Oct. 25, 1927. 1,646,466

E. J. TRAINOR

FABRIC FOR GASKETS

Filed Sept. 9, 1921

Fig. 1.

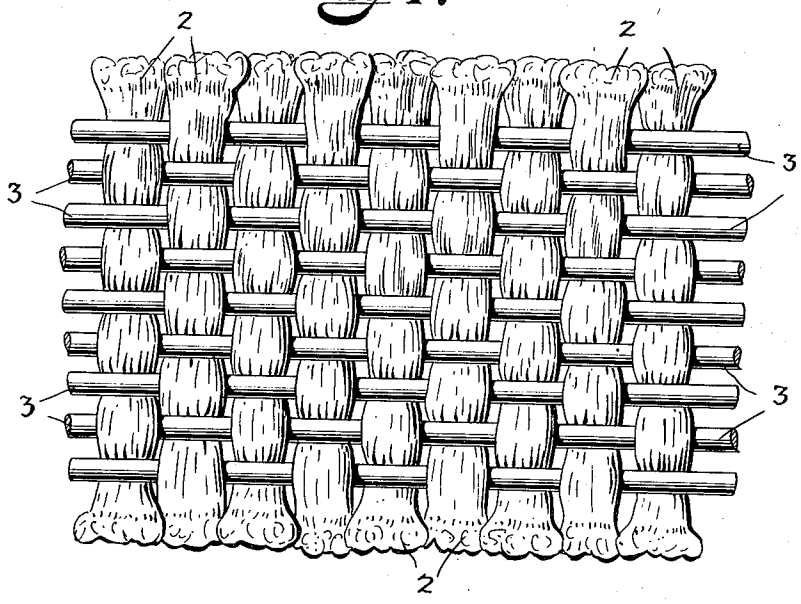


Fig. 2.

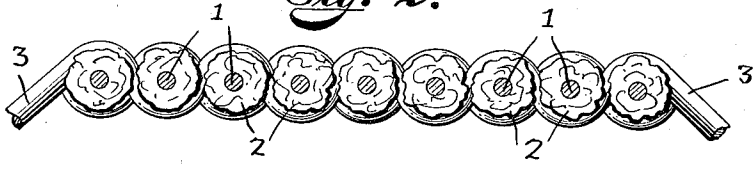
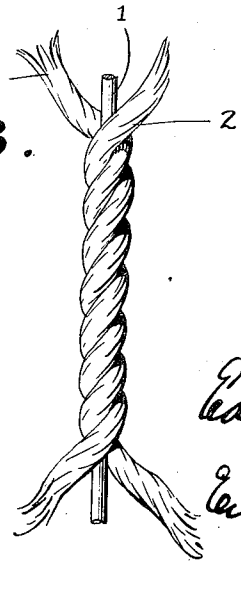


Fig. 3.



Edward J. Trainor INVENTOR

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Patented Oct. 25, 1927. 1,646,466

UNITED STATES PATENT OFFICE.

EDWARD J. TRAINOR, OF BROOKLYN, NEW YORK, ASSIGNOR TO ASBESTOS SPINNING AND WEAVING CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

FABRIC FOR GASKETS.

Application filed September 9, 1921. Serial No. 499,558.

My invention relates to gaskets or similar packings adapted to withstand relatively high temperatures and pressures, and to fabrics of which such gaskets or similar packings may be made.

In the preferred form of my invention the gasket or similar packing is made of a fabric which comprises a woven material composed of asbestos or other heat-resisting fiber wound about a core of lead or other readily deformable wire interwoven with cross wires of a suitable metal, the choice of which depends upon the use to which the gasket is to be put. In this construction the strands in one direction, as for instance the warp, are bare wires and those in the opposite direction are composite or cored strands, described above.

In the drawings I have shown in

Figure 1 a front view of a piece of the gasket material described above, in

Figure 2 a sectional view, and in

Figure 3 a detail perspective view of the cored asbestos strand from which the material is made.

It will be understood that the choice of wire, the closeness of the weave, the thickness of the strands, and the material from which the fibrous strand is made will depend upon the use to which the material is to be put, and it will also be understood that in cases in which it is undesirable to use a woven material, as for instance in packing stuffing boxes, the cored asbestos or other fibrous strand may be used without being woven into a fabric with the bare wires.

Referring to the drawings, it will be seen that the cored asbestos strand comprises a core 1 of lead or other suitable deformable material about which is twisted a plurality of fibers 2, such as asbestos or other similar material. In making a cored strand the asbestos or other material is first twisted into strands of suitable thickness and a plurality of such strands is wound about the wire center. The cored strand thus formed is woven into a fabric with bare metallic warp wires 3 which may be of any suitable material as for instance steel, bronze, Monel metal, etc., depending upon the use to which the gasket is to be put. The construction is such that the warp wires lying on opposite sides of the fibrous weft clamp the fibers of the weft into intimate contact with one another and with the soft metal core and thus greatly increase the tensile strength of the asbestos strands and prevent their fraying upon the surface and produce a woven fabric of great uniformity of thickness.

The woven fabric may be cut into gaskets of any desired shape and when so cut will not fray along the edges and will therefore require no binding at the edges and will be stiff enough to hold their shape when cut in complicated forms. By suitably choosing the weave with respect to the pressures to be encountered, the gasket thus formed will resist blowing out in narrow sections to a high degree. Should it be desired to calender the gasket with rubber or other material, the uniformity of the thickness of the gasket and its stiffness render it easy to coat, since it will not adhere to the rolls during the coating operation, but on the contrary will act as a guide for the coating material and will therefore be free from blow holes or uncoated portions. A gasket made according to my invention presents a greater uniformity of thickness than either molded or other woven gaskets and due to the incorporation in it of the deformable lead wire and its uniformity in thickness will produce a very tight joint.

In the case of stuffing boxes or other similar situations the cored asbestos strand alone may be used, as will be readily understood.

It will be noted that the fabric of which the gasket is preferably made comprises, in the example given above, a set of warp threads (here the metal strands or wires) and a set of weft threads (here the lead- or equivalent wire-cored asbestos or other fabric strands), the threads of the two sets being so interwoven that the metal strands of the one set are in close clamping contact only with the fabric coverings of the strands of the other set.

It will be obvious that my invention may be greatly varied without departing from the spirit of my invention, and I do not wish to confine myself to the precise details shown and described.

What I claim is:

1. A packing comprising wire warp strands and weft strands, the weft strands each consisting of a metallic core and a twisted asbestos yarn wrapped about the core in convolutions, the wire warp strands being under sufficient tension to clamp the weft strands only at the points of contact sufficiently to

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prevent the relative movement of the weft cores and the surrounding fibrous material whereby the balance of the fibrous material located between the warp strands is comparatively loose.

2. A packing comprising deformable wire warp strands and weft strands, the weft strands each consisting of a deformable metallic core and a twisted asbestos yarn wrapped about the core in convolutions, the wire warp strands being under sufficient tension to clamp the weft strands only at the points of contact sufficiently to prevent the relative movement of the weft cores and the surrounding fibrous material whereby the balance of the fibrous material located between the warp strands is comparatively loose.

3. A packing comprising wire warp strands and weft strands, the weft strands consisting of deformable wire and twisted fibrous yarn wrapped about the wire in convolutions, said warp strands being under such tension as to deform the wire of the weft strands and clamp the fibrous yarn thereto, but insure the comparative looseness of the fibrous material between the warp strands.

In testimony whereof, I have signed my name to this specification this 18th day of August, 1921.

EDWARD J. TRAINOR.

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