

No. 668,065.

Patented Feb. 12, 1901.

H. STEIN.

PROTECTING DEVICE FOR SPRING PRESSED VALVES.

(Application filed Oct. 5, 1900.)

(No Model.)

Fig. 1.

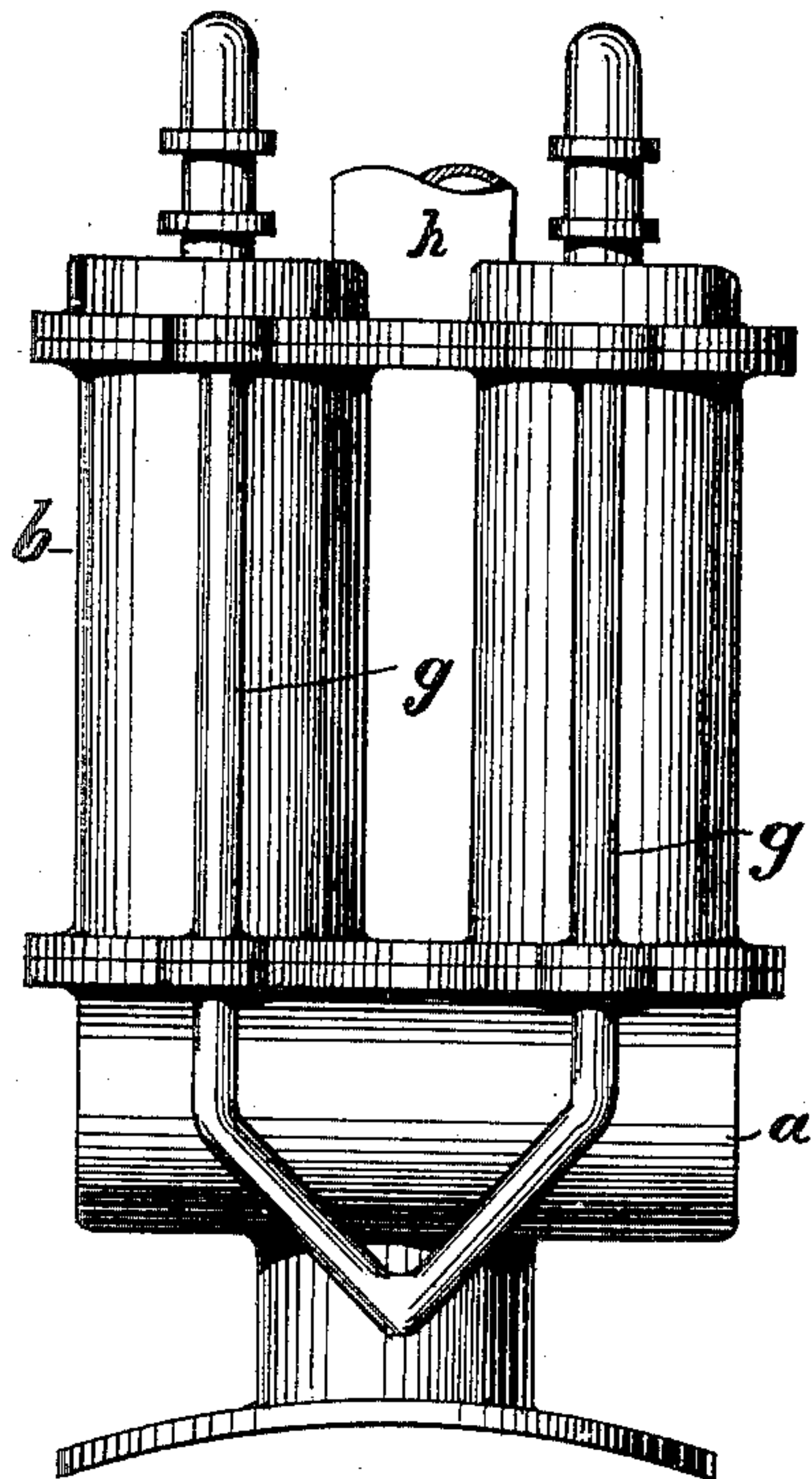


Fig. 2.

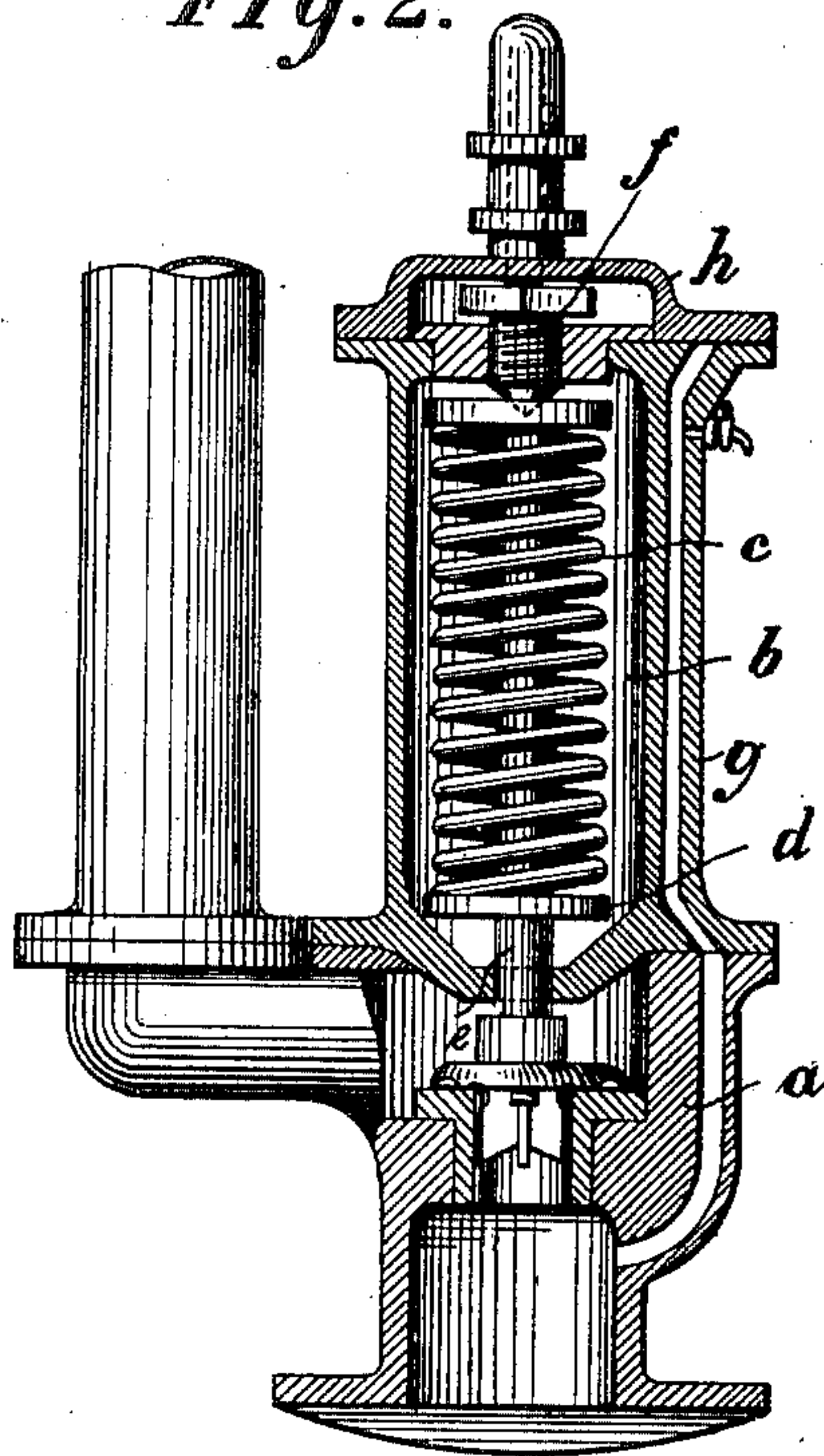
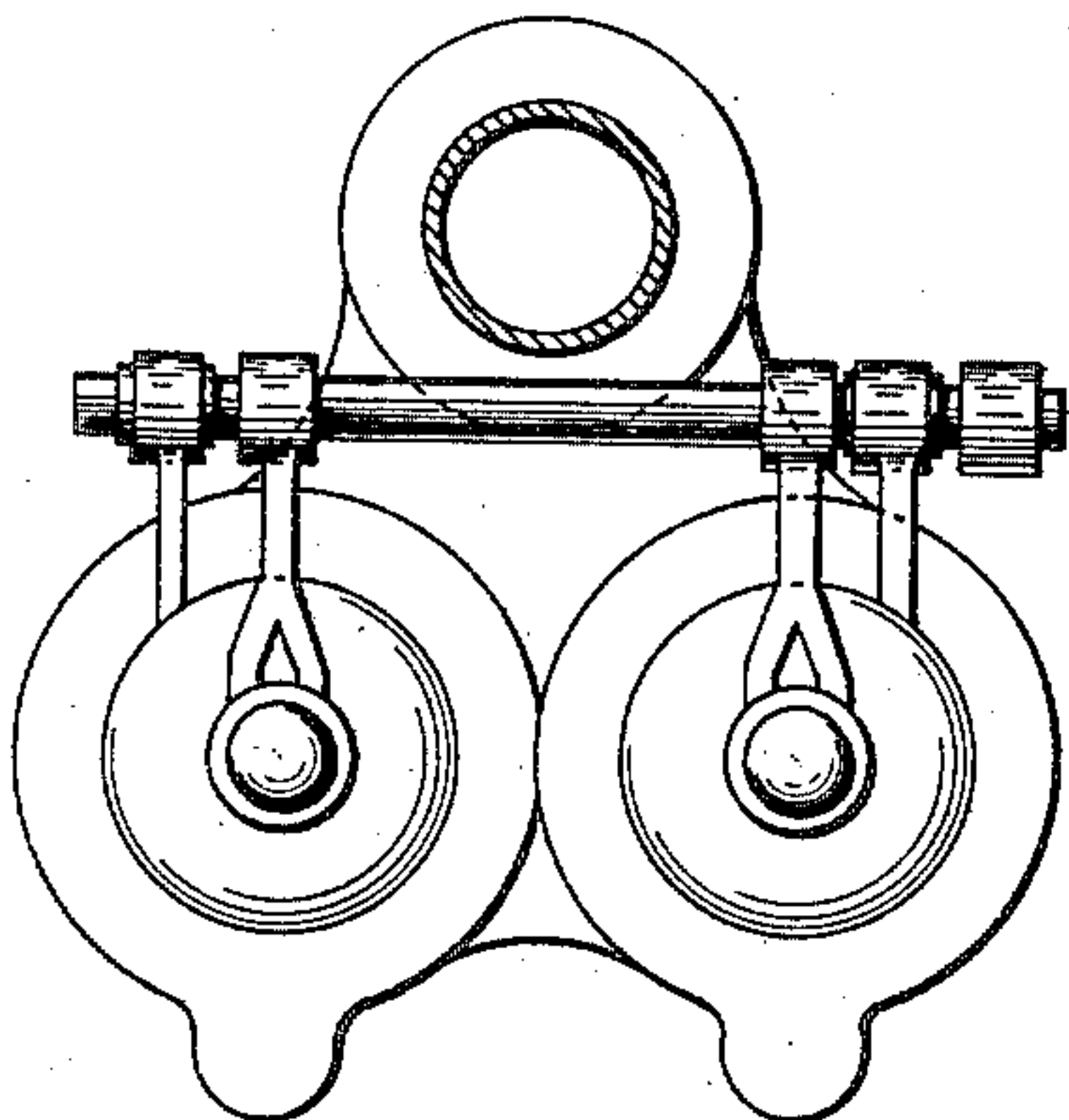


Fig. 3.



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UNITED STATES PATENT OFFICE.

HERMANN STEIN, OF HAMBURG, GERMANY.

PROTECTING DEVICE FOR SPRING-PRESSED VALVES.

SPECIFICATION forming part of Letters Patent No. 668,065, dated February 12, 1901.

Application filed October 5, 1900. Serial No. 32,166. (No model.)

To all whom it may concern:

Be it known that I, HERMANN STEIN, a citizen of the free city of Hamburg, residing at Hamburg, in the German Empire, have invented certain new and useful Improvements in Protecting Devices for Adjustable Spring-Pressed Valves, (for which I have applied for patents in England, No. 14,421, dated August 11, 1900; in Germany, St. 5,946^v/13, dated April 24, 1899, and in France, No. 291,346, dated August 17, 1900,) of which the following is a specification.

This invention relates to a protecting device for adjustable spring-pressed valves, and has for its object the prevention of any unauthorized interference with the apparatus, particularly as regards alteration of the weighting of the valve.

This invention has the advantages over known devices designed for the same purpose that it is more simple and that it fulfils its purpose with greater certainty.

The characteristic feature of the invention is a detachable hood or cover provided over the valve-stem for the guidance of the latter and which carries the screw for adjusting the springs. A steam-channel passes from the interior of the boiler to below the flange of the hood or cover, such flange making a good joint to cut off communication between the steam and the atmosphere. Should any attempt be made to remove the hood for the unauthorized alteration of the weighting of the valve, steam escapes from the channel into the atmosphere by reason of the channel being opened through the loosening of the hood and prevents the valve being further interfered with as long as the boiler is under steam-pressure.

In the accompanying drawings I illustrate, as an example, how the invention may be carried into effect.

Figure 1 is an elevation. Fig. 2 shows a transverse section, and Fig. 3 is a plan.

A valve-casing *a* has an upward cylindrical continuation *b*, which forms the casing for a spiral spring *c*, acting on the valve by bearing against and pressing on a collar *d* of the valve-stem *e*. This pressure of the spring is

regulated by a screw *f*, screwed into the neck of the casing *b*. The valve-rod extends upward through this screw.

The casing *b* has cast with it at the rear a steam-channel *g*, extending from the valve-box to the top of the spring-casing *h*, which guides the valve-rod *e* and incloses the adjusting-screw *f*, so that the latter can only be actuated after removal of the hood.

Should any attempt be made to remove the hood while the boiler is under pressure, then, as before mentioned, steam escapes from the steam-channel *g* on the loosening of the hood and prevents further interference.

A testing or trial tap may be provided at the upper end of the channel *g*.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of a valve adapted to be unseated by predetermined pressure, a valve-casing, a passage in the wall of said casing, and a removable cover for said casing adapted to prevent tampering with the valve and to close said passage when in proper position, for the purpose and substantially as described.

2. The combination with a valve, its casing, a steam-passage leading through the casing exterior to the valve, means for adjusting the pressure on the valve, and a hood or cover adapted to protect said adjusting mechanism and to close said steam-passage when in position, for the purpose and substantially as described.

3. The combination of a safety-valve, its stem, the casing surrounding the stem, the spring for seating the valve, and the spring-adjusting device; with a steam-outlet passage in the walls of the valve chamber and casing, and a cover adapted to be secured to said casing to protect the adjusting mechanism and close said steam-passage, for the purpose and substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

HERMANN STEIN.

Witnesses:

LEO TOLLES,

IDA HAERMANN.