

No. 733,888.

PATENTED JULY 14, 1903.

C. WHITE.
STEAM VALVE.

APPLICATION FILED NOV. 8, 1902.

NO MODEL.

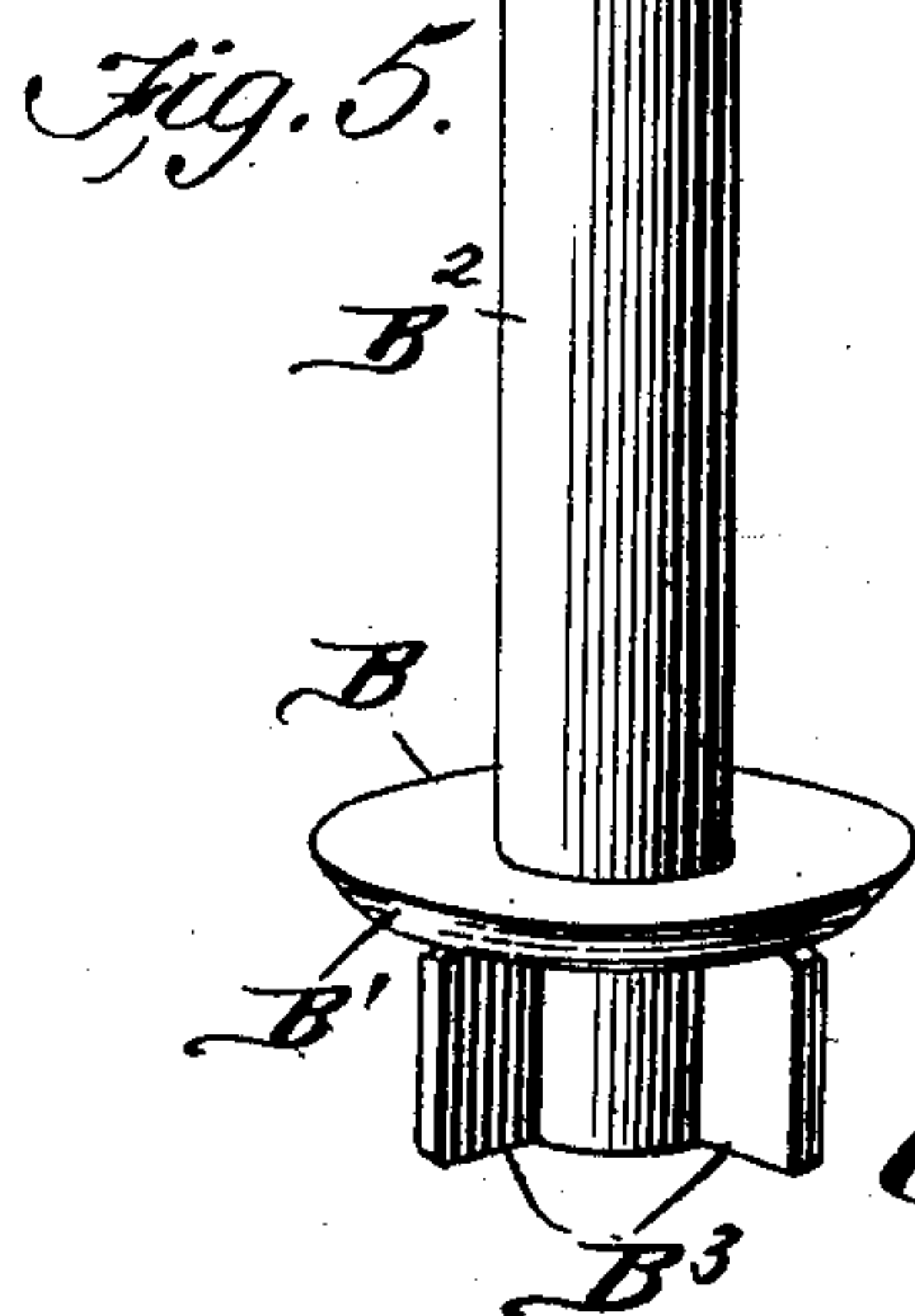
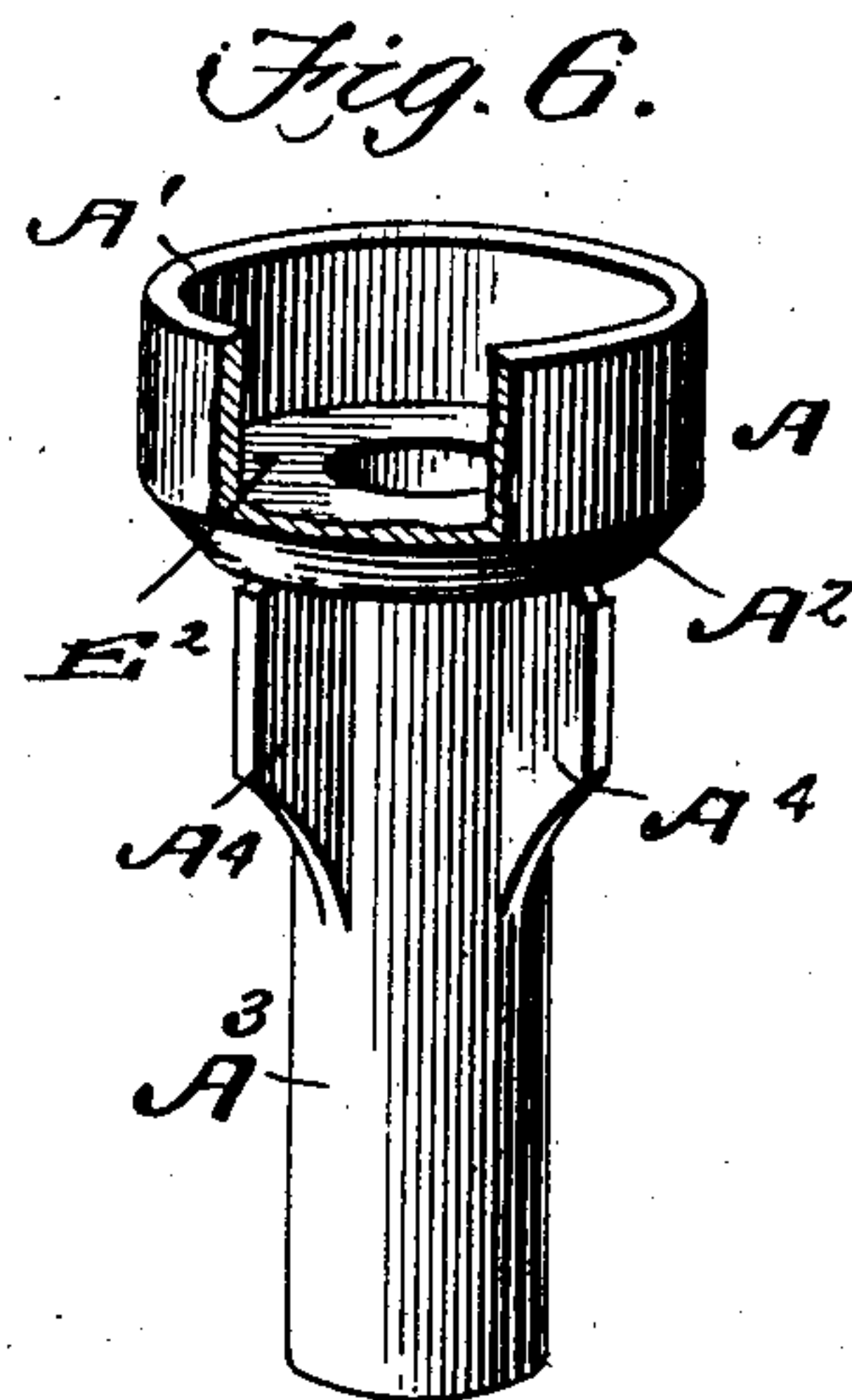
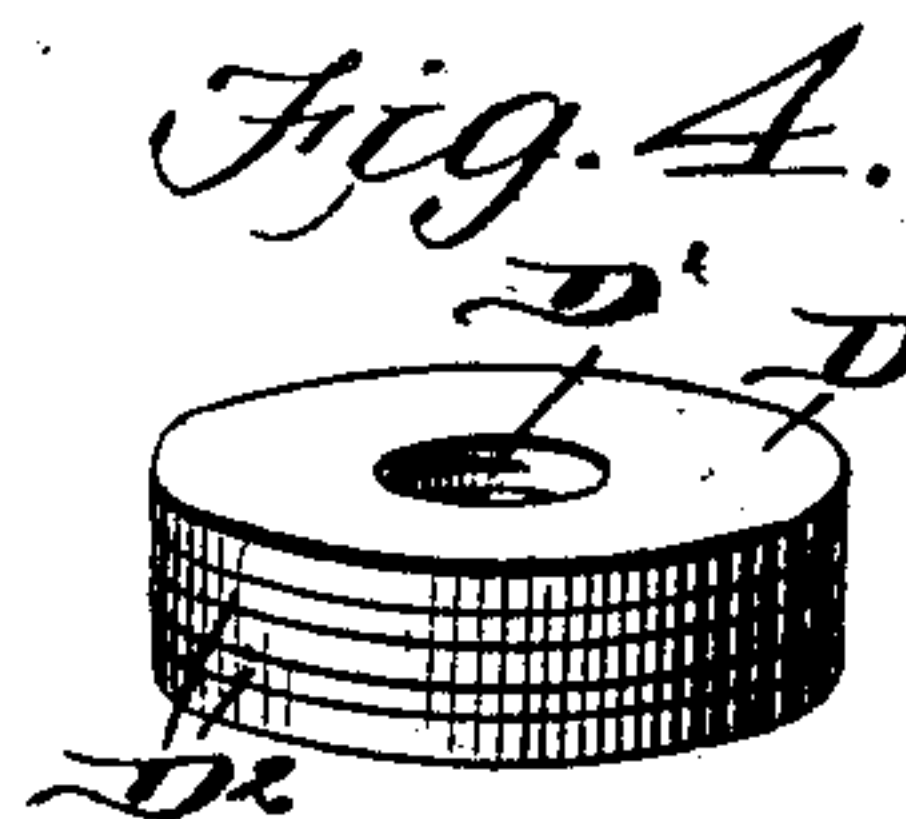
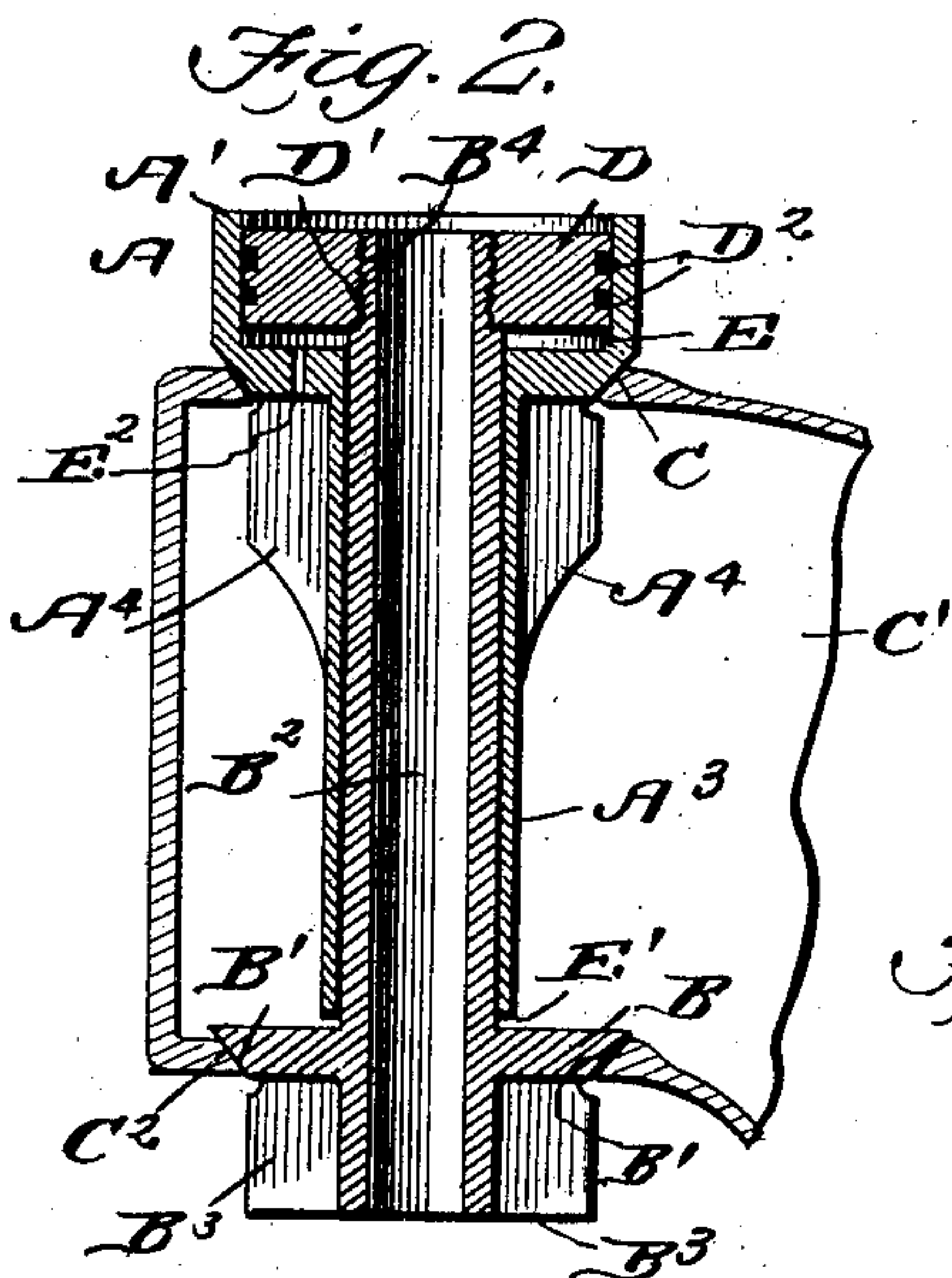
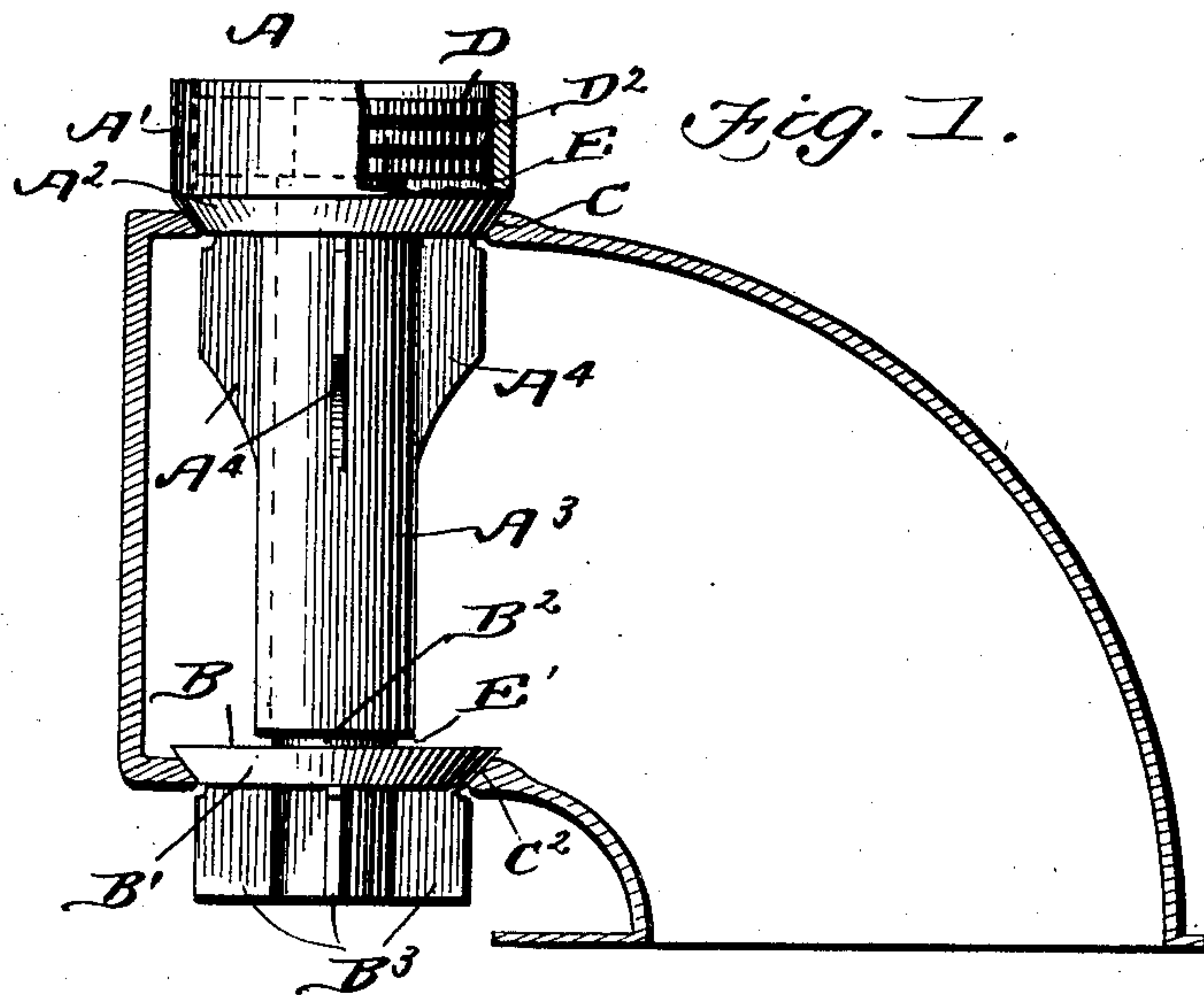
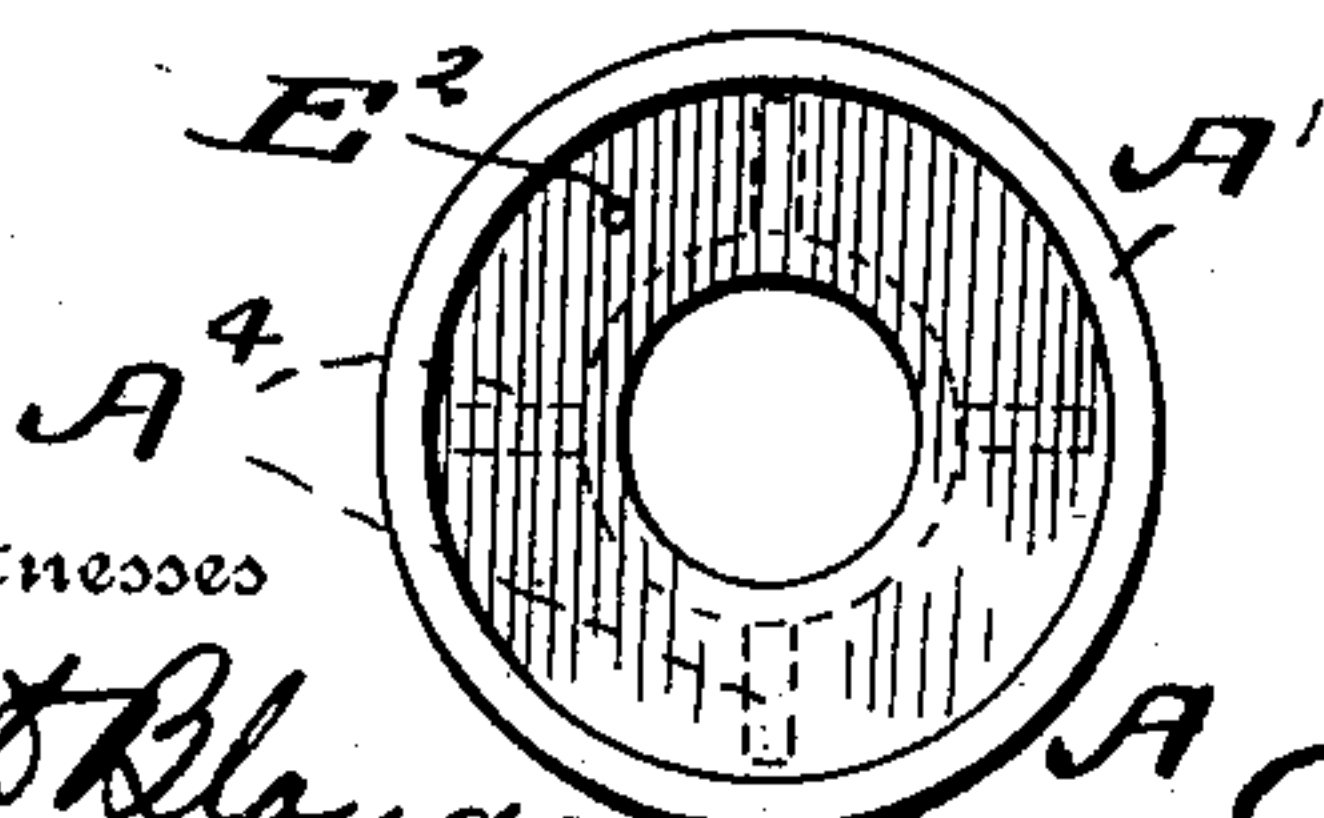


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

CLARK WHITE, OF DUNBAR, PENNSYLVANIA.

STEAM-VALVE.

SPECIFICATION forming part of Letters Patent No. 733,888, dated July 14, 1903.

Application filed November 8, 1902. Serial No. 130,585. (No model.)

To all whom it may concern:

Be it known that I, CLARK WHITE, a citizen of the United States, residing at Dunbar, in the county of Fayette and State of Pennsylvania, have invented a new and useful Steam-Valve, of which the following is a specification.

My invention is an improvement in steam throttle-valves; and the object of my invention is to provide a non-leakable valve of this description, one which can be easily operated and in which a proper allowance will be made for the expansion of the metal.

Briefly, my device comprises two valves, each adapted to find its seat independently of the other, one of said valves having a sleeve through which the stem of the other valve passes, the end of the stem carrying a piston adapted to work inside of the valve having the sleeve, and each valve being adapted to have a slight vertical movement without a corresponding movement on the part of the other.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical elevation, part of the upper valve being broken away and the steam-pipe to cylinder being shown in section. Fig. 2 is a sectional view of my valve. Fig. 3 is a plan of the upper valve. Fig. 4 is a perspective view of the piston. Fig. 5 is a perspective view of the lower valve; and Fig. 6 is a perspective view of the upper valve, a side of the upper part being broken away.

My invention consists of the valve A, which comprises a cylinder-casing A', open at the top and beveled at A² downward to a sleeve A³, which extends downward a considerable distance and carries wings A⁴ on its upper portion. The lower valve comprises a flat circular disk B, beveled at B' and having an integral rod B², extending centrally through it, the rod bearing wings B³ beneath the disk B and is screw-threaded at its upper end at B⁴. A seat C is provided in the pipe C' for the upper valve and one at C² for the lower valve. The rod B² passes upwardly through the sleeve A² and is adapted to slide in same. A piston D, centrally perforated at D', the perforation being threaded, is secured to the

threaded part B⁴. Packing-rings D² are secured in the periphery of the piston, which snugly fits within the casing A'. To prevent expansion of the throttle-box from lifting the piston D, and thereby raising the valve B, a space of approximately one-sixteenth of an inch is left at E between the lower surface of the piston and the bottom of the valve-cylinder. A similar space is also left at E' between the lower part of the sleeve A² and the valve B, thus permitting the valve B to raise a slight distance in advance of the valve A. Each valve can turn independently of the other and find its own bearing and seat. At E² the bottom of the valve-cylinder A' is perforated to drain the space beneath the piston. The area of the piston D is preferably larger than the area of the valve B, giving a downward pressure on the valve B greater than the upward pressure, and the valve will be held firmly to its seat. There is also pressure on the upper edge of the wall A', holding the valve A into its seat.

This valve will fit the ordinary throttle-box without any change in the latter, and its operation will be obvious to any one familiar with such valves.

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

1. The combination with a throttle-box, of a beveled upper valve having a dependent sleeve, wings on said sleeve, a cylindrical casing carried by the valve, a lower valve having a stem extending above and below the valve and having wings on its lower portion, its upper portion extending through the sleeve and being threaded adjacent its upper end, a piston secured to said threaded end said piston being of a greater diameter than the lower valve and fitting in the cylindrical casing of the upper valve, packing-rings around said piston, and means for draining the space beneath said piston.

2. In a throttle-box, a double valve comprising an upper valve having a dependent sleeve open at each end and a cylindrical casing above the valve, said casing being open at the top, a lower valve having a stem passing centrally through it and extending

through the sleeve into the casing of the upper valve, a piston secured to the upper end of said stem and fitting in the casing, said piston being of greater area than the lower valve and normally held above the bottom of the casing, each valve being adapted to turn independently of the other, and the lower valve being adapted to lift in advance of the upper valve, and wings arranged below the lower valve.

CLARK WHITE.

Witnesses:

STEWART SPEER,
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