THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRIEDRICH KNAPP

Appeal No. 1999-1904
Application No. 08/704,778

HEARD: June 6, 2000

Before CALVERT, COHEN and BAHR, Administrative Patent Judges.

BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 25-31, 34-36 and 39-49. Claim 50 stands allowed and claims 32, 33 and 38 stand objected to as being dependent from a rejected base claim. Claim 37 was canceled subsequent to the final rejection (see Paper Nos. 12 and 13). No other claims remain pending.

BACKGROUND

The appellant's invention relates to a connecting element for connecting preferably wood or materials having similar properties (Specification, page 1). A further understanding of the invention can be derived from a reading of exemplary claim 25, which appears in the appendix to the appellant's brief.

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Scarlett	5,323,584	Jun. 28, 1994

The following rejections stand before us for review.[1]

Claims 25, 27-31, 34-36, 39-41 and 49 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Scarlett.

Claims 26 and 42-48 stand rejected under 35 U.S.C. § 103 as being unpatentable over Scarlett.

Reference is made to the brief (Paper No. 15) and the answer (Paper No. 16) for the respective positions of the appellant and the examiner with regard to the merits of these rejections.

[1] The rejections under 35 U.S.C. § 112, first paragraph, have been withdrawn (Paper No. 13).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art reference, and to the respective positions articulated by the appellant and the examiner. For the reasons which follow, we shall sustain the examiner's rejections.

Scarlett discloses a structural beam comprising a web 30, a lower chord 10 and an upper chord 20. As best seen in Figure 3, a groove 13 is cut into a surface 11 of the chord 10. The groove comprises biplanar side walls each having a first planar section 14 which inclines outwardly and downwardly from edge 16 and a second planar section 15, which inclines inwardly and downwardly from the first planar section toward the base 17 of the groove. A longitudinal spline 18 extends upwardly from the base 17 of the groove and defines spline side walls 19. The upper chord 20 is provided with a similar groove 23 having biplanar side walls. The web 30 comprises a tongue 31 on each of the bottom and top edges thereof which tapers bidirectionally toward shoulders 32 and toward a peripheral edge 33, thereby creating respective planar surfaces 34 and 35. The tongue 31 is formed by a milling machine utilizing a pair of opposed blades 40, as shown in Figure 4. A tapered slot 36 is formed into the peripheral edge 33 of the web thereby bifurcating the tongue into paired legs 37. As seen in Figures 6 and 7, the groove 13 is formed in each chord by consecutive parallel longitudinal cutting operations which create a profile complementary to that of the tongue 31. The term

"complementary" as used by Scarlett means "a surface of one member which mates with the cooperating surface of the other member in a generally uncompressed or relaxed joint configuration, thereby achieving a 'self-locking' arrangement" (column 3, lines 10-14). With regard to the joint, Scarlett discloses that

> [d]uring fabrication of the joint by insertion of the tongues 31 into grooves 13 and 23, the respective legs 37 of the tongue 31 are biased or forced towards each other against the peripheral edges 16 of the groove 13 until the widest point of the tongue is within the groove. Thereafter, and during continued insertion, the legs of original orientation [sic]. As may be seen in FIG. 8, restoration of the legs 37 to their unbiased orientation may be aided by spline 18 cooperating with side walls 38 of slot 36. The precise machining of the respective tongue and groove surfaces must provide for sufficient clearance to permit sufficient glue dispersal and adhesion between the surfaces. Excess glue may be transmitted by the pressure of the closed joint into a pocket formed between the tip 53 of spline 18 and the terminus 39 of slot 36 as well as in two pockets formed between groove bases 17 and tongue edges 33, as may be seen in FIG. 8.
>
> As will be readily apparent, the design of joint hereinbefore described is self-locking inasmuch as each member is in a generally non-stressed or non-deflected condition when the joint has been fully assembled, and the joint cannot be separated thereafter without the application of force. This is in contrast to prior joint designs in which the tongue member remains under compression or biased out of position in the assembled joint, which may precipitate or permit separation or disconnection of the joint surfaces [column 6, lines 12-38].

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the

reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations in the claim be found in or fully met by the reference. Kalman v. Kimberly Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

The appellant does not take issue with the examiner's determination that Scarlett's web 30 and chord 10 respond, respectively, to the connecting element and construction element recited in claim 25 or that the first planar sections 14 of each groove 13 are inwardly mutually divergent, solely planar side wall portions and the paired legs 37 are bendable to one another into a compressed condition and have outer sides which are mutually divergent toward a free outer end 33 as required by the claim. The appellant, however, does assert on pages 5-8 of the brief that the legs 37 of Scarlett are not "in said compressed condition" (with the legs bent toward one another) "in an installed state," as required by claim 25, and that, consequently, the legs also fail to "resiliently engage" the planar side wall portions of the groove as further required by claim 25. In fact, pointing to language in column 3, lines 10-14 and 39-48, column 5, lines 52-58, and column 6, lines 12-28, the appellant urges that Scarlett makes a deliberate effort to prevent a compressed state.

While we fully appreciate and have carefully considered the above-mentioned teachings of Scarlett and the appellant's arguments with respect thereto, we also note that Scarlett uses language such as "a generally uncompressed or relaxed joint configuration" (column 3, lines 12-13), "substantially eliminate lateral compressive forces within the assembled joint" (column 3, lines 43-44) and "in a generally non-stressed or non-deflected condition when the joint has been fully assembled" (column 6, lines 31-32).[2] The significance of the use of the terms "generally" and "substantially" is made clear in column 7, lines 5-17, where Scarlett states

> [a]s will be understood by a person skilled in the relevant art, wood products are susceptible to dimensional change with variations of the moisture content of the wood. Also, mechanical cutting devices are subject to change in dimension from heat and wear. Thus, although the preferred form of the invention results in a finished joint in which the legs 37 are not laterally deflected, and with a fine glue line between mating surfaces of the joint, it will be understood that variations in dimensions may result in some lateral deflection of the legs 37, without departing from the desired mechanical locking effect of the joint or the maximized surface contact in the joint which results in a fine glue line.

From the teachings of Scarlett as a whole, it is clear that, in a preferred form of the invention, the legs 37 are not laterally deflected and also that products whose dimensions vary somewhat from the preferred dimensions as a result of machining tolerances and expansion of the wood with variations in moisture content of the wood, thereby resulting in some lateral deflection of the legs 37 in the finished joint, are a non-preferred, but acceptable, form of the invention.

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[2] The underlining, not present in the Scarlett text, has been supplied for emphasis.

A reference is not limited to its preferred embodiment, but must be evaluated for all of its teachings, including its teachings of non-preferred embodiments. See In re Burckel, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979).

As appellant's claim 25 does not specify the degree of compression of the legs or require that the legs be received in the groove in said compressed condition in all installed states (e.g., any temperature or moisture content), we conclude that the subject matter of claim 25 is met by the teachings of the non-preferred form of Scarlett's invention. Accordingly, we shall sustain the examiner's rejection of claim 25 under 35 U.S.C. § 102(b). Additionally, as appellant's brief (page 4) states that claims 26-31, 34, 35, 36, 39, 40 and 42-49 stand or fall with independent claim 25, we shall also sustain the examiner's rejection of claims 27-31, 34-36, 39, 40 and 49 under 35 U.S.C. § 102(b) and of claims 26 and 42-48 under 35 U.S.C. § 103. See In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978).

While appellant has elected to separately argue the patentability of claim 41 apart from independent claim 25, the only argument (brief, pages 8 and 9) advanced by appellant in support of claim 41 is based on the assertion that the legs 37 of Scarlett's web are not received in the groove in a compressed condition in an installed state. For the reasons discussed, supra, with respect to claim 25, we also do not find this argument persuasive with respect to claim 41.

Therefore, we shall also sustain the examiner's rejection of claim 41 under 35 U.S.C. § 102(b).

CONCLUSION

To summarize, the decision of the examiner to reject claims 25, 27-31, 34-36, 39-41 and 49 under 35 U.S.C. § 102(b) and claims 26 and 42-48 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

IAN A. CALVERT Administrative Patent Judge	)
IRWIN CHARLES COHEN Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)

JDB:pgg

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