

G. R. Moore,

Balanced Valve.

No. 100,056.

Patented Feb. 22. 1870.

Fig 1

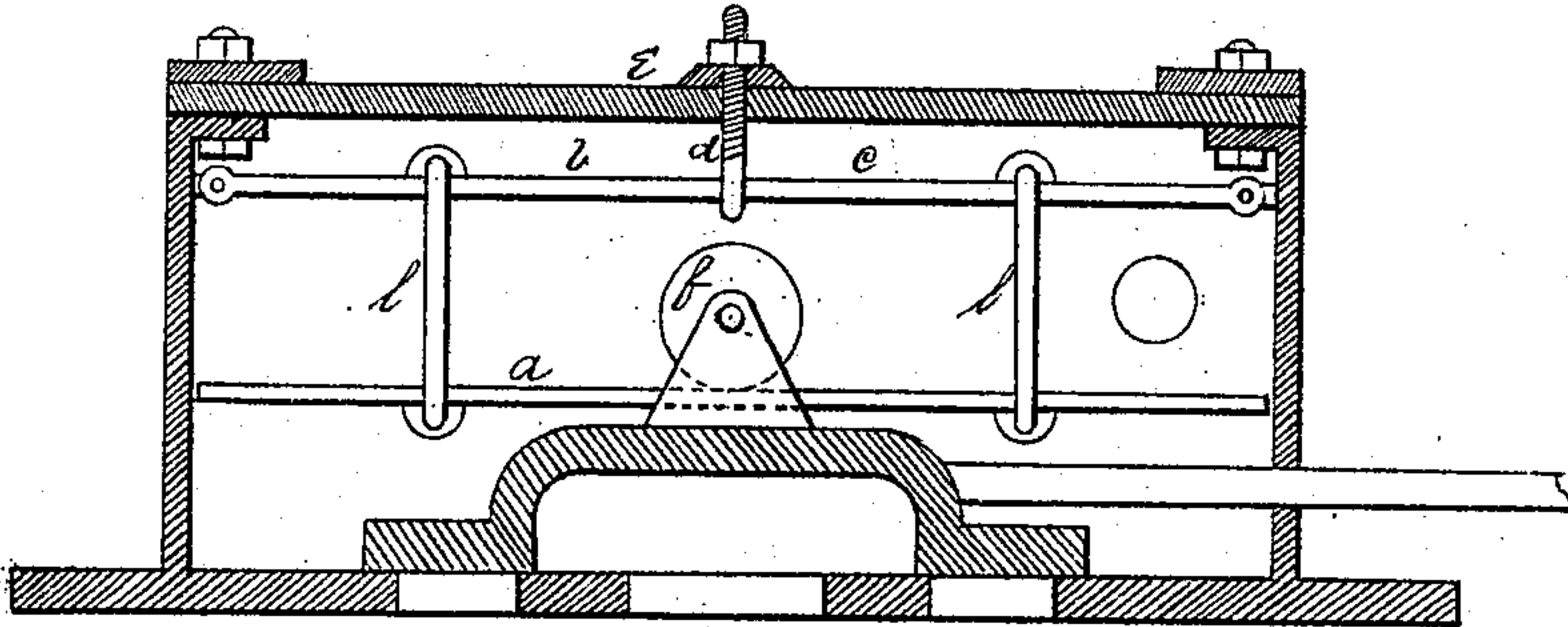


Fig 2

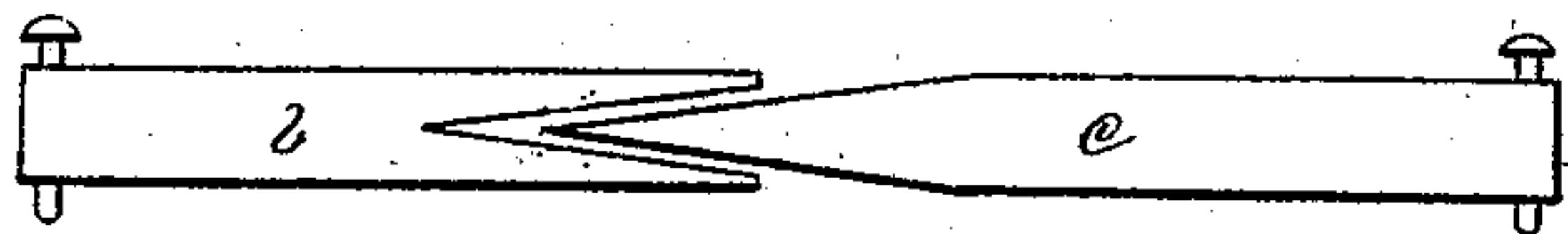
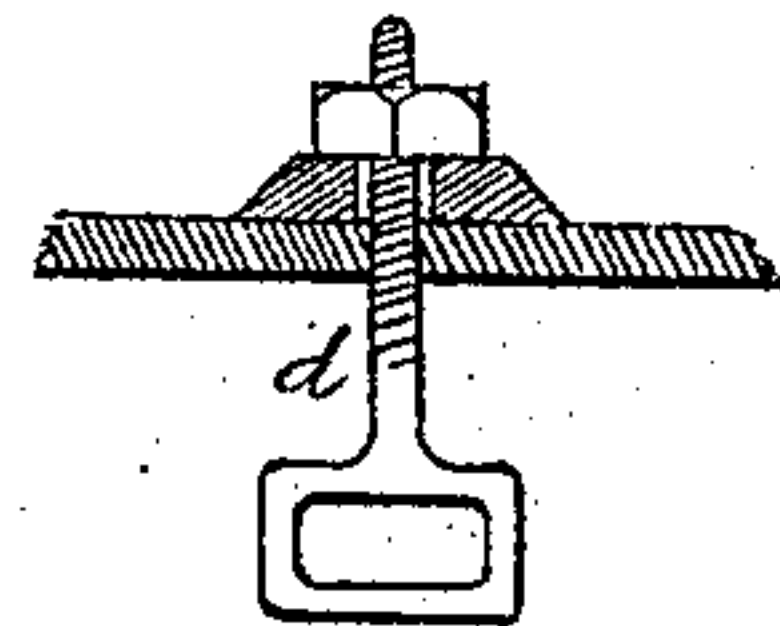


Fig 3



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United States Patent Office.

GEORGE R. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 100,056, dated February 22, 1870.

BALANCE SLIDE-VALVE.

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

I, GEORGE RODNEY MOORE, of the city of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Balance-Valves, of which the following is a specification.

The object of my invention is to provide a counter-balance or relief to the usual pressure and consequent friction of slide and other valves upon their seats when working under steam or liquid pressure.

I place a friction-roller centrally upon the back of the valve and just enough above it to allow a bar or lever to pass between them, and this lever I suspend by two links on two other levers which are pivoted, each at one end, to the steam-chest, on opposite sides thereof; while the two ends coming together are left to bear freely of each other in an adjustable looped hanger at the center of the steam-chest where it passes through an elastic plate, and thus combines the action of the elastic plate with the levers, so that they shall bring a pressure upon the friction-roller in the direction opposite to the valve-seat, and thus by all the tendency there is from the pressure of the steam upon the inside elastic plate or top of the steam-chest to lift it upward, the valve is relieved from downward pressure upon its seat.

Figure 1 is a longitudinal section of an ordinary steam-chest and slide-valve with my improvement included.

Figure 2 is a plan view of the upper levers.

Figure 3 is a plan view of the adjustable hanger, which operates from its central position, all the levers alike effecting the valve.

There are three levers in all, *a b c*.

The lower one, *a*, extends wholly across the steam-chest so as not to be swayed by the alternations or reverse motions of the valve.

This lever is wholly suspended upon the other two *b* and *c*, by the links *l l*.

b and *c* are loosely dovetailed into each other and are both sustained upon the same level in the adjustable hanger *d*, which passes centrally through the top of the steam-chest or elastic plate *e*.

All the levers are hung so that an unvarying pressure is conveyed from the friction-roller *f* to the hanger *d*, irrespective of the position of *f* upon *a*.

I claim as my invention—

The combination of the valve with the elastic plate or its equivalent, by means of the balancing levers *a b c*, substantially as and for the purpose herein set forth.

GEO. R. MOORE.

Witnesses:

SAML. P. JONES, Jr.,
M. V. DONNELLY.