W. BROWN.

Metallic Packing for Stuffing-Boxes.

No. 208,368. Patented Sept. 24, 1878.

Fig. 1.

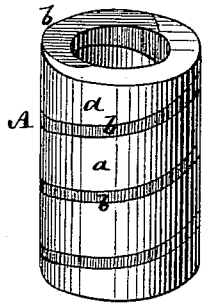


Fig. 2.

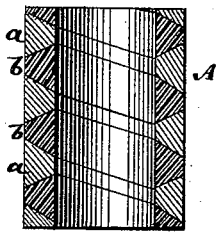


Fig. 3.

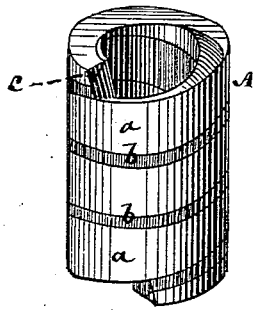
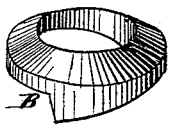


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM BROWN, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF HIS RIGHT TO FREDERICK ROBERTS, OF NEW YORK, N. Y.

IMPROVEMENT IN METALLIC PACKING FOR STUFFING-BOXES.

Specification forming part of Letters Patent No. **208,368**, dated September 24, 1878; application filed August 22, 1878.

To all whom it may concern:

Be it known that I, WILLIAM BROWN, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Metallic Packings for Stuffing-Boxes, of which the following is a description, reference being had to the accompanying drawing, which forms part of this specification.

The invention consists in a metallic tubular packing composed of independent continuous spiral strips of metal interposed in relation with each other, and of reverse wedge shape in their transverse section, so that when said packing is inserted within a stuffing-box and end-pressure brought to bear upon said packing, one strip is caused to contract the other strip around the rod which passes through the stuffing-box. The contracting spiral strip it is preferred to make of soft metal and the other strip of hard metal. Thus the former may be made of Babbitt metal and the latter of brass, or both may be made of soft metal, disunited one from the other.

In the accompanying drawing, Figure 1 represents a view, in perspective, of a metal packing constructed in accordance with my invention; and Fig. 2 is a longitudinal section of the same. Fig. 3 is a further view in perspective, showing the packing of a stepped construction at its ends, to provide for the engagement therewith of stepped caps of conical form on their outer faces, corresponding with conical chambers or recesses in the seat and inner end of the gland of the stuffing-box; and Fig. 4 is a perspective view of such a cap detached.

A is the metallic tubular packing, constructed of duplicate independent and interposed spiral strips *a b*. These strips are of reverse wedge shape in their transverse section, one of them, *a*, increasing in dimensions outwardly in its transverse section, and the other one, *b*, increasing in dimensions inwardly in its transverse section. Such tubular packing may be made by first forming a cylinder of brass or Babbitt metal, and then cutting a continuous spiral slot in it throughout its length of a tapering form in its transverse section, increasing in size inwardly toward the center of the cylinder. Such construction forms the spiral wedge-shaped strip *a*, of diminishing dimensions inwardly in its transverse section. Said spirally-slotted cylinder may then have a hoop temporarily put tightly round it, and Babbitt or other soft metal be poured into the spiral slot, for the purpose of forming the interposed spiral strip *b*, which, owing to the shape of the slot, will be of diminishing dimensions outwardly in its transverse section. It is necessary that both strips *a b* should be independent of each other, and to prevent the metal of the two strips from uniting when making the packing, the ordinary blackwash, or any other suitable substance to prevent adhesion, may be applied to the sides of the spiral slot before pouring in the metal to form the spiral strip *b*.

When a packing thus made is inserted within a stuffing-box and end-pressure brought to bear upon the packing, the spiral strip *b* will be contracted or forced inwardly by the spiral strip *a*, and be caused to closely hug the rod which works through the stuffing-box; and if said packing be put loose in the stuffing-box, it will readily accommodate itself to inequality in the rod, or, in other words, will readily come and go, should the rod be a little taper in any part.

If desired, either or both ends of the packing may be constructed with a step, *c*, in it, (see Fig. 3,) to provide for the independent engagement therewith of a cap, B, (see Fig. 4,) of conical form on its outer face, corresponding with a conical chamber or recess in the gland or in the seat of the stuffing-box, such cap, when fitted to either end of the packing facilitating the free action of the packing when tightening up the gland.

I claim—

The metallic tubular packing herein described, composed of independent and interposed continuous spiral strips of reverse wedge shape in their cross-section, arranged substantially as shown and described.

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Witnesses:
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