Advisory Opinion

Advisory Opinion No. 2015-600017

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The advisory opinion on the technical scope of a patent invention for Patent No. 4150028 between the parties above is stated and concluded as follows.

Conclusion

The "terminal block "indicated in the drawings and explanatory document of Article A does not fall within the technical scope of the invention in Patent No. 4150028.

Reason

No. 1 Object of the demand

The object of the demand for the advisory opinion is to demand the advisory opinion that a terminal block (a terminal block made by SEIKO ELECTRIC Co., Ltd., model: ATS-14C, hereinafter referred to as "Article A") indicated in the explanatory document of Article A and the drawings of Article A, does not fall within the technical scope of the invention relating to Claim 7 of Patent No. 4150028.

No. 2 The patent invention

The invention relating to Claim 7 of Patent No. 4150028 (hereinafter, referred to as the "patent invention"), is acknowledged as described in Claim 7 of the scope of claims for patent, according to the description of the specification and drawings (hereinafter, referred to as "Description and other materials of the patent"), and constituent components thereof are separately described as follows.

"(A) A terminal block comprising: strip-shaped conductive terminals which have screw holes for fastening on both sides; and an insulation unit which holds the conductive terminals,
(B) the insulation unit being provided with projecting portions which project out so as to prevent crimp terminals from being set at crimp terminal insertion portions in which the crimp terminals are erroneously inserted by regulating the outline shapes of the crimp terminals,
(C) the projecting portions being guide rib portions for regulating the erroneous insertion of the crimp terminals, which project out from partitioning walls sandwiching the conductive terminals to insulate, and are provided on one side or both sides between the partitioning walls, the guide rib portions having upper surface portions formed in tapered shapes which are high on a front side and low on a back side.

No. 3 Article A

1 "The explanatory document of Article A" attached to the request for the advisory opinion describes the following matters.

(1) "[Title of Article A] terminal block" (page 1, line 2 in the explanatory document of Article A)

(2) "[Description of Article A]

The terminal block (model number: ATS-14C) manufactured and sold by SEIKO ELECTRIC Co., Ltd. is as shown in the attached explanatory drawings of Article A (Fig. 1, Fig. 2-1, Fig. 2-2, and Fig. 3)."(Page 1, lines 3-6 in the explanatory document of Article A)

(3) "Article A is based on a structure of a terminal block of a conventional art, and is equipped with an upper stage terminal block I and a lower stage terminal block II." (Page 1, lines 8 and 9 in the explanatory document of Article A)

(4) "The upper stage terminal block I is equipped with a large number of crimp terminal insertion portions j partitioned by partitioning walls w1. Each crimp terminal insertion portion j has a threaded washer 10, and the threaded washer 10 is urged upward by a leaf spring 11. A screw 12 is M5 (an outer diameter of 5 mm), and is screwed with a screw hole 13a of a conductive terminal 13.

Also, the lower stage terminal block II is equipped with a large number of crimp terminal insertion portions j partitioned by partitioning walls w2 in the same way. Each crimp terminal insertion portion j has a threaded washer 15, and the threaded washer 15 is urged upward by a leaf spring 11. A screw 17 is M4 (an outer diameter of 4 mm), and is screwed with a screw hole 18a of a conductive terminal 18.

A basic structure of the upper terminal block I is the same as a conventionally well-known one (for example, Japanese Unexamined Patent Application Publication No. 2001-52776), and a projecting portion 20 is projected out from the partitioning wall w1 thereof toward the terminal insertion portion j. A plane surface shape of the projecting portion 20 is a generally semi-columnar shape obtained by vertically half-dividing a column body, and presses the conductive terminal 13 at a back side part. An upper surface of the projecting portion 20 is a horizontal surface and at a height of 3 mm from the upper surface of the conductive terminal 13, and the upper surface is at a generally equal height level with a lower end surface of the screw 12 (refer to Fig. 1 (B-1)).

If the insertion of the crimp terminal insertion portion j of the crimp terminal 2 is not completed, a part of the crimp terminal 2 runs on to the upper surface of the projecting portion 20, and it is sensed that the crimp terminal 2 is not at a proper position, in a fastening stage of the screw 12. Therefore, the crimp terminal 2 is prevented from being fastened at an improper position." (Page 1, line 15-page 2, line 9 in the explanatory document of Article A)

(5) "On the other hand, the screw 17 of the lower stage terminal block II is M4, and is screwed with the screw hole 18a of the conductive terminal 18. A projecting portion 21 is projected out from the partitioning wall w2 of the lower stage terminal block II toward the crimp terminal insertion portion j (refer to Fig. 2-1 (B)), and a plane surface shape of the projecting portion 21 is a generally semi-oval shape obtained by half-dividing an oval column body (further correctly, a shape made by an arc + a horizontal straight line + a diagonal line) (refer to Fig. 2-2 (B)), and a side surface shape thereof is composed of a front side half portion 21a with high height and a back side half portion 21b with low height. Details of the shape of the projecting portion 21 are as shown in Fig. 3 (A)." (Page 2, lines 12-18 in the explanatory document of Article A)

(6) "An upper surface of the front side half portion 21a of the projecting portion 21 is an arc-shaped upper surface (a curvature radius R : 2 mm) 21f convex upward, and an upper surface of the back side half portion 21b is a horizontal surface 21g. The height H of the front side half portion is 3 mm, and the height h1 and the thickness t of the back side half portion 21b are respectively 2 mm and 1 mm. Also, the depth length L of the projecting portion 21 is 7.7 mm, the depth length L1 of the front side half portion 21a is 2.7 mm, and the depth length L2 on a lower surface of the front side half portion 21a is 3.3 mm.

Then, the back side half portion 21b largely extends to the back side, and presses the conductive terminal 18 with a long range from an upper side.

A positional relationship in the height direction between a lower end surface of the screw 17 and the projecting portion 21 is as follows. That is, a center of the curvature radius of the arc-shaped upper surface 21f of the front side half portion 21a of the projecting portion 21 is slightly (eccentric amount e: 1 mm) on the back side from a front side end of the projecting portion. Therefore, a front side before an apex of the arc-shaped upper surface 21f is a slightly forward-downward curved surface, and a back side is a largely backward-downward curved surface to the back side. The apex of the arc-shaped upper surface 21f is higher than the lower end surface of the screw 17 by

generally 0.4 mm, and contrarily, the horizontal upper surface 21g of the back side half portion 21b is lower than the lower end surface of the screw 17 by generally 0.6 mm (refer to Fig. 3)." (Page 2, line 20 - page 3, line 7 in the explanatory document of Article A)

(7) "If the crimp terminal is inserted in an inlet of the crimp terminal insertion portion j in the lower stage terminal block II, for example, in a slightly forward-downward (upward) inclined state, the crimp terminal 2, first, the crimp terminal 2 is line-contacted with the arc surface of the inlet of the projecting portion 21 to be supported, then, descends on the back side (downward) while moving a contact position to the back side, and is being inserted toward a lower side of the screw 17 at a proper downwardly inclined angle (refer to Fig. 3 (B))." (Page 3, lines 15-19 in the explanatory document of Article A)

(8) "4. Explanations of reference numerals in the explanatory drawings of Article A"
I: upper stage terminal block
II: lower stage terminal block
j: crimp terminal insertion portion
3: crimp terminal
3a: tip side portion of crimp terminal
10, 15: threaded washers
12, 17: screws
13, 18: conductive terminals
13a, 18a: screw holes
20, 21: projecting portions
21a: front side half portion of the projecting portion 21
21b: back side half portion of the projecting portion 21
21f: arc-shaped upper surface convex upward
21g: horizontal surface
26: right and left inclined surfaces of the back side half portion 21b of the projecting portion 21
35: inclined surfaces on both of right and left sides of the tip side portion 3a of the crimp terminal 3" (page 4, lines 8-24 in the explanatory document of Article A)

(9) "[Brief description of the explanatory drawings of Article A]
Fig. 1 (A) is a front view of the whole of Article A, Fig. 1 (B) is a side cross-

sectional view, Fig. 1 (B-1) is a partial enlarged view of Fig. 1 (B), and Fig. 1 (C) is a partial plane view of the upper stage terminal block.

Fig. 2-1 (A) is a side view (refer to Fig. 6 in description and other materials of the patent) which schematically indicates a relationship during the insertion of the crimp terminal 2, between the upper surface of the projecting portion 1 and the crimp terminal 2 of the invention relating to Claim 7 of the specification, and Fig. 2-1 (B) is a side view which schematically indicates a relationship during the insertion of the crimp terminal 3, between the upper surface of the projecting portion 21 and the crimp terminal 3 in the lower stage terminal block II of Article A.

Fig. 2-2 (A) is a plane view which schematically indicates a relationship between the projecting portion 20 and a tip side portion 2a of the crimp terminal 2 when the crimp terminal 2 in the upper stage terminal block I of Article A is stored at the proper position in the crimp terminal insertion portion j, and Fig. 2-2 (B) is a plane view which schematically indicates a relationship between the projecting portion 21 and a tip side portion 3a of the crimp terminal 3 when the crimp terminal 3 of the lower stage terminal block II of Article A is stored at the proper position in the crimp terminal insertion portion j.

Fig. 3 (A) is a side view which schematically enlarges and indicates a side surface shape of the projecting portion 21 in the lower stage terminal block II of Article A, and Fig. 3 (B) schematically enlarges and indicates a relationship during the insertion of the crimp terminal, between the arc-shaped upper surface of the front side half portion 21a of the projecting portion 21 and the tip side portion 2a of the crimp terminal 2." (Page 4, line 25 to page 5, line 14 in the explanatory document of Article A)

2 The explanatory drawings of Article A illustrate the following matters.
2-1 The upper stage terminal block I of Article A
(1) If combining Fig. 1 (B), Fig. 1 (B-1), and Fig. 1 (C), the conductive terminal shown by reference numeral 13 in Fig. 1 (B-1) is shaped in a strip, and is provided with screw holes 13a shown by reference numeral 13a in Fig. 1 (C) on both sides.

(2) If combining Fig. 1 (B-1), Fig. 1 (C), and Fig. 2-2 (A), the upper stage terminal block shown by reference numeral I in Fig. 1 (B-1) is made from a member which has the partitioning walls partitioning the crimp terminal insertion portions shown by reference numeral j in Fig. 1 (B-1) and Fig. 1 (C) and shown by reference numeral w1 in Fig. 1 (C) and Fig. 2-2 (A). Furthermore, the member which has the partitioning walls w1 holds the conductive terminal 13.

(3) If combining Fig. 1 (B), Fig. 1 (B-1), Fig. 1 (C), and Fig. 2-2 (A), the partitioning wall w1 is protrusively provided with the projecting portion shown by the reference number 20 in Fig. 1 (B-1), Fig. (C), and Fig. 2-2 (A), and the projecting portion 20 has a horizontal upper surface portion.

2-2 The lower stage terminal block II of Article A
(1) If combining Fig. 1 (B-1) and Fig. 1 (C), the conductive terminal shown by the reference numeral 18 in Fig. 1 (B-1) has a generally reversed L-shape in a side view, and is provided with the screw hole shown by reference numeral 18a in Fig. 1 (C). Also, Fig. 2-1 (B) is a drawing which schematically performs indication corresponding to the invention relating to Claim 7, and does not precisely express the lower stage terminal block II of Article A.

(2) If combining Fig. 1 (B-1), Fig. 1 (C), and Fig. 2-2 (B), the lower stage terminal block shown by reference numeral II in Fig. 1 (B-1) is made from a member which has the partitioning walls partitioning the crimp terminal insertion portions j and shown by reference numeral w2 in Fig. 1 (B-1) and Fig. 2-2 (B). The member which has the partitioning walls w2 holds the conductive terminal 18.

(3) If combining Fig. 1 (B-1), Fig. 1 (C), and Fig. 2-2 (B), the crimp terminal shown by reference numeral 3 in Fig. 1 (C) and Fig. 2-2 (B) is provided with the partitioning walls w2 on right and left sides thereof, and the partitioning walls w2 are protrusively provided with the projecting portions shown by reference numeral 21 in Fig. 1 (C) and Fig. 2-2 (B).

(4) If combining Fig. 1 (B-1), Fig. 1 (C), Fig. 2-2 (B), Fig. 3 (A), and Fig. 3 (B), the projecting portion 21 is composed of a front side half portion shown by reference numeral 21a in Fig. 3 (A) and Fig. 3 (B) and having an arc-shaped upper surface portion convex upward, and a back side half portion shown by reference numeral 21b in Fig. 3 (A) and Fig. 3 (B) and having a horizontal upper surface portion, when viewed from an inlet direction of the crimp terminal insertion portion j.

3 Recognition of Article A
As viewed from matters of 1,2-1 and 2-2, if described in conformity with the patent invention, the structure of Article A is acknowledged as follows.

3-1 The upper stage terminal block I of Article A

"(a1) The upper stage terminal block I comprising: strip-shaped conductive terminals 13 which have screw holes 13a for fastening on both sides; and a member which has partitioning walls w1 holding the conductive terminals 13,

(b1) the member which has the partitioning walls w1 being provided with projecting portions 20 so as to project out to crimp terminal insertion portions j,

(c1) the projecting portions 20 being projecting members which project out from the partitioning walls w1 sandwiching the conductive terminals 13, and are provided on both sides between the partitioning walls w1, the projecting members having horizontal upper surface portions."

3-2 The lower stage terminal block II of Article A

"(a2) The lower stage terminal block II comprising: conductive terminals 18 which have a screw hole 18a for fastening, and have a generally reversed L-shape in a side view; and a member which has partitioning walls w2 holding the conductive terminals 18,

(b2) the member which has the partitioning walls w2 being provided with projecting portions 21 so as to project out to crimp terminal insertion portions j,

(c2) the projecting portion 21 being projecting members which project out from the partitioning walls w2 sandwiching the conductive terminals 18, and are provided on both sides between the partitioning walls w2, the projecting members being composed of front side half portions 21a having arc-shaped upper surface portions convex upward, and back side half portions 21b having horizontal upper surface portions."

No. 4 Comparison / judgment

It is compared and judged as follows whether Article A satisfies the separately described constituent components (A) to (C) relating to the patent invention.

1 The upper stage terminal block I of Article A

1-1 Sufficiency of the constituent component (A)

In comparison of the patent invention with the upper stage terminal block I of Article A, "the conductive terminals 13" of the latter corresponds to "the conductive terminals" of the former, and it is obvious that the member which has the partitioning walls provided between the terminals are usually configured from insulation material, so that it can be said that "the member which has partitioning walls w1 holding the conductive terminals 13" of the latter corresponds to "an insulation unit which holds the conductive terminals" of the former.

Therefore, the upper stage terminal block I of Article A satisfies the constituent component (A) of the patent invention.

On this point, there is no dispute between the demandant and the demandee.

1-2 Sufficiency of the constituent component (B)

In comparison of the patent invention with the upper stage terminal block I of Article A, It is obvious from their shapes that "the projecting portions 20" of the latter are provided so as to prevent the crimp terminals 2 from being set at crimp terminal insertion portions j in which the crimp terminals 2 are erroneously inserted, by regulating the outline shapes of the crimp terminals 2, so that it can be said that "the projecting portions 20" refer to "the projecting portions which project out so as to prevent the crimp terminals from being set at crimp terminal insertion portions in which the crimp terminals are erroneously inserted, by regulating the outline shapes of the crimp terminals" of the former.

Therefore, the upper stage terminal block I of Article A satisfies the constituent component (B) of the patent invention.

On this point, there is no dispute between the demandant and the demandee.

1-3 Sufficiency of the constituent component (C)

We will examine "tapered" in "the guide rib portions having upper surface portions formed in tapered shapes which are high on a front side and low on a back side" of the constituent component (C).

Though the general meaning of a term "tapered" is "a state gradually decreasing a diameter in a conical shape, its gradient, and a pointed cone" (Kojien, 6th Edition), in the patent invention, the guide rib portion having the upper surface portion formed in tapered shape which is high on the front side and low on the back side is formed in a shape different from a conical shape which is the general meaning of the term, judging from the embodiment 3 of Description and other materials of the patent. Namely, in a side view, the upper surface portion of the guide rib portion is formed as an inclined surface of which cross section is high on the front side and low on the back side, and it can be said that the inclined surface means the tapered upper surface portion in the patent invention.

Furthermore, according to "in order to make insertion of the amplifier terminal 7 easy, the top end surface attaches the taper which inclines under slant from on slant. The height of this rib changes also with the size of an amplifier terminal or a screw. If the foot tip of a screw and the upper end part of the rib are made flat-tapped, the amplifier terminal 7 is carried out aslant for a while, and it inserts easily along the tapered surface, and can set to a predetermined value." (Paragraph [0060]), "that is, as shown in Fig. 6,

in the usual terminal block 30A, insert the amplifier terminal 7 easily in order of "1"→"2" →"3", the hole 7a for screws of the amplifier terminal 7 is made to penetrate by the point 8a of the pin guide component 8 along the tapered surface of the guide rib part 41a, and it sets on the screw hole 2 of the terminal 3." (Paragraph [0063]), and [Fig. 6] relating to the embodiment 3 of Description and other materials of the patent, it can be understood that the tapered upper surface portion of the guide rib portion has a function capable of setting the amplifier terminal in the screw hole at a predetermined value; namely, at a predetermined place by guiding the amplifier terminal along the upper surface portion.

Then, "projecting members" of the upper stage terminal block I of Article A have horizontal upper surface portions in a side view, so that the "projecting members" have different shapes from "guide rib portions" of the patent invention; namely, "portions having upper surface portions formed in tapered shapes which are high on a front side and low on a back side," and do not have a function capable of setting the amplifier terminal in the screw hole at a predetermined place by guiding the amplifier along the upper surface portion.

Therefore, the upper stage terminal block I of Article A does not satisfy the constituent component (C) of the patent invention.

On the point which does not satisfy the constituent component (C), there is no dispute between the demandant and demandee.

1-4 Summary

As mentioned above, the upper stage terminal block I of Article A does not satisfy the constituent component (C) of the patent invention, so that it cannot be said that the upper stage terminal block I does not fall within the technical scope of the patent invention.

On this point, there is no dispute between the demandant and demandee.

2 The lower stage terminal block II of Article A

2-1 Sufficiency of the constituent component (A)

In the lower stage terminal block II of Article A, the conductive terminal 18 is a generally reversed L-shaped in a side view, and as shown in Fig. 1 (B-1) and Fig. 1 (C), bends from its middle part. The conductive terminal 18, considering Fig. 1 (B-1) and Fig. 1 (C), has one screw hole 18a for fastening, and is not a strip-shape provided with screw holes on both sides.

Therefore, the lower stage terminal block II of Article A does not satisfy the

constituent component (A) of the patent invention.

Concerning the conductive terminal 18, the demandant and the demandee overlook the point that the conductive terminal 18 is the generally reversed L-shaped in the side view and has only one screw hole 18a for fastening. Therefore, their allegation cannot be accepted.

2-2 Sufficiency of the constituent component (B)

In comparison of the patent invention with the lower stage terminal block II of Article A, it is obvious that a member which has the partitioning walls provided between terminals is usually made from insulation material, so that it can be said that "a member which has the partitioning walls w2" of the latter refers to "an insulation unit" of the former. Furthermore, it is obvious that "projecting portions 21" of the latter are provided so as to prevent the crimp terminal 3 from being set at crimp terminal insertion portions j in which the crimp terminals 3 are erroneously inserted, by regulating the outline shapes of the crimp terminals 3, from their shapes, so that it can be said that "the projecting portions 21" of the latter refer to "projecting portions which project out so as to prevent the crimp terminals from being set at crimp terminal insertion portions in which the crimp terminals are erroneously inserted, by regulating the outline shapes of the crimp terminals" of the former.

Therefore, the lower stage terminal block II of Article A satisfies the constituent component (B) of the patent invention.

On this point, there is no dispute between the demandant and the demandee.

2-3 Sufficiency of the constituent component (C)

It is obvious that "projecting members" of the lower stage terminal block II of Article A are members for regulating the erroneous insertion of the crimp terminal, so that it can be said that the projecting members are members "for regulating the erroneous insertion of the crimp terminals which project out from partitioning walls sandwiching the conductive terminals to insulate, and are provided on one side or both sides between the partitioning walls."

Also, No. 3 1 (7) in the explanatory document of Article A describes that "if the crimp terminal is inserted in a slightly forward-downward (upward) inclined state in an inlet of the crimp terminal insertion portion j of the lower stage terminal block II, first, the crimp terminal 2 is line-contacted with the arc surface of the inlet of the projecting portion 21 to be supported, then, descends on the back side (downward) while moving a

contact position to the back side, and is being inserted toward a lower side of the screw 17 at a proper downwardly inclined angle," so that the projecting member provided on the projecting portion 21 guides the crimp terminal 2 toward the lower side of the screw 17 and also serves as a guide member.

Then, "the projecting members" of the lower stage terminal block II of Article A correspond to "the guide rib portions" of the patent invention.

Although "the projecting members" of the lower stage terminal block II of Article A are composed of the front side half portions 21a having the arc-shaped upper surface portions convex upward, and the back side half portions 21b having horizontal upper surface portions, in a side view, the front side half portions 21a of the lower stage terminal block II of Article A will be further examined.

Though the front side half portion 21a of the lower stage terminal block II of Article A has the arc-shaped upper surface portion convex upward, according to Fig. 1 (B-1), Fig. 3 (A), and Fig. 3 (B), it is shown that the front side half portion 21a is composed of a part (hereinafter, referred to as "a front side half portion 21a1") increasing height from a place lower than the apex of the convex portion on the inlet side toward the apex of the convex portion, and a part (hereinafter, referred to as "a front side half portion 21a2") decreasing height from the apex of the convex portion toward a boundary with the back side half portion, when viewed from an inlet direction of the crimp terminal insertion portion j.

Then, in the projecting member composed of the front side half portion 21a1, the front side half portion 21a2, and the back side half portion 21b in the lower stage terminal block II of Article A, considering the plane shape of the projecting member in the projecting portion 21 in Fig. 1 (C) and Fig. 2-2 (B) which are plane views, it is obvious that the front side half portion 21a1, the front side half portion 21a2, and the back side half portion 21b configuring the projecting member in the projecting portion 21 are integral and inseparable for functioning as crimp terminal erroneous insertion regulation.

Therefore, "the projecting member" of the lower stage terminal block II of Article A is composed of the front side half portion 21a having the arc-shaped upper surface portion convex upward, and the back side half portion 21b having the horizontal upper surface portion. The front side half portion 21a is composed of the part (the front side half portion 21a1) increasing height from the place lower than the apex of the convex portion on the inlet side toward the apex of the convex portion, and the part (the front side half portion 21a2) ranging to the front side half portion 21a1 and decreasing height from the apex of the convex portion toward the boundary with the back side half

portion, when viewed from an inlet direction of the crimp terminal insertion portion j, and the front side half portion 21a1, the front side half portion 21a2, and the back side half portion 21b are integrally and inseparably continued.

Consequently, in the light of the shape of "the projecting members" in the lower stage terminal block II of Article A, "the projecting members" in the lower stage terminal block II of Article A are different in shape from "the guide rib portions" of the patent invention; namely, the members "having upper surface portions formed in tapered shapes which are high on a front side and low on a back side."

Furthermore, in the explanatory document of Article A, as described in No. 3 1 (7) that "if the crimp terminal is inserted in a slightly forward-downward (upward) inclined state in an inlet of the crimp terminal insertion portion j of the lower stage terminal block II, first, the crimp terminal 2 is line-contacted with the arc surface of the inlet of the projecting portion 21 to be supported, then, descends on the back side (downward) while moving a contact position to the back side, and is being inserted toward a lower side of the screw 17 at a proper downwardly inclined angle," the crimp terminal 2 is line-contacted with the arc-shaped upper surface 21f of the projecting portion 21 at a tip end to be supported, then the crimp terminal 2 slides while line-contacting with the arc-shaped upper surface 21f, and when the tip end reaches the horizontal surface 21g, line-contacts with the horizontal surface 21g. The crimp terminal 2 is supported at two points on the arc-shaped upper surface 21f and the horizontal upper surface 21g, and it can be said that the arc-shaped upper surface 21f and the horizontal upper surface 21g function as the guide members. Therefore, as mentioned above, "the projecting members" of the lower stage terminal block II of Article are members which support the crimp terminals 2 and do not guide the crimp terminals 2 along them, whereas in the patent invention, the tapered-shaped upper surface portion of the guide rib portion guides the amplifier terminal along its upper surface portion to be set at a predetermined place (refer to "1-3 sufficiency of the constituent component (C)"), so that "the projecting members" of the lower stage terminal block II of Article A also differ in their function from the guide rib portions of the patent invention.

Therefore, the lower stage terminal block II of Article A does not satisfy the constituent component (C) of the patent invention.

The demandee alleges, on page 8, lines 1-12 in the written reply, that "Claim 7 describes 'the guide rib portions having upper surface portions formed in tapered shapes which are high on a front side and low on a back side,' and does not describe that the

guide rib portions refuse the addition of another shape at all. If the guide rib portions refuse the addition of another shape, I think an expression for limiting such as ‘formed only by a tapered shape’ is necessary. Therefore, the configuration obtained by adding another configuration to ‘having upper surface portions formed in tapered shapes which are high on a front side and low on a back side’ uses the patent right. As well-known, if satisfying all of the constituent components described in the scope of claims for patent, an invention is within the technical scope of the patent invention, so that Article A is within the technical scope of the patent invention when equipped with the front side half portion 21a, regardless of the presence/absence of the back side half portion 21b. The projecting portion adding the back side half portion 21b to the front side half portion 21a uses the invention of Claim 7."

The projecting member in the lower stage terminal block II of Article A, integrally and inseparably has the part ("the front side half portion 21a1" mentioned above) increasing height from the place lower than the apex of the convex portion on the inlet side toward the apex of the convex portion, and the back side half portion 21b, in addition to the part ("the front side half portion 21a2" mentioned above) decreasing height from the apex of the convex portion toward the boundary with the back side half portion 21b. Therefore, "the projecting members" in the lower stage terminal block II of Article A have different shapes from "the guide rib portions" "having upper surface portions formed in tapered shapes which are high on a front side and low on a back side" of the patent invention, do not guide the crimp terminal along them, and differ in their function as mentioned above, so that the allegation of the demandee that the former uses latter cannot be accepted.

Also, the demandee, on page 6, line 19 to page 7, line 6 in the written reply, alleges that "Furthermore, the demandant demands a trial for invalidation on the same day (Invalidation No. 2015-800128), Evidence A No. 1 (Japanese Unexamined Patent Application Publication No. 2001-52776), Evidence A No. 2 (Japanese Unexamined Utility Model Application Publication No. H6-77165), and Evidence A No. 3 (Japanese Examined Utility Model Application Publication No. S55-55500) are provided. The demandee thinks there is no reason for invalidation in the invention relating to Claim 7 of the patent right, and although detailed argument is given in the trial for invalidation, pays attention to Evidence A No. 2 provided by the demandant. What the demandant indicates by Evidence A No. 2 is Fig. 7, and the arc surface shown by reference numeral 22 (the partial enlarged view in the reference drawing 1 of the request for the demand for the invalidation trial). The arc surface shown by reference numeral 22 is an inclined

surface, and is the same as the front side half portion 21a of the projecting portion of Article A. That is, the demandant recognizes that the shape of the front side half portion 21a of the projecting portion of Article A is included in 'the tapered shape' described in Claim 7. Therefore, the front side half portions 21a of the projecting portions in the terminal block II of Article A completely satisfy the wording of "the guide rib portions having upper surface portions formed in tapered shapes which are high on a front side and low on a back side."

Though, the allegation relates to the front side half portion 21a2 of the front side half portion 21a in the projecting member in the lower stage terminal block II of Article A, as mentioned above, in the lower stage terminal block II of Article A, the front side half portion 21a1, the front side half portion 21a2, and the back side half portion 21b are integral and inseparable, and "the projecting members" of the lower stage terminal block II of Article A and "the guide rib portions" of the patent invention differ in their shapes and functions as described above, so that the allegation of the demandee cannot be accepted.

2-4 Summary

As mentioned above, the lower stage terminal block II of Article A does not satisfy the constituent components (A) and (C) of the patent invention, so that it cannot be said that the lower stage terminal block II falls within the technical scope of the patent invention.

3 Summary

As mentioned above, it cannot be said that both of the upper stage terminal block I of Article A and the lower stage terminal block II of Article A fall within the technical scope of the patent invention.

No. 5 Closing

Consequently, Article A does not fall within the technical scope of the patent invention.

Therefore, the advisory opinion shall be made as described in the conclusion.

October 29, 2015

Chief administrative judge: KOYANAGI, Kengo
Administrative judge: NAKAGAWA, Ryuji

Administrative judge: MORIKAWA, Mototsugu

イ号説明書及びイ号説明図面

【イ号物件の名称】　端子台

【イ号物件の説明】

株式会社　正興電機製作所が製造販売している端子台（型式番号：ＡＴＳ－１４Ｃ）は、添付のイ号説明図（図１、図２－１、図２－２及び図３）に示すものである。

１．イ号物件の全体機構

イ号物件は従来技術の端子台の構造を基本とするものであり、上段端子台Ｉと下段端子台Ⅱとを備えている。

上下両端子台Ｉ，Ⅱはその基本構造において互いに格別の違いはない。

上段端子台Ｉは主に回路電線用、下段端子台Ⅱは主に接地電線用でその用途が異なり、圧着端挿入部ｊの幅及び高さ、同挿入部ｊの側壁に突設された突出部２０，２１の形状及びその高さ、ねじ付き座金１０，１５のねじ１２，１７の大きさ、導電端子１３，１８の構造等、その詳細が若干相違している。

上段端子台Ｉは隔壁ｗ１によって仕切られた多数の圧着端子挿入部ｊを備えており、各圧着端子挿入部ｊにねじ付き座金１０があり、当該ねじ付き座金１０は板ばね１１によって上方に付勢されている。そして、そのねじ１２はＭ５（外径５ｍｍ）であり、導電端子１３のネジ穴１３ａに螺合される。

また、下段端子台Ⅱも同様に隔壁ｗ２によって仕切られた多数の圧着端子挿入部ｊを備えており、各圧着端子挿入部ｊにねじ付き座金１５があり、このねじ付き座金１５は板ばね１１によって上方に付勢されている。そして、そのねじ１７はＭ４（外径４ｍｍ）であり、導電端子１８のねじ穴１８ａに螺合される。

上段端子台Ｉの基本構造は従来周知のもの（例えば、特開２００１－５２７７６号公報のもの）と同じであり、その隔壁ｗ１から端子挿入部ｊに向けて突

出部２０が突出されている。そしてこの突出部２０の平面形状は円柱体を縦に半割にしたようなほぼ半円柱状のもので、その奥側部分で導電端子１３を押さえている。そして、この突出部２０の上面は水平面でありその導電端子１３上面からの高さは３ｍｍであり、当該上面は上記ねじ１２の下端面とほぼ等しい高さ位置にある（図１（Ｂ－１）参照）。

圧着端子２の圧着端子挿入部ｊへの挿入が不完全であると圧着端子２の一部が上記突出部２０の上面に乗り上げた状態になり、圧着端子２は正規位置にないことが上記ねじ１２の締め付け段階で感知されるので、これにより、不正規位置で締めつけられるのが未然に回避される。

圧着端子２が正規位置に挿入されると、その傾斜した左右両側面２５に突出部２０の角部が当接して圧着端子２の抜け止めがなされる（図２－２（Ａ））。

他方、下段端子台Ⅱのねじ１７はＭ４であり、導電端子１８のねじ穴１８ａに螺合される。下段端子台Ⅱの隔壁ｗ２から圧着端子挿入部ｊに向けて突出部２１が突出されており（図２－１（Ｂ）参照）、当該突出部２１の平面形状は楕円柱体を半割にしたようなほぼ半楕円（より正確には「円弧＋水平直線＋斜線によるもの）状のもの（図２－２（Ｂ）参照）であり、その側面形状は高さが高い前側半部２１ａと低い奥側半部２１ｂとで構成されている。この突出部２１の形状の詳細は図３（Ａ）に示すとおりである。

２．詳細機構

突出部２１の前側半部２１ａの上面は上方に凸の円弧状上面（曲率半径Ｒ：２ｍｍ）２１ｆであり、奥側半部２１ｂの上面は水平面２１ｇである。前側半部の高さＨは３ｍｍ、奥側半部２１ｂの高さｈ１は２ｍｍ、厚さｔは１ｍｍである。また、突出部２１の奥行き長さＬ：７．７ｍｍ、前側半部２１ａの奥行き長さＬ１：２．７ｍｍ、前側半部２１ａ下面の奥行き長さＬ２：３．３ｍｍである。

そして、この奥側半部２１ｂは奥側に大きく延びていて長い範囲で導電端子１８を上から押さえている。

そして、上記ねじ１７の下端面と突出部２１の高さ方向の位置関係は次のと

おりである。すなわち、突出部２１の前側半部２１ａの円弧状上面２１ｆの曲率半径の中心は当該突出部の前側端から少し（偏心量ｅ：１ｍｍ）だけ奥側にある。したがって、当該円弧状上面２１ｆの頂点より前側は少し前下がりの曲面であり、奥側は奥側に大きく後下がりの曲面である。そして、当該円弧状上面２１ｆの頂点は上記ねじ１７の下端面よりほぼ０．４ｍｍ高く、反対に、奥側半部２１ｂの水平上面２１ｇは上記ねじ１７の下端面よりもほぼ０．６ｍｍ低い（図３参照）。

前側半部２１ａの円弧状上面２１ｆの頂点はねじ１７の下端よりもほぼ０．４ｍｍ程度高い位置にあるので、圧着端子３の先側部３ａを下段端子台Ⅱの圧着端子挿入部ｊに挿入するには大きく傾斜させた状態で挿入しなければならないが、このときの圧着端子３の挿入傾斜角度はねじ１７の下端の高さと上記円弧状上面２１ｆの頂点との高さの関係によって異なることになるので、必ずしも一定の角度ではない。

３．圧着端子の端子台への装着

圧着端子が下段端子台Ⅱの圧着端子挿入部ｊの入り口に、例えば少し前下がり（上向き）の傾斜状態で挿入されると、圧着端子２は当初、突出部２１の入り口の円弧面に線接触して支持され、その後、接触位置を奥側に移動させながら後側下がり（下向き）になり、適宜の下向きの傾斜角度でねじ１７の下側に向けて挿入されていく（図３（Ｂ）参照）。

そして、圧着端子３が圧着端子挿入部ｊの奥側の所定位置まで挿入されると、その先側部３ａの左右両側の傾斜面３５が左右の突出部２１，２１の奥側半部２１ｂの左右の長い傾斜面２６，２６に当接して挟まれるので、正規位置での位置決めが、上段端子台Ⅰの突出部２０による場合よりも正確になされる。

そして、奥側半部２１ｂは、ねじ１７の下端面との間に圧着端子３の先側部３ａを容易に挿入できるように、必要な隙間を確保するためにその高さが低くなっているのであり、また、上段端子台Ⅰの突出部２０による場合の押さえ長さよりも導電端子１８に対する押さえ長さが格別に長い。

当該奥側半部２１ｂは圧着端子３の先側部３ａがねじ１７の下側に容易に挿

入されるようにこれを案内する作用を奏するものではないが、奥側に長く延びているので導電端子１８に対する押さえが強く、また、圧着端子３の左右の長い傾斜面３５にその長い傾斜面２６が当接して左右の側面から押さえるので正規位置への位置決めが突出部２０による場合よりも正確になされるという作用を奏する。

なお、正規位置に挿入された圧着端子３の抜け止めは突出部２１の奥側半部２１ｂの上記傾斜面２６でなされる。

４．イ号説図における符合の説明

Ⅰ：上段端子台

Ⅱ：下段端子台

ｊ：圧着端子挿入部

３：圧着端子

３ａ：圧着端子の先側部

１０，１５：ねじ付き座金

１２．１７：ねじ

１３，１８：導電端子

１３ａ，１８ａ：ねじ穴

２０，２１：突出部

２１ａ：突出部２１の前側半部

２１ｂ：突出部２１の奥側半部

２１ｆ：上方に凸の円弧状上面

２１ｇ：水平面

２６：突出部２１の奥側半部２１ｂの左右の傾斜面

３５：圧着端子３の先側部３ａの左右両側の傾斜面

【イ号説明図の簡単な説明】

図１（Ａ）は、イ号物件全体の正面図、　図１（Ｂ）は、側断面図、　図１（Ｂ－１）は、図１（Ｂ）の一部拡大図、　図１（Ｃ）は、上段端子台の一部

平面図である。

図２－１（Ａ）は、本特許明細書の請求項７に係る発明の突出部１の上面と圧着端子２との、圧着端子２挿入時の関係を模式的に示す側面図（本特許明細書の図６参照）、　図２－１（Ｂ）は、イ号物件の下段端子台Ⅱの突出部２１の上面と圧着端子３との、圧着端子３挿入時の関係を模式的に示す側面図である。

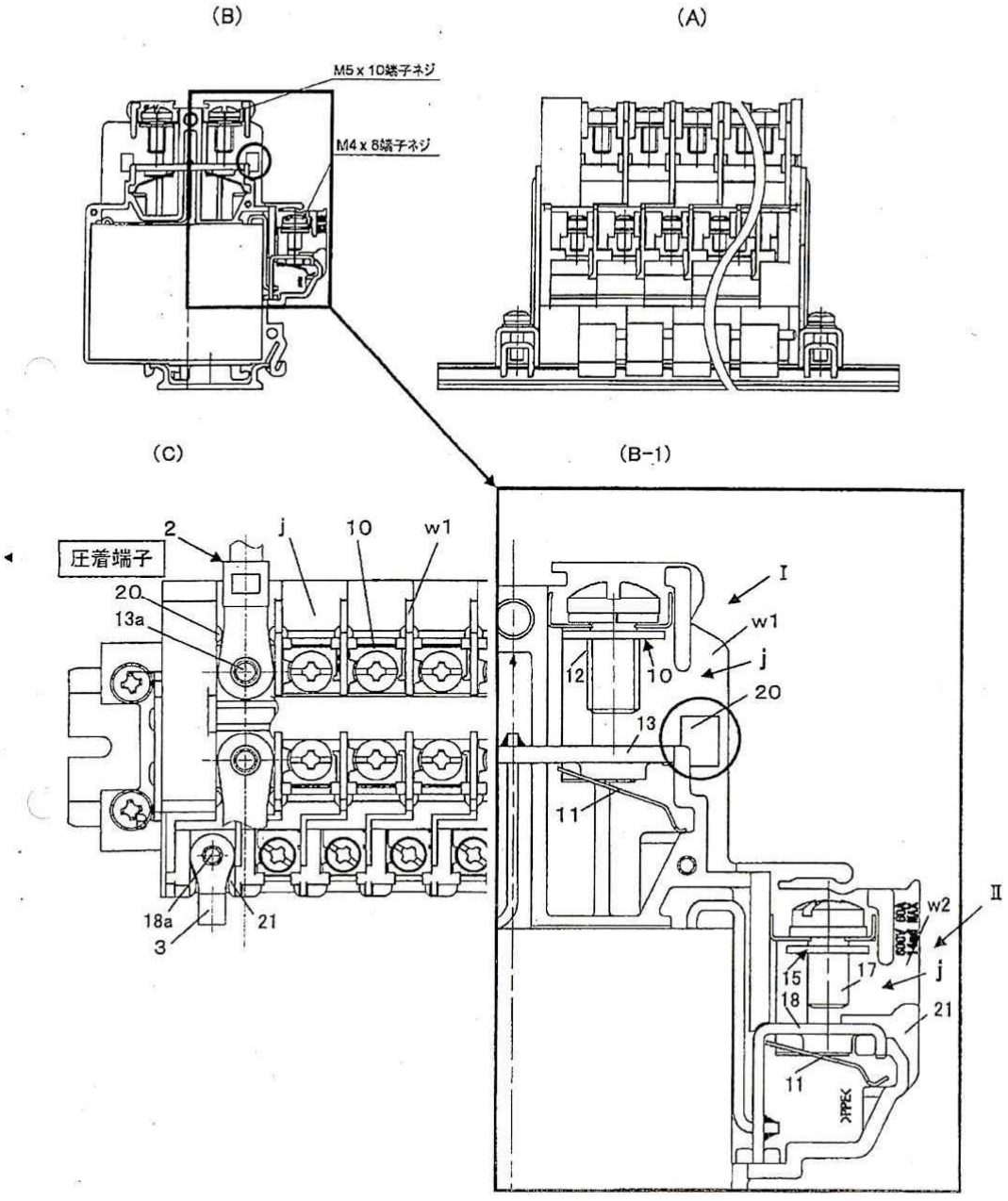
図２－２（Ａ）は、イ号物件の上段端子台Ⅰの圧着端子２が圧着端子挿入部ｊの正規位置に収まっているときの突出部２０と圧着端子２の先側部２ａとの関係を模式的に示す平面図であり、　図２－２（Ｂ）は、イ号物件の下段端子台Ⅱの圧着端子３が圧着端子挿入部ｊの正規位置に収まっているときの突出部２１と圧着端子３の先側部３ａとの関係を模式的に示す平面図である。

図３（Ａ）は、イ号物件の下段端子台Ⅱの突出部２１の側面形状を模式的に拡大して示す側面図、図３（Ｂ）は、同突出部２１の前側半部２１ａの円弧状上面と圧着端子２の先側部２ａとの、圧着端子挿入時の関係を模式的に拡大して示すものである。

イ号 説明図

図1

イ号端子台
(型式:ATS-14C)



イ号説明図　The explanatory drawings of Article A

図１　Fig. 1

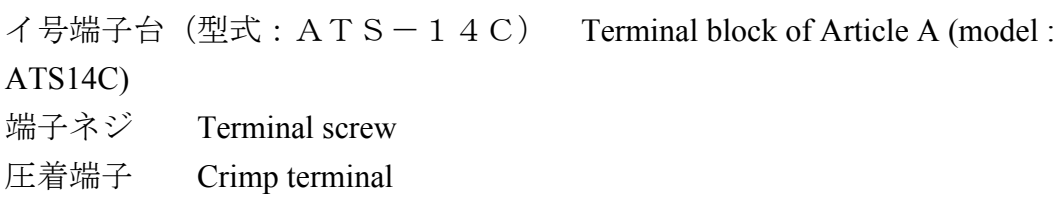
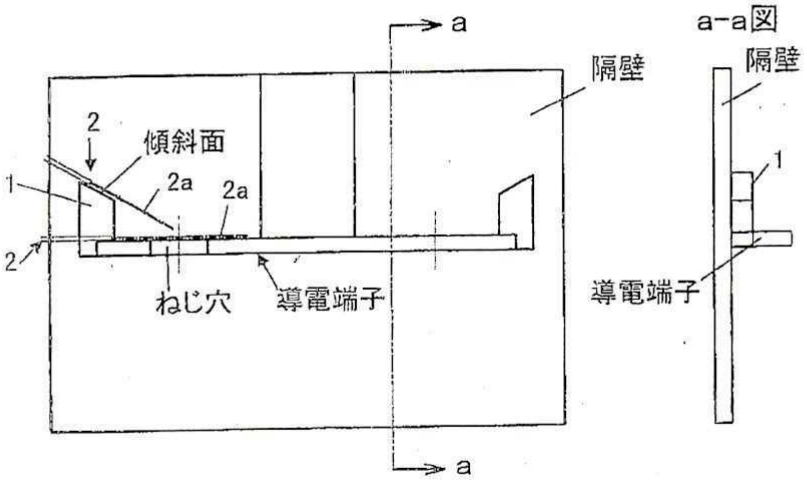


図2－1

(A) 請求項7に係る発明の突出部



(B) イ号物件の突出部

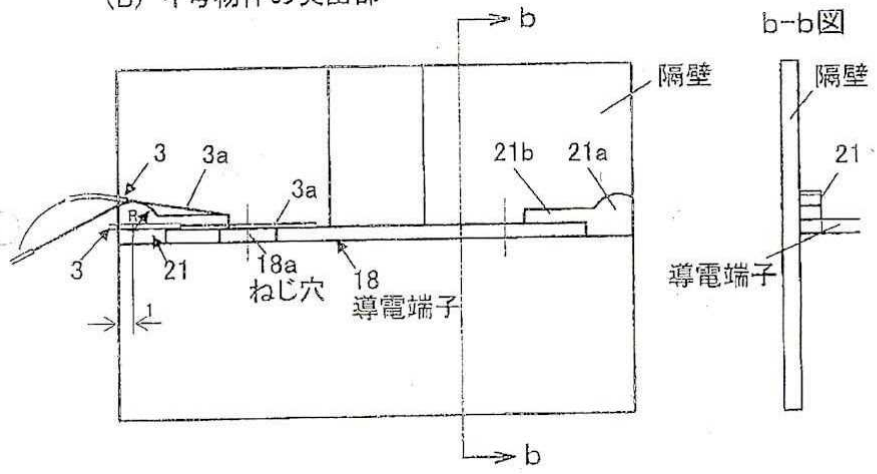


図２－１　　Fig. 2-1

（Ａ）請求項７に係る発明の突出部　　(A) Projecting portion of the invention relating to Claim 7

傾斜面　　Inclined surface

ねじ穴　　Screw hole

導電端子　　Conductive terminal

隔壁　Partitioning wall

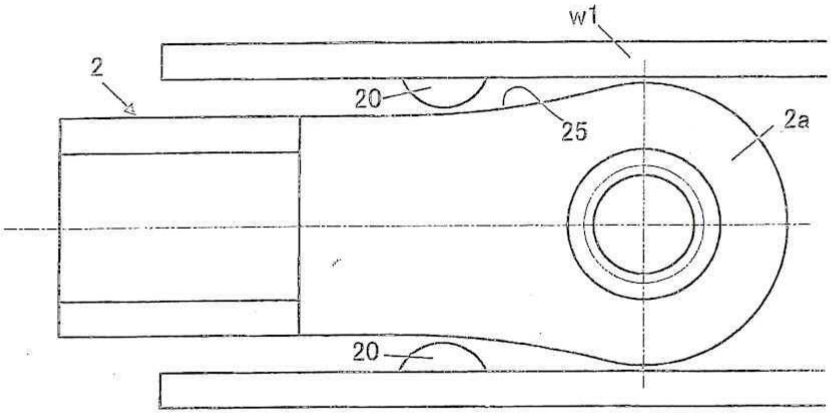
ａ－ａ図　　a-a drawing

（Ｂ）イ号物件の突出部　(B) projecting portion of Article A

ｂ－ｂ図　　b-b drawing

図2－2

(A)



(B)

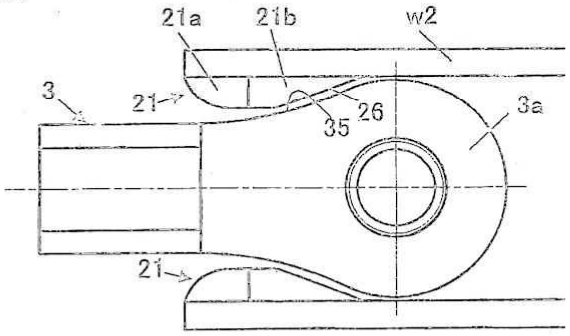
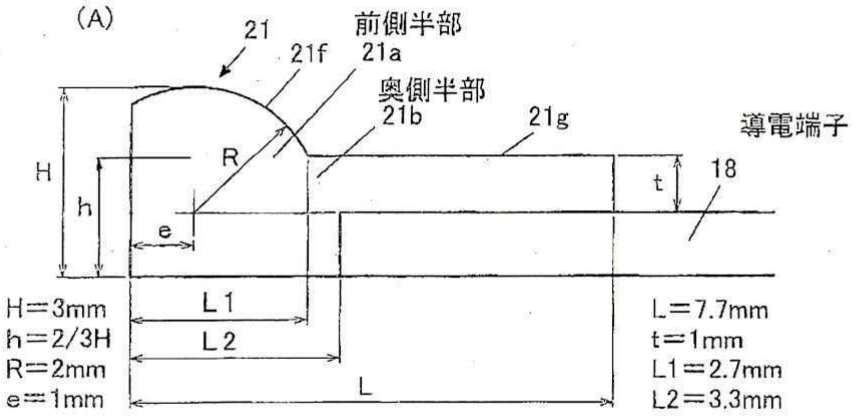


図3　　イ号の突出部拡大図



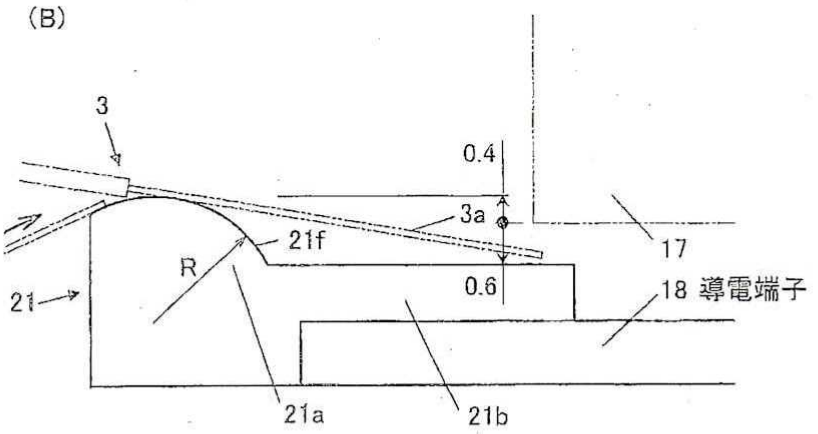


図３　イ号の突出部拡大図　　Fig. 3 Enlarged view of the projecting portion of Article A

前側半部　　Front side half portion

奥側半部　　Back side half portion

導電端子　　Conductive terminal