(No Model.)

J. E. SPENCER.

HYDRAULIC LUBRICATOR.

No. 602,371. Patented Apr. 12, 1898.

Fig. 1.

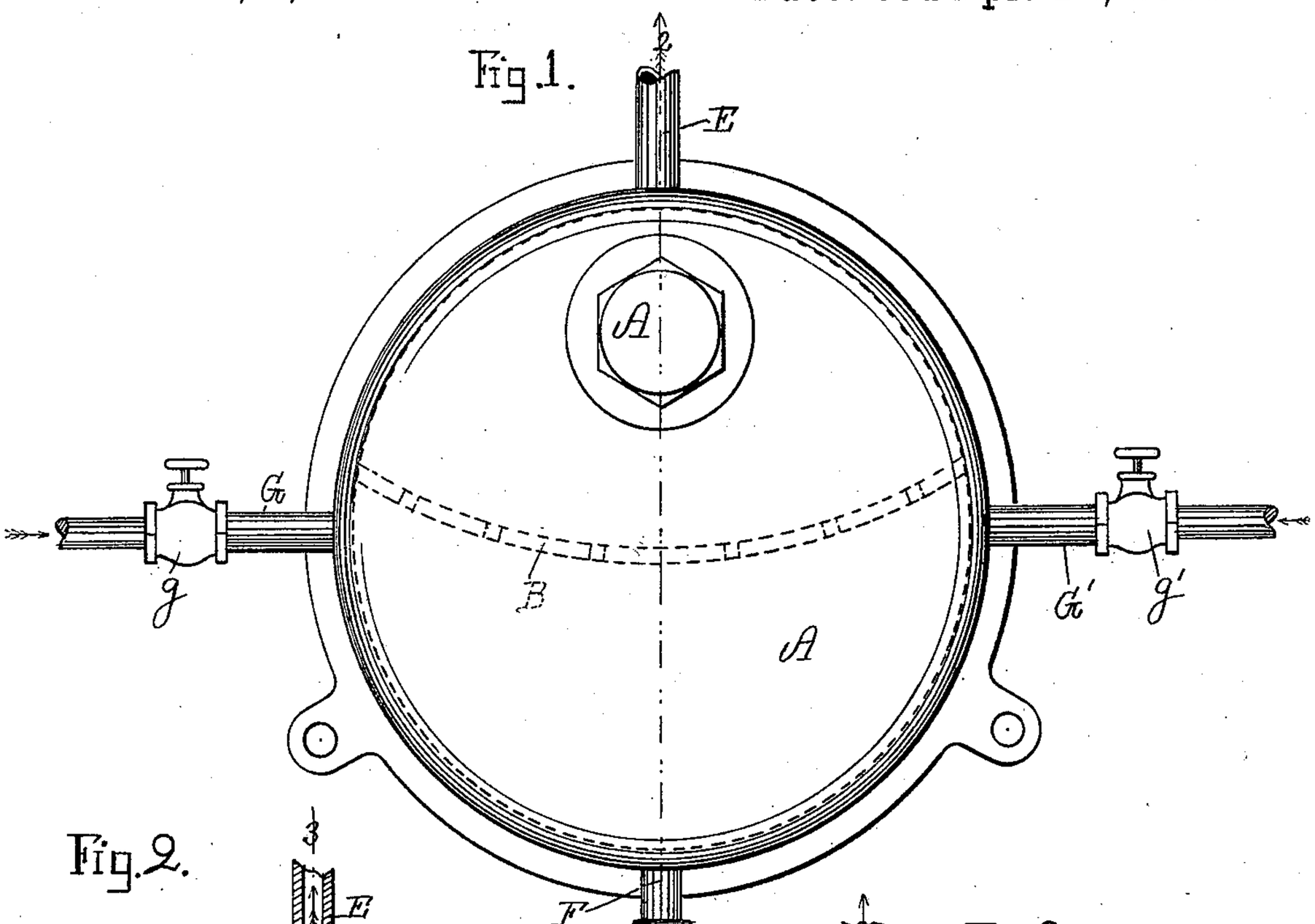


Fig. 2.

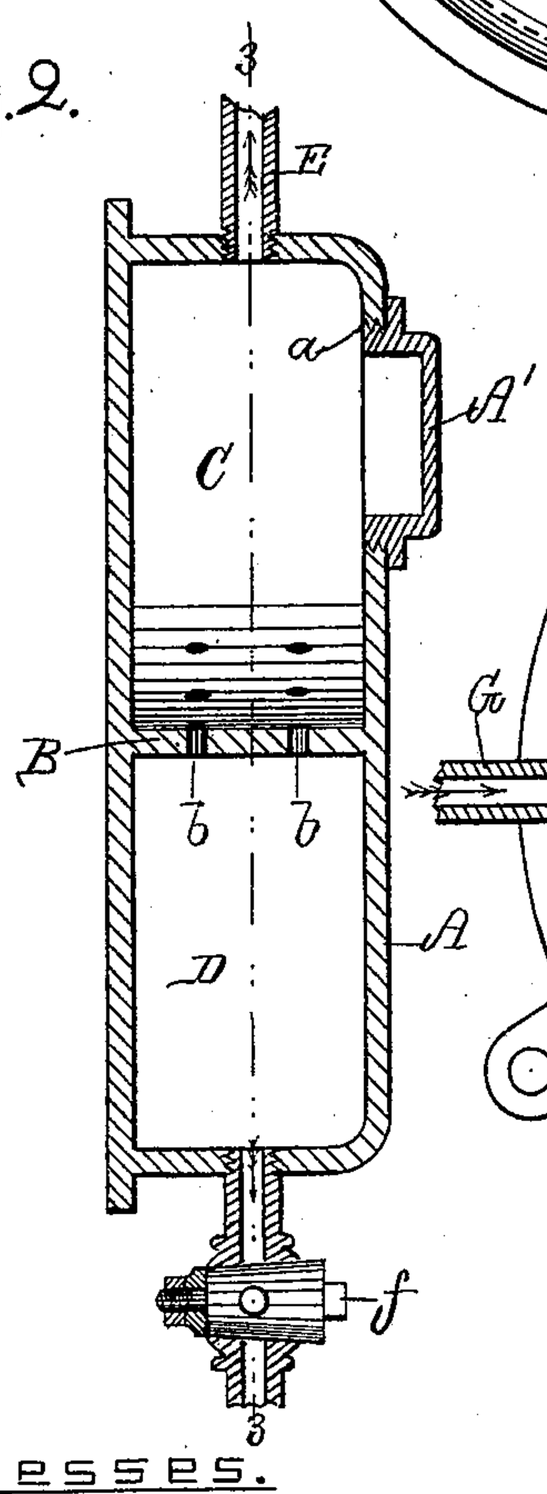
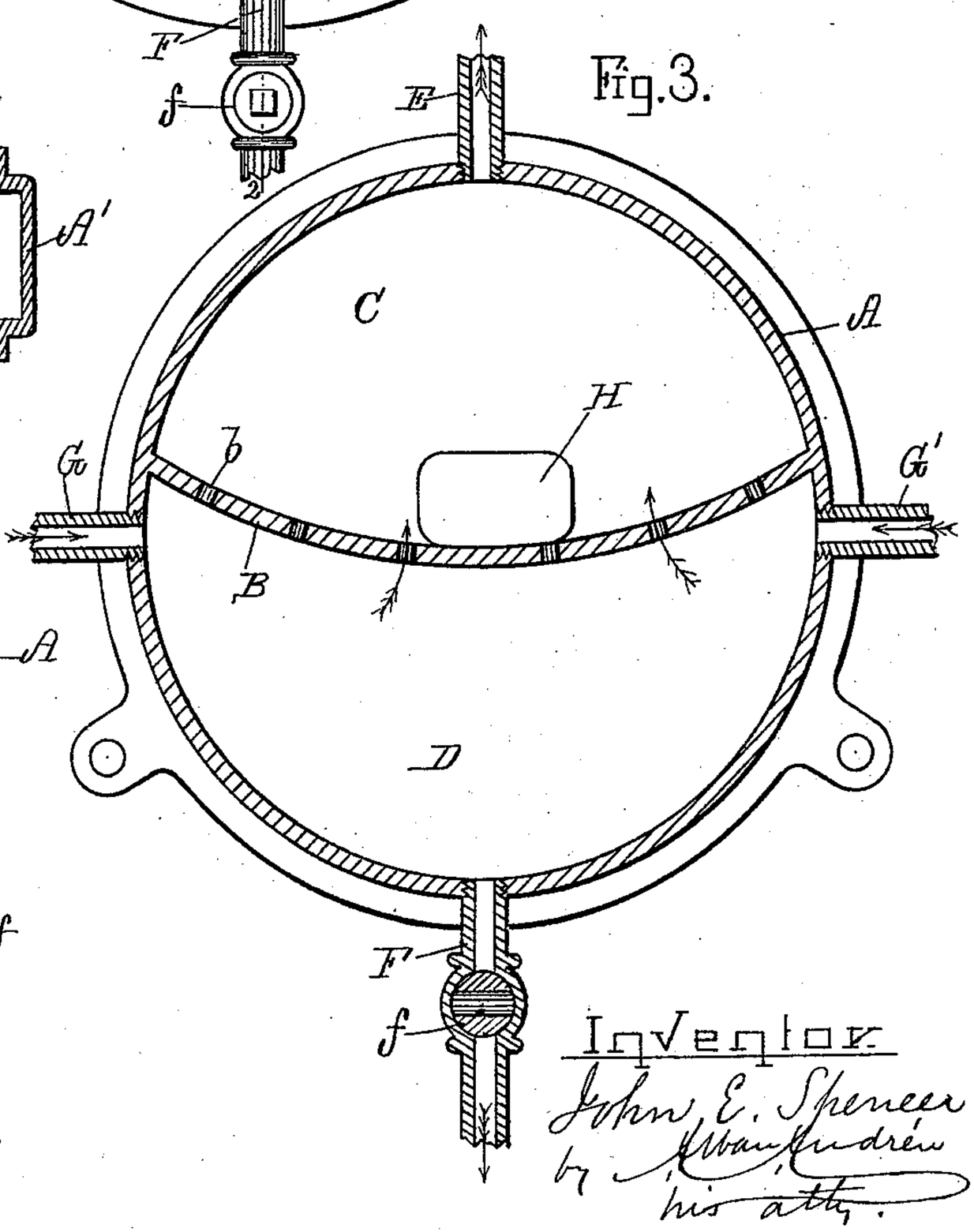


Fig. 3.



Witnesses.

Lauritz N. Möller

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UNITED STATES PATENT OFFICE.

JOHN E. SPENCER, OF SALEM, MASSACHUSETTS.

HYDRAULIC LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 602,371, dated April 12, 1898.

Application filed September 20, 1897. Serial No. 652,223. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. SPENCER, a citizen of the United States, and a resident of Salem, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Hydraulic Lubricators, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in hydraulic lubricators for hydraulic motors—such as, for instance, hydraulic elevators, water-motors of any kind, damper-regulators, &c.—as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1 represents a front elevation of the invention. Fig. 2 represents a vertical section on the line 2 2, shown in Fig. 1; and Fig. 3 represents a cross-section on the line 3 3, shown in Fig. 2.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

The water used for hydraulic motors in different places is oftentimes hard and causes deposits of sediment on the valves or other moving parts of the motor, thereby causing unnecessary friction and sticking of such moving parts. My invention is intended to obviate this objection and to cause the moving parts of the hydraulic motor, &c., to be properly lubricated, and it is constructed as follows:

It consists of a hollow shell A, which is divided by means of a perforated wall or diaphragm B into an upper lubricating-chamber C and a lower settling-chamber D, as shown.

b b b are perforations in the division-wall or diaphragm B, as shown in the drawings.

From the upper portion of the lubricating-chamber C leads a pipe E to the part of the motor or other device that is to be lubricated.

From the lower portion of the settling-chamber D leads a pipe F, provided with a valve or cut-off *f*, as shown.

The pipe F, when its valve *f* is open, serves as a blow-off pipe to discharge the sediments that may accumulate from time to time in the lower portion of the settling-chamber D.

G G′ are inlet-pipes entering the settling-chamber D below the perforated partition B, as shown. Either one of said inlet-pipes may be used as may be most convenient, according to the location of the source of supply of water-pressure to which the lubricating device is to be connected.

g and *g′* are valves or cut-offs on the respective inlet-pipes G G′, as shown in Fig. 1.

a is a filling perforation in the front of the case A, through which the lubricant may be introduced into the chamber C, such perforation being normally closed, preferably by means of a screw-threaded cap A′. (Shown in Figs. 1 and 2.)

As a lubricant within the chamber C may be used soap H, as shown in Fig. 3; but, if so desired, other lubricants—such as, for instance, borax, sal-soda, oils, &c.—may be used without departing from the essence of my invention.

The water as it enters the sediment-chamber D through either one of the pressure-pipes G G′ is made to pass through the perforated wall or diaphragm B into the lubricating-chamber C, where it is softened by the lubricant contained in said chamber and in this condition forced out through the delivery-pipe E, leading to the hydraulic motor, thus obtaining the desired beneficial results. From time to time the blow-off cock *f* is opened to remove sediment from the lower chamber D, as described. By shutting off the cocks *g g′* (or one of such, if only one supply-pipe is used) and by opening the blow-off cock *f* and removing the cap A′ the lubricant may from time to time, as needed, be introduced into the chamber C.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

The herein-described lubricator for hydraulic motors consisting of a hollow shell or casing having within the same a perforated diaphragm adapted to support a lubricant and dividing the interior of the casing into two compartments, the compartment below the diaphragm affording a sediment-chamber, one or more water-inlet pipes leading into the upper part of said sediment-cham-

ber, a blow-off pipe leading from the bottom of the same, a water-delivery pipe leading from the top of the compartment above the diaphragm, a filling-orifice formed in the casing and a closing device therefor, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 14th day of September, A. D. 1897.

JOHN E. SPENCER.

Witnesses:
MARION TAYLOR,
FRANK V. WRIGHT.