

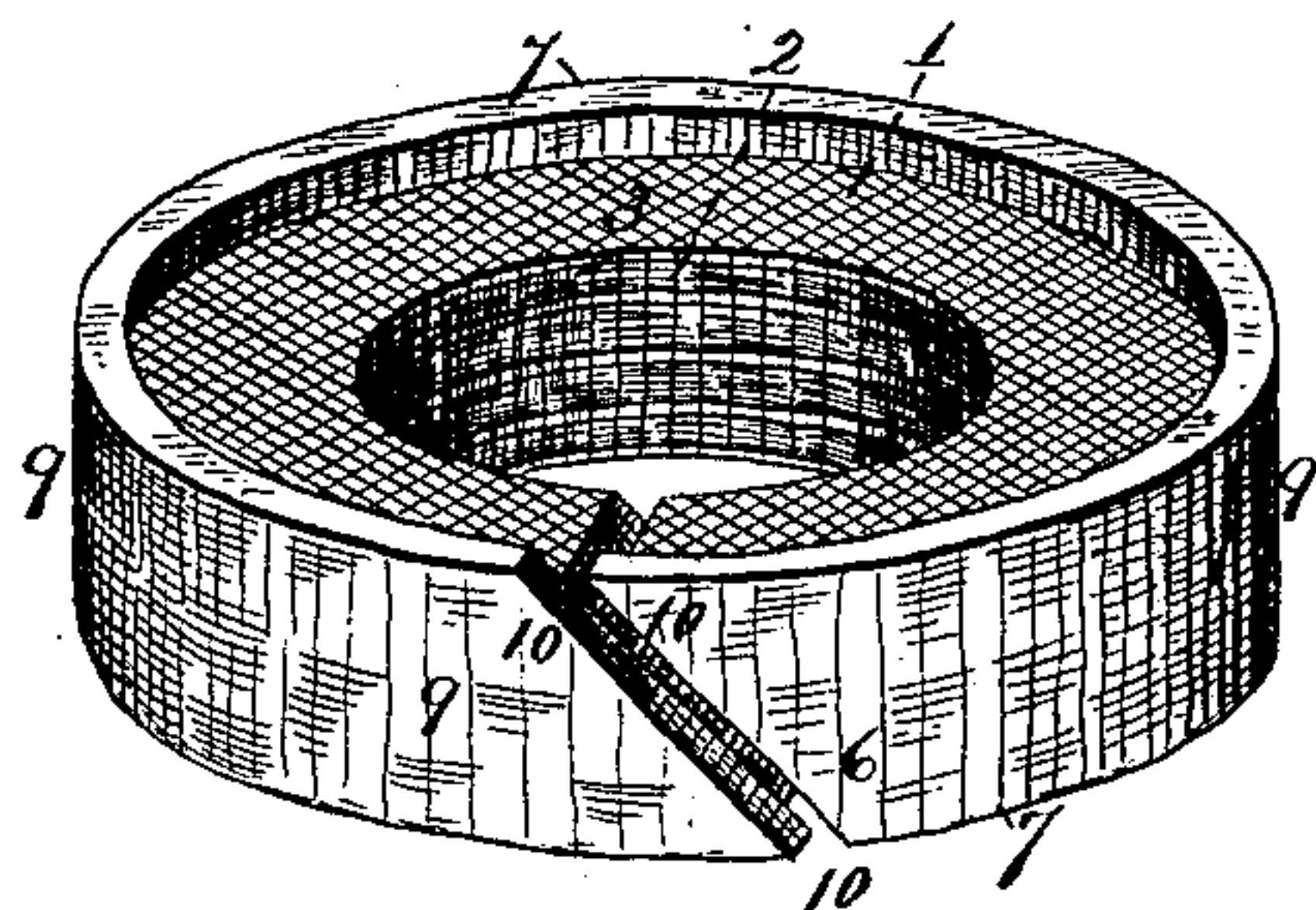
(No Model.)

H. H. PHILPER.  
PISTON ROD PACKING.

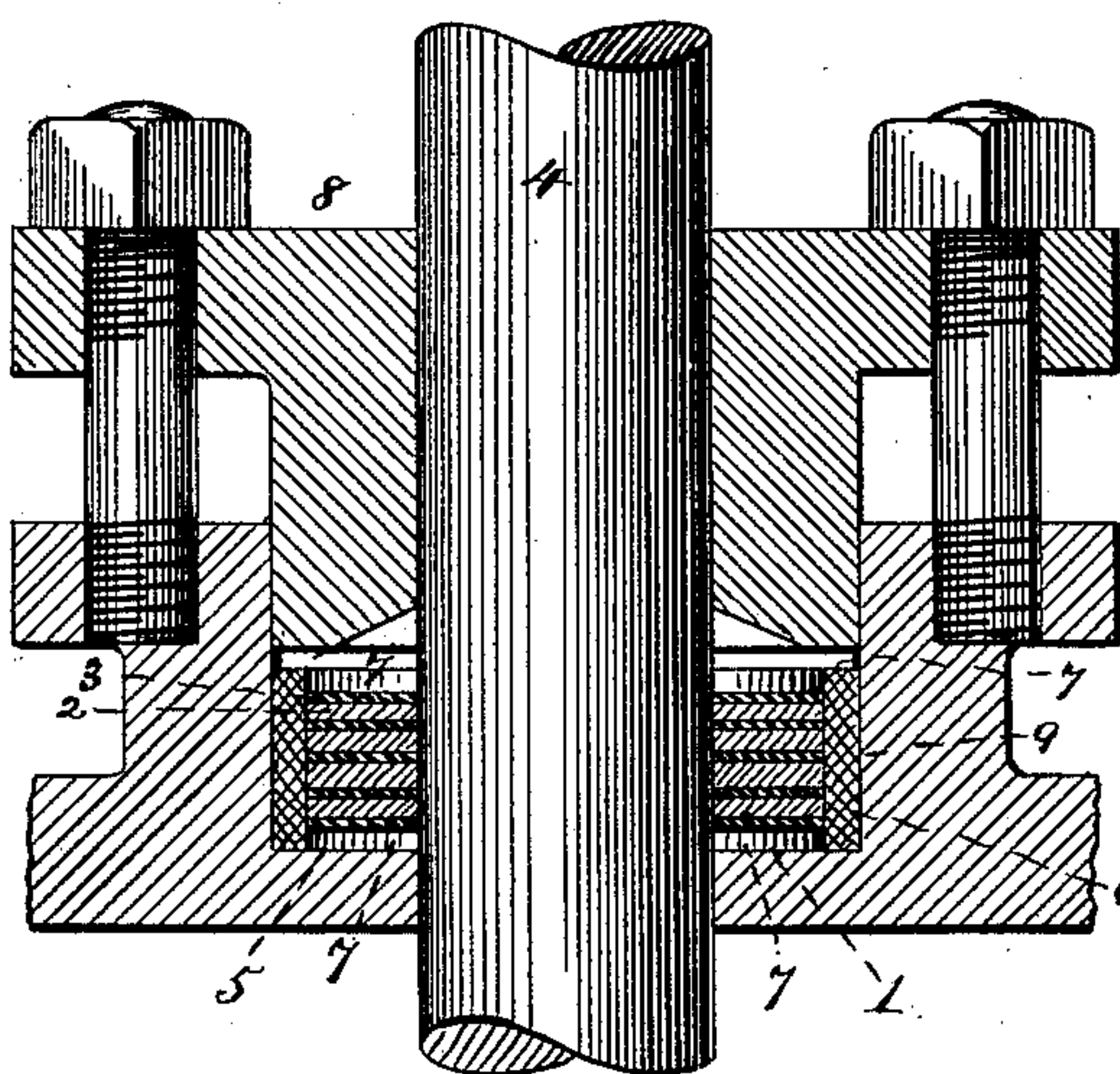
No. 410,918.

Patented Sept. 10, 1889.

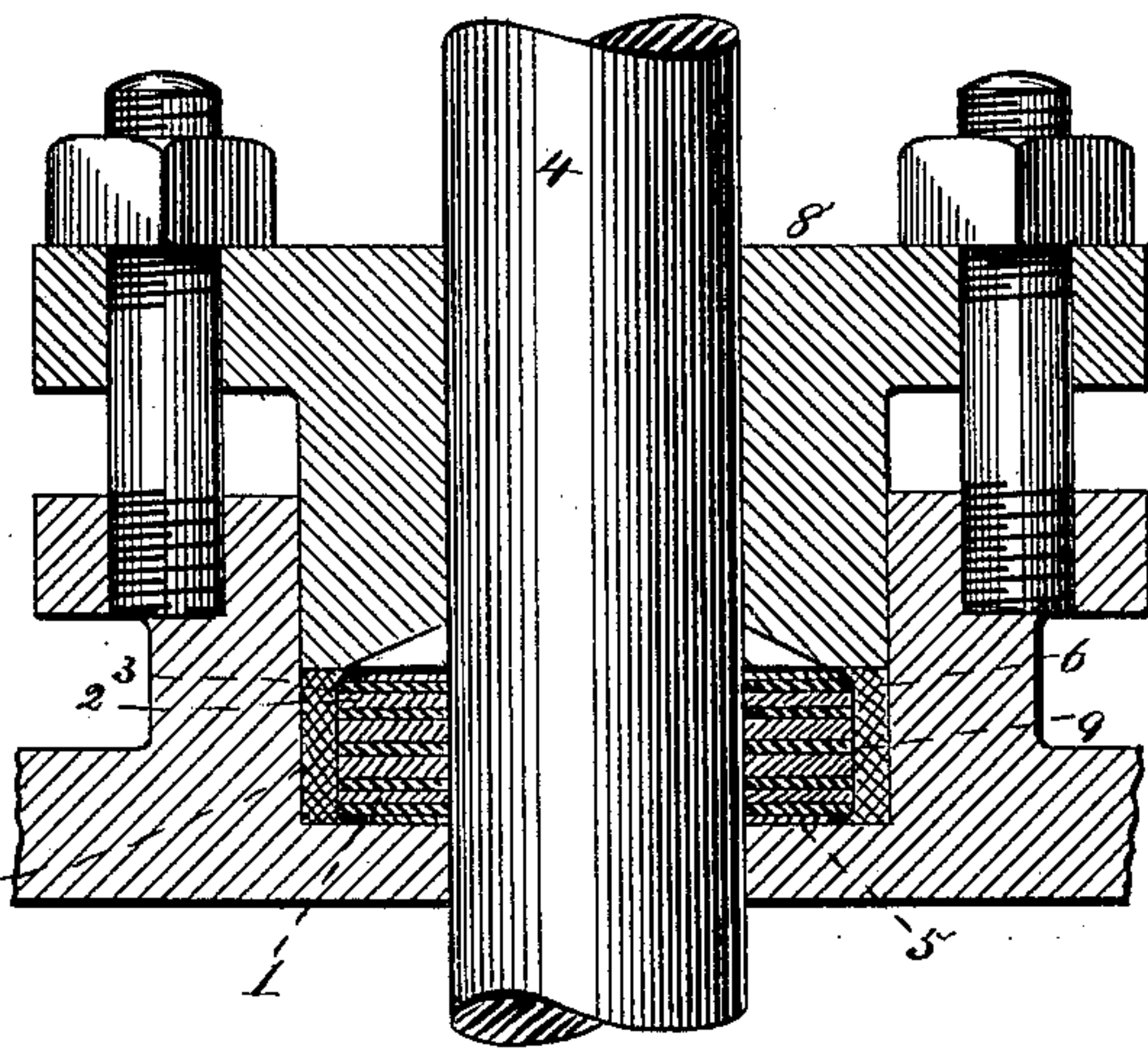
*Fig. I.*



*Fig. II.*



*Fig. III.*



Attest:  
Emma Arthur  
M. J. Larcom

Inventor,

Harry H. Philper.

By Knight Bros.  
attys



# UNITED STATES PATENT OFFICE.

HARRY H. PHILPER, OF ST. LOUIS, MISSOURI.

## PISTON-ROD PACKING.

SPECIFICATION forming part of Letters Patent No. 410,918, dated September 10, 1889.

Application filed December 4, 1888. Serial No. 292,617. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY H. PHILPER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Piston-Rod Packings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 Figure I is a perspective view of the packing. Fig. II is an axial section with the gland elevated above the packing; and Fig. III is a similar view, except that the packing is shown compressed by the gland.  
15 The material used for the disks forming the body 1 of the packing is composed of thick or textile fabric or ducking 2, with a sheet of india-rubber 3 vulcanized upon one side of it. This article is well known to the  
20 trade, being used for various purposes. The material is stamped or cut into disks, whose smaller diameter may be about equal to the rod 4, and the outer diameter may be somewhat less than the interior diameter of the  
25 stuffing-box 5, so as to give place for the surrounding cylinder or covering 6, which consists of india-rubber, whose ends 7 lap past the body 1 at top and bottom. It will be seen that when the gland 8 is pressed down upon  
30 the cylinder the sides of the cylinder are laterally expanded or thickened and press the body directly inward against the rod 4. The cylinder or covering 6 is stuck fast to the circumference of the body by some material  
35 which will cease to act as an adhesive when the packing is in use, owing to the heat or moisture to which the packing is subjected. For this purpose glue or any adhesive may be used, upon which the heat or moisture will  
40 act so as to detach the rubber covering from the body and allow one to slip on the other.

The purpose of having the rubber covering loose is to enable it to slip upon the body when it is compressed endwise, without carrying the edges of the disks with it. If preferred, the rubber covering and body may be stuck together only at their mid-length 9, so that the ends may have freedom to slip inward toward this point. In this case the adhesive material may be such as to make a permanent attachment.

In the manufacture the disks 2 3 are immersed in heavy coal-oil having a density of about 29° Baumé to cause the thorough saturation of the ducking 3. Air or steam pressure may be applied to force the oil into the pores of the fabric.

Before applying the packing to the rod it is usually cut through at one side, preferably in a diagonal direction, as seen at 10, Fig. I. If the diameter of the packing is too great for the stuffing-box, a section may be removed at this point, so that when the edges 10 are brought together the packing will be reduced to the same circumference as the box.

I claim as my invention—

1. In a rod-packing, the combination of disks composed of layers of textile fabric and rubber, and a surrounding covering lapping past the body 1 at each end, substantially as and for the purpose set forth.

2. The combination, in a rod-packing, of disks laid flat together, each disk composed of layers of textile substance and india-rubber, and a surrounding rubber covering stuck fast to the circumference of the body, composed of said disks and lapping past said body, substantially as set forth.

HARRY H. PHILPER.

Witnesses:

SAML. KNIGHT,  
BENJN. A. KNIGHT.