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ALTERNATING ELECTRIC CURRENT RECTIFIER OF THE SELENIUM TYPE

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2 Claims. (Cl. 175—366)

This invention relates to alternating electric current rectifiers of the selenium type comprising a base plate or support provided with a layer or coating of selenium which may contain other substances or compounds of selenium, a counter electrode being applied to the surface of the selenium layer.

The invention further relates to rectifiers of the character above indicated in which a counter electrode is utilised composed principally of tin, cadmium or an alloy of these metals sprayed or otherwise deposited on the surface of the selenium layer or coating.

According to the present invention the counter electrode contains a relatively small quantity of thallium added to the metal or alloy of which the counter electrode is composed as a result of which the ultimate resistance characteristics of the rectifier are found to be considerably improved.

The invention is of particular advantage in cases in which an electric forming process is utilised consisting in applying to the rectifier in the reverse direction a voltage which is high relative to the normal voltage at which the rectifier operates, the period of time during which the relatively high voltage is required to be applied being considerably reduced when the present invention is employed.

In carrying the invention into practice the counter electrode composed of a tin-cadmium

alloy may have approximately 0.1% of thallium added thereto, the necessary time of application of the relatively high voltage utilised in the forming process above referred to being thereby reduced from ten to fifteen minutes to approximately two to five minutes.

The invention is however, not limited to the particular proportion of thallium above mentioned which may evidently be varied without exceeding the scope of the invention.

Having now described our invention, what we claim as new and desire to secure by Letters Patent is:

1. An alternating electric current rectifier of the kind described comprising a base plate provided with a layer of selenium and a counter electrode composed principally of tin, cadmium or an alloy of these metals sprayed or otherwise deposited on the surface of the selenium layer or coating in which the counter electrode contains a relatively small quantity of thallium added to the metal or alloy of which the counter electrode is composed, for the purpose specified.

2. A rectifier as claimed in claim 1 in which the counter electrode is composed of a tin-cadmium alloy containing approximately 0.1% of thallium added thereto, for the purpose specified.

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