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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JINHUAN HUANGFU
and PHILLIP MORRIS DOHNT

Appeal 2020-002225
Application 15/196,360
Technology Center 3700

Before HYUN J. JUNG, BARBARA A. BENOIT, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), the Appellant appeals from the Examiner's Final decision to reject claims 15–26.¹ We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). The Appellant identifies Function Chains Pty Ltd. as the real party in interest. Appeal Br. 1.

CLAIMED SUBJECT MATTER

Claim 15, reproduced below with emphasis added, is illustrative of the claimed subject matter:

15. A flailing apparatus for debarking trees, the flailing apparatus comprising:
a rotatable drum; and
a plurality of flail chains, at least one flail chain comprising:
a first end chain link fixed to the drum;
a second end chain link free to extend from the drum during drum rotation; and
a plurality of intermediate chain links sequentially linked together and connecting the first and second end chain links, the intermediate chain links including *square links* having four shanks all lying in a common plane and connected by four link corners, each shank extending as a straight link segment between adjacent link corners, such that when the square chain links are engaged with adjacent chain links at opposite corners, another link corner of each square chain link is exposed to engage bark.

REFERENCE

The prior art relied upon by the Examiner is:

Name	Reference	Date
Jensen	US 7,878,227 B2	February 1, 2011

REJECTION

The Appellant seeks our review of the rejection of:

- claims 15–26 under 35 U.S.C. § 103(a) as unpatentable over Jensen;
and
claims 15–26 under 35 U.S.C. § 112(a), first paragraph, as failing to comply with the written description requirement.

OPINION

Rejection Under 35 U.S.C. § 103(a)

The Examiner determines that Figures 3, 11A, and 11C of Jensen disclose the limitations of claim 15. Final 5–6. The Examiner also states that “[A]pplicant has not set forth any criticality of the links being square or substantially square in shape” or “provided any unexpected result of the use of such shape” and that the Specification indicates any substantially symmetric polygon provides the same function as a square link. *Id.* at 6; *see also* Ans. 3 (Stating similarly that the Specification describes that linkage elements “may be in the shape of any symmetric polygon” and there is “no criticality to a square or substantially square shape.”).

The Examiner also determines that Jensen has the same shape and function as the claimed square link. Final 6. According to the Examiner, “[t]here are only a finite number of shapes that one could use and still retain the functionality of Jensen, so it would have been obvious to a person of ordinary skill in the art to turn the substantially square shaped links of Jensen into completely square links” and “such a shape was a matter of mechanical expediency as a person of ordinary skill in the art would have found such a shape obvious absent persuasive evidence that the particular configuration of the claimed shape was significant.” *Id.* at 6–7.

For claims 16–22 which depend directly or indirectly from claim 15, Examiner determines that Figures 3 and 11A of Jensen disclose their limitations. *Id.* at 7–8. Applying Figures 11A and 11C of Jensen and the same reasons for independent claim 15, the Examiner determines that Jensen would have rendered obvious independent claim 23. *Id.* at 8–10. The

Examiner also determines that Figure 11A of Jensen discloses claims 24–26 which depend directly from claim 23. *Id.* at 10.

The Appellant argues claims 15–26 as a group. Appeal Br. 3–18. We select claim 15 as the representative claim, and claims 16–26 stand or fall with claim 15. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2019).

The Appellant first argues that the figures the Examiner cites (Figures 11A and 11C of Jensen from the issued patent) are not prior art because they were filed two years after the priority date of the present application. Appeal Br. 6 (citing Ex. 1003, 40–47²). According to the Appellant, these figures were revised in response to an objection, and the revised figures are not identical to Figures 11A and 11C in Jensen’s provisional or published application. *Id.* at 7–8 (citing Ex. 1003, 27–28, 40–47, 56, 124–125; Ex. 1004, 41, 42³). The Appellant also argues that the Examiner’s response that “patents are assumed to be valid” does not apply because Jensen’s validity is not at issue. *Id.* at 8 (quoting Final 2).

Additionally, the Appellant argues that, even if Jensen’s revised Figures 11a and 11c were prior art, they do not show the claimed “square links.” *Id.* at 9–12. In the Appellant’s view, Jensen’s disclosure “repeatedly

² The Appellant states that Exhibit 1003 is the “File Wrapper of US 11/279,502; published as US 2007/0079899 (‘The Jensen Publication’); issued as US 7,878,227 (‘The Jensen Patent’).” Appeal Br. 22. Although the Appeal Brief cites to specific pages of Exhibit 1003 and we identify the page numbers in this Decision, the exhibit does not have any page numbering. Based on the surrounding context, it is sufficiently clear which parts of the file wrapper the Appellant relies on for its arguments.

³ The Appellant states that Exhibit 1004 is the “File Wrapper of US 60/671,012 (‘The Jensen Provisional’).” Appeal Br. 22. Exhibit 1004 also does not have page numbering.

and consistently refers to round links in its detailed description of embodiments,” “goes on to provide a specific example depicting and describing links that are at least generally or substantially round,” and describes how its chain links 940 are made round. *Id.* at 9–12 (citing Jensen, 1:11–17, 3:46–55, 4:43–5:23, 5:50–6:51, 7:14–37, 8:56–60, 9:24–46, 10:62–65, Figs. 1, 11A; Ex. 1003, 28). The Appellant, thus, argues that one of ordinary skill in the art would not have viewed Figures 11A and 11C in a manner divorced from and contrary to Jensen’s disclosure. *Id.* at 11–12.

The Appellant further argues that the Examiner does not provide a reasoned explanation for modifying Jensen to have square links absent hindsight. *Id.* at 13. The Appellant contends that one of ordinary skill in the art would not have ignored Jensen’s teachings directed at round links and that Jensen teaches square links were deficient, thereby discouraging one of ordinary skill in the art from pursuing square links. *Id.* (citing Jensen, 10:62–65). The Appellant additionally alleges commercial success and copying as objective evidence of nonobviousness that were also previously presented to the Examiner. *Id.* at 14–18 (citing Final 2, 6–7; Ex. 1002, 2–8).

The Examiner answers that Jensen discloses “at least a polygonal shape which is the only requirement by [A]ppellant to be able to perform the functions of the invention” and “a substantially square link in [F]igure 11c.” Ans. 3–4 (quoting from Spec. 6:15–18). The Examiner also determines that the Appellant’s declaration “is at odds with [A]ppellant’s disclosure” because “there is no criticality to the square shape.” *Id.* at 4. Regarding whether the cited figures of Jensen are prior art, the Examiner answers that “every patent is presumed to be valid” and “[a]s such Figure 11c is presumed to be supported by the original disclosure of Jensen.” *Id.*

The Appellant replies that it is not arguing that Jensen is invalid, the Examiner is presuming that “all contents of an issued patent are irrefutably deemed to have been filed with the priority application, even if added later,” and the Examiner is not addressing whether the particular disclosure was part of the application as filed. Reply Br. 1–3. The Appellant maintains that the relevant figures of Jensen are from the published application and that it would be prejudicial to the Appellant to apply later revised figures filed after the priority date of the claims. *Id.* at 3.

Because the Appellant disputes what Figures 3, 11A, and 11C of Jensen show and these figures appear to differ from the corresponding figures in the provisional and published applications, we, like the Appellant, turn to Jensen’s disclosure to determine what one of ordinary skill in the art would have understood from those figures at the time of Jensen’s filing date. The Appellant does not dispute that Jensen’s disclosure is prior art, only the figures filed after the filing of Jensen’s application. *See generally* Appeal Br.; Reply Br.

Jensen discloses a “debarking chain including a plurality of interconnected chain links, each chain link being a continuous strand of chain material surrounding and defining a central opening through which the continuous strand of any adjacent, interconnected chain links pass” and “including at least one passing link.” Jensen 2:28–34. Jensen also states that “‘passing’ links will have an inner perimeter, surrounding an open space in the center of the link that will be arcuate in at least three different regions of this inner perimeter that may or may not be separated by substantially straight inner perimeter surfaces.” *Id.* at 6:1–5. Thus, we agree with the Examiner that Jensen teaches or suggests a square chain link, because

Jensen’s link is a “continuous strand of chain material” that is “arcuate in at least three different regions . . . separated by substantially straight inner perimeter surfaces.” *See id.* at 2:28–34, 6:1–5. Even if Figures 3, 11A, and 11C of Jensen as issued are not prior art, Jensen’s disclosure states that the link is “arcuate in *at least three* different regions,” which means that it may be curved and/or angled in four different regions, with a straight inner perimeter surface between the curved regions. Thus, Jensen at least discloses a link having a four-sided shape, a disclosure that supports the Examiner’s findings that Jensen teaches or suggests a square link.

Also, there is no indication in the record that the Examiner considered the Appellant’s submitted objective evidence of nonobviousness. *See generally* Ans.; *see also* Appeal Br. 14 (Arguing that the “strong objective evidence[] of *commercial success* and *copying* submitted by Appellant should have led the Examiner to a finding of nonobviousness” and referencing Ex. 1002), 22 (Identifying “Exhibit 1002” as a “37 CFR § 1.132 Declaration of Jinhuan Huangfu and Phillip Dohnt in support of Office Action Response dated August 12, 2019”).

The Appellant argues that it sells “flail chains” that “include square links that embody the features recited in independent claims 15 and 23.” Appeal Br. 15 (citing Ex. 1002 ¶¶ 5–6). Even if nexus exists between the claimed invention and the asserted objective evidence of nonobviousness, we would agree with the Examiner that, after weighing such evidence together with the Examiner’s findings and determinations from Jensen, claims 15–26 are unpatentable. The asserted commercial success is shown by the testimony of interested witnesses with no corroborating evidence. Ex. 1002 ¶ 1 (“We are co-inventors of the United States patent application

marked as Serial No. 15/196,360”). The declarants do not identify any underlying evidence to support that “Function Chains has now secured about a 70% share of the Australian flail chain market” and “[i]n our last fiscal year (July 2018 to June 2019), over 95% of the flail chains Function Chains shipped to Canada, and over 80% of the flail chains sold by Function Chains in Australia, were square link chains embodying the invention.” Ex. 1002 ¶ 4. Without underlying documentation of the market share assertions made by the declarants, documentation that presumably is readily available to Appellant, the statements made in support of commercial success, are not entitled to significant probative value.

As for copying by others, although we understand that it may be difficult to obtain, there is insufficient evidence that substantial effort was expended by others before the asserted copying. *See* Ex. 1002 ¶¶ 11–14; Ex. 1003; *see also Pentec, Inc. v. Graphic Cntrls. Corp.*, 776 F.2d 309, 317 (Fed. Cir. 1985) (Alleged copying is not persuasive of nonobviousness when the copy is not identical to the claimed product, and the other manufacturer has not expended great effort to develop its own solution); *Vandenberg v. Dairy Equip. Co., a Div. of DEC Int’l, Inc.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984) (Evidence of copying found particularly persuasive where copyist had itself attempted for a substantial length of time to design a similar device, and failed). Therefore, the asserted copying is not particularly persuasive.

For the reasons above, when the submitted evidence of asserted commercial success and copying are weighed together with the Examiner’s findings and determinations, we would agree with the Examiner that Jensen would have rendered obvious claims 15–26. Accordingly, we sustain the Examiner’s rejection of claims 15–26 under 35 U.S.C. § 103.

Rejection Under 35 U.S.C. § 112, First Paragraph

The Examiner determines that “[t]here is no support in the original disclosure for square chain links” because “[t]he [S]pecification only references ‘a substantially square shaped interior space’ or a ‘substantially square shape’ or ‘square cross section’ which is not the same as a square shaped chain link.” Final 2 (Acknowledging that the Appellant filed a declaration but responding that “figure 1A . . . clearly shows a link (10) which does not meet the dictionary definition of square” because “[b]y definition a square has four pointed corners that are at 90 degree angles” and “there is nothing in the original disclosure changing the accepted definition of a square.”), 3–4 (Objecting to the Specification because “there is no support for ‘square chain links.’”).

The Appellant argues that Figures 1A and 3 provide written description support as evidenced by the declaration it previously submitted in response to a prior Office action. Appeal Br. 4. According to the Appellant, the declaration demonstrates how one of ordinary skill in the art would have interpreted Figures 1A and 3 in view of the claim language “square links” and is corroborated by record evidence. *Id.* at 4–5 (citing Ex. 1001, 3–4; Ex. 1002, 10–14, 25, 51–58, 61–70). The Appellant contends that, as explained in the declaration, one of ordinary skill in the art would not have understood “square links” to be mathematically perfect squares because they would be impractical. *Id.* at 5 (citing Ex. 1001, 3–4).

The Appellant also argues that the Examiner erroneously implies that the exact claim language must be found in the Specification. *Id.* at 3. The Appellant further argues that the Examiner should not give more weight to an unsupported dictionary definition and the Examiner’s opinion of the

understanding of one of ordinary skill in the art, which are not evidence, over the Appellant's submitted declaration. *Id.* at 3, 5.

The Examiner answers that the disclosure "calls the linkage element 'substantially square'" and Figure 1a shows "a substantially square shape but not by definition a square shape." Ans. 3 (citing Spec. 6:15–18). In response to the Appellant's declaration, the Examiner states that "in my look at this art square links mean to be actually square (for instance four sharp ninety degree corners)." *Id.*

The Appellant replies that no reference supports the Examiner's assertion regarding a square shape and that "it is a personal assertion that contradicts the written testimony of a very experienced and knowledgeable person in this particular art." Reply Br. 1 (quoting Ans. 3). The Appellant also argues that such "bare dismissal of the testimony of a skilled person is inconsistent with proper and unbiased examination." *Id.*

We agree with the Appellant that Figures 1A and 3 provide written description support. Appeal Br. 4. The Examiner acknowledges that Figure 1A shows a substantially square shape. Ans. 3. The Examiner does not explain why a mathematical definition of "square" over another meaning should be applied in view of the Specification. *See* Final 2–4; Ex. 1001, 3–4. The Examiner also does not address sufficiently the Appellant's declaration that indicates one of ordinary skill in the art would have understood that "square links" do not have to be mathematically perfect square shapes because such shapes are impractical in the art. *See* Final 2–4; Ans. 3–4; Ex. 1001, 3–4. In sum, the record does not make clear why a narrower interpretation, and not the broadest reasonable interpretation of "square" in view of the Specification, applies.

Also, the Examiner determines that the Specification describes only a square interior space. Final 4. The Specification, however, states that “the interior space of the linkage element is regularly shaped,” the “term ‘regularly shaped’ . . . refers to a substantially symmetric polygon” and “in one form of the invention four shank portions and four angled portions may define a substantially square shaped interior space.” Spec. 2:17–20. The Specification also states that “a cross section of any one of said shank portions may be substantially circular.” *Id.* at 3:10–11. Because the Specification describes a “substantially square shaped interior space” formed by portions with circular cross sections, a substantially square link would be within the scope of that description.

For the reasons above, we do not sustain the Examiner’s rejection of claims 15–26 under 35 U.S.C. § 112, first paragraph.

DECISION

The Examiner’s rejection of claims 15–26 are affirmed. More specifically, the Examiner’s rejection of claims 15–26 under 35 U.S.C. § 103(a) is sustained but the rejection of claims 15–26 under 35 U.S.C. § 112, first paragraph is not sustained.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
15-26	103(a)	Jensen	15-26	
15-26	112(a)	Written Description		15-26
Overall Outcome			15-26	

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).

AFFIRMED