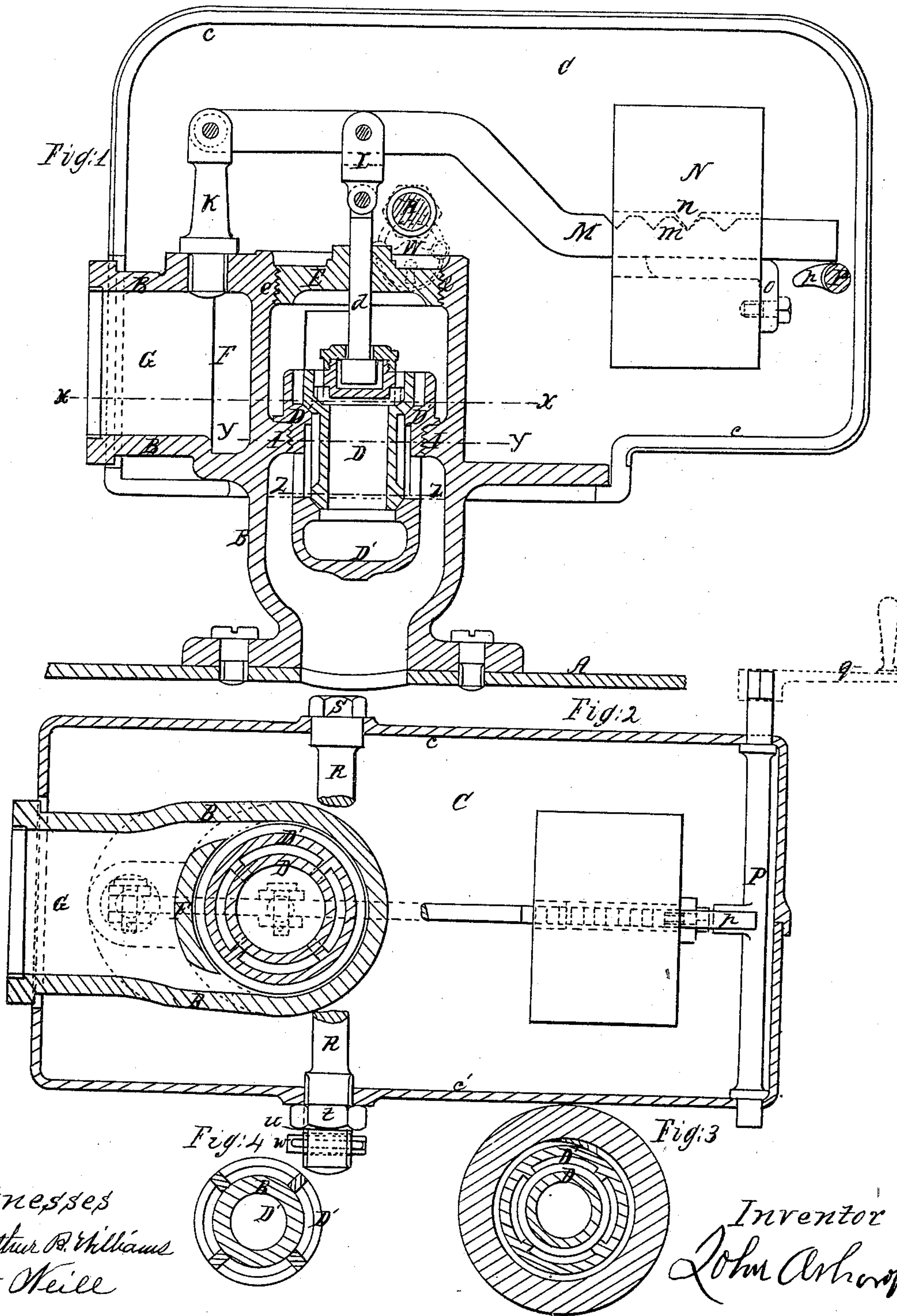


J. Ashcroft.
Safety Valve.

N^o 86,346.

Patented Feb. 2, 1869.



Witnesses
Arthur R. Williams
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United States Patent Office.

JOHN ASHCROFT, OF NEW YORK, N. Y.

Letters Patent No. 86,346, dated February 2, 1869.

IMPROVEMENT IN STEAM SAFETY-VALVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN ASHCROFT, of the city, county, and State of New York, have invented a new and useful Improvement in Steam Safety-Valves for the boilers of locomotives and other steam-engines; and do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, of which—

Figure 1 represents a sectional elevation;
Figure 2, a horizontal section on line *x x* of fig. 1;
Figure 3, a horizontal section on line *y y*; and
Figure 4, a similar section on line *z z* of said figure.

This invention, relating to an improvement in steam safety-valves, consists in the construction and arrangement of the valve, its sustaining-dome and enclosing-case, in such manner that, as the valve (which is in direct communication with the steam in the boiler) is raised from its seat, the steam will escape through the dome, without contact with the mechanism which operates said valve, or access to its enclosing-case.

The enclosing-case not only protects said mechanism from dirt or derangement, but prevents access to the same by any other than the person in charge, being secured to the dome by lock and key, and at the same time the engineer can operate the valve from without, whenever he thinks necessary to blow off steam, or prevent clogging of the valve, and by unlocking the case, the same may be removed for inspection of the valve-mechanism, when the steam is on, or at any desired moment.

Having described the nature of my invention, I will now describe its construction and operation, by reference to the drawings, in which—

A indicates a portion of the shell of a steam-boiler, on which is bolted the dome B, which sustains the enclosing-case C and valve D, as shown.

This dome receives the cap E, which is screwed into the dome at *e*, said cap answering the purpose of a guide for the valve-spindle *d*, as well as to confine the steam when the valve is raised, so that the steam shall

escape around the guard F, which prevents access to the valve from without, and through the exit-opening G of the dome B, without access to the interior of the case C.

The dome B also receives the valve D, whose seat D' is screwed into the dome at I I, and also the standard K, which, together with the fulcrum L, serrated lever M, and weight N, holds the valve D on its seat D'.

The lever M is serrated at *m* for adjustment and retention of the weight N, said weight having a tooth, *n*, which fits into one of the serrations of the lever, and a stay-piece, O, which holds the weight, when adjusted, steadily in place.

P is a crank-shaft, passing through the case C, and carrying a cam, *p*, and crank, *q*, by means of which the engineer operates the valve for blowing off steam, &c.

C is the enclosing-case, made in two sections, *c c'*, the same being held firmly together by the bolt R, which passes through both sections, having a head, *s*, nut, *t*, and a hole, *u*, for reception of the lock *w*, thus holding the sections firmly together, the case C, which they comprise, enclosing the dome, valve, and valve-mechanism, thereby preventing access of the steam to the interior of the case, as well as preventing access to the valve or valve-mechanism otherwise than by unlocking and removal of the case.

Having described my invention,

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

1. The arrangement of the dome B, screw-cap E, guard F, with the valves D D', when said parts are constructed as shown and described.

2. The arrangement of the lever M, weight N, stay-piece O, and crank-shaft P, as shown and described.

In testimony whereof, I have hereunto set my signature, this 14th day of October, A. D. 1868.

JOHN ASHCROFT.

Witnesses:

ARTHUR B. WILLIAMS,
A. NEILL.