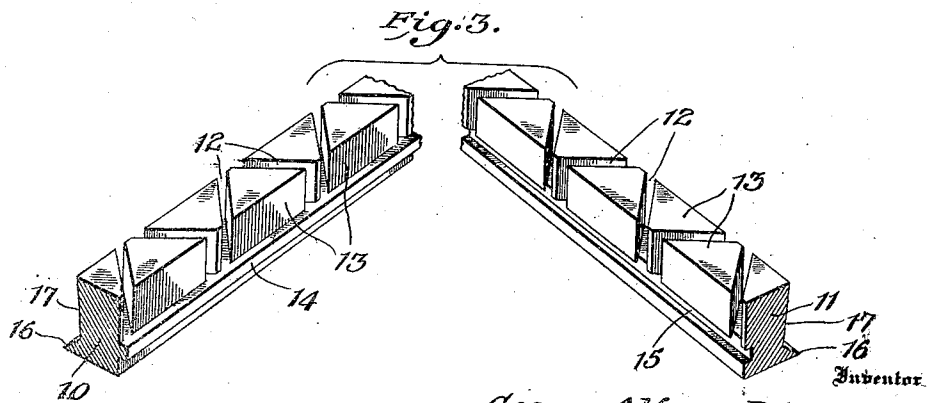
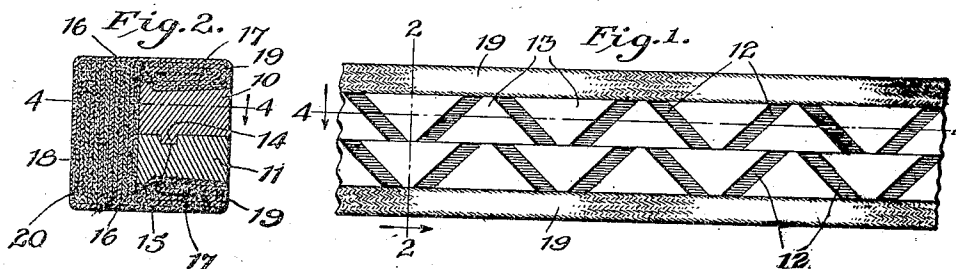
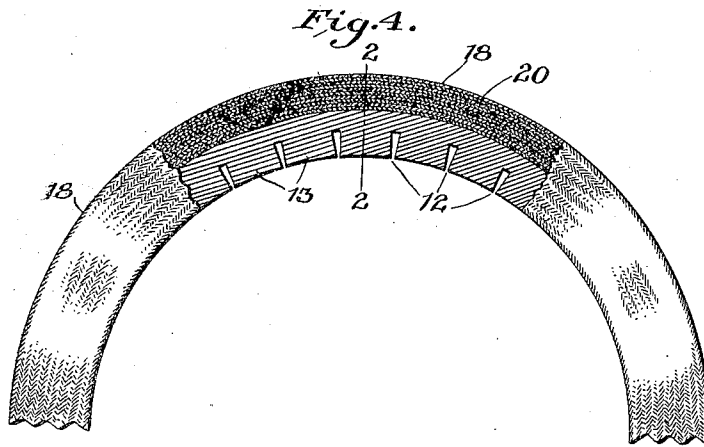


1,369,905.

G. A. PETERS, JR.
PACKING.
APPLICATION FILED MAR. 21, 1919.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE ALFRED PETERS, Jr., a citizen of the United States, residing in the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Packing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to packing and has for an object to provide a packing comprising the combination of such known materials as fabric and metal wear parts to produce a packing of improved structure and efficiency. Many packings have been made of a combination of fabric material and metal, such for instance, as lead or composition comprising soft metal or some kind of alloys, whereby the metal comes in contact with and forms a wear surface upon the rod or other moving part.

It is an object of the present invention to provide such combined packing of such improved form that the wear metal coming into contact with the rod or other moving part will at all times form an air or steam tight contact with such moving part.

In stating the object of the invention, as well as in the description and the claims the use of the term "rod" is to be understood as including and referring to any moving part which it is found necessary to pack for the purpose of making a steam, air, water or other fluid tight joint.

It is a further object of the present invention to construct a packing of a plurality of interengaged metal strips whereby the curving of the packing as an entirety to make such packing conform to the rod is better and more easily accomplished and producing at the same time a better and more complete and satisfactory joint and contact.

With these and other objects in view, the invention comprises certain novel constructions, arrangements and combinations of parts as will be hereinafter more fully described and claimed.

In the drawing—

Figure 1 is a view of the improved pack-

ing in elevation seen from the metal surface side.

Fig. 2 is a transverse sectional view through the packing taken on line 2—2 of Fig. 1.

Fig. 3 is a perspective view of the two-metal elements of the packing showing the interengaging tongue and groove construction.

Fig. 4 is a view partly in section and partly in elevation showing the effect of curving the structure to conform to the rod, the sectional part being taken on line 4—4 of Figs. 1 and 2, and also showing section line 2—2 as the plane of Fig. 2.

Like characters of reference indicate corresponding parts throughout the several views.

The metal element of the improved packing which forms the subject matter of this application is preferably in the form of two independent but interengaging strips. It is obvious that a greater number of strips than two may be employed; it is found desirable to use a plurality and in most cases two will serve the purpose, but it is to be understood that this invention is not limited to two. Each of the two strips, indicated in their entirety as 10 and 11, are provided with slits or grooves 12, preferably disposed at angles oblique to the sides of the strips and to each other and here shown at angles of substantially 45 degrees to the sides, it being understood, however, that the present invention is not limited to such angularity.

While the invention is not limited to the particular angularity of the slits 12, experience indicates that it is desirable to produce those slits in such relation that the intervening bodies or lugs 13 are substantially prisms having five faces, the base and two sides being rectangular and the end faces triangular. Also the dimensions of the slits 12 in either direction are not limited to the proportionate dimensions shown, and it is to be understood that the said slits may be made more or less deep and more or less wide actually or in proportion to the strips as experience may dictate.

For the purpose of retaining the strips in position it is found desirable to have such

strips interlock or interengage and a convenient or desirable means of locking and interengagement is shown in the tongue and groove 14 and 15, formed along abutting areas of the strips so that when juxtaposed the said strips will assume the positions shown at Figs. 1 and 2. It is also intended that when so juxtaposed the apex of one of the triangular prisms of one strip will engage against the base of the juxtaposed prism of the other strip whereby each of the slits 12 terminates against the base of one of the prismatic sections forming thereby an air or steam tight joint.

For the purpose of properly embedding the juxtaposed strips 10 and 11 in the fabric body to be hereinafter more fully described, the strips are provided upon the lower or inner edges opposite the tongue and groove 14 and 15 with outstanding flanges 16, and it is desirable to taper slightly the remote sides of the juxtaposed strips from the rod engaging faces toward the flanges 16 as indicated more particularly at 17, so that, as combined, the two strips 10 and 11 are narrower in cross area through or adjacent to that portion containing the tongue and groove than on either side of such area.

To make a complete packing the abutted and interlocked strips 10 and 11 are embedded in a fabric of any usual and ordinary or desired formation or material, as for instance, canvas, asbestos, or rubberized and vulcanized fabric material. This fabric body may be formed in any usual, well known manner as for instance by forming a fabric casing 18 of substantially channel formation with the edges rolled inwardly as indicated at 19, engaging upon opposite sides of the abutting strips 10 and 11 and engaging also and retaining against the flanges 16. This fabric body may be made of any thickness found desirable to completely fill the space in which it is to be employed by filling in between the bases of the abutting strips 10 and 11 and the casing 18 which may be by laminated strips or other united fabric members as shown at 20 in Figs. 2 and 4. The number of such laminations will depend upon the thickness required and the thickness of the material and intervening binder employed for the purpose. When completed the packing will be of such size and thickness as utility may require and will present a wear surface of slitted metal and fabric edges as indicated in plan at Fig. 1. When this completed structure is curved to the curvature of the rod as shown at Fig. 4, the slits 12 will naturally be closed to a certain extent depending upon the curvature as indicated at Fig. 4, but irrespective of such curvature

the slits will each terminate at the base of an adjacent prismatic section to permit the passage of no steam or air or other fluid through such slits without engaging an abutting metal strip or member.

I claim:

1. A flexible packing strand comprising a plurality of pliable strips of relatively soft metal interlocked side by side parallel with each other and embedded in a body of yieldable nonmetallic packing material so as to expose one face of each metallic strip flush with the other in a zone on one face of the packing.

2. A flexible packing strand comprising a plurality of pliable strips of relatively soft metal embedded side by side parallel with each other in a body of yieldable nonmetallic packing material so as to expose a face of each metallic strip flush with the other forming a zone at one face of the packing strand, the outer sides of the metallic strips having, between their exposed working faces and their rear faces, portions that are nearer the central plane than other portions rearward thereof, whereby the metallic strips are firmly anchored to the yieldable body.

3. A flexible packing strand comprising a plurality of pliable strips of relatively soft metal interlocked side by side parallel with each other and embedded in a body of yieldable nonmetallic packing material so as to expose one face of each metallic strip flush with the other at one face of the packing, the outer sides of the metallic strips having, between their exposed working faces and their rear faces, portions that are nearer the central plane than other portions rearward thereof, whereby the metallic strips are firmly anchored to the yieldable body.

4. A packing comprising a plurality of metal strips abutted laterally and having non-registering grooves formed in the said abutting strips, flanges formed upon the remote sides of the abutted strips and a fibrous body embracing the abutted strips and engaging against the flanges.

5. In a packing, an element comprising a metal strip having transverse slits formed therein substantially perpendicular to its wear face and at angles to each other and to the edges of the strip.

6. In a packing, a metal strip comprising a plurality of approximately prismatic sections arranged in alternately inverted relation.

7. In a packing, a strip having, extending inward from its wear surface obliquely, transverse slits forming a plurality of substantially prismatic sections.

8. In a packing, a strip comprising a plurality of substantially triangular prismatic

sections arranged in inverse order and with the end planes of the sections presenting a wear surface.

5 9. In a packing, an element comprising juxtaposed and interlocked laterally abutted strips, each having independently arranged slits in the wear surface and out of register with the slits in the juxtaposed strip and a body of yieldable material in which said
10 element is embedded.

10. In a packing a plurality of metal strips said strips being slitted upon their wear surfaces to produce substantially prismatic sections, the prismatic apexes of the

section of one strip engaging against the 15 prismatic bases of the section of the juxtaposed strip.

11. In a packing an element comprising a plurality of strips interengaged each with the other and each provided with slits producing alternately inverted approximately prismatic sections with the prismatic apex of the sections of one strip engaging against the prismatic base of the sections of the abutting strip. 20

In testimony whereof I affix my signature. 25

GEORGE ALFRED PETERS, JR.