

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte D. WYNNE SMITH and ALLEN F. BOYER

Appeal No. 2002-2084
Application No. 09/016,740

ON BRIEF

Before COHEN, FRANKFORT, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 6, 8 to 13 and 15 to 17. Claims 7, 14 and 18, which are the only other claims pending in this application, have been objected to as depending from a non-allowed claim.

We REVERSE.

BACKGROUND

The appellants' invention relates to a frame for a work machine. Copies of claims 2 to 6, 8 to 13 and 15 to 17 under appeal are set forth in the appendix to the appellants' brief. Claim 1 on appeal reads as follows:

A frame for a work machine comprising:
a first side wall portion having a first and second bore hole defined therein;
a second side wall portion having a third and fourth bore hole defined therein, wherein said second side wall portion is spaced apart from said first side wall portion such that (1) an interior space is defined therebetween, (2) said first bore hole is linearly aligned with said third bore hole, and (3) said second bore hole is linearly aligned with said fourth bore hole;
a central wall portion having a fifth and a sixth bore hole defined therein, wherein said central wall portion is positioned within said interior space such that (1) said fifth bore hole is linearly aligned with said first and third bore holes and (2) said sixth bore hole is linearly aligned with said second and fourth bore holes;
an axle mounting structure secured to said first side wall portion and said second side wall portion; and
a hitch structure secured to said first side wall portion and said second side wall portion,
wherein said first bore hole, said third bore hole, and said fifth bore hole are each configured to receive a frame pin of a lift arm assembly so as to pivotally couple said lift arm assembly to said frame.^[1]

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Powell	3,231,121	Jan. 25, 1966
Loeber	3,856,344	Dec. 24, 1974
Ahonen	4,099,733	July 11, 1978

¹ The claimed second and fourth bore holes are referred to in the specification as access holes.

Van Valkenburgh et al.
(Van Valkenburgh)

H1587

Sept. 3, 1996

Claims 1 to 3, 5, 8 to 10, 12 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Van Valkenburgh in view of Loeber.

Claims 4, 11 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Van Valkenburgh in view of Loeber and Powell.

Claims 6, 13 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Van Valkenburgh in view of Loeber and Ahonen.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the final rejection (Paper No. 6, mailed November 8, 1999) and the answer (Paper No. 12, mailed May 26, 2000) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 11, filed May 11, 2000) and reply brief (Paper No. 13, filed July 31, 2000) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1 to 6, 8 to 13 and 15 to 17 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Van Valkenburgh

Van Valkenburgh's invention relates generally to the transportation, handling and storage of hazardous wastes and other hazardous materials. More specifically, Van Valkenburgh's invention is concerned with a trailer which is adapted for transporting a containment unit for handling, distribution, storing and transporting hazardous materials.

As shown in Figure 1, trailer 10 has a generally rectangular shaped framework or support structure 11. Attached to and extending longitudinally forward from front end of the rectangular shaped framework 11 of trailer 10 is a hitch assembly 24. The underframe of trailer 10 includes a set of four wheels positioned toward the rear portion of trailer 10. The rectangular shaped framework 11 includes a right side tubular support member 14 which runs the length of the right side of support structure 11, a left side tubular support member 12 which runs the length of the left of support structure 11, a front end tubular support member 22 which runs the width the front of support structure 11 and a rear end tubular support member 20 which runs the width of the rear of support structure 11. Each end of one the support members 12, 14, 20 or 22 is joined to an abutting end of another of the support members 12, 14, 20 or 22 by means of welds. The rectangular shaped framework 11 also includes a pair of internal tubular support members 16 and 18 which run the length of support structure 11 and are joined at their ends to members 20 and 22 by means of welds. Support structure 11 of trailer

10 also includes a plurality of cross braces 34a, 34b, 34c, 34d and 34e which are placed perpendicular to support members 16 and 18.

Loeber

Loeber's invention relates to highway trailers, and more particularly to a relatively low-weight and high-strength trailer bed. Loeber's invention provides a highway trailer having a load-support bed of orthotropic design which is extremely low in weight and easily fabricated from a few similar parts.

Figure 1 shows a highway trailer 20 supported on a conventional rear running gear 22. During use of the trailer, a king pin 25 (see Figure 7) at the front of the trailer is connected to a conventional highway tractor (not shown). Trailer 20 has a high-strength, low-weight load supporting bed 26 of orthotropic design. The bed includes a pair of longitudinally extending, parallel open-section inverted T-beams 28, each T-beam having a vertical web 30 and a horizontal bottom flange 32. The T-beams comprise the main load-carrying structural members of the trailer bed.

A series of side-by-side elongated transverse load-support members or pans 34 are mounted on the top edges of webs 30 of the T-beams. The pans are

open-section members rigidly secured to the T-beams in an orthotropic design. Top flanges 38 of adjacent pans 34 provide a continuous deck panel extending the length of the T-beams 28. A pair of elongated side channel members or rub rails 52, each having a substantially C-shaped cross-sectional configuration, are fitted over the ends of pans 34.

The detailed construction of the trailer bed lower support structure is best understood by referring to Figures 7 and 8. The front of the trailer is supported independently of the tractor on a conventional telescoping landing gear 62. A series of spaced apart lightening holes 64 are punched through web 30 of each T-beam rearward of the landing gear. Each lightening hole 64 is formed by bending the metal surrounding it away from the plane of flange 30 to work-harden the steel and thereby provide additional strength for the T-beams. Moreover, each lightening hole 64 provides a substantial weight savings. Two series of holes 64 are formed in the wide intermediate portion of web 30, with a single series of the holes being formed in the narrower front and rear portions of the web. Alternatively, a single series of wider holes 65 (shown in Figure 1) may be formed in webs 30, although Loeber prefers to use a large number of smaller holes, as shown in Figure 7, because the additional working of the steel provides greater work-hardening and therefore a stronger structural member.

The obviousness rejections

In all of the rejections under 35 U.S.C. § 103 before us in this appeal, the examiner (1) ascertained that Van Valkenburgh did not disclose the claimed bores (i.e., the first and second bore holes in the first side wall portion, the third and fourth bore holes in the second side wall portion and the fifth and sixth bore holes in the central wall portion); (2) determined that Loeber teaches using linearly aligned lightening bores in side wall portions in order to reduce the weight of a frame; and (3) concluded that it would have been obvious to one of ordinary skill in the art, at the time the claimed invention was made, to have included Loeber's linearly aligned lightening bores on Van Valkenburgh's frame in order to reduce its weight.

The appellants' argument

The appellants argue (brief, p. 15) that the examiner utilized impermissible hindsight in combining the teachings of Van Valkenburgh and Loeber to render the claimed subject matter obvious.

Our determination

In our view, there is no suggestion in the teachings of Van Valkenburgh and Loeber to arrive at the claimed subject matter. We have also reviewed the references to Powell and Ahonen but find nothing therein which would have made the subject

matter of the claims under appeal obvious at the time the invention was made to a person of ordinary skill in the art. Accordingly, we cannot sustain the examiner's rejection of appealed claims 1 to 6, 8 to 13 and 15 to 17 under 35 U.S.C. § 103.

All the claims under appeal require the fifth bore hole to be linearly aligned with the first and third bore holes and the sixth bore hole to be linearly aligned with the second and fourth bore holes. However, these limitations are not suggested by the applied prior art (i.e., Van Valkenburgh, Loeber, Powell and Ahonen). In that regard, while Loeber does teach lightening holes, Loeber would not have suggested providing linearly aligned² lightening holes in Van Valkenburgh's support members 12, 14, 16 and 18. At best, Loeber may have suggested providing lightening holes in Van Valkenburgh's support members 16 and 18.

In our view, the only suggestion for modifying Van Valkenburgh in the manner proposed by the examiner to meet the above-noted limitations stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721

² We see no teaching in Loeber that the lightening holes 64 in one T-beam 28 would be linearly aligned with the lightening holes 64 in the other T-beam 28.

F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claims 1 to 6, 8 to 13 and 15 to 17 under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 6, 8 to 13 and 15 to 17 under 35 U.S.C. § 103 is reversed.

REVERSED

IRWIN CHARLES COHEN
Administrative Patent Judge

CHARLES E. FRANKFORT
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

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