

WILLIAM H. WHEATLAND.

Improvement in Condensed Steam Exhaust for Steam Engines.

No. 121,697.

Patented Dec. 5, 1871.

Fig. 1.

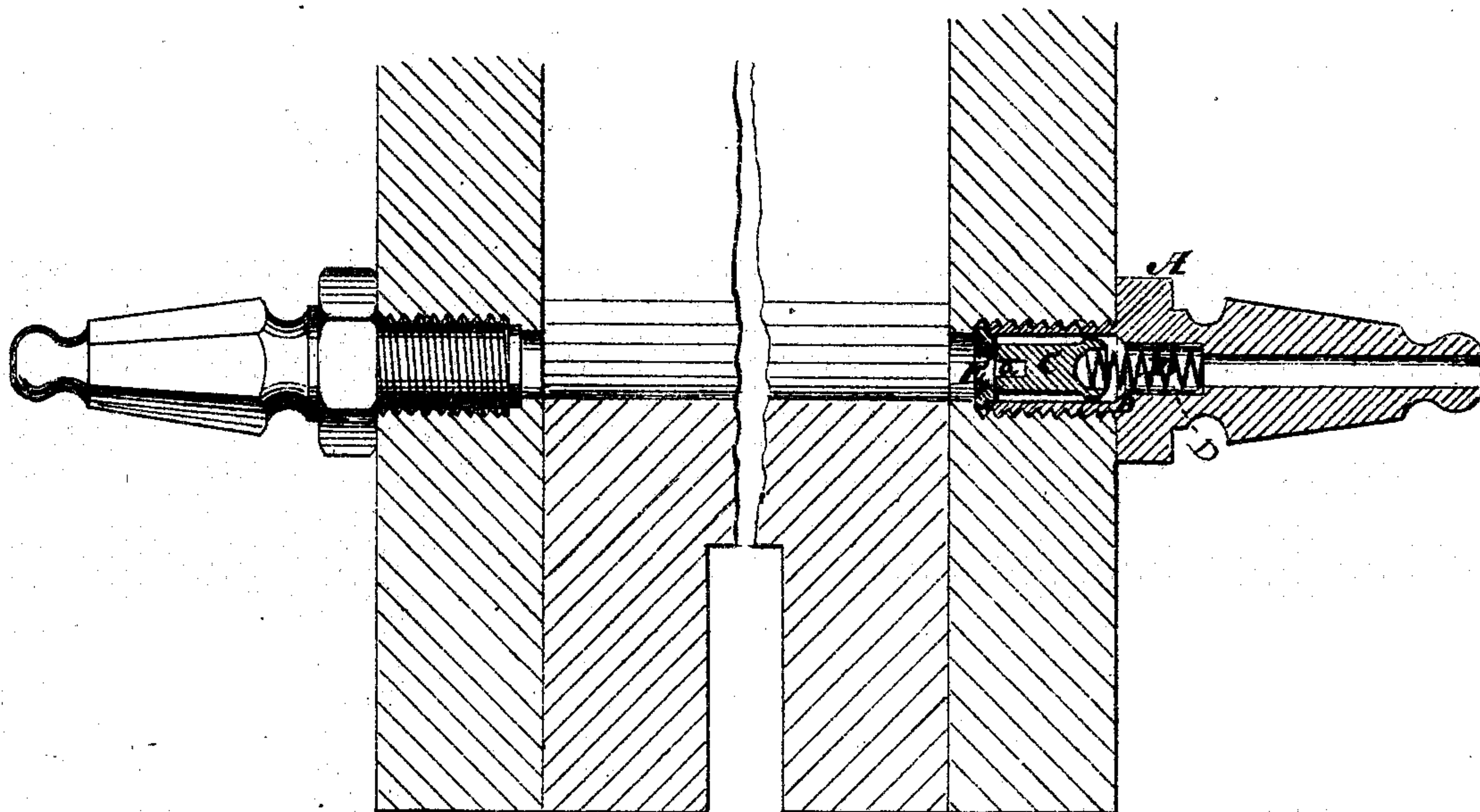
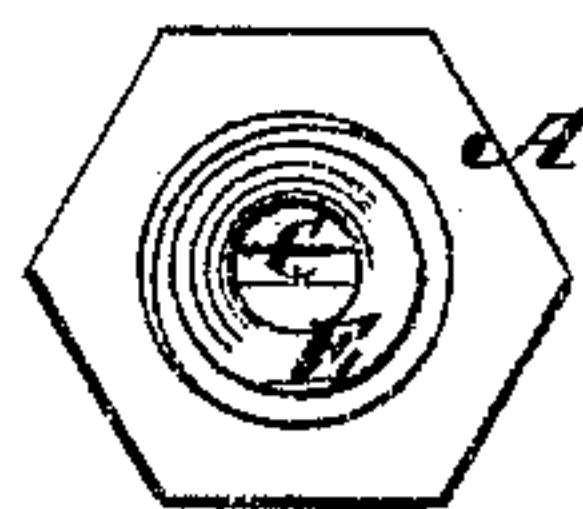


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM H. WHEATLAND, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN CONDENSED-STEAM EXHAUSTS FOR STEAM-ENGINES .

Specification forming part of Letters Patent No. 121,697, dated December 5, 1871.

To all whom it may concern:

Be it known that I, WILLIAM H. WHEATLAND, of Newark, in the county of Essex and State of New Jersey, have invented an Improved Automatic Condensed-Steam Exhaust for Steam-Engines, of which the following is a specification:

My invention consists in the application to the cylinder-heads of an exhaust-tube or nozzle and a valve with a spring behind it to open when the steam-pressure is relieved and let the water of condensation escape at each stroke of the piston, the said valve being closed by the steam-pressure when the latter is on.

Figure 1 is a sectional elevation of parts of a steam-engine cylinder with my improved automatic-exhaust apparatus applied. Fig. 2 is an end elevation.

Similar letters of reference indicate corresponding parts.

A is a short tube or nozzle adapted to screw into the cylinder-head, as shown, and provided with a valve-seat, B, near the inner end, on which is seated a check-valve, C, confined in the inner end of the tube, to be opened by the spring D when steam is exhausted from the cylinder

and allow the water of condensation to escape. It will be observed that the reduced end of the valve C is provided with a slot, *a*, extending transversely through it to permit the passage of steam or water. The said valve is kept closed upon the seat while the cylinder is filled with live steam by the pressure on said valve; but it is lifted by the spring as soon as the exhaust takes place, and thus a simple automatic exhaust is provided. The valve is confined in the tube by a ring, E, or it may be by any other suitable contrivance.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the cylinder of a steam-engine, of the exhaust-tube A, valve C, and springs D, the said tube being provided with a valve-seat, B, and the valve being arranged to close thereon by the steam-pressure and to be lifted off by the spring, all substantially as specified.

WILLIAM H. WHEATLAND.

Witnesses:

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