

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JACOB BRAND and CORNELIS VAN DER ZOUWEN

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Appeal No. 97-1973  
Application No. 08/248,003<sup>1</sup>

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HEARD: July 15, 1999

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Before McQUADE, CRAWFORD and GONZALES, Administrative Patent Judges

GONZALES, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 4 through 8, which are all of the claims

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<sup>1</sup>Application for patent filed May 24, 1994.

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pending in this application.<sup>2</sup>

We REVERSE.

The invention is directed to a bucket dredger. Claim 4 is illustrative of the subject matter on appeal and is reproduced in the "Appendix" to appellants' brief.

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

|                    |           |          |
|--------------------|-----------|----------|
| Gray<br>1900       | 640,762   | Jan. 09, |
| Whisler<br>1938    | 2,132,198 | Oct. 04, |
| Von Bolhar<br>1950 | 2,528,195 | Oct. 31, |

Claims 4 through 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gray in view of Whisler in combination with Von Bolhar.

The full text of the examiner's rejection and response to the argument presented by appellants appears in the answer (Paper No. 21), while the complete statement of appellants' argument can be found in the brief (Paper No. 20).

**OPINION**

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<sup>2</sup> Claim 4 was amended and claim 9 was canceled subsequent to the final rejection. See Paper No. 15.

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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.

Claim 4, the only independent claim before us for review, recites a bucket dredger comprising a swivelling ladder for connecting to a vessel, a driven upper wheel at the top end of the ladder and a polygonal lower wheel at a lower end of the ladder, the lower wheel having upright edges, at least one endless chain guided on the wheels and buckets bound to a plurality of shackles of the at least one chain. The buckets are further defined in claim 4 as including a bottom wall provided with two ribs extending downwardly substantially parallel to the side walls of the bucket and substantially along a length of the bottom wall. Claim 4 also recites that the ribs, in an assembled state of the bucket, extend adjacent to the at least one chain and that the upright edges on the

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lower wheel engage and support the ribs.<sup>3</sup>

It is the examiner's view (answer, page 3) that all of the subject matter recited in claim 4 is disclosed by Gray, except for (1) the upright edges on the lower wheel and (2) the relative positioning of the ribs and upright edges such that the upright

edges engage and support the ribs. However, the examiner finds these features to be taught by Whisler and Von Bolhar, respectively, and takes the position that it would have been obvious to one of ordinary skill in the art to add upright edges to the bottom wheel taught by Gray in order to confine the chain against lateral displacement and to locate the ribs taught by Gray between the chain and upright edges in order to provide a more stable connection between the buckets and chain (answer, pages 3 and 4).

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<sup>3</sup>We note that strict antecedent basis is lacking for the recitation of "the side walls" in line 10 of claim 4. Correction of this informality is in order upon return of the application to the jurisdiction of the examiner.

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Gray discloses a bucket dredger comprising a pivoted ladder E, a top tumbler A mounted on shaft a, gears B,b for driving shaft a, a polygonal lower tumbler M, links C,C' which form an endless chain and buckets D bound to a plurality of links C (lines 60-69). The buckets further include a bottom wall d provided with downwardly bent sides or ribs e which are substantially parallel to the side walls of the bucket (Figure 3) and extend substantially along a length of the bottom wall (Figure 3a). When the buckets are assembled with the endless chain, the sides or ribs e are clamped between the links C together with the ends of the rim H, and the side pieces of the body portion. A shim f is inserted between the link and the side

piece in order to completely fill the space between the links C. See Figure 7 and page 2, lines 22-25 and 37-58.

Whisler discloses a tumbler used for confining a chain of buckets against lateral displacement (page 1, left-hand column, lines 1-9) including a confining flange 2a. See, for

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example, Figure 6.

Von Bolhar discloses a dredge digging structure having buckets 81 mounted on a plurality of link bodies 51 of an endless chain 21. In order to mount the buckets 81 on the link bodies 51, the side walls of the buckets are provided with lugs 86 and 87 having reenforcing flanges 88 and 89 and terminate in bosses 90 and 91. When assembled to the chain, the bosses 90 and 91 are aligned with bosses 93 and 94 located on the lateral faces of the link bodies 51. See col. 4, lines 31-43.

Appellants argue, inter alia, that none of the applied references teach "an upright edge 'engaging and supporting' a rib as recited" (brief, page 6).<sup>4</sup> In response, the examiner argues that

Whisler places upright edges on the lower wheel and Von Bolhar changes the location of Gray's ribs to be between the chain and the upright edges, thus allowing the upright edges to engage and support the ribs. (answer, page 5)

As indicated above, the examiner asserts that one of ordinary

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<sup>4</sup> Claim 4 actually calls for "upright edges on the lower wheel engaging and supporting the ribs" (emphasis supplied).

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skill in the art would have been motivated to relocate Gray's sides or ribs e between the chain and upright edges on the lower wheel in order to provide a more stable connection between the bucket and the chain (answer, page 4). We do not agree. Gray locates the sides or ribs e, the ends of the rim H, the side pieces of the body portion and the shim f between the double links C for a very specific reason, namely, in order to completely fill the space between the links C. Gray teaches that the advantage of such an arrangement is that it prevents particles of rock or gravel from lodging between the double links C and that this is an important feature of his invention (page 2, lines 53-59). Thus, Gray actually teaches away from the modification proposed by the examiner. Furthermore, there is no indication in Von Bolhar that by locating the bosses 90 and 91 on the bucket between the link 51 and the "paddle" that the "paddle" will necessarily engage and support the bosses 90 and 91. We conclude that it is highly speculative to suggest that if Gray were modified as proposed in the rejection, the upright edges on the lower wheel would engage and support the sides or ribs e as

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specified and required by appealed claim 4.<sup>5</sup> Accordingly, we cannot sustain the stated rejection of claim 4 based on the disclosures in Gray, Whisler and Von Bolhar.<sup>6</sup>

Claims 5 through 8 are dependent on claim 4 and contain all of the limitations of that claim. Accordingly, the examiner's rejection of claims 5 through 8 under 35 U.S.C. § 103 will not be sustained.

The decision of the examiner is reversed.

**REVERSED**

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|-----------------------------|---|-----------------|
| JOHN P. McQUADE             | ) |                 |
| Administrative Patent Judge | ) |                 |
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|                             | ) |                 |
|                             | ) | BOARD OF PATENT |
| MURRIEL E. CRAWFORD         | ) | APPEALS AND     |

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<sup>5</sup>We note that Von Bolhar neither describes nor illustrates the details of the lower tumbler 18.

<sup>6</sup>Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

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| Administrative Patent Judge | ) | INTERFERENCES |
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| JOHN F. GONZALES            | ) |               |
| Administrative Patent Judge | ) |               |

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Foley & Lardner  
3000 K Street, NW  
Suite 500  
Washington, DC 20007-5109