

J. SCHMID-ROOST.
 PACKING RING FOR AXLE BOX BEARINGS.
 APPLICATION FILED MAY 5, 1910.

996,798.

Patented July 4, 1911.

Fig. 1

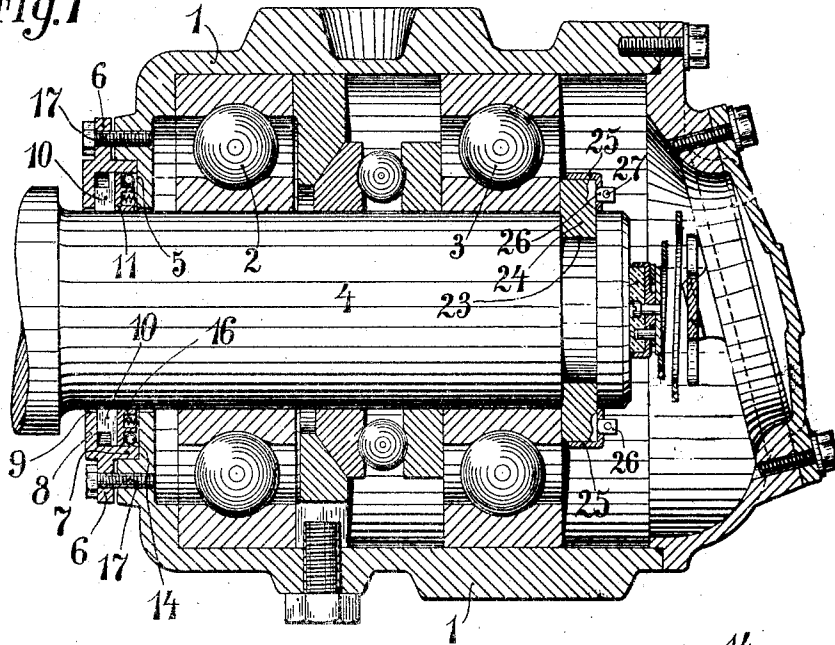


Fig. 2

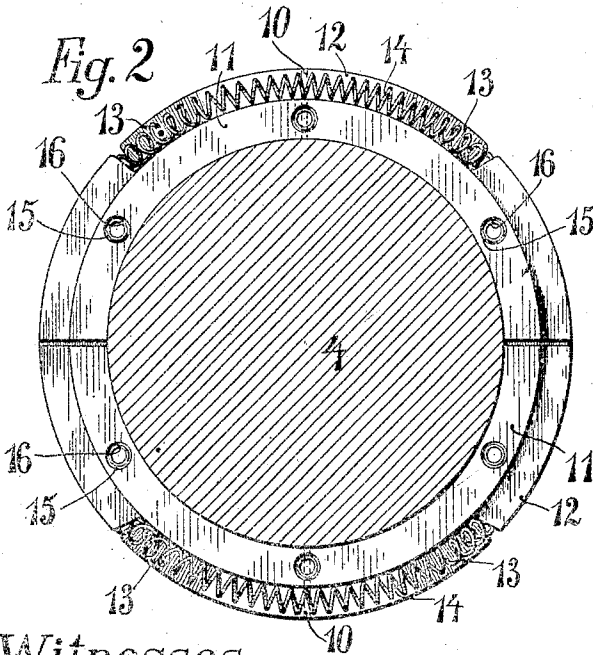
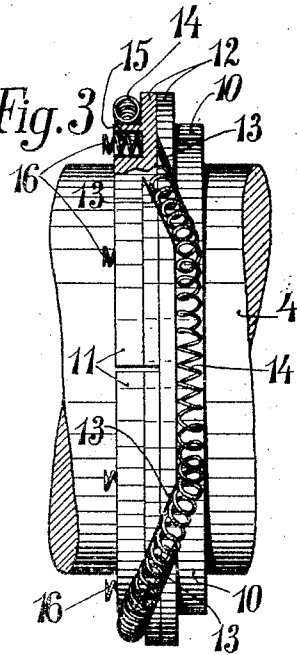


Fig. 3



Witnesses.

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PACKING-RING FOR AXLE-BOX BEARINGS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAKOB SCHMID-ROOST, a citizen of the Republic of Switzerland, residing at Haldenstrasse, Oerlikon, near Zurich, Switzerland, have invented certain new and useful Improvements in Packing-Rings for Axle-Box Bearings; 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.

Hitherto the packings for such bearings have been made of leather or felt, which, however, both possess serious drawbacks. Leather packings, for instance, wear out rapidly, unless supplied with an undue quantity of lubricant; while felt packings harden, owing to their taking up lubricant and dust. In both cases the joint is rendered defective. These drawbacks can be overcome by means of the present invention, of which a practical embodiment is illustrated in the accompanying drawings.

Figure 1 is a longitudinal section through the bearing. Fig. 2 is a cross-sectional view, showing the metallic packing on a larger scale. Fig. 3 is a side elevation of Fig. 2.

The box or housing 1, in which the axle 4 is mounted with the aid of ball-bearings 2, 3, is provided with a groove or recess 5 at the inner end. Into this recess there fits a ring 7, presenting a flange 6, whereby it can be secured to the box 1 by means of screws 17. The ring is furnished with a perforated bottom 8, constituting a closure for the bearing, and whose opening 9 is somewhat larger than is actually requisite to admit passage of the axle 4. In this ring 7 there is located a metallic packing, consisting of two composite rings 10, 11. Each ring comprises two segments, and the internal diameter corresponds with that of the axle 4, but the segment-ends do not contact, so that the segments fit tightly to the axle. The segments are set at an angle of 180° to each other, so that the joints between the segment-ends of the one ring are covered by the other ring. The segments present projecting flanges or rims 12, which abut against each other. These flanges are removed at 13, in inclined direction, and through the grooves thus

formed an endless helical spring 14 is sinusously passed. This is a tension-spring and holds the segments of the rings 10, 11 uniformly together, both in radial and axial direction. The segments 11 present pockets 15, to accommodate small helical compression-springs 16. The one end of these latter bears against the segments 11 and the other end against the bottom of the recess 5, so that the segments 10, 11 are forced against the base 8 of the ring 7. There might naturally be more than two segments in each ring 10, 11.

The end of the axle 4 is annularly grooved at 23, where it receives a split collar 24, which is held upon the axle by a perforated cap 25. The cap is secured to the ring 24 by studs 26 in the latter, which pass through holes in the cap and receive split-pins 27. The purpose of the collar 24 is to take up axial pressures arising in the bearing.

The new metallic packing is compact in length and prevents the access of dust, water, and the like to the bearing. It is also well adapted for packing movable rods in steam and other engines, for which packings are frequently used consisting of a large number of segments and thus of undue length.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is:

1. In an axle box bearing, a metallic packing, comprising two parallel abutting rings, each consisting of a plurality of segments, the joints of the one ring being covered by the other ring; and an endless spring wound sinusously around the assembled segments and holding the latter together both in radial and axial direction; substantially as described.

2. In an axle-box bearing, a metallic packing, comprising two parallel abutting rings, each consisting of a plurality of segments presenting slotted flanges, the joints of the one ring being covered by the other ring; and an endless spring passing through the flange-slots and wound sinusously around the assembled segments and holding the latter together both in radial and axial direction, substantially as described.

3. An axle-box bearing, comprising a housing having a recess at its inner end, an annular member mounted in the recess ha-

ing a perforation in its bottom to receive an
axle, two parallel abutting rings mounted in
the annular member each consisting of a
plurality of segments having flanges diag-
5 onally slotted, the joints of one ring being
covered by the other ring, an endless helical
spring passing through the diagonal slots
and wound sinuously around the assembled
segments, the segments of the inner ring be-
10 ing provided with pockets, and helical com-

pression springs mounted in said pockets
and bearing against the bottom of the recess.

In testimony that I claim the foregoing
as my invention, I have signed my name in
presence of two subscribing witnesses.

JAKOB SCHMID-ROOST.

Witnesses:

ERNST FISCHER,
CARL CUBLER.