UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

MULTIMATIC, INC.,

Plaintiff and Counter-defendant,

v.

EDSCHA AUTOMOTIVE MICHIGAN, INC.,

Defendant and Counter-plaintiff.
_____/

Case Number 19-12598
Honorable David M. Lawson

OPINION AND ORDER CONSTRUING CLAIMS

In this patent infringement case, the plaintiff alleges that the defendant's product infringes its patent on a particular style of automotive door hinge. The parties dispute the meaning of certain claim terms, and they have filed briefs asking the Court to resolve their competing constructions. The paradigm claims which contain the allegedly ambiguous words and phrases that require construction are Claims 1, 10, and 12 of U.S. Patent No. 10,100,563. The Court held a hearing on October 8, 2020, at which the parties made their presentations. This decision explains the reasons for the constructions adopted by the Court. *See Markman v. Westview Instruments. Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

I.

Plaintiff Multimatic, Inc., based in Ontario, Canada, is a maker of automotive components, including auto body structures, suspension systems, and other components. It has manufacturing and engineering facilities in North America, Europe, and Asia. Since 1984, Multimatic has designed and manufactured a variety of automotive hinges for side doors, rear cargo doors, hoods, decklids, liftgates, dropgates, tailgates, tonneau covers, sliding doors, and power closures. This case focuses on a hinge that employs Multimatic's so-called "bridgeless" design, covered by its U.S. patent number 10,100,563. The distinguishing feature of this hinge pattern is that it

incorporates a pivot pin that serves double duty in both permitting and limiting rotation of the two halves of the hinge, as well as providing the structural connection between two of the four brackets that form the respective halves of the completed hinge. Other earlier designs accomplish the required connection by incorporating a "structural bridge" into each bracket subassembly when the bracket and bridge component is stamped or formed. The plaintiff's design produces a hinge with less waste material, and which weighs less.

Defendant Edscha Automotive Michigan, Inc. also makes auto body components including door and lid hinges. According to its website (edscha.com), Edscha Michigan is the North American subsidiary of a German parent company that has been in business since 1870. Edscha's German business started out making fittings for horse drawn coaches. The company evolved over the following 150 years supplying vehicle components through various eras, and now claims to be the preeminent maker of hinges for automobiles. Edscha has 22 manufacturing locations around the world and claims to supply "almost all of the world's automakers." Multimatic alleges that certain patterns of some of Edscha's hinges infringe on its patent by using a nearly identical design.

II.

The patent-in-suit, U.S. Patent No. 10,100,563 (the '563 Patent), entitled "Multiple Piece Construction Automotive Door Hinge," relates to the design of an automotive door hinge, "adapted to facilitate motion of a closure panel relative to a fixed body structure," and "compris[ing] a door component constructed from two press formed angle brackets structurally connected via a pivot pin and adapted to be mounted to a vehicle closure panel," along with "a body component constructed from two press formed angle brackets structurally connected via a simple formed feature and the pivot pin and adapted to be mounted to a vehicle body structure," arranged in such a way that "the pivot pin structurally assembles the two hinge components, facilitates rotary motion between them[,] and structurally connects the multiple press formed angle brackets so that the

resulting assembly achieves a much higher material efficiency than the prior art." Patent Abstract, ECF No. 26-2, PageID.233-34. The patent was issued on October 16, 2018. The accused produce is alleged to infringe Claims 1, 10, and 12 of the '563 Patent. It appears to be undisputed that Claims 1 and 10 are materially identical. They are stated below with the disputed terms highlighted in bold:

> 1. A vehicular hinge assembly comprising:
>
> a first component comprising first and second **separate brackets**, the first **bracket** being **spaced apart** from the second **bracket**;
>
> a second component including a bushing aperture configured to accept a pivot bushing;
>
> a pivot bushing;
>
> a pivot pin that comprises a first end, a second end, and a pivot surface positioned between the first end and the second end, each of the first and second ends comprising an **upset head following assembly of the hinge**;
>
> wherein the pivot surface of the pivot pin is disposed within the pivot bushing such that the second component is rotatable around the pivot surface, and the first and second ends of the pivot pin are **structurally connected** to the first and second **brackets** of the first component to hold the first and second **brackets** in a fixed relationship; and
>
> wherein the **upset heads** of the pivot pin hold the first component and the second component together while permitting them to rotate relative to one another to form an assembly to be mounted as a whole to a vehicular closure panel and a vehicular body structure.

Claim 12 is stated in similar terms, with variations of some terms in the last three clauses:

> 12. A vehicular hinge assembly comprising:
>
> a first component comprising first and second **separate brackets**, the first bracket being **spaced apart** from the second bracket;
>
> a second component including a bushing aperture configured to accept a pivot bushing;
>
> a pivot bushing;

> a pivot pin that comprises a first end, a second end and a pivot surface positioned between the first end and the second end, each of the first end and second end comprising means to structurally connect the pivot pin to the first and second **separate brackets** of the first component respectively;
>
> wherein the pivot surface of the pivot pin is disposed within the pivot bushing such that the second component is rotatable around the pivot surface, and the first and second ends of the pivot pin are **structurally connected** to the first and second **separate brackets** of the first component so that the first and second **brackets** do not rotate in relation to each other;
>
> wherein the first component and the second component are thus held together to form an assembly to be mounted as a whole to a vehicular closure panel and a vehicular body structure.

The parties agree that the previously disputed terms "to be mounted as a whole" and "first and second ends of the pivot pins are secured within the apertures" do not need to be construed and should be given their plain and ordinary meaning. The remaining disputed claim limitation terms and the parties' competing constructions are set forth in the following chart:

Affected Claim(s)	**Claim Limitation**	**Plaintiffs' Construction**	**Defendants' Construction**
All	separate	identifiable as distinct	separate; bridgeless
All	spaced apart	having a gap in between	set apart and not connected; bridgeless
All	bracket	a piece used to join two or more things	formed angle bracket
1, 10	upset head	permanently deformed enlarged portion at an end	a head of a pivot pin formed by deformation of the end of the pin
1, 10	following assembly of the hinge	when the first component and the second component have been assembled	following completed assembly of the hinge
All	structurally connected	permanently joined to form a component	structurally connected by deforming the end of pivot pin into the pivot aperture

III.

Patent infringement cases are reviewed in two steps. *Markman*, 52 F.3d at 976. First, the Court determines the meaning and scope of the protected patent. This process requires the court to determine the meaning of disputed terms within the patent's claims. A "claim" is the portion of the patent in which the inventor/patentee is "particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention." 35 U.S.C.A. § 112(b). A claim "defines precisely what his invention is," *White v. Dunbar*, 119 U.S. 47, 52 (1886), and sets the limits for which the patentee is asserting the right to exclude others from producing the invention. *See Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004); *see also Altoona Publix Theatres v. Am. Tri-Ergon Corp.*, 294 U.S. 477, 487 (1935) ("Under the statute it is the claims of the patent which define the invention.").

After the meaning of the claims is determined by the Court, the second step consists of comparing the properly construed claim and the accused device to determine whether the accused device is infringing. *Markman*, 52 F.3d at 976. The infringement analysis, generally, is for a jury, instructed on the claims as construed by the Court.

"The construction of claims is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims." *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1322 (Fed. Cir. 2001) (quotations omitted). The process begins with consideration of the patent itself because "[i]t is a bedrock principle of patent law that the claims of a patent define the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quotations omitted).

"In *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), [the Supreme Court] explained that a patent claim is that 'portion of the patent document that defines the scope of the

patentee's rights,'" and "held that 'the construction of a patent, including terms of art within its claim,' is not for a jury but 'exclusively' for 'the court' to determine." *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318 (2015) (quoting 517 U.S. at 390). "That is so even where the construction of a term of art has 'evidentiary underpinnings.'" *Ibid.* (quoting 517 U.S. at 372). "[T]he ultimate question of the proper construction of the patent is a question of law [similar to other exercises in] construing [] written instruments, such as deeds, contracts, or tariffs." *Id.* at 318 (citing *Markman*, 517 U.S. at 388-391). However, "when a written instrument uses technical words or phrases not commonly understood, those words may give rise to a factual dispute." *Ibid.* When that occurs, "extrinsic evidence may help to establish a usage of trade or locality." *Ibid.* (citations and quotations omitted). Thus, patent construction, although typically characterized as resolving a "question of law," may require the district court to engage in "subsidiary factfinding," including making "credibility judgments about witnesses," and "in that circumstance, the determination of [necessary] matter[s] of fact will precede the function of construction." *Ibid.* "The purpose of claim construction is to give meaning to the claim terms according to how a person of ordinary skill in the art ['POSITA'] would have understood them at the time of the invention in light of the entire patent, including the claims in which the terms appear and the specification." *E.I. du Pont De Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1068 (Fed. Cir. 2019).

In this case, the parties agree that in this case, a POSITA is a person with a mechanical engineering degree, or some level of education (associates degree or apprenticeship) in tool and die manufacturing, and some experience in automotive design of mechanical assemblies.

The plaintiff asserts that each of the disputed claim terms should be given their plain and ordinary meaning. And that generally is what is done. *Ruckus Wireless, Inc. v. Innovative Wireless*

Solutions, LLC, 824 F.3d 999, 1002 (Fed. Cir. 2016) ("'[T]he words of a claim are generally given their ordinary and customary meaning,' which is 'the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.'") (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc)). "The ordinary meaning may be determined by reviewing various sources, such as the claims themselves, the specification, the prosecution history, dictionaries, and any other relevant evidence." *Id.* at 1002-03. However, "[u]ltimately the only meaning that matters in claim construction is the meaning in the context of the patent." *Id.* at 1003 (quotations omitted).

The presumption of ordinary meaning may be overcome "[w]hen the patentee acts as its own lexicographer, [and then the patentee's] definition governs." *Continental Circuits LLC v. Intel Corp.*, 915 F.3d 788, 796 (Fed. Cir. 2019). "To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning." *Ibid.* (quotations omitted). Also, the presumption may be negated in "instances where the specification may reveal an intentional disclaimer, or disavowal, of claim scope"; "[i]n those situations . . . the inventor's disavowal . . . is dispositive of the claim construction." *Id.* at 796-97. However, "[t]o disavow claim scope, the specification must contain expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope." *Id.* at 797.

"'It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record,'" which includes primarily the specification and statement of claims within the patent itself, but which also encompasses the "prosecution history . . . including the prior art cited during the examination of the patent." *E.I. du Pont De Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1068 (Fed. Cir. 2019) (quotations omitted). "The prosecution history contains the entire record of the proceedings in the Patent Office from the first application papers

to the issued patent." *Ibid.* "Secondary to the intrinsic evidence, [the Federal Circuit has] authorized district courts to rely on extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Continental Circuits*, 915 F.3d at 799 (citations and quotations omitted). However, although "extrinsic evidence can shed useful light on the relevant art, it is less significant than the intrinsic record in determining the legally operative meaning of disputed claim language, [and] [g]enerally, [is viewed] as less reliable than intrinsic evidence." *Ibid.* Technical dictionaries can be particularly helpful because they provide sound evidence of "the way in which one of skill in the art might use the claim terms." *Phillips*, 415 F.3d at 1318. Likewise, expert testimony can be useful insofar as it "provide[s] background on the technology at issue, . . . explain[s] how an invention works, . . . ensure[s] that the court's understanding of the technical aspects of the patent is consistent with that of a person with skill in the art, [and] establish[es] that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Ibid.*

"Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (citations omitted). And of course, the Court's task is limited to construing claim terms that are controverted. *Vivid Technologies v. American Science & Engineering, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (stating that "only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy").

A. "separate" and "spaced apart" (all claims)

The plaintiff argues that the term "separate" needs no special construction and should be understood by its plain meaning of "identifiable as distinct." The plaintiff contends that the figures included in the patent, *e.g.*, Figure 4 at PageID.238, clearly show the "first bracket" and "second bracket" of the "first component" of the hinge being distinct. The plaintiff further contends that the defendant's concession that "separate means separate" is at odds with its previously asserted position that the term "separate" cannot have its plain and ordinary meaning.

As to the term "spaced apart," the plaintiff argues that the defendant's proposed construction "set apart and not connected" is contradicted by the plain language of the claims, which call for the parts to be "connected" by the pivot pin. The plaintiff also asserts that the prosecution history of its earlier filed parent patent (9,863,175) covering a related hinge design evidences the assertion by Multimatic and a determination by the patent examiner that the first and second brackets are both "spaced apart" and "connected" by the pivot pin.

Finally, as to both terms, the plaintiff argues that the defendant's construction "bridgeless" is inappropriate because none of the claims use that term, which appears only in the abstract of the patent, and the "bridgeless" designation embraces several features including the pivot pin, the arrangement of bracket components, and a means of creating structural integrity between those parts, all of which together function to eliminate the need for an integral "structural bridge" spanning the spaced apart brackets. The plaintiff contends that submerging the term "bridgeless" into the mundane phrase "spaced apart" attributes features to the basic term that were used in the patent only to summarize the resulting benefits of the design.

The defendant concedes that the term "separate" may be afforded its plain and ordinary meaning, and it does not contest the plaintiff's proposed definition "identifiable as distinct."

As to the term "spaced apart," the defendant relies principally on a prosecution history including several amendments to the parent '175 patent, which it says demonstrate that "separate" must mean something different from "spaced apart," pointing to iterations of the claims presented by the plaintiff in its attempts to distinguish the invention from prior art. The defendant contends that after an early rejection of the '175 patent claims, the plaintiff first filed an amendment adding the term "separate" to describe the arrangement of brackets, and when the amended claims also were rejected, it then filed another amendment adding the term "spaced apart." The defendant contends, therefore, that, because the plaintiff added two different terms in its quest to distinguish the claims, they must mean something different, otherwise they would be redundant. Therefore, the defendant insists, "separate" can have its ordinary meaning only if "spaced apart" means something more, which it contends must include some notion that the hinge design is "not connected" or "bridgeless," as distinguished from prior art that included a "structural bridge" between the brackets as an essential feature.

The construction of these terms readily is settled by the intrinsic evidence of record, without resort to any extrinsic testimony.

First, despite identifying "separate" as a disputed term, the defendant now concedes that "separate means separate" and may be afforded its plain and ordinary meaning. The defendant has offered no basis to avoid the plaintiff's proposed plain and ordinary definition, which is "identifiable as distinct." Where an ordinary word is not specially defined in the specification, the Court "may rely on dictionary definitions, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." *Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1362-63 (Fed. Cir. 2016) (quotations

omitted). The parties have not given the Court any reason to question the ordinary definition "identifiable as distinct" which the plaintiff has proffered.

Second, the defendant argues at great length that "spaced apart" must have a different meaning from "separate," else why would the plaintiff append both qualifiers to describe its invention during the prosecution of its patent, in serial efforts to distinguish it from the prior art. But the terms plainly do have distinguishable ordinary meanings. "Separate," as the defendant concedes, means "identifiable as distinct." "Spaced apart" means, as the plaintiff proposes, "having a gap in between." This distinction readily is observed from the figures accompanying the patent specification, which depict one of the pairs of angle brackets (the outer set) as having identifiably distinct members, which are spaced apart, to allow room for the other pair of brackets (the inner set) and a pivot bushing to be placed between. Patent Fig. 4, ECF No. 26-2, PageID.238. "[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Continental Circuits*, 915 F.3d 796. The specification plainly illustrates two pairs of brackets. The inner pair are depicted as "separate" (distinct, made of two separately formed pieces), but not "spaced apart," i.e., they are placed in direct contact, back to back with each other, in the finished assembly. The outer pair are depicted as both "separate" and "spaced apart," or "having a gap in between," with the "gap in between" occupied by the inner pair of brackets, a pivot pin bushing, and the axis of the pivot pin.

Further, the defining characteristics of the design readily are contrasted with the figures of prior art in which neither of the bracket assemblies were "separate" (each being formed entirely from single pieces of metal with an incorporated "structural bridge" spanning the gap in between the perpendicular arms), and where the arms of *both* bracket sets of the prior art are "spaced apart"

with a gap in between, rather than only one pair being so. Patent Fig. 1, ECF No. 26-2, PageID.235. Thus, the prior art figures also plainly show that both qualifiers "separate" and "spaced apart" are essential to the description of the different subassemblies comprising the invention, and to distinguishing the invention from the prior art.

The defendant's proposed construction including the qualifier "not connected" is contrary to the plain language of the claims and specification, which expressly state that the outer brackets are "structurally connected" by means of the pivot pin, which operates "to hold the first and second brackets in a fixed relationship." And its insistence on importation of the vague moniker "bridgeless" is merely an improper attempt to import a qualitative description of the benefit achieved by the design, which is used in an explanatory fashion in the abstract to encapsulate various features (separate, spaced apart brackets, structurally joined solely by the pivot pin), that achieve elimination of the "structural bridge" employed in the prior art to perform the same function. The qualifier "bridgeless" adds nothing to the descriptive terms "separate" and "spaced apart" that is not inherent in their ordinary meanings, nor is there any cogent basis in the intrinsic record why it should be included as a qualifier for either term.

B. "bracket" (all claims)

The plaintiff contends that a person of ordinary skill would understand the term "bracket" to mean a "piece used to join two things," which is consistent with figures showing several example brackets and identifying them as joining the assembly on one side to the body of the car and on the other to a movable door. The plaintiff contends that the defendant's proposed construction "formed angle bracket" improperly attempts to import into the claim terms from the specification that were included only to illustrate several implementations of the design, rather than express limitations embodied in the claims as stated.

The defendant, however, points to patent prosecution briefs in which the plaintiff argued that the term bracket must be construed in its "general sense," citing a dictionary definition of the term meaning "a right-angled support projecting from [a surface] for holding [an] object," and also citing exemplary figures in the patent application, all of which depicted L-shaped or "right angle" bracket designs. The defendant thus argues that the proper construction, based on the prosecution history, must include the specific restrictions that the "bracket" in question is "right-angled" or "L-shaped," as emphasized by the plaintiff itself in its defense of the claims.

The meaning of this term is settled by resort to intrinsic evidence in the prosecution history, which discloses that during an appeal against the rejection of a claim in the parent '175 patent, the plaintiff expressly adopted and urged the examiner to endorse its reading of the term "bracket" in a "general sense" to mean an "angle bracket":

> Since the specification of the present application does not particularly limit the shape and configuration of the first and second door angle brackets, the term "bracket" referred to in [prior patent] claim 16 should be interpreted in its general sense. In accordance with the Oxford online dictionary at http://www.oxforddictionaries.com, the term "bracket" in general means "a right-angled support attached to and projecting from a wall for holding a shelf, lamp, or other object." Furthermore, as an example, the drawings (e.g. Figs. 4, 5 and 8) of the present application show two individual L-shaped angle brackets. The shape and configuration in these figures is [sic] consistent with the ordinary meaning of a bracket as defined above.

Appeal Brief dated May 7, 2015, ECF No. 33-20, PageID.838.

It is widely held that the patent holder, having adopted and urged a particular construction in the course of prosecution, is bound to that professed interpretation in subsequent litigation. *Ajinomoto Co. v. Int'l Trade Comm'n*, 932 F.3d 1342, 1351 (Fed. Cir. 2019) ("A patentee must 'be held to what he declares during the prosecution of his patent,' because a contrary rule would undermine '[t]he public notice function of a patent.'" (quoting *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003))); *Liqwd, Inc. v. L'Oreal USA, Inc.*, 720 F.

App'x 623, 628 (Fed. Cir. 2018) ("Amendments and statements made during prosecution, which come after the filing of the application, may of course modify what claim-construction lessons might be drawn from the earlier-filed specification in the absence of such prosecution history."); *TransPerfect Glob., Inc. v. Matal*, 703 F. App'x 953, 960 (Fed. Cir. 2017) ("Beyond the claim language and specification, TransPerfect's argument before the PTO in a separate reexamination proceeding for the '022 patent on the meaning of its claimed 'said hyperlink' limitation is particularly damaging to TransPerfect's current position. In that reexamination, TransPerfect argued the exact opposite of the position it presents to us here."). The plaintiff has offered no meaningful basis for distinguishing the sense in which the term "bracket" is used in the present application compared with the meaning on which it insisted in defending the parent application. Further, the plaintiff is estopped from now urging a contrary interpretation, particularly where it prevailed in having claims upheld after advancing its own construction. *Speedtrack, Inc. v. Endeca Techs., Inc.*, 524 F. App'x 651, 658-59 (Fed. Cir. 2013).

The defendant urges that the term be limited further with the modifier "formed." But that additional description is not called for by any of the tools of construction generally used in claim construction.

The term "bracket" as used in the claims means "angle bracket."

C. "upset head" (claims 1, 10)

The parties' constructions on this point are at first glance difficult to distinguish. The plaintiff proposes the construction "permanently deformed enlarged portion at an end." The defendant proposes that the term means "a head of a pivot pin formed by deformation of the end of the pin." The plaintiff contends that the only dispositive distinction is between the grammatical form of the root word deform.

The plaintiff prefers the adjective "deformed." The defendant prefers to denote the condition as being "formed by deformation," which combines a term and its antipode in a single definition.

The plaintiff asserts that the defendant wants to construe "upset head" to lend support to its proposed construction of another term "following assembly of the hinge," which would facilitate a defense premised on the supposed distinction of the defendant's design as incorporating a pivot pin that has one head deformed before assembly of the hinge, as compared to the plaintiff's invention, which the defendant says includes a limitation that both heads are subject to deformation only after assembly. The plaintiff contends that its construction better conforms to the claim statements, which describe only a hinge design that, in its completed form, has certain features, regardless of the sequence of steps followed to achieve the assembly and manipulation (e.g., "deformation") of those parts.

The defendant points to the plain language of the claims, which state that the "upset head" is a feature consisting of "first and second ends comprising an upset head following assembly of the hinge." The defendant insists that its complementary constructions of the terms "upset head" as a head "formed" by "deformation," along with its proposed construction of the limitation "following assembly of the hinge," are the only proposals that fully incorporate the features specifically described in the claims. For this argument and its related arguments on the next term, the defendant relies entirely on the declaration of its expert engineer, which it insists is more credible than the plaintiff's proposed expert testimony, owing to the absence of any discussion of "generally accepted engineering principles" by the plaintiff's expert.

The issues in construction of the terms "upset head" and "following assembly of the hinge" are intertwined, and the parties' dueling positions are a product of the defendant's apparent attempt

to engraft onto the claims certain limitations that appear nowhere else, presumably so that its proposed construction will confine those claims on a basis that will allow its product to be distinguished.

The full context of the terms appears in the description of the "pivot pin" stated in claims 1 and 10, which reads as follows: "a pivot pin that comprises a first end, a second end, and a pivot surface positioned between the first end and the second end, each of the first and second ends comprising an upset head following assembly of the hinge." Nothing in that claim, plainly read as a whole and in the context of the entire claim and specification, mandates the adoption of the defendant's proposed construction. The defendant's construction would require the invention's upset heads to be shaped by deformation after assembly of all the hinge parts, as opposed to alternatives such as having one head deformed before assembly and the other deformed after assembly.

The parties proposed the following alternative constructions: "permanently deformed enlarged portion at an end" (plaintiff's), and "a head of a pivot pin formed by deformation of the end of the pin (defendant's). Teasing apart the elements of those overlapping proposals, neither party assigns any dispositive meaning to the qualifier "permanently," nor is there any dispute that the phrases "at an end" and "a head of a pivot pin" essentially are synonymous, or that the "head" of the pivot pin necessarily must be at one end or another of the pin.

The parties instead fixate on the grammatical form of the root word "deform," with the plaintiff preferring the adjective "deformed," and the defendant urging the noun (gerund) "deformation." There is no apparent meaningful distinction between the import of those forms when the phrase "upset head" is considered in isolation. Instead, it is apparent that the defendant urges the use of the noun "deformation" only because it wishes to engraft onto the claims a

limitation that the deformation must occur "following assembly of the hinge." But the plain language of the claim, read in context, states only that the "first and second ends compris[e] . . . upset head[s] following assembly of the hinge." Plainly, that description requires that once the assembly is completed, two upset heads will exist, one at each end of the pivot pin, with both heads of the pin being deformed. But the claim says nothing about how or in what sequence any deformation of the pins is accomplished; i.e., the invention is defined in terms of a resulting product comprising certain parts in a certain arrangement, not a particular process to achieve that end.

The specification includes various figures and process descriptions describing several alternative means of achieving deformation, none of which are incorporated explicitly into the claims or made essential to the invention. Patent at col. 3-4, ECF No. 1-1, PageID.22. Where a specification states that it describes only one or more exemplary means of embodiment of a claim, features of those particular embodiments that are not incorporated into the statements of the claims should not be imported by construction. *Continental Circuits*, 915 F.3d at 797 ("[P]hrases such as 'one technique,' 'can be carried out,' and 'a way' indicate that using Probelec XB 7081 is only one method for making the invention and does not automatically lead to finding a clear disavowal of claim scope. We have also expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.").

Moreover, the defendant's construction is an improper attempt to convert the claims to either a "product-by-process" type, or an improperly mixed class describing both a product and method of manufacture. "[T]he statutory class of invention is important in determining patentability and infringement." *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384

(Fed. Cir. 2005). That is so because claims that improperly combine classes may be held invalid as giving insufficient notice of what conduct by an imitator may violate the patent. For example, claims describing both an apparatus and a method of using it are invalid because "it is unclear whether infringement . . . occurs when one creates [the system that is described], or whether infringement occurs when [that system is used according to the described method]." *Ibid.* In this case, the defendant's proposed construction improperly attempts to import new terms to convert a purely product-focused claim into a "product-by-process" claim. *C.f.*, *Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 635 F.3d 1373, 1383 (Fed. Cir. 2011) ("Claim 14, as a product claim . . . recites structural limitations as opposed to method steps. [To properly state such a claim,] [a] patentee need only describe the product as claimed, and need not describe an unclaimed method of making the claimed product."); *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1315 (Fed. Cir. 2006) ("A product-by-process claim is one in which the product is defined at least in part in terms of the method or process by which it is made." (quotation marks omitted)). "The purpose of product-by-process claims is to allow inventors to claim an otherwise patentable product that resists definition by other than the process by which it is made." *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1315 (Fed. Cir. 2006) (quotations omitted). But "[t]he patentability of a product does not depend on its method of production." *Id.* at 1317. In this case, the claim is embodied fully by the written description that merely specifies the situation of all the required parts "following assembly of the hinge," without regard to the order in which they are introduced into the assembly.

The defendant relies solely on the testimony of its expert engineer in its attempts to construe phantom ambiguity into the claim language, which it insists must be read based on extrinsic testimony to embody a certain process. But where, as here, a complete and sensible

construction can be discerned from the intrinsic record, extrinsic sources are unhelpful. "'It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record,'" which includes primarily the specification and statement of claims within the patent itself, but which also encompasses the "prosecution history . . . including the prior art cited during the examination of the patent." *E.I. du Pont De Nemours*, 921 F.3d at 1068 (quotation marks omitted). Extrinsic evidence, like expert testimony, is [s]econdary to the intrinsic evidence," and is "less significant" and less reliable than intrinsic evidence." *Continental Circuits*, 915 F.3d at 799.

So it is here. The term "upset head" in context can be defined by reference to the intrinsic evidence as what it is — a permanently deformed enlarged portion at an end of a pivot pin — and not by how it came to be.

D. "following assembly of the hinge" (claims 1, 10)

Here again, it is difficult at first glance to discern any meaningful distinction between the plaintiff's proposed construction, "when the first component and the second component have been assembled," and the defendant's proposed, "following completed assembly of the hinge." The plaintiff contends that the sole purpose of the alternative language proposed by defendant is to support its defense that its design is distinguishable by involving deformation of one end of the pin before the hinge is assembled rather than after all parts are put together. The plaintiff again argues that its construction faithfully tracks the claim language describing only the orientation and relationship of parts in the assembly, without regard to the sequence of steps taken to produce it. The defendant insists that the plain language of the claims clearly requires that deformation of the heads must take place after the parts of the hinge have been assembled.

For the same reasons stated above, the defendant has not advanced a valid reason to import into the claims its preferred limitation specifying that the deformation of the pivot pin heads occurs

"after completed assembly" of the hinge. This is part and parcel of its attempt to convert the claim to a description embodying both product and process, in order to limit it to assemblies where the pivot pin heads are deformed only after the hinge is assembled, rather than before. But the claim does not propose any process or sequence of steps by which assembly is achieved, only the orientation and situation of components that must result.

E. "structurally connected" (all claims)

The plaintiff argues that its simpler construction "permanently joined to form a component" is consistent with a determination by a patent examiner that the term "structural connection" means, in its ordinary sense, "a means of joining the individual members of a structure to form a completed assembly." The plaintiff again contends that the defendant's construction improperly attempts to import terms found only in the specification into the claim statements, which do not describe any particular method of achieving "structural connection."

The defendant contends that its more specific construction "structurally connected by deforming the end of pivot pin into the pivot aperture" is required by descriptions in the specification that clearly call out that the "connection" must be made by some form of "material upset," including as exemplary means "riveting," "knurling," and "staking." The defendant again relies exclusively on the testimony of its expert for the proposition that the invention would be understood by the relevant POSITA as involving a "structural connection" achieved by some sort of material deformation which, based on the figures included in the patent, must involve both the pivot pin head and the pivot pin aperture, in order to create a solid connection between the two otherwise disconnected brackets, solely by means of the pivot pin spanning them.

The dispute over this term is resolved by consulting the intrinsic record, where the examiner explicitly adopted a construction consistent with the plaintiff's proposal. That construction does not include any specification of the precise means of attachment as urged by the

defendant. In a statement of reasons for allowance of claims 1 through 21 issued on August 24, 2018, the patent examiner adopted a proposed definition of "structurally connected," which had been offered by the plaintiff in its appeal of a prior denial of certain claims. The examiner noted:

> Examiner will accept the definition provided by the Applicant for what constitutes a "structurally connected" joint between the pivot pin and the first and second brackets ("a connection serving to join the individual components of a structure, to ensure the reliability of the structure, and to provide for the proper functioning of the structure as a whole in accord with the requirements of use and assembly") such that the function of ". . . to form an assembly to be mounted as a whole . . ." can be adequately performed.

Notice of Reasons for Allowance dated August 24, 2018, ECF No. 26-8, PageID.374. The plaintiff's terse construction "permanently joined to form a component" tracks that accepted definition, and nothing in the prosecution history suggests the more elaborate limitation urged by the defendant, nor are any such limitations stated in the claims. The Court need not — and may not — look beyond the intrinsic evidence to discern indefiniteness in the term where the question is settled by the intrinsic record. *Ruckus Wireless*, 824 F.3d at 1003 ("Legal error arises when a court relies on extrinsic evidence that contradicts the intrinsic record."); *Mynette Techs., Inc. v. United States*, 139 Fed. Cl. 336, 348 (2018) ("What is disapproved of is an attempt to use extrinsic evidence to arrive at a claim construction that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.") (quotations omitted). And it is well settled that "[t]he person of ordinary skill in the art views the claim term *in the light of the entire intrinsic record*." *Nystrom v. TREX Co.*, 424 F.3d 1136, 1142 (Fed. Cir. 2005) (emphasis added).

Here again, the defendant relies entirely on the extrinsic testimony of its expert in an attempt to impose a narrower construction based on a particular embodiment or method of connection, but that extrinsic testimony is irrelevant where the construction proposed by the plaintiff is sustained by the intrinsic record.

IV.

For the reasons stated above, the Court adopts the constructions of the claim terms agreed to by the parties. The Court determines that the disputed claim terms shall have the construction discussed above.

Accordingly, it is **ORDERED** that the following disputed terms in the '646 patent are construed as follows:

A. "Separate" is construed to mean "identifiable as distinct";

B. "Spaced apart" is construed to mean "having a gap in between";

C. "Bracket" is construed to mean "angle bracket";

D. "Upset head" is construed to mean "permanently deformed enlarged portion at an end";

E. "Following assembly of the hinge" is construed to mean "when the first component and the second component have been assembled"; and

F. "Structurally connected" is construed to mean "permanently joined to form a component."

The jury will be instructed accordingly.

s/David M. Lawson
DAVID M. LAWSON
United States District Judge

Dated: October 14, 2020