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CONTACT MATERIAL

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My invention relates to contact material, and more particularly to a material to be used as a substitute for silver in the electrical field.

Silver as a contact material has the very great advantage of being the best known conductor of electricity. Its use for this purpose, however, is limited due to its relatively high cost.

An object of my invention is to provide a material less expensive than silver to be used as a substitute for silver in its many and varied uses in the electrical field.

A further object of my invention is to provide a material to be used as an electrical contactor which will be highly resistive to corrosion, hard and durable, and at the same time be an excellent conductor of electricity.

A further object of my invention is to provide an alloy to be used as a substitute for silver in the manufacture of contacts for delicate electrical instruments.

Other objects and advantages of my invention will appear as this description progresses.

I have discovered that alloying a relatively large proportion of silver with a small proportion of nickel and bonding the two together with copper forms an excellent substitute for silver in its varied uses in the electrical field.

Such an alloy, besides being considerably cheaper than silver, is an excellent conductor of electricity, is hard and durable, and is markedly resistive to corrosion.

I have found that the best results are obtained when approximately the following proportions of silver, copper and nickel are used:

	Per cent
Silver	65
Copper	30
Nickel	5

Although I have found that the above proportions give results which are highly satisfactory, I have also found that considerable variations in the percentages mentioned above can be made and a more or less satisfactory alloy obtained.

The function of the copper is to secure a bond between silver and nickel as these two elements have a tendency to separate upon cooling. Nickel, being considerably harder than either silver or copper, lends a certain degree of hardness to the alloy which is very desirable in a contact material.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

An electrical substitute for silver composed of silver, nickel and copper in approximately the proportions: Silver 65%, copper 30%, nickel 5%.

In witness whereof, I hereunto subscribe my name this 18th day of June, 1931.

EDGAR W. ENGLE.