July 11, 1944. C. M. PATTEN ET AL 2,353,494

INSULATING TAPE

Filed Nov. 4, 1941

Fig. I.

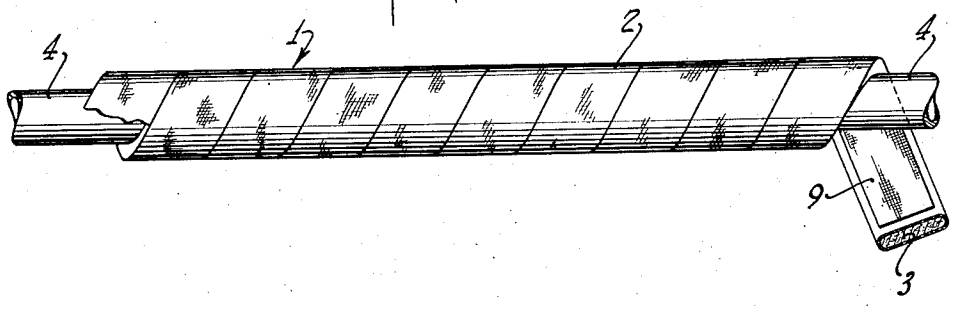


Fig. II.

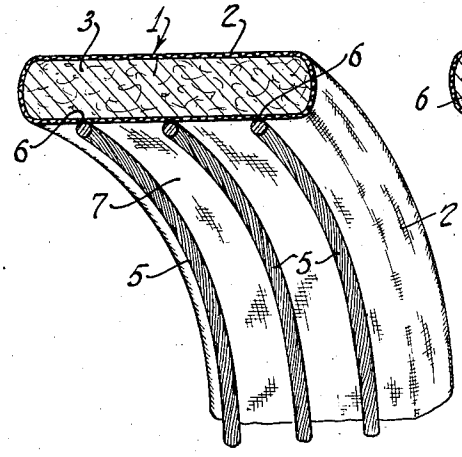
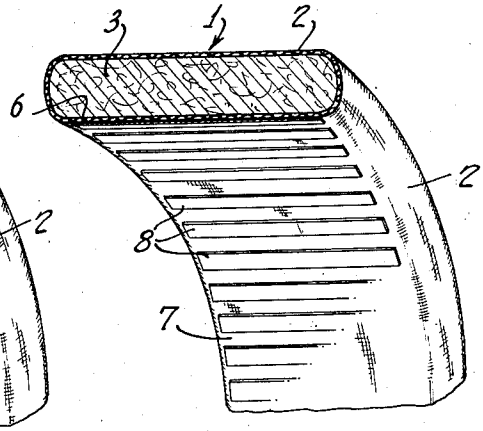


Fig. III.



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Patented July 11, 1944 2,353,494

UNITED STATES PATENT OFFICE

2,353,494

INSULATING TAPE

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Application November 4, 1941, Serial No. 417,772

7 Claims. (Cl. 154—44)

The invention relates to an improvement in insulating tape and more particularly concerns an insulating tape for pipes, conduits, and the like.

Such an insulating tape is usually tightly wound in spiral fashion about the pipe to be insulated and securely fastened. It is often necessary to remove the insulating tape to facilitate repair and adjustment to the pipe, and, in such cases, it is desirable that the tape be removed in such a condition that it may be subsequently reused for the same purpose. It has been found that, particularly where the pipe had been freshly painted prior to the application of the insulating material or a film of rust, dirt, or the like, had formed on the pipe, the insulating tape tends to stick to the pipe so that it is torn or split during removal and thus cannot be later reused. The above condition is sometimes aggravated by the nature and composition of the insulating tape and by the high temperatures of the pipe.

An object of the invention is to provide an insulating tape which can be readily removed from the object which has been insulated and later reapplied to the same or similar object.

A more specific object of the invention is to provide an insulating tape which has a divorcing or parting means affixed to it in such a manner that when the tape is to be removed from an insulated object, the parting means permits such removal without injury to the tape.

In the drawing which illustrates the invention and wherein like reference characteristics indicate like parts:

Fig. I is a perspective view of an insulated pipe assembly illustrating an insulating tape embodying applicant's invention;

Fig. II is an enlarged perspective view of an embodiment of the invention; and

Fig. III is a view similar to Fig. II illustrating a modification of the invention.

In the drawing, a conventional insulating tape 1 is shown comprising a flexible sheathing 2 having an insulating filler 3 disposed therein. The sheathing 2 may be of any flexible type suitable for confining the insulating filler and is preferably a woven or knitted asbestos fabric having a flattened, tubular shape. While the filler 3 may be of any flexible insulating composition adapted to be confined within the sheathing 2, it is preferably asbestos fibres or mineral wool fibres either loose or in the form of rovings, fabric or the like. The insulating tape 1 may be reinforced, waterproofed, coated, or the like.

In accordance with the invention, the insulating tape is provided with a divorcing or parting means on that surface of the tape which is to contact the pipe or other object to be insulated. The parting means consists of one or more members affixed to the contacting surface of the tape in a manner that will permit them to be broken away or separated from the tape without injury to the latter. Thus, when the insulating tape is applied to the pipe, the parting means is interposed between the pipe and tape so that none or only a minor portion of the inner or contacting surface of the tape comes into direct contact with the pipe. Upon subsequent removal of the tape, the parting means will readily break loose from the sheathing and thus permit the removal of the tape without injury to the sheathing or impairment of the insulating value of the tape.

The parting means is preferably in the form of one or more rovings or cords 5 which extend longitudinally along the inner or contacting surface 7 of the sheathing 2, as shown in Fig. II. In the preferred embodiment the cords 5 are affixed to the tape by a cementitious material 6, such as glue, starch, sodium silicate, or like adhesives. The size of the parting means 5 should be sufficient to prevent the major portion of the inner surface of the tape 1 from contacting pipe 4. The parting means is preferably formed of asbestos in the form of rovings or cords, either plain or wire-inserted.

In the modification of the invention shown in Fig. III, the parting means may comprise sections 8, which extend laterally across the inner or contacting surface 7 of the tape 1. Sections 8 are affixed to the contacting surface 7 of the insulating tape in the same manner as the embodiment shown in Fig. II. As shown, the parting means are of asbestos millboard, although short sections of cord, tape or the like may be used.

While the parting means may be merely a divorcing strip affixed to the inner surface 7, such as strip 9, shown in Fig. I, it is preferred that the parting means does not extend over the entire surface, inasmuch as such a strip tends to fold and buckle when the insulating tape is applied to the pipe. Parting means 5 or 8 provide a sufficient barrier between the surface of the pipe and the inner surface 7 of sheath 2 so that the portions of surface 7 contacting the pipe will be of such small area that they will readily break loose when the tape is removed.

By preventing unrestricted contact of the surface 7 with the pipe 4, any injury to the tape resulting from its tendency to stick to the pipe upon removal is substantially minimized. Should the parting means tend to stick to the pipe 4 when

the tape is removed, new cords 5 or sections 8 can be readily affixed to the tape before it is reapplied.

It should be understood that the details of the description set forth above are only for purposes of illustration and that the invention is to be limited only by the scope of the appended claims.

We claim:

1. A pipe covering comprising an insulating tape adapted to be spirally wound around a cylindrical pipe with one surface adjacent thereto, said tape having parting means frangibly affixed to said surface, said parting means being readily separable from said tape.

2. An insulating tape comprising a flexible sheath having an insulating material disposed therein and parting means on, and frangibly affixed to, a surface of said sheath, said parting means being readily separable from said sheath.

3. An insulating tape adapted to contact and surround a cylindrical object, said tape comprising a flexible outer sheath having an insulating material disposed therein, said sheath having parting means frangibly secured to its contact surface and preventing the major portion of the contact surface from contacting said cylindrical object, said parting means being readily separable from said sheath.

4. An insulating tape comprising a flexible sheath having an insulating material disposed therein and parting means disposed thereon, said parting means comprising one or more cords extending longitudinally along, and frangibly affixed to, a surface of said sheath and separable therefrom.

5. An insulating tape comprising a flexible sheath having an insulating material disposed therein and parting means disposed thereon, said parting means comprising a plurality of strips transversely disposed along, and frangibly affixed to, a surface of said sheath and separable therefrom.

6. An insulating tape adapted to surround a cylindrical object comprising a flexible asbestos fabric sheath having fibrous insulating material disposed therein and separable parting means disposed thereon, said parting means preventing the major portion of contact surface of said tape from contacting said object, said parting means comprising a plurality of asbestos cords extending longitudinally along the contact surface of said sheath and cemented thereto.

7. An insulated assembly comprising a cylindrical object having insulating tape wrapped therearound, said tape comprising a flexible sheath having an insulating material disposed thereon and parting means frangibly secured to the surface of said sheath adjacent to said object.

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