No. 694,434. Patented Mar. 4, 1902.

H. SIMS.

OIL FILTER.

(Application filed May 31, 1901.)

(No Model.)

Fig. 1.

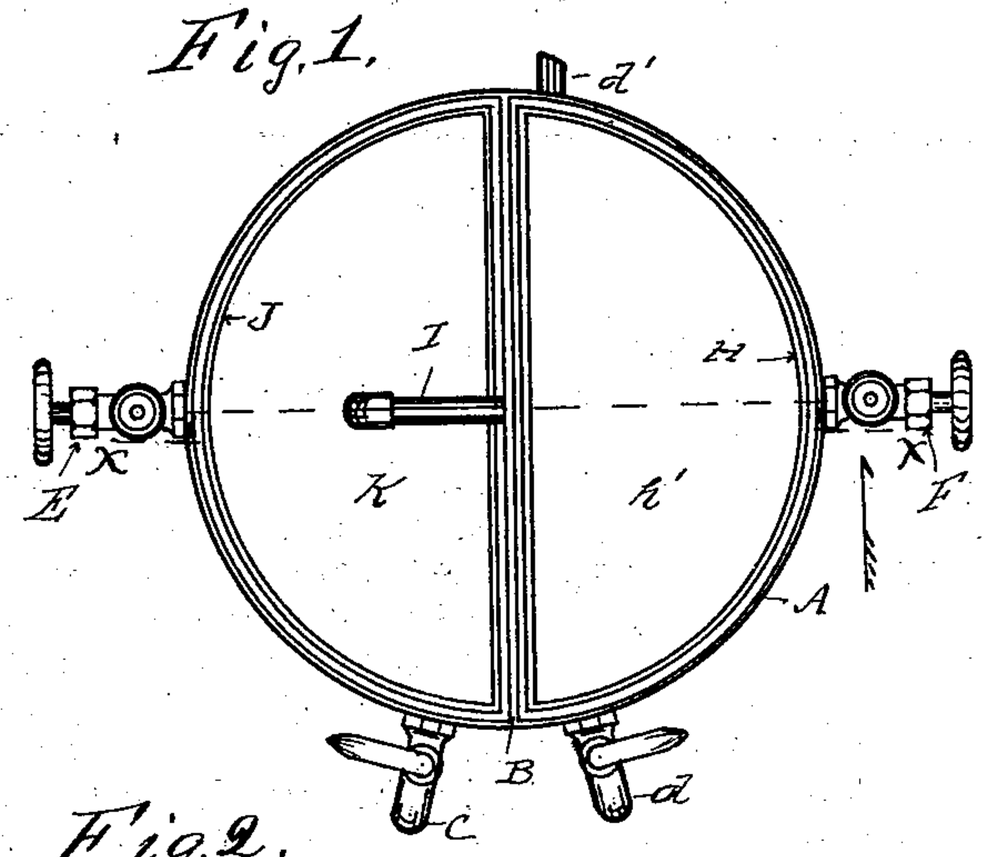


Fig. 2.

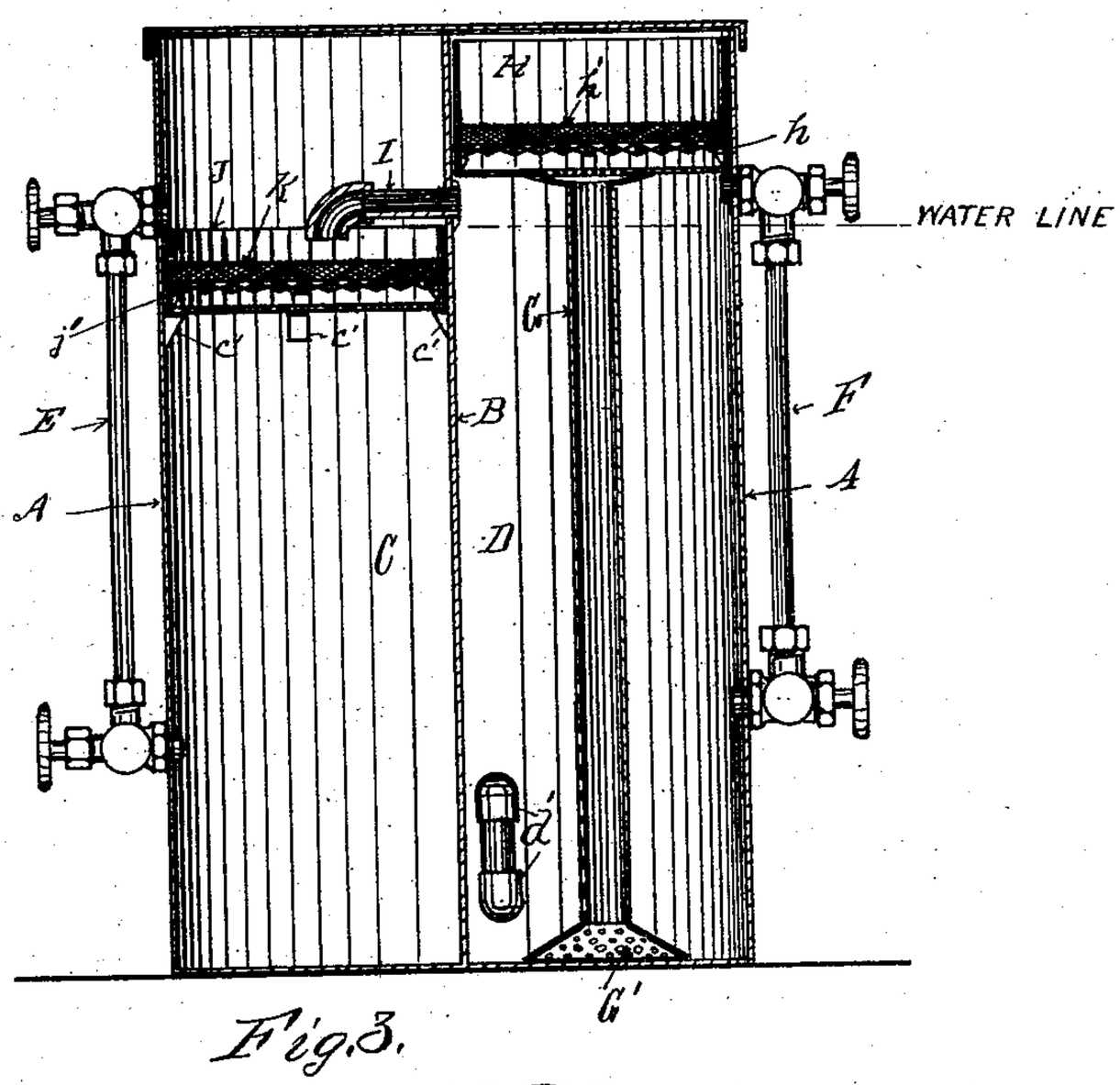
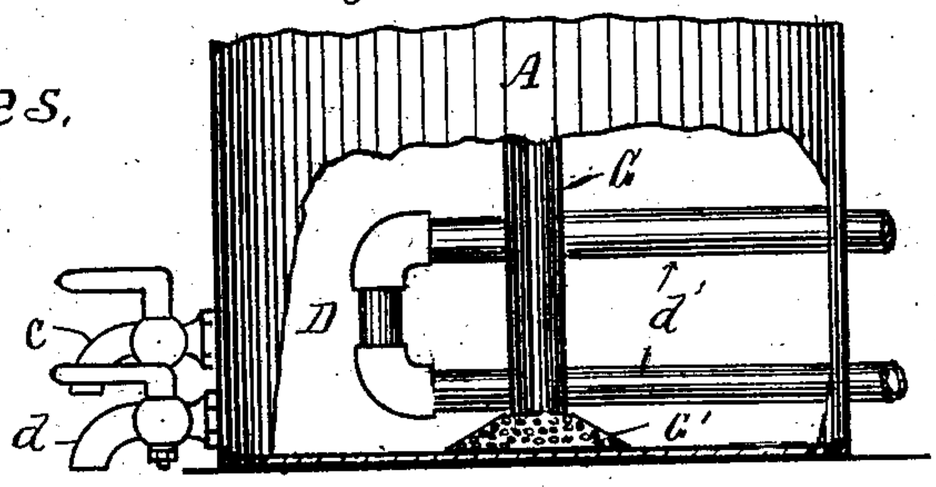


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY SIMS, OF ERIE, PENNSYLVANIA.

OIL-FILTER.

SPECIFICATION forming part of Letters Patent No. 694,434, dated March 4, 1902.

Application filed May 31, 1901. Serial No. 62,550. (No model.)

To all whom it may concern:

Be it known that I, HENRY SIMS, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Oil-Filters; 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-filters, and has for its object the construction of an oil-filter in such a manner that all of the parts thereof are readily removable, so that it can be easily cleaned, as well as other advantageous features of construction and operation, all of which are hereinafter set forth and described, and illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of my improved oil-filter with the cover removed therefrom. Fig. 2 is a vertical section of the same on the line *x x* in Fig. 1. Fig. 3 is another view of a section of the same in elevation with a part of the side thereof broken away.

In these drawings thus illustrating my invention, A is a can, preferably cylindrical in shape, made of sheet metal and provided with a vertical wall B, which divides the same into semicylindrical chambers C and D. Near the bottom of the chambers C and D, I place cocks *c d* for drawing off the contents of said chambers. I also secure sight-glasses E and F to the chambers C and D, so that the height of the fluid therein may be observed. In the chamber D, I also place a steam-coil *d'*, by means whereof the fluid therein may be heated to a temperature suitable for successfully operating the filter. The coil *d'* is preferably placed along the side of the division-wall B, so as not to interfere with the removal of the mechanism hereinafter described as operating in the chamber D.

In the upper part of the chamber D there is a supplementary chamber or receiving-tank H. From the bottom of the tank H a pipe G extends down to near the bottom of the chamber D, where it is provided with a perforated cone-shaped base G', which base G' and pipe G serve to support the tank H, the whole being adapted to be lifted out of the chamber D when desired.

In the lower part of the tank H, I place a fine wire screen *h*, upon which I preferably place one or more layers of felt or other suitable porous material, which operates to strain oil placed in the tank H before it passes down into the tube G. A little below the bottom of the tank H, I removably secure an outlet-pipe I in the wall B, so that oil can flow therethrough into the chamber C. In the chamber C below the pipe I, I place a pan J, which rests upon lugs *c'* on the sides of the chamber C. The bottom of this pan is perforated, so that oil will pass down freely therethrough. In the pan J, above the perforated bottom thereof, I secure a fine wire screen *j'*, upon which I place one or more layers of felt or other porous material K, adapted to strain the oil flowing into the pan J from the pipe I before it passes down into the chamber C below the pan J, from which it can be drawn off by means of the cock *c*.

In operation the chamber D is filled with water up nearly to the outlet-pipe I. Then if oil is placed in the tank H the difference in the height of the tank H and the water-level causes the oil to pass down through the straining material *h'* and the pipe G and out through the perforations in the base G', whence it passes up through the water in the chamber D until it rises high enough to flow through the outlet-pipe I into the pan J, where it passes through the straining material K and down into the storage-chamber C. In order to expedite the washing of the oil as it passes up through the water in the chamber D, steam can be applied to the coils *d'*, so as to heat the water therein to any desired temperature.

It will be observed that the construction of my device is such that the tank H and its appurtenant parts can at any time be lifted out of the chamber D, and by unscrewing the outlet-pipe I the pan J can also be lifted out of the chamber C, thus enabling all of the parts of the device to be speedily and effectually cleansed when desired.

Having thus described my invention, so as to enable others to construct and use the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination in an oil-filter, of a tank A, a vertical wall B therein dividing the tank into chambers C and D, a receiving-tank H, and a pipe G extending downward therefrom in the chamber D, terminating in a conical perforated base G′ on said pipe, and resting upon the bottom of the chamber D, a heating-coil *d′* in one side of the chamber D, a removable outlet-pipe I in the wall B below the tank H, and a removable strainer-pan J in the chamber C below the outlet-pipe I, substantially as and for the purpose set forth.

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

HENRY SIMS.

Witnesses:

HAROLD M. STURGEON,

F. J. BASSETT.