

CIRCUIT BREAKER WITH WELDED CONTACT INTERLOCK, GAS SEALING CAM RIDER AND DOUBLE RATE SPRING

A B S T R A C T

A circuit breaker (10) includes a housing,(14,18) an operating mechanism (63) and separable main contacts (62,64), and a rotatable crossbar (100) which rotates to open and close the contacts. The crossbar interacts by way of a protrusion (101) thereon with a rotatable, positive off-link (188). A handle mechanism (126) is disposed in the housing and has a handle (42) protruding from the housing which is normally movable from a closed to open disposition. However, if the operating mechanism has reacted in such a way as to open the separable main contacts but, in fact, they have not opened because, for example, they are welded shut, the protrusion (101) on the crossbar will interact with the positive off-link and prevent the handle mechanism from moving to the opened position thus warning personnel that the contacts have not opened. There is also provided in association with the crossbar (100) a cam (110) which is spring loaded from the bottom against a portion of a cavity (114) in a crossbar which interacts with a movable portion of the movable contact in such a manner as to latch it open when it has independently moved to an opened position relative to the rotatable crossbar. The cam rider reacts in such a way that it seals off or protects the aforementioned spring (112) from gaseous arc products during the opening operation. There is provided on the trip mechanism a double pitch spring (220). The double pitch being such as to expand the range of the adjustment characteristic of the tripping mechanism.

(Fig. 1)