J. CRANE.

PACKING.

APPLICATION FILED JAN. 3, 1910.

956,042.

Patented Apr. 26, 1910.

Fig. 1.

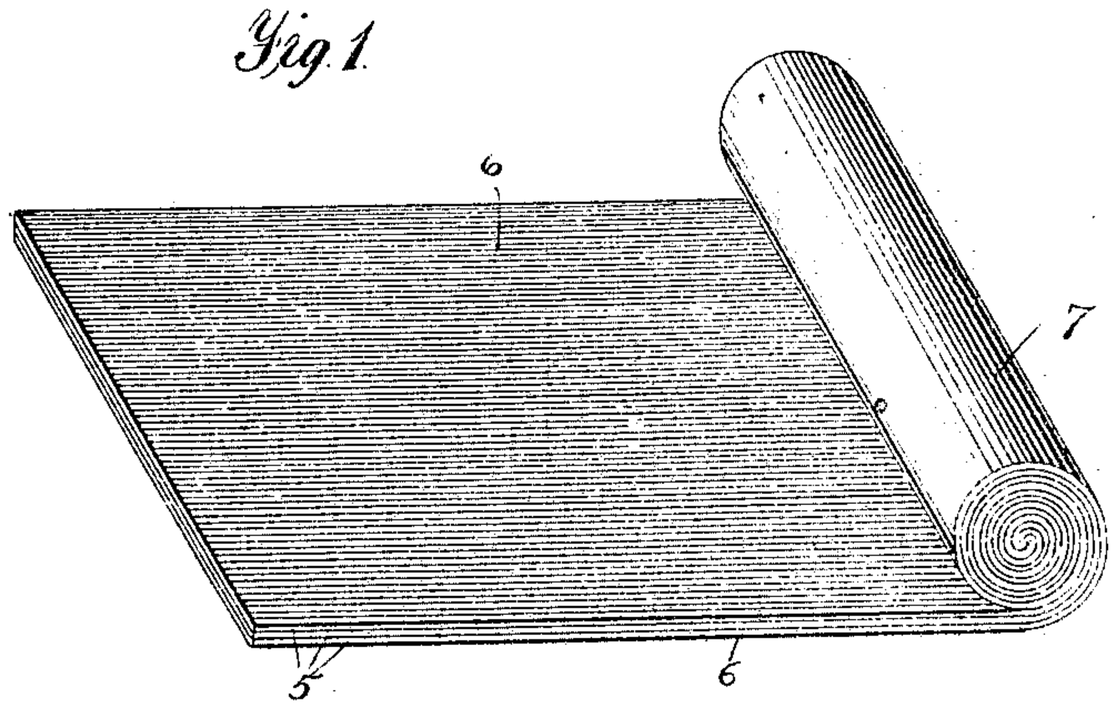


Fig. 2.

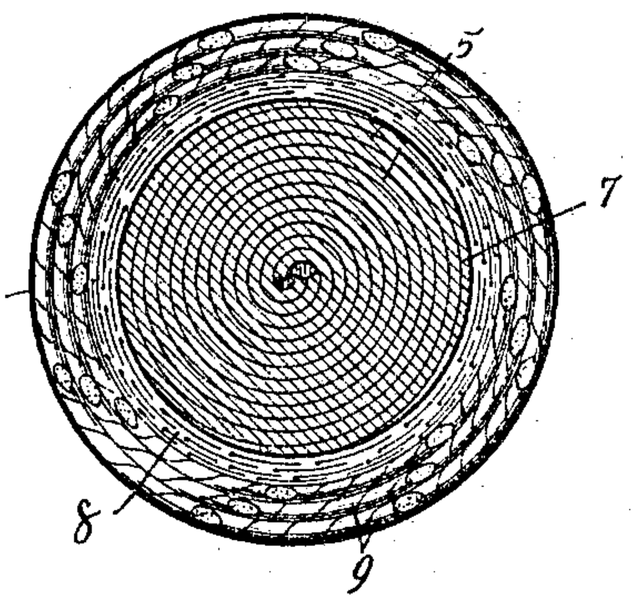
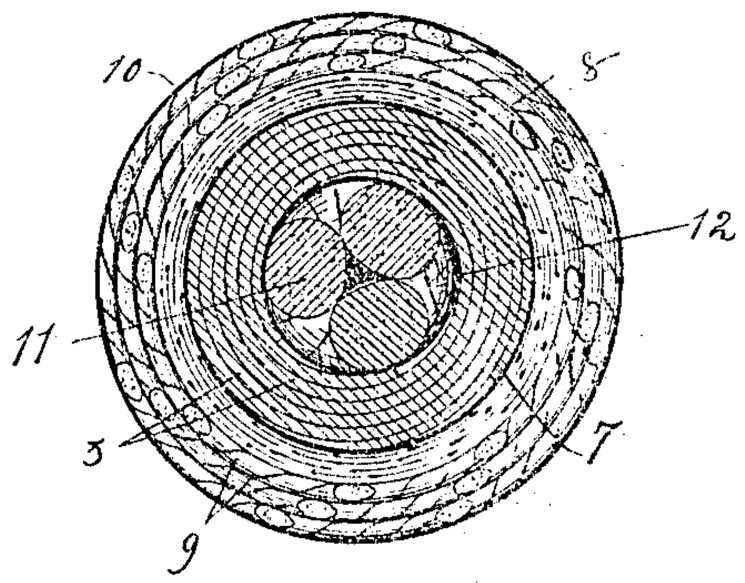


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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PACKING.

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To all whom it may concern:

Be it known that I, JOHN CRANE, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Packing, of which the following is a specification.

My invention relates to packing employed for making fluid tight joints, the particular construction disclosed herein being useful for all purposes where such packing is required.

The chief objects of the improvements which constitute the subject matter of this application for patent are:—to provide an efficient and durable packing that may be cut into various lengths to suit the requirements in each particular case where it is used, and to furnish a packing that can be bent into various forms suited to the contour of the special parts with which it is in contact.

Further objects of this invention are to produce a packing that will have the required degree of elasticity, combined with a plastic quality which will permit it to be molded into a variety of shapes to suit the conditions in each case, and that will be retained in shape when so molded; to furnish a packing constructed of suitable materials and in such a manner that it will serve as a vehicle for applying lubricants to the movable parts of a joint to which it may be applied, and to provide an article of the character stated that will preserve its plastic and lubricating qualities indefinitely when stored.

I accomplish the desired results by means of the structure illustrated in the accompanying drawing, which forms a part of this application, the details of construction being disclosed in the following views:—

Figure 1 is a perspective view of several superposed sheets of flexible metal partially rolled into cylindrical form to produce the central portion of my improved packing; Fig. 2 is a transverse section of the completed packing, and Fig. 3 is a transverse section of a modified form of construction of the central portion, which is provided with a core.

Referring to the details of the drawing, the numeral 5 indicates sheets of lead of extreme thinness, which form the foundation of the packing. The sheets are first treated by applying to their surfaces a compound composed of the graphite paint of commerce to which has been added flake graphite and any suitable lubricating oil, this coating being indicated at 6. A number of the sheets so prepared are placed together, as shown in Fig. 1, and then rolled up into cylindrical form, as indicated at 7 in said figure, which shows a cylinder partly completed. The structure thus formed is then covered with a layer of cotton wicking 8, and outside of the wicking is wrapped a protective covering 9 consisting of a coarser material. I prefer to use for this purpose flax or hemp twine. The next step in the construction of the packing is to cover the outer layer with a paint having suitable adhesive qualities and not easily affected by heat. I prefer to use for this purpose ordinary graphite paint. After applying this freely to the outer surface and before the paint is dry, the cylindrical structure is rolled in flake or powdered graphite, the resulting covering being designated by the numeral 10.

Where a packing of considerable size is required, for the purposes of economy and to lighten the structure, the bulk of the interior or foundation portion is composed of a fibrous core, indicated at 11 in Fig. 3. Heavy cotton wicking or hemp rope may be employed for this core, which is placed in contact with the superposed lead sheets and the latter then rolled about the said core to form a cylinder. Before this core is put in place it should first be thoroughly coated with the graphite paint and oil compound as shown by the heavy line 12, in Fig. 3. The final coating in any case may be asphaltum, a hydrocarbon paint or any suitable compound that will form a protective covering, provided it is not of such a nature as to impair the quality of the lubricating compound which is on the inside. A further purpose of the outer coating is to prevent the oils from drying out of the packing, thus preserving it for an indefinite period and permitting it to be kept on hand for some time without deterioration.

This packing is to be used for all cases to which such articles are usually adapted and will be found to serve the purpose intended since the cylinder is more or less elastic, and at the same time of a plastic character, so that it will yield readily to pressure and may be easily molded to conform to the irregularities of the surfaces with which it is in contact and will retain its shape by rea-

son of the consistency of the paint and other coatings which enter into its construction, at the same time the contained oil and graphite will produce an efficient lubrication when applied to moving parts.

Having thus described my invention what I claim as new, is:—

1. In a packing, the combination of a plurality of superposed thin flexible metallic sheets arranged in cylindric form, a lubricating compound applied to the surfaces of said sheets before they are so arranged, layers of fibrous material wrapped around the said cylinder, and a protective coating of hydrocarbon paint applied to the outer surface of the structure so formed.

2. In a packing, the combination of a fibrous core, a metallic layer surrounding said core, said layer being composed of superposed thin sheets of lead separately covered with a lubricating compound and rolled up into compact form, layers of fibrous material surrounding the metallic layer, and an adhesive heat resisting protective covering for the entire structure.

3. In a packing, the combination of a fibrous core, a lubricating compound applied to said core, a metallic layer surrounding said core, said layer being composed of superposed sheets of lead, a coating of lubricating substance applied to said sheets of lead, a layer of cotton wicking covering the said metallic layer, a wrapping of twine surrounding the cotton layer, and a protective covering of paint applied to the outer surface of the structure.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN CRANE.

Witnesses:
F. BENJAMIN,
H. DE LOS HIGMAN.