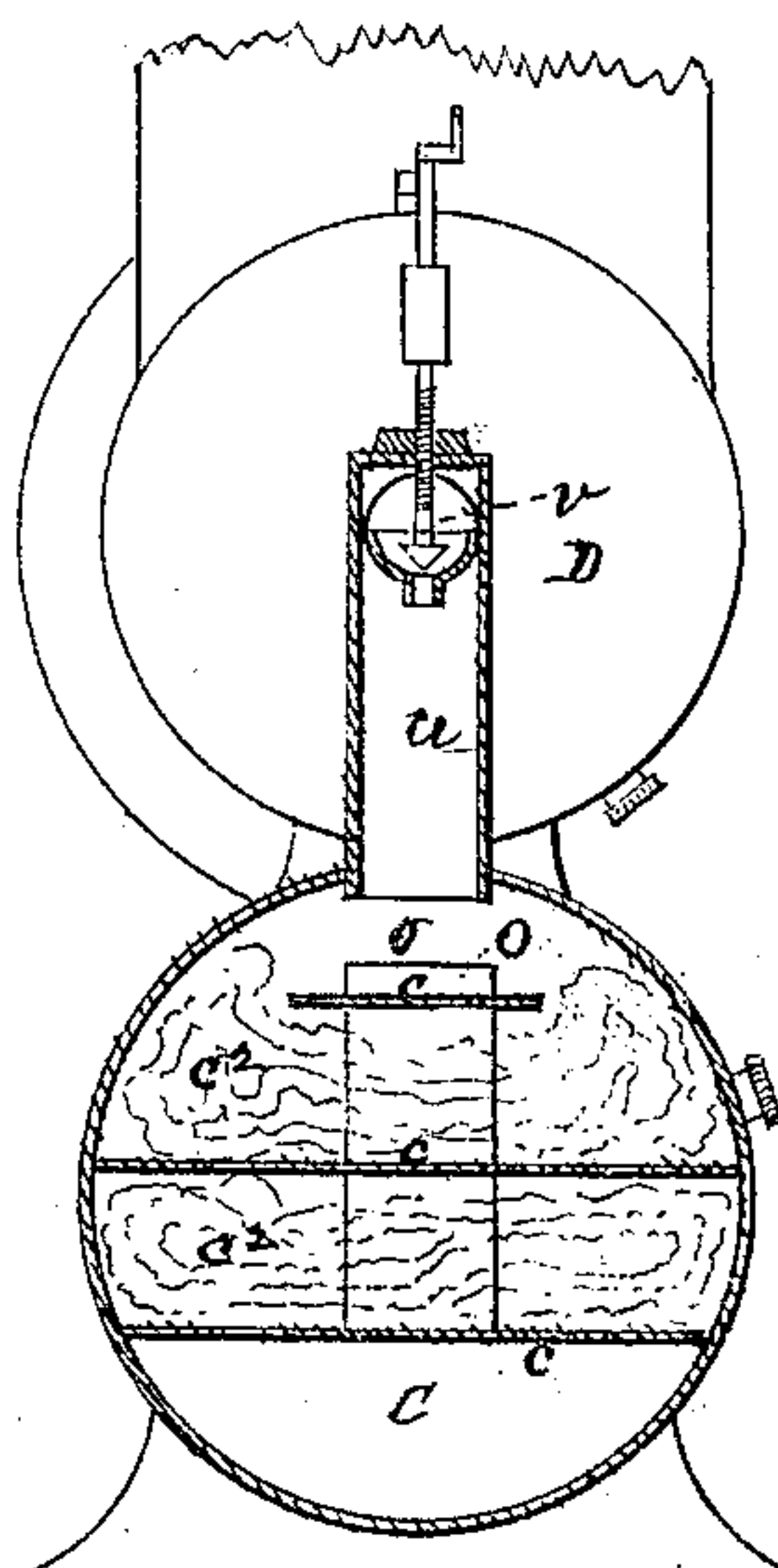
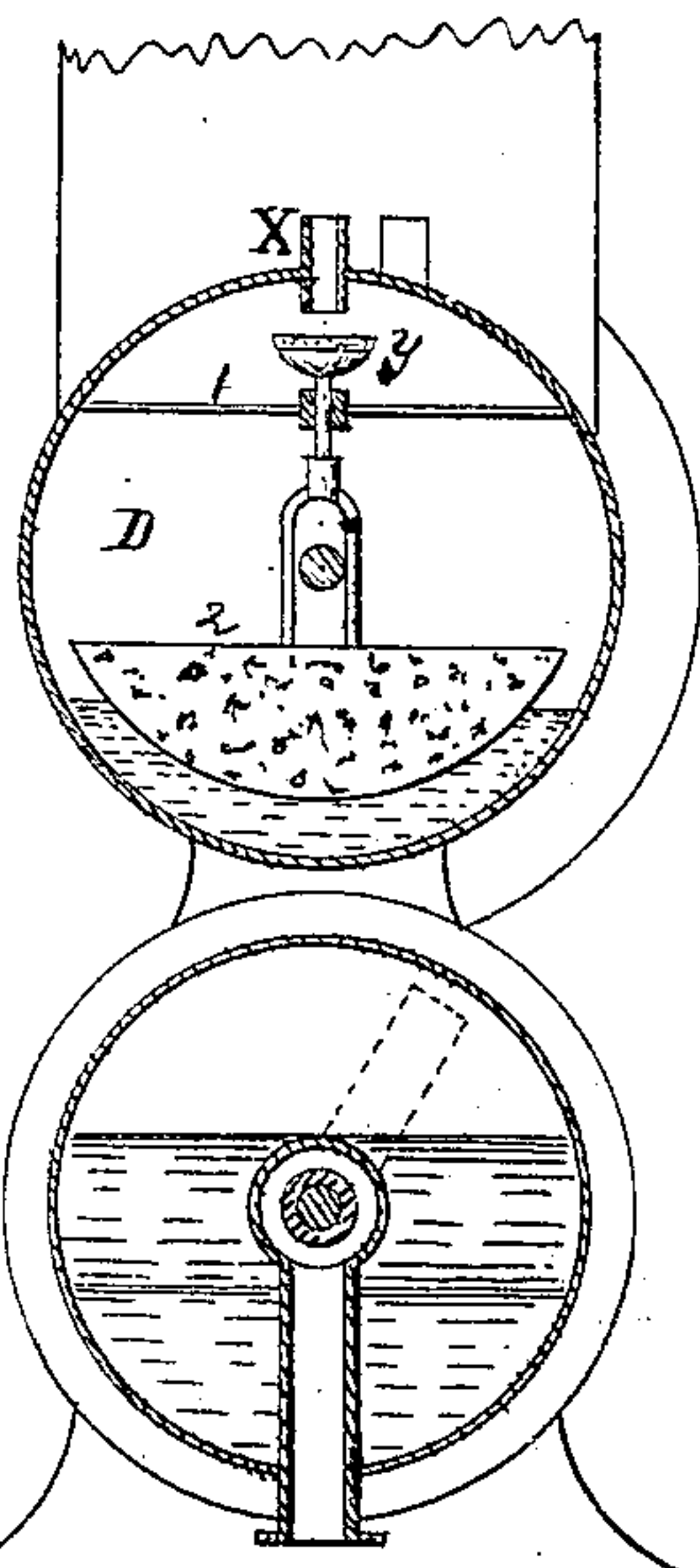
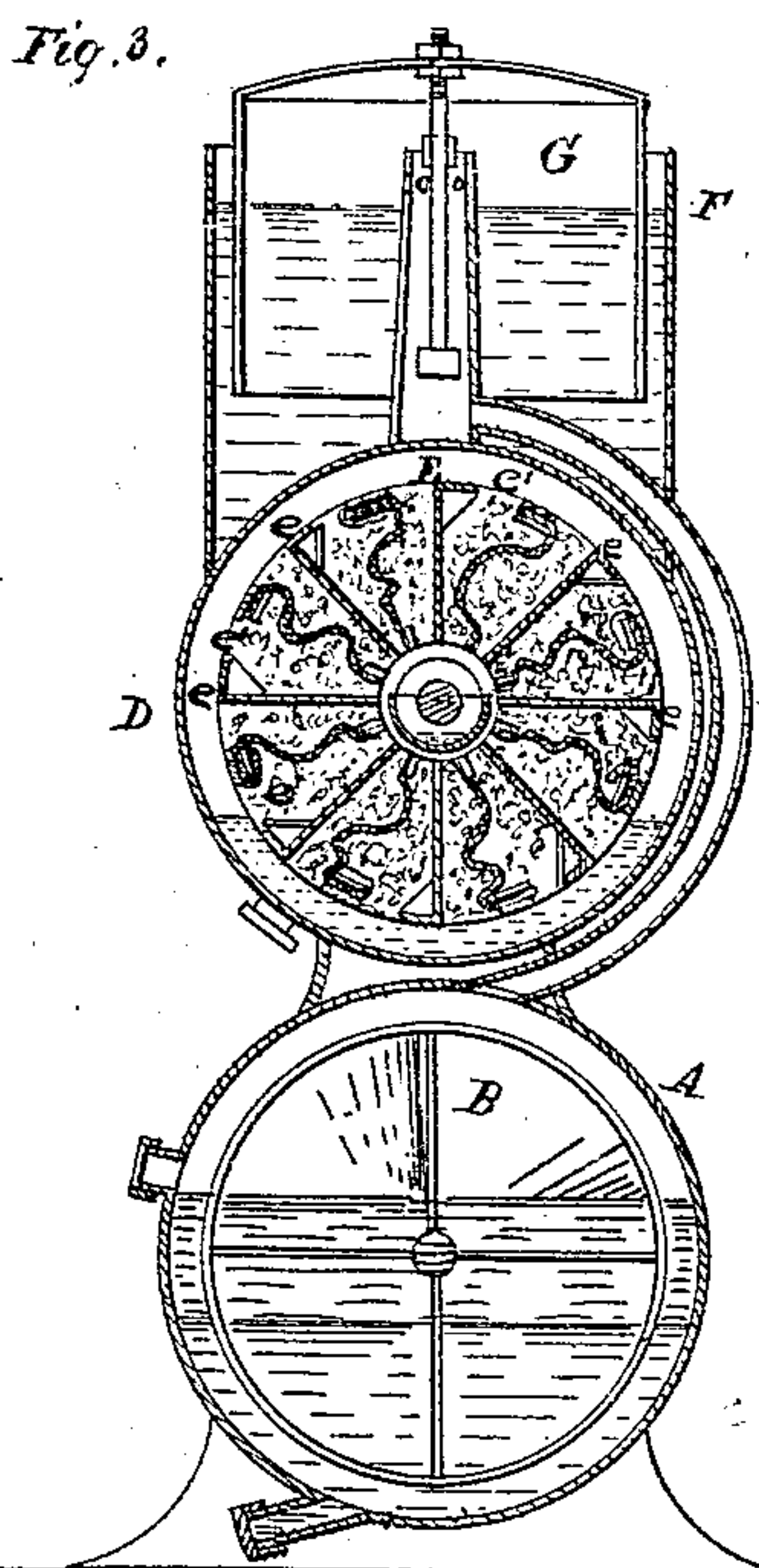
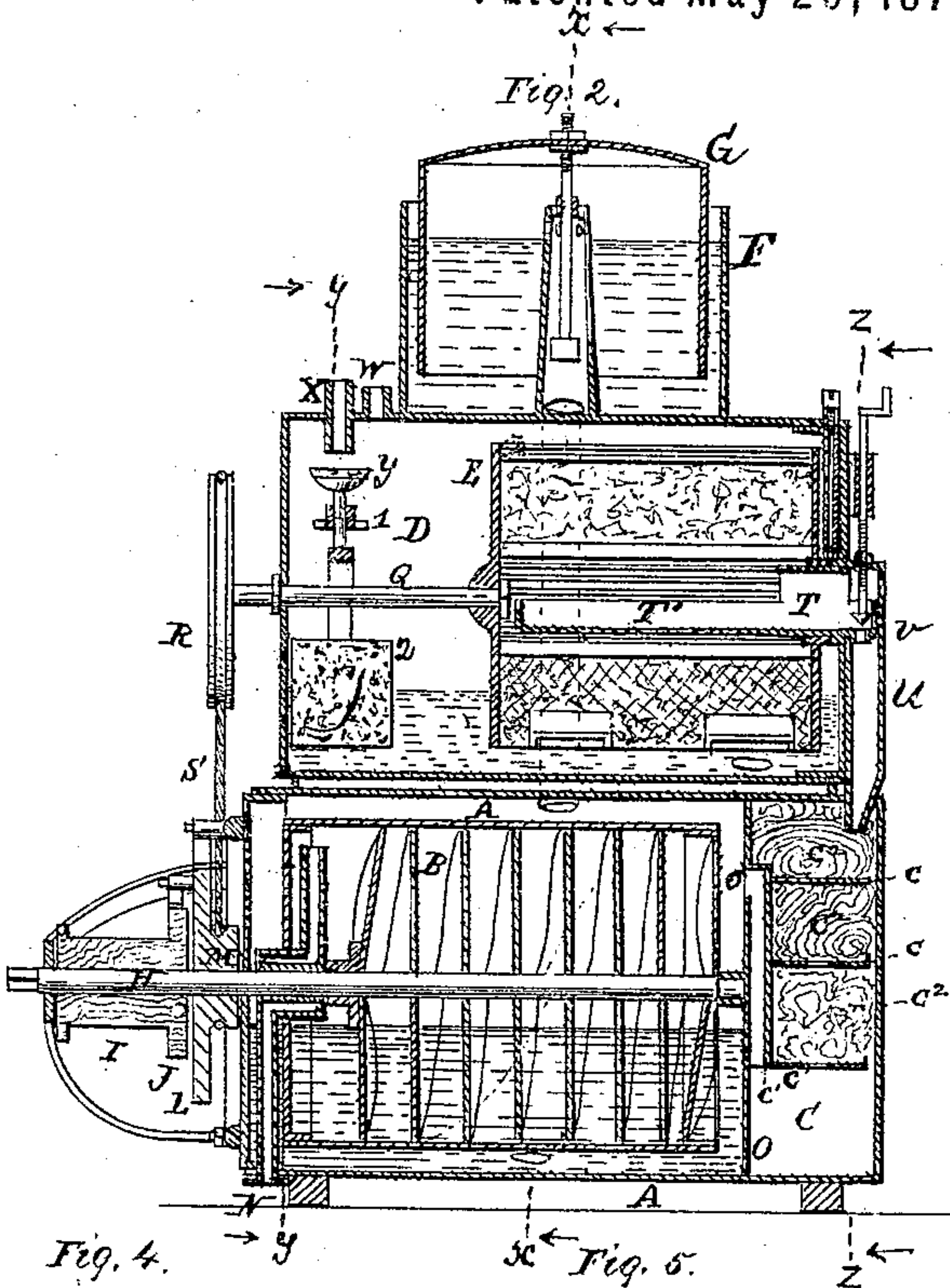
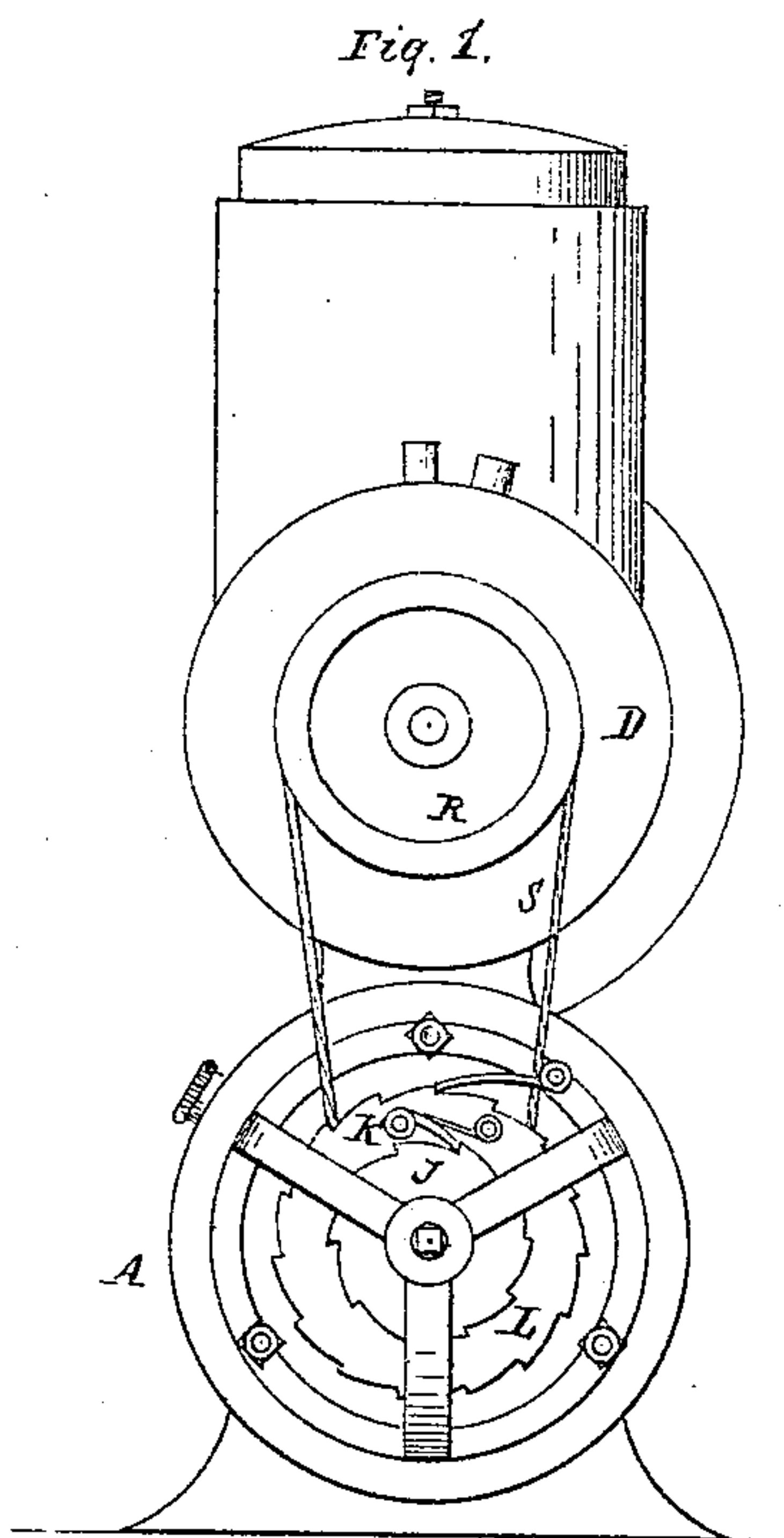


**M. HORNING.**  
**Carbureters.**

No. 151,392.

Patented May 26, 1874.



Witnesses.  
Arthur Lebow  
Henry Deiker

Inventor.  
Matthaus Horning



# UNITED STATES PATENT OFFICE.

MATTHAUS HORNING, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. 151,392, dated May 26, 1874; application filed October 6, 1873.

*To all whom it may concern:*

Be it known that I, MATTHAUS HORNING, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Gas Apparatus; and I do hereby declare the following to be a full, clear, and exact description of same, as will enable others skilled in the art to make and use it, reference being had to the accompanying drawings, which form part of same.

My invention relates to certain improvements in gas-machines.

In the drawings, Figure 1 represents a front elevation of the machine; Fig. 2, a vertical longitudinal central section of same; Figs. 3, 4, and 5, vertical transverse sections, taken, respectively, at the lines *xx*, *yy*, and *zz*, Fig. 2.

My invention consists in certain combinations and arrangements of devices and appliances, as hereinafter set forth and claimed, wherein—

A D represent cylindrical chambers placed one above the other. Within the chamber A is a fan, B, mounted upon a shaft, H. O is a partition placed in the chamber A near its rear end, and forming a separate compartment, C. This partition O, which forms the rear bearing for the shaft H of the fan B, has an opening, *o*, at its top. The compartment C is divided up by perforated plates *c*, running transversely across it, and a vertical partition, *c*<sup>1</sup>. The spaces between the perforated plates *c* are filled with fibrous material *c*<sup>2</sup>. U is a pipe extending up from the top of compartment C into a vessel, T. V is a hand-valve placed at the top of tube U. The vessel T consists of a tube, a part of the upper portion of which is cut away, as shown at T', secured to the rear head of the cylinder D. Revolving on the tubular portion T of this vessel is a drum, E, operated by means of a shaft and pulley, Q R. This drum consists of radial sheets or blades of metal, *e*, bent in the form shown in Fig. 3, which project out from the shaft R in the manner of paddles. Between these blades *e* is placed fibrous material *e*'. X is the inlet-pipe, and W the outlet-pipe, to the chamber

D. Y is a valve placed in the chamber D, the stem of which passes through a cross-bar, 1, and is attached to a float, 2, Fig. 4, by which the valve is operated. F G represent the regulating apparatus, communicating with the chamber B by means of a pipe, H, Fig. 3, by which the pressure of air in the chamber B is controlled. The fan B and drum E are connected, and are operated together through the connection of the pulleys M R, cords S, and pawls and ratchets J K L, Fig. 2.

The chamber A is partially filled with water, through which the fan B revolves. Gasoline is supplied to the chamber D through pipe X, the float 2 rising as the gasoline is poured in, until the valve Y closes the pipe X. The oil is absorbed by the filling *e*' of the drum E, and is carried up by this filling and the curved blades *e*, and drops into the vessel T T'; thence it is conducted, through valve V and pipe U, to the packing *c*<sup>2</sup> between the perforated plates *c*<sup>1</sup> in compartment C. The fan A and drum E are now set in motion by means of a weight attached to a cord wound on the drum I. Air is sucked into chamber A by fan B through pipe N. Passing through chamber A, it is forced through aperture *o* in the partition O, then down to the bottom of compartment C, up through the perforated plates *c* and saturated filling *c*<sup>2</sup>; thence, by pipe U and T, through the saturated stuffing *e*' between the radial blades *e* of the drum E, into the chamber D. From thence it is conducted off through pipe W. Thus it will be seen that the operation of purifying and commingling the air with the gasoline is thorough and perfect. The valve Y automatically regulates the supply of gasoline in the chamber D. The supply of gasoline for keeping the packing *c*<sup>2</sup> in the compartment C properly saturated is regulated by the hand-valve V.

I am aware that gas-machines have been constructed somewhat similar to mine, such as in the patents granted to Oliver P. Drake, August 30, 1853, J. T. and R. H. Plass, September 15, 1868, and P. H. Vander Weyde, August 1868, wherein is shown an oil-chamber and an air-chamber, one placed above the other, the

air-chamber being supplied with a fan and the oil-chamber supplied with a drum filled with fibrous material. These features, therefore, I do not claim; but

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

1. In a gas-generating machine, the tube or vessel T T', the same being constructed and adapted to operate substantially as herein set forth.

2. In combination with the drum E e' and oil-chamber D, the tube T T', valve V, and

passage U, substantially as and for the purposes described.

3. In combination with the oil-chamber D, the air-chamber consisting of two compartments, A C, partition O o c<sup>1</sup>, perforated plates c, and fabric c<sup>2</sup>, all constructed, arranged, and adapted to operate substantially as herein set forth.

MATTHAUS HORNING.

Witnesses:

ARTHUR LEROW,  
HENRY DEIKER.