J. L. SHERMAN.

Piston-Packing.

No. 161,710. Patented April 6, 1875.

Fig: 1.

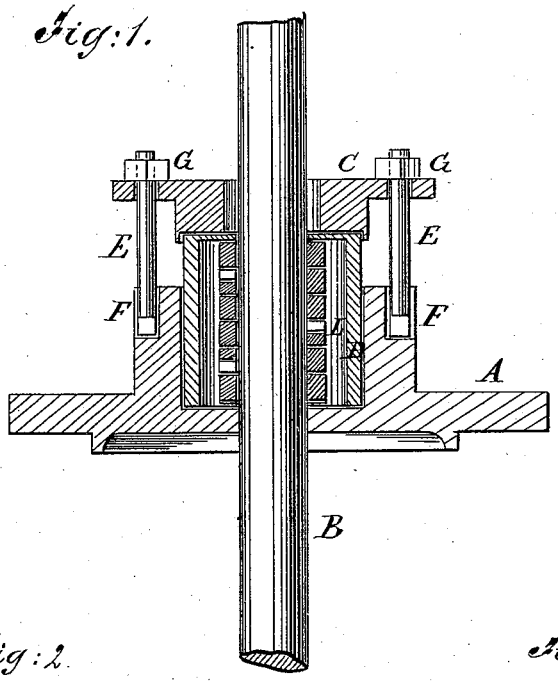


Fig: 2.

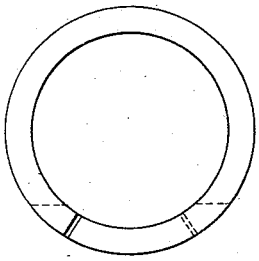
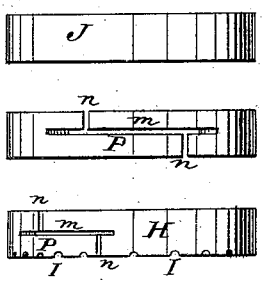


Fig: 3.



WITNESSES:

Chas. Nida.

A. F. Terry

INVENTOR:

J. L. Sherman.

BY

ATTORNEYS.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JAMES L. SHERMAN, OF CASSVILLE, WISCONSIN.

IMPROVEMENT IN PISTON-PACKINGS.

Specification forming part of Letters Patent No. **161,710**, dated April 6, 1875; application filed December 19, 1874.

To all whom it may concern:

Be it known that I, JAMES L. SHERMAN, of Cassville, in the county of Grant and State of Wisconsin, have invented a new and useful Improvement in Piston-Rod Packing, of which the following is a specification:

This invention consists in the construction and arrangement of divided and grooved rings to form the packing of a steam piston-rod, and a cup-like device for containing said rings and receiving the steam, which acts on and compresses them upon the rod, as hereinafter described.

In the accompanying drawing, Figure 1 shows a vertical section of the parts which make the packing around a piston-rod. Fig. 2 is a side view of one of the packing-rings. Fig. 3 is an edge view of three more of the packing-rings, showing the lower ring and the upper one with one of the intermediate packing-rings.

Similar letters of reference indicate corresponding parts.

A is the cylinder-head. B is the piston-rod which it is designed to pack. C is the gland. D is an inverted cup, which slips onto the rod, and incloses the packing-rings D′. This cup rests in a chamber in the cylinder-head A, and is held in place by the gland C. E E are bolts, the heads of which are let into the cylinder-head on A, as seen at F F, where they take hold and extend up through the gland with nuts G G on their upper ends. H represents the lower packing-ring. The under side of this lower ring is cross-grooved, as seen at I, to allow the steam to pass into the chamber L to act upon the intermediate rings. All the packing-rings, with the exception of the upper one, J, are cut, as seen at P, so that they can be contracted around the rod when the steam acts upon this outer surface. The cut through the lower packing-rings is made by a cut, *m*, longitudinal with the ring, and two cross-cuts, *n*, which intersect the cut *m* from the outsides, which severs the ring, as shown. There may be gaskets of sheet-rubber or other suitable material under the cup or the gland, or between the rings, if considered necessary. The action of the steam in the chamber L is to compress the rings tightly to the rod and prevent leakage.

The packing is particularly applicable to the piston-rods of steam-engines, but is adapted for successful use in connection with the piston-rods of water-forcing pumps.

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

In a piston-packing, the combination of the ring H, having grooves I, with a series of divided rings, P, and the cup D, the arrangement being such that an annular chamber, L, is formed around said rings to receive the steam, as shown and described.

JAMES LUTHER SHERMAN.

Witnesses:

WILLIAM HULL,

J. J. HOGAN.