G. S. TOWNE.

PISTON PACKING.

APPLICATION FILED JUNE 1, 1915.

1,155,018.

Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

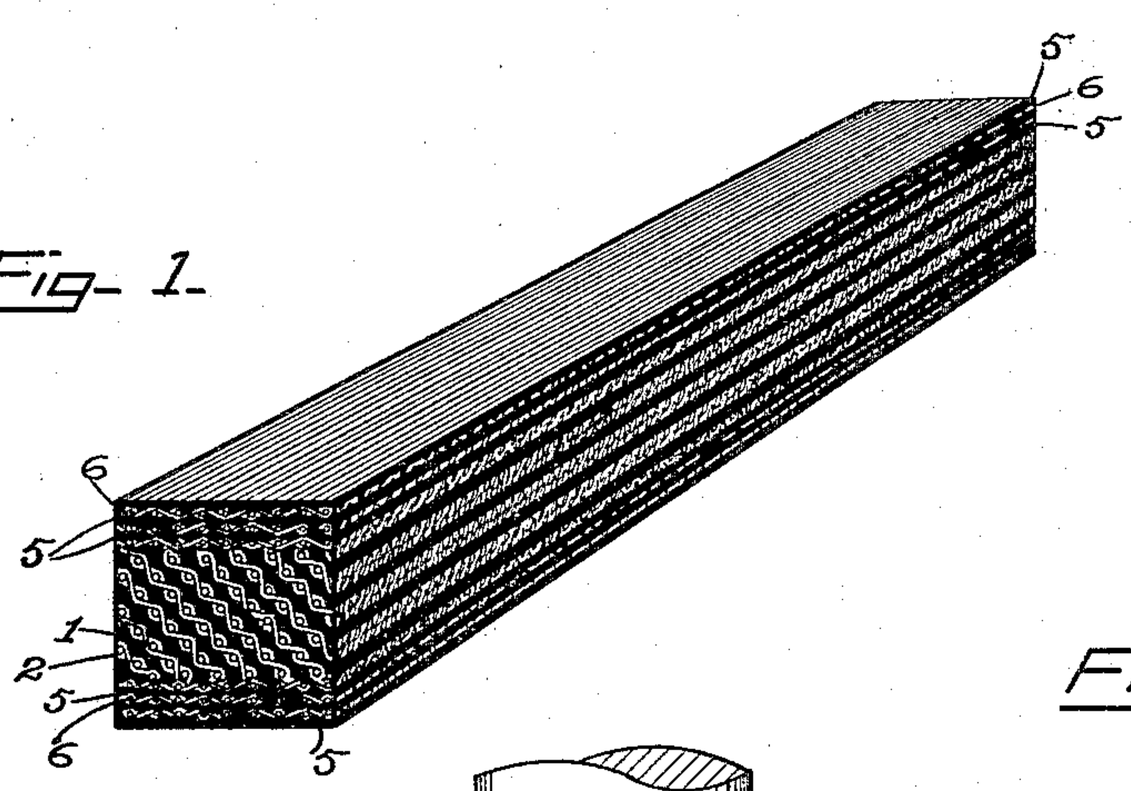


Fig. 2.

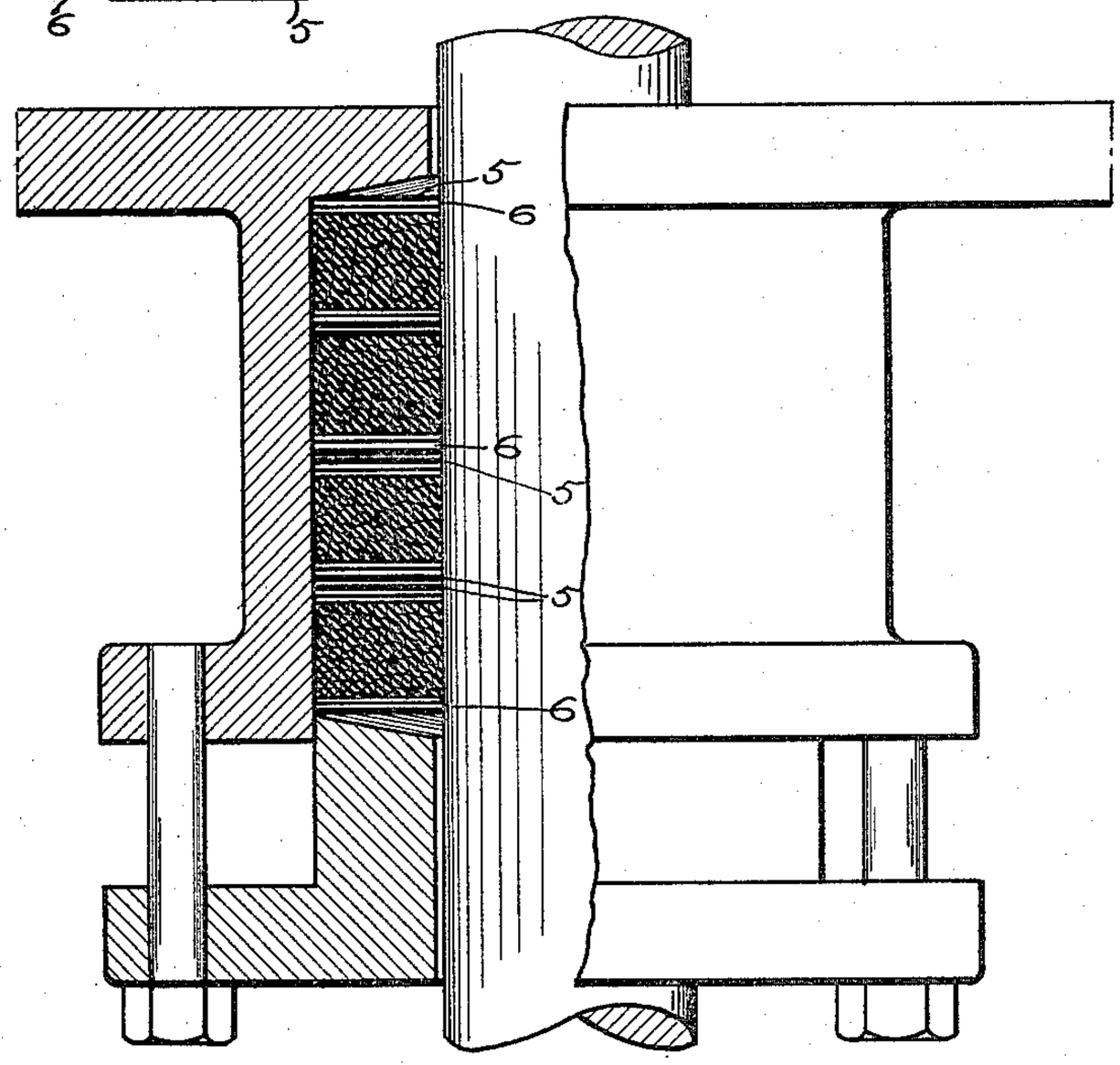
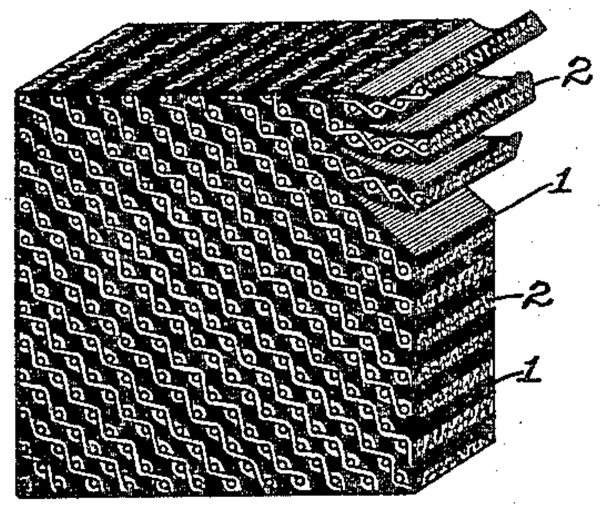


Fig. 3.



WITNESS

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INVENTOR

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BY

Acker & Tolbin

his ATTORNEYS.

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2 SHEETS—SHEET 2.

Fig. 4.

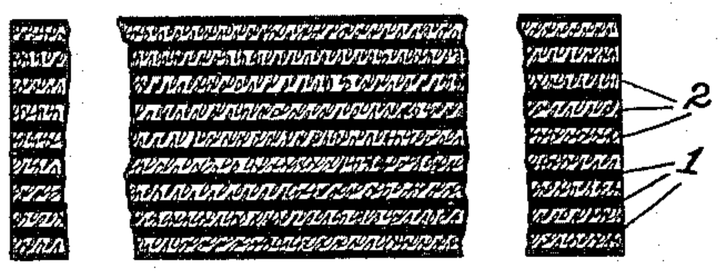


Fig. 5.

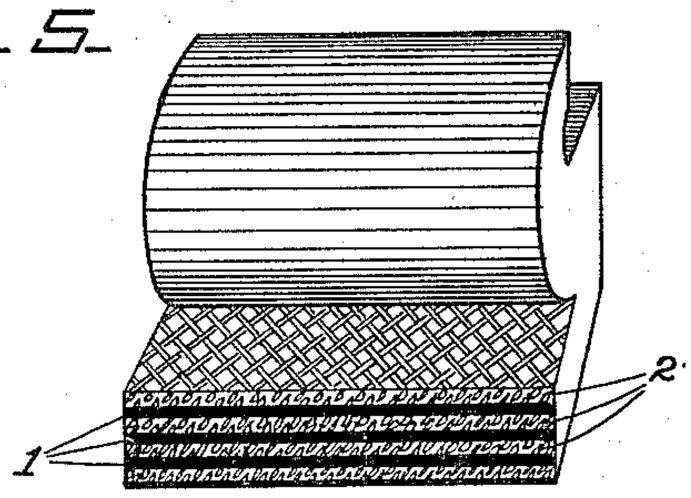


Fig. 6.

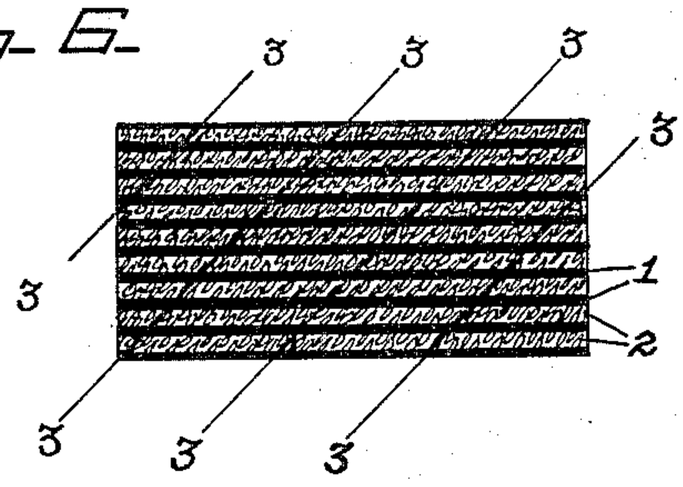
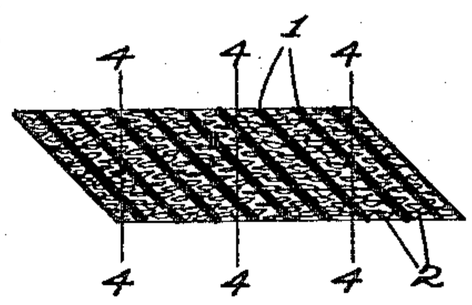


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE S. TOWNE, OF OAKLAND, CALIFORNIA.

PISTON-PACKING.

1,155,018. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed June 1, 1915. Serial No. 31,356.

To all whom it may concern:

Be it known that I, GEORGE S. TOWNE, a citizen of the United States, residing at Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Piston-Packing, of which the following is a specification.

Piston packing of the diagonal type as at present constructed under the Patent No. 600576 granted to H. Dods, March 15, 1898, terminates at diagonal longitudinal edges with short layers of fabric secured together in the usual manner by a body of rubber, and these sections or layers when the packing is positioned in a stuffing box become separated or frayed from each other and from the main body of packing, owing to the friction of the piston against the corners of the packing, and this chafing causes a leaky stuffing box and necessitates the frequent renewal of the packing.

The present invention relates to an improvement in packing of the diagonal type disclosed in Patent No. 600576, and has for its objects to construct a packing which is equally as efficient as that which is at present employed and which is free from the disadvantages present in the packing now in use, thereby increasing the life of the packing and correspondingly reducing the cost of renewing the same.

The invention consists in providing a packing composed of alternate parallel layers of canvas and rubber disposed at an angle to all the faces of the packing and provided on two opposite faces with alternate layers of fabric and rubber, which prevent the fraying or peeling of the main layers of material.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

To more fully comprehend the invention, reference is directed to the accompanying drawings, wherein—

Figure 1 is a view in perspective of a strip of packing of the diagonal type disclosing the end thereof cut on the bias and with my improvement embodied therein. Fig. 2 is a view of a stuffing box partly broken away, disclosing the manner of positioning the packing therein. Fig. 3 is a view in perspective of a strip of diagonal packing as at present constructed with the end cut on the bias, disclosing the frayed corners of the same. Fig. 4 is a view in end elevation of a slab or block of packing before being cut into strips. Fig. 5 is a view in elevation of the slab or block of packing, disclosing the canvas layers thereof cut on the bias. Fig. 6 is a view in end elevation of the manner of cutting the slab or block. Fig. 7 is a view in end elevation of the manner of cutting the cut slab or block sections into diagonal strips.

Referring more particularly to the drawings, wherein like characters of reference designate corresponding parts throughout the several views, the numerals 1 and 2 indicate alternate layers of rubber and fabric vulcanized together and forming a sheet or block, the fabric being cut on the bias, as in Fig. 5, for the hereinafter described purpose. The sheet or block is cut or divided into strips of the required thickness for the packing strip, by cutting longitudinally through the sheet or block, as at 3 in Fig. 6, and said strips are in turn cut or divided to form packing strips by cutting on parallel lines perpendicular to the top and bottom faces of the previously cut strip, as at 4 in Fig. 7. A packing strip is thus provided as in the patent to Dods, No. 600576 with the warp-threads and the woof-threads lying at an angle to the faces of the strip, both lengthwise and breadthwise. To opposite faces of the strip are secured, preferably by vulcanization, any suitable number of alternate layers of rubber and fabric 5 and 6, forming a protecting edge or surface. The strips extend for the full length of the packing strip and the fabric of which, like the fabric 2, is cut on the bias to expose opposite ends of the body threads to the exposed faces of the packing strip. This protecting strip or covering prevents the corners of the packing strip, where the fabric is of a very narrow width, from becoming frayed or separated, which is not the case in the present form, as disclosed in Fig. 3 of the drawings. The protecting strips are constructed in such a manner that they, together with the strips forming the main body of the

packing, will expose the ends of the fabric to the unprotected faces of the strip.

It will be apparent that my improved packing strips have all of the advantages of the strips now on the market, without the disadvantage of the corners fraying or peeling from the main body. My improved packing when positioned in a stuffing box is arranged with the protecting strips of adjacent packings in contact with each other, as in Fig. 2.

Having thus described my invention what I claim is:—

1. A packing for piston rods or the like comprising a body formed of alternate parallel layers of canvas and rubber disposed at an angle to all the faces of the body, and a protecting surface on opposite faces of said body and formed of alternate parallel layers of canvas and rubber.

2. A packing for piston rods or the like comprising a body formed of alternate parallel layers of canvas and rubber disposed at an angle to all the faces of the body and the canvas being cut on the bias, and a protecting surface on opposite faces of said body and formed of alternate parallel layers of canvas and rubber, the canvas being cut on the bias.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE S. TOWNE.

Witnesses:

HARRY A. TOTTEN,

D. B. RICHARDS.