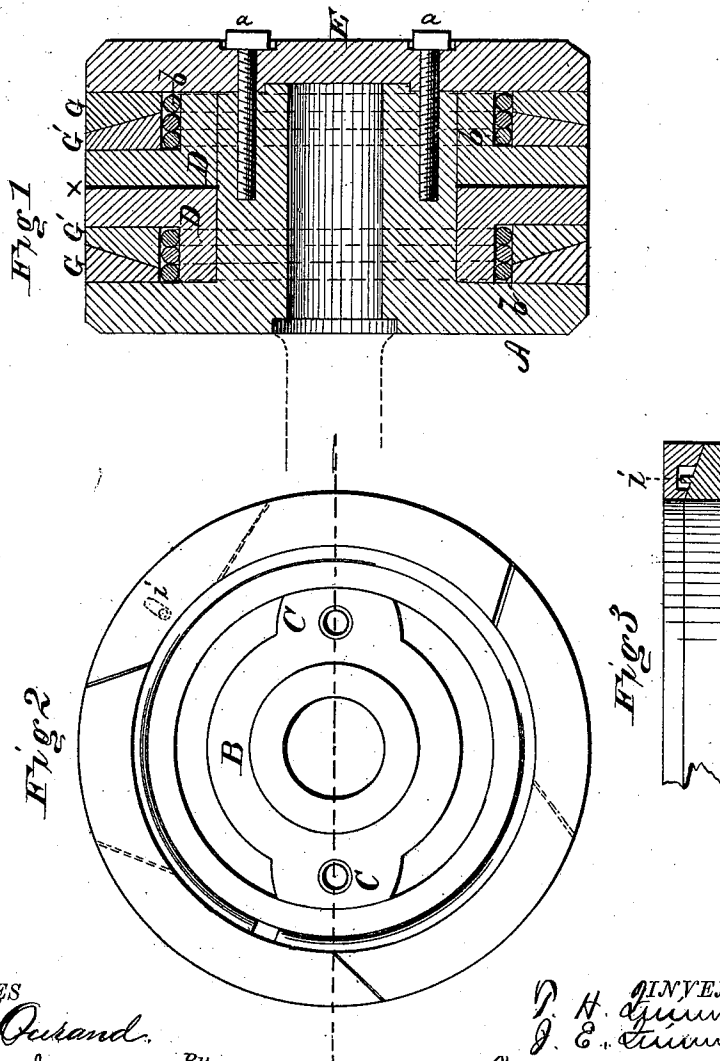


T. H. & J. E. QUINN.

PISTON-PACKING.

No. 179,817.

Patented July 11, 1876.



WITNESSES
Frank L. Oakland.
C. R. Ewert

By

INVENTOR
T. H. Quinn
J. E. Quinn
Alexander D. Quinn
 Attorney

UNITED STATES PATENT OFFICE.

THOMAS H. QUINN AND JAMES E. QUINN, OF RACINE, WISCONSIN.

IMPROVEMENT IN PISTON-PACKINGS.

Specification forming part of Letters Patent No. 179,817, dated July 11, 1876; application filed March 21, 1876.

To all whom it may concern:

Be it known that we, T. H. QUINN and J. E. QUINN, of Racine, in the county of Racine and in the State of Wisconsin, have invented certain new and useful Improvements in Convex and Concave Packing for Pistons; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of a piston and piston-packing, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 4 is a longitudinal section of our piston and packing. Fig. 2 is an end view of the piston with the cap removed. Fig. 3 shows a section of the packing.

A represents the head of the piston, formed with a hub, B, on one side, and the piston-rod to be inserted through the head into the hub.

The hub is on opposite sides provided with projections C C, as shown, of suitable width, and around the hub are placed two L-shaped rings, D D, in the manner shown, so as to form an annular chamber between the head A and the first ring, and a similar chamber between the second ring and the cap E, which cap is fastened by screws *a a*, as shown in Fig. 1. In each of these annular chambers are placed the packing-rings G and G', each made in sections, as shown, and having wire springs *b b* placed within them to force them outward. The outer surfaces of the two packing-rings are made parallel, while the adjoining surfaces are made on a bevel, the ring nearest the end of the piston having a larger outer surface, and the other having a larger inner surface. The section G, being twice the width of the section G' on the face, wears enough faster on the face to keep it fitted snug sidewise, but never wears enough to make it bind between the ring and the spider or hub.

This packing works almost like a solid piston-head—no rattling, clicking, or trembling. With this packing, if the piston-head should be smaller than the cylinder, the steam coming in contact with the section G, which is on the steam side of the piston, will have a sliding tendency to tighten the joint on the face of the packing, and the section G', having twice the number of wire springs *b*, will keep itself adjusted. The springs are made of single pieces of wire, placed around the rings D, and force the sectional packing-rings outward.

It will be noticed that the two sectional packing-rings are cut in opposite directions, so that in case the dowel-pin *i*, which connects the two, should wear out or break off, the packing at the joints, when turning around, will form an X to break the joints, and thus save "blowing" the follower, and even when the packing is worn nearly out the opening will be scarcely enough to cause a blow.

The L-shaped center-rings are made to take up the lateral motion between the head A and cap E by placing paper or other washers *x* between them.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the packing-rings C C, cut with beveling adjoining surfaces, and made in sections, with inclined overlapping joints, the joints of the two rings running in opposite directions, the wire springs *b b* placed on the interior of the rings, and the dowel-pin *i* projecting from one ring into a recess in the other, all substantially as and for the purposes herein set forth.

2. The combination of the head A, hub B, with flanges, as described, the L-shaped rings D D, sectional beveled packing-rings G G', with springs *b b*, and cap E, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 1st day of January, 1876.

THOMAS H. QUINN.
JAMES E. QUINN.

Witnesses:

ROBT. H. BAKER,
N. J. FIELD.