

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MARTIN LEE DENNY

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Appeal No. 2000-1971  
Application No. 09/002,537

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HEARD: May 8, 2001

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Before COHEN, STAAB, and NASE, Administrative Patent Judges.  
STAAB, Administrative Patent Judge.

DECISION ON APPEAL

This appeal is taken from the examiner's decision twice rejecting claims 1-4 and 6-23, all the claims currently pending in the application.

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Appellant's invention pertains to a trailer hitch housing having the sides thereof strengthened by strengthening ribs. A further understanding of appellant's invention can be derived from a reading of exemplary claims 1 and 7, which appear in the appendix to appellant's main brief.

The references relied upon by the examiner in support of the standing rejections are:

Sheldon	1,833,043	Nov. 24, 1931
Kelley et al. (Kelley)	2,093,608	Sep. 21, 1937
Floe	5,421,612	Jun. 6,
1995		
Schiappati	301,153	Jan. 2, 1989
(European Patent Application)		

The following rejections under 35 U.S.C. § 103 are before us for review:

(a) claims 1-4 and 6-17, unpatentable over Schiappati in view of Floe;

(b) claims 1-4 and 6-17, unpatentable over Schiappati in view of Sheldon; and

(c) claims 1-4 and 6-23, unpatentable over Schiappati in view of Kelley.

Reference is made to appellant's main and reply briefs (Paper Nos. 19 and 22) and to the examiner's answer (Paper No.

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21) for the respective positions of appellant and the examiner regarding the merits of these rejections.

*Rejection (a)*

Independent claims 1, 7 and 14 are similar in that they are each directed to a trailer hitch housing comprising a first side having a first strengthening rib intermediate the upper and lower edges thereof, a second side having a second strengthening rib intermediate the upper and lower edges thereof, and a housing cover interconnecting the first and second sides.

Schiappati, the examiner's primary reference, is directed to a hitch assembly specifically designed for motor vehicles. Schiappati's hitch assembly comprises, in pertinent part, a U-shaped bracket element 1 having first and second sides, and a top member joining the sides together. There appears to be no dispute that the U-shaped bracket element 1 of Schiappati corresponds to the subject matter of claims 1, 7 and 14, except for the requirement that the first and second sides have strengthening ribs located intermediate the edges of the respective sides.

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Floe pertains to a trailer and tongue structure comprising a tongue 42 of extruded aluminum (col. 5, lines 27-39) having a cross section as shown in Figure 2. Floe describes the cross section shape of the tongue as follows:

Tongue 42 has an upper generally rectangular portion with a support surface 70 that is about 3.0 inches in width, and a lower approximately oval portion, separated by walls 72 and 74 to form channels 50 and 51. The lower oval shaped portion and the longitudinal ridges are designed to provide strength. [Col. 5, lines 45-50.]

An objective of Floe's invention is the provision of an improved trailer tongue "that allows cooperation with a vehicle-mounted hitch assembly to maximize the permissible angle between the tongue and the hitch assembly" (col. 2, lines 47-50). To this end,

{t}he tongue structure [42] has a predetermined cross-sectional shape with opposed longitudinally extending channels [50, 51] arranged to cooperate with the support structure [120 in Figure 9] of the vehicle-mounted hitch to minimize unwanted contact between the tongue and the support structure to avoid damage to the tongue or the hitch. [Col. 3, lines 26-33.]

See also col. 6, lines 54-68 and Figure 9 for a further explanation of how channels 50, 51 achieve this objective.

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In rejecting claims 1-4 and 6-17 as being unpatentable over Schiappati in view of Floe, the examiner has taken the position that channels 50, 51 of Floe constitute "strengthening ribs" (answer, page 2, third paragraph). The examiner concludes that it would have been obvious to one of ordinary skill in the art "to provide the Schiappati hitch housing with integral strengthening ribs in the vertical plates, as taught by Floe, in order to strengthen the beam" (answer, page 2, fourth paragraph).

We have several difficulties with the examiner's position in this regard. First, while we appreciate that Floe's channels 50, 51 may indeed strengthen tongue 42 to some degree, we do not agree with the examiner's implied position that one of ordinary skill in the art would have viewed these channels as being "strengthening ribs," i.e., provided for the purpose of increasing the strength of the tongue. Floe's disclosure make clear that channels 50, 51 are provided for the purpose of minimizing unwanted contact between the tongue and the support structure of the vehicle-mounted hitch during turning. In point of fact, Floe provides tongue 42 with a closed lower oval portion and longitudinal ridges (not

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numbered) to improve the strength of the tongue (col. 5, lines 49-50). Second, there is no indication in Schiappati that U-shaped bracket element 1 needs any additional strengthening. Moreover, in that eccentric 20 and stem 42 of peg 40 of Schiappati span the sides of the bracket adjacent their lower edges, it is questionable whether bracket element 1 requires any additional strengthening. Third, it is debatable whether channels such as those shown by Floe at elements 50, 51 could be provided in Schiappati without compromising the ability of the bracket element to accommodate the locking mechanism in the form of eccentric 20 and peg 40. Fourth, in that Schiappati's bracket element is affixed to the motor vehicle body (i.e., the thing doing the pulling) rather than the trailer (i.e., the thing being pulled), it is debatable whether one of ordinary skill in art would have considered applying Floe's channel features 50, 51 to Schiappati's bracket element.

In light of the foregoing, we shall not sustain the standing rejection of claims 1-4 and 6-17 as being unpatentable over Schiappati in view of Floe.

*Rejections (b) and (c)*

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Sheldon, the examiner's secondary reference in rejection (b), is directed to "metal lumber," that is, a hollow metal column member made of light gauge sheet metal usable for studding, purlins, stringers, joists, beams, etc. Of particular interest to the examiner is Sheldon's teaching of strengthening ribs in the form of concave troughs 5, 12 formed in the sides of the member. According to the examiner, it would have been obvious to one of ordinary skill in the art to provide the sides of Schiappati's hitch housing with strengthening ribs like those of Sheldon.

Kelley, the examiner's secondary reference in rejection (c), pertains to a sheet metal stamping for a vehicle body. Kelley discloses that a reinforcing rib 16 (Figure 1) may optionally be provided in the stamping. Based on Kelley's teaching, the examiner once again concludes that it would have been obvious to one of ordinary skill in the art to provide the sides of Schiappati's hitch housing with strengthening ribs.

Appellant argues, first, that Sheldon and Kelley constitute nonanalogous art, not being either from appellant's

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field of endeavor or pertinent to the problem with which appellant is concerned. In the view we take of this case even if we assume that Sheldon and Kelley are analogous art, the obviousness rejections based thereon are not well founded.

In establishing a case of obviousness, it is incumbent on upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art. See, e.g., *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

While we appreciate the examiner's observations that Sheldon and Kelley teach the use of reinforcing ribs to strengthen structural members, it is not apparent to us why, based only on the applied reference teachings, one of ordinary skill would have been led to modify Schiappati in a way that would

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have resulted in the claimed invention. Certainly there is no indication in Sheldon or Kelley that trailer hitch devices of the type disclosed by Schiappati are in need of reinforcement. Further, as noted above in our discussion of rejection (a), there is no indication in Schiappati that it might be inadequate for its intended purpose. Indeed, in that eccentric 20 and stem 42 of peg 40 of Schiappati span the sides of the bracket adjacent their lower edges, the ordinarily skilled artisan may very well view Schiappati's hitch housing as being akin to the typical internally braced hitch design referred to by appellant in the "Background" section of the specification in the paragraph spanning pages 2 and 3.

In brief, there is no suggestion in Schiappati, or either of the secondary references, for modifying Schiappati in the manner proposed by the examiner to arrive at the claimed subject matter. Accordingly, we shall not sustain the standing rejections of the appealed claims as being unpatentable over Schiappati in view of either Sheldon or Kelley.

*Remand to the Examiner*

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This application is remanded to the examiner for consideration of the following matter.

The "Background of the Invention" section of appellant's specification (pages 1-3) states that trailer hitch housings "are subjected to many forces which act to deflect and bend the housings" (specification, page 1), that therefore trailer hitch housings must be "extremely strong to maintain [their] integrity as the trailer is being pulled" (specification, page 1), and that, accordingly, trailer hitch housing conventionally include some sort of bracing (typically, "internal" bracing or "end-flange" bracing) "to produce housings capable of withstanding these deflecting and bending forces" (specification, page 1) encountered during use. Thus, it is quite clear that it is within the general knowledge of those versed in the trailer hitch housing art that trailer hitch housings are conventionally provided with some sort of reinforcement to improve their strength.

UK Published Patent Application 2 236 514 A to Winterhoff, attached to appellant's main brief as Exhibit 4 and discussed on page 14 of the main brief, discloses a

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trailer hitch housing generally U-shaped in cross section and having an edge flange (not separately numbered) about the open bottom end of the housing. Accordingly, Winterhoff appears to be an example of an "end-flange" braced trailer hitch housing.

Floe, applied by the examiner against the claims in rejection (a), discloses an extruded metal trailer hitch tongue 42 that includes, in the lower section thereof, longitudinal ridges (not numbered). The ridges are located along the sides of the tongue, intermediate the upper and lower ends thereof. According to Floe, the longitudinal ridges "are designed to provide strength" (column 5, lines 49-50).

The examiner should collectively assess these teachings to ascertain whether they, either by themselves or in combination with other prior art of which the examiner may be aware, would have been suggestive to one having ordinary skill in the art of the subject matter of any of the claims on appeal. Upon conclusion of said assessment, the examiner should take whatever action is deemed appropriate. Such appropriate action may include, for example, reopening

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prosecution for the purpose of entering a new ground of rejection, or a statement of reasons for allowance.

*Summary*

The standing rejections of the appealed claims under 35 U.S.C. § 103 are reversed.

This case is remanded to the examiner for the reason set forth above.

*Reversed and Remanded*

IRWIN CHARLES COHEN	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
JEFFREY V. NASE	)	
Administrative Patent Judge	)	

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DECISION: REVESED & REMAND  
Send Reference(s): Yes No  
or Translation (s)  
Panel Change: Yes No  
Index Sheet-2901 Rejection(s):

Prepared: January 18, 2002

Draft                  Final

3 MEM. CONF.    Y                  N

OB/HD                  GAU

PALM / ACTS 2 / BOOK  
DISK (FOIA) / REPORT