

C. KAMMERER.

Improvement in Steam Traps.

No. 125,459.

Patented April 9, 1872.

Fig. 1.

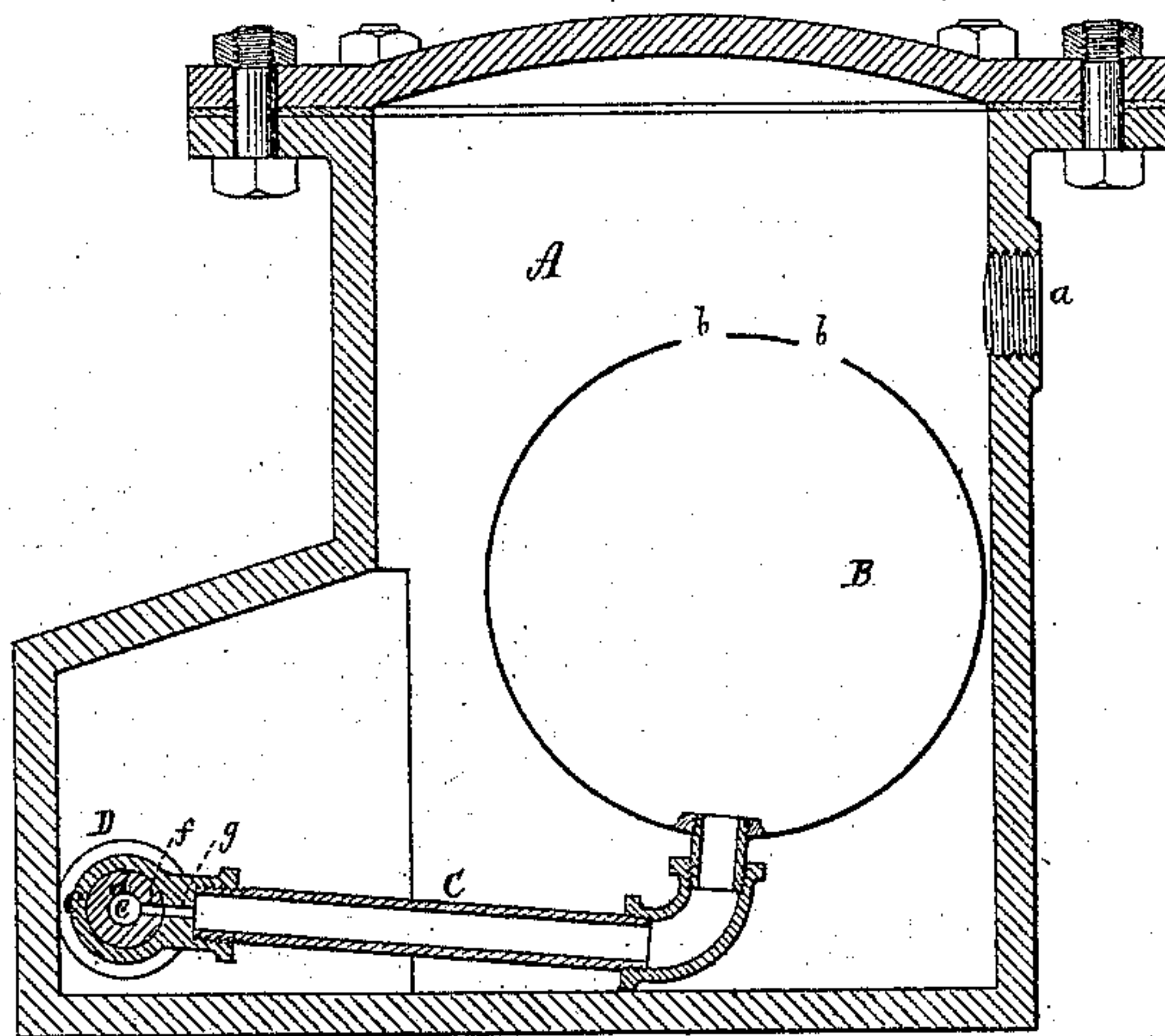
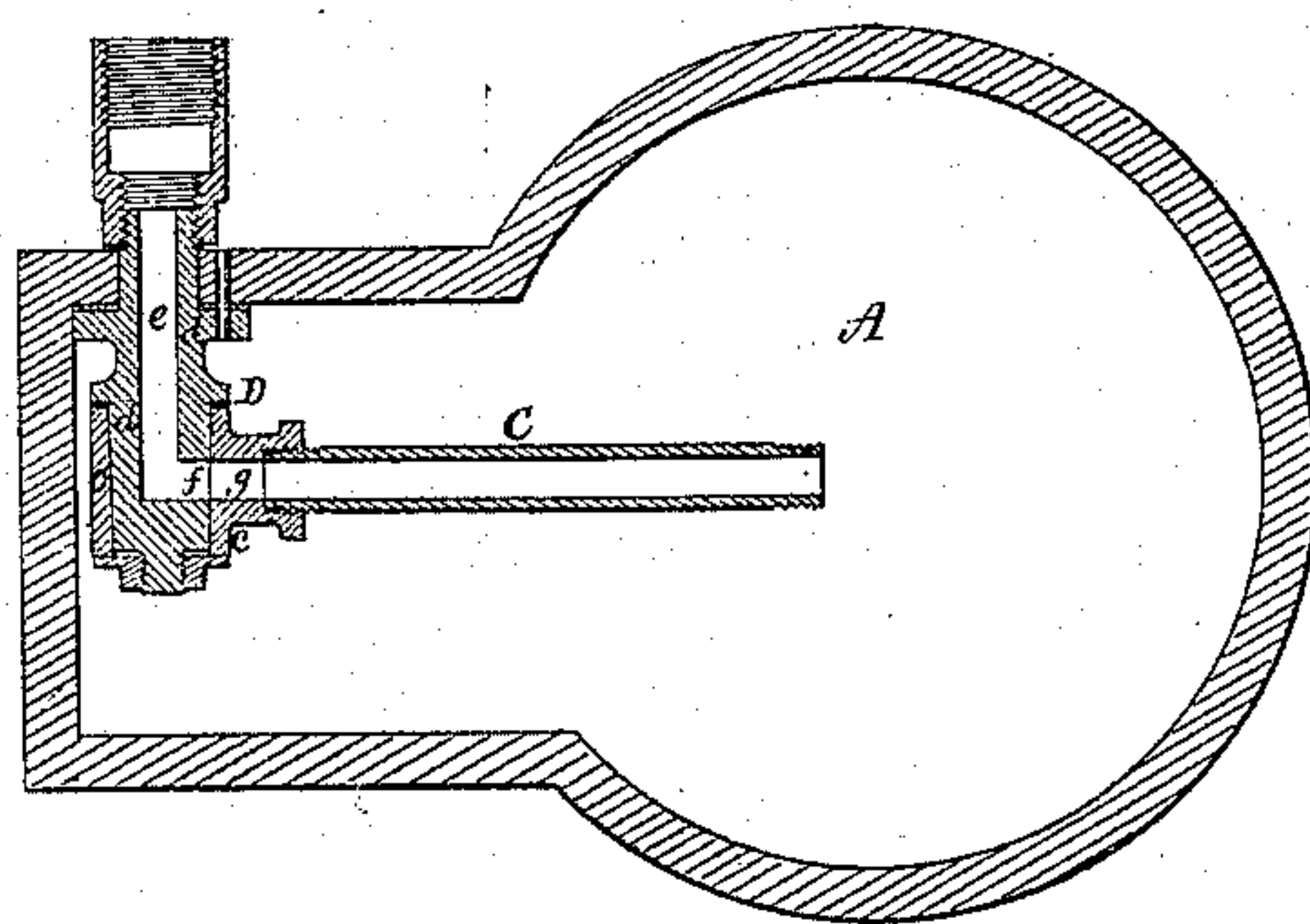


Fig. 2.



Witnesses.

S. N. Piper.

L. N. Möller.

Christopher Kammerer.

by his attorney.

R. M. Eady

UNITED STATES PATENT OFFICE.

CHRISTOPHER KAMMERER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND JAMES C. FURNESS, OF SAME PLACE.

IMPROVEMENT IN STEAM-TRAPS.

Specification forming part of Letters Patent No. 125,459, dated April 9, 1872.

To all persons to whom these presents may come:

Be it known that I, CHRISTOPHER KAMMERER, of Boston, of the county of Suffolk State of Massachusetts, have invented a new and useful Improvement in Steam-Traps; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a vertical and longitudinal section of my improved steam-trap. Fig. 2 is a horizontal section taken through its eduction-cock.

The nature of my invention or improvement consists in a hollow float open at top, a tubular arm and a discharge-cock, arranged and combined together, and with a closed case in manner, and so as to operate essentially as hereinafter explained.

In such drawing, A denotes a closed case or vessel provided with an induct, *a*, arranged as shown, or otherwise properly disposed. Within such vessel is a hollow globular float, B, having one or more openings, *b*, in its top or upper part. This float is fastened at its bottom to one end of a tubular arm, C, which opens out of the globe float. At its opposite end such arm is attached to and opens into the body part *c* of a common water cock, D, having its stem *d* fastened to and extended through the lower part of the case A, in manner as shown. The said stem is tubular or chambered, as represented at *e*, and is made cylindrical or slightly conical to receive the body part *c*, and to enable such to turn on the stem with a water-tight joint, there being in the stem a rectangular opening, *f*, to correspond with or about with another such opening, *g*, in the body part, and leading into the hollow arm or conduit C.

The object of the apparatus, like that of the other steam-traps, is to allow of the escape of water of condensation from a steam heating coil or vessel without at the same time admitting of the escape or loss of steam.

The operation of the apparatus may be thus explained: If we suppose the coil or heater to be opened at its lower part into the case A at its induct *a*, so that the water of condensation, as fast as formed, may flow from the coil

or heater into the said vessel A, it will accumulate therein so as to elevate the float B to the extent of its upward motion, after which it will flow over and into the said float, and into and through the tubular arm C, until it will cause the float to sink sufficiently to bring the opening *f* in such relation with the opening *g* as to let the water flow from the arm C into the plug or sleeve *d*, and be discharged thereby. Water, as it may afterwards gather in the case A, will flow into the float and be discharged without any steam escaping from the trap.

I am aware of the steam-trap of Gould and Brown, as shown in their expired patent of May 2, 1851, and make no claim thereto, although there is a principle common to that and my steam-trap, viz., the open float connected with the discharge-pipe, so that the waste water will flow off through both. My construction and arrangement of parts prevents sediment from collecting in and clogging the float, or its educt, as it is liable to do in the patented trap.

In my arrangement the hollow arm C is entirely below the float B, and disposed so that all sediment or deposits of any nature passing into the float, while it may be in action, will escape freely therefrom, without remaining in it and adding to its weight.

In the trap of the expired patent, most of the float extends below the discharge-pipe, and consequently it operates to collect and retain sedimentary matters, which, after a while, are liable to cover and choke the eduction near the bottom of the float or the partition therein.

Consequently I make no claim to the principle common to the two traps, but confine my invention to my improvement or specific arrangement and construction of parts—that is to say—

I claim—

The combination of the open-top hollow float B with the tubular arm C and waste-cock D, in the case A, all constructed, arranged, and to operate as shown and specified.

CHRISTOPHER KAMMERER.

Witnesses:

R. H. EDDY,
S. N. PIPER.