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## United States Court of Appeals for the Federal Circuit

01-1323

NEUTRIK AG and NEUTRIK USA, INC.,

Plaintiffs-Appellants,

v.

SWITCHCRAFT, INC.,

Defendant-Appellee.

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DECIDED: February 27, 2002

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Before CLEVINGER, SCHALL, and GAJARSA, Circuit Judges.

GAJARSA, Circuit Judge.

## DECISION

Neutrik AG and Neutrik USA, Inc. (collectively "Neutrik") appeal the decision of the United States District Court for the Southern District of New York, granting summary judgment to Switchcraft, Inc. ("Switchcraft") on Neutrik's claim that Switchcraft's accused device infringed Neutrik's U.S. Patent No. 5,205,749 ("the '749 patent"), on Neutrik's claims of trade dress infringement, unfair competition and false designation of origin, and denying Neutrik's motion for further discovery. Neutrik AG & Neutrik USA, Inc. v. Switchcraft, Inc., No. 99 Civ. 11931, slip op. at 13-14 (S.D.N.Y. Mar. 23, 2001) (opinion and order granting summary judgment for all claims and denying discovery motion; analyzing trade dress, unfair competition and false designation of origin claims; but relying on previous opinion and order for infringement analysis) [hereinafter Second Order]; Neutrik AG & Neutrik USA, Inc. v. Switchcraft, Inc., No. 99 Civ. 11931, slip op. at 19 (S.D.N.Y. July 25, 2000) (opinion and order analyzing infringement of the '749 Patent in a preliminary injunction context and determining that no injunction should issue) [hereinafter First Order]. Because the district court did not err in concluding that there were no genuine issues of material fact and that Switchcraft is entitled to judgment as a matter of law, we affirm.

## BACKGROUND

Neutrik is the assignee of the '749 patent. The '749 patent covers a plug and socket that makes an electrical connection. It addresses the problem of making and disengaging a connection under power. The effectiveness of an electrical connection is in part a function of the amount of overlapping or touching conductive surface area. During times of low contact surface area, i.e., initial contact when plugging-in or final contact when unplugging, overloads can shorten the useful life of electrical connectors, or cause malfunction. The invention of the '749 patent provides a connection system whereby there is no increase or decrease in surface area over time. In the '749 patent, and in its embodiment, the SPEAKON connection, the full contact surface area engages or disengages at once.

The '749 patent discloses a cylindrical socket 1 and counterpart cylindrical plug 22. '749 patent, col. 3, ll. 5, 67. Grooves 11 & 12 guide the plug into the socket by the noses 25 and 26 on the plug. Id. at col. 4, ll. 39-43. Once the plug is inserted, the contacts 7 (socket) & 27 (plug) are staggered relative to each other by an angle. The plug contacts 27 are metal rods embedded in the inner side wall of the plug. The socket contacts 7 "comprise a longitudinally extended lamella with an angled connection clip 18," id. at col. 3, ll. 41-42, and contact vanes 21 extending from the contact, id. at col. 3, ll. 41-42. The socket contact 7 mounts inside the groove 17 of the center shaft 6 of the socket. Id. at col. 3, ll. 52-53. After the plug is inserted to full depth, it is rotated to a locking position, causing the contact vanes 21 of the socket contact 7 to come into full surface area contact with the plug contact 27. Id. at col. 4, ll. 48-64.

Claim 1 of the '749 patent is at issue. It is in "Jepson" format. Neutrik twice amended this claim. The first amendment is shown in single underlining. The second is shown in double underlining.

1. In an electric plug-and-socket connection including a cylindrical plug connector and a cylindrical plug-in counterpart connector, each connector having an axis, each connector including contact supports

and contacts . . . the improvement comprising the other contacts in the other contact support each having at least one elastically deformable contact vane, the at least one contact vane extending in circumferential direction from the wall of the contact support and at a distance from the wall of the contact support which increases in circumferential direction.

'749 patent, col. 5, l. 41 to col. 6, l. 6 (underlining added to indicate amendments).

As the district court noted, Neutrik amended claim 1 of the '749 patent twice during prosecution, in each case in response to the examiner's rejections based on U.S. Patent No. 4,826,454 to Kissling ("the Kissling patent"). In the Kissling patent, a metal electrical contact 124 is disclosed by the figures in the Kissling patent. The Kissling patent recites an assembly of such contacts 121-28 & 131-38. Kissling patent, col. 6, ll. 66-67.

Switchcraft manufactures a socket that is compatible with the Neutrik SPEAKON plug. The Switchcraft socket has a contact vane that extends axially along a portion of the length of the center shaft of the socket. At its tip, where it makes contact with the connector in the Neutrik SPEAKON plug, the Switchcraft contact has what the district court characterized as a "bump." First Order at 10.

Neutrik originally sought a preliminary injunction against Switchcraft. On July 25, 2000, the district court denied the injunction in an order that analyzed the likelihood of success of a literal or doctrine of equivalents infringement claim. First Order at 14, 18-19. Then, on March 22, 2001, the district court granted summary judgment to Switchcraft on all of Neutrik's claims. Second Order at 13-14. In doing so, it expressly incorporated and relied on its earlier analysis of the patent infringement issues, and did not further discuss those issues in the Second Order.

For purposes of the preliminary injunction, Switchcraft had conceded the validity of the '749 patent. However, Switchcraft argued that a properly construed claim would not cover the Switchcraft contact because its contact vanes extend from their supports in an axial direction, not in a circumferential direction, and that the distance between the vane and the support increases in the axial direction, not the circumferential direction. Neutrik argued that the "bump" on the tip of the Switchcraft vane embodies a contact that increased in distance from the contact support in a circumferential direction. The district court reviewed a dictionary definition of the word "vane," and then surmised that "vane," as applied to the Switchcraft contact, referred to the entire piece of metal extending from the contact base, not just the bump at the tip. It found that the Switchcraft vane extends from its base in an axial direction, and that just because a small portion of the vane has a round shape does not mean that the vane also extends circumferentially from its base.

The district court characterized Neutrik's argument as stating that the limitation is met if just a portion of the contact vane is extending in a circumferential direction. First, the court noted that the claim did not say "or any portion of the vane." Second, as an alternative basis, it noted that the "bump" of the Switchcraft contact is not attached to the wall of the contact support, and thus cannot be said to extend from it. Third, it found that the distance between the bump and the wall of the support did not increase in the circumferential direction. Fourth, the district court reviewed the two amendments to the claim and concluded that they supported its claim construction, in particular because the Kissling reference showed a contact, like the Switchcraft contact, with a rounded bump on the tip.

The district court next found that the Switchcraft contact did not infringe under the doctrine of equivalents. It agreed with Neutrik that the Switchcraft contact performs substantially the same function and produces substantially the same result, in substantially the same way. However, the district court applied prosecution history estoppel to conclude that a reasonable competitor would believe that Neutrik had surrendered equivalents "that only extend axially" for its contact vane. As a result, there was no infringement under the doctrine of equivalents.

With respect to the trade dress infringement claim, the district court noted the physical description of each product. Neutrik alleged that six common design elements indicated trade dress infringement. The district court noted that to protect an unregistered product design as a trade dress, a party must show, as a threshold matter, that the product's design, not its packaging, is non-functional, and that secondary meaning is present. Second Order at 5. Then, a showing of likelihood of confusion is required.

The district court stated that the test for functionality is whether a product feature "is essential to the use or purpose of the article or [ ] affects the cost or quality of the article." Second Order at 5 (quoting Knitwaves, Inc. v. Lollytogs Ltd., 71 F.3d 996, 1006 (2d Cir. 1995) (internal quotations omitted)). A factor in establishing non-functionality is demonstrating that feasible or cost-effective design alternatives exist. Second Order at 6 (citing Stormy Clime Ltd. v. ProGroup, Inc., 809 F.2d 971, 977 (2d Cir. 1987)).

The district court found that Neutrik's only "evidence" of non-functionality was its own conclusory statements. The only design alternative Neutrik presented was that there is no need for the raised circular rim, and that the outer portion of that rim need not be circular. The district court found, however, that Switchcraft rebutted that evidence because it presented the design requirement of a raised circular rim in order to rear mount the socket. The circular shape is necessitated by the fact that panel manufacturers pre-cut round holes for mounting of sockets like the Neutrik and Switchcraft devices. The district court noted that Switchcraft also presented evidence that the other elements of the Neutrik design are standard industry practice, such as the triangle to indicate orientation, or a rectangular base to allow for "rows" of contacts to be mounted. Thus, Neutrik had not only failed to carry its burden of demonstrating non-functionality of its trade dress, it had failed to rebut Switchcraft's evidence of functionality.

Although noting that it could have stopped after its functionality analysis, the district court also found Neutrik's evidence of secondary meaning lacking. Neutrik only described its sales and advertising generally - it presented no evidence of customer recognition of its product based on product-design trade dress.

With respect to the motion for additional discovery, the district court denied Neutrik's request for additional discovery under FRCP 56(f). The district court noted that in order to justify additional discovery, a party must demonstrate how the additional information will raise a genuine issue of material fact. Second Order at 12 (citing Sage Realty Corp. v. Insurance Co., 34 F.3d 124, 128 (2d Cir. 1994)). The district court found that the requested additional information would not raise such an issue.

Neutrik timely appealed from the district court's grant of summary judgment. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## DISCUSSION

We review a district court's grant of summary judgment without deference. Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1378, 53 USPQ2d 1225, 1227 (Fed. Cir. 1999). Summary judgment is appropriate when the moving party demonstrates that "there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c); Celotex Corp. v. Catrett, 477 U.S. 317, 322-23 (1986). On summary judgment, the evidence must be viewed in the light most favorable to the party opposing the motion, Poller v. Columbia Broad. Sys., Inc., 368 U.S. 464, 473 (1962), with doubts resolved in favor of the nonmovant, Cantor v. Detroit Edison Co., 428 U.S. 579 (1976); Transmatic, Inc. v. Gulton Indus., Inc., 53 F.3d 1270, 1274, 35 USPQ2d 1035, 1038 (Fed. Cir. 1995). Once the moving party has satisfied its initial burden, the opposing party must establish a genuine issue of material fact and cannot rest on mere allegations, but must present actual evidence. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). Issues of fact are genuine only "if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Id. at 248. A disputed fact is material if it might affect the outcome of the suit such that a finding of that fact is necessary and relevant to the proceeding. Anderson, 477 U.S. at 248; General Mills, Inc. v. Hunt-Wesson, Inc., 103 F.3d 978, 980, 41 USPQ2d 1440, 1442 (Fed. Cir. 1997).

Claim construction is an issue of law, Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71, 34 USPQ2d 1321, 1322 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996), that we review de novo, Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1172 (Fed. Cir. 1998) (en banc). The determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact. Bai v. L & L Wings, Inc., 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998).

On procedural issues, this Court follows the rule of the regional circuit, unless the issue is in an area of law exclusively assigned to the Federal Circuit. Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 809, 53 USPQ2d 1289, 1297 (Fed. Cir. 1999). For issues of discovery under Rule 56(f), this Court applies the law of the regional circuit. Id. The Second Circuit reviews a district court's rulings on discovery issues under an abuse of discretion standard. Paddington Partners v. Bouchard, 343 F.3d 1132, 1138 (2d Cir. 1994).

In deciding trademark, trade dress and other unfair competition issues under §43(a) of the Lanham Act, this Court applies regional circuit law. Keystone Ret. Wall Sys., Inc. v Westrock, Inc., 997 F.2d 1444, 27 USPQ2d 1297, 1300 (Fed. Cir. 1993).

On appeal, Neutrik argues that claim 1 covers a contact vane where only a portion of the allegedly infringing vane extends in a circumferential direction with increasing distance from the contact support of the socket's center shaft. Neutrik asserts that the Switchcraft contact infringes the claim because it has an elastically deformable contact vane, and, although the vane extends axially along the center shaft, the tip portion additionally extends in a circumferential direction with increasing distance. In essence, Neutrik argues that the tip portion of the Switchcraft contact vane can satisfy the "extends circumferentially with increasing direction" limitation of the contact vane element, while the entire Switchcraft vane satisfies the "elastically deformable" limitation. Neutrik also argues that the district court incorrectly interpreted the limitation "extending in circumferential direction from" by reading into the claim an attachment requirement only found in the preferred embodiment.

Switchcraft responds that the district court properly construed claim 1 as requiring that the entire contact vane, i.e., the piece protruding from the center shaft of the socket, must meet

the limitations, including the limitation that the vane extend with increasing distance from the center shaft in a circumferential direction, and be elastically deformable.

We agree with Switchcraft that the district court properly granted summary judgment that the Switchcraft contact vane does not infringe the '749 patent. Further, we agree that the district court properly construed claim 1. In construing patent claims, we first look to the intrinsic evidence of record – the claims, the specification, and, if in evidence, the prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996). Claim 1 is directed to a contact vane that is elastically deformable and extends with increasing distance in a circumferential direction from the wall of the contact support. The claim is thus limited to cover devices where the entire length of the protruding contact vane extends in a circumferential direction. The plain language of the claim suggests that the entire contact vane have the property of elastic deformability: "elastically deformable contact vane." Further, the other limitations disclosed by the claim imply that the deformation should occur in the circumferential direction because the contact vane must also extend, circumferentially, at an increasing distance. By implication, then, the deformation would have to occur in the circumferential direction under the language of the claim.

The prosecution history supports this interpretation of the claimed contact vane. Neutrik applied for the '749 patent on November 9, 1988. On September 8, 1991, Neutrik responded to an office action from the United States PTO for the application. The examiner rejected claim 13 (which eventually became claim 1 in the issued patent) as obvious over the admitted prior art (in the Jepson preamble) in view of the Kissling patent. The examiner seemed to believe that the Kissling patent's contacts, such as contact 124, disclosed an elastically deformable contact vane. Neutrik added the language "in circumferential direction" to the claim, and responded to the examiner as follows:

[The claim] has been amended to make it clear that the contact vanes extend in circumferential direction from the wall of the contact support. . . . [the Kissling patent contacts] extend in the axial direction of the assemblies. In accordance with the present invention, on the other hand, the contact vanes [21] extend in the circumferential direction from the wall of the contact support and at an increasing distance from the wall of the contact support.

In January 1992, the PTO responded. It again rejected the claim as obvious, this time because the Kissling patent disclosed an elastically deformable contact vane that extends from the wall of a contact support in circumferential direction. The examiner stated that "web portions 134, 124" extend parallel to the longitudinal axis. He noted that Neutrik's arguments from the previous amendment were not persuasive because the claim language was still broad enough to read on the Kissling patent because:

[The Kissling patent] shows contact vanes which extend in both the axial direction and the circumferential direction in three dimensional space. The contact vanes . . . extend at an increasing distance from the wall of the contact support in the axial direction, but they also extend in the circumferential direction. The claim language does not sufficiently describe the structure to define over the art of record.

Neutrik added the language "which increases in circumferential direction" to the claim, and

responded to the examiner as follows:

[The Kissling patent] clearly shows that the contact pieces . . . are punched out and extend at such an angle that the distance from the housing wall 106 increases in axial direction. In accordance with the present invention as claimed, on the other hand, the circumferentially extending contact vanes have a distance from the wall of the contact support which increases in circumferential direction. (emphasis in original)

The '749 patent subsequently issued on April 27, 1993.

Neutrik thus distinguished the Kissling patent by emphasizing that Neutrik's contact vane extends, with increasing distance, in the circumferential direction, whereas the contact vane in the Kissling patent extended in the axial direction. Neutrik's arguments during prosecution disclaimed contact vanes similar to those disclosed in the Kissling patent. We therefore conclude that claim 1 should be interpreted so as to exclude contact vanes that extend with increasing distance in the axial direction.

If ambiguity remains after consideration of the intrinsic evidence, "extrinsic evidence may also be considered, if needed to assist in determining the meaning or scope of technical terms in the claims." Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1216, 36 USPQ2d 1225, 1228 (Fed. Cir. 1995) (citations omitted). Here we view the intrinsic evidence regarding the contact vane as unambiguous, and thus need not discuss extrinsic evidence.

Turning now to infringement, it is clear that the Switchcraft contact vane extends with increasing distance from the wall of the support in the axial direction. Moreover, in the Switchcraft contact vane, the elastic deformation occurs in the axial direction. As we have construed the claim to exclude contact vanes that extend and elastically deform in the axial direction, we conclude as a matter of law that no reasonable fact-finder could find that the Switchcraft device infringes claim 1, and we therefore affirm the district court's grant of summary judgment of claim 1.

Neither does the Switchcraft contact vane satisfy the claim limitations under the doctrine of equivalents. As seen above, during prosecution, Neutrik distinguished the Kissling patent by arguing that while the Kissling patent showed contact vanes extending, with increasing distance, in the axial direction, Neutrik's contact vanes extended in the circumferential direction. In making this argument, Neutrik clearly and unmistakably surrendered coverage with respect to axially extending contact vanes. Having done so, it is barred from asserting that such vanes infringe under the doctrine of equivalents. See Bayer AG v. Elan Pharmaceutical Research Corp., 212 F.3d 1241, 1252-53, 54 USPQ2d 1711, 1719 (Fed. Cir. 2000) (citing Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1174, 26 USPQ2d 1018, 1025 (Fed. Cir. 1991)); Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 981, 52 USPQ2d 1109, 1115 (Fed. Cir. 1999).

With respect to Neutrik's trade dress infringement, unfair competition and false designation of origin claims, we agree with the district court that Neutrik has not submitted sufficient evidence to show that there are in fact genuine issues for trial. In particular, Neutrik did not show that the product features claimed as trade dress were non-functional. Traffix Devices, Inc. v. Marketing Displays, Inc., 532 U.S. 23, 29, 121 S. Ct. 1255, 1259, 58 USPQ2d 1001, 1005 (2001). Neutrik

failed to rebut the evidence of Switchcraft's expert, who explained that each of the items asserted by Neutrik as trade-dress-protectable features were in fact functional. Even unique arrangements of functional features can constitute a functional, and thus unprotectable, design. Stormy Clime Ltd. v. ProGroup, Inc., 809 F.2d 971, 977, 1 USPQ2d 2026, 2031 (2d Cir. 1987).

Finally, with respect to Neutrik's claim that the district court abused its discretion in denying Neutrik request for additional discovery under FRCP 56(f), including several depositions of Switchcraft personnel, we agree with the district court's basis for denying the motion, and conclude that there was no abuse of discretion.

We have considered Neutrik's remaining arguments and find them to be unpersuasive.

Because the district court did not err in its conclusion that the Switchcraft socket does not infringe the '749 patent as a matter of law, we affirm its grant of Switchcraft's motion for summary judgment of noninfringement. Further, because the district court did not err with respect to the trade dress infringement, unfair competition and false designation of origin claims, we affirm its grant of Switchcraft's motion for summary judgment of these claims. Finally, because the district court did not abuse its discretion in denying Neutrik's motion for additional discovery, we affirm its denial of the motion.

#### FOOTNOTES:

[1] "Contact vanes 21, which start out at the wall of the shaft 6, extend in the circumferential direction of the shaft 6, and increase thereby their distance from the wall of the shaft 6 serving as a contact support." '749 patent, at col. 3, ll. 53-56.

[2] In the claim 1 quotation above, lines 46-67 of column 5 of the '749 patent are omitted.

[3] The six alleged elements are: (1) black color; (2) rectangular base; (3) raised outer circular rim; (4) placement of lettering that designates the manufacturer on the bottom end of the rectangular base; (5) small triangular impression on the top of the base that points downward; and (6) rounded corners on the rectangular base.

[4] For example, Neutrik attempted to justify its discovery request based on the hope that it could overcome its failure to meet its burden on its trade dress claim by reviewing Switchcraft's design views for its own socket, including the extent to which it was based on functional considerations or copied from Neutrik. The district court concluded that even if Neutrik recovered information showing Switchcraft was copying, this would only impact secondary meaning and Neutrik had not supported its trade dress case on the other required factor, non-functionality.

[5] Neutrik also argued that rather than a single element with various limitations, claim 1 specifies the following three elements: (1) the elastically deformable vane; (2) which extends in circumferential direction from the wall; and (3) which also increases in distance from the wall in a circumferential direction. However, this Court views the claim differently, as disclosing a single element, the contact vane, with the following limitations applied to the contact vane: (a) elastically deformable; (b) extends in circumferential direction from the wall; and (c) as it extends, increases in

distance from the wall in a circumferential direction.

[6] We do not reach Switchcraft's argument, based upon Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 56 USPQ2d 1865 (Fed Cir. 2000) (en banc), cert. granted, 121 S.Ct. 2519 (2001), that prosecution history estoppel applies because Neutrik narrowed claim 1 to avoid the examiner's obviousness rejection.

[7] The alleged features are: (1) black color; (2) rectangular base; (3) raised outer circular rim; (4) placement of lettering that designates the manufacturer on the bottom end of the rectangular base; (5) small triangular impression on the top of the base that points downward; and (6) rounded corners on the rectangular base.

[8] The black color is common and matches other third-party audio connection components. The raised outer rim allows for fit in round holes. The placement of "Switchcraft" is in a common location for identifying a connection product, and the clear inclusion of the "Switchcraft" name further evidences lack of intent to deceive customers. The triangle is a common signal used to indicate orientation. Rounding the corners of the rectangular base is done for a variety of manufacturing, handling and cost reasons.