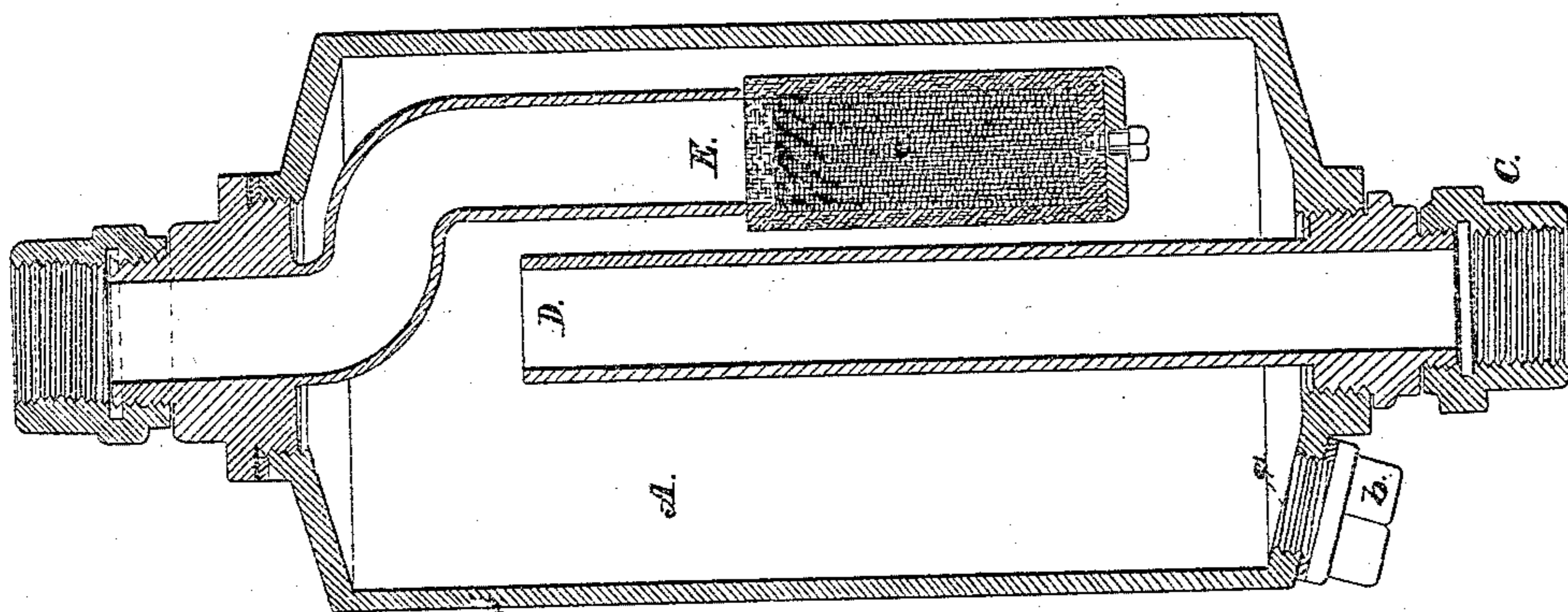


*S. O. Blanding,*  
*Pump Air Chamber,*

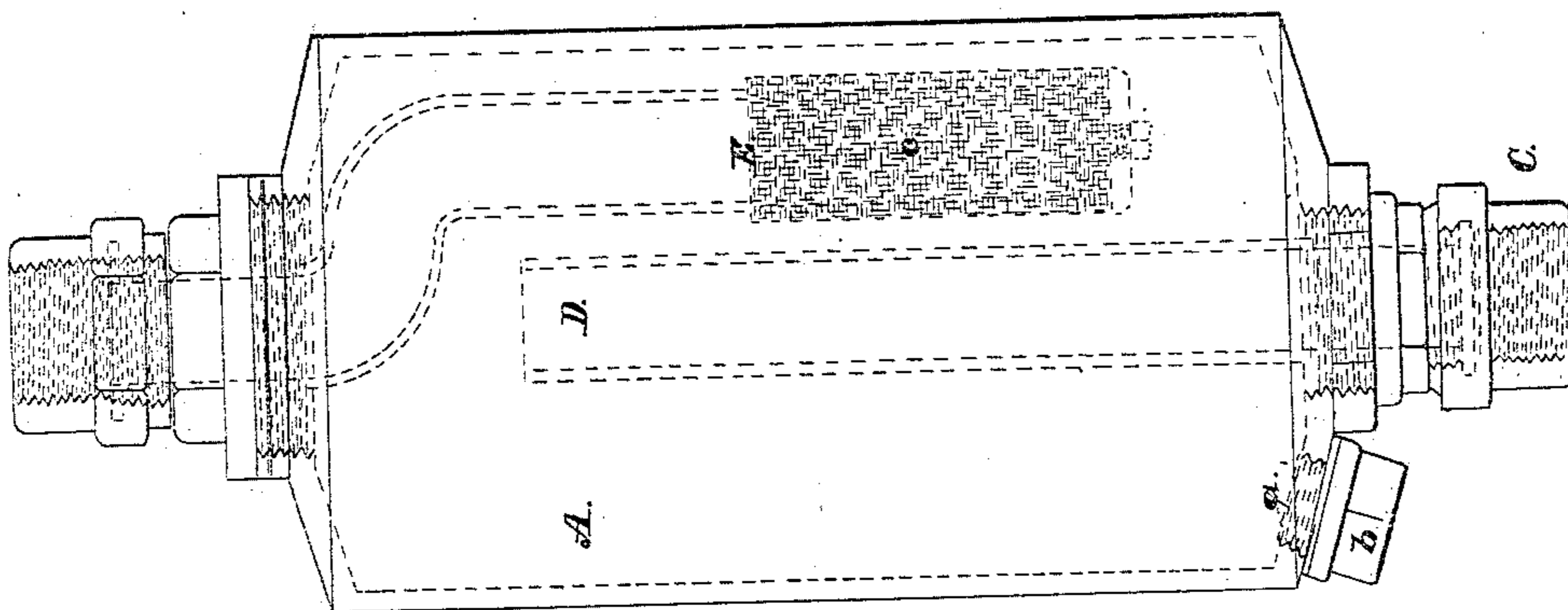
*No 84,081,*

*Patented Nov. 17, 1868.*

*Fig. 2.*



*Fig. 1.*



*Attest:*

*James W. Stillman*  
*C. L. Pundleton*

*Inventor:*

*Samuel O. Blanding*



SANFORD O. BLANDING, OF SMITHFIELD, RHODE ISLAND.

*Letters Patent No. 84,081, dated November 17, 1868.*

**IMPROVEMENT IN DEBRIS-CHECKS FOR PUMPS.**

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, SANFORD O. BLANDING, of (Central Falls,) Smithfield, in the county of Providence, and State of Rhode Island, have invented a new and useful improvement to be applied to that apparatus used in connection with pumps, which is termed a Combined Debris-Check; Water-Charger, and Air-Chamber; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is an elevation.

Figure 2 is a vertical section.

In the accompanying drawings, A represents a close chamber of suitable metal, which is to be attached at the upper end to the suction-pipe of a pump, the lower end, C, being coupled to the pipe leading to the well. The chamber A may be located at any convenient and accessible point between the water in the well and the pump, and should generally be placed as near as practicable to the check-valve of the pump. The pipe leading to the well extends upward into the chamber A, as shown at D, while the pipe connected with the barrel of the pump extends downward into the chamber, to a point considerably below the end of the pipe D, as seen at E.

The apparatus above described, consisting of a water-charger and air-chamber in combination, has heretofore been employed.

My improvement consists in the application, to one of the pipes of such combined water-charger and air-chamber, of a debris-check or netting, to exclude from

the pump the admission of particles of sand, gravel, and debris-matter.

At the lowest point of the chamber A, I make an opening through which the foreign matter, which has been precipitated in the chamber A, can be readily removed. This opening, when access is not required to the chamber A, should be closed by a screw-plug, *b*, or other preferred means.

The end of the pipe E should also be protected by wire-gauze netting *c*, with meshes so fine that all the coarser particles of matter will be excluded from the pipe which it protects.

I do not claim as an improvement in pumps the introduction of a close chamber between the source of water-supply and the point of discharge, into which chamber the pipe, which otherwise would be the suction-pipe, is entered and divided into two parts, the two ends of the pipe so divided lapping past each other, whereby such chamber is able to perform the functions of a water-charger in addition to those of an air-chamber.

Neither do I claim broadly a strainer and a sediment-chamber in combination with an air-chamber, as an arrangement of such character is shown and described in R. H. Hilton's patent of November 19, 1867; but

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

A debris-check or strainer *c*, water-charging pipes D E, and air-chamber A, arranged and combined substantially as described, for the purposes specified.

Witnesses: SANFORD O. BLANDING.

C. L. PENDLETON,

J. W. STILLMAN.