(No Model.)

T. JOHNS.

METALLIC PACKING.

No. 301,605. Patented July 8, 1884.

Fig. 1.

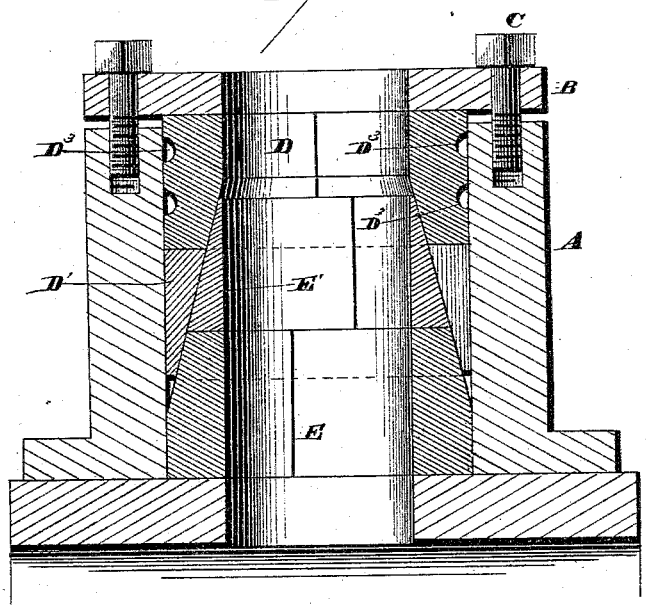


Fig. 2.

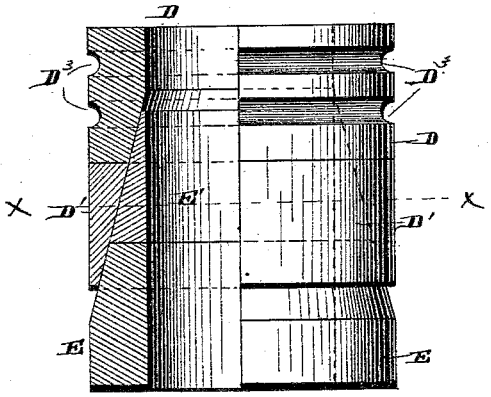
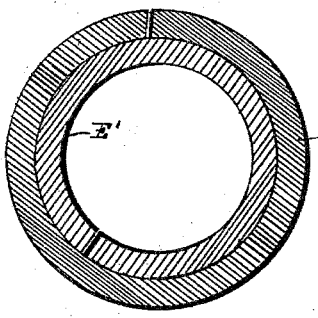


Fig. 3



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS JOHNS, OF THE DALLES, OREGON.

METALLIC PACKING.

SPECIFICATION forming part of Letters Patent No. 301,605, dated July 8, 1884.

Application filed January 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS JOHNS, of The Dalles, in the county of Wasco and State of Oregon, have invented certain new and useful Improvements in Metallic Packing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in metallic packing for piston-rods, valve-stems, pump-plungers, &c., the object being to provide a simple, durable, and effective packing which shall be capable of being adjusted to compensate for wear or tightened around the piston-rod; and with these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of my improvement shown in connection with a stuffing-box. Fig. 2 is a view of my improved packing, partly in section and part in elevation. Fig. 3 is a view in transverse section on the line *x x* of Fig. 2.

A represents a stuffing-box formed on a cylinder, B the gland, and C the gland-nuts. In the stuffing-box are located the split sleeves D D′, placed one above the other, and provided with a tapering or conical bore. While I prefer to employ two sleeves, I would have it understood that I in no wise limit myself to such number, as one continuous sleeve would suffice; or, if desired, the sleeve may be formed in three parts, the tapering bore of one sleeve exactly registering with that of the ring adjacent, the end of the bore of the outer sleeve, D, being preferably made straight, as shown in Fig. 1 of the drawings. Within these sleeves D D′ is adapted to fit a ring, which may be formed in one, two, or more sections, but which I have shown in two sections, E E′. These rings are also split, and are so tapered as to snugly fit within the tapering bore of the sleeve D D′, the end of the ring E′ not quite extending to the straight portion of the ring D to allow for adjustment, as will be hereinafter explained, the said rings being provided with straight bores adapted to register with each other and with that of the outer end of the sleeve D. The outer end of the sleeve D is adapted to slightly extend beyond the end of the stuffing-box, and on which is adapted to bear the gland B. When the rings have become worn from the constant friction of the piston-rod, the parts may be adjusted by simply turning the gland-nuts C, thereby forcing the gland B toward the stuffing-box and also forcing the sleeves D D′ down on the rings, which, being split, are thereby more tightly closed around the piston-rod, making a steam-tight joint. If desired, the inner sides of the rings may be provided with recesses (not shown) for the purpose of lubricating. Again, if desired, the upper sleeve, D, may be provided with grooves D^3, in order to make it more flexible when pressed down by the gland B.

The several parts of this packing may be made of any suitable material, and, if desired, may be formed from different metals, thereby lessening the friction.

My invention is exceedingly simple in construction, is durable in use, there being but little wear on the rings and but little or none on the sleeves. When the cones are worn so that they will not fulfill their functions, they may be removed and the metal reused, as it has sustained no injury.

If desired, the several parts may be again split, thus making eight pieces, in which case they may be placed in position on the piston-rod without the necessity of removing the piston-head; and, again, by using this form of packing the ordinary gland may be employed.

While I have described my invention in connection with a piston-rod, I would have it understood that I do not confine my invention to such application, as it may be used in connection with pump-plungers, valve-stems, and analogous devices with equally good results.

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

1. The combination, with a stuffing-box and a split sleeve closely fitting within the stuffing-box, and provided with the combined conical and straight bore, of a split ring having a straight bore of the same size as the straight bore of the sleeve, the lower end of said ring

being adapted to fit closely within the stuffing-box, while the upper portion thereof is made conical to fit within the conical bore of the sleeve.

2. The combination, with a stuffing-box and a split sleeve closely fitting within the stuffing-box, and provided with the combined conical and straight bore, of a split ring having a straight bore, the lower end of said ring being adapted to fit closely within the stuffing-box, while the upper portion thereof is made conical to fit within the conical bore of the sleeve, and a gland secured to the stuffing-box and adapted to bear on the outer end of the sleeve, substantially as set forth.

3. The combination, with a stuffing-box and a split sleeve composed of two or more sections closely fitting within the stuffing-box, one of said sections being provided throughout a portion of its length with a straight bore, and with a conical bore throughout the remainder of its length, said conical bore registering with the conical bore of the other sections, of split rings having straight bores and situated within the sleeve, and a gland for forcing the sleeve around the rings.

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

THOMAS JOHNS.

Witnesses:
JOHN BRITTEN,
LESLIE BUTLER.