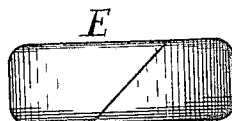
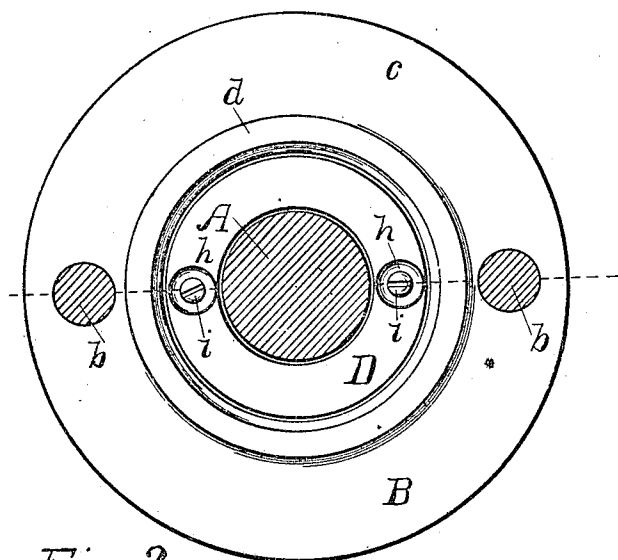
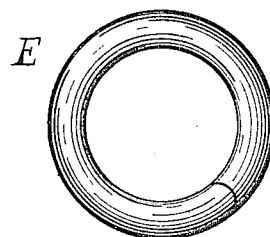
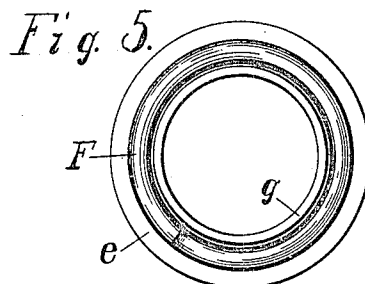
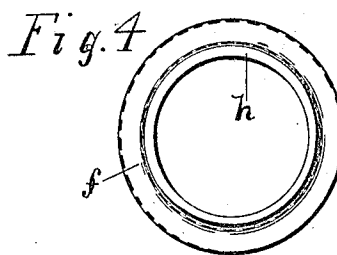
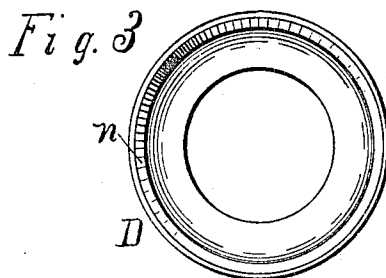
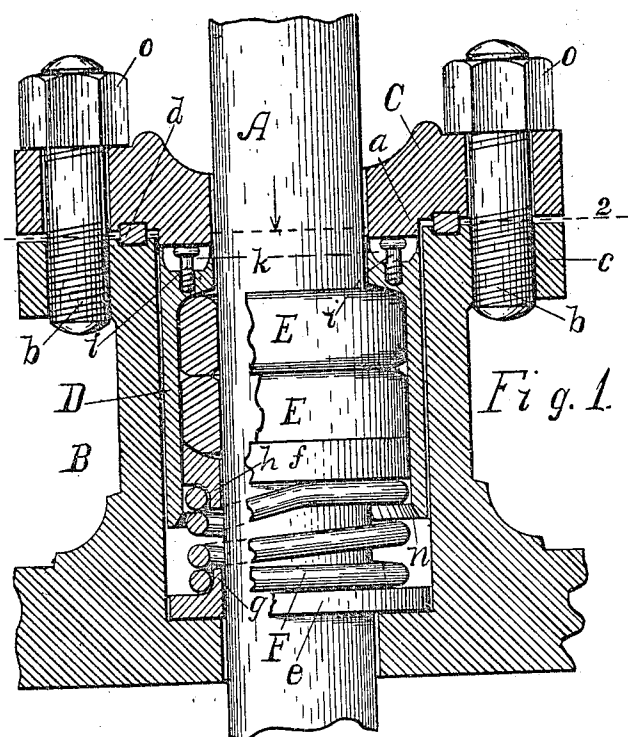


No. 831,717.

PATENTED SEPT. 25, 1906.

O. J. GARLOCK.
 DEVICE FOR PACKING RODS.
 APPLICATION FILED MAR. 9, 1906.



Attest:
 A. M. Whitmore.
 J. M. Deo.

Fig. 7.

Inventor:
 O. J. Garlock
 by C. B. Whitmore Atty

UNITED STATES PATENT OFFICE.

OLIN J. GARLOCK, OF PALMYRA, NEW YORK.

DEVICE FOR PACKING RODS.

No. 831,717.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed March 9, 1906. Serial No. 305,176.

To all whom it may concern:

Be it known that I, OLIN J. GARLOCK, of Palmyra, in the county of Wayne and State of New York, have invented a new and useful Improvement in Devices for Packing Rods, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention relates generally to machinery-packing, it being designed particularly for packing piston and pump rods for either steam or hot or cold water or for other liquids.

The invention comprises a stuffing-box; and it has for its principal object the providing of means within the stuffing-box whereby the rod will be continuously packed automatically and without care from the attendant until the packing material needs renewing after being worn out and exhausted.

Another object of the invention is to construct and arrange the interior parts so the cap or closer for the stuffing-box shall have no longitudinal motion, but be set rigidly against the mouth of the stuffing-box and held immovable while the supply of packing lasts.

Other objects and advantages of the invention will be brought out and made to appear in the following specification, and the novel features particularly pointed out in the appended claims, reference being had to the accompanying drawings, which, with the reference characters marked thereon, form a part of this specification.

Figure 1 is a side elevation of the device, parts being broken away and the stuffing-box with associated parts mainly in central longitudinal section. Fig. 2 is a plan with the closer omitted, the rod and the clamping-bolts being transversely sectioned on the dotted line 2 in Fig. 1. Fig. 3 is an inner end view of the packing cup or magazine detached, seen in a direction opposite that in which Fig. 2 is seen. Fig. 4 is a view of the annular follower detached, seen in the direction in which Fig. 3 is seen. Fig. 5 is a plan of the base-ring detached and the spring in place thereon. Fig. 6 is a plan of a packing-ring detached. Fig. 7 is a side elevation of a packing-ring seen as indicated by arrow in Fig. 6.

In the drawings, A is a piston or pump rod for steam, hot or cold water, or other fluids, and B a stuffing-box, C being a circular perforated cap or closer for the open end of the stuffing-box. The cap C is substantially a

flat metallic disk having no part entering the cavity of the stuffing-box save a slight inward projection *a*, Fig. 1, merely for the purpose of centering the cap upon the box. This cap has no motion upon or within the stuffing-box B similar to that of the glands of ordinary stuffing-boxes, it being held rigidly to place over the open end of the stuffing-box by short clamping-bolts *b b*, threaded into the flange *c* of the stuffing-box. In constructing this improved form of packing device I usually prefer to interpose a slender ring *d*, Figs. 1 and 2, of some suitable material between the cap and the end of the stuffing-box, opposing shallow circular grooves being formed in the cap and the box to receive the ring. The rings *d* of these devices are made of different materials according to the uses to which the devices are put—that is to say, these rings may be made of soft metal, as lead, or of firm india-rubber, or they may be in some cases made of hard fiber braided or woven.

Concentrically within the cylindrical stuffing-box B is placed an inwardly-turned metallic cylindrical cup D, constituting a magazine for holding packing material E E for the rod A. The outer flat end or bottom of the magazine when in place is in contact with the inner plain face of the cap C, as appears in Fig. 1, the inner annular bottom of the magazine being slightly inclined or conical, as shown. The outer flat end of the magazine is also provided with draw-pins *i*, Figs. 1 and 2, to facilitate in withdrawing the magazine from the cavity of the stuffing-box when necessary. The draw-pins *i* are set in cavities *k k* in the magazine with their heads even with the surface of the outer end of the magazine, as shown.

The inner bottom of the stuffing-box B is made flat or in a plane at right angles with the axis of the inclosure, unlike the bottoms of ordinary stuffing-boxes, there being a metal ring *e*, Figs. 1 and 5, with flat lower face resting upon the flat bottom surface of the stuffing-box. The ring *e* constitutes a base or holder for a metal spiral spring F, extending upward slightly into the open end of the magazine D, as appears in Fig. 1, the ring having an upwardly-projecting inner concentric flange *g* within the spring to hold the latter concentrically in place.

Within the magazine D is placed an annular metallic follower *f*, having its upper annular face inwardly inclined or concave, as

shown, this follower being adapted to move longitudinally within the magazine. The follower is seated upon the upper end of the spring F, it being formed with an inner centering-flange *h*, projecting downward within the upper end of the spring, the latter acting to press the follower inwardly against the body of packing material in the magazine.

When supplying this packing device with packing material E E at any time, the cap C is loosened and moved back along the rod and the magazine drawn out of the stuffing-box by means of any suitable instrument applied to the draw-pins *i i*, the base-ring *e*, the spring, and the follower *f* remaining in place. Packing material of any suitable kind or make, in the form of divided rings E E or otherwise, is then placed around upon the rod at the mouth of the magazine in quantity to substantially fill the latter, the magazine, with the body of packing material, being then again moved forward into the stuffing-box. The mouth of the magazine is made conical or slightly flaring at *n*, Figs. 1 and 3, on account of which when the magazine is returned within the stuffing-box its inner end glides smoothly outside of and over the follower and the spring, the body of packing material acting to press the follower back against the spring. When the cap C is returned to the stuffing-box and drawn firmly to place by the screw-nuts *o o* of the clamp-bolts *b b*, the follower will be forced hard back against the spring, compressing the latter near the bottom of the cavity of the stuff-

ing-box against the base-ring *e*. In use as the packing material wears away by the action of the rod the spring, continuously pressing the follower into the magazine, will serve automatically to keep the packing snugly against the rod until practically exhausted, no attention during the time being required of the attendant.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A device of the kind described, having a stuffing-box, with rigid cap therefor, a magazine in the stuffing-box for holding packing material, a follower longitudinally movable in the magazine to confine the packing material, a spring received at one end within the magazine and follower to press the follower against the packing, and a base-ring in the stuffing-box to hold the spring.

2. A device of the kind described, comprising a stuffing-box flat at the bottom, a cylindrical magazine in the stuffing-box for holding packing material, a circular follower adapted to move longitudinally within the magazine, a circular spring adapted to enter the magazine and press the follower, and a flanged base-ring at the bottom of the stuffing-box for controlling the spring.

In witness whereof I have hereunto set my hand, this 3d day of March, 1906, in the presence of two subscribing witnesses.

OLIN J. GARLOCK.

Witnesses:

HARRY G. CHAPMAN,
E. E. SMITH.