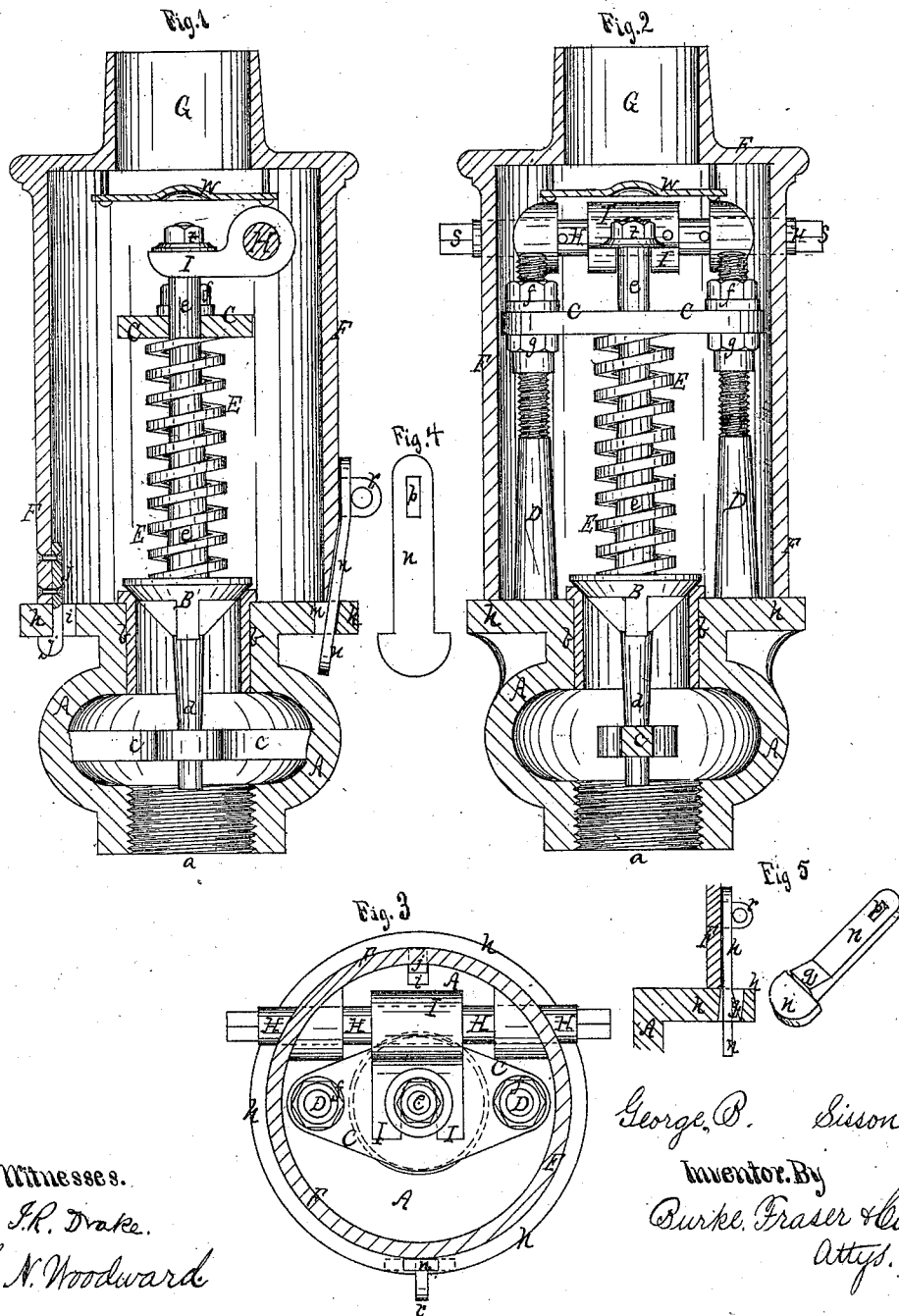


G. B. SISSON.

Fastenings for Safety-Valve Cases.

No. 140,223.

Patented June 24, 1873.



Witnesses.

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C. N. Woodward

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UNITED STATES PATENT OFFICE.

GEORGE B. SISSON, OF BUFFALO, NEW YORK.

IMPROVEMENT IN FASTENINGS FOR SAFETY-VALVE CASES.

Specification forming part of Letters Patent No. 140,223, dated June 24, 1873; application filed February 27, 1873.

To all whom it may concern:

Be it known that I, GEORGE B. SISSON, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Fastening for Safety-Valve Cases for Steam-Boilers, of which the following is a specification:

This invention relates to spring-lock safety-valves commonly used, and consists in the method of attaching the cover or box to the valve, whereby it may be secured to the valve-chamber by means of only one lock and without hinging, as hereinafter fully described.

In the drawings, Figure 1 is a sectional side elevation. Fig. 2 is a sectional front elevation. Fig. 3 is a plan; Figs. 4 and 5, detail views of the hasp.

A is the base or steam-chamber, whose bottom, *a*, is made with an inner screw-thread, by which means it is secured to the boiler. In the top is the valve-seat *b*. The interior of chamber A is provided with a cross-piece, *c*, into the center of which the spindle or guide-rod *d* of a valve, B, sets, as shown. On top of the valve B is another spindle or stem, *e*, which passes upward through a cross-head or plate, C, which is secured by suitable nuts *f* *g* to two upright posts, D D'. (See Fig. 2.) Surrounding the stem *e*, between the cross-head *c* and valve B, is the usual coiled spring E, the whole thus forming the usual spring safety-valve. To make it a lock-valve, I provide a cover or box, F, which sets over the spring and valve, with its lower edge resting upon the top flange *h* of the chamber A, as shown, and with an opening, G, in the top for the escape of the steam. *i* is a slot or opening through one side of the flange *h*, (see Fig. 1,) through which a gib-hook, *j*, passes, which is riveted to the side of the box F, the hook-part catching on the outside of the edge of the flange *h*, and thus holding that side of the case F down. The opposite side of the flange is also provided with a slanting slot, *m*, through which a tongue or lever-hasps, *n*, is passed from beneath, having a slot, *p*, in its upper part fitting over a staple, *r*, secured to the side of the case F, as shown, by which means

it may be locked by a padlock, &c., to prevent its being tampered or interfered with. This hasp may also be constructed with a small incline, *q*, to aid in holding it in its place. (See Fig. 5.) The hasp has a double use, for not only does it aid in fastening the cover F down, but it also acts as a lever to force the gib-hook *j* into its place and hold it in position.

This method of securing the case is another important feature of novelty in my invention, as by this means I fasten the case F by only one lock, and doing away with hinges, which allows the outer case to be removed entirely from place, to readily reach the valve, &c., for repairs or tests.

In all lock-valves with which I am acquainted there is no means of ascertaining whether the valve is in good order or not without unlocking them, or raising the pressure of steam in the boiler unless it has reached the point at which the valve is "set." The latter is inconvenient, and sometimes dangerous, while the first is only practicable when the inspector is present to unlock it. It is usual to attach to boilers an extra safety-valve for use, in cases of emergency, but this does not obviate the main difficulty, which is to ascertain whether the lock-valve is in good order or not.

To accomplish this, I provide a shaft, H, which runs across through the top part of the case F, as shown, and which is provided with square ends, *s* *s*, by which means it may be turned from the outside to raise the valve. On the center of this shaft is a forked catch or "wiper," I, which catches either side of the top of the valve-stem *e*, above the cross-head C, the top of said stem being provided with a head, *t*. By this means the valve may be operated from the outside of the cover, but, at the same time, will not allow it to be held down, or otherwise tampered with. I thus entirely obviate the greatest objection to lock-valves, as well as do away with the necessity of an extra valve, as by the use of the shaft or rod H it may be used as a common safety-valve without interfering with the locking-part of it. W is the usual plate suspended over the orifice

G to prevent the valve being reached from above.

I claim—

The gib-hook *j*, and locking-hasps *n*, in combination with the case *F*, and chamber *A* having the slotted flange *h*, substantially as described, for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEORGE B. SISSON.

Witnesses:

J. R. DRAKE,
C. N. WOODWARD.