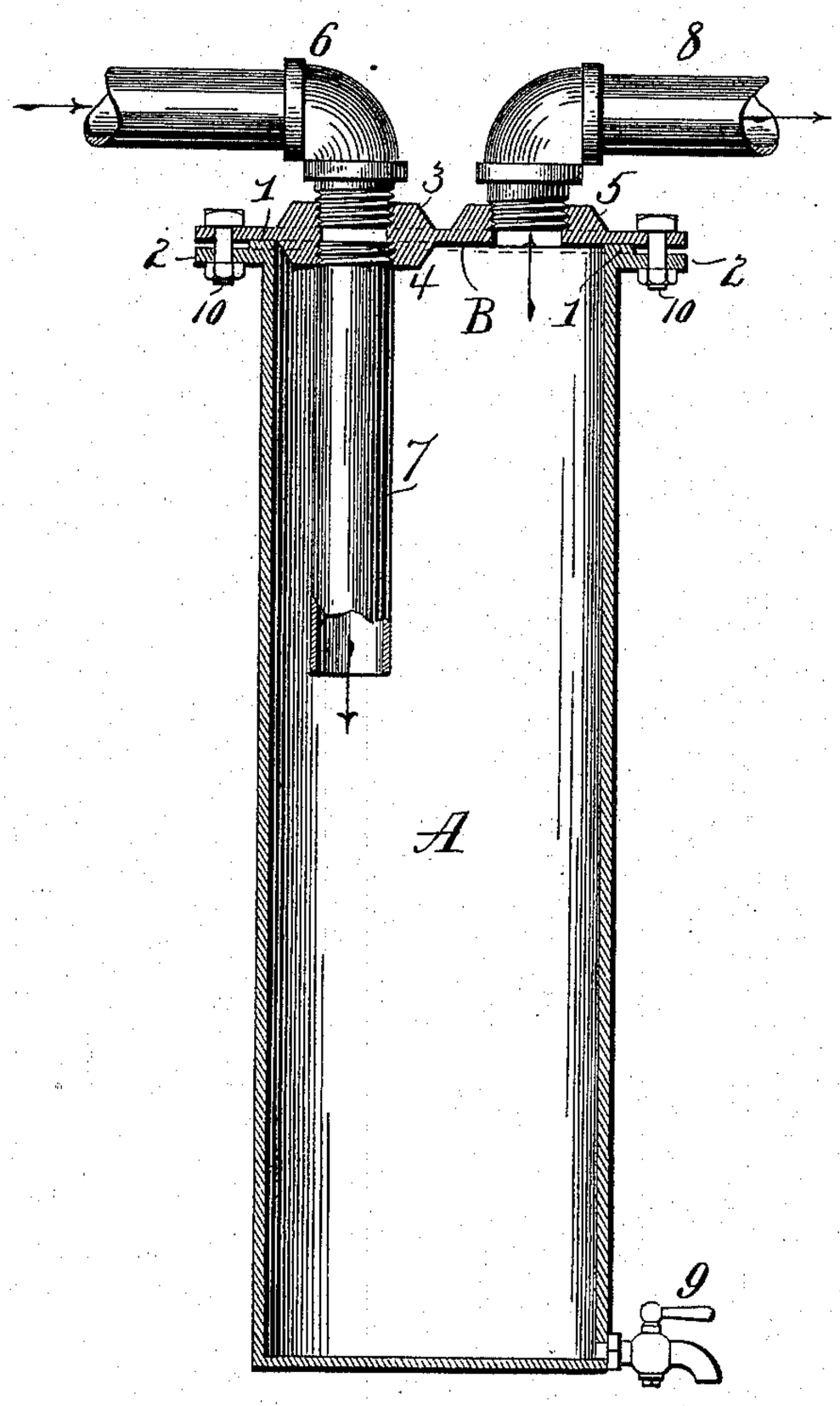
(No Model.)

C. D. SANDERSON.

SEPARATOR.

No. 568,145. Patented Sept. 22, 1896.



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SPECIFICATION forming part of Letters Patent No. 568,145, dated September 22, 1896.

Application filed June 18, 1896. Serial No. 595,993. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DUDLEY SANDERSON, of Throop, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Separators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in separators for separating water from steam, the object being to provide a simple, durable, and efficient device, as well as to materially reduce the cost of manufacture.

With this end in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter more fully described, and pointed out in the claim.

The accompanying drawing represents my invention, partly in section and partly in elevation.

A represents a cast or wrought iron expansion-chamber, and B the detachable cap thereof. Formed at the upper or open end of said expansion-chamber and integral therewith is a ring 1, the top face of which contacts with the bottom face of cap B, the two contacting surfaces forming a ground-joint. Integral with ring 1 and projecting outwardly therefrom is a flange 2, the thickness of which is slightly less than the thickness of said ring, and located below the plane of the upper face of the ring for the purpose of forming a space between said flange and cap B, thus permitting the parts to be clamped, so as to form a steam-tight joint.

Cap B is provided with bosses 3, 4, and 5, into which are secured the induction and eduction pipes, respectively. These bosses also tend to materially strengthen the cap. The induction-pipe is preferably composed of a coupling 6, secured in the outer end of outwardly-extending boss 3, and an inner pipe 7, secured to the inner end of boss 4 and depending therefrom. This pipe 7 is of a length sufficient to provide for the separation of the water from the steam during the latter's passage from said pipe to the eduction-pipe 8. Eduction-pipe 8 consists of a coupling secured to the boss 5.

The lower end of expansion-chamber A is provided with a waste-cock 9, by means of which the accumulated water in said chamber may be drawn off at intervals.

Flange 2 of ring 1 and cap B are each provided with a series of registering holes for the reception of bolts 10, by means of which the parts are secured together, and by forming the space between the adjacent faces of said flange and cap as above described it will be apparent that an absolute tight joint will be secured at the contacting faces of ring 1 and cap B when the nuts on bolts 10 are screwed home. By constructing coupling 6 and pipe 7 of the induction-pipe independent of each other a saving in expense is secured, and, further, one part may be readily removed without necessitating the removal of the other.

The steam passing through induction-pipes enters the expansion-chamber A at a point sufficiently removed from the eduction-pipe as to insure the separation of water therefrom before its exit through said eduction-pipe, and hence it is unnecessary to provide means for additional circulation of the steam prior to its exit.

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

In a separator, the combination with an expansion-chamber, of a cap having an external and internal screw-threaded boss for the attachment of the outer and inner sections of the induction-pipes, and having an external screw-threaded boss for the attachment of the eduction-pipe, said bosses being formed integral with the cap, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES DUDLEY SANDERSON.

Witnesses:

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