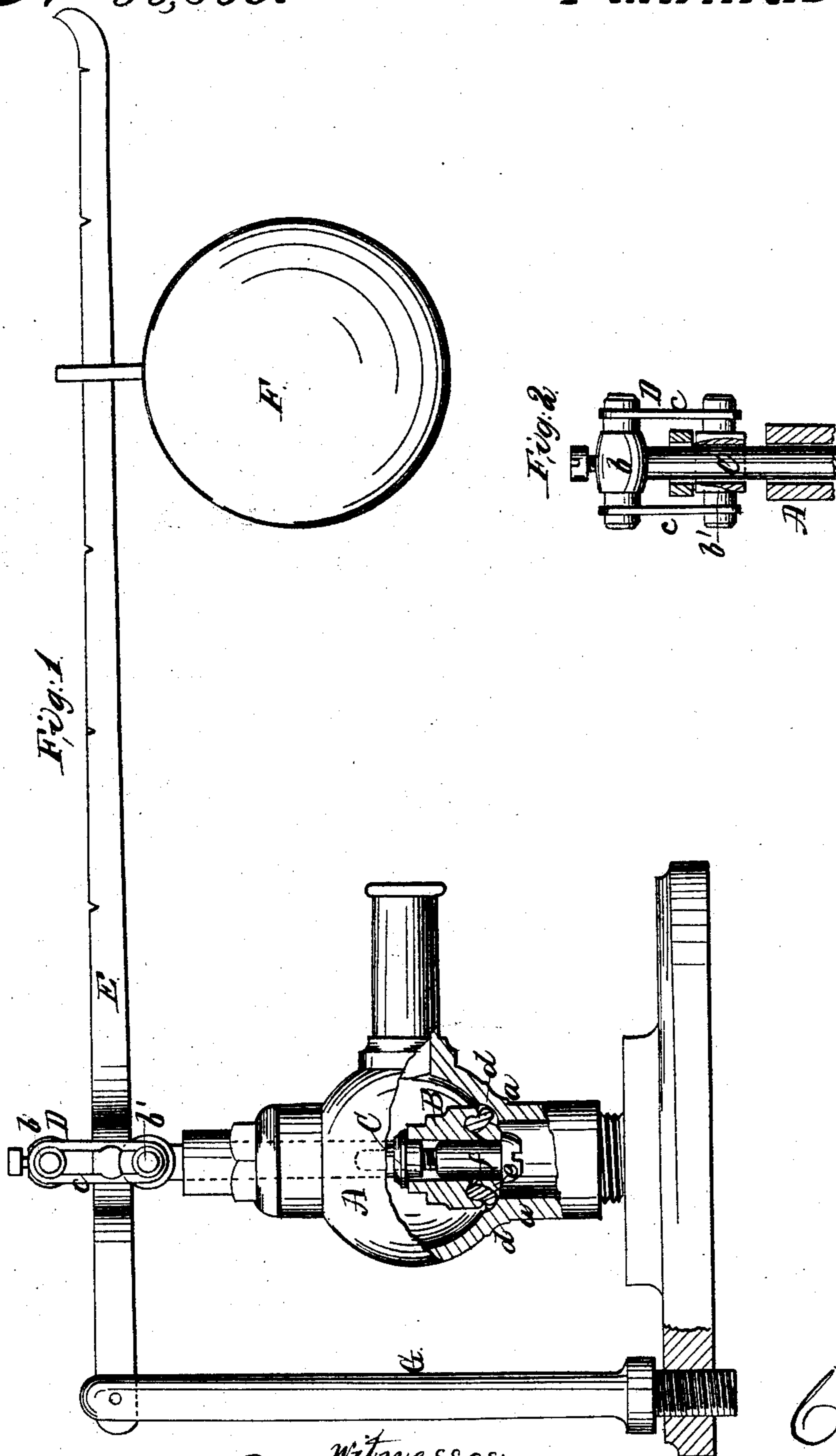


C. L. Frink,
Steam Safety Valve.

N^o 55,639.

Patented June 19, 1866



Witnesses:
J. W. B. Conington
Jas A Service

Inventor:
C. L. Frink
Per M. W. C.
Attorney

UNITED STATES PATENT OFFICE.

C. L. FRINK, OF ROCKVILLE, CONNECTICUT.

IMPROVEMENT IN SAFETY-VALVES FOR BOILERS.

Specification forming part of Letters Patent No. 55,639, dated June 19, 1866.

To all whom it may concern:

Be it known that I, C. L. FRINK, of Rockville, in the county of Tolland and State of Connecticut, have invented a new and useful Improvement in Safety-Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a sectional side elevation of this invention. Fig. 2 is a transverse section of the lever, showing its connection with the valve-stem.

Similar letters of reference indicate corresponding parts.

This invention consists in the arrangement of a swinging supporter, in combination with the stem and lever of a safety-valve, in such a manner that said supporter will accommodate itself to the position of the lever and the lateral strain on the valve-stem will be diminished or avoided.

It consists, further, in making the standard which supports the fulcrum of the lever of a safety-valve adjustable in such a manner that the same can be readily accommodated to the length of the valve-stem and the lever can be easily brought in a horizontal position.

It consists, finally, in the arrangement of a central screw and clamping-plate, in combination with the valve and valve-stem, in such a manner that the face of the said valve can be readily packed, and the packing can be renewed whenever it should become desirable.

A represents the box or shell of my safety-valve B, said valve being secured to the bottom end of a stem, C, and made to close down upon a seat, *a*.

To the top of the stem C is attached a hinged support, as D, which is composed of two cross-bars, *b b'*, and two straps, *c*. The top cross-bar, *b*, is firmly secured to the valve-stem, but the lower cross-bar, *b'*, fits loosely on the same

and rests in the supporting-straps *c*, which are suspended from the ends of the top cross-bar, as clearly shown in the drawings.

The lever E, which is loaded with a weight, F, is split so that it straddles the top end of the valve-stem and rests upon the lowest cross-bar, *b'*, of the supporter D. This cross-bar has a swinging motion in the direction of the lever, and if the valve rises, or if the lever should not be in perfectly horizontal position, said supporter accommodates itself to the position of the lever, and the lateral strain on the valve-stem is diminished or avoided.

The lever E has its fulcrum in a standard, G, which rises from the top plate of the boiler. This standard I have made adjustable by a screw-thread, so that it can be easily lengthened or shortened, and that the lever E can be brought in a horizontal position.

In practice I propose to make this standard out of two parts, which will be connected by a left and right hand thread, so that the length thereof can be adjusted with ease and convenience, and without removing the fulcrum-pin of the lever.

The face of the valve is packed by means of a piece, *d*, of india-rubber or other suitable material, which is held in place by a plate, *e*, and screw *f*. By removing this screw the packing can be readily taken out and renewed whenever it shall become necessary.

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

1. The hinged supporter D, in combination with the valve-stem C and lever F of a safety-valve, substantially as and for the purpose described.

2. The central screw, *f*, and clamping-plate *e*, in combination with the packing-piece *d* and valve B, constructed and operating substantially as and for the purpose described.

C. L. FRINK.

Witnesses:

R. L. FREIN,
E. I. SMITH.