

No. 768,628.

PATENTED AUG. 30, 1904.

J. E. SCHLIEPER.
OIL AND STEAM SEPARATOR.

APPLICATION FILED JAN. 5, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 2

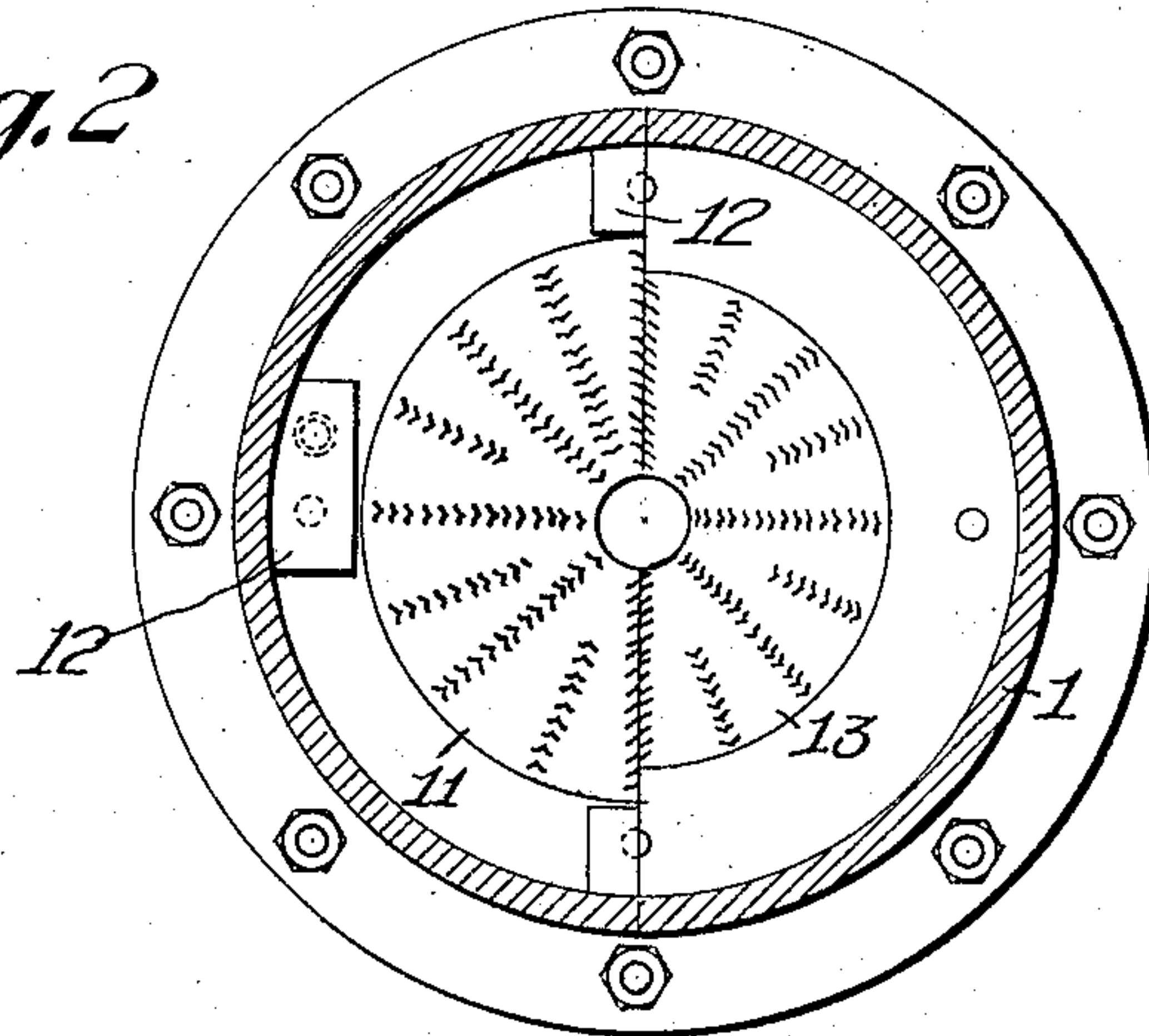
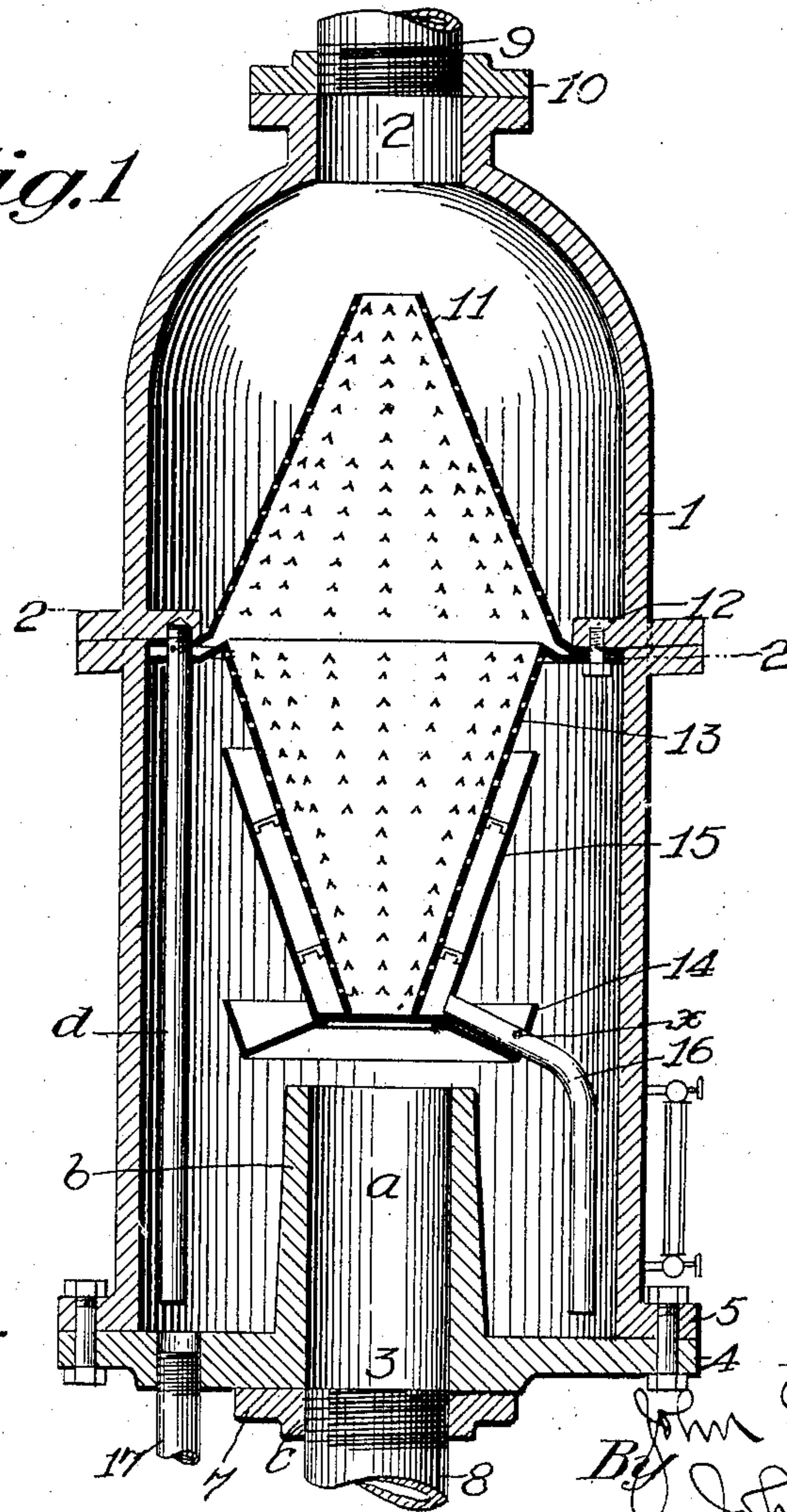


Fig. 1



Witnesses:
Geo. B. Rowley.
Chas. Williams

Inventor;
John E. Schlieper
By John H. Roney
Attorney.

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3 SHEETS—SHEET 2.

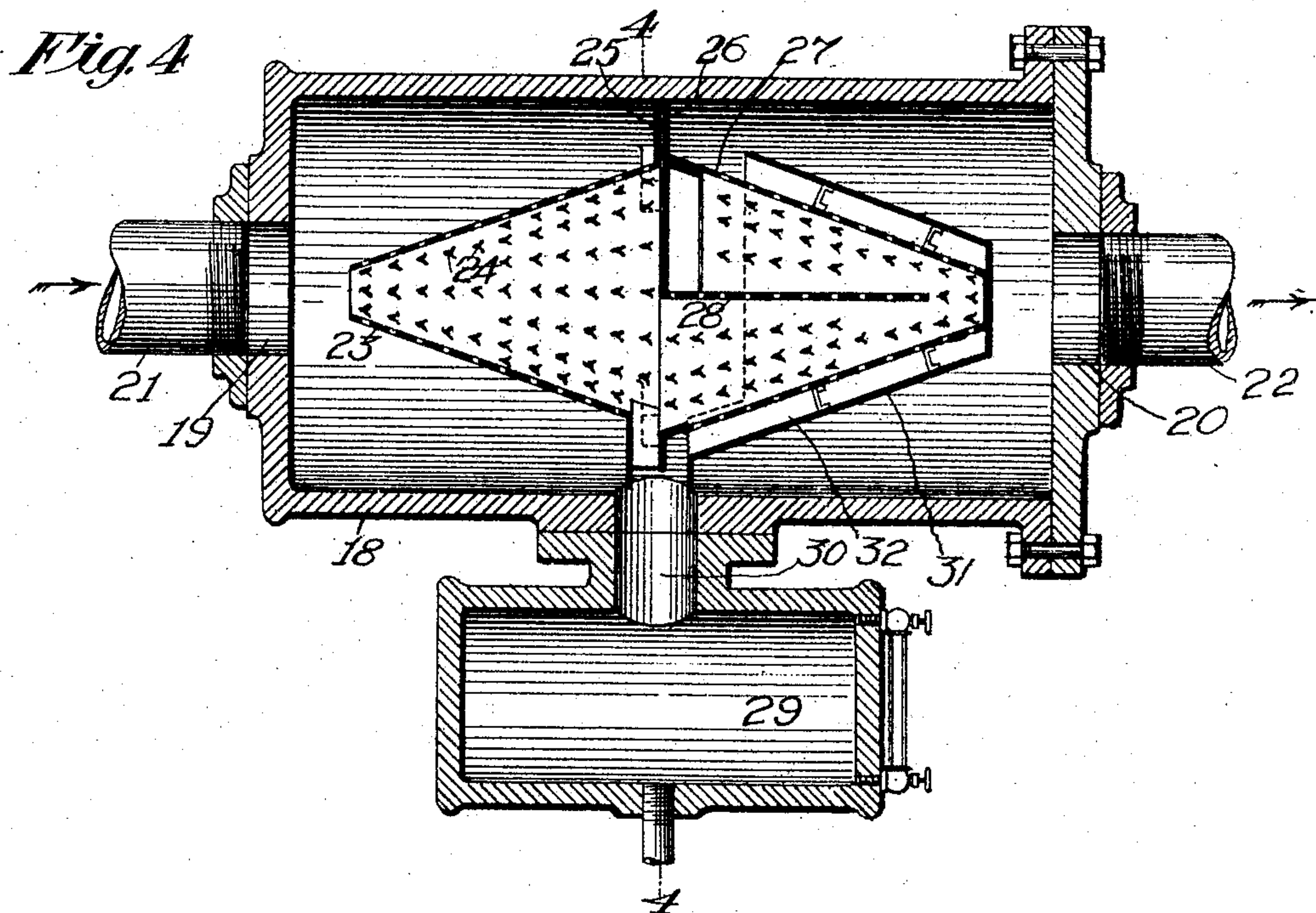
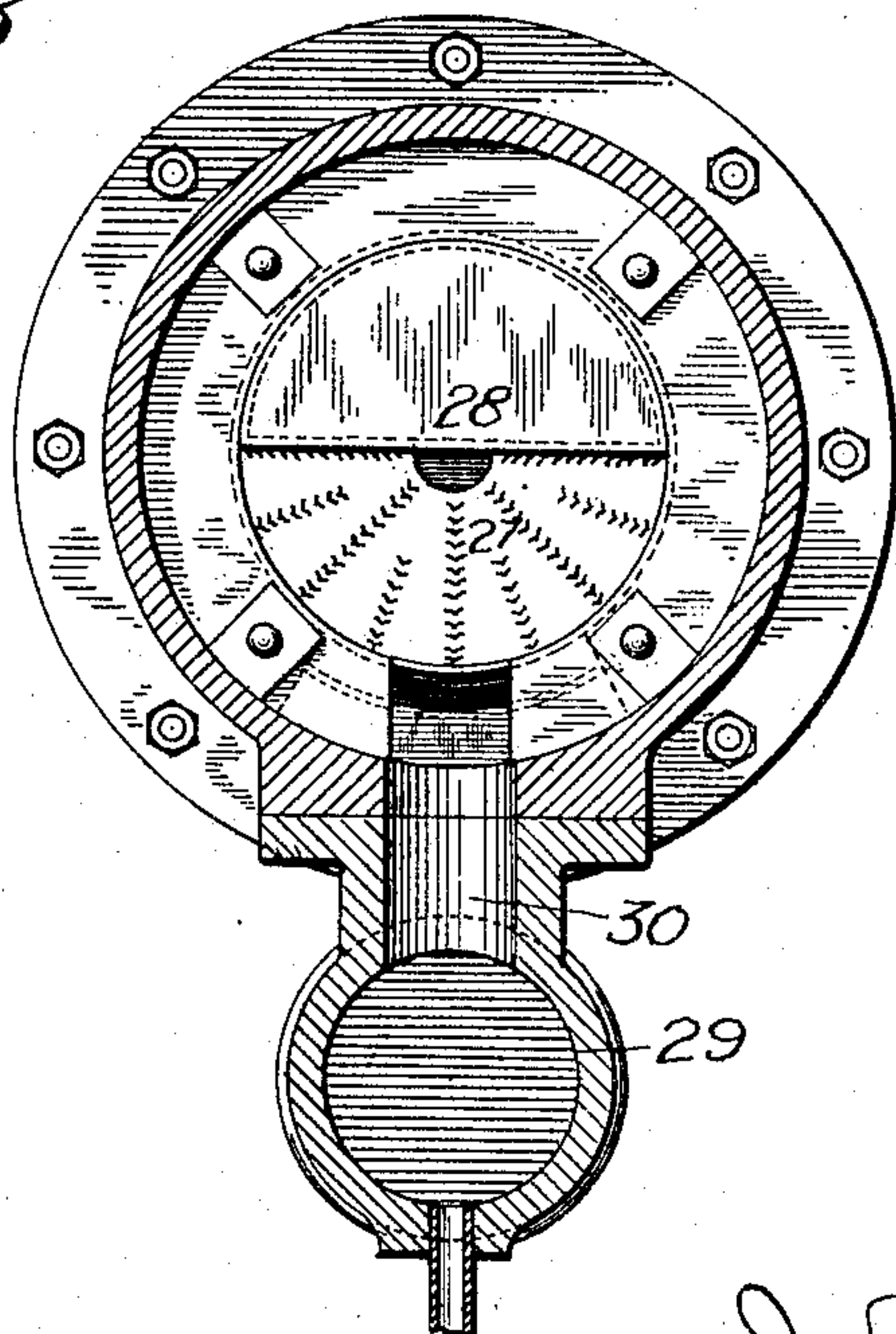


Fig. 3



Witnesses:

Geo. B. Rowley

C. Williams

Inventor;
John E. Schlieper
By John H. Rowley
his Attorney.

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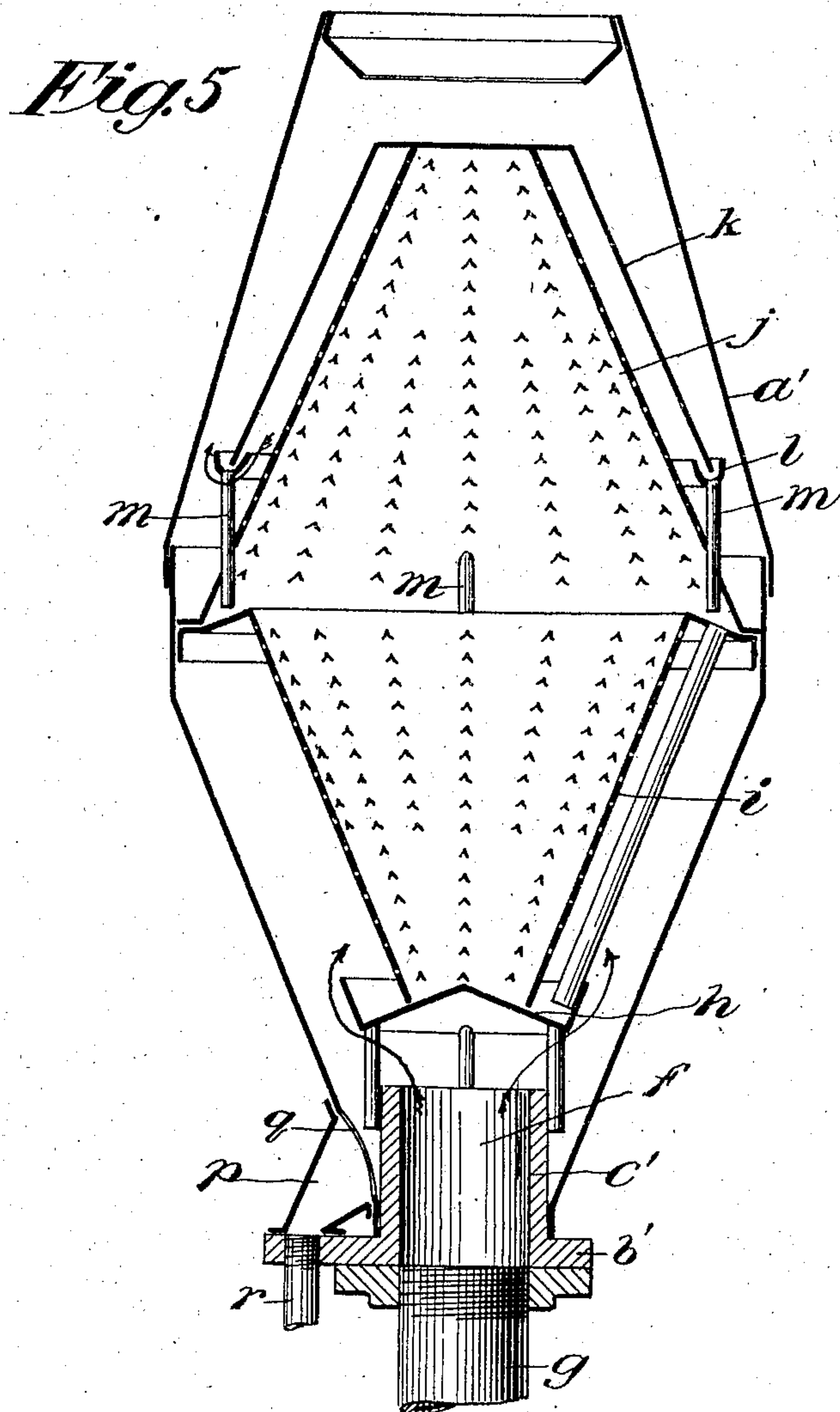
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3 SHEETS—SHEET 3.



Witnesses:
Geo B Rowley
C. Williams

Inventor:
John E. Schlieper
By John H. Roney
his Attorney.

UNITED STATES PATENT OFFICE.

JOHN E. SCHLIEPER, OF ALLEGHENY, PENNSYLVANIA.

OIL AND STEAM SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 768,628, dated August 30, 1904.

Application filed January 5, 1903. Serial No. 137,877. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. SCHLIEPER, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Oil and Steam Separators, of which improvement the following is a specification.

My invention relates to devices commonly called "oil and steam separators;" and the object of my invention is to produce a simple, cheap, and efficient device of this general character; and to accomplish this object my invention consists in the novel construction and arrangement of parts hereinafter described, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 indicates a central longitudinal section of my improved steam and oil separator. Fig. 2 is a transverse section on line 2-2 of Fig. 1. Fig. 3 is a transverse section on line 3-3 of Fig. 4. Fig. 4 is a horizontal central section of a vertical form of my device. Fig. 5 is a modified form of my device applied as an exhaust-head.

Like reference characters indicate like parts wherever they occur.

Referring to said drawings, 1 indicates a shell having an inlet-port 2 and an outlet-port 3. The outlet of said shell is closed by a cap or head 4, which is bolted to the flange 5 of said shell. The said head is provided with an inwardly-projecting boss *b*, in which a centrally-disposed opening *a* is formed. A ring 7, which is provided with an opening *c* in alinement with said opening *a*, is secured to said head or may be integral therewith and is provided with a screw-thread to receive the threaded end of the outlet-pipe 8. The opposite end of said shell is provided with an inlet-pipe 9, which is screwed into ring 10, secured thereto in a similar manner to that used in securing ring 7. A perforated baffle-plate 11, stamped in the form of an inverted cone, is arranged immediately opposite the inlet-port within said shell 1, the diverging sides of which are bolted upon the internal annular lugs 12. A correspondingly-shaped baffle-plate 13, oppositely disposed, is

likewise secured to said lugs, the contracted end of the same terminating in the solid baffle-plate 14. The said baffle-plate 13 at the lower or inner end thereof is inclosed or surrounded by a solid baffle-funnel 15, which extends from the bottom of the transverse baffle-plate 14 almost to the top of the perforated cone-baffle 13. A drain or drip pipe 16 extends from the space between said cones 13 and 14 to carry off condensation and is perforated at *x* to drain the plate 14. A long drip-pipe *d* extends from the channel formed by the curved lower edges of the cone and is discharged into the space below the solid baffle and thence is carried to the atmosphere by pipe 17.

In Figs. 3 and 4 I show a modified form of my device in which the device is horizontally disposed and provided with a drip-receptacle. The device shown in these two figures may be used either as an oil or steam separator and consists of a shell 18, having an inlet-port 19 and an outlet-port 20, in which supply and discharge pipes 21 22 are respectively secured. A baffle-funnel 23, having a diverging or widened inner end and an open contracted end, is located in alinement with the inlet-port. The sides of said funnel are provided with numerous V-shaped perforations 24. The said funnel is also provided with a flange 25, which is secured to the corresponding flange 26 of the corresponding but oppositely-disposed funnel 27. A solid baffle-plate 28 extends partially across the space inclosed between the two funnels, and a perforated horizontally-disposed plate almost subdivides the funnel 27 into two compartments. A drip-receptacle 29 is connected to the outer shell 18 at a point intermediate the length thereof by the pipe 30. A solid cone-baffle 31 surrounds and closes the contracted end of the funnel 27, a space 32 being formed between the walls thereof, into which the steam is compelled to enter on its way to the discharge. The moisture of condensation is carried down said cone baffle-plate 31 to the drip-receptacle 29 by means of pipe 30.

In Fig. 5 I show the device of Figs. 1 and 2 applied as an exhaust-head, which comprises the shell *a'*, one end of which is closed

by a cap *b'*, having an inwardly - projecting boss *c'*, which is provided with an opening *f* in alinement with the exhaust-pipe *g*. A short distance above the open end of
 5 said boss is located a dished baffle-plate *h*, which is supported above said boss by the inverted-cone-shaped funnel *i*, the upper diverging sides of which are flanged and riveted to the sides of the shell. A similar funnel *j*
 10 is secured to said funnel *i*, and the contracted end terminates a short distance below the exit of the shell. A solid cone-shaped funnel *k* surrounds the upper end of funnel *j*, being secured to the upper end thereof. The
 15 lower end of said funnel *k* terminates a short distance above the trough *l*, which is supported on drip-pipes *m m*, secured in the walls of funnel *j*. Drip-pipes are secured to the dished pan *h*, which is secured to the lower
 20 end of funnel *i*. A drip-chamber *p* is formed on one side of said shell *a'*, and an opening *q* formed in the wall of said shell to permit water of condensation to pass into said chamber and from thence to the exterior through
 25 pipe *r*.

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

1. A device of the character described comprising a shell having inlet and outlet ports, two juxtaposed cone-shaped funnels, the end 30 of one of said funnels being closed by a baffle-plate and surrounded by an imperforated funnel, the said juxtaposed funnels having perforations therein.

2. A device of the character described comprising a shell having inlet and outlet ports, 35 two juxtaposed perforated cone-shaped funnels, the end of one thereof being closed by an imperforate baffle-plate and surrounded by an imperforated funnel, a horizontally- 40 disposed plate partially extending across said funnels and a drip-receptacle.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN E. SCHLIEPER.

In presence of—

CLARENCE A. WILLIAMS,
 JAMES C. HERRON.