No. 839,890. PATENTED JAN. 1, 1907

J. J. REDNER.

PISTON PACKING.

APPLICATION FILED JULY 3, 1906.

Fig. 1.

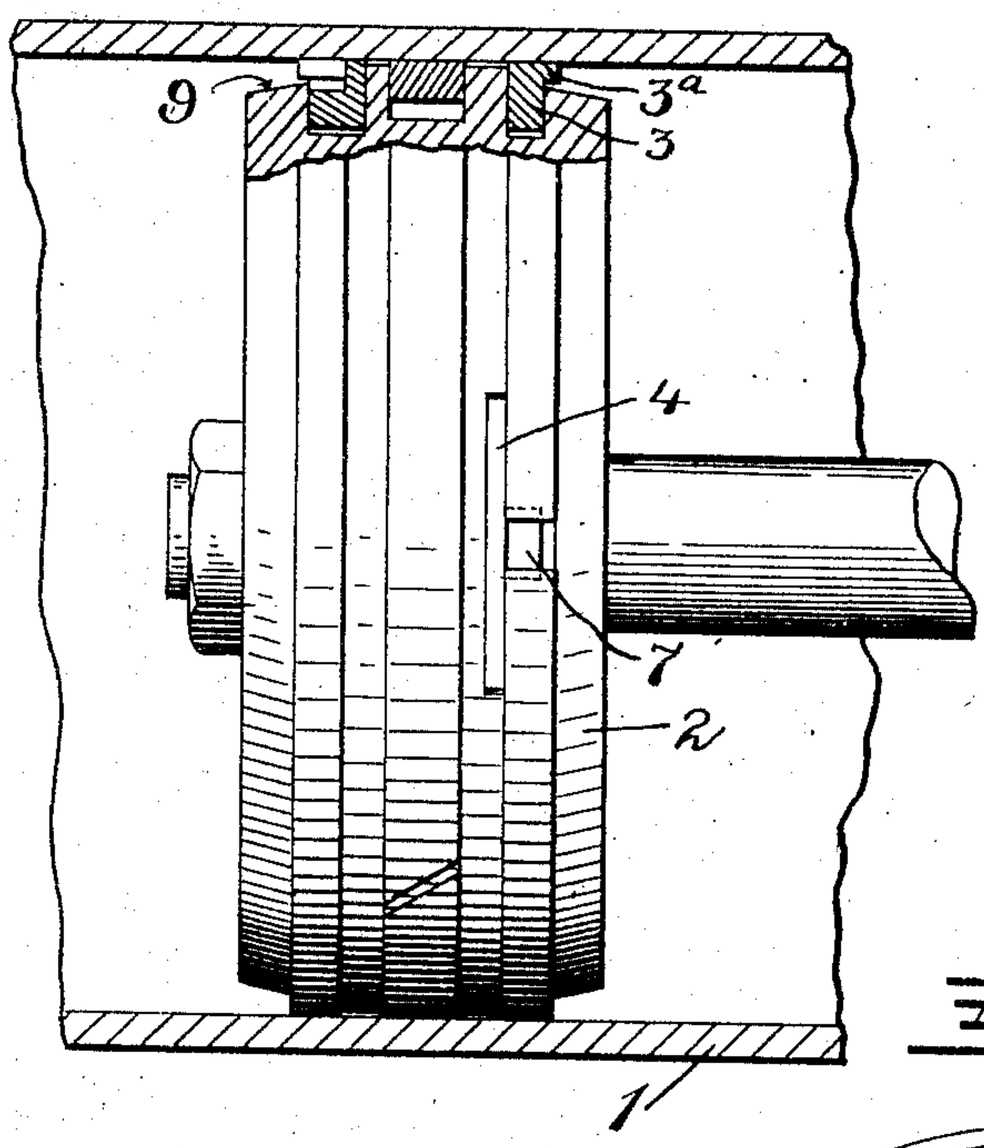


Fig. 3.

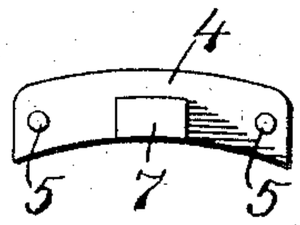


Fig. 4.

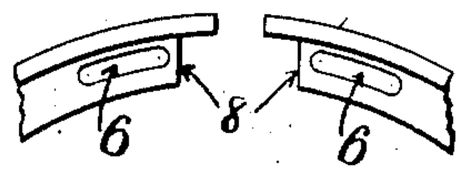
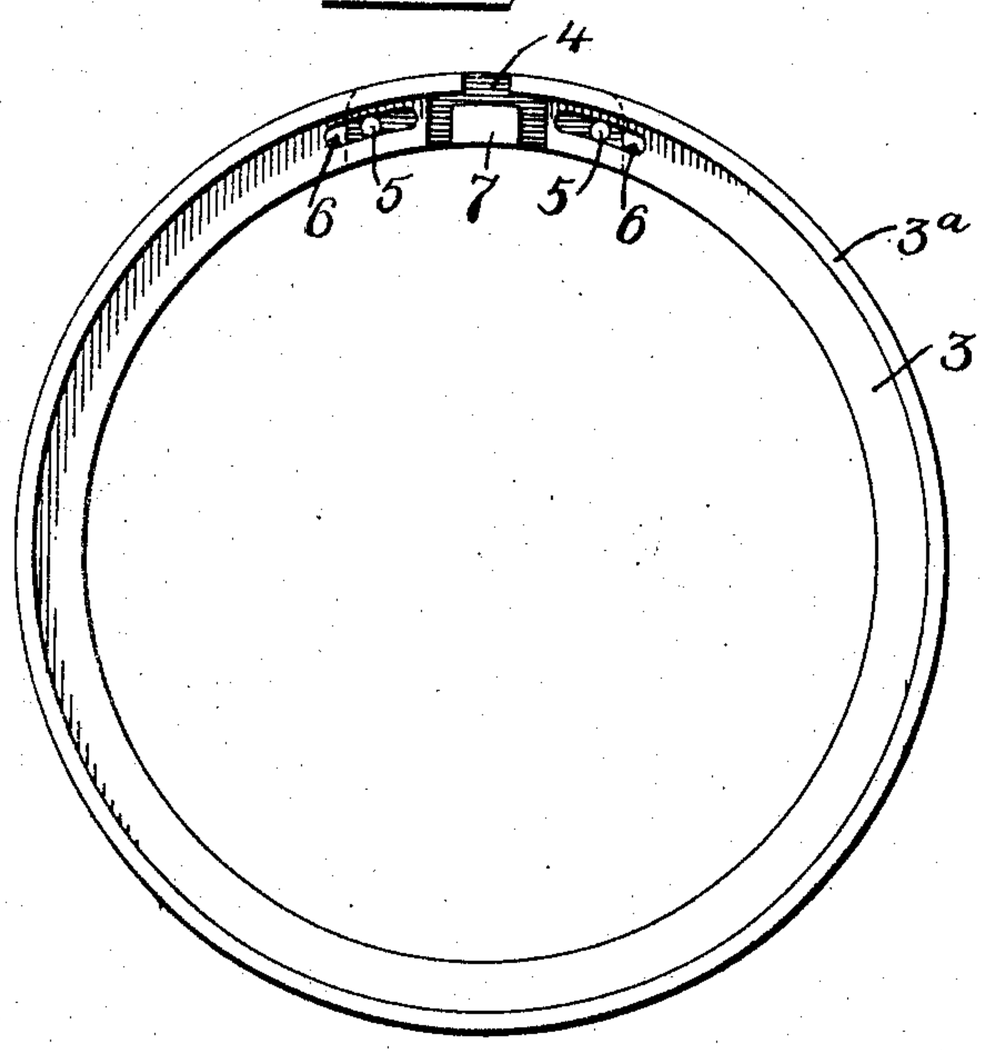


Fig. 2.



Witnesses

Inventor

JOHN J. REDNER

By his Attorneys

UNITED STATES PATENT OFFICE.

JOHN JAMES REDNER, OF NEW YORK, N. Y.

PISTON-PACKING.

No. 839,890. Specification of Letters Patent. Patented Jan. 1, 1907.

Application filed July 3, 1906. Serial No. 324,601.

To all whom it may concern:

Be it known that I, JOHN JAMES REDNER, a citizen of the United States, residing at New York, county and State of New York, have invented certain new and useful Improvements in Piston-Packings, of which the following is a full, clear, and exact description.

My invention relates to metallic packings for pistons for steam-engines and other purposes.

It is essentially an improvement on my former patent, No. 769,566, of September 6, 1904, the object being, as in that case, not only to remedy defects existing in former piston-packings of this type, but also to improve the packing made the subject-matter of my aforesaid patent.

The packing is known as a "ring packing." It fits into a suitable cavity or recess in the piston and springs outwardly to make an intimate contact with the surrounding wall of the cylinder. In this connection I utilize by a certain feature of construction the pressure of the vapor or gas as a means for effecting an even more intimate contact of the ring against the wall of the cylinder than the mere elasticity of said ring would afford, thereby to a greater degree preventing leakage and holding compression than in my former construction.

In the drawings, Figure 1 is a longitudinal section of a portion of a cylinder, showing a piston therein with my improved packing applied thereto. Fig. 2 is a front elevation of one of the packing-rings detached. Fig. 3 is a detail view. Fig. 4 is another detail view.

1 is a cylinder.

2 is a piston.

3 is a packing comprising a piece of resilient material, such as a metal ring, said ring having by preference a relatively heavy body portion projecting into a groove in the piston and a relatively light flanged portion, (indicated at 3^a.) The flanged portion overstands the piston and is located between the external wall thereof and the internal wall of the cylinder. That edge of the piston against which pressure is applied is preferably slightly beveled, so as to cut under the flange 3^a, whereby when pressure is applied thereto the packing will be pressed outwardly into intimate contact with the wall of the cylinder. The end ring or rings only need be provided with these flanges to accomplish the aforesaid desirable results.

4 is an offset portion at one side of the piston-packing, said offset portion overstanding both ends thereof and independent thereof, so that either of said ends may be moved toward or from each other and independently of the said offset portion or block. The piston is suitably recessed to receive said offset portion. As retaining devices I preferably provide pins 5 5, carried by the block and projecting into grooves 6 6 in the ends of the main body of the ring-like packing.

Between the ends of the packing I provide a spacing block or abutment which limits the compressive movement of the packing to prevent shearing the pins. This abutment is indicated at 7 and is preferably carried by the offset 4. To afford clearance for the abutment, the adjacent ends of the ring-like member may be cut away or notched, as indicated at 8 8, Fig. 4, leaving the bearing-surfaces which engage the cylinder solid and relatively close together.

The member 4 fills in the space between the ends of the split ring and prevents the steam or other vapor from leaking past the piston. By beveling the piston, as at 9, it is possible to obtain a firm support for the packing-ring and still permit pressure to be exerted beneath the flange 3^a to hold the ring in close contact with the cylinder-wall.

What I claim is—

1. A piston-packing comprising a piece of resilient material in the general form of an incomplete circle the two ends thereof nearly meeting, having an independent offset portion at the side thereof overlapping both ends and admitting of independent movement of either end relatively thereto, and a stop-shoulder or abutment carried by and at the side of the independent offset portion intermediate to its ends and arranged to receive the thrust of the ends of the circular member, the two ends being cut away or recessed to receive said stop-shoulder.

2. A piston-packing comprising a piece of resilient material in the general form of an incomplete circle, the two ends thereof nearly meeting, having an independent offset portion at the side thereof overlapping both ends and admitting of independent movement of either end relatively thereto, a stop-

shoulder or abutment carried by the independent offset portion and arranged to receive the thrust of the ends of the circular member, and retaining-pins in one of said members and slots in the other member for receiving said pins to allow of the independent movement of the ends of said ring-like member but limiting the extent of said movement.

JOHN JAMES REDNER.

Witnesses:
F. E. MOORE,
CHAS. A. PEARD.