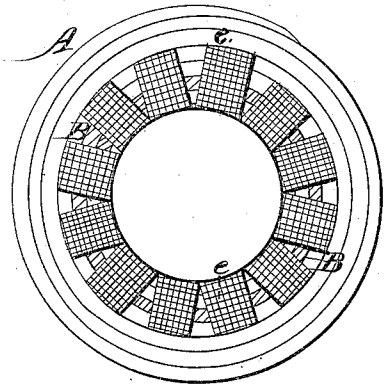
R. Martin,

Piston Packing.

No. 35,698. Patented June 24, 1862.

Fig. 1



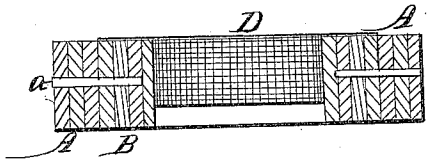
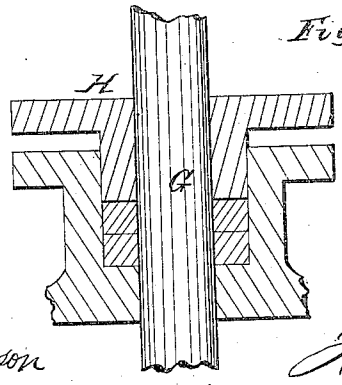


Fig. 2

Fig. 3.



Witnesses.

Charles E. Foster

Charles Howson

Inventor.

R. Martin

Henry Howson

atty

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UNITED STATES PATENT OFFICE.

RICHARD MARTIN, OF BROOKLYN, NEW YORK.

IMPROVED PACKING FOR PISTON AND VALVE RODS.

Specification forming part of Letters Patent No. **35,698**, dated June 24, 1862.

To all whom it may concern:

Be it known that I, RICHARD MARTIN, of Brooklyn, Kings county, State of New York, have invented an Improved Packing for Piston-Rods, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a packing-ring composed of a folded strip of wovem hemp with a lining of wire-gauze on the inside, the whole being constructed substantially as described hereinafter.

The object of my improved packing is to diminish the friction produced by ordinary packing, to present a metallic and constantly-lubricated surface for the piston or other rod to bear against, and to afford a durable and efficient packing for the stuffing-boxes of piston, pump, and other rods.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of my improved packing for piston-rods, &c.; Fig. 2, a vertical section, and Fig. 3 a sectional view, of an ordinary stuffing-box containing my improved packing.

The main body of each piece of packing is composed of a strip, A, of coarsely-woven hemp, the strip being coiled round and round, so as to form the annular mass of folds represented in Fig. 1, and within the hempen folds is contained a strip, B, of gum-elastic, the whole being secured together and maintained in its proper annular form by stitching one fold to the adjacent fold and by driving any suitable number of wooden pegs, *a*, transversely through or nearly through the ring.

To the inside of the ring is secured a cylindrical lining, D, of gauze made of fine brass wire, the upper end of the gauze having a series of flanges, *e*, which lap over the top of the ring and are turned downward and inserted between the folds, so that the wooden pegs *a* may pass through the turned-down ends. The gauze, cylinder, and hempen ring may be further secured to each other by stitching them together with brass wire. One, two, or more of these packing-rings are placed round the piston-rod G, Fig. 3, and are tightly compressed into the stuffing-box by the usual follower, H. The hempen ring soon becomes thoroughly impregnated with the oil or tallow used to lubricate the piston-rod, and owing to the pressure being exerted on the edges of the folded strip of hemp the ring is capable of being readily expanded laterally by a very slight pressure of the follower, the packing being consequently maintained perfectly tight.

The interstices of the wire-gauze lining afford such a certain lodgment for the oil or tallow that as the piston-rod passes through the stuffing-box it is always in contact with the surface of the lubricating material, which is so evenly dispersed over the surface of the gauze that the latter, although composed of very fine wire, is freed from abrasion, and consequently affords a most durable lining, which, presenting a metallic surface for the piston to bear against, is the means of preventing that excessive friction produced by ordinary packing of fibrous material.

The strip B of gum-elastic has a tendency to maintain the packing in its annular form and imparts to the ring a desirable elasticity.

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

The packing-ring composed of a folded strip of woven hemp with a lining of wire gauze, the whole being constructed substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

R. MARTIN.

Witnesses:
HENRY HOWSON,
JOHN WHITE.