

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ONTEL PRODUCTS CORPORATION,
Petitioners,

v.

HAPPY PRODUCTS, INC.,
Patent Owner.

Case IPR2025-01536
U.S. Patent No. RE48,479

**EXPERT DECLARATION OF STEVEN R. SCHMID
IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. RE48,479**

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Exhibit No.	Exhibit Description
1001	U.S. Patent No. RE48,479 (“RE’479 patent”)
1002	Prosecution history of the RE’479 patent
1003	Expert Declaration of Steven R. Schmid, Ph.D. in Support of Petition for <i>Inter Partes</i> Review of Patent No. RE48,479
1004	Curriculum Vitae of Steven R. Schmid, Ph.D.
1005	U.S. Provisional Patent Application No. 61/896,540
1006	Prosecution history of U.S. Application No. 14518,443
1007	Prosecution history of U.S. Application No. 15/192,737
1008	U.S. Patent Application Publication No. 2015/0115124 A1 (“Cannon”)
1009	U.S. Patent No. 1,928,806 (“Barcalo”)
1010	U.S. Patent No. 8,960,421 (“Diebel”)
1011	U.S. Patent No. 3,746,296 (“Dean”)
1012	U.S. Patent Application Publication No. 2015/0189781 A1 (“Klepar I”)
1013	U.S. Design Patent No. D703,216 S (“Klepar II”)
1014	U.S. Patent Publication 2003/0001063 A1 (“Halpin”)
1015	Patent Owner’s and Petitioner’s Joint Claim Construction Statement in <i>Happy Products, Inc. v. Ontel Products Corporation</i> , Civil Action No. 2:24-cv-09819 (DNJ) dated September 22, 2025
1016	Patent Owner’s Disclosure of Asserted Claims and Infringement Contentions in <i>Happy Products, Inc. v. Ontel Products Corporation</i> , Civil Action No. 2:24-cv-09819 (DNJ) dated May 16, 2025
1017	Patent Owner’s Responses to Petitioner’s Invalidity Contentions in <i>Happy Products, Inc. v. Ontel Products Corporation</i> , Civil Action No. 24-cv-09819 (DNJ) dated May 16, 2025

Exhibit No.	Exhibit Description
1022	Assignment Record of U.S. Patent No. 9,642,454

I, Dr. Steven R. Schmid, declare that:

I. INTRODUCTION

1. I have been retained by ArentFox Schiff LLP on behalf of Petitioner Ontel Products Corporation (“Ontel” or “Petitioner”) as an independent expert consultant. I am not and have never been an employee of the Petitioner, any affiliated companies, or any real parties-in-interest.

2. As part of this engagement, I have been asked to provide my opinions regarding the subject matter claimed in U.S. Patent No. RE48,479 (“RE’479 patent”) (Exhibit 1001), assigned to Happy Products, Inc. (“HPI” or “Patent Owner”), including specifically the scope and content of the prior art relating to the subject matter of the RE’479 patent and what the prior art would disclose and suggest to a person of ordinary skill in the art (“POSA”) at the time of the purported invention. My opinions are set forth below.

3. My opinions in this declaration are based on the documents¹ I cite along with my education, experience and knowledge.

4. For my time and effort in researching, reviewing, forming my opinions, and preparing this declaration, I am being paid at a rate of \$400 per hour. No part of the compensation is tied in any way to the opinions expressed in this declaration or

¹ In this Declaration, I refer to Exhibits that I am informed are attached to Petitioner’s petition for *inter partes* review of the RE’479 patent (the “Petition”).

the outcome of this *inter partes* review. I have personal knowledge of the facts stated in this declaration, and I could and would competently testify to them if called upon to do so.

5. In this declaration, I include several annotated figures to explain my opinions. I note that these figures are not necessarily intended to imply literal, precise physical or bodily combination or modification in exactly the way shown or annotated. Instead, I provide the figures and accompanying annotations to help illustrate various concepts. They should not be taken as showing the only disclosure of a particular element, or the only way that a POSA would have modified or combined the prior art.

6. My opinions and their underlying reasoning are explained in detail below.

II. BACKGROUND AND QUALIFICATIONS

7. I am providing my independent opinions in this Declaration. I have worked in the field of mechanical engineering, in both industry and academia, for over thirty years. All of my opinions are based on my own personal knowledge, experience, and professional judgement from my education and experience in the field of mechanical engineering. I am over 18 years of age and, if I am called upon to do so, I would be competent to testify as to the matters set forth herein.

8. My current *curriculum vitae*, which lists my degrees, experiences,

activities, honors, and publications is attached as Exhibit 1004. Below I provide an overview of some of my qualifications and experiences relevant to this matter.

9. I was a Professor of Mechanical Engineering at the University of Notre Dame from 1993 to 2019, and have been the Belk-Woodward Distinguished Professor of Mechanical Engineering at the University of North Carolina at Charlotte since 2020. My areas of research include design, manufacturing and machining, as well as tribology. I write the world's most popular manufacturing textbook, *Manufacturing Engineering and Technology*, currently in its ninth edition. I write the chapter on Machining in the well-known *Marks Handbook for Mechanical Engineers*, and have a large number of technical papers in the field.

10. From 2012- 2013, I served as the first Faculty Fellow at the Advanced Manufacturing National Program Office, where I helped design the Manufacturing USA program. I was a Program Director at the National Science Foundation, where I reorganized the manufacturing research programs into one over-arching Advanced Manufacturing program. I started the Blue Skies initiative at the North American Manufacturing Research Conference, and served as President of NAMRI in 2012. In 2019, I was awarded the Gold Medal from the Society of Manufacturing Engineers for my research in manufacturing processes. In 2023, I received the David Dornfeld Manufacturing Innovation Award from the Society of Manufacturing Engineers, and a Lifetime Achievement Award from the Manufacturing Engineering

Society in Spain.

III. INFORMATION RELIED UPON

11. In addition to my general knowledge gained as a result of my education and experience, I have reviewed and considered, among other things, the prior art of record discussed herein.

12. The full list of information, in addition to my professional and academic experience, that I have relied upon in forming my opinions for this report is set forth throughout the report and in the Table of Exhibits. Where my conclusions are based on certain assumptions that I have adopted, I have stated such assumptions in this Declaration.

13. All of the patents and publications that I reviewed in forming my opinions for my Declaration are materials that experts in my field would have knowledge of and would reasonably rely on in forming certain opinions set forth in my Declaration. In addition, all of the patents and publications that were widely available to a POSA, as discussed below at least as of the time of the filing of the application(s) leading to the RE'479 patent. Based on my experience, people in my field at the time of the alleged invention ordinarily and customarily relied on published papers and textbooks including those listed below, and ordinarily and customarily relied on such publications as having been published as of the publication date listed in the document. I am not aware of any facts or circumstances

that call into question the authenticity of any of the above materials or the accuracy of their publication dates.

IV. LEGAL STANDARDS

14. In forming my opinions and considering the patentability of the claims of the RE'479 Patent, I am relying upon certain legal principles that counsel for Petitioner have explained to me, as listed below.

15. I have been advised that the burden in this proceeding is on Ontel to demonstrate the unpatentability of the challenged claims.

A. Effective Filing Date

16. I have been advised that patents can claim priority to an earlier-filed patent application, e.g., as a “continuation” or “continuation-in-part.” In that circumstance, the claims of the patent can have a priority date (also called an “effective filing date”) of that earlier-filed patent application if the earlier-filed patent application supports the subject matter of the claims. I further understand that the subject matter of the claims is supported by the earlier-filed application if that application provides a written description for the claimed subject matter.

17. I have been advised that the priority date analysis is done on a claim-by-claim basis. I further understand that in order for a patent claim to be entitled to the benefit of the earlier filing date, the entire claim must be supported by the earlier application; if even a single limitation of a claim does not have adequate written

description in an earlier application, then the claim is not entitled to the filing date of that earlier application.

18. I have been advised that to provide a written description for claimed subject matter, an earlier-filed application must make a sufficient description to demonstrate that the inventor had possession of the full scope of the claimed invention at the time the earlier-filed application was filed. Making this determination entails an objective inquiry into the disclosure of the earlier-filed application from the perspective of a POSA, taking into consideration the existing knowledge in the particular field and the maturity of the science or technology.

19. I have been advised that an ambiguous disclosure does not provide written description support for a claim element, and that a POSA must be able to recognize that the inventor was in possession of the claimed invention with reasonable clarity. I also understand that even if a vague description might render a claim element obvious, it is not sufficient to provide written description support for that element.

B. Claim Construction

20. I understand the first step in determining whether a patent claim is valid is to properly construe the claims. I have been advised that each claim of a patent subject to *inter partes* review is to be interpreted in light of the language of the claim, the written description, the figures, and the prosecution history of the patent.

21. I have been advised that in the absence of a specific definition within the specification or the reliance on a specific meaning in the prosecution history, the terms as used in the challenged claims of the RE'479 Patent are to be afforded their plain and ordinary meaning at the time of the invention.

22. I have been advised that the “plain and ordinary meaning” of a term means the ordinary and customary meaning given to the term by those of ordinary skill in the art at the time of the invention and that the ordinary and customary meaning of a term may be evidenced by a variety of sources, including the words of the claims, the specification, drawings, and prior art. I have been advised that in construing claims, all words in a claim must be considered in judging the patentability of that claim against the prior art.

23. I have been advised that extrinsic evidence may be consulted for the meaning of a claim term as long as it is not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence. I have been advised that in construing claim terms, the general meanings gleaned from reference sources must always be compared against the use of the terms in context, and the intrinsic record must always be consulted to identify which of the different possible dictionary meanings is most consistent with the use of the words by the inventor.

24. I have been advised that different claim terms are presumed to have different meanings unless a particular patent uses the terms interchangeably, and that

when two adjacent claims use different terms in parallel settings supports a conclusion that the two terms were not meant to have the same meaning.

C. Obviousness

25. I have been advised that a claimed invention is not patentable for obviousness if the differences between the claimed invention and the prior art are such that the subject matter as a whole would have been obvious at the time the claimed invention was made to a POSA to which the subject matter of the invention pertains.

26. I have been advised that a determination of obviousness requires inquiries into: (i) the scope and content of the art when the claimed invention was made; (ii) the differences between the art and the claims at issue; (iii) the level of ordinary skill in the pertinent art when the claimed invention was made; and, to the extent any exist, (iv) secondary considerations indicating non-obviousness.

27. I have been advised that hindsight must not be used when comparing the prior art to the claimed invention for obviousness. Thus, a conclusion of obviousness must be firmly based on the knowledge and skill of the artisan at the time the claimed invention was made, without the use of post-filing knowledge.

28. I have been advised that in order for a claimed invention to be considered obvious, there must be some rational underpinning for combining cited references as proposed.

29. I have been advised that obviousness may also be shown by demonstrating that it would have been obvious to modify what is disclosed in a single piece of prior art to create the claimed invention. Obviousness may be shown by demonstrating that the skilled artisan would have found it obvious to combine the disclosures of more than one element disclosed by prior art.

30. I have been advised that the following examples are approaches and rationales that may be considered in determining whether a piece of prior art could have been combined with other prior art or with other information within a skilled artisan's knowledge:

- i. combining prior-art elements according to known methods to yield predictable results;
- ii. substituting one known element for another to obtain predictable results;
- iii. using a known technique to improve similar devices (methods, or products) in the same way;
- iv. applying a known technique to a known device (method, or product) that was ready for improvement to yield predictable results;
- v. applying a technique or approach that would have been "obvious to try" (i.e., choosing something from a finite number of identified, predictable solutions, with a reasonable expectation of success);
- vi. applying variations based on known work in one field of endeavor for use in either the same field or a different one, based on design incentives or other market forces, if the variations would have been predictable to one of ordinary

skill in the art; or

- vii. acting upon some disclosure, suggestion, or motivation in the prior art to modify the prior-art reference or to combine prior-art reference disclosures thereby arriving at the claimed invention.

31. I have been instructed that “secondary considerations” will be considered when present.² I am informed by counsel that such secondary considerations, where evident, may include:

32. commercial success of a product due to the merits of the claimed invention;

- i. a long-felt but unsatisfied need for the claimed invention;
- ii. failure of others to find the solution provided by the claimed invention;
- iii. deliberate copying of the claimed invention by others;
- iv. unexpected results achieved by the claimed invention;
- v. praise of the claimed invention by others skilled in the art;
- vi. lack of independent, simultaneous invention within a comparatively short span of time; and
- vii. disclosing away from the claimed invention in the prior art. I am informed that secondary considerations are relevant where there is a nexus between the evidence and the claimed invention.

² I am informed by counsel that Patent Owner has not identified specific evidence to prove alleged secondary considerations that I would need to consider in offering my opinions herein.

33. I have been advised that in order to support a finding of nonobviousness, the evidence of secondary considerations must be sufficiently tied to the patented features. I am informed that the Patent Owner bears the burden to establish any secondary considerations indicating non-obviousness.

34. I have been advised that, after consideration of all of these factors, a patent is obvious if the difference between the subject matter sought to be patented 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 POSA to which said subject matter pertains.

V. LEVEL OF ORDINARY SKILL IN THE ART

35. I have been advised that a POSA is a hypothetical person who is presumed to have known the relevant art at the time of the claimed invention. I further understand that the factors that may be considered in determining the level of ordinary skill include: (1) the problems encountered in the art; (2) the prior art solutions to the problems encountered in the art; (3) the rapidity of innovation; (4) the sophistication of the technology; and (5) the education level of active workers in the field. I understand that these factors need not all be considered for the analysis and that one or more of these factors may control.

36. By virtue of my education, experience, and training, I am familiar with the level of ordinary skill in the art in the context of the RE'479 Patent. A POSA as of October 20, 2014 or June 24, 2016 or January 30, 2019 would be educated in

mechanical engineering with a bachelor's degree and one or two years of experience in the development and construction of support structures, or an associate's degree and at least three to five years of experience in the development of support structures. A POSA would be aware of developments in the field of support structures, particularly portable structures, for example by attending trade shows, and by reading patents and trade journals, and could work in a team with machinists. This level of skill is consistent with that presumed by the inventors of the RE'479 patent.

37. I have been asked to provide my opinion at the level of POSA assuming that the effective filing date for claims 1-2, and 8-10 is the filing date of from U.S. Application No. 15/192,737 of June 24, 2016³, for claims 12-13, 15-17, 19 is the filing date of U.S. Application No. 16/262,797⁴ of January 30, 2019, and for claims 20-21, 27-29 is the filing date of U.S. Application No. 14/518,443⁵ of October 20, 2014. Based on my consideration of the factors above, I believe that the same definition applies, and my opinions expressed herein would not change if a date is earlier in time, including October 20, 2013, than the filing date of U.S. Provisional Application No. 61/896,540⁶.

38. As of the aforementioned effective filing dates, I met the qualifications

³ I refer to this application hereinafter as "the '737 application." (Exhibit 1007).

⁴ I refer to this application hereinafter as "the '797 application." (Exhibit 1002).

⁵ I refer to this application hereinafter as "the '443 application." (Exhibit 1006).

⁶ I refer to this application hereinafter as "the '540 application." (Exhibit 1005).

of a person who has ordinary skill in the art.

39. All my opinions in this declaration are from the perspective of a POSA as I have defined it here during the relevant timeframe.

VI. PRESUMPTION OF VALIDITY

40. I understand that a granted patent is presumed to be valid. I have been advised that the presumption of validity can be overcome in a litigation if clear and convincing evidence is presented that proves the patent is invalid.

41. I have been advised that the standard of proof for invalidating a patent in an *inter partes* review proceeding is a “preponderance of the evidence” (*i.e.*, greater than 50% chance of likelihood), which is a lower standard than the clear and convincing evidence standard.

VII. THE RE’479 PATENT

A. Summary of the Specification⁷

42. The RE’479 Patent relates to a media support apparatus and discloses a media support apparatus that includes three support sides and provides multiple viewing angles. Exhibit 1001 at Abstract, 1:25-30. In an embodiment, the media support apparatus may position media at one of three varied but carefully chosen

⁷ The summary I provide herein is intended to be representative of the disclosure in the RE’479 Patent. I have considered the entirety of the disclosure in the RE’479 Patent for the purposes of providing my opinions.

angles for viewing by the user. Exhibit 1001 at 2:23-25, 2:41-44. As a result, “the media support provides a comfortable support at an appropriate angle for the most common viewing positions.” Exhibit 1001 at 2:44-46.

43. The RE’479 Patent discloses an apparatus that facilitates positioning media, such as a handheld device, an electronic reader, a tablet computer, a video display, a magazine, a book, or the like. Exhibit 1001 at 2:25-28. Because the media may be handheld, it is often viewed while the user is sitting at a table with the media on the table, while the user is sitting with the media disposed in the user’s lap, or while the user is lying down. Exhibit 1001 at 2:29-31.

44. I have reproduced below Figure 1 of the RE’479 Patent (a perspective drawing of an embodiment of the media support apparatus) with annotations to identify the three support sides (155), three edge supports (110)⁸, one of the three back supports (105)⁹ and one of three viewing angles (160):

⁸ I understand that the RE’479 patent uses the terms “edge support” and “support edge” interchangeably (identified as 110).

⁹ I understand that the RE’479 patent uses the terms “back support” and “support back” interchangeably (identified as 105).

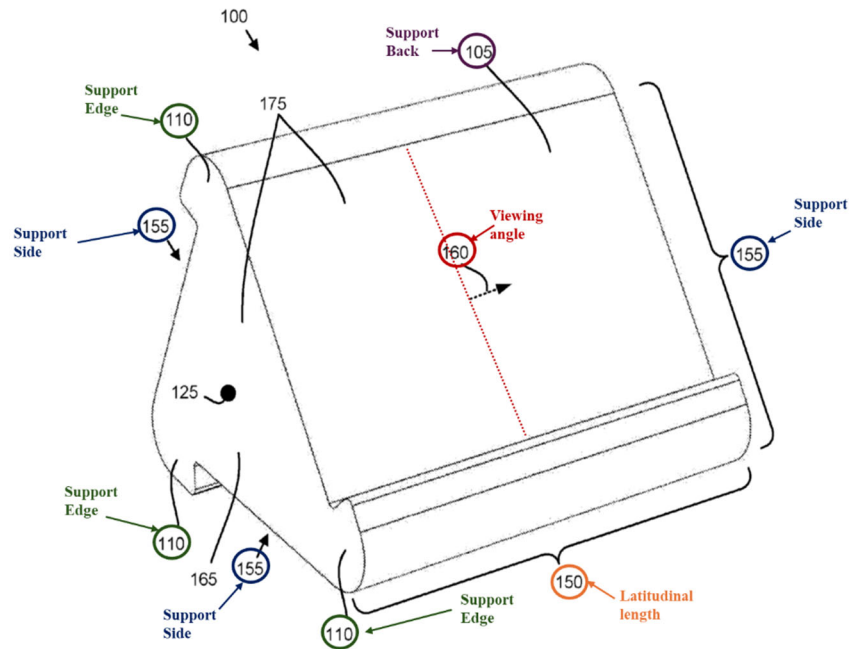


Exhibit 1001 at Figure 1 (annotated).

45. In one embodiment, the back supports 105 and the edge supports 110 of the three support sides 155 are about an end 165. Exhibit 1001 at 3:27-29. The top of each back support 105 is disclosed as being in physical communication with an adjacent edge support about the central axis 125. Exhibit 1001 at 3:29-31. Each back support has a longitudinal length 115a and “each back support 105 and each edge support 110 is a surface 175 of a solid.” Exhibit 1001 at 3:49-58, 3:1-2. “Each back support 105 and each edge support 110 may be in physical communication with two ends 165 of a solid interior.” Exhibit 1001 at 3:2-5, Figure 1 (above).

46. The RE’479 Patent discloses that “[a] plane of a first back support 105a

may be at a first plane angle¹⁰ 120a in a range of 50 to 60 degrees to a second virtual plane 130b between the top of a second back support 105b counterclockwise to the first back support 105a and an outer edge of a second edge support 110b counterclockwise to the first back support 105a. In addition, a plane of the second back support 105b may be at a second plane angle 120b in a range of 55 to 65 degrees to a third virtual plane 130c between the top of a third back support 105c counterclockwise to the second back support 105b and an outer edge of a third edge support 110c counterclockwise to the second back support 110b. A plane of a third back support 105c may be at a third plane angle 120c in a range of 50 to 75 degrees to a first virtual plane 130a between the top of the first back support 105a counterclockwise to the third back support 105c and an outer edge of the first edge support 110a counterclockwise to the third back support 105c.” Exhibit 1001 at 3:31-48; Figure 2.

47. It further discloses that the support sides 155 may be arranged to

¹⁰ I note that the terminology of the RE’479 Patent is inconsistent. For example, the only disclosure in the RE’479 Patent for plane angle 120 is as the angle of a plane of a back support 105a to a virtual plane. Exhibit 1001 at 3:31-48. But later in the specification, the “plane angles 120” are described as “first viewing angle 120a,” “second viewing angle 120b” and “third viewing angle 120c.” Exhibit 1001 at 3:59-63. I understand that the Patent Owner has contended that this is “an apparent numbering error in the specification.” Exhibit 1017 at 73. I am informed that Patent Owner has not sought to correct this error before the Patent Office. As discussed in the claim construction section and in forming my opinions herein, I have applied a revised Patent Owner’s proposed construction for “plane angle.”

provide three different viewing angles 160¹¹ for three different user positions. Exhibit 1001 at 2:63-65. Each viewing angle is disclosed as orthogonal to a back support. Exhibit 1001 at 2:65-66, Figure 2 (annotated below). The arrangement of the longitudinal lengths and the plane angles generate three distinct viewing angles. Exhibit 1001 at 3:59-60.

48. I have reproduced below Figure 2 (a side view drawing illustrating one embodiment of a media support) of the RE'479 Patent annotated to identify the disclosed elements and oriented such that the media support apparatus is resting:

¹¹ For the same reasons as discussed above, the terminology of the RE'479 Patent as to a "viewing angle" is inconsistent. I understand that the Patent Owner has contended that this is "an apparent numbering error in the specification." Exhibit 1017 at 73. I am informed that Patent Owner has not sought to correct this error before the Patent Office. As discussed in the claim construction section and in forming my opinions herein, I have applied Patent Owner's proposed construction for "viewing angle."

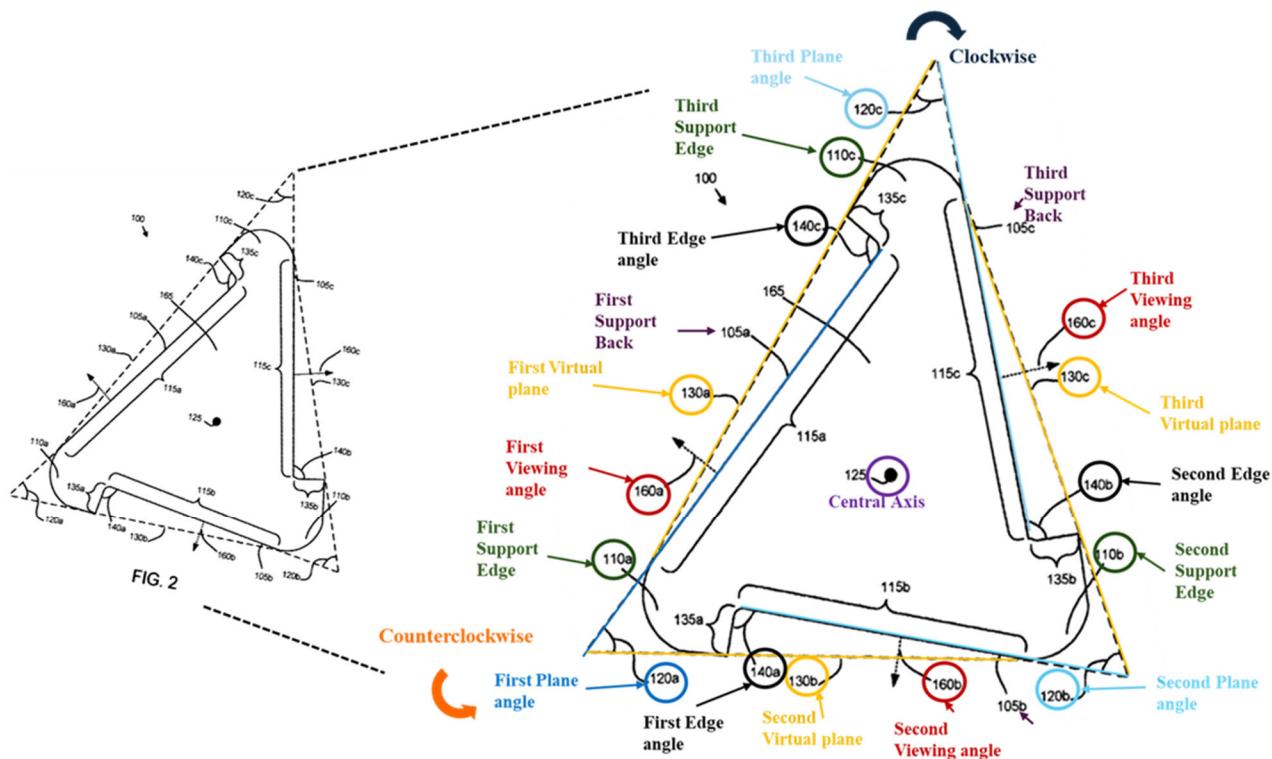


Exhibit 1001 at Figure 2 (annotated).

B. Claims

49. I have been asked to form an opinion regarding the validity of claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE'479 Patent.

50. Claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE'479 Patent are reproduced below:

1. An apparatus comprising:
2. three support sides, each support side comprising a back support and an edge support, wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis and each back support and each edge support is in physical communication with two ends of a solid interior, each edge support comprises an edge support width of 2 centimeters (cm) with an edge angle of 90 degrees to an adjacent back support, a face of each edge support width oriented clockwise

about the central axis, a plane of a first back support is at a first plane angle of 60 degrees to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support, a plane of the second back support is at a second plane angle of 80 degrees to a third virtual plane between the top of a third back support counterclockwise to the second back support and an outer edge of a third edge support counterclockwise to the second back support, a plane of a third back support is at a third plane angle of 40 degrees to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support, and wherein each back support, each edge support, and each end is a surface of the solid interior, the solid interior is a pillow covered in fabric, a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees.

3. The apparatus of claim 1, wherein the first back support has a longitudinal length in the range of 12 to 26 centimeters (cm), the second back support has a longitudinal length in the range of 9 to 21 cm, and the third back support has a longitudinal length in the range of 10 to 22 cm.
4. The apparatus of claim 1, wherein each edge support has an edge support width in the range of 1 to 5 centimeters (cm).
5. The apparatus of claim 1, wherein a plane of each edge support forms an edge angle in the range of 85 to 120 degrees with an adjacent back support.
6. The apparatus of claim 9, wherein the edge angle is 90 degrees.
7. A media support apparatus comprising:
8. a body having a first support back, a second support back, and a third support back disposed about a central axis;
9. a first support edge disposed between the first support back and the second support back, the first support back and first support edge are configured to support a media device at a first support angle;
10. a second support edge disposed between the second support back and third support back, the second support back and second

support edge are configured to support a media device at a second support angle;

11. a third support edge disposed between the third support back and first support back, the third support back and third support edge are configured to support a media device at a third support angle, wherein each edge support comprises an edge support width with an edge angle in the range of 85 to 120 degrees to an adjacent support back, a face of each edge support width oriented clockwise about the central axis;
12. wherein the media support apparatus is configured to be rotated about the central axis so that the body can rest on a horizontal support in any one of three positions including on a first virtual plane between a top of the second support back and an outer edge of the second edge support, on a second virtual plane between a top of the third support back and an outer edge of the third edge support, and on a third virtual plane between a top of the first support back and an outer edge of the first edge support; and
13. wherein the media support apparatus is configured to provide a first viewing angle of the media device when the media support apparatus body rests on the first virtual plane and the media device is supported at the first support angle, a second viewing angle when the media support apparatus body rests on the second virtual plane and the media device is supported at the second support angle, and a third viewing angle when the media support apparatus body rests on the third virtual plane and the media device is supported at the third support angle, wherein the first viewing angle, the second viewing angle, and the third viewing angle are different from one another.
14. The apparatus of claim 12, wherein the first support angle is between 50 and 60 degrees to the second virtual plane, the second support angle is between 55 and 65 degrees to the third virtual plane, and the third support angle is between 50 and 75 degrees to the first virtual plane.
15. The apparatus of claim of 12, wherein the edge support angle is 90 degrees.
16. The apparatus of claim 15 wherein the edge support width is 2 cm.

17. The apparatus of claim 12, wherein the body includes three solid corners, with each of the corners interposed between two adjacent support backs and including a respective edge support.
18. The apparatus of claim 12, wherein the edge support width is in the range of 1 to 5 cm.
20. An apparatus comprising:
- three support sides, each support side comprising a back support and an edge support,
- wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis and each back support and each edge support is in physical communication with two ends,
- wherein each edge support comprises an edge support width with an edge angle to an adjacent back support in the range of 85 to 120 degrees to an adjacent back support,
- wherein a face of each edge support width is oriented clockwise about the central axis,
- wherein a plane of a first back support is at a first plane angle to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support,
- wherein a plane of the second back support is at a second plane angle to a third virtual plane between the top of a third back support counterclockwise to the second back support and an outer edge of a third edge support counterclockwise to the second back support,
- wherein a plane of a third back support is at a third plane angle to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support,
- wherein the first plane angle, the second plane angle, and the third plane angle are different from one another and are configured to provide a first viewing angle, a second viewing angle, and a third viewing angle that are different from one another; and
- wherein each back support, each edge support, and each end is a surface of an interior.

21. The apparatus of claim 20, wherein the first back support has a longitudinal length in the range of 12 to 26 centimeters (cm), the second back support has a longitudinal length in the range of 9 to 21 cm, and the third back support has a longitudinal length in the range of 10 to 22 cm.
27. The apparatus of claim 20, wherein each edge support has an edge support width in the range of 1 to 5 centimeters (cm).
28. The apparatus of claim 20, wherein a plane of each edge support forms an edge angle of 90 degrees with an adjacent back support.
29. The apparatus of claim 28, wherein each edge support has an edge support width of 2 centimeters (cm).

C. Prosecution History¹²

1. Prosecution of the '540 application

51. The '540 application was titled "FLIPY EREADER PILLOW" and contained four claims:

- "1. A method comprising all of the features specified in this disclosure.
2. A device comprising all of the features specified in this disclosure.
3. A system comprising all of the features specified in this disclosure.
4. A Flipy eReader pillow."

Exhibit 1005 at 3-4.

52. In an appendix to the application, the disclosure was ("A multi-sided pillow to hold electronic devices"): "A pillow to hold tablets, phones, other electronic devices for comfortable reading and working--with an angled surface that puts the display at an angle that is easily viewable for a user who is either laying

¹² I have reviewed the entirety of the prosecution histories of the '540, '443, '737 and '797 applications and only provide a summary herein.

down or sitting. The working surface on this pillow has a ledge that helps hold and stabilize the device. In addition, this pillow allows adjustment of angle for the user to best accommodate the sitting or prone position. There are actually multiple working surfaces on the pillow - each one having a slightly different angle so the user can choose how steeply the display is inclined for viewing. In our preferred embodiment, the pillow has 3 surfaces, so the cross section is triangular, and each of the 3 angles is different. For example, the 3 angles might be something like, or the even more extreme 87, 30, 63 or some intermediate 70, 60, and 50 or even something approaching a near-equilateral triangle at maybe 64, 56, 60. ([*sic*] note that in all cases. each angle is at least somewhat acute to help give the tablet device some direction to lean so that it will stay in position. The user can then flip from one surface to another to find the best inclination of the device for reading.” Exhibit 1005 at 5.

53. I have reproduced the figures provided in the '540 application:

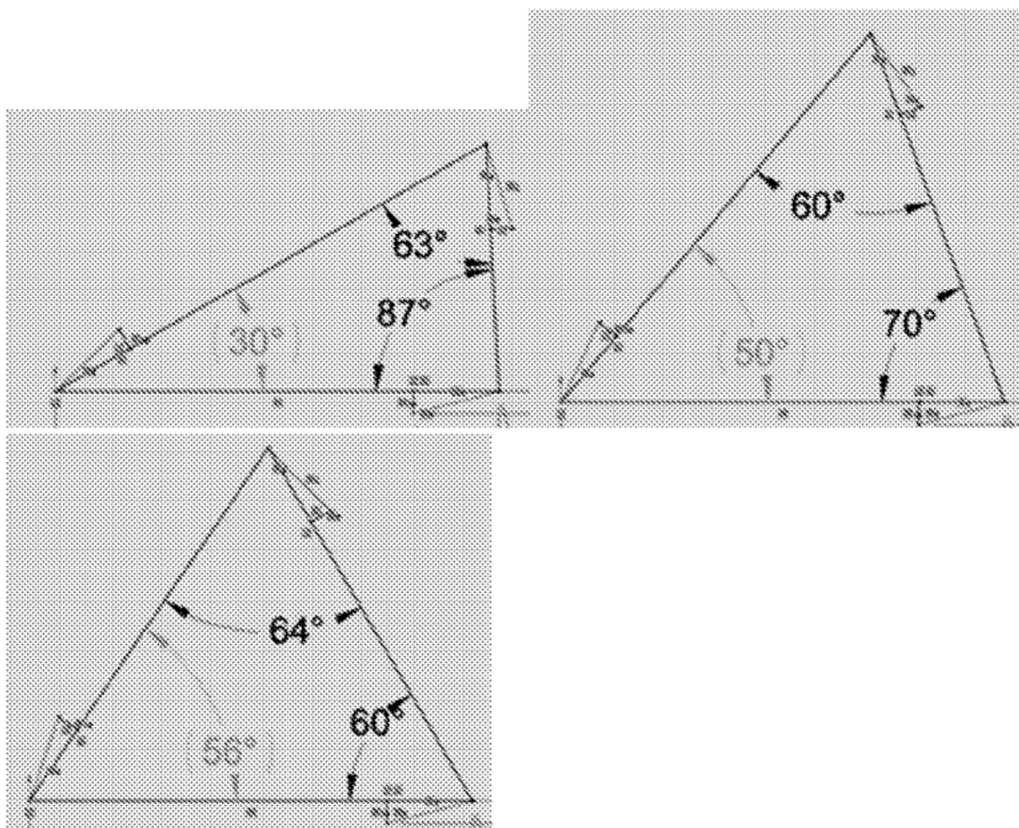


Exhibit 1005 at 5.

2. Prosecution of the '443 application

54. The '443 application was filed with 14 claims of which claim 1 was independent, and is reproduced below:

“1. An apparatus comprising:

three support sides, each support side comprising a back support and an edge support, wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis, a plane of a first back support is at a first plane angle in a range of 50 to 60 degrees to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support, a plane of the second back support is at a second plane angle in a range of 55 to 65 degrees to a third virtual plane between the top of a third back support counterclockwise to the

second back support and an outer edge of a third edge support counterclockwise to the second back support, a plane of a third back support is at a third plane angle in a range of 50 to 75 degrees to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support.”

Exhibit 1006 at 23.

55. The ’443 application published on April 30, 2015 having Publication No. US-2015-0115124A1 (“Cannon”). *See* Exhibit 1008.

56. On August 14, 2015, the examiner rejected the claims as being obvious over U.S. Patent Publication 2003/0001063 A1 (Halpin, Exhibit 1014) in view of U.S. Design Patent D703,216 S (Klepar II, Exhibit 1013). The examiner stated that “Halpin discloses the angle of a plan (*sic*) of the first back support and the first plane angle to vary, as desired by the manufacturer or user, between 45-90 degrees ([0045]). Therefore it would have been an obvious modification well known in the art at the time the invention was made to modify Halpin’s back support and first plane angles to range between 50-70 degrees. Halpin does not directly disclose the one of the back supports to be in communication with one of the adjacent edge supports. Klepar discloses the back support to be in physical communication with an adjacent edge support (Figure 7 right edge and bottom support). Therefore it would have been an obvious modification well known in the art at the time the invention was made to modify Halpin as disclosed by Klepar to include Klepar’s back support in physical communication with an adjacent edge. Such a modification

would provide a means to enhance the physical shape of the support structure.”

Exhibit 1006 at 46-47.

57. Following an interview with the examiner, the applicants proposed amendments to claim 1. Exhibit 1006 at 69-70. The applicants’ amendments:

- Added limitation “each edge support comprises an edge support width with an edge angle of 90 degrees to an adjacent back support, a face of each edge support width oriented clockwise about the central axis;”
- Amended “a first plane angle” limitation to be “of 60 degrees” instead of “in a range of 50 to 60 degrees;”
- Amended “a second plane angle” limitation to be “of 80 degrees” instead of “in a range of 55 to 65 degrees;”
- Amended “a third plane angle” limitation to be “of 40 degrees” instead of “in a range of 50 to 75 degrees;” and
- Added limitation “and wherein a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees.”

Exhibit 1006 at 69-70.

58. In support of these amendments the applicant argued that “amendment is well supported by the specification in Figure 2.” Exhibit 1006 at 73.

59. To overcome the obviousness rejection, the applicants argued that “[amended] claim 1 is patentably distinguished from the combination of Halpin and Klepar by reciting the distinguishing elements ‘ . . . each edge support comprises an edge support width with an edge angle of 90 degrees to an adjacent back support, a face of each edge support width oriented clockwise about the central axis . . . ’ and ‘ .

. . wherein a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees.” Exhibit 1006 at 76. The applicants further argued that “[b]ecause of the clockwise orientation of the edge supports, the apparatus includes back supports with three different viewing angles of 36, 74, and 49 degrees. In contrast, Klepar discloses that one of the three edge supports is counterclockwise to the central axis. As a result, Klepar is only able to position a tablet on back supports with two different angles.¹³ The unique orientation of the edge supports of the present invention clockwise around the central axis supports a third viewing angle, a result that is not obtained by Klepar.” Exhibit 1006 at 76-77.

60. On February 11, 2016, the examiner rejected amended claim 1 as failing to comply with the written description requirement. Exhibit 1006 at 83. The examiner stated that “[s]tructural limitations regarding the second plane angle of 80 degrees and the third plane angle of 40 degrees and the first viewing angle of the first back support to be 36 degrees and the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees, are not disclosed in the specification.” Exhibit 1006 at 83, 87 (“The structural limitations of claim 1 in the

¹³ I disagree with the applicants’ argument because Klepar II can be oriented in the clockwise direction to provides one of the back supports with another viewing angle. See Section IX A vi.

amended form is considered new matter.”). Further, the examiner stated that there had not been “prior disclosure of these specific angle properties in this application,” nor was there “disclosure of the criticality of the angles being of these specific angular values in the specification.” Exhibit 1006 at 83-84. The examiner also maintained the obviousness rejection. Exhibit 1006 at 84-87.

61. Following another interview on June 16, 2016, it was stated that “[the] Applicant will submit a CIP to provide further disclosure of the materials and structural limitations of the invention to overcome the prior art references cited. Specifically, the limitations regarding the solid structure of the display device and the material composition of the solid structure: further disclosing the criticality of the structure and material will overcome the prior art references cited. Since these limitations are not disclosed in this application. the details will be disclosed in the CIP.” Exhibit 1006 at 92.

62. A notice of abandonment was filed on August 25, 2016. Exhibit 1006 at 94-95.

3. Prosecution of the '737 application

63. The '737 application was filed with 10 claims as a continuation-in-part of the '443 application, along with an amended specification. Exhibit 1007 at 27-43. With respect to the specification, the applicants amended at least paragraphs [0018] (identifying surface as “175,” and adding that “[e]ach back support 105 and each

edge support 110 may be in physical communication with two ends 165 of a solid interior.”), [0019], [0020], [0023], [0029], Figure 1 (adding annotations for 175).

64. The ’737 application proceeded to grant without any substantive prosecution as U.S. Patent No. 9,642,454 (“the ’454 patent”). Exhibit 1007 at 89. In the Notice of Allowability, the examiner’s reasons for allowance were that “[t]he prior art does not disclose the three sided support for media device that is a solid form covered in fabric like a pillow; wherein each support side has an edge support with the width of 2 centimeters that protrudes from the face of the support side to facilitate the support of the media device from the bottom of the media device; each side allows for three distinct display angles for the media device.” Exhibit 1007 at 65.

4. Prosecution of the ’797 application

65. The ’797 application was filed as a “broadening reissue” of the ’454 patent. Exhibit 1002 at 47. Through a preliminary amendment, the applicants sought to amend issued claim 1 to remove each specific angular value and measurement. Exhibit 1002 at 43. The applicants also sought to claim a limitation of “three different viewing angles.” Exhibit 1002 at 43.

66. On October 18, 2019, the examiner rejected the claims as being beyond the scope of the issued claims in the ’454 patent. Exhibit 1002 at 58. The examiner outlined the prosecution history of the ’443 and ’737 applications and noted that the

proposed reissue claims were broader than the original claims and contrary to the applicants' arguments to overcome the obviousness rejection during prosecution of the '443 and '737 applications. Exhibit 1002 at 61-64.

67. The examiner rejected the proposed amended claims as being obvious over U.S. Patent No. 1,928,806 (Barcalo, Exhibit 1009) in view of Halpin. Exhibit 1002 at 65-67. The examiner observed that "[i]t would have been an obvious matter of design choice to form the back support of Barcalo with the specified dimensions, since such a modification would have involved a mere change in the size of a component," and that "[i]t would have been obvious to one of ordinary skill in the art to form the apparatus of Halpin with three support sides each comprising a back support and an edge support wherein each back support forming a different viewing angles, as disclosed by Barcalo, in order to increase the flexibility of the apparatus by providing more viewing angle to accommodate the user's needs." Exhibit 1002 at 65-66.

68. In response, the applicants withdrew amendments to claims 1-10 (which had issued in the '454 patent) and added new claims 21-39. Exhibit 1002 at 92.

69. New independent claim 22 (which, after amendment, eventually issued as claim 12) is reproduced below:

“22. (New) A media support apparatus comprising:

- a body having a first support back, a second support back, and a third support back disposed about a central axis;
- a first support edge disposed between the first support back and the second support back, the first support back and first support edge are configured to support a media device at a first support angle;
- a second support edge disposed between the second support back and third support back, the second support back and second support edge are configured to support a media device at a second support angle;
- a third support edge disposed between the third support back and first support back, the third support back and third support edge are configured to support a media device at a third support angle;

wherein the media support apparatus is configured to be rotated about the central axis so that the body can rest on a horizontal support in any one of three positions including on a first virtual plane between a top of the second support back and an outer edge of the second edge support, on a second virtual plane between a top of the third support back and an outer edge of the third edge support, and on a third virtual plane between a top of the first support back and an outer edge of the first edge support; and

wherein the media support apparatus is configured to provide a first viewing angle of the media device when the media support apparatus body rests on the first virtual plane and the media device is supported at the first support angle, a second viewing angle when the media support apparatus body rests on the second virtual plane and the media device is supported at the second support angle, and a third viewing angle when the media support apparatus body rests on the third virtual plane and the media device is supported at the third support angle.”

Exhibit 1002 at 88.

70. New independent claim 30 (which, after amendment, eventually issued as claim 20) is reproduced below:

“30. (New) An apparatus comprising:
three support sides, each support side comprising a back support and an edge support,
wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis and each back support and each edge support is in physical communication with two ends,
wherein each edge support comprises an edge support width with an edge angle to an adjacent back support,
wherein a face of each edge support width is oriented clockwise about the central axis,
wherein a plane of a first back support is at a first plane angle to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support,
wherein a plane of the second back support is at a second plane angle to a third virtual plane between the top of a third back support counterclockwise to the second back support and an outer edge of a third edge support counterclockwise to the second back support,
wherein a plane of a third back support is at a third plane angle to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support, and
wherein each back support, each edge support, and each end is a surface of the interior.”

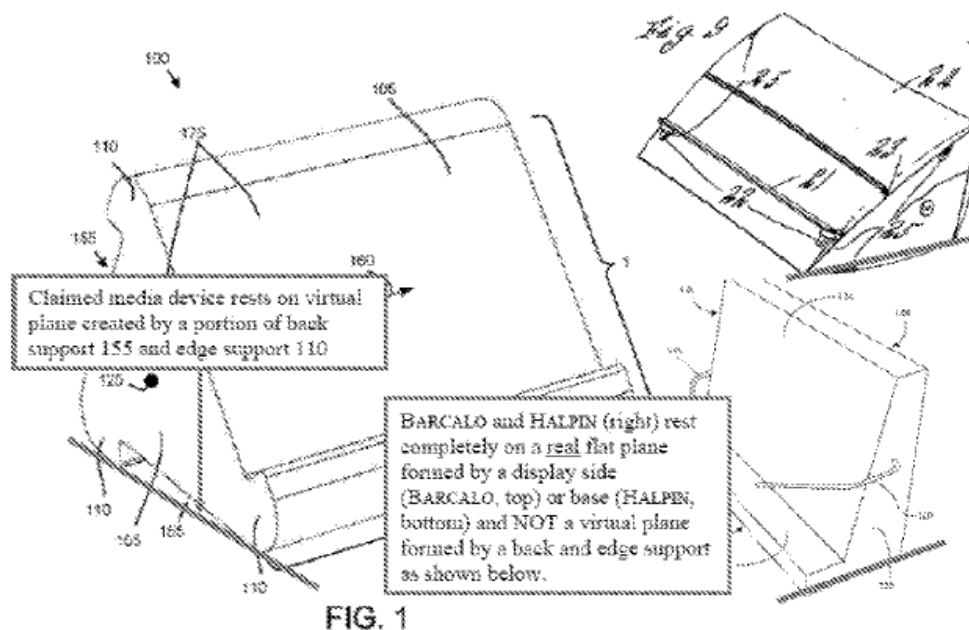
Exhibit 1002 at 89-90.

71. The applicants argued that these amendments “are directed to the specific relationship of the three support backs of the media support body with the three support edges so as to create three different support ‘virtual planes’ to provide three different respective viewing angles.” Exhibit 1002 at 93. And that the features were materially narrow over the original claims. Exhibit 1002 at 93.

72. The applicants also argued that the claims were not obvious over Barcalo because, *inter alia*, (a) “Barcalo is the only reference used to show a three-sided display pillow; but it is configured with only a single, detachable support edge that is NOT shown, described, suggested, or even intended to be attached to a downwardly-facing expanse of the pillow;” (b) Barcalo and Halpin “are not structured to allow the media display device to rest on a lower surface/‘virtual plane’ defined by BOTH the back support and edge support;” (c) the pockets in Barcalo “are not intended to provide an ‘edge support’ which is “configured to support a media device at a first support angle[;]” (d) Barcalo and Halpin “do not allow rotation about a central axis in a single direction to present each of the display sides as with the claims.” Exhibit 1002 at 94-105. The applicants also argued that Kelpar II must be spun about a horizontal plane in order to properly display at least one of its sides. Exhibit 1002 at 101.

73. The examiner issued another rejection that the new claims were beyond the scope of the original, issued claims. Exhibit 1002 at 124. In response, the applicants argued that the new claims were based on disclosure in the ’443 application and “are directed to the specific relationship of the three support backs of the media support body with the three support edges so as to create three different support ‘virtual planes’ to provide three (e.g. different) respective viewing angles.” Exhibit 1002 at 146, 154 (distinguishing Barcalo because “the claimed viewing

angles are not simply between three viewing angle sides as in Barcalo.”). The applicants also argued in connection with claim 30 that “it is not the exact angles but rather the fact that the three display side angles *with respect to virtual planes* are distinct/different that can provide comfortable viewing of the media in any one of a variety of different viewing positions, e.g. in a reader's lap while sitting up, when laying down, or when positioned on a table or desk when reading upright. Applicants can provide evidence of success of recent products without these exact angles to show that such angles are non-critical; it is only important that these angles be different.” Exhibit 1002 at 153 (annotation in original text).¹⁴

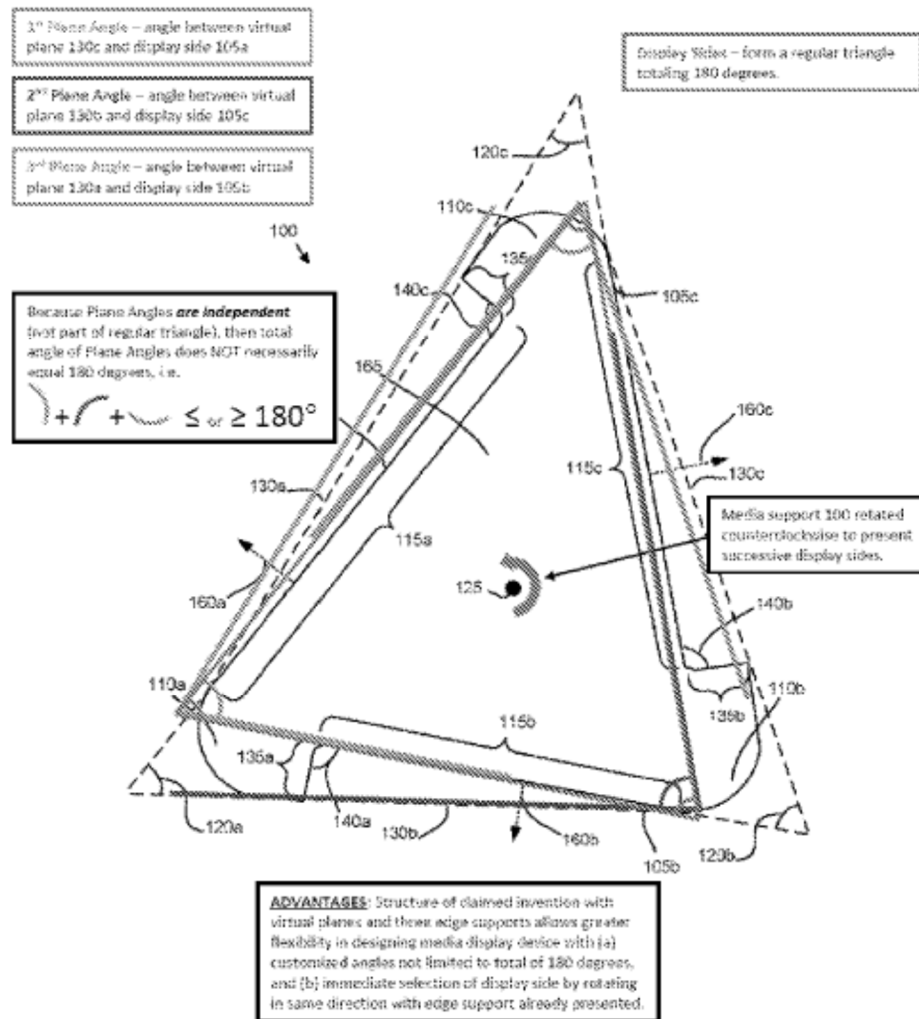


¹⁴ As I note in Section X.A on the construction of “plane angle,” Patent Owner’s proposed construction in the litigation contradicts, in part, the patent applicants’ arguments to the examiner distinguishing Barcalo in the context of claims 22 (claim 12 of the RE’479 patent) and claim 30 (claim 20 of the RE’479 patent).

Exhibit 1002 at 155.

74. Following an advisory action from the examiner rejecting the claims, the applicants filed an appeal. In the appeal brief, the applicants reproduced Figure 2 in the '797 application stating that "FIG. 2 illustrates where media support device 100 rests on virtual plane 130b to support media device (not shown) on support edge 135b and against back 105c at viewing angle 160c...." Exhibit 1002 at 185. The applicants argued that, "[t]he claimed viewing angles are not simply between three viewing angle sides as in Barcalo (which, by having a purely triangular cross-section, would add up to 180 degrees). Instead, the plane angles dictating the viewing angles are between support sides on 'virtual planes' and adjacent display sides, a relationship that does not require the cumulative support angles of the sides to equal 180 degrees. For instance, the very specific support angles listed in claim 1 of the '454 patent are 36 degrees, 74 degrees, and 49 degrees, which combine to equal a total of 159 degrees." Exhibit 1002 at 189. The applicants further argued that the "added limitation in reissue related to the display angles or plane angles as being 'different' is therefore NOT well known in the prior art and is a material narrowing of the original claim sufficient to avoid recapture." Exhibit 1002 at 191.¹⁵

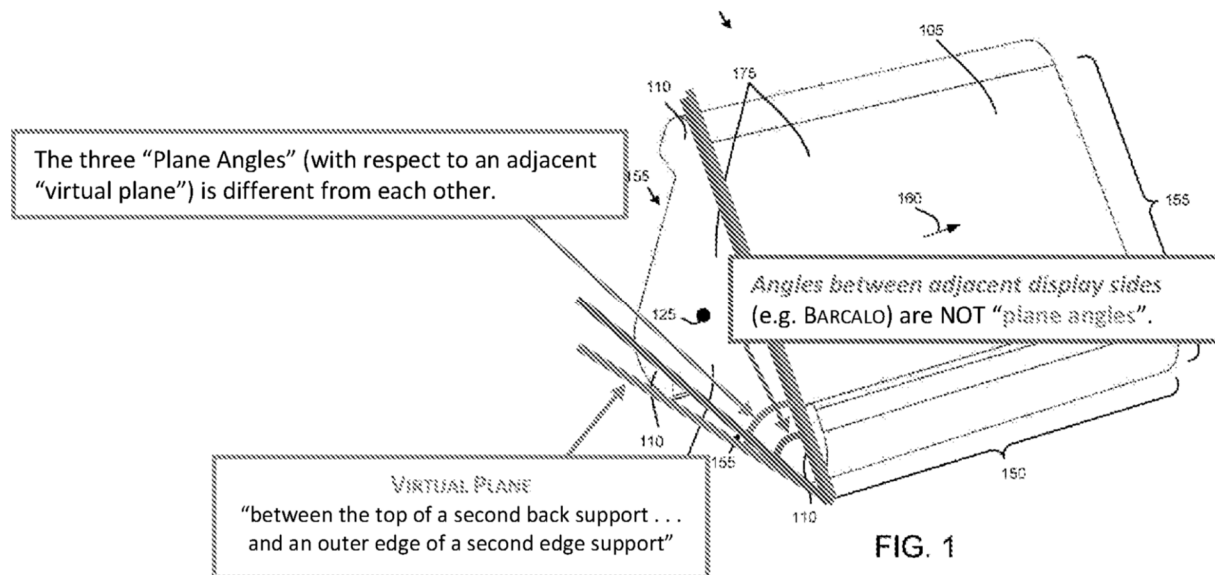
¹⁵ I understand that Petitioner is unable to obtain a colored version of this illustration from the prosecution history of the reissue application. To the extent Patent Owner submits the same, I reserve the right to review the same and supplement my opinions accordingly.



75. The applicants also argued that “[t]he ‘different plane angles’ limitation of claims 30-38 (or ‘different’ viewing angles with respect to virtual planes in claim 29) is not well known in the prior art. Instead, the added reissue claims refer to different angles with respect to ‘virtual planes’ on the media support apparatus. This distinguishes from the newly cited Barcalo reference where viewing angles are with respect to real sides of the apparatus. This difference yields very real results in that the combination of viewing angles in the present device need not equal 180 degrees

(as with the purely triangular Barcalo) and are therefore much more configurable.”

Exhibit 1002 at 192, 190.



76. The applicants also argued that with respect to claim 22 that “the examiner is directed to the very specific relationship of first, second, and third support backs to respective first, second, and third support edges and to the previously unclaimed fact that the media support device is configured to rest on a horizontal support created by the virtual planes to provide first, second, and third viewing angles.” Exhibit 1002 at 194.

77. Thereafter, the examiner rejected the claims again for improper broadening of scope and finding the applicant’s arguments not persuasive. Exhibit 1002 at 224-228.

78. Thereafter, the applicants held an interview with the examiner wherein

the applicants proposed further amending claims 22 and 30 to “include materially narrowed features compared to the original claims as filed, namely in connection with the different ‘viewing angles’ feature and the ‘edge angles’ features cited by the Examiner.” Exhibit 1002 at 253-254. It was noted that the “Examiner indicated that this edge angle range [of between 85 and 120 degrees] is a material narrowing of the claim and, together with the ‘different viewing angles’ feature, would avoid recapture and make the claim allowable in reissue.” Exhibit 1002 at 254.

79. A notice of allowability issued on February 2, 2021 where it was stated that the reasons for allowance were because “[t]he prior art of record does not disclose or fairly suggest an apparatus having three support sides each comprising a back support and an edge support with an edge angle of between 85 and 120 degrees to an adjacent support back, wherein the apparatus configured to provide first, second and third viewing angles of the first, second and third support backs that are different from one another.” Exhibit 1002 at 269.

VIII. OVERVIEW OF OPINIONS FORMED

80. Based on my review of the prior art discussed herein, it is my opinion that at least claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent are invalid as being obvious. In particular, it is my opinion that:

81. At least claims 1-2, 8-10, 12-13, 15-17, and 19 are invalid in view of Cannon in view of Diebel and/or Barcalo and the knowledge of a POSA.

82. At least claims 12-13, 15-17, 19-21, and 27-29 are invalid in view of Klepar I in view of Barcalo and/or Dean, and the knowledge of a POSA.

83. At least claims 20-21, and 27-29 are invalid in view of Barcalo in view of Klepar I and/or Klepar II, and the knowledge of a POSA.

IX. CLAIM CONSTRUCTION

84. As noted above, I have reviewed the disclosures in the RE'479 Patent, as well as the prosecution histories of the '540, '443, '737 and '797 applications.

85. I have also reviewed the parties' Joint Claim Construction and Prehearing Statement ("JCCPS," Exhibit 1015) submitted by the parties in the Litigation, the Patent Owner's Infringement Contentions (Exhibit 1016) and response to Petitioner's Invalidity Contentions (Exhibit 1017).

86. For all claim terms not discussed below, I have given the terms their plain and ordinary meaning to one of skill in the art at the time of the invention.

A. "plane angle" (Claims 1–2, 8–10, 20–21, and 27–29)

87. Independent claims 1 and 20 require "a plane of a first back support is at a first plane angle to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support," "a plane of the second back support is at a second plane angle to a third virtual plane between the top of a third

back support counterclockwise to the second back support and an outer edge of a third edge support counterclockwise to the second back support,” and “a plane of a third back support is at a third plane angle to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support.”

88. I understand that the Patent Owner has proposed construing “plane angle” to mean “the angle between a back support positioned to support a media device and the virtual plane or adjacent back support on which the media stand is resting.” Exhibit 1015 at 6 (Term 3a). I understand that the Petitioner in the Litigation contends this term is indefinite and alternatively, that it should be construed as “the angle formed where the plane of a back support and a virtual plane intersect.” Exhibit 1015 at 6 (Term 3a). In my opinion Patent Owner and Petitioner’s construction differ only with respect to “the angle between a back support positioned to support a media device and the [] **adjacent back support** on which the media stand is resting.” The inclusion of “adjacent back support” in this construction is inconsistent with the plain language of the claims (stating “a plane of a first back support is at a first plane angle to a second virtual plane”), the disclosures in the RE’479 Patent (3:31-48, Figure 2), and the patent applicants’ repeated arguments to the examiner that “[t]he ‘different plane angles’ limitation of claims 30-38 (or ‘different’ viewing angles with respect to virtual planes in claim 29) is not well known in the

prior art. Instead, the added reissue claims refer to different angles with respect to ‘virtual planes’ on the media support apparatus. This distinguishes from the newly cited Barcalo reference where viewing angles are with respect to real sides of the apparatus.” Exhibit 1002 at 101, 146, 154, 190, 192.

89. In view of the disclosures in the RE’479 Patent as well as the arguments presented in the prosecution history, for the purpose of my analysis herein, I interpret “plane angle” using part of the Patent Owner’s construction in so far as its proposed construction is “the angle between a back support positioned to support a media device and the virtual plane on which the media stand is resting,” because that is consistent with the plain language of the claims and the totality of the intrinsic record.

B. “viewing angle” (Claims 1–2, 8–10, 12–13, 15–17, 19–21, and 27–29)

90. The term “viewing angle” is a limitation in all of the claims that are challenged in the Petition. I understand that the Patent Owner has proposed construing this term as “the angle of a vector normal to a back support or support back (whichever is recited in the claim) positioned to support a media device as defined in relation to the plane on which the media stand is resting.” Exhibit 1015 at p. 6 (Term 5a). I understand that the Petitioner contends this term is indefinite and alternatively, that it should be construed as “an angle that is orthogonal (90 degrees)

to the back support for a user,” as it is the patentee’s own lexicography. Exhibit 1015 at p. 6 (Term 5a). For the purpose of my analysis herein, I have been asked to view the prior art under Patent Owner’s construction of this claim limitation. But in my opinion, the claims are obvious under either proposed construction.

C. “support angle” (Claims 12–13, 15–17, 19)

91. As I discuss above in Section VIII.C.4, the term “support angle” was added by the patent applicants during prosecution of the ’797 application in new claims 22 and 23, after the examiner rejected the patent applicants’ preliminary amendments to claim 1. Exhibit 1002 at 88, 92.

92. I understand that the Patent Owner has proposed construing this term as using the same construction as “plane angle.” Exhibit 1015 at 6 (Term 4), (Term 3a). I understand that the Petitioner contends this term is indefinite. Exhibit 1015 at 6 (Term 4). The term “support angle” is not disclosed in the RE’479 Patent specification nor is it disclosed in any of the ’540, ’443, or ’737 specifications, nor was it discussed during prosecution of any of these applications. *See* Section VIII.C. In my review of the prosecution of the ’797 application, the applicants only reference “support angle” once in order to argue that the pockets 20/20a in Barcalo are incapable of being “configured to support a media device at a first support angle.” Exhibit 1002 at 99. With respect to claim 22, the entirety of applicants’ arguments in the ’797 application prosecution was to overcome the examiner’s rejection of

improper recapture. Exhibit 1002 at 189 (arguing that “claimed viewing angles are not simply between three viewing angle sides as in Barcalo (which, by having a purely triangular cross-section, would add up to 180 degrees). Instead, the plane angles dictating the viewing angles are between support sides on ‘virtual planes’ and adjacent display sides, a relationship that does not require the cumulative support angles of the sides to equal 180 degrees.”), 190 (“these plane angles are defined between the display plane and an adjacent virtual plane, NOT between adjacent display planes as with Barcalo.”), 194 (“claim 22 specifies that the first support edge is disposed between first and second support backs, that the second support edge is disposed between the second and third support back, and that the third support edge is disposed between the third and first support back. Further, claim 22 specifies that the media support device is configured to be rotated about a central axis so that the body can rest on either first, second, or third virtual planes (between stated support edges and support backs) to provide first, second, or third viewing angles, respectively. These are aspects that are not specified within the claims of the ’454 patent, and further provide aspects disclosed within the original ’443 application that were unappreciated and unclaimed during original prosecution.”).

93. In view of disclosures in the RE’479 Patent and the entirety of the prosecution history, it is my opinion that “support angle” is not the same as “plane angle.” The RE’479 Patent discloses that a plane angle is the angle between the back

support and an adjacent virtual plane. Exhibit 1001 at 2:31-48. Each of these claim terms appear in different claims and I am advised that, as a matter of law, different claim terms have different meanings. Exhibit 1001 at claim 1, 20 (including the “plane angle” limitation), claim 12 (including the “support angle” limitation). Moreover, the plain language of claim 12 shows that “the [] support back and [] support edge are configured to support a media device at a first support angle.” For the purposes of my analysis herein, I adopt a construction for “support angle” as “the angle formed between the support back and support edge that are configured to support a media device.”

X. THE EFFECTIVE FILING DATE

94. The RE’479 Patent, titled “Multiple viewing angle media support,” issued on March 23, 2021, from the ’797 application, which was filed on January 30, 2019. The ’479 patent is a reissue of U.S. Patent No. 9,642,454 (“the ’454 patent”), issued on May 9, 2017, from the ’737 application, filed on June 24, 2016. The ’479 patent stated that the ’737 application is a continuation-in-part of and claims priority to the ’443 application filed on October 20, 2014, (now abandoned), which in turn claims priority to the ’540 application entitled “FLIPY EREADER PILLOW” which was filed on October 28, 2013. I understand that “continuation-in-part” is used to describe a patent application that includes subject matter from an earlier application but also includes new subject matter.

A. Effective filing date of claims 1-2 and 8-10

95. In my opinion, claims 1-2, and 8-10 of the RE'479 Patent are not entitled to an effective filing date earlier than June 24, 2016, because new matter was added that was not disclosed in the '443 application and the '540 application. The claim limitation “a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees” is not disclosed. Further, the '540 application did not disclose “a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis,” or “each edge support comprises an edge support width of 2 centimeters (cm) with an edge angle of 90 degrees to an adjacent back support,” or a “plane angle,” or a “virtual plane,” or “viewing angles.” Therefore, claims 1–2 and 8–10 of the RE'479 Patent cannot be entitled to an effective file date earlier than June 24, 2016, the filing date of the '737 application.

96. As I discuss above in Section VIII.E, during prosecution of the '443 application, the examiner rejected the claims for lack of written description as to the amended claim 1. Exhibit 1006 at 83-84; Exhibit 1002 at 61, 127, 220. Thereafter, the applicant agreed to “submit a CIP to provide further disclosure of the materials and structural limitations of the invention to overcome the prior art references cited. Specifically, the limitations regarding the solid structure of the display device and

the material composition of the solid structure: further disclosing the criticality of the structure and material will overcome the prior art references cited. Since these limitations are not disclosed in this application. the details will be disclosed in the CIP.” Exhibit 1006 at 92. Thereafter, the ’737 application was filed wherein the specification was amended substantively to add these limitations. Exhibit 1007 at 27-43.

97. In my opinion, based on the prosecution history, a POSA would not understand that the specific viewing angles in claim 1 were disclosed in any of the applications prior to the ’737 application. Because the ’443 and ’540 applications do not provide written description support for claim 1 (and in turn claims 2, 8-10), the effective filing date of the claims 1–2 and 8–10 cannot be earlier than the June 24, 2016 filing date of the ’737 application.

B. Effective filing date of claims 12-13, 15-17, 19

98. In my opinion, claims 12-13, 15-17, 19 of the RE’479 Patent are not entitled to an effective filing date earlier than January 30, 2019, because new matter was added which was not disclosed in the ’737, ’443 and ’540 applications. Specifically, the claim limitation “support angle,” was not disclosed in any of these applications, including in the figures, and therefore, claims 12-13, 15-17, 19–21, and 27–29 of the RE’479 Patent cannot be entitled to an effective file date earlier than January 30, 2019, the filing date of the ’797 application.

99. Because the disclosures are silent, a POSA would not conclude from that disclosure that the inventors necessarily possessed the later-disclosed and claimed “support angle” limitation. As I discuss above in Section X.C with respect to construction of the term “support angle,” a POSA would conclude that “support angle” has a meaning as disclosed in claim 12 of the RE’479 Patent (or claim 22 of the ’797 Application).

100. Further, the ’540 application did not disclose “a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis,” or a “virtual plane,” or “viewing angle.” Therefore, a POSA would not conclude that the inventors possessed an invention meeting these limitations as of the filing date of the ’540 application.

101. In my opinion, based on the prosecution history, a POSA would not understand that the ’737, ’443 and ’540 applications provide written description support and therefore, the effective filing date of the challenged claims 12-13, 15-17, 19 cannot be earlier than the January 30, 2019 filing date of the ’797 application.

C. Effective filing date of claims 20–21, and 27–29

102. In my opinion, claims 20–21, and 27–29 of the RE’479 patent are not entitled to an effective filing date earlier than October 20, 2014, because new matter was added which was not disclosed in the ’540 application. Specifically, the claim limitation “each edge support comprises an edge support width with an edge angle

in the range of 85 to 120 degrees to an adjacent support back, a face of each edge support width oriented clockwise about the central axis,” was not disclosed in the ’540 application. Rather, the ’540 application contained little-to-no disclosure and the limited disclosure did not disclose these claim elements, let alone contain any figures or drawings that comport with the limitations of Claims 20–21, and 27–29.

103. Therefore, in my opinion, because the ’540 provisional application does not provide support for claims 20–21, and 27–29, and these claims cannot claim priority earlier than the October 20, 2014 filing date of the ’443 application.

XI. OVERVIEW OF THE PRIOR ART

A. U.S. Patent Application Publication No. 2015/0115124 A1, (“Cannon”) (Exhibit 1008)

104. U.S. Patent Application Publication No. 2015/0115124 A1 (Cannon) was published on April 30, 2015, and is a corresponding publication of the ’443 application. Because Cannon was published before the effective filing date of the ’737 application, I am informed that it is prior art to claims 1, 2, 8–10, 12, 13, 15–17, 19 of the RE’479 Patent.

105. Cannon discloses a “multiple viewing angle media support, and apparatus” which “includes three support sides” where “each support side includes a back support and an edge support.” Exhibit 1008 at Abstract, ¶[0004]; Figure 1. Cannon discloses an embodiment where each back support 105 and each edge

support 110 is a surface of a solid. The solid media support 100 may have one or more ends 165. Exhibit 1008 at ¶[0019]. Cannon discloses that the solid media support 100 may be a pillow. In one embodiment, the surface of the solid is ultra suede. Exhibit 1008 at ¶[0019].

106. Cannon discloses each edge support 110 may have an edge support width 135. The edge support width 135 may be in the range of 1 to 5 cm. In a certain embodiment, the edge support width 135 is 2 cm. Exhibit 1008 at ¶[0024].

107. Cannon also discloses an edge angle of 90 degrees to an adjacent back support. Exhibit 1008 at ¶[0024] (“In one embodiment, each edge support 110 forms an edge angle 140 with an adjacent back support 105. The edge angle 140 may be in the range of 85 to 120 degrees. The edge angle 140 may be 90 degrees.”). Cannon discloses in Figure 2 the face of each edge support width as oriented clockwise about the central axis. Exhibit 1008 at Fig. 2.

108. Cannon discloses a plane of a first back support at a first plane angle of 60 degrees to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support. Exhibit 1008 at ¶¶[0004], [0021] (“A plane of a first back support 105a in a range of 50 to 60 degrees to a second virtual plane 130b between the top of a second back support 105b counterclockwise to the first back support 105a and an outer edge of a second edge support 110b

counterclockwise to the first back support 105a”).

109. Cannon discloses a plane of the second back support 105b may be at a second plane angle 120b in a range of 55 to 65 degrees to a third virtual plane 130c between the top of a third back support counterclockwise to the second back support 105b and an outer edge of a third edge support 110c counterclockwise to the second back support 110b. Exhibit 1008 at ¶[0021].

110. Cannon discloses a plane of a third back support 105c may be at a third plane angle 120c in the range of 50 to 75 degrees to a first virtual plane 130a between the top of the first back support 105a counterclockwise to the third back support 105c and an outer edge of the first edge support 110a counterclockwise to the third back support 105c. Exhibit 1008 at ¶[0021].

111. Cannon further discloses that the arrangement of the longitudinal lengths 115 and the plane angles 120 generate three distinct viewing angles 160. Exhibit 1008 at ¶[0023].

112. Cannon discloses an embodiment with three support sides 155 to generate three distinct viewing angles 160. Each viewing angle 160 is chosen for a specific viewing orientation. The first viewing angle 160a may be employed when the media support 100 and the media is disposed in the user’s lap. The second viewing angle 160b may be used when the media support 100 and the media is

disposed on a table and the user is sitting upright. In addition, the 3rd viewing angle 160c may be used when the user is lying down and the media support 100 is disposed on the user. Exhibit 1008 at ¶[0027].

113. Cannon discloses an embodiment wherein the first back support 105a has a longitudinal length 115a in the range of 12 to 26 centimeters (cm). Exhibit 1008 at ¶[0022]. Cannon discloses the second back support 105b has a longitudinal length 115b in the range of 9 to 21 cm. Exhibit 1008 at ¶[0022]. Cannon discloses the third back support 105c has a longitudinal length 115c in the range of 10 to 22 cm. Exhibit 1008 at ¶[0022].

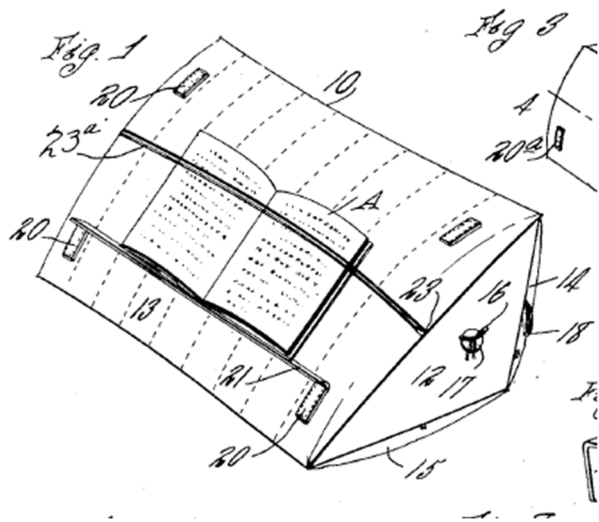
B. U.S. Patent No. 1,928,806 (“Barcalo”) (Exhibit 1009)

114. U.S. Patent No. 1,928,806 (Barcalo) issued October 3, 1933. I am informed that it is prior art to claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent.

115. Barcalo discloses an invention that “relates to pillows or cushions such as may be used on beds or lounges, and also to support books, magazines, and the like in convenient reading positions.” Exhibit 1009 at 1:1-4. Barcalo discloses pillows or cushions to support books or magazines “adjustably” for convenient reading positions. Exhibit 1009 at 1:5-8. The support can be used at “in an inclined position” which is “convenient for reading, when the pillow or cushion is disposed upon the lap of, or in front of, the reader; with which the inclination of the articles

so supported may be varied” Exhibit 1009 at 1:9-18; Exhibit 1009 at 2:18-22.

116. Barcalo discloses a pillow for use of propping materials for reading which is triangular wherein “[t]he ends 12 of the case or sack are triangular in shape, being preferably obtuse angled triangles . . . [with] the triangular ends [] connected by rectangular faces 13, 14 and 15. Such a pillow is, therefore, triangular in transverse cross section. The edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:79-91. *See, e.g.,* Figure 1.



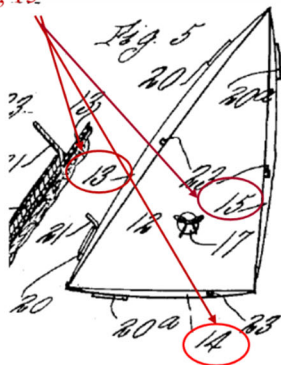
117. Figure 5 shows an end elevation of the pillow in Figs. 1-4, showing the small pockets on all three faces.



118. Barcalo further discloses that “[a] bar 21 serves as the rest and is provided with depending angular feet 22 which are received in the pockets 20 along either side edge of a side face of the pillow, as shown in Fig. 1. The bar or rest 21 thus forms a flange or ledge extending away from the side face of the pillow against which it is placed, and holds a book or magazine or other article A, that may rest upon this inclined face of the pillow, from sliding down this inclined face. For example, in Fig. 1, this rest or bar 21 is adjacent the lower edge portion of the face 13 when the pillow is resting upon the side face 15.” Exhibit 1009 at 2:38-44.

119. Barcalo discloses that [b]y turning the pillow over upon another side face, the side face 13 will make a different inclination to the horizontal or to a supporting surface for the pillow, because the dihedral angle between the faces 13 and 14 is different than the dihedral angle between the faces 13 and 15.” Exhibit 1009 at 2:45-50.

Three faces - 13,
14, 15



Different inclinations
because of differ dihedral
angles between faces

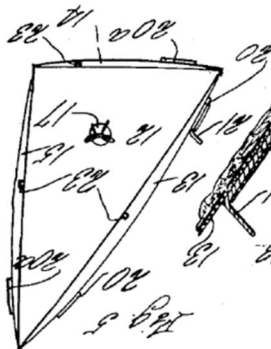
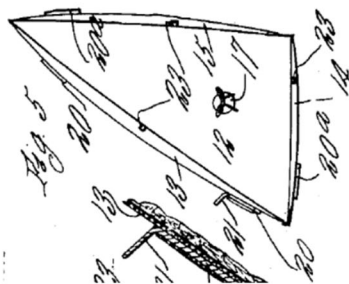


Exhibit 1009, Fig. 5 in different orientations (annotations added).

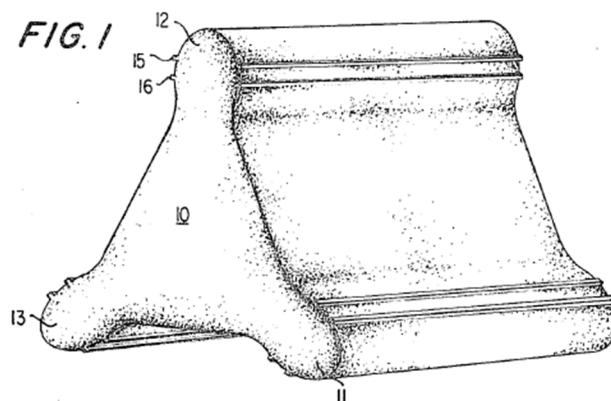
120. Barcalo discloses that the embodiments shown in Figs. 1 to 8 have a pillow which “includes a sack or case 10 of flexible sheet material, such as textile fabric, or leather, which is completely filled with a soft, loose, yielding or elastic filling or stuffing 11, such as hair, cotton, wool, kapok, feathers or any other suitable soft and more or less pliable or resilient filling material.” Exhibit 1009 at 1:66-73.

C. U.S. Patent No. 3,746,296 (“Dean”) (Exhibit 1011)

121. U.S. Patent No. 3,746,296 (Dean) issued October 3, 1933. I am informed that it is prior art to claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent.

122. Dean discloses a triangular portable support for holding and retaining groups of business data cards or forms, such as punched cards in an upright manner. Exhibit 1011 at Abstract, 1:4-6. “The support is . . . generally triangular shape in cross section . . . and provided with plural raised projections near each apex.” Exhibit

1011 at 1:34-28; *see also* Figure 1.



123. Dean discloses a solid member which “is generally symmetrical about its longitudinal axis and therefore can be universally arranged with any two pair of its legs stably (*sic*) resting on a flat support and with the third leg oriented upward.” Exhibit 1011 at 1:61-64, Figure 2. It discloses that “[t]he use of such supports 10 on a base to retain a collection of business data cards[.]” Exhibit 1011 at 2:15-16, Figures 2, 3.

124. It further discloses that the “apex portions **11**, **12**, and **13** provided at the three ends of member **10** are preferably bulbous and enlarged[.]” Exhibit 1011 at 1:66-68. Dean discloses that these regions assist in preventing slipping of the object (e.g. cards) propped against the supportive member **10** by having projections **15** and **16** to engage the cards. These are “spaced apart ridges or ribs having a rectangular cross section with abrupt edges.” Exhibit 1011 at 2:13-14.

D. U.S. Patent No. 8,960,421 (“Diebel”) (Exhibit 1010)

125. U.S. Patent No. 8,960,421 (Diebel) was filed on March 28, 2011, and issued February 24, 2015 which is before the effective filing dates for claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent. I am informed that it is prior art to claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent.

126. Diebel discloses a foldable cover with panels or sections and hinges that allow the cover to be folded into a stand for an electronic tablet or other electric device. Exhibit 1010 at Abstract; 1:59-61; *see also* 5:4-14 (listing numerous media devices which may be used with the disclosures of the patent). A configuration achievable by the foldable cover is a triangular cross-sectional shape. Exhibit 1010 at 6:32-33; 6:35-37.

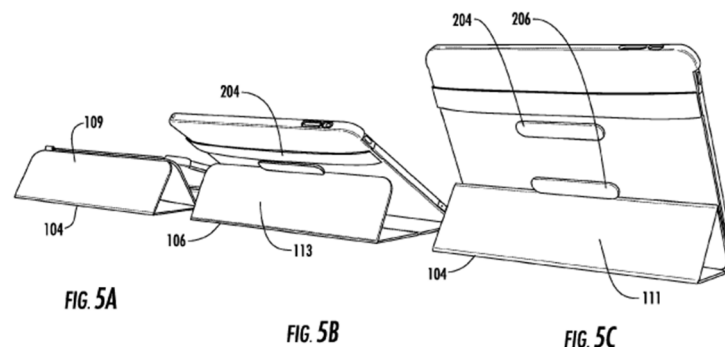
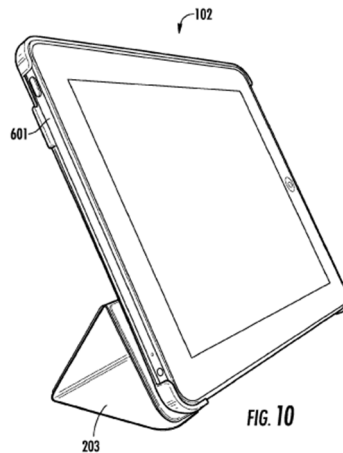
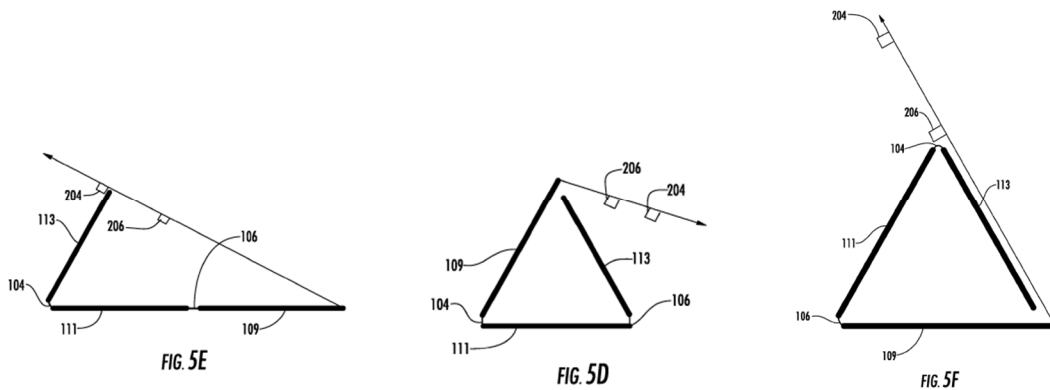


Exhibit 1011 at Figs 5A–5C (depicting triangular stand providing different angles); 8:14-60 (Figs. 5A, 5B, and 5C depicting angles from the table of about 15 degrees, 30 degrees, and 60 degrees, respectively, allowing for typing on the device, with 60

degrees regarded as a “viewing angle”); *see also* Figure 10 (perspective of stand at viewing angle, 60 degrees).



127. Diebel discloses that the cover can be made by any combination of panels having different dimensions. For example, the triangular cross-section can have at least two sides of equal length (i.e. an isosceles triangle) or three sides having equal length (i.e. an equilateral triangle). Exhibit 1010 at 3:64-67; 6:47-53. In various implementations, the case may have varying viewing angles. Exhibit 1010 at Abstract (“[t]he front cover can be folded into a stand to provide multiple viewing angles for the tablet.”); 1:62-64. Diebel discloses a specific implementation where each panel is approximately the same length, forming an equilateral triangle, and the angle provided is about 60 degrees. Exhibit 1010 at 6:47-50.



See Exhibit 1011 at Figs. 5D–5E (depicting cross-sectional views of Figs. 5A, B, and C, respectively, as viewed from the left side of the case).

128. The internal angle is about 60 degrees and is regarded as useful for “viewing media (e.g., watching a movie) on an electronic tablet)” and can be adjusted to more or less than 60 degrees by lengthening or shortening the panel. Exhibit 1010 at 8:64-9:4. This angle can be varied in a range from about 30 degrees to 75 degrees. Exhibit 1010 at 9:5-6. “In various implementations of a case according to the invention, there can be more angles (e.g., more than three different angles) than described here, and different angles (e.g., 8, 20, 35, 40, 50, 55, 65 degrees, and others)” but varying the number of bumps, panels, and hinges. Exhibit 1010 at 9:7-10.

129. Diebel further discloses that a case which provides a stand that enables hands-free viewing of the device on a table. Exhibit 1010 at 5:33-36, 5:63-6:7. Diebel discloses that a material for the case may be a foam (e.g., material having trapped bubbles). Exhibit 1010 at 12:42-44.

E. U.S. Patent Application Publication No. 2015/0189781 A1, (“Klepar I”) (Exhibit 1012)

130. U.S. Patent Application Publication No. 2015/0189781 A1 (Klepar I) published on July 2, 2015, and was filed on December 27, 2013. I understand that Klepar I was published before the effective filing dates for claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent. I am informed that it is prior art to claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE’479 Patent.

131. Klepar I discloses a “multi-position stand for supporting an electronic display device in one or more use configurations and comprises: a first receiving panel configured to support the electronic display; a second receiving panel attached to the first receiving panel, the second receiving panel configured to support a second electronic display; and a base panel attached to the first receiving panel and to the second receiving panel to form a substantially triangular cylinder.” Exhibit 1012 at Abstract, ¶¶[0001], [0012]. The invention is designed to hold a variety of electronic display devices. Exhibit 1012 at ¶[0028].

132. Klepar I discloses that the invention may have “a first receiving panel having an L-channel configured to support a first electronic display; a second receiving panel attached to the first receiving panel, the second receiving panel having a support channel configured to support a second electronic display; and a base panel attached to the first receiving panel and to the second receiving panel, the

base panel forming a structure with the first receiving panel and the second receiving panel, the structure having the shape of a substantially triangular cylinder.” Exhibit 1012 at ¶¶[0013], [0014]. Figure 1 shows a perspective view of a multi-position stand according to the present invention, and Figures 2 and show a computer display device supported by different orientations of the multi-position stand of Figure 1.

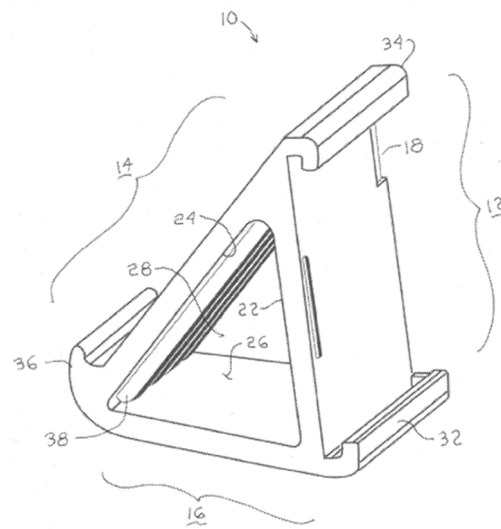


Fig. 1

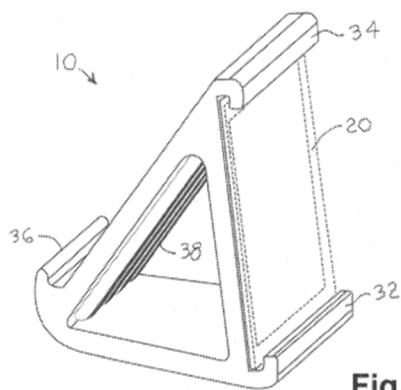


Fig. 2

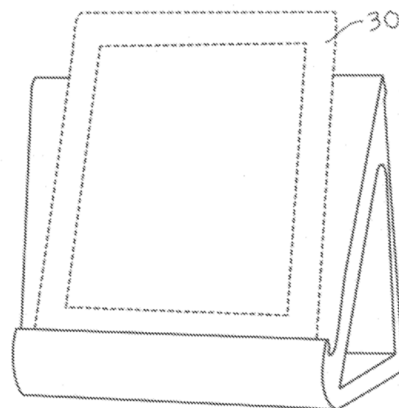


Fig. 3

133. Figure 6 shows the use of the stand in another different orientation.

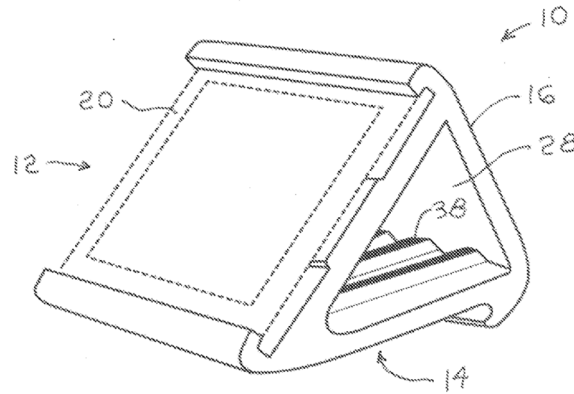


Fig. 6

134. Klepar I discloses that the multi-position stand **10** has a first receiving panel **12**, a second receiving panel **14**, and a base panel **16**. Exhibit 1012 at ¶[0030]. Each of the first receiving panel **12**, the second receiving panel **14**, and the base panel **16** comprise substantially rectangular and planar surfaces, and are interconnected to form a structure having the shape of an open, substantially triangular cylinder. Exhibit 1012 at ¶[0031].

135. Klepar 2013 discloses that “[s]tands especially designed for tablet computers are well-known in the relevant art” but that they have limitations such as “being able to be used only while a user is seated or standing near a table” with receiving portions of the stand which hold the tablet that enable multiple viewing angles but that are “slideable.” Exhibit 1012 at ¶[0002]. Klepar I discloses an improvement over U.S. Patent Application publication No. 213/0119225 which had an engagement portion and a support portion, where the support portion includes “a deformable mass conforming substantially to a smooth support surface in order to

allow adjustment of the inclination of the display device to a desired inclination.” Exhibit 1012 at ¶[0004]. But it required the application of force in order to adjust to the desired orientation. Exhibit 1012 at ¶[0004]

136. Klepar I discloses a stand that “help[s] users quickly change the viewing angle and orientation of the tablet computers in one of several positions without having to apply any force or make any technical changes to the stand holding the tablet device.” Exhibit 1012 at ¶[0010]. Klepar I discloses that the device is intended to enhance the comfort level for the tablet user, which further securely holds the tablet during use. Exhibit 1012 at ¶¶[0001], [0006]. Klepar I also discloses that the invention allows for the user to “easily flip over the multi-position stand in one or more usage configurations.” Exhibit 1012 at ¶[0008]. “The user is enabled to flip over the stand holding the tablet computer in one of three ‘flip’ positions to get a specific viewing angle or use the tablet as a simple stand.” Exhibit 1012 at ¶[0029].

137. Another aspect of the Klepar 2013 invention is “to provide a multi-position stand suitably designed and sized to be locatable on a user’s lap, thigh, or any other surfaces at home or at work stations enabling easy and extended use of the tablet computers in various locations.” Exhibit 1012 at ¶[0011]. Fig. 7 shows the stand being used in a lap orientation. Exhibit 1012 at ¶[0036].

F. U.S. Design Patent No. D703,216 S (“Klepar II”) (Exhibit 1013)

138. U.S. Design Patent No. D703,216 S (Klepar II), issued April 22, 2014.

I understand that Klepar II issued before the effective filing dates for claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE'479 Patent. I am informed that it is prior art to claims 1-2, 8-10, 12-13, 15-17, 19-21, and 27-29 of the RE'479 Patent.

139. Klepar II is an ornamental design for a dual-positioning tablet pillow stand. Exhibit 1013 at 1 (Title, Abstract, Description). Figure 1 is a perspective view of a dual-positioning tablet pillow stand supporting an image display device in a first viewing position, in accordance with the claimed design. Exhibit 1013 at 1.

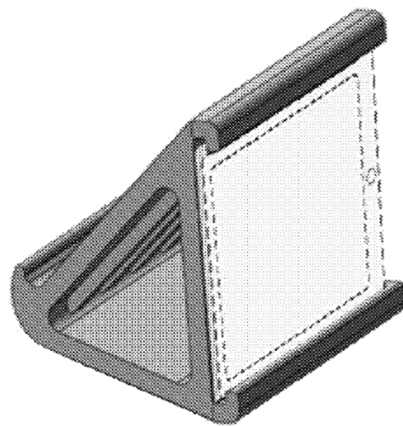


Fig. 1

140. Figure 4 is a perspective view of the dual-positioning tablet pillow stand of FIG. 1 supporting an image display device in a second viewing position, in accordance with the claimed design. Exhibit 1013 at 1.

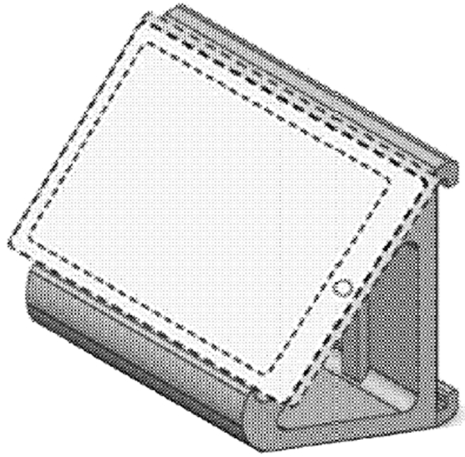


Fig. 4

141. Figures 7 and 8 are side views of the the dual-positioning tablet pillow stand.

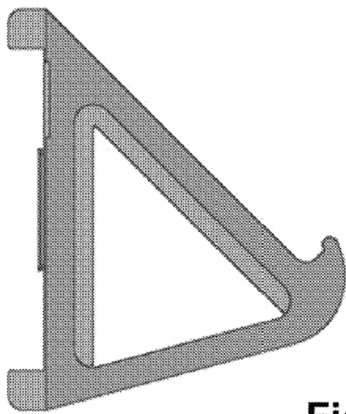


Fig. 7

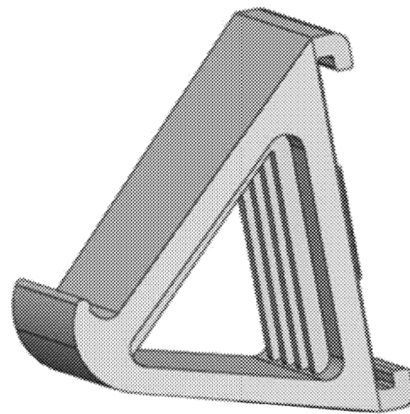


Fig. 8

XII. OPINION I: CLAIMS 1-2, AND 8-10 WOULD HAVE BEEN OBVIOUS BASED ON CANNON IN VIEW OF DIEBEL AND/OR BARCALO AND/OR THE KNOWLEDGE OF A POSA

A. Independent Claim 1

1. Element 1A: “An apparatus comprising...” (“the Preamble”)

142. I am informed that the preamble of a claim generally is not limiting. I am also informed that this is especially true when the claims define a structurally complete invention in the claim body and use the preamble only to state a purpose or intended use for the invention, which is the case for claim 1.

143. However, even assuming the preamble is limiting, Cannon discloses a “[a]n apparatus.” Cannon is titled “multiple viewing angle media support” and refers an apparatus for multiple viewing angle media support, which includes three support sides, and where each support side includes a back support and an edge support. Exhibit 1008 at Abstract, ¶[0004]; *see* Fig. 1.

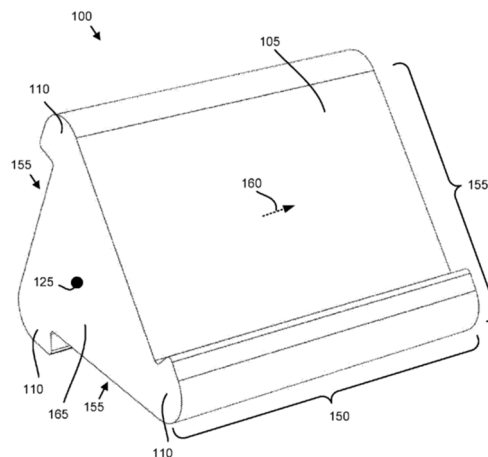
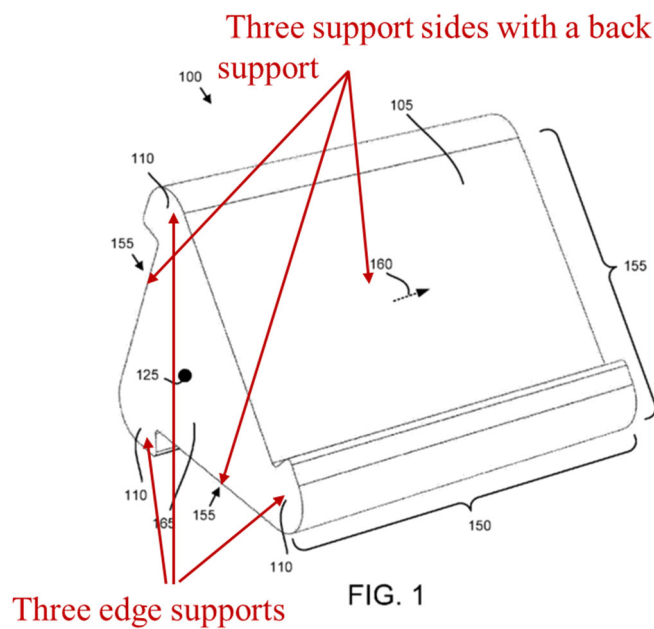


FIG. 1

2. Element 1B: “three support sides, each support side comprising a back support and an edge support”

144. As described above, Cannon discloses that the apparatus is a multiple viewing angle media support, which includes three support sides, and where each support side includes a back support and an edge support. Exhibit 1008, Abstract, ¶[0004]; *see* Fig. 1 (annotated below).



145. The three support sides 155 comprise a back support 105 and an edge support 110, as shown above. Exhibit 1008 at ¶[0016].

3. Element 1C: “wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis and each back support and,”

146. Cannon discloses that the support sides 155 may be disposed about a central axis 125. Exhibit 1008 at ¶[0016]. Cannon further discloses that the apparatus

comprising “three support sides, each support side comprising a back support and an edge support, wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis.” Exhibit 1008 at ¶[0004].

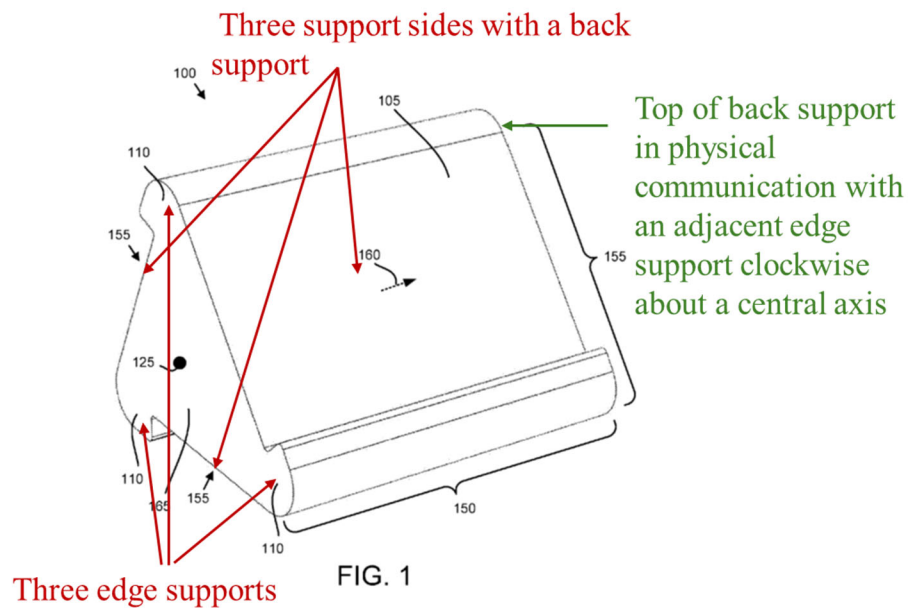


Exhibit 1008, Figure 1 (annotated).

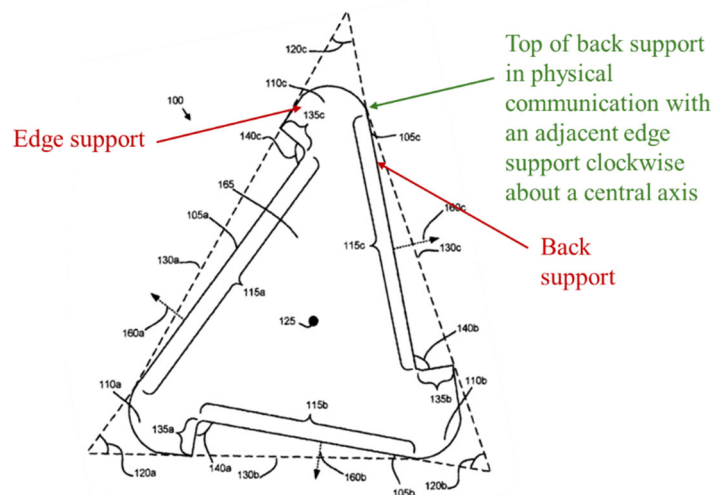


Exhibit 1008, Figure 2 (annotated).

147. I note that the above annotations to Figure 1 (a perspective drawing of an embodiment of the disclosed media support apparatus) and Figure 2 (a side view drawing of an embodiment of the disclosed media support apparatus) in Cannon show a directionality that is oriented the back supports and edge supports counterclockwise as represented in these drawings. However, a POSA would understand that because the apparatus has two ends (Exhibit 1008 at ¶[0019]), when it is viewed from the opposite side, the orientation of the back support to an edge support will be in clockwise direction.

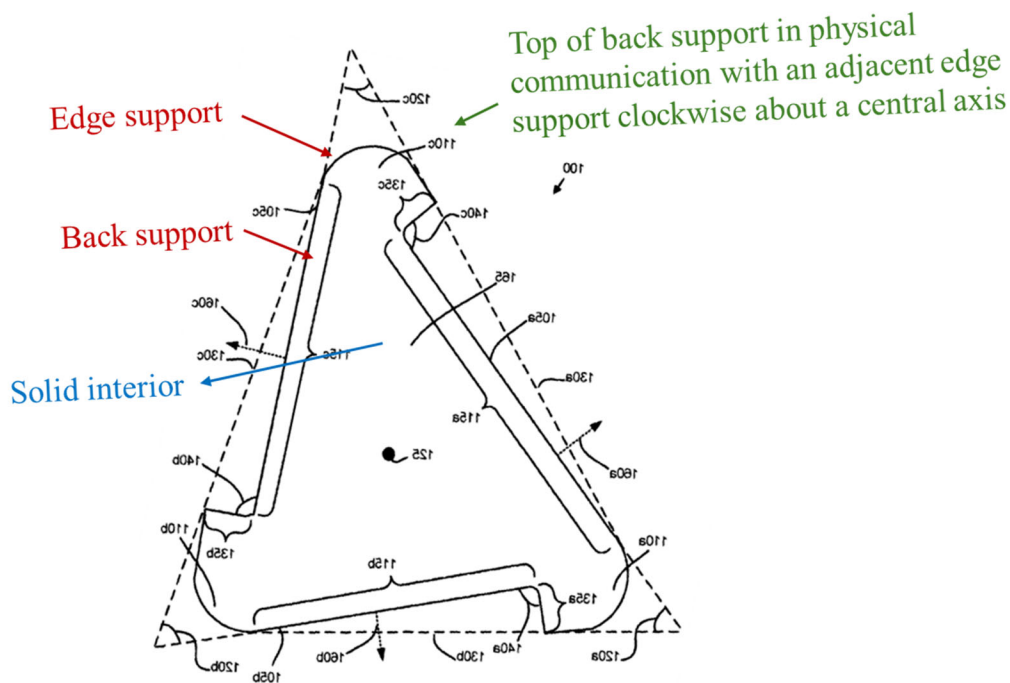


Exhibit 1008, Figure 2 (annotated and flipped on the horizontal plane).

4. **Element 1D: “and each edge support is in physical communication with two ends of a solid interior,”**

148. Cannon discloses that in one embodiment, each back support 105 and each edge support 110 is a surface of a solid. The solid media surface support 100 may have one or more ends 165. In addition, the solid media support 100 may be a pillow. Exhibit 1008 at ¶[0019], Figure 1 (annotated above).

149. A POSA would understand that each edge support is in physical communication with two ends of a solid interior, as shown in the annotation to figure 1.

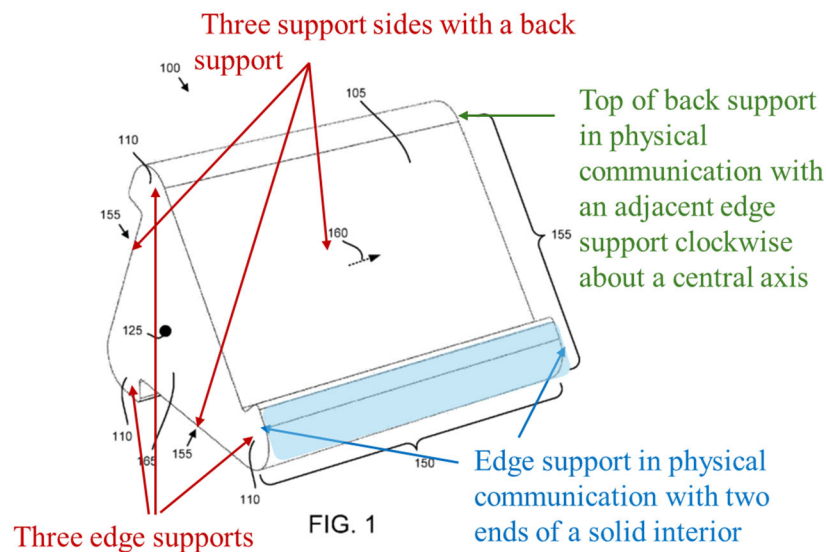


Exhibit 1008, Figure 1 (annotated).

5. Element 1E: “each edge support comprises an edge support width of 2 centimeters (cm) with an edge angle of 90 degrees to an adjacent back support,”

150. Cannon discloses that each edge support has an edge support width of 2 cm. Exhibit 1008 at ¶[0024]. Cannon also discloses an edge angle of 90 degrees to

an adjacent back support. Exhibit 1008 at ¶[0024]

6. Element 1F: “a face of each edge support width oriented clockwise about the central axis,”

151. Cannon does not explicitly disclose “a face of each edge support width oriented clockwise about the central axis.” However, a POSA reviewing Figures 1 and 2 would understand that each edge support width has “a face” on which the media device would rest and that such “face” would be oriented clockwise about the central axis, at least when viewed from one side of the media apparatus. Exhibit 1008 at Figures 1, 2.

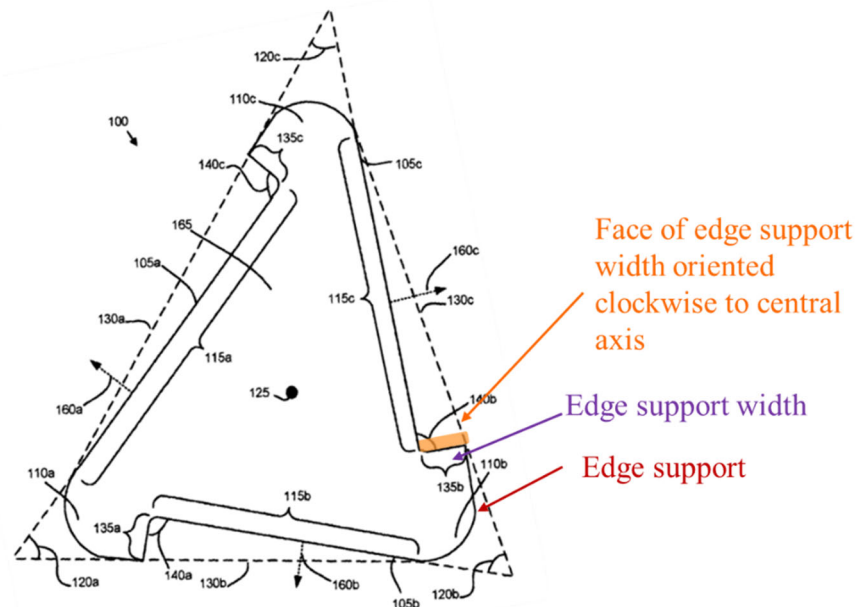


Exhibit 1008 at Figure 2 (annotated).

7. Element 1G: “a plane of a first back support is at a first plane angle of 60 degrees to a second virtual plane between the top of a second back support counterclockwise to the first back

support and an outer edge of a second edge support counterclockwise to the first back support,”

152. Cannon discloses that “[a] plane of a first back support 105a in a range of 50 to 60 degrees to a second virtual plane 130b between the top of a second back support 105b counterclockwise to the first back support 105a and an outer edge of a second edge support 110b counterclockwise to the first back support 105a.” Exhibit 1008 at ¶¶[0004], [0021], Figure 2. In an embodiment, Cannon discloses that the first plane angle 120 a is 60 degrees. Exhibit 1008 at ¶[0022].

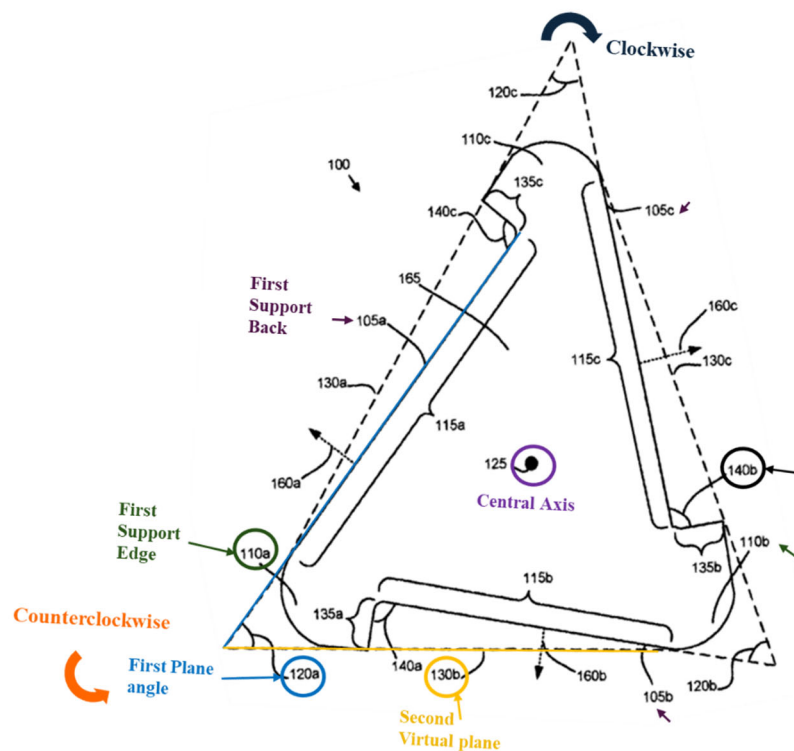


Exhibit 1008 at Figure 2 (annotations added).

8. **Element 1H: “a plane of the second back support is at a second plane angle of 80 degrees to a third virtual plane between the top of a third back support counterclockwise to the second back support and an outer edge of a third edge**

subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.” Exhibit 1006 at 83. The examiner noted that structural limitations such “the second plane angle of 80 degrees” was not disclosed in the specification. Exhibit 1006 at 83. The examiner also noted that “[t]here is not disclosure of the criticality of the angles being of these specific angular values in the specification.” Exhibit 1006 at 84.

155. It would have been obvious to a POSA to calibrate the back support relative to a virtual plane on which the apparatus rests in order to generate a second plane angle of 80 degrees. It would a matter of routine design and optimization for a POSA to provide the back support having the claimed plane angle above the disclosed range in Cannon.

156. It was very well known in the art that providing different inclinations for a back support on which the media device rests. Without providing for such design choice, a POSA would know that the media device could potentially slip or fall from its resting position when the user either changes position or changes the surface on which the apparatus rests. Examples of providing for different inclinations were known in Diebel which discloses that a stand can have different “working angles.” Diebel discloses that “[t]he angle provided by the stand can be

changed by altering the lengths of various panels.” Exhibit 1010 at 8:66-67. It further disclosed that “[f]or example, the length of panel 111 can be made longer than 113 and 109. Then the angle will be generally increased to more than 60 degrees. By doing the reverse (i.e., shortening panel 111), the angle can be decreased to less than 60 degrees.” Exhibit 1010 at 8:67-9:4. Diebel discloses that “the angle can be varied in a range from about 30 degrees to 75 degrees (or even closer to 90 degrees).” Exhibit 1010 at 9:5-6. Diebel goes on to disclose a range of angles, e.g. 8, 20, 35, 40, 50, 55, 65 degrees, and others. Exhibit 1010 at 9:7-10. While Diebel does not explicitly point out “a plane of the [] back support [] at a [] plane angle [] to a [] virtual plane,” a POSA would recognize and consider the disclosures in Diebel as showing a design choice to generate different plane angles.

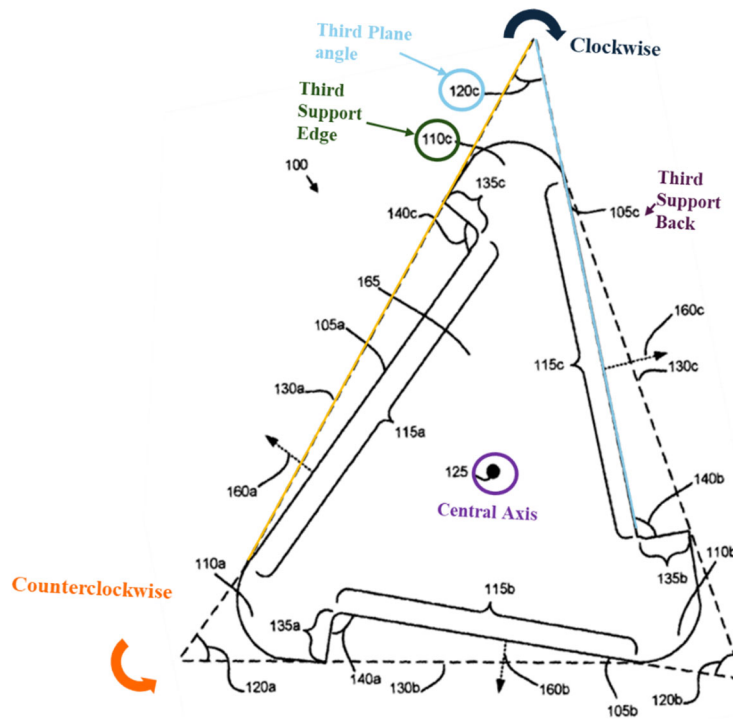
157. The POSA’s motivation to apply such design choice from Diebel is straightforward because, as another example, Barcalo which discloses a pillow to support books or magazines “adjustably in various convenient reading positions.” Exhibit 1009 at 1: 5-8. Barcalo discloses that the pillow “may be used ... in an inclined position convenient for reading ... with which the inclination of the articles so supported may be varied.” Exhibit 1009 at 1:12-20. It goes on to disclose that “[a] pillow of this type may be used in various different positions, such as to form props at different inclinations for a person desiring to sit or be supported in different postures or at different inclinations.” Exhibit 1009 at 2:18-22.

158. A POSA would have been motivated in view either Diebel or Barcalo to design and optimize the back support to have a plane angle such that it would support a media device when the apparatus is resting. As described above, this would provide the known benefit of facilitating the user to use the media support apparatus of Cannon in different viewing positions. A POSA would have had a reasonable expectation of success in incorporating such plane angles because the prior art disclosed that manipulating the inclination of a back support could provide flexibility in design and use of the media support apparatus. Well before the effective filing date of the '737 application, the POSA knew how to make such design choices and it would be routine optimization to determine the plane angle that would be formed against a virtual plane. Therefore, it would have been obvious to optimize Cannon to have “a second plane angle of 80 degrees to a third virtual plane.”

9. **Element 1I: “a plane of a third back support is at a third plane angle of 40 degrees to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support; and,”**

159. Cannon discloses “a plane of a third back support 105c may be at a third plane angle 120c in the range of 50 to 75 degrees to a first virtual plane 130a between the top of the first support back 105a counterclockwise to the third support back 105c and an outer edge of the first edge support 110a counterclockwise to the third back support 105c.” Exhibit 1008 at ¶¶[0004], [0021], Figure 2. In an embodiment,

Cannon discloses that the third plane angle 120 c is 52 degrees. Exhibit 1008 at ¶[0022].



160. Cannon does not disclose “a third plane angle of 40 degrees to a first virtual plane,” as claimed in claim 1. Once again, the examiner’s final rejection of the amended claims in the ’443 application noted that structural limitations such “the third plane angle of 40 degrees” was not disclosed in the specification. Exhibit 1006 at 83. The examiner also noted that “[t]here is not disclosure of the criticality of the angles being of these specific angular values in the specification.” Exhibit 1006 at 84.

161. As discussed above with respect to Element IH, it would have been

obvious to a POSA to calibrate the back support in relative to a virtual plane on which the apparatus would rest such that a third plane angle would be 40 degrees. It would be a matter of routine design and optimization for a POSA to provide the back support having the claimed plane angle below the disclosed range in Cannon.

162. As discussed above with respect to Element IH, it was very well known in the art that providing different inclinations of a back support on which the media device rests would change the viewing angles. For example, Diebel discloses that “[t]he angle provided by the stand can be changed by altering the lengths of various panels.” Exhibit 1010 at 8:66-67. It further disclosed that “[f]or example, the length of panel 111 can be made longer than 113 and 109. Then the angle will be generally increased to more than 60 degrees. By doing the reverse (i.e., shortening panel 111), the angle can be decreased to less than 60 degrees.” Exhibit 1010 at 8:67-9:4. Diebel discloses that “the angle can be varied in a range from about 30 degrees to 75 degrees (or even closer to 90 degrees).” Exhibit 1010 at 9:5-6. Diebel goes on to disclose a range of angles, e.g. 8, 20, 35, 40, 50, 55, 65 degrees, and others. Exhibit 1010 at 9:7-10. While Diebel does explicitly state “a plane of the [] back support [] at a [] plane angle [] to a [] virtual plane,” a POSA would recognize and consider the disclosures in Diebel as showing a design choice to generate different plane angles.

163. The POSA’s motivation to apply such design choice from Diebel is straightforward because, as discussed above, Barcalo discloses that “[a] pillow of

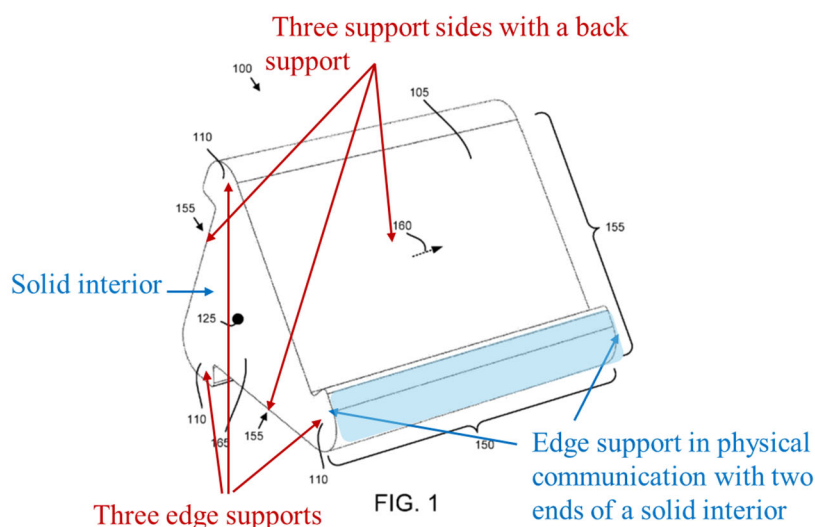
this type may be used in various different positions, such as to form props at different inclinations for a person desiring to sit or be supported in different postures or at different inclinations.” Exhibit 1009 at 2:18-22.

164. A POSA would have been motivated in view either Diebel or Barcalo to design and optimize the back support to have a plane angle such that it would support a media device when the apparatus is resting. As described above, this would provide the known benefit of facilitating the user to use the media support apparatus of Cannon in different viewing positions. A POSA would have had a reasonable expectation of success in incorporating such plane angles because the prior art disclosed that manipulating the inclination of a back support could provide flexibility in design and use of the media support apparatus. Well before the effective filing date of the '737 application, the POSA knew how to make such design choices and it would be routine optimization to determine the plane angle that would be formed against a virtual plane. Therefore, it would have been obvious to optimize Cannon to have “a third plane angle of 40 degrees to a third virtual plane.”

10. Element 1J: “wherein each back support, each edge support, and each end is a surface of the solid interior,”

165. Cannon discloses an embodiment where each back support 105 and each edge support 110 is a surface of a solid. Exhibit 1008 at ¶[0019], Figs. 1, 4. A POSA would understand each back support, each edge support, and each end is a

surface of a solid interior.



11. Element 1K: “the solid interior is a pillow covered in fabric,”

166. Cannon discloses that the solid media support 100 may be a pillow. Exhibit 1008 at ¶[0019] In one embodiment, the surface of the solid is ultra suede. Exhibit 1008 at ¶[0019].

12. Element 1L: “a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees.”

167. An embodiment of the media support apparatus disclosed in Cannon has three support sides 155 which generate three different viewing angles 160 for three different viewer positions. Exhibit 1008 at ¶¶[0018], [0027]. Cannon discloses that “[e]ach viewing angle is chosen for a specific viewing orientation. The first viewing angle 160a may be employed when the media support 100 and the media is

disposed in the user's lap. The second viewing angle 160b may be used when the media support 100 and the media is disposed on a table and the user is sitting upright. In addition, the 3rd viewing angle 160c may be used when the user is lying down and the media support 100 is disposed on the user." Exhibit 1008 at ¶[0027].

168. Cannon does not disclose that "a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees." Exhibit 1008 at ¶[0023] (disclosing that "[t]he arrangement of the longitudinal lengths **115** and the plane angles **120** generate three distinct viewing angles **160**. In one embodiment, the first viewing angle **120 a** may be x degrees, the second viewing angle **120 b** may be X degrees, and the third viewing angle **120 C** may be X degrees). As discussed above, the examiner's final rejection of the amended claim 1 in the '443 application noted that structural limitations such the specifically claimed viewing angles were not disclosed in the specification. Exhibit 1006 at 83. The examiner also noted that "[t]here is not disclosure of the criticality of the angles being of these specific angular values in the specification." Exhibit 1006 at 84; Exhibit 1002 at 61 (noting that the amended claims in the '443 application were rejected because the claimed viewing angles "was not adequately supported by the original disclosure."), 127.

169. However, for the reasons as discussed above with respect to Elements

1H and 1I, it would have been obvious to a POSA to make design choices to modify the plane angles in Cannon and then estimate and optimize for the viewing angles such that “a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees.”

170. Because the “viewing angle” is construed here as the “angle of a vector normal to a back support or support back (whichever is recited in the claim) positioned to support a media device as defined in relation to the plane on which the media stand is resting,” a POSA would know how to determine the viewing angle. Recognizing this concept, Diebel discloses that by designing the back support to have different inclinations and optimize the working angles of the panels, this facilitates flexibility and allow for more viewing angles. Exhibit 1010 at 2:25-27. Diebel discloses that “[t]he angle provided by the stand can be changed by altering the lengths of various panels.” Exhibit 1010 at 8:66-67. Diebel goes on to disclose a range of angles, e.g. 8, 20, 35, 40, 50, 55, 65 degrees, and others that may be formed by the panels. Exhibit 1010 at 9:7-10. It further discloses that “[i]n alternate implementation, there can be varying number of bumps (e.g., 1, 3, 4, and others). The more bumps, generally, the more viewing angles possible.” Exhibit 1010 at 9:14-17. Therefore, determining the “angle of a vector normal to a back support or support back (whichever is recited in the claim) positioned to support a media device

as defined in relation to the plane on which the media stand is resting,” would be expected by a POSA as Barcalo also discloses that “when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:79-91.

171. Therefore, a POSA would have a reasonable expectation at providing “a first viewing angle of the first back support is 36 degrees, a second viewing angle of the second back support is 74 degrees, and a third viewing angle of the third back support is 49 degrees,” in a media support apparatus.

13. Conclusion:

172. For the reasons that I have explained above, Cannon, in combination with Diebel or Barcalo, and/or the knowledge of a POSA, discloses all of the elements of claim 1. Therefore claim 1 would have been obvious.

B. Dependent Claim 2

173. Dependent claim 2 depends from claim 1 and further requires “the first back support has a longitudinal length in the range of 12 to 26 centimeters (cm), the second back support has a longitudinal length in the range of 9 to 21 cm, and the third back support has a longitudinal length in the range of 10 to 22 cm.” Cannon discloses an embodiment wherein the first back support has a longitudinal length in the range of 12 to 26 centimeters, the second back support has a longitudinal length in the range of 9 to 21 centimeters and the third back support has a longitudinal

length in the range of 10 to 22 centimeters. Exhibit 1008 at ¶[0022].

C. Dependent Claim 8

174. Dependent claim 8 depends from claim 1 and adds the same limitation as element 1D of claim 1, requiring “each edge support has an edge support width in the range of 1 to 5 centimeters (cm).” Cannon discloses each edge support with an edge support width in the range of 1 to 5 cm. Exhibit 1008 at ¶[0024].

D. Dependent Claim 9

175. Dependent claim 9 depends from claim 8 and adds the same limitation as element 1D of claim 1, requiring “a plane of each edge support forms an edge angle in the range of 85 to 120 degrees with an adjacent back support.” Cannon discloses each edge support forms an edge angle with an adjacent back support in the range of 85 to 120 degrees. Exhibit 1008 at ¶[0024].

E. Dependent Claim 10

176. Dependent claim 10 depends from claim 1 adds the same limitation as element 1D of claims 1 and 9, requiring “the edge angle is 90 degrees.” Cannon discloses that the edge angle may be 90 degrees. Exhibit 1008 at ¶[0024].

F. Conclusion

177. For the reasons that I have explained above, Cannon discloses all of the elements of claim 2, 8-10. Therefore, claims 2, 8-10 would have been obvious.

G. Independent Claim 12

1. Element 12A: “A media support apparatus comprising:...” (“the Preamble”)

178. For the same reasons as discussed with respect to Element 1A, Cannon discloses a media support apparatus. Exhibit 1008 at Abstract and ¶¶[0002], [0004], Figures 1-4.

2. Element 12B: “a body having a first support back, a second support back, and a third support back disposed about a central axis;”

179. For the same reasons as discussed with respect to Element 1B, the apparatus disclosed in Cannon has multiple viewing angle media support, which includes three support sides, and where each support side includes a back support and an edge support disposed about a central axis. Exhibit 1008 at ¶¶[0016], [0004].

3. Element 12C: “a first support edge disposed between the first support back and the second support back, the first support back and first support edge are configured to support a media device at a first support angle,”

180. Cannon discloses that in one embodiment, each edge support is in physical communication with an adjacent back support and shows each edge support disposed between two back supports. Exhibit 1008 at ¶¶[0021], Figure 2.

181. Cannon does not explicitly or implicitly disclose an “angle formed between the support back and support edge that are configured to support a media device.” *See* Exhibit 1015, Term 2c (Section X.A).

182. However, it would have been obvious to a POSA to develop a media support apparatus having a back support and edge support that are configured to support a media device at a support angle, i.e. the angle formed between the back support and edge support that are configured to support a media device. Such structures were well known in the art. For example, Barcalo discloses that the pillow has edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:79-91, Figure 5. Moreover, the patent applicants admitted that the disclosures in Barcalo show an angle between “adjacent display planes.” Exhibit 1002 at 190, 191 (“Barcalo does not disclose different angles between virtual sides and an adjacent display side.”). Similarly, Diebel discloses a configuration achievable by the foldable cover is a triangular cross-sectional shape. Exhibit 1010, 6:32-33; 6:35-37, Figs. 5A–5C.

183. A POSA would have been motivated to provide a back support and edge support that are configured to support a media device disclosed in Cannon at an angle as discussed by Diebel and Barcalo, i.e. at an inclination that would facilitate supporting a media device. A POSA would have a reasonable expectation that this would be successful at providing a support angle. Therefore, it would have been obvious to design Cannon to have a support angle that would support a media

device.

4. **Element 12D: “a second support edge disposed between the second support back and third support back, the second support back and second support edge are configured to support a media device at a second support angle;”**

184. For the same reasons as discussed with respect to Element 12C, a POSA would have been motivated to provide a second back support and edge support that are configured to support a media device disclosed in Cannon at an angle as discussed by Diebel and Barcalo, i.e. at a second inclination that would facilitate supporting a media device. A POSA would have a reasonable expectation that this would be successful at providing a second support angle.

5. **Element 12E: “a third support edge disposed between the third support back and first support back, the third support back and third support edge are configured to support a media device at a third support angle,”**

185. For the same reasons as discussed with respect to Element 12C, a POSA would have been motivated to provide a third back support and edge support that are configured to support a media device disclosed in Cannon at an angle as discussed by Diebel and Barcalo, i.e. at a third inclination that would facilitate supporting a media device. A POSA would have a reasonable expectation that this would be successful at providing a third support angle.

6. **Element 12F: “wherein each edge support comprises an edge support width with an edge angle in the range of 85 to 120 degrees to an adjacent support back, a face of each edge**

support width oriented clockwise about the central axis;”

186. Cannon discloses each edge support may have an edge support width which forms an edge angle with an adjacent back support in the range of 85 to 120 degrees. Exhibit 1008 at ¶[0024]. Cannon discloses that the edge supports are clockwise oriented around a central axis. Exhibit 1008 at ¶[0024], Figure 2.

7. **Element 12G: “wherein the media support apparatus is configured to be rotated about the central axis so that the body can rest on a horizontal support in any one of three positions including on a first virtual plane between a top of the second support back and an outer edge of the second edge support, on a second virtual plane between a top of the third support back and an outer edge of the third edge support, and on a third virtual plane between a top of the first support back and an outer edge of the first edge support; and”**

187. Cannon discloses that the media support 100 can be rotated to select a back support 105 with a comfortable viewing angle 160. Exhibit 1008 at ¶¶[0020], [0028]. The support sides are disposed about a central axis. Exhibit 1008 at ¶[0016]. Cannon discloses that the media support apparatus can rest on a horizontal support in any one of three positions – a first virtual plane or second virtual plane or third virtual plane. Exhibit 1008 at ¶[0021], Figure 2, *see* Elements 1G-1I, above.

8. **Element 12H: “wherein the media support apparatus is configured to provide a first viewing angle of the media device when the media support apparatus body rests on the first virtual plane and the media device is supported at the first support angle, a second viewing angle when the media support apparatus body rests on the second virtual plane and the media device is supported at the second support angle, and a third viewing angle when the media support apparatus**

body rests on the third virtual plane and the media device is supported at the third support angle, wherein the first viewing angle, the second viewing angle, and the third viewing angle are different from one another.”

188. An embodiment of the media support apparatus disclosed in Cannon has three support sides 155 which generate three different viewing angles 160 for three different viewer positions. Exhibit 1008 at ¶¶[0018], [0027]. Cannon discloses that “[e]ach viewing angle is chosen for a specific viewing orientation. The first viewing angle 160a may be employed when the media support 100 and the media is disposed in the user’s lap. The second viewing angle 160b may be used when the media support 100 and the media is disposed on a table and the user is sitting upright. In addition, the 3rd viewing angle 160c may be used when the user is lying down and the media support 100 is disposed on the user.” Exhibit 1008 at ¶¶[0023], [0027], Figure 2.

189. Further, for the same reasons as discussed with respect to Elements 12C-12E, a POSA would have been motivated to provide a back support and edge support that are configured to support a media support apparatus disclosed in Cannon at an angle as discussed by Diebel and Barcalo, i.e. at an inclination that would facilitate supporting a media device when the apparatus is disposed on such virtual planes.

9. Conclusion

190. Because Cannon, in combination with Diebel or Barcalo, discloses all

of the elements of claim 12, this claim would have been obvious to a POSA.

H. Dependent Claim 13

191. Dependent claim 13 adds the same limitation as element 12C-12E of claim 12, requiring “the first support angle is between 50 and 60 degrees to the second virtual plane, the second support angle is between 55 and 65 degrees to the third virtual plane, and the third support angle is between 50 and 75 degrees to the first virtual plane.”

192. As discussed with respect to Elements 12C-12E, a POSA would have been motivated to provide a back support and edge support that are configured to support a media support apparatus disclosed in Cannon at an angle as discussed by Diebel and Barcalo, i.e. at an inclination that would facilitate supporting a media device when the apparatus is disposed on such virtual plane. The calculation of the angle that would be formed between such support angle and the virtual plane as disclosed in Cannon would be a straightforward mathematical calculation. A POSA would routinely undertake such measurements and optimizations as demonstrated in Diebel. Therefore, claim 13 also would have been obvious over Cannon in view of Diebel and/or Barcalo.

I. Dependent Claim 15

193. Dependent claim 15 depends from claim 12 and further requires that “the edge support angle is 90 degrees.” Cannon discloses that the edge angle may be

90 degrees. Exhibit 1008 at ¶[0024].

J. Dependent Claim 16

194. Dependent claim 16 depends from claim 15 and further requires that “the edge support width is 2 cm.” Cannon discloses that each edge support has an edge support width of 2 cm. Exhibit 1008 at ¶[0024].

K. Dependent Claim 17

195. Dependent claim 17 depends from claim 12 and further requires that “the body includes three solid corners, with each of the corners interposed between two adjacent back supports and including a respective edge support.” Cannon discloses an embodiment where each back support and each edge support is a surface of a solid. Exhibit 1008 at ¶[0019]. Cannon further discloses that a top of each back support 105 is in physical communication with an adjacent edge support 110 about the central axis 125. Exhibit 1008 at ¶¶[0021], [0004] (“[a] top of each back support is in physical communication with an adjacent edge support clockwise about a central axis.”), [0024].

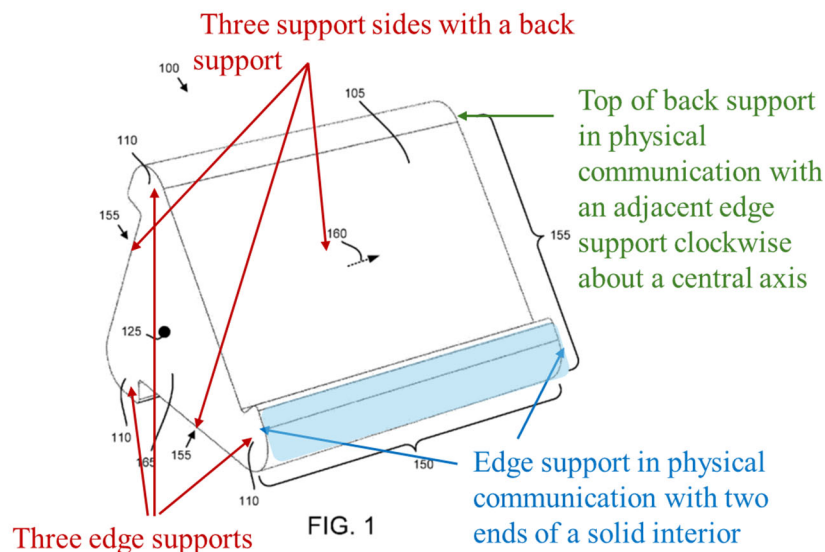


Exhibit 1008, Figure 1 (annotated).

196. It would be apparent to a POSA that Cannon discloses three solid corners, with each of the corners interposed between two adjacent back supports and including a respective edge support.

L. Dependent Claim 19

197. Dependent claim 19 depends from claim 12 and further requires that “the edge support width is 2 cm.” Cannon discloses that each edge support has an edge support width of 1 to 5 cm. Exhibit 1008 at ¶[0024].

M. Conclusion

198. For the reasons that I have explained above, Cannon discloses all of the elements of claims 13, 15-17, 19. Therefore, claims 13, 15-17, 19 would have been obvious.

XIII. OPINION II: CLAIMS 12, 13, 15–17, AND 19 WOULD HAVE BEEN OBVIOUS BASED ON KLEPAR I IN VIEW OF BARCALO AND/OR DEAN AND/OR THE KNOWLEDGE OF A POSA

A. Independent Claim 12¹⁶

1. Element 12A: “A media support apparatus comprising:...” (“the Preamble”)

199. Even assuming the preamble is limiting, Klepar I discloses multi-position stand for supporting an electronic display device in one or more usage configurations. Exhibit 1012 at Abstract, ¶¶[0012], Figures 1-6.

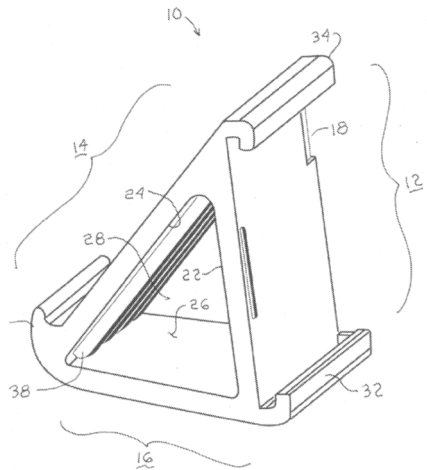


Fig. 1

Exhibit 1012 at Figure 1 (a perspective view of a multi-position stand).

2. Element 12B: “a body having a first support back, a second support back, and a third support back disposed about a central axis;”

200. The multi-position stand disclosed in Klepar I discloses as having a

¹⁶ My analysis under Opinion II applies the same break-up of each limitation of claim 12 consistent with the elements 12A-12G discussed under Opinion I.

“first receiving panel, the second receiving panel configured to support a second electronic display; and a base panel attached to the first receiving panel and to the second receiving panel, the base panel forming a structure with the first receiving panel and the second receiving panel, the structure having the shape of a substantially triangular cylinder. Exhibit 1012 at ¶¶[0012], [0031].

201. Klepar discloses three alternate orientations of the multi-position stand, each oriented along a central axis:

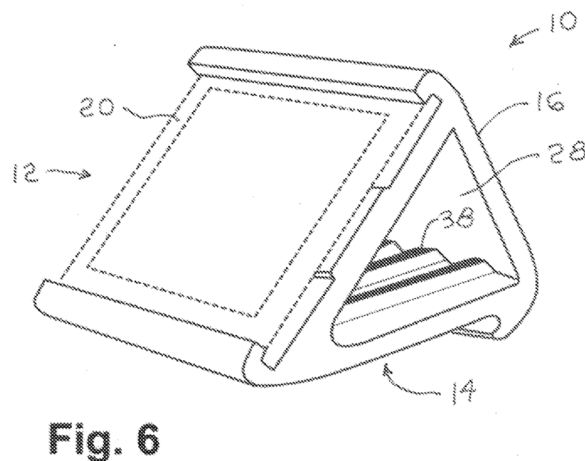
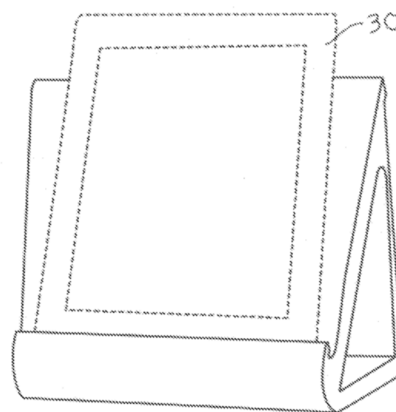
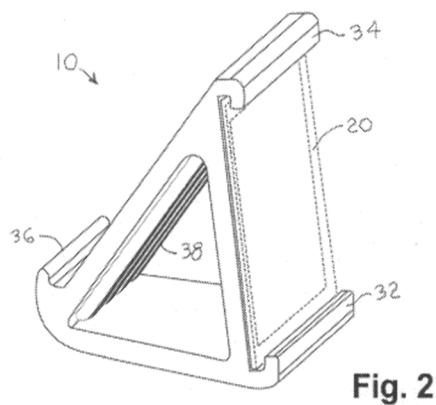


Exhibit 1012 at Figures 2, 3, 6.

202. A POSA would understand Klepar I discloses a body having at least two back supports. A POSA would recognize that providing a third back support would be useful in view of Barcalo which discloses a pillow for use of propping materials for reading, which is triangular in shape having side faces wherein “when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:89-91, Figs. 1, 5.

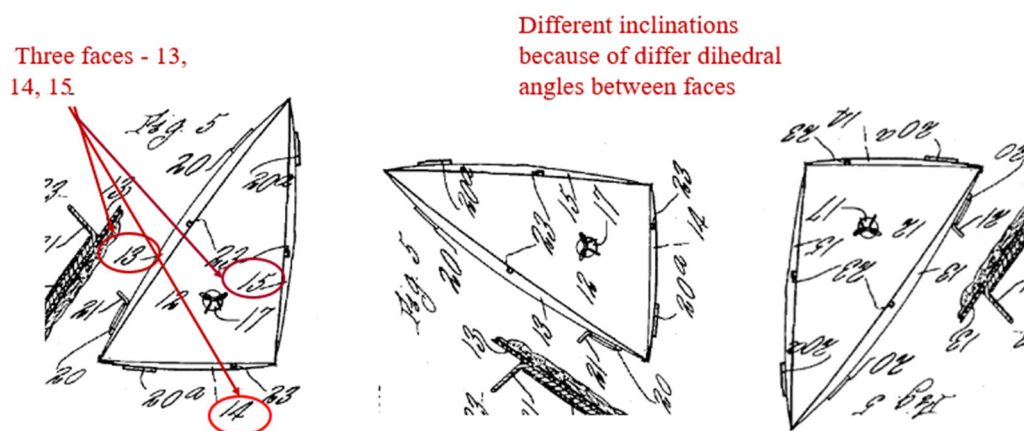


Exhibit1009, Fig. 5.

203. Changing the directionality of the first L-channel (32) to the opposite direction would be a straightforward design choice for a POSA. Triangular supports having raise projections that would facilitate resting the device on such projections was known in the art. For example, Dean disclosed a solid member that “can be universally arranged with any two pair of its legs stably resting on a flat support and with the third leg oriented upward.” Exhibit 1011 at 1:55-65, Figure 2.

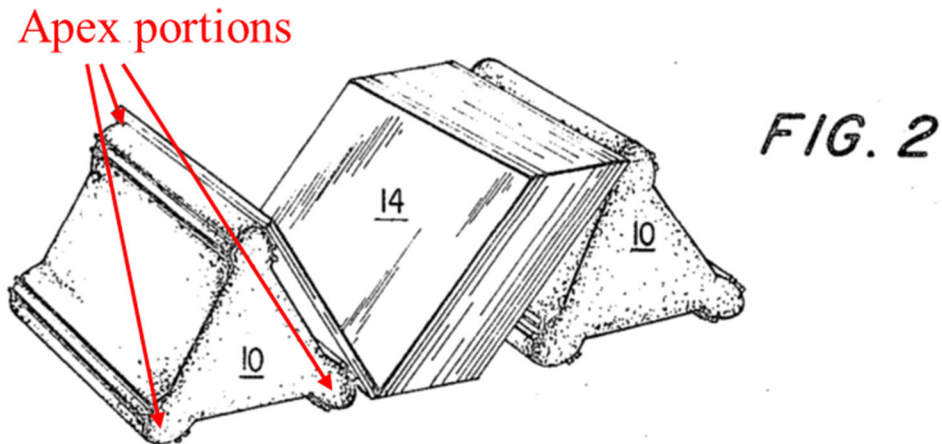


Exhibit 1011 at Figure 2 (annotations added).

204. Moreover, in view of the three disclosed orientations in multi-position stand disclosed in Klepar I, a POSA would be motivated to change the orientation of L-channel (32) such that it generates three back supports having orientation similar to Figure 6 in Klepar. A POSA would readily recognize the benefit of doing so because it would facilitate using a known three-inclination design (such as in Barcalo) and applying it to the existing configuration in Klepar. A POSA would have a reasonable expectation of success given that such elevated designs were known in the art (such as in Dean).

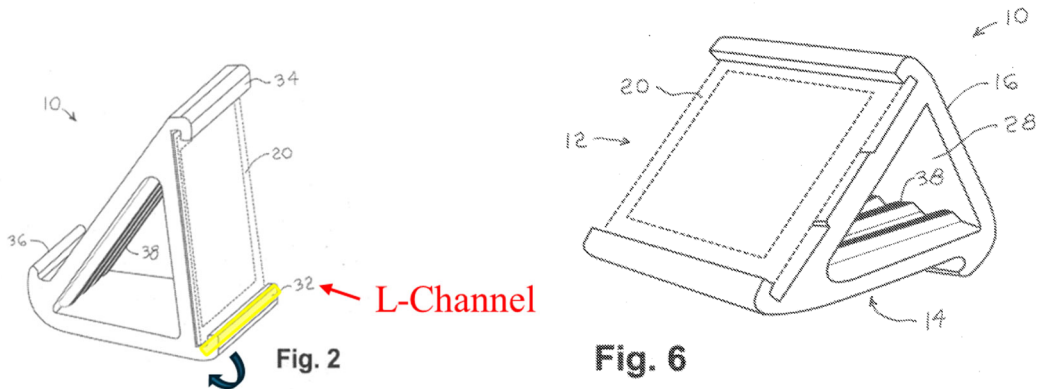


Exhibit 1012 at Figure 2 (annotated to show change in orientation of L-channel to form a configuration similar to Figure 6 of Klepar I).

3. **Element 12C: “a first support edge disposed between the first support back and the second support back, the first support back and first support edge are configured to support a media device at a first support angle,”**

205. Klepar I discloses that “[t]he first receiving panel **12** and the second receiving panel **14** are dimensioned and oriented with respect to one another such that the multi-position stand **10** is shaped and angled to maintain a first electronic display device **20** at a comfortable angle relative to the body and line of vision of the user, as shown in FIG. 2.” Exhibit 1012 at ¶[00231].

206. Reviewing the figures in Klepar I, a POSA would understand that Klepar I provides three different configurations wherein the back support and edge support a media device at a support angle, i.e. the angle formed between the back support and edge support that are configured to support a media device when the apparatus is resting.

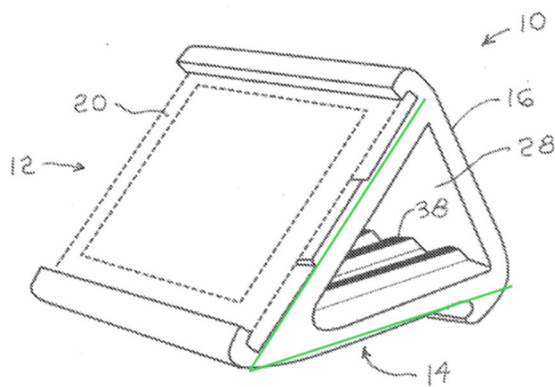


Fig. 6

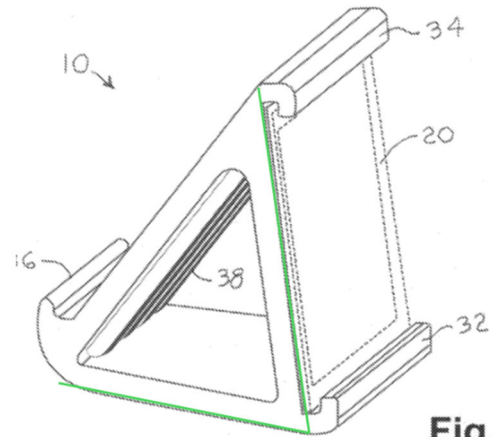


Fig. 2

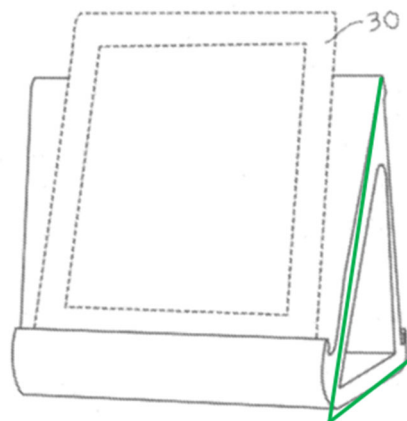


Fig. 3

Exhibit 1012 at Figures 2, 3 and 6 (annotated to show the angle formed between the back support and edge support).

207. Moreover, Barcalo discloses that the pillow has edges of the triangular ends that are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:79-91, Fig. 5.

208. Having been motivated to reverse the orientation of L-channel (32)

disclosed in Klepar, a POSA would have known that each back support would provide a support angle between the “edge support” (L-channel) and the back support (panel).

4. **Element 12D: “a second support edge disposed between the second support back and third support back, the second support back and second support edge are configured to support a media device at a second support angle;”**

209. For the same reasons as discussed with respect to Element 12C, a POSA would have been motivated to provide a back support and edge support that are configured to support a media device on the multi-position stand disclosed in Klepar I and would have known that each back support would be provide a support angle between the “edge support” (L-channel) and the back support (panel). Exhibit 1012 at Figures 2, 3, 6 (as annotated above).

5. **Element 12E: “a third support edge disposed between the third support back and first support back, the third support back and third support edge are configured to support a media device at a third support angle,”**

210. For the same reasons as discussed with respect to Element 12C, a POSA would have been motivated to provide a back support and edge support that are configured to support a media device on the multi-position stand disclosed in Klepar I and would have known that each back support would be provide a support angle between the “edge support” (L-channel) and the back support (panel). Exhibit 1012 at Figures 2, 3, 6 (as annotated above).

6. **Element 12F: “wherein each edge support comprises an edge support width with an edge angle in the range of 85 to 120 degrees to an adjacent support back, a face of each edge support width oriented clockwise about the central axis;”**

211. Klepar I discloses three edge supports which include a first L-channel 32 and a second L-channel 34 disposed on two opposing sides of the first receiving panel 12, for securely holding the first electronic display device 20. Exhibit 1012 at ¶[0032]. Klepar I also discloses that the multi-position stand can be used with an electronic display device, such as tablet computers, in one or more usage configurations. Exhibit 1012 at ¶[0008]. It is my opinion having reviewed the disclosures in Klepar I and the associated figures that it discloses “each edge support comprises an edge support width with an edge angle in the range of 85 to 120 degrees to an adjacent support back.”

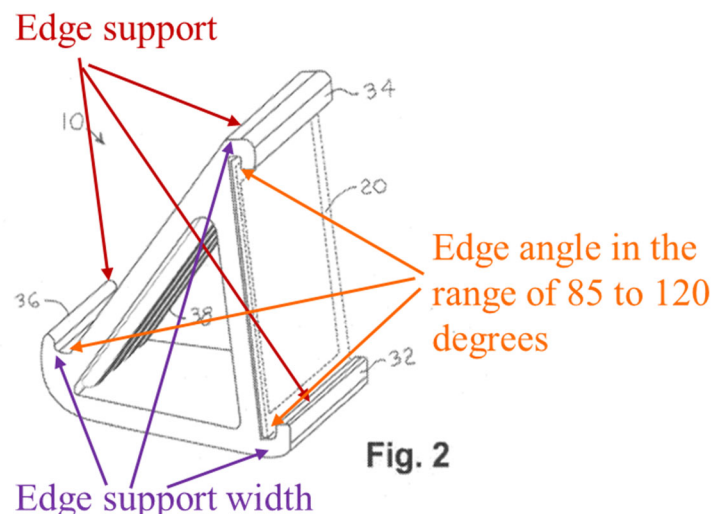


Exhibit 1012 at Figure 2 (annotations added).

212. Further, Klepar I discloses two edge supports that are clockwise oriented around a central axis. Exhibit 1012 at Figure 2. Similar to Figure 2 in the RE'479 Patent, Figure 2 in Klepar I shows one side of the multi-position stand which appears to show a counterclockwise orientation. However, when viewed from the other side, these edge supports would have a clockwise orientation about the central axis. This is shown in Figure 5 of Klepar I.

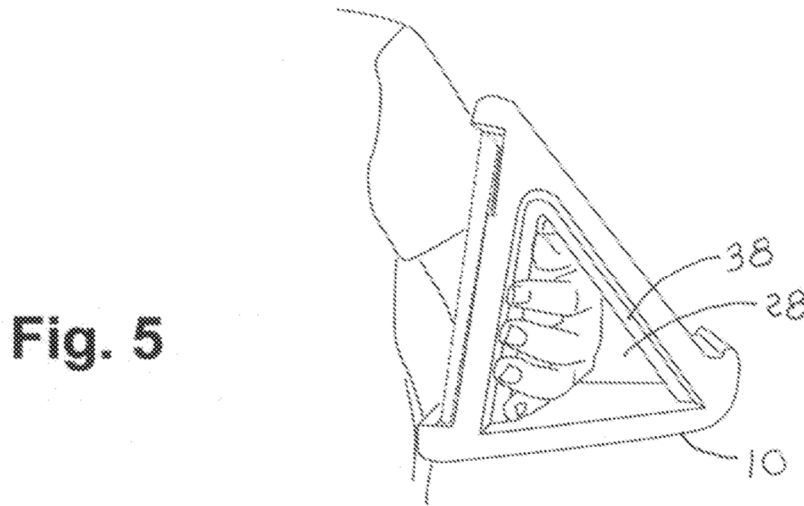


Exhibit 1012 at Figure 5.

213. As discussed above with respect to Elements 12B-12D, it would have been obvious to a POSA modify the third edge support orientation of Klepar I to also be clockwise oriented around a central axis. Indeed, Klepar I discloses that “FIG. 6 shows the multi-position stand 10 as may be used in an alternative orientation. As shown in the illustration the electronic display device 20 is supported on the first receiving panel 12, the second receiving panel 14 faces downward and the base panel

16 faces away from the user. As can be appreciated by one skilled in the art, the multi-position stand 10 can be used in any of the three positions shown in FIGS. 2, 4, and 6.” Exhibit 1012 at ¶[0035].

7. **Element 12G: “wherein the media support apparatus is configured to be rotated about the central axis so that the body can rest on a horizontal support in any one of three positions including on a first virtual plane between a top of the second support back and an outer edge of the second edge support, on a second virtual plane between a top of the third support back and an outer edge of the third edge support, and on a third virtual plane between a top of the first support back and an outer edge of the first edge support; and”**

214. As discussed above with respect to Elements 12A to 12H, Klepar I discloses a multi-position stand that can support media devices in different positions. Klepar I further discloses that an “[e]xemplary embodiment of the present invention is directed towards a multi-position stand for securely holding an electronic display device, such as tablet computers, in one or more usage configurations accessible by: (i) flipping the stand relative to a user, or (ii) using the stand in substantially flat position, or (iii) using the stand as vertical or horizontal stand. The user is enabled to flip over the stand holding the tablet computer in one of three 'flip' positions to get a specific viewing angle or use the tablet as a simple stand preferably like the e-reader. The user as desired can place the tablet computer in the stand either in portrait or landscape orientation.” Exhibit 1012 at ¶[0029].

215. Moreover, in Figure 6, Klepar I shows that the electronic display device

20 is supported on the first receiving panel 12, the second receiving panel 14 faces downward, and the base panel 16 faces away from the user. As can be appreciated by one skilled in the art, the multi-position stand 10 can be used in any of the three positions shown in FIGS. 2, 4, and 6.” Exhibit 1012 at ¶[0035]. In this orientation, Klepar I discloses the multi-position stand resting on at least one horizontal support along a virtual plane.

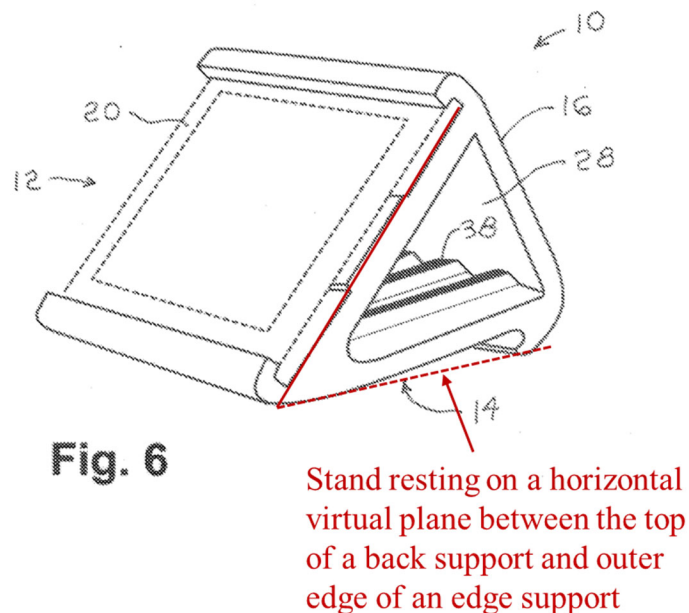


Exhibit 1012 at Figure 6 (annotations added).

216. As discussed above with respect to Elements 12B-12D, it would have been obvious to a POSA modify the third edge support orientation of Klepar I to also be clockwise oriented around a central axis. It would therefore have been apparent to a POSA that following a straightforward design change, the multi-position stand of Klepar I would have any one of three positions, including three virtual planes. *See*

Exhibit 1012 at ¶[0035].

8. **Element 12H: “wherein the media support apparatus is configured to provide a first viewing angle of the media device when the media support apparatus body rests on the first virtual plane and the media device is supported at the first support angle, a second viewing angle when the media support apparatus body rests on the second virtual plane and the media device is supported at the second support angle, and a third viewing angle when the media support apparatus body rests on the third virtual plane and the media device is supported at the third support angle, wherein the first viewing angle, the second viewing angle, and the third viewing angle are different from one another.”**

217. As discussed above in Section VIII.C.4, during prosecution of the '443 application and the '797 application, the applicants conceded that Klepar II discloses two viewing angles. Exhibit 1002 at 195. Indeed, Klepar I discloses three potential configurations, each of which generates a different viewing angle when the media device is supported at three different support angles.

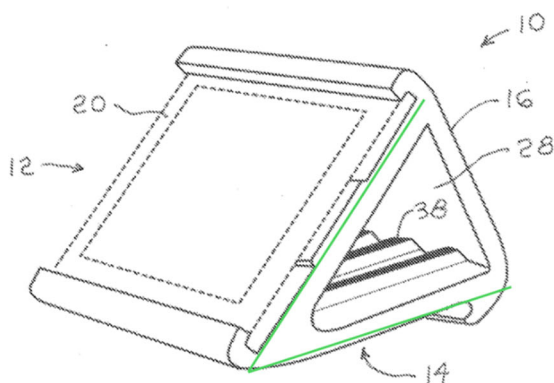


Fig. 6

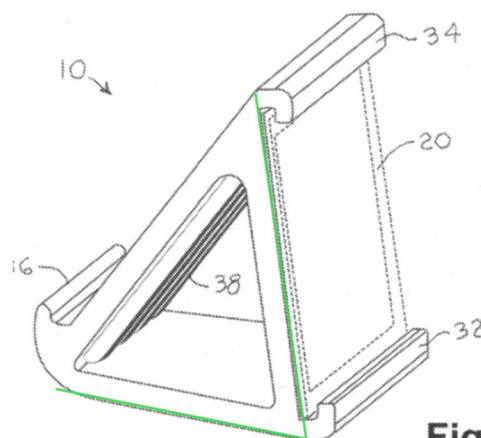


Fig. 2

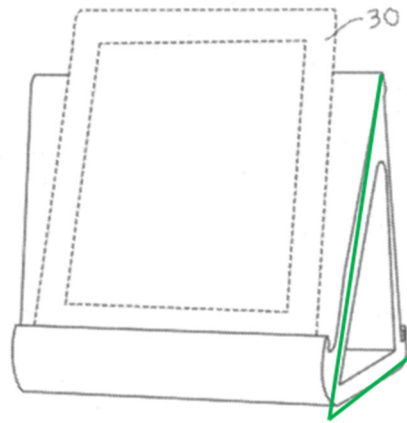


Fig. 3

Exhibit 1012 at Figures 2, 3 and 6 (annotated to show the angle formed between the back support and edge support).

218. As I note above in Section VIII.C.4, during prosecution of the '797 application, the applicants argued that “the Barcalo device like the Halpin device (and the previously cited Klepar device D703,216 [Klepar II]) must be spun about a horizontal plane in order to properly display at least one of its sides. Halpin has only one display side. Klepar has two.” Exhibit 1002 at 101. Based on this argument, the applicants distinguished the claimed invention as facilitating “[r]otations occur in the same direction to present each of the sides sequentially, either clockwise or counterclockwise. This makes it easier to find a side a display angle that best works for the user.” Exhibit 1002 at 102.

219. I disagree with the applicants’ argument because Klepar I (as well as the corresponding Klepar II design patent) has three potential configurations which provide three viewing angles as I discuss above. Moreover, by modifying a third

edge support orientation of Klepar I to also be clockwise oriented around a central axis, Klepar I would disclose a multi-position stand that meets all the elements of this claim limitation.

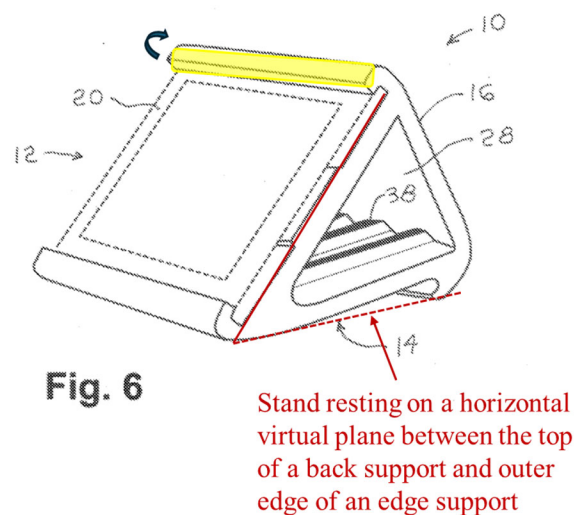


Exhibit 1012 at Figure 6 (annotated to at least one virtual plane and design change to the third edge support).

9. Conclusion

220. For the reasons I have explained above, Klepar I, in view of Barcalo and Dean, discloses all of the elements of claim 12, this claim would have been obvious to a POSA.

B. Dependent Claim 13

221. As discussed above, determining the support angle would be a matter of routine for a POSA based on the disclosures in Klepar I. Thus, claim 13 also would have been obvious Klepar I, in view of Barcalo and Dean.

C. Dependent Claim 15

222. Dependent claim 15 further requires “the edge support angle is 90 degrees.” Klepar I discloses an edge angle of 90 degrees. Exhibit 1012 at Figures 2, 3, 6. Thus, claim 15 also would have been obvious over Klepar I.

D. Dependent Claim 16

223. Dependent claim 16 further requires “the edge support width is 2 cm.” Klepar I discloses each edge support that would be suited to hold a tablet, electronic device or book. Exhibit 1012 at ¶[0028]. A POSA would know that in order to accommodate such devices which have standard width dimensions between 1 to 5 centimeters, the edge support (L-channel) would have to be at least 2 centimeters. This would have been another straightforward disclosure based on Klepar I. Thus, claim 16 also would have been obvious over Klepar I.

E. Dependent Claim 17

224. Dependent claim 17 adds that “the body includes three solid corners, with each of the corners interposed between two adjacent support backs and including a respective edge support.” As discussed above with respect to Element 12D, Klepar I discloses two edge supports that are clockwise oriented around a central axis. It would have been obvious to a POSA modify the third edge support orientation of Klepar I to also be clockwise oriented around a central axis. Indeed, Klepar I discloses that “FIG. 6 shows the multi-position stand **10** as may be used in

an alternative orientation. As shown in the illustration the electronic display device **20** is supported on the first receiving panel **12**, the second receiving panel **14** faces downward and the base panel **16** faces away from the user. As can be appreciated by one skilled in the art, the multi-position stand **10** can be used in any of the three positions shown in FIGS. 2, 4, and 6.” Exhibit 1012 at ¶[0035]. Moreover, Barcalo and Dean disclose that edge supports may be oriented to be clockwise around a central axis. Thus, claim 17 also would have been obvious over Klepar I in view of Barcalo or Dean.

F. Dependent Claim 19

225. Dependent claim 19 adds that “the edge support width is in the range of 1 to 5 cm.” For the same reasons as claim 16, claim 19 also would have been obvious over Klepar I.

G. Conclusion

226. For the reasons that I have explained above, Klepar I discloses all of the elements of claims 13, 15-17, 19. Therefore, claims 13, 15-17, 19 would have been obvious.

XIV. OPINION III: CLAIMS 20-21, AND 27-29 WOULD HAVE BEEN OBVIOUS BASED ON BARCALO IN VIEW OF KLEPAR I OR KLEPAR II AND/OR DEAN, AND THE KNOWLEDGE OF A POSA

A. Independent Claim 20

1. Element 20A: “An apparatus comprising...” (“the Preamble”)

227. I understand that the preamble is not limiting. However, even assuming the preamble is limiting, Barcalo discloses pillows or cushions to support books or magazines “adjustably” for convenient reading positions. Exhibit 1009 at 1:1-8. The support can be used at “varied inclinations” which are “convenient for reading.” Exhibit 1009 at 1:9-22.

2. Element 20B: “three support sides, each support side comprising a back support and an edge support,”

228. As discussed above, Barcalo discloses a pillow which is triangular in shape for use of propping materials for reading. “[t]he ends 12 of the case or sack are triangular in shape, being preferably obtuse angled triangles . . . [with] these triangular ends [] . . . connected by rectangular faces 13, 14 and 15. Such a pillow is, therefore, triangular in transverse cross section. The edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:79-91, Figure 5.

Three faces - 13,
14, 15

Different inclinations
because of differ dihedral
angles between faces

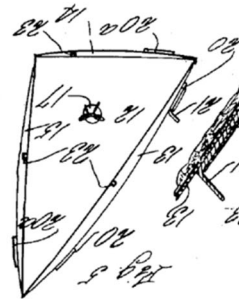
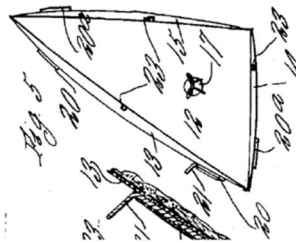
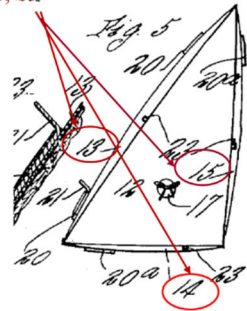
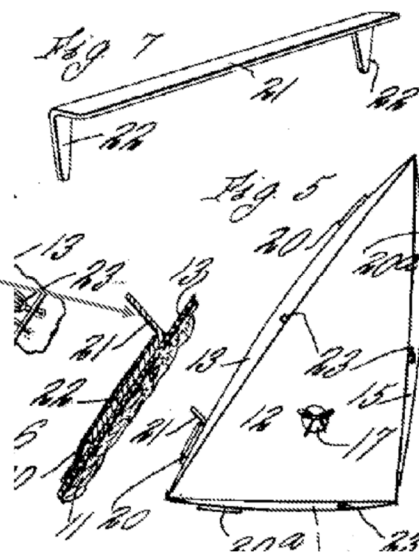


Exhibit 1009 at Figure 5 (annotations and orientations added).

229. During prosecution of the '797 application, the patent applicants argued that Barcalo would not render the pending claims obvious because "Barcalo discloses a media support pillow that uses only a single support bar 21. This support bar is removed prior to rotating the media display pillow to a new side, and the single support bar is then inserted in the new display side." Exhibit 1002 at 94. The patent applicants provided the following drawing:

BARCALO
U.S. Pat. No. 1,928,806
Has only ONE edge support 21
that must be removed from pocket
20 before being used in different
pocket (e.g. pocket 20a on side 15).



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Exhibit 1002 at 94.

230. The patent applicants also argued that “[f]or one, none of the multiple embodiments of the Barcalo pillow show multiple support bars. Thus, the Examiner’s reasoning is either hindsight or speculation. Second, the specification goes to great pains to describe removeable structures (e.g. feet 22 that are removably received within pockets 20) and does not indicate that these support bars are to be permanently affixed within the pockets. Thus, the Examiner’s theory would result in a change of principle of operation. Third, it is clear from the shape of the Barcalo support bar 21 that it is not intended to be used as a support on a downward facing side.” Exhibit 1002 at 95.

231. Having reviewed the prosecution history, it is my opinion that a POSA would be motivated to configure the triangular pillow of Barcalo with “edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface,” to have each support side comprising a back support and an edge support which was well known in the art, such as in Klepar I or Klepar II and Dean.

232. For the same reasons as I discuss above with respect to claim 12 (Element 12B), Klepar I discloses having a “first receiving panel, the second receiving panel configured to support a second electronic display; and a base panel

attached to the first receiving panel and to the second receiving panel, the base panel forming a structure with the first receiving panel and the second receiving panel, the structure having the shape of a substantially triangular cylinder.” Exhibit 1012 at ¶¶[0012], [0031].

233. Klepar I discloses three alternate orientations of the multi-position stand, each oriented along a central axis:

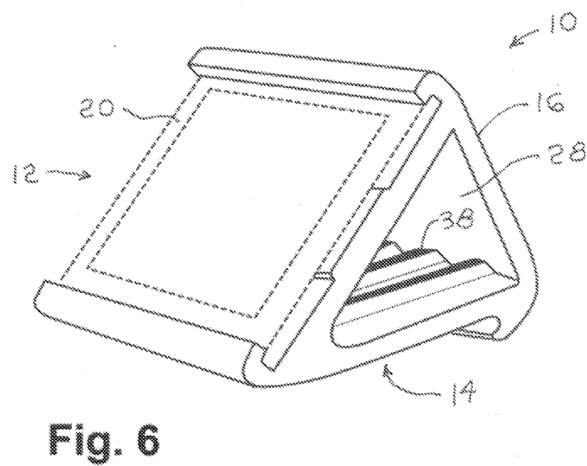
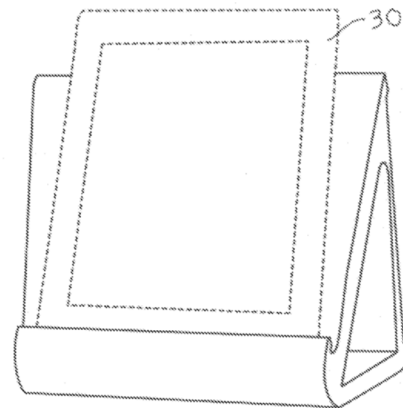
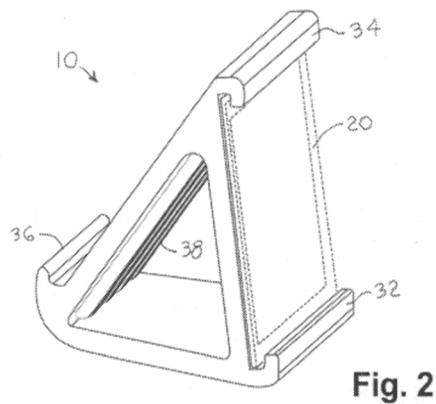


Exhibit 1012 at Figures 2, 3, 6.

234. Klepar II is an ornamental dual-positioning tablet pillow stand with Figure 1 showing a perspective view supporting an image display device in a first viewing position and Figure 4 showing a perspective view supporting an image display device in a second viewing position.

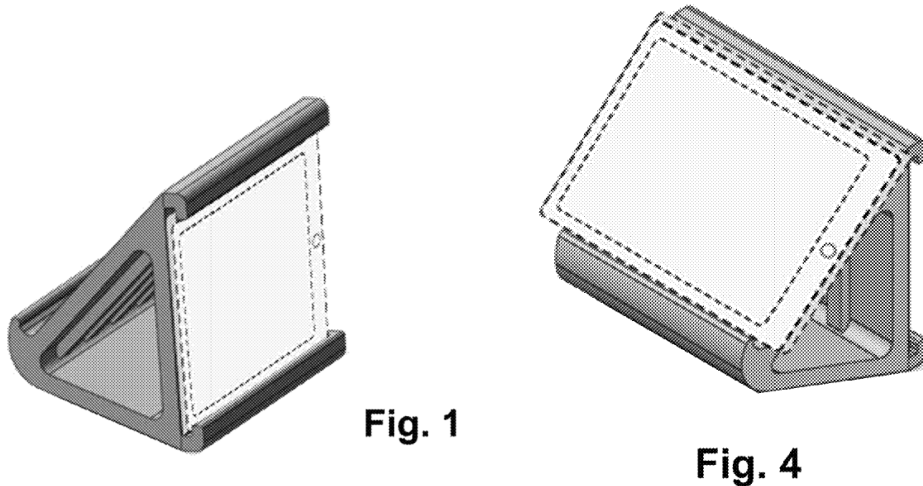


Exhibit 1013 at Figure 1, 4.

235. A POSA would have been aware of the benefits of Barcalo which would provide for a pillow that facilitates viewing “adjustably in various convenient reading positions.” Exhibit 1009 at 1:5-8. This would motivate a POSA to configure Barcalo to have edge supports that are not removable (in other words, permanent) as disclosed in Klepar I or Klepar II. Changing the directionality of the first L-channel (32) in Klepar I (or the edge in Klepar II) to the opposite direction would be a straightforward design choice for a POSA. Moreover, support structures with edge supports affixed to back supports were known in the art, such as in Dean. Dean

disclosed a solid member that “can be universally arranged with any two pair of its legs stably resting on a flat support and with the third leg oriented upward.” Exhibit 1011 at 1:55-65, Figure 2.

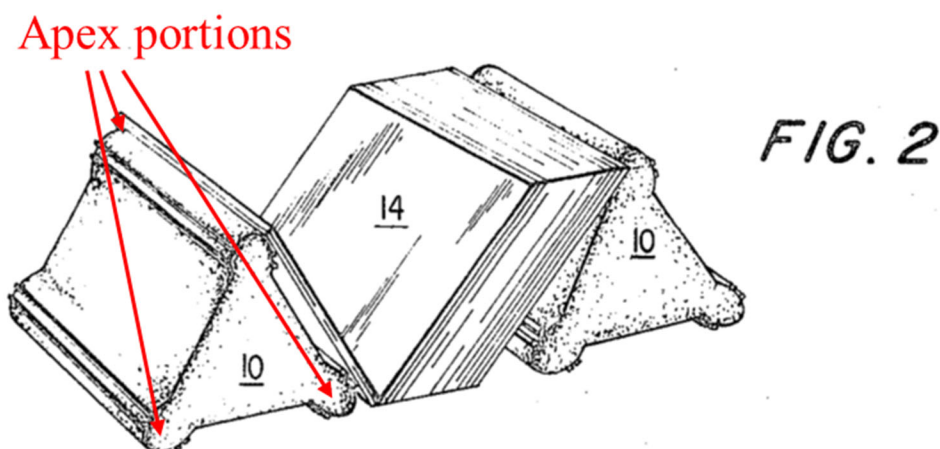


Exhibit 1011 at Figure 2 (annotations added).

3. **Element 20C: “wherein a top of each back support is in physical communication with an adjacent edge support clockwise about a central axis and each back support and each edge support is in physical communication with two ends,”**

236. For the same reasons as discussed with respect to Element 20B, Klepar I and Klepar II show at least two back supports that are in physical communication with an adjacent edge support clockwise about a central axis. Klepar I and Klepar II also show each back support and each edge support is in physical communication with two ends.

Fig. 5

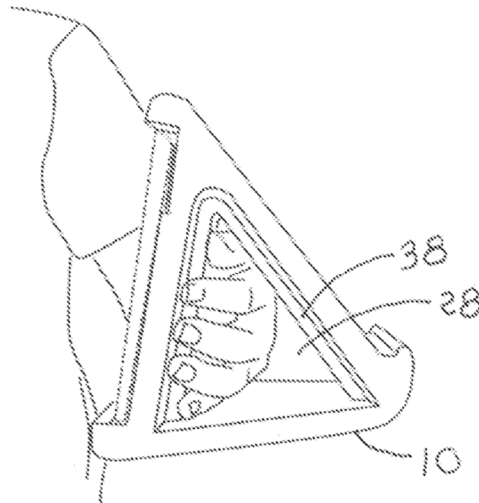


Exhibit 1012 at Figure 5.

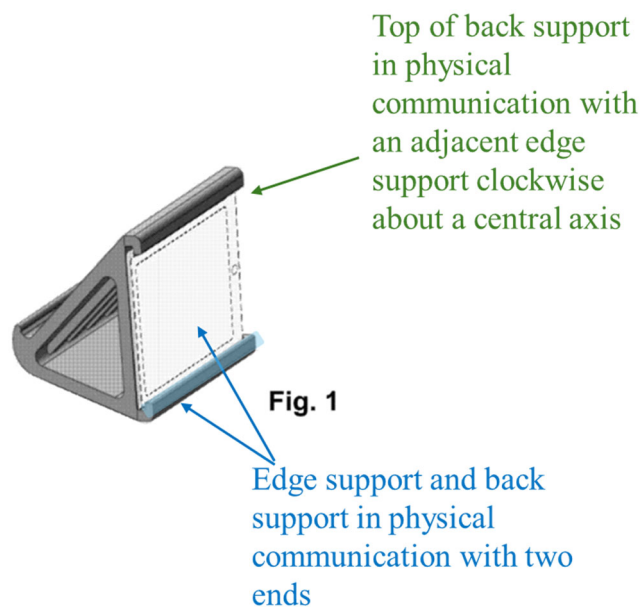


Exhibit 1013 at Figure 1 (annotations added).

237. Because a POSA would have been motivated to configure the three back supports of Barcalo to have three edge supports as disclosed in Klepar I and

Klepar II, a POSA would have known that straightforward design choices can provide a clockwise orientation of the edge supports about the central axis of Barcalo as disclosed in Klepar I and shown in Klepar II.

238. Further, in Figure 6, Klepar I shows that “the electronic display device **20** is supported on the first receiving panel **12**, the second receiving panel **14** faces downward, and the base panel **16** faces away from the user. As can be appreciated by one skilled in the art, the multi-position stand **10** can be used in any of the three positions shown in FIGS. 2, 4, and 6.” Exhibit 1012 at ¶[0035]. In this orientation, Klepar I discloses the multi-position stand resting on at least one horizontal support along a virtual plane.

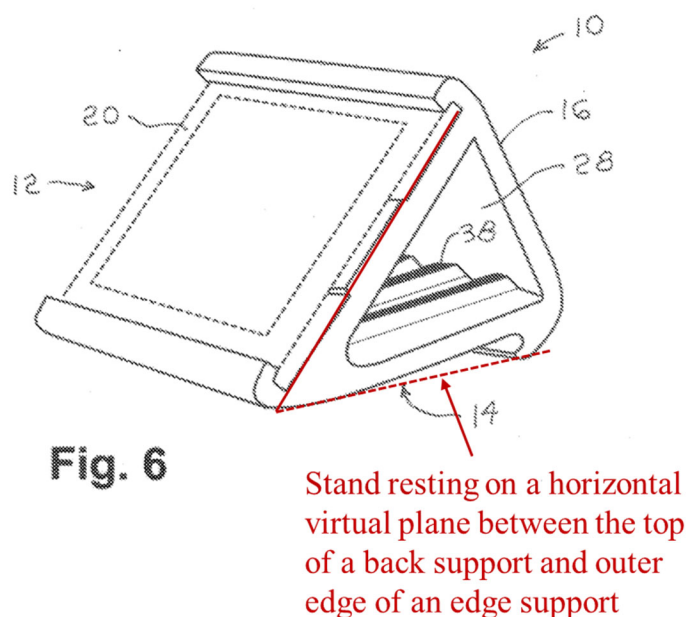


Exhibit 1012 at Figure 6 (annotations added).

239. It is my opinion that Klepar II also shows a third orientation where the

image display device has a third viewing position (similar to Figure 6 in Klepar I).

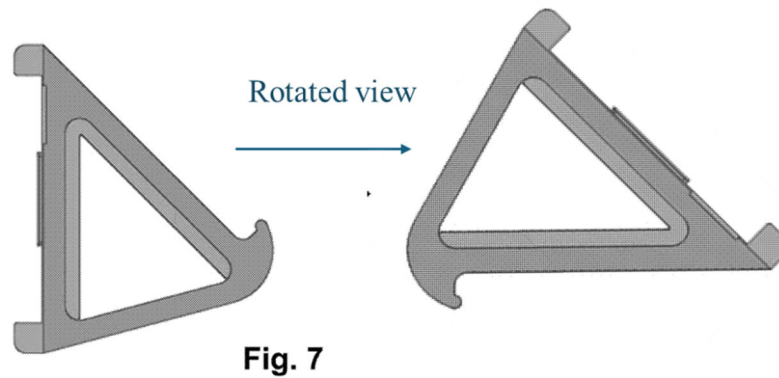


Exhibit 1013 at Figure 7 (rotated on the right).

240. In order to retain the benefits of the three inclinations as disclosed in Barcalo, it is my opinion that a POSA would, in adapting the Klepar I and Klepar II configuration to Barcalo, orient each edge support in the clockwise direction. A POSA would have a reasonable expectation that this would be successful at providing such configurations in Barcalo.

4. **Element 20D: “wherein each edge support comprises an edge support width with an edge angle to an adjacent back support in the range of 85 to 120 degrees to an adjacent back support,”**

241. In my opinion, it would be the routine work of the POSA to measure the width and angle of the edge support. Barcalo discloses that “[a] bar 21 serves as the rest and is provided with depending angular feet 22 which are received in the pockets 20 along either side edge of a side face of the pillow, as shown in Fig. 1.”

Exhibit 1009 at 2:32-36. In Figure 5, I estimate the bar to be at an angle within 85 to 120 degrees to the adjacent back support.

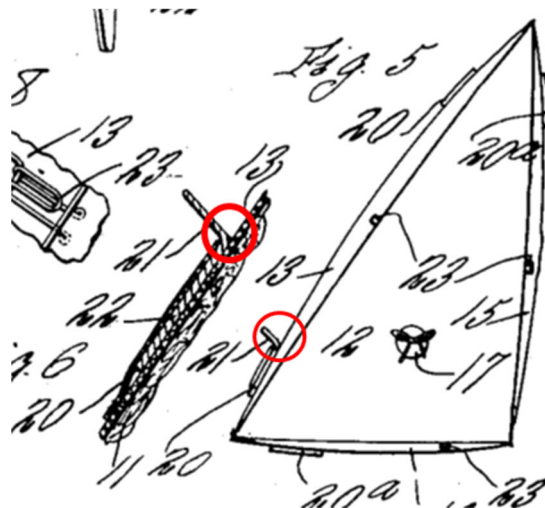


Exhibit 1009 at Figure 5 (annotations added).

242. As discussed above with respect to claim 12 (Element 12F), Klepar I discloses three edge supports which include a first L-channel **32** and a second L-channel **34** disposed on two opposing sides of the first receiving panel **12**, for securely holding the first electronic display device **20**. Exhibit 1012 at ¶[0032]. Klepar I also discloses that the multi-position stand can be used with an electronic display device, such as tablet computers, in one or more usage configurations. Exhibit 1012 at ¶[0008]. It is my opinion having reviewed the disclosures in Klepar I and the associated figures that it discloses “each edge support comprises an edge support width with an edge angle in the range of 85 to 120 degrees to an adjacent back support.”

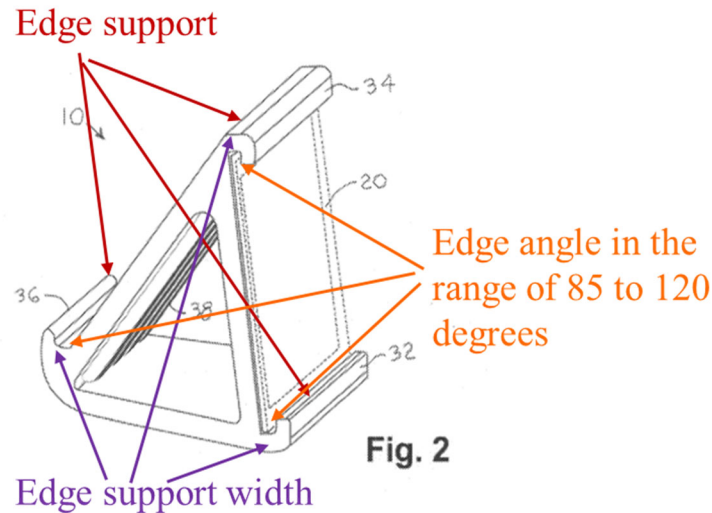


Exhibit 1012 at Figure 2 (annotations added).

243. Klepar II also shows edge angles in the range of 85 to 120 degrees. These would be routine measurements that a POSA would carry out. Therefore, in my opinion a POSA would have a reasonable expectation that the edge supports that would be configured as to Barcalo would be in the range of 85 to 120 degrees.

5. Element 20E: “wherein a face of each edge support width is oriented clockwise about the central axis”

244. As shown and discussed with respect to Element 20C, Klepar I and Klepar II have at least two back supports that are in physical communication with an adjacent edge support clockwise about a central axis. The face of the edge supports are accordingly also oriented clockwise about the central axis. Therefore, a POSA would have known that the same orientation can be configured in Barcalo, and as such a POSA would have a reasonable expectation of success.

6. Element 20F: “wherein a plane of a first back support is at a first plane angle to a second virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support,”

245. As discussed above, Barcalo discloses that the triangular pillow has “edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:86-91; *see also, e.g.*, Exhibit 1009 at Fig. 1.

246. Further, as discussed with respect to Element 20 C, Klepar I and Klepar II have an orientation wherein a plane of a back support is at a plane angle to a virtual plane between the top of a second back support counterclockwise to the first back support and an outer edge of a second edge support counterclockwise to the first back support.

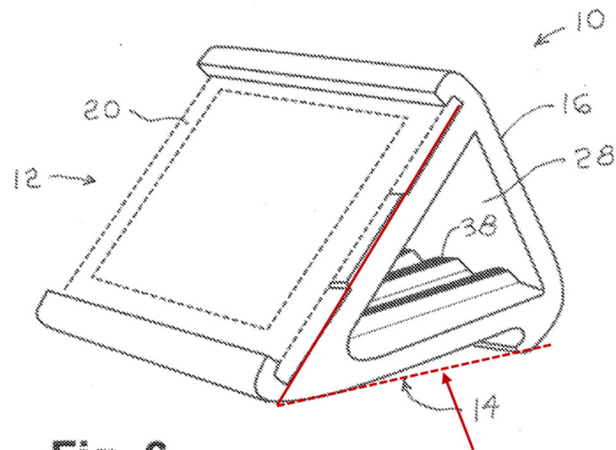


Fig. 6

Stand resting on a horizontal virtual plane between the top of a back support and outer edge of an edge support

Exhibit 1012 at Figure 6 (annotations added).

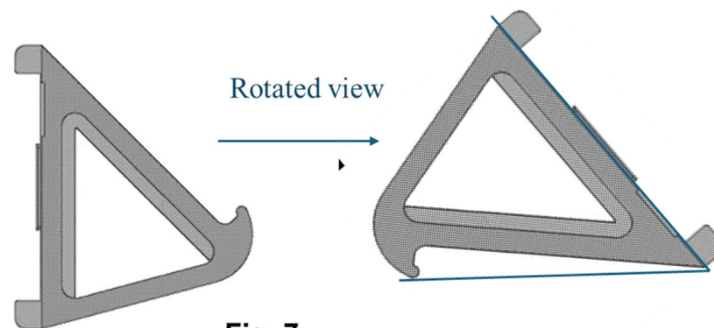


Fig. 7

Exhibit 1013 at Figure 7 (annotated).

247. As I have discussed in with respect to Elements 20B and 20C, it would be obvious for a POSA to modify Barcalo based on the disclosures in Klepar I and as shown in Klepar II design and in adapting such configuration to Barcalo, it would be obvious to a POSA to orient each edge support in the clockwise direction so as to

retain the benefits of the Barcalo pillow. This is a routine and straightforward design choice for a POSA as I have explained above, and a POSA would have a reasonable expectation of success in configuring Barcalo to provide a plane angle to a virtual plane between the top of a back support counterclockwise to another back support..

7. **Element 20G: “wherein a plane of the second back support is at a second plane angle to a third virtual plane between the top of a third back support counterclockwise to the second back support and an outer edge of a third edge support counterclockwise to the second back support,”**

248. For the same reasons as discussed with respect to Element 20H, it would be obvious for a POSA to modify Barcalo on the second face based on the disclosures in Klepar I and as shown in Klepar II design and in adapting such configuration to Barcalo, it would be obvious to a POSA to orient each edge support in the clockwise direction so as to retain the benefits of the Barcalo pillow. This is a routine and straightforward design choice for a POSA as I have explained above, and a POSA would have a reasonable expectation of success in configuring Barcalo to provide a plane angle to a virtual plane between the top of a back support counterclockwise to another back support..

8. **Element 20H: “wherein a plane of a third back support is at a third plane angle to a first virtual plane between the top of the first back support counterclockwise to the third back support and an outer edge of the first edge support counterclockwise to the third back support,”**

249. For the same reasons as discussed with respect to Element 20H, it

would be obvious for a POSA to modify Barcalo on its third face based on the disclosures in Klepar I and as shown in Klepar II design and in adapting such configuration to Barcalo, it would be obvious to a POSA to orient each edge support in the clockwise direction so as to retain the benefits of the Barcalo pillow. This is a routine and straightforward design choice for a POSA as I have explained above, and a POSA would have a reasonable expectation of success in configuring Barcalo to provide a plane angle to a virtual plane between the top of a back support counterclockwise to another back support.

9. Element 20I: “wherein the first plane angle, the second plane angle, and the third plane angle are different from one another and are configured to provide a first viewing angle, a second viewing angle, and a third viewing angle that are different from one another; and”

250. During prosecution of the '443 application and the '797 application, the applicants conceded that Klepar II discloses two viewing angles. Both Klepar I and Klepar II are shows to have three alternate orientations of the multi-position stand, each oriented along a central axis. Exhibit 1012 at Figures 2, 3, 6; Exhibit 1013 at Figures 1, 4, 7. Moreover, a POSA would have been aware of the benefits of Barcalo which would provide for a pillow that facilitates viewing “adjustably in various convenient reading positions.” Exhibit 1009 at 1:5-8. This would motivate a POSA to configure Barcalo to have edge supports that are not removable (in other words, permanent) as disclosed in Klepar I or Klepar II. Changing the directionality of the

first L-channel (32) in Klepar I (or the same edge in Klepar II) to the opposite direction would be a straightforward design choice for a POSA. In adopting such design choices, a POSA would have known that Barcalo as configured based on the disclosures in Klepar I and Klepar II would have three plane angles which are different from each other and provide for a first viewing angle, a second viewing angle, and a third viewing angle that are different from one another. A POSA would have a reasonable expectation at achieving this configuration.

10. Element 20J: “wherein each back support, each edge support, and each end is a surface of an interior”

251. As stated above in connection with element 20B, it would have been obvious to modify the triangular pillow in Barcalo to have three back supports and three edge supports which are disclosed in Klepar I and Klepar I. Further, Barcalo discloses that “[t]he edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:86-91, Figure 1. Further, Klepar I discloses three back supports, three edge supports and two ends which form the surface of an interior. This is also shown the figures in Klepar I and Klepar II.

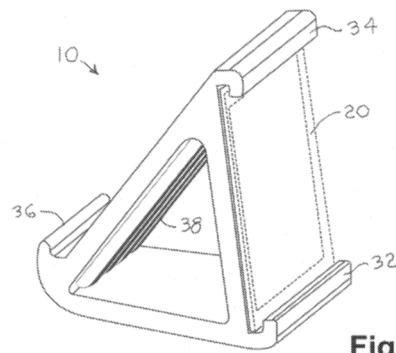


Fig. 2

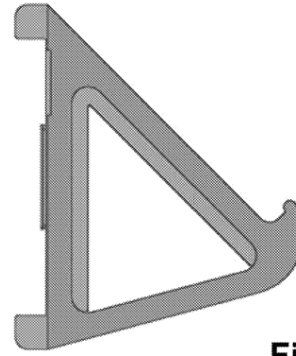


Fig. 7

Exhibit 1012 at Figure 2; Exhibit 1013 at Figure 7.

11. Conclusion

252. For the reasons I have explained above, Barcalo, in view of Klepar I, Klepar I and/or Dean, discloses all of the elements of claim 20, and this claim would have been obvious to a POSA.

B. Dependent Claim 21

253. Dependent claim 21 depends from claim 20 and further requires “the first back support has a longitudinal length in the range of 12 to 26 centimeters (cm), the second back support has a longitudinal length in the range of 9 to 21 cm, and the third back support has a longitudinal length in the range of 10 to 22 cm.” Barcalo discloses that “[t]he edges of the triangular ends are preferably nearly, but not equal in length, and all the angles of the triangle also are preferably unequal, so that when the pillow is supported upon different side faces, the other side faces will make different inclinations to the supporting surface.” Exhibit 1009 at 1:86-91, Figure 1. Further, Klepar I discloses that the lengths can vary (Exhibit 1012 at ¶[0033]) as is

also shown the figures in Klepar I and Klepar II. Moreover, in view of the potential use of the media support apparatus with different portable media devices, a POSA would have known that the longitudinal lengths of the back support can be modified, preferably to suit the length or width of the media device itself in order to optimize the support the media support device provides. Therefore, the claimed longitudinal lengths and determining the same would be a matter of routine for a POSA in view of the prior art. Thus, claim 21 also would have been obvious because Barcalo, in view of Klepar I and Klepar I, discloses all of the elements of claim 21, this claim would have been obvious to a POSA.

C. Dependent Claim 27

254. Dependent claim 27 depends from claim 20 and further requires “an edge support width in the range of 1 to 5 centimeters (cm).” This would be an obvious design choice for the reasons I discuss above regarding Dependent Claims 16 and 19. Thus, claim 27 also would have been obvious over Barcalo, in view of Klepar I and Klepar II.

D. Dependent Claim 28

255. Dependent claim 28 depends from claim 20 and further requires that “a plane of each edge support forms an edge angle of 90 degrees with an adjacent back support.” Klepar I and Klepar II disclose edge angles of about 90 degrees. Exhibit 1012, Figures 2, 3, 6; Exhibit 1013, Figures 1, 7. Thus, claim 28 also would have

been obvious over Barcalo, in view of Klepar I and Klepar II.

E. Dependent Claim 29

256. Dependent claim 29 depends from claim 28 and further requires “each edge support has an edge support width of 2 centimeters (cm).” Once again, this is a straightforward and obvious design choice, as discussed above. Thus, claim 29 also would have been obvious over Barcalo, in view of Klepar I and Klepar II.

F. Conclusion

257. For the reasons I have discussed above, claims 21, and 27-29 also would have been obvious over Barcalo, in view of Klepar I and Klepar II.

XV. CONCLUSION

258. In signing this declaration, I understand that the declaration will be filed as evidence in the contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in this case and that that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

October 16, 2025
Date



Steven R. Schmid