

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte DAVID T. MUSKOVITZ

Appeal 2007-3209
Application 10/447,686
Technology Center 3700

Decided: May 30, 2008

Before, TONI R. SCHEINER, DEMETRA J. MILLS, and
LORA M. GREEN, *Administrative Patent Judges*.

MILLS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims for obviousness. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

Claim 1 is representative.

1. An in-mold protective helmet comprising:

an outer shell;

an inner liner comprised of impact absorbing material having suitable impact attenuation properties to protect a wearer of said protective helmet, said inner liner joined to said outer shell using an in-mold process to form a shell/liner composite;

a plurality of ventilation ports positioned within said protective helmet, said ventilation ports providing an access for ambient air to enter and exit an interior portion of said protective helmet;

a ventilation system integrally formed with said protective helmet and interacting with at least one of said plurality of ventilation ports to control flow of said ambient air into and out of said interior portion of said protective helmet, said ventilation system comprising:

an upper portion:

a lower portion;

a vent space defined by the formation of said upper portion with said lower portion; and

a vent shield contained within said vent space, said vent shield capable of displacing within said vent space in relation to said at least one ventilation port.

Cited References

Mirage	US 4,995,117	Feb. 26, 1991
Simpson	US 5,165,116	Nov. 24, 1992
Bullock	US 6,009,562	Jan. 4, 2000

Grounds of Rejection

1. Claims 1, 8, 11, 14-16 and 19¹ stand rejected under 35 U.S.C. § 103 as obvious over Mirage in view of Bullock.
2. Claims 6 and 20 stand rejected under 35 U.S.C. § 103 as obvious over Mirage in view of Bullock and Simpson.

DISCUSSION

Background

“The present invention relates to protective helmets designed to protect the user from potential impacts to the head during bicycling, skiing, snowboarding, and other sporting adventures. Specifically, the protective helmet provides for improved ambient air flow throughout the interior of the helmet using a unique ported and adjustable airflow system.” (Spec. 1.)

Obviousness

Claims 1, 8, 11, 14-16 and 19 stand rejected under 35 U.S.C. § 103 as obvious over Mirage in view of Bullock. We select claim 1 as representative of the rejection before us since Appellant has not separately argued the claims. 37 C.F.R. § 41.37(c)(1)(vii).

The Examiner contends that:

Mirage shows an outer shell as at 12 having an inner liner 25, the helmet defining ventilation ports as at 20, 23A, 34 and a ventilation system (see Figure 7) comprising an upper portion at 12, a lower portion “template 24”, a vent space defined between the upper portion 12 and lower portion 24 for receiving a vent

¹ Claims 2-5, 7, 9, 10, 12, 13, 17, 18 and 21-23 have been withdrawn from consideration by the Examiner as directed to a non-elected species. (Ans. 2.)

shield “baffle 23” displaceable relative to port 23A. Further with respect to claim 19 note the recessed portion defined by the liner 25 about the member 24 as shown in Figure 7.

(Ans. 3.)

The Examiner acknowledges that Mirage does not teach the outer shell at 12 and the inner liner 25 forming a shell/liner composite. (Ans. 3.) Thus the Examiner relies on Bullock for teaching that the formation of a shell/liner composite during the formation of a helmet (see column 4, lines 11-17) is known in the art. (Ans. 3.) The Examiner finds that

[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to form the shell and liner of Mirage as a composite in the manner of Bullock et al. to achieve the advantage of eliminating the need for fitting a separately formed liner to the shell.

(Ans. 3- 4.)

Appellant contends that there is no motivation to combine Mirage with Bullock. (Br. 11.) Appellant argues that:

Nowhere does Bullock teach that using an injection molding process provides an advantage of eliminating the need for fitting a separately-formed liner to the shell. In fact, Bullock is very particular as to why an injection-molded inner liner is used, and it is not to eliminate the need for fitting a separately-formed liner to the shell. Rather, Bullock specifically discloses that injection molding of the liner is used to provide additional security to the anchor member (element 60 shown in Figure 3A). The injection molding process of Bullock allows the liner to secure the anchor member 60 by molding around the ring shaped cross member (element 64 in Figure 3A) during the injection molding process. Thus, the closely-fitted liner provides more support than would be provided by the shell alone.

(Br. 11.)

In making an obviousness determination over a combination of prior art references, it is important to identify a reason why persons of ordinary skill in the art would have attempted to make the claimed subject matter. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). When making such a determination, the scope of the prior art and level of ordinary skill must be considered. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The motivation to combine references does not have to be identical to Appellant's to establish obviousness. *In re Kemps*, 97 F.3d 1427, 1430 (Fed. Cir. 1996). We find the Examiner has established with sufficient evidence in the prior art a reason why persons of ordinary skill in the art would have attempted to make the claimed subject matter. Bullock specifically discloses that injection molding of the shell/liner composite provides additional security to anchor members in the helmet (Bullock, col. 4, ll. 11-17) providing a reason why one of ordinary skill in the art would be motivated to use a shell/liner composite in a helmet.

Appellant argues that “the sole disclosed purpose of using the injection-molded foam [in Bullock] is to provide additional support for the anchor member of the attachment systems, not to avoid the need for a separately fitted liner” as argued by the Examiner. (Br. 12.) Appellant concludes that since no additional support is taught as needed in the helmet of Mirage, there is no motivation to combine the cited references found in the references themselves. (Br. 12.) Along a similar vein of argument, Appellant argues that upon reading Bullock, a person of ordinary skill in the art would be discouraged from using screws or rivets for attachment purposes on a shell/liner-

composite type helmet, and that Bullock teaches away from the use of screws or rivets in a shell/liner composite type helmet, as taught by Mirage. (Br. 13-14.)

We note that the Supreme Court emphasized that “the [obviousness] analysis need not seek out precise teachings directed to the subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ” (*KSR Int’l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)). Furthermore, an “[e]xpress suggestion to substitute one equivalent for another need not be present to render such substitution obvious.” *In re Fout*, 675 F.2d 297, 301 (CCPA 1982)). Moreover, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *See KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007). In the present case we agree with the Examiner and find that it would have been obvious to one of ordinary skill in the art to use an alternative or substitute method known in the art of joining the inner liner of a protective helmet to the outer shell using an in-mold process to form a shell/liner composite as disclosed in Bullock for preparing the helmet of Mirage.

In addition we do not agree with Appellant that Bullock teaches away from the use of screws or rivets in a shell/liner composite type helmet. In particular, Bullock specifically discloses in the abstract that the helmet accessory of the disclosed helmet is mounted by a mounting member which can be a screw. (Bullock, abstract.) Thus Bullock does not teach that screws may not be used in a shell/liner composite type helmet. In contrast to Bullock’s alleged teaching away, Bullock teaches how to overcome

problems in prior art helmets to securely attach helmet accessories.

(Bullock, col. 1, ll. 50-55.)

Appellants also put forth the Declaration of Moeller dated February 10, 2006, in which the declarant states that “column 1, lines 20-27 of Bullock teaches that rivets [as taught by Mirage] cannot be used with a shell/liner composite because the liner will not properly support the inner end of the rivet.” (Moeller Declaration, ¶ 6.) We do not agree with the declarant’s interpretation of Bullock, column 1, lines 20-27. This portion of Bullock describes problems with prior art helmets and states,

modern lightweight bicycle helmets are formed with a thin hard plastic shell surrounding a lightweight foam liner. The foam provides very minimal support for the screws, thus making the screw/shell contacts the primary support for the helmet accessory. The minimal contact between the thin plastic shell and the screw does not provide sufficient support to keep many helmet accessories securely attached to the helmet.

(Bullock, col. 1, ll. 20-27.) This portion of Bullock does not state that rivets cannot be used with a shell/liner composite, as indicated by the declarant. In addition, the foam disclosed in Bullock is indicated to provide minimal support for the screws, thus Bullock does not teach that screws cannot be used, only that they are minimally supported. Further, additional disclosure of Bullock teaches how to overcome prior art problems of securely attaching helmet accessories. (Bullock, col. 1, ll. 50-55.) Therefore, we are not persuaded by this Declaration of Moeller.

A second Declaration of Moeller, also dated February 10, 2006 indicates that the “failure of others to combine the teachings of Bullock and

Mirage to create an ‘in-mold’ or ‘shell/liner composite’ helmet with a ventilation system... supports his opinion that an expert in the field of helmet design would not think to combine the teachings of Bullock and Mirage.” (Moeller Declaration, ¶ 9.) However, the declarant has not provided evidence of attempts and the failure of others to create a “shell/liner composite” to support the conclusory statements made in the Declaration. It is well settled that in order to be of probative value, objective evidence must be factually supported by an appropriate affidavit or declaration that includes evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, or allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant. *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984).

Declarations of Joe McNeal, Joe Kourafas and David Muskovitzc each dated February 9, 2006, indicate that the shell/liner composite helmet as claimed has met with commercial success. (McNeal Declaration, ¶ 7; Kourafas Declaration, ¶.) However, none of the Declarations present evidence of commercial success to support the conclusions of the Declarant. Therefore, we are not persuaded by these Declarations.

In view of the above Appellant has failed to rebut the Examiner’s prima facie case of obviousness and the obviousness rejection is affirmed.

2. Claims 6 and 20 stand rejected under 35 U.S.C. § 103 as obvious over Mirage in view of Bullock and Simpson. We select claim 6 as

representative of the rejection before us since Appellant has not separately argued the claims. 37 C.F.R. § 41.37(c)(1)(vii).

The Examiner acknowledges that “Mirage does not teach the lower member 24 comprised of a portion of the outer shell as at 12 the outer shell thus forming the upper and lower boundaries of the vent space.” (Ans. 4.) Thus the Examiner relies on Simpson as teaching that the shell forming the upper and lower boundaries or members for a vent space is old in the art (see shell about shutters 27 and 28, Fig 2.). (Ans. 4.)

The Examiner concludes that:

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the helmet of Mirage by forming the upper and lower boundaries or members for the vent space with the shell in the manner of Simpson to achieve an alternative means of mounting the vent shield that allows a like result of permitting sliding of the vent shield relative to the port.

(Ans. 4.)

Appellant contends that no suggestion to combine the cited references in the manner suggested by the Examiner is found in the prior art. (Br. 18.) In particular, Appellant argues that

the Examiner indicated that one of skill in the art would have been motivated to combine the teachings of Mirage and Bullock with the teachings of Simpson “to achieve an alternate means of mounting the vent shield that allows a like result of permitting sliding of the vent shield relative to the port.” The Examiner made no attempt to show that Mirage, Bullock, Simpson or any other reference taught this motivation suggested by the Examiner. Applicant respectfully submits that none of the cited references teach this or any other motivation to combine Simpson with Mirage and Bullock. Rather, this shows that the

Examiner must have relied on Applicant's disclosure to reconstruct Applicant's claims using impermissible hindsight.
(Br. 19.)

We are not persuaded by Appellant's argument. As discussed herein we have found that an express suggestion to substitute one equivalent for another need not be present to render such substitution obvious, and that it would have been obvious to one of ordinary skill in the art to use an alternative or substitute method known in the art of joining the inner liner of a protective helmet to the outer shell using an in-mold process to form a shell/liner composite as disclosed in Bullock for preparing the helmet of Mirage. Moreover, we agree with the Examiner that, as supported by the prior art, it would have been obvious to further modify the helmet of Mirage by forming the upper and lower boundaries or members for the vent space with the shell in the manner of Simpson to achieve an alternative means of mounting the vent shield that allows a like result of permitting sliding of the vent shield relative to the port. *See In re Fout*, 675 F.2d 297, 301 (CCPA 1982)).

We do not find the Examiner's rejection to be premised on impermissible hindsight reasoning, as the Examiner has provided evidence in the prior art, Simpson, of a vent space, as claimed.

With no further argument by Appellant, we do not find Appellant has rebutted the Examiner's prima facie case of obviousness and the rejection is affirmed.

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SUMMARY

The rejection of claims 1, 8, 11, 14-16 and 19 under 35 U.S.C. § 103 as obvious over Mirage in view of Bullock is affirmed. The rejection of claims 6 and 20 under 35 U.S.C. § 103 as obvious over Mirage in view of Bullock and Simpson is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

dm

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