

L. S. FALES.
Oil Still.

No. 49,740,

Patented Sept 5, 1865.

Fig. 2.

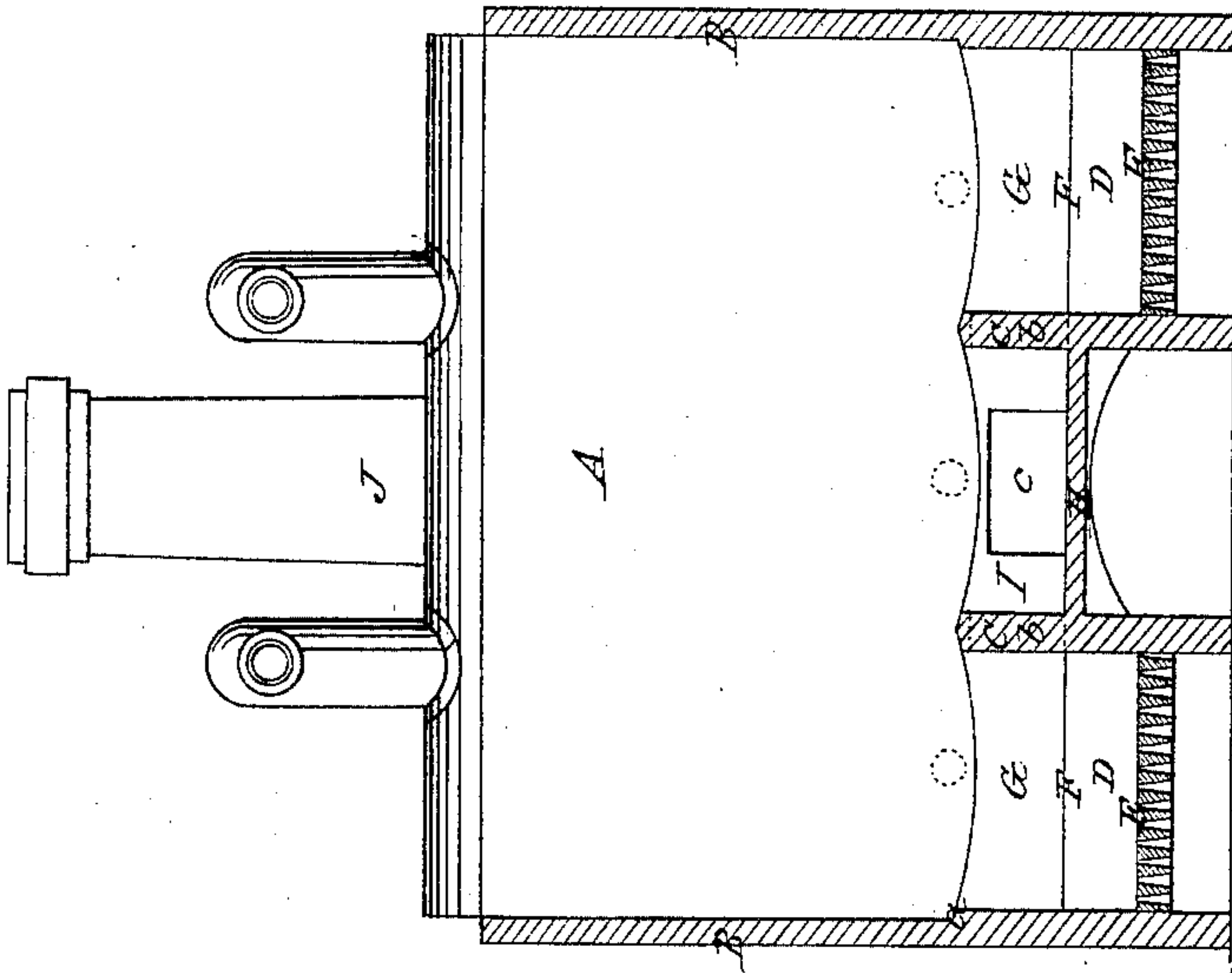


Fig. 1.

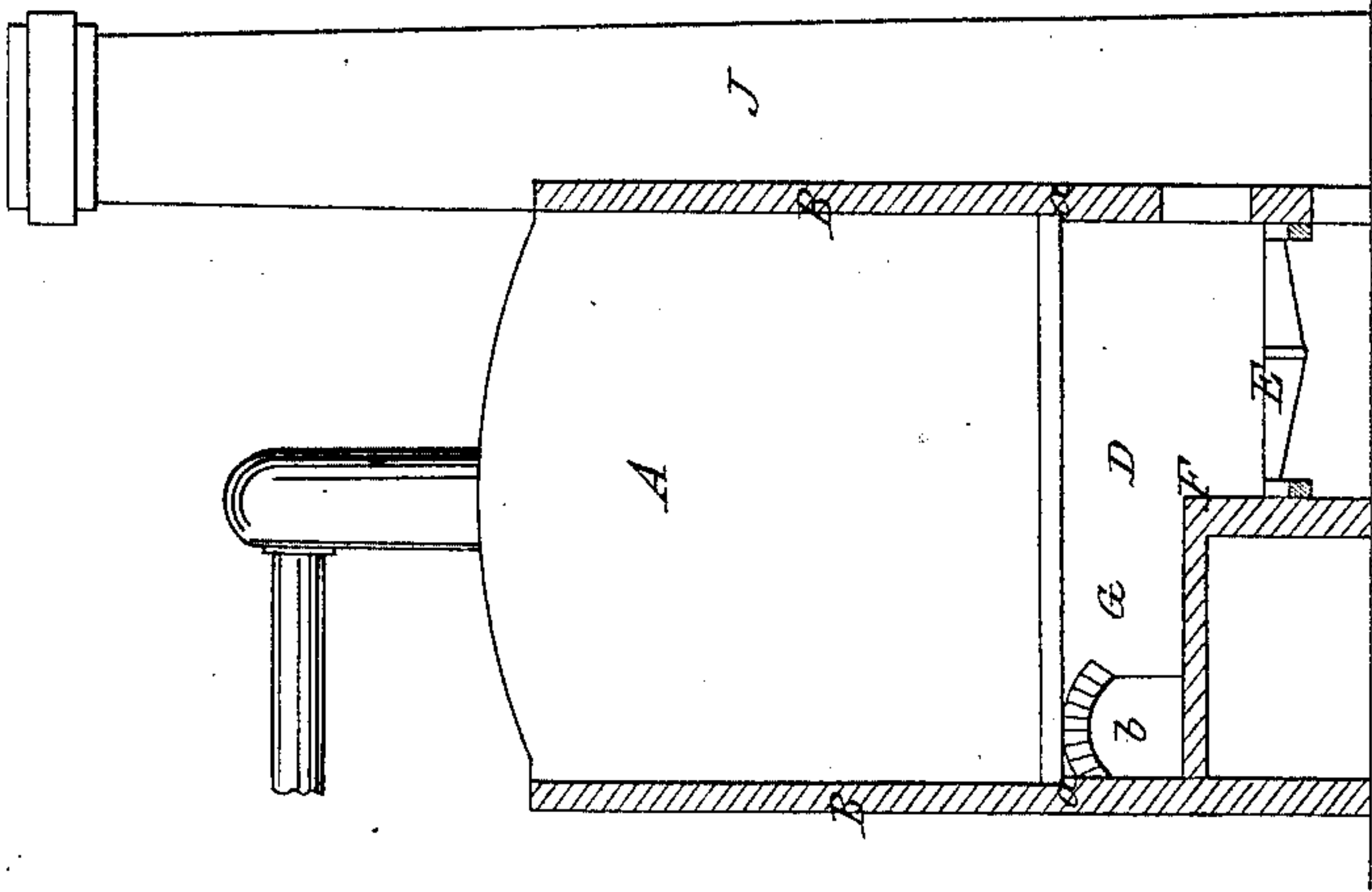
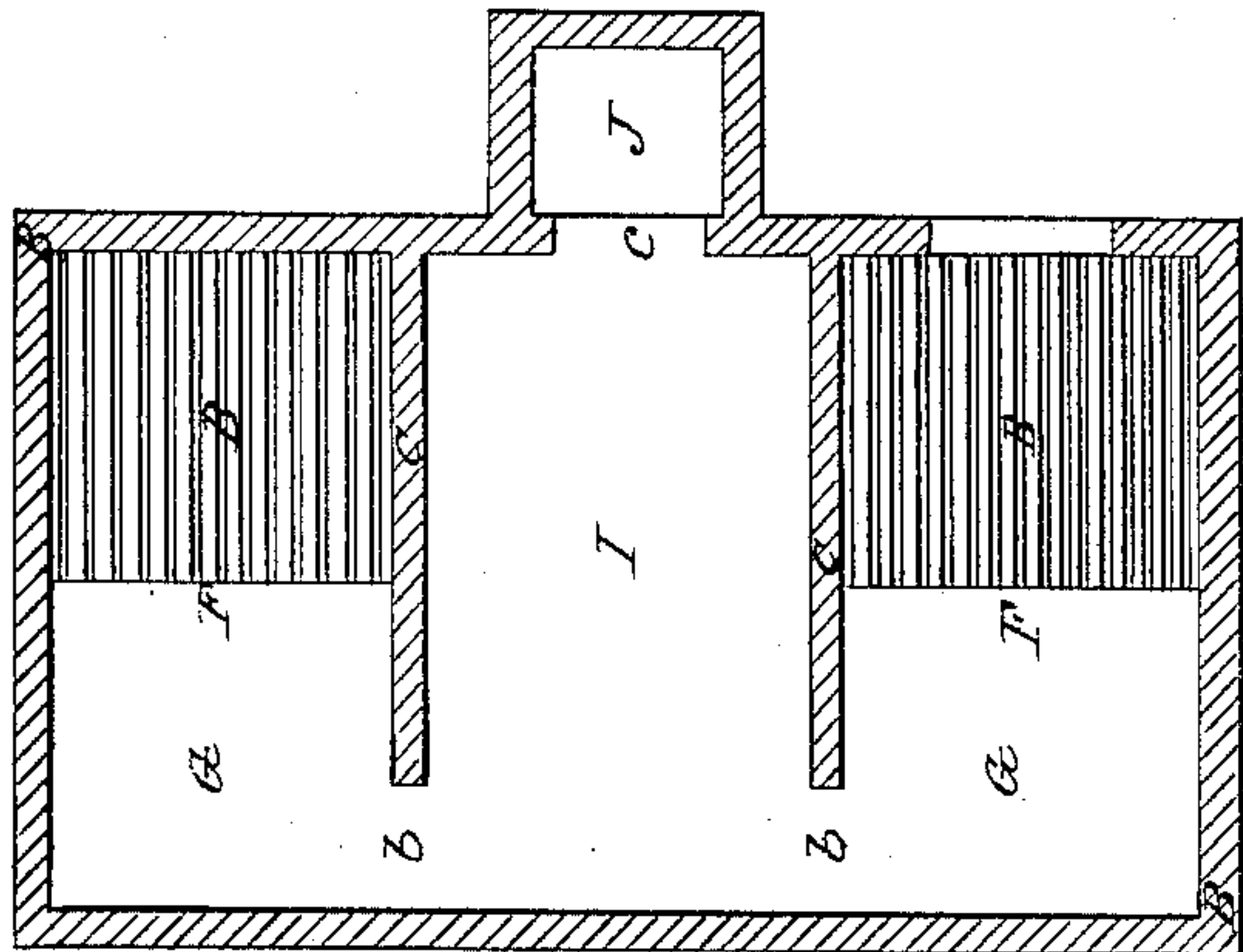


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

LEVI S. FALES, OF BOSTON, MASSACHUSETTS.

IMPROVED METHOD OF SETTING STILL.

Specification forming part of Letters Patent No. 49,740, dated September 5, 1865.

To all whom it may concern:

Be it known that I, LEVI S. FALES, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Setting of Stills for Distilling Petroleum and other Liquid Substances; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are vertical sections at right angles to each other of a still set according to my invention. Fig. 3 is a horizontal section of the setting.

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

The object of this invention is to carry on the process of distilling petroleum on a large scale in an economical manner by the use of a still of very large capacity; and to this end it consists in a certain arrangement of furnaces, flues, and setting, whereby all parts of the bottom of the still are heated uniformly, or nearly so, with a comparatively small consumption of fuel.

To enable others skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

A is the body of the still, of quadrangular form in its horizontal section, and of large horizontal area in proportion to its height, supported mainly upon ledges *a a* provided on the outer inclosing-walls B B of the setting, and having its bottom further supported by two parallel partition-walls, C C, which extend across the space below the still and within the outer walls, B B, of the setting, and divide the said space into three equal, or nearly equal, parts. In the spaces between each of the partition-walls and the nearest parallel side walls

are the two furnaces D D, of ordinary construction, with the grates E E in front, bridge-walls F F in rear of the grates, and direct flues G G in rear of the said bridge-walls. In the central space between the partition-walls C C there is an arch, H, above which, and directly under the bottom of the still, is formed a return-flue, I, extending entirely across the setting, the said flue communicating with the direct flues G G by openings *b b* at the rear, and communicating by an opening, *c*, in the front wall with the chimney J, which is situated in front of the setting between the furnace-doors.

The operation is as follows: The flame and heated gaseous products of combustion from the two furnaces D D pass over the bridge-walls F F into the flues G G, from the back part of which they pass through the openings *b b* into the central flue, I, in which they return in a forward direction to the opening *c*, by which they pass to the chimney, heating in an almost uniform degree all parts of the bottom of the still, where in distilling oils by the direct application of fire all the heat should be applied.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination under one retort of two furnaces, D D, two parallel partition-walls, C C, which partly support the bottom of the retort, and a central or intermediate return-flue, I, common to both furnaces and forming their communication with the chimney, the whole constructed and arranged within the inclosing-walls of the still, substantially as and for the purpose herein set forth.

LEVI S. FALES.

Witnesses:

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