

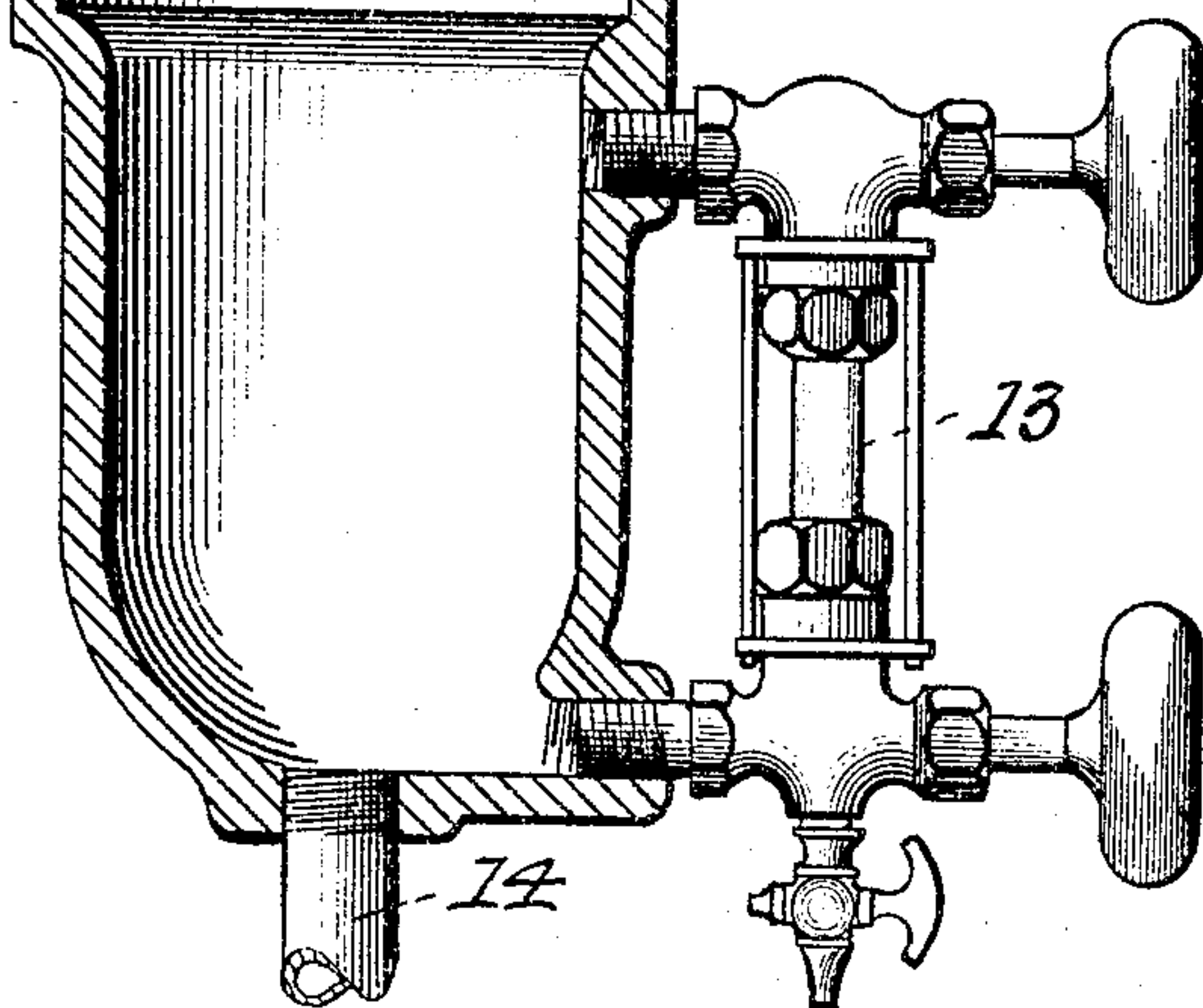
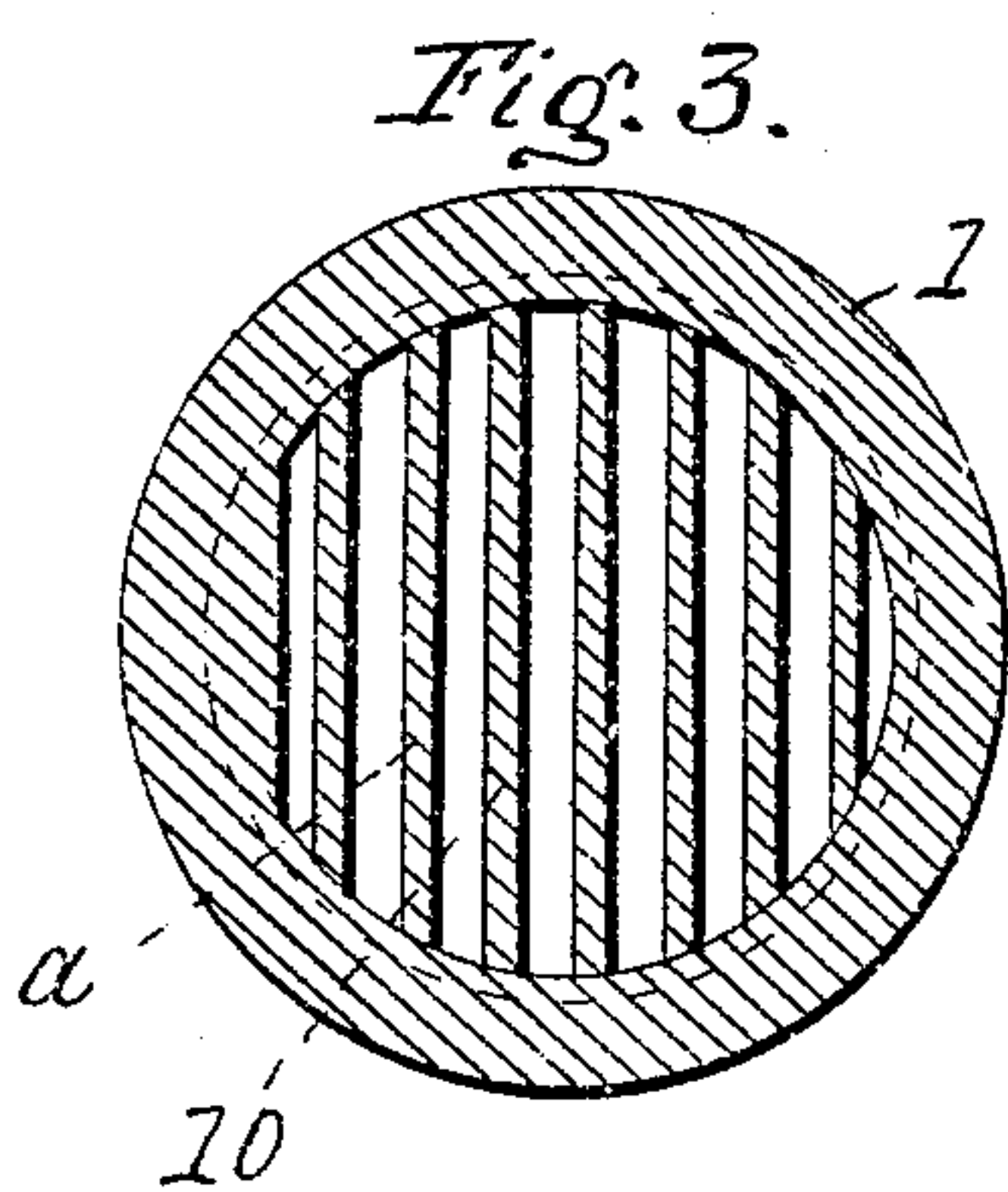
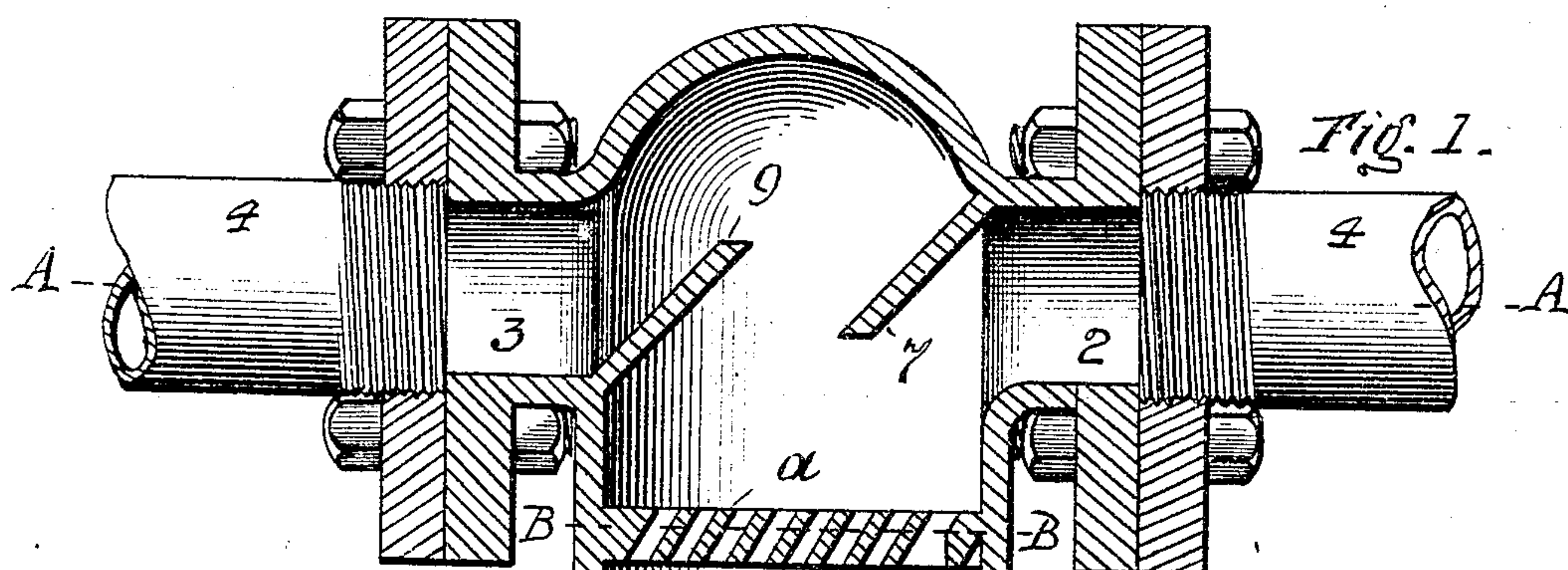
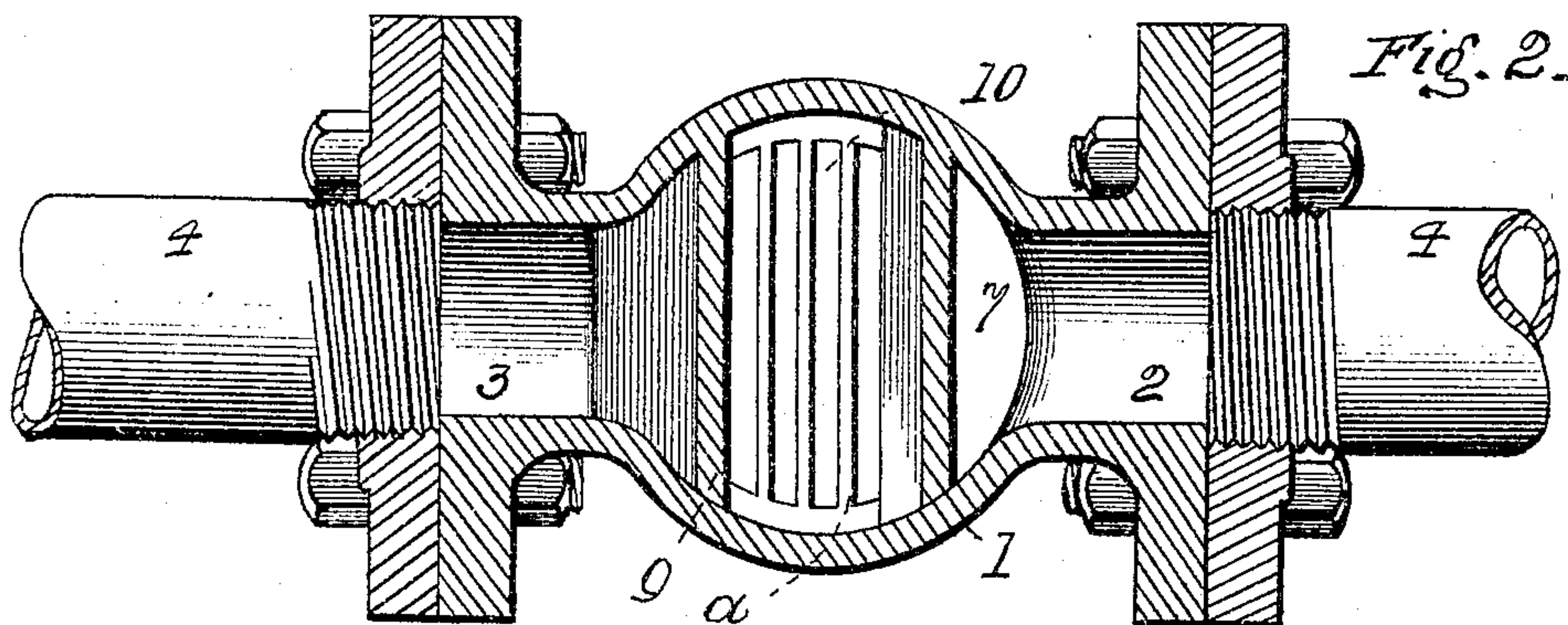
No. 774,519.

PATENTED NOV. 8, 1904.

A. J. GREENAWAY.
SEPARATOR.

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NO MODEL



Witnesses

E. W. Walker
Harry L. DeBea

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Inventor
Arthur J. Greenaway
H. H. T. Howard

Attorneys

UNITED STATES PATENT OFFICE.

ARTHUR J. GREENAWAY, OF DETROIT, MICHIGAN, ASSIGNOR TO THE GREENAWAY COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 774,519, dated November 8, 1904.

Application filed May 23, 1903. Renewed August 12, 1904. Serial No. 220,463. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. GREENAWAY, of the city of Detroit, in the county of Wayne and State of Michigan, have invented certain
5 Improvements in Steam and Water Separators, of which the following is a specification.

This invention relates to certain improvements in a steam and water separator adapted for insertion in a horizontally-placed steam-
10 pipe leading to a steam-engine or any other apparatus where dry steam is required.

In the description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof,
15 and in which—

Figure 1 is a vertical section of the improved apparatus. Fig. 2 is a section of Fig. 1, taken on the dotted line A A. Fig. 3 is a section of Fig. 1, taken on the dotted lines B B.

20 Referring now to the drawings, 1 is the shell of the separator, which is preferably of cylindrical form, and 2 and 3 are respectively the entry and delivery nozzle, to which the sections of the main steam-pipe 4 are connected.

25 The nozzles 2 and 3, which are in alinement, are situated near the top of the shell 1, and within the shell are the inclined baffle-plates 7 and 9, the approaching ends or edges of which overlap each other, but are separated to establish a passage for steam of a sufficient size.
30 Below the baffle-plates is a grating 10, the slats of which are in an inclined position, as shown in Fig. 1.

35 Near the bottom of the shell 1 is an ordinary glass water-gage 13, by which the height of water collecting in the shell may be ascertained, and such water is carried off through the drain-pipe 14, which is provided with a cock or globe-valve. (Not shown.)

It will be seen that the entire apparatus, exclusive of the steam-pipes, is cast as a single piece, and with the exception of facing the flanges of the nozzles and drilling and tapping the holes for attaching the water-gage and the drain-pipe no fitting up is required to put
45 the apparatus in a condition for use.

Steam entering the shell is deflected by the baffle-plate 7 to the grating 10, and the impact causes globules of water held in suspension in the steam to unite and pass down between the slats of the grating to the bottom of the shell. The steam after striking the grating has to pass over the edge of the baffle-plate 9 before reaching the delivery-nozzle 3, and globules of water not thrown down in the
55 impact of the steam with the grating as described will follow the inclined surface of the baffle-plate to the inner surface of the shell.

The apparatus is found by actual use to be a cheap, simple, and effective means for intercepting and collecting water held in suspension in steam while the same is passing through a horizontal steam-pipe.

I claim as my invention—

In a steam and water separator, a vertical
65 shell having an entry and a delivery nozzle near its upper end and in horizontal alinement, two separated inclined baffle-plates the edges of which overlap, arranged across the said nozzles, and a grating which consists of a system of separated inclined slats, situated below
70 the said baffle-plates, substantially as specified.

ARTHUR J. GREENAWAY.

Witnesses:

HELENA L. HILL,
LOTTIE CANFIELD.