

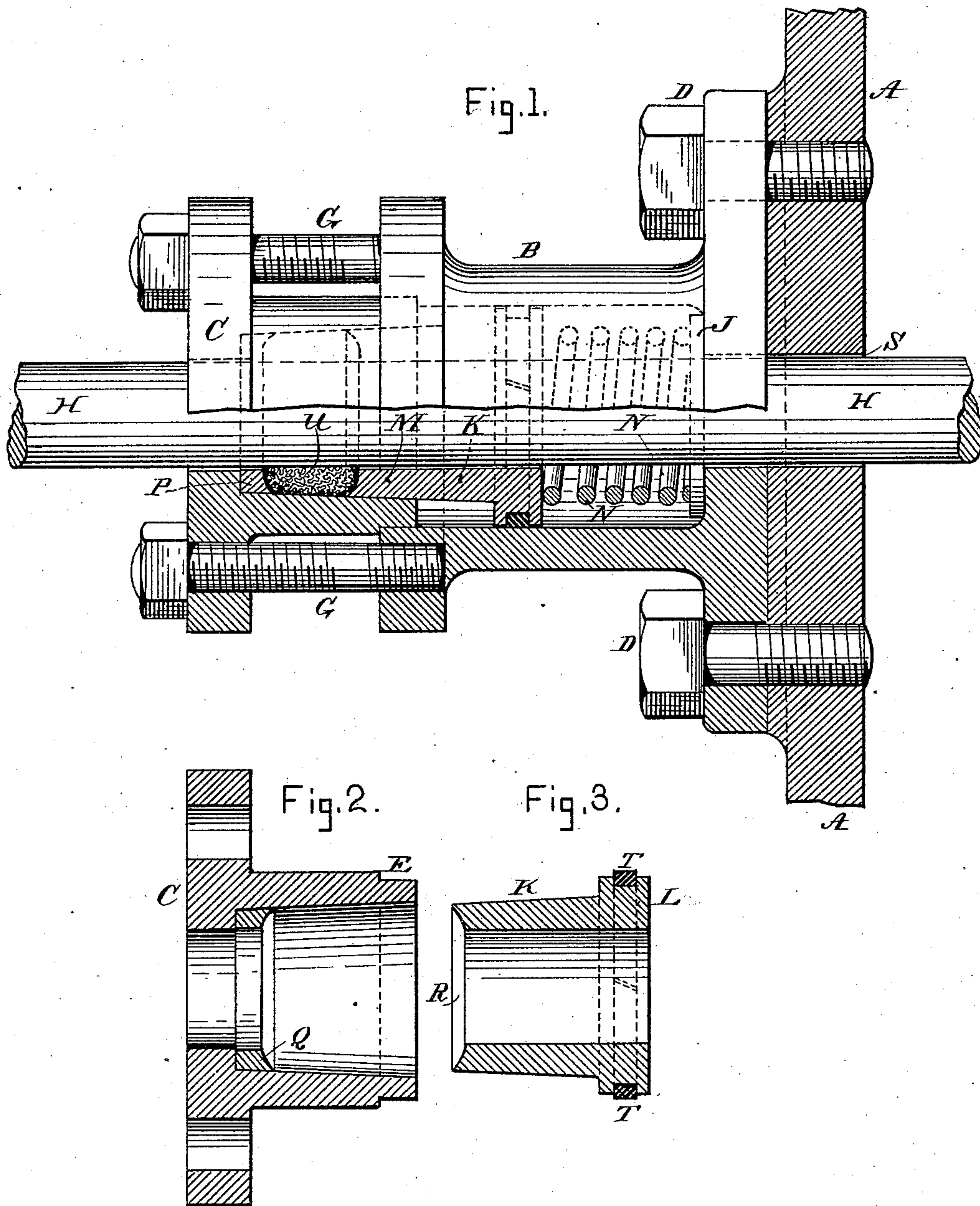
(No Model.)

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## ROD PACKING.

No. 285,244.

Patented Sept. 18, 1883.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## ROD-PACKING.

SPECIFICATION forming part of Letters Patent No. 285,244, dated September 18, 1883.

Application filed June 11, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES C. FARMER, of Providence, in the county of Providence and State of Rhode Island, and ROBERT A. CALDER, of Lynn, in the county of Essex and State of Massachusetts, have invented a certain new and useful Improvement in Rod-Packings, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, showing a portion of the steam-chest, the stuffing-box, and the gland, some of the parts being represented in vertical section; Fig. 2, a vertical longitudinal section of the gland removed; and Fig. 3, a like view of the sleeve or thimble, also detached.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

Our invention relates to means for packing the piston-rod; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

In the drawings, A represents the head of the steam-chest, B the stuffing-box, and C the gland. The stuffing-box is secured to the chest in the usual manner by the screw-bolts D, the gland being provided with a rabbet or shoulder, E, at its inner end, and fitted into the outer end of the stuffing-box, where it is secured by means of the screw-bolts G. The piston-rod H passes centrally through a hole in the head of the steam-chest, stuffing-box, and gland, and is fitted to work longitudinally therein, as shown in Fig. 1. Arranged on the piston within the stuffing-box there is an ordinary bushing or ring, J, and also a sleeve or thimble, K, provided with the flange L, the sleeve extending outwardly or upwardly into the body of the gland, as shown at M. Disposed around the piston, between the sleeve or thimble K and the bushing or ring J, there is also a coiled spring, N, resting on the bushing and acting expansively to force the thimble

upwardly or outwardly into the gland C. A ring or bushing, P, is also disposed around the piston-rod within the gland C, this ring being concaved on its lower or inner side, as shown at Q, a corresponding concavity being formed in the upper or outer end of the sleeve K, as shown at R.

In packing the piston-rods of locomotive steam-engines in the ordinary manner, the packing material is usually placed in the stuffing-box B, where it is subjected to a great degree of heat from the steam which passes into the box through the space S around the piston-rod, thereby causing it to be rapidly destroyed. Our improvement is designed to obviate this objection, and also to render it more convenient to repack the piston-rod; and to that end we make use of the sleeve K, gland C, and ring P, the sleeve being adapted to work in the gland, and the packing material U disposed around the piston-rod between the concaved end of the sleeve and ring P, as shown in Fig. 1, whereby it is removed as far as possible from the stuffing-box, and thereby rendered much more durable than when the piston-rod is packed in the ordinary manner. The object of concaving the ring P and sleeve K, as described, is to force the packing U into closer contact with the piston-rod, as the sleeve approaches the ring, than would be possible were these parts made plain or in nearly any other form. The flange L of the thimble K is provided with a packing-ring, T, to make it work steam-tight in the stuffing-box, the spring N acting expansively to force the thimble against the packing material when the steam is shut off from the engine, and thus keep the packing material U in position. It will be obvious that by removing the bolts G and slipping the gland C outwardly or upwardly on the piston-rod H, the packing material may be readily introduced into the gland without opening the stuffing-box, thereby greatly facilitating the packing of the piston. Instead of the rabbet E, formed in the inner or lower end of the gland C, a rabbet may be formed in the outer or upper end of the stuffing-box B, to receive the gland and form a seat for the same, if preferred.

Having thus explained our invention, what we claim is—



1. The combination, with a stuffing-box and piston-rod, of a gland fitted to the outer end of the stuffing-box, and a thimble within said stuffing-box, the outer end of which extends 5 into said gland, said thimble being provided at its inner end with a grooved flange provided with a packing-ring, substantially as described.

2. The combination, with a stuffing-box and 10 piston-rod, of a detachable gland fitted to the outer end of the stuffing-box, a thimble within said stuffing-box, the outer end of which ex-

tends into said gland, said thimble being provided at its inner end with a grooved flange provided with a packing-ring, and an expansive spring interposed between said flange and the end of the steam-cylinder, substantially as described. 15

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