

(No Model.)

E. G. SHORTT.
ROD PACKING.

No. 447,261.

Patented Feb. 24, 1891.

Fig. 1.

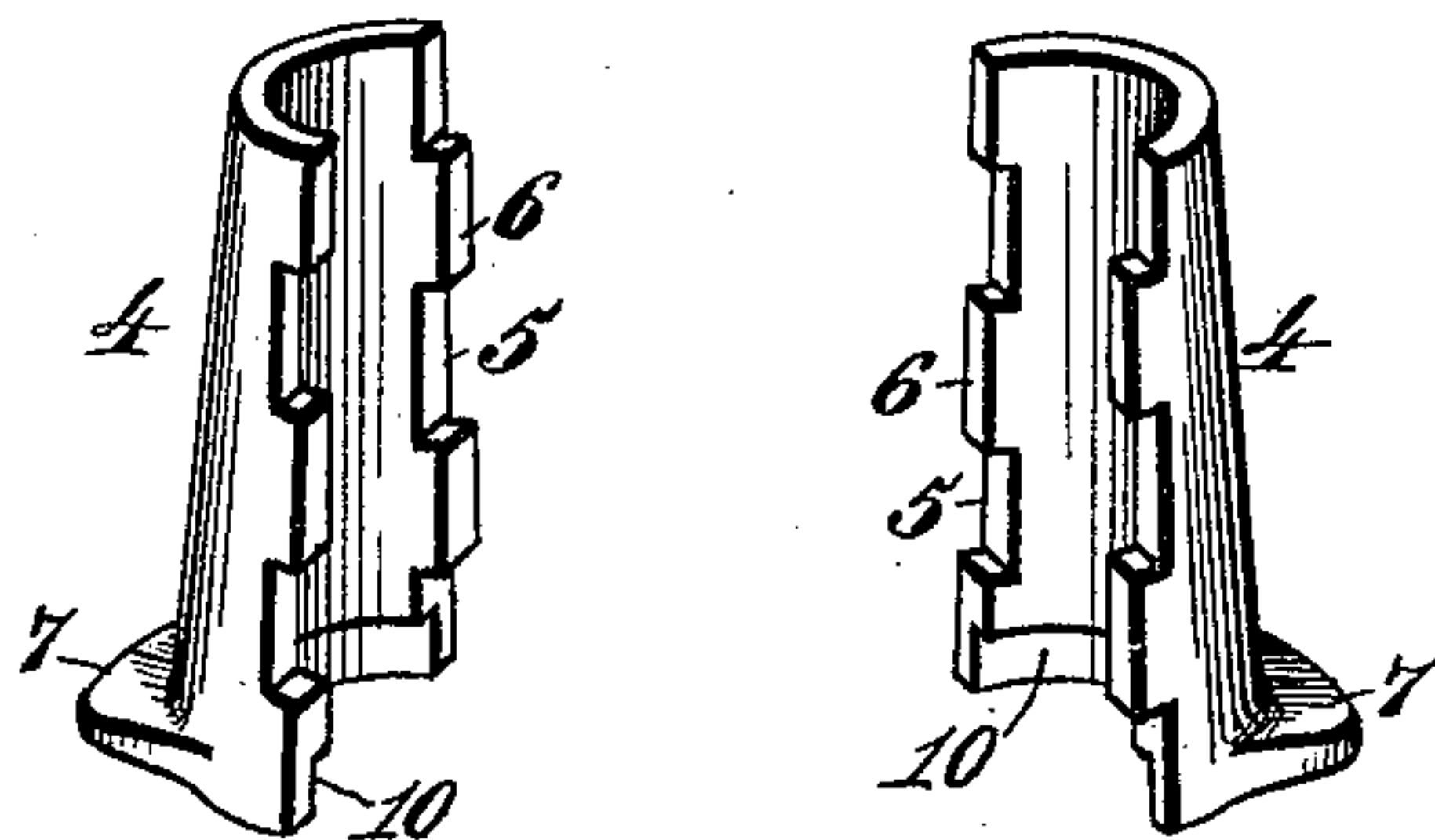


Fig. 2.

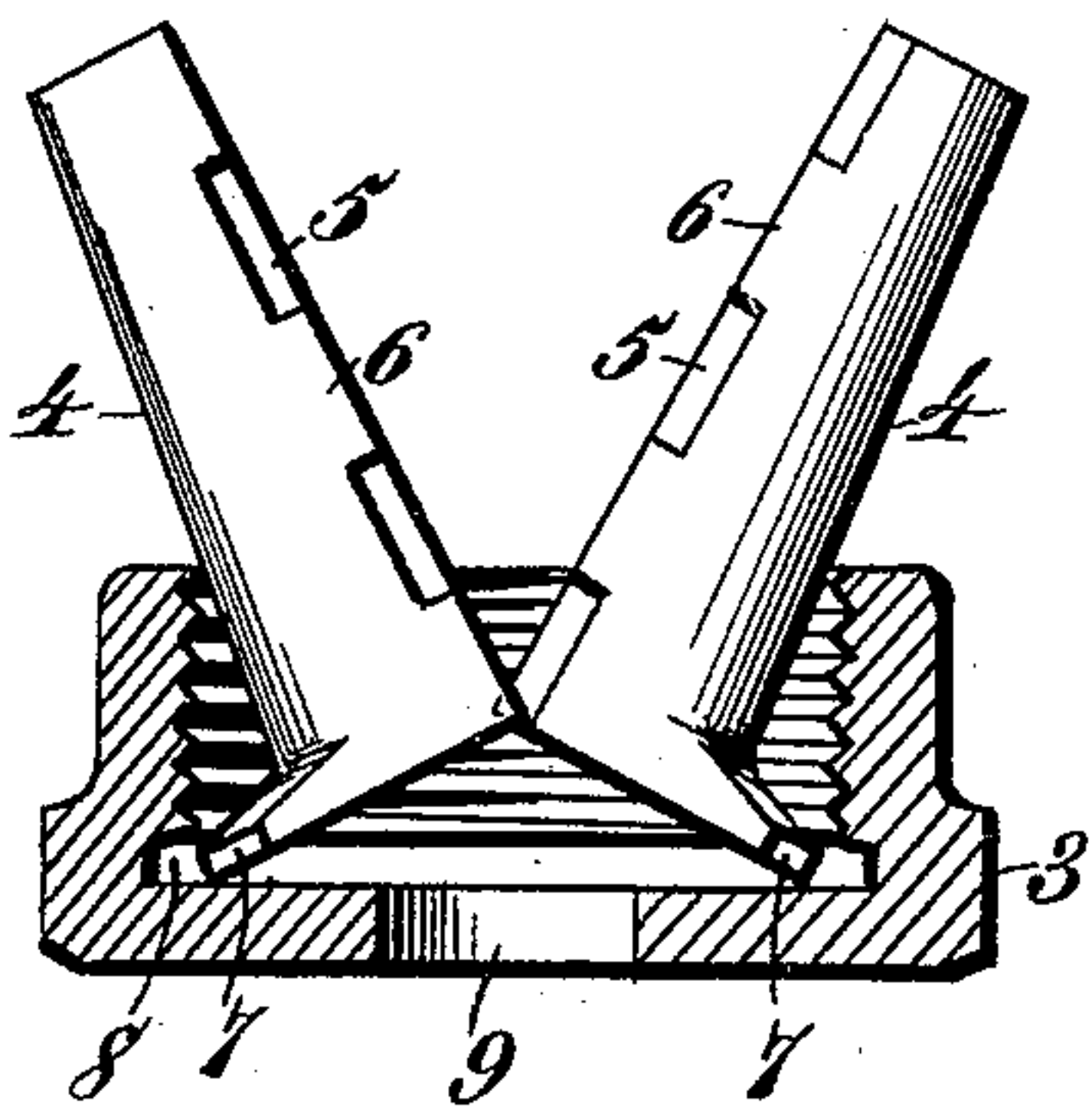
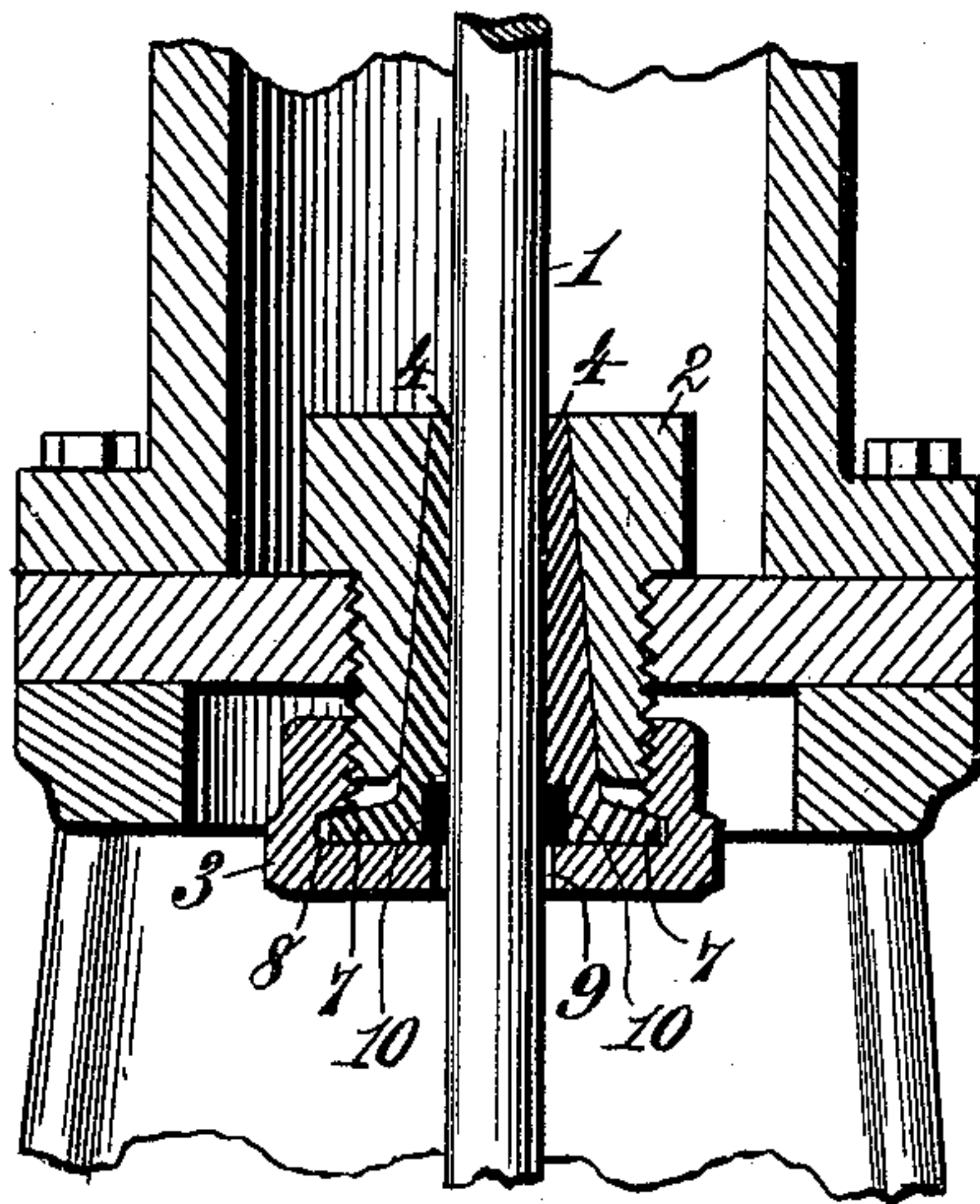


Fig. 3.



Witnesses.

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EDWARD G. SHORTT, OF CARTHAGE, NEW YORK.

ROD-PACKING.

SPECIFICATION forming part of Letters Patent No. 447,261, dated February 24, 1891.

Application filed November 21, 1890. Serial No. 372,210. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. SHORTT, a citizen of the United States, residing at Carthage, in the county of Jefferson and State of New York, have invented new and useful Improvements in Rod-Packings, of which the following is a specification.

This invention relates to metallic packing for the piston and valve rods of steam and other engines, pumps, and the like; and the object of my invention is to provide a novel metallic packing composed of sections which are properly supported by and engaged with a cap or nut on the packing-box in such manner that the cap or nut removes the packing-sections as it is detached from the packing-box.

To such end my invention consists in the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a view of the separated parts of a metallic packing embodying my improvements. Fig. 2 is a sectional detail view showing the manner of inserting the flanged end of the metallic packing into or removing it from a flanged and recessed screw-cap by means of which the packing is supported in and removed from a box through which the piston-rod is pressed. Fig. 3 is a sectional elevation of a portion of a pump or engine, showing my improved metallic packing applied to a piston-rod.

Referring to the drawings, the numeral 1 designates a piston-rod, valve-rod, or other analogous part of a steam-engine, a pump, or other machine, and 2 is a box through which said rod is pressed. One end of the box 2 is externally screw-threaded for attachment of a flanged and recessed cap or nut 3 in which the metallic packing 4 is supported. The metallic packing 4 is formed in two or more separable sections internally concaved to fit around the piston-rod or valve-rod and having their edges provided with alternating notches 5 and tongues 6, as clearly shown in Fig. 1, by which the adjacent edges of the several sections are adapted to interlock. The outer surface of the packing is conical to correspond with the conical interior of the box 2, into which it is inserted, while the inner

surface of the several parts of the packing when connected is cylindrical to fit the piston-rod. The large end of the metallic packing is provided with flanges 7 to engage a groove or recess 8 in the cap or nut 3, so that by unscrewing said cap from the box 2 the packing will be removed with the cap.

The manner of connecting and disconnecting the packing 4 and cap 3 is shown in Fig. 2, from which it will be seen that by placing the large or flanged ends of the packing-pieces together and spreading or inclining outward the small ends of said packing-pieces the packing can be readily inserted into the cap, and then by pinching together the small end of the packing the flanges 7 on its large end will be forced into the groove or recess 8 at the end of the cap, and thereby connect the parts; and it will be obvious that by reversing this operation the parts can be readily disconnected.

The screw-cap 3 is provided with an opening 9 for passage of the piston-rod or valve-rod 1, and is adapted to support the packing 4 and hold it in place within the box 2 when the cap or nut is attached to said box, as shown in Fig. 3. It is obvious that by unscrewing the cap 3 from the box 2 the packing 4, by its flanged connection with the screw-cap, will also be removed from the box and can be disconnected from the cap, as previously explained, for the purpose of making any repairs or adjustments or for replacing them with new parts. Should the packing become loose from long and continuous wear, it can be detached and separated into its several parts, and the interlocking tongues may be filed off on their ends, thus allowing the wear to be taken up readily without expense or loss of time.

For use in large engines the packing is preferably made in three or four sections or separable parts instead of two, as shown, but will be in other respects the same as above described.

Inside the large end of the metallic packing 4 it is preferable to provide a groove 10, which is to be filled with the ordinary fibrous packing, so as to trap the oil that would otherwise run down the rod, and in this manner the rod will be wiped with lubricant at each stroke.

From the foregoing description the operation and advantages of the improved packing as applied to piston-rods, valve-rods, or other parts to which it is adapted will be apparent, and need not be further explained.

What I claim as my invention is—

1. A metallic packing for piston or valve rods, consisting of sections having flanged ends and a cap adapted to connect with a packing-box and engaged with the flanges of the packing-sections for removing the latter with the cap as it is detached from the packing-box, substantially as described.

2. The combination, with a suitable packing-box, of a metallic packing composed of separate sections having flanged ends and a screw-cap connected with the packing-box and engaged with the flanges of the separable sections for removing the latter as the cap unscrews, substantially as described.

3. A metallic packing for piston-rods and valve-rods, composed of separable interlocking sections internally grooved to receive a fibrous packing and flanged at one end to engage a screw cap or nut by which the packing is supported in its box and removable with said cap or nut, substantially as described.

4. The combination, with a piston-rod or valve-rod and an externally-threaded box, of a metallic rod-packing composed of separable interlocking sections flanged at one end and a screw cap or nut adapted to engage the box and recessed or grooved to receive the flanged end of the packing, whereby said packing is supported in the box and removable therefrom with the screw cap or nut, substantially as described.

5. The combination, with the rod 1 and externally-threaded box 2, of the metallic packing 4, composed of separable interlocking sections provided with flanges 7 and an internal groove 10, and the screw cap or nut 3, having a groove or recess 8 to receive the flanged end of the packing, whereby the packing is supported in the box and removable therefrom with the screw cap or nut, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

EDWARD G. SHORTT.

Witnesses:

HOWARD G. SHORTT,
JAMES H. DAWLEY.