

L. MOORE.
SAFETY-VALVE APPARATUS.

No. 174,279.

Patented Feb. 29, 1876.

Fig: 1.

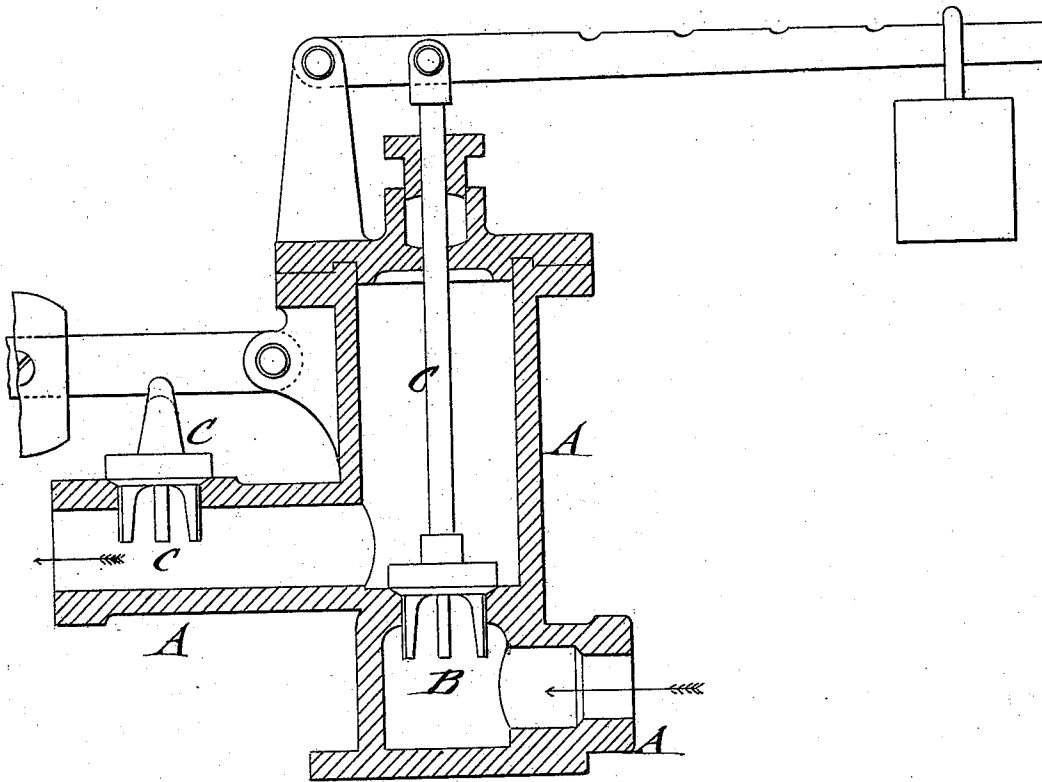
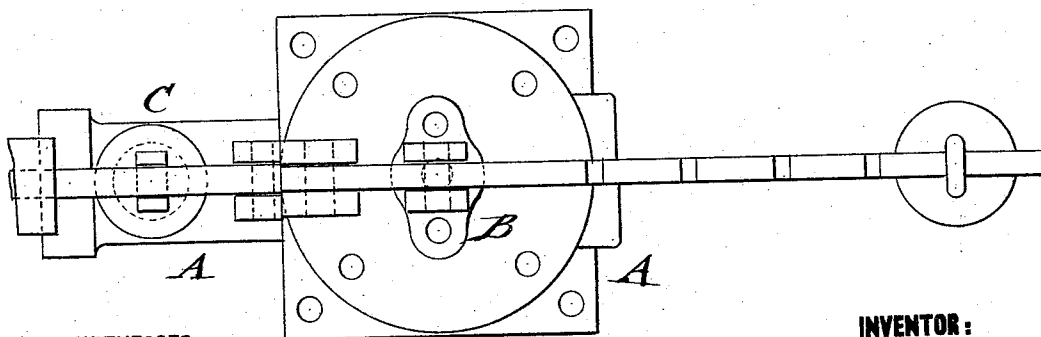


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEONIDAS MOORE, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN SAFETY-VALVE APPARATUS.

Specification forming part of Letters Patent No. **174,279**, dated February 29, 1876; application filed January 15, 1876.

To all whom it may concern:

Be it known that I, LEONIDAS MOORE, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Safety-Valve, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved safety-valve, and Fig. 2 a top view of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved safety-valve arrangement for rag and straw boilers in paper-mills, and for other purposes; and it consists of two valves arranged in such a manner that the pressure on the rag-boiler is kept up at a uniform degree from the battery of boilers, and that the back pressure of the rag-boiler assists in closing the main valve when the required pressure is established.

In the drawing, A represents a pipe that connects the battery of boilers with the rag-boiler, the pipe A being arranged with a main valve, B, and a supplementary valve, C. Both valves are so weighted that they establish jointly the required pressure in the battery of boilers. When, for instance, the weight of the main valve is set at seventy-five pounds and that of the supplementary valve at fifteen pounds the pressure in the main boiler is thereby at ninety pounds. The pressure in the rag-boiler is kept uniform by the joint working of both valves, for as soon as the pressure in the battery of boilers increases above ninety pounds the steam will blow off at the supplementary valve C. As the equilibrium of the valves with the pressure in the battery is interrupted, this can be regulated by observing the pressure in the battery, and preventing any blowing off by placing the weight of the main valve at greater distance from the valve-stem. When the pressure on the rag-boiler falls below the regular pressure to which the valves are set,

the pressure in the battery of boilers will raise the valve, and re-establish the required pressure in the rag-boiler. The back pressure from the rag-boiler, acting on the main valve, forms the main advantage of my valve arrangement.

When the main valve is opened, the steam fills rapidly the rag-boiler until the pressure of the same is raised to fifteen pounds, when the back pressure will close the main valve, the supplementary valve acting merely as a safety-valve in case there should be anything wrong in the main valve.

In rag and straw boilers there is great condensation of steam, and when the steam is condensed the pressure will fall. The main valve regulates the supply of steam to the rag-boiler, for as soon as the pressure goes below fifteen pounds steam will be supplied until the regular pressure is re-established. The constant condensation and supply of steam keeps the main valve continually working, and secures thereby a uniform pressure in the rag-boiler, while the supplementary valve serves as safety-valve, and secures, with the main valve, in simple and effective manner the safety and efficiency of the rag-boiler, keeping the pressure therein constantly at a uniform degree.

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

The combination, in a safety-valve apparatus, of a main regulating-valve and a supplementary safety-valve, adjusted jointly to the pressure of the generating-boiler to keep the steam at uniform pressure in the rag-boiler, and close the main valve automatically by back pressure, substantially as described.

LEONIDAS MOORE.

Witnesses:

CHARLES FLOOD,
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