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MEANS FOR SHORT-CIRCUITING THE SECONDARY CIRCUIT OF A CURRENT TRANSFORMER

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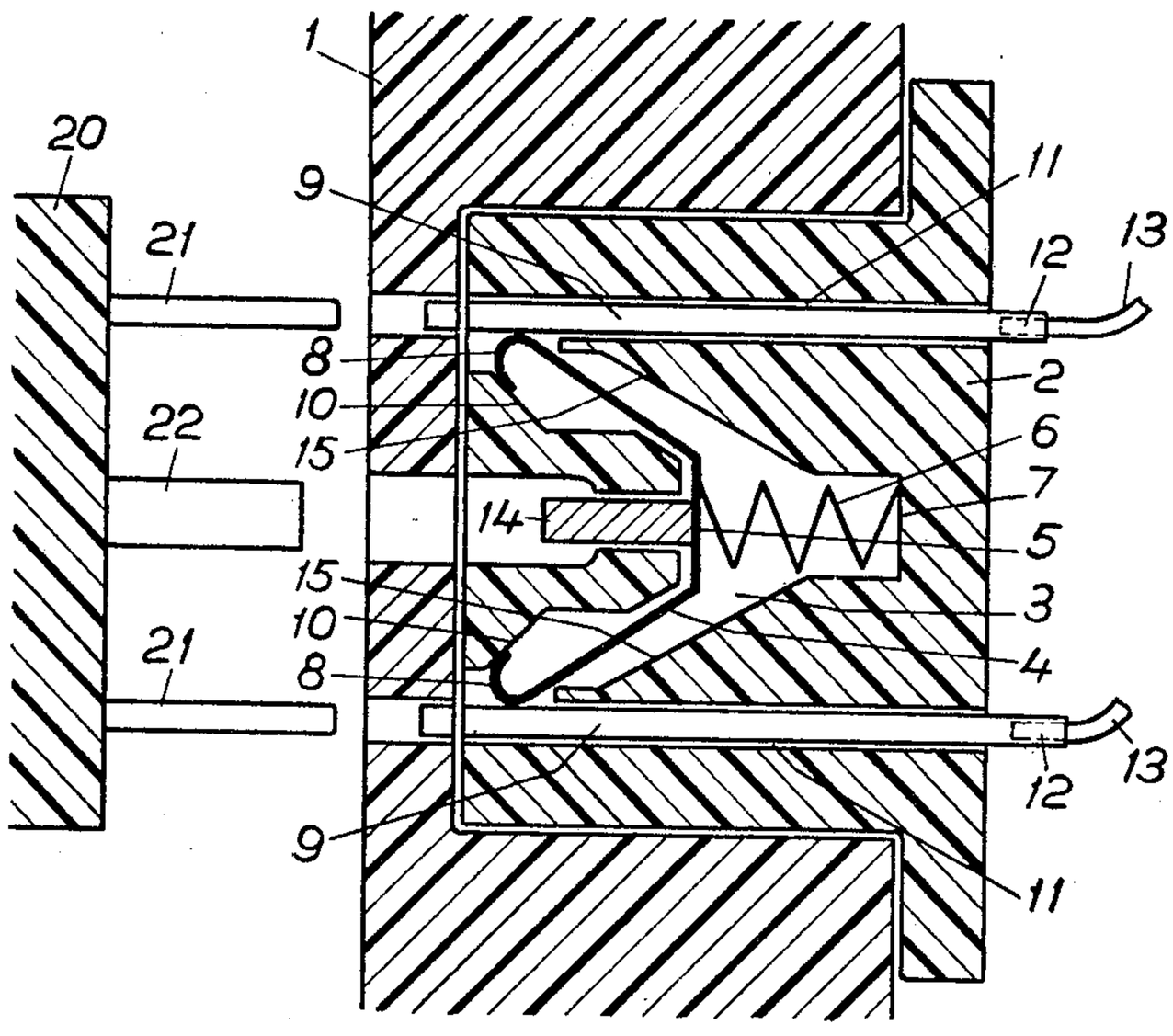

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MEANS FOR SHORT-CIRCUITING THE SECONDARY CIRCUIT OF A CURRENT TRANSFORMER

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ABSTRACT OF THE DISCLOSURE

A device for short-circuiting the secondary circuit of a transformer when a contact making device is removed from such circuit comprises a body of insulating material in which is slidably mounted a short-circuiting member which is pushed into a position by a spring to make contact with two jacks when the contact making device is removed, so as to short-circuit the transformer. When the contact making device is replaced, a pin engaging a pin on the short-circuiting member pushes it to another position in which it no longer short-circuits the secondary.

BACKGROUND OF THE INVENTION

Field of the invention

The invention relates to an arrangement for short-circuiting a secondary circuit of a current transformer when a relay or other device is removed from such circuit.

The prior art

When disconnecting electrical apparatus which are directly connected to a current transformer there is a great risk that the secondary circuit of the current transformer will be opened involuntarily. This is the case especially with apparatus of the plug-in type, for example, relays. Usually some type of switch-over with non-interrupting contacts is used for short-circuiting the secondary circuit before the apparatus is removed from its mounting plate. As the switch-over is operated manually, there is always a risk that the short-circuit is not brought about, which results in an opening of the secondary circuit and risks of damage to the current transformer.

Summary of the invention

With a device according to the invention an automatic short-circuiting of the secondary circuit is obtained when the apparatus is removed. The short-circuiting is brought about before the apparatus is removed and the risk of damaging the current transformer is completely eliminated.

The essential characteristic for the invention is that the device consists of a socket of insulating material and a short-circuiting body which is movably arranged in an aperture in the socket. The body is actuated partly by a

spring mounted in the aperture and partly by a pin on the apparatus. The contact arrangement in the device consists of two contact parts which are connected to the secondary circuit of the current transformer. When the apparatus is removed the body is situated in one of its end positions under influence of the spring where it brings about a short-circuit between the two mentioned contact parts. When the apparatus is inserted the body is situated at its second end position under the influence of the pin in the apparatus whereupon the short-circuit is nullified.

Brief description of the drawing

The attached drawing shows the structure of the invention when applied to a relay of the plug-in type.

Description of the preferred embodiments

In the modification shown in the drawing, the device is inserted in a mounting plate **1**. The device consists of a socket **2**, in which there is an aperture **3**, in which a short-circuiting body **4**, is arranged. The body at its centre part **5**, is actuated by a pressure spring **6**, which is in contact with a bottom surface **7** in the aperture and presses the body to the left in the figure. The free ends of the body are bent in order to obtain a good contact surface, partly against two contact parts **9**, partly against a slanting surface **10** in the aperture. The contact parts **9** are shaped as contact jacks inserted in tubes **11** in the socket. At their right end the jacks are connected to a cable from the secondary circuit of a current transformer which is not shown.

Of the relay which is to be connected, only the bottom socket **20**, two plugs **21** and a pin **22** are shown in the figure. When the relay is mounted on the mounting plate the plugs **21** enter the jacks **9**, and by this the relay is connected to the secondary circuit of the current transformer. The pin **22** is intended to cooperate with a guide pin **14** in the body **4** and to press the body to the right when the relay is inserted in its place. When moved to the right, the body is compressed slightly and its free ends are slid along the edges **15** in the aperture so that the short-circuit is broken. The lengths of the guide pin **14**, pin **22** and the two plugs **21** on the relay are so dimensioned that upon insertion of the relay into the socket the plugs **21** have good contact with the contact jacks **9** before the body **4** is pressed so far to the right that the short-circuiting between the contact parts **9** is broken. Upon the removing of the relay the body **4** will have brought about a short-circuit of the secondary circuit before the plugs **21** have left the contact jacks **9**.

We claim:

1. Device for short-circuiting the secondary circuit of a current transformer simultaneously with the removing of an apparatus which is connected to said current transformer by means of said device, said device comprising a socket of insulating material having an aperture therein, a short-circuiting means movably arranged in said aperture, a pressure spring in said aperture and a pin on said apparatus for moving said short-circuiting means in opposite directions, said socket having tubes therein on opposite sides of said aperture and communicating therewith, two contact jacks in said socket connected to the secondary circuit of said current transformer, each said contact jacks being positioned in one of said tubes, said short-circuiting

means engaging in direct contact with said contact jacks when the apparatus is removed from the socket, said contact jacks being arranged for direct cooperation with corresponding contact pins on the apparatus.

2. A device according to claim 1, said short-circuiting body being provided with a guide pin which cooperates with said pin of said apparatus, the length of the guide pin and said pin in the apparatus being such that the apparatus is electrically connected to the current transformer before the short-circuit is broken upon inserting of an apparatus in the socket.

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