No. 875,574. PATENTED DEC. 31, 1907.

O. J. GARLOCK.

ROD PACKING.

APPLICATION FILED AUG. 21, 1907.

Fig. 1.

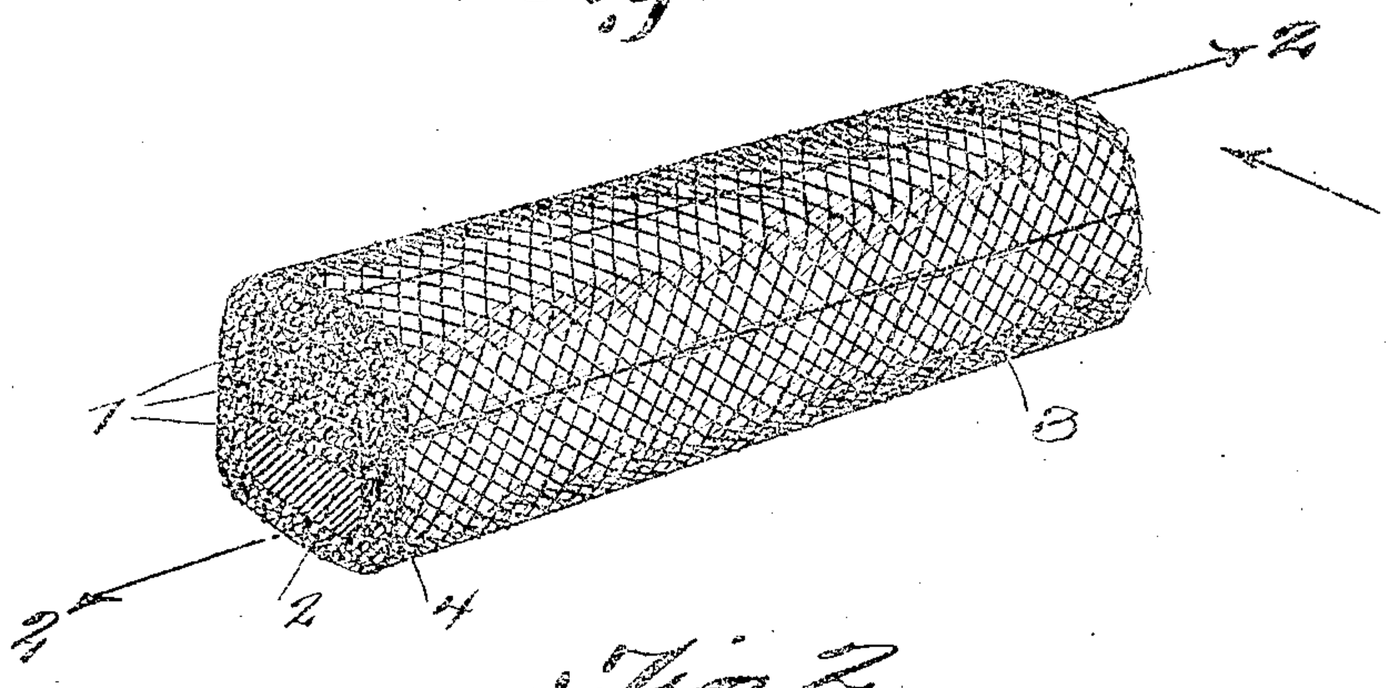

Fig. 2.

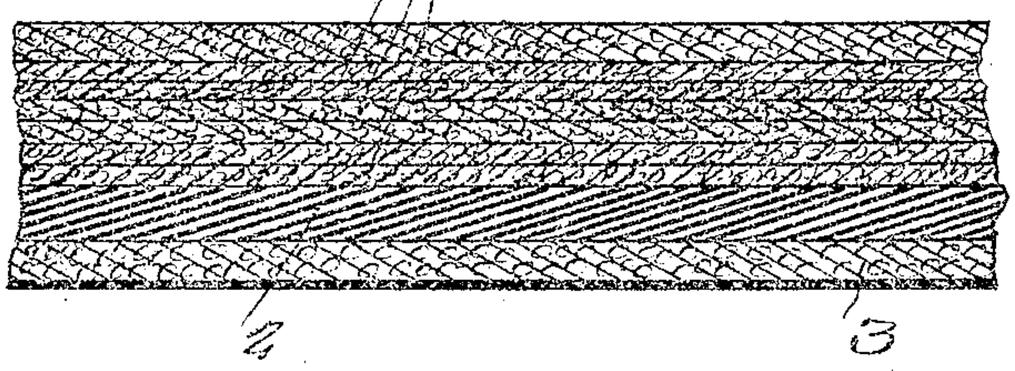

Fig. 3.

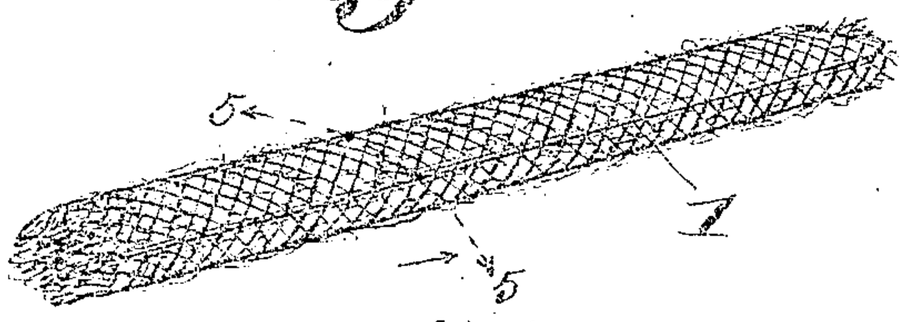

Fig. 4.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

OLIN J. GARLOCK, OF PALMYRA, NEW YORK, ASSIGNOR TO THE GARLOCK PACKING COMPANY, OF PALMYRA, NEW YORK.

ROD-PACKING.

No. 875,574. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed August 21, 1907. Serial No. 389,560.

To all whom it may concern:

Be it known that I, OLIN J. GARLOCK, of Palmyra, in the county of Wayne and State of New York, have invented a new and useful Improvement in Rod-Packings, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates to certain new and useful improvements in rod packing of that class composed of strands of suitable material with a strip of rubber and the whole covered with a suitable fabric.

The present invention has for its objects among others to provide an improved packing of this general character which will not harden or tend to become stiff and rigid from the action of the heat in use, and which, in use, will tend to hug close against the rod with which it is employed and thus make the joint steam tight.

I employ a tubular strand for the body of the packing, of asbestos, preferably with a small percentage of cotton duck, which is flattened and doubled three or four times, more or less, one fold upon another, the number of folds depending upon the required thickness of the packing in any particular case. A strip of india-rubber that will not become vulcanized by the heat is placed against one side of the folded tube, and this folded tube and the rubber strip are inclosed within a suitable casing of braided material, the folded edge being cemented by rubber cement to the body portion.

In use the packing is so placed that the pressure will be in a direction against the edges of the flattened or collapsed tubular body throughout the whole body of the packing. This pressure against these edges tends to make them bulge at the middle or reassume, to a limited extent, their original round or tubular shape which causes the body of the packing to expand against the rod and thus insure a tight joint.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which

Figure 1 is a perspective view of a portion of a rod packing embodying my invention. Fig. 2 is a longitudinal section through the same as on the line 2—2 of Fig. 1. Fig. 3 is a perspective view of a portion of the tubular strand. Fig. 4 is a like view of a portion of the rubber strip. Fig. 5 is a cross section through the line 5—5 of Fig. 3 showing the tubular strand before it is flattened.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings 1 designates a braided tube of asbestos with a small percentage of cotton duck, or other material possessing like qualities, which well adapt it for steam piston rod packing, for which this packing is more particularly adapted, having the quality or characteristic of not hardening or tending to become stiff and rigid from the heat of the piston rod. This braided tube is flattened and doubled a number of times, three or four, more or less, one fold upon the other as seen best in Fig. 1, the number of folds depending upon the desired thickness of the completed packing. This braided tube when flattened becomes practically a flat body as seen in Figs. 1 and 2, but in use is free to be bulged by pressure, as will be hereinafter more fully explained, the object of which will also be given.

A strip of india rubber 2 is placed against the one side of the folded tubular body as seen in Figs. 1 and 2, this rubber strip being preferably rectangular in cross section as shown and about as thick as the flattened or collapsed tube 1 and of substantially the same width.

The inner flattened tubular body and the rubber strip are covered by a covering 3 of suitable material, preferably braided cotton duck, or asbestos, or a combination of the two, or analogous materials, the folded edge being cemented by rubber cement as seen at 4. Rubber cement also may be placed between the covering and the body to more firmly unite the parts.

The packing thus constructed is made in long strips or ropes and cut off and formed into rings or coils and placed in the stuffing box of the cylinder-head in the usual manner, it being so placed in the stuffing box that when bent the flattened tube is inside or toward the piston rod and the rubber strip on the outside or near the inner wall of the stuffing box. By this disposition of the parts the

gland, when pressed against the packing in the box will press in a direction against the edges of the collapsed or flattened tube 1 throughout the whole body of the packing; this pressure against the edges of the tubes tending to make them bulge in the center and reassume to the extent of the pressure, their normal round or tubular form. This causes the body of the packing to expand against the rod with the result that the packing is caused to hug close against the rod and insure a tight joint. The rubber strip guards against improper distortion of the packing as a whole.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages. For instance, the body portion may be composed of a plurality of tubular members instead of a single tube folded upon itself.

What is claimed as new is;—

1. A rod packing an essential element of which is a body portion composed of a flattened tubular part folded upon itself to bring its adjacent sides into contact with each other.

2. A rod packing having a body portion of a flattened and folded braided tube with its adjacent faces brought into contact with each other arranged with its edges to receive the pressure to bulge the tube.

3. A rod packing having a body of a flattened and folded tube with a plurality of folds one upon the other, a strip of rubber bearing against one face of the same, and a covering therefor.

4. A rod packing composed of a body portion of a flattened tubular member having a plurality of folds one upon the other, a comparatively rigid member, and a covering secured to the same.

5. A rod packing composed of a tubular member flattened and folded upon itself, a rubber strip bearing against one face of the same, and a covering, the rubber arranged to be outermost in use and the flattened tubular body to be innermost to receive the pressure and tend to be bulged thereby.

In witness whereof, I have hereunto set my hand this 19th day of August, 1907, in the presence of two subscribing witnesses.

OLIN J. GARLOCK.

Witnesses:
GEO. E. BERNHARD,
F. I. PALMER.