

Search history

Search PN=(WO2018006770) (Results 1)

1:

Search fn=(63432355) (Results 1)

2:

Search [SP]: conductive loop of circuit breaker boucle conductrice de disjoncteur a conductive loop of a circuit breaker, comprising: a first contact group and a second contact group. the first contact group comprises a first stationary contact (121) and a first movable contact (122), wherein the first stationary contact (121) is connected to a wire inlet terminal (101). the second contact group comprises a second stationary contact (131) and a second movable contact (132), wherein the first movable contact (122) is in conductive connection with the second movable contact (132), the second stationary contact (131) is connected to a tripper (104), and the tripper (104) is connected to a wire outlet terminal (105). the conductive loop of the circuit breaker connects a plurality of movable contacts (122, 132, 222) in a conductive manner, and the plurality of movable contacts (122, 132, 222) are coaxially mounted and the second stationary contact (131) is connected, across the second movable contact (132), to the wire outlet terminal (105) under the condition of insulation. on the premise of making the whole structure of the circuit breaker compact and the occupation space thereof small, the wire inlet terminal and the wire outlet terminal can be distributed at two sides, so as to facilitate the circuit breaker in wiring with the other electrical devices. l'invention concerne une boucle conductrice d'un disjoncteur comprenant: un premier groupe de contacts et un deuxième groupe de contacts. le premier groupe de contacts comprend un premier contact fixe (121) et un premier contact mobile (122). le premier contact fixe (121) est relie a une borne d'entree de fil (101). le deuxième groupe de contacts comprend un deuxième contact fixe (131) et un deuxième contact mobile (132). le premier contact mobile (122) est en liaison conductrice avec le deuxième contact mobile (132), le deuxième contact fixe (131) est relie a un déclencheur (104) et le déclencheur (104) est relie a une borne de sortie de fil (105). la boucle conductrice du disjoncteur relie une pluralite de contacts mobiles (122, 132, 222) de maniere conductrice, et la pluralite de contacts mobiles (122, 132, 222) sont montes de maniere coaxiale. le deuxième contact fixe (131) est relie, a travers le deuxième contact mobile (132), a la borne de sortie de fil (105) en condition d'isolation. en supposant que la totalite de la structure du disjoncteur est compacte et que l'espace qu'elle occupe est petit, la borne d'entree de fil et la borne de sortie de fil peuvent etre distribuees sur deux cotes, ce qui facilite le cablage du disjoncteur avec les autres dispositifs electriques. (Results 3)

Search TA=(CIRCUIT BREAKER) and PD<=20160706 (Results 69805)

4:

Search 4 AND TRIP* (Results 17348)

5:

Search 5 AND (fixed or static) and (moving or movable) (Results 6108)

6:

Search 6 and insulator (Results 560)

7:

Search 7 and shaft (Results 252)

8:

Search 8 and (fixed contact* or static contact*) (Results 116)

9:

Search 9 and (movable contact* or moving contact*) (Results 109)

10:

Search 10 and (static w5 insulat*) (Results 0)

11:

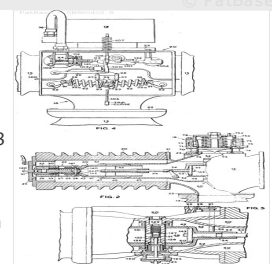
Search 10 and (fixed w5 insulat*) (Results 26)

12:

1) Family number: 25704612 (GB960402 A)

IMPROVEMENTS IN OR RELATING TO ELECTRIC CIRCUIT-BREAKERS

Abstract: Source: GB960402 A 960,402. Gas-blast switches. ENGLISH ELECTRIC CO. Ltd. June 1, 1960 [June 2, 1959], No. 18794/59. Heading H2B. A gas-blast **circuit-breaker** comprises a centre section 16, a pair of oppositely-projecting hollow insulators 20 mounted one on each side of the centre section and each forming an enclosure for a pair of co-operating contacts, a common source of compressed gas and a common exhaust valve 18 to control the flow of gas from the source through the enclosures, through a nozzle contact of each pair of contacts and the valve to atmosphere. To open the **circuit breaker**, the control rod 106, Fig. 4, is moved upwardly and the rod, through a bell-crank lever 105, displaces a valve control lever 101 to the left to open a pilot valve 102 which admits compressed air to the lower face of a piston 74, Fig. 2, to open the exhaust valve 18. The resulting reduction in pressure within the hollow **moving contacts** 41 permits the pressure in the contact enclosures to cause the initial movement of each **moving contact** 41 which separates from resilient **fixed contact** fingers 27, the " **fixed** " arcing contact 29 **moving** with the **moving contact** 41 under the bias of a spring 33. This initial movement causes each contact actuating piston 49 to uncover a port 50, Fig. 5, to admit compressed air to a cylinder 48 and cause the piston to withdraw the associated **moving contact** 41 from the arcing contact 29. As each **moving contact** 41 is moved from its closed to its open position, an associated spring toggle 91, 92 moves over centre to maintain the contacts open. Providing both **moving contacts** 41 open, the toggles, through links 96... 100, turn the valve control lever 101 to release the pilot valve 102 which recloses and so permits the exhaust valve 18 to reclose. The lever 101 also operates a valve 103 which exhausts cylinders 31 so that the compressed air in the **circuit breaker** moves pistons 32 to retract the arcing contacts 29 to provide contact gaps adequate for isolation purposes. To close the **circuit-breaker**, the rod 106 is moved downwardly causing the bell-crank lever 105 to move the lever 101 to the right to release the valve 103. This allows each arcing contact 29 to move towards the associated **moving contact** 49 under the bias of its spring 33. The right hand end of the lever 101 operates a valve 104 to admit compressed air to the operating cylinder 124 of a change-over valve 122 which opens each port 50 to atmosphere and admits compressed air to another port 51 of each cylinder 48. The pistons 49 now close the contacts, the toggles 91, 92 passing back through their deadcentre positions to bias the contacts closed and to cause the lever 101 to pivot so that the valve 104 is released and recloses, shutting off the supply of compressed air to the cylinder 124 so that the change-over valve 122 restores. Specifications 960,403, 960,404, 960,405 and 960,406 are referred to. Reference has been directed by the Comptroller to Specification 919,843.



Probable Assignee: ENGLISH ELECTRIC CO LTD

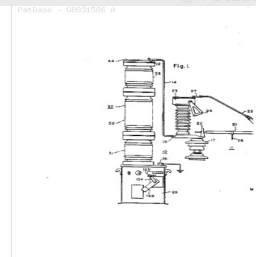
Earliest Publication Date: 19640610

IMPROVEMENTS IN OR RELATING TO ELECTRIC SWITCHES

Abstract: Source: GB831586 A 831,586. Electrically released switches; hightension switches; actuation of switches; protective cut-out arrangements. WESTING- HOUSE ELECTRIC CORPORATION. Jan. 21, 1958 [Jan. 31, 1957], No. 1985/58. Class 38 (5). An earthing switch comprises a metal enclosure 28, Fig. 3, at earth potential, an elongated insulating casing 30 above the enclosure, a **fixed contact** 46 inside the casing and supported from the top thereof, a reciprocating contact member 54 extending from the enclosure into the casing and normally spaced from the **fixed contact**, energy storage means, e.g. a spring 156, Fig. 8, for closing the contacts and operating means for opening the contacts, the casing and part of the enclosure being filled with gas having a dielectric strength of at least 1.4 times that of air. The gas may be sulphur hexafluoride, selenium hexafluoride, bromotrifluoromethane, perfluoropropane or dichlorodifluoromethane. Electrically-released switches.-The **moving contact** 54 is moved by an operating lever 81 secured to a **shaft** 82 which is latched in the contact open position by an underset toggle 95, 97, Fig. 6, engaging a latch lever 105. The toggle is biased by a spring 104 but is prevented from collapsing by a component of the spring forces acting on the **shaft** 82. When a **tripping** electromagnet 108 is energized, a latch 102 releases the toggle lever 97, which is turned anticlockwise by the force applied by the lever 105. This prises the toggle lever 95 out of engagement with the latch lever 105 and enables the switch to close. Latching switches.-When the switch closes it is latched to prevent contact rebound by means of a latch 158, Fig. 10, which engages a shoulder 164 on a plate 143 secured to the **shaft** 82. To open the switch, an operating handle 149, Fig. 8, secured to a hollow **shaft** 144 is turned, so that a pin 166 on an arm 165 secured to the **shaft** 144 initially engages an extension 167 of the latch 158 and lifts this latch out of engagement with the shoulder 164. The pin 166 then engages a shoulder 168 on the plate 143 and turns the plate 143 to open the contacts and to stress the spring 156 which is connected to the plate 143 by a link 157. Retarding switches.-In addition to the closing spring 156, a spring 68, Fig. 3, is provided to accelerate the **moving contact** 54 which is provided with a piston 63. When the piston passes apertures in a tube 55, gas is compressed in the tube by the piston to cushion the final closing movement. Rubber sheets 91 also act as a buffer for the **moving contact** assembly. Protective cut-out arrangements.-In the arrangement shown in Fig. 2, the earthing switch is used in conjunction with a disconnect switch to protect a transformer. In the event of an internal fault in the transformer, differential relays open a low-voltage **circuit-breaker** and cause the earthing switch to close. This causes sufficient current to flow to operate protective relays which **trip** a remote high-voltage circuit-breaker. Pressure-operated relays 176, 177, Fig. 6, in the enclosure 28 perform various protective functions should there be a loss of gas pressure within the casing. Specifications 710,925 and 736,090 are referred to.

Probable Assignee: WESTINGHOUSE ELECTRIC CORP

Earliest Publication Date: 19590709



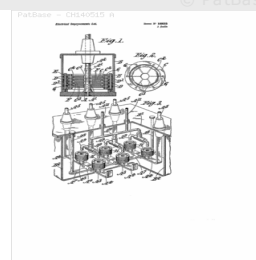
3) Family number: 26070851 (CH140515 A)

ELECTRICAL **CIRCUIT BREAKER**. (MACHINE TRANSLATION)

Abstract: Source: CH140515 A CLAIM electrical **circuit breaker**, characterizes in that it comprises, for each arc to blow, the bunk conductive disks, isolated from each other and Circuit cut, these discs presenting central openings forming a channel around a **fixed contact** and through which a **moving contact** and being themselves surrounded by an envelope enve that closes the edges of the spaces between the discs. SO (TS-1 CLAIMS breaker according to claim, charac terized in that the conduc tors disks are separated and supported by an insulating panels that surround them. The **circuit breaker** of claim, charac terized in that each conductive disk present on each face an annular nure spoke, such that when the disks are assembled, the narrow spaces which separate the open exte quently in a larger annular chamber. breaker claim, charac rise in that the conductive disks have radial passages leading from their central opening, the cross-cutting holes for the flow of oil or gas products. breaker according to claim 4, charac- terisie by a shaped envelope to surround closely the insulating rings which hold the conductive disks. 5 polyphase **circuit breaker** according to revendic.a- tion, characterized by two **fixed** and two **movable contacts** for each phase; the latter being connected by a mo bile deck, the decks being insulated from each other and mounted on -the organe.d'ac- a single mobile tioning, each **movable contact** passing through a central channel formed by the discs.

Probable Assignee: ELECTRICAL IMPROVEMENTS LTD

Earliest Publication Date: 19300615

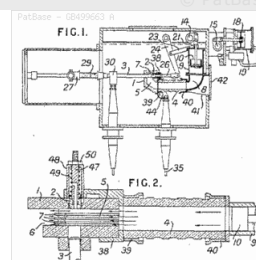


4) Family number: 19661126 (GB499663 A)

IMPROVEMENTS IN ELECTRIC CIRCUIT BREAKERS OF THE IMPULSE TYPE

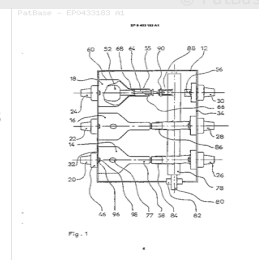
Abstract: Source: GB499663 A 20635. [Class 38 (v)] An impulse **circuit-breaker** comprises in combination at least one pair of co-operating contacts, power means such as a source of previously-stored energy for positively mechanically separating said contacts, **tripping** means controlling the release of said power means, a member of insulating material having passages for the co-operating contacts and inlet and outlet ducts adapted to direct insulating liquid across the arc path between the separating contacts, a piston pump, power means (which may be the same as, or additional to, the aforesaid power means) adapted to operate the piston of said pump upon operation of said **tripping** means, a free and unrestricted insulating tube directly connecting the pump cylinder with the inlet duct of said member of insulating material, and a tank or chamber which houses at least the contacts, member of insulating material, and insulating tube and which is adapted to hold a body of insulating liquid sufficient to flood at least the three members last mentioned. The pump piston may be driven by a loaded spring or compressed air in a manner per se known. The **fixed** and **moving** butt contacts 2, 3 are separable in an insulating member 1 having a narrow outlet 6 which produces a high-speed flow across and beyond the arc and may contain one or more arc-splitters 7. Member 1 may be a solid block or built up of plates after the manner of cross-jet explosion pots, and leads by an inlet passage 5 into an insulating tube 4 which leads in turn to an elbow 8 and oilycylinder 9 containing a piston 10. The crossection of tube 4 is half that of the cylinder 9. The elbow 8 carries the cylinder 10 and is formed integral with, or carried on, a support 41, 42. A bracket 44 attached to the lead-in 35 supports a collar 39 carrying a mounting 38 by means of which the lead-in 35 is connected to contact 2. The **movable contact** 3 slides in a resilient sleeve 30 and is connected by insulating member 29 to a sliding cross-head 27 linked at 26 to a lever 24, which is connected with lost-motion at 21, 23 to a **shaft** 14 to which the pump-piston 10 is connected. **Shaft** 14 is operated through a **shaft** 15 by an air-piston 18 and cylinder 19. Non-return valves are provided in the piston 10, or elsewhere, to enable the cylinder 9 to refill with oil, the level of which is shown. The pump 9, 10 may alternatively be located outside the oil-tank. The parts are shown with the contacts about to open, the piston 10 having already begun its stroke, as permitted by the lost-motion connection 21, 23. Fig. 2 shows a suitable form for the contact 2 and the arrangement of the mounting 38 and collar 39 which is to form a stress-distributor correspondingly with the flared end of a collar 40. The contact 2 is carried on a stem 47 operating in a tubular casing 48, a stop nut 50 and helical spring 49 being provided. The tube 4 may be connected to the cylinder 9 by an elbow 8 instead of directly, as shown. In Fig. 3 (not shown), the above arrangement is adapted to an insulating member 1 having a vertical exhaust.

Probable Assignee: ARTHUR UPTON

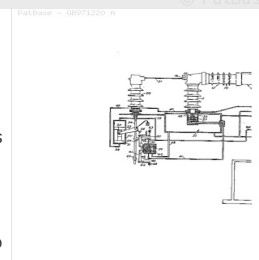


5) Family number: 3780923 (EP0433183 A1)**THREE-POLE GASINSULATED HIGH TENSION CIRCUIT BREAKER.**

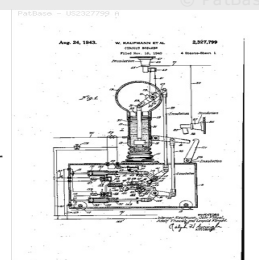
Abstract: Source: EP0433183 A1 A high-tension **circuit-breaker** 10 with sealed metal envelope 12 is filled with SF₆, and encloses three poles 14, 16, 18 actuated by a control bar 78. Each pole includes one pair of **fixed** 36 and **moving** 54 contacts, a compression self-blasting device 64, the whole being topped off by an insulating chamber 58 of revolution. This latter includes a bearing 66 for guiding the sliding pin 55 in translation, and a **fixed** cylinder 62 cooperating with the piston 68 of the self-blasting device 64. The base of the chamber 58 is **fixed** by screws to the metal envelope 12 which acts as earth ring for the three poles.

Probable Assignee: MERLIN GERIN**Earliest Publication Date:** 19910614**6) Family number: 20349528** (GB971220 A)**IMPROVEMENTS RELATING TO ELECTRIC CIRCUIT-BREAKER SYSTEMS**

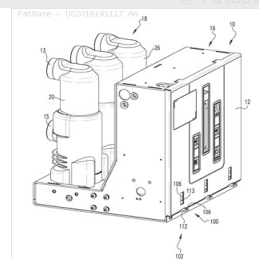
Abstract: Source: GB971220 A 971,220. Gas blast switches. MERZ and McLELLAN SERVICES Ltd. Oct. 22, 1962 [Feb. 21, 1962], No. 6829/62. Heading H2B. A **circuit-breaker** system includes a main switch, consisting of a gas blast **circuit - breaker** 10 with series isolator 21 for making and breaking an inductive load circuit, and a resistor switch 25 operating automatically to connect a resistor 27 across the load immediately before the main switch opens and to disconnect it immediately after the main switch is closed. Electromagnetic release of a latch 44 operates a valve 40 to vent the underside of a piston 37 to atmosphere, whereupon the pressure air in a reservoir 35 drives the piston 37 downwards to open a blast valve 36, normally spring closed. Pressure air enters the **circuit-breaker** chamber separating the contacts and extinguishing the arc formed between them. As the valve 36 opens pressure air passes along line 85 to a valve 76 driving its spool to left to allow air from line 81 to drive a piston 68 upwards to close resistor switch contacts 28, 29. Pressure air also passes along a line 49 to a valve 50 and after a short period is sufficient to drive the mechanism 53, 56 over-centre to open the isolator 20. Rotation of the isolator **shaft** 54 causes a cam 65 to reset the latch 44, reapplying pressure to the underside of the piston 37 to close the blast valve and thus the circuitbreaker contacts. The isolator and resistor switch then remain in the open and closed positions respectively until a second latch 62 is electromagnetically **tripped** to allow a valve 39 to apply pressure air to the other side of valve 50 to reclose the isolator, a second cam 64 on the isolator **shaft** resetting the latch 62. Air is also applied to the other side of valve 76 driving its spool to the right to vent the underside of piston 68 through a restricted aperture 80. This restriction together with the overclosure allowed by spring mounting contact 28 ensures that the isolator 20 closes before the resistor switch opens. In a modification (Fig. 3, not shown), the resistor switch comprises a pivoted flexible blade arranged on the live side of the resistor.

Probable Assignee: MERZ AND McLELLAN SERVICES**Earliest Publication Date:** 19630830**7) Family number: 30960273** (US2327799 A)**CIRCUIT BREAKER**

Abstract: Source: US2327799 A 1. Electrical switching apparatus for controlling a circuit, comprising a circuit interrupter having circuit interrupting contacts: 'actuating means therefor and means for extinguishing arcs drawn by said contacts, a second pair of contacts structurally associated with 't1]E-l.'1\}BI*1"1Dl}€T»B.I1[i electrically connected in 'shunt relation directly across said circuit interrupting contacts, separate actuating means for said second pair of contacts, said circuit interrupting contacts being normally closed and said second pair of contacts normally open, means operable to cause opening of said circuit interrupting contacts, and means including a timing device for initiating closing operation of said second pair of contacts -a predetermined time interval after opening of said circuit interrupting contacts, said timing device, providing a predetermined time interval which is substantially constant and substantially unaffected by variations in the speed of movement of said circuit interrupting contacts and other operating conditions. , A .

Probable Assignee: WESTINGHOUSE ELECTRIC AND MFG CO**Earliest Publication Date:** 19411031**8) Family number: 62402081** (US2016141117 AA)**MECHANICAL WEAR, WIPE AND STROKE MEASUREMENT SYSTEM FOR CIRCUIT BREAKERS**

Abstract: Source: US2016141117 AA A contact wear indicator assembly for a **circuit breaker** assembly is provided. The contact wear indicator assembly includes an interface assembly, an indicator drive assembly, and a user display assembly. The user display assembly includes an output device. The output device is structured to produce a visual indication representative of a measurable contact characteristic. The indicator drive assembly is operatively coupled to the interface assembly, whereby the indicator drive assembly moves between a first position and a second position corresponding to an interface assembly first and second position. The indicator drive assembly is measurably coupled to the user display assembly. The user display assembly is structured to convert the position data of the indicator drive assembly into a quantified output such as, but not limited to, contact characteristics. The user display assembly is further structured to display the indicator drive assembly position data on the output device.

Probable Assignee: EATON INTELLIGENT POWER LTD**Earliest Publication Date:** 20160519**9) Family number: 20879343** (GB460971 A)**IMPROVEMENTS IN OR RELATING TO ELECTRIC CIRCUIT-BREAKERS**

Abstract: Source: GB460971 A 22130. [Class 38 (v)] Cases and covers; indicators.-A three-phase, liquid-insulated **circuit-breaker** has the three sets of contacts respectively in the three phases disposed in generally symmetrical triangular formation in a single cylindrical tank and the two lead-in conductors leading to the contacts in each phase are arranged concentrically with one another in a bushing **insulator** carried by the tank-cover plate, the whole breaker being withdrawable vertically from a **fixed** upper chamber having contacts with which the lead-in conductors make plug-and-socket, connection. The invention is particularly adapted to metalclad switch-gear for controlling tee-connections from bus-bars which are normally in series with a ring main or other circuit, liquid-insulated isolating switches (capable of opening under load) being provided for disconnecting the ends of the bus-bars from the ring main or other circuit. In this arrangement, the breakers may be mounted side-by-side in a row with the bus-bars passing through **fixed** upper chambers into the isolating-switch chambers, which are disposed at the ends of the row and receive the cables constituting part of the ring main or other circuit. Figs. 1-3 show the layout of a panel each comprising a **fixed** cubicle 1 housing a breaker 2 which is vertically withdrawable from an upper chamber comprising a bus-bar chamber 4 and a chamber 5 for the tee-connection 19 and associated current transformers 18. The tee'd circuit is connected by leads 15, 17 to the inner 9 of two concentric insulated socket contacts for each phase contained in orifice insulators 7 in the base of the upper chamber. The outer socket contacts 8 in chamber 4 have metal clamps 10 constituting the bus-bars extending on either side to **fixed** isolating contacts 11 in chambers 12, 13. The cylindrical oil-tank 20 of the breaker carries on its cover 21 three pairs of concentric lead-in conductors 22, 23 surrounded by concentric bushing insulators 24, 25 and adapted, when the breaker is in operative position, to engage contacts 8, 9. The contact-sets are spaced apart symmetrically in triangular formation and radial barriers 27, Fig. 5, are located in the tank 20 to separate the phases. An arc-control device, Figs. 8-11 (not shown), of the character described in Specification 460,219, [Group XXIX], is located in each of the compartments formed by the barriers, and the vents are arranged to exhaust against the barriers. Each **movable** **contact** 40, Fig. 5, is connected by an insulating arm 76 to a common, centrally-disposed, operating rod 78 which is lowered to open the circuit, the rod being linked at 80 to a lever 81 which is pivoted at 82 and has a dashpot 86 to cushion the opening stroke. Lever 81 is linked at 83 to a lever 84 on an operating **shaft** 85, the arrangement providing increased mechanical advantage at the end of the closing stroke. The rear end of **shaft** 85 carries a crank arm 87 to which is connected a kick-off spring 88 in a housing 89 pivoted to the cover 21 of the breaker. By supporting the operating mechanism thus on the cover 21, the entire breaker can readily be detached for inspection. The **shaft** 85 is linked at 123 to a crank arm 122 on a parallel **shaft** 12 <1> , Fig. 5, which controls an indicator 124 and a set of auxiliary switches in a box 125 on cover 21, the connections of the switches being brought up to terminals 126 which, when the breaker is in operative position, engage spring clips 127 on the base of chamber 4. The cubicle-front is closed by a lower plate 160 hooking over flanges 162 at the sides of the cubicle and having a latch 163 engaging an upper door 164 provided with a pair of lugs 165, Fig. 17, each carrying a hinge pin 166. When the door is closed, Fig. 2, each pin 166 rests in a slot 167 in the front of a guide bar 168 extending from front to back of the cubicle, and to open the latter, plate 160 is lifted out and plate 164 swung up on pins 166, which engage the slots 167 and allow the plate 164 to be pushed in a little, in which position it is held raised. When the breaker is lowered, the plate 164 can be pushed right in, Fig. 17, to shut off the contacts 8, 9, but in order to permit testing of the tee'd connection by an authorized person, the plate 164 has three holes just large enough to permit access to contacts 9, the holes being normally covered by a padlocked rotatable shutter 170. The plate 164 also has three windows, one for viewing the indicator 124, another for applying an operating handle 113, and a third for giving access to a hand-**trip** arrangement 105. The front wall of the upper chamber 4, 5 is occupied by a swing frame 174 which carries the meters 175 and is pivoted on an intermediate frame which is withdrawable to give access to the interior. The **movable** isolating contacts 178 carry parts which are in continuous contact with contacts 179 which, in the case of the right-hand side of Fig. 1, connect with the ring main. The contacts 178 are mounted on a **shaft** 177 for rotation from the " on " position shown either to a testing contact 187 or to an earthing contact 190. When the switch is in the earthing position, the cover 189 of an orifice **insulator** 188 may be opened to permit insertion of a testing contact for the ring main cables connected to contact 179, the operating handle 193 being for this purpose allowed to move back to the testing position. The reverse process is carried out in order to close the cover 189 and reconnect the ring main to the bus-bars, Figs. 20-23 (not shown). The chamber 13 contains a similar isolating switch leading to bus-bar connections 184 in compound-filled boxes 183 for connection to an adjacent panel. With a number of panels, however, the isolating chambers can be omitted and the bus-bar chambers can be arranged to form a continuous chamber extending along the row, with the ends of the clamps 10 connected together and isolating switches at the ends for connection to a ring main. The tanks 20 for the circuitbreakers are formed with cover-joints as described in Specification 460,970, comprising, Fig. 5, a projection 155 on the cover 21 fitting snugly within the thickened upper part 156 of the tank, the cover being secured by four studs 154 passing through lugs 157 and serving to compress a wedge-shaped, packing ring 159. For raising and lowering the breaker, the cover 21 carries a plate 129 in a slot 130 in which is slidable a bar 131, which has a transverse **shaft** 134 guided at 135 and supporting a foot 136, which is rotatable between the Fig. 2 and Fig. 17 positions by means of a tommy bar applied to socket 137. As the foot 136 is swung down, a cam 139 engages a floor pad 138, so raising the bar 131 until a pin 132 engages a register hole 133 in the base 6, so locking the top of the bar. In the extreme position, the cam 139 latches over the pad 138 to drop the bar 131 and lock it against movement when supporting the breaker, the drop being inadequate to free pin 132 from hole 133. The bar 131 has a hole 148, Fig. 2, and a hole 143, Fig. 17, and the plate 129 has a hole 144, the holes 144, 148 being in alignment in the Fig. 17 position and a pin 145, Fig. 12, being passed through them so that the bar and breaker can be wheeled together into the cubicle. The pin 145 is detached and the foot 136 then swung down and locked, and steps 140, 141 hinged to the bar and plate 129, respectively, are swung out and a jack 142 applied between them, Fig. 17. Operation of the jack raises the breaker on the bar to the operative position whereupon pin 145 is inserted in the aligned holes 143, 144 to retain the breaker. In this position, the pin 145 is covered by a lever 146 in the path of the **trip** lever 105, Fig. 12, to prevent removal of the breaker until it has been **tripped** open. When the breaker has been removed, its cover can be lifted by means of the bar 131 and jack 142 in conjunction with a portable hospital bay. The cover is raised in two stages, the first utilizing a platform on the bay as the lower abutment for the jack, and the second utilizing step 140, Fig. 19 (not shown). Automatic circuit-breakers.-The automatic **trip** is shown in Figs. 12, 13 in the set and **tripped** positions respectively. The **shaft** 85 carries a crank arm 90 having a roller 91 which is normally restrained against clockwise movement under spring-action 88 by a roller 92 on a lever 93 which is pivoted to the end of an arm 94 on a **shaft** 95 concentric with 85. Lever 93. is also linked at 97 to a bell-crank 98 pivoted at 99 and normally retained by the spindle 100 having a flat surface 101. Also pivoted to 94 is a latch arm 106 engaging a **fixed** plate 107 and connected by spring 109 to an arm 110 on crank 94. When the spindle 100 is rotated to the Fig. 13 position by raising the rod 103 either by solenoid 104 or the hand **trip** 105, the flat surface 101 releases crank 98 and hence lever 93, so allowing roller 91 to ride over roller 92 and open the breaker. During this movement of lever 93, a stud 111 thereon engages an arm 112 on catch 106 and so frees it from plate 107. Clockwise rotation of **shaft** 95 by the handle 113 into the open position causes the roller 92 to ride under roller 91 and reverse rotation of 95 closes the breaker. After **tripping**, a projection 90 on lever 90 engages pin 111 to retain link 93 in **tripped** position during the rotation of 94, 95 to open position, so preventing the toggle 97, 98 from straightening and resetting the lever 93 until roller 92 is in position behind roller 91. An arrangement for preventing removal of the handle 113 from the **shaft** 95 excepting in the extreme positions is also described, Figs. 15, 16 (not shown).

Probable Assignee: THOMAS WILLIAMS

Earliest Publication Date: 19370208

10) Family number: 10140066 (EP0768692 A1)

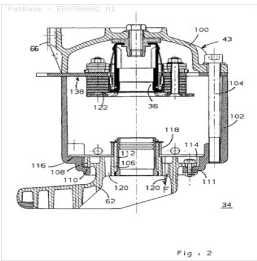
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AUTOEXPANSION **CIRCUIT BREAKER** WITH INSULATING GAS

Abstract: Source: EP0768692 A1 The electric **circuit breaker** comprises a gas expansion cut-off chamber (34) enclosing separable arc contacts and an electromagnetic coil (122) for causing rotation of the arc. An **insulating** support arm (62) is **fixed** to the end of the cartridge (43) and comprises a base (108) **fixed** on a first internal step (110) of the cartridge (43) by screws (111). A thermal screen (114) is positioned on the base (108) to serve as a flame barrier. The excitation of the coil (122) is effected through a part of the magnetic circuit (138).

Probable Assignee: SCHNEIDER ELECTRIC INDUSTRIES SA

Earliest Publication Date: 19970416



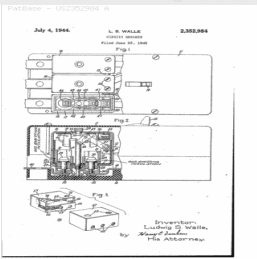
11) Family number: 29893195 (US2352984 A)

CIRCUIT BREAKER

Abstract: Source: US2352984 A 1. A **circuit breaker** adapted to interrupt currents of short-circuit magnitude comprising a pressure-containing chamber provided with a constricted exhaust port, a plurality of pairs of separable switch contacts mounted within said casing remote from said exhaust port, said pairs of contacts being connected in series circuit relation. **movable** means for separating said pairs of contacts to establish electric arcs therebetween, means within said casing for partially enclosing each of said pairs of separable switch contacts thereby to define within said casing a restricted space for the separation of each or said pairs of contacts, means within each of said enclosing means operable in conjunction with the electric arc established between the associated pair of separable contacts for generating within said enclosing means a dielectric gas at substantial pressure, and means for exhausting said gaseous dielectric from each of said enclosing means into the interior of said casing in opposing directions, the stream of gas from each of said enclosing means passing substantially transversely across the generating arc and encountering the opposing stream of gas to create within said casing a turbulent flow of gas between said contacts and said exhaust port and said casing confining said gas to create within said casing a pressure sufficient to prevent short-circuiting of said pairs of contacts by said opposing gas streams.

Probable Assignee: GEN ELECTRIC

Earliest Publication Date: 19440704



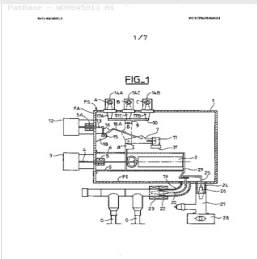
12) Family number: 12477062 (WO9845913 A1)

ELECTRIC CELL WITH SEALED METAL CASING

Abstract: Source: WO9845913 A1 Disclosed is a cell comprising a casing containing a three-phase disconnecting and isolating switch, which ensure interconnection between the bars and/or external electric cables connected inside the casing through sealed press leads. Said casing, being optimally cubic, comprises an isolating switch, the blades (7) of which are in contact in a service position with conducting studs (9); said studs are aligned horizontally and parallel to the front panel of the casing, and are borne by conducting bars (10) orthogonally arranged with respect to this surface, above the isolating switch and the disconnecter in the casing. These bars are connected to press leads (17A, 17B, 17C), borne by a top panel (FS) of the casing. In a ground connection position, the blades are in contact with one of the grounding studs (11) borne by a horizontal reinforcing crosspiece (31), centrally arranged between lateral walls in the casing.

Probable Assignee: GEC ALSTHOM T AND D SA

Earliest Publication Date: 19981009



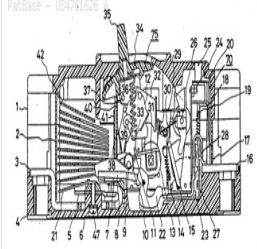
13) Family number: 8649476 (US4761626 A)

CIRCUIT BREAKER

Abstract: Source: US4761626 A In a **circuit breaker** includes a **fixed contactor**, a **moving contactor** subjected to a switching operation of a switching mechanism, a heater connected to the **moving contactor** and disposed in such a manner as to extend along a **fixed** core and a **moving** core pivotally supported by the **fixed** core, the **fixed contactor** is formed in a J-shape and is interposed between an **insulating** member disposed on the **fixed contactor** in such a manner as to extend along the side of the **fixed contactor** facing the **moving contactor** and a demagnetizing member disposed in such a manner as to extend along the bent inner surface. The **circuit breaker** includes also an operation time adjusting mechanism engaging with the **moving** core and capable of adjusting the operation time of the **moving** core, and a casing storing therein the constituent elements. The operation time adjusting mechanism is brought into abutment against an adjustment portion formed on the **moving** core, and is detachably mounted on the casing.

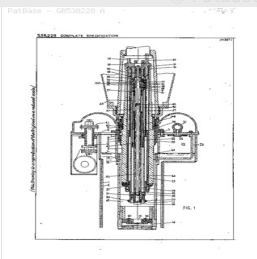
Probable Assignee: HITACHI LTD A CORP OF JAPAN

Earliest Publication Date: 19860710



14) Family number: 20515721 (GB538228 A)

IMPROVEMENTS IN OR RELATING TO ELECTRIC CURRENT BREAKERS



Abstract: Source: GB538228 A

32608.

[Class 38 (v)] The **movable contact** of an oil-break or oilblast **circuit-breaker** is longitudinally operated by a rotary **insulator** through a screw-thread connection and, in the oil-blast breaker, a mechanical latch is releasable to effect rapid opening of the contact on fault independent of the **insulator** movement.

The **insulator** 4 is mounted in bearings 5, 6 in the top plate 3 of the tank 1, and carries a double-tooth wheel 9 whereby it can be chain-driven from a motordriven gear wheel 11.

The lower end of **insulator** 4 contains a metal cylinder 35 having a quick-pitch thread engaging a thread on a further cylinder 47 which is fastened at 53 to a crosshead 48 which is slidable in grooves 50 in a metal cylinder 27, which is threaded into an end cap 28 carrying isolating contacts 29.

Thus rotation of the **insulator** 4 causes longitudinal movement of the crosshead 48, a part 52 of which can be coupled by means of a pair of balls 56 and groove 55 to a plug 41 supporting the upper end of the **movable contact** structure.

The latter comprises the contact proper 13, which is threaded into a tube 39, a tube 40 screwed into the upper end of tube 39, and the plug 41 which is screwed into tube 40.

A further sleeve 42 screws on to the upper end of 39 and projects upwardly about 40 for about half its length.

Plug 41 is slidable on a stem 44 and, when closing circuit, depresses the upper end of a helical spring 45 coiled about the stem, so as to provide the opening force.

In the arrangement shown, opening is effected by release of the coupling 56 in response to compressed-air admission from pipe 21 to chamber 22 on fault, the pressure acting on the liquid in the tank 1 to produce an oil-blast in the side-blast explosion pot 14 in the manner set out in Specification 535,956.

The pressure also acts on a further sleeve 43 and, with the aid of the slight lost motion permitted by spring 57, raises it so that slots therein come level with the balls 56, which are thus forced out of the groove 55 in plug 41 and permit the latter to rise until the contact 13 is level with the orifice 19 of the pot 14.

The coupling is remade when subsequently the motor is energized to rotate the **insulator** 4 in the reverse direction and restore all the parts to the fully-open position.

In a modification, applicable.

to an oil-filled busbar selector, no coupling is provided and the rotary **insulator** drives the **movable contact** directly, Fig.

2 (not shown).

Reference has been directed by the Comptroller to Specification 523,420

Probable Assignee: FREDERICK JOSEPH KEELEY

Earliest Publication Date: 19410725

15) Family number: 20448659 (GB849993 A)

IMPROVEMENTS IN OR RELATING TO CIRCUIT BREAKERS

Abstract: Source: GB849993 A 849,993. Oil - blast switches; airbreak switches; automatic circuit-breakers; hydraulic actuation of switches. LEVEL, B. P. E. Feb. 27, 1958 [March 1, 1957 (2) Aug. 3, 1957], No. 6440/58. Class 38 (5). An oil-blast switch has one end of a tubular **moving contact** 1 and a tubular **fixed contact** 2 in an oil-filled chamber 7 which is normally closed by a valve 8, the other end of the contact 1 extending into a further oil-filled chamber 12 and the intermediate portion of the contact 1 being coupled to actuating means. When the contact 1, Fig. 1, is moved to open the contacts, oil displaced from the chamber 12 opens an insulating valve 5 against spring bias and the valve 5 then acts to deflect the displaced oil across the arc drawn between contacts 1, 2. In Fig. 5, the oil displaced from the chamber 12 issues through slots in an insulating tube 24 interposed between the contact 1 and an arcing contact 25. In this case, the arc may have two serially-related parts rooted on the contact 1 and arcing contacts 25, 3. Several slotted insulating tubes may be provided, Fig. 4 (not shown). Also, in Fig. 5 the contact 1 is opened by springs 63 when a latch 64 is released by electromagnetic or hydraulic means. When the contact 1 is open, a spring-biased normally-open valve 60 abuts the base of the chamber 12 and is closed so that oil under pressure from a reservoir 62a may be used to reclose the contacts, the valve 60 reopening only when the oil pressure is released. In a combined oil-blast **circuit-breaker** and airbreak isolating switch, Fig. 7, the oil-blast **circuit-breaker** of Fig. 5 is pivoted at 107 and carries the **moving** isolating contact 110. Both the **circuit-breaker** and switch are maintained closed by an overset toggle 111a, 111b against the action of springs 63, 105. When the toggle is broken by a hydraulic **tripping** device 118, the spring 63 opens the **circuit-breaker** contacts and the spring 115 is then able to turn the circuitbreaker to open the isolating contacts 110, 103. To reclose the **circuit-breaker** and switch, oil under pressure is applied to the chamber 12 to close the **circuit-breaker** contacts and fully extend the springs 63 and the toggle. Then, when the pressure is released from the chamber 12, the springs 63 contract slightly and apply a closing force greater than the opening force of the spring 115 so that the **circuit-breaker** is turned into the position in which the isolating contacts are closed. In a modified arrangement, Figs. 8 to 10 (not shown) a single spring 63 may be coiled around the **circuit-breaker** casing and the contacts may be held closed by a telescopic link which may be released by a bellows acting on a ball latch, the bellows being operated when a spring biased oil pump is released by an electromagnetic overload-responsive latch. The spring biasing this pump may be stressed by a double-acting hydraulic jack, the cylinder of which provides an expansion chamber of limited volume for the oil displaced from the chamber 12 as the isolating contacts close.

Probable Assignee: BERTRAND LEVEL

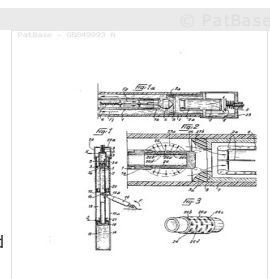
Earliest Publication Date: 19581215

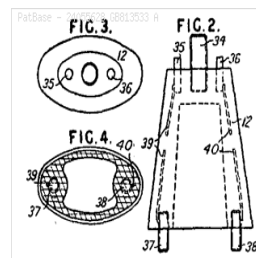
16) Family number: 24055628 (GB813533 A)

IMPROVEMENTS RELATING TO ELECTRIC AIR BREAK CIRCUIT BREAKERS HAVING ARC-EXTINCTION CHAMBERS

Abstract: Source: GB813533 A 813,533. Insulators. ETABLISSEMENTS MERLIN and GERIN. July 25, 1956 [July 27, 1955], No. 22967/56. Class 36. [Also in Group XXXVII] An elliptical and preferably ethoxylin resin **insulator** has fixing studs 37, 38 embedded in the resin, as are locating pins 35, 36 and a fixing stud 34 for equipment such as a **circuit-breaker** arc-shoot assembly. Electrodes 39, 40 are also embedded in the insulators to equalize the positive and negative impulse flash over values.

Probable Assignee: MERLIN GERIN





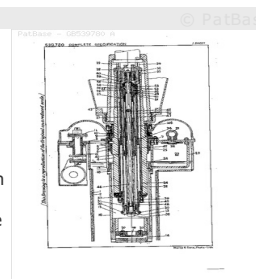
17) Family number: 20557790 (GB539780 A)

IMPROVEMENTS IN OR RELATING TO CONTACT ARRANGEMENTS FOR ELECTRIC CIRCUIT BREAKERS

Abstract: Source: GB539780 A 32609. Drawings to Specification. [Class 38 (v)] A contact arrangement for a **circuit-breaker** comprises a contact-member biased to move relatively to a further member and in a circuit-opening direction, and latching means arranged to hold the contact-member against the bias **tripping** of the latching means to allow movement of the contact-member relatively to the further member and in the circuit-opening direction being arranged to be produced by movement of an intermediate member, normally **movable** with the contact-member, relatively to the contact-member. The latching means are such that, in normal circumstances, the contact-member may be moved in the circuit-opening direction without disengagement of the latching means, the contact-member and intermediate member being **movable** as one. The invention is described in its application to Fig. 1, of Specification 538,228. Specification 535,956 is referred to.

Probable Assignee: FREDERICK JOSEPH KEELEY

Earliest Publication Date: 19410924



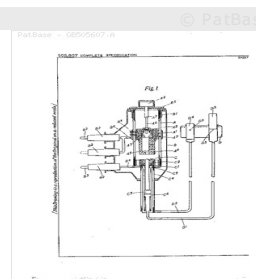
18) Family number: 21692790 (GB505607 A)

IMPROVEMENTS IN OR RELATING TO METAL-CLAD ELECTRIC SWITCHGEAR

Abstract: Source: GB505607 A 1. Metal-clad. electric switchgear, comprising a single-break **circuit-breaker** unit having **fixed** and **moving contacts** and an 75 associated arc-control device immersed in insulating liquid within a container, which is itself enclosed within an outer metal casing bodily removable from a **fixed** portion of the switchgear, cooperating contacts. respectively carried by the casing and the **fixed** portion being provided in the connection from each circuitbreaker contact to the external circuit.

Probable Assignee: REYROLLE A AND CO LTD

Earliest Publication Date: 19390515



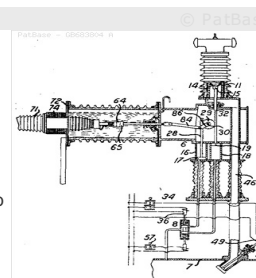
19) Family number: 19937102 (GB683804 A)

IMPROVEMENTS IN AND RELATING TO AIR BLAST HIGH VOLTAGE ELECTRIC CIRCUIT BREAKERS

Abstract: Source: GB683804 A 683,804. Air-blast switches, oil-break switches. BRITISH THOMSON-HOUSTON CO., Ltd. March 29, 1949 [April 6, 1948], Class 38 (v) A **circuit-breaker** has main interrupting contacts 14, 15 of the air-blast type and oil-break insulating contacts 64, 65, a single fluid motor 6 actuating the interrupting contacts directly and the isolating contacts through an overcentre toggle 84, 86, so that the isolating contacts open after nd close before the interrupting contacts. The **circuit-breaker** is shown in the "closed" position and on manual or other operation of the switch 34, a valve 8 is moved by the solenoid 36 to admit pressure air from the container 7 to the "opening" cylinder 16, and a valve 9 is opened by the solenoid 49 to admit pressure air to the arc-extinguishing chamber 11. The piston 17 is driven upwardly and by means of a rack 28 turns a pinion 29 on its **fixed** spindle 30 to move a rack 32 interconnecting the **moving** interrupting contact 15 with the "closing" piston 19. Thus the contact 15 is moved down to open the circuit, the are formed at the contacts 14, 15 being extinguished by the blast through the opened valve 9, pipe 46 and nozzle contact 14. As the pinion 29 turns, it turns the toggle link 86 which is **fixed** to it, and initially straightens the toggle 84, 86, so that during the initial part of the opening movement of the contact 15, the isolating contact 65 is merely moved to the left against the bias of the resilient mounting of the **fixed** isolating contact 64. The oil-break isolating contacts 64, 65 are opened as the pinion 29 turns the toggle 84, 86 beyond its straight position. To re-close the **circuit breaker**, switch 57 is operated to cause valve 8 to admit gas to the cylinder 18 so as to move the piston 19 from the bottom to the top of the cylinder, the isolating contacts 64, 65 being closed first as the links 84, 86 pass through their central position. The **insulating** bushing 71 carrying the **fixed contact** 64 is supported by an earthed plate 72 which permits the use of a bushing-type current transformer 74. Specifications 541,321 [and 549,756 are referred to.

Probable Assignee: GEN ELECTRIC

Earliest Publication Date: 19510529



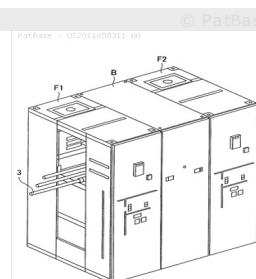
20) Family number: 48436069 (US2011058311 AA)

VACUUM INSULATED SWITCHGEAR

Abstract: Source: US2011058311 AA The vacuum insulated switchgear includes a housing enclosing a control compartment, a switch compartment, and a busbar compartment, each of the three compartments being partitioned by a metallic earthing plate; a first busbar and second busbar extended from an adjacent panel, in the busbar compartment; and a first busbar-connecting bushing and second busbar-connecting bushing making the first and second busbars connectable/disconnectible; a double-breaking three position vacuum switch, two sets of earthing switches, the first busbar-connecting bushing, and the second busbar-connecting bushing being integrally molded to form a switch provided on an electrical phase-by phase basis independently, wherein the switches for three phases are arranged in order side by side in the housing.

Probable Assignee: HITACHI LTD

Earliest Publication Date: 20110310



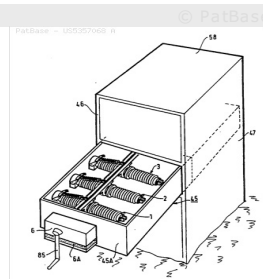
21) Family number: 32384374 (US5357068 A)

SULFUR HEXAFLUORIDE ISOLATING CIRCUIT-BREAKER AND USE THEREOF IN PREFABRICATED STATIONS, SUBSTATIONS, AND BAYS

Abstract: Source: US5357068 A A sulfur hexafluoride isolating circuit-breaker comprises an SF₆-filled gastight case for each cell containing fixed contacts and arcing contacts, the poles are fixed to a common grounded metal bar capable of pivoting between two end walls of a drawer suitable for containing the poles, said bar shelters a control shaft for the poles and connected to a control box which is itself connected to said bar, the rotation of the bar providing the section-switch isolating function and rotating or translating said shaft driving the circuit breaking function.

Probable Assignee: ALSTHOM GEC

Earliest Publication Date: 19930501



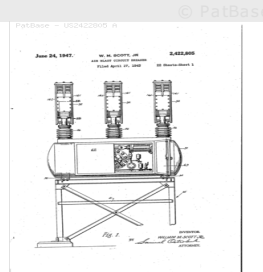
22) Family number: 21714727 (US2422805 A)

AIR BLAST CIRCUIT BREAKER

Abstract: Source: US2422805 A 1. In a fluid blast circuit breaker main contact members, a disconnect switch member, a source of fluid under pressure, a piston controlled by fluid from said source for operating-said switch member to open and to closed position, a valveoperative when open to permit the flow of fluid from said source to said piston for operating said switch member to open position, an electromagnet operative when energized to control the opening of said valve, a second valve for controlling the flow of fluid from said source to operate said switch member to closed position, an electromagnet operative when energized to control, said second valve, and means controlled by fluid from said source for disconnecting said main contact members, said piston being thereafter operated to operatesaid disconnect switch member to open position, means operative When current ceases to flow in the circuit controlled by said circuit breaker for operating said main contacts to reengaged position, means for controlling the energization of the last mentioned electromagnet to effect reclosure of said disconnect contacts, and means for rendering said last mentioned means ineffective as soon as said disconnect contacts are closed to prevent pumping of said circuit breaker.

Probable Assignee: ITE CIRCUIT BREAKER LTD

Earliest Publication Date: 19470624



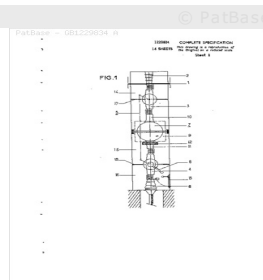
23) Family number: 98026 (GB1229834 A)

SWITCHGEAR STRUCTURES.

Abstract: Source: GB1229834 A 1,229,834. Switchgear structures. DELLE ALSTHOM. 20 May, 1968 [18 May, 1967; 11 Sept., 1967], No. 24003/68. Heading H1N. A switchgear cubicle contains a multipole circuit breaker 7 with isolating devices 3, 4, each pole of the switchgear including at least one insulating bushing extending between a pair of isolating contacts, the bushings carrying auxiliary devices such as current transformers, 12 and the circuit breaking and isolating contacts and the bushings of each pole being disposed in straight lines and aligned one behind the other in the cubicle. The terminals 53, 60 of the circuit breakers form the fixed contacts of load and line isolators 3, 4 operable conjointly. When the isolators are off, the circuit breaker assembly can be withdrawn on rollers 63. Each circuit breaker comprises a two-part earthed metal gas filled cylindrical case 43, 44 and a pair of insulator bushings 46, 47 respectively housing a tripping mechanism 51 and a puffer 55 for extinguishing the arc. The bushings also carry current transformers 12, voltage transformers 61 and fuses 62. In modifications (Figs. 6, 7, not shown) one or both sets of isolators may be omitted, the terminals of the circuit breakers being staggered vertically or angularly to allow removal of the breakers. When both isolators are omitted isolation is by withdrawal or rotation (Figs. 10, 11 respectively, not shown) of the circuit breaker unit. In Figs. 1-3 (not shown) the cables are located at the bottom of the cubicle and the bus-bars 1 at the top; cable earthing switches (13) are fitted; the cables and fixed contacts of the cable isolators may be in a unit from which the remainder of the cubicle can be detached (Fig. 3, not shown). To prevent access to live terminals the front wall of the cubicle may be formed to fit closely about the circuit breakers when partially withdrawn (Figs. 8, 9, not shown), the opening being closed by a front plate (86) of the withdrawable unit when fully inserted and by a blind or rigid shutters when fully withdrawn, the shutters being coupled to close automatically. Current transformers may be mounted inside the pivoted bushings of the isolators (Figs. 12-15, not shown) and metal screens between the bus-bar, circuit breaker and cable chambers may conform to the outline of the pivoted bushings so that the latter serve as shutters. In alternative circuit breaker units (Figs. 18, 19, not shown) the insulator 46 contains respectively a disconnecting switch, allowing the poles to be used individually while others are earthed, and a cartridge fuse of the kind having a tripping pin for automatically opening the circuit breaker contacts.

Probable Assignee: ALSTHOM CGEE

Earliest Publication Date: 19680719

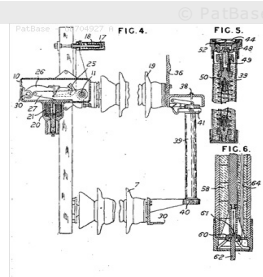


24) Family number: 30911620 (GB704927 A)

AN IMPROVED ELECTRICAL INTERRUPTER

Abstract: Source: GB704927 A 704,927. Electrically-tripped switches; fluidblast circuit-breakers. MITCHELL, F. March 24, 1952 [March 29, 1951], No. 7476/52. Class 38(5) The circuit-breaker comprises a cartridge 39 carried by a pair of insulators 7, 19 which are relatively movable so as to operate the cartridge which contains contacts arranged in arc-extinguishing means. The insulator 19 is attached to a lever 27 which is pivoted at 11 in a box 10 and is normally held in the position shown by a lever 26 pivoted at 30 and restrained by a catch 25. The cartridge is secured by a lower clamp 40 and an upper clamp 41 which is pivotally carried by the insulator 19 together with an operating pin 38. If an overload or other fault occurs, the catch 25 is tripped by a plunger 21 acted on by a coil 20, thereby releasing levers 26, 27 and insulator 19 which moves clockwise so that the pin 38 engages a frangible plate 44, Fig. 5, at the top of cartridge 39. This causes the enlarged head of a pin 52 to be lowered from between a split contact 49 which is thus moved downwards by a spring 50 out of engagement with a fixed nozzle contact 48, a liquid blast being forced between the contacts in the process. The cartridge may comprise a solid gasevolving material 58, Fig. 6, with the contacts 60, 61 arranged at the lower end for operation by removal of pin 62 through linkage (not shown) by insulator 19, or directly by a movable insulator 7. An auxiliary current-carrying element 64 is broken, when contact 61 moves upwards, so as to form an arc to initiate the vaporizing of material 58. When the cartridge is replaced, the insulator 19 is returned to its normal position by resetting levers 26, 27 and catch 25 by means of an external lever, Fig. 3 (not shown). The downward movement of insulator 19 is limited by a spring buffer 17, 18. The line terminals 36 may be earthed after operation by earthing blades, Fig. 2 (not shown). Several phases may be linked for simultaneous operation by means of the spindle 11 and the catch 25 may be tripped manually.

Probable Assignee: FRANK MITCHELL



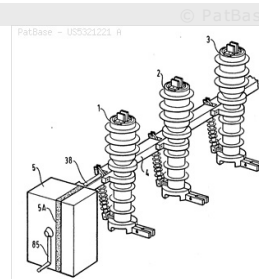
25) Family number: 34547078 (US5321221 A)

SELF-DISCONNECTING CIRCUIT-BREAKER FOR MEDIUM TENSION, AND USE THEREOF IN A MEDIUM-TENSION STATION OR BAY

Abstract: Source: US5321221 A A multipolar isolating circuit-breaker comprising, for each pole, an insulating feedthrough containing a vacuum bottle, the feedthrough including a first contact at a first end connected to a first terminal of the bottle and designed to co-operate with a first conductor, and a second contact at a second end connected to a second terminal of the bottle and designed to co-operate with a second conductor, the feedthroughs being secured to a common metal bar sheltering a common shaft for driving the bottles and actuated by a mechanism contained in a box. The circuit-breaker is applicable to medium-tension bays and stations.

Probable Assignee: ALSTOM SA

Earliest Publication Date: 19930501



26) Family number: 30954208 (GB287677 A)

IMPROVEMENTS RELATING TO OPERATING MECHANISMS, PRIMARILY FOR ELECTRIC SWITCHES

Abstract: Source: GB287677 A 287.677. British Thomson-Houston Co., Ltd., Hamlyn, W. P., and Hunter, M. C. I. Feb. 5, 1927. Automatic circuit-breakers.- Operating-mechanism for holding a member 11 against a bias 20 until released by a small tripping force 40 is described as applied to a circuit-breaker. Fig. 2 shows the mechanism after release has been effected. The force 40 has caused a stop 36 to move from under a roller 35 thereby moving pivot 31 so that the joint 29 of a toggle 27, 30 has been able to pass from the lower to the upper side of its links. This has permitted the rod 26 to move upwards and therefore the joint 17 of a lap-over toggle 15, 16 (i.e. a toggle in which the link 15 was initially in compression, while the link 16 was in tension) to move clockwise, so that the pivot 12 and member 11 has moved to the right under the bias 20. The links 15, 16 are hinged to pivoted members 13, 19 of unequal length. To reset the mechanism, the handle 25 is raised to the position shown in Fig. 3, thereby moving the hinge 18 to the right and reforming the links 15, 16 into a lap-over toggle and by moving the joint 17 downwards, the tripping mechanism is reset with the roller 35 on the stop 36. Return of the handle 25 to its initial position, draws the toggle 15, 16 and hence the member 11 to the left against the bias 20 and retains it in the strained position owing to the pivot 22 passing the dead centre with reference to pivots 18 and 24. A catch may engage the handle 25 so that the stop 36 is moved from under the roller 35 should the handle be moved while the mechanism is set against the bias. Specification 183,978 is referred to.

Probable Assignee: BRITISH THOMSON HOUSTON CO LTD

Earliest Publication Date: 19280329

