

J. W. CAREY.
Piston Packings.

No. 140,244.

Patented June 24, 1873.

Fig. 1.

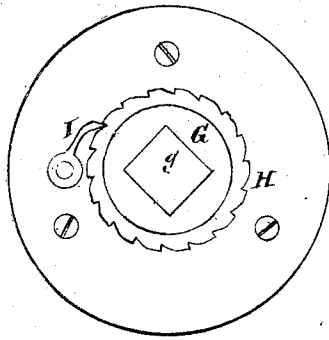


Fig. 4.

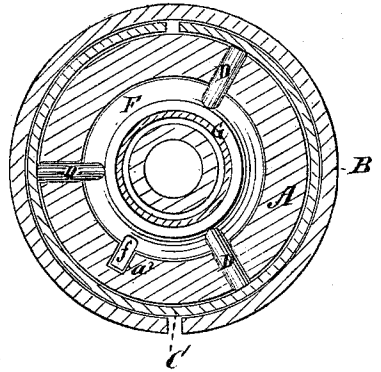


Fig. 2.

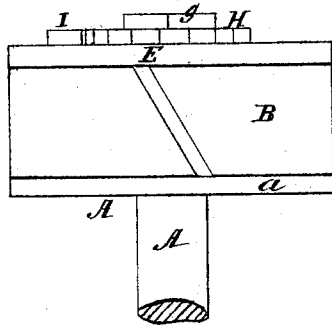
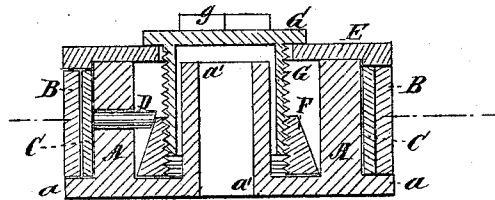


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN W. CAREY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN PISTON-PACKINGS.

Specification forming part of Letters Patent No. **140,244**, dated June 24, 1873; application filed May 13, 1873.

To all whom it may concern:

Be it known that I, JOHN W. CAREY, of the city of Baltimore and State of Maryland, have invented a new and useful Improvement in Piston-Packing; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is a central vertical section, and Fig. 4 is a horizontal section in line *x x* of Fig. 3.

The invention relates to pistons which are intended to work air-tight or steam-tight, and consists in the application, to the split rings which constitute the packing, of an adjusting-screw, conical nut, and loose pins, so arranged and applied as to expand the rings without the necessity of removing follower of piston, as hereinafter more fully described and subsequently claimed.

In the drawing, A represents the hollow body of a piston having a circular bottom-flange, *a*, and a central hub or hollow guide-pillar, *a*¹, while B C are the ordinary splitrings which surround this body and are expanded therefrom to make the piston work steam-tight in the steam-cylinder. D are a series of loose pins, which pass through holes in the side of piston-body, and are forced against the split rings to press them outwardly toward the steam-cylinder. E is the top disk of piston. F is a loose nut, which is conical on the outside, and sufficiently large at the base to fit snugly in the piston-body. It is provided

with a side stud, *f*, which fits and works up and down in a guide-groove, *a*², and serves to prevent the nut from turning. G is a hollow screw, which has the head *g* for a wrench, fits over the hub *a*¹, and works in the nut F. H is a ratchet, and I a detent-pawl, the one formed or rigidly fixed on the head of screw, while the other is located upon and pivoted to the follower of the piston.

The application is as follows: If the piston is found not to work steam-tight there is no necessity to remove the follower of the piston. A wrench applied to head *g* and turned operates the screw G and draws the loose nut F toward it, thereby forcing out the pins D, and thus expanding the split rings B C. The reverse of this operation effects the opposite change if the piston should stick or seem too tight. The ratchet and pawl hold the screw down to the point gained after the wrench is removed. The ordinary semi-elliptic springs may, if desired, be interposed between the pins and the split rings.

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

The combination of the hollow screw G *g* fitting over hub *a*¹ of a piston-body with a nut, F, conical upon its outer surface, having side studs *f*, and working against loose pins, as and for the purpose described.

JOHN WILLIAM CAREY.

Witnesses:

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