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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARK JOSEPH WARBURTON

Appeal 2011-011302
Application 11/222,956
Technology Center 3700

Before DEMETRA J. MILLS, STEPHEN WALSH, and SHERIDAN K. SNEDDEN, *Administrative Patent Judges*.

SNEDDEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a single-use disposable digital tourniquet, a method of applying occlusion pressure to a digit, and a kit of digital tourniquets. The Examiner has rejected the claims as anticipated and obvious. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

STATEMENT OF THE CASE

Claims 1-25, 33, 41, 43, 44, 47-51 and 53-61 are on appeal. There are twelve independent claims: Claims 1, 8, 10, 15, 21, 22, 25, 33, 41, 51, 58 and 59. Claims 1, 8, 25 and 59 are representative and read as follows (emphasis added):

> 1. A single-use disposable digital tourniquet, comprising:
>
> a substantially rigid block support body *defining a curved digit contact outer surface* and an opposing outer surface, the curved digit contact surface being concave relative to the block body,
>
> wherein the digit contact surface having first and second channel apertures, the digit contact surface being sized and configured to hold a target digit thereagainst,
>
> wherein the support body and digit contact surface span at least a major portion of a width of a target digit, the support body comprising first and second spaced apart cuff channels sized and configured to receive a cuff therethrough,
>
> wherein the first and second cuff channels extend substantially side-by-side in a depth direction of the support body between the digit contact surface and the opposing outer surface such that, in position, a cuff extends out of the first and second channels of the block body from the first and second channel apertures in the digit contact surface,
>
> *wherein the block body and cuff cooperate to provide safe occlusive pressures to both sides of the target digit*, and
>
> wherein, in position, the depth direction is substantially orthogonal to both sagittal and axial directions of a target digit held against the digit contact surface of the support body.
>
> 8. A single-use disposable digital tourniquet, comprising:
>
> a support body comprising a digit support surface and first and second spaced apart cuff channels sized and configured to receive a cuff therethrough, wherein the first and second cuff channels extend under the digit support surface and are closely spaced with at least a portion of each channel being substantially parallel to the other, and wherein the first channel comprises an inner wall with substantially

opposing first and second inwardly extending cuff retaining shoulders attached thereto;

a rod sized and configured to reside in the first channel and with a respective one of opposing first and second end portions of the rod configured to reside against a respective one of the cuff retaining shoulders to hold a first end portion of a cuff in the support body first channel;

a clamping member in communication with the second cuff channel configured to hold a portion of the cuff residing below the digit support surface proximate or in the second channel, wherein, in operation, the rod and clamping member cooperate with the support body to provide a cuff with a nearly closed loop figure at a desired tension over a digit held on the support body digit support surface; and

at least one deformable member configured to operatively communicate with the rod holding the first end portion of the cuff, the at least one deformable member configured to automatically yield or break when the cuff is tensioned above a target amount to provide a tactile and/or audible alert to a clinician that a target occlusion pressure has been achieved.

25. A method of applying occlusion pressure to a digit, comprising:

providing a block support body having a digit contact surface and an opposing outer surface, the digit contact surface configured to span at least a major portion of a width of a target digit, the block body also having two substantially parallel spaced apart cuff channels extending substantially vertically therethrough and a substantially planar non-inflatable elastomeric cuff that extends through the first and second channels and out of apertures in the digit contact surface, the cuff having opposing first and second end portions, the first end portion being secured to the support body proximate the first channel with the cuff extending through the second channel in one direction such that the second end portion extends out an aperture in the opposing outer surface, the aperture in the opposing outer surface being aligned with one of the apertures in the digit contact surface;

placing a digit of interest on the digit contact surface of the support body inside a loop portion of the cuff;

pulling the second end portion of the elastomeric cuff to tighten the cuff snugly about at least a major portion of the digit to force the digit against the support body;

pivoting a clamp against a portion of the cuff to clamp the cuff against an inner surface of the second cuff channel proximate the opposing outer surface of the block body to provide a desired safe occlusion pressure to the digit of interest; and

automatically providing tactile and/or audible feedback to a user in response to the pulling step when the desired safe occlusion pressure is achieved.

59. A single-use disposable digital tourniquet, comprising:

a substantially rigid block support body defining a digit contact outer surface and an opposing upper or lower outer surface, the digit contact surface being concave relative to the block body and sized and configured to hold a digit thereagainst, wherein the digit contact surface comprises first and second cuff apertures spaced apart in a lateral (sagittal) direction, wherein the support body and digit contact surface span at least a major portion of a width of a target digit, the support body comprising first and second spaced apart cuff channels sized and configured to receive a cuff, the first cuff channel aligned with the first cuff aperture and the second cuff aperture aligned with the second cuff channel, wherein the first and second cuff channels extend substantially side-by-side in a depth direction of the support body between the digit contact surface and the opposing outer surface; and

a non-inflatable elastomeric cuff having opposing first and second end portions, the first end portion attached to the block support body in the first cuff channel, the cuff extending out of the first cuff aperture and into the second cuff aperture, wherein the cuff extends through the second cuff channel in a single direction so that the second end portion of the cuff resides below the opposing outer surface of the block body, whereby the cuff and the block body cooperate to apply a *target safe occlusive pressure* to arteries in opposing sides of a target digit, and wherein the cuff and support body are held in a *sterile package for medical use*.

The claims stand rejected as follows:

I. Claims 1, 3, 4, 6 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dyer (US 5,102,075, issued Apr. 07, 1992).

II. Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dyer.

III. Claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dyer.

IV. Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Vincent (US 5,658,298, issued Aug. 19, 1997) and Brown (US 5,129,511, issued Jul. 14, 1992).

V. Claim 59 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Vincent and Brown.

VI. Claims 7, 9, 12 and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Fulton (US 3,816,878, issued Jun. 18, 1974.

VII. Claims 13, 14, 41, 53 and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton and Knudson (US 5,715,578, issued Feb. 10, 1998).

VIII. Claims 8, 10, 51 and 58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton and Merser (US 3,402,435, issued Sept. 24, 1968).

IX. Claims 15-17, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Botka (US 4,272,047, issued Jun. 9, 1981).

X. Claims 18-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Botka, Fulton and Knudson.

XI. Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Merser.

XII. Claim 22 stands rejected under 35 U.S.C. § 103 (a) as being unpatentable over the combination of Dyer, Fulton, Merser and Knudson.

XIII. Claims 25, 43, 44, 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Merser, Talen (US 5,893,870, issued Apr. 13, 1999) and Dumcum (US 6,192,554 B1, issued Feb. 27, 2001).

XIV. Claim 49 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Merser, Talen, Dumcum and Botka.

XV. Claims 55 and 56 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over the combination of Dyer, Fulton, Vincent and Brown.

XVI. Claim 57 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton, Knudson, Vincent and Brown.

XVII. Claims 60 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Vincent, Brown and Botka.

I.

Issue

The Examiner has rejected claims 1, 3, 4, 6 and 11 as being anticipated by Dyer. The Examiner contends that "Dyer discloses the invention substantially as claimed" (Ans. 3), including the ability to provide a safe occlusive pressure (*see e.g.*, Ans. 27). The Examiner contends that the Rule 132 Declarations submitted by Appellant on the issue of whether the device of Dyer is capable of providing a safe occlusive pressure "include opinion and not factual evidence as to the capability of the Dyer reference to provide safe occlusion pressures." (Ans. 35.)

Appellant provides separate arguments for the patentability of the elements of claims 1 and 11. Regarding claim 1, Appellant argues that "the cable tie body proposed by Dyer does not anticipate the claimed invention at least because it fails to provide safe occlusive pressures." (App. Br. 20.) Regarding claim 11, Appellant argues that the device of Dyer does not possess the features set forth by this claim. (*See e.g.*, App. Br. 22-24.)

Although Appellant points out what claims 3, 4 and 6 recite and assert that the references do not teach those limitations (id. at 12-13), such conclusions are not considered a separate argument for patentability. See *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) ("[T]he Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art."). Dependent claims 3, 4 and 6 therefore stand or fall with claim 1. 37 C.F.R. §41.37(c)(1)(vii).

The issues with respect to this rejection are:

1. Regarding claim 1, whether the device of Dyer may be used as a digit tourniquet to provide safe occlusive pressures?

2. Regarding claim 11, whether the device of Dyer comprises a pivoting clamp that allows "the user to pivot the clamp in a reverse direction to release the cuff" as required by the claim.

Findings of Fact

FF1. Figure 1 of Dyer is reproduced below.

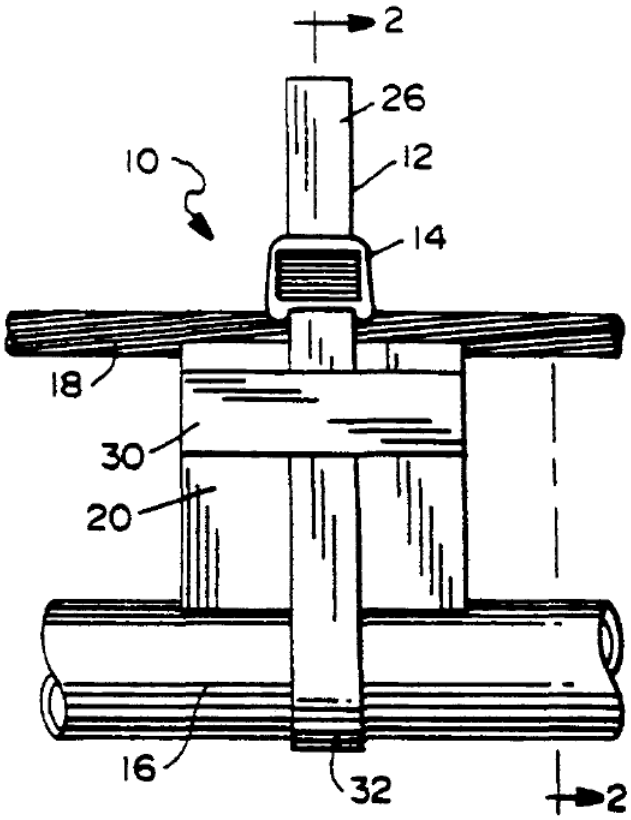


Figure 1 of Dyer shows a side elevation view of a cable or bundle tie assembly **10** "shown in use securing a large telecommunications cable and a spacer, to a stranded metal support cable."

FF2. The following excerpt of Dyer provides a description of the above Figure 1.

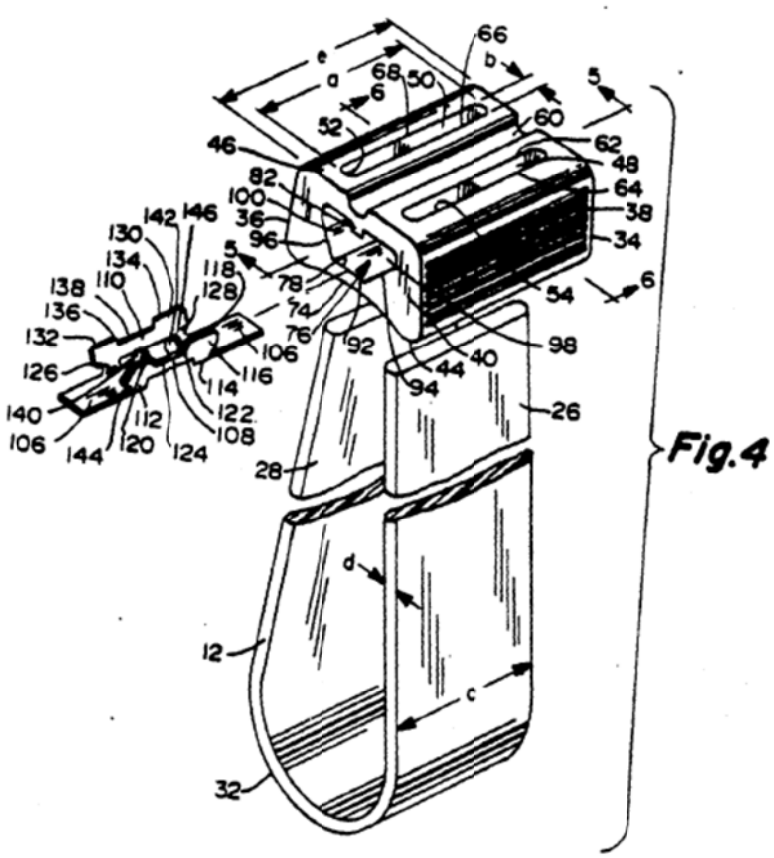
> For the application illustrated in **FIGS. 1-2**, a first end **26** of tie strap **12** is inserted into one side of tie head **14** to secure it with one side of pawl member **24**. The opposing free end **28** of strap **12** may be threaded through slot **30** provided a side of spacer member **20**, around cable **16** and back up through slot **30** on the other side of spacer members **20** to form a strap loop section **32**. Tie head **14** is positioned over support cable **18** and the free end **28** is inserted into the other side of the tie head **14**. Tie strap **12** is cinched or tensioned by pulling, either by hand or with a hand tool, one or both of the strap ends up through the tie head **14** until the loop **32** is shortened sufficiently to tighten all of the parts of assembly **10** together. Alternatively, strap ends **26** and **28** may be pre-assembled around the cables and spacer member **20** and introduced into tie head **14** at about the same time.
>
> Cable tie arrangement **10** as shown in **FIGS. 1-2** is of a same-side, parallel-entry type, which means that the strap ends **26** and **28** are inserted from the same side of the tie head **14** and extend through tie head housing **22** parallel to each other. In accordance with this preferred embodiment, cable tie arrangement **10** is intended for outdoor use and accordingly, tie strap **12** and tie head housing **22** are preferably made from a high strength environmentally-resistant thermoplastic material capable of retaining its physical properties during prolonged exposure to humidity, heat and sunlight or ultra-violet radiation. (Dyers, col.5 ll. 50-68 and col. 6, 11. 1-10.)

FF3. The Examiner finds that "[a]s the pressure provided by the strap of the device of Dyer depends solely upon the tension applied to the strap and the amount of strap pulled through the cable tie head, the device of Dyer is capable of providing a safe occlusive pressure" and further that "even though the device [of Dyer] may generate forces in excess of what Appellant calls 'safe occlusive pressures', these features do not prevent or render

incapable the provision of safe occlusion pressures by the device of Dyer." (Ans. 27.)

FF4. The Examiner found the Appellant's 1.131 Declaration to be unpersuasive because they "are not of probative value, since they do not provide factual proof of the inoperability of the prior art (i.e., that the device of Dyer is not capable of being used as a digital tourniquet and providing safe occlusive pressure)." (Ans. 31.)

FF5. Figure 4 of Dyer is reproduced below:



A description of the elements of Figure 4 is provided in the following excerpt of Dyer:

> As is best shown in **FIG. 4**, passageway **48** defines an inner housing surface **62** and an outer or exterior surface **64**.

> Passageway **50** also defines an inner or interior surface **66** and an outer or exterior surface **68**.
>
> …
>
> A pair of opposing lateral arms **108** and **110** extend on opposed sides of base portion **106**, intermediate the length, **l**, of base portion **106**. Lateral arm **108** is interconnected or cantilevered to base portion **106** at one end by means of bight portions **112**, **114**. The opposing free end **116** of arm **108** is provided with spaced apart chamfered edges defining blade contact sections **118** and **120**. An intermediate cut out **122** having a generally rectangular configuration is disposed in free end **116** to define strap stop surface **124** extending parallel to and inwardly spaced from blade contact sections **118** and **120**.

(Dyer, col. 6, ll. 31-34 and col. 8, ll. 15-26.)

FF6. Dyer discloses that "[o]nce inserted, the strap is prevented from being withdrawn by a biting and wedging engagement of the strap between the pawl blade sections and the surfaces of the passageways." (Dyer, col. 3, lines 19-22.)

FF7. Dyer discloses that "the strap may be cut adjacent one of the entrance openings to release the strap. The remaining portions of the strap may be pulled completely through the exit of the other passage to disengage the strap from the tie head." (Dyer, col. 3, lines 34-38.)

FF8. With regard to claim 11, the Examiner finds that "the block body [of Dyer] is capable of allowing a user to pivot the clamps (108, 110) in a reverse direction, such as by tugging on the strap to cause deflection of the clamps or via channel (76) providing access to pivoting clamps (108, 110), which would allow a user to pivot said clamps, for example, by inserting a tool into said channel to move the clamps." (Ans. 4-5.)

Principles of Law

> To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently. Anticipation is an issue of fact, and the question whether a claim limitation is inherent in a prior art reference is a factual issue.

In re Schreiber, 128 F.3d 1473, 1477 (Fed. Cir. 1997) (citations omitted). "It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable." *Id.*

> [W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

Id. at 1478, quoting *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971).

The Board "determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction 'in light of the specification as it would be interpreted by one of ordinary skill in the art."' *Phillips v. AWH Corp*., 415 F.3d 1303, 1316 (Fed. Cir. 2005) (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). "Absent claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition." *Id.*

Analysis

Claim 1

With regard to claim 1, Appellant contends that "Dyer does not anticipate the claimed invention at least because it fails to provide safe occlusive pressures (see, e.g., Figure 2B, pp. 13-15) and/or because it is simply not configured to support the digit in the manner required for appropriate digit tourniquet use." (App. Br. 20.) Specifically, Applicant argues that "Dyer proposes a body and tie-wrap formed of a high-strength, weather-resistant thermoplastic polyacetal material (col. 3, lines 50-54) capable of a loop tensile strength in excess of 250 pounds and prolonged environmental use life (col. 3, lines 46-50)," which "would not appear to be a material that forms a cuff for providing safe occlusive pressures to a target digit (*i.e.*, without causing nerve or tissue damage)." (App. Br. 20; emphasis in original.) Appellant further submits Rule 132 Declarations Zhongyu John Li, M.D., Ph.D. and Kenneth Shull, M.D. as evidence that the device of Dyer would not provide safe occlusive pressures to both sides of the target digit.

We are not persuaded by Appellant's arguments and declaratory evidence in favor of patentability of claim 1. We note that the term "safe" is a relative term that is not otherwise defined by the Specification. In this regard, we agree with the Examiner's logic that "the pressure provided by the strap of the device of Dyer depends solely upon the tension applied to the strap and the amount of strap pulled through the cable tie head" (FF4) and that the device of Dyer is capable of applying pressure that would fall within the range of pressure deemed safe for use as a digit tourniquet.

Evidence supplied by Appellant in the form of expert opinion does not prove that the device of Dyer is incapable of supplying safe pressures. Accordingly, we conclude that the Examiner did not err in concluding that claim 1 is anticipated by Dyer.

Claim 11

Appellant argues that Dyer does not teach "a pivoting clamp member as claimed, including one that allows a user to pivot the clamp in the reverse direction to release the cuff." (App. Br. 24.) We agree. Dyer discloses a device that prevents the withdrawal of the strap once inserted (FF5) and discloses that the strap is released by cutting the strap (FF6). We therefore conclude that the device is Dyer is not arranged with a pivot clamp according to claim 11.

Conclusion of Law

The Examiner did not err in finding the subject matter of claim 1 anticipated by Dyer. We conclude that the preponderance of the evidence of record does not support the Examiner's finding that Dyer discloses a device meeting all of the limitations of claim 11. Claims 3, 4, and 6 have not been argued separately and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii).

II.

Issue

The Examiner has rejected claim 5 as obvious over Dyer. The Examiner contends that "[i]t would have been an obvious matter of design

choice to modify the device of Dyer to have the specified dimensions for profile depth, in order to allow the cable tie to accommodate different sized/shaped items or bundles." (Ans. 5).

Appellant contends that Dyer and other references cited by the Examiner (Fulton, Knudson, Merser, Botka, and Dumcum) are non-analogous art. (App. Br. 28-32; Reply Br. 6-13). To support this view, Appellant submits opinion evidence from experts in the field to support the contention that a person of ordinary skill in the art would not have looked to the field of bundle/cable ties to design digit tourniquets. (*Id.*)

Appellant further contends that it would not have been obvious to modify the device of Dyer to have the specified dimensions for profile depth as recited in claim 5 because "Dyer provides outwardly flaring curved surface segments 70, 72 at the lower portions of the passageways 48, 50" and "cables of varying diameters can already be accommodated by the device." (App. Br. 34, citing Dyer, col. 6, lines 42-45; Figure 2; col. 7, lines 9-20.)

The issues with respect to this rejection are:

- Whether Dyer is analogous art; and
- Whether Dyer renders obvious the features of claim 5.

Additional Findings of Fact

FF9. Claim 5 provides as follows:

> 5. A digital tourniquet according to Claim 4, wherein the profile is a substantially arcuate profile with a shallow depth of less than about 5 mm.

(App. Br. 65.)

FF10. The Examiner finds that "cable tie references are in the field of Appellant's endeavor (i.e., tourniquets), as evidenced by Dumcum (US 6,192,554) which explicitly teaches that cable ties may be used as tourniquets (column 7, lines 45-49)." (Ans. 32.)

FF11. Dumcum provides as follows:

> The inventive straps lend themselves to a variety of applications in addition to bundling of items or restraining rolled material. They can also be used as *emergency tourniquets* or to hold bandages or splints in place; as a book strap; even as an emergency belt if need be.

Dumcum, col. 7, lines 45-49 (emphasis added).

Principles of Law

A reference is analogous if it is reasonably pertinent to the particular problem with which the inventor is involved. See *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (citing *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)).

Obviousness analysis permits an examiner to rely upon "common sense" or the knowledge of the skilled artisan to bridge gaps in prior art's explicit teachings. *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 420-21, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007) ("Common sense teaches ... that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle."). The examiner's reasoning "may include recourse to logic, judgment, and common sense available to a person of ordinary skill that do not necessarily require

explication in any reference or expert opinion." *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328-29 (Fed. Cir. 2009).

Analysis

Appellant asserts that the problem with which Appellant is concerned is "digital tourniquets that control the applied occlusion pressure to digits." (Reply Br. 10.) The evidence of record establishes that cable ties were known to be useful as tourniquets, even if only in emergency situations. (FF10 and FF11.) This disclosure of Dumcum demonstrates that it was known that cable ties can function to apply occlusion pressure in a manner that permits them to be used as tourniquets. Whether or not the ties may be applied to a limb, digit or other is a matter of size, which we do not find to meaningfully impact the structure and function of the devices. Further, as discussed above with regard to claim 1, we are not persuaded by Appellant arguments that the cable ties of the prior art are incapable of providing occlusion pressure in a range that would be considered "safe" within the broad meaning of this term.

Appellant cites to evidence in the form of Rule 132 Declarations providing the opinion of experts that cable ties "are not suitable for use as a digit tourniquet that provides for a safe, desired and/or target occlusion pressure and that they would not have looked to this field for devices to use in surgery." (App. Br. 25; emphasis omitted.) However, this evidence is insufficient to overcome to evidence of record establishing that cable ties were known to be suitable for use as a tourniquet. (FF10 and FF11.)

For the reasons above, we are not persuaded by Appellant arguments that the references cited by the Examiner related to cable ties are non-analogous art.

Conclusion of Law

The evidence of record supports the Examiner's finding that Dyer is analogous art and renders obvious the features of claim 5.

III.

Issue

The Examiner has rejected claim 33 under 35 U.S.C. § 103(a) as obvious over Dyer. The Examiner contends that "[i]t would have been obvious to provide the kit of Dyer … with different sized block bodies, in order to allow for the accommodation of different sized/shaped items or bundles." (Ans. 17-18.)

Appellant contends that Dyer is non-analogous art and submits opinion evidence from experts in the field to support the contention that a person of ordinary skill in the art would not have looked to the field of bundle/cable ties to design digit tourniquets. (See App. Br. 28-32; see also Reply Br. 6-13.) Appellant further contends that "Dyer teaches away from the subject matter of Claim 33 as there is no special need for different tie housings that can accommodate different tie wrap widths (cuff widths)." (App. Br. 35.)

Appellant's arguments related to the issue of non-analogous art are addressed in Section II above. Thus, the remaining issue with respect to this rejection is:

Whether Appellant has successfully rebutted a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention?

Principles of Law

One "may rebut a *prima facie* case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect." *In re Peterson*, 315 F.3d 1325, 1331 (Fed. Cir. 2003); citing *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997). However, for a reference to teach away, it must state more than a general preference for an alternative invention. It must '"criticize, discredit, or otherwise discourage"' investigation into the invention claimed. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009), quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed.Cir. 2004).

Analysis

After reviewing the record before us, we are not persuaded that Dyer teaches away from tie housings that can accommodate different tie wrap widths. Dyer "does not 'criticize, discredit, or otherwise discourage' investigation into the invention claimed." *Depuy Spine*, 567 F.3d at 1327. The most that might be reasonably said about Dyer is that it expresses a preference for the alternative invention (*i.e.*, a cable tie assembly for use in securing a large telecommunications cable (FF1)), but does not discourage investigation into cable tie assemblies of different sizes. Appellant has pointed to no part of Dyer that criticizes or discredits cable ties of various sizes or a kit containing them.

Conclusion of Law

The evidence supports the Examiner's findings of fact and reasoning establishing a prima facie case of obviousness.

IV.

Issue

The Examiner has rejected claim 2 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Vincent and Brown. The Examiner contends that "Dyer substantially discloses the claimed invention except for specific dimensions for cuff channel spacing, cuff width," and asserts "that changes in size of a device at most relate to the size of an article under consideration which is not a matter of invention," citing *In re Rose*, 220 F.2d 459 (CCPA 1955). (Ans. 36.)

Appellant contends that "claimed dimensions clearly define over Dyer as they relate to spacings and sizes of features that provide functional characteristics of the device for delicate surgical procedures that provide safe occlusive pressures to be applied by the digit tourniquet" (App. Br. 36) and that "the dimensions define a structure that allows for safe occlusive pressures" (App. Br. 37-38).

The issue with respect to this rejection is:

Whether the Examiner has established a prima facie case of obviousness that the claimed dimensions of the digit tourniquet are not patentable features in view of *In re Rose*.

Additional Findings of Fact

FF12. Appellant's Specification provides as follows:

> The cuff width can affect the applied occlusion pressure as larger cuff widths provide an increased area with reduced pressures for the same applied force P= (F/A). Further lower pressures can be successfully used for larger cuff widths.
> …
> Estimates of target pressures using different cuff widths are provided in **Table** 1. It will be understood that these values can vary based on design considerations, such as cuff thickness, cuff elasticity, cuff width and the finger circumference that a particularly sized tourniquet body/cuff will accommodate. The yielding and/or breaking tension of projection(s) **50, 50'** can be correlated to the desired occlusion pressure(s). In some embodiments, the breaking/yielding tension may be a maxima for the cuff and contemplated larger digit size and/or may be averaged for a range of patient sizes.

(Specification, 14-15.)

FF13. Claim 2 provides as follows:

> 2. A digital tourniquet according to Claim 1, wherein the first and second cuff channels and corresponding first and second channel apertures are closely spaced in a width dimension corresponding to the sagittal direction with axially extending centerlines of the first and second cuff channels residing between about 1-20 mm apart in the width dimension of the support body and with the channels extending a distance in the axial direction to receive a cuff having a width of between about 8-15 mm, and wherein the digital tourniquet is held in a sterile package for medical use.

(App. Br. 64.)

Analysis

The Examiner's reliance on *In re Rose* does not explain why a skilled artisan would have modified Dyer to arrive at the claimed dimensions as a matter of obvious design choice. Although we appreciate the Examiner's

reliance on *In re Rose* for the proposition that size is not ordinarily a patentable feature, we note that jurisprudence when used in this manner amounts to a *per se* rule of unpatentability. However, our reviewing court has carefully cautioned against the use of such per se rules. *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) ("[R]eliance on *per se* rules of obviousness is legally incorrect."). As such, we find the Examiner's reliance on a *per se* rule to be inappropriate because the Examiner has not provided any evidence or reason that would have prompted a person of ordinary skill in the art to modify the cable ties of Dyer to the dimensions recited in the claim.

Furthermore, we note that Appellant's Specification describes the correlation between cuff size and desired occlusion pressures. (FF12; see also App. Br. 35-38.) Hence, Appellant's Specification provides an indication as to the criticality of cuff size to the function of the claimed device.

Conclusion of Law

Given that the rejection is based on a *per se* rule and because Appellant has shown the criticality of cuff dimensions for the functionality of the claimed device, we conclude that the Examiner has not established a prima facie case of obviousness of the subject matter of claim 2.

V.

Issue

The Examiner has rejected claim 59 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Vincent and Brown. The Examiner finds that "one of ordinary skill in the art would appreciate that cable ties

could provide a predictable resulting function as ligatures in surgical procedures, in view of Vincent et al, and Brown et al teach that placing ligatures in a sterile package, one of ordinary skill in the art would have found it obvious to place a cable tie device, such as that of Dyer, in a sterile package for medical use." (Ans. 37.)

Appellant contends that 1) "Dyer fails to provide the target safe occlusive pressures and/or because Dyer is simply not configured to support the digit in the manner required for appropriate digit tourniquet use;" (Ans. 40) and 2) "it simply would not be obvious to one of ordinary skill in the art to place outdoor cable ties (such as the Dyer device) in a sterile package" (Ans. 39)

Appellant's arguments related to the issue of whether Dyer's device is capable of provided safe occlusive pressures is addressed in Section I above. Thus, the remaining issue with respect to this rejection is: Does the evidence of record support the Examiner's conclusion that the cited prior art renders Claim 59 obvious?

Additional Findings of Fact

FF14. Vincent provides as follows:

> There are many occasions when it is necessary to place a strap, belt, or ligature around a tissue or a prosthesis to fix it in place. Such a ligature can take the form of a cable tie commonly used for bundling electrical wires or a band such as a gastric band for encircling a stomach. Recently, laparoscopic methods and tools have been developed which enable the placement of such ligatures around organs or tissues without the need for open surgery.
> (Vincent, col. 1, ll. 20-27.)

FF15. The invention of Brown relates to a package for a combined surgical suture-needle device. (Brown, col. 1, ll. 9-10.)

FF16. Brown provides as follows:

> Most surgical suture-needle packages in current use consist of a folded paper surgical suture-needle retainer seated within a sterile outer envelope. The sterility of the surgical suture-needle and envelope are maintained by a second sealed overwrap. When the surgical suture-needle is to be used, the overwrap is opened in the operating room and the sealed envelope is placed within the sterile field. Sterile personnel then tear open the sterile envelope to gain access to the surgical suture-needle.
> (Brown, col. 1, ll. 28-38.)

Analysis

The Examiner's rationale is:

> As one of ordinary skill in the art would appreciate that cable ties could provide a predictable resulting function as ligatures in surgical procedures, in view of Vincent et al, and Brown et al teach that placing ligatures in a sterile package, one of ordinary skill in the art would have found it obvious to place a cable tie device, such as that of Dyer, in a sterile package for medical use.

(Ans. 37.) We agree. The evidence of record supports the Examiner's findings that cable ties were known to be suitable for use as a medical device. (*See e.g.*, FF9 and FF10.) Having identified a medical use, the Examiner contends that it would have been obvious to place a medical device into a sterile package. (Ans. 26.)

Appellant argues that "it simply would not be obvious to one of ordinary skill in the art to place outdoor cable ties (such as the Dyer device)

in a sterile package." (App. Br. 39.) We are not persuaded. After reviewing the record before us, we find that the Examiner has provided a rational basis for the proposed modifications. The fact that none of the references individually disclose placing cables ties into a sterile package is not sufficient to establish that the Examiner erred in reaching a conclusion of obviousness based upon the combined teachings of the references. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (Each reference "must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole.").

Conclusion of Law

The evidence of record supports the Examiner's conclusion that the cited prior art renders Claim 59 obvious.

VI.

Issue

The Examiner has rejected claims 7, 9, 12 and 50 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer and Fulton. Appellant's arguments related to the persuasiveness of declaration evidence are addressed in Section I above. Appellant's arguments related to the issue of non-analogous art are addressed in Section II above.

The issue remaining with respect to this rejection is: Does the evidence of record support the Examiner's conclusion that the cited prior art renders claims 7, 9, 12 and 50 obvious?

Additional Findings of Fact

FF17. Figure 10 of Fulton is provided below.

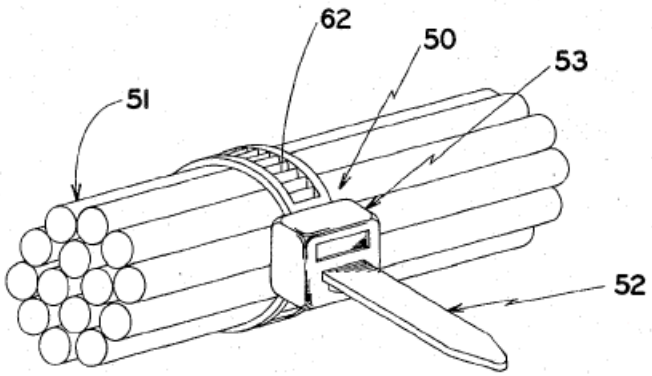


FIG. 10

Figure 10 is "a perspective view of a second embodiment of the cable tie of this invention showing the strap assembled to the retaining head, looped about a bundle of wires or the like, and locked into the retaining head, securing the wires into a bundle." (Fulton, col. 2, ll. 9-13.)

FF18. Figure 11 of Fulton is provided below.

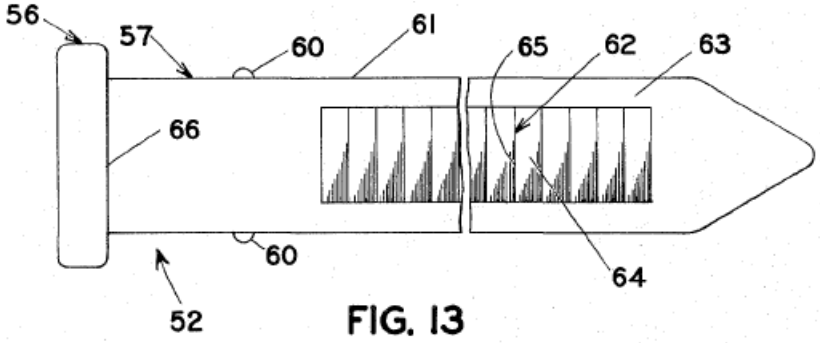


FIG. 13

Figure 11 is "an end view of the retaining head generally illustrated in FIG. 10 showing the securing aperture two-piece cable tie referred to above wherein the strap means thereof with the locking pawl therein." (Fulton, col. 2, ll. 14-16.)

FF19. Fulton provides the following disclosure with reference to Figures 10 and 11:

> A second illustrative embodiment of the cable tie of this invention, generally designated by the numeral 50 (**FIGS. 10**,

> **14-16**), is shown applied to a bundle of cables or the like **51**. Cable tie **50** is preferably made of flexible plastic and includes, generally, an elongated flexible strap **52**, a head **53**, and a locking pawl **54**. Strap **52** (**FIG. 13**) comprises a retainer portion **56** at one end and a tongue portion **57** at the other end. Tongue portion **57** is provided with retaining embossments **60** on respective longitudinal tongue surface **61** and abutments or teeth **62** are provided on a strap tooth surface **63**. Each tooth **62** comprises a tooth ratchet surface **64** and a tooth retaining surface **65** (**FIGS. 13-16**). A pair of lateral shoulders 66 are provided on retainer portion **56** adjacent tongue portion **57**.

(Fulton, col. 5, ll. 5-20.)

Analysis

The Examiner finds as follows:

> The device of Dyer is disclosed with a symmetrical pawl device for securing a strap instead of the cuff having an anchoring member/rod that is inserted into a cuff channel and the rod sitting on retaining shoulders in the body. Fulton et al teach using a cuff having an anchoring rod (56) used with a body having retaining shoulders (73) in a channel and a pivoting pawl member for securing a strap (54; see figures 10-16; column 5, lines 5-35). It would have been obvious for a person having ordinary skill in the art at the time of the invention to substitute a securing system including the cuff having an anchoring member/rod that is inserted into a cuff channel and the rod sitting on retaining shoulders in the body and a pivoting pawl member for the securing system including the symmetrical pawl mechanism of the device of Dryer [sic], since the two configuration are functional equivalents and the system taught by Fulton et al simplifies functionality by allowing a user to only have to insert the free end of the cuff through the channel and pull in one direction at the free end of the cuff.

(Ans. 6-7.)

With regard to claim 7, Appellant argues that Dyer does not teach "a pivoting clamp member, especially one that can pivot between open and closed positions." (App. Br. 41.) We agree. Like Appellant, we fail to find any disclosure in either Dyer or Fulton of a feature that can be fairly described as a pivoting clamp member that pivots between open and closed positions. We do not sustain the Examiner's rejection with regard to claim 7.

With regard to claim 9, Appellant relies on their arguments with regard to claim 7 and contend that argue that "it would not have been obvious to modify the Dyer device to replace the non-pivoting, self-centering symmetrical pawl with the pivoting pawl of Fulton." (Ans. 42.) However, unlike claim 7, claim 9 does not require a "pivoting clamping member" or "pivoting pawl". (See Ans. 41-42 and 65-66.) As such, we are not persuaded by Appellant arguments as they relate to claim 9.

With regard to claim 12, Appellant argues that "Dyer does not disclose or suggest a digital tourniquet whereby the cuff compresses the target digit against the digit contact surface of the support body to apply the safe occlusion pressure, much less a safe occlusion pressure that is between about 225 mm Hg and 375 mm Hg." (Ans. 42.) We agree. The Examiner has not provided any evidence or reason that would have prompted a person of ordinary skill in the art to modify the cable ties of Dyer to provide occlusion pressures limited to between about 225 mm Hg and 375 mm Hg as required by claim 12. We do not sustain the Examiner's rejection with regard to claim 12.

With regard to claim 50, the Examiner applies a rational with reliance on *In re Rose,* 220 F.2d 459 (CCPA 1955). We reverse this rejection for the reasons explained in Section IV above regarding the rejection of claim 2, which also requires cuffs having a width between about 1-20 mm.

Conclusion of Law

The evidence of record supports the Examiner's conclusion of obviousness for claim 9. The evidence of record does not support the Examiner's conclusion of obviousness for claims 7, 12, and 50.

VII.

Issue

The Examiner has rejected claims 13, 14, 41, 53 and 54 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Fulton and Knudson. Appellant's arguments related to the persuasiveness of declaration evidence are addressed in Section I above. Appellant's arguments related to the issue of non-analogous art are addressed in Section II above. Thus, the remaining issue with respect to this rejection is:

Does the evidence of record support the Examiner's conclusion that the cited prior art renders claims 13, 14, 41, 53 and 54 obvious?

Analysis

Claim 13

The Examiner finds that "[i]t would have been obvious for a person having ordinary skill in the art at the time of the invention to modify the device of Dyer in view of Fulton et al to have the anchoring rod attached to the first end of the cuff via a rod sleeve view of Knudson, since Knudson

teaches that using a rod sleeve to attach an anchoring rod to a cuff facilitates cost-effective assembly of a device (column 1, lines 50-53)." (Ans. 18.)

Appellant argues that "Dyer already includes a 'preferred' self-centering pawl locking mechanism, and there would be no motivation to include a redundant anchoring mechanism" and that "Dyer teaches that the tie strap can be pulled from either end, and therefore teaches away from a sleeve that would prevent one end of the strap from being pulled away from the tie head." (App. Br. 44.)

After reviewing the record before us, we find Appellant has failed to traverse the Examiner's specific findings noted above. The fact that Dyer discloses a "preferred" self-centering pawl locking mechanism is not sufficient to establish that the Examiner erred in reaching a conclusion of obviousness based upon the combined teachings of the references. *See In re Merck & Co. Inc*., 800 F.2d 1091, 1097 (Fed. Cir. 1986) (Each reference "must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole."). Furthermore, the fact that Dyer discloses a "preferred" self-centering pawl locking mechanism is not enough to establish that Dyer teaches away from an alternative locking mechanism. For a reference to teach away, it must state more than a general preference for an alternative invention. It must '"criticize, discredit, or otherwise discourage"' investigation into the invention claimed. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009), quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed.Cir. 2004).

Claims 14 and 41

Regarding claims 14 and 41, the Examiner applies a rational with reliance on *In re Rose,* 220 F.2d 459 (CCPA 1955). (See Ans. 8 and 18.) We reverse this rejection for the reasons explained in Section IV above regarding the rejection of claim 2.

Claims 53 and 54

Claims 53 and 54 are dependent to claim 50. In section VI above, we reversed the Examiner's rejection of claim 50 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer and Fulton. Knudson is not relied upon by the Examiner to overcome the stated deficiencies of the combination of Dyer and Fulton, and thus, for the same reasons discussed in section VI above, Appellant's arguments do not persuade us that the Examiner has erred in concluding that claims 53 and 54 are obvious over the cited prior art.

Conclusion of Law

The evidence of record supports the Examiner's conclusion of obviousness for claims 13. The evidence of record does not support the Examiner's conclusion of obviousness for claims 14, 41, 53 and 54.

VIII.

Issue

The Examiner has rejected claims 8, 10, 51 and 58 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Fulton and Merser. Appellant's arguments related to the persuasiveness of declaration evidence are addressed in Section I above. Appellant's arguments related to the issue

of non-analogous art are addressed in Section II above. Thus, the remaining issue with respect to this rejection is:

Does the evidence of record support the Examiner's conclusion that the cited prior art renders claims 8, 10, 51 and 58 obvious?

Additional Findings of Fact

FF20. Figure 2 of Merser is reproduced below.

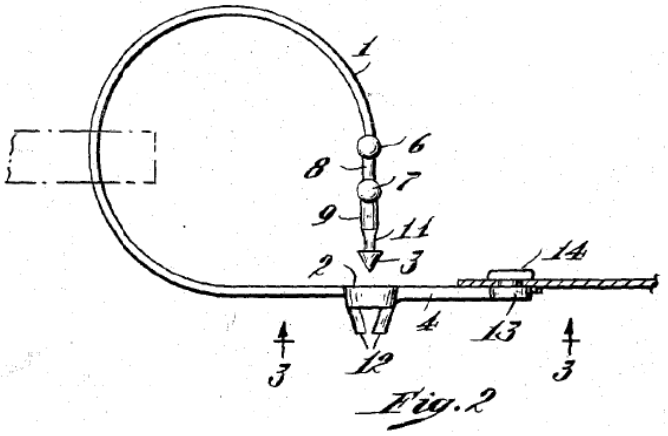


Figure 2 is a side view of the device disclosed in Merser before the head **3** has been inserted in the socket **2**. (Merser, col. 1, ll. 42-43.)

FF21. Figure 4 of Merser is reproduced below.

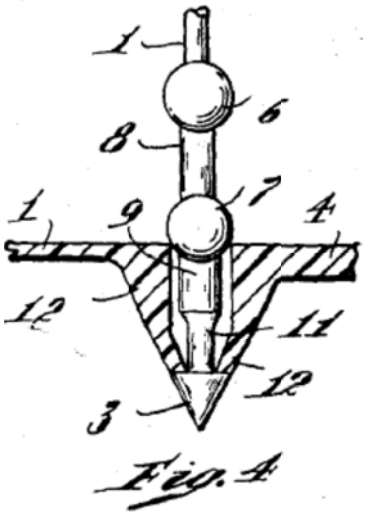


Figure 4 is a section of the head and socket of the device disclosed in Merser after the head has been inserted. (Merser, col. 1, ll. 45-46.)

FF22. Merser discloses as follows:

> The exit end of the socket is slotted to form fingers **12** which converge to surround the neck **11** closely. The device is made of resilient material such as nylon so that as the head is inserted the fingers expand and then snap in behind the head as shown in FIG. 4.

(Merser, col. 1, ll. 59-64.)

Analysis

The Examiner finds as follows:

> Merser teaches the use of at least one deformable projection (12) in a body that automatically yields and then snaps to secure a cuff (1) passing through said body (see figures 1-4; column 1, lines 59-64; it is the examiner's position that said snapping to secure provides a tactile and/or audible feedback to a user). It would have been obvious for a person having ordinary skill in the art at the time of the invention to modify the device of Dyer in view of Fulton et al to incorporate at least one deformable projection into the first channel to secure the anchoring rod of said cuff in view of Merser, since Merser teaches that using such a deformable member facilitates securing a cuff (column 1, lines 28-32).

(Ans. 9-10.)

Appellant argues that

> Merser simply does not disclose or suggest that the fingers 12 are configured to automatically yield or break when the ‘cuff’ is tensioned above a target amount to provide a tactile and/or audible alert to a clinician that a target occlusion pressure has been achieved. The fingers 12 expand as the head 3 is inserted and then snap back into place after the head 3 is inserted, but this has nothing to do with target occlusion pressure of a digital tourniquet.

(App. Br. 47.) We agree with Appellant. Substantial evidence does not support the Examiner's conclusion that the device of Merser is "configured to automatically yield or break" or otherwise "provide a tactile and/or audible alert to a clinician" once a target pressure is achieved.

Conclusion of Law

The factual evidence and technical reasoning underlying the rejection of claims 8, 10, 51 and 58 do not adequately support the Examiner's conclusion of obviousness.

IX.

Issue

The Examiner has rejected claims 15-17, 23 and 24 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer and Botka. Appellant's arguments related to the persuasiveness of declaration evidence are addressed in Section I above. Appellant's arguments related to the issue of non-analogous art are addressed in Section II above. Thus, the remaining issue with respect to this rejection is:

Does the evidence of record support the Examiner's conclusion that the cited prior art renders claims 15-17, 23 and 24 obvious?

Additional Findings of Fact

FF23. Figures 2 and 3 of Botka are reproduced below.

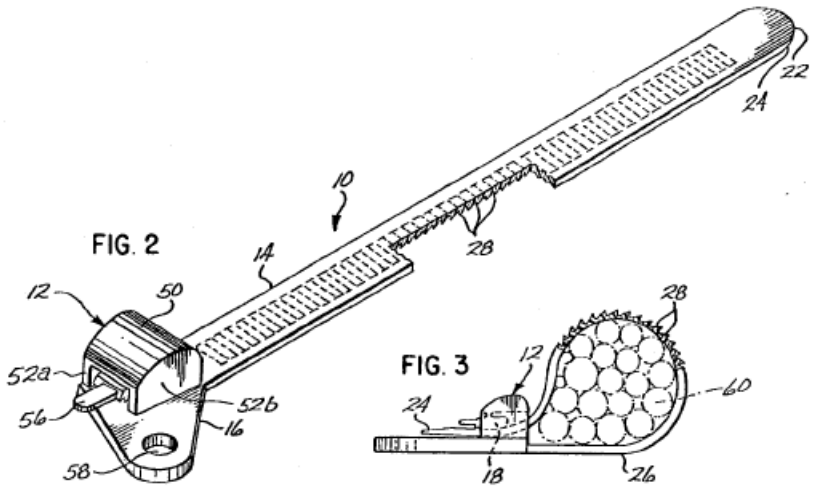


Figure 2 is a perspective view of the adjustable clamp disclosed in Botka. (Botka, col. 1, ll. 48-51.) Figure 3 is a side view of the adjustable clamp holding a bundle of wires. (*Id.* at col. 1, ll. 52-53.)

FF24. Botka discloses as follows:

> When the strap end is released, the pivotable member engages the teeth in the strap and the bundle is held in position by the member. If the load is heavy, the strap will try to-back out, which will counter-rotate the pivotable member and wedge it against the side of the aperture and lock in place. If one wishes to remove or add a wire to the bundle **60**, the handle **56** is pulled to rotate the pivotable member out of engagement with the strap. If one wishes to remove or add a wire to the bundle **60**, the handle **56** is pulled to rotate the pivotable member out of engagement with the strap.

(*Id.* at col. 3, ll. 12-20.)

Principles of Law

"A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). However, a prima facie conclusion of obviousness may be supported by a showing that a combination of familiar elements according to known methods yields no

more than predictable results. See *KSR*, 550 U.S. at 401; citing *United States v. Adams*, 383 U.S. 39, 40 (1966).

Analysis

Claims 15 and 24

The Examiner finds as follows:

> Dyer discloses the invention substantially as claimed except for the pivoting clamp including a user-accessible lever to pivot the clamp. Botka teaches the use of a user-accessible lever (56) on a pivoting clamp (see figure 2). It would have been obvious for a person having ordinary skill in the art at the time of the invention to modify the device of Dyer to incorporate a user-accessible lever into the pivoting clamp in view of Botka, since Botka teaches that having a user-accessible facilitates adjustment of a cuff held by the pivoting member (column 3, lines 18-20).

(Ans. 10.)

Appellant argues that "Dyer directly teaches away from employing a lever configured to allow a user to pivot the clamp in a reverse direction to release the cuff, as recited." (App. Br. 50.)

After reviewing the record before us, we find Appellant has failed to traverse the Examiner's specific findings noted above. Specifically, Appellant's arguments do not adequately address the teachings of the combined references, but rather focuses solely on the deficiencies of Dyer. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (Each reference "must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole."). We thus find Appellant's arguments unpersuasive.

Claims 16 and 17

Regarding claims 16 and 17, the Examiner applies a rational with reliance on *In re Rose,* 220 F.2d 459 (CCPA 1955). (See Ans. 11 and 45.) We reverse this rejection for the reasons explained in Section IV above regarding the rejection of claim 2.

Conclusion of Law

The evidence of record supports the Examiner's conclusion of obviousness for claim 15 and 24. Claim 23 stands with independent claim 15. 37 C.F.R. § 41.37(c)(1)(vii).

The evidence of record does not support the Examiner's conclusion of obviousness for claims 16 and 17.

X.

Issue

The Examiner has rejected claims 18-20 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Fulton and Knudson. Appellant's arguments related to the persuasiveness of declaration evidence are addressed in Section I above. Appellant's arguments related to the issue of non-analogous art are addressed in Section II above. Thus, the remaining issue with respect to this rejection is:

Does the evidence of record support the Examiner's conclusion that the cited prior art renders claims 18-20 obvious?

Analysis

Regarding dependent claims 18 and 19, Appellant argues that these claims are patentable for the reasons advanced by Appellant with regard to claims 9 and 15. (App. Br. 52.) We affirmed the rejections set forth by the

Examiner with regard to both claim 9 and 15. Thus, for the same reasons discussed above, Appellant's arguments do not persuade us that the Examiner has failed to set forth a prima facie case of obviousness in view of the cited references.

Regarding claim 20, Appellant does not adequately address the teachings of the combined references, but rather focuses solely on the deficiencies of Dyer. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (Each reference "must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole."). We thus find Appellant arguments unpersuasive to overcome the Examiner's rejection under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Fulton and Knudson.

Conclusion of Law

The evidence of record supports the Examiner's conclusion of obviousness for claims 18-20.

XI.

The Examiner has rejected claim 21 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer and Merser. Claim 21 is directed to a digital tourniquet having "at least one deformable member configured to automatically yield or break when the cuff is tensioned above a target amount." (App. Br. 70.) As explained in Section VIII, the evidence of record does not support a finding that combination of Dyer and Merser discloses this element. We do not sustain this rejection of claim 21 for the reasons explained above.

XII.

The Examiner has rejected claim 22 under 35 U.S.C. § 103(a) as obvious over the combination of Fulton, Merser and Knudson. Claim 22 is directed to a digital tourniquet having "a deformable projection arm" configured to yield or break. (App. Br. 70-71.) As explained in Section VIII, the evidence of record does not support a finding that combination of Dyer and Merser discloses this element. Knudson is not relied on by the Examiner to cure this deficiency. (See Ans. 15 and 50-53.) We do not sustain this rejection of claim 22 for the reasons explained above.

XIII- XIV.

The Examiner has rejected claims 25, 43, 44, 47 and 48 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Merser and Talen. Claim 49 is rejected under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Merser, Talen, Dumcum and Botka.

Independent claim 25 is directed to method of applying occlusion pressure to a digit comprising "tactile and/or audible feedback to a user". (App. Br. 71.) As explained in Section VIII, the evidence of record does not support a finding that combination of Dyer and Merser discloses this element. Talen is not relied on by the Examiner to cure this deficiency. (See Ans. 15-16 and 54-55.) We do not sustain this rejection of claim 25 for the reasons explained above.

As claims 43, 44, and 47-49 are dependent on claim 25, and thus incorporate all of the limitations of claim 25, we reverse the rejections as to those claims as well.

XV.

The Examiner has rejected claims 55 and 56 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Fulton, Vincent and Brown. Per the reasoning set forth in Section VI above, we reversed the rejection of claim 50 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer and Fulton. The Examiner does not rely on Vincent or Brown to overcome the deficiencies of the combination of Dyer and Fulton. (See Ans. 24 and 57-59.) As claims 55 and 56 are dependent on claim 50, and thus incorporate all of the limitations of claim 50, we reverse this rejection as to those claims for the reasons set forth in Section VI above.

XVI.

The Examiner has rejected claim 57 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Fulton, Knudson, Vincent and Brown. Per the reasoning set forth in Section VII above, we reversed the rejection of claim 41 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer and Fulton. The Examiner does not rely on Knudson, Vincent or Brown to overcome the deficiencies of the combination of Dyer and Fulton. (See Ans. 24 and 57-59.) As claim 57 is dependent on claim 41, and thus incorporates all of the limitations of claim 41, we reverse this rejection of claim 57 for the reasons set forth in Section VII above.

XVII.

The Examiner has rejected claims 60 and 61 under 35 U.S.C. § 103(a) as obvious over the combination of Dyer, Vincent, Brown and Botka. Each of claims 60 and 61 is directed to a tourniquet comprising a pivot "configured with a user accessible member that allows a user to manually

pivot the clamp between open and closed positions." (App. Br. 77.) As explained in Section VI above with regard to claim 7, we fail to find any disclosure in Dyer related to a feature that can be fairly described as a pivoting clamp member that pivots between open and closed positions. The Examiner does not rely on Vincent, Brown or Botka to overcome this deficiency of Dyer. (See Ans. 26 and 57-59.) We thus do not sustain this rejection for the reasons set forth in Section VI above.

SUMMARY

We affirm the rejection of claims 1, 3, 4 and 6 under 35 U.S.C. § 102(b) as being anticipated by Dyer. We reverse the rejection of claim 11 under 35 U.S.C. § 102(b) over Dyer.

We affirm the rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Dyer.

We affirm the rejection of claim 33 under 35 U.S.C. § 103(a) as being unpatentable over Dyer.

We reverse the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Dyer, Vincent and Brown.

We reverse the rejection of claim 59 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Vincent and Brown.

We affirm the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Fulton. We reverse the rejection of claims 7, 12 and 50 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Fulton.

We affirm the rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton and Knudson. We reverse the rejection of claims 14, 41, 53 and 54 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton and Knudson.

We reverse the rejection of claims 8, 10, 51 and 58 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton and Merser.

We affirm the rejection of claims 15, 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Botka. We reverse the rejection of claims 16-17 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Botka.

We affirm the rejection of claims 18-20 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Botka, Fulton and Knudson.

We reverse the rejection of claim 21 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer and Merser.

We reverse the rejection of claim 22 under 35 U.S.C. § 103 (a) as being unpatentable over Dyer in view of Fulton, Merser and Knudson.

We reverse the rejection of claims 25, 43, 44, 47 and 48 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Merser, Talen and Dumcum.

We reverse the rejection of claim 49 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Merser, Talen, Dumcum and Botka.

We reverse the rejection of claims 55 and 56 under 35 U.S.C. § 103 (a) as being unpatentable over the combination of Dyer, Fulton, Vincent and Brown.

We reverse the rejection of claim 57 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Fulton, Knudson, Vincent and Brown.

We reverse the rejection of claims 60 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Dyer, Vincent, Brown and Botka.

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

AFFIRMED-IN-PART

dm