



**FEDERAL SUPREME COURT**  
**ON BEHALF OF THE PEOPLE**  
**JUDGMENT**

X ZR 47/21

Announced on:  
June 13, 2023  
Zöller  
Clerk of the Court  
as clerk of the court  
registry

in the patent nullity case

Reference book:     yes  
BGHZ:                 no  
BGHR:                yes

Connecting terminal

PatG § 82

- a) The limited defense of a patent claim attacked with a partial invalidity action by combining it with the features of a non-attacked subclaim is inadmissible for lack of interest in legal protection (confirmation of Federal Supreme Court (BGH), judgment of March 1, 2017 - X ZR 10/15, GRUR 2017, 604 para. 27 et seq. - Ankopplungssystem). This also applies if the features of the non-attacked subclaim are not literally included in the defended version, but are included in substance.
- b) On the other hand, an interest in legal protection exists if the challenged claim is merely supplemented by a part of the features of a subclaim that is not challenged.

Federal Supreme Court (BGH), Judgment of June 13, 2023 - X ZR 47/21 -  
Federal Patent Court

The X. Civil Senate of the Federal Supreme Court, at the oral hearing on June 13, 2023, by the Presiding Judge Dr. Bacher, the Judges Dr. Kober-Dehm, Dr. Marx and Dr. Rombach, and the Judge Dr. Rensen

found in favor of the defendant:

On appeal by the defendant, the judgment of the 6th Senate (Cancellation Senate) of the Federal Patent Court of February 19, 2021, is amended.

European patent 2 400 595 is partially invalidated by giving claims 1 to 4 the following version, claims 5 to 10 continuing to refer back to the granted version of claims 1 to 4:

1. Connecting terminal (1) with an insulating material housing (2) and with at least one spring clamp unit with a clamping spring (4) and a busbar section (3) in the insulating material housing (2), wherein the clamping spring (4) has a contact section (6), a spring bend (7) adjoining the contact section, and a clamping section (8) adjoining the spring bend (7) and shaped for clamping an electrical conductor against the conductor rail section (3), wherein the clamping spring (4) has an operating section (13) section (13) which extends away from the direction of the spring force of the clamping

spring (4) acting on the clamping section (8) and is oriented in such a way as to be acted upon by an operating element (16, 31, 33, 39), in that the operating element (16, 31, 33, 39) can be brought into engagement with the operating section (13) in order to exert a tensile force acting on the operating section (13) counter to the spring force when the operating element (16, 31, 33, 39) is displaced, in order to open the clamping spring (4), characterized, that the operating section (13) of the clamping spring extends from the clamping section of the clamping spring, wherein the operating element (16, 31, 33, 39) is an operating lever (16) pivotally mounted in the insulating-material housing (2) and having a bracket (17) about which it is pivotable, wherein at least one free end (10) of the clamping section (8) protrudes in the direction of the busbar section (3) to form a clamping point for an electrical conductor inserted into a conductor insertion opening (5) and passed through below the free end (10) of the clamping spring (4), wherein the pivot bearing (17) of the operating lever (16) is located above the busbar section (3).

2. (deleted)

3. (deleted)

4. Connecting terminal (1) according to claim 1, characterized in that the operating section of the clamping spring (4) has a bent end which is hooked into the operating lever (16).

In all other respects, the complaint is dismissed.

The further appeal is dismissed.

The costs of the dispute at first instance are set aside. Of the costs of the appeal proceedings, the plaintiff shall bear three quarters and the defendant one quarter.

By law

Facts:

1           The defendant is the owner of European patent 2 400 595 (patent in suit), which was granted with effect for the Federal Republic of Germany, was filed on June 17, 2011, claiming a German priority of June 23, 2010, and concerns a connecting terminal.

2           Claim 1, to which nine claims are recited, reads in procedural language:

Connecting terminal (1) with an insulating-material housing (2) and with at least one spring clamp unit with a clamping spring (4) and a busbar section (3) in the insulating-material housing (2), the clamping spring (4) having a contact section (6), a spring bend (7) adjoining the contact section, and a clamping section (8) adjoining the spring bend (7) and shaped for clamping an electrical conductor against the busbar section (3), the clamping spring (4) having an operating section (13) which extends away from the direction of the spring force of the clamping spring (4) acting on the clamping section (8) and is oriented to be acted upon by an operating element (16, 31, 33, 39) in such a way that the operating element (16, 31, 33, 39) is arranged to exert a force on the operating section (13) upon displacement of the operating element (16, 31, 33, 39) against the spring force to open the clamping spring (4), characterized in that the operating section of the clamping spring extends from the clamping section of the clamping spring.

3           The plaintiff challenged the patent in suit to the extent of claims 1 to 4, claiming that their subject matter went beyond the content of the documents originally filed and was not patentable. The defendant has defended the patent in suit with one main request and six auxiliary requests in amended versions.

4           The Patent Court declared the patent invalid to the extent challenged. The defendant's appeal challenges the merits of its first-instance requests. The plaintiff opposes the appeal.

Reasons for Decision:

5                   The admissible appeal is only well-founded with regard to the first  
auxiliary request.

6                   I.       The patent in suit relates to a connecting terminal with an  
insulating-material housing and a spring-clamp unit.

7                   1.       According to the description of the patent in suit, such clamps are  
known in various forms. To establish a conductive contact, an electrical conductor  
is pressed against a current bar section by the spring force of a clamping spring  
(para. 2).

8                   To remove the connected electrical conductor, the clamping spring must  
be displaced against its spring force and the clamping point opened. This is done  
by means of actuating elements, such as screwdrivers, which are inserted into  
actuating openings of the connecting terminal, or by means of actuating elements  
built into the insulating-material housing of the connecting terminal (Par. 3).

9                   Various designs of such actuators are known in the prior art (paras. 4 to  
10).

10                  2.       The patent in suit concerns the technical problem of providing a  
connecting terminal with improved actuation capability.

11                  3.       The patent in suit, in the version of claim 1 defended by the main  
application, proposes a connecting terminal, the features of which can be divided  
as follows (with change markings compared to the granted version):

- a) Connecting terminal (1) with
  - aa) an insulating-material housing (2) and
  - ab) at least one spring clamp unit.
- b) The spring clamp unit has in the insulating-material housing (2)
  - ba) a clamping spring (4) and
  - bb) a busbar section (3).
- c) The clamping spring (4) has
  - ca) a contact section (6),
  - cb) a spring arc (7) adjoining the contact section,
  - cc) a clamping section (8) adjoining the spring bend (7) and shaped for clamping an electrical conductor against the conductor rail section (3), and
  - (cd) an operating section (13).
- d) The operating section (13)
  - da) extends away from the direction of the spring force of the clamping spring (4) acting on the clamping section (8) and
  - db) is oriented to be acted upon by an actuating member (16, 31, 33, 39) such that the actuating member is engageable with the operating section (13) to exert a tensile force acting on the operating section (13) upon displacement of the actuating member against the spring force to open the clamping spring (4).
- e) The operating section (13) of the clamping spring (4) extends from the clamping section of the clamping spring.
- f) The actuating element (16, 31, 33, 39)
  - fa) is an operating lever (16) pivotably mounted in the insulating-material housing (2),
  - fb) which has a pivot bearing (17) about which it can be pivoted.

13                   a)     The connecting terminal according to feature a serves to establish  
a current-conducting contact with an electrical conductor.

14                   It follows from the connection with feature cc that the terminal must have  
an opening for inserting an electrical conductor for this purpose.

15                   The range of application of the connecting terminal is not specified.

16                   b)     The insulating-material housing provided in accordance with  
feature aa is made of a material that does not conduct the electric current.

17                   The choice of material is left to the specialist.

18                   aa)    It follows from feature group b that the insulating-material housing  
must be designed to accommodate the spring-clamp unit.

19                   For this purpose, a cuboid basic arrangement may be considered, such  
as is shown in Figure 4 of the patent in suit reproduced below.



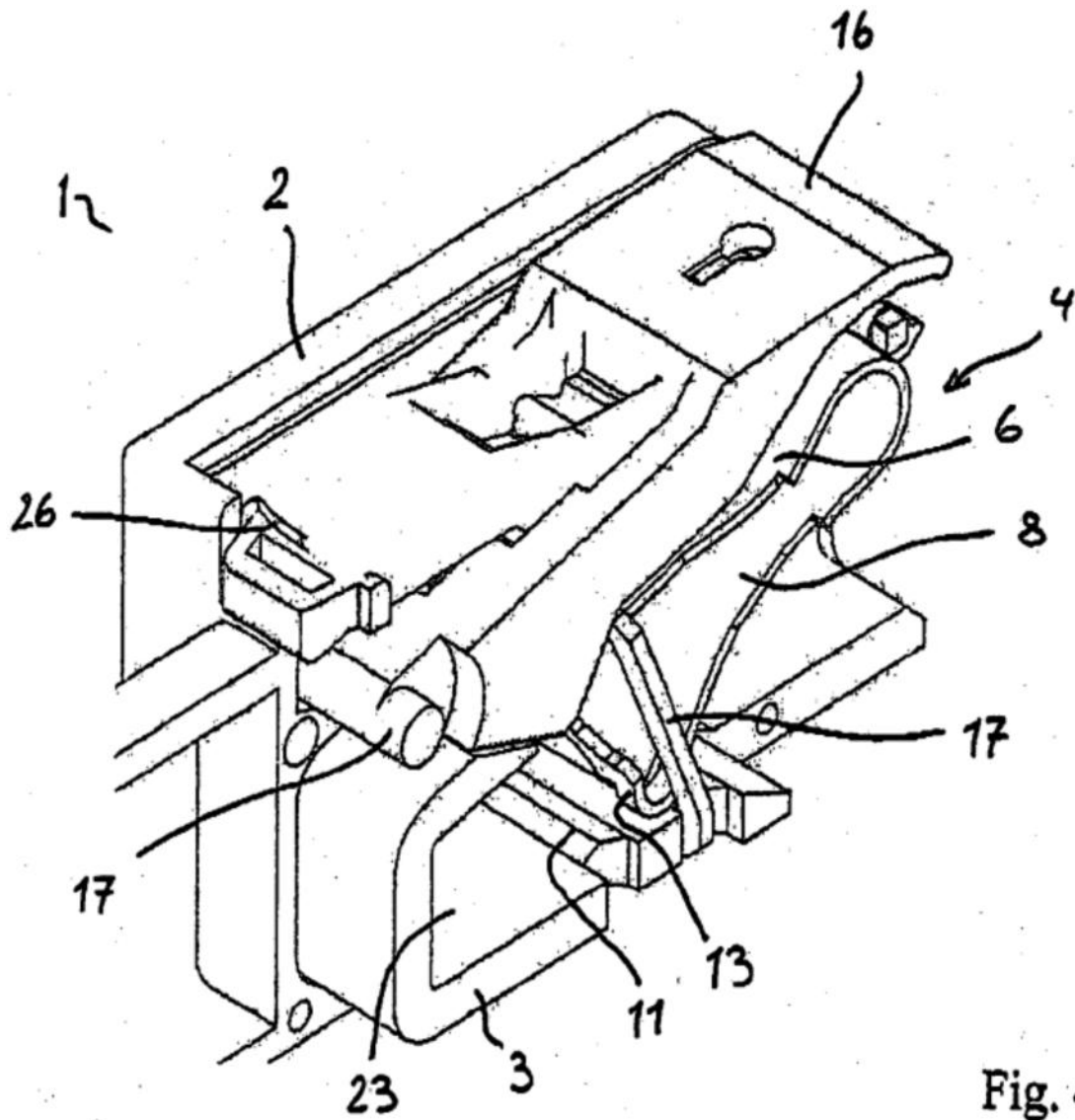
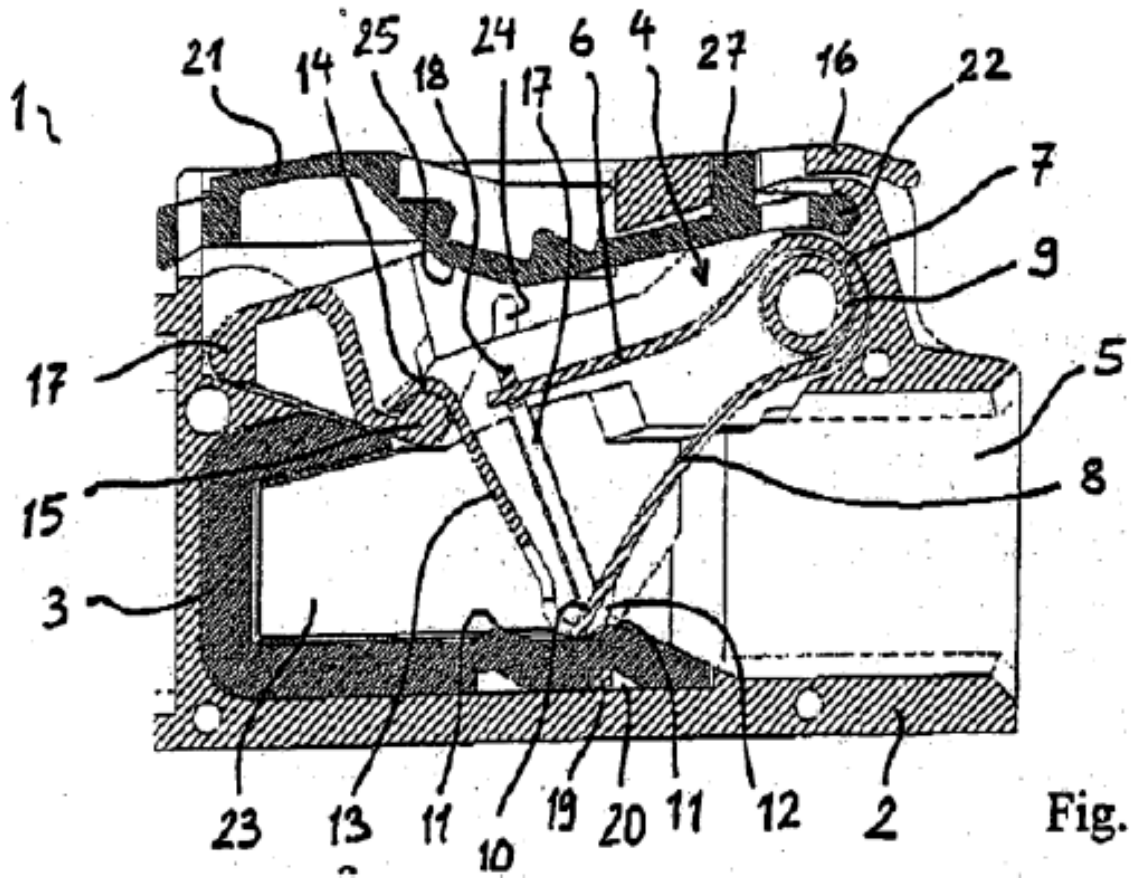
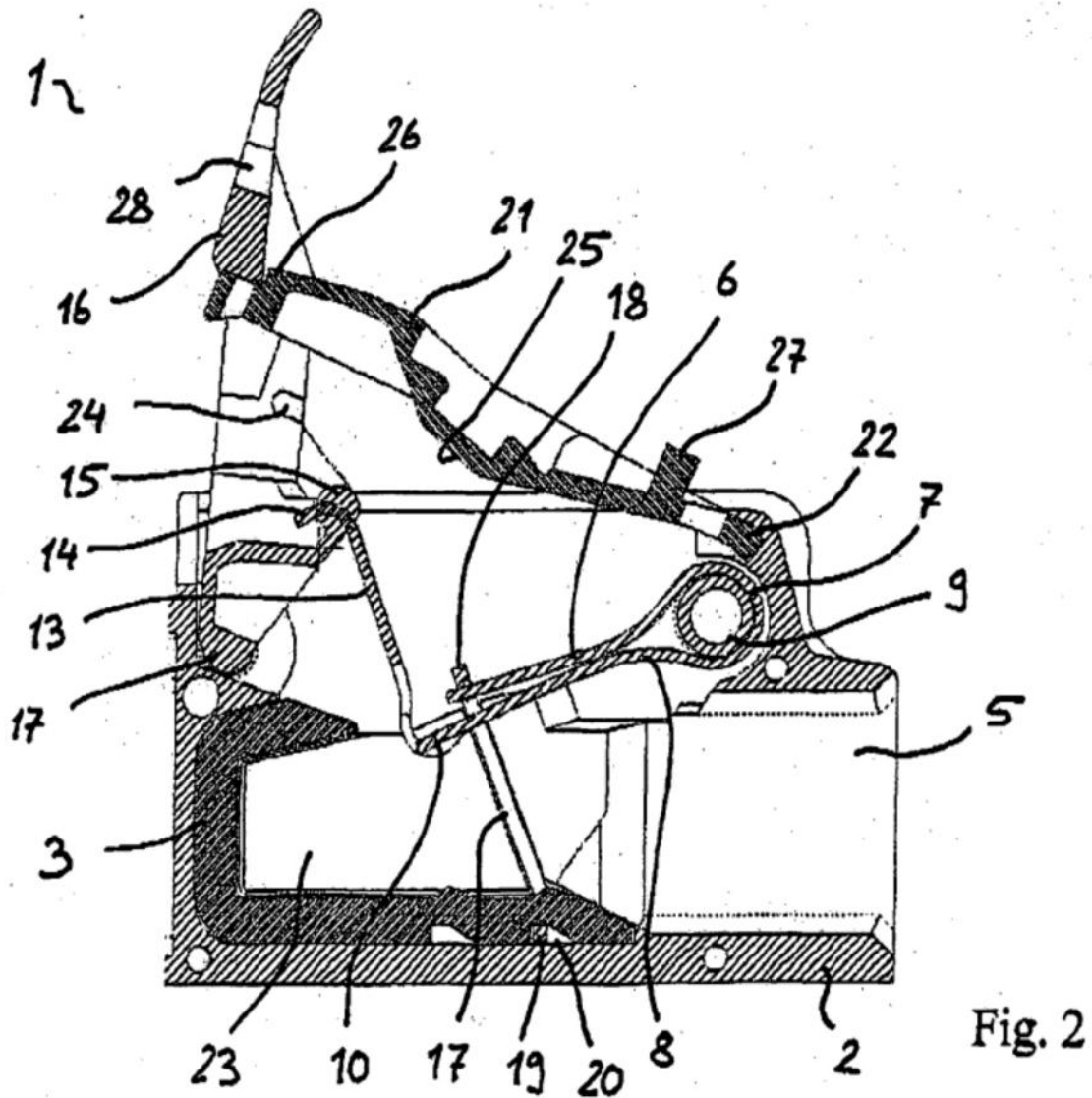


Fig. 4

20                    However, the claim is not limited to this design. Likewise, it is left to the person skilled in the art to decide whether to form the insulating-material housing in one or several parts (par. 62).

21                    bb) It follows from feature group f that an additional recess for mounting the actuating element can be provided in the insulating-material housing in addition to the insertion opening for the electrical conductor, as shown in Figure 4 and in Figures 1 and 2 reproduced below. These show an operating lever (16) in the basic position and in the swung-out state.





22 c) Contrary to the view of the appeal, feature b does not necessarily provide that the clamping spring and the busbar section must be designed as separate components and that the busbar section must not be bent out of the material of the spring.

23 The wording of claim 1 does not provide for such a separation. It is also not mandatory from a functional point of view.

24           As the appellant rightly asserts, it is sufficient to meet the requirements of feature group b under both aspects if, in the case of the spring clamping unit, a distinction can be made between an area which forms the clamping spring and an area which functions as the busbar section. Whether and in what way these two areas are mechanically connected to each other, on the other hand, is irrelevant. Against this background, contrary to the view of the appeal, nothing else results from the fact that in feature group c further properties of the clamping spring are defined without mentioning the busbar section.

25           It can be left open whether a separate design, as shown in the figures of the patent in suit, offers advantages with respect to clamping force or other aspects. Such advantages are not necessarily provided for in claim 1. This also applies to the advantage cited by the appeal that the clamping spring and busbar section can be made of different materials. Irrespective of this, two components made of different materials can also be joined together, as the description of the patent in suit (para. 59) expressly provides for individual sections of the clamping spring.

26           An arrangement in which the clamping section of the clamping spring can clamp an electrical conductor against the busbar section, as provided by feature cc, is therefore sufficient. This is also possible if the clamping spring and the busbar section are connected to each other at another point and the latter is bent out of the spring for this purpose.

27           d)     According to feature group c, the clamping spring consists of at least four sections.

28           aa)    According to the defendant's uncontradicted argument, the contact section forms an abutment that enables the clamping force of the spring to be transmitted to the clamping point.

29           bb) The adjoining spring arc connects the contact section to the  
clamping section.

30           cc) The clamping section clamps the electrical conductor against  
the busbar section by means of the spring force.

31           dd) Decisive importance for the objective pursued by the invention  
is attached to the operating section provided in feature cd, which is  
characterized in more detail in feature e and feature groups d and f.

32           (1) The operating section is used to open the clamping point.

33           To enable this, according to features e and da, it is configured to extend  
away from the clamping section and to extend away from the direction of the  
spring force acting on the clamping section.

34           (2) Furthermore, the operating section according to feature db must  
be aligned in such a way that an operating element can be engaged with it and  
thereby, when the operating element is displaced, exert a tensile force that acts on  
the operating section and leads to the opening of the clamping spring.

35           Feature db thus contains two cumulative requirements to be met:

- A tensile force must act on the operating section.
- The actuating element must exert this tensile force.

36           (a) The first-mentioned requirement is met if the operating member  
can apply a tensile force to the operating section that allows the clamping spring  
to open.

37           This can also be done, for example, by the operating element pressing  
against a bent end of the operating section so that the operating section and, with  
it, the contact section are pulled away from the contact surface against the spring  
force.

38                   (aa) Such a power transmission takes place in the embodiment  
example according to figures 1 and 2.

39                   There, the bent free end (14) of the operating section (13) partially  
engages over a bearing pin (15) of the operating lever (16) (par. 32). When the  
operating lever (16) is swung away upwardly around the pivot bearing (17), the  
clamping section (8) of the spring (4) is swung upwardly toward the abutment leg  
(6) and the operating member (16) by exerting a pulling force on the operating  
section (13) due to the upward swing of the bearing pin (15) (Para. 39).

40                   It is therefore decisive that the operating section (13) is subjected to a  
tensile force by the operating element via the bearing pin (15). The fact that this  
occurs in that the bolt (15) also presses from below against the bent-over end  
(14) of the operating section (13) does not prevent the qualification as a tensile  
force in the above sense.

41                   (bb) A comparable power transmission takes place in the alternative  
embodiment example shown in Figure 5 reproduced below.

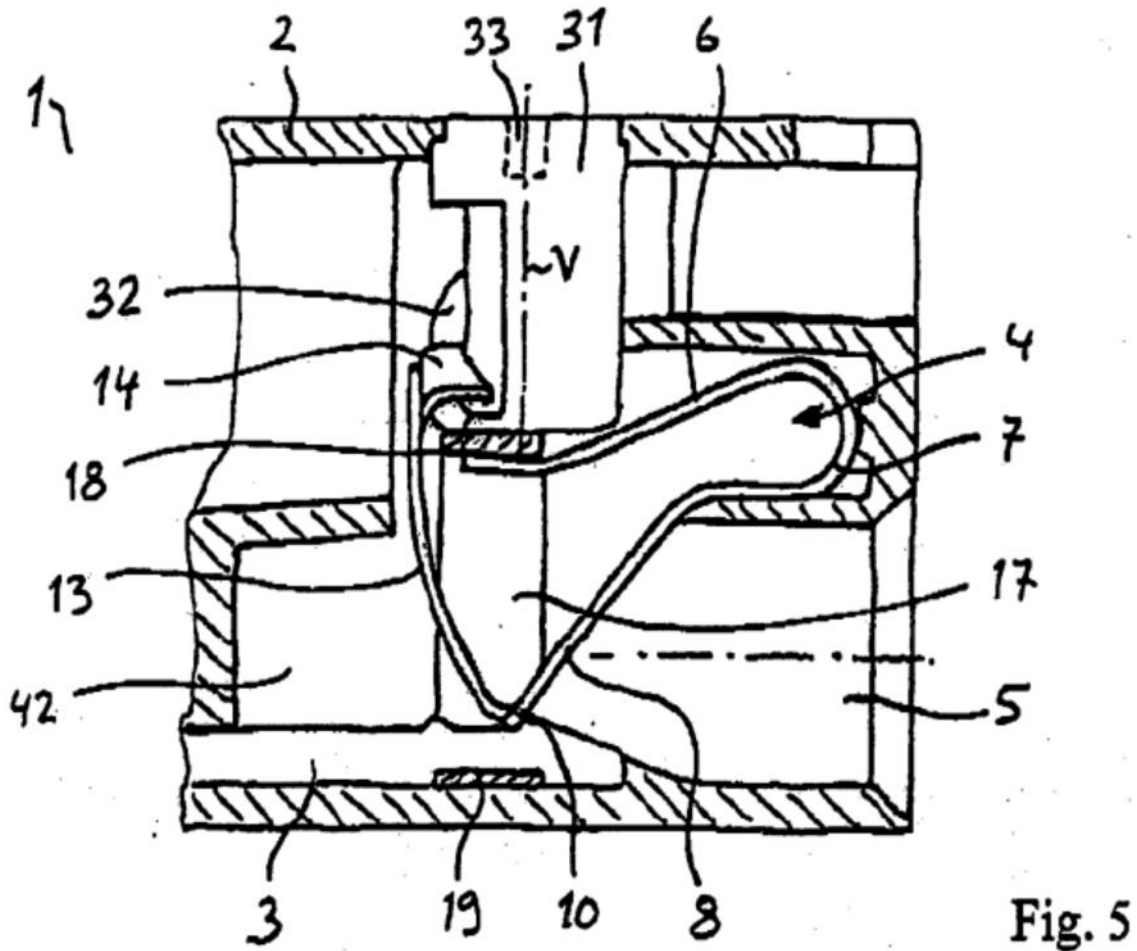


Fig. 5

42 In this embodiment, the free end (14) of the operating section (13) is bent in the opposite direction compared to Figures 1 and 2. It rests on an obliquely upwardly inclined support ramp (32) of an actuating cylinder (31) (par. 50). The cylinder (31) can be rotated about its vertical axis with a screwdriver. As it does so, the end (14) slides up the ramp (32) so that a pulling force is applied to the operating section (13) (par. 51).

43 In this embodiment, too, the tensile force acting upwardly in the direction of the operating section is applied to the operating section by a part of the cylinder (31) acting as the operating section pressing against the free end (14) of the operating section from below.

44 (cc) A comparable power transmission further takes place in the third embodiment example shown in Figure 6 reproduced below.

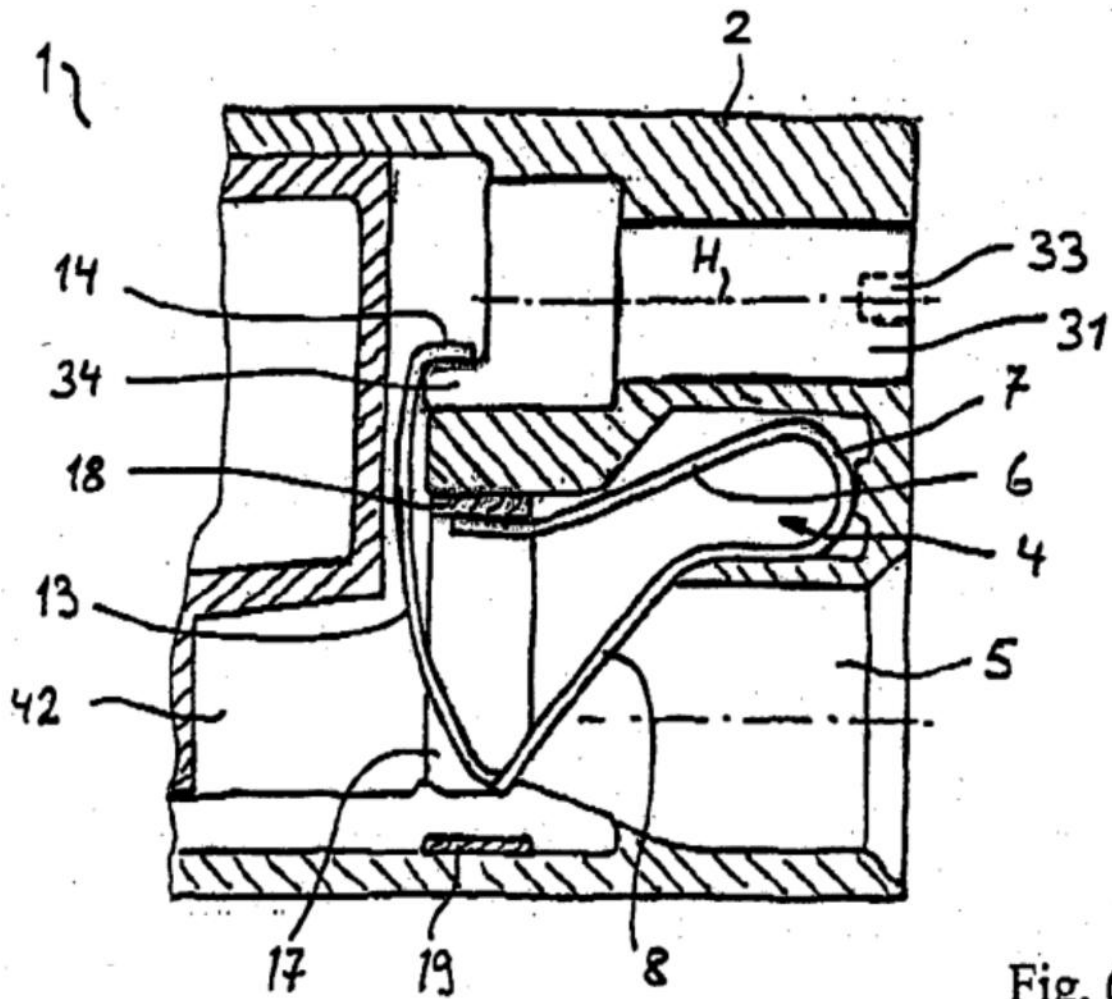
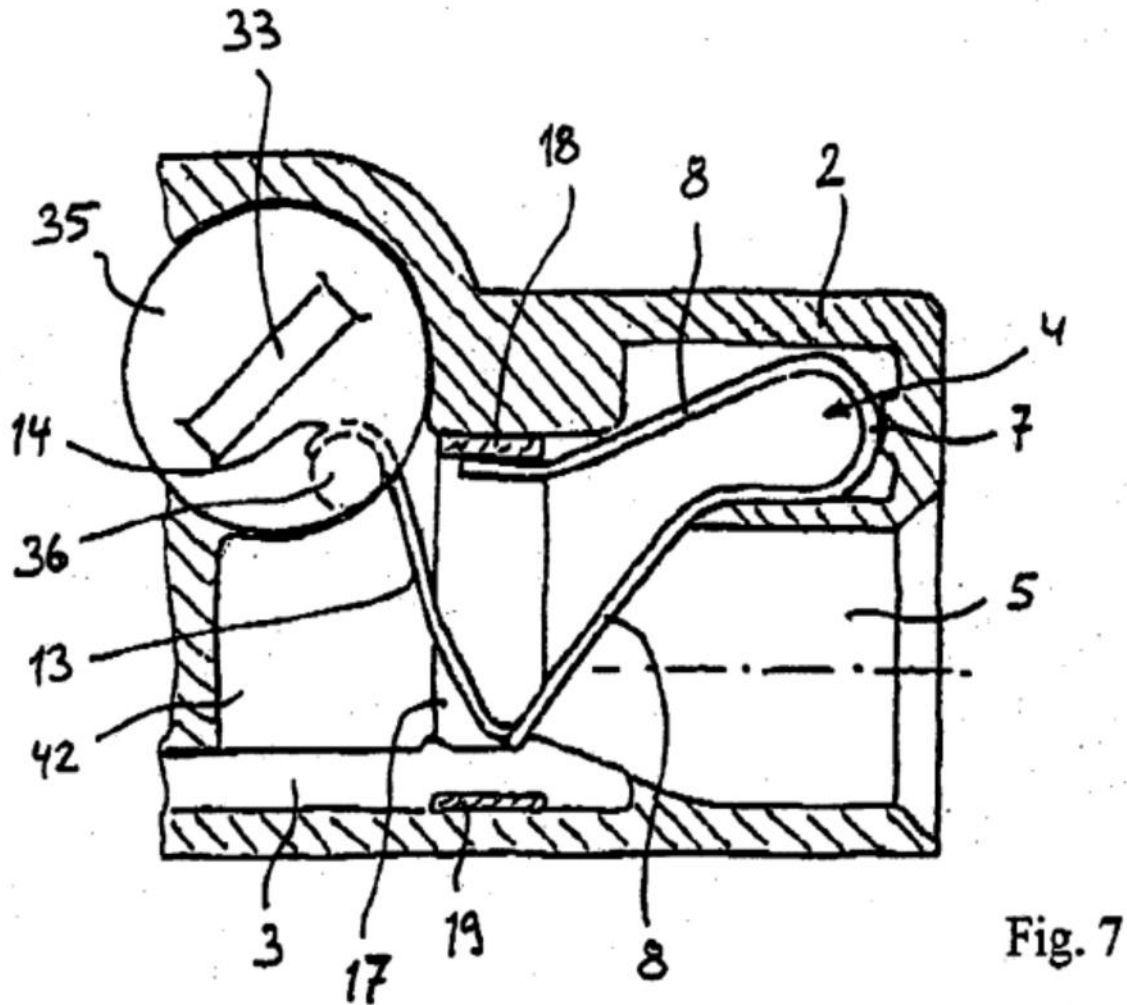


Fig. 6

45 In this embodiment, the operating section (13) has the same design as in Figure 5. The operating cylinder (31) can now be rotated about its horizontal axis. During this rotary movement, a support (34) projecting at the end of the cylinder, on which the free end (14) rests, moves upward. As a result, a tensile force acting in its direction is exerted by the actuating element on the operating section (13) (par. 52).



46 (dd) The same applies to a fourth embodiment example shown in Figure 7 reproduced below.



47 In this embodiment, the free end (14) of the operating section (13) is bent in a similar manner as in Figures 1 and 2, and is engaged in a bearing pin (36) whose position can be displaced upwardly by means of an actuating wheel (35). This also exerts a tensile force on the operating section (13), which is directed toward the actuating element (par. 54).

48                   (b) From the requirement that the actuating element must exert the  
tensile force, it follows that this force must be directed toward the actuating  
element.

49                   Contrary to the view of the Patent Court and the appeal rejoinder, it is  
therefore not sufficient to meet the requirements of feature db if a tensile force in  
the sense described above acts in at least one region of the operating section.  
Rather, this force must be oriented in such a way that, viewed from the operating  
section, it is directed toward the actuating element.

50                   (aa) Even this specification does not rule out the possibility of a  
compressive force acting in certain areas.

51                   In all of the embodiments shown above, such a force acts in particular in  
the region in which the actuating element is engaged with the operating section.  
Only the area of the operating section adjoining it is acted upon by the tensile force  
described in the description of the patent in suit, which corresponds to the first  
specification from feature db.

52                   (bb) In all of the embodiments shown above, the operating section  
further exerts a force that pulls the operating section toward the operating section.  
This corresponds to the second specification of the requirement formulated in  
feature db.

53                   In Figures 1 and 2, the operating section (13) is pulled toward the  
operating lever (16).

54                   In Figure 5, the inclined ramp (32) exerts a force that pulls the operating  
section (13) toward the actuating cylinder (31).

55                   In Figure 6, the actuating cylinder (31) exerts a corresponding force by  
means of the support (34).

56                    In Figure 7, such a force is exerted by the bearing pin (36) of the  
actuating cylinder (35).

57                    (cc)    In view of this, embodiments in which a tensile force acts on at  
least one region of the operating section, but the operating section is thereby  
pressed away from the actuating element and there is therefore no tensile force  
exerted by the actuating element, are not sufficient.

58                    e)        In the version of claim 1 defended by the main application, the  
operating element according to feature group f must be a pivotally mounted  
operating lever.

59                    According to features fa and fb, which are identical in this respect, the  
operating lever must be pivotably mounted. According to feature fa, this bearing  
must be arranged inside the insulating-material housing (2) and, according to  
feature fb, form a pivot bearing.

60                    aa)      In the embodiment example according to Figures 1 and 2, these  
requirements are met by the operating lever (16), which is pivotably mounted  
within the housing (2) by the pivot bearing (17), the pivot bearing (17) not being  
part of the insulating-material housing (2) there.

61                    bb)      However, the claim is not limited to this form.

62                    The requirement in feature fa that the bearing is arranged within the  
insulating-material housing merely defines a spatial assignment between the  
bearing and the housing, but not the specific type in which the bearing is  
designed. Contrary to the opinion of the appeal, this requirement can therefore  
also be fulfilled if the operating lever is integrally connected to the insulating-  
material housing at the bearing location.

63                   cc)    The embodiment examples according to Figures 5 to 7, on the  
other hand, do not satisfy these requirements.

64                   The actuating cylinder provided in these embodiments cannot be  
pivoted, but only rotated about its longitudinal axis.

65                   II.    The Patent Court gave the following main reasons for its  
decision:

66                   It was irrelevant whether the subject-matter defended by the main  
request with regard to feature fb went beyond the content of the documents  
originally filed. In any case, it was suggested to the person skilled in the art, a  
graduate engineer with a degree from a university of applied sciences or a  
bachelor in precision engineering or manufacturing technology, who develops  
electrical connecting terminals, on the basis of the Japanese utility model Sho 56-  
131679 (D1) or the Japanese disclosure document 2003-77558 (D6).

67                   Both citations disclosed the features a to e completely. D1 also discloses  
a pivotable operating lever which, however, is not mounted in the insulating-  
material housing but is integrally connected thereto. D6 does not disclose a  
pivotable lever, but an actuating slide mounted in the insulating material housing.

68                   The design of the actuating element according to feature group f is a  
measure which was common practice for connecting terminals at the priority date,  
as the Patent Court is aware from its own expert knowledge. Accordingly, the  
product catalog for the pre-used spring-cage terminal FFKDS/H1-5.08 (D8) also  
mentions and illustrates an operating lever. Therefore, it was within the scope of  
routine practice to relocate the part of the operating lever cooperating with the  
operating section of the clamping spring as well as its swivel axis into the interior  
of the insulating-material housing of the connecting terminal known from D1,  
according to the model of D8, in order to ensure the required contact protection.  
Similarly, in the case of the connecting terminal known from D6, the skilled person

would have replaced the straight-line movable pusher with a swivel lever that is easier for the user to handle.

69           The defense of the patent in suit in the version of auxiliary requests 1 to 3 is inadmissible because the additional feature ga is taken at least in part from subclaim 5, which is not challenged by the complaint. This was inadmissible according to the principles of the decision "Ankopplungssystem" (Federal Supreme Court (BGH), judgment of March 1, 2017 - X ZR 10/15, GRUR 2017, 604 para. 18 f.).

70           The auxiliary requests 4 to 6, which were filed for the first time in the oral proceedings at first instance and which do not provide for the features taken from claim 5, were late and therefore had to be rejected. The defendant's attention had already been drawn to the decision "coupling system" and the resulting inadmissibility of the auxiliary requests in the court notice under Sec. 83 (1) Patent Law in connection with feature ga.

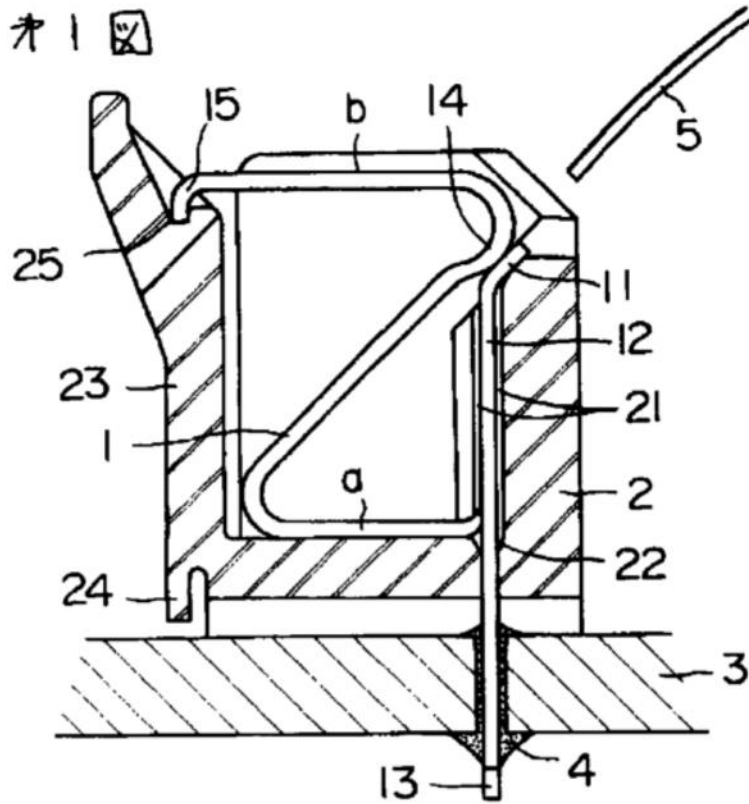
71           III.    This assessment withstands review in the appeal proceedings with regard to the version defended by the main claim.

72           1.    The Patent Court correctly held that D1 does not fully disclose the subject matter defended by the main claim.

73           a)    D1 relates to a connector for connection to a flat cable to establish a conductive contact.

74           According to the description of the D1, a connector known in the prior art is difficult to use when inserting and removing a thin and elastic cable. Furthermore, it has the disadvantage that the cable wears out and good contact capability cannot be maintained (p. 6 line 14 et seq.).

75 To solve this, D1 proposes a connector with an improved structure. An example of an embodiment is shown in Figure 1 reproduced below.



76 Shown is a contact piece (1) arranged in an insulation box (2). The contact piece (1) has a fixed side (a) and a movable side (b) (p. 6 line 35 et seq.).

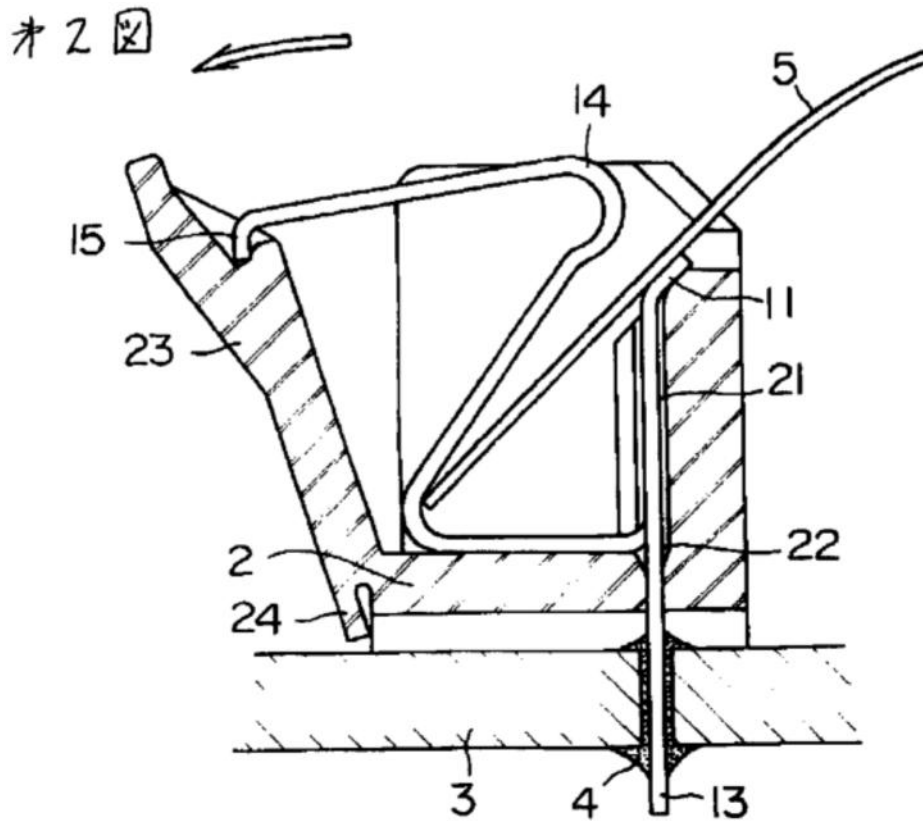
77 The fixed side (a) consists of a head part (11) which receives a contact part (14) of the movable side (b), a body part (12) which is pressed and fixed into the side of the insulation box (2), and a foot part (13) which can be soldered to a printed circuit board (3) (p. 7 lines 1-7).

78 The movable side (b) consists of a contact part (14) formed by bending over to achieve sufficient contact pressure with the head part (11) of the fixed side

(a). Furthermore, a locking part (15) is provided into which a lever part (23) of the insulating body (2) can be hooked and held (p. 7 lines 8-13).

79 The insulation body (2) consists of a groove (21) and a press-in hole (22) which form a guide for the pressed-in fixed side (a) of the contact piece (1). Furthermore, it consists of a lever part (23) for engaging the movable side (b) by opening and closing, respectively. For this purpose, a hinge (24) is used which becomes a stop when the lever part (23) is opened. In addition, a groove (25) is provided which catches the movable side (b) of the contact piece (1) when it is opened (p. 7 lines 14-22).

80 Figure 2 below shows the connector in the open position.



81           The lever part (23) provided on the insulation body (2) is opened in the direction of the arrow as far as the stop of the hinge (24) on the insulation body (2) so that a conductor (5) can be inserted. When the lever part (23) is released, it returns to the original position from Figure 1 due to the springing of the movable side (b) of the contact piece (1) and the insulation body (2). At the same time, the conductor (5) is held clamped in the outgoing direction at an angle of 45 degrees to the printed circuit board (3) in such a way that the contact piece (1) achieves good contact. For removal, the lever part (23) is opened in the same way in the direction of the arrow and the conductor (5) is pulled out (p. 7 line 28 to p. 8 line 3).

82           According to the description of D1, the fatigue of the contact piece (1) due to the opening and closing of the lever part (23) can be prevented if the range of movement is created within the spring limit of the material of the contact piece (p. 8 lines 4-8). Another advantage is that, in contrast to conventional connectors, the lever (23) can be formed in one piece with the insulation body (2), which facilitates assembly and enables inexpensive production (p. 8 lines 20-27).

83           b)     Thus, as the Patent Court correctly assumed and the appeal does not question, feature groups a, c and d as well as features e and f are disclosed.

84           c)     Also disclosed, contrary to the defendant's view, is feature group b.

85           This is true even if one assumes with the defendant that D1 directly and unambiguously discloses only a one-piece structure of the contact piece (1), in which the fixed side (a) of the contact piece (1) serving as a clamping spring within the meaning of the patent in suit is firmly connected to the busbar section formed by the areas (11), (12) and (13) and bent out of the material of the spring.



86           As has been pointed out, feature group b does not require that the clamp  
spring and busbar section be separate components.

87           d)     On the other hand, as the Patent Court also rightly decided,  
feature group f is not disclosed.

88           aa)    As the Patent Court correctly pointed out, however, the lever (23)  
is pivotable. The bearing in the area of the hinge (24) is therefore to be regarded  
as a pivot bearing within the meaning of feature fb.

89           bb)    However, the lever (23) is not supported in the insulating-material  
housing (2), as provided by feature fa.

90           The lever (23) forms an integral part of the side wall of the housing (2)  
and is supported at the transition to its bottom surface. D1 does not directly and  
unambiguously disclose in this respect that the bearing (24) is surrounded by the  
boundaries of the insulating-material housing (2) in the closed state of the  
connector.

91           2.     Likewise, the Patent Court correctly assumed that D6 does not  
fully disclose the subject matter defended by the main request.

92           a)     D6 discloses a terminal block capable of electrically connecting a  
circuit formed on a circuit board and a line cable.

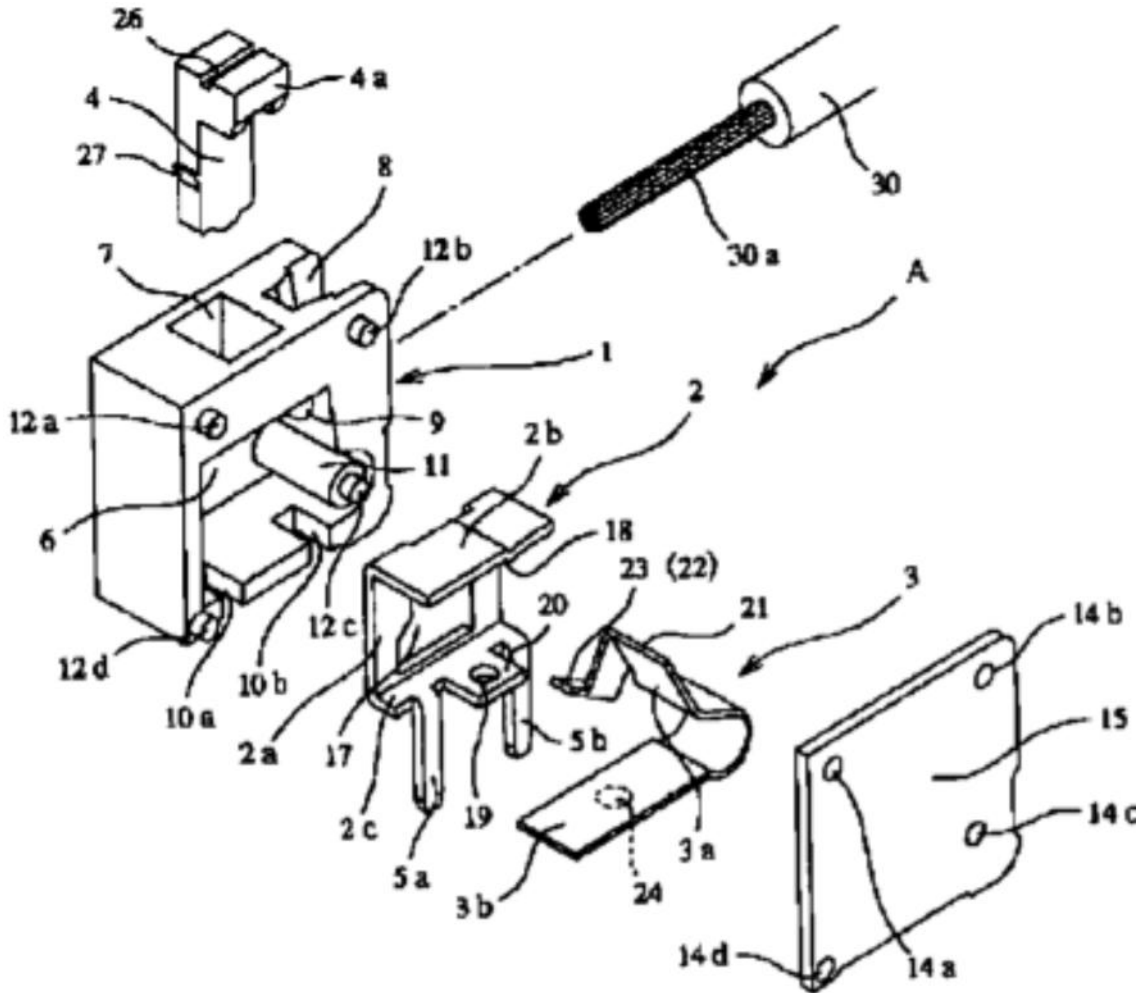
93           According to the description of D6, there were problems with connection  
blocks of this type known in the prior art when the conductor cable is designed as  
a stranded wire. This could unravel if it was inserted through the insertion opening  
or pressed against the metal connector by the locking spring (para. 2 lines 13-21).  
This could cause the contact between the stranded wire and the connecting piece  
to become incomplete. In addition, when the contact point is opened, part of the  
stranded wire can get between the actuating button and the locking spring (para.  
2 lines 14-29).

94                    In the prior art, to solve these problems, it had been proposed to separate the space for pressing the wire and the space for actuating the spring by a wall and to provide a notch or recess in the locking element. This would require a higher plate density in the operating section and a greater width of the terminal block (par. 3 and par. 4).

95                    For improvement, D6 suggests that the contact point between the actuating button and the locking spring be located to the side and below the pressure contact section.

96                    An example of an embodiment is shown in Figure 1 reproduced below.

【図 1】



97                    A metal connector (2), a locking spring (3) and an actuating knob (4) are arranged inside a main body (1).

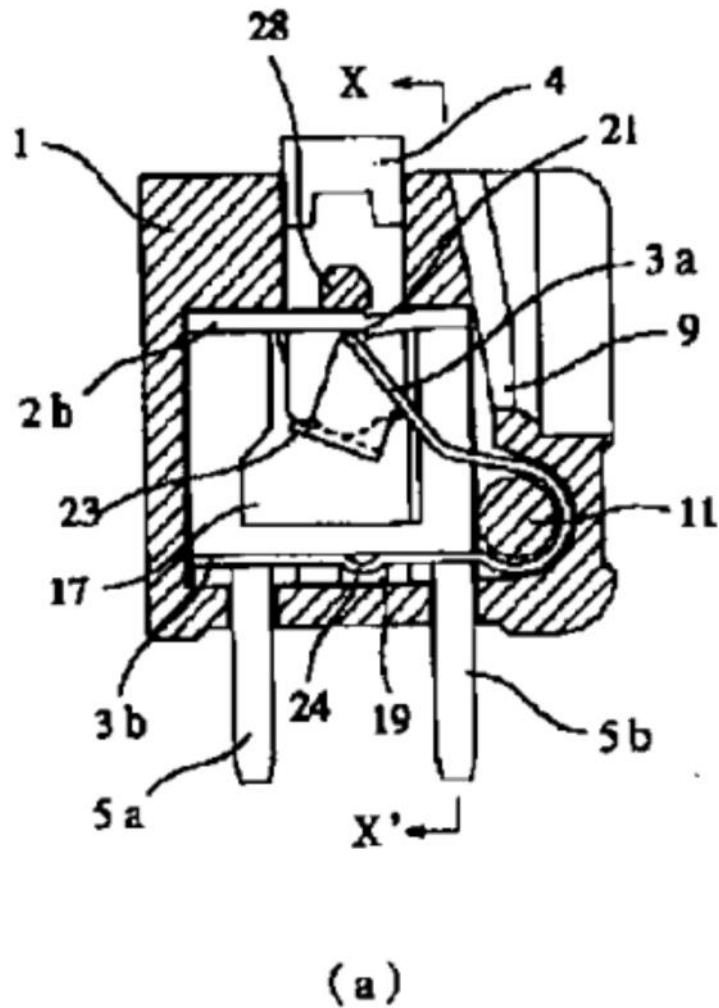
98                    The main body (1) is a box body made of resin with insulating property (par. 10 lines 14-15).

99           The metal connector (2) is formed into a substantially U-shape by bending a conductive material, such as a copper plate. An opening (17) is provided in a side wall (2a) through which an engagement portion (22) of a locking spring (3) can protrude (par. 11). Furthermore, a clamping section (18) for clamping the core wire (30a) of a line cable (30) with the locking spring (3) is formed on an upper plate (2b) so as to project downward in a wedge shape. A support piece (3b) of the locking spring (3) is supported on a bottom plate (2c) of the metal connector (2) (par. 12).

100           The locking spring (3) is formed into a hook shape by bending a leaf spring so that one part forms the locking piece (3a) and another part forms the support piece (3b). An engagement portion (22) is formed on the spring at the front end portion of the locking piece (3a). This is connected to a pressure contact portion (21) which is in pressure contact with the upper plate (2b) of the connector piece made of metal (2). The engagement section (22) is formed by a step member (23). The latter is formed by bending a projection protruding laterally from a side surface of the locking piece (3a) in an L-shape (par. 13).

101           The actuating knob (4) is formed of resin in a plate-like shape. Its upper part protrudes laterally to form an operating section (4a). It can be slid up and down in a guide hole (7) formed in the main body (1). A non-slip groove (26) is formed on the upper surface of its operating section (4a), which can be engaged by a tool to operate the operating knob (4). Its lower end, which engages with the step part (23) of the locking spring (3), is formed in an arc shape (par. 15).

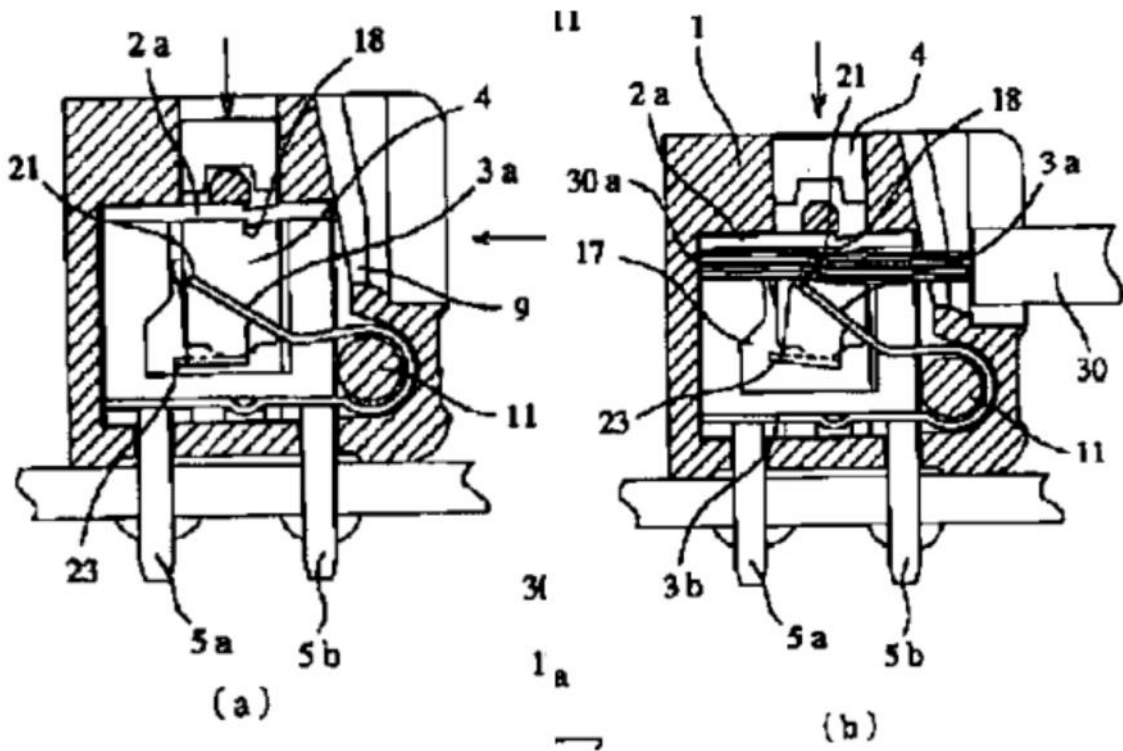
102           The arrangement of these components within the main body (1) can be seen in Figure 2a reproduced below.



103                    The section (21) of the locking piece (3a) is in pressure contact with the lower surface of the upper plate (2b) of the connector (2).

104                    The step part (23) protrudes laterally from the opening (17) of the connecting piece (2) (par. 14). It engages in the lower end of the actuating knob (4). When the actuating knob (4) is pressed down, the locking piece (3a) is bent downwards (par. 13 lines 10-13; par. 16). This bends the locking spring (3) and releases the pressure contact of the line cable with the connector (2) (par. 9 lines 36 et seq.).

105                    The open state is shown in Figure 3a below, the closed state with the conductor inserted in Figure 3b.



106 To open the clamping section (18), a tool is pressed against the groove (26) of the operating section (4a) of the operating knob (4) to bend down the locking piece (3a) of the locking spring (3) by pressing down the operating knob (4) and the step section (23). This creates a space between the upper plate (2b) of the connector (2) and the pressure contact section (21) of the locking spring (3), which allows easy insertion of the line cable (par. 17).

107 The core wire (30a) is pressed against the lower surface of the upper plate (2b) of the connector (2) by means of the elasticity of the locking spring (3) through the pressure contact portion (21), thereby fixing it. Since, in the closed state, the operating knob (4) is moved downward by its own weight until its lower end abuts against the step portion (23) of the locking spring (3), any separated stranded wire (30a) is prevented from spreading on the side surface of the operating knob (4), so that the core wire (30a) is reliably in contact with the metal terminal (2) even in such a case (par. 18).

108                   b)     Thus, as the Patent Court correctly assumed and the appeal also  
does not doubt, feature groups a, b and c as well as features d, da, e and f are  
disclosed.

109                   c)     The features fa and fb are not disclosed, as the Patent Court also  
rightly decided and as the appellant does not dispute.

110                   d)     Contrary to the view of the Patent Court and the appellant's reply,  
the feature db is also not disclosed.

111                   To open the clamping spring, the operating knob (4) exerts a  
compressive force on the horizontal part of the step part (23) engaged with it,  
which functions as an operating section within the meaning of the patent in suit.

112                   Since the surface on which the knob (4) acts is arranged below the  
contact section (21), a tensile force does act on the vertical part of the  
engagement section (22), which also belongs to the operating section, and this  
pulls the spring (3) down against its spring force and opens it. However, this only  
fulfills the first of the two requirements of feature db shown above.

113                   In contrast, the requirement that the pulling force is exerted by the  
actuating element is not met. The knob (4) acting as the actuating element does  
not pull the engagement section toward itself. Rather, it pushes it away from itself.

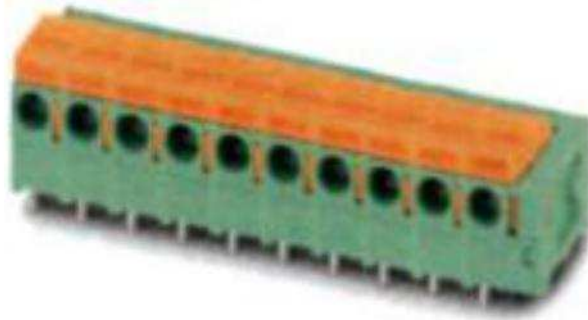
114                   3.     As a result, the Patent Court was correct in assuming that the  
subject matter of claim 1 as amended by the main request was obvious.

115           a)     Contrary to what the Patent Court assumed, however, this does  
not apply starting from D6.

116           It can be left open whether, on the basis of D6, there was reason to look  
for possibilities for a different design of the component with which the force  
required to open the spring is applied. Even if this were to be affirmed and a lever  
along the lines of D8 had been considered as an alternative to the actuating knob  
(4) disclosed in D6, feature db would not have been realized.

117           aa)    D8 discloses a spring-cage terminal with a lever opener, the  
conductor connection of which is aligned horizontally to the printed circuit board.  
An illustration and two dimensional drawings are reproduced below.



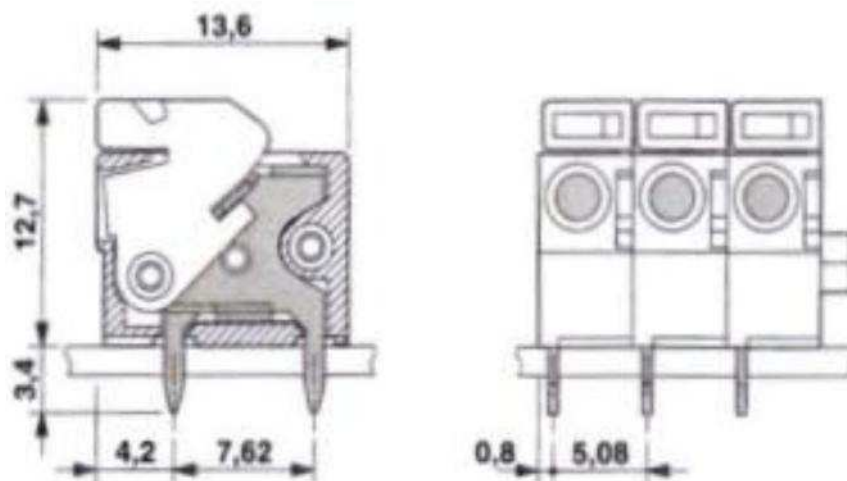


## FFKDS/H1-5,08

Federkraftklemme mit Hebelöffner,  
Leiteranschluss horizontal zur Leiterplatte



### Maßzeichnung



- 118                    In the closed state, the upper area of a clamping spring presses the conductor inserted through a circular opening against the lower side of the upper limit of a busbar section. A lateral projection at the upper end of the clamping spring engages in a receiving contour of the operating lever. To open, the operating lever

is pivoted clockwise about its axis of rotation. This presses the upper end of the clamping spring downwards.

119                   bb)    Thus, D8 discloses feature group f, but not a realization of the  
second requirement from feature db.

120                   The lateral projection of the clamping spring, which is located at the  
height of the clamping point, is pushed away from the actuating element.

121                   cc)    A combination of the clamp disclosed in D6 with the lever  
disclosed in D8 would also not have led to a disclosure of feature db.

122                   Even with such a combination, the force exerted by the operating lever  
on the engagement portion (22) is not a pulling force because it pushes the  
engagement portion away from itself, just like the button disclosed in D6.

123                   b)     However, as the Patent Court correctly assumed, starting from  
D1 it was obvious to arrange the bearing (24) of the lever part (23) inside the  
housing if necessary.

124                   aa)    Contrary to the opinion of the appeal, there was reason to use  
D1 as a starting point for technical considerations.

125                   As the appeal also does not fail to recognize in its approach, the  
justification for using a certain citation as a starting point for technical  
considerations usually lies in the effort of the skilled person to find a better or  
different solution for a certain purpose than the prior art makes available (see only  
Federal Supreme Court (BGH), judgment of October 5, 2016 - X ZR 78/14, GRUR  
2017, 148 para. 43 - Opto-Bauelement).

126                   There was also cause for such efforts starting from D1.

127           D1, however, offers a solution that is deliberately reduced to the bare essentials, whose individual components are closely coordinated with one another and whose interaction is precisely what leads to the desired success. This made it seem rather far-fetched to make fundamental changes to the structure revealed there. On the other hand, the explanations in D1 - as is often the case with patents and utility models - are limited to an explanation of the solution principle, without going into all the details of the concrete implementation. In this respect at least, there was reason to use D1 as a starting point for further considerations.

128           bb)    The Patent Court correctly assumed that, on the basis of D1, there was reason to design further details, in particular with regard to the protection against contact.

129           The aspect of protection against contact with live parts is not addressed in D1. At least for use in environments in which such protection is prescribed by technical standards, there was reason to make the necessary additions.

130           Against this background, the Patent Court rightly concluded that there was reason to add additional insulating elements to the deliberately minimalist design of the D1 to the extent necessary to ensure sufficient protection against contact.

131           cc)    It can remain open whether it was appropriate for this purpose to replace the simple lever construction from D1 with a more complex construction, such as that disclosed in D8.

132           In any case, among the possibilities which were possible and obvious without fundamental modification was to supplement the connecting terminal disclosed in D1 with additional insulating parts, such as an additional cover on the top and on the two side walls. To ensure that the side covers also provide adequate protection when open, it was obvious to design them in such a way that the lever

part (23) is arranged between them when closed. Such a design already moves the pivot bearing (24) into the interior of the insulating housing, so that feature group f is realized.

133           As already explained above, feature fa does not preclude the operating lever from being integrally connected to the insulating housing. A spatial association in such a way that the bearing of the lever is arranged inside the housing is sufficient. This requirement is fulfilled in the above-described modification suggested by considerations of contact protection.

134           IV.    In contrast, the patent in suit - contrary to the Patent Court's assumption - is valid in the version of auxiliary request 1.

135           1.    According to auxiliary request 1, the following features are provided in addition to the version defended by the main request:

fc)   The pivot bearing (17) of the operating lever (16) is located above the busbar section (3).

g)   At least one free end (10) of the clamping section (8)

ga)   protrudes in the direction of the busbar section (3),

gb)   to provide a clamping point for a conductor inserted into a conductor insertion opening (5).

gc)   and below the free end (10) of the clamping spring (4).

136           Some of these features require further explanation.

137           a)    The position specifications of features fc and gc (above the busbar section and below the free end of the clamping spring, respectively) only result in relative requirements with regard to the arrangement of the individual components.

138           aa) As the appellant correctly argues, there is a lack of fixed reference points with regard to the question of what is "above" or "below" because the patent in suit claims a connecting terminal regardless of its concrete installation situation.

139           It can be inferred from the relevant positional indications in the patent specification that they refer to an installation position as shown in Figures 1 to 4. According to the uncontradicted and correct argument of the appellate defense, the patent in suit protects the clamp according to the invention not only in this installation position.

140           bb) Against this background, the relative specifications of features fc and gc are to be understood as meaning that the pivot bearing for the operating lever and the clamping section for the conductor must be arranged on the same side of the conductor rail and that the clamping section must be formed on the side of the clamping section facing away from the pivot bearing.

141           cc) On this interpretation, the features fc and gc are not ambiguous, contrary to the plaintiff's view.

142           dd) The busbar section according to feature fc is not a smaller part of a larger busbar to be conceptually separated therefrom.

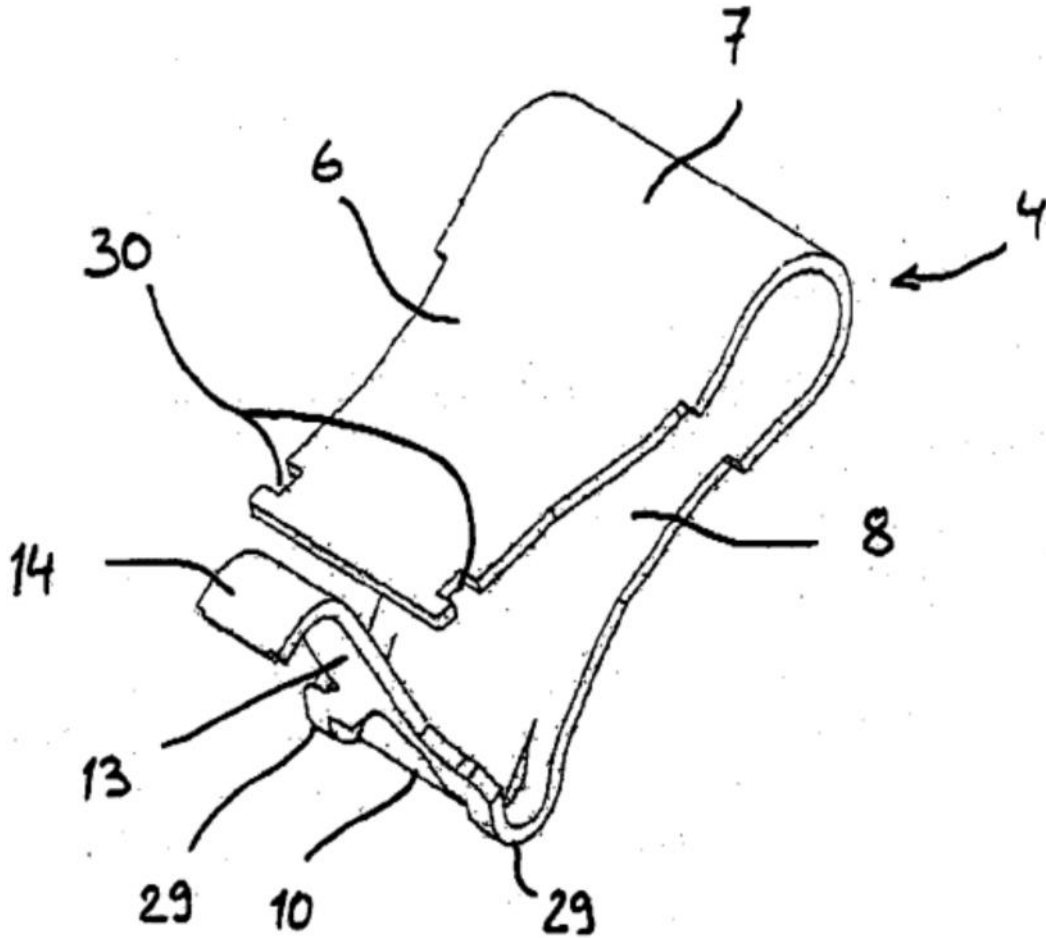
143           The terms are rather used synonymously in the patent specification in dispute. Thus, with regard to a possible design of a holding pocket for the electrical conductor, a U-shaped arrangement of the busbar section is suggested (para. 24), as shown in Figures 1 and 2. The fact that, in contrast, the more detailed description of Figure 1 refers to a U-shaped busbar does not lead to any different understanding (Para. 31 and Para. 32).

144                    Accordingly, contrary to the view of the appellant's reply according to  
feature fc, even in the case where the busbar section forms a U-shaped holding  
pocket, the pivot bearing must be arranged above this area in the above sense  
and not within the holding pocket formed by the busbar section.

145                    An embodiment meeting these requirements is shown in Figures 1 and  
2.

146                    b)     A free end in the sense of feature ga is an area of the clamping  
section that ends at the clamping point, i.e. does not continue in the operating  
section in the further course.

147                    Such an embodiment is shown in Figure 3 of the patent in suit  
reproduced below.



148                    In this embodiment, the free end (10) is arranged in the central area of the spring (4). The operating section (13) is exposed (cut free, punched free or similar) at the right and left edge areas of the clamping section, leaving the central free end (10). The edge areas are formed in the manner of a spring bend (29) from the spring sheet material (par. 45).

149                    2.     The Patent Court was wrong to consider the defense with this version inadmissible.

150                    a)     According to the case law of the Senate, the limited defense of a patent claim attacked with a partial invalidity action by combining it with the

features of a subclaim not attacked is inadmissible because there is no legal interest in doing so (Federal Supreme Court (BGH), judgment of March 1, 2017 - X ZR 10/15, GRUR 2017, 604 para. 27 et seq. - Ankopplungssystem).

151                    Contrary to the opinion of the Patent Court, however, there is an interest in legal protection if the attacked claim is merely supplemented by a part of the features of a non-attacked subclaim.

152                    b)     In the case in dispute, auxiliary request 1 provides only some of the features of the non-attacked claim 5.

153                    aa)    Claim 5 provides, in addition to the claims 1 to 4 referred to therein, the following features:

5.1 the clamping section (8) has at least one free end (10) provided for clamping an electrical conductor to the busbar section (3);

5.2 the operating section (13) integrally formed with the clamping section (8) is bent from the clamping section (8) before the free end (10),

5.3 so that part of the width of the clamping section (8) forms the at least one free end (10) and the other part forms the operating section (13).

154                    bb)    As the Patent Court correctly recognized in the approach, these requirements correspond in substance in large parts with the requirements from feature group g.

155                    Although feature group g does not contain an explicit correspondence to features 5.2 and 5.3, already from the interaction of the specification in feature ga or feature 5.1, according to which the clamping section (8) has a free end for clamping the conductor (and thus for forming a clamping point in the sense of features gb and gc), and the requirements from features cd and da, according to



which the operating section (13) extends away from the direction of the spring force acting on the clamping section, it follows, however, that the operating section must be bent before the free end and that both the free end (10) and the operating section (13) must be arranged in the region of the clamping section (8).

156                   cc)    The requirement under feature 5.2 that the operating section (13) must be integrally formed with the clamping section (8), however, is not found in the version of the patent in suit defended by auxiliary requests 1.

157                   According to the authoritative understanding of the patent specification, the operating section is only formed integrally in the sense of feature 5.2 with the clamping section if it is bored out of the spring sheet material in one piece (para. 18). This embodiment distinguishes the patent specification from the further possibility of manufacturing the operating section as a separate component and thus independently of the material properties of the clamping spring. Only after manufacture is it riveted or welded to the clamping section, for example (Para. 59).

158                   The version of patent claim 1 defended by auxiliary request 1 does not contain any mandatory requirements in this respect.

159                   3.     Contrary to the plaintiff's view, the subject matter defended by auxiliary request 1 does not go beyond the content of the documents originally submitted.

160                   a)     Contrary to the appellant's view, feature fb is disclosed in the originally filed documents as belonging to the invention.

161                   According to the case law of the Senate, a claimed subject matter is originally disclosed if the technical teaching designated in the claim can be directly

and unambiguously inferred from the original documents in their entirety as a possible embodiment of the invention (see only Federal Supreme Court (BGH), judgment of June 28, 2022 - X ZR 67/20, GRUR 2022, 1575 para. 68 - Übertragungsparameter; judgment of December 13, 2022 - X ZR 115/20, para. 37).

162           According to this, a "broadly" formulated claim is unobjectionable from the point of view of inadmissible broadening, at least if an embodiment of the invention described in the application presents itself from a technical point of view as an embodiment of the more general technical teaching described in the claim and this teaching in the claimed generality can already be taken from the application as belonging to the invention applied for - be it in the form of a claim formulated in the application, or be it according to the overall context of the documents. This applies in particular if only one or only some of several features of an embodiment, which taken together, but also considered individually, are conducive to the success of the invention, have been included in the claim (see only Federal Supreme Court (BGH), judgment of June 28, 2022 - X ZR 67/20, GRUR 2022, 1575 para. 69 - Übertragungsparameter; judgment of December 13, 2022 - X ZR 115/20, para. 38).

163           These requirements are met by the version of claim 1 defended by auxiliary request 1.

164           aa) As also correctly pointed out by the appellant, claim 3 as formulated in the application claims an operating lever (16) pivotably mounted in or on the insulating material housing (2) as one of several alternatively considered operating elements, as also provided for - limited to the mounting in the housing - feature fa.

165           bb) The additional requirement of feature fb, according to which this operating lever has a pivot bearing about which it can be pivoted, is sufficiently clearly disclosed in the description of the application as belonging to the invention.

166 In the description of the application it is stated - as in the description of the patent in suit (para. 32) - that the operating lever (16) is movable about a pivot bearing (17) on a curved path and that the pivot bearing (17) is located opposite the conductor insertion opening (5) and above the holding pocket (23) formed by the conductor rail (3) (p. 9 para. 3).

167 As is not disputed by the appellant's reply, it is sufficiently clear from this that the claimed invention includes embodiments in which the operating lever can be pivoted about a pivot bearing.

168 (2) Contrary to the view of the appellant's rejoinder, it does not follow from the additional indication that the lever is movable on a curved path that only those pivot bearings are included in the invention which enable such a movement. Rather, it is sufficiently clear from the context of the description that this form of movement is at most classified as advantageous, but not as mandatory.

169 In the general description of the invention, the application documents emphasize the advantages associated with the exertion of a pulling force by an operating member engageable with the operating section (p. 3(3)). An operating lever supported and pivotable in the insulating-material housing and engageable with the operating section for exerting a pulling force is mentioned as a conducive means for achieving this desired advantage (p. 3(5)) and is accordingly claimed in claims 2 and 3 of the original application documents without further specification.

170 c) If interpreted correctly, feature fc is also disclosed as belonging to the invention, contrary to the appellant's rejoinder.

171 In the original application documents, the terms "conductor rail section"  
and "conductor rail" are also used synonymously (p. 6 para. 2, p. 9 para. 3).

172 Thus, it is also disclosed there that the pivot bearing must be located  
over the entire area forming the busbar section in the sense already mentioned.

173 c) Contrary to the plaintiff's view, feature group g does not go beyond  
the content of the originally submitted documents because no warping of the  
conductor rail in the clamping area is required and no U-shaped angled conductor  
rail is provided as a holding pocket for the electrical conductor passing below the  
free end of the clamping spring.

174 It is clear from the context of the application documents that these are  
optional components of a useful design which do not necessarily have to be  
associated with the features listed in feature group g.

175 1. The subject matter defended by auxiliary request 1 is patentable.

176 a) The said subject matter is new.

177 aa) In any case, D1 does not disclose feature group g.

178 It does not follow directly and unambiguously from D1 that the part (14)  
of the clamping spring bent at the clamping point to the busbar section (11, 12,  
13) has an area for clamping the electrical conductor which does not continue in  
the operating section.

179 According to D1, the contact piece (1) as a whole is made of a metal plate  
by a bending forming process (p. 6 lines 35-38). In this process, the contact part

(14) is formed by bending the spring in the direction of the head part (11) (p. 7 lines 8-13).

180                   bb)    D6 discloses feature group g, but not feature db.

181                   (1)    As has already been shown above, the spring disclosed in D6 has, in the region of the busbar, a free part (21) which presses the conductor against the busbar, while the engagement section (22), which acts as an operating section, adjoins it laterally. This meets the requirements of feature group g.

182                   (2)    Not disclosed, for the reasons already stated in connection with the main request, is the feature db.

183                   b)     The subject matter defended by auxiliary request 1 was not obvious.

184                   aa)    Based on D1, there was no reason to design the transition from the clamping section to the operating section by additional measures according to the example of feature group g and to provide a free end of the clamping section in this respect.

185                   As already explained, D1 deliberately limits itself to a solution reduced to the bare minimum, in which the contact piece (1) is manufactured as a whole from a metal plate by bending forming. By bending the area (14) to the head part (11), a satisfactory contact between the electrical conductor and the busbar section is achieved.

186                   bb)    Based on D6, there was no reason to design the arrangement between the operating element and the operating section in such a way that a tensile force within the meaning of feature db is exerted by the operating element on the operating section towards the operating element.

187 Additional consideration of the lever construction of D8 does not lead to  
the realization of feature db for the reasons already mentioned.

188 cc) The other documents are further off and do not lead to any other  
assessment.

189 II. The decision on costs is based on Sec. 121 (2) Patent Law and  
Sec. 92 (1) and Sec. 97 (1) Code of Civil Procedure (ZPO).

190 The costs at first instance were to be set off against each other because  
the defendant originally requested that the complaint be dismissed in its entirety  
and the version defended by auxiliary request 1 leads to a significant restriction  
of the content of the protected subject matter.

191                    Three quarters of the second instance costs are to be borne by the plaintiff and only one quarter by the defendant, because the defendant defended the patent in suit in the second instance primarily only in the version according to the already restricted main request.

Bacher

Kober-Dehm

Marx

Rombach

Rensen

Lower court:

Federal Patent Court, decision of 19.02.2021 - 6 Ni 51/18 (EP) -