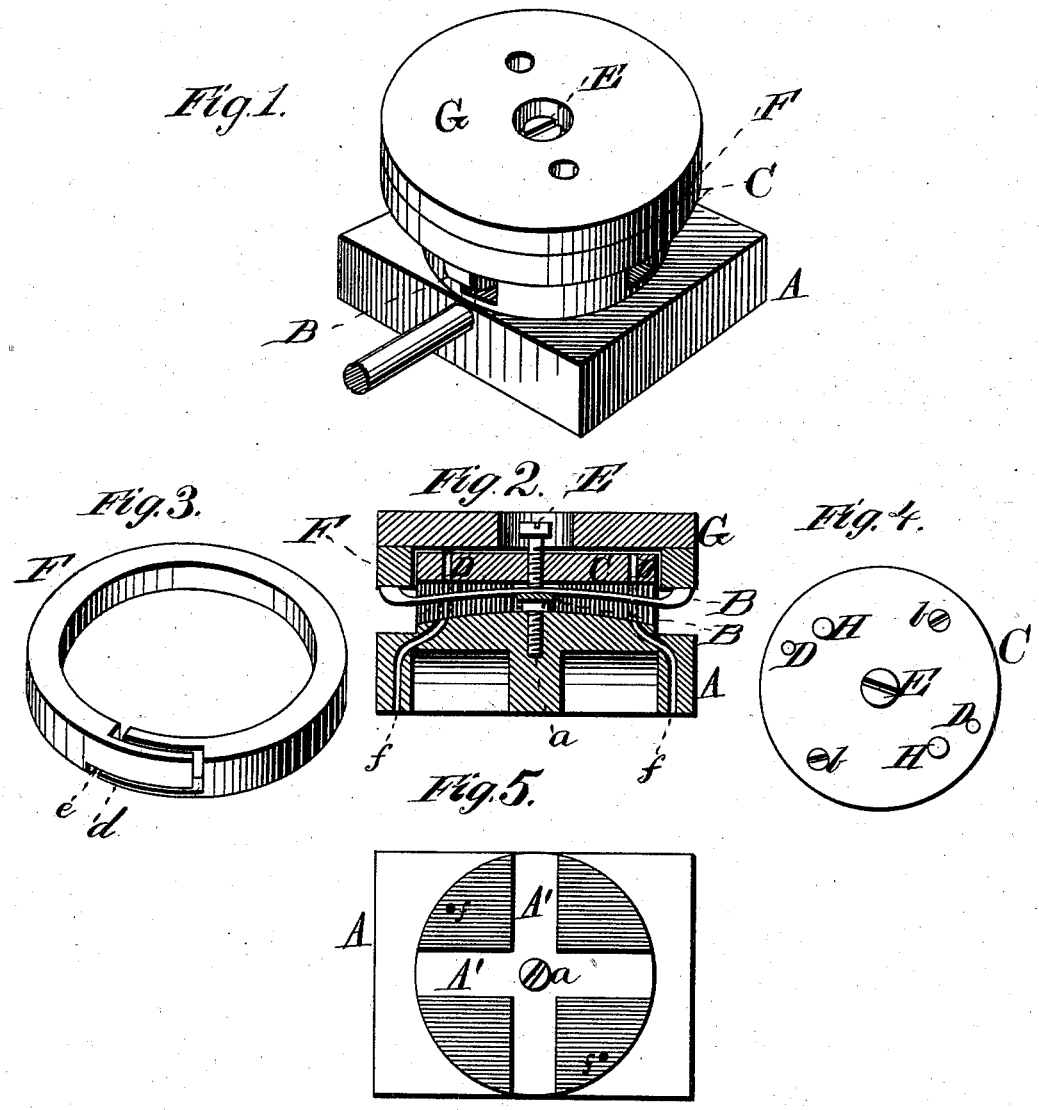


D. C. STOTTS.
BALANCED STEAM-VALVES.

No. 194,481.

Patented Aug. 21, 1877.



WITNESSES
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UNITED STATES PATENT OFFICE.

DAVID C. STOTTS, OF SAVANNAH, MISSOURI.

IMPROVEMENT IN BALANCED STEAM-VALVES.

Specification forming part of Letters Patent No. 194,481, dated August 21, 1877; application filed November 18, 1876.

To all whom it may concern:

Be it known that I, DAVID C. STOTTS, of Savannah, in the county of Buchanan and State of Missouri, have invented a new and valuable Improvement in Balanced Steam-Valves; and I hereby declare that the following a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of my balanced steam-valve. Fig. 2 is a vertical section of the same. Figs. 3, 4, and 5 are detail views.

This invention consists in certain improvements in the construction of balanced steam-valves, as will be hereinafter more fully set forth, and pointed out in the claims.

On the annexed drawings, A represents the valve, to which the rod which operates it is attached. The upper side of this valve is rounded, and is provided with transverse grooves A' A', which cross each other, in which the two springs B B are placed. These springs B B are arranged in said grooves for the purpose of raising or lowering the top of the valve-plate G. The center of these springs B B rests upon a set-screw, a, which is secured to the valve A at or near its center. C is a circular plate, which is rigidly secured to the valve A by bolts b. Through this plate are holes D D for the purpose of oiling the valve-seat, the oil passing down through the perforations f f in the valve and out of the same on the face of the valve and valve-seat.

The plate C is provided with a set-screw, E, by which the springs B B are adjusted and the pressure upon the top of the valve regulated. This plate is also provided with two

upright projections, H H, which keeps the plate G on the top of the valve from displacement. The plate G presses upon the upper side of the steam-chest. This plate is provided with an opening in its center. The object of this opening is to have easy access to the spring-adjusting thumb-screw E.

Upon the ends of the springs B B rests a metallic packing-ring, F, the ends of which are lapped over each other. On one of the under sides of this packing-ring a lip, d, is left, which lip fits into a recess, e, on the other end of the packing-ring. By means of this packing-ring the steam is prevented from passing into the space left between the plates C and G, and creating a pressure upon the top of the valve.

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

1. The valve A, provided with transverse grooves A' A', in combination with springs B, ring F, and plate G, substantially as described, and for the purpose set forth.

2. In a balanced steam-valve, the plate C, having lubricating-holes D D, passages f f, and set-screw E, in combination with springs B B and valve A, substantially as described, and for the purpose set forth.

3. In a balanced steam-valve, the valve A, having transverse grooves A' A', adjusting-springs B B, metallic packing-ring F, in combination with plates C G, all constructed substantially as described, and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DAVID C. STOTTS.

Witnesses:

J. R. CALDWELL,
NICHOLAS KIRTLY.