

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES W. FORBES

Appeal 2008-1802
Application 11/099,083
Technology Center 3600

Decided: October 31, 2008

Before WILLIAM F. PATE, III, JENNIFER D. BAHR, and
JOSEPH A. FISCHETTI, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

James W. Forbes (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1, 2, and 6-19. The Examiner has objected to claims 3-5 as depending from a rejected claim, but indicated that they are otherwise allowable. No other claims are pending in the

application. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellant's claimed invention relates to three piece rail road trucks for rail road cars (Specification ¶ 2). The "three piece" terminology refers to a truck bolster 14, 22, 122, 222 and a pair of sideframes 16, 24, 224. The truck bolster extends across the sideframes with the ends of the truck bolster protruding through the sideframe windows. Spring groups are mounted in spring seats in the sideframes to transmit forces between the truck bolster and the sideframes. (Specification ¶ 3.)

Independent claims 1 and 13, reproduced below, are representative of the claimed invention.

1. A rail road car truck comprising:

a pair of first and second side frames and a truck bolster resiliently mounted transversely relative thereto;

wheelsets, each wheelset having an axle having two wheels mounted thereto, and each axle being mounted to said side frames;

each of said side frames having pedestal seats for receiving mating bearing adapters;

a bearing adapter mounted to each end of each axle, each bearing adapter being matingly engaged in one of said pedestal seats;

said pedestal seats having a bearing surface for mating with said bearing adapter;

said mating bearing surface being chosen from the set of bearing surfaces consisting of (a) a

planar surface; and (b) an arcuate surface having a radius of curvature greater than 50 inches;

said bearing adapter having a curved bearing surface upon which said bearing surface of said pedestal seat is engaged, said bearing surface of said bearing adapter and said bearing surface of said pedestal seat being in rocking engagement;

said curved bearing surface of said bearing adapter having a local radius of curvature for lateral rocking of less than 30 inches.

13. The combination of a bearing adapter for a rail road freight car truck, and a mating pedestal seat for a sideframe of a rail road freight car truck, said bearing adapter having a first bearing surface, said pedestal seat having a second bearing surface, said first and second bearing surfaces being in rocking engagement, and permitting lateral rocking of the sideframe, one of said bearing surfaces being chosen from the set of bearing surfaces consisting of (a) a planar surface; and (b) an arcuate surface having a radius of curvature greater than 50 inches; and the other of said bearing surfaces having a radius of curvature of less than 30 inches.

The Rejections

The Examiner relies upon the following as evidence of unpatentability:

Palmgren	US 2,762,317	Sep. 11, 1956
Barber	US 3,714,905	Feb. 6, 1973

1961 Car Builders' Cyclopedia of American Practice 868 (C. L. Combes ed., Simmons-Boardman Publishing Corporation 21st ed. 1961) (hereinafter "Car Builders' Cyclopedia").

Additionally, Appellant relies on the following in arguing in favor of patentability of the claims:

1997 Car and Locomotive Builder's Cyclopeda 811 (William W. Kratville ed., Simmons-Boardman Publishing Corporation 6th ed 1997) (hereinafter "Car and Locomotive").

1980 Car and Locomotive Builder's Cyclopeda 748, 750 (Kenneth G. Ellsworth, Simmons-Boardman Publishing Corporation 4th ed. 1980) (hereinafter referred to as "Car Builders' Cyclopeda").

Appellant seeks review of the Examiner's rejections under 35 U.S.C. § 103(a) of claims 13-17 as unpatentable over Palmgren and the journal box specification in Car Builders' Cyclopeda and claims 1, 2, 6-12, 18, and 19 as unpatentable over Palmgren, the journal box specification in Car Builders' Cyclopeda, and Barber.

THE ISSUES

The primary issues in this appeal are whether Appellant demonstrates that the Examiner erred in determining that Palmgren's journal box 1 is a "bearing adapter" as recited in each of Appellant's independent claims and that the bearing surfaces on Palmgren's journal box 1 and side frame 7 permit lateral rocking of the side frame, as required by claim 13.

Also at issue is whether Appellant demonstrates the Examiner erred in determining that it would have been obvious to combine the known rocking railway journal box of Palmgren with the known resilient mounting arrangement between a truck bolster and a pair of side frames as taught by Barber.

THE FACTS PERTINENT TO THE ISSUES

- FF1 Appellant's bearing adapter 42, 400 engages a bearing mounted on one of the axles and has a curved contour on its upper surface for engaging a pedestal seat 40 or bearing surface 474 of a sideframe 24 or 470 such that the sideframe can swing or rock laterally (Specification ¶¶ 58-59, 90, 92, 97; figs. 2b, 6a, 6f).
- FF2 Appellant's Specification does not explicitly define "bearing adapter."
- FF3 According to Appellant, "a bearing adapter is used to distribute the loads passed from the sideframe pedestal seat into the outer casing of the bearing" and is "intended to sit square on the casing and spread this load more or less evenly between the two races" (Reply Br. 5).
- FF4 According to Appellant, "the bearing adapter has a body that sits square relative to the axle and provides a load spreading seat that passes the vertical load from the pedestal seat into the sealed cylindrical bearing casing" (Reply Br. 5).
- FF5 According to Appellant, "it is desirable that the bearing adapter not 'tilt' with respect to the end of the shaft, but that it sit square on the bearing casing" (emphasis in original) (Reply Br. 5).
- FF6 Palmgren's journal box 1 is mounted on a single self-aligning roller bearing 8 and has a curved upper supporting surface or rocking surface 2 in rocking engagement with flat surface 6 of side frame 7 (col. 2, ll. 16-22, 25-26).
- FF7 The outer raceway surface 9 of Palmgren's roller bearing 8 is of spherical form, such that when the axle 12 moves axially from central to extreme left or right, the outer race and the journal box 1 rock laterally (col. 2, ll. 26-28 and 35-37). For example, Figure 1 shows

- the journal box in a vertical position, while Figure 1a shows the axle 12 shifted horizontally to the left and the journal box and outer race rocked clockwise through a small angle d (col. 2, ll. 39-44).
- FF8 Vertical load from the weight of the truck is passed through Palmgren's journal box 8 and distributed into the outer case 9 of the bearing 8 (fig. 1).
- FF9 While Palmgren does not teach rocking of the side frame 7, it is clear that the rocking surface 2 of journal box 1 engaging the flat surface 6 of side frame 7 permits lateral rocking of the journal box 1 relative to the side frame 7 or rocking of the side frame 7 relative to the journal box 1.
- FF10 The Examiner finds that Car Builders' Cyclopedia shows that the diameter of a journal box was generally less than 10 inches (Answer 3), and Appellant does not dispute this finding.
- FF11 The Examiner finds that Palmgren's Figure 7 shows that the radius of curvature of rocking surface 2 is clearly less than the diameter of the journal box (Answer 3-4), and Appellant does not dispute this finding.
- FF12 According to Appellant, the type of roller bearing 8 taught by Palmgren has been replaced by updated sealed roller bearing technology made available by Timken and Brenco, as taught by Car and Locomotive (Appeal Br. 12).
- FF13 The updated roller bearings comprise bearing cups with inner conical surfaces that ride on tapered rollers, thereby eliminating tilt at the interface between the rollers and the bearing cup (Appeal Br. 12).
- FF14 Barber teaches a resilient mounting arrangement between a truck bolster and a pair of side frames, utilizing spring assemblies 20, 21,

and spring (14) supported wedges 13, to provide a self-squaring function to compensate for travel of a railway car into curved track or uneven track (col. 1, ll. 19-25; col. 2, ll. 13-17, 39-63; fig. 1).

PRINCIPLES OF LAW

When construing claim terminology in the United States Patent and Trademark Office, claims are to be given their broadest reasonable interpretation consistent with the specification, reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct 1727, 1739 (2007).

“A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at 1742.

ANALYSIS

Claims 13-17

Appellant argues claims 13-17 together as a group. Thus, in accordance with 37 C.F.R. § 41.37(c)(1)(vii), we select claim 13 as the representative claim to decide the appeal of this rejection, with claims 14-17 standing or falling with claim 13.

In contesting the rejection of claim 13, Appellant argues that the journal box 1 of Palmgren is not a bearing adapter, and, further, lacks the capability of permitting lateral rocking of the sideframe, as required by

claim 13 (Appeal Br. 8-13; Reply Br. 4-7). For the reasons that follow, Appellant fails to convince us that this is the case.

Appellant's Specification does not explicitly define "bearing adapter" (FF2). Nor does Appellant offer a specific definition of "bearing adapter." Appellant's Specification describes a bearing adapter that engages a bearing mounted on one of the axles and has a curved contour on its upper surface for engaging a pedestal seat or bearing surface of a sideframe such that the sideframe can swing or rock laterally (FF1). We understand from Appellant's arguments that a bearing adapter is used to distribute loads passed from the sideframe pedestal seat into the outer casing of the bearing and is intended to sit square on the casing and spread this load more or less evenly between the two races (FF3, FF4). Appellant also contends that it is *desirable* that the bearing adapter not tilt with respect to the end of the shaft, but that it sit square on the bearing casing (FF4, FF5). Consistent with Appellant's Specification (FF1) and Appellant's arguments as to the function of a bearing adapter, we understand a bearing adapter to be an element that is mounted on an axle roller bearing and has a curved rocking surface in engagement with a lower bearing surface of a side frame such that it transmits vertical loading from the side frame and distributes it into the bearing casing and also permits relative rocking between the side frame and the bearing adapter. We find that Palmgren's journal box 1 satisfies all of these requirements (FF6, FF8, FF9). While Palmgren's journal box 1 rocks or tilts relative to the axle upon axial movement of the axle 12, as illustrated, for example, in Figure 1a (FF7), such tilting is not caused or permitted because of any structural feature of the journal box itself. Rather, such tilting or rocking results from the spherical form of the outer raceway 9 of

Palmgren's roller bearing 8. Accordingly, any structural distinction between Palmgren and Appellant's invention lies not in the journal box, or bearing adapter, but rather in the roller bearing on which the journal box or bearing adapter is mounted. Inasmuch as the roller bearing is not specifically recited in claim 13, it cannot be relied upon for patentability. It is well established that limitations not appearing in the claims cannot be relied upon for patentability. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

Appellant additionally points out that journal box technology was banned from service in freight cars in 1994 and argues that, consequently, a person skilled in the art would associate the obsolete journal box technology with trouble and would not be motivated to adopt it (Appeal Br. 14; Reply Br. 7-8). This line of argument is not persuasive. Simply that a known technology has been replaced with more updated technology and is no longer the industry standard does not remove such known technology from the prior art. A mere step back in the art does not constitute invention. Moreover, the update in technology that led to a change in industry standard (FF12, FF13) is directed to an unclaimed feature of the freight car, namely, the roller bearing, and hence to a portion of Palmgren not relied upon by the Examiner in rejecting claim 13. In this case, the additional teachings of Car Builders' Cyclopedias are relied upon merely as evidence of what a person of ordinary skill in the art would have understood the conventional dimensions of a journal box as taught by Palmgren to be. The use of a journal bearing having such known conventional dimensions in the bearing assembly of Palmgren would have involved only routine skill and ordinary creativity, not innovation, and thus would have been obvious to a person of ordinary skill in the art at the time of Appellant's invention.

For the above reasons, Appellant's arguments fail to demonstrate that the rejection of claim 13, or claims 14-17 standing or falling with claim 13, should be reversed.

Claims 1, 2, 6-12, 18, and 19

Appellant argues these claims together as a group. Accordingly, we select claim 1 as the representative claim to decide the appeal of this rejection, with claims 2, 6-12, 18, and 19 standing or falling with claim 1.

The Examiner's position in making this rejection is that it would have been obvious to combine the known rocking railway journal box of Palmgren with the known resilient mounting arrangement between a truck bolster and a pair of side frames as taught by Barber to achieve the advantages offered by each (Answer 4). In addition to repeating the arguments asserted against the rejection of claim 13 (Appeal Br. 15), which also fail to demonstrate error in the rejection of claim 1, for the reasons discussed above, Appellant also argues that since Palmgren does not mention swinging of the side frames 7, a person of ordinary skill in the art would have taken as a given that the side frames were rigidly interlinked by a transom, as was formerly a common practice (Appeal Br. 16). Consequently, Appellant reasons that the self-squaring feature provided by the resilient mounting of the truck bolster to two side frames as taught by Barber would not necessarily provide any benefit to Palmgren's railway car (Appeal Br. 16; Reply Br. 10). Appellant's argument is based on pure speculation, as Palmgren provides no disclosure that such structure was provided on the railway car to interlink the side frames 7. The combination of the known resilient rocking railway journal box of Palmgren with the

known resilient mounting arrangement between a truck bolster and a pair of side frames as taught by Barber proposed by the Examiner is nothing more than the combination of known elements according to their established functions to yield a predictable result. Therefore, Appellant's arguments fail to demonstrate that the rejection of claim 1, or claims 2, 6-12, 18, and 19 standing or falling with claim 1, should be reversed.

CONCLUSIONS

Appellant fails to demonstrate that the Examiner erred in determining that Palmgren's journal box 1 is a "bearing adapter" as recited in each of Appellant's independent claims and that the bearing surfaces on Palmgren's journal box 1 and side frame 7 permit lateral rocking of the side frame, as required by claim 13.

Appellant also fails to demonstrate that the Examiner erred in determining that it would have been obvious to combine the known rocking railway journal box of Palmgren with the known resilient mounting arrangement between a truck bolster and a pair of side frames as taught by Barber.

DECISION

The decision of the Examiner to reject claims 1, 2, and 6-19 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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