

(No Model.)

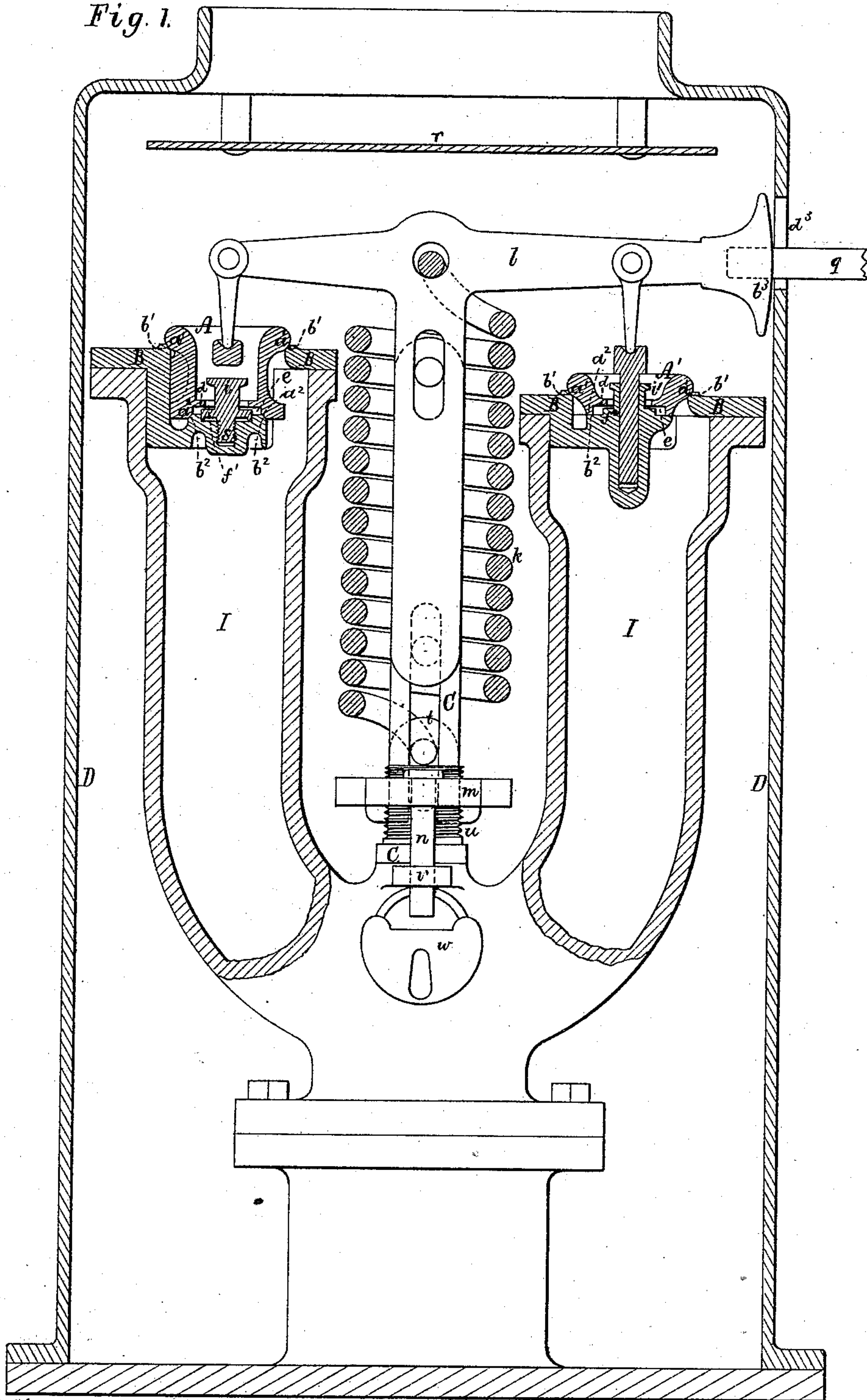
2 Sheets—Sheet 1.

J. W. MELLING.
Safety Valve.

No. 235,889.

Patented Dec. 28, 1880.

Fig. 1.



Witnesses

S. N. Piper
W. W. Lunt

Inventor

John William Melling
by attorney
R. H. East

(No Model.)

2 Sheets—Sheet 2.

J. W. MELLING.
Safety Valve.

No. 235,889.

Patented Dec. 28, 1880.

Fig. 2.

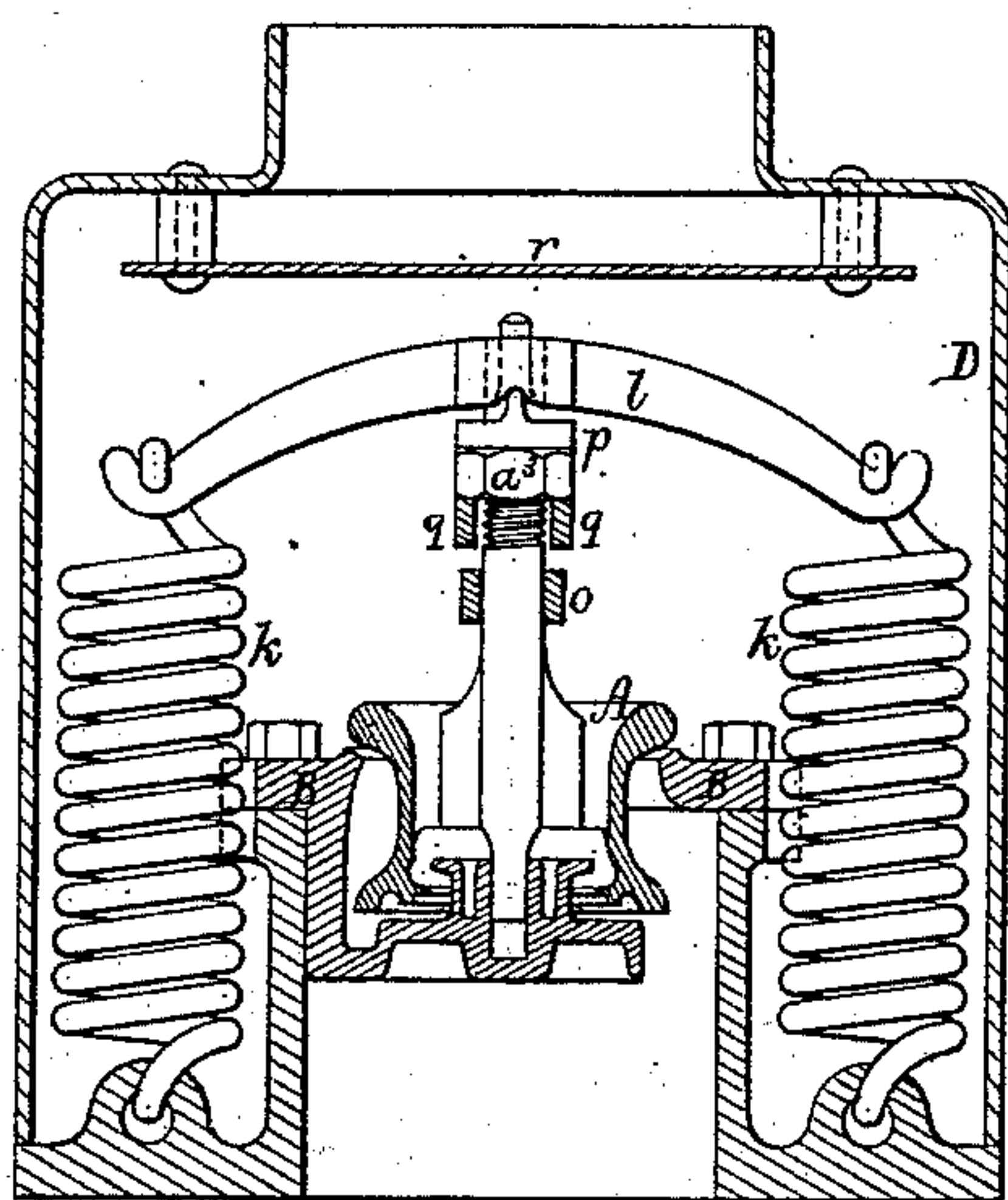
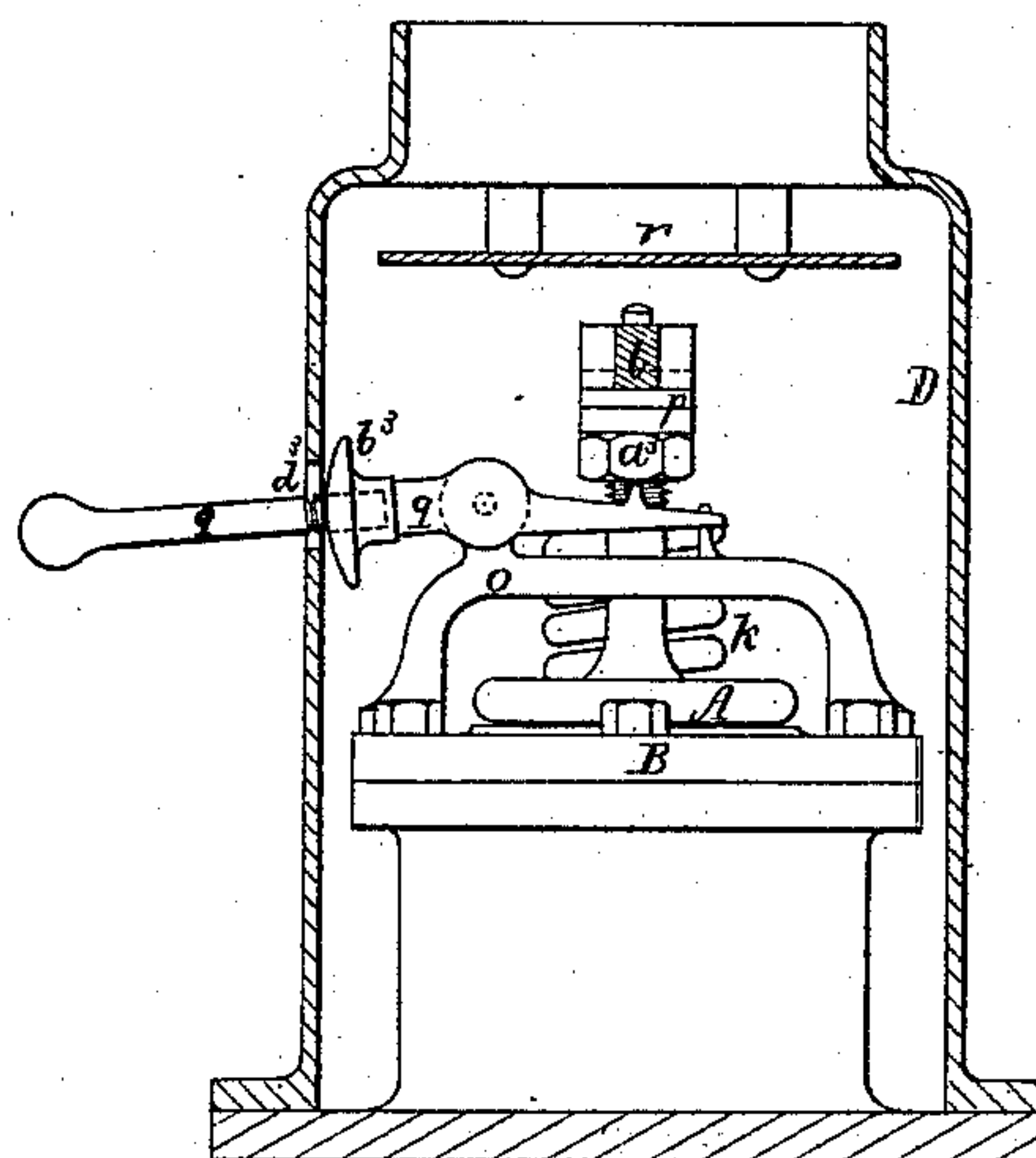


Fig. 3.



Witnesses

S. N. Piper
Wm. W. Lunt

Inventor.

John William Melling

by attorney.

R. H. Rudy

UNITED STATES PATENT OFFICE.

JOHN W. MELLING, OF BIRKETT BANK, WIGAN, COUNTY OF LANCASTER,
ENGLAND.

SAFETY-VALVE.

SPECIFICATION forming part of Letters Patent No. 235,889, dated December 28, 1880.

Application filed June 21, 1880. (No model.) Patented in England November 6, 1873.

To all whom it may concern:

Be it known that I, JOHN WILLIAM MELLING, of Birkett Bank, Wigan, in the county of Lancaster, England, have invented new and useful Improvements in Safety or Relief Valves; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

10 Figures 1, 2, and 3 are vertical and transverse sections of safety-valves and their cases with my invention applied thereto.

My invention relates particularly to the improved safety and relief valve and seat for 15 which Letters Patent of the United States of America, No. 170,757, were granted to me on December 7, 1875, my present improvements consisting, first, in the combination of the double-seated tubular valve and its seating 20 with a headed post connected with the latter and extending within the bore of the valve, and being for contracting or diminishing the passage for the escape of steam through such bore during rise of the valve, such device being either permanently fixed in place or adapted 25 so as to be movable and adjusted vertically in position; second, in the double-seated valve and its seating provided with a chamber, as set forth, and having certain parts, as explained, adjustable vertically, as and for the 30 purpose or purposes as specified.

In Fig. 1 two double-seated valves, A A', and their seating B, substantially as shown in my said patent, are represented as applied to 35 two steam-inducts, I I, which are conjoined at their lower parts, as shown. Over the two valves is a lever or bar, l, adapted to a standard, C, to slide or play vertically thereon as occasion may require, such lever being pivoted 40 or applied to the valves in manner as represented.

The valves A A' and their seatings are shown as having faces a' b' a^2 b^2 , spaces e , and a boss or seat-projections, f' f^2 , all substantially as 45 exhibited in the said patent. These projections f' f^2 are respectively provided with short headed posts or standards i i' , extending up from them into the bore or passage of the valve in manner and formed as represented. The 50 headed post i' of the valve A' and the projection f^2 are in one piece with the seating B of

that valve; but in the valve A the post i and projection f' are separate from the valve-seating, except in being provided with a screw, s , to screw down into the seating, in order to connect the part f' with the seating and allow of 55 the parts f' and i , especially the latter, being adjusted in altitude within the valve. The headed posts i i' are for the purpose of impeding the escape or diminishing the flow of steam 60 up through the valve as the latter may rise upward, in order for the steam to be caused to act with increased power on the part or surface d , and thus be more effective in forcing the valve upward. 65

The spring k , which at its upper end hooks into and is connected with the bar or lever l , is shown as provided with means of varying its tension or draft on the said bar or lever, the spring at its lower part being passed or 70 hooked into a loop, t , adapted to the standard C and to a screw-nut, m , so as to be movable vertically by the nut when revolved on a stationary screw, u . The nut is provided with a series of holes made vertically through it at 75 equal distances asunder, to receive in either of them, as occasion may require, a pin or bolt, n , which, when extending through the nut and a projection, v , and held in place by a padlock, w , as shown, serves to prevent the nut from 80 being revolved.

The part f' is to aid in the formation of the chamber e , and serves to obstruct the escape of steam from such chamber into the space 85 around and above the post i . The object of the part f' and the post i being adjustable, as described, is to vary the depth of the outlet of the chamber e .

In Figs. 2 and 3 the valve is shown as provided with a yoke or lever, l , and two springs, 90 k k , extending down therefrom and fixed at their lower parts to the case. This yoke is supported at its middle on a pivot projecting up from a plate, p , resting upon a nut, a^3 . This nut, screwed on the valve-stem, has extending 95 underneath it a lever, q , pivoted to an arched guide, o , through which the valve-stem passes, such guide being fixed to the valve-seating B.

The lever q , as well as the lever l , (shown in Fig. 1,) is provided with a socketed head, b^3 , 100 arranged opposite and close to a slot, d^3 , made in the valve housing or case D. The said head

is to receive in its socket a movable arm, *g*, in order to enable the lever to be moved by such arm to raise the valve off its seats or allow it to be moved off them by the pressure of steam when it may be desirable to "blow off" the steam.

Within the case D, and just below its discharge-neck, is a stationary disk or plate, *r*, by and around which the steam while escaping can flow. This plate, with the head of the lever *g*, serves to prevent access being had to the valve-adjusting nut or the valve or valves for any improper purpose.

I claim as my invention as follows:

15 1. The combination of the double-seated tubular valve and its seating, having the open space or chamber *e* between the seats and valves, as set forth, with the headed post arranged within the valve and applied to the

seating, the said post being either stationary 20 or adjustable vertically, as explained.

2. The post *i* and its supporting part *f'*, combined and adjustable, as described, in combination with the double-seated valve provided with the chamber *e*, arranged in it as set forth. 25

3. The construction of the headed post *i* with the double-seated tubular valve and its seating, such post being arranged within the valve and adapted so as to be either stationary or adjustable relatively to the seating, as set forth.

JOHN WILLIAM MELLING.

Witnesses:

ROBERT MOSS,

Clerk, 24 Cross St., Wigan.

SAMUEL TAYLOR,

Cashier, Market Place, Wigan.