

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN G. COTSFORD

Appeal No. 2006-1855
Application No. 10/210,385
Technology Center 3600

ON BRIEF

Before FRANKFORT, CRAWFORD and HORNER, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the examiner's final rejection of claims 1, 4-6, 21, 24-26, and 40. Claims 3, 7-20, 23, and 27-39¹ are objected to as depending from a rejected base claim. Claims 2 and 22 have been canceled. Claims 41-43 stand allowed.²

¹ We note that in the appellant's claims appendix attached to his brief, there are two claims numbered 31.

² The examiner had objected to claims 41-43 in the final office action as being dependent on a rejected base claim. The examiner subsequently indicated on page 2 of the Examiner's Answer that claims 41-43 stand allowed. It is

We reverse.

BACKGROUND

The appellant's invention relates to a nipper-clipper assembly (30) for use on a railroad track (1). The nipper clipper assembly (30) is mounted to a vehicle (10) by a mounting bracket (22), and it includes a nipper assembly (50) and a clipper assembly (120). (See Specification, Figure 1). The nipper assembly (50) is used to lift the railroad tie against the lower side of the rails and to position it laterally so as to center it under the rails. (Specification, page 3, lines 11-14). The clipper assembly (120) is then used to install springs on tie plates to couple the rails to the ties. (Specification, page 15, lines 13-15). The vehicle (10) includes a frame (12), an engine (14), a cab (16), a control panel (20), rail wheels (18), and lifting pistons (24) for lifting the nipper clipper assembly (30) off the track (1). (Specification, page 5, lines 16-19 and 25-28). The nipper assembly (50) includes a vertical lifting device (51) that is structured to lift the ties (2) and a lateral movement device (53)³ that is structured to move the ties (2) laterally. (Specification, page 6, lines 18-21). In one embodiment, the lateral movement of the tie (2) occurs due to the force of gravity. (Specification, page 6, lines 21-26). In another embodiment, the lateral movement device (53) includes a device for actively shifting the tie (2) in a lateral direction. (See Specification, Figure 6 and page 12, line 21 – page 13, line 11). The nipper assembly (50) further includes pad assemblies (72, 72A) that are structured to contact the lateral ends of the tie (2). (See Specification, Figure 2 and page 14, lines 10-17). Independent claims 1, 5, 21, and 25 are representative

noted that claim 41 as listed in the appellant's claims appendix contains bracketed text in line 2 that was previously deleted by amendment.

³ Although reference numbers 51 and 53 are described in the detailed description, they do not appear in the figures.

of the subject matter on appeal, and a copy of these claims can be found in the appendix to the appellant's brief.

The examiner relies upon the following as evidence of unpatentability:

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| Theurer <i>et al.</i> (Theurer) | 4,809,614 | Mar. 07, 1989 |
| Weber | 5,586,502 | Dec. 24, 1996 |

The examiner has rejected claims 1, 4-6, 21, 24-26, and 40 under 35 U.S.C. § 103(a) as being unpatentable over Weber in view of Theurer.

Rather than reiterate in detail the conflicting viewpoints advanced by the examiner and the appellant regarding this appeal, we make reference to the examiner's answer (mailed December 15, 2005) for the examiner's complete reasoning in support of the rejection and to the appellant's brief (filed December 1, 2005) and the appellant's reply brief (filed December 22, 2005) for the appellant's arguments.

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, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations that follow. It is our view that, after consideration of the record before us, the evidence relied upon fails to support the obviousness rejection made by the examiner.

We focus our review on independent claims 1, 5, 21, and 25. In the rejection of independent claims 1, 5, 21, and 25, the examiner has determined that Weber discloses all of the elements of the claimed assembly except for a nipper-clipper

assembly that has, in addition to a vertical lifting device, a lateral movement device that is structured to contact the lateral ends of the ties to move the ties laterally. (Examiner's Answer, p. 3). To address this deficiency, the examiner relied on Theurer's teaching of a tie pulling device comprising, in addition to a vertical lifting device, a lateral movement device for laterally withdrawing old ties from a railroad track by contacting the lateral ends of the ties. (Examiner's Answer, p. 3-4, citing Theurer abstract, Figures 7 and 8, and column 7, lines 14-31). The examiner contends,

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Weber to include the use of a nipper-clipper assembly comprising, in addition to a vertical lifting device, a lateral movement device that is structured to contact the lateral ends of the ties to move the ties laterally in his advantageous nipper-clipper assembly as taught by Theurer et al in order to replace the damaged ties during installation and removal of rail clips while eliminating the need for two vehicles. (Examiner's Answer, p. 4).

The Examiner reasons that Theurer discloses an apparatus for installing new ties and thus suggests the desirability of moving or shifting a tie laterally into a correct position during installation for the purpose of inserting the spikes into the tie. (Examiner's Answer, p. 6). The Examiner has also determined that the vertical lifting device of Theurer, i.e., the gripping means (111) and hook (129), contact the "lateral ends" of the tie. The examiner has construed the claim limitation "lateral ends" to not be limited to the lateral end faces of the tie. (Examiner's Answer, p. 7).

The appellant contends that Theurer fails to disclose any structure for lifting a tie to be in contact with the underside of a rail. The appellant contends that the lifting device of Theurer is structured to lift only one side of the tie so that the tie breaks free from the ballast and that such action does not press the tie against the rails. (Appellant's Brief, p. 7). The appellant argues that to introduce a vertical lifting motion of the tie in the Weber device would defeat the purpose of the Theurer device, which is structured to lift the rails off the tie. (Appellant's Brief, p. 8). Based on this reasoning, the appellant contends that there is no motivation, teaching, or suggestion to combine Weber and Theurer, because Weber is directed to a nipper assembly structured to place a tie in close contact with a rail by lifting the tie, and Theurer is directed to a railroad tie exchanger structured to separate a tie from the overlaying rails. (Appellant's Brief, p. 7-8).

The appellant further argues that the examiner has misconstrued the device shown in Figure 8 of Theurer. The appellant notes that hook 129 is used to move the tie laterally, not lift the tie. With regard to the gripping means (111), the appellant admits that it acts as a pincer-like gripping device to contact the front and back sides of the tie to lift it, but the appellant argues that it does not contact a lateral face of the tie. Finally, the appellant argues that Theurer does not discuss laterally adjusting the ties during their installation. (Appellant's Reply Brief, p. 3).

The appellant argues that claims 1 and 21 are patentable, because there is no motivation, teaching, or suggestion to combine Weber and Theurer, and neither reference suggests a nipper-clipper assembly that is structured to lift the ties and move the ties laterally and which includes a vertical lifting device that is structured to lift the ties and a lateral movement device that is structured to move the ties laterally, and one or more clipping assemblies. (Appellant's Brief, p. 8-9). The

appellant argues that claims 5 and 25 are patentable, because there is no motivation, teaching, or suggestion to combine Weber and Theurer, and neither reference suggests a nipper-clipper assembly that is structured to contact both lateral ends of a tie. (Appellant's Brief, p. 9-10).

With regard to the appellant's contention of a lack of motivation to combine Weber and Theurer, we considered the requirement, as recently re-stated in *In re Kahn*, 441 F.3d 977, 78 USPQ2d 1329 (Fed. Cir. 2006), for a showing of a "teaching, suggestion, or motivation" to modify or combine the prior art teaching. As to this test, the court explained,

[T]he "motivation-suggestion-teaching" test asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims.... From this it may be determined whether the overall disclosures, teachings, and suggestions of the prior art, and the level of skill in the art – *i.e.*, the understandings and knowledge of persons having ordinary skill in the art at the time of the invention – support the legal conclusion of obviousness.

441 F.3d at 988, 78 USPQ2d at 1337 (internal citations omitted). It is not just the explicit teachings of the art itself, but also the understandings and knowledge of persons having ordinary skill in the art, that play a role in applying the motivation-suggestion-teaching test.

"In considering motivation in the obviousness analysis, the problem examined is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made. *In re Kahn*,

441 F.3d at 988, 78 USPQ2d at 1336 (citations omitted). In this case, the general problem confronting the inventor was to make a nipper-clipper assembly that allowed for adjustment of a railroad tie if it was laterally off-center as compared to the rails or adjacent ties. (See specification, page 2, lines 13-18).

In view of this general problem confronting the inventor, and the teachings of the prior art, we find that there would have been no motivation absent the teaching of the present invention for one skilled in the art at the time of the invention to modify Weber, which relates to a nipper-clipper assembly having only a vertical lift device, with the teachings of Theurer, which relates to a machine for laterally removing and replacing ties.

The tie pulling and inserting device of Theurer includes two rail-lifting devices (133) and a tie-lifting mechanism (described below). The rail-lifting devices (133) include carriers (121) and lifting plates (40). (Theurer, col. 10, lines 50-57). Drives (122) are actuated to lower the carriers (121) until lifting plates (40) engage the railheads. Drives (123) then actuate the plates (40) to grip the railheads, and drives (122) are again actuated to raise the carriers (121) and lift the track (12) slightly off of the ballast bed. (Theurer, col. 11, lines 39-43). Once the track has been lifted, the tie-lifting mechanism is actuated.

The tie-lifting mechanism of Theurer comprises a drive (112) that raises and lowers a guide element (110). The guide element (110) includes a guide beam (127) telescopically mounted therein. The guide element (110) includes a tie end gripping means (111) having a tie clamp (39). A separate drive (114) actuates the tie clamp (39) to open and close the clamp. Tie end gripping means (111) is pivotally mounted, and drive (131) can be used to cause the gripping means (111) to pivot around its pivot axis to force engaging hook (115) to engage the bottom of

old tie (47) to loosen it from the ballast bed. Once the tie has been loosened, a drive (113) causes transverse displacement of guide beam (127) and gripping means (111) to move the tie laterally. Guide element (110) also includes a hook (129) on the opposite end from the gripping means (111). A drive (128) can be actuated to cause hook (129) to engage and then push the opposite end of tie (47) in the withdrawal direction. After the tie is fully withdrawn, the drive (112) is actuated to lift the tie, held by the gripping means (111) and hook (129), above the rail level. Then, drive (113) is actuated in reverse to place the tie on the rails (11). (Theurer, Figure 8 and col. 11, lines 43-67). As such, although Theurer teaches using the hook (129) in combination with gripping means (111) and drive (112) to raise the tie (47) above the rail level, Theurer never teaches or suggests using this tie-lifting mechanism to raise the tie (47) into contact with the rails (11).

Naturally, during tie removal, one would want to keep the tie separate and apart from the rails, as described in Theurer. Likewise, during tie installation, the tie must be kept separate and apart from the rails until the new tie has been inserted under the rails. With regard to the use of Theurer's system to install a tie, once the new tie is moved laterally into position under the track, Theurer suggests actuating the drives (122) to lower the carriers (121) to reposition the track (12) on the ballast bed. (See Theurer, col. 11, lines 39-43 and col. 12, lines 6-9 (teaching that the tie inserting operation proceeds substantially in reverse to the tie pulling operation)). At this stage in the new tie installation process, Theurer teaches using a ballast-tamping device (72) mounted on a work vehicle (5) to tamp the newly inserted tie while the work vehicle (5) continuously advances. (Theurer, col. 12, lines 61-66). Theurer then suggests that the work vehicle (5) may be followed by a *separate work vehicle* to insert tie plates and drive spikes to fasten the ties to the

rails. As such, Theurer does not teach or suggest using the tie-lifting mechanism of its tie pulling and inserting devices to fasten the ties to the rails. Rather, Theurer suggests using a separate work vehicle to insert the tie plates and the spikes once the work vehicles containing the tie pulling and inserting devices and the ballast-tamping device have advanced down the track. As such, one skilled in the art would not have been motivated at the time of the invention absent the teaching of the present invention to use the tie-lifting mechanism of Theurer for the nipping device of Weber.

We find that examiner has failed to set forth a *prima facie* case of obviousness. From our perspective, the Examiner's rejection appears to be premised on impermissible hindsight reasoning. On the record of this appeal, it is our view that the Examiner has not carried the burden of establishing a *prima facie* case of obviousness with respect to the subject matter defined by the appealed claims.

Further, with regard to claims 5 and 25, the appellants argue that the claim element “lateral ends,” should be interpreted to mean the lateral faces of the tie and that neither Weber nor Theurer teach or suggest a nipper assembly constructed so as to act on the lateral faces of a tie. (Appellants’ Brief, pages 9-10). Specifically, both claims 5 and 25 recite, “a right side nipper assembly having a pad assembly coupled to said main beam assembly,” “a left side nipper assembly having a pad assembly coupled to said main beam assembly,” and “said right side pad assembly and said left side pad assembly structured to act upon said tie by contacting the lateral ends of said tie.”

We first construe the meaning of the term “lateral ends” as used by the appellants in the claims. We determine the scope of the claims in patent

applications “not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004)). Any special meaning assigned to a term “must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.” *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998).

Although the common meaning of “lateral ends” could be construed broadly to mean all of the exterior surfaces at the two end regions of the tie, in this case we find that the appellant gave the term a special definition. The appellant clearly defined the term “lateral ends” to mean the lateral end faces of the tie, when he distinguished his invention from the prior art nipper assemblies stating, “the invention ... provides a nipper assembly structured to grip a tie by the lateral ends as opposed to the forward and aft sides or the bottom surface.” (Specification, p. 2, lines 25-27). This interpretation of the term “lateral ends” is consistent with all of the embodiments shown and described in the specification, see e.g., Figures 2 and 6 in which right pad (78) contacts the right lateral face of tie (2) and left pad (78A) contacts the left lateral face of tie (2). As such, we find that the broadest reasonable interpretation of the term “lateral ends” as used in the claim language, and as would be interpreted by one of ordinary skill in the art in light of the specification, is the lateral end faces of the tie.

Neither Weber nor Theurer teach or suggest right and left side nipper assemblies coupled to a main beam assembly and each having a pad assembly

where “said right side pad assembly and said left side pad assembly [are] structured to act upon said tie by contacting the lateral ends of said tie.” In Weber, the jaws (164) of rail nipper (162) clamp around and grasp the fore and aft sides of the tie (18). (Weber, Figure 10). In Theurer, the gripping means (111) clamp onto the fore and aft sides of the tie (47) and the hook (129) engages the opposite lateral end of the tie. Neither Weber nor Theurer teach or suggest left and right pad assemblies that act upon the lateral ends of the tie.

As such, the Examiner has failed to establish a *prima facie* case of obviousness of claims 5 and 25, because he has failed to show where the claim limitation of “said right side pad assembly and said left side pad assembly structured to act upon said tie by contacting the lateral ends of said tie” is taught or suggested in either Weber or Theurer.

Accordingly, we find that the subject matter of claims 1, 5, 21, and 25 would not have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains in view of the combination of Weber and Theurer. Thus, we reverse the Examiner’s rejection of independent claims 1, 5, 21, and 25 under 35 U.S.C. § 103(a).

With regard to remaining rejected dependent claims 4, 6, 24, 26, and 40, because these claim rejections rely upon the underlying rejection of independent claims 1, 5, 21, and 25 based on the combination of Weber and Theurer, we must also reverse the examiner’s rejection of these claims. See *In re Fine*, 837 F.2d 1071, 5 USQP2d 1596 (Fed. Cir. 1988) (If an independent claim is nonobvious under 35 U.S.C. 103, then any claim dependent therefrom is nonobvious).

CONCLUSION

To summarize, for the reasons set forth above, we reverse the rejection of claims 1, 4-6, 21, 24-26, and 40.

REVERSED

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| CHARLES E. FRANKFORT |) | |
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Appeal No. 2006-1855
Application No. 10/210,385

Page 13

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