

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ARNE LANG-REE and HILGARD N. MULLER

Appeal 2008-1948
Application 10/911,246
Technology Center 3700

Decided: December 11, 2008

Before DONALD E. ADAMS, LORA M. GREEN, and
RICHARD M. LEBOVITZ, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 1-11, 16-18, and 21-31. The only remaining pending claims 13-15, were “objected to as being dependent upon a rejected base claim” and are not before us in this appeal (Ans. 2). We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

The claims are directed to a mirror attachment for a helmet having a visor (claims 1-10), a helmet attachment system (claims 11, 13-18, and 21), and a system for providing an accessory to a helmet (claims 22-31). Claims 1, 2, 11, 16, and 26 are illustrative:

1. A mirror attachment for a helmet having a visor, the visor defining a recess, the system comprising:

a base operable to be nested substantially within the recess of the visor and to be coupled to the visor; and

a mirror rotatably coupled to the base and operable to move between a storage configuration and an extended configuration by being rotated, wherein the mirror and the base, when in the storage configuration, comprise a combined footprint that fits substantially within a footprint of the recess.

2. The mirror attachment of Claim 1, and further comprising a ball joint coupling the mirror and the base.

11. A helmet attachment system, comprising:

a helmet having a rear portion, the rear portion of the helmet defining a depression; and

a belt comprising a length, a width, and a thickness, wherein:

the belt is fixed to the rear portion;

the belt is disposed over a substantial portion of the depression to define a gap between the belt and the depression; and

the belt and the gap are configured to allow a device to be coupled to the rear portion of the helmet.

16. The helmet attachment system of Claim 11, wherein the platform is formed from a flexible material.

26. [A system for providing an accessory to a helmet, the accessory having a clip, the system comprising;

a helmet defining a depression;

a belt fixed to the helmet and disposed over a substantial portion of the depression;

and

a gap defined between the belt and the depression, the gap configured to receive the clip], wherein the belt is formed from a flexible material.

The Examiner relies on the following prior art references to show unpatentability:

Turner	US 5,917,667	Jun. 29, 1999
Berke	US 6,247,824 B1	Jun. 19, 2001
Theisen	US 6,497,493 B1	Dec. 24, 2002
Henry	US 6,616,294 B1	Sep. 9, 2003
Lyden	US 6,681,403 B2	Jan. 27, 2004

The rejections as presented by the Examiner are as follows:

1. Claims 1, 3-7, 9, and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Berke.
2. Claims 2 and 8 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Berke and Turner.
3. Claims 11, 21-25, and 29-31 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Theisen and Henry.
4. Claims 16-18 and 26-28 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Theisen, Henry, and Lyden.

We reverse.

Anticipation:

ISSUE

Does Berke teach a mirror attachment that is configured so that the configuration of the mirror and base in combination has a footprint that fits substantially within the footprint of the recess defined by the visor?

FINDINGS OF FACT (FF)

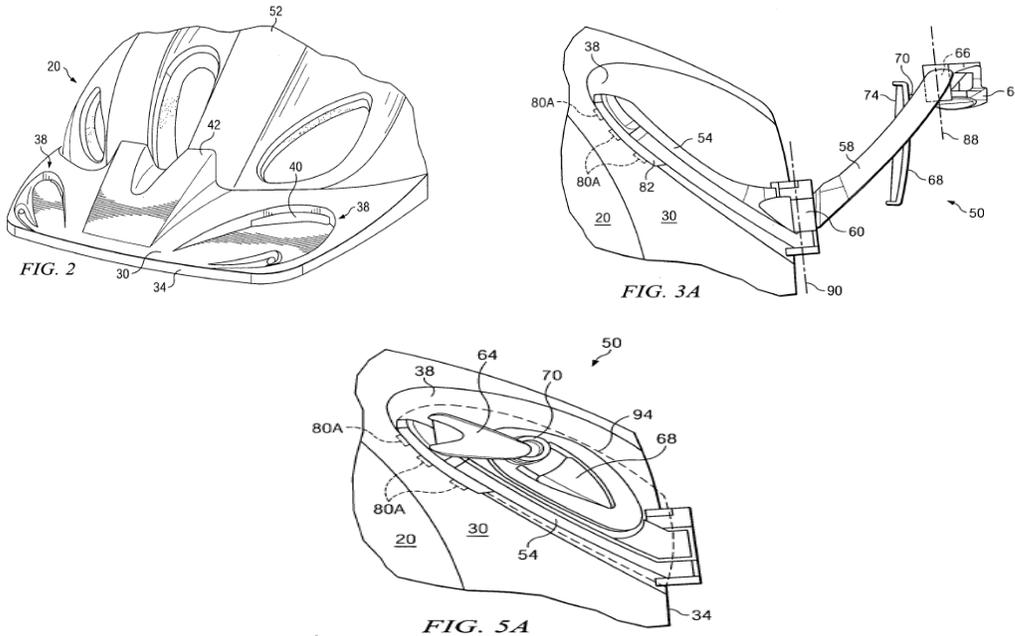
1. Claim 1 is drawn to a mirror attachment for a helmet having a visor, wherein the visor defines a recess. The mirror attachment comprises:

A) a base that can be nested substantially within the recess of and coupled to the visor; and

B) a mirror rotatably coupled to the base. The mirror is configured to be rotated between a storage configuration and an extended configuration.

Claim 1 requires that when the mirror attachment is in a storage configuration the mirror and base in combination has a footprint that fits substantially within the footprint of the recess defined by the visor.

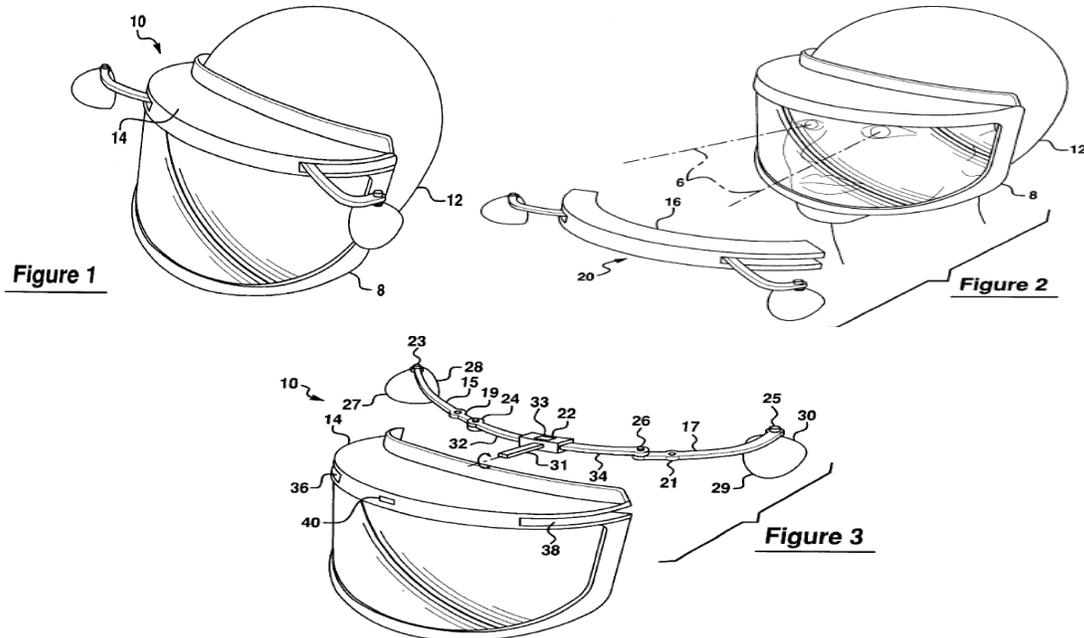
2. For clarity, we reproduce Appellants' Figures 2, 3A, and 5A below:



“FIGURE 2 . . . is a schematic diagram illustrating a perspective view of one embodiment of a visor” (Spec. 5: 9-10). Figure 3A is a schematic diagram illustrating a top view of a mirror assembly that may be used in conjunction with a visor (Spec. 5: 12-15). Figure 5A is a schematic diagram illustrating

a top view of the mirror assembly shown in Figure 3A in a retracted configuration (Spec. 5: 20-23).

3. Berke teaches a mirror system that may be mounted onto the surface of an existing helmet, face shield, or apparatus (Berke, col. 3, ll. 5-13). For clarity, we reproduce Berke's Figures 1-3 below:



“FIG. 1 is a perspective assembled view of a safety helmet incorporating a face shield with a mirror system that is made in accordance with the teachings of the preferred embodiment of the invention” (Berke, col. 2, ll. 38-41). “FIG. 2 is a perspective view of a retrofit mirror system as detached from a typical safety helmet face shield” (Berke, col. 2, ll. 42-44). “FIG. 3 is an unassembled view of a mirror system” (Berke, col. 2, l. 45).

Berke teaches a mirror system **10**, which is integrally disposed within the front of a safety helmet face shield **8** on the portion immediately above the wearer's forehead and forward field of view **6** (Berke, col. 3, ll. 7-10). Berke's system **10** includes two mirrors or reflective members that are movably disposed on opposed sides of the device (Berke, col. 3, ll. 27-29).

The mirrors or reflective members are mounted to extension arms that are pivotally disposed to move in the horizontal plane through slotted openings **36, 38** of the main body **14** to allow the wearer to fold the arms and mirror assemblies back against the sides of the helmet for stowage (Berke, col. 4, ll. 1-12).

LEGAL PRECEDENT

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

ANALYSIS

Claim 1 is drawn to a mirror attachment for a helmet having a visor, wherein the visor defines a recess (FF 1).¹ The Examiner finds that “Figure 2 of Berke et al. is an embodiment that supports the mirror carrying member being nested above the top surface of the visor 8 and within the recess defined by the top surface of the visor 8 as show in Figure 1” (Ans. 7-8). While we disagree with the Examiner’s intimation that Berke’s mirror system is mounted on the ledge on top of the helmet’s visor (face shield) **8**, we find that Berke teaches a mirror system **10**, which is *integrally* disposed *within the front of a safety helmet face shield 8* on the portion immediately above the wearer’s forehead and forward field of view **6** (FF 3). Thus, as an integral component of the helmet’s face shield, the recess defined by slotted openings **36, 38** of the main body **14** define a recess in the helmet’s face shield (*id.*).

Appellants’ claim 1 requires the base of the mirror attachment operable to be nested substantially within the recess of and coupled to the visor (FF 1)². Berke teaches this embodiment as illustrated in Berke’s Figs. 1 and 2 (FF 3).

Appellants’ claim 1 requires a mirror rotatably coupled to the base. The mirror is configured to be rotated between a storage configuration and

¹ Claim 7, the only other independent claim in this ground of rejection, requires a visor coupled to a helmet and where the visor defines a recess (Claim 7).

² Claim 7, the only other independent claim in this ground of rejection, requires “a base operable to be nested substantially within the recess of the visor and to be coupled to the visor” (Claim 7).

an extended configuration.³ Berke teaches this embodiment as illustrated in Berke's Figs. 1-3 (FF 3).

Appellants' claim 1 requires that when the mirror attachment is in a storage configuration the mirror and base in combination has a footprint that fits substantially within the footprint of the recess defined by the visor.⁴ As Appellants' explain, "mirrors 28 and 30 and block 22 do not fit substantially within the footprint of openings 36 or 38 because mirrors 28 and 30 can only be folded to positions completely outside slotted openings 36 and 38" (App. Br. 13). We agree. Even under the Examiner's construction of Berke's mirror attachment, as mounted on the top of the face shield, the mirrors would not fall within the recess defined by the face shield. Instead, the mirrors would lie outside of the recess on either side of the helmet. Therefore, with either interpretation of the placement of Berke's mirror attachment, Berke's mirrors are not operable so that the configuration of the mirror and base in combination, when in the storage configuration, has a footprint that fits substantially within the footprint of the recess defined by the visor.

CONCLUSION OF LAW

Berke fails to teach a mirror attachment that is configured so that the configuration of the mirror and base in combination has a footprint that fits

³ Claim 7, the only other independent claim in this ground of rejection, requires a mirror rotatably coupled to the base and configured for rotation between a storage and extended configuration (Claim 7).

⁴ Claim 7, the only other independent claim in this ground of rejection, requires that the combined footprint of the mirror and the base fits substantially within a footprint of the recess (Claim 7).

substantially within the footprint of the recess defined by the visor. The rejection of claims 1, 3-7, 9, and 10 under 35 U.S.C. § 102(b) as being anticipated by Berke is reversed.

Obviousness:

LEGAL PRECEDENT

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”
KSR Int’l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739 (2007).

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.

Id. at 1742. It is proper to “take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 127 S.Ct. at 1741. *See also id.* at 1742 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). “In determining whether obviousness is established by combining the teachings of the prior art, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re GPAC Inc.*, 57 F.3d 1573, 1581 (Fed. Cir. 1995) (internal quotations omitted).

Nevertheless,

“a patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. Although common sense directs caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does.”

KSR Int’l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1731 (2007).

Berke and Turner:

ISSUE

Does the combination of Berke and Turner teach a mirror attachment that is configured so that the configuration of the mirror and base in combination has a footprint that fits substantially within the footprint of the recess defined by the visor?

FINDINGS OF FACT

4. Claim 2 depends from and further limits the mirror attachment of claim 1 to further comprise a ball joint coupling the mirror and the base.
5. Turner teaches a helmet mirror that “comprises an articulated two-piece body having the mirror on one piece and an attachment device on the other piece” (Turner, Abstract). For clarity we reproduce Turner’s Figure 5 below:

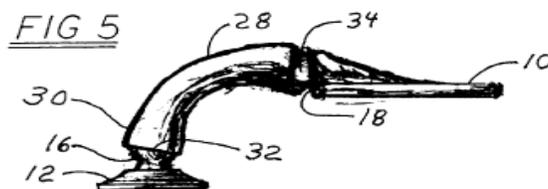


FIG. 5 is a top view of one embodiment of Turner's mirror (Turner, col. 1, ll. 50-51). Turner teaches that "[t]he articulation means **14** comprises a stud **16** having a spherical end extending from the attachment piece **12**" (Turner, col. 3, ll. 1-2). At [t]he other end of the link **28** is formed with a spherically ended stud **34** that engages the socket **18** in the mirror piece **10** with an interference fit" (Turner, col. 3, ll. 36-38).

ANALYSIS

Berke is discussed above (FF 3). Turner teaches a mirror assembly comprising a ball joint coupling the mirror and the base (FF 4). Based on this evidence, the Examiner concludes that

[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the ball joint at 16, 34 of Turner for an arm joint of Berke et al. to enhance positioning of the mirror for viewing by providing additional degrees of rotation to the mirror.

(Ans. 4.)

The Examiner does not, however, account for the requirement in Appellants' claims requiring that when the mirror attachment is in a storage configuration the mirror and base in combination has a footprint that fits substantially within the footprint of the recess defined by the visor. Even if one of ordinary skill in this art would modify Berke's device to use Turner's ball joints the Examiner failed to explain how this modification would result in a mirror and base combination that has a footprint that fits substantially within the footprint of the recess defined by the visor as required by Appellants' claimed invention.

CONCLUSION OF LAW

The Examiner has failed to meet his burden of establishing that combination of Berke and Turner teach a mirror attachment that is configured so that the configuration of the mirror and base in combination has a footprint that fits substantially within the footprint of the recess defined by the visor. The rejection of claims 2 and 8 under 35 U.S.C. § 103(a) as unpatentable over the combination of Berke and Turner is reversed.

Theisen and Henry:

ISSUE

Does the combination of Theisen and Henry teach a device, comprising a helmet, wherein the rear portion of the helmet defines a depression with a belt is disposed over a substantial portion of the depression to define a gap between the belt and the depression?

FINDINGS OF FACT

6. Independent claims 11 and 22 are drawn, *inter alia*, to a device, comprising a helmet, wherein the rear portion of the helmet defines a depression and a belt is disposed over a substantial portion of the depression to define a gap between the belt and the depression. Accessories configured for use in conjunction with the helmet may be coupled to the belt by inserting the tongue of a clip attachment mechanism through the gap and clipping the attachment to the belt (Spec. 13: 26-32).

7. Theisen teaches illuminated protective headgear that includes a safety helmet, with a rear shell section that contains a battery-powered light mounting bracket. For clarity, we reproduce Theisen's Figure 1 below:

Fig. 1

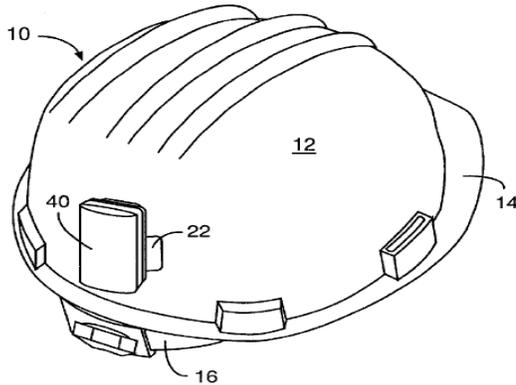
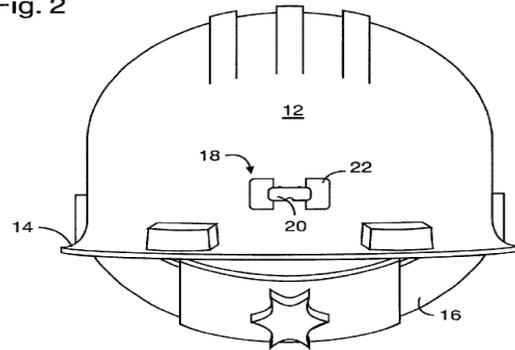


Fig. 2



“FIG. 1 is a perspective view of an illuminated safety helmet as seen from the rear. FIG. 2 is a rear view of a safety helmet and an attachable clip mount” (Theisen, col. 3, ll. 16-19). Theisen teaches that attachable bracket **18** comprising, *inter alia*, a center clip attachment section **20** and outwardly extending mounting plates **22** is attached to the rear section of a safety helmet shell (Theisen, col. 3, ll. 42-45). Theisen teaches that “[t]he clip engaging section is spaced from the shell when the mounting plates are attached to said shell by intermediate spacers extending inwardly from the clip engaging section to the mounting plates” (Theisen, col. 2, ll. 22-25).

8. Henry teaches a flashlight holder for use with a conventional hard hat (Henry, Abstract). For clarity, we reproduce Henry's figures 4 and 6 below:

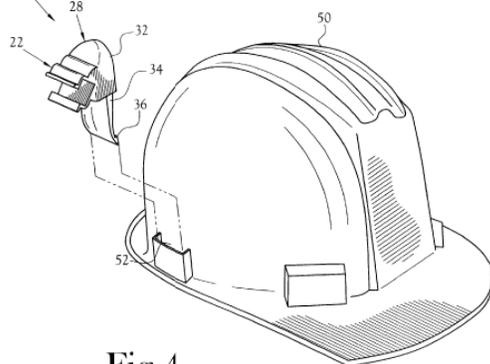


Fig.4

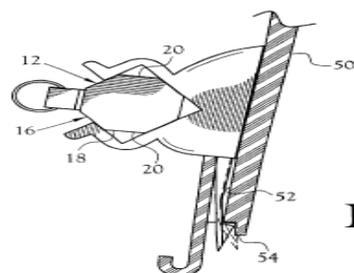


Fig.6

“FIG. 4 is an exploded perspective view of the flashlight holder . . . illustrating the engagement mechanism between the flashlight holder and the hard hat” (Henry, col. 4, ll. 24-26). “FIG. 6 is an end elevation view of the flashlight holder of the present invention being mounted in a hard hat” (Henry, col. 4, ll. 29-30). Henry teaches that “[a] locking projection **36** extends from the distal end of the tab **34** in a direction opposite the barrel support **22** . . . for engaging a lower edge **54** of the hard hat **50**” (Henry, col. 5, ll. 63-67).

ANALYSIS

Based on the combined teachings of Theisen and Henry (FF 7 and 8), the Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Theisen with the depression at 54 of Henry . . . to better accommodate an inserted clip or arm about the belt 20 of Theisen” (Ans. 4-5). We disagree.

Theisen teaches an attachable bracket **18** comprising, *inter alia*, a center clip attachment section **20** and outwardly extending mounting plates **22** (FF 7). The outwardly extending mounting plates **22** space attachment section **20** from the helmet shell to permit accessories to be attached to the clip attachment section **20** (FF 7). Henry teaches that the *lower edge* **54** of a hard hat **50** can be used in conjunction with the locking projection **36** of the flashlight holder (FF 8). As Appellants explain, “there is no disclosure in either reference that any alleged ‘belt,’ including alleged ‘belt’ 20 of *Theisen*, is disposed over a substantial portion of the lower edge of a hardhat” (App. Br. 14). We agree.

CONCLUSION OF LAW

The combination of Theisen and Henry fails to teach a device, comprising a helmet, wherein the rear portion of the helmet defines a depression with a belt is disposed over a substantial portion of the depression to define a gap between the belt and the depression.

The rejection of claims 11, 21-25, and 29-31 under 35 U.S.C. § 103(a) as unpatentable over the combination of Theisen and Henry is reversed.

Theisen, Henry, and Lyden:

ISSUE

Does the combination of Theisen, Henry, and Lyden teach a device, comprising a helmet, wherein the rear portion of the helmet defines a depression with a belt is disposed over a substantial portion of the depression to define a gap between the belt and the depression?

FINDINGS OF FACT

9. Claims 16-18 depend from and further limit the belt⁵ of claim 11 (FF 6) to one formed from a flexible material (claim 16), a thermoplastic elastomer (claim 17), or SANTOPRENE (claim 18). Claims 26-28 depend from and further limit the belt of claim 22 (FF 6) to one formed from a flexible material (claim 26), a thermoplastic elastomer (claim 27), or SANTOPRENE (claim 28).

⁵ We recognize that claims 16-18 depend from in claim 11 and make reference to a “platform” in claim 11. The term “platform” is not recited in claim 11. Accordingly, we interpret the term “platform” to be in reference to the “belt” of claim 11. This interpretation corresponds to analogous language in claims 26-28, which depend from claim 22.

10. Lyden teaches a variety of elastomeric materials that are useful in the manufacture of sporting equipment, including SANTOPRENE (Lyden, col. 18, ll. 24-65).

11.

ANALYSIS

Based on the combined teachings of Theisen, Henry, and Lyden (FF 7, 8, and 10) the Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to form the belt 20 of Theisen of the SANTOPRENE of Lyden thus recognizing a material known for providing durability and impact protection in a helmet environment (Ans. 5 and 6).

However, as Appellants explain, Lyden fails to make up for the deficiencies in the combination of Theisen and Henry discussed above (App. Br. 15).

CONCLUSION OF LAW

The combination of Theisen, Henry, and Lyden fails to teach a device, comprising a helmet, wherein the rear portion of the helmet defines a depression with a belt is disposed over a substantial portion of the depression to define a gap between the belt and the depression.

Appeal 2008-1948
Application 10/911,246

The rejection of claims 16-18 and 26-28 under 35 U.S.C § 103(a) as unpatentable over the combination of Theisen, Henry, and Lyden is reversed.

REVERSED

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