H. I. DIAMOND.

ELECTRICALLY INSULATING TAPE.

APPLICATION FILED JAN. 6, 1920.

1,368,025. Patented Feb. 8, 1921.

Fig. 1.

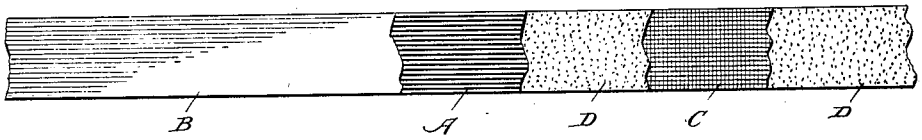
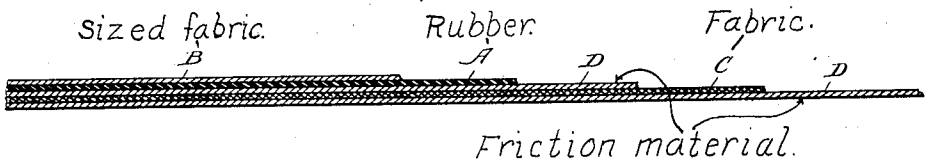


Fig. 2.



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HARRY I. DIAMOND, OF ATLANTA, GEORGIA.

ELECTRICALLY-INSULATING TAPE.

1,368,025. Specification of Letters Patent. Patented Feb. 8, 1921.

Application filed January 6, 1920. Serial No. 349,771.

To all whom it may concern:

Be it known that I, HARRY I. DIAMOND, a citizen of the United States, and resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Electrically-Insulating Tape, of which the following is a specification, reference being had therein to the accompanying drawing.

The object of this invention is to provide electrically insulating tape which will in use be more quickly applied than ordinary insulation, give more uniformly perfect results, and eliminate certain kinds of imperfect work now common where unfaithful workmen are employed.

It is usual to wind about bare conductors strips of good insulating material such as plastic, adhesive rubber or gutta percha compound and afterward to cover this insulation by winding about it a strip of fabric having "friction" material upon its face. It sometimes happens that a workman exhausts his supply of insulating strips while having left a stock of covering strip, which is itself capable of insulating in some degree. If, for example, he must thus omit the insulating strip on a splice or two or else return on another day to complete the work properly, he may save time by using the covering strip alone. The bad work cannot be discovered by ordinary inspection, yet later it may lead to very serious loss.

In the accompanying drawings,

Figure 1 is a view showing a portion of my novel tape with its several layers broken away to show in succession a small portion of the various layers.

Fig. 2 is a cross section of the same tape showing the layers greatly exaggerated in thickness.

In these figures, A represents a strip of approved insulating material, preferably pliable adhesive rubber or gutta percha compound, and B an equal superposed adherent strip, preferably of "Holland" or fabric filled and sized, the function of this strip being the temporary protection of the strip when rolled and the prevention of too strong adhesion of the adjacent friction surface. When a piece of the strip is to be used, this layer is stripped from it. C represents a fabric layer having on each face a coating D of soft highly adhesive "friction" material. When the tape made up of these several connected layers is coiled upon itself, the outer friction layer adheres with moderate tenacity to the layer B but not so strongly as to prevent unwinding of the tape by a strong pull upon its end portion. In using the tape a portion from which the layer B has been stripped is wound firmly around the conductor to be insulated, usually forming a helix with its margins overlapping, and pressed down so that all air and moisture are excluded and all crevices and interstices are closed. This operation is quickly and perfectly performed and with almost unavoidable perfection owing to the character of the tape and the fact that it is soft and lies between the overlapping surfaces of the insulation proper. The entire tape is put securely in place in far less time than is usually required to apply the layer A, and the work is less likely to be imperfect at any point, the conductor lying in the axis of a body having all its parts integrally connected at all points as if molded upon the wire.

Obviously the workman can never save time by using the covering strip only, since both are always together and practically cannot be separated. It is also evident that the covering strip by its own insulating quality tends to make the insulation more secure.

What I claim is:

1. In an electrically insulating tape, the combination with a strip of adhesive plastic material, such as rubber or gutta percha compound, or other approved insulating material, permanently united to a superposed strip of fabric having both faces coated with soft, insulating, highly adhesive friction material, said plastic material having its otherwise exposed face protected by a slightly adhering strip itself of non-adherent material.

2. Insulating tape consisting of a strip of plastic adhesive material of highly insu-

lating character superposed on an analogous strip of fabric having both its faces coated with friction material.

3. Insulating tape consisting of a strip of fabric impregnated with insulating material, such as rubber or gutta percha compound, or other approved insulating material, bearing upon each face a coat of friction material, and a superposed strip of plastic, adhesive, rubber-like insulating compound secured permanently upon one of the frictioned faces of the fabric strip.

In testimony whereof I hereunto affix my signature.

HARRY I. DIAMOND.