UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/911,357	06/06/2013	Stefano Lepre	1083-108PUSCON	4826

29973 7590 11/23/2016
CRGO LAW
ATTN: STEVEN M. GREENBERG, ESQ.
7900 Glades Road
SUITE 520
BOCA RATON, FL 33434

EXAMINER
BROWN, DREW J

ART UNIT	PAPER NUMBER
3616	

NOTIFICATION DATE	DELIVERY MODE
11/23/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@crgolaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEFANO LEPRE

Appeal 2014-007811
Application 13/911,357
Technology Center 3600

Before: JENNIFER D. BAHR, BRANDON J. WARNER, and LEE L. STEPINA, *Administrative Patent Judges*.

STEPINA, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision to reject claims 1–3, 5–9, 12–14, and 27–30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claims are directed to a twist-axle with longitudinally-varying wall thickness. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A unitary, tubular cross-beam member for use in a twist-axle of a vehicle, the twist-axle being provided with two trailing arms, the cross-beam member extending between and joining the trailing arms at two connection regions of the cross-beam member, the connection regions being disposed inwardly of the respective trailing arms to form an integral axle, the cross-beam member comprising a central section formed between the two connection regions, the central section being torsionally elastic and each of the connection regions being torsionally stiff adjacent at least a portion of the connection region joining each of the trailing arms, the cross-beam member having a wall thickness that is generally uniform circumferentially and varying longitudinally from the torsionally elastic central section to each of the torsionally stiff connection regions.

Appeal Br. 18 (Claims App.).

REJECTION[1]

Claims 1–3, 5–9, 12–14, and 27–30 are rejected under 35 U.S.C. § 102(b) as anticipated by Opel (EP 681932 A2; pub. Nov. 15, 1995).

[1] The Examiner indicated that the Terminal Disclaimer filed February 14, 2014, overcomes the rejections in the Final Action made on the ground of nonstatutory double patenting relying on various claims in US 8,490,990. Advisory Act. 1 (dated February 25, 2014). Accordingly, these double patenting rejections are not before us for review as part of the present appeal.

OPINION

Appellant argues claims 1–3, 5–9, 12–14, and 27–30 as a group. Appeal Br. 5, 17. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Opel discloses all of the features recited in claim 1, including (i) two torsionally stiff connection regions, (ii) a tubular cross beam with a torsionally elastic central section, and (iii) that the wall thickness of the cross beam member varies smoothly from the torsionally elastic central section to each of the torsionally stiff connection regions. Final Act. 4.

Appellant asserts that claim 1 "requires a variation in wall thickness <u>between</u> the central section and the connection regions, and a variation in wall thickness <u>within</u> the connection regions would not meet this limitation." Appeal Br. 12. Appellant contends that the variation in wall thickness disclosed by Opel is within the connection region of Opel's structure. *See, e.g.*, Appeal Br. 13–17. In this regard, Appellant asserts that the Examiner improperly construed claim 1's connection regions as "only the precise point of contact between the cross-beam member and the trailing arms, and as not including any portion of the cross-beam member extending inwardly from that point of contact." Appeal Br. 5.

In response, the Examiner indicates that the rejection of claim 1 does not rely on an interpretation of the connection region as a single point. Ans. 4. Further, the Examiner provides an annotated copy of Figure 9 of Opel indicating where the Examiner finds Opel to provide a connection region as recited in claim 1. Ans. 5. Discussing the marked up copy of Figure 9, the Examiner states "only a portion of the cross-member shown in Figures 8 and 9 is being considered as the 'connection region,' and therefore, the varying

wall thickness is not <u>within</u> the connection region but rather <u>between</u> the central section and the connection regions." Ans. 5–6. We reproduce the Examiner's annotated copy of Figure 9 of Opel below.

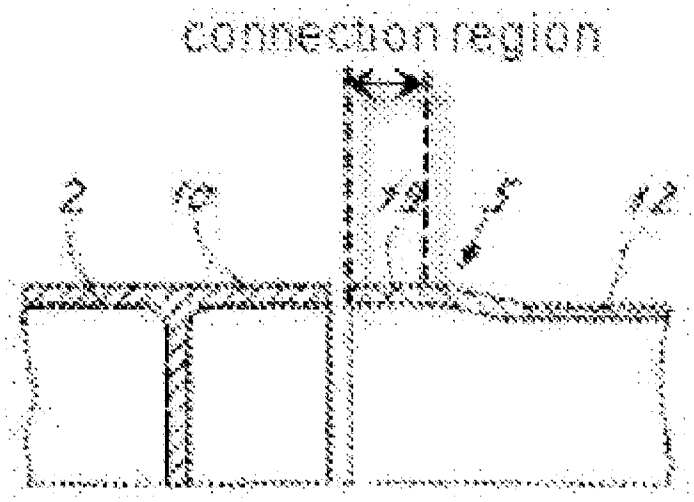

FIG. 9

Figure 9 of Opel depicts one embodiment of a connection between longitudinal control arm 2 and transverse strut 5 of a vehicle (Opel 5) and the Examiner's annotation identifies a portion of the length of profiled tube end 19 as a "connection region" (Ans. 5).

In reply, Appellant asserts that the Examiner's interpretation of the term "connection region" as it is used in claim 1 is incorrect, and the portion of profiled tube end 19 identified by the Examiner in annotated Figure 9 cannot correspond to the recited connection region. Reply Br. 4–5. Regarding the proper interpretation of claim 1, Appellant states that, "as read by one skilled in the art consistent with the specification, the 'connection regions' include at least the parts of the cross-beam member that are torsionally stiff because of their transverse cross-sectional shape." Reply Br. 6; *see also* Spec. ¶¶ 29, 31, 34. Further with regard to the scope of claim 1, Appellant states:

> Upon review of paragraph [0034], since at least part of the "connection region" is torsionally stiff and the torsional stiffness results from the transverse cross-sectional shape, *it follows that the longitudinal extent of the "connection region" corresponds to at least the longitudinal extent of the transverse cross-sectional shape that imparts the torsional stiffness.*

Reply Br. 6 (emphasis added).

Appellant contends that Opel describes the portion of strut 5 between section lines A-A and B-B as a "transition zone," and Appellant asserts that what is to the left of section line A-A is a torsion-proof zone corresponding to the recited "connection region." Reply Br. 10–12. Appellant further asserts that Figure 9 of Opel shows portions of strut 5 to the left of line A-A, and "the 'profiled tube end' denoted by reference numeral 19 in Figure 2 is the 'connection region' of Opel." Reply Br. 11–12. Thus, asserts Appellant, the portion of Opel where the wall thickness varies is <u>within</u> the connection region of Opel instead of between the connection region and a central section as recited in claim 1. Reply Br. 13.

Appellant's Specification states:

> *As can be seen in Figure **6**, the end section **204** has an end cross-sectional shape that may be circular, oval, or some other non-circular shape. Such a shape is suitable for attaching the end section to a side trailing arm. Such a transverse cross-sectional shape also provides a torsionally stiff end section, which as noted earlier, is a connection region.* The transverse cross-sectional shape of the transition section **206** transitions from that of the mid-section **202** to that of the end section **204**. An example is shown in Figure **5**. Preferably, such transition is smooth and gradual. When the cross-beam member is twisted by opposite torsional forces exerted on opposite ends **104**, the transition sections transmit the torsional forces to the midsection. Smooth transition helps avoiding any concentrated build-up of stress in the transition section when the mid-section is twisted by

> the twisting forces exerted at the end sections and transmitted through the transition sections.

Spec. ¶ 34 (emphasis added). Thus, the connection region is defined in terms of stiffness provided by a shape, but the connection region is not limited to any particular shape. Further, the broadest reasonable interpretation of claim 1 does not preclude the presence of a transition zone as taught by Opel. Although claim 1 recites that the cross-beam member has a wall thickness "varying longitudinally from the torsionally elastic central section to each of the torsionally stiff connection regions," claim 1 does not limit the torsionally elastic central section in any way that would exclude Opel's transition zone.

Assuming, for the purpose of argument, that profiled end tube 19 in Figure 9 of Opel is located to the left of section line A-A,[2] we do not agree that it is necessary to consider the entire structure depicted in Figure 9 to be a connection region and to then discount the varying wall thickness depicted in Figure 9 as something <u>within</u> such a connection region. The fact that Opel does not *label* the region identified by the Examiner (*see* annotated Figure 9 of Opel; *see also* Ans. 5) as a "connection region" is outweighed by the fact that the structure depicted in Figure 9 and set forth in Opel's discussion thereof satisfies the broadest reasonable interpretation of the connection region recited in claim 1. Specifically, the finding that the wall thickness of the component in question varies <u>between</u> the connection region and the central section is supported by a preponderance of the evidence. Accordingly, we affirm the Examiner's rejection of claim 1 as anticipated by Opel. Claims 2, 3, 5–9, 12–14, and 27–30 fall with claim 1.

---

[2] Opel states, Figures 6–11 "show alternative embodiments of the connection point between the longitudinal control arm and the transverse strut." Opel 4.

DECISION

The Examiner's rejection of claims 1–3, 5–9, 12–14, and 27–30 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED