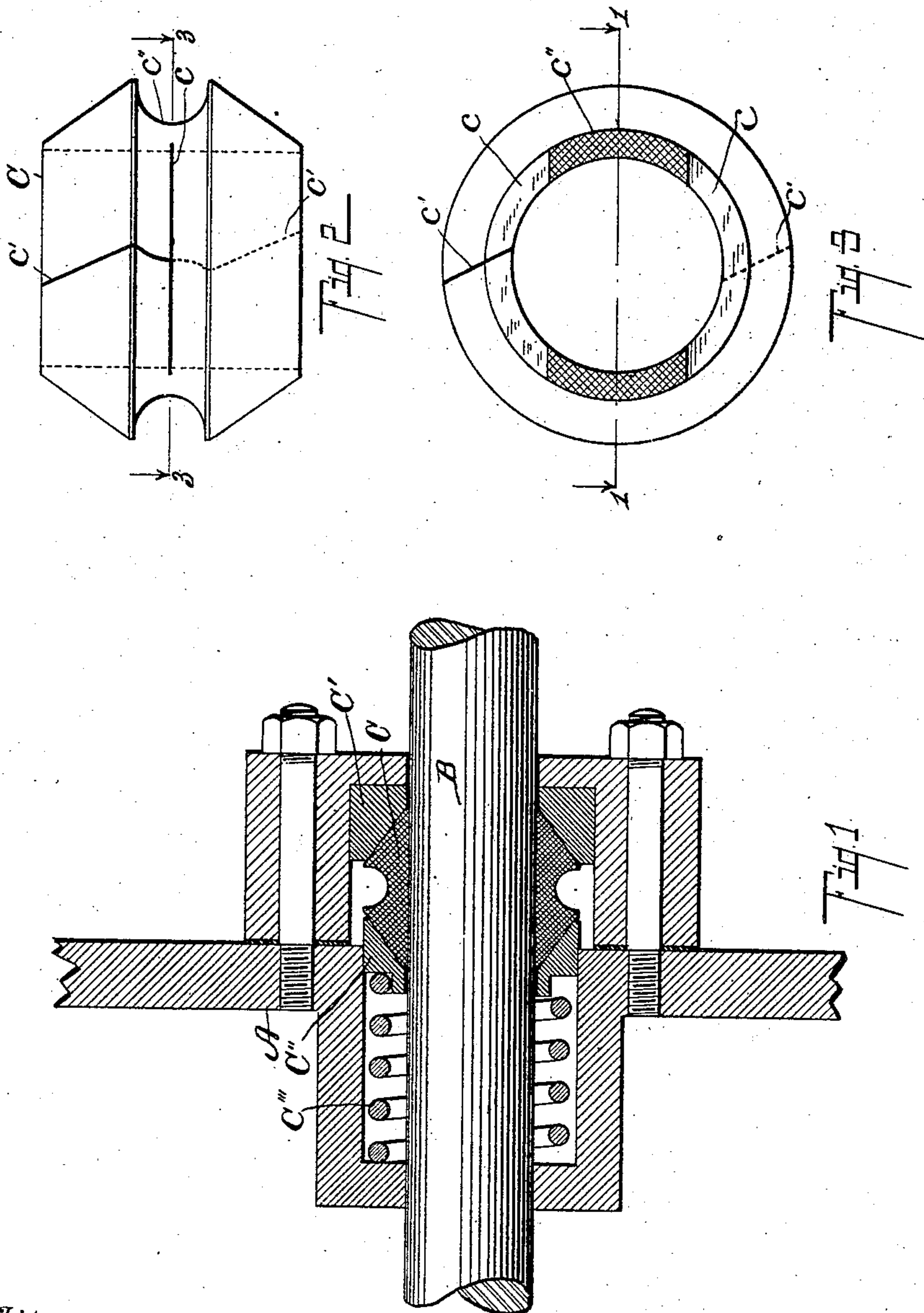


No. 848,533.

PATENTED MAR. 26, 1907.

E. G. BOSTWICK.
PISTON ROD PACKING.
APPLICATION FILED JUNE 16, 1906.



Witnesses:

W. T. Adams
Lulu Greenfield

Inventor,

Edwin G. Bostwick

By *Chappell & Earl*
Att'ys

UNITED STATES PATENT OFFICE.

EDWIN G. BOSTWICK, OF KALAMAZOO, MICHIGAN.

PISTON-ROD PACKING.

No. 848,533.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed June 16, 1906. Serial No. 322,031.

To all whom it may concern:

Be it known that I, EDWIN G. BOSTWICK, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Piston-Rod Packings, of which the following is a specification.

This invention relates to improvements in piston-rod packings.

The objects of this invention are, first, to provide an improved piston-rod packing which is effective for the purpose and very durable; second, to provide an improved piston-rod packing which is automatically adjusted to compensate for wear.

Further objects and objects relating to structural details will definitely appear from the description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a detail section of a structure embodying the features of my invention, taken on a line corresponding to line 1 1 of Fig. 3, the piston-rod B being shown in full lines. Fig. 2 is a plan of my improved ring C. Fig. 3 is a section taken on a line corresponding to line 3 3 of Fig. 2.

In the drawings similar letters of reference refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines.

Referring to the lettered parts of the drawings, A represents a cylinder-head, and B a piston-rod. The cylinder-head is provided on the inside with a pocket A', through which the piston-rod is arranged, and with a gland A''. This packing-gland is secured in position by suitable bolts, as *a*.

My improved packing-ring is of metal and is in the form of a double cone and is provided with an annular groove *c* between the cones. The ring C also has oppositely-arranged circumferential slots *c'* in the grooved portion thereof. The cones of ring C are also cut or slotted at *c''*, which slots extend from the edges of the cones to the circumferential slits *c*. The slots *c''* are cut diagonally through the cones, as illustrated. The

slots *c''* are oppositely arranged—i. e., the slit of one of the cones opens into one of the slots *c'* and the other into the opposite slot *c'*. (See Fig. 3.) By thus slotting the ring the two cones are joined together only by the parts *c'''*. (See Fig. 3.)

A concaved ring C is arranged in the gland A'' to form a seat for the packing-ring. A concaved follower or compression-ring C'' is provided, the ring C'' held against the packing-ring by the coiled spring C''', which is arranged in the pocket A' on the cylinder-head. As this follower or compression-ring C'' is forced upon the packing-ring it gradually compresses it as it is worn away by the piston-rod, thereby maintaining a tight joint. The annular groove and the slits readily permit this and also allow the two cone portions of the packing-rings to close up or compress independently of each other.

By forming and arranging the parts as I have illustrated and described I secure a piston-rod packing which is very effective and at the same time does not have an undue amount of friction or tension upon the piston-rod. It automatically adjusts itself for wear and requires practically no attention until worn out. It is very easily applied and may be used on structures now in common use. If found necessary, the ring may be divided for placing upon the piston-rod. In doing this the ring is preferably cut through each cone to the center slits C' on opposite sides of the ring, breaking the joints.

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

1. The combination with a cylinder-head and piston-rod, of a gland, a double-cone metallic packing-ring having an annular groove between its cones with opposite circumferential slots in the said groove, the said cone portions having radial slots there-through opening into said circumferential slots; a concaved seat-ring for said packing-ring arranged in said gland; a concaved follower or compression-ring for said packing-ring; substantially as described.

2. The combination of a double-cone metallic packing-ring having an annular groove between its cones with circumferential slots in the said groove, the said cone portions having radial slots therethrough opening into said circumferential slots; a concaved seat for said packing-ring; a concaved

follower or compression-ring; and a coiled spring arranged to bear thereon, as specified.

3. The combination of a double-cone metallic packing-ring having an annular groove
5 between its cones with circumferential slots in the said groove, the said cone portions having radial slots therethrough opening into said circumferential slots; a concaved
10 seat for said packing-ring; a concaved follower or compression-ring for said packing-ring, as specified.

4. The combination of a double-cone metallic packing-ring having an annular peripheral groove between its cones; a concaved
15 seat for said packing-ring; a concaved fol-

lower or compression-ring; and a coiled spring arranged to bear thereon, as specified.

5. The combination of a double-cone metallic packing-ring having an annular peripheral groove between its cones; a con- 20
caved seat for said packing-ring; a concaved follower or compression-ring, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two wit- 25
nesses.

EDWIN G. BOSTWICK. [L. s.]

Witnesses:

LULU G. GREENFIELD,

OTIS A. EARL.