

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. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte PAUL E. ANGLIN and GLEN GIBBS

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Appeal No. 2000-0533  
Application No. 08/821,508

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ON BRIEF

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Before McCANDLISH, Senior Administrative Patent Judge,  
ABRAMS and BAHR, Administrative Patent Judges.  
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 33, 36-39, 42-45 and 60, which are all of the claims pending in this application.

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BACKGROUND

The appellants' invention relates to a method of forming a flared end on a fluid conduit (claims 33, 36-38 and 60) and a method of sealingly joining two members (claims 39 and 42-45). An understanding of the invention can be derived from a reading of exemplary claim 33, which appears in the appendix to the appellants' brief.<sup>1</sup>

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

Currie	3,265,413	Aug. 9, 1966
McIntosh	2,242,831	May 20, 1941
Takikawa	5,354,107	Oct. 11, 1994

The following rejection is before us for review.<sup>2</sup>

Claims 33, 36-39, 42-45 and 60 stand rejected under 35 U.S.C. § 103 as being unpatentable over Takikawa in view of McIntosh and Currie.

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<sup>1</sup> The copy of claim 60 in appellants' appendix is an inaccurate reproduction of the claim of record. In particular, in line 3, "forming" should be "flaring"; in line 4, "an end" should be "a distal end portion"; in line 7, "a" should be "the distal end"; and, in line 13, there should be a comma after "conduit."

<sup>2</sup> The examiner has withdrawn the rejection of the claims as being unpatentable over AAPA (appellants' admitted prior art) in view of McIntosh, Takikawa and Currie (answer, page 2).

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Reference is made to the brief (Paper No. 29) and the answer (Paper No. 30) for the respective positions of the appellants and the examiner with regard to the merits of this rejection.

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. As a consequence of our review, we make the determinations which follow.

Independent claim 60 recites the steps of:

- (1) flaring a first end of a conduit radially outward from an axial extent with a distal end portion extending radially inward by axially pressing a tool into the first end of the conduit;
- (2) bending the distal end portion inward on itself to form exterior and inner substantially parallel flanges, an exterior conical surface formed on the outer flange and an inner conical surface formed on the inner flange; and

(3) simultaneously with the bending of the first flared end, extruding an annular reduced resistance bead having a sidewall terminating in an outer end by the axial pressing of the tool as a continuous, one-piece, radially inward[ly] projecting extension from a plane<sup>3</sup> defined by the interior conical surface.

Step (1) is the step shown in appellants' Figure 2 of pressing the punch 36 axially into the end of the conduit 14 to produce the bowed, partially folded over flange 42 illustrated in Figure 3. In accordance with the underlying disclosure, steps (2) and (3) are simultaneously performed by pressing the special tool 46 into the partially folded over flange. This tool 46 is different from the tool or punch 36 used in step (1). Claim 60 is thus inaccurate or misdescriptive of appellants' invention, in that the extruding step (3) is recited as being performed by axially pressing "the tool," which refers back to the only tool recited in the

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<sup>3</sup> It is not apparent to us what plane is defined by a conical (curved) surface. Presumably, the plane referred to in the claims is a plane lying tangent to the conical surface and the extension from the plane occurs at the line of tangency. In any event, it is in this manner that we have interpreted the claims in reaching our decision in this appeal.

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claim, i.e., the tool used in step (1), rather than to a tool used in step (2).

Claim 38, which depends from independent claim 33, is also misdescriptive of appellants' invention as disclosed, in that the bending step of claim 38 is recited as a step in addition to the flaring step recited in claim 33. In accordance with the invention as disclosed, the step of bending the flared first end inward on itself to form parallel flanges is the step shown in Figure 3 of pressing the special tool 46 into the bowed or partially folded over flange 42. This is the same step that forms the exterior and interior conical surfaces. Thus, the bending step of claim 38 should be recited as part of the flaring step, rather than as an additional step separate from the flaring step.

No claim may be read apart from and independent of the supporting disclosure on which it is based. We are thus required to read the claims in light of the disclosure. The result is an inexplicable inconsistency within each of claims 38 and 60, for the reasons discussed above, which renders the claims indefinite under the second paragraph of 35 U.S.C. §

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112. See In re Cohn, 438 F.2d 989, 993, 169 USPQ 95, 98 (CCPA 1971).

For the foregoing reasons, claims 38 and 60 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as the invention. This is a new ground of rejection pursuant to 37 CFR § 1.196(b).

Next we turn to the examiner's rejection of claims 33, 36-39, 42-45 and 60 under 35 U.S.C. § 103 as being unpatentable over Takikawa, McIntosh and Currie. Normally, when a claim is held to be indefinite, a determination as to patentability under 35 U.S.C. § 103 is not made. See In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962) and In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). However, in this instance, we consider it to be desirable to avoid the inefficiency of piecemeal appellate review. See Ex parte Ionescu, 222 USPQ 537, 540 (Bd. App. 1984). In reviewing the examiner's obviousness rejections, we have interpreted claim 38 such that the step of flaring further comprises the step of "bending . . ." recited in claim 38. We have also interpreted the bending step of claim 60 as

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being performed by axially pressing a second tool into the first end of the flared conduit and the extruding step as being performed by the axial pressing of the second tool.

Each of independent claims 33, 39 and 60 requires, inter alia, the steps of axially pressing a tool into a member or conduit to form exterior and interior parallel conical surfaces and simultaneously extruding an annular reduced resistance bead by the axial pressing of the tool as a continuous one-piece extension from a plane defined by one of the conical surfaces. According to the examiner, the claimed method is suggested by the combined teachings of Takikawa, McIntosh and Currie.

Takikawa discloses a flared double-wall conduit having an annular reduced resistance bead (annular brim 2) formed as a one-piece, radially inwardly projecting extension from the interior conical surface of the flared end. Takikawa does not disclose a specific method of forming the flared double-wall conduit, other than a broad reference to "molding processes" and "machining and/or cutting" (column 2, lines 51-52).

McIntosh discloses a two-step process of forming a double walled flare on tubing. The process, like appellants' method,

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includes axially forcing a first member 70 against the end of the tube such that the end is curved into the form of an arc, as shown in Figure 4, and then inserting a flaring member 78 against the end of the arc to flatten the inwardly arched portion 94 and the outwardly arched portion 92 of the arc together, as shown in Figure 5, to form exterior and interior parallel flanges and conical surfaces. The McIntosh method does not include extrusion of an annular reduced resistance bead extending from a conical surface of the flared end, as required by the claims.

Currie (Figure 4, column 3, lines 5-16) discloses a method of forming a raised annular portion 46 on the inner surface of a flared end of a tube using a single double angle flaring tool punch. The raised annular portion created by this method is the point of intersection of two conical portions or surfaces 40, 41 of different angularity and is not a one-piece extension from either of these conical surfaces 40, 41 (or from a plane tangent to either of these conical surfaces). Thus, the Currie method does not produce an annular reduced resistance bead as a one-piece extension from a plane defined by either of these conical surfaces, as

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required by the claims, and will not produce a bead (brim) of the type disclosed by Takikawa.

The examiner concedes that McIntosh and Currie do not teach or suggest a flaring/extruding process which would simultaneously produce parallel conical surfaces and an annular bead as required by the claims. However, the examiner's position, in essence, is that any deficiencies in the flaring/extrusion taught by Currie are overcome by the teachings of Takikawa (answer, page 3).

While Takikawa teaches that flared double-wall conduits having parallel exterior and interior conical surfaces and an annular bead of the type formed by the claimed method were known in the art at the time of appellants' invention, we perceive no teaching or suggestion in the applied references to form that particular flared end by axially pressing a tool into the conduit to form the parallel exterior and interior conical surfaces and simultaneously extruding the annular bead by the axial pressing of the tool. As discussed above, Takikawa does not specify the method of forming the flared end and, thus, provides no suggestion of such a method. McIntosh and Currie, on the other hand, fail to teach or suggest a

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method wherein a bead as claimed is extruded simultaneously with the flaring of the end to form parallel interior and exterior conical surfaces by the pressing of a tool into the end of the conduit. Modification of the teachings of McIntosh and Currie to arrive at the claimed invention would require a re-design of the flaring tool. From our perspective, the only suggestion for such a modification is found in the luxury of hindsight accorded one who first viewed the appellants' disclosure. This, of course, is not a proper basis for a rejection. See In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

Accordingly, we shall not sustain the examiner's rejection of claims 33, 36-39, 42-45 and 60 under 35 U.S.C. § 103.

#### CONCLUSION

To summarize, the decision of the examiner to reject claims 33, 36-39, 42-45 and 60 under 35 U.S.C. § 103 is reversed. A new rejection of claims 38 and 60 is entered pursuant to 37 CFR § 1.196(b).

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b). 37 CFR § 1.196(b) provides that, "A new

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ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

- (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
- (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED; 37 CFR § 1.196(b)

HARRISON E. McCANDLISH	)	
Senior Administrative Patent Judge	)	
)	)	
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	)	
	)	BOARD OF PATENT
NEAL E. ABRAMS	)	APPEALS
Administrative Patent Judge	)	AND
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