Aug. 18, 1936. E. H. WELLS, JR 2,051,626

PACKING AND METHOD OF MAKING THE SAME

Filed April 16, 1934

Fig. 1.

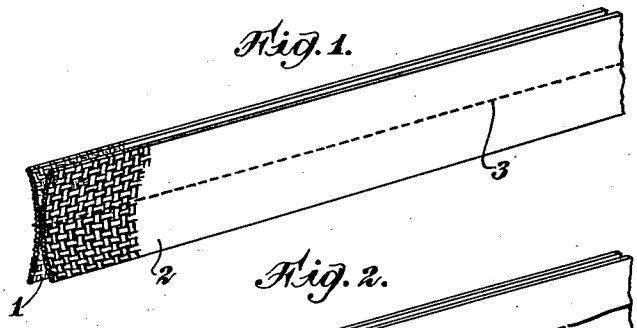


Fig. 2.

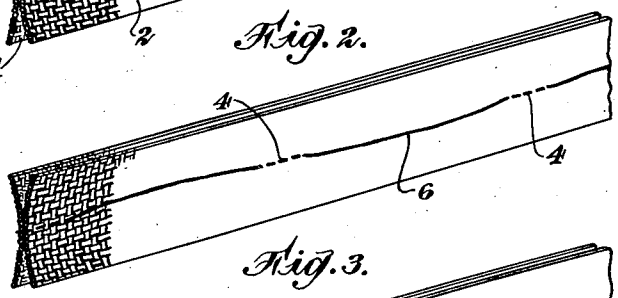


Fig. 3.

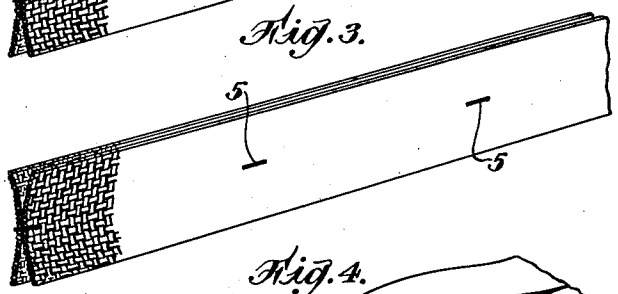
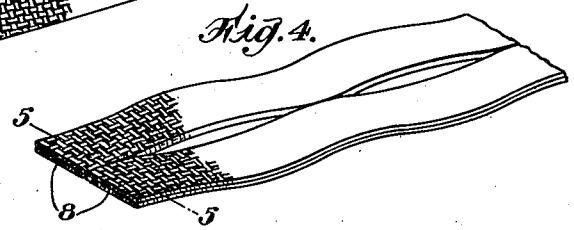


Fig. 4.



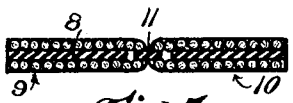
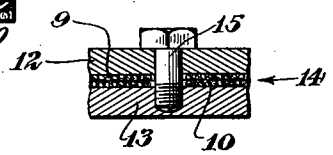


Fig. 5.

Fig. 6.



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PACKING AND METHOD OF MAKING THE SAME

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Application April 16, 1934, Serial No. 720,672

7 Claims. (Cl. 154—2)

This invention relates to a packing or gasketing tape and to the method of making the same.

In a gasket for use in packing the space between two surfaces, as, for example, at the front end of a locomotive smoke box, it is desirable for many purposes that the gasket should be in the form of a tape of average width that is narrow and, on the other hand, should provide for the ready insertion therethrough of bolts or other selected fastening elements which are used for holding, tightly against the gasket, the two surfaces forming the joint that is to be packed.

For this purpose there has been used heretofore gasketing tapes comprising two parallel strips of packing material that are spaced from each other, either by a loose form of stitching or by a weak fabric that may be cut through at selected positions for the insertion of bolts.

It is an object of the present invention to provide a gasket that may be narrow and compact at positions between those through which the fastening elements pass. A further object is to provide such a structure in which the means uniting the side elements of the tape actually extend through portions of the side elements and are disposed between and spaced from the planes of the two faces of the tape.

Typical embodiments of the invention are illustrated in the attached drawing, forming a part of this specification, in which

Fig. 1 shows a perspective view, partly diagrammatic, of the article in a development or intermediate stage of fabrication;

Figs. 2 and 3 show similar views of other embodiments of the invention, also in the development or intermediate stage;

Fig. 4 shows a perspective view of the finished article made in accordance with the invention, with the two side elements spread apart, at intervals, to receive bolts or the like;

Fig. 5 shows a cross sectional view on line 5—5 of Fig. 4; and

Fig. 6 shows a cross sectional view of the finished article as assembled for use in a gasket.

The finished article and the method of manufacture will be described in connection with the various figures, in which like reference characters denote like parts.

First, there are assembled, face to face, strips 1 and 2 of material, such as woven asbestos listing, that are adapted for use as packing. I have used to advantage strips that are flexible and that do not contain reenforcing wires or other stiffening elements. Such strips that have been used are each of width equal approximately to the width desired in the finished tape. Thus, there have been used two strips each of ¾ inch width which, when made into the finished article, will give a gasketing tape of width equal approximately to ¾ inch.

When the strips have been assembled, as described, uniting means are then inserted through the assembly, from face to face, preferably through the mid-portion in such manner as to hold the strips together at a plurality of positions extending longitudinally of the assembly. The uniting means shown in Fig. 1 consist of continuous stitching 3, in Fig. 2 of intermittent stitching 4 securing the two strips together at intervals spaced longitudinally of the strip, and in Fig. 3, of clinched wire staples 5 securing the two strips together at intervals spaced as in Fig. 2.

In general, the strips to be united are assembled with their respective faces and edges parallel and uniting means are then inserted through the two strips, in a narrow longitudinal zone.

When continuous stitching or securement is used, the uniting means should be adapted to be severed readily, as by cutting at selected positions, for the insertion of a bolt or the like between the two side elements of the finished gasket. Continuous stitching, for example, may be made with strands of the type of asbestos yarn having a cotton thread reenforcement. When the stitching is discontinuous and there are left, in the fabrication, intermediate positions in which the side elements may be readily spread apart without severing of the uniting means, the stitching may be made with strong material, such as asbestos yarn reenforced with very fine wire.

Between the positions of stitching, when intermittent stitching is used, the stitching yarn need not be cut during the fabrication but may be left loose, as illustrated at 6 in Fig. 2.

The type of stitching used should provide for locking the stitching in position by means that are conventional and are not, therefore, illustrated or claimed herein. The interlocked stitching penetrates portions of each of the side elements and makes positive the union of the said elements.

After the two strips have been secured together, as described, each strip is folded on itself along the line of stitching or fastening, as a longitudinal axis, and in direction away from the other strip.

This folding is made permanent, suitably by

cementing the outside faces of each strip, before the fold therein is made, with a cementing substance adapted for use in packing and being suitably of the type of a rubber compound cement 8 (Figs. 4 and 5). The cement coating covers the stitching on the cemented face of the fabric and causes the stitching on this face to be completely embedded before folding is undertaken. The stitching extends through the fabric strip only and not through the cement applied thereover. When the thus cemented strips are separately folded, as described, each is then pressed on itself, to give a finished article of the type illustrated in Figs. 4 and 5. Each strip now constitutes a side element 9 and 10 of the finished tape and is joined, at the mid-portion, to the other strip by uniting means 11.

For best results, the uniting means 11 is of lesser thickness than twice the thickness of the individual strips originally used, whereby when the strips are folded and made double, the uniting means are centered within the mid-portions of the edges of the two side elements, are thinner than the said side elements, and are spaced, therefore, from both faces of the tape. This spacing permits compression of the tape without disturbing effect due to the said means.

Fig. 6 shows a sectional view of a finished assembly comprising members 12 and 13 that are to be joined, the gasketing tape 14 disposed therebetween, and bolt 15, extending through the tape, between the two side elements 9 and 10 thereof, and holding members 12 and 13 in packing contact with the gasket.

My improved tape is adapted to be used in gasketing surfaces that are narrow. At the same time, the tape has overall compactness which promotes continuity and effectiveness of gasketing at positions between the bolts or other elements that hold together the gasketed surfaces.

The side elements may abut, edge to edge, except as they are separated at intervals for the insertion of bolts or the like.

When desired, the entire finished tape may be impregnated with a packing compound of the type of rubber and may be lubricated over the outer surfaces, as with graphite. Also, the rubber compound in the tape may be vulcanized in situ.

It will be understood that the details that have been given are illustrative, not restrictive, and that variations within the scope of the appended claims may be made without departing from the invention.

What I claim is:

1. A gasketing tape comprising side elements adapted for use as packing and uniting means extending through a portion of each of the side elements and holding the side elements together in abutting relationship, edge to edge, at a plurality of positions extending lengthwise of the tape, the said uniting means being disposed between the plane of the two faces of the finished tape and being spaced from each of the said planes.

2. A gasketing tape comprising side elements adapted for use as packing and discontinuous stitching extending between and through the mid-portions of the inner edges of the said side elements and securing the said side elements together at spaced positions, in abutting relationship, edge to edge, to form a tape having side elements adapted to be spread apart at positions between the stitching, the said stitching being disposed between the plane of the two faces of the finished tape and being spaced from each of the said planes.

3. In making a gasketing tape, the method which comprises assembling, face to face, strips of flexible material adapted for use in packing, inserting uniting means at intervals through the longitudinal mid-portion of the assembled strips, from face to face, to hold the strips together, and folding each strip upon itself along the said longitudinal mid-portion as an axis and in direction away from the other strip, whereby each original strip is caused to form a side element of the finished tape.

4. In making a gasketing tape, the method which comprises assembling, face to face, strips of flexible material adapted for use in packing and of width equal approximately to that desired in the finished tape, stitching the assembled strips to each other in the longitudinal mid-portion of the assembled strips, from face to face, to hold the strips together, folding each strip upon itself along the said longitudinal mid-portion as an axis and in direction away from the other strip, and making the fold permanent, whereby each original strip is caused to form an integral side element of the finished tape.

5. In making a gasketing tape, the method which comprises assembling, face to face, strips of flexible material adapted for use in packing, inserting uniting means at intervals through the longitudinal mid-portion of the assembled strips, from face to face, to hold the strips together, folding each strip upon itself along the said longitudinal mid-portion as an axis and in direction away from the other strip, and adhering together the inner surfaces of the folds of each strip, whereby each original strip is caused to form a substantially integral side element of the finished tape and the two side elements of the tape are adapted to be spread apart at positions between the fastening means.

6. In making a gasketing tape, the method which comprises assembling face to face two strips of flexible material adapted for use as packing, inserting through the longitudinal mid-portion of the assembled strips, from face to face, uniting means of lesser thickness than twice the thickness of either of the said strips, folding each strip on itself along the said longitudinal mid-portion as an axis and in direction away from the other strip, and making the fold permanent, whereby each of the said strips is caused to form a side element of the finished tape and the uniting means are caused to penetrate each of the side elements and to be spaced from both faces of the finished tape.

7. In making a gasket, the method which comprises providing two strips of flexible material of the type of woven asbestos listing, arranging the two strips with their respective faces and edges parallel, inserting uniting means through the two strips in a narrow longitudinal zone, and folding each of the said strips on itself along the said narrow zone and in direction away from the other strip, whereby there is formed a tape comprising two elongated side elements united to each other by the said uniting means.

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