

No. 643,341.

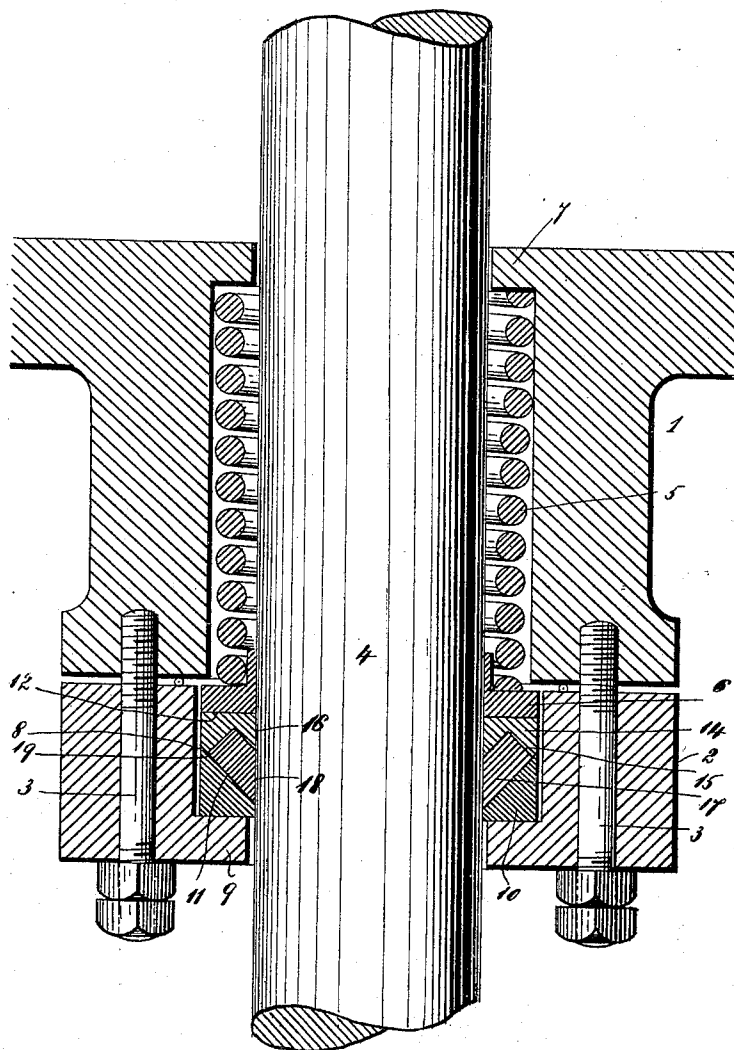
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R. C. WHITE, M. HASLUP & J. G. SCHWEINFURTH.

PACKING.

(Application filed Sept. 20, 1899.)

(No Model.)



WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT C. WHITE, MILLARD HASLUP, AND JOHN G. SCHWEINFURTH, OF
BIRMINGHAM, ALABAMA.

PACKING.

SPECIFICATION forming part of Letters Patent No. 643,341, dated February 13, 1900.

Application filed September 20, 1899. Serial No. 731,069. (No model.)

To all whom it may concern:

Be it known that we, ROBERT C. WHITE, MILLARD HASLUP, and JOHN G. SCHWEINFURTH, citizens of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Packings, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to piston and valve rod-packings; and it has for its object to provide a simple and improved packing in which the two rings will bear with a perfectly uniform and even pressure at all times upon the piston-rod, whereby the durability and efficiency of action will be increased.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, said drawing being a sectional view showing a stuffing-box and gland provided with our improved packing.

In the drawing forming part of this specification the separate parts of our improvement are designated by numerals of reference.

In said drawing, 1 designates the stuffing-box, to which is secured the gland 2 by means of bolts 3 or in any other desired manner.

4 designates the piston or valve rod, which is arranged to pass through the stuffing-box and gland in the usual manner and is surrounded by a spring 5, contained within the stuffing-box and bearing at its outer end against a follower 6, the other end of said spring having a seat against the inwardly-projecting flange 7 on the stuffing-box.

The gland 2 is recessed on its inner face, as at 8, for the accommodation of the packing-rings and auxiliary members, hereinafter described, and said recess forms the edge flange or shoulder 9. The follower 6 is greater in diameter than the internal diameter of the stuffing-box, so that it is prevented from moving into the stuffing-box, as will be readily understood.

10 designates the ring-box, which is seated within the gland against the flange-seat 9 and has its inner face inclined or beveled toward the rod 4 and toward the outer end of the gland, as shown at 11.

The spring-follower 6 has a flat outer face, as shown at 12, between which and the inclined face 11 of the box 10 two packing-rings, which constitute the main feature of our invention, are retained. These rings are constructed of metal and are of a peculiar relative contour, as will be now described. The inner ring 14 has a flat face corresponding to and bearing against the face 12 of the follower 6, and its opposite face is provided with an annular notch or groove 15, which is approximately V-shaped in cross-section. The flat inner edge 16 of this ring 14 bears against the rod 4. The inner ring 17 is shaped to correspond to and fit in the space between the V-shaped face 15 of the ring 14 and the inclined face 11 of the box 10. This ring 17 is thus in diagonal or inclined position with relation to the rod 4, its angle of inclination being toward the outer end of the gland or away from the direction of the expansion or action of the spring. The flat inner face 18 of the ring 17, which bears against the rod 4, is thus at an angle or on a bevel with relation to the longitudinal extension of the body of the ring. The relative construction and arrangement is such that the bearing-faces 18 and 16 of the rings 17 and 14 respectively present approximately equal bearing-faces against the rod 4.

By reason of the peculiar relative construction and arrangement of the two packing-rings in conjunction with the follower 6 and box 10 the expansion of the spring operates to force the inclined ring 17 against its seat on the corresponding inclined face 11 of the box 10 and also simultaneously forces said ring against the rod 4. In like manner the expansion of the spring operates to force the ring 14 against the rod 4 by reason of the connection of said ring 14 through its V-shaped recess 15 with the inclined ring 17, this action being especially positive by reason of the fact that a part of the ring 14 just outside the groove 15 forms an inclined bearing-surface, as at 19, corresponding to and bearing upon the surface 11 of the box 10.

The action just above described insures an equal wear of both rings, and thus greatly enhances the durability or life of the packing. The construction involved in the inter-

locked rings is exceedingly simple and inexpensive, and the invention is adapted for practical and effective application in all varieties of packing such as are employed in piston-rods, valve-stems, pumps, &c.

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

1. An improved packing of the class described, comprising the ring 14 having the flat face 12 and the opposite face 15 formed with an approximately V-shaped annular recess or groove and also having the bearing-face 16, the packing-ring 17 corresponding in its body contour to said groove 15 and arranged at an angle or incline with respect to the ring 14 and having the relatively beveled or inclined bearing-face 18, in combination with the box 10 having the inclined face forming a bearing-surface for the ring 17, and the spring-actuated follower 6 bearing against the face 12 of the ring 14, substantially as and for the purpose set forth.

2. The combination, with the rod 4, of two interlocked packing-rings, one of which is

provided with a flat face bearing against the rod and with another face having an approximately V-shaped annular groove occupying a plane transverse to said rod, while the other ring corresponds in its body portion to said groove and fits therein and has the relatively inclined or beveled face bearing against the rod, the relative construction and arrangement being such that said rings jointly move in an inclined manner toward said rod and in the direction of its length whereby equal or uniform wear of both rings is secured, and means for forcing said packing-rings in said movement, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 15th day of September, 1899.

ROBERT C. WHITE.

MILLARD HASLUP.

JOHN G. SCHWEINFURTH.

Witnesses:

JOHN ABSTON,

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