

Title (en)

Automatic circuit breakers, particularly earth fault and overload circuit breakers.

Title (de)

Selbstschalter, insbesondere Fehler- und Überstromschalter.

Title (fr)

Perfectionnements aux interrupteurs à coupure automatique, notamment aux interrupteurs différentiels et disjoncteurs.

Publication

**EP 0143682 A1 19850605 (FR)**

Application

**EP 84401955 A 19841001**

Priority

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- FR 8409416 A 19840615

Abstract (en)

1. An electrical device with automatic circuit-breaking, comprising, between a rotary control member (2, 42) and a rocking contact-carrier (3) on which there is mounted at least one movable contact (4) cooperating with a fixed contact (5) and which is urged by a first spring (6) in the direction of opening or separation of the movable contact (4) from the fixed contact (5), a toggle (1) and catch (20, 50) mechanism capable, on the one hand, when this mechanism is taut, of transmitting the movement of the control member (2) to the contact-carrier (3) both in the opening direction and in the opposite direction or closing direction and, on the other hand, at the moment when this mechanism (1) is relaxed by tripping means (7) acting independently of the control member (2) on the catch (20, 50), of causing the return of the contact-carrier (3) from its closing position to its opening position, this toggle mechanism (1) being adapted in such a manner as to permit the control member (2) to reset the device, that is to say to retighten the mechanism (1) by restoring it from its opening position after tripping to its normal opening position, after cessation of the intervention of the tripping means and under the action of a second spring (8) acting on this control member (2), which mechanism (1) consists essentially of a connecting-rod (10) articulated by one of its ends on the control member (2) about an axis (11) which is eccentric in relation to the axis of rotation (12) of the control member (2), of a link (13) articulated by one of its ends on the other end of the connecting-rod (10) and by the other of its ends on the contact-carrier (3), about an axis (15) which is eccentric in relation to the rocking axis (16) of the contact-carrier (3), and of a tripping lever (17) articulated by one of its ends about a fixed pin (18) and provided with a longitudinal slot (19) in which the joint pin (14) between connecting-rod (10) and link (13) can slide practically without transverse play, all these axes and pins (11, 12, 15, 16, 18) being parallel to one another, the catch (20, 50), having a fixed pin (21, 51), being urged by a third spring (22, 52) and acting on the tripping lever (17) characterised in that the catch (20, 50) is adapted in such a manner that and, in particular, its pin (21, 51) is situated in such a manner that this catch (20, 50) automatically occupies a stable position, that is to say a position in which the action of the first spring (6) is incapable of causing the catch (20, 50) to turn about its pin (21, 51), in the closed position of the device, and in that the tripping means (7) are adapted in such a manner as to act mechanically by thrust on this catch (20, 50), against the action of the third spring (22, 52, 62).

Abstract (fr)

Appareil électrique à coupure automatique dans lequel l'organe rotatif de manoeuvre (2) est relié au porte-contact (3) par un mécanisme genouillère et à encliquetage, avec un relais de déclenchement (7) indépendant. Le mécanisme est constitué d'une bielle (10) suivie d'une biellette (13) actionnant le porte-contact (3) et d'un levier déclencheur (17) muni d'une rainure (19) dans laquelle glisse l'axe commun (14) des bielles et biellettes, un cliquet (20) étant sollicité par un ressort (22) pour agir sur le levier déclencheur (17).

IPC 1-7

**H01H 71/52**

IPC 8 full level

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CPC (source: EP)

**H01H 71/528** (2013.01)

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- [Y] DE 1490307 B1 19700122 - SIEMENS AG
- [Y] CH 483114 A 19691215 - STOTZ KONTAKT GMBH [DE]
- [A] CH 387760 A 19650215 - WEBER AG FAB ELEKTRO [CH]

Cited by

EP0338930A1; CN103681133A; FR3133268A1; EP0325501A1; FR2626104A1; FR2630581A1; FR2630582A1; EP0310943A3; CN113230934A; EP0508839A1; EP0393566A1; FR2646015A1; GB2216724A; CN116871847A

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