No. 754,139. PATENTED MAR. 8, 1904.

J. HODGE.

ROD PACKING.

APPLICATION FILED MAR. 1, 1902.

NO MODEL.

Fig. 1.

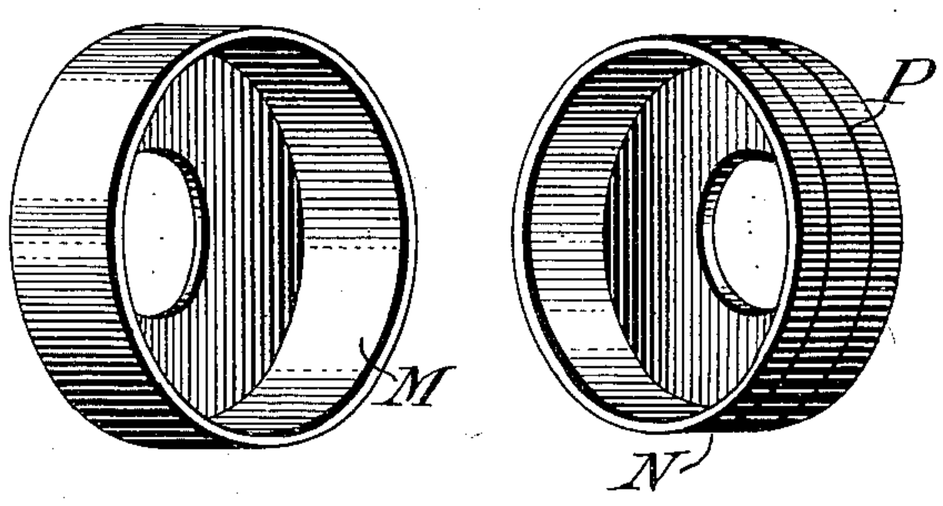


Fig. 2.

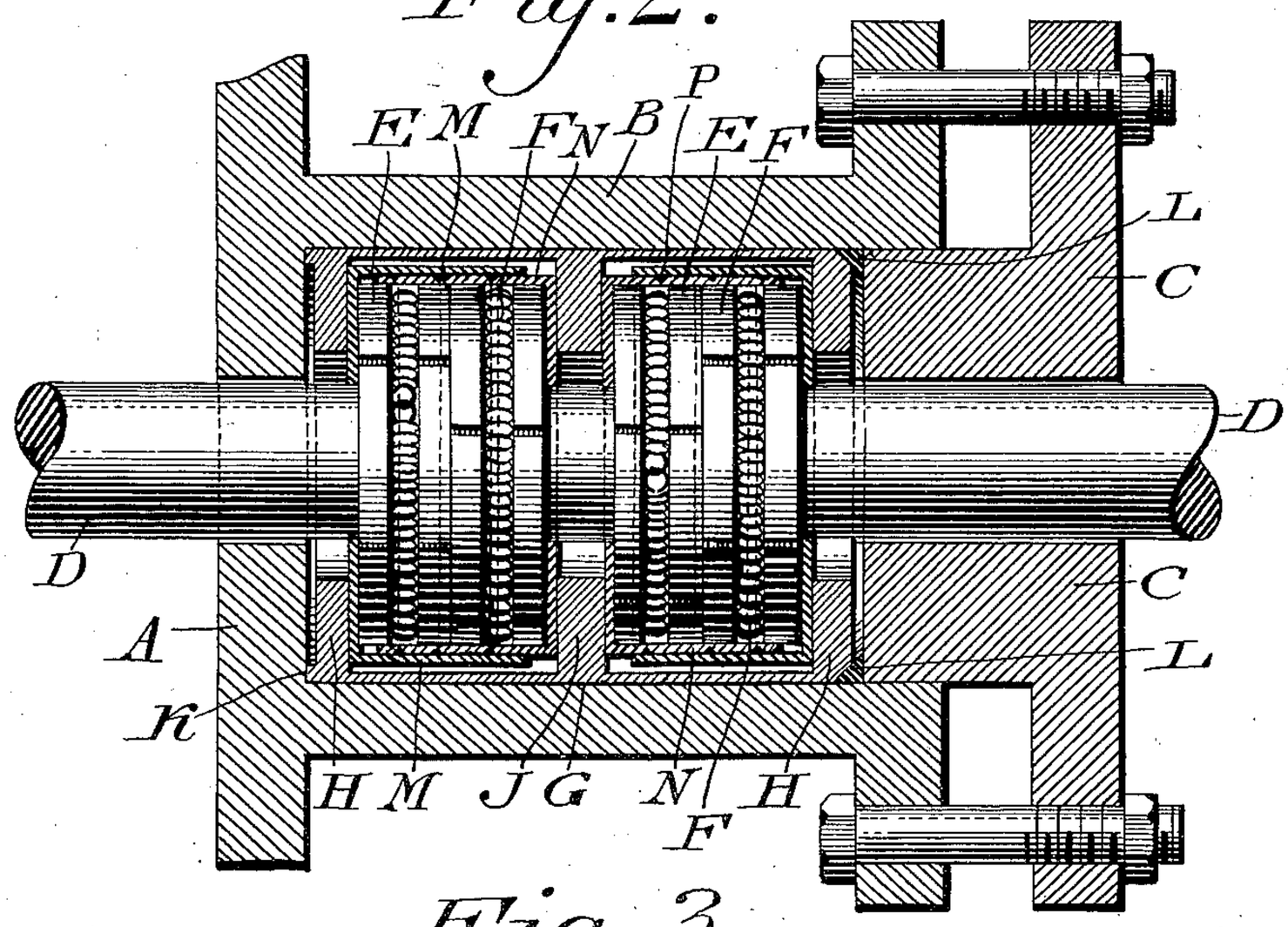
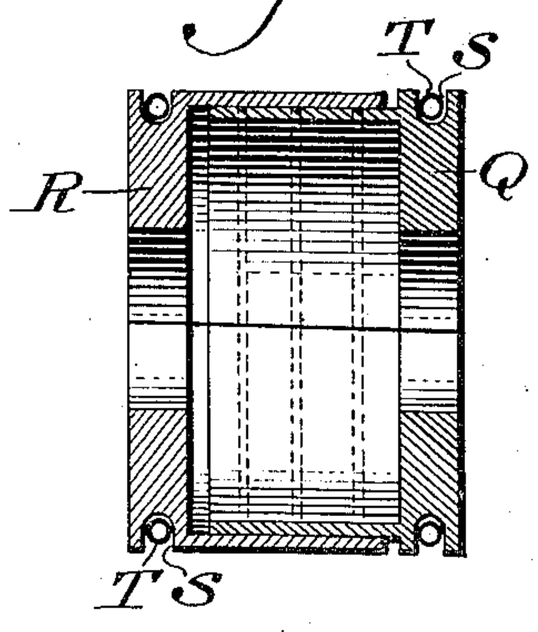


Fig. 3.



Witnesses

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No. 754,139. Patented March 8, 1904.

UNITED STATES PATENT OFFICE.

JOHN HODGE, OF CHESTER, PENNSYLVANIA, ASSIGNOR TO THE HARPER MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

ROD-PACKING.

SPECIFICATION forming part of Letters Patent No. 754,139, dated March 8, 1904.

Application filed March 1, 1902. Serial No. 96,248. (No model.)

To all whom it may concern:

Be it known that I, JOHN HODGE, a citizen of the United States, residing at Chester, in the county of Delaware, State of Pennsylvania, have invented a new and useful Improvement in Rod-Packing, of which the following is a specification.

My invention consists of an improved metallic packing for piston-rods and the like, as will be hereinafter fully described and claimed.

Figure 1 represents a perspective view of the parts of a casing forming part of my invention. Fig. 2 represents a central longitudinal section of a metallic packing embodying my invention. Fig. 3 represents a modified construction of a casing shown in Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the head of a cylinder, B a stuffing-box, C the gland therefor, and D a piston-rod, said parts being of usual construction.

My invention is applicable more especially to metallic packing consisting of the rings E, that are usually made in sections and held around the piston-rod D by means of springs F. These rings are inclosed within the box G, fitting within the stuffing-box B, said box G being longitudinally divided to receive the rings and having annular end pieces H and an interior annular flange J about midway between its ends, the latter being employed when more than one set of rings are inclosed therein.

The inner end of the box G is provided with a rib or annular projection K to insure a tight joint between the inner end of the box G and the inner wall of the stuffing-box B, while between the outer ends of the box G and the gland C is a packing-washer L.

The casing inclosing the rings consists of two cup-shaped members M and N, the latter fitting or telescoping within the former and forming steam-joints between their interfitting or telescoping sides, while the member N is also provided with peripheral grooves P, designed to catch the water of condensation that may leak through, and thus aid in maintaining the steam-joint between the telescoping sides of the members M and N. The width of the annular compartments on the interior of the box G is such that when two of the rings E are placed side by side within the casing made by the cup-shaped members M and N the combined thickness of the rings and the ends of the cup-shaped members M and N is equal thereto. It is also noted that the diameter of the rings is such that they fit within the interior member N of the casing to form steam-joints. In this way steam-joints are not only formed between the members of the casing themselves, but between their ends and the adjacent faces of the box G, also between the interior faces of their end pieces and the sides of the rings E, as well as between the rings themselves and between the latter and the inner member of the casing.

It will be noted, further, that the exterior diameter of the annular compartments within the box G is greater than exterior diameter of the outer member M of the casing, so as to allow for lateral play of the piston-rod and rings.

In Fig. 3 I have shown the members Q and R of the casing within which the rings are inclosed as each consisting of two interfitting sections longitudinally divided, the ends of which are provided with grooves S, within which strings T are situated and by means of which the sections of the members Q and R are held around the packing-rings.

It will be seen from the foregoing that the casing prevents the steam-pressure from the boiler from acting upon the outside peripheries of the packing-rings, thereby reducing the friction between the rings and the rod and also prolonging the life of the rings.

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

1. In a metallic packing, in combination with a stuffing-box, a box situated therein and having an internal groove or annular compartment, a casing fitting between the ends of said groove or compartment and consisting of interfitting members within which the packing-rings are situated.

2. In a metallic packing, a box having an internal groove or compartment, a casing fitting

between the ends of said groove or compartment and consisting of interfitting members within which the packing-rings are situated, the combined thickness of the packing-rings and the ends of said casing being approximately equal to the length of said groove or compartment.

3. In a metallic packing in combination with a stuffing-box, a box situated therein and having an annular compartment, and a casing containing packing-rings situated within said compartment, said casing being of less diameter than said compartment to permit lateral movement of the casing and the rings, and the ends of said casing fitting against the ends of the compartment.

4. In a metallic packing, a casing consisting of interfitting sections, one of said sections having a circumferential groove in the face thereof contacting with the other section, and a packing-ring situated within said casing.

5. In a metallic packing in combination with a stuffing-box, a casing situated therein and containing the packing-rings, and consisting of interfitting sections, each section being divided longitudinally and a spring upon each section for holding divisions thereof together.

6. In a metallic packing, in combination with a rod, packing-rings, means for holding the same upon said rod, and means out of contact with the rod for preventing the pressure from the cylinder from reaching the outer peripheries of said rings and an inclosing box for said parts.

7. In a metallic packing, in combination with a rod, packing-rings, means for holding the same upon said rod, means out of contact with the rod for preventing the pressure from the cylinder from reaching the outer peripheries of said rings, and means for permitting lateral movement of said rod, with respect to the cylinder and an inclosing part for said parts.

8. In a metallic packing, in combination with a rod, packing-rings, means for holding the same upon said rod, means out of contact with the rod for preventing the pressure from the cylinder from reaching the outer peripheries of said rings, and means for permitting the lateral movement of said rod, rings, and the means controlling the latter, with respect to the cylinder and an inclosing box for said parts.

9. In a metallic packing in combination with a rod, packing-rings, means for holding the same upon said rod, split means for preventing the pressure from the cylinder from reaching the outer periphery of said rings and means for holding said split means in assembled position.

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Witnesses:
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