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THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

This opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

**MAILED**

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**AUG 29 1995**

*Ex parte* GEORGE WEIHRAUCH

**PA  
BOARD OF  
AND INTERFERENCES**

Appeal No. 95-1894  
Application 07/748,016<sup>1</sup>

HEARD: AUGUST 7, 1995

Before MEISTER, STAAB and McQUADE, *Administrative Patent Judges.*  
STAAB, *Administrative Patent Judge.*

*DECISION ON APPEAL*

This appeal is from the final rejection of claims 1, 3-9, 11-13, 17, 19-21 and 23. The status of claim 10 is that of a non-rejected dependent claim.<sup>2</sup> Claims 2 and 16 have been can-

<sup>1</sup> Application for patent filed August 21, 1991.

<sup>2</sup> In every office action beginning with the office action dated December 24, 1992 (Paper No. 5) and in every subsequent response, both the examiner and the appellant have treated dependent claim 10 as though it were a rejected claim. However, a thorough review of the record reveals that this claim has never been formally rejected. While this situation would normally warrant a remand to the examiner for correction of this manner, in the present instance the question of whether or not the examiner intended to include claim 10 among the finally rejected claims is moot in view of our disposition of this appeal.

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celed. Claims 14, 15, 18 and 22, the only other remaining claim in the application, have been allowed.<sup>3</sup>

The appellant's invention pertains to a process (claims 1 and 3-11) and apparatus (claims 12-15 and 17-23) for joining bristle bundles to a bristle carrier. Independent claims 1 and 12, copies of which are appended to this opinion, are illustrative of appellant's process and apparatus, respectively.

The references of record relied upon by the examiner in support of rejections under 35 U.S.C. § 103 are:

Bickel	4,609,228	Sept. 2, 1986
Weihrauch	4,988,146	Jan. 29, 1991

In addition, the examiner relies upon "Applicant's Admitted Prior Art on pages 1-3 of the specification" (answer, page 3; hereinafter "AAPA") in support of the rejections.

Claims 1, 3-9, 12, 13 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over AAPA in view of Weihrauch and claims 11, 19-21 and 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over AAPA in view of Weihrauch and further in view of Bickel.<sup>4</sup>

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<sup>3</sup> The amendments filed subsequent to the final rejection (Paper Nos. 12 and 19) rewriting claims 14, 15, 18 and 22 in independent form have been entered.

<sup>4</sup> Although not specifically challenged by the appellant, it is questionable whether Weihrauch, which is the appellant's own patent, qualifies as prior art under 35 U.S.C. § 102. In any event, the question is moot in view of our disposition of this appeal.

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The rejections are explained in the office action dated December 24, 1992 (Paper No. 5).<sup>5</sup>

The opposing viewpoints of appellant are found in the main and reply briefs (Paper Nos. 14 and 18, respectively).

OPINION

For reasons stated *infra* in our new rejection entered under the provisions of 37 CFR 1.196(b), we have encountered substantial difficulty in understanding precisely what is meant by certain claim language in the appealed claims. While we might speculate as to what is meant by that claim language, our uncertainty provides us with no proper basis for making the comparison between that which is claimed and the prior art as we are obligated to do. Rejections under 35 U.S.C. § 103 should not be based upon "considerable speculation as to the meaning of terms employed and assumptions as to the scope of the claims." *In re Steele*, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962). When no reasonably definite meaning can be ascribed to certain terms in a claim, the subject matter does not become obvious, but

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<sup>5</sup> In explaining the rejections in the answer, the examiner has referred to the final rejection (Paper No. 9), which in turn refers to another prior office action (Paper No. 5), wherein the examiner's rationale in support of the rejection can be found. This sort of incorporation by reference does not comply with the guidelines set forth in MPEP § 1208 requiring that an explanation of each ground of rejection be found in the examiner's answer or a *single* prior action. If the examiner wishes to incorporate by reference a rejection found in a single previous office action, he should refer *directly* to that office action.

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rather the claim becomes indefinite. *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Accordingly, we are constrained to reverse the examiner's rejections of the appealed claims as being unpatentable over the prior art. We hasten to add that this is a procedural reversal rather than one based upon the merits of the rejections. We take no position as to the pertinence of the prior art as applied by the examiner in his rejections.

Pursuant to our authority under 37 CFR 1.196(b), we make the following new rejection.

Claims 1, 3-13, 17, 19-21 and 23 are rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention.

While we are mindful that appellant is free to claim his invention in broad terms and in language of his own choosing, we must also remember that because a patentee has a right to exclude others from making, using and selling the invention covered by a patent (35 U.S.C. § 154), the public must be appraised of exactly what the patent covers, so that those who would approach the area circumscribed by the claims of the patent may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance. It is to

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this end that the second paragraph of 35 U.S.C. § 112 is directed. See *In re Hammack*, 427 F.2d 1378, 166 USPQ 204 (CCPA 1970).

With this as our perspective, we turn to the claims before us and note that, in the present case, independent claim 1 calls for a process of joining bristle bundles to a bristle carrier which comprises the steps of (1) melting the bristles of each bundle to form thickened portions, (2) pressing the thickened portions into holes provided in a receiving area of the bristle carrier, (3) peripherally elastically sealing a space above the receiving area, and (4) pressing and displacing rising material due to the pressing of bristle bundles so as to compress the rising material in the sealed space so as to obtain a planar surface over the entire bristle carrier. The peripherally elastically sealing step is said to involve sealing "a space above the receiving area and between the bristle bundles which surrounds in an annular manner the entire bristle area formed by the space against the bristle carrier." The meaning of this terminology is not clear. Specifically, it is not clear what constitutes "the space" (second occurrence). If "the space" (second occurrence) is the same as "the space" (first occurrence), then the above quoted terminology as a whole would appear to make no sense because "the space" would, in effect, be defining itself (*i.e.*, "the space above the receiving area and between the bristle bundles . . . [is] formed by the space"). On the

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other hand, if "the space" (second occurrence) is not the same as "the space" (first occurrence), we are at a loss as to what "the space" (second occurrence) refers to. This confusion leads to further confusion as to what the term "the sealed space" in lines 13-14<sup>6</sup> of claim 1 refers to. In addition, claim 1 appears to be incorrect in stating that the process obtains a planar surface over "the entire bristle carrier" (last line). Rather, the process would appear to, at best, result in obtaining a planar surface over the entire bristle area.

With respect to the dependent process claims, it is also unclear as to precisely what constitutes "the annular sealed space" (claim 4, line 2) and "the annular sealed space outside of the projections" (claim 6, last two lines), it being noted that these terms lack strict antecedent basis. Further with respect to claim 4, it is not precisely clear how the annular sealed space, regardless of what it is, is supplied with heat at a temperature above the melting point of the bristles, since the sealed space would not appear to be formed until the platen engages the bristle carrier, at which point the only disclosed heating element (element 10 in Figure 1) must of necessity have already been removed. Claims 6, 8 and 9, which are directed to the Figure 12 embodiment, would not appear to properly depend

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<sup>6</sup> All line numbers for appealed claims are with respect to the claims as they appear in the appendix to appellant's brief.

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from claims 1 or 3 in that both of these latter claims call for obtaining "a planar surface of the entire bristle carrier" (claim 1, last two lines) whereas the practice of the Figure 12 process results in the formation of collar like projections where the bristle bundles meet the bristle carrier.

Turning to the apparatus claims, independent claim 12 is directed to an apparatus for joining bristle bundles to a bristle carrier, the apparatus comprising a receptacle for accommodating the bristle carrier, a pair of guide plates and a clamping device for providing bristle bundles to the bristle carrier, a heating mechanism for melting ends of the bristle bundles, and a platen upstream from the receptacle for cooperating with the bristle carrier to provide a sealed space for accommodating and compressing rising melted material of the bristle carrier during the connection of the bristle bundles to the bristle carrier. In lines 5-7, it is not clear what is meant by the guide plates having aligned channel "for enabling" a supply of the bristle bundles. Perhaps the claim should read ". . . aligned channel for receiving a supply of the bristle bundles." In line 13, "the bristle area" lacks clear antecedent basis. Presumably, this terminology refers to that portion of the bristle carrier which receives the bristle bundles and the vicinity immediately adjacent thereto. In lines 15-16, it is not clear what constitutes "a space defined by the annular sealing zone." Specifically, it

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is not clear whether "the annular sealing zone" in line 15-16 refers to "the sealing zone annularly surrounding the bristle area" (lines 12-13) of the platen, the "cooperating annular sealing zone" (lines 14) on the bristle carrier, or both.

With respect to dependent claim 13, it is not clear whether "the annular sealing zone" (lines 1-2) refers to the "sealing zone annularly surrounding" (claim 12, lines 12-13) of the platen, the "corresponding annular sealing zone" (claim 12, line 14) on the bristle carrier, or "the annular sealing zone for accommodating rising material" (claim 12, lines 15-16). In addition, the annular sealing zone of claim 13 is said to be formed by an interengaging groove and rib on the platen and bristle carrier. Thus, it would appear that the bristle carrier is a positively recited element of the apparatus, at least to the extent that the bristle carrier in part defines the annular sealing zone. However, the preamble of claim 12 is specifically directed to an "[a]pparatus" per se. The preamble of claim 12 makes this clear by reciting that the purpose of the apparatus is "*for joining bristle bundles to a bristle carrier*" (emphasis added). Consequently, the scope of claim 12 and the scope of claim 13 are inconsistent, thus rendering claim 13 further indefinite in that it is unclear whether appellant intended to cover the apparatus per se or in some fashion the apparatus and the article worked upon by the apparatus.

In addition, we regard claim 13 as reading only on the Figure 4 embodiment in that this is the only disclosed embodiment comprising structure that can be reasonably regarded as having an interengaging groove and rib structure. In this respect, we note that the specification describes element 20 of the Figure 4 embodiment as a "groove" and element 21 as a "web-like projection." In contrast, the elements 23 and 24 of the Figure 5 embodiment are described as interengaging "steps" (as per allowed claim 14). The Figure 4 embodiment, however, does not have a bristle carrier receiving side having a substantially planar surface as called for in the last two lines of claim 12. Rather, the bristle carrier receiving side of the Figure 4 embodiment includes a depression 22. Additionally, the Figure 4 embodiment does not have a platen which cooperates with the bristle carrier for "peripherally elastically sealing" a space as called for in line 15 of claim 12.<sup>7</sup> Accordingly, it does not appear that claim 13 can properly depend from claim 12 in that claims 12 and 13 are directed to mutually exclusive embodiments.

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<sup>7</sup> At oral hearing, counsel for appellant was understood to say that the claim terminology "peripherally elastically sealing" was broad enough to cover a number of the disclosed sealing arrangements in addition to the Figure 6 embodiment. As is apparent from our discussion, we do not share this view, at least insofar as it applies to the Figure 4 embodiment.

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The scope of claim 19, which depends from claim 17, is not clear in that the term "said guide channel" appearing therein lacks any antecedent basis whatsoever.

Claims 14, 15, 18 and 22 have been allowed by the examiner. We note, however, that each of these independent apparatus claims includes the same 35 U.S.C. § 112, second paragraph, deficiencies as independent apparatus claim 12 set forth supra in our new rejection thereof. Claims 14, 15, 18 and 22 are therefore indefinite for the same reasons.

In addition, in claims 15 and 22, the meaning of the terminology "said platen . . . cooperable with a corresponding annular sealing zone on the [sic] for peripherally elastically sealing a space" is not clear. Perhaps the words "bristle carrier" should appear after "on the." Still further, claims 14 and 22 are internally inconsistent. In this respect, claim 14 would appear to be directed to the Figure 5 embodiment ("the annular sealing zone is formed by interengaging steps on the platen and on the bristle carrier") and claim 22 is directed to the Figure 7 embodiment ("an elastic material layer provided with channels for accommodating the bristle bundles rests on the bristle carrier"). However, neither the Figure 5 embodiment nor the Figure 7 embodiment provides a platen which cooperates with the bristle carrier for "peripherally elastically sealing" a space, as also called for in each of these claims. Thus, independent apparatus claims

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14, 15 and 22 contain deficiencies in addition to those set forth supra in our new rejection of independent apparatus claim 12.

Accordingly, under the provisions of 37 CFR § 1.196(d), we recommend that claims 14, 15, 18 and 22 be rejected under 35 U.S.C. § 112, second paragraph, and remand this application to the examiner for this purpose.

In summary:

The 35 U.S.C. § 103 rejections of claims 1, 3-9, 11-13, 17, 19-21 and 23 are reversed on procedural grounds. We take no position as to the pertinence of the prior art as applied by the examiner in his rejections.

A new ground of rejection of claims 1, 3-13, 17, 19-21 and 23 under 35 U.S.C. § 112, second paragraph, is entered pursuant to 37 CFR 1.196(b).

A remand of this application is made to the primary examiner for consideration of our recommended rejection of allowed claims 14, 15, 18 and 22 under 35 U.S.C. § 112, second paragraph, pursuant to 37 CFR § 1.196(d).

The decision of the examiner is reversed.

A period of two months is set in which the appellant may submit to the Primary Examiner an appropriate amendment, or a showing of facts or reasons, or both, in order to avoid the grounds set forth in the statement of the Board of Patent Appeals and Interferences under the provisions of 37 CFR § 1.196(d)



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*APPENDIX*

1. Process for joining bristle bundles to a plastic bristle carrier, the process comprising the steps of melting bristles of each bundle [are melted] at fastening-side ends thereof so as to form a thickened portion at the fastening side ends of the bristle bundles, pressing the bristle bundles with the thickened portions into holes provided in a bristle receiving area of the bristle carrier accompanied by thermalforming, peripherally elastically sealing a space above the receiving area and between the bristle bundles which surrounds in an annular manner the entire bristle area formed by the space against the bristle carrier, pressing and displacing rising material due to the pressing of the bristle bundles so as to compress the rising material in the sealed space so as to obtain a planar surface over the entire bristle carrier.

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12. Apparatus for joining bristle bundles to a bristle carrier, the apparatus comprising a receptacle for accommodating the bristle carrier, at least two guide plates spaced from the receptacle and disposed in parallel to one another and to said receptacle, each of said guide plates having aligned channels for enabling a supply of the bristle bundles, at least one clamping device for fixing the bristle bundles in the channels at least during a connection of the bristle bundles to the bristle carrier, at least one heating mechanism for melting zones of bristle ends projecting out of the channel, and a platen positioned upstream of the receptacle, said platen including a sealing zone annularly surrounding the bristle area and cooperable with a corresponding annular sealing zone on the bristle carrier for peripherally elastically sealing a space defined by the annular sealing zone for accommodating rising material during a compression of the bristle carrier and the bristle bundles during the connection of the bristle bundles to the bristle carrier, whereby the entire bristle carrier on the bristle carrier receiving side has a substantially planar surface.