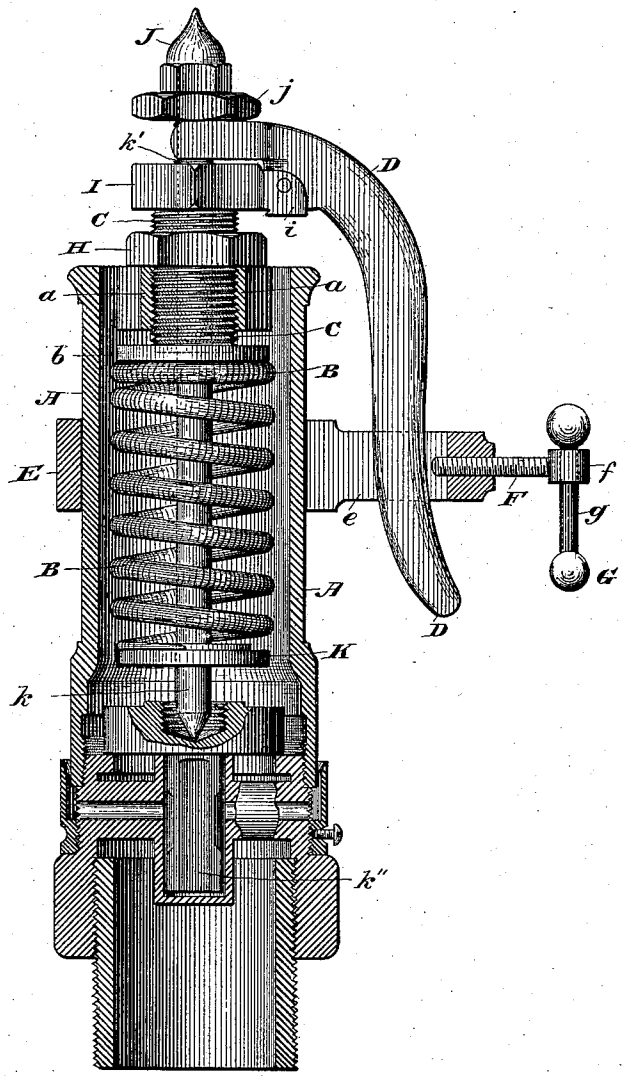
(No Model.)

E. MEDDEN.

SAFETY VALVE.

No. 290,450. Patented Dec. 18, 1883.



Attest.
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UNITED STATES PATENT OFFICE.

EDWIN MEDDEN, OF SENECA FALLS, NEW YORK, ASSIGNOR TO THE SILSBY MANUFACTURING COMPANY, OF SAME PLACE.

SAFETY-VALVE.

SPECIFICATION forming part of Letters Patent No. 290,450, dated December 18, 1883.

Application filed August 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWIN MEDDEN, a citizen of the United States, residing at Seneca Falls, in the county of Seneca and State of New York, have invented certain new and useful Improvements in Safety-Valves, of which the following is a specification.

My invention relates to that class of safety-valves in which a spring is employed to hold the valve to its seat, said valves having means for adjusting the pressure of the spring, so as to adapt it to offer any desired resistance, and also means for throwing them open for the purpose of emptying the boiler of steam or air or admitting air to it.

My invention consists in providing such valves with means for controlling the device for throwing them open, whereby they may be opened and automatically held for any desired length of time.

The accompanying drawing is a vertical section of a valve with my invention applied.

A represents the valve-cylinder, containing a valve of any ordinary construction, which is held to its seat by a coil-spring, B, pressing downward against an annular metallic disk, K, having a downwardly-projecting pintle or stud, *k*, which rests in a socket in the top of the valve. The upper end of the spring B presses upwardly against a similar annular disk, *b*, whose upper face is provided with an annular socket, in which works the lower end of a hollow externally-screw-threaded thimble, C, whose threads engage with corresponding threads formed on the interior of a hub, *a*, supported centrally within the top of the valve-cylinder by means of radial arms.

k' is the upper end of the spindle, which is formed integrally with or attached to the annular disk K, and passes upward centrally through the spring B and thimble C. Its upper end is screw-threaded, and carries a pair of jam-nuts, *J j*.

I is a nut keyed to the top of the thimble C, and provided with a lug, *i*, to which is pivoted a bent lever, D, whose upper end is bifurcated or notched for the reception of the spindle *k.'*

E is a collar surrounding the valve-cylinder, and provided on one side with a yoke, *e*, in which works the lower end of the lever D, said ring being fitted loosely and adapted to turn with the lever. The outer extremity of the yoke *e* is provided with a screw-threaded socket for the reception of an adjusting-screw, F, whose head *f* is provided with an eye, through which works the neck *g* of the handle G, which is of "dumb-bell" form.

H is a jam-nut working on the thimble C.

k'' is the valve-stem, guided in a socketed hub supported from the valve-case by radial arms.

The operation of the device is as follows: The thimble C is first adjusted in such position as to adapt the spring B to exert the desired maximum pressure, and the jam-nut H brought down upon the top of the hub *a* for preventing the thimble from being driven farther in, thereby increasing the resistance of the spring. The jam-nut *j* is then brought down, so as to bear lightly upon the top of the lever D, and the nut J brought down to hold it. The device is then in condition for use. When it is desired to open the valve for the purpose of emptying the boiler of steam or air, or admitting air to it, the screw F is driven in, thus depressing the lever D and raising the spindle *k'* and its accessories. The weighted ends G of the handle prevent a retrograde movement of the screw F, which may be due to the jar or vibrations of the engine when the device is used on fire-engines, for example.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a safety-valve, the combination, with a spring adapted to bear the valve to its seat with yielding pressure, of a lever arranged to press back the spring, so as to release the valve when required, and a screw for operating said lever, substantially as described.

2. The combination, with the spindle, of a valve having means for bearing such valve to its seat with yielding pressure, the pivoted lever for releasing the valve by lifting such spindle, and an adjusting-screw for operating said lever, substantially as set forth.

3. The combination, with the spindle, of a valve having means for bearing such valve to its seat with yielding pressure, means for regulating and setting the pressure on said valve, and mechanism, consisting of lever D and ad-

justing-screw F, for relieving said valve (by raising the spring) at any point below the pressure set, as set forth.

4. In combination with the lever and screw for operating the valve, a sliding handle for such screw, of dumb-bell form, for the purpose set forth.

5. The combination, with the spring of a valve and a lever for operating the said spring, of a ring surrounding the valve-cylinder, and provided with a yoke, in which an adjusting-screw for operating said lever has its bearings, substantially as and for the purpose set forth.

EDWIN MEDDEN.

Witnesses:
JOHN A. SMITH,
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