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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL
BOARD

Ex parte RAYMOND HOLTZ

Appeal 2011-012488
Application 11/902,249
Technology Center 1700

Before BRADLEY R. GARRIS, ANDREW H. METZ, and KAREN M.
HASTINGS, *Administrative Patent Judges*.

METZ, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1 and 3 through 8. Claims 9 through 20, the only other claims remaining in the application, are claims directed to a previously non-elected invention pursuant to a requirement for restriction in which election of the subject matter of claims 1 and 3 through 8 was made without traverse. Accordingly, claims 9 through 20 stand withdrawn from consideration and form no issue in this appeal. 37 C.F.R. § 1.142(b). We have jurisdiction under 35 U.S.C. § 6.

We REVERSE.

THE INVENTION

Appellant discloses a method for making a molded hollow plastic tube for use in a vehicle fuel delivery system. Spec. [0003]. According to Appellant, conventional prior art molded hollow plastic tubes prepared by extrusion processes present difficulties in manufacturing and also make it difficult to control tolerances of the final product. Spec. [0005]. Appellant alleges to have overcome the deficiencies of the prior art by injection molding the hollow plastic tube into a configuration having a particular geometry. Spec. [0008], [0009]. Appellant's process is a two-step process in which a hollow plastic tube is, in a first step, injection molded into a configuration as demonstrated for example by Fig. 2. Spec. [0014], [0023], [0024]. Although specific details for injection molding the hollow tube and the materials useful for injection molding Appellant's hollow tube are not specifically set forth in the specification with any detail, Appellant discloses that the hollow tube is "injection molded from electrically conductive or non-conductive plastic suitable for exposure to fuel such as moldable PA grade." In the second step of Appellant's process the molded hollow tube from the first step is "pre-formed" into the desired final geometry for the tube as it will be used in the vehicle fuel delivery system as shown, for example, in Fig. 3. Spec. [0015], [0025]. According to Appellant, the pre-forming step follows known technologies for heat forming tubes. Spec. [0027].

Claim 1 is believed to be adequately representative of the appealed subject matter and is reproduced below for a more facile understanding of the claimed invention.

1. A method of providing a tube for a fuel delivery module of a vehicle,

injection molding a plastic hollow tube to define a first portion and a second portion integral with the first portion, each of the first and second portions having an opened end, with the opened ends communicating with each other, each opened end having an axis, the axis of the opened end of the second portion being generally transverse with respect to the axis of the opened end of the first portion, and

pre-forming the tube such that the axis of the opened end of the second portion is permanently generally parallel with respect to the axis of the opened end of the first portion, with the opened ends facing the same direction.

The references of record which are being relied on by the Examiner as evidence of obviousness are:

Bowker et al. (Bowker)	4,113,829	Sep. 12, 1978
Patel et al. (Patel)	4,284,459	Aug. 18, 1981
Rowley	5,527,503	Jun. 18, 1996
Murakami et al. (Murakami)	5,770,285	Jun. 23, 1998

THE REJECTIONS

Claims 1 and 5 through 8 stand rejected as being unpatentable under 35 U.S.C. § 103(a) as the claimed subject matter would have been obvious at the time Appellant made his invention from the disclosure of Murakami considered with Patel.

Claim 3 stands rejected as being unpatentable under 35 U.S.C. § 103(a) as the claimed subject matter would have been obvious at the time Appellant made his invention from the disclosure of Murakami considered with Bowker.

Claim 4 stands rejected as being unpatentable under 35 U.S.C. § 103(a) as the claimed subject matter would have been obvious at the time Appellant made his invention from the disclosure of Murakami considered with Rowley.

In her Answer, the Examiner entered a new ground of rejection of all the appealed claims as being unpatentable under 35 U.S.C. § 112, paragraph 2.¹

OPINION

The issue before us, whether the claimed subject would have been obvious in the sense of the statute to the hypothetical person of ordinary skill in the art from the cited and applied prior art at the time appellant made his invention, is a question of law. The ultimate legal conclusion of obviousness is based on the underlying facts in each specific case including the scope and content of the prior art, the differences between the claimed invention and the prior art and the level of ordinary skill in the relevant art. As with all rejections based on Section 103, our analysis begins with an interpretation of the claims.

Appellant's claim 1 is directed to a two-step method for preparing a tube for a fuel delivery module of a vehicle. Appellant's two steps are a first

¹ Beginning on September 16, 2012, 35 U.S.C. § 112, paragraph 2 became 35 U.S.C. § 112, paragraph (b).

injection molding step to form a hollow tube possessing a particular configuration or geometry and a second “pre-forming” step wherein “the hollow tube” from the first step is formed into a second geometry different from the geometry of the first step (claim 1). Appellant’s invention is claimed without the use of transitional phrases such as “comprising” or “consists essentially of” but is instead claimed by the unambiguous language in claim 1 setting forth two distinct process steps. Thus, claim 1 is directed to the subject matter specifically delineated by the language describing the two process steps.

The Examiner’s rejections of the claims are founded on her interpretation of Appellant’s claims as not requiring “the preforming step to occur subsequent to or separately from the injection molding step.” Answer, page 7, first full paragraph. However, the plain language of the claim requires pre-forming *the* tube formed in the injection molding step. Furthermore, as Appellant has argued in his Brief, it is clear from Appellant’s Specification that the injection molding step in claim 1 is the first step in Appellant’s two-step process and that the second step occurs after the first step. In particular, on page 4, line 26 of the specification it is recited “**after** molding of the tube 16, the second portion 24 is bent at a radius R so that axis A and axis B are generally parallel.” (emphasis added). Additionally, the disclosure from the Specification at paragraph [0027] and paragraph [0028] further support Appellant’s argument that the claims require two, separate and sequential steps. Indeed, in paragraph [0030] of the Specification a different embodiment of Appellant’s invention is set forth in which no pre-forming is required. That is, an embodiment is described in

which the final shape of the tube is obtained solely by the injection molding step and requires no subsequent “pre-forming.”

Accordingly, we find the Examiner’s stated rationale is founded upon an erroneous and unreasonable interpretation of Appellant’s disclosure and claims. Neither Murakami nor any reference on which the Examiner has relied discloses a method where a hollow plastic tube is first injection molded and subsequently heat molded in a separate step into the final desired geometry. Because we have found the Examiner’s interpretation of Appellant’s claims to be unreasonable, we need not reach the Examiner’s argument that forming a tube into any desired shape is merely an obvious matter of design choice.

While Appellant has not specifically responded in his Reply Brief to the new ground of rejection set forth by the Examiner in her Answer, Appellant has made substantive arguments in his Reply Brief concerning the Examiner’s prior art rejections that we find to be a complete response to the new ground of rejection. Specifically, the Examiner’s rejection of the claims under 35 U.S.C. § 112 is founded on the Examiner’s erroneous and unreasonable interpretation of Appellant’s claims and disclosure as being unclear as including separate injection molding and pre-forming steps. Accordingly, we reverse the Examiner’s rejection of the claims under 35 U.S.C. § 112.

The decision of the Examiner is reversed.

REVERSED

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