(No Model.)

T. TRIPP.

METALLIC ROD PACKING.

No. 265,470. Patented Oct. 3, 1882.

Fig. 1.

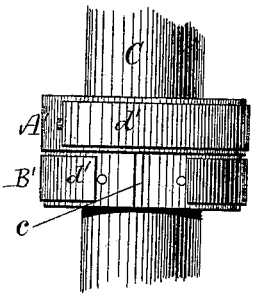


Fig. 2.

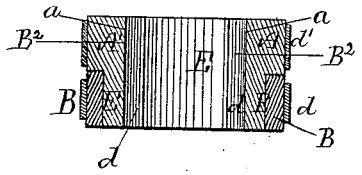


Fig. 3.

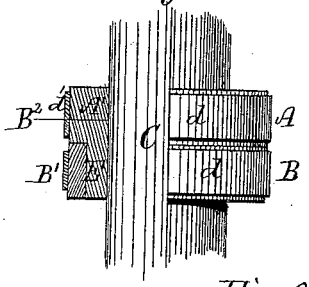


Fig. 4.

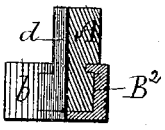


Fig. 5.

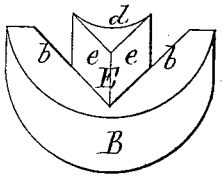


Fig. 6.

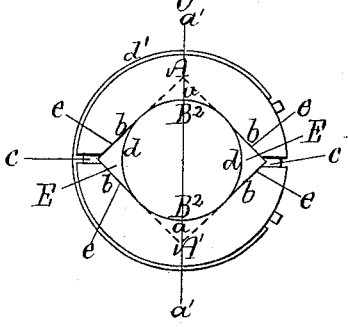
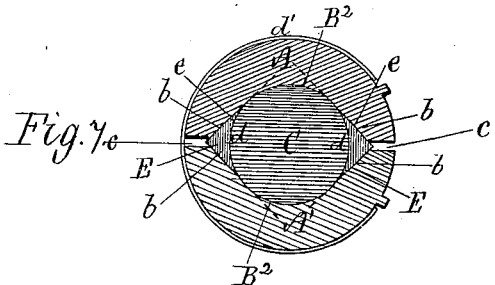


Fig. 7.



Witnesses.
H. E. Lodge.
F. G. Simpson.

Inventor.
Thomas Tripp.
A. Curtis, Atty.

UNITED STATES PATENT OFFICE.

THOMAS TRIPP, OF EAST STOUGHTON, MASSACHUSETTS.

METALLIC ROD-PACKING.

SPECIFICATION forming part of Letters Patent No. 265,470, dated October 3, 1882.

Application filed February 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TRIPP, a citizen of the United States, residing at East Stoughton, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Metallic Packings; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

In this device I employ four flat segmental plates, arranged in pairs peripherally about the rod to be packed, each plate being practically a semicircular ring, and the central solid portion of each ring or plate of one pair breaking joints with the adjacent ends of the other pair, and each plate or ring having a segmental lip or horn in the form of a quadrant of a square cylinder with a circular bore, each lip or horn springing from the center of its ring or plate and breaking joints longitudinally of the rod, with joints between the ends of such plates or rings and the rod, the said horns being embraced by the ends of the plates and constituting guides to insure the correct relative positions of the whole as wear ensues, substantially as hereinafter explained.

The drawings accompanying this specification represent, in Figure 1, a side view of the packing-rings and rod with the springs employed to confine them together. Fig. 2 in such drawings is a longitudinal section of the rings with the springs and without the rod. Fig. 3 is a sectional elevation of the rings and rod. Fig. 4 is a section of one of the rings, showing the Babbitt-metal tongue thereof. Fig. 5 is a perspective of one of the segmental rings. Fig. 6 is an end view of the ring. Fig. 7 is a cross-section of the rings and rod.

In carrying out my invention I provide four flat segmental curved plates or rings, A A′ B B′, each of which is about a half-circle in extent, these plates being arranged in pairs about a rod, so as to constitute two variable rings, the solid center portion of each plate overlapping two adjacent ends of the two opposite plates, as shown in Fig. 1 of the drawings. The concave inner surface or bore, B^2, of each plate is made up of a central portion, *a*, (see Fig. 6,) which is a segment of ninety degrees of a circle in extent, and of side rings, *b b*, which are straight faces departing at a tangent of ninety degrees of a circle from a radial line, *a′*, struck through the center of the plate; hence the two faces necessarily stand at right angles to each other, while the conjoint faces *b b b b* of each pair of rings make up an open square. The central portions, *a a a a*, of the four rings conjointly constitute a circular bore to inclose a rod, which is shown at C, though they are not arranged diametrically opposite each other; and in order that these four rings may approach each other as wear ensues, each plate is somewhat less than a half-circle in length, thus permitting of spaces between the ends, as shown at *c c* in Figs. 1, 6, and 7 of the drawings. The four plates constitute together an expansible or variable ring to inclose the rod C, and are held up to such rod and prevented from misplacement by plate-springs *d′d′*, which partially inclose their perimeters, as shown in Figs. 2 and 7 of the drawings.

In order to maintain the relative positions of the segmental plates A A′ B B′ and to break joints between such plates and the rod C by filling up the blank spaces between the arms of the plates, I add to each plate a tongue or lip, E, which departs centrally from such plate at right angles to its flat face and longitudinally of the rod C, each horn being a quadrant of a hollow cylinder of circular bore and square exterior—that is to say, each has a bore, *d*, of an arc of ninety degrees, and a perimeter composed of two sides, *e e*, of a square cylinder, the concavity or bore *d* of each horn being a continuation of the concavity or bore *a* of the accompanying plate. Each outer face, *e*, of each tongue E is flush with the inner face of the adjacent arm of the accompanying plate, and the bore *a* of each tongue is a continuation of the bore B^2 of the plate, and as a consequence the knife-edge of each tongue as the device wears preserves its original perfection and position relatively to the rod and the combined bores *a* B^2 remain an arc of ninety degrees. Each pair, E, of tongues are of course

disposed diametrically opposite each other upon the rod C, longitudinally of the latter, while the two horns of each pair are necessarily arranged diametrically opposite each other peripherally of such rod. Hence as a logical sequence the four tongues are arranged quadratially of the rod, though alternating with each other longitudinally of such rod; therefore it will be seen that the two oppositely-disposed quadrantive arcs *a a* of one pair of plates constitute, in conjunction with the quadrantive arcs *d d* of the oppositely-disposed tongues in the same plane, a complete circular bore to inclose the rod C, and that owing to the disposition of the four plates and tongues, as explained, they are permitted to slide upon or with respect to each other toward or away from a reel or imaginary rod without departing from their relative positions, for the reason that the right-angular extensions of the tongues constitute guides to determine the movements of the segmental plates. The result is a ring or tube adapted to hug the rod and capable of peripheral expansion to enable it to be applied to a rod without being dismembered and of peripheral contraction about such rod as wear ensues without disturbing the relative positions of its parts or separation of its joints.

A mistake cannot be made in assembling the parts about a rod, and the parts when in place cannot become disarranged or twist upon their seats.

If it is desired to employ Babbitt or other soft anti-friction metal as a bearing for the rod C, I construct the tongues E each of such soft metal, each tongue being let into the segmental plate or ring in any suitable manner. Fig. 4 of the drawings shows one of the tongues of Babbitt metal as inserted at its base in one of the plates.

I claim—

The herein-described packing, consisting of the two pairs of semicircular rings or plates adapted to embrace a rod and arranged quartering with respect to each other thereupon, each ring or plate having a centrally-disposed segmental tongue composing one-fourth of a circular tube of square exterior, and the tongues of each pair of plates being embraced by the arms of the opposite plates, as explained, whereby each plate and tongue moves up to the rod each in its own path, which is never disturbed.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS TRIPP.

Witnesses:
H. E. LODGE,
F. CURTIS.