

J. LOFTUS.
STUFFING-BOXES FOR STEAM-ENGINES.

No. 194,696.

Patented Aug. 28, 1877.

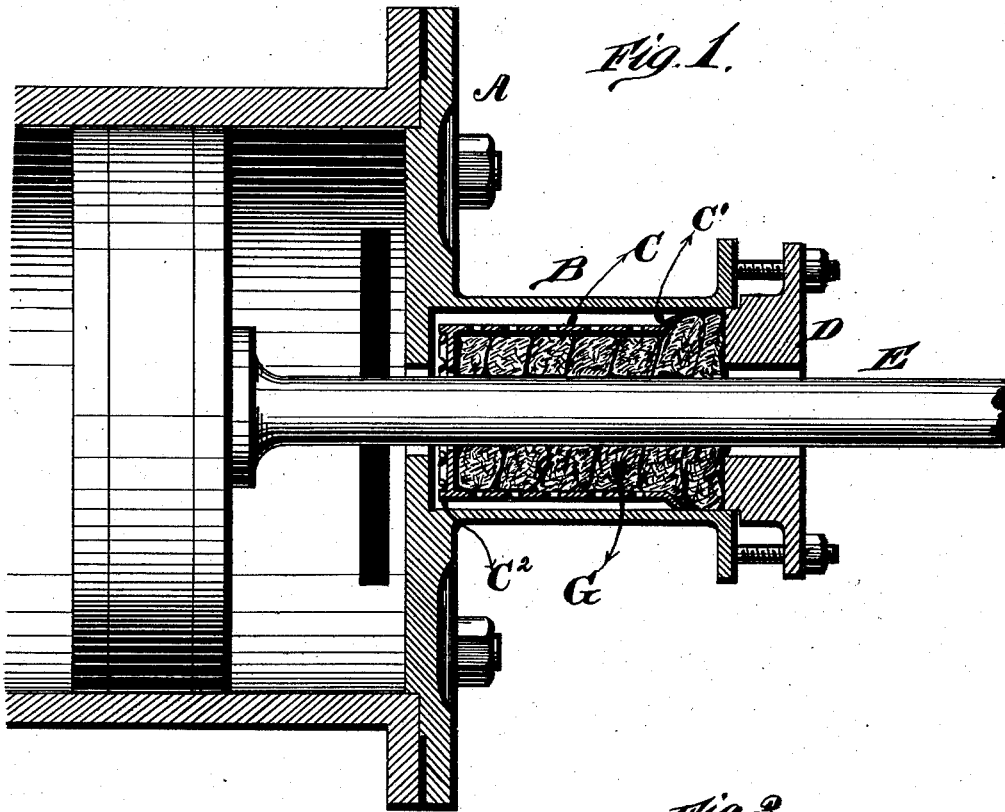


Fig. 1.

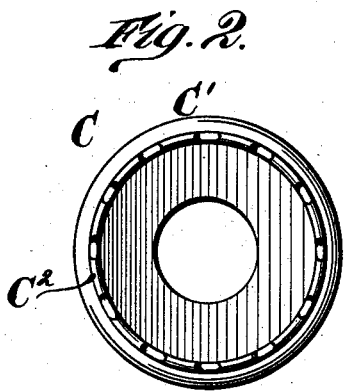


Fig. 2.

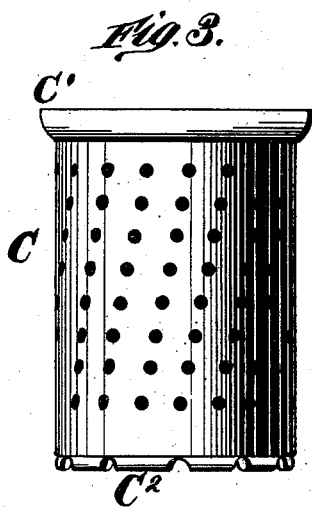


Fig. 3.

WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN LOFTUS, OF EAST ALBANY, ASSIGNOR OF ONE-HALF HIS RIGHT TO
RICHARD GREENALCH, OF GREENBUSH, NEW YORK.

IMPROVEMENT IN STUFFING-BOXES FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. **194,696**, dated August 28, 1877; application filed
July 14, 1877.

To all whom it may concern:

Be it known that I, JOHN LOFTUS, of East Albany, in the county of Albany and State of New York, have invented a new and valuable Improvement in Stuffing-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical central sectional view of a cylinder, showing my stuffing-box. Fig. 2 is a bottom view of the cup, and Fig. 3 is a side view of the cup.

The nature of my invention consists in the construction and arrangement of a packing for the stems of pistons, valves, and similar articles, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents the cylinder-head, formed on the outside with the cylindrical packing-box B. Within this box is placed a perforated cup or bushing, C, the outer end of which is formed with a flaring rim, C¹, forming with the end of the gland D a steam-tight joint to prevent the escape of steam therefrom.

E is the piston-rod, passing through the center of the parts and surrounded with packing G inside the cup or bushing C.

The steam will enter the stuffing-box B at the bottom of the perforated cup C, and will force the cup upon the packing. At the same time the steam will enter the space between the sides of the cup and the stuffing-box, and will press the packing down upon the piston-rod. The steam will naturally condense in the space surrounding the cup, and the moist-

ure therefrom, with part of the oil used for lubricating, will penetrate the packing through the holes in the cup and keep the packing lubricated and prevent its burning.

The space around the cup in part allows for vibration of the rod without wearing on the packing in the cup, as the cup will move with the rod at the bottom end of the cup.

Around the bottom of the cup is formed a ring, C², with openings, as shown, to allow of the free passage of steam to the outside of the cup, when the bottom might be tight against the bottom of the box. Between the gland and the end of the cup is a space to allow the cup to work up on the packing.

With this invention hemp or other cheap packing material may be used. There is no waste of packing material in repacking, as it is only necessary to place new packing in front of the old and tighten up the gland against the steam-tight joint.

As the packing in the cup depends for its elasticity on the steam on the outside, the cup will remain tight if full of packing.

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

1. In a stuffing-box, the movable perforated cup C, provided with rim C¹ and notched ring C², for the purposes herein set forth.

2. The combination of the stuffing-box B, perforated cup C, gland D, piston-rod E, and packing G, all substantially as and for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN LOFTUS.

Witnesses:

WM. LOFTUS,
ARTHUR B. MURPHY.