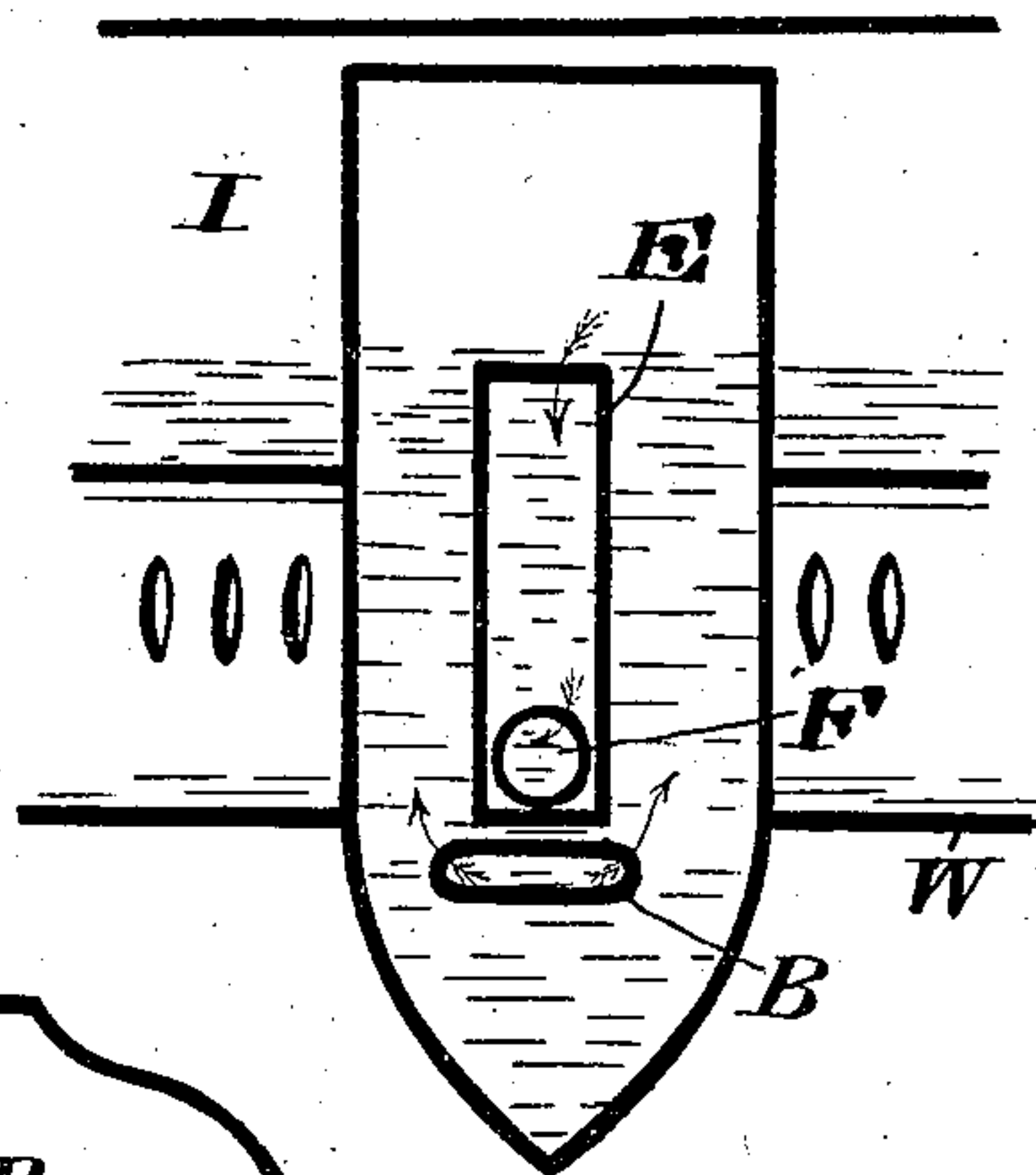
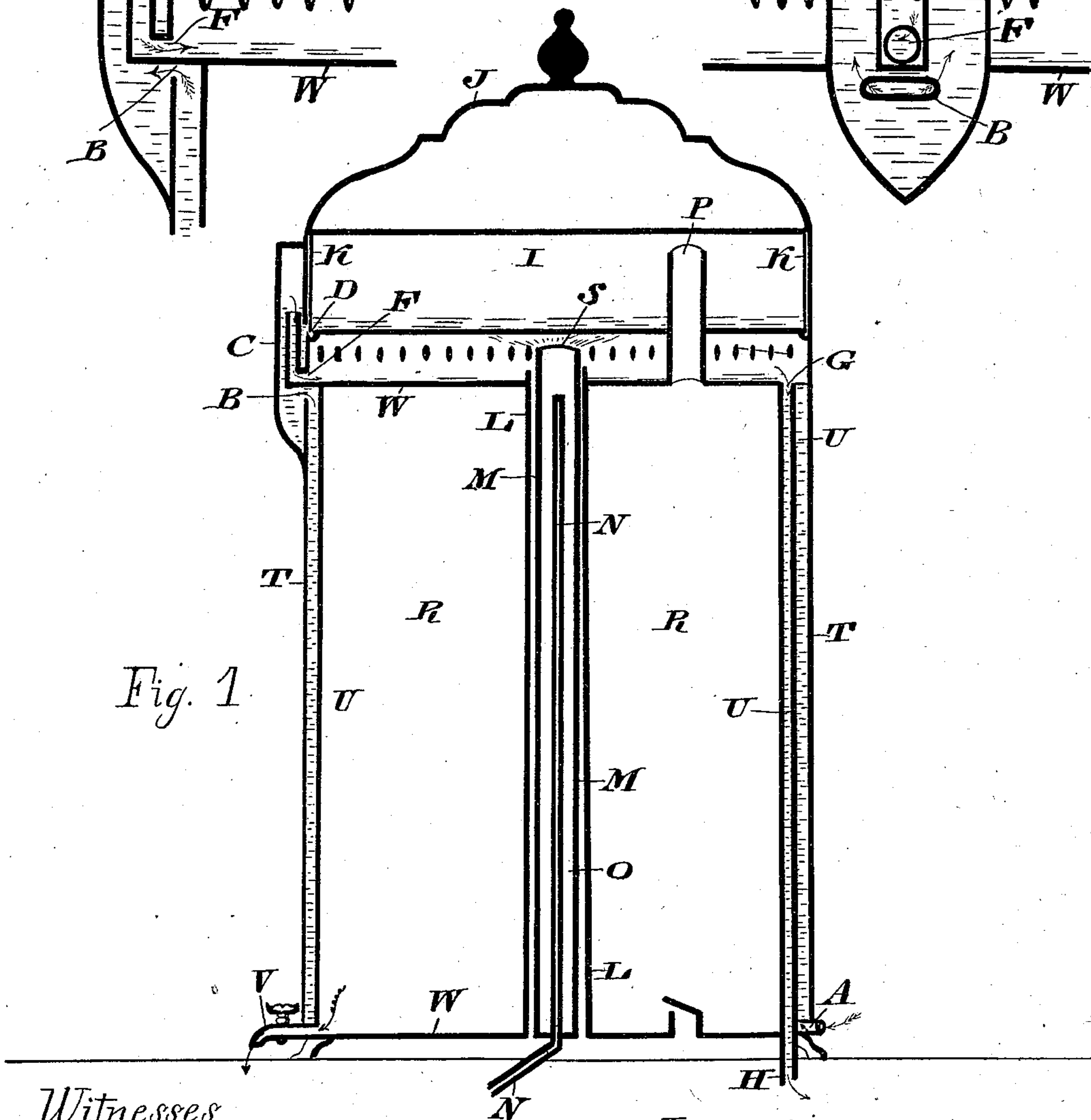


Fig. 1



Witnesses

P. F. Hagler.

L. Draville

Inventor

Jeffrey O. Bentley

UNITED STATES PATENT OFFICE.

JEFFREY O. BENTLEY, OF PHILADELPHIA, PENNSYLVANIA.

STILL.

SPECIFICATION forming part of Letters Patent No. 557,102, dated March 31, 1896.

Application filed June 4, 1895. Serial No. 551,587. (No model.)

To all whom it may concern:

Be it known that I, JEFFREY O. BENTLEY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Stills, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of still in which the water is more rapidly evaporated and purified than heretofore, the novel features of the apparatus being hereinafter set forth, and specifically pointed out in the claims.

Figure 1 represents a vertical sectional view of a still embodying my invention. Fig. 2 represents on an enlarged scale a sectional view of the upper left-hand portion of the still. Fig. 3 represents a front elevation of the same, partially in section.

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

Referring to the drawings, T designates the casing of the still, the same having inner and outer walls forming a water-jacket. A designates the inlet-pipe, which conducts the fluid into said jacket. B designates a passage between a portion of a wall of the still and the top or partition W of the same. C designates an enlarged chamber through which said water passes after entering the passage B. E designates a pipe in said chamber C by means of which communication is had with the space above the partition W, which constitutes a heating-chamber. F designates an inlet from said pipe E to said heating-chamber.

K designates the inner lid of the top J of the still, the same being adapted to rest in a suitable recess D, whereby communication is had for the water between the chamber C and the evaporating-chamber I, it being noticed that the said recess D is below the top of the pipe E.

L designates a tube located within the still, said tube being open at its bottom and top and having said top above the bottom of said heating-chamber and serving to introduce air into the space above the partition W. M designates a pipe which is located within said tube L. N designates a gas-pipe which conducts the heating medium into the upper por-

tion S of said pipe M, said portion S being perforated to allow the ignition and escape of the heating medium.

P designates an open-ended pipe which forms a communication between the chamber or reservoir I and the condensing-chamber R in the lower portion of the still.

W designates the bottom partition of the still; H, an overflow, and V a cock or pipe whereby the water of distillation is drawn off.

The operation is as follows: The gas or other heating medium having been ignited heats the bottom of the reservoir I. The water is introduced in the pipe A and fills the jacket T and passes in the direction indicated by the arrows in Fig. 2 by means of the passage D into said reservoir I, the heat evolved from the burner S heating the bottom of the reservoir, so as to vaporize the water flowing thereinto, the steam from which passes through the pipe P into the enlarged distillation-chamber R and is there condensed, the distilled water being drawn off from the bottom through the pipe V, the air for combustion being introduced through the perforations below the reservoir I in the sides of the casing as well as through the open end of the tube L.

The quantity of water in the evaporating-chamber is controlled by the pipe E, any excess above the top of the same flowing down said pipe into the heating-chamber and out through the overflow-pipe H.

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

1. A still, consisting of a condensing-chamber, having a water-jacket with an inlet-pipe, a heating-chamber directly above and supported on said condensing-chamber, and having openings in its sides, an evaporating-chamber above said heating-chamber, an enlarged chamber outside of and communicating with said water-jacket and evaporating-chamber, a pipe leading from said heating-chamber into said enlarged chamber above its communication with said evaporating-chamber, a pipe leading from the upper part of said evaporating-chamber into said condensing-chamber, an overflow-pipe leading from said heating-chamber, and means for heating the latter, said parts being combined substantially as described.

2. A still, consisting of a condensing-chamber R', having a water-jacket with an inlet-pipe, the heating-chamber above said condensing-chamber, an evaporating-chamber
5 above said heating-chamber, the enlarged chamber C communicating with said water-jacket and evaporating-chamber, the pipe E communicating with said heating and enlarged chambers and having its top above the
10 communication between the said enlarged chamber and the evaporating-chamber, the open-ended tube L located within the still and having its top above the bottom of the heating-chamber, the pipe M within said tube L,
15 having its perforated top above the top of said tube, and a gas-supply pipe leading into

said pipe L, said parts being combined substantially as described.

3. In a still, a condensing-chamber with a heating-chamber above the same, the tube L 20 passing through said condensing-chamber and opening into said heating-chamber above the bottom of the same, the pipe M having a perforated upper end within said heating-chamber and the inclosed gas-pipe S, said 25 parts being combined substantially as described.

JEFFREY O. BENTLEY.

Witnesses:

JOHN A. WIEDERSHEIM,
E. H. FAIRBANKS.