

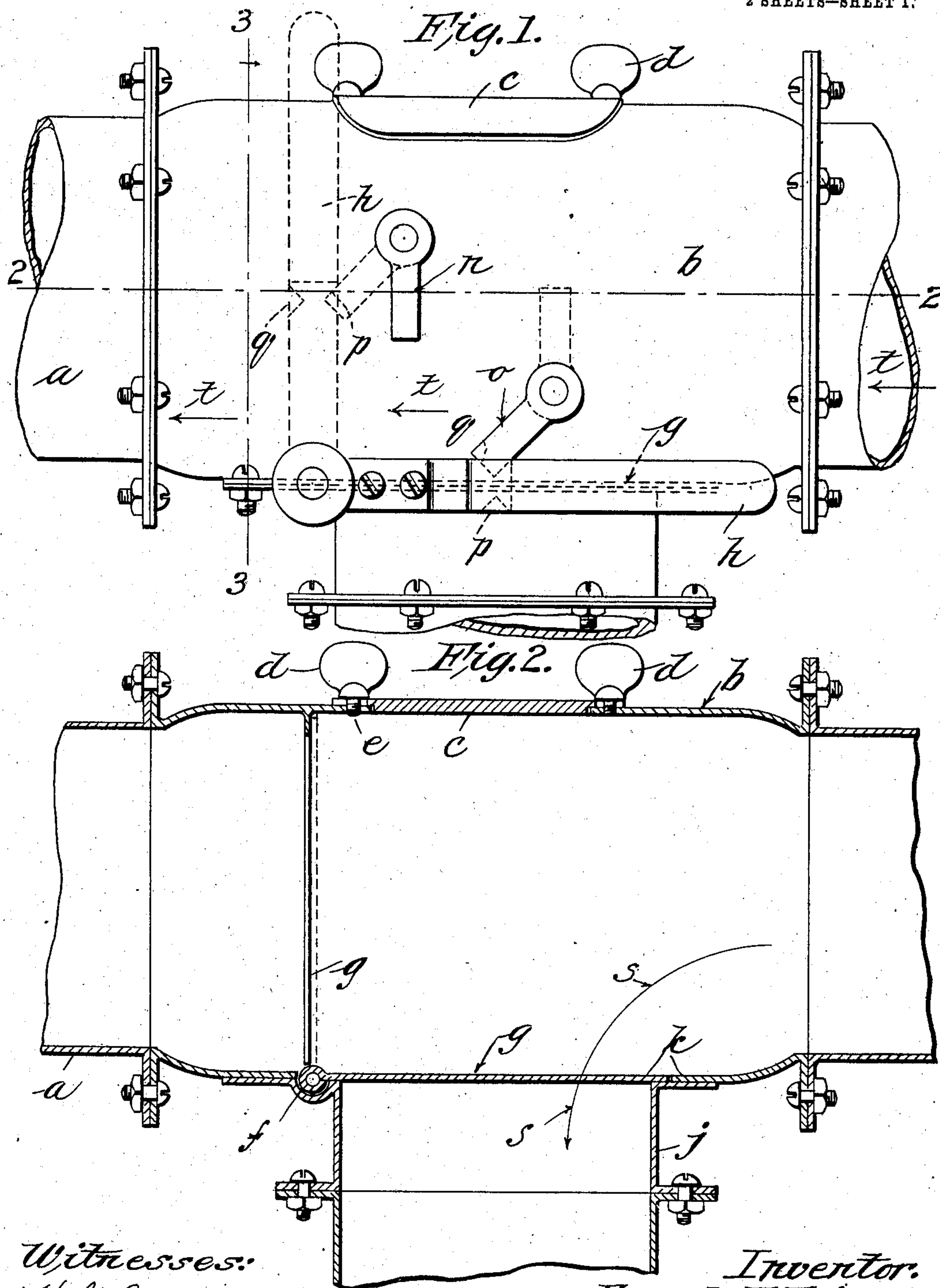
No. 827,435.

PATENTED JULY 31, 1906.

E. H. FRIEDRICH.
FLOAT VALVE.

APPLICATION FILED MAR. 20, 1906.

2 SHEETS—SHEET 1.



Witnesses:
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E. W. Sealhorn

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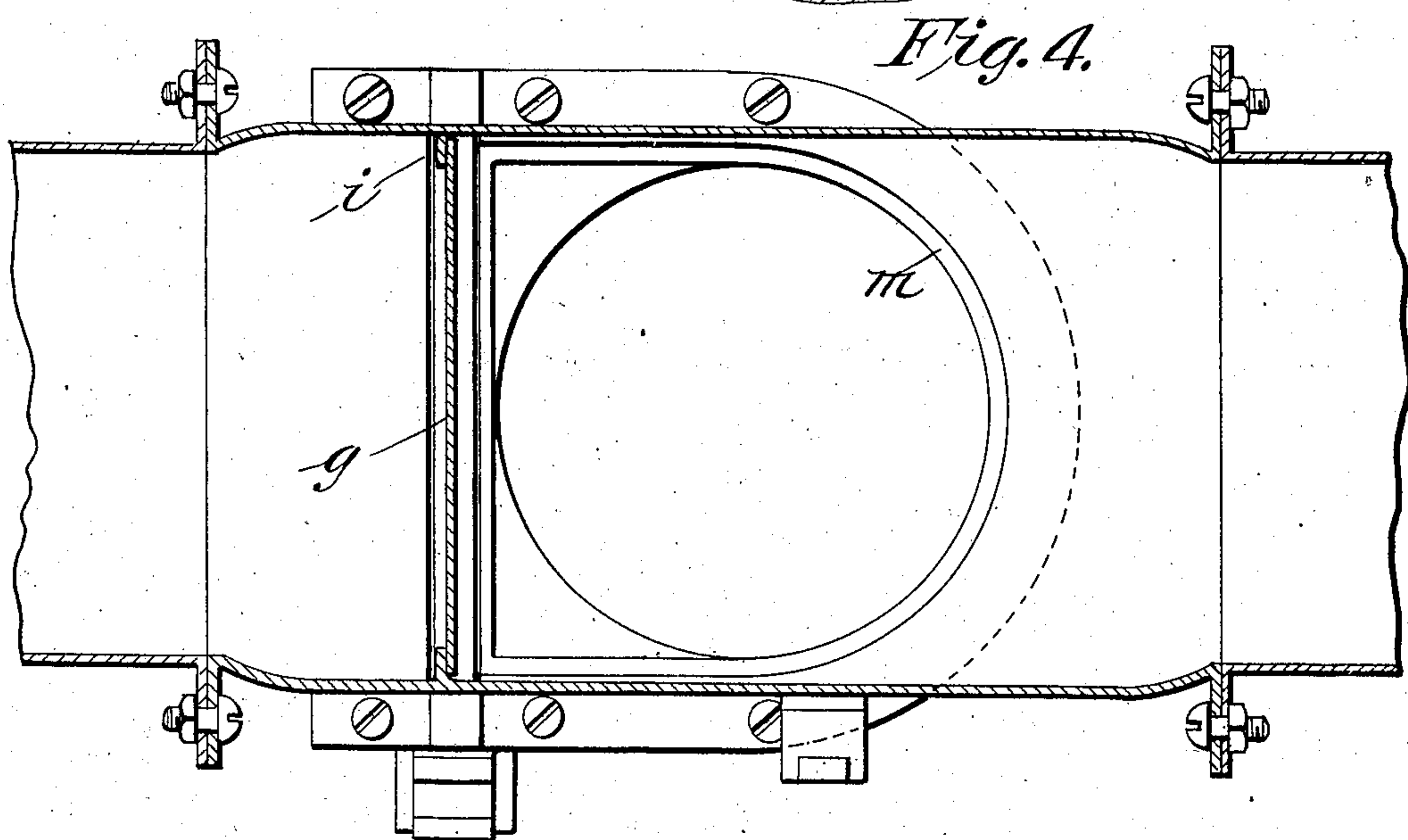
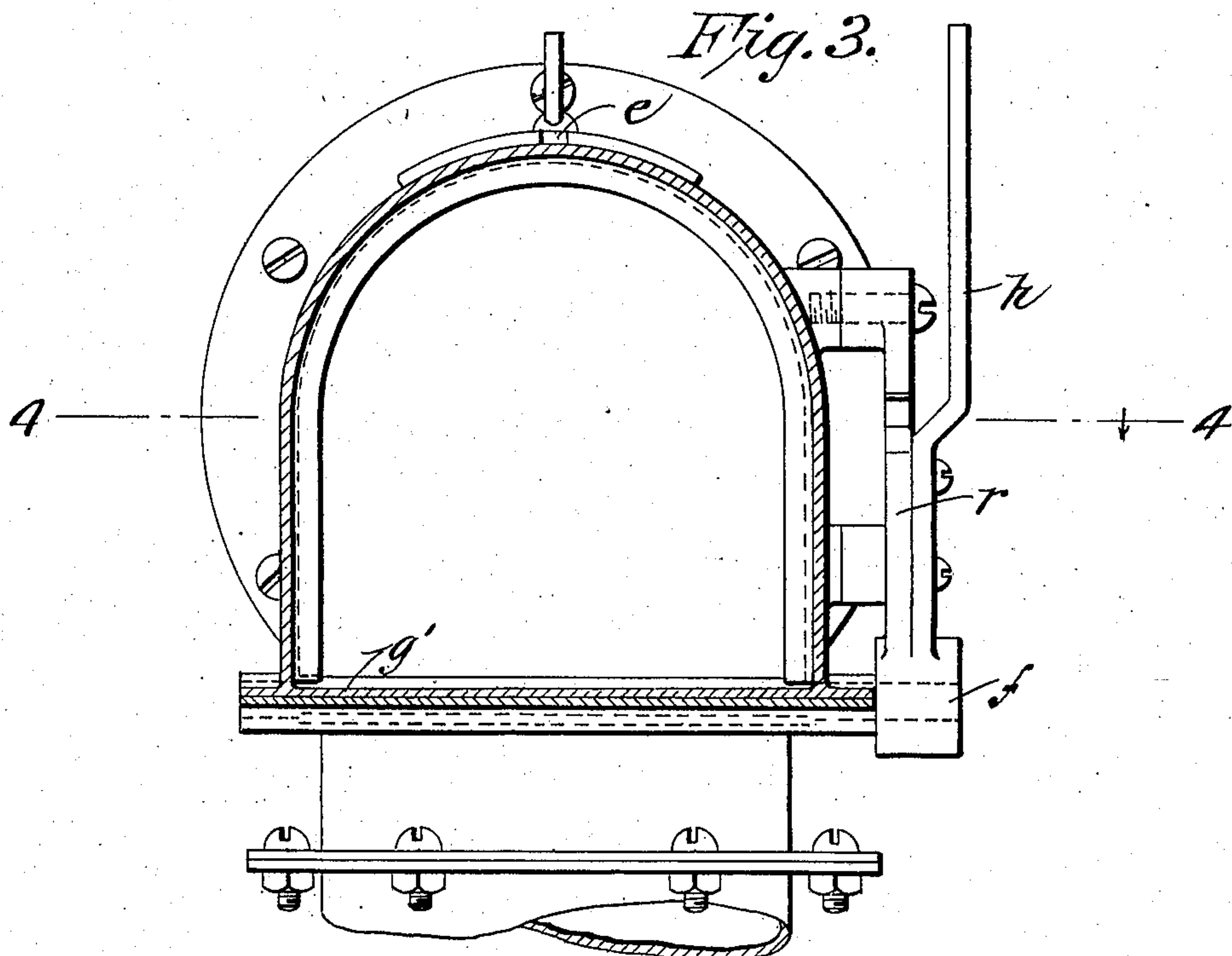
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UNITED STATES PATENT OFFICE.

ERNEST H. FRIEDRICH, OF HOLYOKE, MASSACHUSETTS.

FLOAT-VALVE.

No. 827,435.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed March 20, 1906. Serial No. 307,126.

To all whom it may concern:

Be it known that I, ERNEST H. FRIEDRICH, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Float-Valves, of which the following is a specification.

This invention relates to pulp-valves for use in paper-mills for directing the flow of pulp in different directions from one machine to another, or from one part of the building to another, as may be desired. It is generally used to control the pulp after leaving the beating-engine and before it enters the paper-making machine.

Broadly, the invention consists in securing a valve or gate to a horizontally-movable shaft in the valve-casing, so that the flow of pulp can be changed from a horizontal direction to one at right angles thereto, or, vice versa, as may be desired.

In the drawings forming part of this application, Figure 1 is a side elevation showing the valve in dotted lines in longitudinal adjustment. Fig. 2 is a longitudinal sectional view on line 2 2, Fig. 1, showing the valve in full lines thrown to a vertical position and to a horizontal position in dotted lines. Fig. 3 is a section on the line 3 3 of Fig. 1 looking in the direction of the arrows and showing the valve in vertical adjustment in dotted lines. Fig. 4 is a horizontal sectional view looking downward on the line 4 4 of Fig. 3.

Referring to the drawings in detail, *a* designates a portion of the main pulp-pipe; *b*, the valve-casing, secured to the pipe *a* by the ordinary flange-and-bolt construction, as shown.

c designates a plate for covering an opening in the top of the valve-casing *b* for affording means for inspecting and repairing the interior of the valve mechanism. This plate is secured to the casing *b* by the thumb-nuts *d*. The ends of the plate are slotted or cut away, as shown at *e*, so that the plate can be easily removed or inserted in place by simply unscrewing one of the thumb-nuts.

Extending transversely of the casing *b*, and in the lower side thereof, is a shaft *f*, to which is secured by soldering or otherwise the valve *g*. The lower side of the casing *b* is made flat where the valve *g* rests, as shown at *g'*. Secured on the outside of the casing and to the transverse shaft *f* is an operating handle or lever *h* for throwing the valve *g* into a verti-

cal or horizontal position. On the interior of the casing and extending around the inner wall thereof is a vertical flange *i*, against which the valve *g* rests when thrown into a vertical position, as clearly shown in Figs. 2, 3, and 4.

It will be noticed that the lower side of the casing has a pipe *j* connected at right angles to the casing *b*, as shown in Figs. 1, 2, and 3. The valve *g* when turned into a horizontal position forms a closure for the passage-way leading from the casing *b* to the pipe *j*, and when in this position the valve *g* is flush with the bottom of the casing, as shown at *k*, Fig. 2. The valve *g* rests on a horizontal flange *m*, as shown in Fig. 4, for supporting the valve when in this position.

In order to securely hold the valve *g* in either a horizontal or vertical position, I have pivotally mounted on the outside of the casing *b* locking-latches *n* and *o*. In the opposite sides of the handle *h* are cut two notches *p* and *q* in a piece *r*, that is riveted to the operating-handle *h*, as shown in Fig. 3. When the handle *h* is thrown, and consequently the valve *g*, into a vertical position, the latch *n* is rotated to the dotted-line position, so as to engage the notch *p* in the piece *r*, thus securely holding the valve in this position, and when the same is thrown into a horizontal position (shown in dotted lines in Fig. 1) the latch *o* is rotated, so as to engage the notch *q*. (Shown in full lines in this figure.) It will therefore be seen that the valve *g* is securely locked in either horizontal or vertical position, according to the direction in which it is desired that the pulp is to flow. When in the position shown in Fig. 2, the pulp is directed downward through the pipe *j*, (shown by the arrows *s*,) and when thrown into a horizontal position, as shown in the dotted lines of Fig. 1, the pulp can pass freely through the pipe *a* and the connecting valve-casing *b*, as indicated by the arrows *t*.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A pulp-valve mechanism, a valve-casing, and means for attaching the same to a pipe at either end, a manhole in the upper side of the casing, and means for closing the same, a transverse shaft in the lower side of the casing, a valve attached to the shaft, a handle secured to one end of the transverse shaft, pivotal latches secured to the outside of the casing and adapted, when the valve is

in either a vertical or horizontal position, to engage the operating-handle to lock the same in said position.

2. In a pulp-valve, a casing, the lower portion of which is straight, the remaining portion being substantially a curved surface, a transverse shaft extending through the casing and mounted in the straight portion thereof, a pipe secured to the casing at right angles thereto and adjacent to the transverse shaft and communicating with the interior of the casing, an operating-handle secured to the transverse shaft and having

notches therein located opposite each other, pivotal latches mounted on the casing for engaging the notches to lock the operating-handle in either a vertical or horizontal position so that the flow of pulp may be permitted to pass freely through the valve-casing when in a horizontal direction, or be deflected from the casing in a direction at right angles thereto and through said pipe.

ERNEST H. FRIEDRICH.

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