

# UNITED STATES PATENT OFFICE.

JAMES TATHAM, OF PHILADELPHIA, PENNSYLVANIA.

## INSULATING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 366,898, dated July 19, 1887.

Application filed November 20, 1886. Serial No. 219,468. (No specimens.)

*To all whom it may concern:*

Be it known that I, JAMES TATHAM, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain  
5 Improvements in Insulating Compounds, of which the following is a specification.

The object of my invention is to provide an insulating compound for electrical conductors, which compound, while possessing very high  
10 insulating properties, is of a pliable or flexible character and will not be injuriously affected by the bending or rough handling of the conductor.

My improved compound consists of rosin  
15 and cotton-seed oil, the proportions of the respective ingredients being varied in accordance with the purpose for which the conductor is intended, the rule to be observed being that the greater the degree of flexibility required  
20 the larger should be the proportion of cotton-seed oil in the compound. As indicating the range of proportions, I may say that good results have been obtained by a compound of six parts, by weight, of rosin to one part of  
25 cotton-seed oil, and good results have also been obtained by a compound having but four parts of rosin to one part of cotton-seed oil.

The effect of the cotton-seed oil upon the rosin is to toughen it, or render it pliable, and  
30 thus overcome the natural tendency which the rosin has, when cold, to crack or granulate when the conductor to which the insulating compound is applied is bent or roughly handled, so as to subject the covering to strain.

35 For this reason my insulating compound is especially available for use in insulating con-

ductors inclosed in lead pipes, as such lead-covered conductors are usually wound upon a reel, and are afterward unwound and subjected to repeated bending during the operation of laying the cable.

The mixture of the ingredients is preferably effected by subjecting them to heat, the different ingredients being heated together, or the rosin being first melted and the cotton-  
45 seed oil afterward added. The compound is applied to the conductors while in a heated state.

Other ingredients may, if desired, be added to my improved compound, the latter being  
50 used as the insulating base for the compound to be produced.

I am aware that cotton-seed oil and rosin have been used as ingredients in insulating compounds; but I am not aware that cotton-  
55 seed oil has been used in combination with rosin alone in the proportions specified by me for the purpose of softening and toughening the rosin.

I therefore claim as my invention— 60

An insulating compound consisting of rosin and cotton seed oil, in the proportions of from four to six parts, by weight, of rosin to one part of cotton-seed oil, all substantially as  
65 specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES TATHAM.

Witnesses:

WILLIAM D. CONNER,  
HARRY SMITH.