



FEDERAL SUPREME COURT

IN THE NAME OF THE PEOPLE

JUDGMENT

X ZR 12/22

Announced on:
March 12, 2024
Anderer
Judicial Employee
as Clerk of the
Court Registry

in the patent nullity case

Reference book: yes
BGHZ: no
BGHR: yes
JNEW: no

Variant groove

EPC Art. 69 para. 1; PatG Section 14

A term used in two features of a claim may be interpreted differently if this results from the function of the two features (supplement to Federal Supreme Court (BGH), judgment of October 5, 2016 - X ZR 21/15, GRUR 2017, 152 para. 17 - Zungenbett).

PatG Section 116 para. 2, Section 117; Code of Civil Procedure (ZPO) Section 531 para. 2

An auxiliary request filed for the first time in the appeal instance is generally inadmissible if it takes into account an aspect that the Patent Court has already designated as likely to be relevant to the decision in the notice issued pursuant to Section 83 (1) PatG (confirmation of Federal Supreme Court (BGH), judgment of December 15, 2015 - X ZR 111/13, GRUR 2016, 365 para. 25 et seq. - Telekommunikationsverbindung).

Federal Supreme Court (BGH), judgment of March 12, 2024 - X ZR 12/22 - Federal Patent Court

ECLI:DE:BGH:2024:120324UXZR12.22.0

The X. Civil Senate of the Federal Supreme Court at the hearing on March 12, 2024 by the Presiding Judge Dr. Bacher, the Judge Hoffmann, the Judges Dr. Kober-Dehm and Dr. Marx and the Judge Dr. Crummenerl

ruled:

The appeal against the judgment of the 1st Senate (Nullity Senate) of the Federal Patent Court of September 16, 2021 is dismissed at the defendant's expense.

By law

Facts of the Case:

1 The defendant is the proprietor of European patent 1 862 615 (patent in suit) granted with effect for the Federal Republic of Germany, which was applied for on May 11, 2007, claiming an Austrian priority of June 1, 2006, and relates to a key.

2 Claim 1, to which three further claims are related back, reads:

Key for cylinder-lock locking system, wherein longitudinal grooves (2, 3) are provided in the flat sides (1) of the key, the arrangement and cross-section of said grooves being variable in order to generate locking variations, and wherein at least one deep variant groove is provided in the form of a longitudinal groove (3), the cross-sectional shape of which defines a basic triangle, the base of which is located in the flat side of the key from which the other two sides extend to a line of intersection, or at least one longitudinal groove is provided, the cross-sectional shape of which defines a bisected basic triangle, the base of which is located in the flat side of the key, from which the other two sides extend to a line of intersection (10) and wherein one of the sides, as a bisector (11) of the base of the basic triangle, is perpendicular to the central longitudinal plane (12), characterised in that at least one other longitudinal groove is formed as a shallow variant groove, by the fact that, starting from the basic triangle, at least one of the groove flanks (12, 13) extends along the side bisector (121, 131) of one of the sides (9, 8) of the basic triangle, the other groove flank (12, 13) extending either along the side bisector (131, 121) of the other side (8, 9) of the basic triangle or along the side (9, 8) of the basic triangle.

3 The plaintiff has argued that the subject matter of the patent in suit is not patentable. The defendant has defended the patent in suit as granted and in four amended versions.

4 The Patent Court declared the patent in suit invalid. The defendant's appeal is directed against this, in which it continues to defend the patent in suit in the granted version and in five new amended versions. The plaintiff opposes the appeal.

Reasons for the decision:

5 The admissible appeal is unfounded.

6 I. The patent in suit relates to a key.

7 1. According to the description of the patent in suit, keys for cylinder-lock locking systems were known in the prior art which have longitudinal grooves in the flat sides of the key, the arrangement and cross-section of said grooves being variable.

8 The function of such keys and locks is primarily to generate a large number of possible variants and to make improper imitation more difficult. However, it is desirable to keep the differences between the individual variants as large as possible in order to avoid incorrect locking due to material abrasion or manufacturing inaccuracies (para. 2). There may also be a need to upgrade existing locking systems so that new profile elements are compatible with existing elements (para. 3).

9 2. Against this background, the technical problem can be described as providing a key for a cylinder-lock locking system that offers a large number of possible variants with the greatest possible diversity of variants and takes compatibility with existing locking systems into account.

10 3. For the solution, the patent in suit in the granted version of claim 1 proposes a key whose features can be organized as follows:

- 1 Key for cylinder-lock locking system.
- 2 Longitudinal grooves (2, 3) are provided in the flat sides (1) of the key,
 - 2.1 the arrangement and cross-section of said grooves being variable in order to generate locking variations.
- 3 At least one deep variant groove is provided in the form of a longitudinal groove (3), the cross-sectional shape of which
 - 3.1a defines a basic triangle,
 - 3.2a the base of which is located in the flat side of the key,
 - 3.3a from which the other two sides extend to a line of intersection,
 - or
 - 3.1b defines a bisected basic triangle,
 - 3.2b the base of which is located in the flat side of the key,
 - 3.3b from which the two other sides extend to a line of intersection (10),
 - 3.4b wherein one of the sides, as a bisector (11) of the base of the basic triangle, is perpendicular to the central longitudinal plane (12).
- 4 At least one other longitudinal groove is formed as a shallow variation groove in that
 - 4.1 starting from the basic triangle, at least one of the groove flanks (12, 13) extends along the side bisector (121, 131) of one of the sides (9, 8) of the basic triangle, and
 - 4.2 the other groove flank (12, 13)
 - 4.2a extending either along the side bisector (131, 121) of the other side (8, 9) of the basic triangle
 - 4.2b or along the side (9, 8) of the basic triangle.

11 4. Some features require explanation.

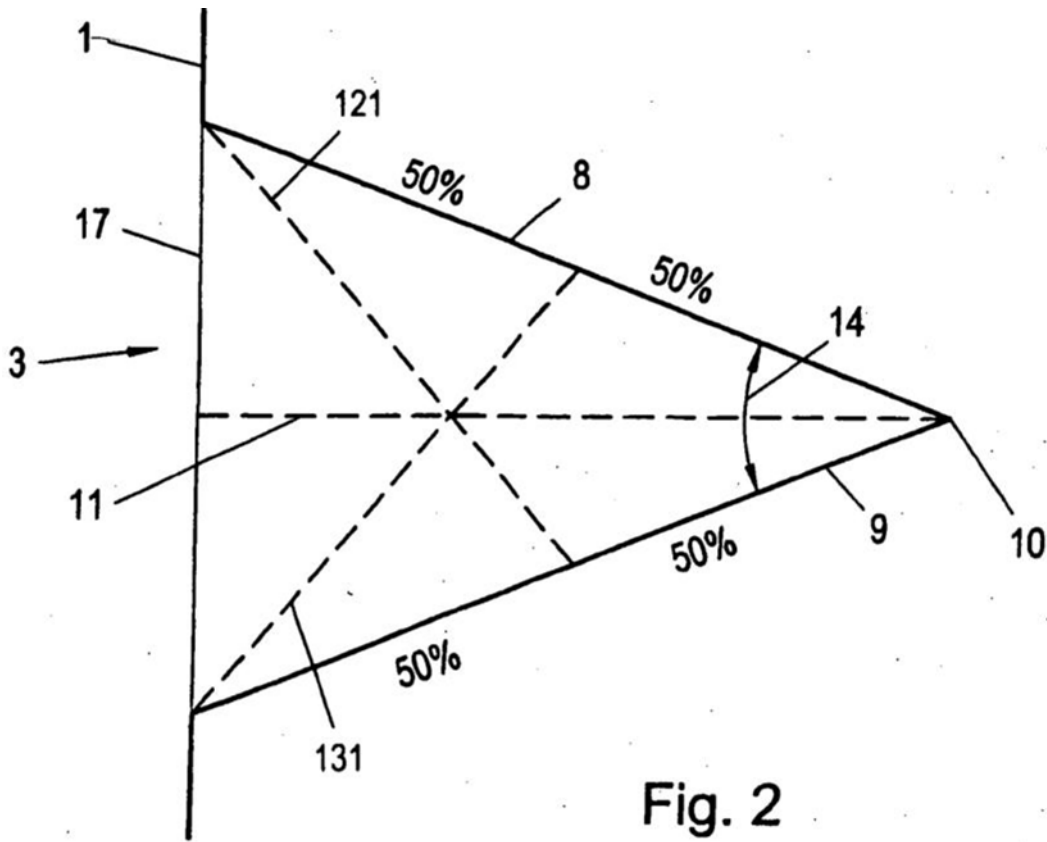
12 a) The suitability of the key for use in a cylinder lock locking system provided for in feature 1 is basically given according to the teaching of the patent in suit if the other features are realized.

13 b) The variable longitudinal grooves in the flat sides of the key provided in feature group 2 serve to achieve this objective, at least one of which must be designed as a deep variant groove within the meaning of feature group 3 or as a shallow variation groove within the meaning of feature group 4.

14 Other grooves or other design features that do not meet the requirements of feature groups 2, 3 and 4 are therefore not excluded, provided the key can still be used in a locking system.

15 c) The cross-section of a deep variant groove in the sense of feature group 3 is defined starting from a basic triangle.

16 aa) Such a basic triangle within the meaning of features 3.1a to 3.3a is shown by way of example in Figure 2 reproduced below.



17 The base side of this triangle runs along the flat side (1) of the key. The two other sides (8, 9) meet in a line of intersection (10).

18 Claim 1 does not specify the depth of the triangular groove or the angles. Nor does it necessarily specify that it is an isosceles triangle.

19 bb) Alternatively, the deep variant groove according to features 3.1b to 3.4b can be formed by a bisected basic triangle.

20 This is derived from the basic triangle in that one side is designed as a bisector (11) of the base side of the basic triangle and lies perpendicular to the central longitudinal plane (12).

21 According to the description, the central longitudinal plane is an imaginary plane that runs in the middle between the two flat sides. It is marked with the reference sign 112 in Figure 4 reproduced below (para. 13).

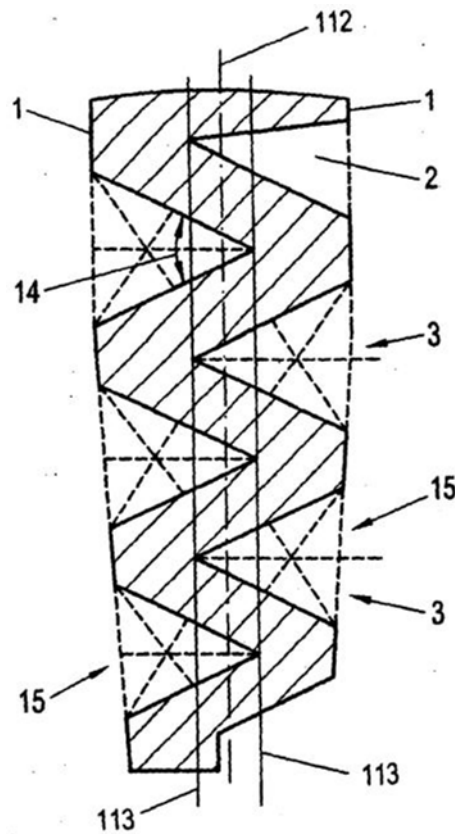


Fig. 4

22 d) The cross-section of a shallow variation groove in the sense of feature group 4 is also defined starting from a basic triangle.

23 In such a groove, a groove flank (12 or 13) runs along a side bisector (121 or 131) which divides one of the sides (8 or 9) of the basic triangle.

24 There are again two possibilities for the other groove flank (13 or 12): According to feature 4.2a, it can also run along a side bisector (131 or 121).

According to feature 4.2.b, it can alternatively run along the side (9 or 8) of the basic triangle.

25 e) This means that both a deep and a shallow variation groove can have three different configurations. These six possibilities are shown in Figure 3 below.

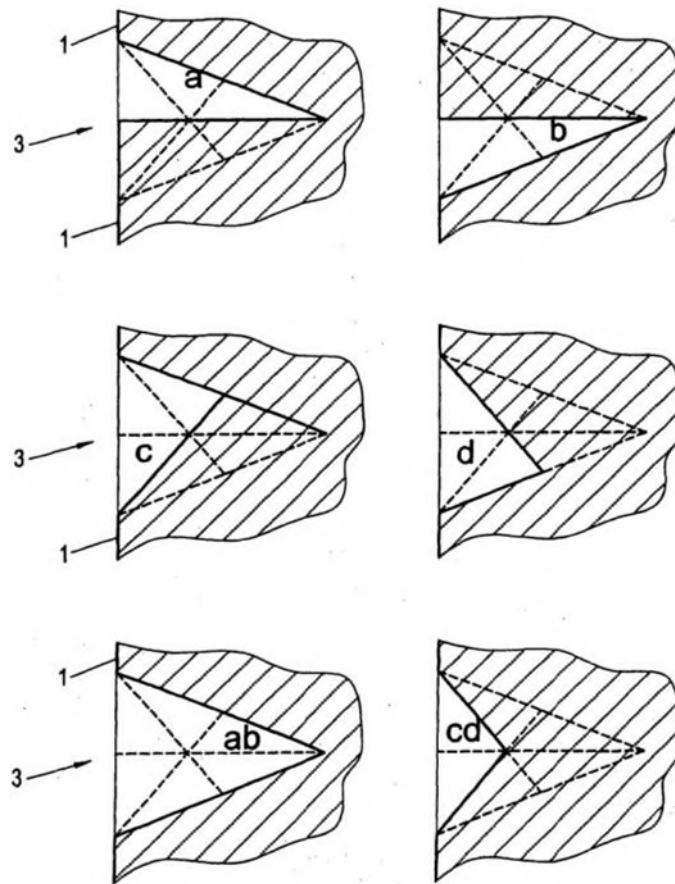


Fig. 3

26 Variant 'ab' shows a deep variant groove in the shape of a basic triangle. In variants a and b, the deep variant groove has the shape of a bisected basic triangle.

27 Correspondingly, variant 'cd' shows a shallow variation groove in which both groove flanks run along a side bisector. In variants c and d, one groove flank runs along a side bisector and the other along the side of the basic triangle.

28 According to the description, this design makes it possible to replace the security-relevant locking cylinders with new locking cylinders with an additional rib that corresponds to a shallow groove if a key is lost. A matching key with a shallow groove locks new and old cylinders alike. New cylinders, on the other hand, are only locked with new keys (Para. 18). Furthermore, additional group or individual keys can be created that have a shallow groove instead of a deep groove and therefore do not lock with existing cylinders (Para. 19 f.).

29 f) The Patent Court rightly assumed, in agreement with the Düsseldorf Higher Regional Court (judgment of December 13, 2018 - 15 U 23/18, p. 15), that a basic triangle that determines the cross-section of a deep variant groove within the meaning of feature group 3 does not necessarily have to be congruent with a basic triangle that determines the cross-section of a shallow variation groove within the meaning of feature group 4.

30 The wording "starting from the basic triangle" used in feature 4.1 could, when viewed in isolation, suggest that the same basic triangle is meant as in features 3.1a and 3.1b. However, it follows from the function of the two different grooves that this formulation merely contains a reference to the design specifications contained in features 3.1a to 3.3a.

31 For the purposes of extending an existing locking system as described in the description, it is sufficient for each individual groove to have one of the six profile variations shown in Figure 3, which are derived from the same basic triangle. A matching basic triangle for all grooves is not necessary. Accordingly, the statements

in the description that six profile variations can be formed from a single basic triangle (para. 11) merely state that the profile of each individual variation groove must be derived from a single basic triangle.

32 g) Contrary to the view of the appeal, feature 4.1 does not exclude that the base triangle from which a shallow variation groove is derived would have a depth jeopardizing the stability of the key.

33 No such requirement can be inferred from the wording of the claim. The purpose of a shallow variation groove does not give rise to any further requirements.

34 In this context, it can be left open whether claim 1 contains requirements for the stability of the key or whether the key must necessarily be suitable for the purposes described in the description (paras. 18-20). Even if this were to be affirmed, it would in any case be sufficient if the key was suitable for at least one of these purposes.

35 Not all of these purposes necessarily require that a deep variant groove could also be formed in place of a shallow variation groove without jeopardizing stability. Interchangeability in this sense may be necessary in order to form additional group or individual keys, because in this case a shallow variation groove is formed instead of a deep one. However, this variation option is not required, at least for the formation of new keys with an additional groove formed as a shallow variation groove.

36 h) As the Düsseldorf Higher Regional Court correctly stated in the infringement dispute, the feature groups 3 and 4 do not give rise to any requirements

that must be met with particular geometric precision. Deviations from the geometrically exact shape are harmless as long as they remain within the usual clearances for manufacture and use.

37 This understanding is supported by the wording of features 4.1 and 4.2, which, with regard to a shallow variation groove, only provide that the groove flanks run "along" a side or a side bisector of the basic triangle.

38 This is also consistent with the illustration in Figure 7 reproduced below and the related explanations in the description, according to which this shape, which is designated as preferred grooves and in use considers the clearances between the metal surfaces sliding against each other (para. 16).

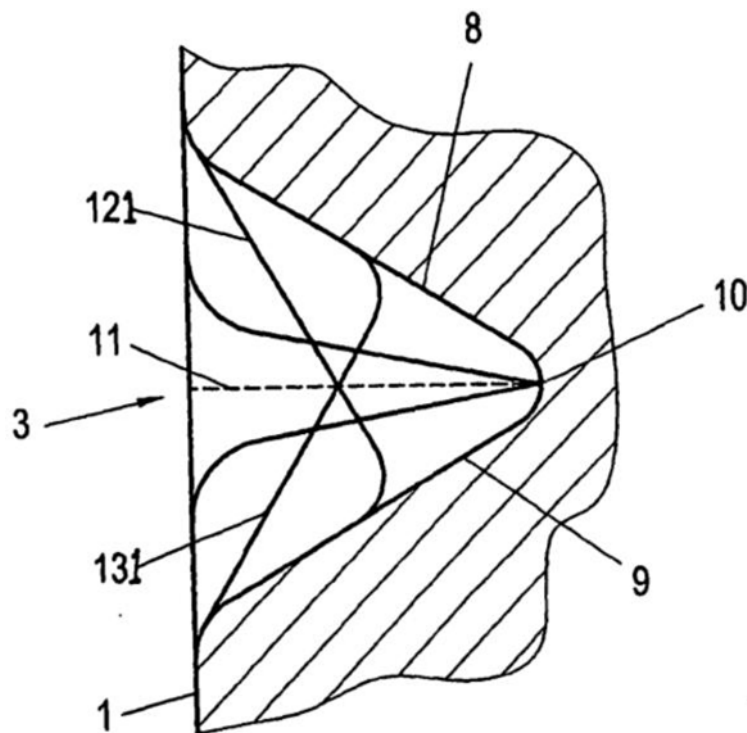


Fig. 7

39 Within the framework of the required clearance, there is limited creative freedom with regard to removing material to increase play or leaving material in place to increase stability.

40 II. The Patent Court essentially gave the following reasons for its decision, insofar as it is still of interest in the appeal proceedings:

41 The subject matter of granted claim 1 is not new compared to European patent application 1 452 673 (D1/K28). A deep variant groove (7) within the meaning of feature group 3a is shown there in the form of a right-angled and possibly isosceles (basic) triangle. The key profile is supplemented by at least one further longitudinal groove (7), which has a cross-section in the form of a right-angled but not isosceles triangle, with the implication that the groove depth is less than that of the deep variant groove. In the event that a cathetus or triangular side encloses an angle of 30° with the hypotenuse or base side of the right-angled triangle of the "shallow" variation groove, it also represents the side bisector of an equilateral triangle erected above the base side, which acts as a basic triangle within the meaning of feature 4.1. The other flank of the groove runs along the side of the basic triangle, as required by features 4.2 and 4.2b. The fact that the design rule disclosed in D1 differs from that of the patent in suit does not lead to a different assessment. The novelty test depends on the protected product, not on the underlying construction rule.

42 The subject-matter of the granted claim 4 was not based on inventive step in relation to the key model "E.". This model with the cross-sectional profile shown in Exhibit K22 was in any case publicly accessible in so far as it was shown in the general catalog of the supplier "E." (K21 and K27), which was published in May 2000, i.e. well before the priority date. Set of Exhibits K27 contains printed material for the distribution of individual keys which, according to their respective structure and layout, were intended as order templates and thus for public distribution to

interested parties and customers shortly after the printing date. It could be left open whether in the profile of model AA18 the cross-sectional shapes of the deep and shallow variation groove were based on congruent, in particular visually invisible basic triangles with identical internal angles. No explicit suggestion was needed for the embodiment of the design rule required by claim 4. The skilled person, a master craftsman or technician for precision mechanics, who is involved in the development of locking systems at a manufacturer of security technology and has several years of professional experience in this field, would only have had the alternatives of providing the same or different sizes for determining the respective internal angle of the base triangle for the deep and shallow variation groove. A relevant advantage of the claimed angle specification was not apparent.

43 The subject-matter defended with auxiliary requests 1 to 4 at first instance was not based on inventive step. Moreover, the subject-matter defended by auxiliary request 4 goes beyond the content of the documents originally filed.

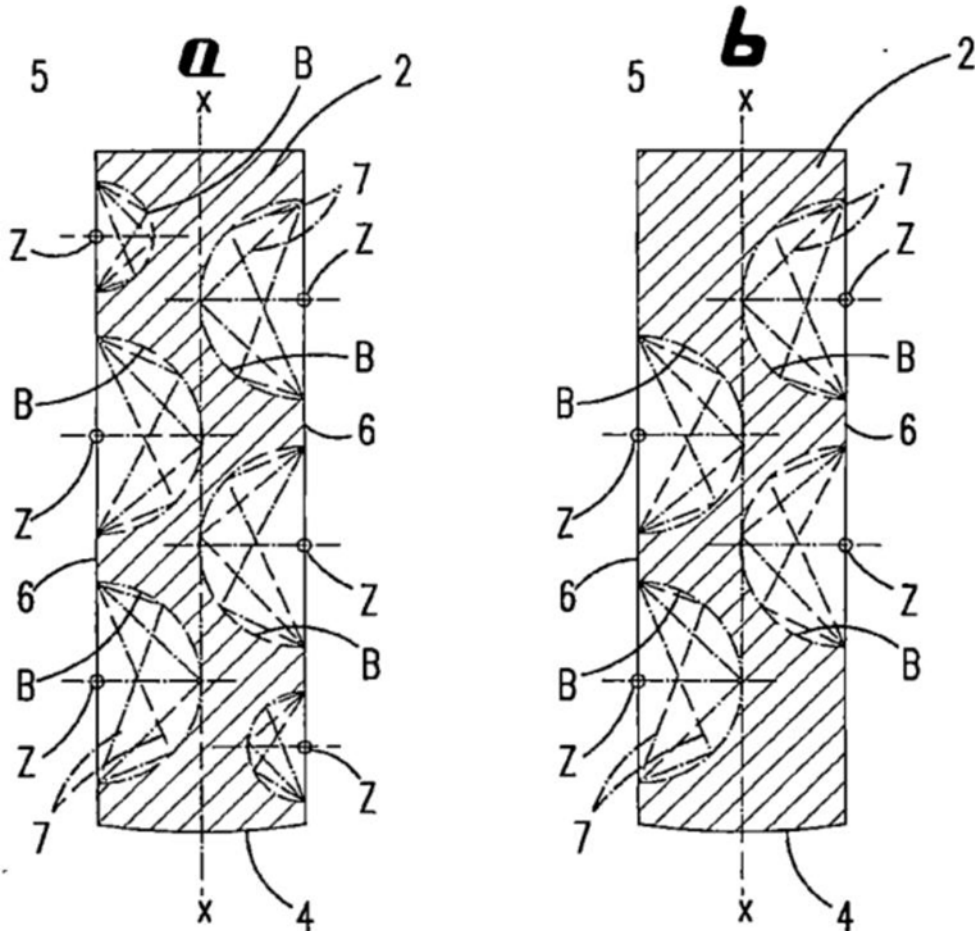
44 III. This assessment stands up to assessment on appeal.

45 1. The Patent Court rightly held that the subject-matter of claim 1 was not novel in relation to D1.

46 a) D1 is a flat key for a hierarchically lockable locking system that allows a high degree of profile variation in a simple manner.

47 Figure 2 below shows possible basic profiles.

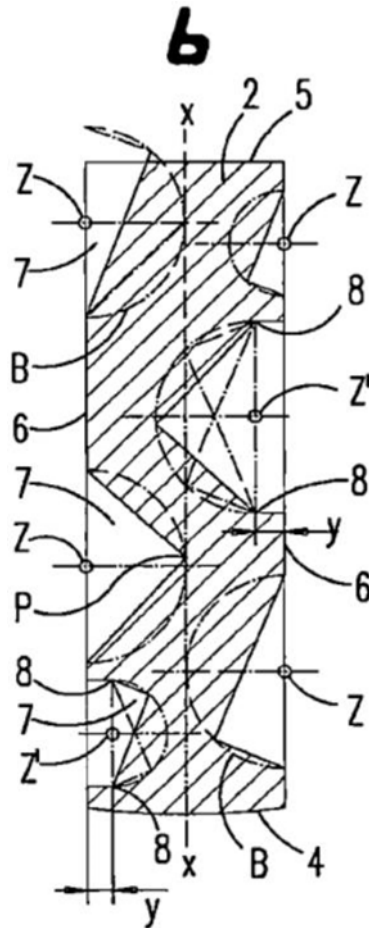
Fig. 2



48 Central lines (Z) with corresponding semicircles (B) are provided on the key broad faces (6). Within the semicircle (B), several triangles are indicated by dotted lines, the base of which is the diameter of the semicircle and the cathets of which intersect at a point on the semicircle and form a right angle there in accordance with Thales' theorem. According to D1, a large number of different variation grooves (7) can be designed with this configuration (sp. 1 lines 51-53, sp. 4 lines 19-22). Furthermore, savings could be achieved with regard to the tools producing the grooves, since the different shape of the variation grooves (7) could be achieved solely by the corresponding alignment of the tool to the width of the key (6) (col. 2 lines 7-12).

49 Figure 5b below shows the design of a key in which the end points (8) of the base are offset inwards by an amount (y) in the lower left semicircle and in the middle right semicircle.

Fig. 5



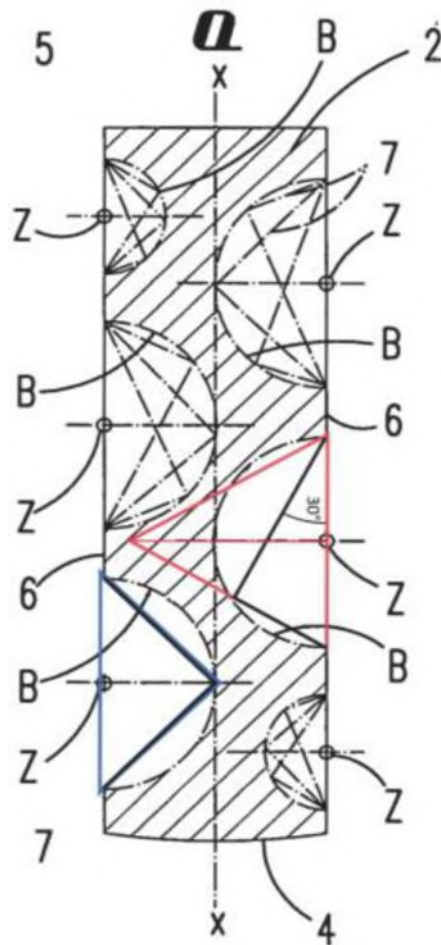
50 As the radius of the middle right semicircle corresponds to half the key thickness, the offset (y) means that the radius of this semicircle overlaps with the semicircles of some of the opposing variation grooves (7). This makes it possible for a plane running parallel to the width-across-key plane to be intersected by at least two opposing grooves (7). According to D1, this rules out the possibility of

creating a superordinate key by filing off the broadsides of the key, as this would fall apart due to the paracentricity (col. 6 lines 31-43).

51 b) Features 1, 2 and 3 as well as features 3.1a, 3.2a and 3.3a are thus disclosed, as the appeal does not call into question.

52 c) Feature group 4 is also anticipated.

53 As illustrated by the diagram from Figure 2a (ropNi3 sheet 2) reproduced below and supplemented by the defendant, a shallow groove having base angles of 30° and 60° can be derived from an isosceles basic triangle (red) corresponding to the design rules of features 3.1a to 3.1c. With the specified angle ratios, one groove flank runs along the side bisector and the other along the side of the basic triangle.



54 The fact that the basic triangle shown in red is not congruent with the basic triangle of another groove highlighted in blue is irrelevant because different grooves do not necessarily have to be derived from the same basic triangle for the reasons explained above.

55 It is also irrelevant whether the key would still be sufficiently stable with a deep variant groove in the form of the red triangle. As shown above, claim 1 does not necessarily specify that at the position of a shallow variant groove a deep variant groove derived from the same basic triangle could be formed.

56 2. With regard to the versions of claim 1 defended by the auxiliary
requests, there is no different assessment.

57 a) The auxiliary request 5 filed for the first time in the appeal proceedings
remains unsuccessful.

58 aa) According to auxiliary request 5, claim 1 is to be supplemented by the
following features:

- 9. so that, starting from a single basic triangle
 - 9.1 at the position of the at least one deep variant groove
 - 9.2 and at the position of at least one shallow variant groove
 - 9.3 six profile variations can be created for a cylinder-lock
locking system.

59 bb) It is thus mandatory that a shallow variant groove within the meaning of
feature group 4 could alternatively be replaced by a deep variant groove within the
meaning of feature group 3 derived from the same basic triangle and vice versa.

60 Contrary to the opinion of the appellant's reply, feature group 9 does not claim
any six profile variations. Rather, it is clear from the context that it concerns the six
variations defined in feature groups 3 and 4.

61 cc) Auxiliary request 5 is inadmissible pursuant to Sec. 116 (2) PatG.

62 (1) The Patent Court has already stated in its reference under Sec. 83 (1)
PatG that the requirements of feature group 4 should only be relevant to the extent
that they are also reflected in distinguishable embodiments on the finished key. The
design rule underlying the formation of the possible cross-sectional shapes of the
grooves was not in itself an independent technical feature characterizing the
subject-matter of the patent in suit in the applicable patent category itself (p. 5/6).

63 Based on this, the Patent Court explained that in Figure 2a of D1, a cathetus or triangular side, which encloses an angle of 30° with the hypotenuse or base side of the right-angled triangle, also represents the side bisector of an isosceles triangle erected above the base side, which in this case functions as a base triangle according to the required understanding of feature group 4. The other flank of the groove runs along the side of the base triangle, as required by feature 4.2b (p. 10, last paragraph). The fact that D1 is based on a different design rule is irrelevant in this respect (p. 10 below).

64 (2) Accordingly, the defendant already had reason at first instance to defend claim 1, if necessary in the alternative, in a version as now submitted for decision in auxiliary request 5.

65 dd) Irrespective of this, the patent in suit is not valid in this version either.

66 (1) However, the subject-matter defended by auxiliary request 5 is to be taken from the original application documents, which correspond to the disclosure document, as belonging to the invention.

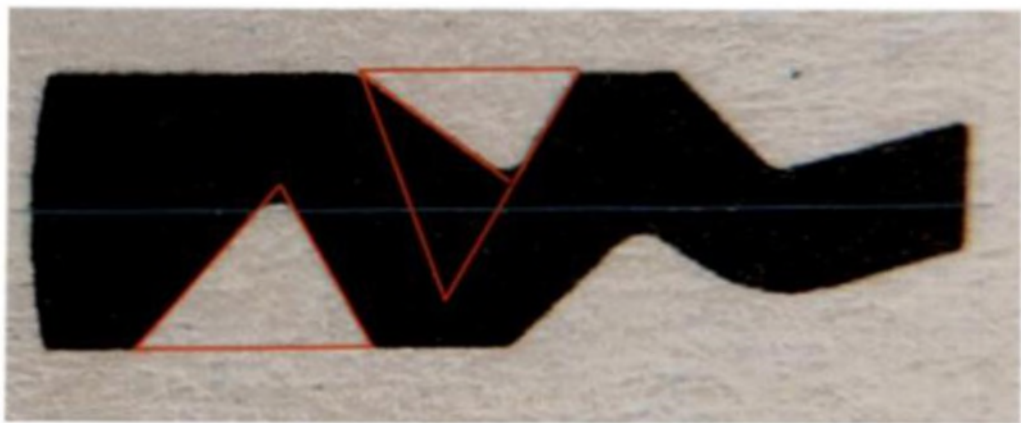
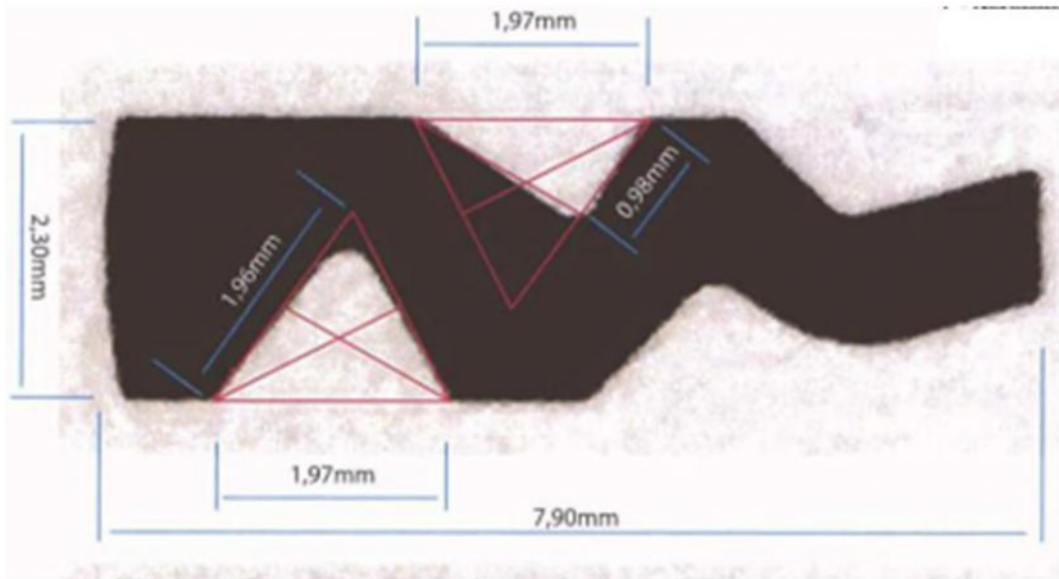
67 In the descriptive passage of the application cited by the defendant (para. 10), which in this respect corresponds to the patent in suit (para. 11), it is stated, with reference to the groove scheme shown in Figure 2 and the resulting groove types according to Figure 3, that six profile variations can be formed from a single basic triangle.

68 It follows directly and unambiguously from this that the invention also includes those embodiments in which all six profile variations from feature groups 3 and 4 can be formed at the same point on the key.

69 (2) The subject matter defended by auxiliary request 5 is completely anticipated by the key model "E".

70 (a) Based on the printing of the catalog (Exhibits K21 and K27), the Patent Court correctly and unobjectionably found that the key model AA18 was publicly available before the priority date of the patent in suit.

71 (b) As can be seen from the figures (K22 and ropNi4; the latter mirrored for better comparability) reproduced below and supplemented by the parties, the profile of model AA18 has a deep and a shallow groove that meet the requirements of feature groups 3, 4 and 9 respectively.



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72 Both representations show that the shallow groove can be derived from a basis triangle, one flank of which runs along a side bisector of this basic triangle. In the upper representation, supplemented by the plaintiff, the shape of the basic triangle also corresponds to the cross-section of the deep groove.

73 In accordance with feature group 9, six profile variations can be formed in both representations, starting from the basic triangle at the location of the deep

groove and at the location of the shallow groove. The fact that the material distances between the grooves and to the opposite key flat side prevent the formation of all profile variations, in particular a deep variant groove, cannot be inferred from the upper illustration with the material distances shown there.

74 From the lower representation, supplemented by the defendant, it is true that interpretations with smaller and possibly problematic material distances are also possible. However, the lines drawn by the plaintiff are still within the tolerance range opened up by feature group 4, which does not specify an exact course on the side bisector, but only along it.

75 The AA18 model thus represents an embodiment variant of the subject matter defended by auxiliary request 5. If the subject matter of a claim is anticipated in the prior art with only one embodiment variant, novelty is generally lacking (Federal Supreme Court (BGH), judgment of May 5, 2015 - X ZR 60/13, GRUR 2015, 1091 para. 31 - Verdickerpolymer I).

76 The fact that the catalog for model AA18 contains no reference to possible profile variations according to feature group 9 does not justify a different assessment. A key with grooves each having one of the six possible profile variations for the deep and the shallow groove is sufficient for a disclosure excluding novelty. It is not necessary to provide reasons as to why such an item complies with the patent construction doctrine (Federal Supreme Court BGH, judgment of November 18, 2010 - Xa ZR 149/07, GRUR 2011, 129 para. 45 - Fentanyl-TTS).

77 b) The same applies to auxiliary request 1'.

78 aa) According to auxiliary request 1', the granted version of claim 1 is to be supplemented by the following features (changes compared to auxiliary request 1 at first instance are highlighted):

5. and wherein at least at three positions ~~the crossing lines (10)~~ the longitudinal grooves (2, 3)

5.1a ~~are arranged in the~~extend to the central longitudinal plane (112) ~~of the profile~~ or

5.1b exceed them. ~~are arranged on the other side of the longitudinal center plane (112).~~

6. At the two key flat sides (1) at least one longitudinal groove with deep variant grooves (a, b, ab) is arranged to provide an overlapping profile.

79 bb) A so-called overlapped profile is thus claimed, which is defined in the patent description in accordance with feature group 5 by longitudinal profile grooves which extend to or exceed the central longitudinal plane (112) in at least three positions (para. 13).

80 Feature 7 specifies that two of the three longitudinal grooves must be arranged on the opposite key flats. This corresponds to the embodiments shown in Figures 4 to 6.

81 cc) Auxiliary request 1' is inadmissible.

82 (1) Auxiliary request 1' differs in content from auxiliary request 1 submitted at first instance.

83 According to auxiliary request 1 at first instance, feature group 5 only provides that the lines of intersection (10) extend to or exceed the central longitudinal plane (112). This requirement is also satisfied by a shallow variant groove which does not extend to the central longitudinal plane but is derived from a basic triangle which satisfies this requirement.

84 As a result, according to auxiliary request 1, it is therefore sufficient for there to be two grooves that approach or exceed the central longitudinal plane. According to auxiliary request 1', on the other hand, there must be at least three such grooves.

85 (2) The defendant already had reason to file such an auxiliary request, if necessary, on the basis of the notice issued pursuant to Sec. 83 (1) PatG.

86 In the reference to claim 2 as granted, the Patent Court stated that this required at least one deep variant groove on both flat sides extending to the central longitudinal plane or beyond. Such an overlapped profile is disclosed by D1 in Figures 4a, 4c and 5b.

87 Accordingly, the defendant already had cause at first instance to file an auxiliary request with the content of auxiliary request 1'.

88 dd) Irrespective of this, the subject matter defended by auxiliary request 1' is suggested by D1.

89 As the Patent Court correctly explained, D1 in Figure 5b discloses a key in which a groove extends up to the central plane and a groove arranged on the other side exceeds the central plane. From the explanations in the description already mentioned above, according to which it is possible in such an embodiment to intersect a plane of at least two opposing grooves (7) running parallel to the widthwise plane of the key in order to prevent the production of an overriding key by filing off the broadsides, the suggestion arises that, if necessary, further grooves could also be designed in this way.

90 c) There is no deviating assessment for auxiliary request 2'.

91 aa) According to auxiliary request 2', claim 1 in the version of auxiliary request 1' is to be modified as follows:

5. and where at least at three positions the longitudinal grooves (2, 3)
5.1a ~~extend to exceed the central longitudinal plane (112) or~~
5.1b ~~exceed these~~
5.2 and the lines of intersection (10) are arranged in a plane of intersection (113) parallel to the central longitudinal plane (112) of the profile.

92 bb) This request is inadmissible for the same reasons as auxiliary request 1', because in feature 5 it also provides for at least three grooves (instead of three crossing lines) which are designed in the manner claimed.

93 cc) Irrespective of this, the subject matter defended by auxiliary request 2' is also suggested by D1.

94 (1) The passages from D1 cited in connection with auxiliary request 1' gave rise to the suggestion that several grooves should be designed to overlap each other in such a way that all these grooves cross the central longitudinal plane.

95 The design in Figure 5b, in which only one groove fulfills this requirement, is presented against the background of the description as an example to demonstrate the individual design elements. This resulted in the suggestion to use these design elements in different combinations.

96 It is not apparent that multiple overlapping was to be regarded as problematic with regard to key stability. On the contrary, Austrian patent specification 385 076 (K4), Figure 1 of which is reproduced below, shows that such paracentric multiple overlaps were known in the prior art.

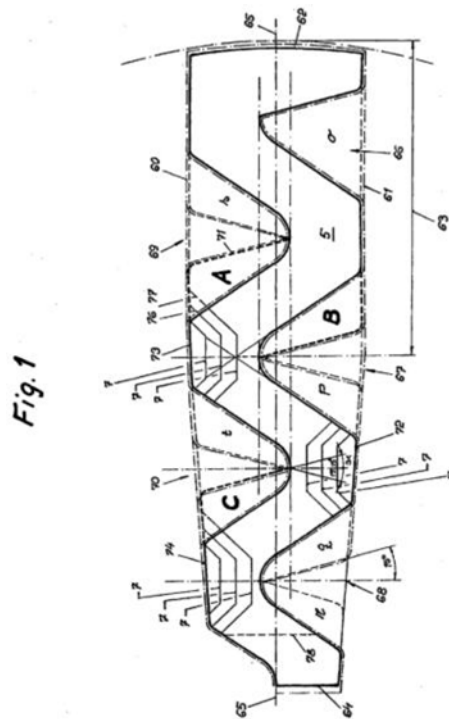


Fig. 1

97 (2) Against this background, it was also obvious to design several grooves
crossing the central longitudinal plane in such a way that their intersecting lines lie
in one plane, as feature 5.2 specifies.

98 d) Nothing to the contrary applies to auxiliary request 3'.

99 aa) According to auxiliary request 3', claim 1 in the version of auxiliary
request 2' is to be supplemented as follows:

5.2.1 where the distances between the planes of intersection
(113) and the central longitudinal plane (112) are
essentially the same on both sides of the key.

100 bb) This auxiliary request is inadmissible for the same reasons as auxiliary
request 1'.

101 cc) Irrespective of this, the subject matter defended by auxiliary request 3' is
also suggested by D1.

102 One of the design options suggested by Figure 5b and the related
explanations in the description of D1 was to arrange several grooves exceeding
the central longitudinal plane in such a way that they each exceed this plane by
the same amount.

103 e) Auxiliary request 4' is also unsuccessful.

104 aa) According to auxiliary request 4', claim 1 in the version of auxiliary
request 3' is to be supplemented as follows:

5.2.2 wherein the distances of the planes of intersection (113)
to the central longitudinal plane (112) are smaller than the
normal distances of adjacent variant grooves.

105 bb) At first instance, the defendant presented the normal distance between
two adjacent variant grooves in the supplement to Figure 4 reproduced below.

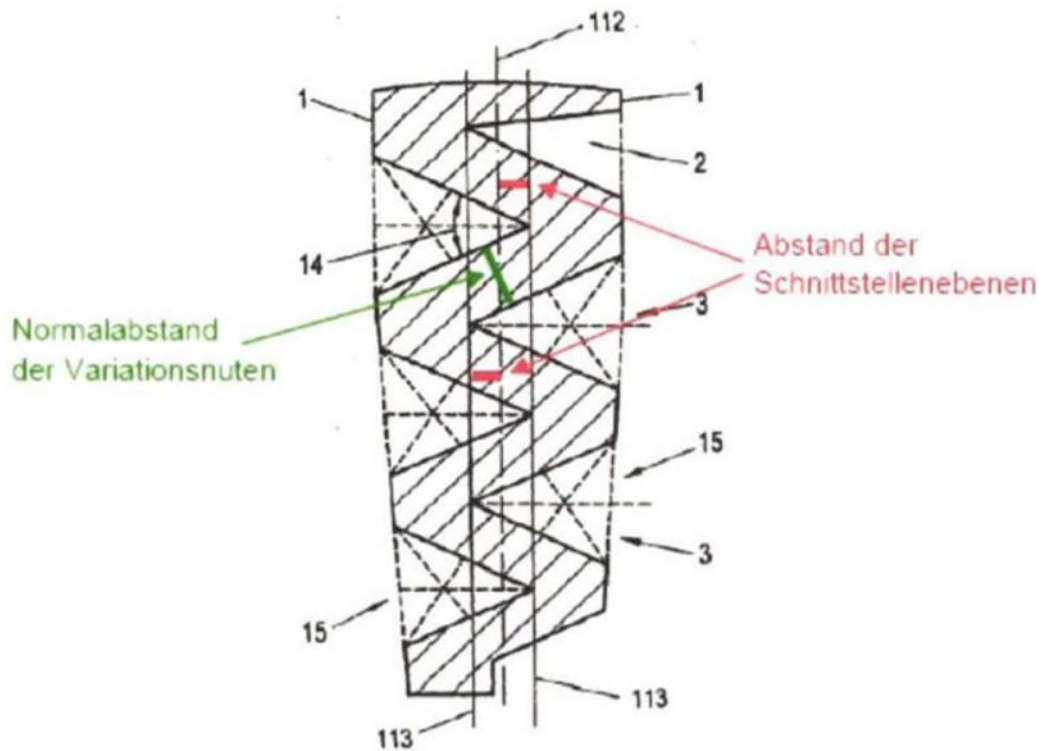


Fig. 4

106 cc) Auxiliary request 4' is inadmissible for the same reasons as auxiliary
request 1'.

107 dd) Irrespective of this, the Patent Court rightly decided that feature 5.2.2
was not disclosed as belonging to the invention in the documents originally filed.

108 It remains to be seen whether the representation in Figure 4 can be regarded
as a true-to-scale drawing that allows conclusions to be drawn about the
relationship between the two relevant distances. Even if this were to be affirmed,
neither the figures nor the description show that this ratio is significant in the
context of the invention.

- 109 3. The subject matter of granted claim 4 is also not patentable.
- 110 a) Claim 4 provides the following features in addition to claim 1:
7. The profile is conical.
8. The internal angle (14) of the basic triangle is always the same.
- 8.1 The side lengths of the basic triangle and their side
 bisections are each measured from the key flat side(s).
- 111 b) A profile is conical within the meaning of feature 7 if the envelope end
(15) extends at an angle to the central longitudinal plane (112) over at least part of
the key height (para. 14).
- 112 c) The subject matter of claim 4 is neither anticipated nor suggested by
D1.
- 113 aa) A conical arrangement within the meaning of feature 7 is not disclosed
in D1.
- 114 bb) Feature 8 is also not anticipated in D1.
- 115 Due to the arrangement of the internal angles on the semicircle, all grooves
have the same internal angle, namely a right angle. However, the base triangle,
from which a shallow groove with base angles of 30° and 60° can be derived, has
an internal angle of 60°.
- 116 cc) Based on D1, there is also no apparent suggestion to refrain from using
semicircular arcs for groove formation.

117 d) However, the subject matter of claim 4 is fully anticipated by the key
model "E".

118 aa) As can be seen from the figures (K22 and ropNi4) provided by the parties
with supplements, the end of the envelope of model AA18 runs at an angle to the
central longitudinal plane over part of the key height.

119 bb) As already explained in auxiliary request 5, the profile has a deep and a
shallow groove that meet the requirements of feature groups 3 and 4 (and 9).

120 The diagram supplemented by the plaintiff (K22) shows that the shape of the
basic triangle is the same for both grooves. This means that these two triangles
also have the same internal angle.

121 The defendant's supplementary representation (ropNi4) shows that other
interpretations are also possible. However, this is irrelevant for the reasons already
set out in relation to auxiliary request 5, as the lines drawn by the plaintiff are still
within the tolerance range opened up by feature group 4.

122 IV The decision on costs is based on Section 121 (2) PatG and Section 97 (1) Code of Civil Procedure (ZPO).

Bacher

Hoffmann

Kober-Dehm

Marx

Crummenerl

Lower court:

Federal Patent Court, decision of 16/09/2021 - 1 Ni 17/19 (EP) -