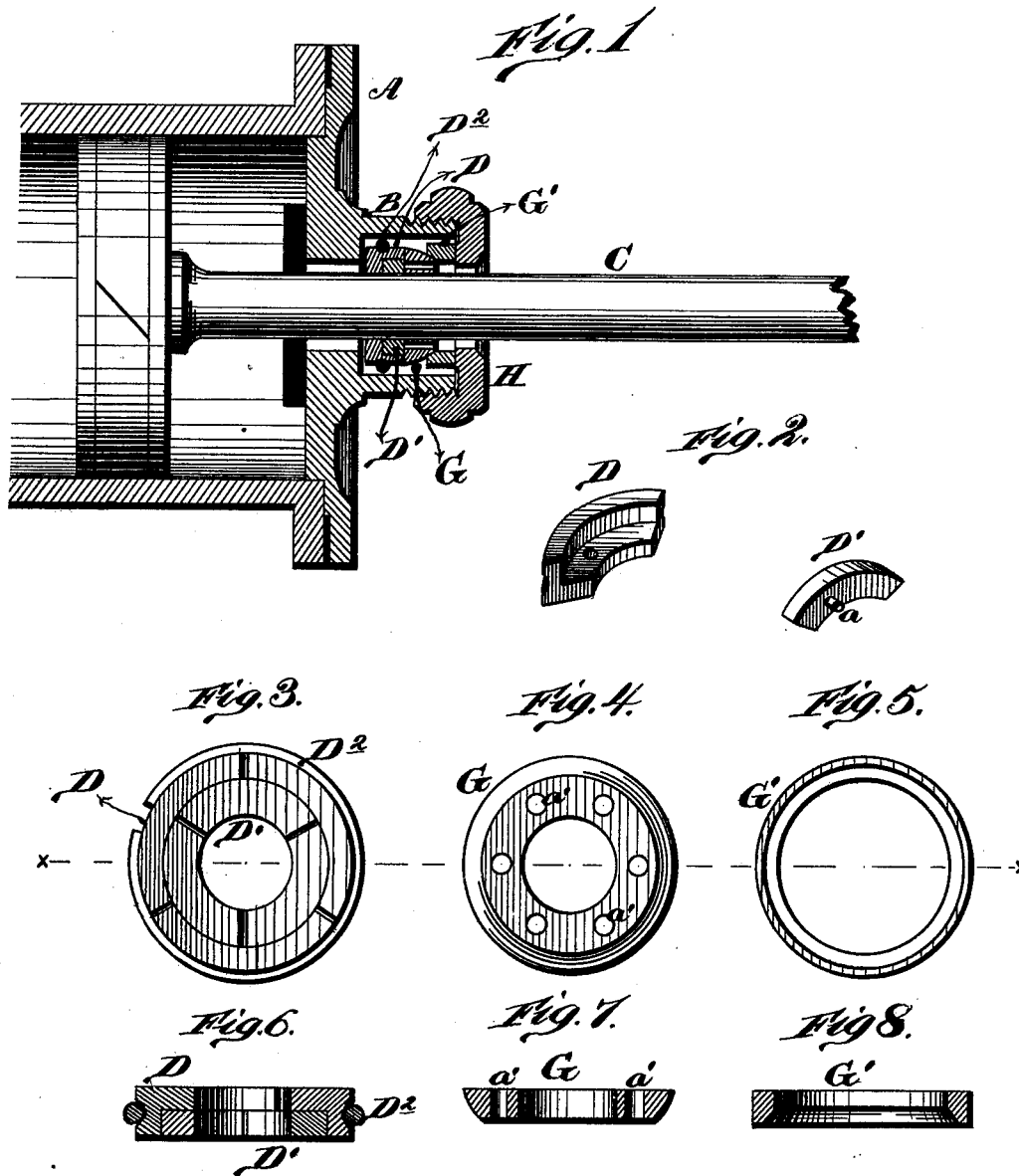


F. D. TOUCEY & E. F. SCALLEN.  
 PACKING FOR PISTON-RODS.

No. 195,421.

Patented Sept. 18, 1877.



WITNESSES  
*Robert Everett*  
*George E. Upham*

INVENTOR.  
*Ferris D. Toucey,*  
*Edward F. Scallen,*  
*Gilmore & Smith Co.*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

FERRIS D. TOUCEY AND EDWARD F. SCALLEN, OF MINNEAPOLIS, MINN.

## IMPROVEMENT IN PACKING FOR PISTON-RODS.

Specification forming part of Letters Patent No. **195,421**, dated September 18, 1877; application filed June 30, 1877.

*To all whom it may concern:*

Be it known that we, FERRIS D. TOUCEY and EDWARD F. SCALLEN, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and valuable Improvement in Packing for Piston-Rods; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical central sectional view of our packing for piston-rods; and Figs. 2, 3, 4, 5, 6, 7, and 8 are details of the same.

The nature of our invention consists in the construction and arrangement of a packing for piston-rods for steam-engines, pumps, &c., as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate our invention.

A represents the cylinder-head, formed with the box B on its outer side, and through which the piston-rod C passes. Around this rod, within the box B, is placed the packing, consisting of an L-shaped sectional ring, D, provided with an interior sectional ring, D<sup>1</sup>, and surrounded by an open spring, D<sup>2</sup>, as springs. The rings D and D<sup>1</sup> are arranged to break joints, and a pin, a, connects one section of one ring with one section of the other ring, whereby they are prevented from turning, so as to open the joints, which would cause the steam to escape.

On top of this packing is placed a ring, G, made in one piece, having its inner surface flat, and its edge made beveled and convex,

said ring covering the segmental packing-rings, and forming the male portion of a ball-joint. The female portion of this ball-joint is formed of a ring, G', having a concave surface fitting over the convex surface of the ring G. A cap-nut, H, is then screwed on, which confines all the parts in the box B.

The segmental packing-rings D D<sup>1</sup> could not be used successfully alone, as all steam-engine piston and valve rods have three different motions at the same time, namely, forward or backward, oscillating, and lateral motions; but the ball-joint rings G G' cover these three motions, and keep the segment-rings square on the rod in all cases.

The ring G is provided with a series of ports or holes, a', for the escape of any steam which may enter behind it, thus incidentally relieving the steam-pressure of the ring G on the ring G', and lessening the friction of the former on the latter.

What we claim as new, and desire to secure by Letters Patent, is—

The combination, with the cylinder-head A, box B, and piston-rod C, of the L-shaped perforated sectors D and sectors D<sup>1</sup>, having pins a, and arranged to break joints with each other, spring D<sup>2</sup>, male ring G, with holes a', female ring G', and cap H, as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

FERRIS D. TOUCEY.  
EDWARD F. SCALLEN.

Witnesses:

O. NAEGELL,  
W. S. HUGHES.