

United States District Court,
D. Minnesota.

Robert W. HASEL and ABCO Research LLC,
Plaintiffs.

v.
PULPDENT CORPORATION, a Massachusetts corporation,
Defendant.

Civil No. 01-2008(DSD/FLN)

Aug. 12, 2003.

Ronald J. Brown, Esq., Christopher A. Young, Esq., Dorsey & Whitney, Minneapolis, MN, Theresa K. Hanks, Esq., Dorsey & Whitney, San Francisco, CA, for plaintiffs.

William H. Lee, Esq., Fredda Hollander, Esq., Lee & Hollander, Boston, MA, David A. Davenport, Esq., Winthrop & Weinstine, Minneapolis, MN, for defendant.

ORDER

DAVID S. DOTY, District Judge.

This matter is before the court upon the motions of plaintiffs Robert W. Hasel ("Hasel") and ABCO Research LLC ("ABCO") and defendant Pulpdent Corporation ("Pulpdent") for construction of claims within the patents that are the subject matter of the present suit. FN1 The court conducted a hearing on the motions on August 11, 2003 in accordance with the requirements set forth in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978-81 (Fed.Cir.1995).

FN1. The patents in suit are U.S. Patent Number 5,944,527 (issued August 31, 1999) ("527") and U.S. Patent Number 6,315,567 (issued November 13, 2001) ("567").

DISCUSSION

Claim construction is a question of law for the court. *See Vivid Technologies, Inc. v. American Science and Engineering, Inc.*, 200 F.3d 795, 804 (Fed.Cir.1999). Claims are to be construed on the basis of the language of the claims, the patent specification and the prosecution history. *See Gart v. Logitech, Inc.*, 254 F.3d 1334, 1339-40 (Fed.Cir.2001). While the court may consider extrinsic evidence in construing claims, such evidence may not be used to vary the meaning of the claim in light of the patent taken as a whole. *See U.S. Industrial Chemicals, Inc. v. Carbide & Carbon Chemicals Corp.*, 315 U.S. 668, 678 (1942); *Markman*, 52 F.3d at 979.

Having carefully considered the language of the patent claims, the language of the patent specifications, the prosecution histories of the patents and the submissions of the parties, the court defines the disputed terms as described below.

A. "Will Not Run"

Plaintiffs argue that the term "will not run" as used in the patents in suit means that the composition will not flow or drip out of a hollow in the tooth within a clinically significant time. Defendant contends that there is no time limit expressed in the patents in suit and therefore the term should be construed without limitation to a clinically significant period of time.

Both the '567 and the '527 patent use and define the expression "will not run" in reference to the restorative composition which is the subject of the patents. In both patents, certain of the claims call for a restorative composition of sufficient post-application viscosity that it will not run "after application to the hollow of the tooth and before said composition is cured." ('527 at col. 14, claims 7 and 27; *see also* '567 at cols. 13-14, claims 5, 8, 15 and 17.) Similarly, the specifications of each patent describe a composition that "will not run (i.e., flow or drip out of the hollow under gravity)." ('527 at col. 3, lines 35-36; '567 at col. 3, line 40.) The specifications also indicate that the composition will flow within the hollow to fill small crevices and corners. (*See* '527 at col. 3, lines 32-33; '567 at col. 3, lines 37-8.)

By their express language, the claims state that the composition will not run between application and light curing. The court finds that "within a clinically significant time" fairly captures the meaning of that durational limitation, which is explicit in the claims and implicit in the specifications. Therefore, the jury will be instructed that the definition of the term "will not run," as used in the patents in suit, means that the composition does not flow or drip out of the hollow in the tooth within a clinically significant time.

B. "Restorative Composition"

Plaintiffs contend that the phrase "restorative composition," which appears in numerous claims in each of the patents in suit, is a composition that puts a tooth back in its original condition by filling a cavity or void with sufficiently durable material. Plaintiffs further argue that as used in the patents in suit, a restorative composition is not a sealant, liner or base applied to the surface of the tooth. Defendant asserts that the patent specifications indicate that the claims are not so limited and the term includes sealants, glazes and adhesives.

The court disagrees with defendant's characterization of the phrase in question. While the specifications do note the existence of restorative composite materials used for those purposes, it cites examples of such uses disclosed in other patents. Neither the claims nor the specifications in either patent purport to reach such uses.

Further, unless the claim language, specification or prosecution history clearly show a different intended meaning, patent language must be construed according to its ordinary usage and meaning. *See* Carroll Touch, Inc. v. Electro Mechanical Sys., Inc., 15 F.3d 1573, 1577 (Fed.Cir.1993). Plaintiffs cite several dental and medical dictionaries defining restoratives as replacing missing, damaged or diseased parts of teeth. Such sources are persuasive evidence of the ordinary meaning of terms as used in the field unless the language of the patents clearly manifests a different meaning. *See* Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202 (Fed.Cir.2002). In this case it does not.

Finally, because the applicant repeatedly distinguished the patented process and material from sealants, liners and bases during the prosecution of the patent, it is clear that the claims utilizing the term "restorative composition" do not reach such uses. Therefore, the court construes the phrase "restorative composition" as used in the patents in suit as a suitably durable mixture used to fill a cavity or void, or to replace a damaged, diseased or missing portion of a tooth.

C. "Syringe," "Applicator," "Syringe-type Applicator"

Plaintiffs urge that these terms are used interchangeably and represent a device capable of storing, delivering and shaping a restorative composition. Plaintiffs further contend that as used in the patents in suit, the terms refer to a device similar to a hypodermic needle, consisting of a plunger to force the composition out of the applicator, a barrel to store the composition which has a small opening to which a relatively small needle is affixed and through which the composition is applied and which is capable of shaping and manipulating the applied restorative composition. Defendant urges a broader reading of the claims, arguing that the storage requirement has no durational requirement, that the shaping requirement is a side effect of the claims rather than a limitation expressed by the claims and that the patent acknowledges that "applicator" has a broader meaning than "syringe."

The court again disagrees with defendant's characterization and finds that the terms "syringe," "applicator" and "syringe-type applicator" are limited in the claims, specifications and file histories. Although Example 6 of the '527 patent recognizes that,

instead of using a syringes [sic], other means of forcing a thixotropic composition through a needle-type lumen can be used. Also, instead of a constant diameter [sic] hypodermic needle like instrument, an instrument with a small diameter needle-like tube at an end thereof for position of the composition may be used

(527 at col. 12 lines 51-56), the claimed invention is differentiated from the prior art by the thixotropic nature of the composite material, which allows the composite to flow through a much smaller lumen than contemplated for restorative applications by the prior art. FN2 The patents in suit do allow for possible future modifications of the applicator device that nonetheless remain within the spirit of the invention. However, the limitations of storage, delivery and shaping are not abandoned, nor is the requirement that the method allow delivery through, and shaping by, a small bore needle or tube relinquished. Therefore, the court finds that the terms "syringe," "applicator" and "syringe-type applicator" describe a device capable of storing a restorative composition, delivering that composition directly into a cavity, hollow or void on a tooth and shaping the restorative composite consistently with the planar surface of the tooth. That device must also have the characteristics of a plunger or other similar mechanism capable of creating sufficient force or sneer stress to move the composition from a barrel or other storage compartment through a needle or tube that is small enough to permit direct application of the composition inside a cavity, void or hollow in a tooth and which is sufficiently rigid to permit shaping of the composition after application to the tooth.

FN2. While prior art references may indicate application of other flowable composites of relatively low viscosity, such as sealants, bases and liners, through needle-like applicators, the court has determined that the processes claimed in the patents in suit are limited to restorative composites and exclude sealants, bases and liners. (See Section B, *infra*.)

D. "Thixotropic Composition"

Consistent with its construction of the term "thixotropic composition" in its order of May 20, 2003 [Doc. No. 84], the court will instruct the jury that, as used in the patents in suit, "thixotropic composition" refers to a restorative composition that changes viscosity when placed under pressure, returns to its original viscosity after the pressure is relieved and is of sufficiently high viscosity that it stays in place until cured.

E. Other Terms Defined

By stipulation of the parties and upon further consideration by the court, the following terms will be defined for the jury as follows:

F. "Hollow"

A void area or cavity that results after a tooth has been prepared to receive a restorative by a cutting or abrasive tool such as a dental bur.

G. "Cavity"

A hole in a tooth that is the result of the removal of tooth structure.

H. "Needle"

A needle is a slender, hollow, stiff instrument that may be straight, curved or bent, with or without a sharp point.

I. "Lumen"

The bore of a needle.

J. "Thixotropic Agent"

An agent that confers thixotropic properties on the restorative composition.

K. "Dab"

The specifications of the patents in suit equate drops, dabs and beads.

L. "Desired Shape on the Tooth"

A restoration where the hollow has been completely filled so that the outermost layer of the restorative material conforms to the desired shape-typically the shape of the tooth.

CONCLUSION

Accordingly, **IT IS HEREBY ORDERED** that:

1. Plaintiffs' motion for certain claim construction and definition of terms [Doc. No. 104] is granted in part and denied in part.

2. Defendant's motion for certain claim construction and definition of terms [Doc. No. 114] is denied.

3. The claims are construed and the terms in question are defined as a matter of law in accordance with the foregoing.

D.Minn.,2003.

Hasel v. Pulpdent Corp.

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