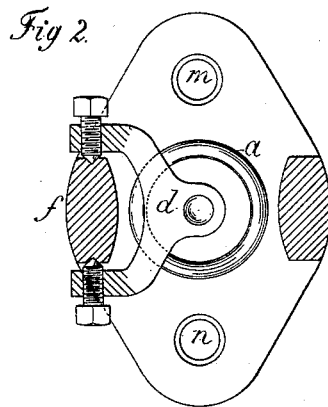
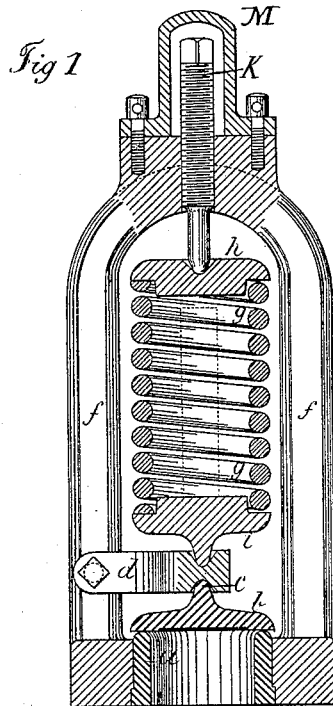


(No Model.)

A. SCHMID.  
SAFETY VALVE.

No. 303,754.

Patented Aug. 19, 1884.



*Witnesses:*

*C. J. Bell*  
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# UNITED STATES PATENT OFFICE.

ALBERT SCHMID, OF ZURICH, SWITZERLAND.

## SAFETY-VALVE.

SPECIFICATION forming part of Letters Patent No. 303,754, dated August 19, 1884.

Application filed January 9, 1884. (No model.) Patented in France May 4, 1883, No. 155,269.

*To all whom it may concern:*

Be it known that I, ALBERT SCHMID, a citizen of Switzerland, residing at Zurich, in the Canton of Zurich and Republic of Switzerland, have invented certain new and useful Improvements in Safety-Valves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to the class of adjustable spring-pressed safety-valves; and the object of my invention is to diminish the amount of friction and to provide a safety-valve which will operate with the smallest excess of steam-pressure over the amount for which it is set.

The invention consists in the construction and arrangement of parts, as hereinafter described and claimed.

Figure 1 shows a vertical section, partly in side elevation, of a safety-valve embodying my invention; and Fig. 2 is a ground plan of the lower portion, partly in section.

The ring, of bronze or other hard metal, *a*, forms the seat of the valve *b*, which rests freely on the crest of the ring *a*. The central pointed head *c* of the valve *b* fits into a cavity in the under side of the forked arm *d*, the two arms of which are pivoted to one of the side standards, *f*, by means of screws with pivot-points that rest in sockets in the side of the standard. On the upper side of the arm *d* there is a socket, which receives the central pivot-point of the plate *i*, the same being immediately above the head *c* of the valve-plate. The spring *g* is confined between the two plates *i* and *h*, the latter forming a base-block for the regulating-screw *K*, and having a cen-

tral socket which receives the end of the screw. The lower plate, *i*, has a pin, (indicated by the dotted lines in Fig. 1,) which extends up within the spiral spring almost to the top plate, *h*, to limit the upward movement of the valve. The pressure on the valve is regulated and set by means of the screw *K*, and the head of the same is covered by a cap, *M*, to prevent it from being tampered with. The apparatus is made fast in the boiler by screws and nuts at *m* and *n*.

The operation of the safety-valve will be readily understood from its construction. The valve *b*, when lifted from its seat by the too great pressure of the steam, is guided in its short ascending motion by the arm *d*, and, being held by a central pivot-support, is perfectly free to adjust itself to the pressure and any resisting friction or adherence to the seat at any point of its contact-surface, and to take an inclined or horizontal position, its point of pressure forming at the time its only guide.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a safety-valve, a pivoted arm, in combination with the valve and a spring-pressed plate between which it is interposed, substantially as and for the purpose set forth.

2. A safety-valve consisting of a valve, *b*, having its seat on ring *a*, and central head, *c*, pivoted forked arm *d*, plate *i*, having its central pivot-point, spring *g*, top plate, *h*, and regulating-screw *K*, combined and arranged substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT SCHMID.

Witnesses:

T. A. BOURRY,  
WILLIAM SCHNEIDER.