

W. A. Schneider,
Steam Trap,
N^o 98,524. *Patented Jan 4, 1870.*

Fig. 1

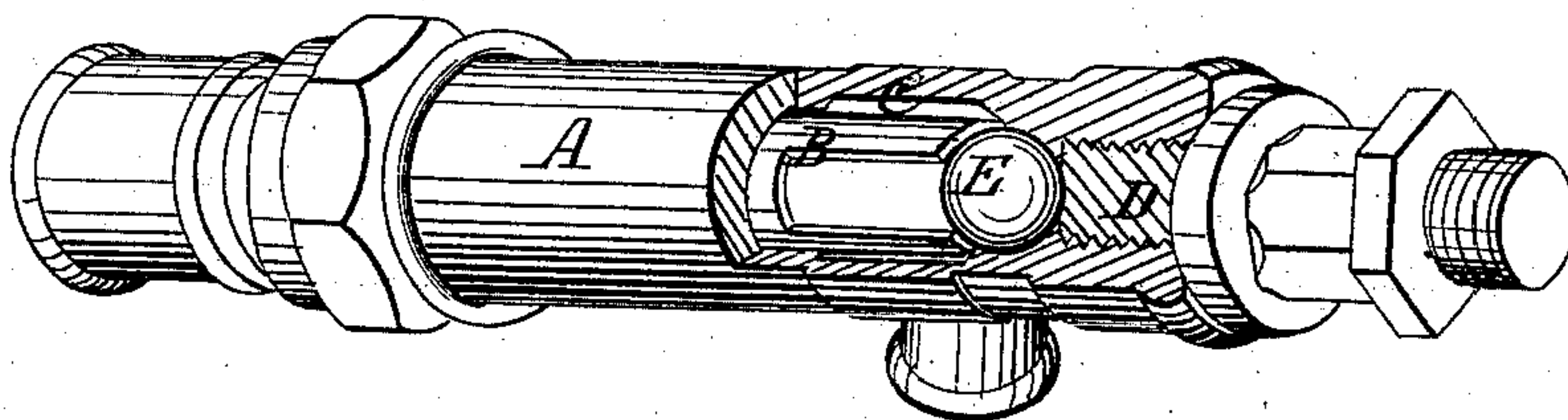
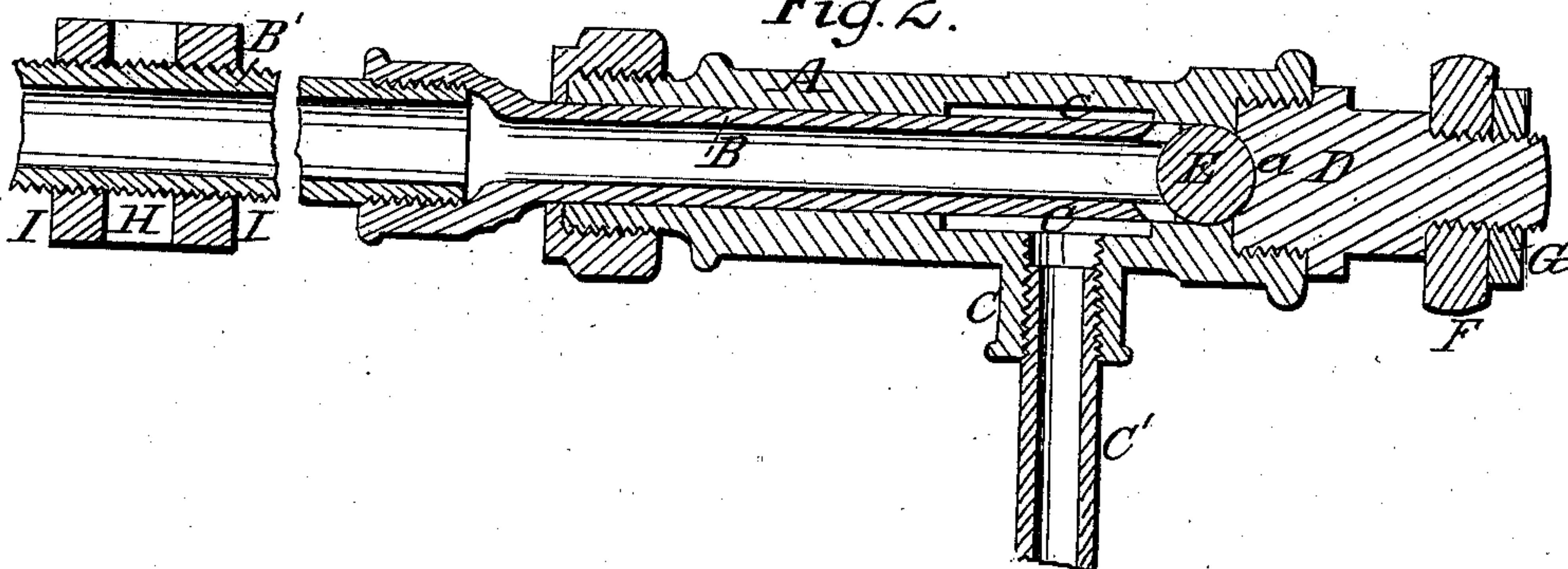


Fig. 2.



Witnesses.

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WILLIAM A. SCHNEIDER, OF ALBANY, NEW YORK.

Letters Patent No. 98,524, dated January 4, 1870.

IMPROVEMENT IN STEAM-TRAP.

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, WILLIAM A. SCHNEIDER, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Steam-Traps; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a steam-trap, with parts broken away, exposing the improvements.

Figure 2 is a longitudinal section through the steam-trap, embodying the invention.

My invention relates to the combination of a rubber ball with the usual inner tube and the head-piece of a steam-trap, in such a manner that the rubber ball will be capable of closing up the bore of the inner tube, when the said inner tube and its connecting steam-pipe shall have expanded by the heat, and will unstop the bore of the inner tube when the temperature of the said tube and its connecting pipe shall have been reduced, thereby permitting the condensed steam (water) to run out from the said inner tube and its connecting-pipes, and escape through a waste-pipe, also provided.

To enable others skilled in the art to make and use my invention, I will proceed to describe it, in reference to the accompanying drawings, and the letters of reference marked thereon, the same letters indicating like parts.

In the drawings—

A represents the outer shell or tube of the steam-trap.

B is the inner tube, connecting with the usual steam-pipe B'.

C is the water-tube, connecting with the usual waste-pipe C'.

The steam-trap is provided with a piece, D, which I term the head, which head-piece D is screwed in the shell of the trap, and is provided with a cup, *a*, in the centre of its interior end.

In the said cup I place an India-rubber ball, E, or other elastic ball, which elastic ball E is intended to act as a valve to the inner tube B.

When the steam-trap is set up, and its several parts arranged, the said inner tube will not be placed directly in contact with the elastic ball E, but with

its open end at a little distance therefrom, as shown in fig. 2. Being thus arranged, when the said tube B and its connecting-pipe B' are filled with steam, the heat of the steam will cause the said tube B and its connecting-pipe B' to expand.

The steam-trap being firmly held in position by means of the bracket F and its holding-nut G, and the steam-pipe B' and the tube B being held firmly by the brackets H, and their nuts I I, at a distance opposite, the expansion of the tube B and its connecting-pipe B', will cause their expanded length to reach out toward the elastic ball E, and force the open end of the tube B to impinge against the said ball, which ball will effectually close the end of the bore of the said tube, and prevent the escape of the steam and water.

Around the inner tube B, and near its end, is a chamber, *c*, which communicates with the water-tube C.

When the condensed steam of the many several steam-pipes shall have entered the tube B, and its connecting-pipe B', and reduced their temperature so that the said tube and pipe will contract their length between the bracket H and the end of the tube B, such contraction will cause the end of the said tube B to draw from the elastic ball E, and unstop the same, and when thus unstopped, the water in the tube, and the pipes connected therewith, will escape therefrom into the chamber *c*, and find a passage out through the water-tube C and waste-pipe C', when the tube B and pipe B' will again become filled with steam, heated and expanded, and the elastic ball E will again operate to stop the passage of the steam by the lengthening of the said tube and pipe by expansion.

Having described my invention,

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

In a steam-trap, the elastic ball E, in combination with the inner tube B and the head-piece D, when arranged substantially as described, for the purpose set forth.

WILLIAM A. SCHNEIDER.

Witnesses:

J. A. BUCKBEE, Jr.,
ALEX. SELKIRK.