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2,597,368

SWITCHING MEMBER FOR CIRCUIT BREAKERS

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Fig. 1.

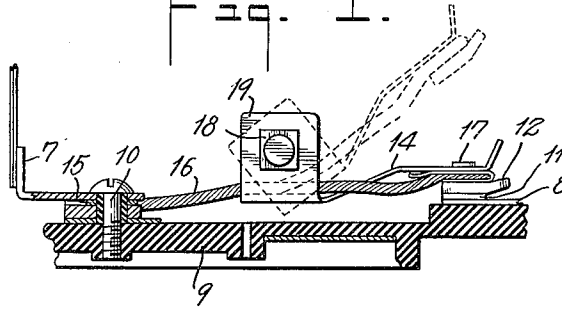


Fig. 2.

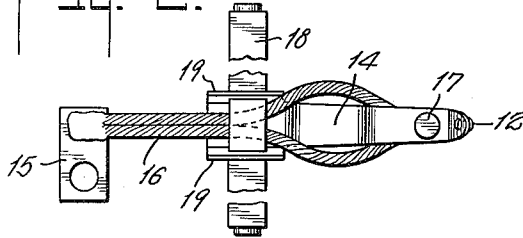


Fig. 4.

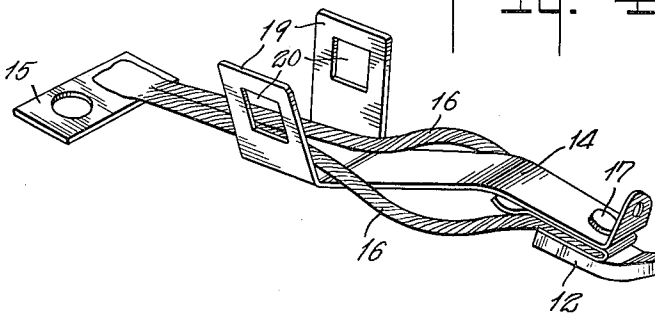
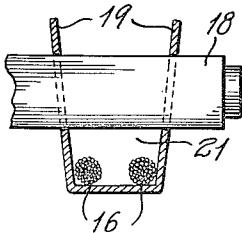


Fig. 3.



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SWITCHING MEMBER FOR CIRCUIT
BREAKERS

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3 Claims. (Cl. 200-166)

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This invention relates to the contact making and breaking parts of a circuit breaker. The movable switch member is frequently hinged and actuated manually as well as automatically in case of an overload.

It is the main object of my invention to improve the construction of the hinged contact member.

Another object is to facilitate the mounting and to provide adjustment of the hinged member.

The accompanying drawing illustrates one embodiment of the invention.

Fig. 1 is an edge view of the preferred form of switching member of my invention showing it in full lines in closed circuit relation to conventional elements of a circuit breaker, and in dotted lines in open circuit relation.

Fig. 2 is a top plan view of the switching member.

Fig. 3 is a cross sectional view showing the mounting of the switching member.

Fig. 4 is an enlarged perspective view of the switching member.

In the drawing, I have shown the invention as applied to part of a circuit breaker in which 7 and 8 represent portions of circuit terminals mounted on a part 9 of a circuit breaker housing. Part 7 is secured in place, for instance, by member 10, and part 8 mounts one of the stationary contacts 11 of the circuit breaker.

The movable switch contact 12 is carried by a spring arm 14 and connected to the terminal plate 15 by a flexible conductor 16, the end of which is looped around a rivet 17 between the tip of the arm 14 and the contact 12. The arm 14 is mounted on a rocker shaft 18 which also carries the usual tripping member (not shown) of the circuit breaker.

This arm 14 has two ears 19, 19 having openings 20, 20 which ears are slidably mounted on the shaft 18 and biased so as to grip the shaft 18 to normally hold the arm against longitudinal movement on the shaft. By pressing the ends of the ears 19, 19 toward each other they may be released so as to permit the arm 14 to be adjusted longitudinally of the shaft. The base of the arm is spaced away from the shaft 18 so as to provide a passage 21 for the looped conductor 16 which is passed beneath the shaft 18 and connected to circuit terminal part 7.

The switch parts are shown in closed circuit or on position in Fig. 1. When shaft 18 is rocked either manually or automatically, the arm 14 is swung upwardly in a counterclockwise direction to open or off position as shown in dotted lines.

It will thus be seen that the device is very simple and compact and is very adequately supported on the rocker shaft. It can very easily be mounted on and taken off of the shaft and is readily adjustable along the shaft.

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I claim:

1. In a circuit breaker, a switching unit comprising a terminal member, a rocker shaft, a movable switch member carried thereby, said member including an elongated spring arm, a contact riveted to one end of the arm, spaced perforated mounting ears formed integrally on the other end of the arm extending at right angles to the plane of the body of the arm and encircling said shaft and being biased to normally slidably grip the shaft for adjustment therealong, the perforations of said ears being spaced outwardly of the body of the arm to provide a passage between the shaft and the body of the arm, and a flexible conductor extending along the arm and through said passage, said conductor being looped around the rivet connecting the contact and arm and having its ends connected to the terminal member.

2. As an article of manufacture, a movable switch member comprising an elongated flat arm of spring metal having a contact element at one end with means for attaching said element to a conductor and having a pair of aligned perforated ears integrally formed with the arm at its other end for receiving a supporting and actuating shaft, said ears being biased away from each other to grippingly and releasably engage the shaft.

3. A switching unit for a circuit breaker comprising an elongated flat movable switch arm of spring metal, a contact secured to one surface thereof at one end, perforated ear members integrally formed on the other end of the arm and extending from opposite edges and from the opposite surface, in biased relationship for grippingly and releasably mounting the arm on a supporting and actuating shaft, and a flexible conductor extending along and beyond the arm, one end of said conductor being connected to said contact and the other end which extends beyond the arm hingedly connecting the arm to a terminal, said hinged connection including a plate member for attachment to the terminal, the perforations in the ear members being spaced outwardly of the arm a sufficient distance to permit the conductor to pass behind the supporting and actuating shaft when the unit is on the shaft.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,127,813	Graves	Aug. 23, 1938
2,211,412	Filko	Aug. 13, 1940
2,440,034	Wiegert	Apr. 20, 1948