

(No Model.)

E. H. STONE.
ROD PACKING.

No. 471,577.

Patented Mar. 29, 1892.

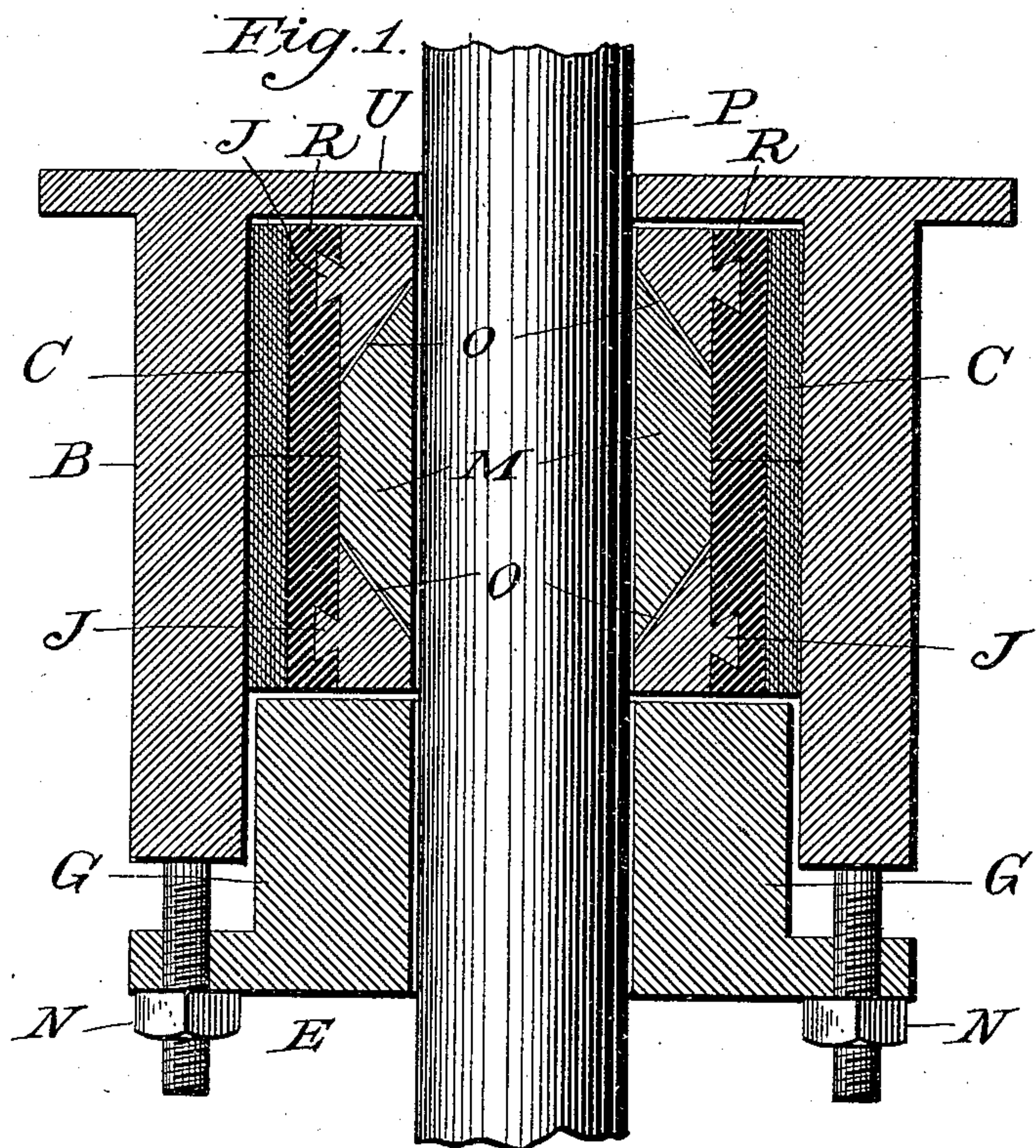
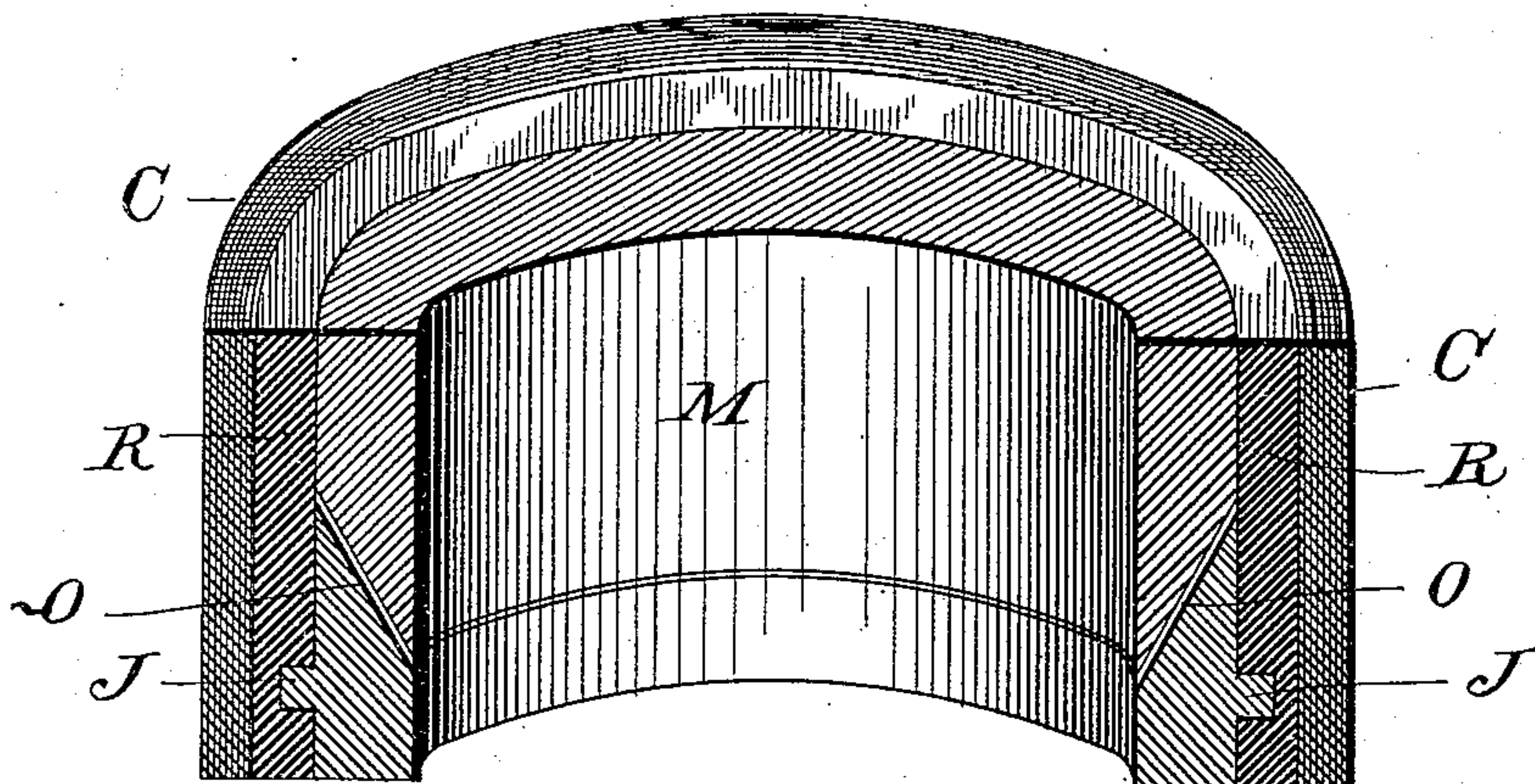


Fig. 2.



Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

EDWARD H. STONE, OF WEST BAY CITY, MICHIGAN, ASSIGNOR OF ONE-HALF
TO JOHN S. McNEILL, OF SAME PLACE.

ROD-PACKING.

SPECIFICATION forming part of Letters Patent No. 471,577, dated March 29, 1892.

Application filed June 26, 1891. Serial No. 397,647. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. STONE, a citizen of the United States, residing at West Bay City, in the county of Bay and State of Michigan, have invented a new and useful Packing, of which the following is a specification.

This invention relates to packing more especially adapted for use in connection with piston-rods or with other rods or shafts that have a reciprocatory, an oscillatory, or a rotary motion.

The object of the invention is to provide a packing of this character which is capable of being adjusted to take up for wear, but which will set so close to the rod as to prevent the escape of water or steam when such rod is a piston-rod.

To this end the invention consists of the specific details of construction, substantially as hereinafter more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a central longitudinal section of this invention, showing a piston-rod in elevation as passing therethrough. Fig. 2 is a perspective view, on an enlarged scale, of a portion of the packing proper.

Referring to the said drawings, the letter P designates the piston-rod, which moves longitudinally in the present instance through a box B. One end E of the latter is adjustable toward the body of the box by means of bolts and nuts N in the usual manner, and this end carries glands G, which move within the interior of the box, as shown.

My improved packing consists of an inner cylinder M, of soft metal, whose ends are severed from its body on oblique lines O, and said end pieces have projections J on their exterior faces, which may be dovetailed or plain, as shown. Upon the exterior of this metal cylinder is a cylinder R, of rubber, which is molded or formed upon the metal cylinder M and over and around the projections J in any suitable manner. Around the outside of the rubber cylinder is the third cylinder, composed of alternated strips of canvas and rubber fabric wound tightly round and round. The two outer cylinders may be, and prefer-

ably are, divided transversely at about the center of the central portion of the metal cylinder. The three cylinders are preferably connected by a suitable cement or fastening, although this is not absolutely essential.

In operation this improved packing is placed within the box B, about as shown in Fig. 1, and the glands G are brought against one end thereof, while the other end bears against the upper end U of the box. The nuts N are now turned to move the glands inwardly, and the result is that the end portions of the metal cylinder M are driven slightly in behind the central portion of this cylinder on account of the oblique lines O separating these portions. The rubber and the canvas and rubber cylinders yield slightly during this longitudinal compression of the packing, and the softness of the metal cylinder permits it to adjust itself to the exterior of the piston-rod P so closely that no leakage of steam can occur. When the parts wear, the adjustment may be repeated, as above. When the dovetailed projections J are used, it is obvious that the cement will be unnecessary, although its use will do no harm.

Considerable change in the details of construction may be made without departing from the spirit of my invention.

What is claimed as new is—

1. The herein-described packing, the same comprising an interior cylinder of soft metal having a dovetail projection, a soft-rubber cylinder around the same and inclosing said projection, and an exterior cylinder composed of alternate strips of canvas and rubber fabric, as and for the purpose set forth.

2. The herein-described packing, the same comprising an interior cylinder of soft metal divided on oblique lines, a surrounding cylinder of soft rubber spanning the division-lines, and connections, substantially as described, between the rubber cylinder and that section of the interior whose edge stands outside the edge of an adjacent section, as set forth.

3. The herein-described packing, the same comprising an interior cylinder of soft metal whose ends are divided from its central portion on oblique lines, a surrounding cylinder of soft rubber spanning the division-lines, and an exterior cylinder of fabric of the same

length as the rubber cylinder, and connections, substantially as described, between the cylinders, as set forth.

4. The herein-described packing, the same
5 comprising an interior cylinder of soft metal whose ends are divided from its center on oblique lines, dovetailed projections on the outer faces of said ends, a surrounding cylinder of soft rubber, and an exterior cylinder of fabric
10 cemented on the rubber, in combination with a stuffing-box within which said packing is

located, and means for moving one end of the box toward the other, as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as 15 my own I have hereto affixed my signature in presence of two witnesses.

EDWARD H. STONE.

Witnesses:

JOHN H. BLOMFIELD,
SAMUEL L. BRIGHAM.