

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAUL G. CHEESEMAN

Appeal No. 1998-2558
Application No. 08/744,894

ON BRIEF

Before KIMLIN, DELMENDO, and JEFFREY T. SMITH, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 and 3 through 11, which are the only claims pending in the subject application.

The subject matter on appeal relates to a battery assembly comprising: a particular tubular, plastic, sleeve-shaped housing; at least one particular individual self-contained electrochemical cell positioned within the housing; and particular end caps closing the ends of the tubular housing.

According to the express language of the appealed claims, the housing has a uniform wall of cross-section thickness less than 0.7 mm

throughout its length and is formed by a process consisting of extrusion. Further details of this appealed subject matter are recited in illustrative claim 1 reproduced below:

1. A battery assembly comprising a tubular, plastic, sleeve-shaped housing having a uniform wall of cross-section thickness less than 0.7 millimeters throughout its length and formed by a process consisting of extrusion; at least one individual self-contained electrochemical cell positioned within the housing; said housing wall closely conforming to the shape and size of and contacting the cell positioned within the housing; and end caps closing the ends of said tubular housing, one of said end caps having terminals for electrical connection to an external device, wherein said at least one cell within the housing provides additional strength to the housing.

The examiner relies on the following prior art references as evidence of unpatentability:

Stutzbach et al. (Stutzbach)	4,460,663	Jul. 17, 1984
Machida et al. (Machida)	4,997,731	Mar. 5, 1991

Claims 1 and 3 through 11 on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Machida in view of Stutzbach. (Examiner's answer, pages 4-6.)

We reverse the aforementioned rejection.

The examiner characterizes the teachings of Machida as follows:

Machida et al. disclose the use of a tubular plastic housing having uniform wall thickness, with endcaps having terminals for electrical connection to an external device, and housing openings which allow cells to be guided along the interior cavity of the closely conforming walls. Embodiments of this tubular plastic housing may have either one (Figure 7) or two (Figure 1) substantially flat wall surfaces. The Machida et al. reference differs from claims 1, 4, and 7 in that it fails to disclose the use of a plastic extrusion process. [Examiner's answer, pp. 4-5.]

To account for the limitation in appealed claim 1 that the tubular, plastic, sleeve-shaped housing is "formed by a process consisting of extrusion," the examiner relies on the teachings of Stutzbach. Specifically, the examiner states:

Stutzbach et al., however, disclose the manufacture of a battery casing wherein they make use of an "...extruded tubular member of preferable rectangular cross section having upper and lower ends." See column 4, lines 25-35. This tubular member is of uniform wall thickness, serving to "reduce the overall weight of the casing and to minimize material costs." [Id. at p. 5.]

The examiner then concludes:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an extrusion method like that of Stutzbach et al. in order to reduce the weight, cost, and complexity of fabricating a casing like that of Machida et al. [Id.]

We cannot agree with the examiner's analysis. As pointed out by the appellant (appeal brief, pages 7 and 10), Machida does not describe "a tubular, plastic, sleeve-shaped housing having a uniform wall of cross-section thickness less than 0.7 millimeters throughout its length and formed by a process consisting of extrusion" as recited in appealed claim 1.

(Emphasis added.) Instead, Machida describes a tubular body having notches 18, 23, and 24, "a step portion having a bit increased [sic] inner diameter," and a flange 26. (Column 3, lines 39-58.) Thus, contrary to the examiner's allegation, Machida's tubular body does not have a "uniform wall..." as recited in appealed claim 1 and as defined in the specification at page 5.

Stutzbach does not make up for the lack of a teaching in Machida as to a tubular body having a "uniform wall of cross-section thickness less than 0.7 millimeters throughout its length." Although Stutzbach teaches an extruded casing wall member with a "substantially reduced uniform wall thickness" (column 2, lines 13-18), the examiner has not presented any evidence to establish that one of ordinary skill in the art would have found the requisite motivation, teaching or suggestion in the applied prior art to replace the tubular body

of Machida with that of Stutzbach. Along these lines, Machida teaches that notches 23 and 24 function as air relief vents and that flange 26 holds the battery cells in position. (Column 3, lines 48-50 and 55-58.) These functions are necessary in Machida and would not be possible if the tubular body were to have a uniform wall thickness, i.e. a tubular body without notches and a flange. Under these circumstances, it is our judgment that one of ordinary skill in the art would have had no incentive to replace Machida's tubular body having non-uniform wall thickness with the "uniform wall thickness" tubular body of Stutzbach.

By ignoring the "uniform wall" claim limitation, the examiner committed reversible error. In re Geerdes, 491 F.2d 1260, 1262-63, 180 USPQ 789, 791 (CCPA 1974) ("[E]very limitation in the claim must be given effect rather than considering one in isolation from the others."); In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art.").

For these reasons, we cannot uphold the examiner's 35 U.S.C. § 103 rejection of appealed claims 1 and 3 through 11 as unpatentable over Machida in view of Stutzbach.

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Application No. 08/744,894

The decision of the examiner is reversed.

REVERSED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
ROMULO H. DELMENDO)	
Administrative Patent Judge)	APPEALS AND
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