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(72) Inventors:
• **WANG, Yang**
Shanghai, Shanghai 201108 (CN)
• **SHEN, Xian**
Shanghai, Shanghai 200030 (CN)

(74) Representative: **Patentanwaltskanzlei WILHELM & BECK**
Prinzenstraße 13
80639 München (DE)

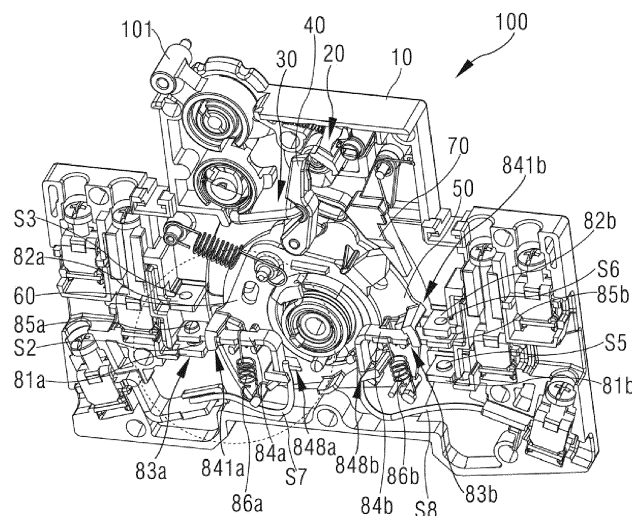
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(71) Applicant: **Siemens Aktiengesellschaft**
80333 München (DE)

(54) CHANGE-OVER CONTACT PIECE ASSEMBLY AND AUXILIARY SWITCH WITH SAME

(57) The present invention discloses a change-over contact piece assembly, comprising: a first stationary contact piece with a first stationary contact provided thereon; a second stationary contact piece with a second stationary contact provided thereon; and a movable contact piece assembly comprising: a movable contact carrier connectable to a rotary member; a movable contact fixed on the movable contact carrier; and a reset member, with one end thereof being connected to the movable contact carrier, and the other end thereof being connected to the rotary member, wherein as the rotary member

rotates, the movable contact can be driven into contact with the first stationary contact or the second stationary contact. The present invention further provides an auxiliary switch having the above-mentioned change-over contact piece assembly. With the change-over contact piece assembly of the present invention, it can be ensured that the movable contact carrier applies the same contact piece pressure to stationary contact pieces on upper and lower sides, thereby ensuring the stability of electrical contact between the movable contact and the stationary contacts.

*Fig. 1*

Description

Technical Field

[0001] The present invention relates to the field of low-voltage electrics, and in particular to a change-over contact piece assembly and an auxiliary switch having the change-over contact piece assembly.

Background Art

[0002] With regard to an auxiliary switch used in cooperation with a circuit breaker, it is necessary to provide a change-over contact piece assembly inside the auxiliary switch to achieve switching between different electrical circuits.

[0003] In general, with regard to a single-break change-over contact piece assembly with three terminals, it is very challenging to keep a movable contact piece in good contact with stationary contact pieces on upper and lower sides thereof during movement. In particular, taking materials and manufacturing tolerance into consideration, one of the most urgent problems for those skilled in the art is how to ensure that the movable contact piece applies the same contact piece pressure to the stationary contact pieces on the upper and lower sides and maintains the same opening and closing characteristics to thereby ensure the stability of electrical contact and ensure the safety and reliability of products.

Summary of the Invention

[0004] An object of the present invention is to provide a change-over contact piece assembly which can ensure that a movable contact carrier applies the same contact piece pressure to stationary contact pieces on upper and lower sides to thereby ensure the stability of electrical contact between a movable contact and a stationary contact.

[0005] The present invention provides a change-over contact piece assembly for achieving switching between different electrical circuits, the change-over contact piece assembly comprising: a first stationary contact piece with a first stationary contact provided thereon; a second stationary contact piece with a second stationary contact provided thereon; and a movable contact piece assembly comprising: a movable contact carrier connectable to a rotary member; a movable contact fixed on the movable contact carrier; and a reset member, with one end thereof being connected to the movable contact carrier, and the other end thereof being connected to the rotary member, wherein as the rotary member rotates, the movable contact can be driven into contact with the first stationary contact or the second stationary contact.

[0006] In a further exemplary embodiment of the change-over contact piece assembly, the movable contact carrier has a plate-like structure and has a thickness, and the movable contact carrier is provided with at least

two clamping portions so as to be separately fitted with and clamped onto the rotary member. With the above design, the movable contact carrier has a large current-carrying section, which can not only improve a current-carrying capacity, but also effectively reduce an increase in temperature and power consumption.

[0007] In yet another exemplary embodiment of the change-over contact piece assembly, the movable contact carrier comprises a first extension and a second extension, and the first extension and the second extension form an L-shaped structure, the movable contact being located at an end of the first extension. With the above design, the connection relationship between the movable contact carrier and the first rotating plate or the second rotating plate is made more stable and reliable.

[0008] In another exemplary embodiment of the change-over contact piece assembly, a bent portion bent toward the first extension is further provided at an end of the second extension, and the rotary member is provided with an accommodation groove for accommodating the bent portion, such that the bent portion can be clamped in the accommodation groove. With the above design, the connection stability between the movable contact carrier and the first rotating plate or the second rotating plate can be further improved.

[0009] In another exemplary embodiment of the change-over contact piece assembly, the first extension is also provided with a first mounting groove, the rotary member is also provided with a clamping hook, and the first mounting groove and the clamping hook can be fitted and clamped together.

[0010] In another exemplary embodiment of the change-over contact piece assembly, the first extension is also provided with a second mounting groove, and the rotary member is also provided with a mounting post, one end of the reset member being hooked in the second mounting groove, and the other end of the reset member being sleeved over the mounting post.

[0011] In another exemplary embodiment of the change-over contact piece assembly, the rotary member is also provided with two locating protrusions for bearing the movable contact carrier, when the rotary member drives the movable contact carrier to rotate in a first direction and into place, the movable contact carrier takes a first locating protrusion as a rotation fulcrum, and when the rotary member drives the movable contact carrier to rotate in a second direction and into place, the movable contact carrier takes a second locating protrusion as the rotation fulcrum. With the change of the two rotation fulcrums, contact pressure reverses, so that when the movable contact is brought into contact with different stationary contacts, contact pressure is provided by the reset member, and the stability of the contact pressure is ensured.

[0012] At the same time, the present invention also provides an auxiliary switch, a housing of the auxiliary switch being internally provided with at least one change-over contact piece assembly which has the above-mentioned

structure and features or a combination thereof and which is located on at least one side of the housing. The movable contact carrier of the change-over contact piece assembly is selectively connected to a rotating plate of the auxiliary switch. The first stationary contact piece and the second stationary contact piece are each connected to two wiring terminals located on one side of the housing, and as the rotating plate rotates, the movable contact can be driven into contact with the first stationary contact or the second stationary contact so as to achieve switching between at least two electrical circuits. By using the above design, the product structure is more compact, the movable contact carrier does not easily experience plastic deformation, and moreover, the stability of the electrical contact of the movable contact is better, the current-carrying capability is stronger, and at the same time, the increase in temperature and the power consumption are reduced.

[0013] In addition, the present invention also provides an auxiliary switch, a housing of which being internally provided with two change-over contact piece assemblies which have the above-mentioned structure and features or a combination thereof, and a first rotating plate and a second rotating plate which are arranged concentrically, wherein a first change-over contact piece assembly and a second change-over contact piece assembly are respectively located on two sides of the housing, the movable contact carrier of the first change-over contact piece assembly is connected to the first rotating plate of the auxiliary switch, and the movable contact carrier of the second change-over contact piece assembly is connected to the second rotating plate of the auxiliary switch, as the first rotating plate rotates, the movable contact can be driven into contact with the first stationary contact or the second stationary contact, and as the second rotating plate rotates, the movable contact can be driven into contact with the first stationary contact or the second stationary contact so as to achieve switching between four electrical circuits. By using the above design, the product structure is more compact, the movable contact carrier does not easily experience plastic deformation, and moreover, the stability of the electrical contact of the movable contact is better, the current-carrying capability is stronger, and at the same time, the increase in temperature and the power consumption are reduced.

[0014] Preferred embodiments will be explained in a clear and comprehensible manner hereinafter with reference to the accompanying drawings, and the above characteristics, technical features, advantages and implementations of the auxiliary switch will be further described.

Brief Description of the Drawings

[0015] The following accompanying drawings merely describe and explain the present invention in an illustrative manner and do not limit the scope of the present invention.

Fig. 1 is a structural schematic diagram of an exemplary embodiment of an auxiliary switch having a change-over contact piece assembly of the present invention;

Figs. 2 and 3 are respectively structural schematic diagrams of a handle of the auxiliary switch of the present invention being in OFF and ON positions;

Fig. 4 is a partial enlarged view of Fig. 1, and mainly shows the structure of the change-over contact piece assembly on one side of a housing;

Fig. 5 is a structural schematic diagram of an exemplary embodiment of a first rotating plate of the present invention; and

Fig. 6 is a structural schematic diagram of an exemplary embodiment of a second rotating plate of the present invention.

Reference numerals

[0016]

Auxiliary switch 100 First locating protrusion
Housing 10 604; 504
Operating handle 101 Second locating protrusion
Release assembly 20 605; 505
Connection rod assembly 30
First lock rod 40
Second lock rod 70
First stationary contact piece 81a; 81b
Second stationary contact piece 82a; 82b
Movable contact piece assembly 83a; 83b
Movable contact carrier 84a; 84b
Movable contact 85a; 85b
Reset member 86a; 86b
Wiring terminals T1, T2, T3, T4, T5, T6
First stationary contact S2; S5
Second stationary contact S3; S6
Clamping portion 841a, 848a; 841b, 848b
First extension 843a; 843b
Second extension 842a; 842b
Bent portion 844a; 844b
Accommodation groove 601; 501
First mounting groove 845a; 845b
Second mounting groove 846a; 846b
Second rotating plate 60
First rotating plate 50
Clamping hook 602; 502
Mounting post 603; 503

Detailed Description of Embodiments

[0017] In order to better understand the technical features, objects and effects of the present invention, the particular embodiments of the present invention will now be described with reference to the accompanying drawings, wherein throughout the drawings, the same numeral denotes components which have the same or a similar structure and the same function.

[0018] As used herein, the term "exemplary" means "serving as an example, instance, or description," and any illustration and embodiment described as "exemplary" herein should not be interpreted as a more preferred or a more advantageous technical solution.

[0019] The present invention relates to a change-over contact piece assembly which can be used for achieving switching between different electrical circuits. The change-over contact piece assembly comprises a first stationary contact piece 81a; 81b, a second stationary contact piece 82a; 82b and a movable contact piece assembly 83a; 83b. The first stationary contact piece is provided with a first stationary contact S2; S5. The second stationary contact piece is provided with a second stationary contact S3; S6.

[0020] It should be noted that the movable contact piece assembly 83a; 83b comprises a movable contact 85a; 85b, a movable contact carrier 84a; 84b, and a reset member 86a; 86b, wherein the movable contact carrier 84a; 84b is connectable to a rotary member 60; 50 (equivalent to a second rotating plate 60 and a first rotating plate 50 described below). The movable contact 85a; 85b is fixed on the movable contact carrier 84a; 84b. One end of the reset member 86a; 86b is connected to the movable contact carrier 84a; 84b, and the other end of the reset member 86a; 86b is connected to the rotary member 60; 50. As the rotary member 60; 50 rotates, the movable contact 85a; 85b can be driven into contact with the first stationary contact S2; S5 or the second stationary contact S3; S6 so as to achieve switching between different circuits.

[0021] The present invention further relates to an auxiliary switch 100, a housing 10 of which is internally provided with a change-over contact piece assembly having the above-mentioned structure and features or a combination thereof. With reference to Fig. 1, a structural schematic diagram of the interior of the auxiliary switch 100 of the present invention is shown. Furthermore, Figs. 2 and 3 are respectively structural schematic diagrams of the interior of the auxiliary switch when an operating handle 101 is in an OFF position and in an ON position.

[0022] Specifically, according to a preferred embodiment of the present invention, two mechanisms, namely, an AS mechanism and an FC mechanism, are arranged inside the housing 10 of the auxiliary switch 100 of the present invention, and the AS mechanism and the FC mechanism can be linked to achieve different functions. The AS mechanism comprises an operating handle 101, a release assembly 20, a connection rod assembly 30,

a first lock rod 40, and a first rotating plate 50. The FC mechanism comprises an operating handle 101, a release assembly 20, a connection rod assembly 30, a first lock rod 40, a second lock rod 70, and a second rotating plate 60. It should be noted that the first rotating plate 50 and the second rotating plate 60 are arranged concentrically, the first rotating plate 50 can drive the second rotating plate 60 to rotate, and the AS mechanism and the FC mechanism share the operating handle 101, the release assembly 20, the first lock rod 40 and the connection rod assembly 30 therebetween. Six wiring terminals T1, T2, T3, T4, T5 and T6 are arranged on two sides of the housing 10, three wiring terminals T1, T2, T3 and T4, T5, T6 being arranged on each side of the housing 10 so that four different electrical circuits can be formed inside the housing 10.

[0023] As a first preferred embodiment, two change-over contact piece assemblies are arranged inside the housing 10. As shown in Figs. 1 to 3, a first change-over contact piece assembly and a second change-over contact piece assembly are respectively located on the two sides of the housing 10, the movable contact carrier 84a of the first change-over contact piece assembly is connected to the second rotating plate 60 of the auxiliary switch 100, and the movable contact carrier 84b of the second change-over contact piece assembly is connected to the first rotating plate 50 of the auxiliary switch 100.

[0024] Inside the housing 10, a pair of wiring terminals T1 and T4 away from the operating handle 101 are respectively electrically connected to the movable contact carrier 84a on the second rotating plate 60 and the movable contact carrier 84b on the first rotating plate 50 via flexible wires S7, S8, and respectively remain in a normally closed state. The remaining two pairs of wiring terminals T2, T3, T5, T6 are respectively provided with two pairs of stationary contact pieces S2, S3, S5, S6. As the first rotating plate 50 rotates, same can drive the movable contact 85b to come into contact with the first stationary contact S5 or the second stationary contact S6 on the same side of the first rotating plate so that switching between a first electrical circuit and a second electrical circuit can be achieved. As the second rotating plate 60 rotates, same can drive the movable contact 85a to come into contact with the first stationary contact S2 or the second stationary contact S3 on the same side of the second rotating plate so that switching between a third electrical circuit and a fourth electrical circuit can be achieved.

[0025] As a second preferred embodiment, only one change-over contact piece assembly may be provided inside the housing 10 of the auxiliary switch 100. Specifically, the movable contact carrier may be selectively connected to one of the rotating plates of the auxiliary switch 100, for example, same is connectable to the first rotating plate 50 or the second rotating plate 60. As the first rotating plate 50 or the second rotating plate 60 rotates, the movable contact 85b or 85a on the corresponding side thereof can be driven into contact with the first stationary contact S2; S5 or the second stationary contact

S3; S6 so as to achieve switching between at least two electrical circuits.

[0026] The structure and operation process of the change-over contact piece assembly of the present invention will be described in detail below with the first preferred embodiment as an example and in conjunction with Figs. 1 to 4.

[0027] According to a preferred embodiment, the movable contact carrier 84a has a plate-like structure and has a thickness, and the movable contact carrier 84a is provided with at least two clamping portions 841a, 848a so as to be separately fitted with and clamped onto the second rotating plate 60. Similarly, the movable contact carrier 84b has a plate-like structure and has a thickness, and the movable contact carrier 84b is provided with at least two clamping portions 841b, 848b so as to be separately fitted with and clamped onto the first rotating plate 50. With the above design, the movable contact carrier has a large current-carrying section, which can not only improve a current-carrying capacity, but also effectively reduce an increase in temperature and power consumption.

[0028] Furthermore, the movable contact carrier 84a comprises a first extension 843a and a second extension 842a. Preferably, the first extension 843a and the second extension 842a form an L-shaped structure, the movable contact 85a being located at an end of the first extension 843a. A bent portion 844a bent toward the first extension 843a is further provided at an end of the second extension 842a. The second rotating plate 60 is provided with an accommodation groove 601 for accommodating the bent portion 844a, such that the bent portion 844a can be clamped in the accommodation groove 601. Similarly, the movable contact carrier 84b comprises a first extension 843b and a second extension 842b. Preferably, the first extension 843b and the second extension 842b form an L-shaped structure, the movable contact 85b being located at an end of the first extension 843b. A bent portion 844b bent toward the first extension 843b is further provided at an end of the second extension 842b. The first rotating plate 50 is provided with an accommodation groove 501 for accommodating the bent portion 844b, such that the bent portion 844b can be clamped in the accommodation groove 501. With the above design, the connection relationship between the movable contact carrier and the first rotating plate or the second rotating plate is made more stable and reliable.

[0029] Further preferably, the first extension 843a is also provided with a first mounting groove 845a, the second rotating plate 60 is also provided with a clamping hook 602, and the first mounting groove 845a and the clamping hook 602 can be fitted and clamped together. Similarly, the first extension 843b is also provided with a first mounting groove 845b, the first rotating plate 50 is also provided with a clamping hook 502, and the first mounting groove 845b and the clamping hook 502 can be fitted and clamped together. With the above design, the connection stability between the movable contact car-

rier and the first rotating plate or the second rotating plate can be further improved.

[0030] In order to make the reset member have better connection stability, the first extension 843a is also provided with a second mounting groove 846a, and the second rotating plate 60 is also provided with a mounting post 603, one end of the reset member 86a being hooked in the second mounting groove 846a, and the other end of the reset member 86a being sleeved over the mounting post 603. Similarly, the first extension 843b is also provided with a second mounting groove 846b, and the first rotating plate 50 is also provided with a mounting post 503, one end of the reset member 86b being hooked in the second mounting groove 846b, and the other end of the reset member 86b being sleeved over the mounting post 503.

[0031] It should be noted that, as a further preferred embodiment, the second rotating plate 60 is also provided with two locating protrusions 604, 605, and the first extension 843a can selectively abut against either one of the locating protrusions so that, when the second rotating plate 60 drives the movable contact carrier 84a to rotate in a first direction, the movable contact carrier 84a takes the first locating protrusion 604 as a rotation fulcrum, and when the second rotating plate 60 drives the movable contact carrier 84a to rotate in a second direction, the movable contact carrier 84a takes the second locating protrusion 605 as the rotation fulcrum. Similarly, the first rotating plate 50 is also provided with two locating protrusions 504, 505, and the first extension 843b can selectively abut against either one of the locating protrusions so that, when the first rotating plate 50 drives the movable contact carrier 84b to rotate in the first direction, the movable contact carrier 84b takes the first locating protrusion 504 as a rotation fulcrum, and when the rotary member 50 drives the movable contact carrier 84b to rotate in the second direction, the movable contact carrier 84b takes the second locating protrusion 505 as the rotation fulcrum. With the change of the two rotation fulcrums, contact pressure reverses, so that when the movable contact is brought into contact with different stationary contacts, contact pressure is provided by the reset member, and the stability of the contact pressure is ensured.

[0032] As shown in Fig. 4, taking the change-over contact piece assembly on one side of the housing 10 as an example, since one end of the reset member 86a is sleeved over the mounting post 603 on the second rotating plate 60 and the other end of the reset member 86a is hooked in the second mounting groove 846a on the movable contact carrier 84a, as the second rotating plate 60 rotates, the movable contact carrier 84a is driven to move so that, when the second rotating plate 60 rotates by a certain angle, the movable contact carrier 84a comes into contact with the first stationary contact piece 81a, the second rotating plate 60 continues to rotate, the movable contact carrier 84a is separated from the first locating protrusion 604, and at this time, the reset member

86a generates a contact pressure on a contact; and when the second rotating plate 60 rotates in a reverse manner and by a certain angle, the movable contact carrier 84a comes into contact with the second stationary contact piece 82a, the second rotating plate 60 continues to rotate, the movable contact carrier 84a is separated from the second locating protrusion 605, and at this time, the reset member 86a generates a contact pressure on the contact.

[0033] In summary, regarding the change-over contact piece assembly with the above-mentioned structure and features of the present invention, the contact pressure of the contact thereof is provided by the reset member, a tension action point is located on the movable contact piece close to a fulcrum, and the influence of the accumulated tolerance of parts on a reset force is reduced by a lever, therefore, the influence of the dimensional tolerance of the mechanical parts on the contact pressure of the contact can be effectively reduced. Since the reset member has a more stable pull force, the stability of the contact pressure can be ensured. With the change of the two fulcrums, the contact pressure reverses, so that when the movable contact is brought into contact with different stationary contacts, contact pressure is provided by the reset member, and a stable contact pressure is provided.

[0034] Since the movable contact carrier of the present invention has a large current-carrying section, the current-carrying capacity can be increased, and an increase in temperature and power consumption can be reduced. Compared with the prior art, the movable contact carrier has a short length, which can meet the requirements for the spatial compactness of a product. Since the movable contact carrier has a high degree of rigidity, plastic deformation cannot occur.

[0035] It should be understood that, although the description is given according to each of the embodiments, each embodiment does not only comprise an independent technical solution, and this narrative manner of the description is only for clarity. For a person skilled in the art, the description shall be regarded as a whole, and the technical solution in each of the embodiments can also be suitably combined to form other implementations that can be understood by a person skilled in the art.

[0036] The series of detailed descriptions set forth above is merely a specific description regarding the feasible embodiments of the present invention, and is not intended to limit the scope of protection of the present invention; any equivalent embodiment or alteration of the present invention, such as the combination of features, the division or the duplication of a feature, made without departing from the technical spirit of the present invention, shall be included within the scope of protection of the present invention.

Claims

1. A change-over contact piece assembly for achieving switching between different electrical circuits, the change-over contact piece assembly comprising a first stationary contact piece (81a; 81b) with a first stationary contact (S2; S5) provided thereon; a second stationary contact piece (82a; 82b) with a second stationary contact (S3; S6) provided thereon; and a movable contact piece assembly (83a; 83b) comprising:

a movable contact carrier (84a; 84b) connectable to a rotary member (60; 50);
a movable contact (85a; 85b) fixed on the movable contact carrier (84a; 84b); and
a reset member (86a; 86b), with one end thereof being connected to the movable contact carrier (84a; 84b), and the other end thereof being connected to the rotary member (60; 50), wherein as the rotary member (60; 50) rotates, the movable contact (85a; 85b) can be driven into contact with the first stationary contact (S2; S5) or the second stationary contact (S3; S6).

2. The change-over contact piece assembly as claimed in claim 1, wherein the movable contact carrier (84a; 84b) has a plate-like structure and has a thickness, and the movable contact carrier (84a; 84b) is provided with at least two clamping portions (841a, 848a; 841b, 848b) so as to be separately fitted with and clamped onto the rotary member (60; 50).

3. The change-over contact piece assembly as claimed in claim 2, wherein the movable contact carrier (84a; 84b) comprises a first extension (843a; 843b) and a second extension (842a; 842b), and the first extension (843a; 843b) and the second extension (842a; 842b) form an L-shaped structure, the movable contact (85a; 85b) being located at an end of the first extension (843a; 843b).

4. The change-over contact piece assembly as claimed in claim 3, wherein a bent portion (844a, 844b) bent toward the first extension (843a; 843b) is further provided at an end of the second extension (842a; 842b), and the rotary member (60; 50) is provided with an accommodation groove (601; 501) for accommodating the bent portion (844a; 844b), such that the bent portion (844a; 844b) can be clamped in the accommodation groove (601; 501).

5. The change-over contact piece assembly as claimed in claim 3, wherein the first extension (843a; 843b) is also provided with a first mounting groove (845a; 845b), the rotary member (60; 50) is also provided with a clamping hook (602; 502), and the first mount-

ing groove (845a; 845b) and the clamping hook (602; 502) can be fitted and clamped together.

6. The change-over contact piece assembly as claimed in claim 3, wherein the first extension (843a; 843b) is also provided with a second mounting groove (846a; 846b), and the rotary member (60; 50) is also provided with a mounting post (603; 503), one end of the reset member (86a; 86b) being hooked in the second mounting groove (846a; 846b), and the other end of the reset member (86a; 86b) being sleeved over the mounting post (603; 503) .
7. The change-over contact piece assembly as claimed in claim 1, wherein the rotary member (60; 50) is also provided with two locating protrusions (604, 605; 504, 505) for bearing the movable contact carrier (84a; 84b), when the rotary member (60; 50) drives the movable contact carrier (84a; 84b) to rotate in a first direction and into place, the movable contact carrier (84a; 84b) takes a first locating protrusion (604; 504) as a rotation fulcrum, and when the rotary member (60; 50) drives the movable contact carrier (84a; 84b) to rotate in a second direction and into place, the movable contact carrier (84a; 84b) takes a second locating protrusion (605; 505) as the rotation fulcrum.
8. An auxiliary switch (100), a housing (10) of which is internally provided with at least one change-over contact piece assembly as claimed in any one of claims 1-7, wherein the change-over contact piece assembly is located on at least one side of the housing (10), and the movable contact carrier (84a; 84b) of the change-over contact piece assembly is selectively connected to a rotating plate (60; 50) of the auxiliary switch (100); the first stationary contact piece (81a; 81b) and the second stationary contact piece (82a; 82b) are each connected to two wiring terminals (T2, T3; T5, T6) located on one side of the housing (10); and as the rotating plate (60; 50) rotates, the movable contact (85a; 85b) can be driven into contact with the first stationary contact (S2; S5) or the second stationary contact (S3; S6) so as to achieve switching between at least two electrical circuits.
9. An auxiliary switch (100), a housing (10) of which is internally provided with two change-over contact piece assemblies as claimed in any one of claims 1-7, and a first rotating plate (60) and a second rotating plate (50) which are arranged concentrically, wherein a first change-over contact piece assembly and a second change-over contact piece assembly are respectively located on two sides of the housing (10), the movable contact carrier (84a) of the first change-over contact piece assembly is connected to the first rotating plate (60) of the auxiliary switch

(100), and the movable contact carrier (84b) of the second change-over contact piece assembly is connected to the second rotating plate (50) of the auxiliary switch (100), as the first rotating plate (60) rotates, the movable contact (85a) can be driven into contact with the first stationary contact (S2) or the second stationary contact (S3), and as the second rotating plate (50) rotates, the movable contact (85b) can be driven into contact with the first stationary contact (S5) or the second stationary contact (S6) so as to achieve switching between four electrical circuits.

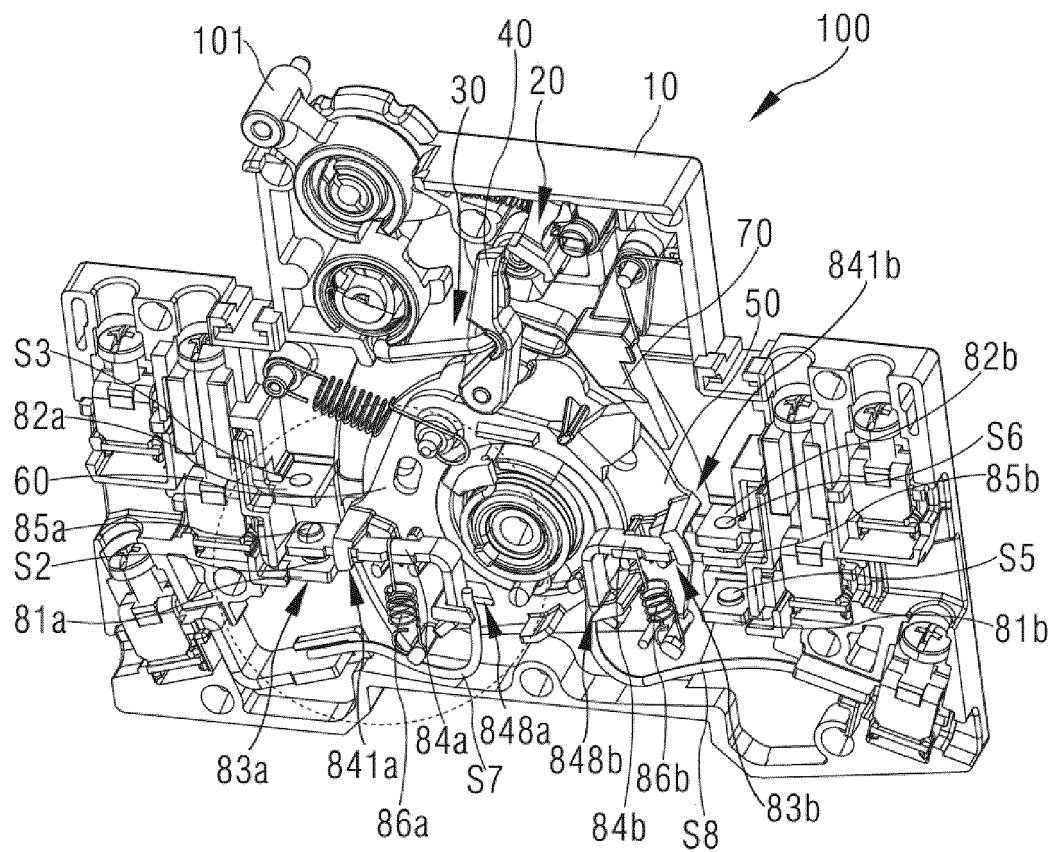


Fig. 1

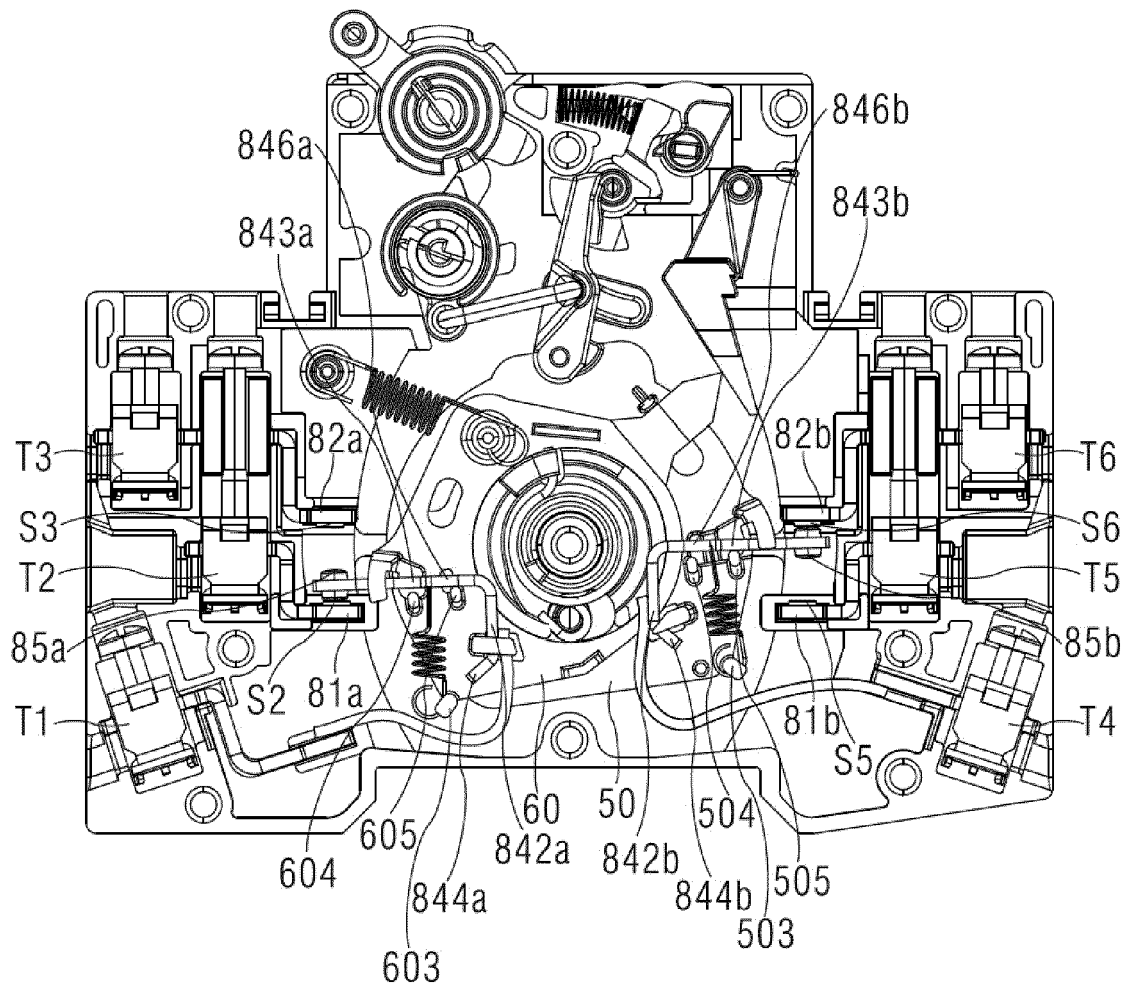


Fig. 2

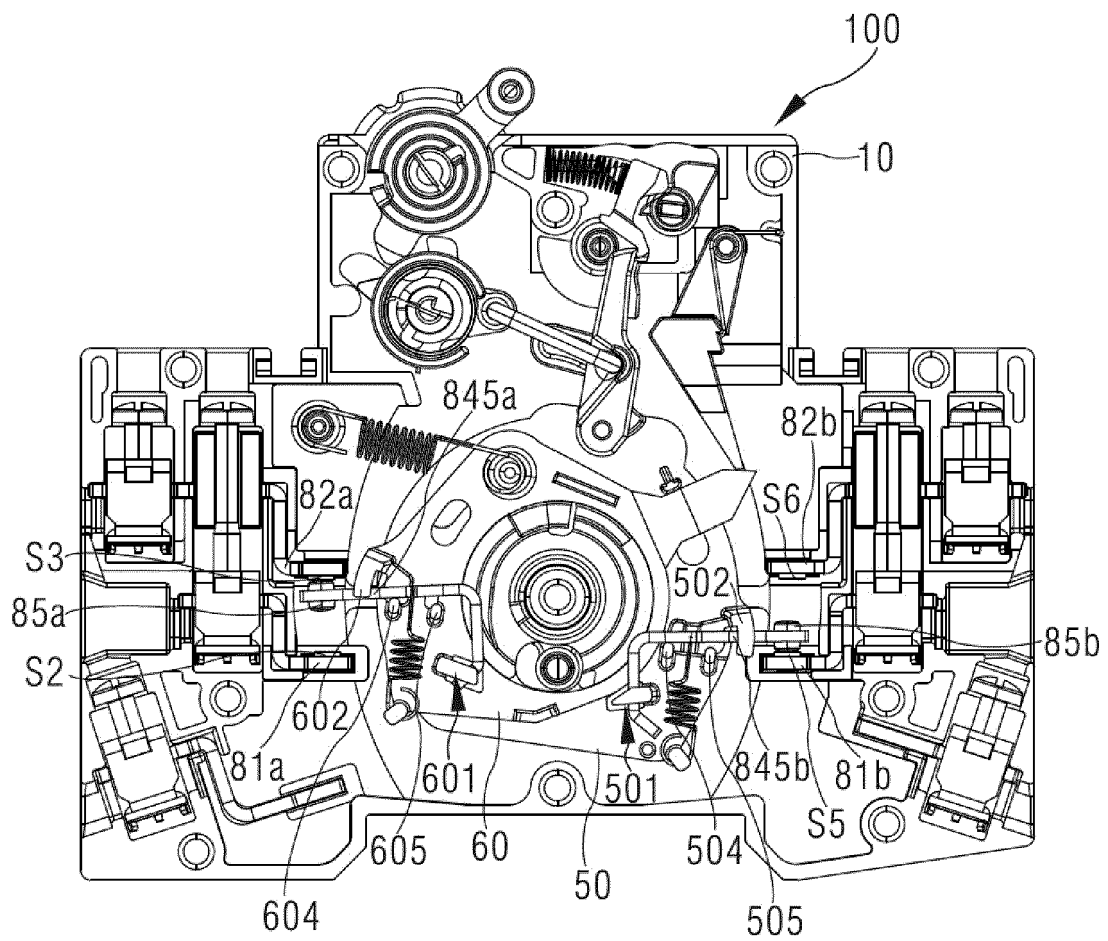


Fig. 3

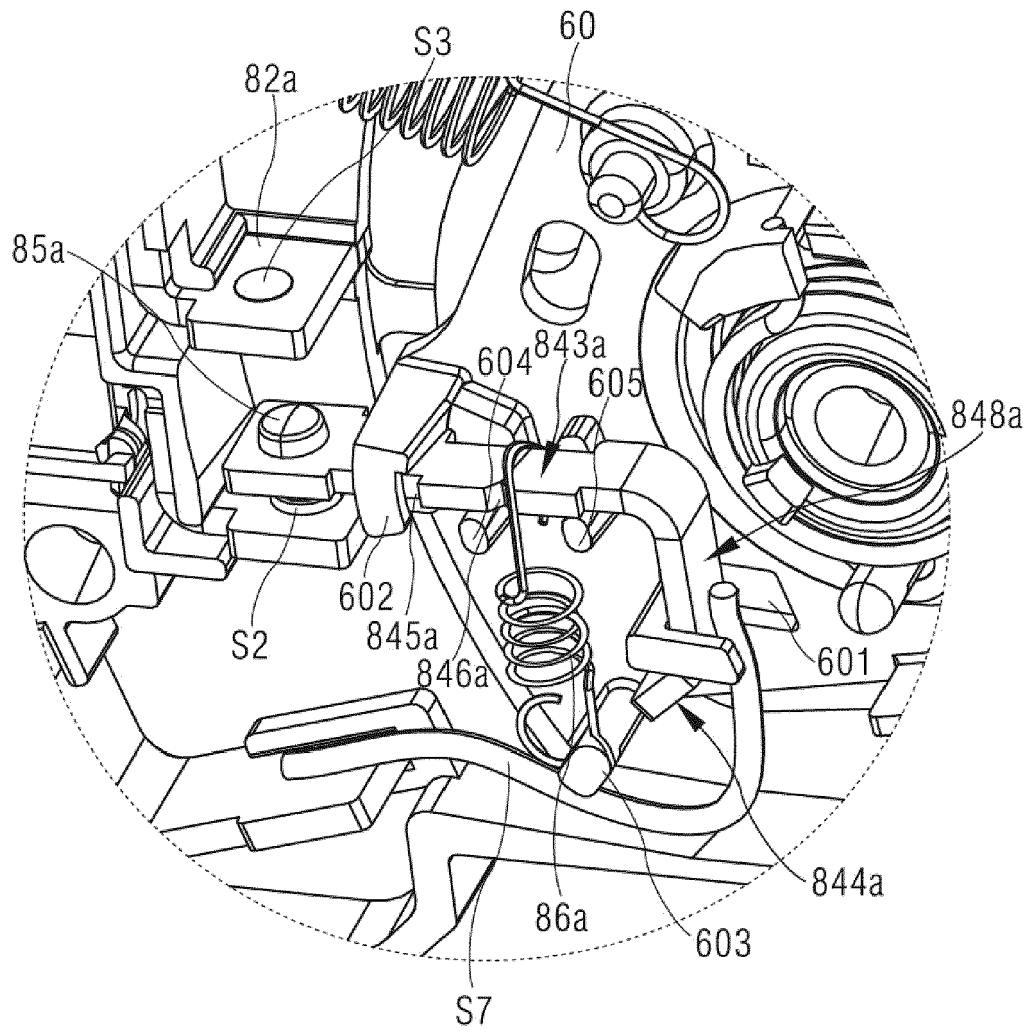


Fig. 4

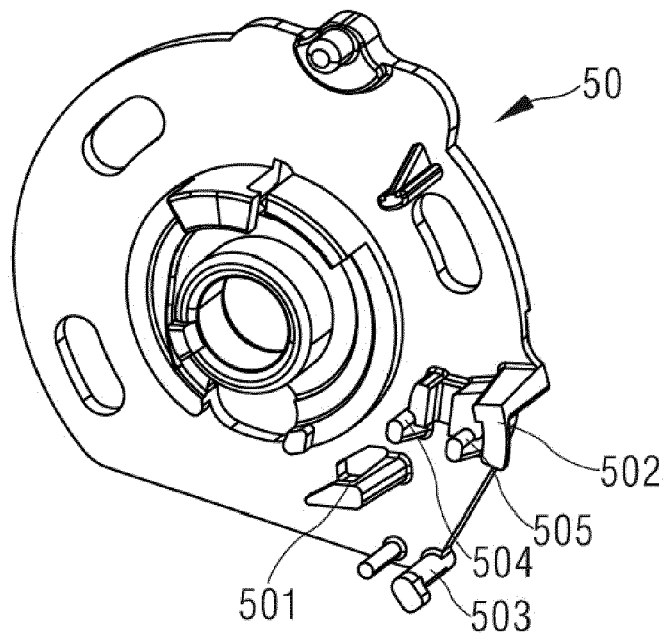


Fig. 5

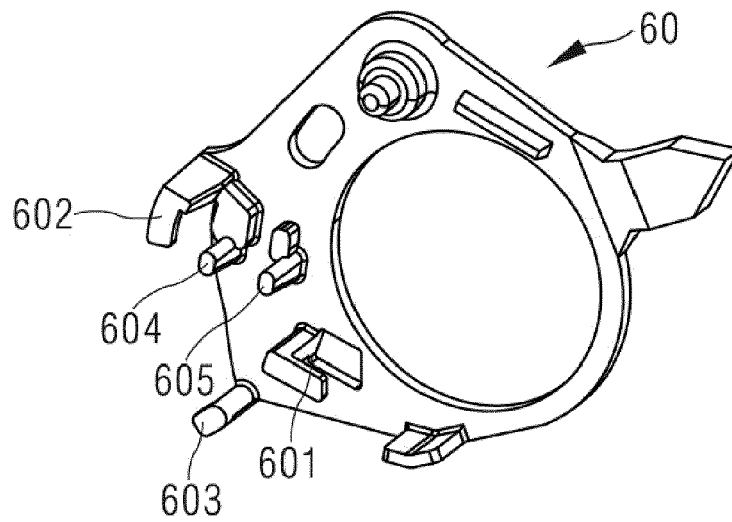


Fig. 6



EUROPEAN SEARCH REPORT

Application Number
EP 17 20 8586

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 2 009 657 A2 (SIEMENS AG [DE]) 31 December 2008 (2008-12-31)	1,2,7,8	INV. H01H71/46 H01H1/22
A	* column 3, line 25 - column 5, line 32; figures 1-4 *	3-6,9	
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A	* page 7, paragraph 1 - page 9, paragraph 1; figures 1-4 *	3-6,9	
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