

G. F. BLAKE.
Pumps and Engines.

No. 154,010.

Patented Aug. 11, 1874.

Fig 1.

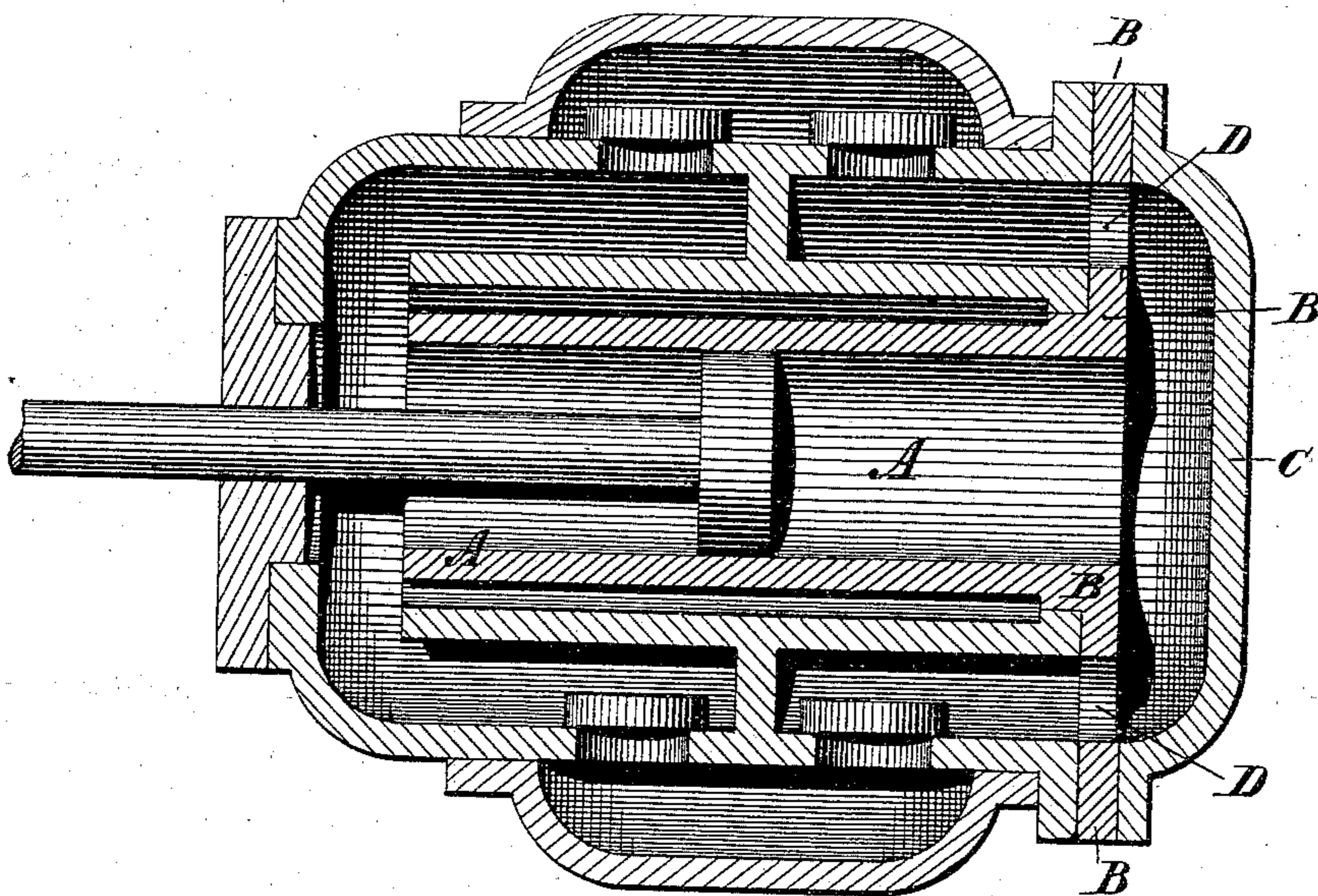
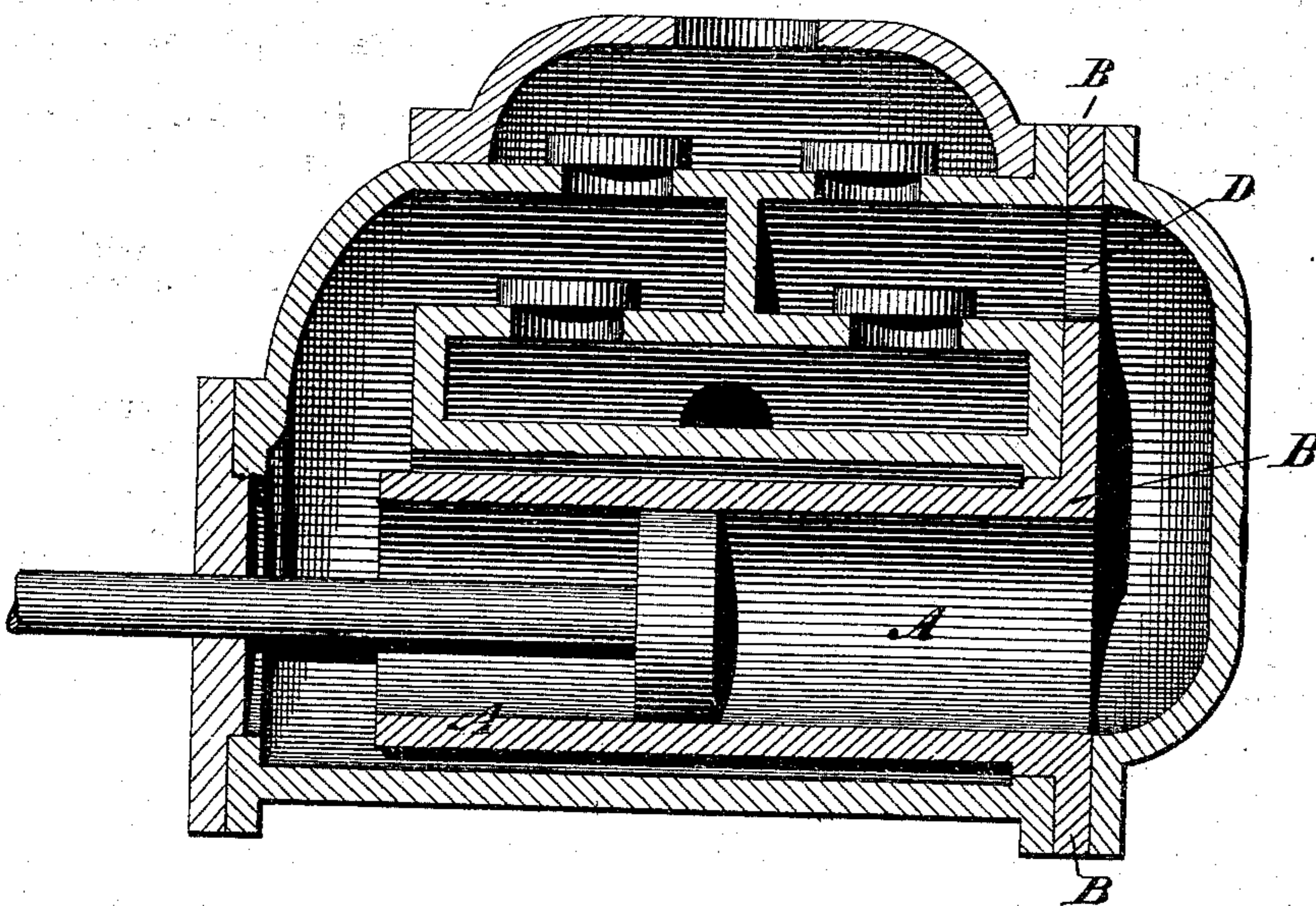


Fig 2.



WITNESSES

Harry King DET.

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INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE F. BLAKE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO GEORGE F. BLAKE MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN PUMPS AND ENGINES.

Specification forming part of Letters Patent No. **154,010**, dated August 11, 1874; application filed May 18, 1874.

CASE B.

To all whom it may concern:

Be it known that I, GEORGE F. BLAKE, of Boston, county of Suffolk and State of Massachusetts, have invented an Improvement in Pumps and Engines, of which the following is a specification:

This invention relates to an improvement in detachable cylinder for pumps and engines; and consists in enlarging the flange of the detachable cylinder so as to give it a width sufficient to cover the passages leading to the steam or water valves, in forming the steam or water ports through said enlarged flange of the cylinder, and in holding the cylinder in place relatively to the casing by means of a bonnet bolted to the flange and casing, as hereinafter described.

The drawings represent the invention in two forms. Figure 1 shows the manner of constructing the cylinder and flange in pumps or engines, in which the suction and discharge valves have separate ports. Figure 2 shows

their construction in cases where the same port is used for both suction and discharge.

In these drawings, A marks the detachable cylinder, B the enlarged flange of the cylinder, and C the bonnet which holds the cylinder in place by being bolted through flange B to the casing.

It is obvious that the flange B forms a partition cutting off communication between the two ends of the cylinder.

By this construction of the flange the joint around the port is readily finished with the cylinder.

I claim—

The combination, with the cylinder A, having the ports D, of the head or bonnet C, arranged to form the port or passage from the cylinder, and to fasten the cylinder in place, as set forth.

Witnesses:

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