J. Keesey,

Piston Packing.

No. 107,062. Patented Sept. 6. 1870.

Fig: 1.

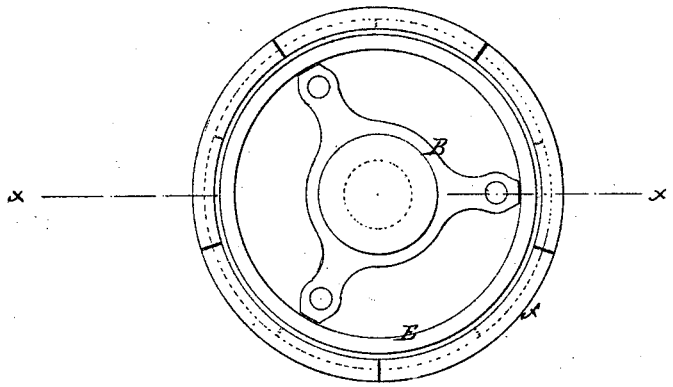
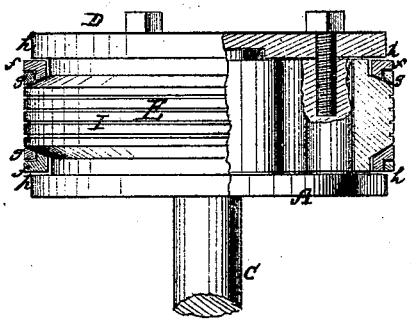


Fig: 2.



Witnesses:

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JOHN KEESEY, OF CHESTER, PENNSYLVANIA.

Letters Patent No. 107,062, *dated September* 6, 1870.

IMPROVEMENT IN PISTON-PACKING.

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

To all whom it may concern:

Be it known that I, JOHN KEESEY, of Chester, in the county of Delaware and State of Pennsylvania, have invented a new and useful Improvement in Piston-Packing; 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.

This invention relates to a new and useful improvement in mode of packing the pistons of steam-engines, whereby the packing-rings are made self-adjusting, and the piston is made to work steam-tight in the cylinder; and

The invention consists in a grooved central ring on the spider of the piston, and in segmental packing-rings, in combination therewith, as will be hereinafter more fully described.

In the accompanying sheet of drawing—

Figure 1 is a view of the piston-end, with the follower off.

Figure 2 is a section of fig. 1, on the line *x x*.

Similar letters of reference inidcate corresponding parts.

A is the piston-head.

B is the spider.

These two parts are cast in one piece, to which the piston-rod C is fitted in the usual manner.

D is the follower, which is screwed to the spider, as represented in fig. 2.

E is the grooved ring, which is fitted onto the spider, as seen in fig. 1.

This ring is rebated, so that recesses are left next to both piston-head and follower, in which recesses the packing-rings are placed.

One side of these recesses is at right angles with the line of motion of the piston. The sides formed by the grooved ring E are at any desired angle, for the purpose of reducing the area of the inner side of the packing-ring, thereby reducing the pressure, and preventing unnecessary friction and wear.

f and *g* represent the packing-rings which are cut up into three or more segments, and placed in the recesses, as seen in fig. 2. The rings are turned so as to conform to the shape of the recess, but of less depth and width than the recess, so that the steam will enter behind the main ring *f*, as seen at *h*, and force the rings outward and into proper position.

The segments into which the rings *f* and *g* are cut are placed in the recess, so as to break joints and prevent steam from passing.

It will be seen that the packing-rings will work loosely in the recesses on the back stroke alternately, but will be forced out by the pressure of the steam alternately, when the piston is driven in the opposite direction.

I represents the grooves in the ring E. The water of condensation will enter these grooves, which will serve to lubricate the piston, or lubricating material, as tallow or other substance, may be placed therein, where it will serve the intended purpose. It will be seen that the packing-rings are self-adjusting, and will adapt themselves to any irregularities in the bore of the cylinder. No time is lost in setting out the packing, while the piston works steam-tight, thus reducing friction, and saving both steam, time, and fuel.

Having thus described my invention.

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

In piston-packing, a spider-ring, E, rebated on each end, combined with two pairs of packing-rings *f g*, cut at several points, located as set forth, and operating as and for the purpose described.

JOHN KEESEY.

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