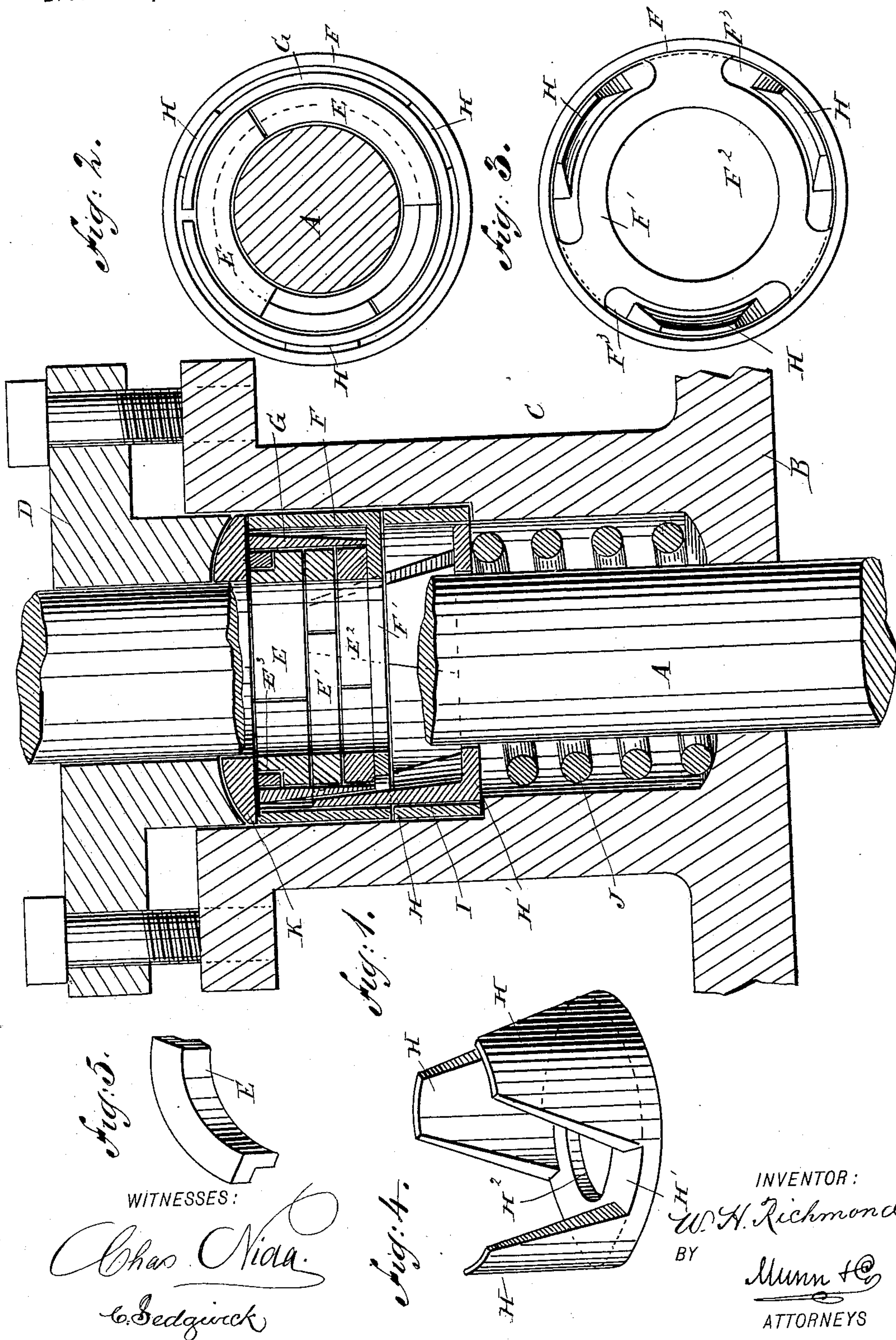


(No Model.)

W. H. RICHMOND.
ROD PACKING.

No. 434,808.

Patented Aug. 19, 1890.



WITNESSES:

Chas. Viola.
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UNITED STATES PATENT OFFICE.

WESLEY H. RICHMOND, OF CADILLAC, MICHIGAN.

ROD-PACKING.

SPECIFICATION forming part of Letters Patent No. 434,808, dated August 19, 1890.

Application filed February 5, 1890. Serial No. 339,311. (No model.)

To all whom it may concern:

Be it known that I, WESLEY H. RICHMOND, of Cadillac, in the county of Wexford and State of Michigan, have invented a new and Improved Packing, of which the following is a full, clear, and exact description.

My invention is an improvement in that class of metallic rod-packing in which a beveled split ring surrounds the sectional packing-rings proper and serves to press them inward, and thus hold them in close contact with the piston-rod.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement as applied. Fig. 2 is a plan view of the improvement. Fig. 3 is a plan view of the casing for the packing-ring and the wedges. Fig. 4 is a perspective view of the circularly-arranged wedges, and Fig. 5 is a perspective view of a section of one of the packing-rings.

The improved packing, as shown in Fig. 1, is applied to a piston-rod A, which passes in the usual manner through the cylinder-head B and the cylindrical offset C, into the outer end of which fits the usual gland D. The piston-rod A is surrounded in the offset C by a series of sectional packing-rings E, E', and E², placed one on top of the other, and of which the innermost E² rests on the bottom F' of a cylindrical casing F, fitting into the cylindrical offset C, and provided in its bottom F' with a central opening F² for the passage of the piston-rod A. The sectional packing-rings E, E', and E² are surrounded by a split ring G, which serves to press the rings E, E', and E² into contact with the piston-rod A. The periphery of the split ring G is beveled to make the latter wedge shape, the pointed part extending inward, as plainly shown in Fig. 1. The wedge-shaped split ring G is engaged on its periphery by a series of similarly-shaped wedges H, projecting in a circle from a ring H', having a central opening H² for the passage of the piston-rod A. The wedges are adapted to pass through segmental slots F³, formed in the bottom F' of the casing F, the ring H', carrying the said wedges, being below the said bottom F'. A

ring I surrounds the inner ends of the wedges H and fits with the casing F into a slightly-enlarged recess in the offset C, as plainly shown in Fig. 1. A coiled spring J loosely surrounds the piston-rod A and sits in the bottom of the circular offset C to press with its upper outer end against the under side of the ring H', carrying the wedges H, so that the latter are pressed in contact with the split ring G, whereby the sectional packing-rings are pressed in firm contact with the piston A, thus packing the latter. The uppermost ring E is also provided with an annular recess, into which fits a split ring E³, serving to break the joints of ring E and slightly extending above the ring E. On the top of the split ring E³, the split ring G, and the casing F rests a ring K, having a curved top engaged by the similarly-shaped inner end of the gland D. The several packing-rings E, E', and E² are each preferably made in three sections, and the sections of one ring may break joint with the adjacent one. It will be seen that as the casing F, with the ring K, holds the packing-rings E, E', and E² and the split ring G in place the spring-pressed wedges H exert a constant pressure on the split ring G and the latter on the packing-rings E, E', and E², so that the latter are forced onto the piston-rod and pack the same. The wear on the piston-rod, as well as on the packing-rings E, E', and E², is constantly compensated by the action of the spring J pressing the wedges H correspondingly outward.

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

1. A packing comprising one or more sectional packing-rings, a beveled split ring surrounding the said packing-rings, a casing containing the said packing-rings and split ring, a series of spring-pressed wedges passing into the said casing and onto the said split ring, a ring carrying the said wedges, and a spring pressing onto the said ring to force the wedges into contact with the split ring, substantially as shown and described.

2. A packing comprising one or more sectional packing-rings, a beveled split ring surrounding the said packing-rings, a casing containing the said packing-rings and split ring,

a series of spring-pressed wedges passing into the said casing and onto the said split ring, a ring carrying the said wedges, a spring pressing onto the said ring to force the wedges
5 into contact with the split ring, and a second ring held in place by the gland and resting on top of the said casing, beveled ring, and sectional rings, substantially as shown and described.

WESLEY H. RICHMOND.

Witnesses:

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