

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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HIROSHI HIGUCHI, HIROTAKA SHIMOSAKA  
and YASUHI ICHIKAWA

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Appeal No. 2003-1426  
Application No. 09/635,638

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HEARD: October 8, 2003

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Before ABRAMS, STAAB, and BAHR, Administrative Patent Judges.

ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-3, 5-10, 13, 14, 16-21, 23-31 and 33. Claim 11 has been allowed and claims 4, 12, 15, 22 and 32 have been canceled.

We REVERSE.

### BACKGROUND

The appellants' invention relates to a golf ball. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to the Brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Moriyama <u>et al.</u> (Moriyama)	5,518,246	May 21, 1996
Melvin <u>et al.</u> (Melvin)	5,779,562	Jul. 14, 1998

Claims 1-3, 5-10, 13, 14, 16-21, 23-31 and 33 stand rejected under 35 U.S.C. § 103 as being unpatentable over Melvin in view of Moriyama.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the Answer (Paper No. 19) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 18) and Reply Brief (Paper No. 20) for the appellants' arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The appellants' invention relates to multi-piece golf balls comprising a solid core enclosed by inner and outer covers. According to the appellants, constructing such a golf ball in accordance with the limitations recited in the claims causes it to have improved flight performance, good spin characteristics, a pleasant feel, and improved scraping resistance and durability when hit with a variety of golf clubs including woods, irons and putters (specification pages 1-3; Brief, page 2). It is the examiner's opinion that the subject matter recited in all three of the independent claims, as well as the claims depending therefrom, would have been obvious<sup>1</sup> to one of ordinary skill in the art in view of the combined teachings of Melvin and Moriyama. Although not included in the statement of the rejection, the examiner has added to the teachings attributed to the applied references Official Notice that (1) isocyanates and diisocyanates are commonly known within the art as base components to produce polyurethanes and (2) thermo-plastic resins are commonly used as adhesives to hold two surfaces together (Answer, page 6).

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<sup>1</sup>The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See, for example, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a prima facie case of obviousness, it is incumbent 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 and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

In arriving at the conclusion that the claims are unpatentable, the examiner expresses the view (Answer, page 5) that all of the subject matter recited in claim 1 is disclosed or taught by Melvin, except for

- (1) the sum of the dimple trajectory volumes being 530 to 750;
- (2) the cover inner and outer layers having specific gravities of 0.8-1.2 and 0.9-1.3, respectively;
- (3) the average dimple cross-sectional area ratio being 0.58-0.68; and
- (4) the number of dimples being 360-540.

However, it is the examiner's position that it would have been obvious to one of ordinary skill in the art to modify the Melvin golf ball in such a manner as to meet these limitations in view of the teachings of Moriyama, considering further the knowledge of those skilled in the art of which the examiner has taken Official Notice. The appellants have set forth in considerable detail on pages 5-10 of the Brief and pages 1-6 of the Reply Brief where they believe the examiner has erred in the rejection. We find ourselves in agreement with the appellants' reasoning therein stated, and we will not sustain the rejection.

Claim 1 requires that there be a plurality of dimples on the outer layer of the cover and that "the sum of the dimple trajectory volumes each obtained by multiplying a dimple volume by the square root of a dimple diameter is 530 to 750" (emphasis added). In evaluating this requirement, on page 5 of the Answer the examiner first points out Moriyama's teaching of providing a golf ball wherein "[t]he total volume of all

the dimples is 250 mm<sup>3</sup>-450 mm<sup>3</sup>" (column 3, lines 64 and 65; emphasis added), and then concludes it would have been obvious to one of ordinary skill in the art to modify the Melvin ball by providing "a total dimple volume of 530 to 750" (Answer, page 6). In response to the appellants' argument that "dimple trajectory volume" is not the same as "dimple volume" (Brief, page 3), the examiner states on page 7 of the Answer that Moriyama discloses a dimple "substantially the same shape to [sic] that of the appellant's [sic] dimple in appearance," and then asserts on the basis of measurements made on the drawing that because the Moriyama dimple shown in Figure 7 has the same structure and dimension as the dimple disclosed by the appellants, it follows that the Moriyama ball also must have the same dimple trajectory volume.

We agree with the appellants that the dimple depicted in Figure 7 of Moriyama is on its face much different from that disclosed by the appellants, and that in the absence of assurances that the drawings in a reference are to scale it is improper to base a rejection upon measurements obtained from those drawings (see MPEP Section 2125). Thus, an attempt to meet the limitation regarding dimple trajectory volume based upon data obtained by the examiner's measuring of the drawings cannot be relied upon. Moreover, the mere fact that Moriyama states that the trajectory of a golf ball is related to the number and configuration of the dimples does not, in and of itself, direct the artisan to form the dimples in accordance with a "dimple trajectory volume," much less

to provide this factor with a value of 530-750. These shortcomings in the rejection cause it not to be sustainable.

We also find persuasive the appellants' argument on pages 7-9 of the Brief that the requirement in claim 1 regarding the  $S_1/S_2^2$  relationship is not taught by the applied references. Here the examiner again has relied upon measurements made on Moriyama's Figure 7, the impropriety of which we have discussed above. Particularly compelling in the appellants' arguments are the pictorial presentations on page 8 of the Brief demonstrating that the examiner's reasoning on this issue is defective because dimples having the same diameter and height do not necessarily have the same cross-sectional area. In addition, as was the case above, neither of the applied references directs one of ordinary skill in the art to utilize the  $S_1$  and  $S_2$  factors in the manner recited in the claim. The rejection thus also fails on this ground.

It therefore is our conclusion that the combined teachings of Melvin and Moriyama fail to establish a prima facie case of obviousness with regard to the subject matter recited in claim 1, and we will not sustain the rejection of claim 1 or of claims 2, 3 and 5-10, which depend therefrom.

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<sup>2</sup>Factor  $S_1$  is defined in claim 1 as the area of the cross-sectional shape of a dimple at its center, and factor  $S_2$  as multiplying a dimple diameter by a dimple depth.

The limitations discussed above also are present in independent claims 13 and 24, and we thus will not sustain the like rejection of these claims, or of depending claims 14, 16-21, 23, 25-31 and 33.

CONCLUSION

The rejection is not sustained.

The decision of the examiner is reversed.

NEAL E. ABRAMS	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	APPEALS
Administrative Patent Judge	)	AND
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JENNIFER D. BAHR	)	
Administrative Patent Judge	)	

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SUGHRUE, MION, ZINN, MACPEAK & SEAS, P.L.L.C.  
2100 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, DC 20037-3213