

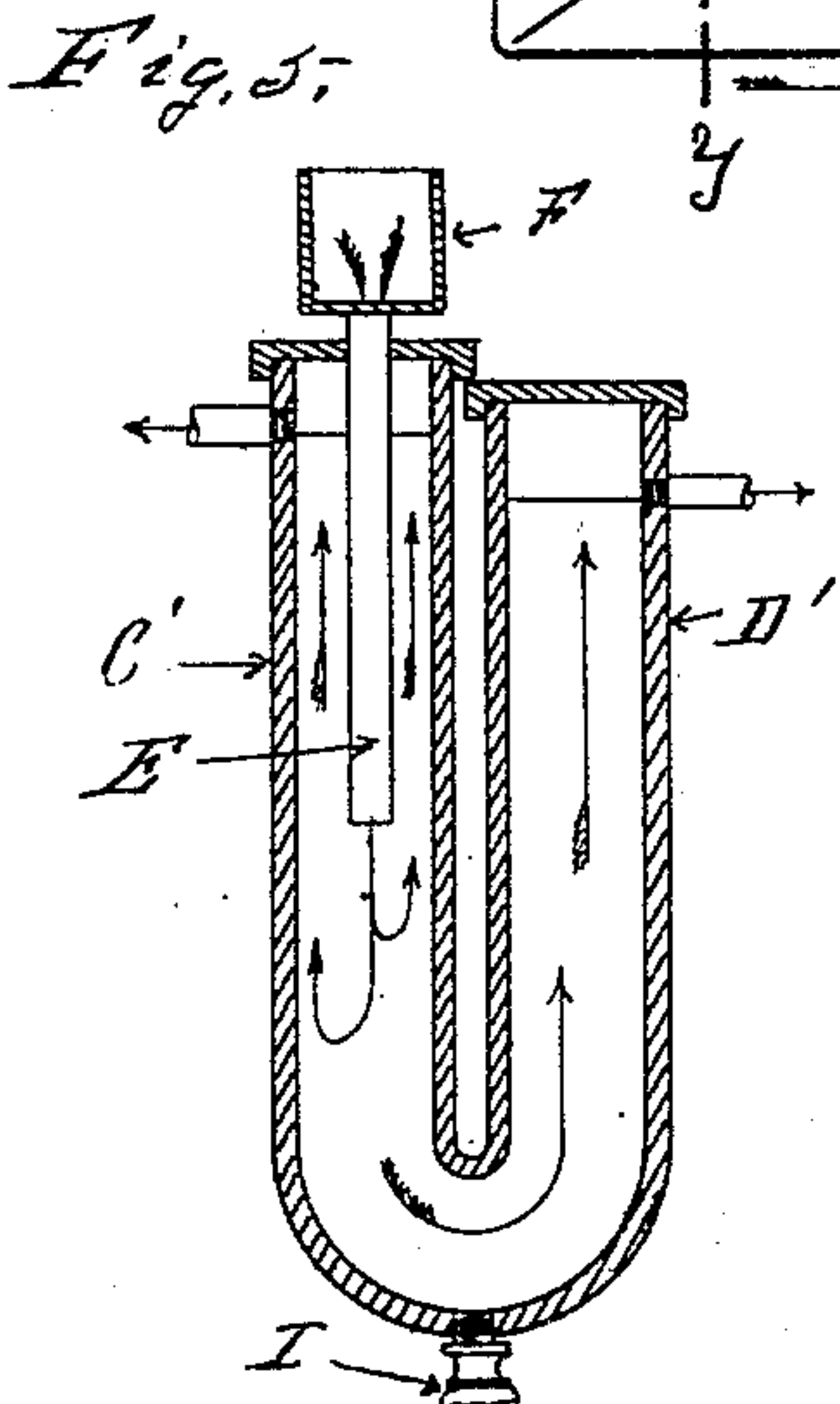
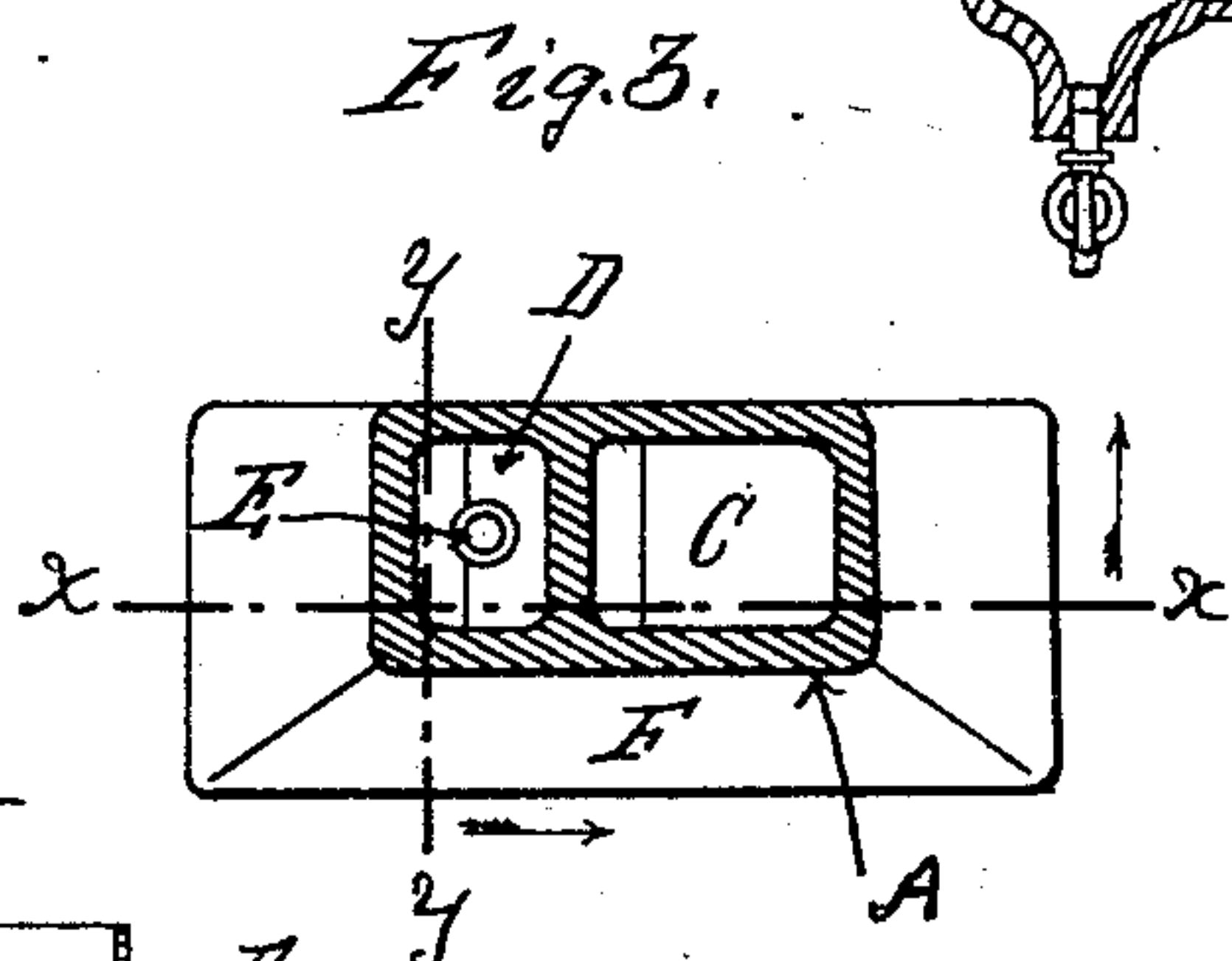
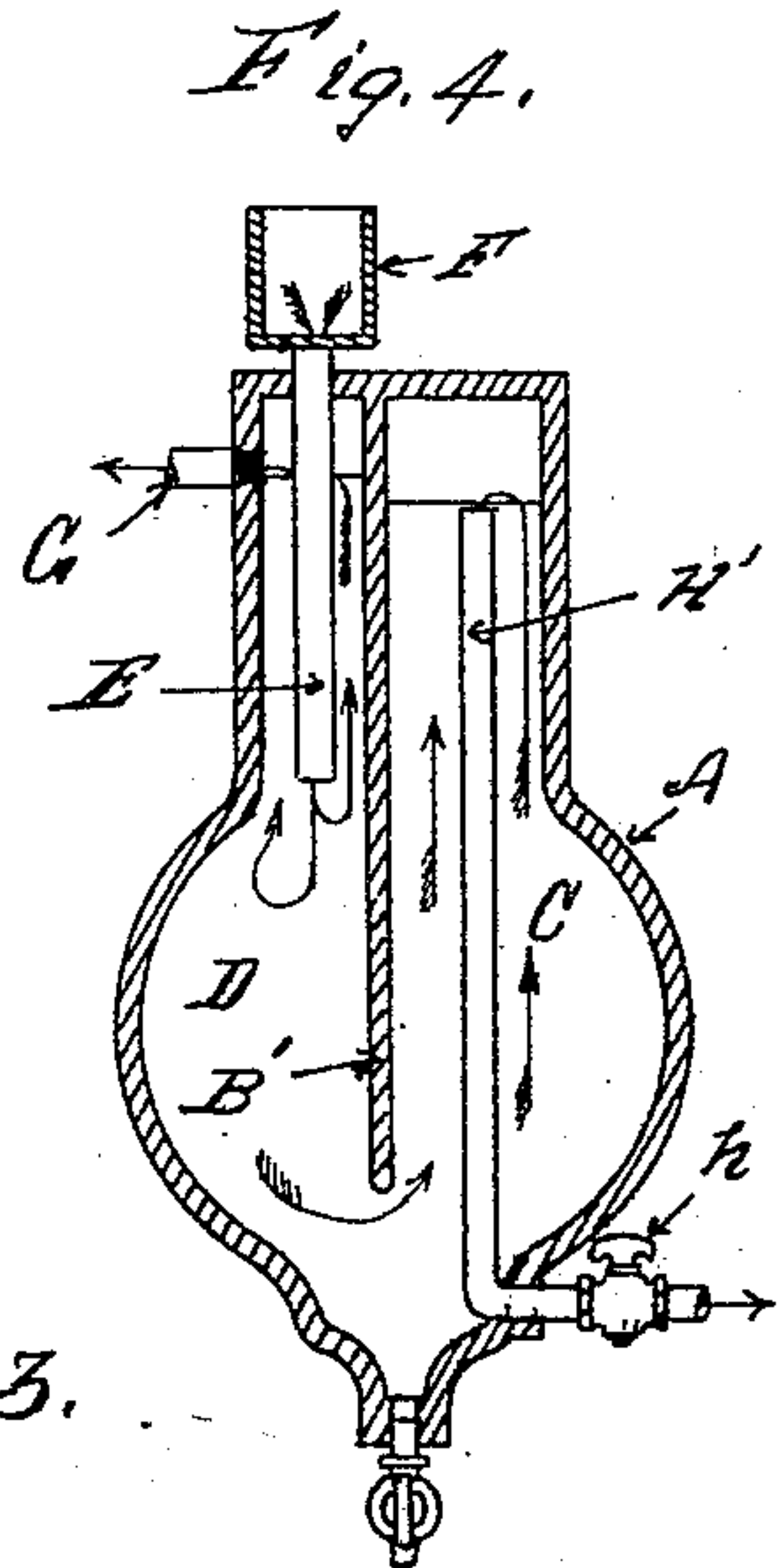
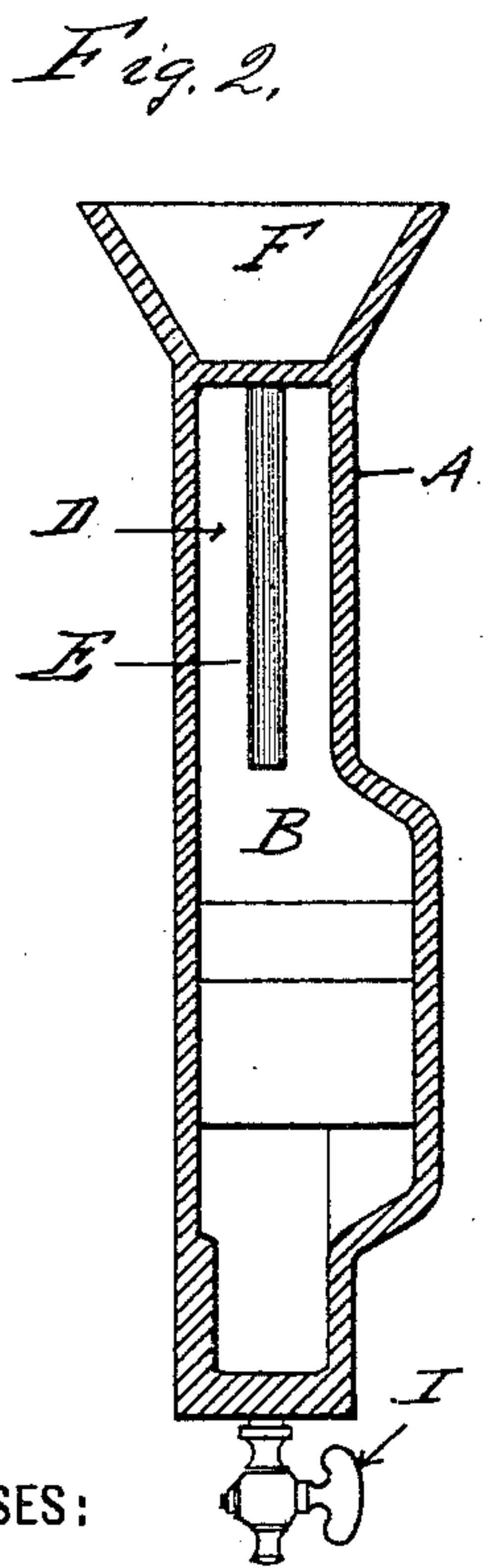
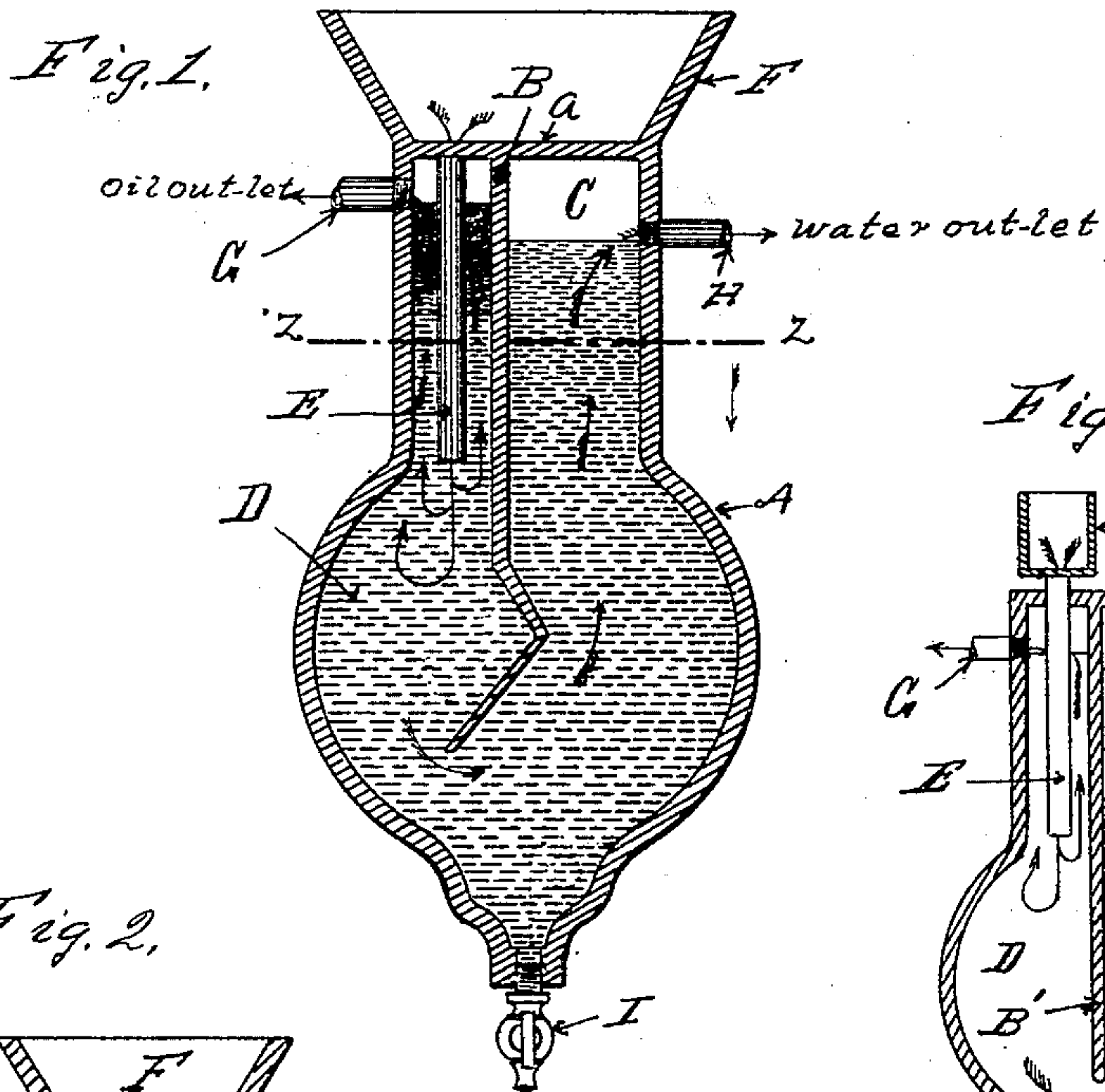
No. 616,661.

Patented Dec. 27, 1898.

J. C. GLENN.  
OIL AND WATER SEPARATOR.

(Application filed Dec. 13, 1897.)

(No Model.)



WITNESSES:

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INVENTOR  
*John C. Glenn*  
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# UNITED STATES PATENT OFFICE.

JOHN C. GLENN, OF ERIE, PENNSYLVANIA, ASSIGNOR TO LE GRAND SKINNER, OF SAME PLACE.

## OIL AND WATER SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 616,661, dated December 27, 1898.

Application filed December 13, 1897. Serial No. 661,606. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. GLENN, a citizen of the United States, residing at the city of Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Oil and Water Separators; and I do hereby 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, forming part of this specification.

My invention relates to improvements in oil and water separators, and comprises, substantially, a tank having a diaphragm extending downward therein nearly to the bottom thereof, dividing the upper portion of the tank into two compartments, and a tube extending downward in one of these compartments, with an oil-outlet near the top of this compartment and a water-outlet near the top of the other compartment, but somewhat lower than the oil-outlet, so that when water and oil are poured into the tube the water and oil will separate at or near the lower end of the tube and the oil rise up around it and flow out of the oil-outlet, while the water will pass down under the diaphragm and up and out of the water-outlet, the construction and operation thereof being hereinafter fully explained, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of my improved oil and water separator on the line  $xx$  in Fig. 3. Fig. 2 is a sectional view thereof on the line  $yy$  in Fig. 3. Fig. 3 is a transverse section of the same on the line  $zz$  in Fig. 1. Fig. 4 is a vertical section of a modified form of construction of my invention. Fig. 5 is a vertical section of a modified form thereof, showing a simple type of construction.

In the drawings, A is a tank, made of any convenient shape, and B is a diaphragm extending from the top  $a$  of the tank downward about three-fourths of its depth and dividing the upper three-fourths of the tank into two compartments C and D. E is a tube extending from a funnel F through the top  $a$  of the

tank A down into the compartment D thereof of about half the depth thereof, and G is an oil-outlet near the top of the compartment D, and H a water-outlet near the top of the compartment C, but lower than the oil-outlet G.

In Fig. 4 I have shown a modified construction of my invention in which the diaphragm B' is straight, and in lieu of the water-outlet H, near the top of the chamber C, I place a vertical tube H' therein, the upper end of which is open and somewhat below the level of the oil-outlet G of the chamber D, which extends out through the side of the lower part of the tank and is provided with a cock  $h$ , which tube operates as a water-outlet in lieu of the water-outlet hereinbefore described.

In Fig. 5 I show a simple type of construction of my invention, which comprises a U-shaped tube, one arm D' of which has the tube E therein and the oil-outlet G near the top thereof, and the other arm C' is provided with the water-outlet H near the upper part thereof, but on a lower plane than the oil-outlet G, and in the bottom of the U there is a cock I, by means of which the arms of the tube can be drained.

In operation oil and water are poured into the funnel F and pass down the tube E until they pass out of the lower end thereof, when the oil immediately takes an upward course and passes up in the compartment D of the tank around the tube E until it reaches the oil-outlet G, when it passes out, while the water passes on downward around under the lower end of the diaphragm B and up in the compartment C and out at the water-outlet H, and this operation is continuous as long as oil and water are supplied to the funnel F.

For emptying the tank A of its contents a cock I is placed at the lowest point thereof, which may be opened for that purpose.

I have thus shown and described a convenient device for the practice of my invention; but I do not confine myself to the exact constructions shown and described, as many modifications thereof can be made without departing from the spirit of my invention.

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

1. An oil and water separator, substantially comprising a receptacle having two vertical chambers communicating with each other at the lower portion thereof, a vertical pipe extending down into one of said chambers, an oil-outlet near the top of said chamber, and a water-outlet communicating directly with the top of the other chamber, but on a lower plane than the said oil-outlet, substantially as and for the purpose set forth.

2. An oil and water separator, substantially comprising a tank, a diaphragm in said tank, dividing the upper portion thereof into two

chambers, a pipe extending downward into one of said chambers, an oil-outlet near the top of said chamber, and a water-outlet communicating with the top of the other chamber, but on a lower plane than the said oil-outlet, substantially as and for the purpose set forth.

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

JOHN C. GLENN.

Witnesses:

FRED EINFELDT,  
HENRY A. CLARK.