

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte KAZUHIRO ASADA

Appeal No. 2006-2169
Application No. 09/899,919

ON BRIEF

Before KRASS, RUGGIERO, BARRY, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

A patent examiner rejected claims 1-4. The appellant appeals therefrom under 35 U.S.C. § 134(a). We affirm.

I. BACKGROUND

The invention at issue on appeal is a connector for joining an fiber optical cord to a photoelectric device or for joining together fiber optical cords. (Spec. at 1.) More specifically, the appellant's optical connector 1 features a bore 11c for receiving a fiber optical cord 90. A mounting hole 13 in the housing receives a stopper, i.e., a clip, 40 into the bore perpendicularly to the insertion direction of the cord. The clip features plate-like parts 41, with a slit 42 and a blade portion 43 with an angle of 90° at each

open end of the slit. When the stopper is inserted into the bore, each blade portion penetrates a sheath 92 of the cord. (*Id.* at 25.¹)

A further understanding of the invention can be achieved by reading the following claims.

1. An optical connector comprising:

a housing having a cord receiving hole portion and a mounting hole, the cord receiving hole portion receiving an optical fiber cord to be inserted along an axis of said optical fiber cord in a cord insertion direction, the mounting hole disposed along said cord receiving hole portion; and

a stopper including a plate-like portion having a positioning slit between blade portions, the positioning slit having a width slightly smaller than a diameter of said optical fiber cord, each of the blade portions being formed by a side edge of said positioning slit joined at a right angle to a distal end edge of said plate-like portion; wherein

said plate-like portion of said stopper can be inserted into said mounting hole along said cord receiving hole portion in a stopper insertion direction perpendicular to the cord insertion direction of said optical fiber cord;

said housing has stopper retaining portions for holding said plate-like portion of said stopper, said stopper retaining portions engaging a retaining side of said plate-like portion and having a cross-section perpendicular to the cord insertion direction of said optical fiber cord; and

¹ The lack of line numbers in the appellant's specification impedes us from more precise citations thereto.

when said stopper is inserted into said mounting hole along said cord receiving hole portion, said each of said blade portions penetrates into a covering portion of said optical fiber cord, with the positioning slit being perpendicular to the axis of said optical fiber cord, while said each of the blade portions removes a portion of said covering portion, thereby fixing said optical fiber cord along the axis of said optical fiber cord.

3. An optical connector according to claim 1, wherein the side edge of said positioning slit for said each of the blade portions projects a gable wedge having a cross-section corner along a thickness midline of the side edge for said each of the blade portions, the cross-section corner extending toward said positioning slit.

4. An optical connector according to claim 1, wherein the distal end edge of said plate-like portion slants from a first cross-section face of said plate-like portion to a second cross-section face of said plate-like portion.

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,452,386 ("van Woesik ") and U.S. Patent No. 6,174,091 ("Herrmann").

II. OPINION

At the outset, we note that the appellant's principal brief contain numerous references to specific line numbers of his specification. (App. Br. at 2-4, 11, 13, 17.) Although such precision is welcome, the specification itself omits line numbers. The appellant should number the lines of his specifications to facilitate reference thereto.

We also note the appellant's request that we "reverse the rejections of the claims and to pass this application to issue." (App. Br. at 20.) In an *ex parte* appeal, the Board "is basically a board of review c we review . . . rejections made by patent examiners." *Ex parte Gambogi*, 62 USPQ2d 1209, 1211 (B.P.A.I. 2001). While we have authority to reverse rejections, we lack authority to "pass this application to issue." (App. Br. at 20.) Patent examiners have the authority to pass applications to issue. M.P.E.P. §§ 1005, 1302.13. That said, our opinion addresses the claims in the following order:

- claims 1 and 2
- claim 3
- claim 4.

A. CLAIMS 1 AND 2

"[T]o assure separate review by the Board of individual claims within each group of claims subject to a common ground of rejection, an appellant's brief to the Board must contain a clear statement for each rejection: (a) asserting that the patentability of claims within the group of claims subject to this rejection do not stand or fall together, and (b) identifying which individual claim or claims within the group are separately patentable and the reasons why the examiner's rejection should not be sustained." *In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) (citing 37 C.F.R. §1.192(c)(7) (2001)).

Here, the appellant argues claims 1 and 2, which are subject to the same ground of rejection, as a group. (Appeal Br. at 10-16.) We select claim 1 as the sole claim on which to decide the appeal of the group. "With this representation in mind, rather than reiterate the positions of the examiner or the appellant[] *in toto*, we focus on the following three points of contention therebetween," *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *2 (B.P.A.I. 2004):

- removing covering
- blade edge
- stopper retaining portion.

1. Removing Covering

The examiner finds, "It is clearly illustrated in Fig. 19 of van Woesik and Figure 5 of Herrmann, that by piercing the covering portion of the optical fiber, the blade portions of the clip displace the covering portion, creating a cut. Therefore, portions of the covering portion are *removed* from the area that is now occupied by the blade."

(Examiner's Answer at 9.) The appellant makes the following argument.

[D]isplacing the covering portion along the axial direction of the cord is distinguishable from removing a portion of the covering portion towards the transverse direction of the cord. Merely deforming and shifting the sheath substance whose space becomes occupied by the chamfered blades of van Woesik and Herrmann contrasts with removal of a "portion" of the covering portion that inherently removes material from that portion, as provided in claim 1.

(Reply Br. at 4.)

"In addressing the point of contention, the Board conducts a two-step analysis. First, we construe the representative claim at issue to determine its scope. Second, we determine whether the construed claim would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *2 (B.P.A.I. 2004).

a. Claim Construction

"Analysis begins with a key legal question — what is the invention claimed?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "the PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000)). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

Here, claim 1 recites in pertinent part the following limitations: "each of the blade portions removes a portion of said covering portion. . . ." Giving the representative claim the broadest, reasonable construction, the limitations merely require using blade parts to remove a portion of the sheath of a fiber optical cord. Contrary to the

appellants' argument, the limitations do not require that the removal be "towards the transverse direction of the cord." (Reply Br. at 4.)

b. Obviousness Determination

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Massingill*, at *3. The question of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . . ." *In re Zurko*, 258 F.3d 1379, 1383, 59 USPQ2d 1693, 1696 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)).

Here, Herrmann "relates to a fiber-optic connector having a connector housing and a fiber holding clip, which can be introduced into the connector housing in order to retain a fiber-optic cable." (Col. 1, ll. 6-9.) "As can be discerned in FIG. 2, the fiber holding clip 10 is of U-shaped design. The limb 11 on the cable side 5 is likewise of U-shaped design with two limbs (FIG. 3). These two limbs pierce the insulating sheath 7 of the fiber-optic cable end 6. As a result, the fiber-optic cable end 6 will be retained in the fiber receptacle hole 5 of the connector housing 2." (Col. 2, ll. 43-50). Because the

two limbs pierce the insulating sheath of the fiber-optic cable, we agree with the examiner's finding that the reference teaches using blade parts to remove a portion of the sheath of a fiber optical cord.

2. Blade Edge

The examiner makes the following assertions.

[I]t would have been obvious to one having ordinary skill in the art at the time the invention was made for the blade portions to be formed by a side edge of the positioning slit joined at a right angle to a distal end edge of the plate-like portion since it would have been an obvious matter of design choice to implement such a modification, since applicant has not disclosed that having the side edge of the positioning slit joined at a right angle to a distal end edge of the plate-like portion solves any states problem or is used for any particular purpose and it appears that the invention would perform equally well with the chaffered edge disclosed in Herrmann and van Woesik.

(Examiner's Answer at 4-5.) The appellant "responds by referring to the advantages explained in pages 15-16 of Appellant's specification." (App. Br. at 13.) In particular, they offer the following explanation.

Appellant's disclosure provides for each blade portion (43) cutting the covering portion (92) while forcing the cut portion away in its inserting direction. Consequently, removing the excess covering portion, instead of merely pushing it away, reduces axial compressive force being applied against the covering portion. Similarly, this removal of the excess covering portion avoids radial compressive force from being applied against the optical fiber (91). This advantage is achieved by a right-angle edge profile, as claimed. See page 16, lines 2-22 of the specification.

(*Id.*)

a. Claim Construction

Claim 1 further recites in pertinent part the following limitations: "a plate-like portion having a positioning slit between blade portions, the positioning slit having a width slightly smaller than a diameter of said optical fiber cord, each of the blade portions being formed by a side edge of said positioning slit joined at a right angle to a distal end edge of said plate-like portion. . . ." Giving the representative claim the broadest, reasonable construction, the limitations require a pair of legs defining an opening and that the aforementioned blade parts be formed by a side edge of the opening joined at a right angle to an edge of the legs.

b. Obviousness Determination

"All that is required to show obviousness is that the claimed invention would have been made obvious by applying knowledge clearly present in the prior art." *In re Rau*, 838 F.2d 1223 (tbl.), 1988 WL 5131 (Fed. Cir. 1988) (citing *In re Shekler*, 438 F.2d 999, 1001, 168 USPQ 716, 717 (CCPA 1971); *In re Winslow*, 365 F.2d 1017, 1020, 151 USPQ 48, 50-51 (CCPA 1966)) (unpublished).

Here, van Woesik "relates to a fibre [sic] optic connector for optically connecting first and second optical fibres [sic]. . . ." (Col. 1, ll. 8-9.) More specifically, the "fibre optics connector 2 (FIGS. 15 and 16) comprises a connector housing 4, an intermediate

optical fibre 6, an optical fibre alignment sleeve 8, a refractive index matching material 10, and a fibre fixing clip 12." (Col. 3, ll. 62-66.) We find that the fibre fixing clip 12 features a pair of legs defining an opening. To wit, "[a]s shown in FIGS. 11 and 12, the fibre fixing clip 12 . . . comprises a flat base 62 from opposite edges of which depend respective fibre retention plates 64, each of which comprises a pair of legs 66 each having a tapered free end portion 68, the legs defining between them an opening 67 having parallel side edges 65." (Col. 4, l. 63 – col. 5, l. 1.)

Similarly, because Herrmann's "limb 11 on the cable side 5 is likewise of U-shaped design with two limbs (FIG. 3)," (col. 2, ll. 46-47), we find that the fiber holding clip features a pair of legs defining an opening. Because these two "limbs 11 pierce the insulating sheath 7 of the fiber-optic cable end," (col. 3, ll. 11-12), we further find that the secondary reference describes blade parts.

Although Figures 3 and 5 of Hermann show that its blade parts are formed by a side edge of an opening joined at an angle to an edge of the limbs, the Figures portray the angle as an obtuse angle rather than a right angle. Because the operation of the blade parts is the same with an obtuse angle or a right angle, we agree with the examiner's aforementioned finding, however, that the appellant's "invention would

[have] perform[ed] equally well with the chaffered edge disclosed in Herrmann. . . ."

(Examiner's Answer at 5.)

Turning to the appellant's argument, the part of the specification that he cites explains that his invention offers two advantages. First, an "optical fiber cord 90 is retained after the mounting of the stopper 40. . . ." (Spec. at 16.) Second, "the stopper 40 is less liable to impart to the optical fiber 91 an excessive pressing force tending to compress this optical fiber 91 in its radial direction. . . ." (*Id.*)

Regarding the first advantage, Hermann discloses that because its blade parts pierce the insulating sheath of a cable, "the fiber-optic cable end 6 will be retained in the fiber receptacle hole 5 of the connector housing 2." (Col. 2, ll. 46-50.) Accordingly, we find that the arrangement of the secondary reference offers the first advantage relied on by the appellant.

Regarding the second advantage, the appellant explains that the advantage is achieved by "removing the excess covering portion [of a fiber optical cable], instead of merely pushing it away. . . ." (App. Br. at 13.) Because Herrmann's blade parts pierce the insulating sheath of a fiber-optic cable, we find that these parts likewise remove the excess insulating sheath, instead of merely pushing it away. Consequently, we further

find that the arrangement of the secondary reference offers the second advantage relied on by the appellant.

In summary, we find that the operation of the blade parts is the same with an obtuse angle or a right angle. The appellants have failed to show that the change in angle "result[s] in a difference in function or give unexpected results." *In re Rice*, 341 F.2d 309, 314, 144 USPQ 476, 480 (CCPA 1965). "Moreover . . . there is no evidence of commercial success or other secondary considerations. . . ." *Electro-Nucleonics, Inc. v. Mossinghoff*, 592 F.Supp. 608, 612, 224 USPQ 432, 434 (D.D.C.1984). For our part, we are persuaded that the differences in angle "between the subject matter claimed and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." *Sheckler*, 438 F.2d at 1000-01, 168 USPQ at 717. "Such changes in design . . . are no more than obvious variations consistent with the principles known in that art." *Rice*, 341 F.2d at 314, 144 USPQ at 480.

3. Stopper Retaining Portion

The examiner finds "that van Woesik explicitly states that the retention pips 70 engage the walls of the slots 33 (col. 5, lines 67-68)." (Examiner's Answer at 8.) The appellant argues "that although van Woesik discloses retention pips on the clip,

there is no teaching for engagement counterparts on the housing. . . ." (Reply Br. at 3-4.)

a. Claim Construction

"Claims must be read in view of the specification, of which they are a part."
Markman v. Westview Instruments, Inc., 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed. Cir. 1995)(en banc). Here, claim 1 further recites in pertinent part the following limitations: "said housing has stopper retaining portions for holding said plate-like portion of said stopper, said stopper retaining portions engaging a retaining side of said plate-like portion and having a cross-section perpendicular to the cord insertion direction of said optical fiber cord. . . ." Figures 8A – 8C of the appellant's specification, moreover, show the "stopper" as a clip. Reading the representative claim in view of the specification, the limitations require a retaining part for engaging a retaining pip of a clip, thereby holding the clip in place, wherein the retaining part is perpendicular to the insertion direction of the aforementioned fiber optical cord.

b. Obviousness Determination

"A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed.

Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). Here, "[p]roximate the base 62 [of van Woesik] each plate 64 has an outwardly projecting retention pip 70." (Col. 5, ll. 2-3.) Because "[t]he retention pips 70 engage the walls of the slots 33 to hold the clip 12 in its home position," (col. 5, l. 67 – col. 6, l. 1), we agree with the examiner's finding that the walls of the slots constitute a retaining part for engaging a retaining pip of a clip. Figure 7 of the primary reference, moreover, shows that walls of the slots 33 are perpendicular to the insertion direction of the optical fiber cord. Therefore, we affirm the rejection of claim 1 and of claim 2, which falls therewith.

B. CLAIM 3

Taking official notice that "employing a gable wedge to provide a sharp edge [wa]s well established in the art to improve the ease of cutting," (Examiner's Answer at 9), the examiner asserts that "providing a gable wedge in order to facilitate the cutting would have been obvious to one having ordinary skill in the art." (*Id.*) The appellant "asserts that there is to no motivation to modify the blades of the applied references to include a gable edge because of the greater complexity in manufacturing." (Reply Br. at 4.)

1. Claim Construction

Claim 3 recites in pertinent part the following limitations: "the side edge of said positioning slit for said each of the blade portions projects a gable wedge. . . ." Giving the claim the broadest, reasonable construction, the limitations require that the cutting edge of the blade parts be formed as a gable wedge.

2. Obviousness Determination

Although Herrmann's blade parts pierce the insulating sheath of a fiber-optic cable, *supra*, the reference does not detail the shape of the edge of the blade parts. By not disclosing a particular shape, we find that Herrmann suggests that any known shape could have been used. The appellant does not deny that employing a gable wedge to provide a sharp edge was known in the art. Because Herrmann suggests that any known shape could have been used; and a gable wedge would have improved the ease of cutting; we find that those skilled in the art would have been motivated to form the edge of the blade parts as a gable wedge. Therefore, we affirm the rejection of claim 3.

C. CLAIM 4

The examiner finds that "van Woesik discloses a device wherein the distal end edge of the plate-like portion slants from a first cross-section face of the plate-like portion to a second cross-section of the plate-like portion (see Fig. 15, ref. 12)." (Examiner's Answer at 6.) The appellant argues that "van Woesik fails to teach or suggest an edge slant between the blade faces." (App. Br. at 18.)

1. Claim Construction

Claim 4 recites in pertinent part the following limitations: "the distal end edge of said plate-like portion slants from a first cross-section face of said plate-like portion to a second cross-section face of said plate-like portion." "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 , 75 USPQ2d 1321, 1327 (Fed.Cir. 2005) (en banc) (citing *Brown v. 3M*, 265 F.3d 1349, 1352, 60 USPQ2d 1375, 1377 (Fed.Cir. 2001)). "In such circumstances, general purpose dictionaries may be helpful." 415 F.3d at 1314, 75 USPQ2d at 1327.

Here, the preposition "to" is "used as a function word to indicate movement or an action or condition suggestive of movement toward a place, person, or thing reached. . . ." *Webster's Ninth New Collegiate Dictionary* 1238 (1990) (copy attached). Giving the claim the broadest, reasonable construction, the limitations require that the distal end of the aforementioned legs slants from a first face toward a second face.

2. Obviousness Determination

"As shown in FIGS. 11 and 12 [of van Woesik], the fibre fixing clip 12 . . . comprises a flat base 62 from opposite edges of which depend respective fibre retention plates 64, each of which comprises a pair of legs 66 each having a tapered free end portion 68. . . ." (Col. 4, ll. 63-68.) More specifically, we find that Figure 12 of the primary reference shows that each of the tapered free end portion 68 slants from one face of its leg 64 toward the other face of its leg. Although each slant meets an opposing slant to form the aforementioned taper, the claim does not preclude such a meeting. Therefore, we affirm the rejection of claim 4.

III. CONCLUSION

For the aforementioned reasons, the rejection of claims 1-4 under § 103(a) is affirmed.

"Any arguments or authorities not included in the brief or a reply brief filed pursuant to [37 C.F.R.] § 41.41 will be refused consideration by the Board, unless good cause is shown." 37 C.F.R. § 41.37(c)(1)(vii). Accordingly, our affirmance is based only on the arguments made in the briefs. Any arguments or authorities omitted therefrom are neither before us nor at issue but are considered waived. *Cf. In re Watts*, 354 F.3d 1362, 1367, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004) ("[I]t is important that the applicant challenging a decision not be permitted to raise arguments on appeal that were not presented to the Board.") No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

ERROL A. KRASS
Administrative Patent Judge

JOSEPH F. RUGGIERO
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

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