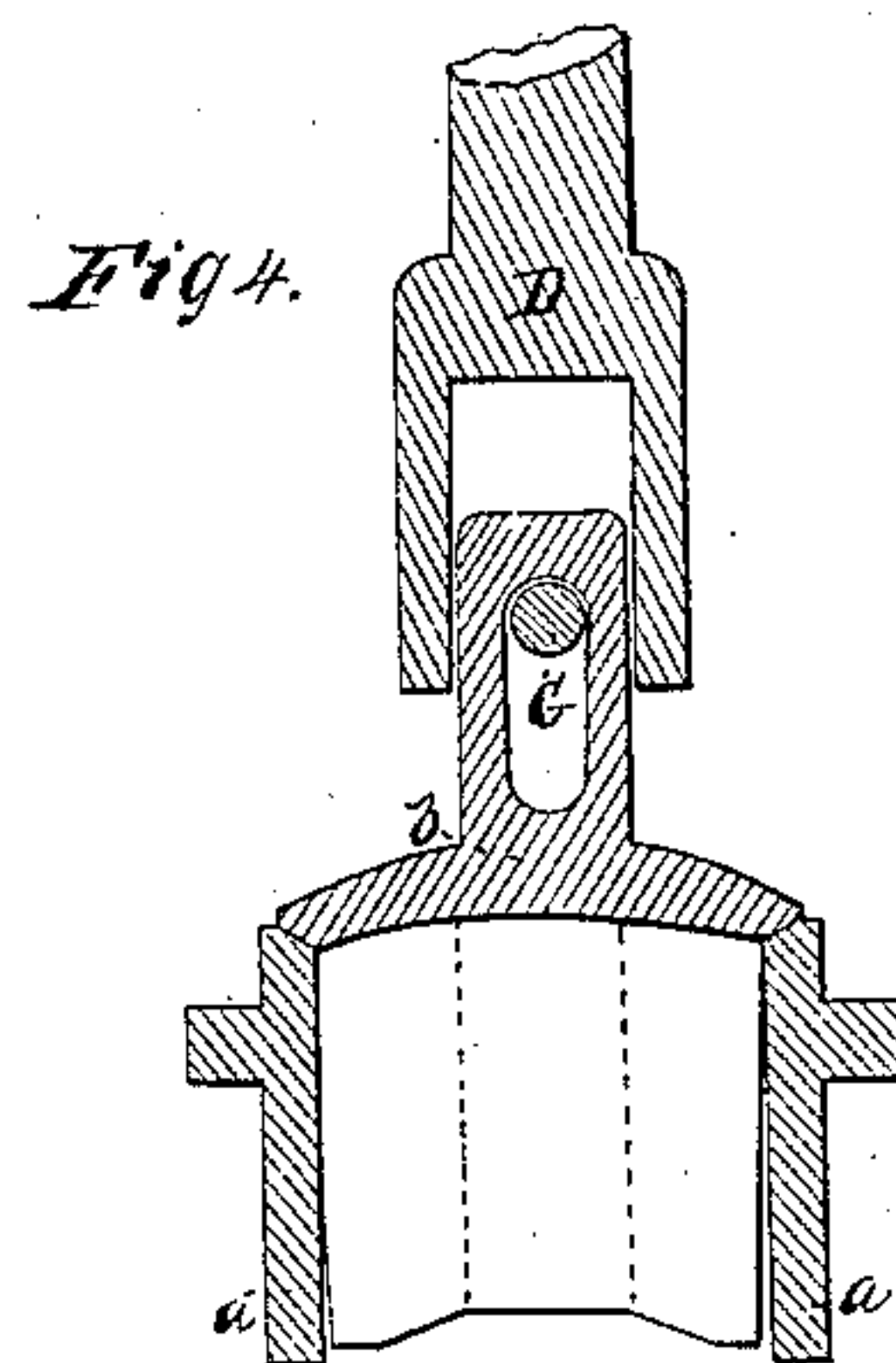
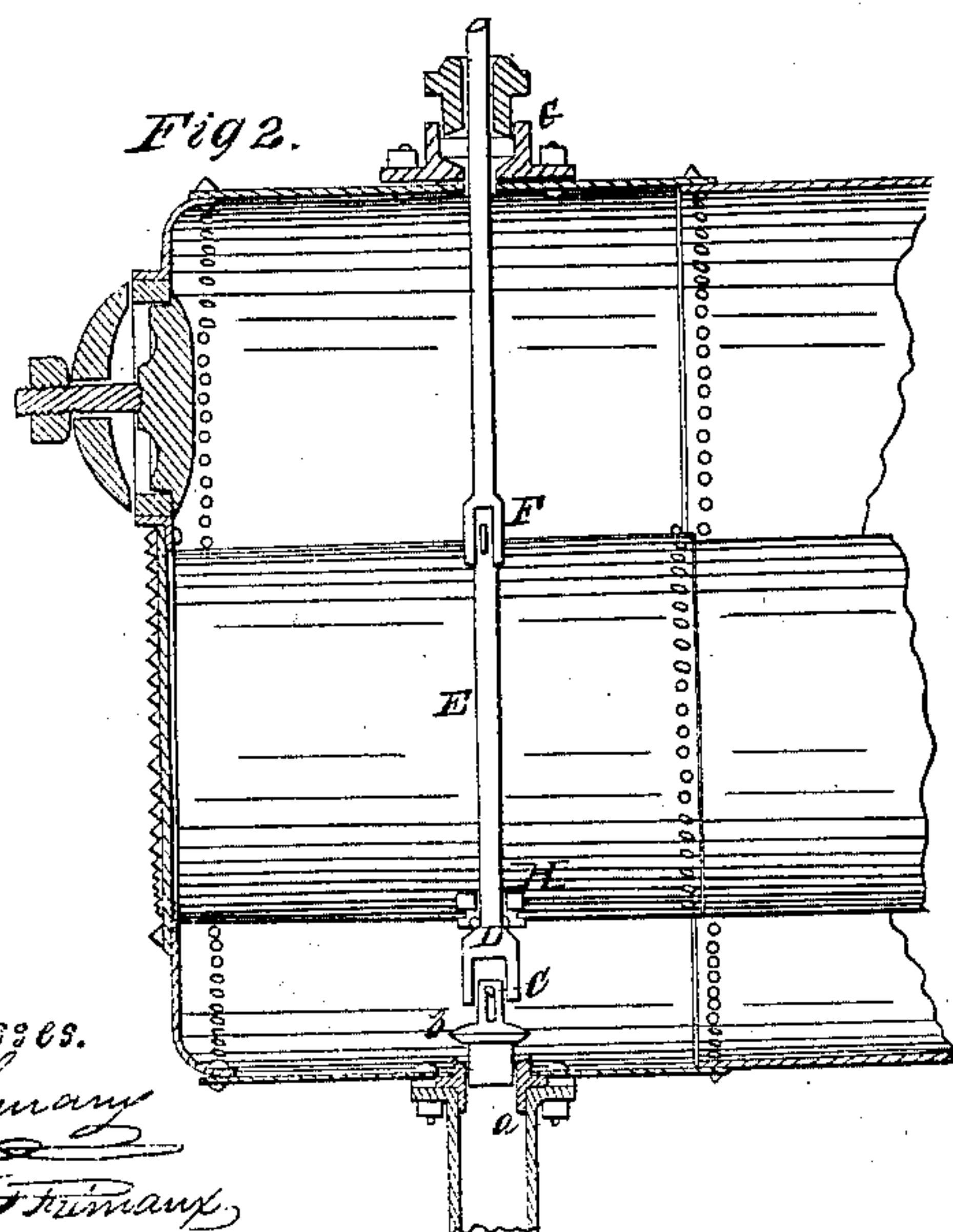
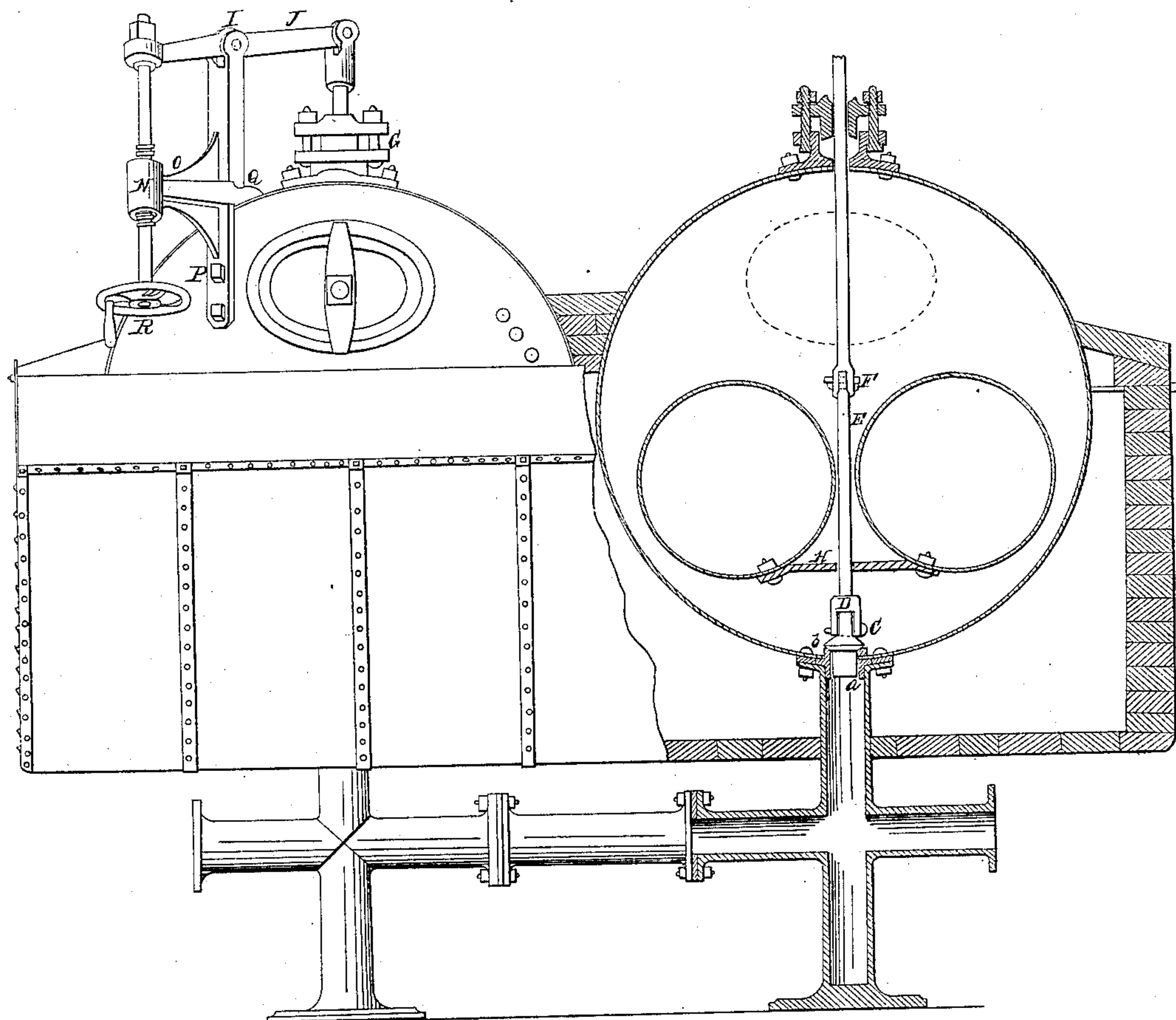


J. Delery.

Steam-Boiler Attachment.

N^o 61,324.

Patented Jan. 22, 1867.



Witnesses.
J. L. Lamy
J. H. Lamy

Inventor.
J. Delery

United States Patent Office.

JULES DELERY, OF ST. BERNARD, LOUISIANA.

Letters Patent No. 61,324, dated January 22, 1867.

IMPROVEMENT IN STEAM GENERATOR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JULES DELERY, of the parish of St. Bernard, and State of Louisiana, have made a new and additional Improvement to the Water Communications of Steamboat Boilers, for the purpose of preventing explosions thereof; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon.

The nature of my invention consists in adding to each boiler on board of steamboats an extra check-valve besides the ordinary arrangements now used, and closing up the choke joints between the boilers, the object of which is to prevent the water from falling below the fire line, when, by some cause, the vessel rolls or cants one side, which causes the water to flow from the highest to the lowest boiler with the present arrangements.

To enable others skilled in the art to make use of my invention, I will proceed to describe its construction and operation.

Between the top end of the feed or stand pipe and the bottom of the boiler I insert a valve-seat, *a*, one-half section of which is represented at Figure 4. The recess at the under part of fig. 4 enters inside of the stand pipe. The upper recess fills the hole at the bottom of the boiler. The projecting flange in the middle serves as a gasket ring to keep the necessary distance between the boiler and the upper flange of the stand pipe for making the ordinary cement joint. On the upper part of *a* is turned the seat for the valve *b*, which carries at the under part three leaf guides, (or four,) as shown in the drawings, instead of a stem; and on the top it carries a stem, with a mortise, the purpose of which will hereafter be explained. A socket, *D*, attached to the rod *E*, connected at *F* by a socket, for facility of introducing it in the stuffing-box *G* on the top of the boiler. The rod *E* passes through a hole in the arch-bar *H*, which is a guide to steady the rod as well as the valve. The rod *E* is connected with lever *J*, having its fulcrum at *I*, and is connected with rod *L*, having a strong thread-screw working at *N* through the stand *O*, which is strongly bolted to the boiler at *P* and *Q*. The rod *L* being unscrewed by means of crank *R*, the socket *D* is raised at a convenient height to allow valve *b* to yield to the force of the pump, and permit the water into the boiler, fig. 2; and, being closed immediately by its own weight and the pressure of the steam, it will not allow the water to flow from one boiler to the other when the boat rolls to one side. Now, if the isolating valves were of the same capacity as the feed-pump valve, the boiler nearest to the pump would receive all the water; and, being separated from the others, these would soon run empty, or be scantily supplied; and it is to obviate this that the rods *L*, *J* and *E* and connections are added, so that the feed-water may be regulated to each boiler. The mortise on the top of the upper stem of the valve is intended to pull up the valve, and keep it open, by means of pin *C*, when it is desired to let the water out of the boiler for blowing off or cleansing. The socket *D* on the end of rod *E* serves as a check and a guide, as well as a rest, to keep the valve open when it is needed. This arrangement of isolating the boilers would bring a great increase of labor on the engineer if it were applied to steamboat boilers as now used; but it is intended to be invariably connected with the JULES DELERY's steam boilers' warden, patented on the 3d of July, 1866, No. 56,017. The warden, being constantly in operation, it performs all the overseeing for the engineer, and notifies him as soon as one of the isolating valves requires to be altered, thus greatly lessening the necessary watchfulness of the engineer, and at the time removing all danger of unnoticed scarcity of water in the boiler in all circumstances, and giving the engineer perfect control of the water supply.

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

The isolating check-valve *b*, connecting-rods *E* and *L*, and lever *J*, in combination with the generator and water-communication pipe, substantially in the manner shown and described.

J. DELERY.

Witnesses:

J. LANAUZ,
W. BLOCH.