

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Milwaukee Electric Tool Corporation,
Petitioners,

v.

Klein Tools, Inc.,
Patent Owner.

U.S. Patent No. 12,187,573
Case No. PGR2025-00048

**DECLARATION OF DAVID EBY IN
SUPPORT OF PETITION FOR POST-GRANT REVIEW
OF ALL CLAIMS OF U.S. PATENT 12,187,573**

Table of Contents

DECLARATION OF DAVID EBY IN SUPPORT OF PETITION FOR POST-GRANT REVIEW OF ALL CLAIMS OF U.S. PATENT 12,187,573		I
TABLE OF CONTENTS		I
2.	ENGAGEMENT	6
3.	QUALIFICATIONS.....	6
	Background and Experience.....	6
	Compensation and Previous Expert Opinions.....	8
4.	MATERIALS REVIEWED	9
5.	DESCRIPTION OF THE RELEVANT TIMEFRAME, THE RELEVANT FIELD, AND A PERSON OF SKILL IN THE ART	9
6.	CLAIM CONSTRUCTION	10
7.	UNDERSTANDING OF LEGAL STANDARDS	10
	Anticipation	10
	Obviousness.....	10
	Written Description	12
	Indefiniteness.....	13
8.	BACKGROUND OF THE '573 PATENT	13
9.	OVERVIEW OF THE PRIOR ART	15
	Hartranft	15
	Bruin	17
	Noonan	18
	Klein Fish Tape Publication	20
	Southwire Glow in the Dark Fish Sticks Publication.....	22
10.	SUMMARY OF MY OPINIONS	23
11.	MY OPINIONS ON THE CHALLENGED CLAIMS	24
	My Opinion on Hartranft in view of Bruin for Claims 1-4, 6-12, and 14-18.....	24

11.1.1	Motivation to Combine Hartranft and Bruin.....	24
11.1.2	Claim 1	31
11.1.3	Claim 2	44
11.1.4	Claim 3	45
11.1.5	Claim 4	47
11.1.6	Claim 6	49
11.1.7	Claim 7	51
11.1.8	Claim 8	51
11.1.9	Claim 9	52
11.1.10	Claim 10	53
11.1.11	Claims 11 and 12	53
11.1.12	Claim 14	55
11.1.13	Claim 15	59
11.1.14	Claim 16	60
11.1.15	Claim 17	60
11.1.16	Claim 18	60
My Opinion on Hartranft in view of Bruin and Noonan for Claims 5 and 13		61
11.1.17	Motivation to Combine Hartranft-Bruin and Noonan.....	61
11.1.18	Claim 5	67
11.1.19	Claim 13	69
My Opinion on Klein Fish Tape Publication (“KP1”) in view of Southwire Glow in the Dark Fish Sticks Publication (“SP1”) for Claims 1-18.....		69
11.1.20	Motivation to Combine KP1 and SP1	69
11.1.21	Claim 1	79
11.1.22	Claim 2	89
11.1.23	Claim 3	91
11.1.24	Claim 4	92

11.1.25	Claim 5	96
11.1.26	Claim 6	97
11.1.27	Claim 7	98
11.1.28	Claim 8	99
11.1.29	Claim 9	99
11.1.30	Claim 10	101
11.1.31	Claims 11 and 12	101
11.1.32	Claim 13	102
11.1.33	Claim 14	102
11.1.34	Claim 15	103
11.1.35	Claim 16	104
11.1.36	Claim 17	105
11.1.37	Claim 18	106
	My Opinion on the Phrase “configured to allow” for Claims 1-18	106
11.1.1	The Phrase “configured to allow the luminescent material to be energized,” as Recited by Claims 1, 6, and 14, is Not Supported By the Specification.....	106
	My Opinion on the term “a donut shaped case” for Claims 1-13	112
12.	CONCLUSION	118

Table of Exhibits

Exhibit	Description
Ex-1001	U.S. Patent No. 12,187,573 (“’573 Patent”)
Ex-1002	Prosecution History of the application that led to the ’573 Patent
Ex-1003	Declaration of Expert Witness, Dr. David J. Eby, Ph.D., P.E., CFEI.
Ex-1004	European Patent No. 1,391,412 (“Hartranft”)
Ex-1005	International Publication No. 1997/41626 (“Bruin”)
Ex-1006	U.S. Patent No. 5,505,432 (“Noonan”)
Ex-1007	CV of Expert Witness, David J. Eby, Ph.D., P.E., CFEI
Ex-1008	Klein Tools Fish Tape Publication (“KP1”)
Ex-1009	Southwire Glow in the Dark Fish Sticks Publication (“SP1”)
Ex-1010	Internet Archive Affidavits
Ex-1011	Laura, “A Brief History of Doughnuts,” Kitchen Kat Blog (January 26, 2008), https://kitchenkat.blogspot.com/2008/01/brief-history-of-doughnuts.html
Ex-1012	“donut”. <i>The American Heritage Dictionary of the English Language</i> (3 rd Ed.), Houghton Mifflin Company, 1996, p. 551
Ex-1013	Irving, Washington. (1809) <i>Knickerbocker’s History of New York</i> . Project Gutenberg. Retrieved April 14, 2025, from https://www.gutenberg.org/files/13042/13042-h/13042-h.htm#KNICKERBOCKERSI
Ex-1014	Klein Glow Fish Tape publication
Ex-1015	Prosecution History of the application that led to the 11,713,209 Patent (“’209 Patent”)

Ex-1016	Complaint in International Trade Commission (ITC) investigation No. 337-TA-1442, titled <i>Certain Glow Fish Tape Systems, Safety Helmet Systems, and Components Thereof</i> (“ITC Complaint”)
Ex-1017	Sagon, Candy, “The Hole Story,” Washington Post (March 6, 2002), https://www.washingtonpost.com/archive/lifestyle/food/2002/03/06/the-hole-story/ce8a94e0-05c7-4639-8ff7-60c6fd46eeee/ . Wayback Machine. Archived August 25, 2018, from https://web.archive.org/web/20180825183723/https://www.washingtonpost.com/archive/lifestyle/food/2002/03/06/the-hole-story/ce8a94e0-05c7-4639-8ff7-60c6fd46eeee/?utm_term=.24e165d5cce3
Ex-1018	U.S. Patent No. 11,713,209 Patent (“’209 Patent”)
Ex-1019	“A Brief History of Fluorescence and Phosphorescence before the Emergence of Quantum Theory” by Benard Valuer and Mario N. Berberan-Santos, published in the Journal of Chemical Education.
Ex-1020	“Development of Illuminant Glow-in-the-Dark Cotton Fabric Coated by Luminescent Composite with Antimicrobial Activity and Ultraviolet Protection” by Tawfik A. Khattab, et al., published in the Journal of Fluorescence.
Ex-1021	Testimony history of Expert Witness, David J. Eby, Ph.D., P.E., CFEI

1. I, David Eby, hereby declare as follows:

2. Engagement

2. I have been retained by Milwaukee Electric Tool Corporation, (“Petitioners”) in connection with the above-captioned petition for Post-Grant Review (“PGR”) of U.S. Patent 12,187,573 (the “’573 Patent” or “Ex-1001”). I understand the ’573 Patent is currently assigned to Klein Tools, Inc. (“Patent Owner”).

3. I have been asked by Petitioners to offer opinions regarding the ’573 Patent, including the unpatentability of the claims of the ’573 Patent (which I may subsequently refer to as the “Challenged Claims”) in view of certain prior art. This declaration sets forth the opinions I have reached to date regarding these matters.

4. I am being compensated by Petitioners at my standard hourly consulting rate for my time spent on this matter. My compensation is not contingent on the outcome of the PGR or on the substance of my opinions.

5. I have no financial interest in Petitioner or Patent Owner.

3. Qualifications

Background and Experience

6. I am well qualified to serve as a technical expert in this matter based upon my qualifications, which I discuss below. A copy of my curriculum vitae is

included as Ex-1007, and it includes additional information regarding my academic and employment history.

7. I received my Ph.D. in Engineering Mechanics from the Materials Science and Mechanics department at Michigan State University in 2000, my Master of Science in Engineering Mechanics from the Materials Science and Mechanics department at Michigan State University in 1997, and my Bachelor of Science in Engineering Mechanics from the Materials Science and Mechanics department at Michigan State University in 1996.

8. I was employed as an engineer at General Motors from 1996 until 1999. During this period, I worked on a variety of projects as a project engineer in the crashworthiness, thermal fluids, and noise and vibration groups. In 1999 I worked also as an adjunct professor at Michigan State University. There, I taught classes on strength of materials. From 2000 until 2002, I co-founded Red Cedar Technologies, a startup that consulted in aerospace, automotive, and the energy sectors designing and analyzing mechanical systems in combination with materials science. From 2002 until 2006, I was employed as an Advanced Methods Group Manager at CD-adapco. During this period, I worked on a variety of projects which involved mechanical design and materials science with aerospace, automotive, biomedical, and energy sectors. From 2006 until 2012 I was employed as a Managing Engineer at Exponent, Failure Analysis Associates in the Materials and Mechanics group.

During this period, I worked on a variety of projects which involved failure analysis, mechanical design, and materials science. From 2012 to date, I have worked at Design Research Engineering in the areas of failure analysis and design of mechanical systems and materials science.

9. Over the past 25+ years, I have been involved with the design and failure analysis of tools such as drills, manual chain hoists, machine design, fasteners, and gas powered cutoff saws.

10. In particular, I have taught classes on mechanical engineering and materials science.

11. I am competent to write this declaration.

12. In formulating my opinions, I have relied upon my training, knowledge, and experience in the relevant art.

Compensation and Previous Expert Opinions

13. I am being compensated at my usual rate of \$305.00/hour for each hour of service that I provide in connection with this case, including time I spend consulting, writing this report, giving deposition testimony and testifying. My compensation does not depend in any way on the content of my testimony and is not affected by the outcome of the case. If called to testify as to the contents of this report, I can and would testify truthfully and competently.

14. A listing of previous cases in which I have provided expert testimony in the past four years can also be found in Ex-1021.

4. Materials Reviewed

15. In forming my opinions, I have reviewed the '573 Patent, its prosecution history/file wrapper, its parent the '209 Patent and its prosecution history/file wrapper, and considered each of the documents listed in the Exhibit List above and the other references cited in my declaration.

16. In reaching my opinions, I have relied upon my experience in the field (examples of which I provided above and more of which are listed on my CV in Ex.-1007) and I have also considered the viewpoint of a person of ordinary skill in the art at the time of the earliest claimed priority date of the '573 Patent, i.e., November 2019. Ex.-1002 at 165. As explained below, I am familiar with the level of skill of a person of ordinary skill in the art regarding the relevant technology at issue as of that time.

5. Description of the Relevant Timeframe, the Relevant Field, and A

Person of Skill in the Art

17. All of the opinions that I provide herein are provided through the lens of a person having ordinary skill at the relevant time (prior to November 2019, which I understand is the priority date claimed by the '573 Patent). In my opinion, a person of ordinary skill in the art ("POSA") at the relevant time would have had a bachelor's

degree in mechanical engineering, industrial engineering, industrial design, with at least 2 years of industry experience and/or research concerning hand tools.

6. Claim Construction

18. I do not believe that any express constructions are needed, but I reserve the right to respond to any constructions offered by the Patent Owner.

7. Understanding of Legal Standards

Anticipation

19. I have been instructed as to the definition of “anticipation” in the context of the patent laws. I understand that for a claim to be invalid as anticipated, all of the features of that claim must be present in a single previous device/system or method that was known of, used, or described in a single previous printed publication or patent. To anticipate the invention, the prior art does not have to use the same words as the claim, but all of the features of the claim must have been disclosed, either stated expressly or implied to a person having ordinary skill in the art in the technology of the invention, so that looking at that one reference, that person could make and use the claimed invention.

Obviousness

20. I have been instructed as to the definition of “obviousness” in the context of the patent laws. It is my understanding that even though an invention may not have been identically disclosed or described before it was made by an inventor,

in order to be patentable, the invention must also not have been obvious to a POSA before the date of the alleged invention (which in these proceedings I am assuming to be November 26, 2019).

21. I understand that obviousness is a question of law based on underlying factual issues including the level of ordinary skill in the art at the time of the patent's alleged invention, the scope and content of the prior art, and any differences between the prior art and the claimed invention.

22. I understand that the scope and content of prior art for deciding whether the invention was obvious includes at least prior art in the same field as the claimed invention. The prior art can also come from different fields that a POSA would have considered when trying to solve the problem that is addressed by the invention.

23. I understand that the existence of each and every element of the claimed invention in the prior art does not necessarily prove obviousness. Most, if not all, inventions rely on building blocks of prior art. But, in considering whether a claimed invention is obvious, I understand that one may find obviousness if, at the time of the patent's alleged invention, there was a reason that would have prompted a POSA to combine the known elements in a way the claimed invention does, taking into account such factors as (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known problem in the

relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior art teaches away from combining elements in the claimed invention; (5) whether it would have been obvious to try the combinations of elements, such as when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions; and (6) whether the change resulted more from design incentives or other market forces.

24. To find that the prior art renders the invention obvious, I understand that one must find that the combinations of the prior art could have been completed by a POSA with a reasonable expectation of success. I also understand that it is impermissible to find obviousness based on hindsight reasoning, i.e., starting backwards from the patent's claims to stitch together the prior art.

Written Description

25. I understand that a patent claim may lack written description if the specification and earlier-filed priority applications fail to describe the invention sufficiently to convey to a person of skill in the art that the patentee had possession of the claimed invention at the time of the application and that the patentee invented what is claimed.

Indefiniteness

26. I understand that a patent claim may be indefinite if the claim, when viewed in light of the specification and prosecution history, fails to inform those skilled in the art about the scope of the invention with reasonable certainty.

8. Background of the '573 Patent

27. I have reviewed the '573 Patent and understand that Daniel R. Pearson is listed as an inventor.

28. I also understand that the '573 Patent relates to a luminescent fish tape system to pull electrical wires and fiber optic cable through conduits or into enclosed wall spaces. Ex.-1001 at Abstract, 1:29-1:30. The system includes a fish tape (red, in the annotated version of Figure 1 of the '573 Patent, shown below) inside a case (orange and turquoise). Ex.-1001 at 1:44-1:45. The length of the fish tape includes a luminescent material that emits light after being energized by exposure to a light source. Ex.-1001 at 3:21-3:24. At least a portion of the case is transparent to allow the luminescent material to be energized by light passing through the transparent portion. Ex.-1001 at 3:27-3:29. The case also includes a handle (yellow) engaged with the case for sliding movement along a circumference of one of the inner and outer walls, which can be used to deploy the fish tape and reload the fish tape from the storage compartment. Ex.-1001 at 2:14-2:19.

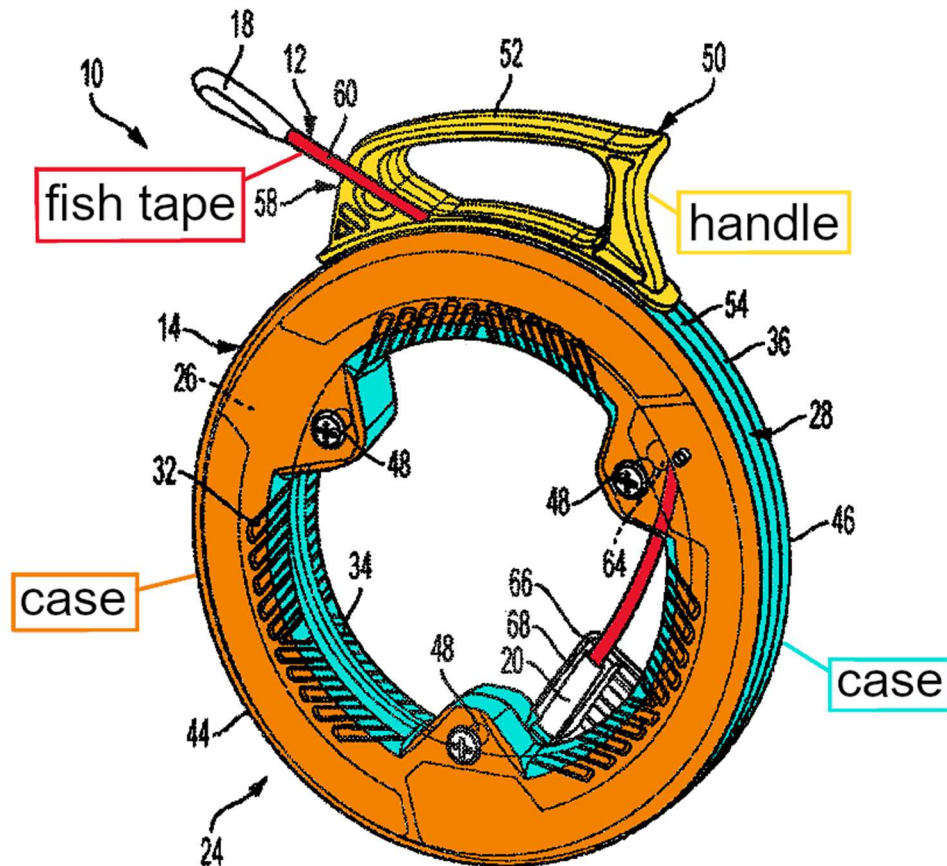


FIG. 1

Ex-1001 Fig. 1 (annotated with shading and text)¹

29. In sum, and as relevant to claims 1-18, it is my understanding that the '573 Patent describes a luminescent fish tape system to pull electrical wires and fiber optic cable through conduits or into enclosed wall spaces.

¹ All emphasis in textual quotations and color annotations and textual labels in figures has been added throughout, unless indicated to the contrary.

9. Overview of the Prior Art

30. Below I have provided a brief overview of each of the cited references. I will note here that both fish tape systems and luminescent wire/cable pullers to pull wires/cables through conduits or into enclosed wall spaces were known before the '573 Patent.

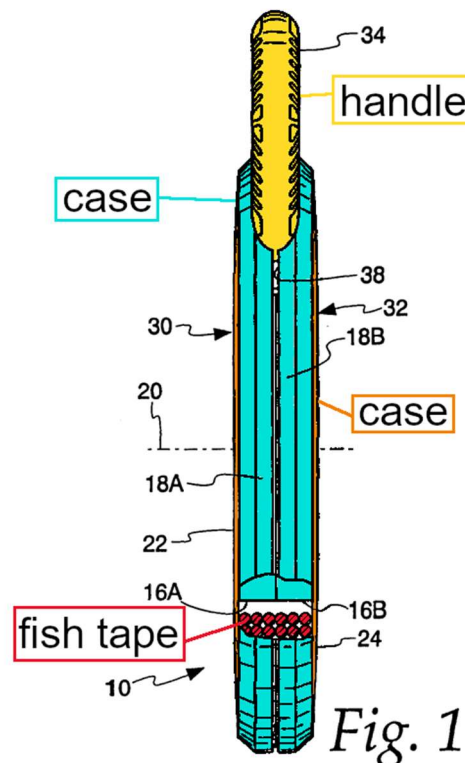
Hartranft

31. Hartranft published on February 25, 2004. I have been informed that this reference qualifies as prior art to the '573 Patent. Hartranft describes “an electrician’s fish tape housing” with “a translucent or clear housing.” Ex-1004 at ¶1. Hartranft specifies that “[a] fish tape is an electrician’s tool which is used to install wires in a conduit.” Ex-1004 at ¶2.

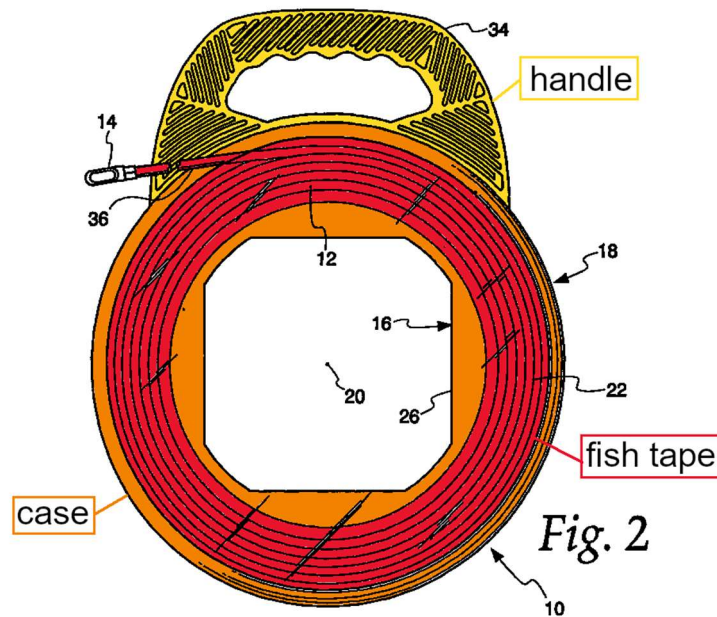
32. Figure 2 of Hartranft illustrates a fish tape 12 inside a housing 10. Ex-1004 at ¶8. The housing 10 has a first radial wall 22 and a second radial wall 24 that join an inner annular wall 16 to an outer annular wall 18, with the second radial wall 24 defining the central opening 26 of the housing 10. Ex-1004 at ¶10. The housing 10 is made up of two identical halves 30, 32, each of which includes one of the radial walls 22, 24, and about half of each annular wall 16, 18. Ex-1004 at ¶10. Hartranft discloses that the space between the halves 30, 32 defines a chamber 28 for storing the fish tape 12 when the fish tape 12 is not in use. Ex-1004 at ¶10. A handle 34 travels circumferentially around the housing 10 along a path formed by the edges of

the half-wall portions 18A, 18B of the outer annular wall 18 to allow the tape 12 to emerge from the chamber 28. Ex-1004 at ¶11.

33. Hartranft also specifies that the housing 10 can be entirely or partially translucent. Ex-1004 at ¶12. In particular, Hartranft discloses that “[i]t is preferred that the entire housing is translucent,” but also describes embodiments in which only one housing half 30, 32 is translucent and in which only the radial walls 22, 24 are translucent while the annular walls 16, 18 are not. Ex-1004 at ¶12.



Ex.-1004 Fig. 1



Ex.-1004 Fig. 2

Bruin

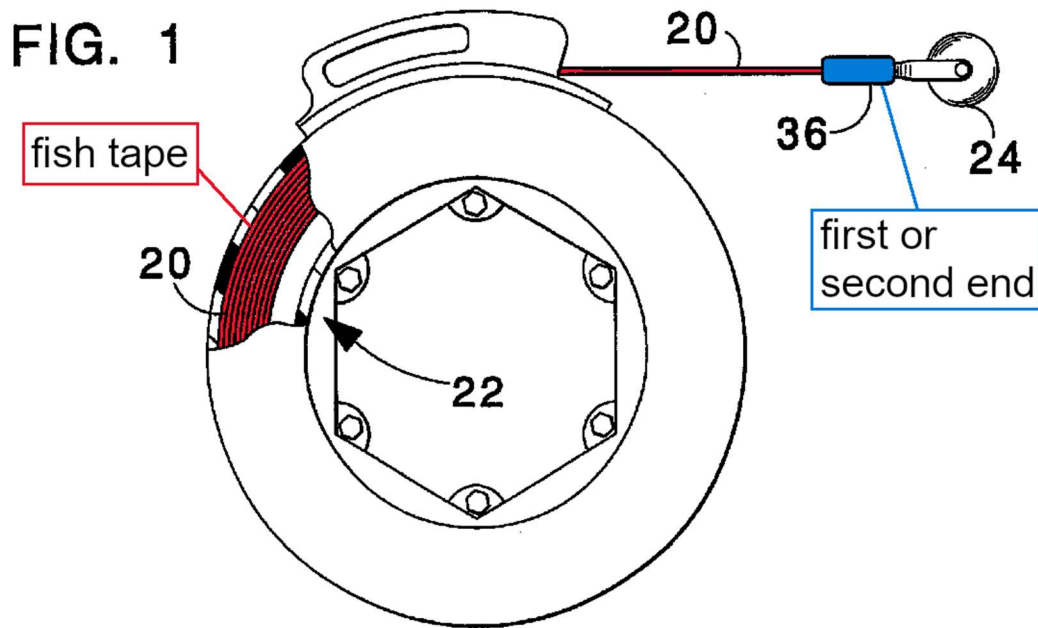
34. Bruin published on November 6, 1997. I have been informed that this reference qualifies as prior art to the '573 Patent. Bruin describes “a device and method for retrieving stringlines or cables, particularly though not exclusively stringlines or cables from within cavity walls or floors.” Ex.-1005 at 1:2-6.

35. In particular, Bruin discloses that this device can “support[] and feed[] a flexible element through a hole in the wall.” Ex.-1005 at 1:31-33. Bruin specifies that the element can be a cord means, with a tape being a preferred embodiment of the cord means. Ex.-1005 at 2:1, 2:34-35. Moreover, the cord means can be manufactured with or marked with a fluorescent material (a type of luminescent material). Ex.-1005 at 6:15-17.

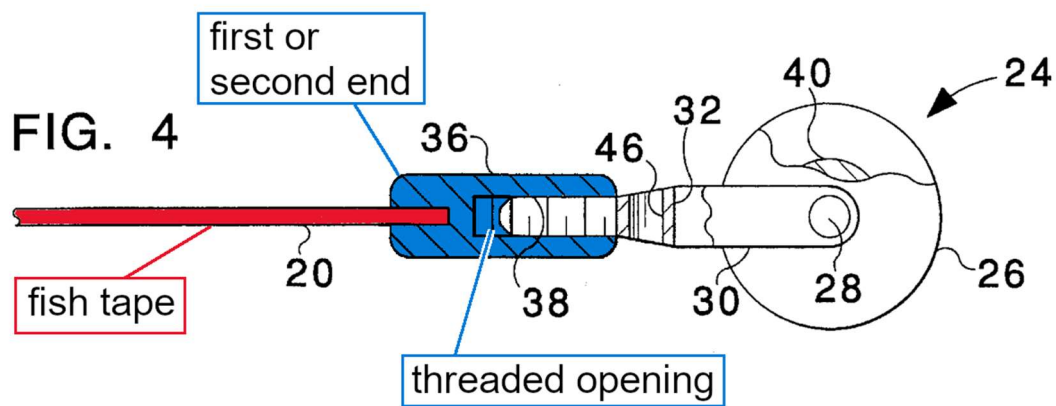
Noonan

36. Noonan issued on April 9, 1996. I have been informed that this reference qualifies as prior art to the '573 Patent. Noonan describes “improvements in ‘fish tapes’ employed in inserting elongated items into protected conduits and more particularly to anti-snagging devices therefor” and explains that “[t]he term ‘fish tape’ is commonly employed to designate an elongated, resilient wire that is employed in installing electrical conductors in metal conduits.” Ex.-1006 at 1:4-9.

37. Figure 1 of Noonan “illustrates a ‘fish tape’ wire 20 which is wound into a coil form on a reel 22,” where “[an] anti-snagging device 24 is mounted on the partially unwound leading end of the wire 20.” Ex.-1006 at 3:36-40. The fish tape wire 20 is “provided, at its free, leading end, with a mounting cylinder 36,” and “[t]he mounting cylinder 36 is provided with a longitudinal threaded bore 38, the axis of which is aligned with the center of the cross section of the wire 20.” Ex.-1006 at 3:50-54. The mounting cylinder 36 and threaded bore 38 (blue) at the leading end of the fish tape wire 20 (red) is illustrated in Noonan’s Figures 1 and 4.



Ex.-1006 Fig. 1

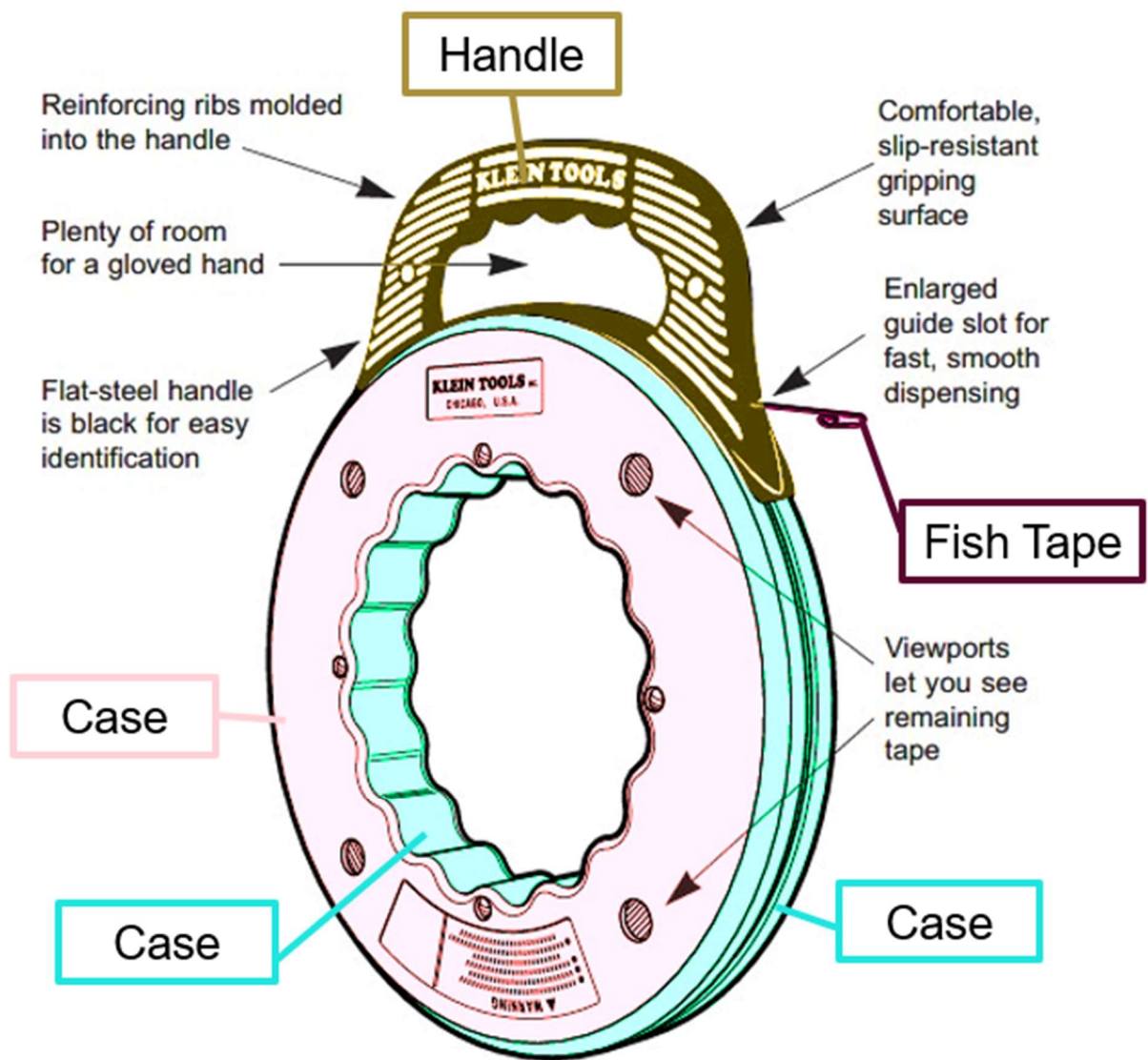


Ex.-1006 Fig. 4

Klein Fish Tape Publication

38. I have reviewed Klein Fish Tape Publication (“KP1”) published on October 28, 2011. I have been informed that this reference qualifies as prior art to the ’573 Patent.

39. KP1 is a publication describing the instructions for the Klein Flat Steel Fish Tape product, along with safety warnings and various product information. Ex. 1008 at 1. The publication describes that the fish tape is for “pulling through conduit” and comes in a winder reel (orange and turquoise) that stores the fish tape (red) and has a handle (yellow) with four viewports on either side that allow the user to see the remaining tape in the case. Ex. 1008 at 1. To deploy and rewind the tape, a user holds the handle while “rotating the reel.” Ex. 1008 at 2. KP1 also teaches that the flat steel fish tape inside the Klein Winder Reel can be replaced by opening up the winder reel, or case, halves. Ex. 1008 at 2. Klein fish tape leaders can also be easily added on and off the fish tape using the threaded opening at the end of the fish tape which the instructions refer to as the “tapered fitting.” Ex. 1008 at 2.



Ex. 1008 at 1

40. In sum, and just like the '573 Patent, KP1 discloses a fish tape system to pull electrical wires and fiber optic cable through conduits or into enclosed wall spaces.

Southwire Glow in the Dark Fish Sticks Publication

41. I have reviewed the Southwire Glow in the Dark Fish Sticks Publication (SP1) published on July 19, 2018. I have been informed that this reference qualifies as prior art to the '573 Patent.

42. SP1 is a publication describing the Southwire glow in the dark fish sticks product. Ex.-1009 at 1. The SP1's glow in the dark fish sticks product is used for wire/cable pulling, and thus functions similarly to the fish tape system described in the Patent-at-Issue. Ex.-1009 at 1. The SP1's glow in the dark fish sticks are also luminescent, making "fishing through walls or over ceiling easier." Ex.-1009 at 1. The fish sticks are "luminescent fiberglass rods" and they "recharge in most available light sources." Ex.-1009 at 1. SP1's glow in the dark fish sticks also are "highly flexible" and because of their threaded opening ends, "individual sections easily screw together to form a single rod." Ex.-1009 at 1. SP1 advertises that the glow in the dark fish sticks have various attachments, such as "bullet nose with eyelet and hook attachments." Ex.-1009 at 1.



Ex.-1009 at 1

43. In sum, and just like the '573 Patent, SP1 discloses a luminescent wire/cable puller.

10. Summary of My Opinions

44. Having reviewed the '573 Patent and the prior art cited above, I have formed the following opinions:

- Each element of claims 1-4, 6-12, and 14-18 are taught or suggested by Hartranft in view of Bruin, and a POSA would have been motivated to combine the two references.

- Each element of claims 5 and 13 are taught or suggested by Hartranft in view of Bruin, and Noonan, and a POSA would have been motivated to combine the two references.
- Each element of claims 1-18 are taught or suggested by KP1 in view of SP1, and a POSA would have been motivated to combine the two references.
- A POSA looking at the specification would not know that the inventor had possession of any other manner to configure the sidewalls of the case to allow the luminescent material to be energized (as claimed in claims 1-18) other than by using transparent portions of the case.
- The specification fails to inform a POSA of the scope of claims 1-13 with reasonable certainty because the term “a donut shaped case” lacks objective standard in this field.

45. The reasons for my opinions are discussed in further detail below.

11. My Opinions on the Challenged Claims

My Opinion on Hartranft in view of Bruin for Claims 1-4, 6-12, and 14-18

11.1.1 Motivation to Combine Hartranft and Bruin

46. Hartranft and Bruin qualify as analogous art because they are in the same field as the ‘573 Patent—namely, wire/cable pullers and techniques for routing

wires/cables through a wall cavity or conduit. Ex.-1004 at ¶2; Ex.-1005 at 1:2-10; Ex.-1001 at 1:26-27. Wire/cable pullers are often used to aid electricians going through conduits or wall cavities to give them easier access. At minimum, they are at least reasonably pertinent to a problem allegedly solved by the claimed invention: reducing the time and effort expended by an electrician while routing wiring through a cavity or conduit. Ex.-1004 at ¶5; Ex.-1005 at 1:2-10; Ex.-1001 at 1:26-37. Because spaces where wiring is needed is often very narrow, inaccessible, and dark electricians must rely on wire/cable pullers to install wires/cables.

47. In my opinion a POSA had motivation to (i) add a luminescent material (taught by Bruin's fluorescent cord means) to the fish tape housed in Hartranft's translucent housing or (ii) include Bruin's fluorescent cord means in Hartranft's translucent housing.

48. *Add Bruin's Luminescent Material to Hartranft's Fish Tape.* With regards to motivation (i), in my opinion a POSA would have been motivated to add the fluorescent material disclosed by Bruin to the fish tape stored in Hartranft's transparent housing to produce a fluorescent fish tape that can be seen by an electrician or operator while routing wiring through the cavity or conduit. First, modifying Hartranft's fish tape with Bruin's fluorescent material simply involves using a known technique (manufacturing or marking a cord of a cable catcher, which is used to install electrical cables, with fluorescent materials) to improve a similar

device in the same way (e.g., to improve a fish tape so as to “allow an operator to easily locate” the fish tape in a “conduit or cavity,” Ex.-1005 at 6:18-20, when installing wires/cables in dark spaces). Hartranft provides a base fish tape by disclosing “the coiled fish tape 12 within the housing 10,” Ex.-1004 at ¶9, while Bruin provides a comparable product by disclosing “a device ... for retrieving stringlines or cables, particularly though not exclusively ... from within cavity walls or floors.” Ex.-1005 at 1:2-6. Bruin’s wire/cable puller (the “cord means”) includes an improvement, namely, “[i]n a particularly preferred embodiment, the cord means is manufactured or at least marked with a fluorescent material.” Ex.-1005 at 6:15-17. In my opinion, POSA could have easily applied Bruin’s improvement to Hartranft’s base fish tape by manufacturing and/or marking Hartranft’s fish tape with the fluorescent material. For example, a POSA could easily mark Hartranft’s base fish tape with Bruin’s fluorescent material by applying fluorescent tape along different parts of the length of the fish tape.

49. I also believe that Hartranft motivates a POSA to modify the fish tape in its transparent housing to arrive at a luminescent fish tape because Hartranft’s disclosure providing only a general definition of pre-existing fish tapes, listing details such as common materials and lengths, Ex.-1004 at ¶¶2-3, and expressly inviting a POSA to alter and modify the fish tape system it discloses. Ex.-1004 at ¶13. In my opinion, a POSA building Hartranft’s fish tape system would look to find

more details about the fish tape itself and would very likely encounter Bruin, which has specific teachings about the fish tape itself. Bruin provides a POSA with information about issues encountered by electricians using fish tapes in the dark and solves those issues by adding a fluorescent material. Ex.-1005 at 6:17-20. In particular, Bruin explains that “[a]s will be understood by persons skilled in the art, [manufacturing or at least marking the cord with a fluorescent material] will allow an operator to easily locate the loop 80 formed [by the cord means] in the dark cavity of the cavity wall.” Ex.-1005 at 6:17-20. With knowledge of this issue and Bruin’s solution, in my opinion a POSA would have been motivated to modify Hartranft’s fish tape with Bruin’s fluorescent material.

50. Finally, a POSA would have known that adding the fluorescent material disclosed by Bruin to Hartranft’s fish tape would produce a luminescent fish tape. To start, a POSA would know that Bruin’s fluorescent material is a type of luminescent material and, thus, can be used to produce a luminescent fish tape. My conclusion that Hack’s fluorescent material is a type of luminescent material is well known to a POSA, as corroborated by the statements in “A Brief History of Fluorescence and Phosphorescence before the Emergence of Quantum Theory,” which explains that “[t]he various types of luminescence are classified according to the mode of excitation. In particular, photoluminescence is the emission of light arising ‘from direct photoexcitation of the emitting species.’ Fluorescence,

phosphorescence, and delayed fluorescence are well-known forms of photoluminescence.” Ex.-1019 at 1.

51. Modifying Hartranft’s fish tape with Bruin’s fluorescent material would merely involve marking and/or manufacturing Hartranft’s existing fish tape with a fluorescent/luminescent material, Ex.-1005 at 1:31-2:1, 2:34-3:2, 6:15-17; Ex.-1004 at ¶2, which, in my opinion, is a simple change that would not require extensive modification to the mechanical properties of Hartranft’s underlying fish tape.

52. My opinion that Hack’s fluorescent material would not extensively modify properties of Hartranft’s fish tape is well known to a POSA, as corroborated by the statements in “Development of Illuminant Glow-in-the-Dark Cotton Fabric Coated by Luminescent Composite with Antimicrobial Activity and Ultraviolet Protection,” which explains that luminescent coatings are flexible enough to avoid altering the material to which it is applied. Ex.-1020 at 1.

53. ***Include Bruin’s Fluorescent Cord Means in Hartranft’s Housing.*** Moving on to motivation (ii), I think that a POSA would have been motivated to replace the fish tape stored in Hartranft’s transparent housing with the fluorescent cord means disclosed in Bruin. Such a modification is a simple substitution of one known element (Hartranft’s fish tape cord) with another (Bruin’s fluorescent cord) to obtain predictable results (a fluorescent fish tape system). First, like the fish tape recited by the ‘573 Patent, Hartranft discloses a “coiled fish tape 12 within the

housing 10,” where the fish tape 12 has a length. Ex.-1004 at ¶¶9,12. While Hartranft is silent regarding a luminescent fish tape, Bruin discloses a “cord means [that] is manufactured ... with a fluorescent material.” Ex.-1005 at 6:15-17. A POSA would have been motivated to substitute Hartranft’s fish tape with Bruin’s fluorescent cord means because Hartranft and Bruin disclose tapes with similar properties. Even though Bruin discloses that the “tape, wire, or band is preferably relatively inflexible in a plane perpendicular to the plane of the loop as compared to its flexibility in the plane of the loop,” Ex.-1005 at 2:35-38, a POSA would still recognize that Bruin’s fluorescent cord means has similar properties to Hartranft’s fish tape. For example, Hartranft discloses that its fish tape “is rigid enough to be pushed through a conduit yet flexible enough to bend around corners or curves in the conduit” and also “seeks to return to its natural straight condition and thus wants to ‘spring out’ of its coiled condition.” Ex.-1004 at ¶2. Likewise, Bruin discloses that “[i]n their unextended state, tapes 40 [of the cord means 30] are essentially linear” and that when “[t]he cord means 30 is moved to its extended position” and “extend[s] out into the cavity 300 until its distal end contacts the other side 400 of the cavity,” “the tapes 40 [] flex outwardly.” Ex.-1005 at 4:17-30.

54. Moreover, for at least some of the reasons I provided regarding motivation (i), I also believe that Hartranft motivates a POSA to replace the fish tape in its transparent housing to produce a luminescent fish tape in a clear housing. As I

explained above, a POSA building Hartranft's fish tape system would have encountered Bruin while seeking references that provide additional teachings about the fish tape. In doing so, a POSA would recognize that electricians have difficulty viewing fish tapes in dark cavities or conduits and encounter Bruin's solution that, "[a]s will be understood by persons skilled in the art, [manufacturing or at least marking the cord with a fluorescent material] will allow an operator to easily locate the loop 80 formed [by the cord means] in the dark cavity of the cavity wall." Ex.-1005 at 6:17-20. Therefore, in my opinion, a POSA would be motivated to remedy this problem by replacing Hartranft's fish tape with Bruin's fluorescent cord means.

55. Finally, in my opinion a POSA would have known that replacing Hartranft's fish tape with Bruin's fluorescent cord means would produce a fish tape system with a luminescent fish tape because the combination of stiffness and flexibility needed by Bruin's cord means to enter a cavity and flex when met with resistance, not only makes Bruin's cord means compatible for use as Hartranft's fish tape, Ex.-1004 at ¶2; Ex.-1005 at 4:17-30, but this combination also allows Bruin's cord means to be stored in Hartranft's housing. Ex.-1004 at ¶2.

56. Under either combination, and any of the proposed rationales described above, a POSA would have recognized that the combination would allow the luminescent material of Bruin to be energized by light passing through Hartranft's transparent sidewalls.

11.1.2 Claim 1

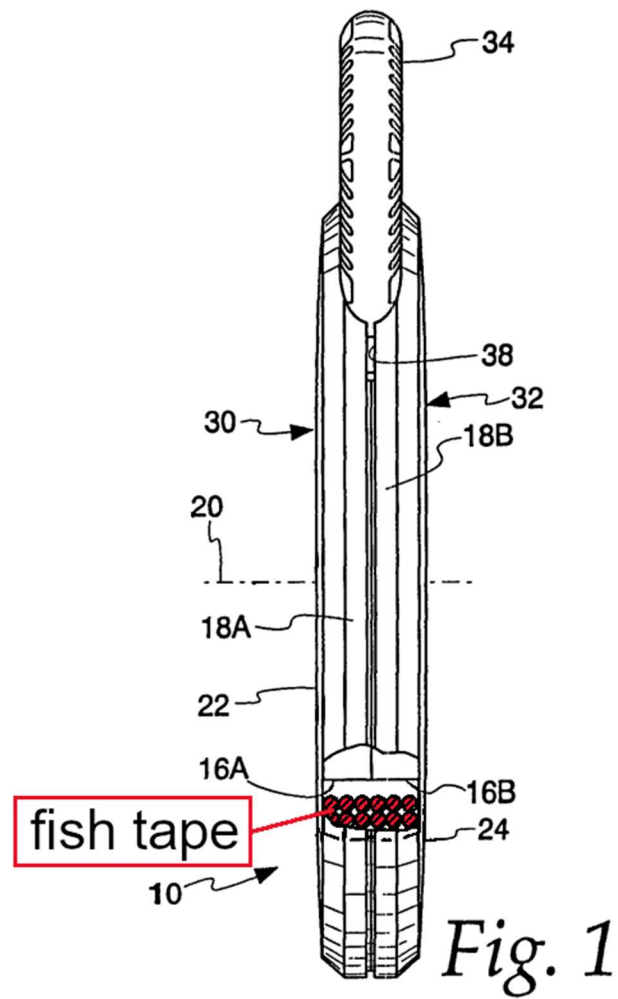
11.1.2.1 Element 1[pre]

57. Hartranft-Bruin teaches 1[pre]’s “fish tape system” at least because Hartranft teaches “an electrician's fish tape housing,” with a “coiled fish tape 12 within the housing 10.” Ex.-1004 ¶¶1, 9.

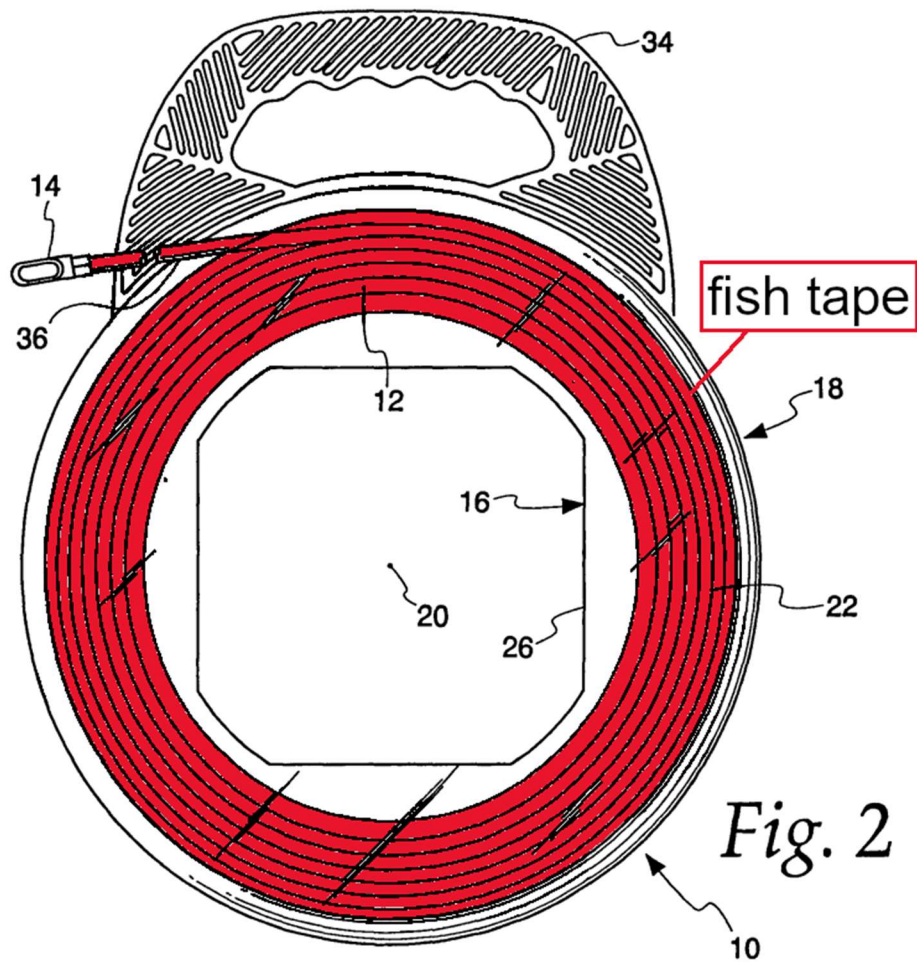
11.1.2.2 Element 1[a]

58. Hartranft-Bruin teaches “a fish tape having a length extending from a first end to a second end, the length of the fish tape comprising a luminescent material that emits light after being energized by exposure to a light source.”

59. Hartranft teaches a “coiled fish tape 12 within the housing 10.” Ex.-1004 at ¶9. Hartranft’s Figures 1 and 2 illustrate the fish tape 12 (red) inside a fish tape housing 10.



Ex.-1004 Fig. 1



Ex.-1004 Fig. 2

60. First, Hartranft explicitly teaches that the fish tape 12 has a length (“[t]he translucent housing 10 enables a user to determine the type, length and remainder of the coiled tape 12 within its chamber” Ex.-1004 at ¶12) and at least one end (“[a]n eyelet 14 is fixed to the end of the fish tape” Ex.-1004 at ¶9). Additionally, in my opinion a POSA would also recognize that the coiled fish tape 12 of Hartranft

necessarily has a first end, a second end, and a length that extends therebetween.
Ex.-1004 at ¶12.

61. I recognize that Hartranft does not expressly teach that “the length of the fish tape compris[es] a luminescent material that emits light after being energized by exposure to a light source.” However, Bruin clearly teaches a “cord means [that] is manufactured or at least marked with a fluorescent material” and that “the cord means is provided by a tape, wire or band.” Ex.-1005 at 6:15-17, 2:34-35. In my opinion a POSA would have recognized that such a fluorescent material meets the limitation of “a luminescent material that emits light after being energized by exposure to a light source” because a fluorescent material is one type of luminescent material.

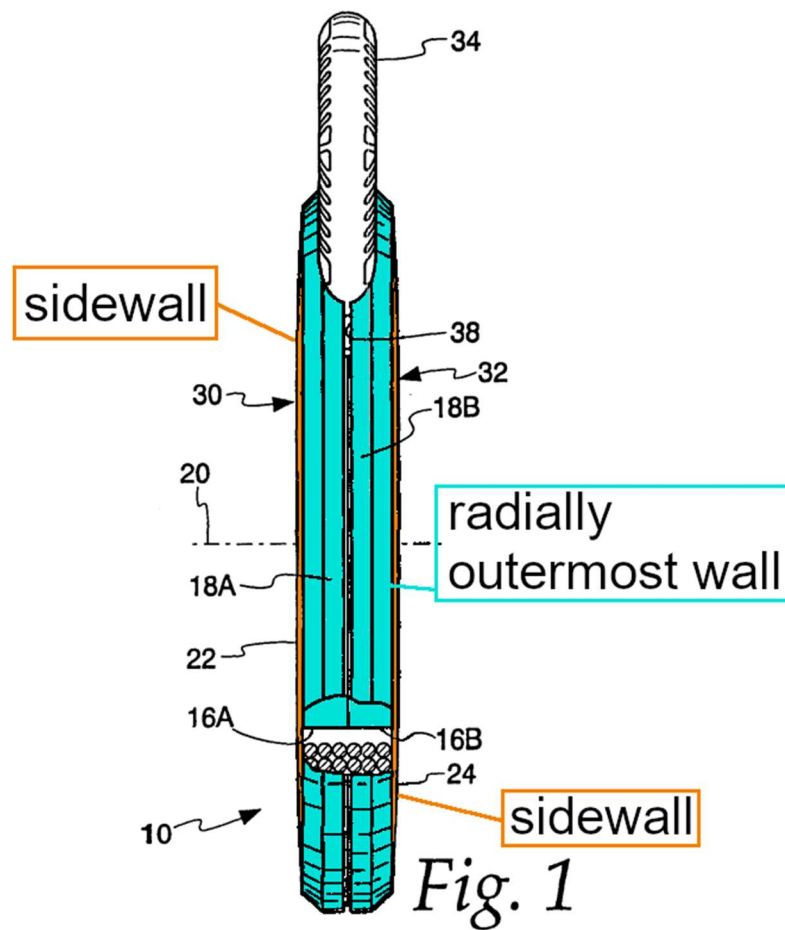
62. For the reasons I explained above, in my opinion a POSA would have been motivated to (i) modify Hartranft’s fish tape to manufacture or at least mark it with a fluorescent material as taught by Bruin or (ii) place Bruin’s fluorescent cord means inside Hartranft’s translucent housing. Please see section 11.1.1.

63. In my opinion, Hartranft-Bruin teaches “a fish tape [e.g., modified Hartranft’s fish tape 12 or Bruin’s cord means in Hartranft’s housing] having a length extending from a first end to a second end, the length of the fish tape comprising a luminescent material [e.g., Bruin’s fluorescent material] that emits light after being energized by exposure to a light source.”

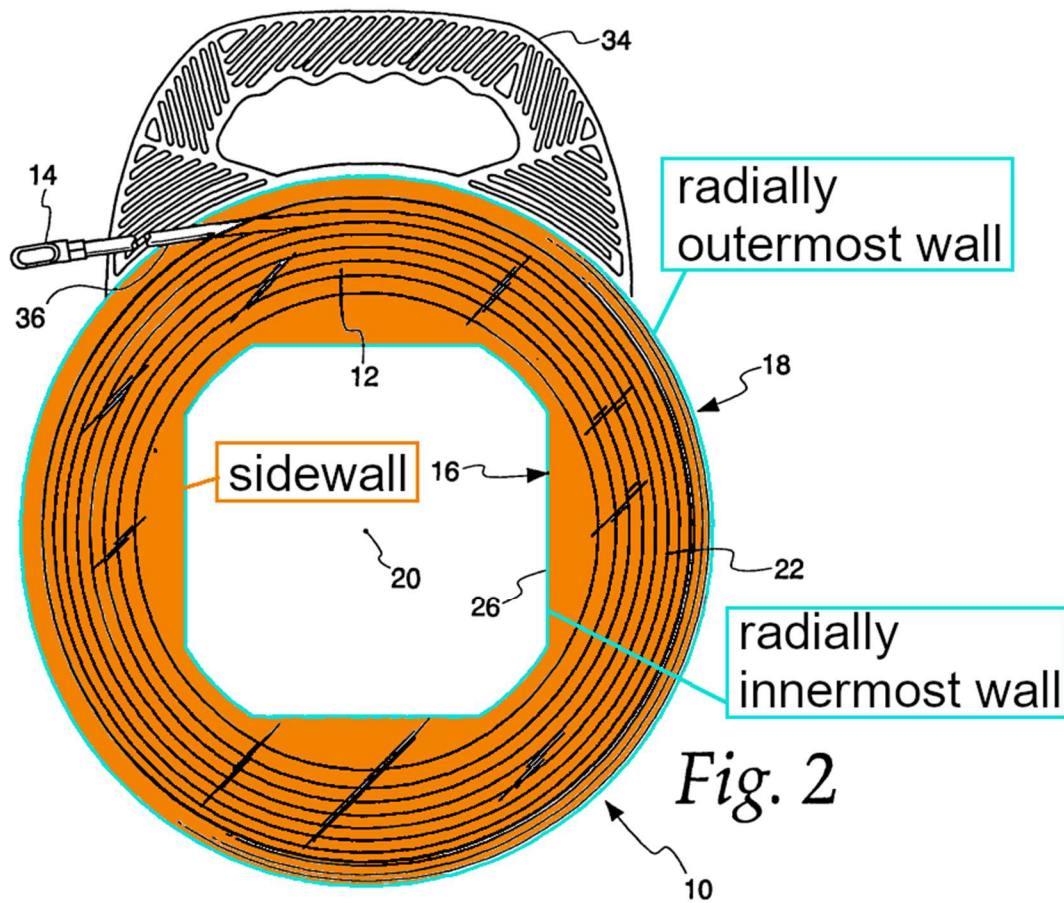
11.1.2.3 Element 1[b]

64. Hartranft-Bruin teaches “a donut shaped case having a pair of sidewalls extending between a radially innermost wall and a radially outermost wall, the outermost wall having an annular opening extending around a circumference of the outer wall, the sidewalls being spaced from each other to define a fish tape storage compartment that stores the length of fish tape for deployment via the annular opening in the case” for the following reasons.

65. To start, Hartranft discloses that “[t]he housing 10 comprises inner and outer annular walls 16 and 18” and “[f]irst and second radial walls 22 and 24 that join the annular walls” where “[t]he second radial walls define a central opening 26.” Ex.-1004 at ¶10. Hartranft’s Figures 1 and 2 illustrate the inner and outer annular walls 16 and 18 (turquoise) and the first and second radial walls 22 and 24 (orange) of the housing 10.



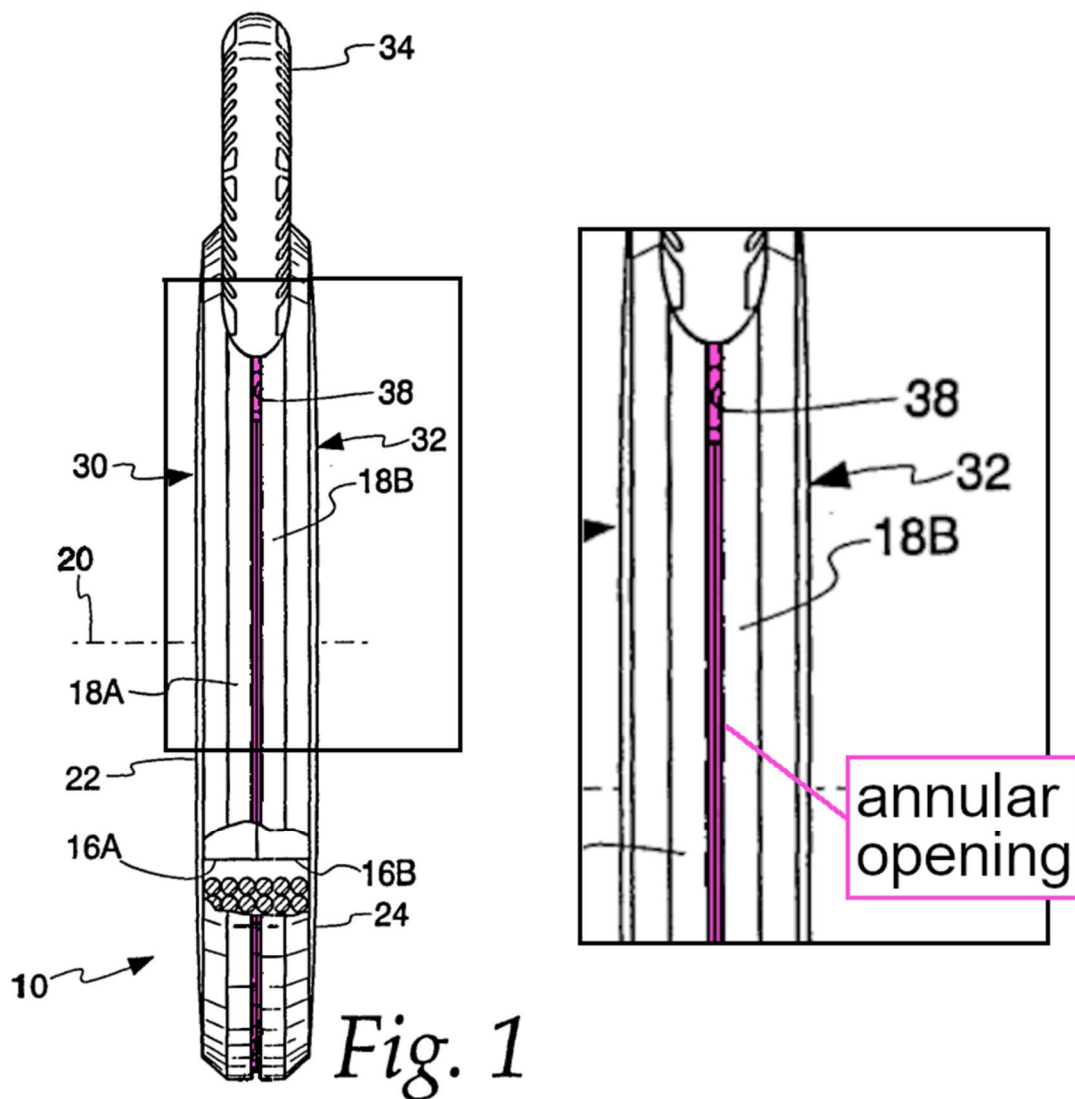
Ex.-1004 Fig. 1



Ex.-1004 Fig. 2

66. Assuming, for the sake of argument, that “donut shaped” is not indefinite and that a generally toroidal shape is among the possible donut shapes, in my opinion Hartranft-Bruin teaches “a donut shaped case having a pair of sidewalls [e.g., radial walls 22, 24] extending between a radially innermost wall [e.g., inner annular wall 16] and a radially outermost wall [e.g., outer annular wall 18].” Ex.-1004 at ¶10.

67. Next, Hartranft discloses “a local slot 38 between [] outer annular half-wall portions 18A, 18B” that “provides a space through which the tape [12] may emerge from within the housing chamber when the tape is being played out.” Ex.-1004 at ¶11. The slot 38 (pink) in the housing 10 is illustrated in Hartranft’s Figure 1.



Ex.-1004 Fig. 1

68. In my opinion, Hartranft-Bruin teaches “the outermost wall having an annular opening [e.g., slot 38 formed by the edges of the outer annular half-wall portions 18A, 18B] extending around a circumference of the outer wall [e.g., outer annular wall 18].” Ex.-1004 at ¶11. I have been informed that the term “the outermost wall” lacks antecedent basis and that, for purposes of this proceeding only, it is understood to refer to “a radially outermost wall.” Similarly, I have been informed that the term “the outer wall” lacks antecedent basis and that, for purposes of this proceeding only, it is understood to refer to “a radially outermost wall.”

69. Finally, in Hartranft, “the annular walls and radial walls define a chamber 28 in which the fish tape 12 resides when the tape is not in use.” Ex.-1004 at ¶10.

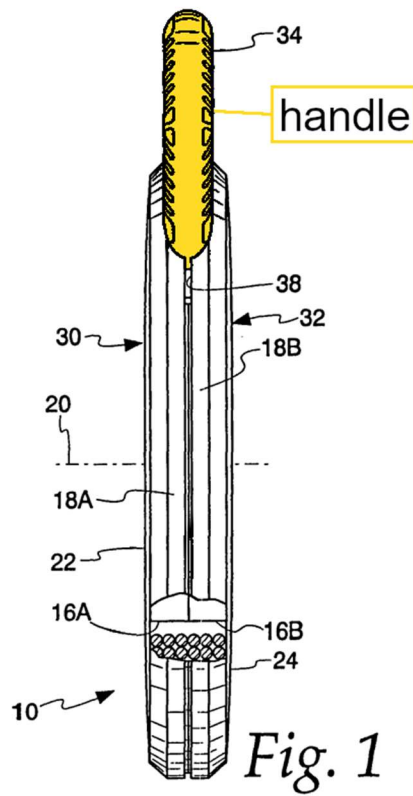
70. In my opinion, Hartranft-Bruin teaches “the sidewalls being spaced from each other to define a fish tape storage compartment [e.g., chamber 28] that stores the length of fish tape for deployment via the annular opening in the case.” Ex.-1004 at ¶10, 11.

11.1.2.4 Element 1[c]

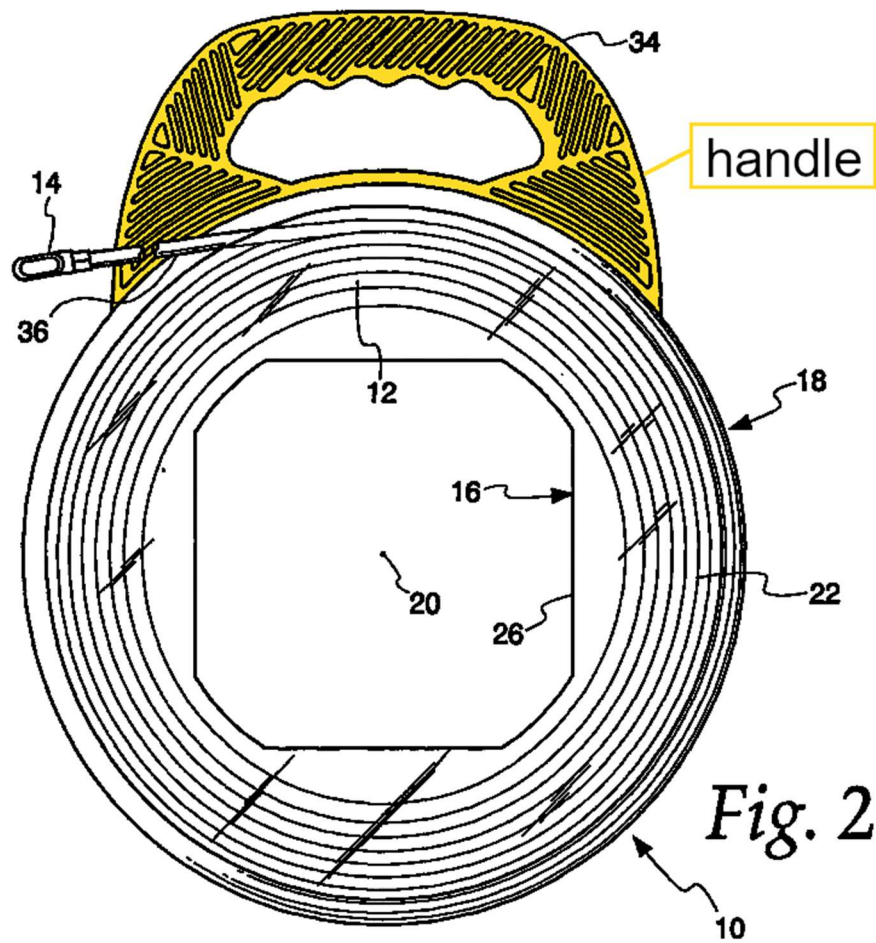
71. Hartranft-Bruin teaches “a handle engaged with the fish tape and mounted to slide within the annular opening of the case around the entire

circumference of the outer wall to deploy the fish tape from the storage compartment and to reload the fish tape into the compartment.”

72. Hartranft discloses that “[a] handle 34 may be rotatably attached to the housing [10]” and “include[] an aperture 36 through which the fish tape [12] is threaded.” Ex.-1004 at ¶11. In particular, “[a] lower portion of the handle 34 is located generally between the halves [30 and 32 of the housing 10] and includes channels which interfit with the edges of the annular half-wall portions 18A and 18B, allowing the handle to travel circumferentially around the housing 10.” Ex.-1004 at ¶11. Hartranft’s Figures 1 and 2 illustrate the handle 34 (yellow) that is rotatably attached to the housing 10.



Ex.-1004 Fig. 1



Ex.-1004 Fig. 2

73. Hartranft discloses that “[a]s the handle travels, it separates the halves 30 and 32 slightly at the location of the handle” which “opens a local slot 38 between the annular half-wall portions 18A, 18B ... through which the tape [12] may emerge from within the housing when the tape is being played out.” Ex.-1004 at ¶11. Similarly, Hartranft specifies that “when the tape is returned into the housing it does so through slot 38.” Ex.-1004 at ¶11.

74. In light of the teachings summarized above, in my opinion Hartranft-Bruin discloses “a handle [34] engaged with the fish tape [e.g., handle 34 has an aperture 36 through which the fish tape 12 is threaded] and mounted [e.g., handle 34 has channels that interfit with the edges of the annular half-wall portions 18A, 18B] to slide within the annular opening [e.g., handle 34 travels circumferentially around the housing 10 via the slot 38 formed by the annular half-wall portions 18A, 18B] of the case around the entire circumference of the outer wall [e.g., outer annular wall 18] to deploy the fish tape from the storage compartment and to reload the fish tape into the compartment.” Ex.-1004 at ¶11.

11.1.2.5 Element 1[d]

75. Hartranft-Bruin teaches “wherein at least one of the sidewalls of the case is configured to allow the luminescent material to be energized by light passing through the at least one of the sidewalls.”

76. Hartranft teaches that “[t]he fish tape housing 10 is made out of any lightweight, translucent material,” which “includes materials that pass so much light that they might be considered transparent.” Ex.-1004 at ¶9. Hartranft specifies that “[i]t is preferred that the entire housing is translucent since this will permit observation of the tape regardless of the orientation of the housing relative to the observer” and also discloses embodiments where “the radial walls 22, 24 could be translucent while the annular walls 16, 18 are not.” Ex.-1004 at ¶12.

77. The transparent case in Hartranft can energize a luminescent material, and this is necessarily present in Hartranft because luminescent materials are energized by light, which is capable of passing through a transparent case. In the combined Hartranft-Bruin system, a POSA, following the motivations noted above, would have known that because light can pass through the translucent or transparent housing taught by Hartranft, and, thus, been motivated to configure Hartranft's housing 10 to allow the fluorescent material of the modified fish tape 12 (or replaced with Bruin's tape) inside the housing 10 to be energized by the light passing through at least one of the transparent radial walls 22, 24. Ex.-1004 at ¶12.

78. In my opinion, Hartranft-Bruin teaches a fish tape system "wherein at least one of the sidewalls [e.g., radial wall 22 or 24] of the case is configured [e.g., to the extent not indefinite, this would include Hartranft's case made of materials that pass so much light that they may be considered transparent] to allow the luminescent material [e.g., the fluorescent material taught by Bruin] to be energized by light passing through the at least one of the sidewalls." Ex.-1004 at ¶¶9, 12.

11.1.3 Claim 2

79. Claim 2 depends from claim 1, which Hartranft-Bruin teaches. Please see section 11.1.2. Claim 2 adds that "both of the sidewalls of the case are configured to allow the luminescent material to be energized by light passing through the sidewalls."

80. Hartranft teaches that both of the radial walls 22, 24 can be translucent or transparent, which in my opinion, teaches claim 2. Ex.-1004 at ¶12. Moreover, because Hartranft discloses transparent radial walls 22, 24, Hartranft necessarily teaches that light can pass through the radial walls 22, 24 to energize the fluorescent material of the modified fish tape 12 (or Bruin’s fluorescent cord means) inside the housing 10.

81. In my opinion, Hartranft-Bruin teaches a fish tape system “wherein both of the sidewalls [e.g., both radial walls 22 and 24] of the case are configured [e.g., made of materials that pass so much light that they may be considered transparent] to allow the luminescent material [e.g., the fluorescent material taught by Bruin] to be energized by light passing through the at least one of the sidewalls.” Ex.-1004 at ¶¶9, 12.

11.1.4 Claim 3

82. Claim 3 depends from claim 2, which I think Hartranft-Bruin teaches. Please see section 11.1.3. Claim 3 adds: “wherein at least one of the innermost and outermost walls is configured to allow the luminescent material to be energized by light passing through the sidewalls.” I have been informed that the term “the innermost and outermost walls” lacks antecedent basis and that, for purposes of this proceeding only, it is understood to refer to “a radially innermost wall and a radially outermost wall.” Moreover, I do not see how “the innermost and outermost walls”

can be configured to allow the luminescent material to be energized by light passing through “the sidewalls.” In any case, Hartranft teaches that the entire housing 10 can be translucent, which encompasses both the innermost and outermost walls as well as the sidewalls. Ex.-1004 at ¶12.

83. Hartranft teaches that “[i]t is preferred that the entire housing is translucent since this will permit observation of the tape regardless of the orientation of the housing relative to the observer.” Ex.-1004 at ¶12. With the entire housing translucent, both the radial walls 22 and 24, as well as the annular walls 16 or 18 would all be translucent.

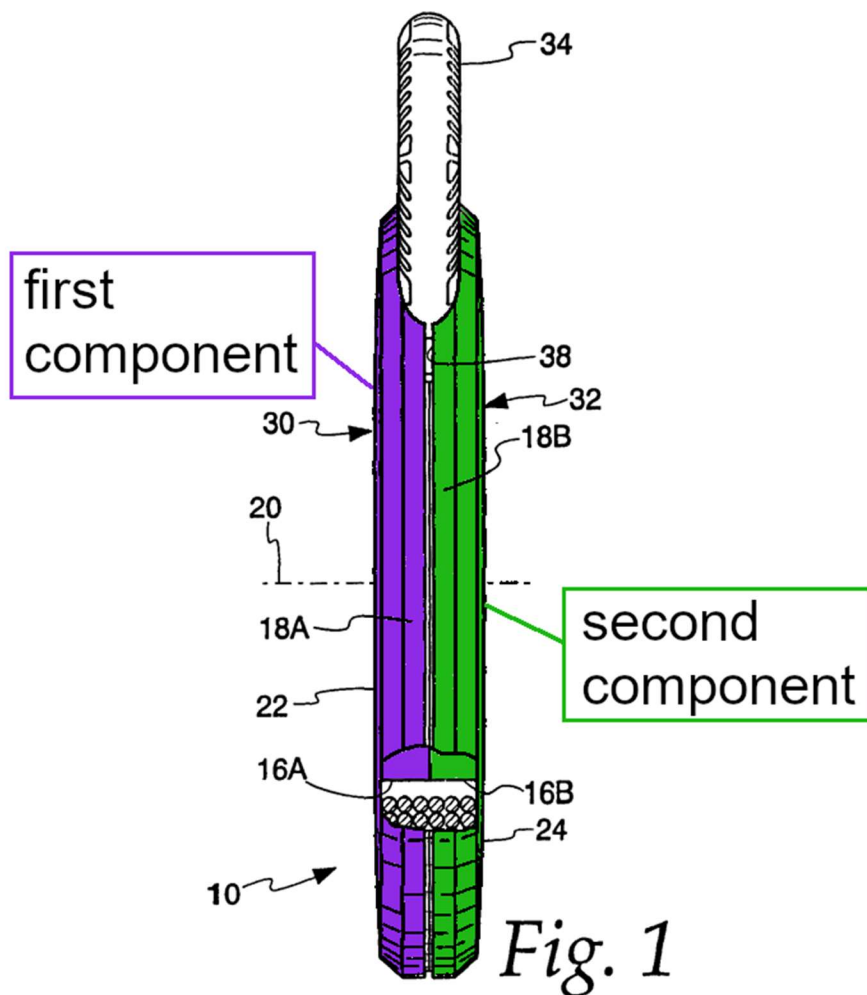
84. In my opinion, any POSA would recognize that because Hartranft discloses an entirely transparent housing 10, Hartranft necessarily teaches that light can pass through the radial walls 22, 24 and/or the annular walls 16, 18 to energize the fluorescent material of the modified fish tape 12 (or Bruin’s fluorescent cord means) inside the housing 10.

85. In my opinion, Hartranft-Bruin teaches a fish tape system “wherein at least one of the innermost and outermost walls [e.g., annular wall 16 and/or 18] is configured [e.g., made of materials that pass so much light that they may be considered transparent] to allow the luminescent material [e.g., the fluorescent material taught by Bruin] to be energized by light passing through the sidewalls.” Ex.-1004 at ¶¶9, 12.

11.1.5 Claim 4

86. Claim 4 depends from claim 1, which in my opinion Hartranft-Bruin teaches. Please see section 11.1.2. Claim 4 adds “one of the sidewalls and portions of the innermost and outermost walls are defined by a first component of the case, and the other of the sidewalls and other portions of the innermost and outermost walls are defined by a second component of the case, the first and second components being assembled together to form the storage compartment.”

87. Hartranft teaches that “housing half 30 includes first radial wall 22 and annular half-wall portions 16A and 18A while housing half 32 has second radial wall 24 and annular half-wall portions 16B and 18B.” Ex.-1004 at ¶10. Hartranft’s Figure 1 illustrates the first half 30 (purple) and the second half 32 (green) of the housing 10.



Ex.-1004 Fig. 1

88. Hartranft also teaches that “[t]he halves 30 and 32 are joined together in facing relation,” which “defines the chamber 28 in the space within the halves 30 and 32.” Ex.-1004 at ¶10. Finally, Hartranft specifies that “[t]he housing 10 restrains the coiled tape 12 within this space.” Ex.-1004 at ¶10.

89. Based on the teachings summarized here, in my opinion Hartranft-Bruin teaches a fish tape system “wherein one of the sidewalls [e.g., the radial wall 22] and portions of the innermost and outermost walls [e.g., the annular half-wall portions 16A, 18A] are defined by a first component of the case [e.g., the half 30], and the other of the sidewalls [e.g., the radial wall 24] and other portions of the innermost and outermost walls [e.g., the annular half-wall portions 16B, 18B] are defined by a second component of the case [e.g., the half 32], the first and second components being assembled together to form the storage compartment [e.g., the chamber 28.].” Ex.-1004 at ¶10.

11.1.6 Claim 6

11.1.6.1 Elements 6[pre]-6[c]

90. Based on my review, Elements 6[pre]-6[c] are substantively analogous to elements 1[pre]-1[c].

91. In particular, only element 1[b] differs from element 6[b]. In particular, where element 1[b] recites “the outermost wall having an annular opening extending around *a circumference of the outer wall*,” element 6[b] recites “an annular opening extending around *a circumference of one of the inner and outer walls*.” I have been informed that term “the inner and outer walls” lacks antecedent basis and that, for purposes of this Petition only, it is understood to refer to “a radially innermost wall and a radially outermost wall.”

92. Because the annular opening extends around a circumference of the outer wall, the annular opening also extends around a circumference of one of the inner and outer walls. Therefore, element 6[b] is taught by Hartranft-Bruin for reasons similar to element 1[b].

93. Therefore, in my opinion elements 6[pre]-6[c] and are taught by Hartranft-Bruin for similar reasons as the ones I provided with respect to elements 1[pre]-1[c]. Please see sections 11.1.2.1-11.1.2.4.

11.1.6.2 Element 6[d]

94. As compared to element 1[d], element 6[d] states that “at least a portion of the case is configured to allow the luminescent material to be energized by light passing through the portion,” rather than stating that “at least one of the sidewalls” does this. Because the sidewalls are a portion of the case, element 6[d] is taught for the same reasons as element 1[d]. Please see section 11.1.2.5.

95. Accordingly, in my opinion, Hartranft-Bruin teaches a fish tape system “wherein at least a portion of the case [e.g., the entire housing 10; one or both of the halves 30, 32; one or both of the radial walls 22, 24] is configured to allow the luminescent material [e.g., the fluorescent material taught by Bruin] to be energized by light passing through the portion.” Ex.-1004 at ¶¶9, 12.

11.1.7 Claim 7

96. Claim 7 depends from claim 6, which in my opinion Hartranft-Bruin teaches. Please see section 11.1.6. Claim 7 differs from element 1[d] only in that where element 1[d] recites “at least one of the sidewalls of the case is configured to allow the luminescent material to be energized by light passing through the at least one of the sidewalls,” claim 7 refers only to “*at least a portion of* at least one of the sidewalls.”

97. Because at least one of the sidewalls is configured to allow the luminescent material to be energized, then *at least a portion of* at least one of the sidewalls is as well. Moreover, because Hartranft discloses transparent radial walls 22, 24, Hartranft necessarily teaches that light can pass through the radial walls 22, 24 to energize the fluorescent material of the modified fish tape 12 (or Bruin’s fluorescent cord means) inside the housing 10. Please see section 11.1.6.2. Therefore, in my opinion claim 7 is taught for reasons similar to element 1[d].

11.1.8 Claim 8

98. Claim 8 depends from claim 6, which in my opinion Hartranft-Bruin teaches. Please see section 11.1.6. Claim 8 differs from claim 2 only in that where claim 2 recites “both of the sidewalls are configured to allow the luminescent material to be energized by light passing through the sidewalls,” claim 8 refers only

to “*at least portions of* both of the sidewalls of the case are configured to allow the luminescent material to be energized by light passing through the sidewalls.”

99. Because both of the sidewalls are configured to allow the luminescent material to be energized, then *at least portions of* both of the sidewalls are as well. Moreover, because Hartranft discloses transparent radial walls 22, 24, Hartranft necessarily teaches that light can pass through the radial walls 22, 24 to energize the fluorescent material of the modified fish tape 12 (or Bruin’s fluorescent cord means) inside the housing 10. Therefore, in my opinion claim 8 is taught for reasons similar to claim 2.

11.1.9 Claim 9

100. Claim 9 depends from claim 6, which Hartranft-Bruin teaches. Please see section 11.1.6. Claim 9 adds: “wherein at least portions of all the walls of the case are transparent.” I have been informed that the term “all the walls” lacks antecedent basis and that , for purposes of this Petition only, it is understood that this refers to “a pair of sidewalls,” “a radially innermost wall,” and “a radially outermost wall.”

101. Hartranft discloses that the entire housing 10 can be transparent. Ex.-1004 at ¶¶9, 12. Because Hartranft discloses an entirely transparent housing 10, Hartranft necessarily teaches that light can pass through the any wall 16, 18, 22, 24

to energize the fluorescent material of the modified fish tape 12 (or Bruin's fluorescent cord means) inside the housing 10.

102. In my opinion, Hartranft-Bruin teaches claim 9.

11.1.10 Claim 10

103. Claim 10 depends from claim 6, which Hartranft-Bruin teaches. Please see section 11.1.6. Claim 10 adds “one of the sidewalls and portions of the innermost and outermost walls are defined by a first component of the case, and the other of the sidewalls and other portions of the innermost and outermost walls are defined by a second component of the case, the first and second components being assembled together to form the storage compartment.”

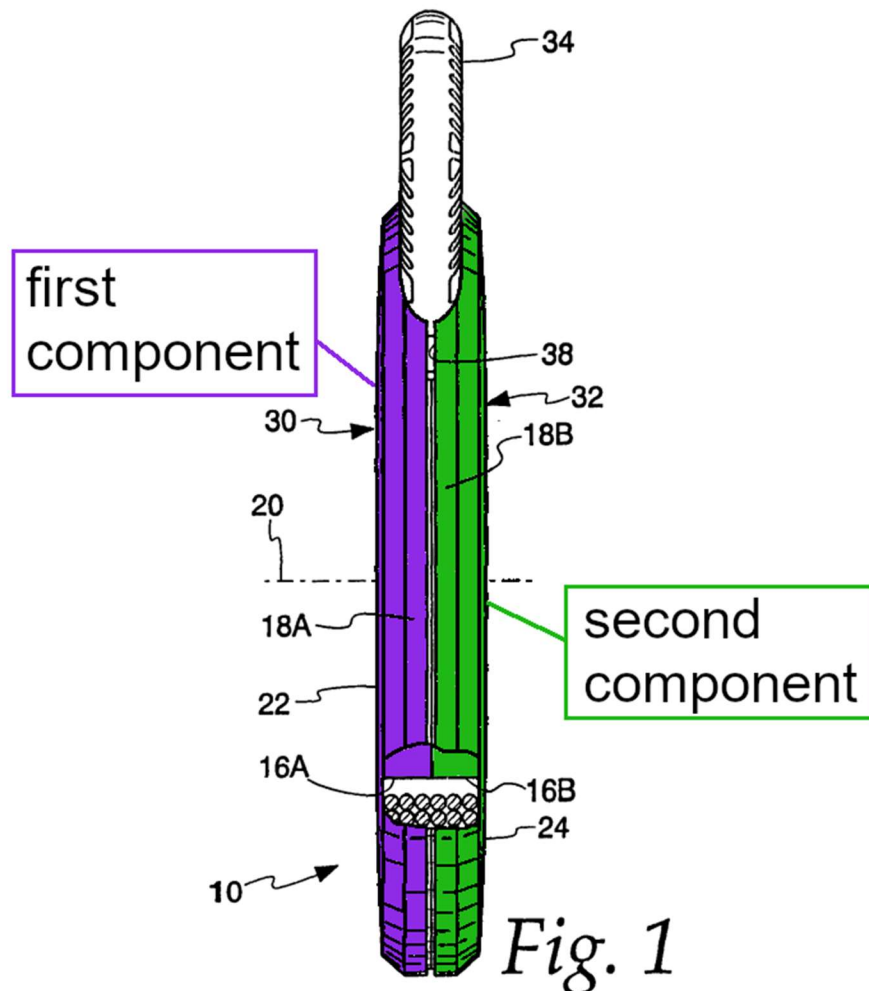
104. This feature is analogous to the feature recited in claim 4, so in my opinion it is taught for similar reasons. Please see section 11.1.5.

11.1.11 Claims 11 and 12

105. Claims 11 and 12 depend from claim 10, which Hartranft-Bruin teaches, in my opinion. Please see section 11.1.10. Claim 11 adds: “wherein at least one of the first and second components comprises a transparent material” and claim 12 says both components are transparent. Hartranft teaches both configurations.

106. Hartranft teaches that “one housing half could be translucent while the other is not.” Ex.-1004 at ¶12. Hartranft also teaches that “[i]t is preferred that the entire housing is translucent since this will permit observation of the tape regardless

of the orientation of the housing relative to the observer.” Ex.-1004 at ¶12. Hartranft also teaches that “the housing [10] is split into two identical halves 30 and 32.” Ex.-1004 at ¶10. Hartranft’s Figure 1 illustrates the first half 30 (purple) and the second half 32 (green).



Ex.-1004 Fig. 1

107. Accordingly, a POSA would recognize that if Hartranft's entire housing 10 is transparent, then both halves 30 and 32 must also be transparent (and, logically then, at least one half is translucent too).

108. In my opinion, Hartranft-Bruin teaches a fish tape system where one or both the first and second components (e.g., the halves 30 and 32) comprises a transparent material. Ex.-1004 at ¶¶10, 12.

11.1.12 Claim 14

11.1.12.1 Elements 14[pre], 14[a], and 14[c]

109. Upon review of claim 14, elements 14[pre], 14[a], and 14[c] of Claim 14 are substantively similar to elements 1[pre], 1[a], and 1[c] of Claim 1 and elements 6[pre], 6[a], and 6[c] of Claim 6.

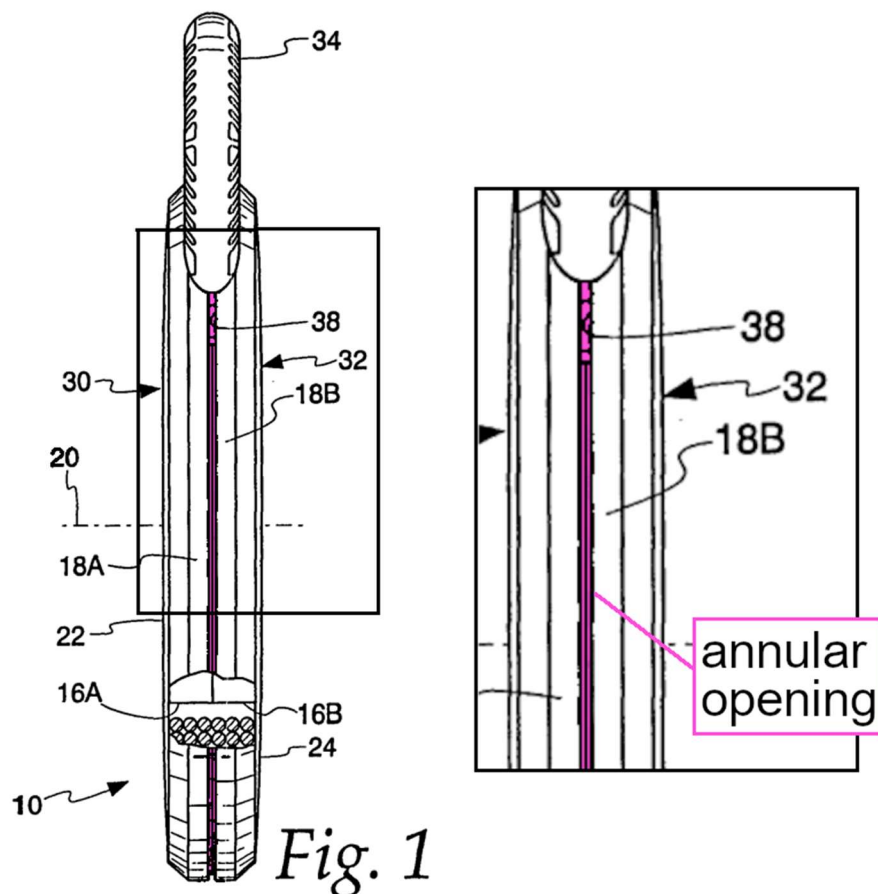
110. Therefore, in my opinion, elements 14[pre], 14[a], and 14[c] are taught by Hartranft-Bruin for similar reasons as described above with respect to elements 1[pre], 1[a], and 1[c]. Please see sections 11.1.2.1, 11.1.2.2, 11.1.2.4.

11.1.12.2 Element 14[b]

111. Element 14[b] recites "a case having a fish tape storage compartment that stores the length of fish tape for deployment and reloading via an annular opening in the case."

112. Hartranft discloses that the housing 10 includes "a chamber 28 in which the fish tape 12 resides when the tape is not in use." Ex.-1004 at ¶10. Hartranft

describes the chamber 28 as being defined by the annular walls 16, 18 and the radial walls 22, 24 and as being defined by the halves 30 and 32—which, in turn, are defined by the annular walls 16, 18 and the radial walls 22, 24. Ex.-1004 at ¶10. Hartranft also discloses that “[e]ach half includes one of the radial walls and about half of each annular wall,” and “the edges of the outer annular half-wall portions 18A and 18B[] allow[] the handle to travel circumferentially around the housing 10.” Ex.-1004 at ¶¶10-11. In particular, Hartranft’s housing 10 has “a local slot 38 between the outer annular half-wall portions 18A, 18B.” Ex.-1004 at ¶11. The slot 38 (pink) in the housing 10 is illustrated in Hartranft’s Figure 1.



Ex.-1004 Fig. 1

113. Hartranft specifies that the slot 38 “provides a space through which the tape [12] may emerge from within the housing chamber when the tape is being played out.” Ex.-1004 at ¶11. Similarly, “when the tape is returned into the housing it does so through slot 38.” Ex.-1004 at ¶11.

114. Based on the above disclosure, in my opinion Hartranft-Bruin teaches “a case [e.g., housing 10] having a fish tape storage compartment [e.g., chamber 28]

that stores the length of fish tape for deployment and reloading via an annular opening [e.g., slot 38] in the case.” Ex.-1004 at ¶¶10-11.

11.1.12.3 Element 14[d]

115. Element 14[d] recites “wherein at least a portion of the case is configured to allow the luminescent material to be energized by light passing through the portion and into the storage compartment.”

116. Hartranft teaches that “[t]he fish tape housing 10 is made out of any lightweight, translucent material,” which “includes materials that pass so much light that they might be considered transparent.” Ex.-1004 at ¶9. Moreover, while Hartranft provides a preferred embodiment in which “the entire housing is translucent,” Hartranft also explains that “less than all of the housing could be translucent and still allow observation of the tape in the housing” and provides examples where “one housing half could be translucent while the other is not” and “the radial walls 22, 24 could be translucent while the annular walls 16, 18 are not.” Ex.-1004 at ¶12.

117. Both Hartranft’s housing 10 and chamber 28 are defined by the annular walls 16, 18 and the radial walls 22, 24. Ex.-1004 at ¶10. Alternatively, both the housing 10 and chamber 28 are defined by the halves 30 and 32—which, in turn, are defined by the annular walls 16, 18 and the radial walls 22, 24. Ex.-1004 at ¶10.

Because the housing 10 and the chamber 28 are defined by the same walls and halves, a POSA would recognize that the light passing through the transparent housing 10 would enter the chamber 28 of the fish tape system.

118. In my opinion, Hartranft-Bruin teaches a fish tape system “wherein at least a portion of the case [e.g., the entire housing 10; one or both of the halves 30, 32; one or both of the radial walls 22, 24] is configured to allow the luminescent material [e.g., the fluorescent material taught by Bruin] to be energized by light passing through the portion and into the storage compartment [e.g., chamber 28.].” Ex.-1004 at ¶¶9-10, 12.

11.1.13 Claim 15

119. Claim 15 depends from claim 14, which I think Hartranft-Bruin teaches. Please see section 11.1.12. Claim 15 adds: “wherein the storage compartment has an annular shape bounded by a pair of spaced sidewalls.”

120. Hartranft discloses that “[t]he housing 10 comprises inner and outer annular walls 16 and 18” joined by “[f]irst and second radial walls 22 and 24,” where “[t]he second radial walls define a central opening 26.” Ex.-1004 at ¶10. Hartranft also discloses that “[t]ogether the annular walls and radial walls define a chamber 28 in which the fish tape 12 resides when the tape is not in use.” Ex.-1004 at ¶10.

121. In my opinion, Hartranft-Bruin teaches a fish tape system “wherein the storage compartment [e.g., chamber 28] has an annular shape [e.g., formed by the

central opening 26 in the radial walls 22 and 24] bounded by a pair of spaced sidewalls [e.g., radial walls 22 and 24.].” Ex.-1004 at ¶10.

11.1.14 Claim 16

122. Claim 16 depends from claim 15, which Hartranft-Bruin teaches. Please see section 11.1.13. Claim 16 adds: “wherein at least a portion of at least one of the sidewalls is transparent.” Claim 16 is otherwise analogous to claim 7, so in my opinion claim 16 is taught for similar reasons. Please see section 11.1.7.

11.1.15 Claim 17

123. Claim 17 depends from claim 16, which in my opinion Hartranft-Bruin teaches. Please see section 11.1.14. Claim 17 adds: “wherein portions of both of the sidewalls are transparent.” Claim 17 is otherwise analogous to claim 8, so in my opinion it is taught for similar reasons. Please see section 11.1.8.

11.1.16 Claim 18

124. Claim 18 depends from claim 16, which, in my opinion, Hartranft-Bruin teaches. Please see section 11.1.14. Claim 18 adds: “wherein the case comprises a pair of components that are joined to each other to define the storage compartment, and at least one of the pair of components comprises a transparent material.”

125. Hartranft discloses that “the housing [10] is split into two identical halves 30 and 32” where “[t]he halves 30 and 32 are joined together in facing

relation” to “define[] the chamber 28 in the space within the halves 30 and 32.” Ex.-1004 at ¶10.

126. Hartranft teaches that “[t]he fish tape housing 10 is made out of any lightweight, translucent material,” which “includes materials that pass so much light that they might be considered transparent.” Ex.-1004 at ¶9. Hartranft also discloses that “[t]he entire housing is translucent” or “one housing half could be translucent while the other is not.” Ex.-1004 at ¶12.

127. Based on the above, in my opinion Hartranft-Bruin teaches a fish tape system “wherein the case [e.g., housing 10] comprises a pair of components [e.g., halves 30 and 32] that are joined to each other to define the storage compartment [e.g., chamber 28], and at least one of the pair of components comprises a transparent material.” Ex.-1004 at ¶¶9-10, 12.

My Opinion on Hartranft in view of Bruin and Noonan for Claims 5 and 13

11.1.17 Motivation to Combine Hartranft-Bruin and Noonan

128. Hartranft, Bruin, and Noonan qualify as analogous art because they are in the same field as the ‘573 Patent—namely, wire/cable pullers and techniques for routing wires/cables through a wall cavity or conduit. Ex.-1004 at ¶2; Ex.-1005 at 1:2-10; Ex.-1006 at 1:4-10; Ex.-1001 at 1:26-27. Wire/cable pullers are often used

to aid electricians going through conduits or wall cavities to give them easier access. Moreover, Hartranft, Bruin, and Noonan are all reasonably pertinent to a problem allegedly solved by the claimed invention: reducing the time and effort expended by an electrician while routing wires/cables through a cavity or conduit. Ex.-1004 at ¶5; Ex.-1005 at 1:2-10; Ex.-1006 at 2:1-10; Ex.-1001 at 1:26-37. Because spaces where wiring is needed is often very narrow, inaccessible, and dark electricians must rely on wire/cable pullers to install wires/cables.

129. I think a POSA had motivation to (i) replace the eyelet at the end of the Hartranft's fish tape marked with the Bruin fluorescent material with a threaded opening (taught by Noonan's mounting cylinder with a threaded bore) or (ii) use a threaded opening (taught by Noonan's mounting cylinder with a threaded bore) to attach the eyelet to the end of Hartranft's fish tape marked with the Bruin fluorescent material.

130. *Replace Hartranft-Bruin's Eyelet with Noonan's Threaded Bore.* First, this modification would be a simple substitution of one known element (Hartranft's fish tape eyelet, which is present in the Hartranft-Bruin combination) with another (Noonan's mounting cylinder and threaded bore) to obtain predictable results (a fish tape with a threaded opening in at least one of its ends). Like the fish tape recited by the '573 Patent, Hartranft discloses a "coiled fish tape 12 within the housing 10." Ex.-1004 at ¶9. Hartranft teaches that "[a]n eyelet 14 is fixed to the end

of the fish tape,” Ex.-1004 at ¶9, but is silent regarding its fish tape ends having a threaded opening. However, Noonan teaches that its fish tape wire ends have a mounting cylinder with a threaded bore. Ex.-1006 at 3:50-53. In my opinion a POSA could have substituted Hartranft’s fish tape eyelet with the mounting cylinder and threaded bore taught by Noonan because both Hartranft’s eyelet and Noonan’s mounting cylinder provide an end of their respective fish tapes. Ex.-1004 at ¶9; Ex.-1006 at 3:50-51. Additionally, a POSA could have made this substitution because both Hartranft’s eyelet and Noonan’s mounting cylinder and threaded bore can attach or connect an object to a fish tape. Not only would it be commonplace for a POSA to replace the eyelet with Noonan’s mounting cylinder, but it would be beneficial. Noonan’s mounting cylinder can be used to connect different objects to the end of Hartranft’s fish tape, such as different sized eyelets, hooks, balls, or even other fish tapes. This ability to substitute the object at the end of the fish tape makes the fish tape more versatile. Hartranft in particular specifies that the “eyelet 14 is fixed to the end of the fish tape *to permit ready attachment* of a wire or cable.” Ex.-1004 at ¶9. Similarly, Noonan explains that “[a] stem 34 [of its anti-snagging device 24] is threaded into the bore 38 *to mount* the anti-snagging device 24 on the leading end of the ‘fish tape’ wire 20.” Ex.-1006 at 3:54-56.

131. In my opinion, Hartranft also motivates a POSA to modify the fish tape in its transparent housing to produce a fish tape with a threaded opening in at least

one of its ends. First, Hartranft motivates a POSA to build a fish tape system that allows users to work efficiently, stating that its “translucent housing allows users of fish tapes to save time and expense by observing the condition, type and amount of tape within the housing without the added effort of removing the tape.” Ex.-1004 at ¶6. Furthermore, Hartranft provides limited information about the eyelet, simply noting that “[a]n eyelet 14 is fixed to the end of the fish tape to permit ready attachment of a wire or cable.” Ex.-1004 at ¶9at ¶9. In my opinion, a POSA building Hartranft’s fish tape system would not only be interested in helping users work efficiently, but a POSA would also seek out additional references to obtain details about the eyelet. This POSA would naturally encounter Noonan, which seeks “to minimize, if not eliminate the problem of jamming in the use of ‘fish tapes’” because “such jamming of the ‘fish tape’ is both time consuming and vexatious,” Ex.-1006 at 2:1-10, and teaches details about the end or lead portion of a fish tape. This can be seen in the Abstract of Ex.-1006. Specifically, Noonan discloses a mounting cylinder with a threaded bore. Ex.-1006 at 3:51-53. In my opinion, in building Hartranft’s fish tape system and following Hartranft’s express motivation to improve efficiency, a POSA would have been motivated to modify Hartranft’s fish tape with Noonan’s mounting cylinder and threaded bore.

132. Accordingly, a POSA would have known that this modification would produce a fish tape with a threaded opening in at least one of its ends because this

modification merely requires replacing one fish tape end (Hartranft's fish tape eyelet) with another (Noonan's mounting cylinder having a threaded bore) without changing the function or hindering the benefits taught by Hartranft's fish tape system.

133. *Use Noonan's Threaded Bore to Attach Hartranft's Eyelet to Hartranft's Fish Tape.* Regarding motivation (ii), I think a POSA would have been motivated to use Noonan's mounting cylinder with a threaded bore to attach Hartranft's eyelet to the end of Hartranft's fish tape. A POSA would have been motivated to try this modification because this modification would have been chosen from a finite number of identified, predictable solutions. As discussed above, Hartranft discloses an eyelet at the end of a fish tape, Ex.-1004 at ¶9, but does not teach a POSA how the eyelet is attached to the end of the fish tape. However, there are a finite number of methods for attaching an eyelet to the end of a fish tape. For example, a POSA would use male threads, female threads, quick couplings, clips, pins, etc., anything that would help him interexchange the tool at the end of the fish tape quickly. Threaded components at the ends of fish tapes are the most common. Noonan discloses one of these methods. *See* Ex.-1006 at 3:41-56. Namely, Noonan is directed to an anti-snagging device that is mounted onto a fish tape wire and specifies that the fish tape wire has a "mounting cylinder 36 is provided with a longitudinal, threaded bore 38" and that a "stem 34 [of the anti-snagging device] is

threaded into the bore 38 to mount the anti-snagging device 24 on the leading end of the 'fish tape' wire 20." Ex.-1006 at 3:50-56. Finally, a POSA would have known that the threaded bore in Noonan's mounting cylinder could be used to attach Hartranft's eyelet to the end of Hartranft's fish tape because this is a common method for coupling eyelets or other fish tape leads to fish tapes. For the reasons I explained above, in my opinion a POSA would have been motivated to attach Hartranft's eyelet to the end of Hartranft's fish tape using a threaded opening at the end of the fish tape, as taught by Noonan's mounting cylinder with a threaded bore.

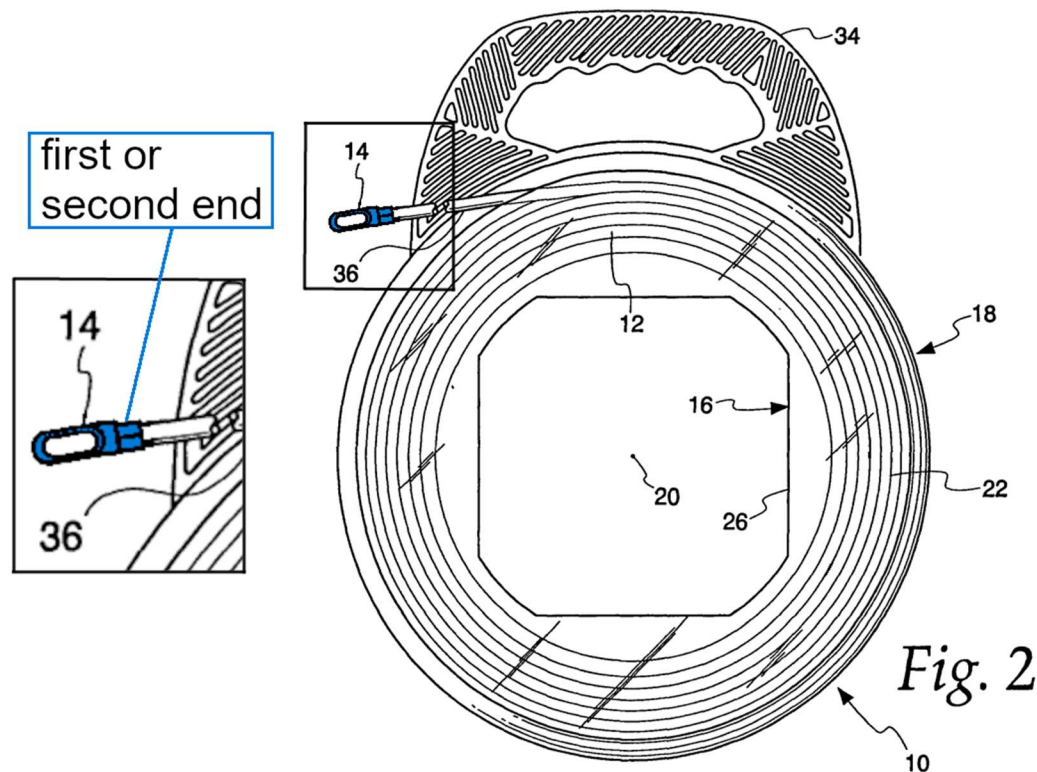
134. In my opinion, under any of the proposed rationales described above, a POSA would have recognized that the combination would allow the mounting cylinder with the threaded bore taught by Noonan to be in at least one of the first and second ends of the fish tape of the modified Hartranft-Bruin system.

135. Notably, a POSA's motivation to replace the eyelet at the end of Hartranft's fish tape with Noonan's mounting cylinder with a threaded bore or use Noonan's mounting cylinder with a threaded bore to attach Hartranft's eyelet to the end of Hartranft's fish tape is further confirmed by the '573 Patent, which discloses that "[n]on-limiting examples of suitable forms/configurations for the ends 18 and 20 include eyelet ends... male threaded connector ends, or female threaded connector ends, *all of which are well known in commercially available fish tape systems and fish rod systems.*" Ex.-1001 at 4:49-56.

11.1.18 Claim 5

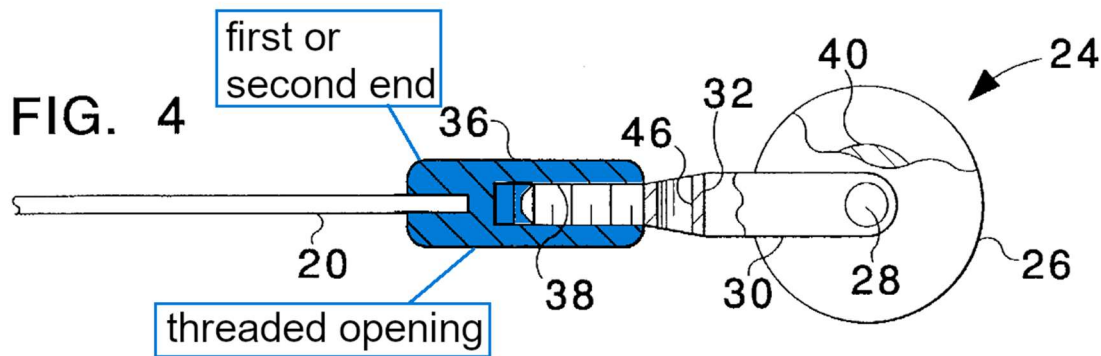
136. Claim 5 depends from claim 1, which in my opinion Hartranft-Bruin teaches. Please see section 11.1.2. Claim 5 adds: “wherein the fish tape further comprises a threaded opening in at least one of the first and second ends.” Hartranft in view of Noonan teaches this.

137. First, Hartranft teaches that “[a]n eyelet 14 is fixed to the end of the fish tape.” Ex.-1004 at ¶9. The eyelet 14 (blue) is illustrated in Hartranft’s Figure 2.



Ex.-1004 Fig. 2

138. Next, Noonan teaches a fish tape wire that “is provided at its free, leading end, with a mounting cylinder 36” and that “[t]he mounting cylinder 36 is provided with a longitudinal threaded bore 38, the axis of which is aligned with the center of the cross section of the wire 20.” Ex.-1006 at 3:50-54. The mounting cylinder 36 with the threaded bore 28 (blue) is illustrated in Figure 4 of Noonan.



Ex.-1006 Fig. 4

139. As I explained above, a POSA would have been motivated to (i) replace the eyelet at the end of Hartranft-Bruin’s fish tape with a threaded opening (taught by Noonan’s mounting cylinder with a threaded bore) or (ii) use a threaded opening (taught by Noonan’s mounting cylinder with a threaded bore) to attach Hartranft’s eyelet to the end of Hartranft’s fish tape. Please see section 11.1.17.

140. Therefore, in my opinion, Hartranft-Bruin-Noonan teaches a fish tape system “wherein the fish tape [e.g., the fish tape 12 in Hartranft or the fish tape wire 20 in Noonan] further comprises a threaded opening [e.g., the threaded bore 38] in

at least one of the first and second ends [e.g., the eyelet 14 at the end of the fish tape 12 in Hartranft or the mounting cylinder 36 at the end of the fish tape wire 20 in Noonan.].” Ex.-1004 at ¶9; Ex.-1006 at 3:50-54.

141. Finally, the ‘573 Patent discloses that “[n]on-limiting examples of suitable forms/configurations for the ends 18 and 20 include eyelet ends... male threaded connector ends, or female threaded connector ends, *all of which are well known in commercially available fish tape systems and fish rod systems.*” Ex.-1001 at 4:49-56. Thus, the ‘573 Patent itself recognized that a fish tape with a threaded opening in at least one of the first and second ends existed in the prior art.

11.1.19 Claim 13

142. Claim 13 depends from claim 6, which in my opinion Hartranft-Bruin-Noonan teaches. Please see sections 11.1.6. Claim 13 is analogous to claim 5, so I conclude that it is taught for similar reasons. Please see section 11.1.18.

My Opinion on Klein Fish Tape Publication (“KP1”) in view of Southwire Glow in the Dark Fish Sticks Publication (“SP1”) for Claims 1-18

11.1.20 Motivation to Combine KP1 and SP1

143. In this section, I rely on the combination of KP1 and SP1. As I discuss in more detail below, a POSA would have been motivated to create this straightforward combination.

144. As a threshold matter, in my opinion, KP1 and SP1 qualify as analogous art. They are both in the same field of endeavor as the ‘573 Patent and one another—namely, devices and techniques for routing wiring through a wall cavity or conduit. Ex.-1008 at 1; Ex.-1009 at 1; Ex.-1001 at 1:29-30. Wire/cable pullers are often used to aid electricians going through conduits or wall cavities to give them easier access. At minimum, they are at least reasonably pertinent to a problem allegedly solved by the claimed invention: reducing the time and effort expended by an electrician while routing wiring through a cavity or conduit. Ex.-1008 at 1; Ex.-1009 at 1; Ex.-1001 at 1:29-30. Because spaces where wiring is needed is often very narrow, inaccessible, and dark electricians must rely on wire/cable pullers to install wire/cable.

145. In my opinion, a POSA had motivation to (i) add a luminescent material (taught by SP1) to the fish tape housed in KP1’s fish tape case with view ports or (ii) include SP1’s glow in the dark fish sticks in KP1’s fish tape case with view ports. Motivations for each combination are discussed in turn below.

146. ***Add SP1’s Luminescent Material to KP1’s Tape.*** Turning to (i), in my opinion a POSA would have been motivated to add the luminescent material disclosed by SP1 to the fish tape stored in KP1’s fish tape case to produce a luminescent fish tape that can be seen by an electrician or operator while routing wiring through the cavity or conduit, and in my opinion KP1 itself implicitly calls

for improvement. First, modifying KP1's fish tape with SP1's glow in the dark fish sticks' luminescent material would amount to the use of a known technique (manufacturing wire/cable pullers with luminescent materials) to improve a similar device in the same way (e.g., to improve a fish tape so as to "make fishing through walls or over ceilings easier"). Ex.-1009 at 1. KP1 provides a base fish tape by disclosing a fish tape that can be "pull[ed] through conduit which contains...other wires." Ex.-1008 at 1. SP1 provides a comparable product by disclosing "[l]uminescent fiberglass rods that glow in the dark" that "[m]ake fishing through walls or over ceilings easier." Ex.-1009 at 1. SP1's glow rods includes an improvement, namely, the glow in the dark feature to "make fishing through walls or over ceilings easier." Ex.-1008 at 1. In my opinion a POSA could have applied SP1's improvement of luminescent material in the entirety of the length of the glow rod by manufacturing KP1's fish tape with luminescent material along the length of the fish tape. For example, in my opinion a POSA could just coat the flat steel fish tape inside KP1 with the same luminescent material that causes the SP1 glow in the dark fish sticks to glow, since luminescent coatings would have been well known to a POSA, as corroborated by statements in "Development of Illuminant Glow-in-the-Dark Cotton Fabric Coated by Luminescent Composite with Antimicrobial Activity and Ultraviolet Protection," which explains that luminescent coatings are flexible enough to avoid altering the material to which it is applied. Ex.-1020 at 1.

Alternatively, a POSA could easily apply SP1's luminescent material to KP1's fish tape by applying luminescent tape along different parts of the length of the fish tape. This would yield a bright glow with high visibility in dark conduits, and would allow an electrician to better see the fish tape even if the conduit is dark or crowded with other wires, an advantage that KP1 does not have.

147. Further, in my opinion it is an improvement that KP1 implicitly calls for. KP1 cautions users that the fish tape may be used in areas that could result in injury to the user, such as warning users to "NOT use any fish tape on or near live circuits. Use extreme caution when working near any electrical equipment," and "when pulling through conduit which contains any other wires, be certain that power to those wires has been turned off or disconnected." Ex.-1008 at 1 (warning label and step 2 in "How to Use a Klein Flat Steel Fish Tape.") A POSA would recognize that pulling wires/cables through conduit can be an extremely dangerous and risky job, and the high importance of visibility of the tape to the safety of the user. Often these tools are used in areas with low visibility, where a user cannot see what is behind a wall. Short of turning off the power to the entire building, users may run the risk of running the fish tape into other live wires that would then energize the fish tape. A steel material fish tape would conduct electricity very well, making it potentially dangerous as it could shock the person holding it. The POSA would have naturally looked to an analogous reference like SP1 to improve the visibility of the

KP1 fish tape system to make it safer. By adding the SP1's glow in the dark fish stick's luminescent material to the KP1 fish tape, the fish tape can be used to pull wires through conduits that pose potential risks in a safer manner due to the increased visibility.

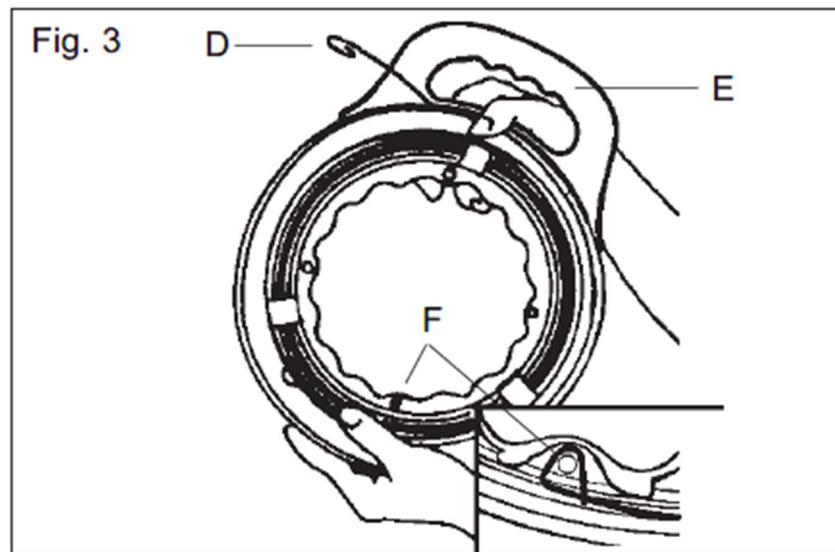
148. Alternatively or additionally, in my opinion KP1 motivates a POSA to modify the fish tape in its case to arrive at a luminescent fish tape through its emphasis on the difficulty of pulling when the fish tape gets caught in an obstruction. KP1 teaches “Do not force a pull that has become hung up. It is best to remove the wire, clear any kinks or obstructions and, if necessary, use additional lubricant.” Ex.-1008 at 1 (step 7 in “How to Use a Klein Flat Steel Fish Tape.”) This implies the common problem of the fish tape becoming caught and stopping the pull. These conduits are usually tight spaces to begin with, and the holes electricians pull these wire/cables through are often very small, making it very difficult to navigate through potential obstructions. It is also very important not to damage existing wire if the fish tape does get caught, so it is highly desirable for the electrician to be able to see what is causing an obstruction when the fish tape does get caught so they can decide the best steps to proceed with to preserve the existing wire/cable and the fish tape. A POSA would recognize that increased visibility for the fish tape in the dark conduits would allow the user to better navigate and detangle the fish tape, and thus result in fewer aborted pulls due to it being caught in obstructions. Accordingly, a

POSA using KP1's fish tape system would pursue additional references to find more details about high visibility wire/cable pullers in dark conduits. In this pursuit, a POSA would have naturally encountered SP1, given its specific teachings about glow in the dark wire/cable pullers. Indeed, SP1 provides a POSA with information on how its "[l]uminescent fiberglass rods" "[m]ake fishing through walls or over ceilings easier." Ex.-1009 at 1. With knowledge of this issue of fish tape entanglement in obstructions within conduits and SP1's solution, a POSA would have been motivated to modify KP1's fish tape with SP1's luminescent material.

149. Finally, in my opinion a POSA would have known that applying SP1's glow in the dark fish stick's luminescent material to KP1's fish tape would produce a luminescent fish tape. Luminescent materials were well known before the '573 Patent and were widely used in electrician's tools. Precision is an important aspect to an electrician's job, and thus having additional light through luminescent materials has helped electricians to better perform their tasks. A POSA could merely have used a luminescent material to make the fish tape, could have painted the currently existing fish tape with luminescent paint, or even just used luminescent tape to wrap around the fish tape. All of these modifications are simple changes that would not require extensive modification to the mechanical properties of KP1's underlying fish tape. Thus, applying luminescent material to KP1's fish tape was a well-known process to implement and would have resulted in a working system.

150. *Include SP1's glow in the dark fish sticks in KP1's fish tape case.*

With regards to (ii), in my opinion a POSA would have been motivated to replace the fish tape stored in KP1's case with the luminescent glow in the dark fish stick disclosed in SP1. Replacing KP1's fish tape with SP1's glow in the dark fish sticks so that the SP1 glow in the dark fish stick sits in the KP1 case would amount to a simple substitution of one known element (SP1's glow in the dark fish sticks) with another (KP1's fish tape system) to obtain predictable results (a luminescent fish tape system). First, KP1 discloses that its fish tape can be replaced with ease by opening up the "winder reel" shown below. Ex.-1008 at 2 ("How to Replace Flat Steel Fish Tape in Klein Winder Reel.")



Ex.-1008 at 2.

151. In fact the whole process of putting new tape into the case takes only 6 steps and no advanced tools. Ex.-1008 at 2 ("How to Replace Flat Steel Fish Tape

in Klein Winder Reel.”) This implies that it is easy to replace the tape within the reel with another. KP1 further teaches that the replacement fish tape that can be loaded into the case comes in varying lengths, 50’ (15.2 m), 100’ (30.5 m), and 200’ (61 m). Ex.-1008 at 1 (“Replacement Flat-Steel Fish Tapes (without reel)”). Thus, there is implied flexibility in the size of the fish tape that can fit into the case. A POSA could have substituted KP1’s steel fish tape with SP1’s luminescent glow in the dark fish sticks because KP1 and SP1 disclose wire/cable pullers with similar properties, especially since variations in the size, shape and length of fish sticks was also well known to a POSA at the time of the ’573 patent. For example, KP1 discloses that its fish tape is used to “pull[] through conduit.” Ex.-1008 at 1 (step 2 of “How to Use a Klein Flat Steel Fish Tape.”) Similarly, SP1 discloses that its glow in the dark fish sticks “make fishing through walls or over ceilings easier.” Ex.-1009 at 1.

152. Alternatively or additionally, in my opinion KP1 implicitly calls for such improvement to its system to produce the luminescent fish tape claimed in the ‘573 Patent by showing how the fish tape can be bought separately from the reel and then added into the case easily. Since KP1 shows that fish tape can be purchased separately from the reel, i.e. for refills, it implies that the case and the fish tape are two separate components that can be mixed and matched. Ex.-1008 at 1 (“Replacement Flat-Steel Fish Tapes (without reel).”) Before the ’573 Patent, electricians often used the fish tape on its own, without the case, and would just wind

it up manually by hand and deploy by hand. In fact, as acknowledged by Patent Owner, albeit after the filing date, the fish tape housed within their Klein Glow Fish Tape cases are “fully removable from case for wall cavity, drop ceiling, and conduit pass through feeding...allowing this fish tape to also function as a super-flex glow rod.” Ex.-1014 at 2. Thus, a POSA would recognize that solutions to the problem of visibility in dark conduits could be solved by mixing *different* wire/cable pullers with the Klein fish tape case, and look to similar standalone wire/cable pullers without a case, such as glow in the dark fish sticks, and thus would have naturally looked to an analogous reference like SP1 to further improve KP1’s fish tape system.

153. Finally, in my opinion a POSA would have had a reasonable expectation of success in including SP1’s glow in the dark fish sticks to KP1’s fish tape case. SP1 discloses that the fish sticks are “[h]ighly flexible.” Ex.-1009 at 1. Further flexible materials were well known before the effective filing date and were also widely used in electrician’s tools. SP1 also teaches that the glow in the dark fish sticks can be made longer, by disclosing that “[i]ndividual sections easily screw together to form [a] single rod.” Ex.-1009 at 1. In addition, fish sticks of varying cross-section diameters, shapes, or lengths would have been well known to a POSA, and thus they could have easily changed the cross-section diameter, shape, or length of the SP1 fish sticks as necessary to fit inside the KP1 storage compartment. A POSA could have used the highest flexibility version of the SP1 glow in the dark

fish stick and increased the length of the glow in the dark fish stick by screwing together sections and wrapping that final, modified glow in the dark fish stick into the KP1 fish tape case. A POSA could have also additionally or alternatively re-manufactured SP1's glow in the dark fish stick into an even more flexible and longer version of the fish stick and wrapped that into the KP1 fish tape case. Thus, including SP1's luminescent glow in the dark fish sticks to KP1's fish tape was a well-known process to implement and would have resulted in a working system.

154. Under either combination, and any of the proposed rationales described above, in my opinion a POSA would have recognized that the combination of KP1 and SP1 would allow the luminescent material of SP1 to be energized by the four viewports of KP1's fish tape case. The viewport cutouts of KP1 would allow light to pass onto the fish tape, which is all that is required to charge luminescent material as described in SP1.

155. To the extent that Patent Owner argues the viewports would be insufficient to energize the material, in my opinion a POSA would have also recognized that the viewports could be made bigger by simply removing more of the case either in the manufacturing process or by just manually cutting the viewports bigger, resulting in larger viewports that cover more radial area to view the fish tape to ensure that the length of the fish tape does not run out, ensure less cost to manufacture the fish tape case because of the decrease in materials, and more

luminescent fish tape length that gets energized by the light. Further, to the extent that Patent Owner argues that creating larger cutouts would disturb the underlying properties of the storage compartment, this is not true. There would have been a reasonable expectation of success in creating larger cutouts, since as shown in Ex.-1008 at 2, Fig. 3, when the fish tape opens up, there is space inside the storage compartment for an additional securing mechanism, such as a u-channel that runs at or near the circumference of the case that works as a securing mechanism to ensure the fish tape does not move around inside the storage compartment of the case regardless of the size of the cutouts of the case. Thus, larger cutouts can be made without significantly affecting the underlying fish tape storage, re-wind and deploy mechanisms.

11.1.21 Claim 1

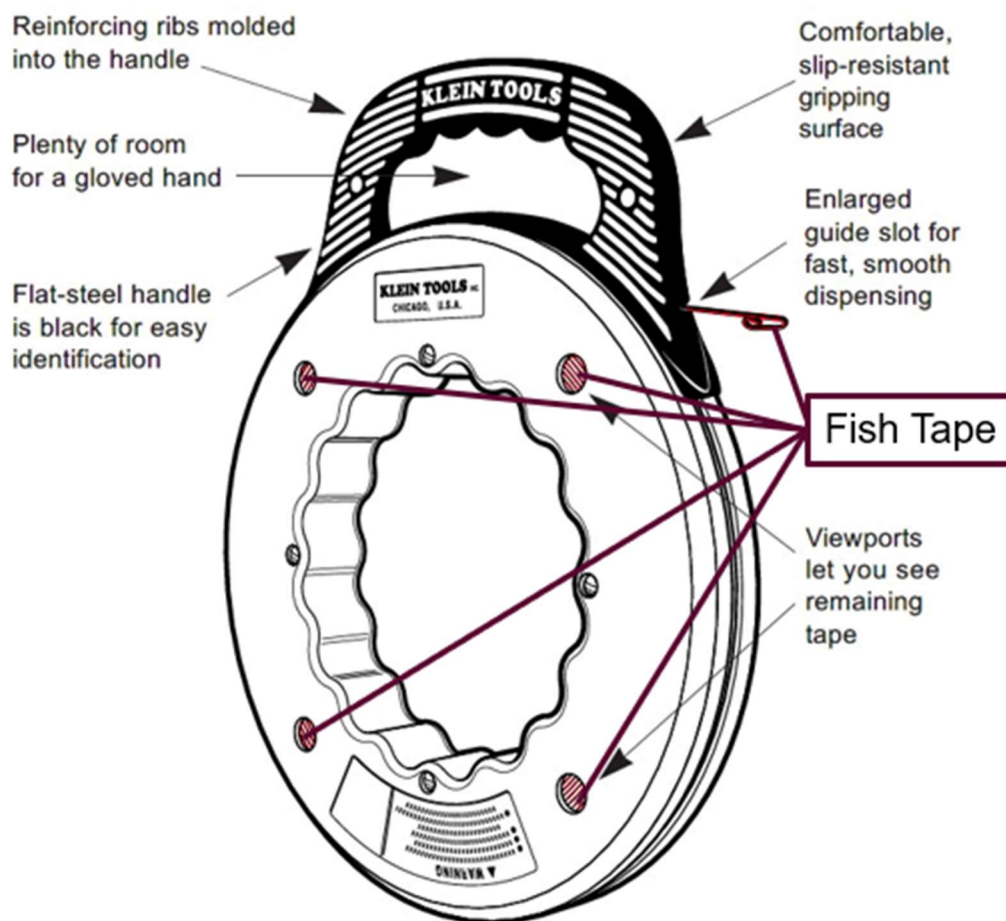
11.1.21.1 Element 1[pre]

156. Element 1[pre] recites a “fish tape system.” If limiting, in my opinion KP1 teaches this. For example, KP1 teaches “Flat Steel Fish Tapes and Winder Reels” that “pull[] through conduit.” Ex.-1009 at 1.

11.1.21.2 Element 1[a]

157. In my opinion, KP1-SP1 teaches 1[a].

158. KP1 teaches a “flat steel fish tape” for “pulling through conduit.” Ex.-1008 at 1 (step 2 of “How to Use a Klein Flat Steel Fish Tape.”) KP1 illustrates the fish tape (red) inside a fish tape housing, below.



Ex.-1008 at 1

159. In my opinion, not only does KP1 explicitly teach that the fish tape has a length (it is available in three different lengths) and at least one end (it comes with two possible leader types, a Klein Fish-Tape Leader or Klein Fish-Tape Ball), but a POSA would also recognize that the coiled fish tape shown in the above figure has

a first end, a second end, and a length that extends therebetween. Ex.-1008 at 1 (showing available lengths 50', 100' and 200'), 2 ("How to Attach a Klein Fish-Tape Leader or a Klein Fish-Tape Ball"). Therefore, KP1's fish tape necessarily has "a length extending from a first end to a second end."

160. KP1 does not expressly teach that "the length of the fish tape comprising a luminescent material that emits light after being energized by exposure to a light source." SP1, however, in my opinion, teaches "[l]uminescent fiberglass rods [that] glow in the dark." Ex.-1009 at 1. One of skill in the art would have recognized that such luminescent material meets the limitation of "a luminescent material that emits light after being energized by exposure to a light source."

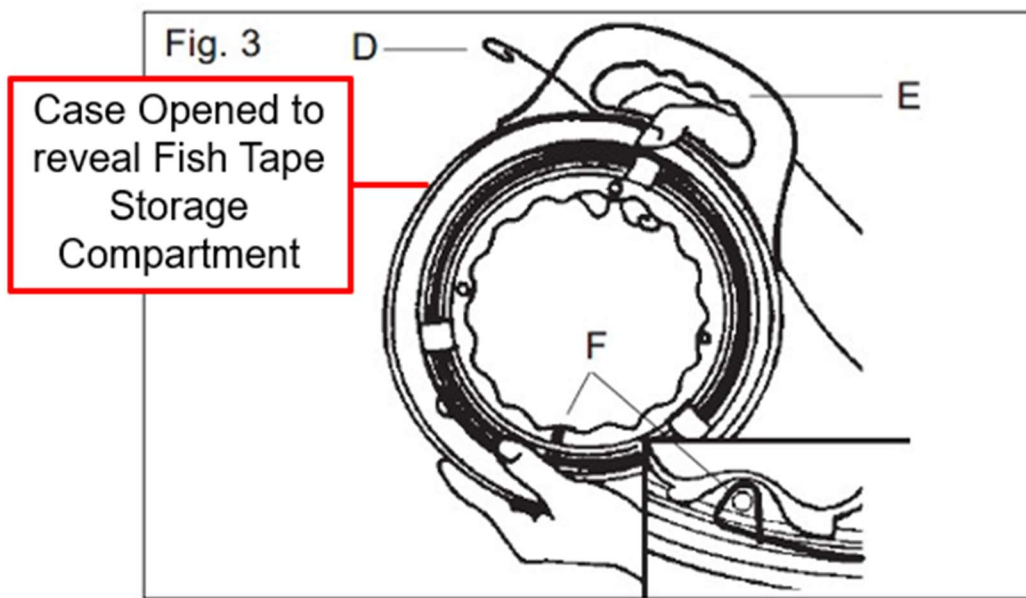
161. As discussed above, in my opinion a POSA would have been motivated to take (i) KP1's fish tape and manufacture it with a luminescent material as taught by SP1 or place SP1's glow in the dark fish sticks inside KP1's case with viewports. Please see section 11.1.20.

162. Therefore, in my opinion KP1 in view of SP1 teaches "a fish tape [e.g. KP1's fish tape or SP1's glow in the dark fish sticks] having a length extending from a first end to a second end, the length of the fish tape comprising a luminescent material [e.g. SP1's glow in the dark fish sticks] that emits light after being energized by exposure to a light source."

11.1.21.3 Element 1[b]

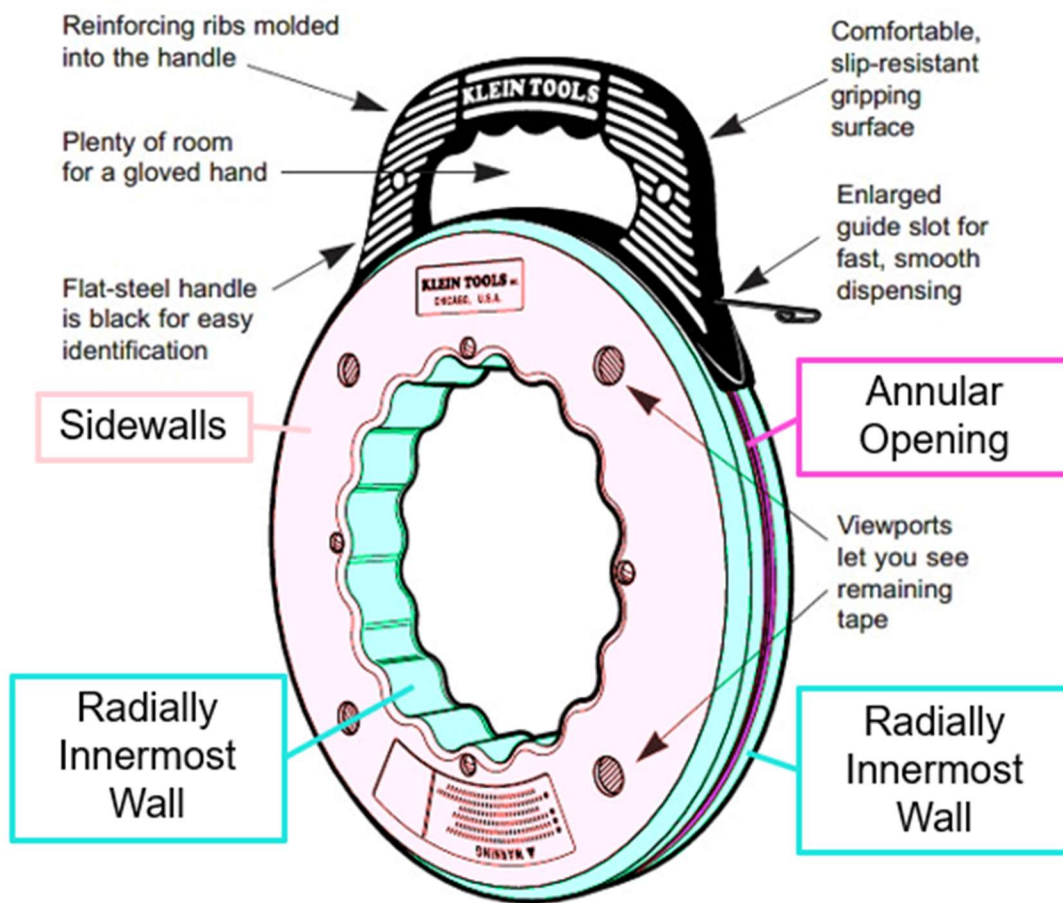
163. In my opinion, KP1-SP1 teaches 1[b].

164. The annotated figures of KP1 below illustrate the pair of sidewalls (orange) between a radially innermost wall and a radially outermost wall (turquoise). The annular opening extending around the circumference of the outer wall is also annotated in purple. KP1 teaches that the handle aligns “in the groove at the outside edge of the reel.” Ex.-1008 at 2 (step 3 of “How to Replace a Klein Fish-Tape Handle.”) It can also be seen from the figure that the sidewalls are spaced from each other to define a fish tape storage compartment that stores the length of fish tape, since the viewports show the fish taped stored within the storage compartment defined by the sidewalls (orange). KP1 also teaches that a user can “open the reel halves” to remove or reload the fish tape into the storage compartment defined by the two sidewalls, as shown below. Ex.-1008 at 2 (step 4 of “How to Replace Flat Steel Fish Tape in Klein Winder Reel.”)



Ex.-1008 at 2

165. KP1 also shows that the length of fish tape is deployed via the annular opening in the case, as the user rewinds the tape by “holding the handle firmly with one hand while rotating the reel” and deploys the tape by “hold[ing] the winder handle with one hand, pulling tape from the reel with the other hand.” Ex.-1008 at 3 (step 8 and step 3 of “How to Use a Klein Flat Steel Fish Tape.”) KP1 also teaches that on the annular opening, there is an “[e]nlarged guide slot for fast, smooth dispensing.” Ex.-1008 at 1. To the extent that the term “donut shaped” can be construed, KP1’s central opening shown below, together with the aforementioned walls, define a donut shaped case.



Ex.-1008 at 1

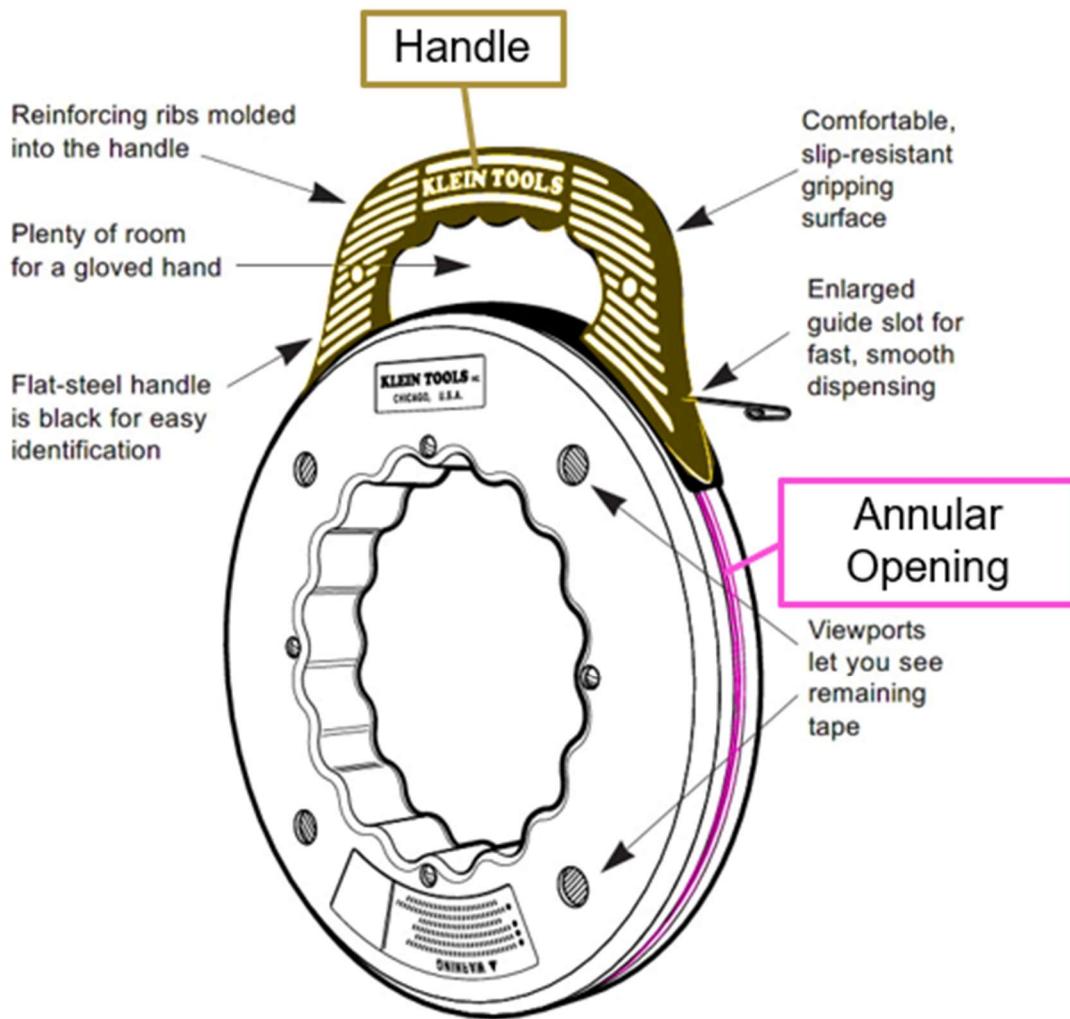
166. Therefore, in my opinion KP1 teaches “a donut shaped case [to the extent “donut shaped” is not indefinite, it is formed by the central opening of the case] having a pair of sidewalls [shown in green] extending between a radially innermost wall and a radially outermost wall [shown in turquoise], the outermost wall having an annular opening extending around a circumference of the outer wall [shown in purple] the sidewalls being spaced from each other to define a fish tape storage compartment that stores the length of fish tape for deployment via the

annular opening in the case [shown when the case is opened to reload fish tape].” I have been informed that the term “the outermost wall” lacks antecedent basis and that, for purposes of this proceeding only, it is understood to refer to “a radially outermost wall.” Similarly, I have been informed that the term “the outer wall” lacks antecedent basis and that, for purposes of this Petition only, it is understood to refer to “a radially outermost wall.”

11.1.21.4 Element 1[c]

167. In my opinion, KP1-SP1 teaches element 1[c].

168. KP1 teaches that the length of fish tape is deployed via the annular opening in the case, as the user rewinds the tape by “holding the handle firmly with one hand while rotating the reel” and deploys the tape by “hold[ing] the winder handle with one hand, pulling tape from the reel with the other hand.” Ex.-1008 at 3 (step 8 and step 3 of “How to Use a Klein Flat Steel Fish Tape.”) The KP1, below, illustrates the handle (in yellow) and the annular opening path (in purple) that the handle follows to deploy the fish tape. As the handle rotates in the clockwise direction relative to the case along the entire circumference of the outer wall, the fish tape unwinds out of the storage compartment. As the handle rotates in the counter-clockwise direction relative to the case along the entire circumference of the outer wall, the fish tape winds back into the storage compartment.



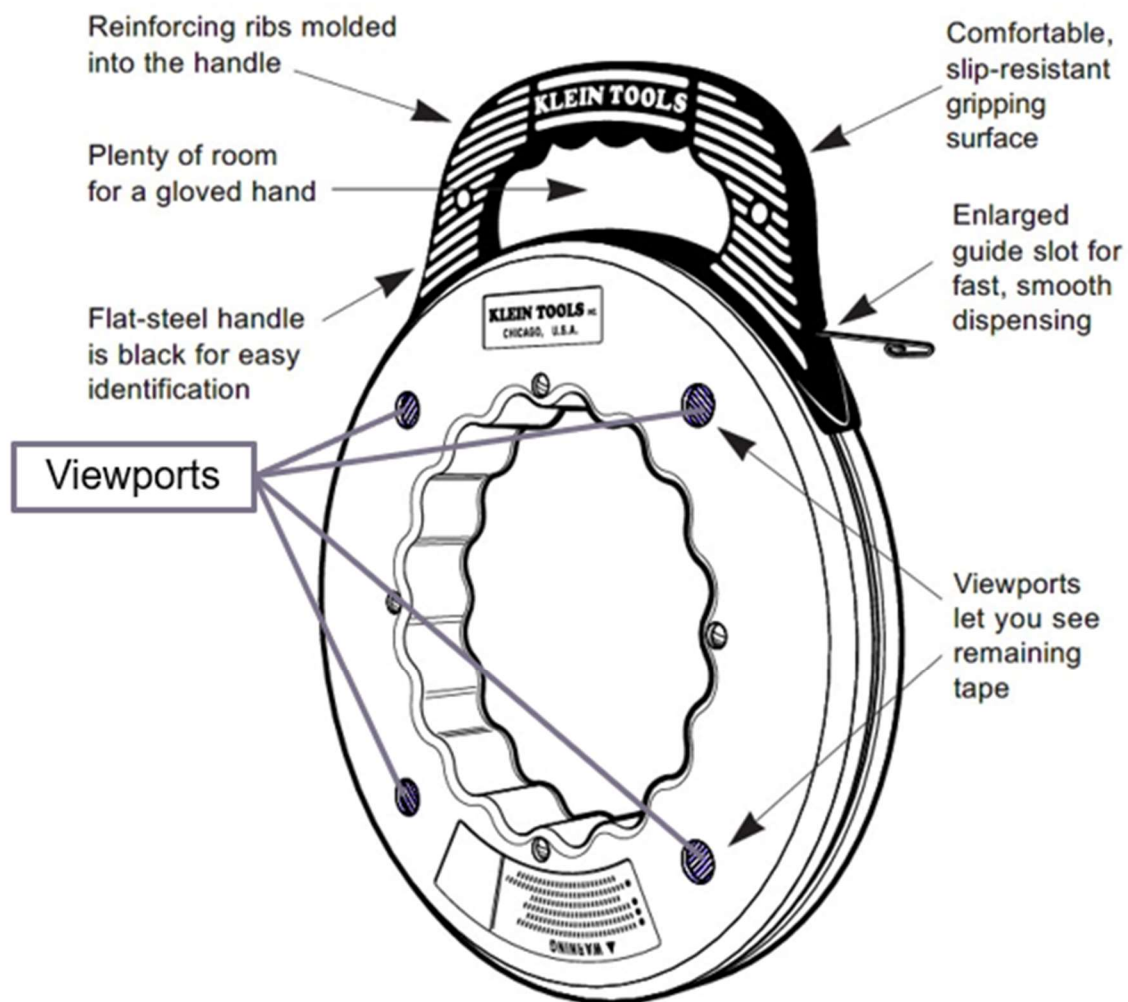
Ex.-1008 at 1

169. Therefore, in my opinion KP1 discloses “a handle [shown in yellow] engaged with the fish tape and mounted to slide within the annular opening of the case around the entire circumference of the outer wall [shown in purple] to deploy the fish tape from the storage compartment and to reload the fish tape into the compartment [shown by viewports which view into the storage compartment of the case].”

11.1.21.5 Element 1[d]

170. KP1-SP1 teaches 1[d].

171. KP1 teaches four viewports on the sidewalls of the case (shown in dark purple, below) that allow users to see the amount of remaining fish tape. The viewports, since they are cutouts on the sidewalls, would allow luminescent material to be energized by the light passing through the viewport.



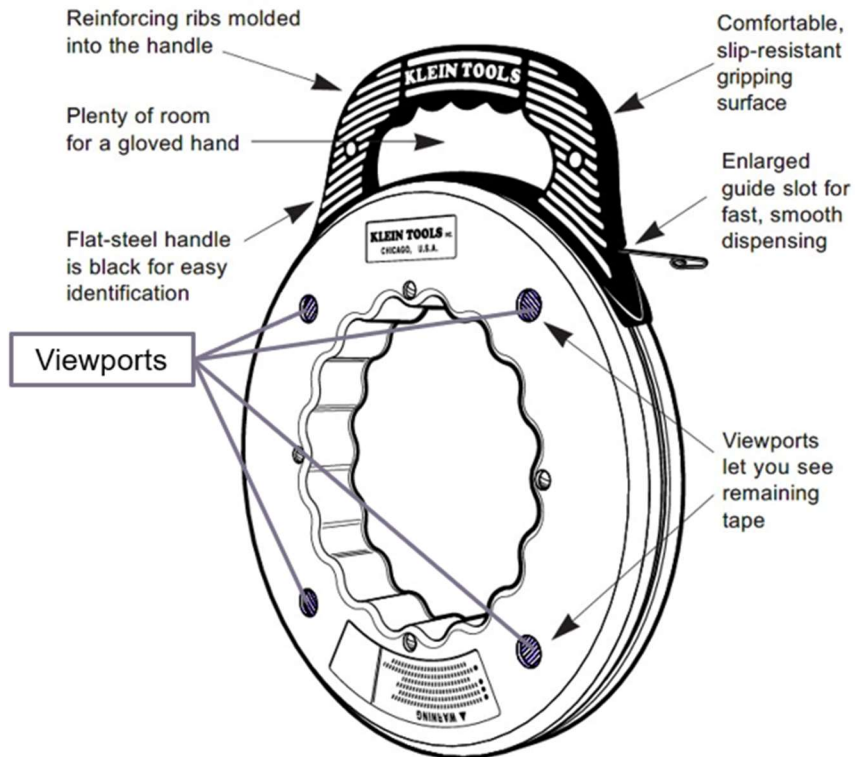
172. In my opinion, 1[d] does not require the full length of the luminescent material to be energized. But to the extent Patent Owner argues that the viewports are not sufficient to allow luminescent material to be energized, in my opinion it would have been simple for a POSA to modify the viewports to make them larger. Making them larger would only require cutting out a bigger segment than the current viewports taught by KP1. A POSA would be motivated to do so as it would not only allow luminescent material to be charged, but would also allow for more of the fish tape to be viewed, so that an electrician can better tell how much length of fish tape is remaining. Additionally, it would be cheaper to manufacture the case, since the case would use less material.

173. Therefore in my opinion KP1-SP1 teaches a fish tape system “wherein at least one of the sidewalls of the case [the sidewall of the KP1 case] is configured to allow the luminescent material to be energized by light passing through the at least one of the sidewalls [the viewports of the KP1 case or, in the alternative, larger viewport cutouts in the KP1 case that would have been easy for a POSA to make].”

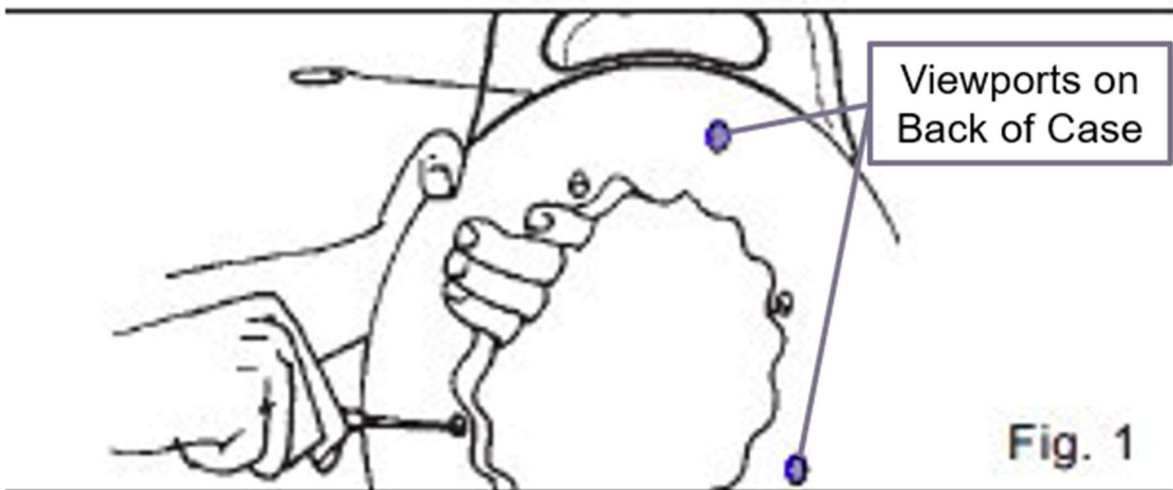
11.1.22 Claim 2

174. Claim 2 depends from claim 1, which in my opinion KP1-SP1 teaches. Please see sections 11.1.21.1-11.1.21.5. The added features of claim 2 are also taught by KP1-SP1.

175. KP1 teaches four viewports cut out in the case to allow viewing of “remaining tape.” Please see section 11.1.21.5; Ex.-1008 at 1. KP1 also teaches that the back of the fish tape also has these four viewports (purple). Only two viewports on the back of the case are visible in the illustration. However in my opinion it would have been expected that the case would be manufactured to have identical viewports on both sides of the case, and thus the four viewports can be inferred from the diagram.



Ex.-1008 at 1



Ex.-1008 at 1

176. Therefore, in my opinion KP1-SP1 teaches a fish tape system “wherein both of the sidewalls of the case are configured to allow the luminescent material to be energized by light passing through the sidewalls [viewport cutouts].”

11.1.23 Claim 3

177. Claim 3 depends from claim 2, which in my opinion KP1- SP1 teaches. Please see section 11.1.22. Claim 3 adds: “wherein at least one of the innermost and outermost walls is configured to allow the luminescent material to be energized by light passing through the sidewalls.” In my opinion, it would have been easy and commonplace for a POSA to have modified the KP1 case to teach this limitation.

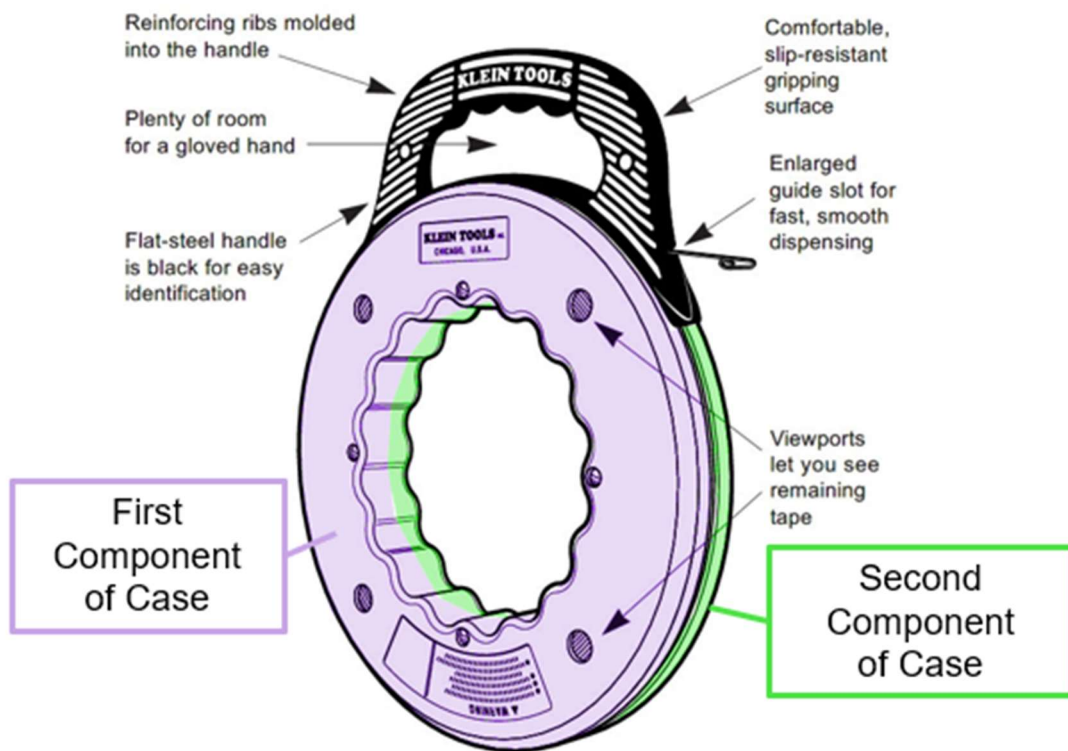
178. As detailed in sections 11.1.2.5 and 11.1.3, KP1 teaches viewport cut outs that allow electricians to view the progress of the fish tape as it is being used. In my opinion, it would have been natural for a POSA to modify KP1 to create these cutouts for viewports in the innermost or outermost walls of the case to both allow for more of the fish tape to be inspected by an electrician, to allow luminescent material to be energized by light passing through the walls, and because it would be cheaper to manufacture as it would require less materials, as described in section sections 11.1.20, 11.1.21.5.

179. Therefore, in my opinion KP1-SP1 teaches a fish tape system wherein at least one of the innermost and outermost walls is configured to allow the luminescent material to be energized by light passing through the sidewalls.

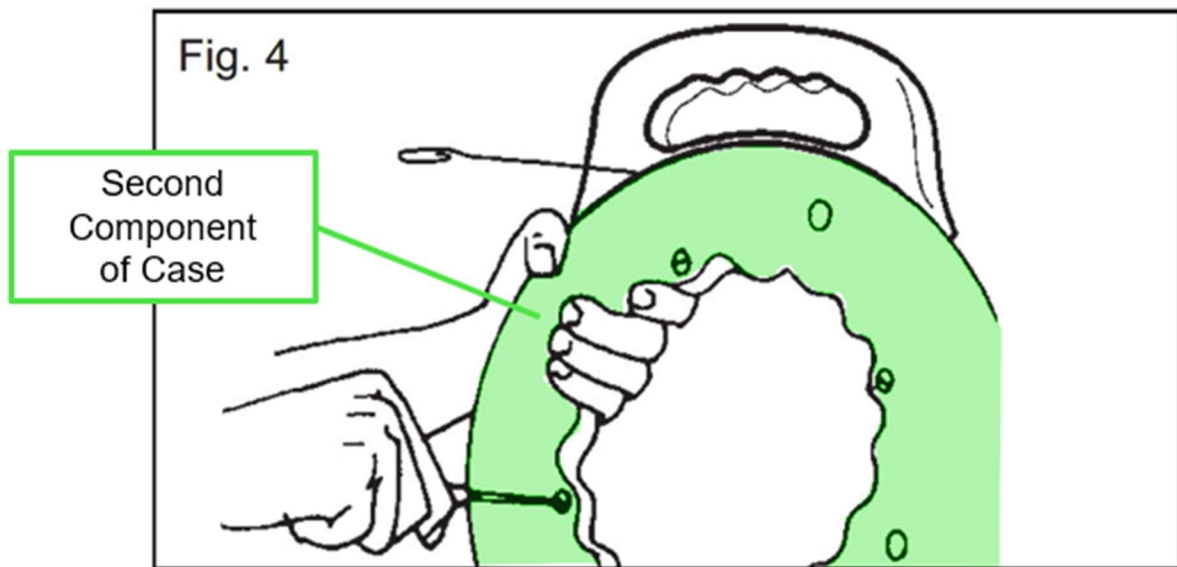
11.1.24 Claim 4

180. Claim 4 depends from claim 1, which in my opinion KP1-SP1 teaches. Please see sections 11.1.21.1-11.1.21.5. In my opinion, Claim 4's added features are taught, too.

181. As shown below, the KP1 fish tape case is composed of a first component of the case (purple) and a second component of the case (green). The first component defines the sidewalls and portions of the innermost and outermost wall, and the second component defines the other of the sidewalls and other portions of the innermost and outermost walls. Together, the two components form the storage compartment, where the fish tape can be seen in the figures through the two viewports.

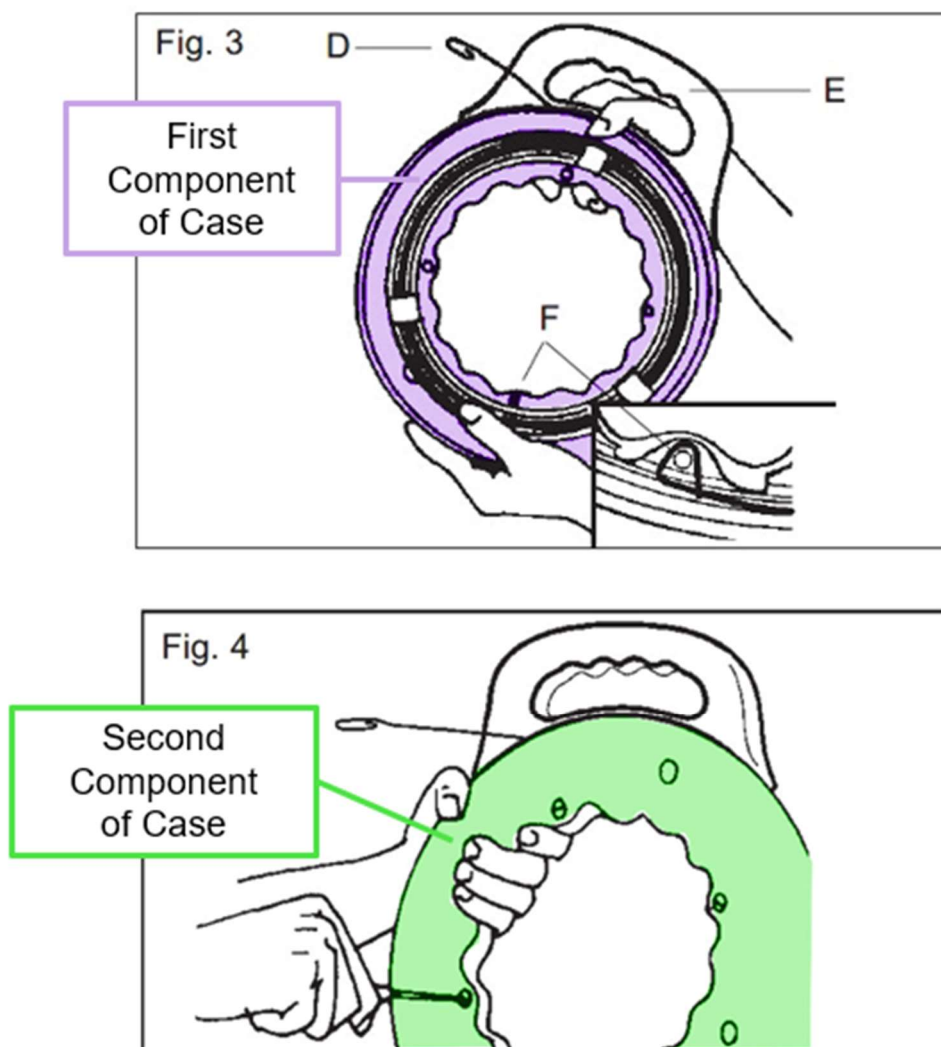


Ex.-1008 at 1



Ex.-1008 at 2

182. KP1 also teaches that these two components are separate and can open to reload the fish tape, as shown below and as further explained in section 11.1.21.3.



Ex.-1008 at 2

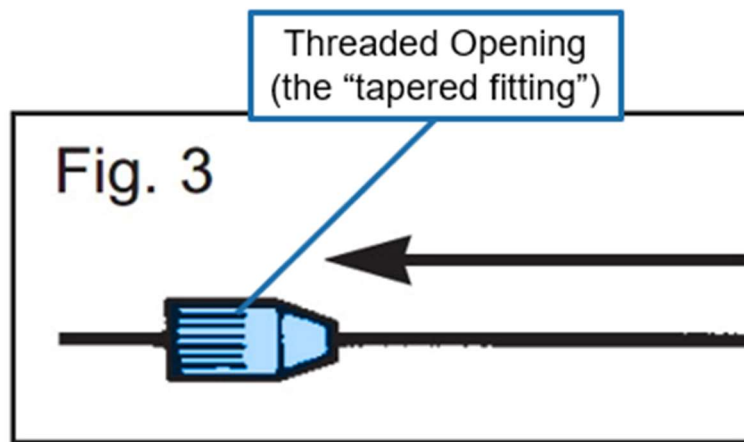
183. Therefore, in my opinion KP1-SP1 teaches a fish tape system “wherein one of the sidewalls and portions of the innermost and outermost walls are defined by a first component of the case [shown in purple], and the other of the sidewalls and other portions of the innermost and outermost walls are defined by a second component of the case [shown in green], the first and second components being

assembled together to form the storage compartment [shown in when the two components are opened to reveal the fish tape in the storage compartment].”

11.1.25 Claim 5

184. Claim 5 depends from claim 1, which in my opinion KP1-SP1 teaches. Please see sections 11.1.2.2-11.1.2.5. In my opinion claim 5’s added features are taught, too.

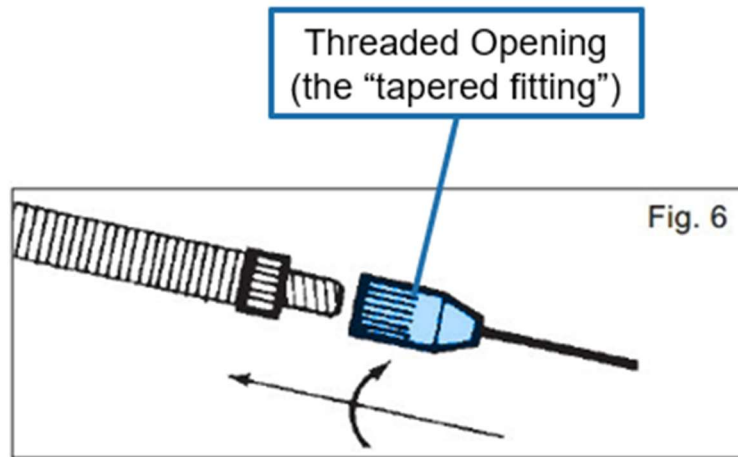
185. As shown in the annotated figure below, KP1 teaches that the “pulling loop at [the] end of [the] flat steel tape” can be “cut” or broken off and replaced with a “tapered fitting” (blue) that is pushed onto the tape end. Ex.-1008 at 2 (step 2 and step 3 in “How to Attach a Klein Fish-Tape Leader or Klein Fish-Tape Ball.”)



Ex.-1008 at 2

186. KP1, as shown below, teaches that this “tapered fitting,” or threaded opening (blue), can be used to attach a leader to the end of the fish tape by “turn[ing]

tapered fitting onto exposed threads of leader (Fig. 6). Be sure leader turns freely on tape end.” Ex.-1008 at 2.



Ex.-1008 at 2

187. Therefore, in my opinion KP1 teaches a fish tape system “wherein the fish tape further comprises a threaded opening (shown in blue, the tapered fitting) in at least one of the first and second ends.”

11.1.26 Claim 6

11.1.26.1 Elements 6[pre]-6[c]

188. In my opinion, 6[pre]-6[c] are broader, and substantively analogous, to 1[pre]-1[c]. Thus in my opinion 6[pre]-6[c] are also taught by KP1-SP1. Please see sections 11.1.21.1-11.1.21.4.

11.1.26.2 Elements 6[d]

189. As compared to 1[d], 6[d] states that “at least a portion of the case is configured to allow the luminescent material to be energized by light passing

through the portion,” rather than stating that “at least one of the sidewalls” does this. Because the sidewalls are a portion of the case, in my opinion 6[d] is taught for the same reasons as 1[d]. Please see section 11.1.21.5.

190. Therefore, KP1-SP1 teaches a fish tape system “wherein at least a portion of the case [e.g., the viewports on the sidewalls of the case] is configured to allow the luminescent material [e.g., the luminescent material taught by SP1] to be energized by light passing through the portion.”

11.1.27 Claim 7

191. Claim 7 depends from claim 6, which in my opinion KP1- SP1 teaches. Please see sections 11.1.26.1-11.1.26.2. Claim 7 differs from element 1[d] only in that where element 1[d] recites “at least one of the sidewalls of the case is configured to allow the luminescent material to be energized by light passing through the at least one of the sidewalls,” claim 7 refers only to “at least a portion of at least one of the sidewalls.” Please see section 11.1.21.5.

192. If at least one of the sidewalls is configured to allow the luminescent material to be energized, then in my opinion at least a portion of at least one of the sidewalls is as well.

193. Therefore, in my opinion KP1-SP1 teaches a fish tape system “wherein at least a portion of at least one of the sidewalls of the case is configured to allow [e.g., the viewports on the sidewalls] the luminescent material [e.g., the luminescent

material taught by SP1] to be energized by light passing through the at least one of the sidewalls.”

11.1.28 Claim 8

194. Claim 8 depends from claim 6, which in my opinion KP1-SP1 teaches. Please see sections 11.1.26.1-11.1.26.2. Claim 8 differs from claim 2 only in that where claim 2 recites: “both of the sidewalls are configured to allow the luminescent material to be energized by light passing through the sidewalls,” claim 8 refers only to “*at least portions of* both of the sidewalls of the case are configured to allow the luminescent material to be energized by light passing through the sidewalls.” Please see section 11.1.22.

195. In my opinion if both of the sidewalls are configured to allow the luminescent material to be energized, then *at least portions of* both of the sidewalls are as well.

196. Therefore, in my opinion claim 8 is taught for reasons similar to claim 2.

11.1.29 Claim 9

197. Claim 9 depends from claim 6, which in my opinion KP1-SP1 teaches. Please see sections 11.1.26.1-11.1.26.2. Claim 9 adds: “wherein at least portions of all the walls of the case are transparent.” I have been informed that term “the inner and outer walls” lacks antecedent basis and that, for purposes of this Petition only,

it is understood to refer to “a radially innermost wall and a radially outermost wall.” Moreover, I have been informed that Patent Owner has asserted that “a lack of material” in the case can be within the scope of “transparent to allow,” which I have been informed to adopt throughout the proceeding, although I reserve the right to contest this understanding. Ex.-1016 at ¶ 23. Therefore, in my opinion a POSA would have been motivated to modify KP1 to include this.

198. As discussed in section 11.1.22, KP1-SP1 has viewport cutouts on both of the sidewalls of the case. Further, as discussed in section 11.1.23, a POSA would have been motivated to modify the KP1 fish tape case to have viewport cutouts in “at least one of the innermost and outermost walls.” For the same reasons, a POSA would have also been motivated to have viewport cutouts in *both* the innermost and outermost walls since viewport cutouts in both the innermost and outermost walls would allow even more of the fish tape to be inspected by an electrician (e.g., to see if the fish tape had gotten tangled or caught in the case), would allow even more luminescent material to be energized by light passing through the walls, and because it would be even cheaper to manufacture and would require less materials when compared to only having viewport cutouts in *either* the innermost and outermost walls. Please see sections 11.1.20, 11.1.22, 11.1.23.

199. Therefore, in my opinion KP1-SP1 teaches a fish tape system “wherein at least portions of all the walls of the case are transparent [e.g., the viewport cutouts

on the sidewalls and the viewport cutouts that a POSA would have been motivated to make on the innermost and outermost walls].”

11.1.30 Claim 10

200. Claim 10 depends from claim 6, which in my opinion KP1-SP1 teaches. Please see sections 11.1.26.1-11.1.26.2. Added language in Claim 10 in my opinion is analogous to claim 4 and is taught for similar reasons. Please see section 11.1.24.

11.1.31 Claims 11 and 12

201. Claim 11 and 12 depend from claim 10, which in my opinion KP1-SP1 teaches. Please see section 11.1.30. Claim 11 adds: “wherein at least one of the first and second components comprises a transparent material” and claim 12 says both components are transparent. In my opinion KP1-SP1 teaches both configurations.

202. As described in section 11.1.22, KP1 teaches viewport cutouts in both the sidewalls of the case. Since the sidewalls are part of “the first and second components,” of the case, and since, to the extent Patent Owner argues that cutouts meets the limitation requiring transparent material sections, cutouts are “a transparent material,” in my opinion KP1-SP1 also teaches this limitation.

203. Therefore, in my opinion KP1-SP1 teaches a fish tape system wherein one or both the first and second components (e.g., the sidewalls) comprises a transparent material (e.g., the viewport cutouts).

11.1.32 Claim 13

204. Claim 13 depends from claim 6, which in my opinion KP1-SP1 teaches. Please see sections 11.1.26.1-11.1.26.2. Added language in Claim 13 is analogous to claim 5 and in my opinion is taught for similar reasons. Please see section 11.1.25.

11.1.33 Claim 14

11.1.33.1 Elements 14[pre], 14[a], and 14[c]

205. In my opinion, 14[pre], 14[a], 14[c] are broader, and substantively analogous, to 6[pre], 6[a], 6[c]. Thus in my opinion, 14[pre], 14[a], 14[c] are also taught by KP1-SP1. Please see sections 11.1.26.1.

11.1.33.2 Element 14[b]

206. In my opinion, KP1-SP1 teaches element 14[b].

207. As described in section 11.1.26.1 for limitation 6[b], in my opinion KP1-SP1 teaches “a donut shaped **case** having a pair of sidewalls extending between a radially innermost wall and a radially outermost wall, an annular opening extending around a circumference of one of the inner and outer walls, the sidewalls being spaced from each other to define **a fish tape storage compartment that stores the length of fish tape for deployment via the annular opening in the case.**” (emphasis added to show similarity in claim language). Since limitation 6[b] is a broader version of limitation 14[b], and since KP1-SP1 in my opinion, as shown

in section 11.1.26.1, teaches limitation 6[b], in my opinion KP1-SP1 also teaches limitation 14[b] for similar reasons.

11.1.33.3 Element 14[d]

208. As compared to 6[d], 14[d] states that “wherein at least a portion of the case is configured to allow the luminescent material to be energized by light passing through the portion and into the storage compartment,” adding on the terms “*and into the storage compartment.*”

209. In my opinion, if the luminescent material on the fish tape is “energized by light passing through the portion” of the case, then that light also passes *into the storage compartment* because the fish tape is stored entirely within the storage compartment. Please see section 11.1.21.3.

210. Therefore, in my opinion element 14[d] is taught for reasons similar to element 6[d].

11.1.34 Claim 15

211. Claim 15 depends from claim 14, which in my opinion KP1-SP1 teaches. Please see sections 11.1.33.1-11.1.33.3. Claim 15 adds: “wherein the storage compartment has an annular shape bounded by a pair of spaced sidewalls.”

212. As described in section 11.1.26.1 for claim 6[b], in my opinion KP1 teaches “a donut shaped case having a pair of sidewalls extending between a radially innermost wall and a radially outermost wall, **an annular opening** extending around

a circumference of one of the inner and outer walls, **the sidewalls being spaced from each other to define a fish tape storage compartment** that stores the length of fish tape for deployment via the annular opening in the case.” (emphasis added to show similarity in claim language).

213. In my opinion if the case has an annular opening extending around a circumference of one of the inner and outer walls and the sidewalls are spaced from each other to define a fish tape storage compartment, then the case is “has an annular shape” and is “bounded by a pair of spaced sidewalls.” Please see section 11.1.26.1

214. Therefore, in my opinion KP1-SP1 teaches or suggests each and every element of claim 15 for similar reasons to element 6[b].

11.1.35 Claim 16

215. Claim 16 depends from claim 15, which in my opinion KP1-SP1 teaches. Please see section 11.1.34. Claim 16 adds: “wherein at least a portion of at least one of the sidewalls is transparent.”

216. As described in section 11.1.27 for claim 7, in my opinion KP1-SP1 teaches “wherein at least a portion of at least one of the sidewalls of the case is configured to allow the luminescent material to be energized by light passing through the at least one of the sidewalls” via the viewports on the sidewalls of the case.

217. In my opinion if the viewports on the sidewalls of the case allow the luminescent material to be energized by light passing through the at least one of the sidewalls, then “at least a portion of at least one of the sidewalls is transparent.”

218. Therefore, in my opinion KP1-SP1 teaches claim 16 for similar reasons to claim 7.

11.1.36 Claim 17

219. Claim 17 depends from claim 16, which in my opinion KP1-SP1 teaches. Please see section 11.1.35. Claim 17 differs from claim 8 only in that where element claim 8 recites “at least portions of both of the sidewalls of the case are configured to allow the luminescent material to be energized by light passing through the sidewalls,” claim 17 leaves out “at least” and swaps out “configured to allow the luminescent material to be energized by light passing through the sidewalls” for “transparent.”

220. As described in section 11.1.28 for claim 8, in my opinion KP-SP1 teaches “wherein at least portions of both of the sidewalls of the case are configured to allow the luminescent material to be energized by light passing through the sidewalls” via the viewports on the sidewalls of the case.

221. In my opinion, if viewports on both of the sidewalls of the case allow the luminescent material to be energized by light passing through the sidewalls, then “portions of both of the sidewalls are transparent.”

222. Therefore, in my opinion KP-SP1 teaches claim 17 for similar reasons to claim 8.

11.1.37 Claim 18

223. Claim 18 depends from claim 16, which in my opinion KP1-SP1 teaches. Please see section 11.1.35. Claim 18 is substantively analogous, if not identical, to the combined limitations of claims 10 and 11 and, in my opinion, is taught for similar reasons. Please see section 11.1.30 and 11.1.31.

My Opinion on the Phrase “configured to allow” for Claims 1-18

11.1.1 The Phrase “configured to allow the luminescent material to be energized,” as Recited by Claims 1, 6, and 14, is Not Supported By the Specification

224. I am informed that Section 112(a) contains a written description requirement separate from the enablement requirement. In particular, I am informed that the Federal Circuit has held that “claims may be no broader than the supporting disclosure,” and are invalid if they attempt to expand beyond what is described as the invention.

225. With respect to this ground, in my opinion claim 1 is representative of the independent claims. Claim 1 of the ‘573 Patent differs from claim 1 of the ‘209 Patent by a single word. Namely, claim 1 of the ‘573 Patent states that “at least one

of the sidewalls” is “configured” (as opposed to “transparent”) “to allow the luminescent material to be energized by light passing through the portion.” Similarly, Claims 6 and 14 of the ‘573 Patent state “wherein at least a portion of the case is configured to allow the luminescent material to be energized by light passing through the portion” and are identical to claims 6 and 14 of the ‘209 Patent, but for the “configured”/”transparent” change.

226. To the extent Patent Owner argues that claims 1 of the ‘573 and ‘209 Patent differ in scope, in my opinion claim 1 of the ‘573 Patent lacks written description because in my opinion, to a POSA, neither the original specification of the ‘573 Patent nor its parent application (which is substantively identical) describes “sidewalls of the case” being “configured to allow the luminescent material to be energized” in any manner other than transparent portions of the sidewalls. Rather, every sentence describing how the luminescent material is energized, each reproduced below, explains that a portion of the case is transparent:

At least a portion of the case is transparent to allow the luminescent material 22 to be energized by light passing through the transparent portion and into the storage compartment.	Abstract
At least a portion of the case is transparent to allow the luminescent material to be energized by light passing through the portion	Col. 1, ll. 57-59 (Brief Summary of the Disclosure)

As one feature, the outermost wall has the annular opening extending around a circumference of the outer wall, and at least one of the sidewalls of the case is transparent to allow the luminescent material to be energized by light passing through the at least one of the sidewalls.	Col. 1, ll. 60-64 (Brief Summary of the Disclosure)
In one feature, both of the sidewalls of the case are transparent to allow the luminescent material to be energized by light passing through the sidewalls.	Col. 1, ll. 65-67 (Brief Summary of the Disclosure)

According to one feature, at least one of the innermost and outermost walls is transparent to allow the luminescent material to be energized by light passing through the sidewalls.	Col. 2, ll. 1-4 (Brief Summary of the Disclosure)
At least a portion of the case is transparent to allow the luminescent material to be energized by light passing through the portion and into the storage compartment.	Col. 2, ll. 45-47 (Brief Summary of the Disclosure)
At least a portion of the case 14 is transparent to allow the luminescent material 22 to be energized by light passing through the transparent portion and into the storage compartment 26.	Col. 3, ll. 27-30 (Detailed Description of Preferred Embodiments)

In the illustrated and highly preferred embodiment, the walls 32, 34 and 36 are all transparent to allow the luminescent material 22 to be energized by light passing into the compartment 26 through the wall 32, 34, and 36.	Col. 3, ll. 55-58 (Detailed Description of Preferred Embodiments)
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227. In view of the above, in my opinion, a POSA looking at the specification of the ‘573 Patent would not know of any other way that a POSA could configure the system to energize the luminescent material or teach a POSA a myriad of configurations that allow light to pass through to the case. Rather, the ‘573 Patent describes only a single way: a transparent portion of the case. Indeed, the ‘573 Patent’s detailed description includes only two sentences that address this aspect of the invention at all, with the remaining sentences from the brief description repeating the original claim language of the parent application. Moreover, the only differing embodiments relating to this feature concern which and how many portions of the case are transparent. In my opinion, the ‘573 Patent does not evidence the fact that Patent Owner was, or a POSA could be, in possession of any way to energize the luminescent material other than a transparent portion of the case.

228. Thus, in my opinion, claims 1, 6, and 14, and their associated dependent claims, are invalid for lack of sufficient written description because the claimed “configured” term is broader than the disclosure of a “transparent” housing.

My Opinion on the term “a donut shaped case” for Claims 1-13

229. I am informed that the definiteness requirement section 112(b) requires “that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty. The definiteness requirement, I am informed, mandates clarity, while recognizing that absolute precision is unattainable.

230. In my opinion, to a POSA, a donut is not defined only by its shape, and there is no objective standard for what “a donut shaped case” is in this field. Rather, various literature and publications note the changing definition of the term “donut.” For example, “[a] doughnut, or donut, is a sweet, deep-fried piece of dough or batter. The two most common types are the torus-shaped ring doughnut and the filled doughnut, a flattened sphere injected with jam/jelly, cream, custard, or another sweet filling.” Ex.-1011 at 1. Please note that “donut” and “doughnut” refer to the same item. Ex.-1012 at 3. In fact, Washington Irving described ‘dough-nuts’, in his 1809 History of New York, as ‘**balls** of sweetened dough, fried in hog’s fat, and called dough-nuts, or olykoeks.’ Ex.-1013 at 67. The ring donut was purportedly not introduced until 1847, 38 years after Washington Carver described the donut as a

ball. Ex.-1017 at 2. Thus, the term “donut shaped” is subjective, as the shape of a donut is in the eye of its creator, and critically there is more than one common shape for a donut.

231. In my opinion, the specification and prosecution history do not provide a POSA an objective standard for applying any particular shape to the term. The only description of “donut shaped” cases is as follows:

In the illustrated embodiment, the case 14 is **donut shaped** and includes a pair of sidewalls 32 (best seen in FIG. 5) extending between a radially innermost wall 34 and a radially outermost wall 36. The wall 36 includes the opening 28 in the form of an annular opening 28 extending around the entire circumference of the wall 36. The sidewalls 32 are spaced from each other, and in combination with inwardly facing annular surfaces 38 and 40 of the walls 34 and 36, respectively, define the storage compartment 26 with an annular shape. As best seen in FIGS. 1 and 5 , the illustrated and preferred case 14 is an assembly of two, half- case components 44 and 46 that are joined to each other using threaded fasteners 48. Each of the components 44 and 46 define one of the sidewalls 32 and approximately one-half of each of the walls 34 and 36 and are preferably molded using a suitable process, such as injection molding. The annular opening 28 is defined between each portion of the wall 36 defined by each of the components 44 and 46. **Such constructions for donut shaped fish tape cases are well known**, with a few examples of such commercially cases being offered by Ideal Electronics under model numbers 31-542, 31-056, and 31-064; by Gardner Bender under model numbers FTS-125R, FTS-250R, and FTS-50B; and Klein Tools under model numbers 56001, 56014, 56002, and 56005.

(‘573 Patent, col. 3, ll. 31-54).

232. The text above describes how donut shaped cases that include an annular opening may be constructed (“Such constructions for donut shaped fish tape cases are well known”), and one can fairly infer that a storage compartment with an annular shape is an example of a donut shaped case. But in my opinion this disclosure falls short of providing an objective measure of the metes and bounds of the shape of a donut, as it fails to inform a POSA of the limits of the term donut shaped. Moreover, I have reviewed the particular models of fish tape cases listed above, and I note that while they all have holes, the holes are not all the same or even similar in shape, as shown below:



233.

234. Gardner Bender FT-250R

235.



236. Ideal Electric 31-064

237.



238. Klein Tools 56331

239. The examples leave a POSA to wonder if the claims require an annular opening, or are the models shown above merely examples of donut shaped cases? If an annular opening is required, does any construction with an annular opening, even a long cylinder, or an annular opening with an irregular shape, fall within the scope

of the claims? In my opinion, the specification does not inform a POSA of the answers to these questions. Reasonable certainty is lacking, which I am informed is a requirement.

240. Thus, in my opinion claims 1, 6, and their associated dependent claims are indefinite and thus invalid.

12. Conclusion

241. For the reasons set forth above, in my opinion, all limitations of all claims of the '573 Patent are taught or suggested by the prior art (and combinations thereof) cited herein. Additionally, A POSA looking at the specification would not know that the inventor had possession of any other manner to configure the sidewalls of the case to allow the luminescent material to be energized as is claimed in all claims of the '573 Patent other than by using transparent portions of the case. Finally, the specification also fails to inform a POSA as to the scope of claims 1-13 with reasonable certainty.

242. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further 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 and that such willful false statements may jeopardize the results of these proceedings.

243. The opinions stated in this report are based on a review of case specific materials combined with my education, background, and experience. All opinions expressed are to a reasonable degree of engineering certainty and are based on information currently available. If additional information is made available or if new facts are determined during the investigation and discovery process, my opinions may be supplemented.

244. Executed on April 21, 2025 in Dexter, Michigan.



David Eby