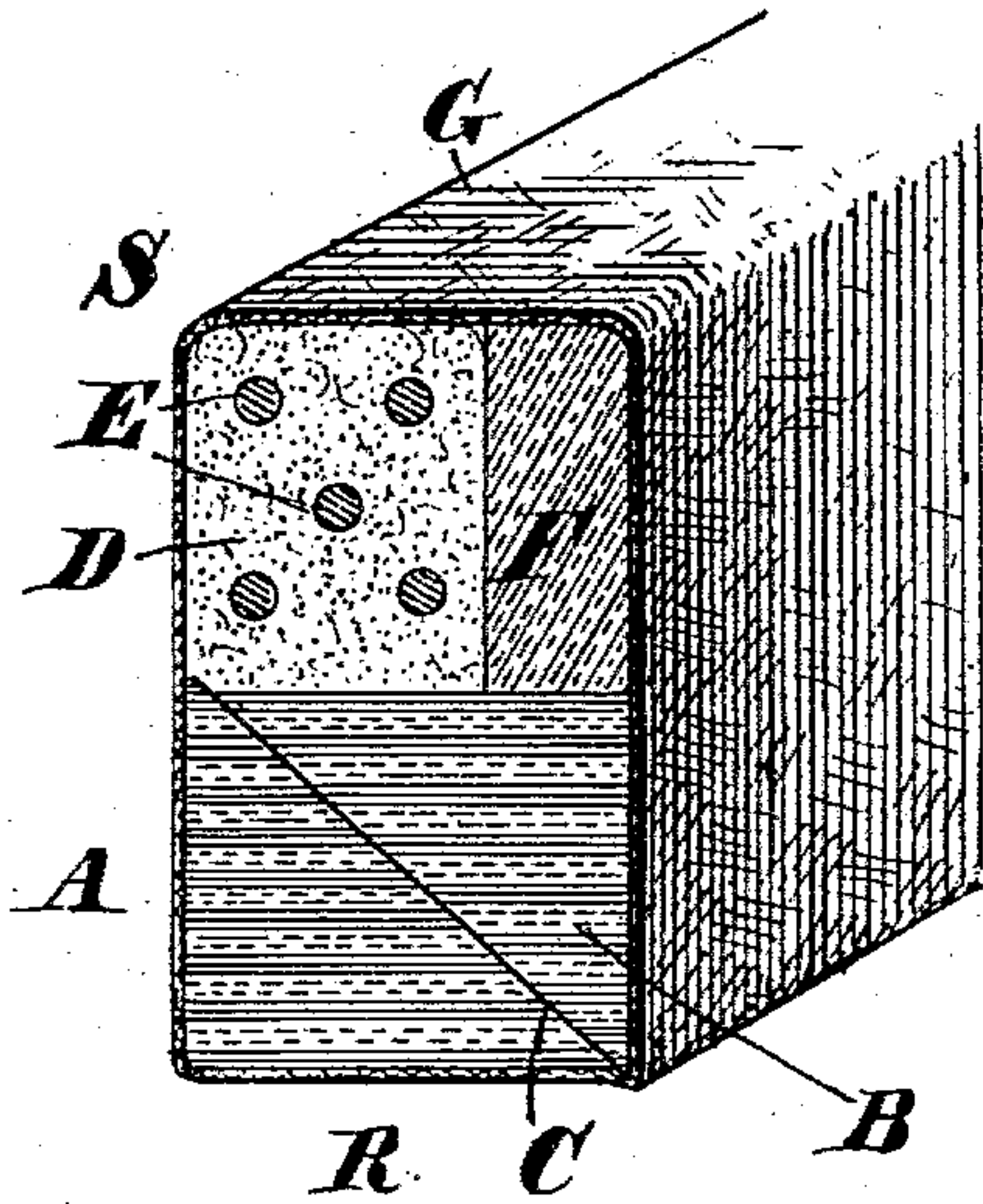


No. 745,643.

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M. MONTGOMERY.  
PACKING FOR PISTON RODS.  
APPLICATION FILED SEPT. 11, 1903.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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BROTHERS, OF PHILADELPHIA, PENNSYLVANIA, A FIRM.

## PACKING FOR PISTON-RODS.

SPECIFICATION forming part of Letters Patent No. 745,643, dated December 1, 1903.

Application filed September 11, 1903. Serial No. 172,758. (No model.)

*To all whom it may concern:*

Be it known that I, MARSHALL MONTGOMERY, of the city and county of Philadelphia and State of Pennsylvania, have invented an  
5 Improvement in Packing for Piston-Rods, of which the following is a specification.

My invention has reference to packing for piston-rods; and it consists of certain improvements, which are fully set forth in the  
10 following specification and shown in the accompanying drawing, which forms a part thereof.

The object of my invention is to provide a packing suitable for piston-rods and other  
15 uses which shall have great self-adjustability, thereby making it automatic in reshaping and adjusting itself to compensate for wear.

In carrying out my invention I provide a packing consisting of a flexible rubber-and-  
20 canvas strip divided diagonally in the direction of its length, so that the two parts may slide over each other to compensate for wear in the width, combined with a second member arranged above one of the rubber-and-  
25 canvas strips, consisting of a textile packing to hold the lubricant, preferably provided with lead or ductile-metal wires embedded within it, and an elastic rubber strip extending vertically to one side of the textile material and pressing downward upon one of  
30 the canvas-and-rubber strips, whereby it performs the dual function of adjusting the textile portion laterally and the rubber-and-canvas strip vertically. In this manner the  
35 packing as a whole has great capacity for automatically adjusting itself to compensate for wear of all members of the packing.

My invention will be better understood by reference to the drawing, in which is shown  
40 a perspective view of a packing embodying my invention with part in cross-section.

R is the lower member, and S the upper member, of the packing, and these are superimposed and inclosed within a sheath G of  
45 braided textile fiber.

The lower member is composed of the rubber-and-canvas strand divided diagonally, as at C, to form two strips A and B of triangular cross-section and adapted to slide one upon  
50 the other under vertical pressure, so as to cause them to spread laterally to compensate for lateral wear. This member R has flexi-

bility to adapt it to fit the rod, but has practically little or no elasticity.

The upper member S is composed of a strand 55 of textile material, D, in which are preferably embedded a series of wires of lead or other ductile metal, and a second strand, F, of elastic rubber, having a height equal to that of the textile strand and a width sufficient to  
60 give considerable elasticity. This rubber strand F presses laterally against the textile strand and vertically upon the diagonal strip B of the lower member.

In operation the elasticity of the rubber 65 strand F exerted laterally and vertically performs the dual function of feeding the textile strand against the rod to compensate for wear and also of forcing down the strip B to spread the lower member R to compen-  
70 sate for wear of the lateral wall of the strip A. This adjustment is shown as having taken place to a slight extent in the drawing. This double function of the rubber strand F is most important, as it insures the entire  
75 width from top to bottom of the packing to be automatically adjusted to compensate for wear throughout the entire lateral face against the moving piston-rod. The rubber  
80 is put into a condition capable of exerting its adjusting capacity by the compression given to the packing in the initial adjustment of the gland of the stuffing-box, and it continues to exert that influence until it has fully  
85 expanded. Upon further adjustment of the gland the rubber F will once more be brought to a degree of compression to again exert its adjusting capacity.

Having now described my invention, what I claim as new, and desire to secure by Letters 90 Patent, is—

1. A packing consisting of the combination of two longitudinal members superimposed one upon the other, one member being the full width of the packing comparatively non- 95 compressible and divided diagonally to form two strips of triangular cross-section and the other member being composed of a strand of textile material, and a strand of elastic rubber of a height substantially equal to that of  
100 the textile strand and resting upon the top of one of the triangular strips of the first-mentioned member.

2. A packing consisting of the combination



of two longitudinal members superimposed one upon the other, one member being the full width of the packing comparatively non-compressible and divided diagonally to form  
5 two strips of triangular cross-section and the other member being composed of a strand of textile material inclosing longitudinal ductile-metal wires, and a strand of elastic rubber of a height substantially equal to that of  
10 the textile strand and resting upon the top

of one of the triangular strips of the first-mentioned member, and the whole incased within a textile sheet or covering to hold the several members together.

In testimony of which invention I hereunto 15 set my hand.

MARSHALL MONTGOMERY.

Witnesses:

M. J. EYRE,

R. M. HUNTER.