UNITED STATES DISTRICT COURT
DISTRICT OF DELAWARE

No. 1:24-cv-00507

Smart Denture Conversions, LLC,
Plaintiff,
v.
Straumann USA, LLC,
Defendant.

OPINION AND ORDER

Before the court is defendant's motion to dismiss for failure to state a claim. Doc. 12. The motion turns on a single issue: whether claims 1 and 9 of the patent in suit impermissibly claim both apparatus components and method steps. For the reasons set forth below, defendant's motion is denied.

I. Background

Smart Denture Conversions, LLC, owns by assignment U.S. Patent No. 11,937,992, a patent claiming technology used to convert temporary dentures into a fixed prosthesis. The technology consists of a "temporary screw" that breaks away when the two objects it holds together are pulled apart. Those two objects are (1) an "implant abutment," a small cylindrical piece implanted in the gums that has female threads to receive the temporary screw; and (2) a "coping," the piece that ultimately connects the denture to the implant abutment and thus the gums.

A dentist who is using the technology would first screw the copings into the implant abutments using the temporary screws. Then, the dentist would set the dentures on the jaw with bonding material so that the copings become bonded to the dentures. Once bonded, the dentures would be pulled away from the gums—a motion called the "pick-up process." The temporary screws release, thereby allowing the copings to remain bonded to the dentures and the implant abutments to remain implanted in the jaw. The purpose of all this is to align the dentures, copings, and implant

abutments precisely. The dentures could then be permanently affixed to the jaw by running "definitive screws" through the teeth of the dentures, through the copings, and into the implant abutments.

The '992 patent consists of 12 claims. Independent claims 1 and 9 are the claims at issue. Defendant argues that these claims contain impermissible method-step language lodged in an apparatus claim. Those claims, in part, follow (with the language at issue in bold):

> **1**. A dental system comprising:
>
> an implant abutment having threads;
>
> a definitive screw . . . ;
>
> a coping . . . ; and
>
> a temporary screw . . .
>
> wherein the temporary screw is rotatable in a distal direction whereby the distal shaft portion of the temporary screw engages the threads of the implant abutment to a predetermined torque which causes the proximal head portion of the temporary screw to hold the coping in alignment with the implant abutment, and **wherein an axial force in a proximal direction from pick-up processing releases the coping and the temporary screw from the implant abutment**.
>
> **9**. A dental system for attachment of a coping to a threaded implant abutment comprising:
>
> an implant abutment . . . ;
>
> a definitive screw . . . ;
>
> a coping . . . ; and
>
> a temporary screw . . . ,
>
> wherein the temporary screw holds the coping in position against the implant abutment for pick-up processing, wherein the male threading of the post of the temporary screw is configured to enter the implant abutment and rotatably engage the the [sic] female threading of the implant abutment to a predetermined pick-up processing torque, and **wherein threads of the male threading of the post release from threads of the female threading**

> **of the implant abutment with a predetermined axial pick-up force in a proximal direction in response to and/or during pick-up processing**.

Doc. 1-1 at 25:36–64, 26:34–27:2. Claims 2–8 depend on claim 1. *See id.* at 25:65–26:33. Claims 10–12 depend on claim 9. *See id.* at 27:3–16.

Plaintiff brought this action against defendant alleging that defendant's NeoConvert system uses plaintiff's patented technology. Doc. 1 at 6. Defendant moved to dismiss for failure to state a claim, Doc. 12, arguing that the patents are indefinite as a matter of law and thus invalid. The patents are invalid, defendant maintains, because claims 1 and 9 cover both apparatus components and method steps (the bold text). Doc. 13 at 12–15. Plaintiff responds that the provisions in bold merely recite functional capabilities of the temporary screws—that they are capable of releasing when axial force is applied, not that infringement requires the actual releasing. Doc. 15 at 12–19. The court heard argument on the motion on November 13, 2024, and now decides it.

II. Analysis

As mentioned above, this motion raises the sole issue whether the "release[]" language in claims 1 and 9 means the capability to release or the event of releasing upon application of an axial force. If it means the event of releasing upon the user's application of force, then the claims are indefinite as a matter of law.

The definiteness requirement for patent validity comes from 35 U.S.C. § 112(b), which provides: "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention." The Supreme Court has articulated the standard—a patent's claims must, "viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014).

A patent claim is indefinite if it combines two different statutory classes of invention—such as combining a "machine" with a "process." 35 U.S.C. § 101.[1] "[A]s a result of the combination of two separate statutory classes of invention, a manufacturer or seller of the claimed apparatus would not know from the claim whether it might also be liable for contributory infringement because a buyer or user of the apparatus later performs the claimed method of using the apparatus." *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005).

In *IPXL*, for example, the invention was a system for storing users' financial information. The patent contained the limitation "wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and *the user uses the input means* to either change the predicted transaction information or accept the displayed transaction type and transaction parameters." *Id.* The court found the claim to be indefinite because it recited "both a system and the method for using that system." *Id.* Similarly, the Federal Circuit found indefinite three claims reciting a system with an "interface means for providing automated voice messages . . . to certain of said individual callers, *wherein said certain of said individual callers digitally enter data*." *In re Katz Interactive Call Processing Pat. Litig.*, 639 F.3d 1303, 1318 (Fed. Cir. 2011) (emphasis added). In both of these cases, claiming both the system and the user's action rendered the claims invalid.

However, a claim can recite an apparatus and describe that apparatus's functional capabilities using verbs. That is, a claim is not indefinite for describing the invention as a *thing* that *does x*. Because capabilities are about what actions a thing can do, using verbs is a natural way of describing the thing's capabilities.

[1] "Method" and "process" mean the same thing. *See* 35 U.S.C. § 100(b) ("The term 'process' means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.").

For example, the Federal Circuit found that the following language did not describe method steps:

> [a] system comprising: . . . . a reporting module . . . . wherein the reporting module installed within the CRM software application *presents* a set of user-selectable database fields as a function of the selected report template, *receives from the user a selection* of one or more of the user-selectable database fields, and *generates* a database query as a function of the user selected database fields . . . .

MasterMine Software, Inc. v. Microsoft Corp., 874 F.3d 1307, 1315 (Fed. Cir. 2017) (quotation marks omitted). Unlike the claims in *IPXL* and *Katz*—which "focus on specific actions performed by the user"—the court found the claim in *MasterMine* to "focus on the capabilities of the system." *Id.* at 1316.

MasterMine shows that the mere reference to a user's action does not constitute a method step. A reporting module that "receives from the user" a selection is simply a reporting module with a capability—not a reporting module and an event. Another case, this one from the District of Delaware, further illustrates this principle. *See Arthrodesis Tech. LLC v. Wright Med. Tech.*, No. 1:21-cv-00011, 2022 WL 3700901 (D. Del. Aug. 26, 2022). The claims at issue in *Arthrodesis* were "a jig base component *which will be positioned* adjacent to a bottom surface of a patient's heel during a surgical operation" and "a jig arm component *which will be positioned* roughly parallel to a patient's tibia bone during a surgical operation." *Id.* at *7 (emphases added). Even though it is the *user* who would position the jig base and arm components, the court found the claims to "describe the structure of the claimed alignment jig." *Id.* Note also the future tense. The claims were not about the act of positioning the jig components—they were about jig components that would be positioned *during* some future event. In other words, they were about jig components that had to be capable of such positioning.

Now back to the present case. Recall that claim 1 of the '992 patent recites a dental system "wherein an axial force . . . releases

the coping and the temporary screw." Doc. 1-1 at 25:63–64. Claim 9 recites a dental system "wherein threads of the male threading . . . release from threads of the female threading . . . with a predetermined axial pick-up force . . . in response to and/or during pick-up processing." *Id.* at 26:65–27:2. Although they contain verbs and the technology claimed requires user action in practice, these claims recite functional capabilities of the apparatuses—not method steps. Several reasons follow.

First, the claims' structure indicates that they claim apparatuses with capability limitations. Claims 1 and 9 both have similar structures, summarized here:

- A dental system comprising:
    - four components, each having certain characteristics,
    - wherein the temporary screw does certain things.

Both claims have one paragraph that begins with "wherein," but both of those "wherein" paragraphs actually have multiple clauses beginning with "wherein." *See supra* pp. 2–3. The language at issue is in the final "wherein" clause of each claim. The other "wherein" clauses in the same paragraphs, therefore, may be helpful in determining whether the final "wherein" clauses contain functional limitations or method steps. *See Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("a claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent").

In claim 1's "wherein" paragraph, the first "wherein" clause—the only other one besides the one at issue—says, "wherein the temporary screw is rotatable in a distal direction." This unambiguously refers to a functional capability of the temporary screw. Defendant agrees. *See* Doc. 13 at 18 (quoting that language and then saying, "*i.e.* that the temporary screw is capable of being rotated in a distal direction"). Although that first "wherein" clause goes on to say, "whereby the distal shaft portion of the temporary screw *engages* the threads of the implant abutment," defendant does not argue that the "engages" verb relates

to the act of engaging rather than the capability to engage. Nor could it—the "engages" language simply describes the way in which the temporary screw is rotatable. Thus, the other "wherein" clause in claim 1's final paragraph plainly describes a capability of the temporary screw; this is strong evidence that the "wherein" clause at issue does the same.

Claim 9's "wherein" paragraph has two other "wherein" clauses. The first says, "wherein the temporary screw holds the coping in position against the implant abutment for pick-up processing." Defendant does not argue that the "holds" verb indicates that this is a method step. That is because it is description of the screw's function—as a cup holds liquid or a paperclip holds papers together. The second "wherein" clause of that paragraph is even clearer: "wherein the male threading of the post of the temporary screw is configured to enter the implant abutment." Again, defendant agrees that "configured to" "plainly" constitutes capability language. *See id.* (citing "configured to" language earlier in claim 1). Therefore, the three other "wherein" clauses in claim 1's and claim 9's "wherein" paragraphs recite functional capabilities. [2] So too do the "wherein" clauses at issue.

Second, the language at issue in claims 1 and 9 does not reference a user. It is not the user that "releases" the temporary screw—it is the axial force. Of course, the user is the one applying the axial force. But the inquiry is not whether user action is required to make the invention work. If every claim reciting an apparatus that required user action were invalid for indefiniteness, then the claims at issue in *MasterMine* would have been invalid for

[2] Both claims 1 and 9 have other "wherein" clauses. They come before the "wherein" paragraphs. Doc. 1-1 at 25:44–46 ("wherein the aperture is larger than the distal post portion of the definitive screw"); *id.* at 26:41–43 ("wherein the male threading has a male threading profile that matably threadably engages and which matches the female threading"); *id.* at 26:51–56 ("wherein the male threading has a male threading profile that is different from the male threading profile of the shaft of the definitive screw, and wherein the aperture of the coping is sized and configured to allow the post to pass through"); *id.* 26:57–58 ("wherein the head is integral to or coupled to the post"). These are also about the apparatuses' capabilities.

indefiniteness. *See MasterMine*, 874 F.3d at 1315 ("wherein the reporting module . . . *receives from the user a selection*"). They were not.

The inquiry instead is the *focus* on user action. In both *Katz* and *IPXL*, the claims explicitly said that a person was actively doing something. *See Katz*, 639 F.3d at 1318 ("wherein *said certain of said individual callers digitally enter data*") (emphasis added); *IPXL*, 430 F.3d at 1384 ("wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and *the user uses the input means*"). Unlike those cases, and like *MasterMine*, the language at issue here only implies user action—it does not explicitly refer to it.

Third, claim 9 speaks of a future event. Like the claims in *Arthrodesis*—which said how the jigs would be positioned "*during* a surgical operation"—claim 9 says what the male threads do "in response to and/or *during* pick-up processing." *Compare Arthrodesis*, 2022 WL 3700901, at *7 (emphasis added), *with* Doc. 1-1 at 26:65–27:2 (emphasis added). Pick-up processing is happening in the future. Defendant argues the opposite—that this case is distinct from *Arthrodesis* because the claims here speak in the present tense. *See* Doc. 16 at 11. To be sure, the *verbs* here ("release[s]") are in the present tense. But that does not mean that the claims describe pick-up processing as happening presently and, thus, being required for infringement. Consider language used earlier in this paragraph: "Pick-up processing is happening in the future." That sentence uses the present-tense verb "is" but speaks of a future event. Claim 9 does the same thing when it says, "release . . . in response to and/or during pick-up processing." The claim does not recite the present act of pick-up processing; it recites what pick-up processing will cause, and therefore what functional characteristic the technology must have to infringe the patent.

Although the reason given above applies only to claim 9, the first two reasons given are sufficient to support the conclusion

that both claims 1 and 9 claim apparatuses with functional-capability limitations—not method steps. Below, defendant's remaining arguments are addressed.

Defendant argues that the language in claims 1 and 9 that unambiguously refers to functional capabilities shows that the drafters knew how to differentiate between functional capabilities and method steps. Doc. 13 at 18. For example, as mentioned above, claim 1 says elsewhere that the definitive screw has threads "configured to engage," that the temporary screw "is rotatable," and that the temporary screw is "is capable of being rotated." *See id.* However, that does not mean that language using a verb to describe a cause and effect—axial force causing a screw to release—is not capability language. There is a good reason the drafter may have chosen to use the action verb instead of a word ending in "able": the screw is not merely able to release upon axial force. It *does* release whenever the requisite force is applied. That describes a functional characteristic to no lesser effect than "able" language.

That argument is further undermined by the fact that the drafter of the patent evidently knew the difference between a system and a method claim. The title of the patent is "Screw-Attached Pick-Up Dental Coping System and Methods." Doc. 1-1 at 2. And the abstract describes a "temporary alignment system and method." If the drafter were trying to claim a system and a method, one would not expect them to have drafted both claims 1 and 9 simply to claim "[a] dental *system* comprising" certain features, without including the word "method." Similarly, one would not expect all of the dependent claims to begin with "[t]he dental system of claim 1" or "[t]he dental system of claim 9." Doc. 1-1 at 25:36–27:16. The drafter intended to claim a system—an apparatus—and chose appropriate language to that end.[3]

[3] Defendant argues that the method and process language in the specification actually shows that the drafter intended the final "wherein" clauses of claims 1 and 9 to refer to method steps. *See* Doc. 16 at 5–7. However, as plaintiff's counsel pointed out at the hearing on this motion, the drafter likely

Defendant also points to a District of Delaware case in which the court found the claims to be indefinite, *Courtesy Prods., L.L.C. v. Hamilton Beach Brands, Inc.*, No. 1:13-cv-02012, 2015 WL 7295436 (D. Del. Nov. 18, 2015), arguing that it is analogous to this case. The invention at issue in that case was a beverage brewing system. The claims included language such as "the brewing machine heating water from the water reservoir," "the brew baskets being inserted into the location in the beverage brewing machine," and "the brew baskets being individually inserted into the location during an associated brewing operation." *Id.* at *4–5. The court found that language to be impermissible method language.

However, that decision does not have precedential effect. *See Threadgill v. Armstrong World Indus., Inc.*, 928 F.2d 1366, 1371 (3d Cir. 1991) ("The doctrine of *stare decisis* does not compel one district judge to follow the decision of another."). At most it may be persuasive. Even still, it is distinguishable: the claims at issue in *Hamilton Beach* did not speak in terms of cause and effect. They merely recited the "being inserted" and the "heating water." The claims at issue in the present case, however, speak of "releas[ing]" because of axial force at pick-up processing. That is, the apparatus responds in a certain way to a stimulus because of the apparatus's functional characteristics. The claims therefore do not recite method steps, notwithstanding the decision in *Hamilton Beach*.

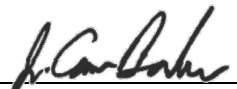
III. Conclusion

For the reasons given, the court holds that claim 1 and claim 9 of the '992 patent do not impermissibly claim both apparatus components and method steps. Accordingly, the court denies defendant's motion to dismiss for failure to state a claim (Doc. 12). An order setting Rule 26 deadlines will follow this order.

---

included that language as a basis for a potential continuing application including method claims. *See generally Transco Prod. Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 555–56 (Fed. Cir. 1994) (describing continuing applications).

So ordered by the court on December 12, 2024.



J. CAMPBELL BARKER
United States District Judge