

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 KALIN LEIFER and ELROY SCHOENBECK

Appeal No. 2002-1067
Application No. 09/358,666

ON BRIEF

Before COHEN, STAAB, and MCQUADE, *Administrative Patent Judges*.
STAAB, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1, 4-10, 13, 16-18 and 22-26. Claims 19-21 have been allowed. Claims 12, 14 and 15, the only other claims in the application, have been indicated by the examiner to contain allowable subject matter, but currently stand objected to until such time that they are rewritten in independent form. Subsequent to the final rejection (see page 2 of the answer) the examiner withdrew the rejection of claim 16 and indicated that

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Claims 17, 18, 22, 23, 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wegner.

Reference is made to appellants' revised main brief and reply brief (Paper Nos. 12 and 14) and to the examiner's answer (Paper No. 13) for the respective positions of appellants and the examiner regarding the merits of these rejections.

Discussion

Looking first at the examiner's anticipation rejection of independent claim 24 based on Wegner, claim 24 calls for, *inter alia*, first and second rollers having "substantially cylindrical" exterior surfaces for contacting exterior surfaces of the strips to reduce distortions imparted to the strips during slitting.

Wegner is directed to an apparatus for smoothing the edge corners of metal strips produced by a slitter or other continuously acting shearing device. Wegner's apparatus comprises, in pertinent part, first and second coacting roller means 28, 29, each roller means comprising two work rolls 30, 31 separated by a thin spacer disk 33 and rotatably carried by a shaft 34. The work rolls engage the metal strips at their edge corners to de-burr and slightly taper said edge corners. Wegner further describes the configuration and operation of the work rolls as follows:

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The roll surface of each of the rolls **30**, **31** has a shallow bevel or frusto-conical configuration with the larger diameter at the locality of proximity of the two roll surfaces By reason of the preferably very narrow axial dimension of the roll surfaces, as well as their taper, all possibility of rolling metal contact with the advancing strip surfaces is limited strictly to the edge corner regions where smoothing function is desired. [Column 5, lines 28-43.]

Wegner further states that

. . . very preferably the work rolls are relatively narrow in the transverse direction of the strip, in that for example in one embodiment the total width of the two bevelled work faces together was about seven-eighths inch. By reason of their bevelled or tapered configuration, at a relatively small angle such as 2° to 5° to the path plane, e.g., 3° for metal 0.008 inch thick and upwards, engagement with the strip is limited essentially to the corner area, i.e., to the actual deformed locality. [Column 13, lines 5-15.]

The linchpin of the standing rejection of claim 24 as being anticipated by Wegner is the examiner's determination that Wegner's work rolls 30, 31 have "substantially cylindrical" exterior surfaces as called for in claim 24. More particularly, the examiner takes the position (answer, page 4) that

[a]lthough Wegner teaches that the roll surface of each of the rollers (30, 31) has a shallow bevel or frusto-conical configuration[,] this does not mean that the rollers cannot be substantially cylindrical. The term "substantially" . . . allows room for slight deviation. Wegner teaches that the roll surface of each of the rollers has a shallow bevel (col. 5, lines 28-29), which by interpretation may be within the range of a "substantially" cylindrical roller. A shallow bevel can range anywhere from a minuscule dimension such as a nanometer to a larger dimension that would not

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constitute a "substantially" cylindrical roller. It is the Examiner's opinion that a shallow bevel with a minuscule dimension such as a nanometer would fall within the deviation allowed by the term "substantially" and therefore constitute a "substantially" cylindrical roller.

The above quoted rationale offered by the examiner asserting that Wegner anticipates appellants' claim 24 is not persuasive. The examiner determined that a shallow bevel with a minuscule dimension such as a nanometer would fall within the deviation allowed by the term "substantially"; however, the examiner did not find that Wegner's roller has such a minuscule taper. Rather, the examiner found that Wegner discloses a work roll having a "shallow bevel" (column 5, line 29) that "may be" within the range of a "substantially" cylindrical roller, and that Wegner's disclosure of a work roll having a "shallow bevel" means that the taper thereof "can range anywhere from a minuscule dimension such as a nanometer [which would arguably meet the terms of the claim] to a larger dimension that would not constitute a 'substantially' cylindrical roller" (answer, page 4). Thus, by the examiner's own admission, the disclosure of Wegner relative to the bevel of the work roll is ambiguous in that the bevel may or may not have a "minuscule dimension" that, in the examiner's view, would meet the substantially cylindrical roller requirement of claim 24. This does not provide a proper

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basis for anticipation since anticipation cannot be predicated on an ambiguous reference. See *In re Turlay*, 304 F.2d 893, 899, 134 USPQ 355, 360 (CCPA 1962).

Moreover, we consider that it is improper to interpret the term "substantially cylindrical" as used in appellants' claims to be of such breadth to encompass within its metes and bounds a work roll like that of Wegner that is intentionally tapered or beveled at an angle of 2° to 5° (see Wegner, column 13, line 12). The term "cylindrical" has the universally recognized and accepted meaning that precludes surfaces that are beveled, tapered, or frusto-conical.² This, we assume, is not in dispute. Further, this is consistent with appellants' disclosure. See appellants' specification, at page 7, lines 12-18 and Figures 5-7 where the roller is described and shown as being cylindrical. While it is true that "substantially" and other similar words are sometimes construed liberally to avoid unduly restricting a patent claim, the imprecision of such a word cannot be allowed to

²See *Webster's II New Riverside University Dictionary* (Riverside Publishing Company, copyright © 1984 by Houghton Mifflin Company), wherein it is stated that the adjective "cylindrical" may mean "[h]aving the shape or properties of a cylinder," and that the noun "cylinder" may mean "[a] surface generated by a straight line moving parallel to a fixed straight line and intersecting a plane curve" or "[t]he part of such a surface bounded by two parallel planes and the regions of the planes bounded by the surface."

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negate the meaning of the word it modifies. The use of the modifier "substantially" in the context of appellants' claims, we think, was intended to allow for irregular deviations from a perfectly cylindrical roller surface and not to broaden the scope of "cylindrical" to encompass rollers that are intentionally provided with tapered or beveled surfaces that are distinctly not cylindrical by design.³ *Arvin Industries, Inc. v. Berns Air King Corp.*, 525 F.2d 182, 185, 188 USPQ 49, 51 (7th Cir. 1975). See also *Amhil Enterprises, Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562, 38 USPQ2d 1471, 1476 (Fed. Cir. 1996) (In view of specification, prosecution history, and prior art, "substantially vertical face" in the patent's claim must be construed as the same as or very close to "vertical face"). For this reason, we agree with appellants that Wegner's work rolls 30, 31 having a taper of 2° or more are not "substantially cylindrical" as claimed.

In light of the foregoing, we shall not sustain the examiner's rejection of claim 24 as being anticipated by Wegner.

³Our position in this regard is supported by appellants' arguments in the revised main brief and the reply brief. See, for example, page 2, lines 13-16, of the reply brief.

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Turning to claims 17, 18, 22, 23, 25 and 26, each of these claims call for a "substantially cylindrical" roller and further require, in one form or another, that the substantially cylindrical roller is at least 2 inches long. For the reasons explained above, we do not consider that the work rolls 30, 31 of Wegner may properly be viewed as being "substantially cylindrical." Moreover, the examiner does not take the position, and it is not apparent to us, that it would have been obvious to one of ordinary skill in the art to modify the intentionally beveled or tapered work rolls of Wegner to provide them with substantially cylindrical exterior surfaces. On this basis

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alone, we also shall not sustain the Section 103 rejection of claim 17, 18, 22, 23, 25 and 26 as being unpatentable over Wegner.

The decision of the examiner is reversed.

REVERSED

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IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LAWRENCE J. STAAB)	
Administrative Patent Judge)	APPEALS AND
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JOHN P. MCQUADE)	
Administrative Patent Judge)	

LJS/hh

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