

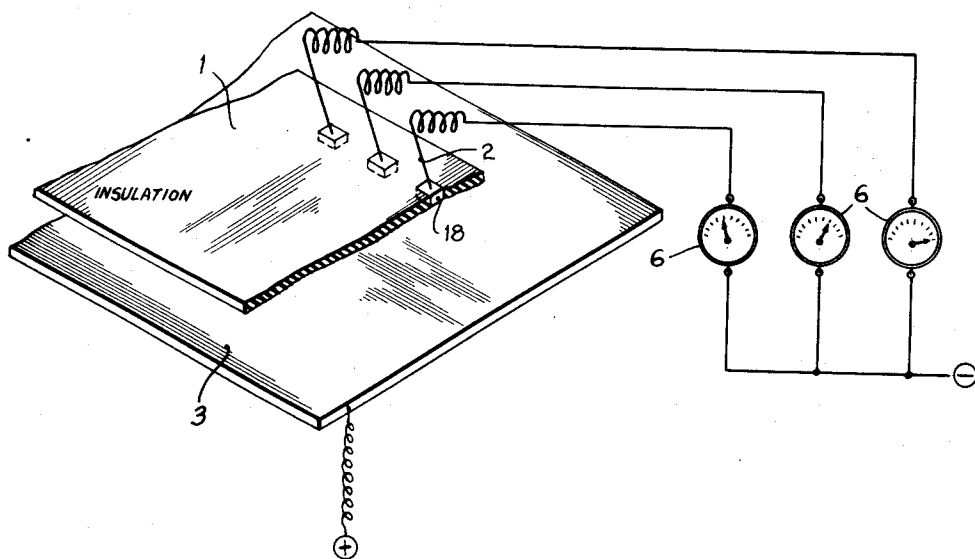
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CARD CONTROLLED MACHINE

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CARD CONTROLLED MACHINE

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ary 18, 1932, Serial No. 593,781

7 Claims. (Cl. 235—92)

The present invention relates, particularly, to improvements in electrical arrangements for analyzing members provided with controlling index points, such members being composed of cards, or the like, and are employed for controlling the operation of devices in record controlled machines used for statistical and book-keeping purposes.

This application is a division of the co-pending application, Serial No. 403,854, filed Oct. 31, 1929.

The object of the invention is to apply to a card or plate, of insulating material, designations having the same electrical property but varying in value so as to represent different digits.

More specifically it is an object of the invention to designate the different digits on a tabulating card by metallic elements having different values of electrical resistance, each of such metallic elements being carried by the tabulating card of insulating material and adapted to be analyzed by electrical devices so as to represent the digital value by a suitable electrical measuring instrument.

The above objects are attained by means hereinafter described and illustrated in the accompanying drawing in which there is shown a tabulating card provided with several designations of the type described and correlated with electrical analyzing devices.

At the index point positions in which the designations are to be made there are impressed electrical conducting bodies 18, in a card 1 or strip of insulating material.

In order to characterize the value of the designations the metallic bodies 18 have different electrical resistances corresponding to the digital value to be designated. The designation of the numeral "1" is secured, for example, by a body consisting of a metal alloy 18 having a high electrical resistance, the numeral "2" by a metal alloy which has an electrical resistance of a lesser value, and so on, up to the designation representing the numeral "9" which has the lowest electrical resistance.

When a card 1, prepared in this manner, is brought between an electrical conducting sensing element 2 and an electrical conducting support 3, a current is caused to flow through a circuit which includes the sensing element 2 and the metallic body 18 which is analyzed to affect a

proportional deflection of a pointer of a conventional ammeter 6 electrically connected in the same circuit. It will be understood that the extent of the deflection of the pointer of the ammeter 6 is proportional to the conductivity of the body 18 in electrical contact with the sensing element 2.

I claim:—

1. A tabulating card carrying a series of metallic elements of varying inherent electrical conductivities insulated from each other and adapted to control the magnitude of current in an electric circuit.

2. A tabulating card having embedded therein, insulated from each other, metallic elements of graduated electrical conductivities and adapted to control the magnitude of current in an electric circuit.

3. A tabulating card of electrically non-conducting material and carrying spaced elements of different alloys, the electrical conductivity of each controlling the amount of current in an electric circuit.

4. A tabulating card of electrically non-conducting material carrying a metallic element the inherent electrical resistance of which is of a value according to a character it represents.

5. The combination of a tabulating card containing metallic elements insulated from each other and of graduated electrical conductivities, 30 and electrical analyzing means including a pair of contact devices for analyzing one of said elements for determining the extent of current flow governed by said element.

6. The combination of a tabulating card containing metallic elements insulated from each other and of alloys having different electrical conductivities, and electrical analyzing means including a base plate contacting all of said elements for analyzing said elements for determining the extent of current flow governed by said elements.

7. The combination of a tabulating card having embedded therein, insulated from each other, metallic elements of different electrical conductivities to represent different characters, and electrical analyzing means including a single element electrically contacting the surface of a related one of the elements for determining the extent of current flow in its associated circuit.

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