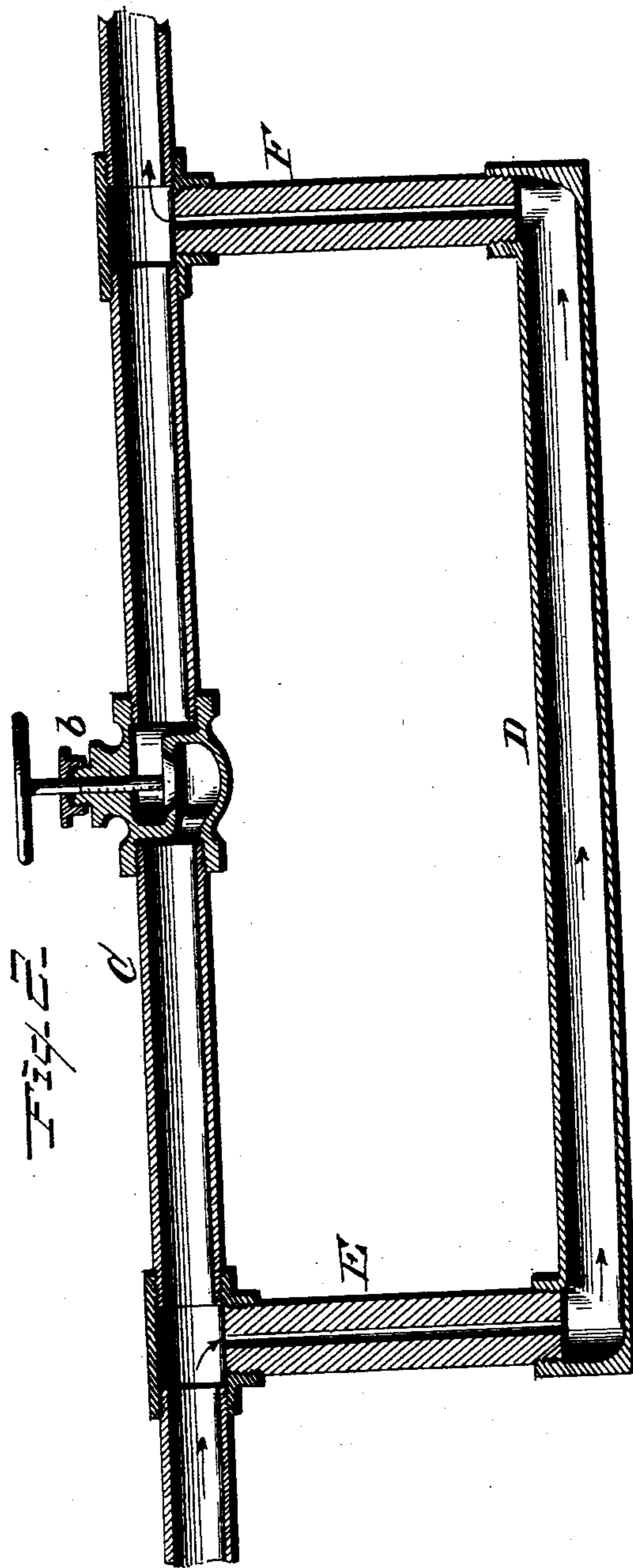
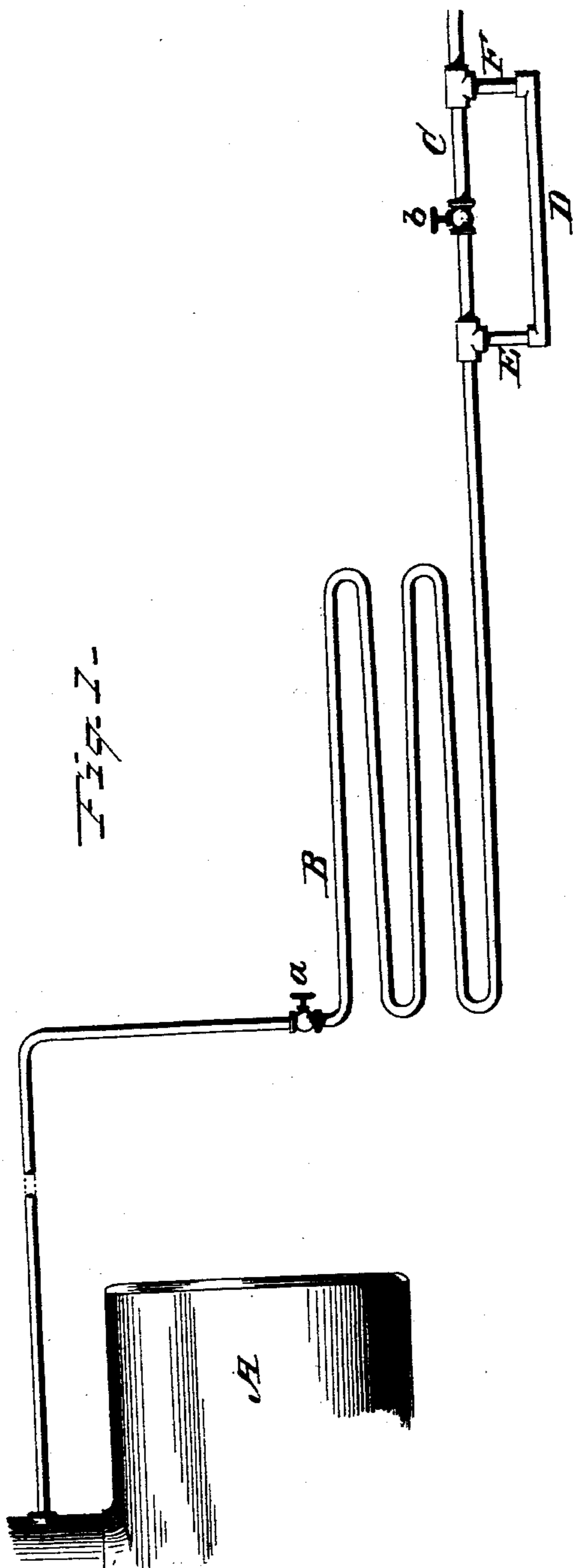


(No Model.)

E. L. PERRY.
STEAM TRAP.

No. 520,077.

Patented May 22, 1894.



Witnesses
C. J. Williamson.
Wm. J. Goodwin.

Inventor
Edward L. Perry.
per Cha. H. Fowler.
Attorney.

UNITED STATES PATENT OFFICE.

EDWARD L. PERRY, OF PATERSON, NEW JERSEY.

STEAM-TRAP.

SPECIFICATION forming part of Letters Patent No. 520,077, dated May 22, 1894.

Application filed February 8, 1894. Serial No. 499,523. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. PERRY, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Steam-Traps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to steam-traps for boilers and the object thereof is to provide a simple device that will effectually trap the steam and carry off the condensation thereof, and consists of a device constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents my improved steam-trap showing it connected to the boiler through the usual steam heating coil and discharge or exhaust pipe; Fig. 2 a detail sectional view on an enlarged scale of the trap and branch tubes connecting it with the exhaust or discharge pipe.

In the accompanying drawings A represents the boiler and B the usual heating coil connecting therewith and provided with the usual feed valve *a*, and to the coil is connected the exhaust or discharge pipe C, all of which are the usual construction. The pipe C is provided with a suitable valve *b* to control the direction of the steam and water through it. To the pipe C is connected the steam-trap D through the medium of branch tubes E F and suitable couplings.

When the valve *a* is open to form a communication between the boiler A and heating coil B, the steam will pass therefrom into the coil where more or less condensation takes place, which condensed steam is allowed to pass out through the pipe C when the valve *b* is open.

After the first condensation of the steam has been removed from the heating coil and the trap filled with water from the condensed

steam, the valve *b* in the pipe C is closed and all further condensation is compelled to pass through the passage of the tube E, into the trap, and thence through tube F. 50

When the trap is once filled with water from the condensed steam, it remains filled, as the escape of the condensed steam through the tube F does not exceed the amount taken up and passed through the tube E into the trap, consequently the passage and discharge of the condensed steam through the two tubes are equal and uniform. 55

To insure the perfect operating of the trap, the passages in the branch tubes are contracted to such an extent in their diameter as to prevent the escape of steam with the water but sufficiently large in diameter to take up the steam as fast as it is condensed. 60

The valve located as it is between the juncture of the two branch tubes with the exhaust or discharge-pipe, is considered of importance in rendering the device practical in its operation in quickly emptying the contents of the tank or heater. This is essential where great condensation takes place as in steam jackets, vacuum-pans, and the like. 65

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is— 70

In a steam-trap, an exhaust or discharge pipe and a suitable valve located therein, branch-tubes having contracted openings and communicating with the exhaust or discharge pipe at a point upon each side of the valve, and a pipe for the condensed steam which forms the trap proper, said pipe communicating with the branch tubes, substantially as and for the purpose set forth. 75

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses. 80

EDWARD L. PERRY.

Witnesses:

CHAS. J. WILLIAMSON,
WM. H. DE LACY.