R. Mood,

Steam Safety Valve.

No. 50,376. Patented Oct. 10, 1865.

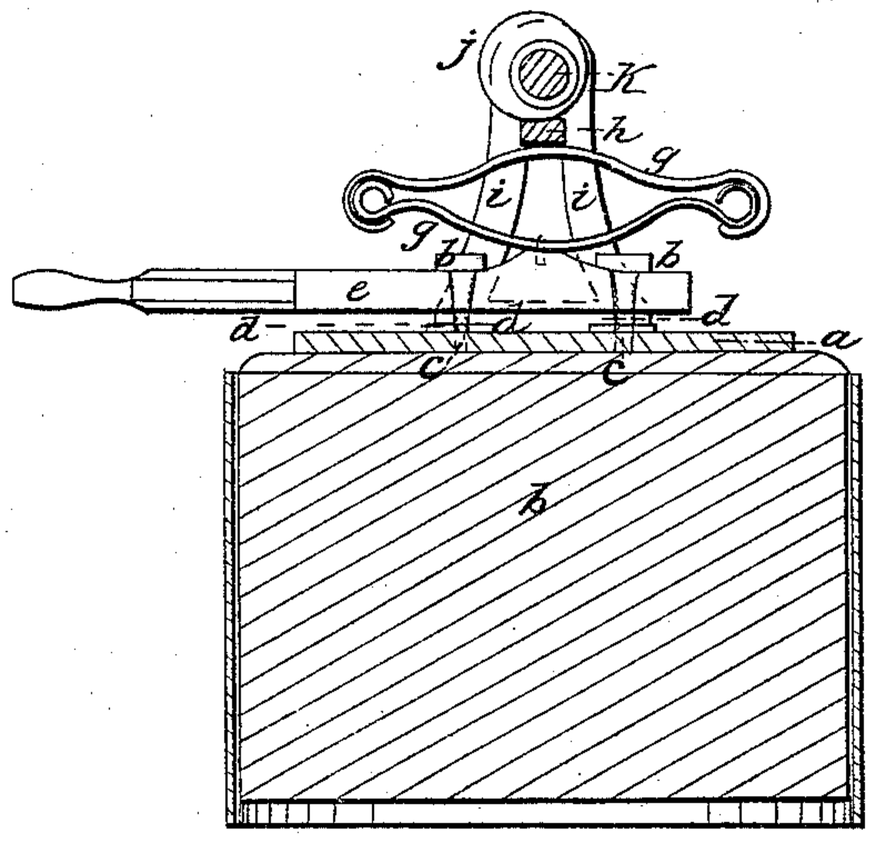
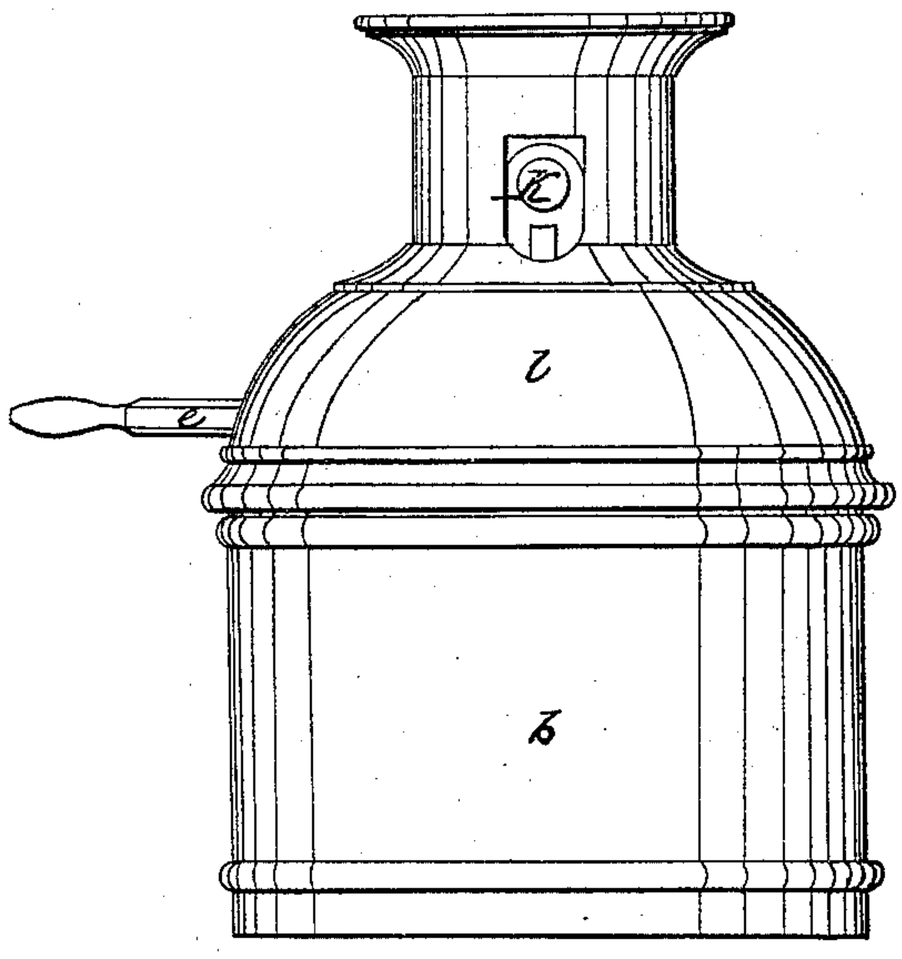


Fig 2.

Fig. 1.



Witnesses:
T. Smith
L. Jones

Inventor:
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by Atty Thos. T. Everett

UNITED STATES PATENT OFFICE.

ROBERT MOOD, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN SAFETY-VALVES FOR STEAM-GENERATORS.

Specification forming part of Letters Patent No. **50,376**, dated October 10, 1865.

To all whom it may concern:

Be it known that I, ROBERT MOOD, of Indianapolis, in the State of Indiana, have invented a certain new and useful Safety-Valve Arrangement for Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters and marks thereon.

My invention has for its object an arrangement of safety-valves for steam-boilers, together with the means for controlling the operation thereof, which shall be entirely under the control of the inspectors or managing officers, (they determining the exact pressure of steam,) and not liable to be tampered with by the engineman or others, or the pressure of steam allowed to be increased beyond the degree to which the apparatus may be fixed by the inspector or managing officer.

The drawings forming part of this specification show how my invention may be carried out, Figure 1 of these drawings being a view in elevation of the chamber or case containing the apparatus, and Fig. 2 being a view by vertical section through the center of the apparatus.

In both of these figures, where like parts are shown like marks and letters are used to indicate the parts.

Upon the cap *a* of the steam-chamber *b*, or upon such other part of the steam-space of the boiler as may be preferred, and over or in suitable valve-seats, *c*, therein or thereon, I place two valves, *d d*, as is indicated by Fig. 2 of the drawings. A lever, *e*, having two screws, *f f*, lies above the valves, each screw respectively pressing upon the center of each valve, the ends of the screws bearing in suitable recesses on the upper surfaces of the valves. Above the bearing portion of the lever is a spring, *g*, which may be of the shape shown, or may be a volute, spiral, or any other suitable form. Above the spring is a cross-bar, *h*, made so as to slide in guide-bars *i i;* and above the cross-bar is an eccentric, *j*, having suitable bearings for its shaft *k* in the guide-bars, which cross-bar and eccentric may be connected to each other by the usual or ordinary strap. The pressure of the eccentric through the bar upon the spring may be made by the use of a toothed lever, wheel, gearing, and screws, either combined or by such pieces or parts thereof as will answer to regulate the pressure of the eccentric and hold it in the position desired.

A cap or cover, *l*, will be placed over the apparatus and so secured to the case or chamber that the pieces or parts of the apparatus cannot be tampered with.

The greatest degree of pressure that can be exerted on the valves will be that occurring when the eccentric is at its greatest degree of eccentricity, or at its full throw; and thus, while a lesser pressure may be that fixed upon, and which cannot without violence be changed, except by the proper officer having charge of the key locking the cap, an excess over the greatest degree of eccentricity can never be created. A safe pressure can therefore always be secured by the proper adaptation of size or diameter of the eccentric used. The screws *f f* in the lever will be useful, also, in adjusting the pressure on the valves. Pressure made upon the handle of the lever *e* will allow of the trying of the one valve, while the lifting up of the end of the lever will admit the trying of the other valve; but, as will be perceived, the lever cannot be made use of to increase the pressure upon both of the valves at the same time.

The guide-bars *i i* will serve as guides to the spring as well as to the bar and the other pieces.

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

The arrangement of the valves, lever, spring, and cross-bar with the eccentric, substantially as herein set forth.

This specification signed this 26th day of August, 1865.

ROBERT MOOD.

Witnesses:

WALTER S. PHELPS,

J. MILNER.