

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MING-CHIANG LI

Appeal No. 1996-2163
Application 08/106,541¹

ON BRIEF

Before THOMAS, BARRETT and FRAHM, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellant has appealed to the Board from the examiner's final rejection of claims 17-32, which constitute all the claims in the application.

Representative claim 17 is reproduced below:

17. An acoustical antenna comprising a body; wherein the body comprises a bounded rim which defines an opening for radiating and receiving sounds; wherein the body further comprises of a skirt which is disposed at the rim; wherein a portion of the skirt comprises a serrated-roll edge; wherein the serrated-roll edge is

¹ Application filed August 16, 1993. According to appellant, the application is a continuation-in-part of Application 07/612,997, filed November 15, 1990, now abandoned.

(a) smoothly and continuously rolled back;

(b) shaped to form a serration, wherein an outer edge of the serration is gradual and smooth.

The following references are relied on by the examiner:

Senne	811,877	Feb. 6, 1906
Suchy	1,588,390	Jun. 8, 1926
Leon	2,643,727	Jun. 30, 1953
Novak	2,900,040	Aug. 18, 1959
Kobayashi et al. (Kobayashi)	4,739,860	Apr. 26, 1988
Pfister	5,220,608	Jun. 15, 1993 (filed Oct. 2, 1990)
Ishii et al. (Ishii) ² (Japanese Kokai)	56-52994	May 12, 1981

Claims 18 and 19 stand rejected under 35 USC § 112, first paragraph, on what appears to be both the enablement and best mode provisions. Claims 30 and 32 stand rejected under the written description provision of 35 USC § 112, first paragraph. Claims 17-32 are rejected under 35 USC § 112, second paragraph, as being indefinite.

Various art rejections have been set forth by the examiner. Claims 17-21 and 25-29 stand rejected under 35 USC § 102(b) as being anticipated by Ishii. Likewise, claims 17-20 and 25-27 stand rejected under the same provision as being anticipated by Senne. Other claims remain rejected under 35 USC § 103. As evidence of obviousness, as to

² Our understanding of this reference is based upon a translation provided by the Scientific and Technical Information Center of the United States Patent and Trademark Office. A copy of the translation is enclosed with this decision.

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claims 22, 30 and 32, the examiner relies upon Ishii in view of Kobayashi; as to claims 23 and 31, the examiner relies upon Ishii in view of Pfister or Leon; and as to claim 24, the examiner relies upon Ishii in view of Suchy. Claims 21, 28 and 29 stand rejected under 35 USC § 103 as being obvious over Senne in view of Novak; as to claim 22, the examiner relies upon Senne in view of Novak, further in view of Kobayashi; as to claim 24, the examiner relies upon Senne in view of Suchy; and finally, as to claims 30 and 32, the examiner relies upon Senne in view of Novak and Kobayashi.

Rather than repeat the positions of the appellant and the examiner, we make reference to the appellant's Brief filed on June 16, 1995, as well as appellant's Reply Brief of October 19, 1995. Subsequent to the Remand to the Examiner on March 19, 1999, we have also considered the Supplemental Examiner's Answer of November 1, 1999 as well as appellant's additional Reply Brief of December 3, 1999.

OPINION

At the outset, we make note that the present application is a continuation-in-part of appellant's original application. This continuation-in-part application contains significantly more figures and text in the written description as compared with its parent application, while presenting the current claims on appeal. The filing date of this application is August 16, 1993.

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Turning first to the rejection of claims 18 and 19 under the enablement and best mode provisions of the first paragraph of 35 USC § 112, we reverse the rejection of these claims to the extent it relies upon the best mode provision. The examiner has presented us no evidence of concealment, accidental or intentional, on appellant's part as to the subject matter presently claimed as of the filing date of the present application. Note In re Sherwood, 613 F.2d 809, 817, 204 USPQ 537, 544 (CCPA 1980), cert. denied, 450 U.S. 994, 210 USPQ 776 (1981).

As to the enablement issue, the specification must teach those skilled in the art how to make and use the claimed invention without undue experimentation. Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1365, 42 USPQ2d 1001, 1004 (Fed. Cir.), cert. denied, 118 S. Ct. 397 (1997). This same case indicates that the scope of the claims must bear a reasonable correlation to the scope of enablement provided by the disclosure. Enablement is also not precluded even if some experimentation is necessary, although the amount of experimentation needed must not be unduly excessive. Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987).

We reverse the rejection of claims 18 and 19 under the enablement provision of 35 USC § 112, first paragraph. The examiner's view is based upon the failure of the specification to specifically disclose the theoretical calculations and analysis providing the basis of appellant's invention as well as an adequate description of the claimed minimum

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radius of curvature and predetermined number of derivatives as well as the upper end acoustical wavelengths of antenna operation recited in claims 18 and 19 on appeal.

For his part, appellant makes reference to his prior patent 5,298,911, issued on March 29, 1994 with an effective filing date of September 18, 1990. This patent concerns serrated-rolled edge microwave antennas, and appellant regards this as a part of the art of acoustical antennas of the claimed invention on appeal here. Appellant also makes reference to the Burnside article referenced as an appendix to the principal Brief on appeal entitled "An Improved Main Reflector Design for Compact Range Applications", published in IEEE Trans. Ant. & Prop., Vol. AP 35, No. 3, March 1987, pp. 342-347.

After having studied appellant's present specification and drawings as well as these two documents, we agree with his basic assertion that the terms questioned by the examiner in dependent claims 18 and 19 have a certain measure of standardness and are well known to the artisan. Appellant's own prior patent at column 2, lines 54-64 discusses that the skirt of a serrated-rolled edge antenna must be smooth and continuous, indicating that the minimum radius of curvature at any part of this skirt ought to be at least on the order of the upper end radio wavelength of antenna operation to assure the smooth variation of the skirt surface. Appellant further explains that this smoothness and continuity means that the radius of curvature and a certain number of its derivatives are continuous across the junction of the antenna surface and the serrated-rolled skirt. Similar language with respect to the derivatives is discussed in the present specification in association with

figure 1 at the top of the specification page 5, with respect to figure 2 at the top of the specification page 6 and with respect to figure 4 at the middle of the specification page 7. Appellant's specification also discusses in general terms the underlying theory at specification pages 2 and 3 and again at the middle of page 5 of the specification.

In accordance with the earlier noted precedent governing this rejection, it appears to us that the specification is written from the perspective of requiring a reasonable degree of experimentation from an artisan's perspective, and such would have been necessary to determine the minimum radius of curvature and the relationship thereto of the upper end acoustical wavelength of the antenna operation in addition to the predetermined number of derivatives of the radii of curvature. So much of this is obviously application dependent. However, even though we conclude that some measure of experimentation would be necessary to make and use the claimed invention as to claims 18 and 19, we cannot conclude that the amount of experimentation needed would have resulted in an excessive amount to the artisan. Therefore, we reverse the rejection of claims 18 and 19 under the enablement portion of the first paragraph of 35 USC § 112.

We turn next to the examiner's rejection under the written description portion of 35 USC § 112, first paragraph of claims 30 and 32 because, in the examiner's view, the specification as originally filed does not provide support for the invention as is now claimed in these two claims relating to filling the interiors of the antenna body and skirt with solid material. At the outset, the examiner's reasoning for lack of "support" for the claimed

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invention herein implicitly refers to the written description portion of this statutory provision.

In re Higbee, 527 F.2d 1405, 1406, 188 USPQ 488, 489 (CCPA 1976).

The test to be applied under the written description portion of 35 USC § 112, first paragraph, is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventors had possession at that time of later claimed subject matter. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117, reh'g denied (Fed. Cir. July 8, 1991) and reh'g en banc denied (Fed. Cir. July 29, 1991).

Given the present filing date of August 16, 1993 of this continuation-in-part application, we must reverse this rejection. Original claims 8 and 15 in this application, figures 5 and 6 and their corresponding discussion at pages 7 and 8 of this application as filed provide support for the "solid material" limitation of these claims on appeal.

NEW REJECTION UNDER 35 USC § 112, FIRST PARAGRAPH

Claim 18 is rejected under the written description portion of the first paragraph of 35 USC § 112. There is no evidence to us in the originally filed claims, the drawings and written description of this CIP application that appellant possessed the subject matter of dependent claim 18 on appeal because none of these indicate to us that appellant had possessed and otherwise determined any minimum radius of curvature and any upper end

acoustical wave length of antenna operation. Claim 18 is not an originally filed claim since it was submitted as a part of Paper No. 15, on May 18, 1994 after the filing date of the present application.

Turning next to the rejection of claims 17-32 under the second paragraph of 35 USC § 112, it is to be noted that to comply with the requirements of the cited paragraph, a claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure and the teachings of the prior art as it would be by the artisan. Note In re Johnson, 558 F.2d 1008, 1016, 194 USPQ 187, 194 (CCPA 1977); In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

The examiner's various concerns about the use of the words "smoothly, continuously and gradual" in the claims on appeal do not cause the claims on appeal to be rendered indefinite. The use of these words is consistent within the exact and same usage in the specification as filed. Although they are terms of degree, there is a reasonable understanding the reader would have of their use based on common ordinary meanings of these terms. Additionally, based upon the earlier noted Burnside publication and appellant's own prior patent, there appears to be a certain specified meaning well understood by the artisan. Furthermore, when interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning, unless it appears from the specification or the file history that they were used differently by the inventor. Carroll Touch, Inc. v. Electro Mechanical Systems, Inc., 15 F.3d 1573, 1577, 27 USPQ2d 1836, 1840 (Fed. Cir. 1993). A claim is construed in light of its description in the specification as well

as in its commonly accepted technical sense. In re Barr, 444 F.2d 588, 590, 170 USPQ 330, 333 (CCPA 1971). The examiner has given us no indication that the artisan would not have reasonably understood the meaning of the terms smoothly, continuously and gradually in the context of the disclosed invention and the prior art as required by the earlier noted case law. To avoid edge defraction and spatial irregularities, the surfaces of the acoustic antenna must be smooth and continuous, that is, not disjointed, and gradually changing in shape rather than changing shape abruptly according to the nature of the disclosed and claimed invention. To the extent the examiner's concerns indirectly relate to the breadth of the claims, it is to be noted that breadth is not equated with indefiniteness. See In re Miller, 441 F.2d 689, 693, 169 USPQ 597, 600 (CCPA 1971).

As to the examiner's concerns with respect to claim 19, the claim simply states that both the body and skirt comprise their own respective radii of surface curvature. Therefore, there is no antecedent basis problem contrary to that alleged by the examiner at page 7 of the Answer. In accordance with our earlier noted reversal of the enablement rejection of this claim, the "a predetermined number" of derivatives is easily determinable based upon the mathematical functions under which the curvature is defined, where the claim indicates that "the radii and derivatives of the radii are smooth and continuous across the rim."

On the other hand, the separate rejections of claims 21, 23, 24 and 26-28 are sustained. The language "the transducer" has, as noted by the examiner, no proper antecedent basis because of the use of the article "the" in claim 21. Overall, this claim mounts a transducer at the mouth of the antenna body, where the body of claim 20 further

comprises a mouth. Furthermore, the language “the acoustical antenna comprises means to the transducer in interacting with surrounding medium” is indefinite and does not recite what appellant appears to intend as reflected at pages 2 and 3 of the second Reply Brief. There, appellant indicates that he intends the language to recite the means to mount the transducer and to interact with the surrounding medium. Clearly, there is some function or coupling that has not been recited in this claim. This defect is repeated in claims 23, 24 and 26. In claim 24 there is no recited “the brass instrument” but the claim correctly recites “a brass instrument.” We agree with the examiner that in claim 26 the language “an end in mounting an ultrasonic drive” is indefinite. Likewise “the opening rim of the antenna body” is indefinite because there has not been established in this independent claim that there is any opening rim in any antenna body or any other portion of that claim. The same may be said of “the mouth” at the end of dependent claim 28 on appeal. Therefore, the decision of the examiner rejecting claims 21, 23, 24 and 26-28 under the second paragraph of 35 USC § 112 is sustained. The rejection of claims 17-20, 22, 25 and 29-32 is reversed.

Before we turn to the individual art rejections, we observe that appellant’s written description in the specification continually describes the serrated edges as being “rolled back.” The drawings, however, in this CIP application do not show well that the serrated edges are rolled back. The best showing appears to be the depictions in appellant’s prior patent entitled “Serrated-Rolled Edge for Microwave Antennas,” U.S. Patent 5, 298, 911 issued on March 29, 1994, as the best way of illustrating appellant’s serrated and rolled back edges. It appears to us that a rolled back edge flares back upon itself, that is, the serrated surface must change direction and tend to roll back towards the origin of the flare

at the outer edge of the flare. A simple flaring surface does not necessarily flare backwards or roll backwards.

With this understanding, we reverse the rejection of independent claims 17 and 20 and their respective dependent claims rejected under 35 USC § 102 over Ishii. On the other hand, we sustain the rejection of anticipation under 35 USC § 102 of claims 27-29 on the basis of this reference.

This rejection under 35 USC § 102 of independent method claim 27 is sustained because there is no recitation in this claim that the recited “serrated-rolled edge” must be rolled back, which feature is recited in independent claims 17 and 20 and is the basis for the reversal of the rejection of these respective claims. Ishii does not show and the translation we have obtained of Ishii does not describe that the edge portion of the horn pipe 3 in the various figures has edges that are rolled back as required by independent claims 17 and 20 on appeal. To sustain the examiner’s rejection of these claims, we would need to resort to speculation or unfounded assumptions to supply the factual deficiencies in the record before us. This we decline to do. Note the guidance provided by In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968), reh’g denied, 390 U.S. 1000 (1968). Ishii simply falls short of the needed specificity.

Appellant’s arguments addressing this rejection are at pages 5 and 6 of the principal Brief on appeal and at pages 3 and 4 of the second Reply Brief (where appellant’s first Reply Brief does not substantively address these rejections). To the extent that appellant argues that Ishii does not teach the reduction of edge defraction, this feature

is not claimed and therefore not pertinent to the very broadly recited feature in independent claim 27 that the skirt only have “a serrated-rolled edge.” Therefore, appellant’s argument regarding an accidental anticipation under 35 USC § 102 is misplaced. There is no active teaching away in Ishii of serrated-rolled edges to the extent recited in independent claim 27 on appeal. Furthermore, we see no merit to appellant’s characterization that the edges of Ishii’s horn 3 are fairly characterized as having fluted edges, since the claim does not otherwise distinguish over the showings in this reference. Claim 27 also does not require that the edges be uniform, continuous, smooth and gradual. Therefore, since appellant has not presented any other arguments with respect to the rejection of method claim 27 and its dependent claims 28 and 29, we sustain this rejection under 35 USC § 102 of these claims as being anticipated by Ishii.

Turning next to the various claims under 35 USC § 102 as being anticipated by Senne, we also reverse the rejection of independent claims 17 and 20 as being anticipated by Senne, but sustain the rejection of claim 27 as being anticipated by this reference.

Again, it is noted that the independent claim 27 merely requires that the skirt have “a serrated rolled edge.” This is clearly shown in at least figures 2, 8, 12 and 13, which depict that the outer edge or outer end of the respective series of blades or strips A, when assembled, provide a series of serrated-rolled edges. Additionally, note page 2, lines 18-20 which state “I prefer to bend the free ends of the blades at their outer ends back upon the body of the blade in a circular form.” Appellant’s argument with respect to this rejection at pages 6 and 7 of the principal Brief on appeal and appellant’s second Reply Brief at

pages 3 and 4 thereof, are also misplaced to the extent we sustain the rejection of independent claim 27 on appeal. Suffice it to say that claim 27 does not recite the features recited in independent claims 17 and 20 on appeal which further detail the nature of the serrated-rolled edge. To the extent recited in claim 27 the manner in which the joints between the blades allegedly are not smooth is not pertinent to the claim itself. There is no clear teaching away in Senne or of a reduction of edge defraction since that feature is not recited in that claim. Thus, appellant's further argument of an accidental anticipation of the claimed invention within 35 USC § 102 does not apply according to the facts here.

On the other hand, we reverse the rejection of independent claims 17 and 20 on appeal as being anticipated by Senne. In independent claim 20, the outer edge in Senne is not smooth and gradual at the point where the outer end of each individual blade joins each adjacent blade. At that point there is an apparent discontinuity between blades. This is true even though each blade per se has at the outer end of his speaker horn a rolled back edge that is smooth and continuous. As to independent claim 17, we add to these deficiencies of Senne that it also does not meet the limitation that the outer edge be "smoothly and continuously rolled back." As such, the rejection of independent claims 17 and 20 and their respective dependent claims rejected under 35 USC § 102 cannot be sustained.

To the extent Ishii and Senne are combined with additional references to reject dependent claims depending from independent claims 17 and 20 under 35 USC § 103, these rejections are all reversed because of the noted deficiencies with respect to Ishii and Senne in meeting the requirements of these independent claims. We focus now upon

those rejections applicable to the dependent claims associated with independent method claim 27.

We sustain the rejection of dependent claims 30 and 32 under 35 USC § 103 in light of the collective teachings of Ishii in view of Kobayashi as set forth by the examiner at pages 9 and 10 of the Supplemental Answer. For ultrasonic embodiments, Kobayashi's figure 7 indicates that it was known in the art to fill at least the ultrasonic chamber with solid material. Moreover, what is more telling however is appellant's own description of his disclosed invention in figures 5 and 6 as set forth at the bottom of page 7 and top of page 8 of appellant's CIP specification as filed. There, appellant clearly indicates that it was known in the art for certain ultrasonic environments to completely fill an antenna body and its associated skirt with solid material and to mount an ultrasonic drive onto an antenna body. These admissions cannot be ignored. Taken with Kobayashi, obviously Ishii's teaching would have been applicable to ultrasonic as well as audible range acoustic environments.

For his part, appellant's remarks at page 9 of the principal Brief on appeal and page 4 of the second Reply Brief both basically take the position that Kobayashi and Ishii did not teach or consider methodologies to reduce the edge defraction of their horns. As noted earlier in this decision, this position is unpersuasive since there is no feature recited in dependent claims 30 and 32 as to any edge reduction at all. Appellant's arguments do not consider the features of the actual claims on appeal nor the teaching value of Kobayashi. As noted in the last paragraph, we do not regard the examiner's position as based upon prohibited hindsight.

On the other hand, we reverse the rejection of claim 31 in light of the collective teachings of Ishii in view of Pfister or Leon. In accordance with independent claim 27, the serrated-rolled edge of the skirt is placed at the opening rim of the antenna body. It is in this context that the first feature of dependent claim 31 recites that the antenna body is shaped to a reflector. Then, in a feature apparently not fully appreciated by the examiner, the claimed acousducer has been placed in front of the reflector at the end of claim 31 on appeal. The examiner's statement of the rejection at page 10 of the second Answer does not appear to specify how Pfister modifies Ishii. It is not clear if the examiner intends to modify the outside rim of the loud speaker 5, the first reflector 9 or the second reflector 6 in view of Ishii's serrated-rolled edge horn element 3 in his various figures. Every one of these approaches is speculative in our view in light of the collective teachings and showings of both references. In the first and third views of the examiner, the speaker 5 would not necessarily be placed in front of the reflector as required at the end of claim 31 on appeal.

As to Leon, this reference teaches various advantages at column 1, lines 6-17 and column 2, lines 41-54 generally attributable to the ellipsoid reflector 3 used in conjunction with the speaker 1. Again, the combination of Ishii and Leon would not have yielded the speaker in front of the reflector 3 of Leon in accordance with the requirement of the feature at the end of claim 31 on appeal. Even if the teachings of the two references were combinable within 35 USC § 103, the effective advantages just noted of the ellipsoidal shape of the reflector 3 in Leon would have apparently been destroyed by the use of the serrated rolled edge thereon in accordance with the modifying teachings in Ishii.

Therefore, in view of these considerations, we reverse the rejection of claim 31 in light of Ishii in view of Pfister or Leon.

Claims 28 and 29 stand rejected under 35 USC § 103 in light of the collective teachings of Senne in view of Novak. Initially, Senne's invention is directed to a phonograph horn. It goes without saying therefore that the claimed acousducer of these claims comprises the phonograph itself, taught in Senne but not shown in any figure associated therewith. Obviously, it would have been placed in the region C at the mouth of Senne's antenna body. Additionally, the combined arrangement would have been present as shown generally in Novak in his various figures. Although no enclosure of claim 29 is shown in Senne, the teachings in Novak indicate that it was known to have placed an enclosure about his loudspeaker 1 in the manner claimed as an obvious enhancement over the teachings in Senne. Further the advantages of the use of Novak are set forth at least at column 1, lines 45-56. This rejection of claims 28 and 29 is sustained.

We therefore do not agree with appellant's general argument of hindsight as set forth at page 4 of the second Reply Brief as to this rejection. We also do not agree with appellant's argument at page 11 of the principal Brief on appeal that Novak does not teach to reduce the edge defraction of his loud speaker, since this feature is not recited in claims 28 and 29 on appeal.

NEW REJECTION UNDER 35 USC § 103

Before we continue, we enter a new ground of rejection to dependent claim 31 in light of the collective teachings of Senne and Novak under 37 CFR § 1.196(b). Figure 7 of

Novak shows a folded horn speaker arrangement where the speaker is placed in front of the reflector arrangement housing 6a generally discussed at column 3, beginning at line 56, in the manner set forth at the end of claim 31 on appeal. Such a folded horn arrangement in figure 7 of Novak is obviously an antenna body of the type initially set forth in claim 31 on appeal also shaped as a reflector. However, in view of the combined teachings of Novak and Senne, it would have been obvious to shape the outer rim edges of the horn 6a in the manner of the serrated rolled edge approach shown in Senne.

Finally, we address the rejection of claims 30 and 32 under 35 USC § 103 in light of the collective teachings of Senne, in view of Novak and Kobayashi. We sustain this rejection for the reasons set forth earlier with respect to our affirmance of the rejection of these claims under 35 USC § 103 in light of the collective teachings of Ishii and Kobayashi. We do so for these reasons in addition to those set forth by the examiner at page 13 of the second Answer. Appellant's arguments as to this rejection in the Brief and second Reply Brief do not address the rejection with any more particularity than we have already discussed.

Appellant, even though prosecuting his own application pro se, may not fully appreciate his own "duty to disclose information material to patentability" required of him in accordance with 37 CFR § 1.56. On the one hand, appellant provided as an attachment to the amendments supplied with Paper No. 15 of the present application filed on May 18, 1994 as well as an attachment to the principal Brief on appeal the 1987 Burnside article, and continued to make mention in the arguments associated with the parent application and this application in the various responses to the Office Actions issued, appellant's

belief that his prior microwave antenna patent was considered by him to be pertinent, analogous prior art to the claims present in this appeal. The submission of these documents was not formally in the context of the disclosure requirement in accordance with Rule 56, however. Additionally, we note that although the discussion in the paragraph above the middle of page 4 of the specification of the parent application that appellant regarded the ancient chinese art of bell making's more recently used designs employing serrated-rolled edges as pertinent prior art, no mention is made of this subject matter in the present CIP application. For his part, the examiner appears not to have fully appreciated the teaching value of all this prior art made known to the examiner by appellant. In any continuing prosecution of this application or any subsequent application, appellant is expected to comply with the provisions of 37 CFR § 1.56 and the examiner is expected to fully consider the materiality of any new submissions by appellant as well as the above noted prior art.

SUMMARY

We have reversed the best mode and enablement rejections of claims 18 and 19 under 35 USC § 112, first paragraph. We have also reversed the rejection of claims 30 and 32 under the written description portion of the first paragraph of 35 USC §112. As to the rejection of claims 17-32 under the second paragraph of 35 USC § 112, we have sustained the rejection of claims 21, 23, 24 and 26-28, but have reversed the rejection of claims 17-20, 22, 25 and 29-32.

As to the various art rejections, we have reversed the rejections under 35 USC §§ 102 and 103 of claims 17-26 as being anticipated by Ishii or Senne, respectively, including all combinations of references applied for their respective dependent claims under 35 USC § 103. On the other hand, we have sustained the rejection of claims 27-29 under 35 USC § 102 as being anticipated by Ishii, and we have also sustained the rejection of claim 27 under 35 USC § 102 as being anticipated by Senne. We have sustained the rejection of claims 30 and 32 under 35 USC § 103 over Ishii and Kobayashi. We have reversed the rejection of claim 31 under 35 USC § 103 in light of the collective teachings of Ishii in view of Pfister or Leon. We have sustained the rejection of claims 28 and 29 under 35 USC § 103 in light of the collective teachings of Senne and Novak as well as the rejection of claims 30 and 32 in light of the additional teachings added to these references by Kobayashi.

Under the provisions of 37 CFR § 1.196(b) we have instituted a new ground of rejection of claim 18 under the written description portion of the first paragraph of 35 USC § 112. We have also instituted a new ground of rejection of claim 31 under 35 USC § 103 in light of the collective teachings of Senne in view of Novak.

Therefore, the decision of the examiner rejecting the claims on appeal under various statutory bases is affirmed-in-part.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63,122 (Oct. 21, 1997)). 37 CFR

§ 1.196(b) provides, “A new ground of rejection shall not be considered final for purposes of judicial review.”

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

(b) Appellant may file a single request for rehearing within two months from the date of the original decision

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for reconsideration thereof.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART
37 CFR § 1.196(b)

)	
JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LEE E. BARRETT)	
Administrative Patent Judge)	APPEALS AND
)	
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