

L. Finlay. Balancing Pistons.

118227

Fig. 1.

PATENTED AUG 22 1871

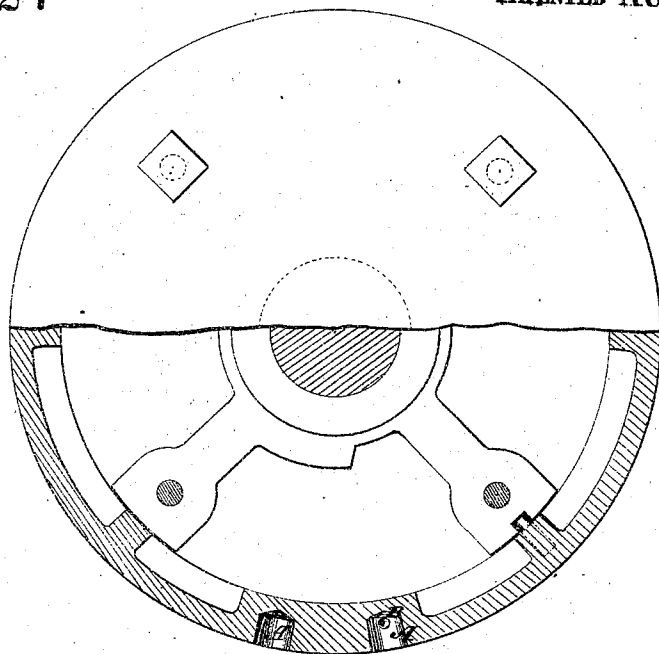
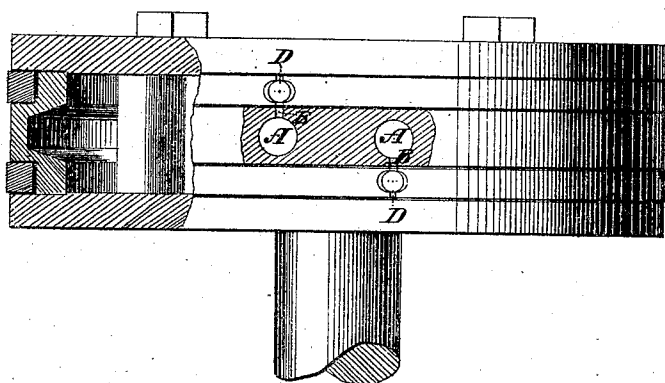


Fig. 2.



Witnesses:

Hubert Dietrich
Alex F. Roberts

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UNITED STATES PATENT OFFICE.

LEONARD FINLAY, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN BALANCING-PISTONS.

Specification forming part of Letters Patent No. 118,227, dated August 22, 1871.

To all whom it may concern:

Be it known that I, LEONARD FINLAY, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Balancing-Pistons; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The invention relates to improvements in balancing steam or air-pistons working horizontally; and it consists in providing one or more cavities in the face of the piston at the under side, and admitting steam thereto to act between the piston and the cylinder to counteract the weight. The arrangement also facilitates lubrication.

Figure 1 is an end view of a piston, partly in vertical section; and Fig. 2 is a view of the face, also partly sectioned.

Similar letters of reference indicate corresponding parts.

I provide one or more (preferably two) cavities, A, in that part of the principal packing-ring of the piston which works at the bottom, and steam-passages B leading thereto through the side walls, to which passages I prefer to admit the steam

through the spaces D at the end of the outside packing-rings, but it may be admitted in any approved way; and I arrange the said passages to have steam admitted from one side of the piston to one cavity and from the other side to the other, so that there will be a constant pressure of steam under the piston, lifting it from the cylinder, no matter which way it is moving. The employment of the two cavities with passages arranged in this way prevents the blowing of the steam through from one side of the piston to the other, which would take place if only one cavity with passages communicating with both sides were used. This arrangement also facilitates the lubrication of the piston, for the steam admitted below it carries with it considerable moisture.

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

The cavities A in the bottom of the piston-packing, having passages admitting the steam thereto for counteracting the weight of the piston, substantially as specified.

LEONARD FINLAY.

Witnesses:

DANL. MCFARLAN,
J. W. C. HALLEY.