May 5, 1931. O. H. CILLEY 1,803,840

ASBESTOS INSULATING TAPE

Filed Sept. 22, 1928

Fig. 1.

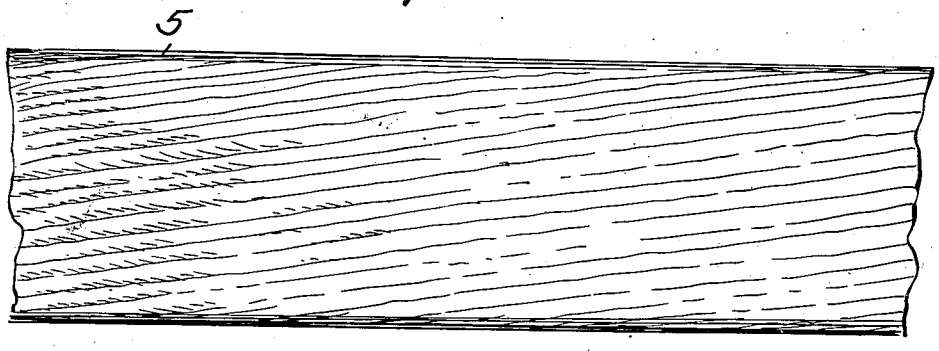


Fig. 2.

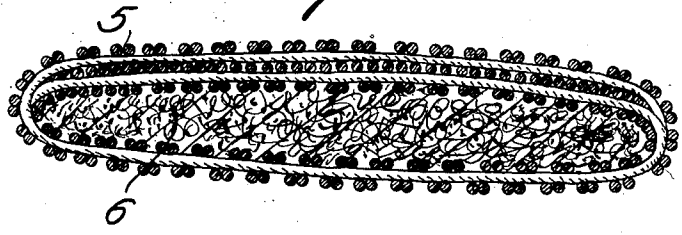
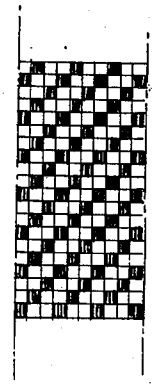


Fig. 3.



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UNITED STATES PATENT OFFICE

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ASBESTOS INSULATING TAPE

Application filed September 22, 1928. Serial No. 307,632.

The principal object is to provide asbestos insulating material for covering steam, vapor and hot water lines and in general for application for heat retentive purposes; which material shall be possessed of greater resistance to wear, greater flexibility and greater overall serviceability and efficiency than the materials heretofore proposed or available.

The nature of the invention consists in providing padded asbestos insulation embodying a woven tubular tape containing a pad or filling of loose asbestos fibre and ultimately flattened for use; the weave being a diagonal twill, the twills on the respective faces of the flattened tube being reversely formed, that is to say the twill on one side runs upward from left to right and on the other side the range is from right to left; and the weave is such that one side or face of the tape contains half the amount of filling of the other side, for the purpose and with the result of imparting such added flexibility as will enable the tape to conform more readily to the curvature of the pipe when wound spirally around it than would be the case with a tape of plain weave.

The invention is illustrated in the accompanying drawings, wherein

Figure 1 is an elevational view of the improved covering tape.

Fig. 2 is a sectional view thereof.

Fig. 3 is a diagram of one of the diagonal twills.

According to my invention I provide heat retentive or insulation material consisting of woven asbestos tape in the form of a flat tube 5 containing a pad or filling 6 of loose asbestos fibre.

The weave is a diagonal twill, the twill on one side of the tape running upward from left to right, and on the other side from right to left. This is best shown in the diagram Fig. 3, wherein the black squares represent the points at which the filling or weft would appear on the surface of the fabric, and the white squares represent points at which the warp appears on the face of the fabric.

The fabric of the tube also varies as to the relative amount of filling material in its respective faces, that is to say one face (the outer) contains double the amount of filling contained in the other. This is accomplished by weaving, for one face, a two up and one down twill which means that each pick of filling is under two warp ends and over one warp end, alternately when placed in the fabric; and by weaving for the other face a one up and two down twill by which is understood that when the filling is placed in the fabric it covers two warp ends and passes under one warp end alternately across the fabric.

The merit and advantage of the diagonal twill and of the differential filling, whereby that face of the tube for ultimate contact with the pipe contains only half as many picks of filling per inch as in the outer face, is that it can be more readily wrapped around the pipe in spiral fashion, conforms smoothly to and is in full contact with the surface of the pipe, and readily adapts itself to joints and flanges. In short, the new article is so completely flexible that it eliminates all tendency of buckling and ridge forming when wound or wrapped in service.

Having thus described my invention, I claim:

1. Material for covering pipes and the like, consisting of flat tubular tape of woven fabric, each face of the tape presenting a diagonal twill, and a pad for the tape.

2. Material for covering pipes and the like, consisting of flat tubular tape of woven fabric, whereof one face contains less filling than the other in order to impart flexibility and to prevent buckling, and whereof the respective faces present twills extending in opposite diagonal directions as viewed in each face, and a pad for the tape.

3. Padded asbestos insulation comprising pad material and investing material consisting of woven asbestos in the form of tubular tape whereof one section is formed as a two up and one down twill and whereof another section is formed as a one up and two down twill, whereby sufficient flexibilily is established to enable the tape to be effectively applied in service without the hazard of buckling.

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4. Material for covering pipes and the like, consisting of flat tubular tape of woven asbestos fabric, each face of the tape presenting a diagonal twill, and a pad of loose asbestos fiber within the tape.

5. Material for covering pipes and the like, consisting of flat tubular tape woven with increased flexibility in one diagonal direction so as to permit the tape to conform to a cylinder when wrapped thereon, and a pad within the tape.

6. Material for covering pipes and the like, consisting of flat tubular tape having a greater amount of filling in one face than in the other, and a pad within the tape.

In testimony whereof I affix my signature.

OSBORN H. CILLEY.