

X-RITE, INC.,
Plaintiff,
v.
ACCUDENT PTY LTD.,
Defendant.

Plaintiff X-Rite, Inc. filed this action seeking a declaratory judgment that its dental vision system does not infringe United States Patent No. 5,177,694 ("‘694 patent"), and that the ‘694 patent is invalid. Accudent Pty Ltd. ("Accudent"), owner of the ‘694 patent, filed a counterclaim alleging that X-Rite’s dental vision system infringes the ‘694 patent. A Memorandum Opinion on Claim Construction and Order ("Claim Construction Order") was issued in accordance with Markman v. Westview Instruments Inc., 517 U.S. 370 (1996), construing the disputed claim language. Accudent now moves for summary judgment on the issue of validity of the ‘694 patent, and for summary judgment of literal infringement and infringement under the doctrine of equivalents. X-Rite has moved for summary judgment of non-infringement and to strike a portion Accudent’s reply in support of its motion for summary judgment of patent infringement. Because X-Rite’s accused device does not contain a

"reference set of colors," not each and every limitation of the '694 patent is literally present in X-Rite's accused device, and X-Rite's accused device cannot literally infringe the '694 patent. Because the single-color beige reference strip of X-Rite's accused dental vision system cannot be used to perform a central function of the '694 patent, infringement under the doctrine of equivalents is precluded as a matter of law. X-Rite's motion for summary judgment of non-infringement will be granted, and Accudent's motion for summary judgment of infringement will be denied. Because X-Rite will not dispute the '694 patent's validity if its motion for summary judgment of non-infringement is granted, Accudent's motion for a declaration that the '694 patent is valid will be denied as moot. X-Rite's motion to strike will be denied.

BACKGROUND

Accudent is a company existing under the laws of Australia and is the owner of the '694 patent. The '694 patent claims a method and apparatus for computerized color matching that seeks to solve the problem of tooth-color mismatching faced by dentists and dental technicians when preparing dental caps, crowns or bridge work. See '694 patent, col. 1:12-15. Color mismatching occurs, among other reasons, because "the dentist and the technician are most likely to have different colour perceptions of the colours under a standard reference light, let alone under

different lights" and "some of the standard shades are very similar and therefore difficult to separate by eye." Id. at col. 1:19-39. Prior to the '694 patent, color matching of a dental patient's tooth with the dental implant was "subjective and the results very much dependent on the skills of the person doing the colour matching." Id. at col. 1:16-18. However, in contrast to the prior art, the computerized color matching system of the '694 patent accomplishes color matching by first photographing the tooth or dental piece adjacent to a reference set of colors. Id. at col. 2:7-10. The photographed reference set of colors is then analyzed and compared with an absolute reference set of colors, and a compensation factor is calculated by a computer and applied to the colors captured on the tooth to produce a corrected picture of the tooth. Id. at col. 2:11-23. This corrected picture, then, makes it more likely that an accurate color match will be made between the tooth and any new dental work, notwithstanding different illuminations when the picture of the tooth is taken and the color match actually is performed.

Specifically, claim 1 of the '694 patent claims:

1. A method of computerized colour matching of a first article with one or more other articles which the first article may be, associated, the method including the steps of:
 placing a strip displaying a reference set of colours adjacent the associated articles;

taking a photograph of the associated articles and the reference set of colours;
analyzing the colour data from the photograph; and
generating a colour map and/or computer enhanced photograph, of the associated articles, using a computer, the colour map and/or enhanced photograph identifying the colour(s) of the associated articles relative to an absolute set of colours.

'694 patent, col. 6:19-32. Claim 5 of the '694 patent claims:

5. An apparatus for effecting the computerized colour matching of a first article against one or more articles with which the first article may be associated, the apparatus including:

means to support a strip displaying a reference set of colours adjacent the associated articles;

reference light means to illuminate the associated articles and the reference set of colours;

still video camera means to photograph the associated articles and the reference set of colours in machine readable form;

computer means to analyze the reference set of colours against an absolute set of colours, to calculate a compensation factor to compensate for the difference between the reference set and absolute set of colours and to produce a corrected picture where the colours of the associated articles have been corrected by the compensation factor; and

output means to generate a colour map and/or enhanced photograph identifying the colour(s) of the associated articles relative to the absolute set of colours.

Generally, then, the patented method proceeds by (1) comparing the values of a reference set of colors with those of the absolute set of colors; (2) calculating a compensation factor that takes into account differences in illumination; (3) applying that compensation factor to the values for the color (or colors)

of the article that is to be color-matched; and (4) determining the matching color (or colors) from the absolute set of colors for the article and producing a color-coded map or an enhanced photograph with that color (or those colors). The apparatus of claim 5 implements the method of claim 1.

X-Rite is a company existing under the laws of Michigan and sells and manufactures dental vision systems. X-Rite's accused dental vision system is described accurately in X-Rite's international patent application under the Patent Cooperation Treaty ("PCT patent application"). (See X-Rite's Mem. in Supp. of Mot. for Summ. J. Non-Infringement ("X-Rite's Mot. for Summ. J. Non-Infringement") at 14; Accudent's Mem. in Supp. Mot. Summ. J. Infringement ("Accudent's Mot. Summ. J. Infringement") at 1-2.) According to X-Rite's PCT patent application, X-Rite's accused device uses (1) searchlight illumination to illuminate uniformly a tooth or article with constant irradiance, (2) colorimetric imaging of the tooth or article involving multiple time-separated measurements of specific ranges of bandwidths of light, (3) a multi-functional sanitary shield which includes a beige reference strip that is included in images collected of the tooth or article, (4) a display for the optical measurement instrument so that the operator may collect the exact image intended, (5) a sealed housing for the optical measurement instrument to facilitate cleanup and (6) a comparison of the

optical characteristics of the tooth or article to be matched and the matching prosthesis. (See Accudent's Mot. for Summ. J. Infringement, Ex. D, X-Rite's PCT Patent Application at 8-13.) The beige reference strip's optical characteristics are measured during instrument calibration and compared to the later values measured during optical measurement of the tooth or article in order to detect difference in illumination. (Id. at 11.) The parties' motions for summary judgment regarding infringement revolve around this single-color beige reference strip.

A Claim Construction Order was issued construing the disputed claim language of the '694 patent, including "set" and "color" from the claim language "reference set of colors." In the '694 patent, set denotes "a group of two or more articles grouped together according to a system of classification" and color means a "particular hue or tint being one of the constituents into which white or colorless light can be decomposed, the series of which constitutes the spectrum; also any mixture of these" as well as "the quality or attribute in virtue of which objects present different appearances to the eye." Claim Construction Order at 2, 24. In addition, the Claim Construction Order noted that "[a]s is recited in Claim 1 of the '694 Patent, the end goal of the color-matching system [of the '694 patent] is to generate a 'colour map and/or enhanced photograph identifying the colour(s) of the associated articles

relative to an absolute set of colour(s)' so that an objective color-match can be made. . . . [And c]omparing an article's colors against that of an absolute reference set with a single color would result in a binary match or no-match result, effectively eviscerating the purpose of the patent." Claim Construction Order at 16, 18-19 (quoting '694 patent, col. 6:30-32) (footnote omitted).

Accudent now moves for summary judgment of validity of the '694 patent and of literal infringement and infringement under the doctrine of equivalents by X-Rite's accused device. X-Rite opposes these motions and moves for summary judgment of literal non-infringement and non-infringement under the doctrine of equivalents. X-Rite also moved to strike a portion of Accudent's reply in support of its motion for summary judgment of infringement.

DISCUSSION

Summary judgment is proper "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c).

I. INFRINGEMENT

A. Literal

"[L]iteral infringement requires that each and every limitation set forth in a claim appear in an accused product." Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Intern., Inc., 389 F.3d 1370, 1378 (Fed. Cir. 2004).

X-Rite argues that its accused device cannot literally infringe the '694 patent because no "reference set of colors" is placed adjacent to the tooth or article to be photographed. (See X-Rite's Mot. for Summ. J. Non-Infringement at 20.) Rather, in X-Rite's device a single-color beige strip is placed in the field of view of the tooth or article. (Id.) Accudent counters that the single-color beige strip is a "reference set of colors" because "[t]he X-Rite system does not measure the white light (or the 'beige' light) reflected from its reference color strips. Instead, it separately measures red, green and blue constituent light into which that white light is decomposed . . . [with] three different color filters, and separate measurements of the reflected light are made for each of the three different color filters through which the light passes." (Accudent's Opp'n to Mot. for Summ. J. Non-infringement at 3-4.) Essentially, Accudent argues that the single-color beige strip literally is a number of different colors.

Accudent's argument is unpersuasive, and in any event, ignores both definitions for color included in the Claim Construction Order. The single-color beige reference strip of X-Rite's accused device is just that, a single-color strip, and therefore cannot be a "reference set of colors" that contains two or more colors. In the '694 patent, color means a "*particular* hue or tint being one of the constituents into which white or colorless light can be decomposed, the series of which constitutes the spectrum; also any mixture of these" as well as "the quality or attribute in virtue of which objects present different appearances to the eye." Claim Construction Order at 2, 24 (emphasis added). Accudent's analysis, taken to its logical end, means no single color ever could exist. This is contrary to the first definition of color, namely, a particular hue or tint. Moreover, the second definition of color defines the eye as the appropriate sensor to judge the color displayed, and there is no dispute that X-Rite's strip appears anything but beige to the naked eye. Accudent's arguments essentially amount to reconstruing the claims of the '694 patent. Accordingly, X-Rite's accused device does not literally infringe the '694 patent.

B. Doctrine of equivalents

Under the doctrine of equivalents, an accused device "that does not literally infringe upon the express terms of a patent

claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused [device] and the claimed elements of the patented invention." Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997). "The determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact." Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed. Cir. 2001). "Summary judgment on the issue of infringement is proper when no reasonable jury could find that every limitation recited in a properly construed claim either is or is not found in the accused device either literally or under the doctrine of equivalents." PC Connector Solutions LLC v. SmartDisk Corp., 406 F.3d 1359, 1364 (Fed. Cir. 2005). An accused device that does not perform a central function of a patent "could rarely, if ever, be considered to be insubstantially changed from the claimed invention." Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc., 212 F.3d 1377, 1382 (Fed. Cir. 2000).

X-Rite argues that infringement under the doctrine of equivalents is unavailable as a matter of law to Accudent because "the single beige color on X-Rite's device does not perform the function performed by the claimed multiple colors in the field of view." (See X-Rite's Mem. in Supp. of Mot. for Summ. J. Non-Infringement at 28.) Accudent disagrees and counters that X-Rite's accused device infringes the '694 patent under the

doctrine of equivalents because X-Rite's color reference strips are performing the same function as the '694 patent's reference and absolute set of colors. (See Accudent's Opp'n to Mot. for Summ. J. Non-infringement at 12-15.)

"[T]he end goal of the color-matching system [of the '694 patent] is to generate a 'colour map and/or enhanced photograph identifying the colour(s) of the associated articles relative to an absolute set of colour(s)' so that an objective color-match can be made. . . . Comparing an article's colors against that of an absolute reference set with a single color would result in a binary match or no-match result, effectively eviscerating the purpose of the patent." Claim Construction Order at 16, 18-19 (quoting '694 patent, col. 6:30-32) (footnote omitted). It is undisputed that X-Rite's accused device employs a single-color beige strip. Because X-Rite's color strip contains only a single color, X-Rite's accused dental vision system cannot perform the central color-matching function of the '694 patent, and X-Rite's single-color beige reference strip means that X-Rite's accused dental vision system cannot be insubstantially different from the claimed invention. Since no material facts are in dispute, infringement under the doctrine of equivalents is foreclosed as a matter of law.¹ See Vehicular Techs., 212 F.3d at 1382.

¹ X-Rite also argues that infringement under the doctrine of equivalents is barred by the all-elements rule. (See X-Rite's Mot. for Summ. J. Non-infringement at 21-25.) Under the all-

II. VALIDITY

Because X-Rite's motion for summary judgment of non-infringement will be granted, the validity of the '694 patent is no longer in issue in this litigation. (See X-Rite Mot. for Summ. J. Non-infringement at 3 (stating that the claim for a declaration of invalidity "will be moot upon a determination of noninfringement").)

CONCLUSION

Because X-Rite's accused device does not contain each and every element of the '694 patent and the single-color beige strip cannot perform a central function of the reference and absolute reference set of colors, literal infringement and infringement under the doctrine of equivalents are precluded as a matter of law. X-Rite's motion for summary judgment of non-infringement will be granted, and Accudent's motion for summary judgement of infringement will be denied. Because X-Rite is not persisting in its invalidity claim upon its award of summary judgment of non-infringement, Accudent's motion for a declaration that the '694 patent is valid will be denied as moot. X-Rite's motion to

elements rule, if the patent holder's theory of equivalence would vitiate entirely a particular claim element of the patent, a judgment of non-infringement should be granted to the accused infringer. See Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 40 n.8 (1997). Here, infringement under the doctrine of equivalents is unavailable as a matter of law in light of Vehicular Technologies, so X-Rite's argument based on the all-elements rule will not be considered.

strike also will be denied. A final Order accompanies this Memorandum Opinion.

SIGNED this 28th day of September, 2006.

_____/s/
RICHARD W. ROBERTS
United States District Judge