

Internal distribution code:

- (A) [] Publication in OJ
(B) [] To Chairmen and Members
(C) [X] To Chairmen
(D) [] No distribution

D E C I S I O N
of 5 February 2004

Case Number: T 1233/01 - 3.2.1

Application Number: 93922109.9

Publication Number: 0662053

IPC: B60R 19/42

Language of the proceedings: EN

Title of invention:

Safety beam

Patentee:

SSAB HardTech Aktiebolag

Opponent:

Benteler AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty, inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 1233/01 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 5 February 2004

Appellant: Benteler AG
(Opponent) Residenzstrasse 1
D-33104 Paderborn (DE)

Representative: Bockermann, Rolf, Dipl.-Ing.
Bockermann & Ksoll
Patentanwälte
Bergstrasse 159
D-44791 Bochum (DE)

Respondent: SSAB HardTech Aktiebolag
(Proprietor of the patent) S-971 88 Lulea (SE)

Representative: Körber, Wolfhart, Dr. rer.nat.
Patentanwälte
Mitscherlich & Partner
Sonnenstrasse 33
D-80331 München (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 1 October 2001
rejecting the opposition filed against European
patent No. 0662053 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: S. Crane
Members: F. J. Pröls
S. U. Hoffmann

Summary of Facts and Submissions

I. European patent No. 0 662 053 granted on 9 April 1997 was opposed by the appellants (opponents) on the grounds that its subject-matter lacked novelty and inventive step (Article 100(a) EPC).

Of the prior art documents relied upon only the following have played any significant role on appeal:

(D1) JP-A-1 240 322

(D4) US-A-4 796 946

(D5) FR-A-2 425 338.

With its decision posted 1 October 2001 the Opposition Division rejected the opposition.

II. A notice of appeal against that decision was filed on 16 November 2001 and the appeal fee was paid in due time. The statements of grounds of appeal was received on 31 January 2002.

III. Oral proceedings before the Board were held on 5 February 2004.

IV. The appellants (opponents) requested that the decision under appeal be set aside and the patent be revoked.

At the oral proceedings the respondents (patentees) requested that the patent be maintained on the basis of claims 1 to 8 and the description columns 1 and 2

submitted at the oral proceedings together with the description columns 3 to 6 and the drawings as granted.

Amended claim 1 reads as follows:

A bar construction, in the form of a vehicle mounted safety bar for protection in the event of collisions, particularly side-on collisions, said bar having a generally trapezoidal and open cross-section which includes a centre-flange (6) which is embraced by two webs (7), and a side-flange (8) which extends outwardly on each side of the bar and connects with a respective web (7), wherein the bar optionally includes a first section (1) of constant cross-section in the centre part of the bar, and wherein the centre-flange (6) optionally includes a channel (9), the bottom of which is located in the same plane as the side flange (8), characterized in

that the bar includes at least one second section (2)

- which has a centre-flange (6) whose width (b) decreases towards one end (5) of the bar,
- the second bar section (2) has a generally constant height (h),

a transition part (3, 4) of generally trapezoidal shape is located between the second section (2) and said one bar end (5), which transition part (3, 4) has a height (h) which decreases towards one end of the bar and includes at least one third section (3) having a centre-flange (6) of essentially constant width(b)."

V. The arguments of the appellants were essentially as follows:

The features set out in the precharacterising part of claim 1 if construed in the sense of the description as granted were clearly known from D5. As concerned the first feature i.e. the decreasing width of the centre flange as set out in the characterising part of claim 1 there was no definition of the position and the length of the so-called second section nor of the order of magnitude in which its centre flange decreased towards one of the bar. Therefore that feature was also disclosed by D5 insofar as this showed a bar with a width decreasing towards its ends. Furthermore, Figure 5 of D5 showed a centre section of the bar having a generally constant height in the sense as formulated in claim 1, since the claim's definition of the height included within the normal manufacturing tolerances both a limited decrease and a limited increase in height. The claim further required a transition part of the bar having a decreasing height towards one end of the bar. This, however, was also true for D5 as shown by its Figure 5. As concerned the last feature of claim 1 that at least one section of the transition part has a centre flange of essentially constant width the term "essentially constant" in this definition did not exclude a small decrease in width as also present in the transition part of the bar known from D5. Therefore, the subject-matter of claim 1 was anticipated by the prior art according to D5.

Alternatively, starting from document D1, which disclosed a bar with clearly defined sections also having the claimed shaping it was obvious for a person skilled in the art to additionally provide an open cross-section of the bar as generally known e.g. from D5 or mentioned in D4.

VI. The reply of the respondents can be summarised as follows:

Contrary to the known bars according to D1 or D5 the claimed invention related to a bar having distinct sections whereby in one section the height of the bar is generally constant and the width of its centre-flange decreases towards one bar end whereas in the other section the height decreases towards the bar end and the width of its centre-flange is essentially constant. In other words the general way in which the cross-section of the bar develops changes from one bar section to the other. As concerns the prior art constructions the height and the width of the known bars changed in the same sense along their full length, so that differently formed bar sections of the nature claimed were not present. Accordingly the claimed bar was basically different from those disclosed by the prior art relied upon and therefore was novel and inventive.

Reasons for the Decision

1. The appeal complies with the formal requirements of Articles 106 to 108 and Rules 1(1) and 64 EPC. It is therefore admissible.

2. The Board is satisfied that claim 1 representing combination of the wording of claims 1 and 3 as granted corresponds to the requirements of Articles 123(2) and (3) EPC.

3. The optionally claimed features in the last lines of the precharacterising part of present claim 1 which concern the presence and the configuration of a first section of the bar and of a channel in the centre-flange are not considered in the following statements, since they evidently in no way restrict the subject-matter of claim 1 to a bar construction which included those features. Thus, the bar construction as defined by the introductory features of the precharacterising part includes, as set out in the characterising part of claim 1

(a) at least one section (designated as "one second section") which has

(a1) a centre-flange whose width decreases towards one end of the bar, and

(a2) a generally constant height.

(b) a transition part of generally trapezoidal shape which is located between the at least "one second section" and said bar end and

(b1) has a height which decreases towards one end of the bar, and

(b2) includes at least one further section
(designated as "one third section")

(b2.1) having a centre-flange of
essentially constant width.

4. The features set out in the precharacterising part of claim 1 are undisputedly known from D5.

Furthermore the bar construction according to D5 has dimensions which are maximum in the middle of the bar and decrease towards its ends (page 2, lines 32 to 24 of D5) as also clearly shown in the Figures 4 and 5 of D5. This means that both the width and the height of the centre-flange continuously decrease towards the bar end.

Contrary to this known construction the claimed bar provides sections ("at least one second section") of which the centre-flange has a width which decreases towards the bar end (see feature (a1) above) accompanied by a generally constant height (see features (a2) above) and a further section ("at least one third section") arranged in a transition part located between said "at least one second section" and the bar end (see feature (b) above) whereby the centre-flange of this further section has an essentially constant width (see feature (b2.1) above) accompanied by a height which decreases towards the bar end (see feature (b1) above). Thus, the dimensions of the "at least one second section" vary in a first way and the dimensions of the "at least one third section" vary in another way.

This is not true for the known bar construction D5 of which both dimensions (height and width) vary in one and the same way (continuous decrease) over the whole length of the bar.

5. Document D1 relates to a bar construction having a generally closed cross-section whereby the sections of bar vary in height and width in the same way over the whole length of the bar. In particular, the centre-flange is press formed from a raw material having a thickness decreasing from the centre towards the end of the bar as shown in Figure 5, so that both the width and the height of the contour of the centre-flange also continuously decrease towards the bar end.
6. According to D4 the shown open (Figure 5) or closed (Figures 6 to 8) bar construction does not provide any variations in the height and width of its centre-flange.
7. The appellants argue that the vague terms in claim 1 concerning "generally constant height" and "essentially constant width" do not exclude a small decrease of the dimensions concerned. That may well be the case but this line of argument overlooks the fact that in the prior art bars the degree of change in the height of the bar corresponds generally to that of the width of the centre-flange, and this as well over effectively the whole length of the bar. Thus it is clearly inappropriate to say on the one hand that this degree of change constitutes the decrease in height or width required by the claim and on the other hand that the equivalent degree of change in the other dimension is so small as to be negligible, ie to correspond to the requirement of general or essential constancy.

8. Having regard to the above the Board is therefore satisfied that the subject-matter of present claim is distinguished from the prior art according to documents D1, D4 and D5.

9. With regard to the question of inventive step the respondents relied solely on a combination of the documents D1 and D5 or D1 and D4. It is however apparent from what has been said above with respect to novelty that neither of these documents discloses the essential element of the claimed subject-matter, namely the shaping of the bar over its length so that its height and the width of its centre-flange vary in the different sections of bar in different specific way. It follows that the teaching of claim 1 has no counterpart in the state of art. There are also no arguments to show why the skilled person would have taken any step necessary to arrive at the bar shaping claimed, and the Board can find nothing in the state of the art which would have led him to do so.

It is therefore evident that there is no way of combining the teachings of these documents to arrive at the bar construction as defined in claim 1 which accordingly involves an inventive step (Article 56 EPC).

10. In summary the Board concludes that the subject-matter of claim 1 is novel and involves an inventive step (Articles 54 and 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent in amended form on the basis of the following documents:
 - claims 1 to 8 submitted at the oral proceedings;
 - columns 1 and 2 of the description submitted at the oral proceedings together with columns 3 to 6 of the description as granted;
 - drawings as granted.

The Registrar:

The Chairman:

S. Fabiani

S. Crane