No. 647,313. Patented Apr. 10, 1900.

T. W. MITCHELL.

METALLIC PACKING.

(Application filed Oct. 5, 1899.)

(No Model.)

Fig. 1

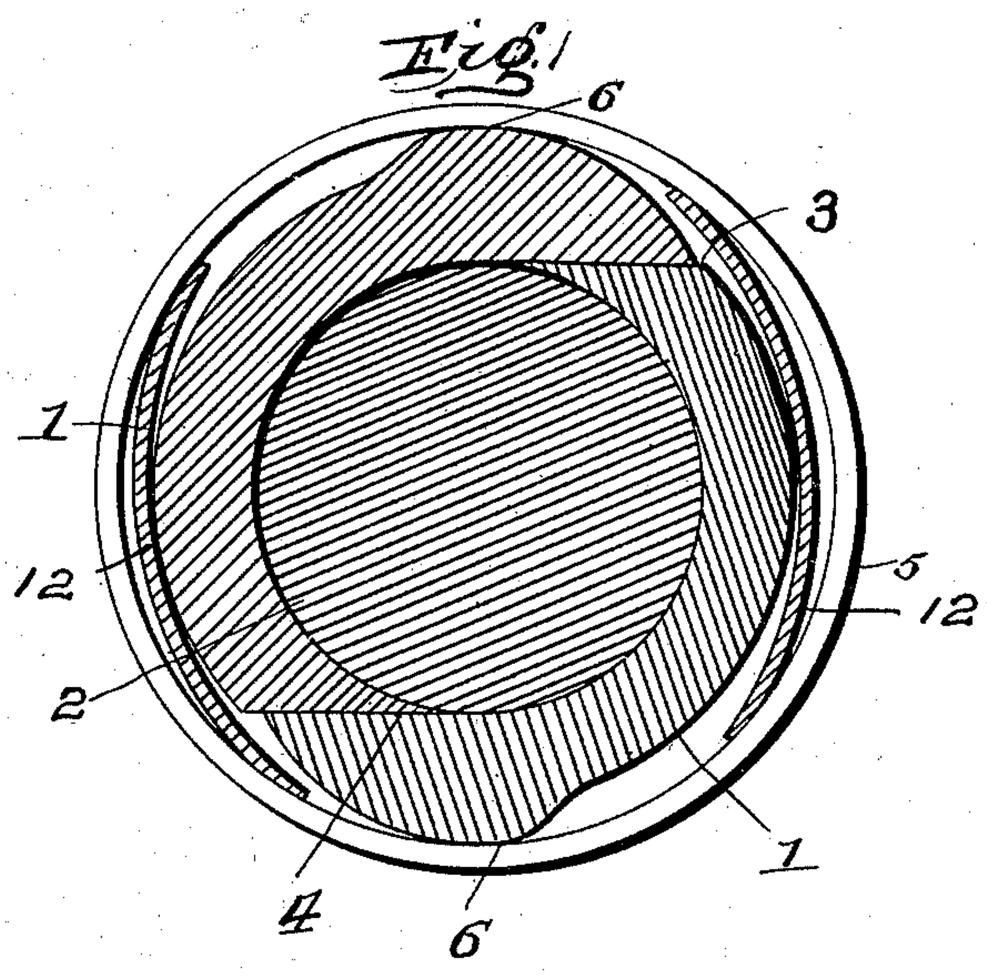
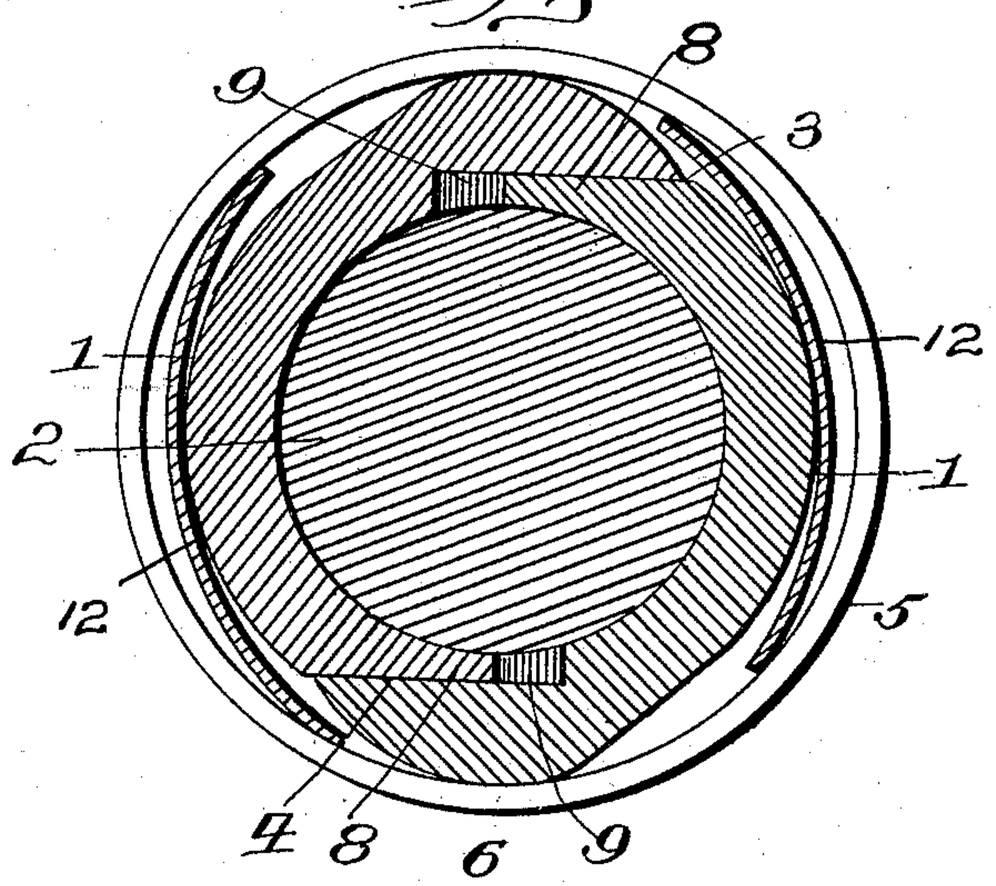


Fig. 2.



Witnesses
J. M. Fowler Jr.
J. B. Peyton Jr.

Inventor
Thomas W. Mitchell
by Church & Church
his Attorneys

UNITED STATES PATENT OFFICE.

THOMAS W. MITCHELL, OF SOUTH OMAHA, NEBRASKA.

METALLIC PACKING.

SPECIFICATION forming part of Letters Patent No. 647,313, dated April 10, 1900.

Application filed October 5, 1899. Serial No. 732,702. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. MITCHELL, a citizen of the United States, residing at South Omaha, in the county of Douglas and State of Nebraska, 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 same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures of reference marked thereon.

The present invention relates to packings to make joints between moving parts, as the piston-rod and piston-head of an engine, steam or gas tight, such as shown and described in my application Serial No. 697,985, and the present invention is designed to simplify and improve the construction shown in said application.

To this end the invention consists in certain novel details of construction and combinations and arrangements of parts, all as will now be described and the particular features of novelty pointed out in the appended claims.

In the drawings, Figure 1 is an elevation showing the packing-ring sections in position within the retainer. Fig. 2 is a similar view showing a modified form of packing-ring.

Similar figures of reference in both views indicate the same parts.

As described in my before-mentioned application, the packing-rings are preferably made in two sections or segments, each adapted to encircle one-half, more or less, of the piston-rod, and are confined within a retainer, all arranged within a packing-gland.

Referring particularly to Fig. 1, it will be seen that the sections of the packing-ring marked 1 are adapted to embrace the piston-rod 2. Each section on the inner side is provided with a flat surface 3, while at the opposite end a flat surface 4 is provided, said flat surfaces being in parallel planes, contacting with each other and forming sliding bearings. As thus far described, the construction does not differ from what is shown in my former application; but instead of employing a retainer such as described in said application I employ in the present instance a circular retainer 5, having an internal circular bearing-surface. Each of the packing-ring sections is formed or provided on opposite ends with external rounded or circular bearing-surfaces 6, which coöperate with the internal surface of the retainer. These bearing-surfaces may be formed in any preferred manner, the only essential being that they be of such form that the sections will be permitted a rocking motion within the retainer.

To take up wear or to accommodate to irregularities, the flat bearing-surfaces 4 at the inner ends of the ring-sections are advanced or caused to retreat, sliding on the contacting surface 3 of the other ring-section, this movement of the inner ends of the ring-sections being permitted by reason of the rocking movement of the sections at the opposite ends on the retainer.

In Fig. 2 there is illustrated a modified form of ring-sections, the construction being the same as that previously described, except that the opposite end of each of the sections has a projection 8 adapted to fit within a recess or seat 9 in the coöperating section, said recess and seat having straight contacting bearing-surfaces. The operation of this construction is the same as that previously described. The pressure within the gland is utilized to advance the sections against the piston-rod, although I preferably employ flat springs 12 in addition to accomplish this.

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

1. In a metallic packing, the combination of the retainer, of the packing-ring sections each having a pivotal contact with the retainer at one end, and a sliding contact with the coöperating section at the opposite end; substantially as described.

2. In a metallic packing, the combination with the retainer, of the packing-ring sections, each having a pivotal contact, with the retainer at one end, the meeting ends of said section having coöperating overlapping projections having straight contacting bearing-surfaces; substantially as described.

3. In a metallic packing, the combination with an annular retainer, of packing-ring sections each having oppositely-arranged external rounded bearing-surfaces coöperating with the internal curved surface of the retainer, the meeting ends of said sections hav-

ing coöperating overlapping projections having straight contacting bearing-surfaces; substantially as described.

4. In a metallic packing, the combination with the annular retainer, of the packing-ring sections each having oppositely-arranged external rounded bearing-surfaces, coöperating with the internal curved surface of the retainer, the meeting ends of said sections being provided with projections and recesses having straight contacting bearing-surfaces; substantially as described.

THOMAS W. MITCHELL.

Witnesses:
C. E. THOMPSON,
H. M. CHRISTIE.