

Title (en)  
Snap closing mechanism for modular circuit breaker

Title (de)  
Schnelleinschaltvorrichtung für Modulschutzschalter

Title (fr)  
Mécanisme de fermeture brusque pour appareil électrique modulaire de type disjoncteur

Publication  
**EP 1170769 B1 20020313 (FR)**

Application  
**EP 00440285 A 20001019**

Priority  
EP 00440285 A 20001019

Abstract (en)  
[origin: US2002046940A1] A mechanism for the rapid closure of electrical contacts on modular electrical apparatuses, particularly circuit-breakers is disclosed. The mechanism includes at least one movable electrical contact, which cooperates with at least one fixed electrical contact. The movable electrical contacts pivot with respect to a contact support. The movable electrical contacts are maintained in a rest position through at least one spring. The contact support is capable of rotary movement to alternatively position the movable electrical contacts in and out of electrical contact with the fixed electrical contact. The contact support is moved by a control lever, which may be manually actuated, acting through a toggle system, which imparts opposing rotary movements to the control lever and the movable electrical contacts. A cam, driven by the control lever and a finger, which is fixedly attached to each movable electrical contact, are caused to move in substantially the same direction, such that there is an intersection in the respective paths of motion of the cam and finger when the fixed and the movable electrical contacts are separated. The cam has a configuration and surface such that the cam and finger remain rotationally locked during a portion of the path of rotation of the control lever that is less than the portion of its path of rotation required to reach a stable position wherein the fixed and movable electrical contacts are in closed relationship to one another. The contact support continues to travel along its path, while the contact spring accumulates energy, which is dissipated only when contact between the cam and finger ceases. During a final stage of motion of the control lever, the cam is able to freely rotate relative to the control lever, with its range of motion being limited only by a stop element, positioned on the cam, which interposes itself between the cam and the control lever.

IPC 1-7  
**H01H 71/52**

IPC 8 full level  
**H01H 71/52** (2006.01); **H01H 71/00** (2006.01)

CPC (source: EP US)  
**H01H 71/526** (2013.01 - EP US); **H01H 71/002** (2013.01 - EP US); **H01H 2300/048** (2013.01 - EP US)

Cited by  
WO2013041801A1; FR2980635A1; CN103050342A; CN103946948A; EP4131314A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**EP 1170769 A1 20020109**; **EP 1170769 B1 20020313**; AT E214516 T1 20020315; DE 60000091 D1 20020418; DE 60000091 T2 20021107; ES 2172499 T3 20021001; PT 1170769 E 20020731; US 2002046940 A1 20020425; US 6492607 B2 20021210

DOCDB simple family (application)  
**EP 00440285 A 20001019**; AT 00440285 T 20001019; DE 60000091 T 20001019; ES 00440285 T 20001019; PT 00440285 T 20001019; US 78287601 A 20010213