

(No Model.)

A. C. MEADY.  
SAFETY VALVE.

No. 274,133.

Patented Mar. 20, 1883.

Fig. 1.

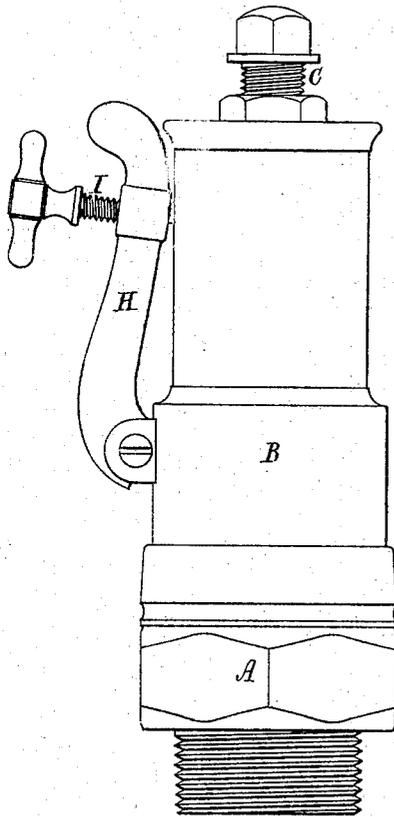
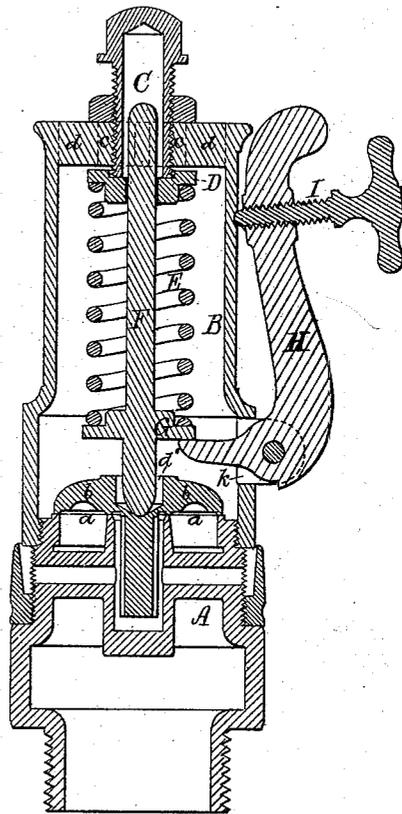


Fig. 2.



*Witnesses:*

*J. N. Piper*  
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*Inventor:*

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*by R. H. Sedy atty.*

# UNITED STATES PATENT OFFICE.

ALBERT C. MEADY, OF EAST SOMERVILLE, ASSIGNOR TO THE CROSBY  
STEAM GAGE AND VALVE COMPANY, OF BOSTON, MASSACHUSETTS.

## SAFETY-VALVE.

SPECIFICATION forming part of Letters Patent No. 274,133, dated March 20, 1883.

Application filed January 2, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT CECIL MEADY, of East Somerville, in the county of Middlesex, of the State of Massachusetts, have invented a new and useful Improvement in Safety-Valves for Steam-Boilers; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Fig. 2 a vertical section, of a safety-valve provided with my invention, the nature of which is defined in the claim hereinafter presented.

In the drawings, A denotes the valve and seat-carrier, the valve-seat of which is shown at *a* and the valve at *b*. Surrounding the valve and extending up from the said carrier is a tubular case, B, which is open at top, and having within it, arranged concentrically, a hub, *c*, supported by arms *d*, radiating from it to the said case. A tubular screw, C, screws downward through the said hub and against a washer, D, resting upon the upper end of a spiral spring, E. The said spring encompasses a spindle, F, and rests on a shoulder or circular shelf, G, projecting from the spindle, and concentric therewith. The spindle at its foot is stepped upon the valve or rests in a step, *d'*, formed therein, and the spindle at its upper part extends within the bore of the tubular screw C. By means of the said screw the spring may be contracted, so as to vary the pressure on the valve, as occasion may require. Such is a common method of constructing a safety-valve.

My invention is for the purpose of forcing

upward the valve-spindle and holding it up when raised, and therefore, in carrying out my said invention, I combine with the valve and its pressure-spring means or mechanism not only for contracting the spring, in order that the valve may rise under pressure of steam against it, but for automatically holding the spring so contracted for any desirable period. To this end I fulcrum to the case B a knee-lever, H, and arrange it, as shown, so that its shorter arm shall extend through a hole, *k*, into the case and project directly underneath the spring rest or shelf G. Through the longer arm of such lever I screw a screw, I, so that the inner end of such screw shall bear against the case B. On turning or screwing up the screw, the shelf G and its spindle may be forced upward, so as to contract the spiral spring and relieve the valve of the pressure of such spring, the lever and screw automatically holding the spring contracted as long as may be desirable, whether to let off steam or air from the boiler or to let air into it.

I claim as my invention—

The combination of the knee-lever H, pivoted to the case B, and the screw I, screwing through such lever, as described, with the said case B, and with the safety-valve and its seat-spindle, spring, and the downward-compressing devices of such spring, all being arranged, adapted, and to operate substantially as set forth.

ALBERT CECIL MEADY.

Witnesses:

R. H. EDDY,  
E. B. PRATT.