

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STANLEY W. STEPHENSON

Appeal No. 2005-0175
Application No. 09/241,700

ON BRIEF

Before WARREN, KRATZ and DELMENDO, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 9-12 and 14, which are all of the claims pending in this application.

BACKGROUND

Appellant's invention relates to a wearable panoramic imager. An understanding of the invention can be derived from a reading of exemplary claim 9, which is reproduced below.

9. A user wearable apparatus for forming a panoramic digital image, comprising:
 - a user wearable flexible garment worn below the head and made of fabric;

a plurality of digital cameras supported non-rigidly at predetermined positions on the garment to have overlapping fields of view to allow a simultaneous 360° field of view around the user;

user activating means for activating selected digital cameras to cause the selected digital cameras to simultaneously capture digital images for forming panoramic image;

a storage memory for storing the captured digital images,

wherein the garment is electrically conductive and provides electrical connections between the digital cameras and the user activating means.

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

Shiomi	5,047,793	Sep. 10, 1991
Henley	5,657,073	Aug. 12, 1997
Winningstad	5,886,739	Mar. 23, 1999

In addition, appellant relies on the following prior art in responding to the examiner's obviousness position:

Ritchey ¹	5,130,794	July, 14, 1992
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¹ Ritchie is not relied upon by the examiner in the statement of either rejection as correctly noted by appellant (reply brief, page 4). However, appellant (reply brief, page 4) argues to the effect that Ritchie would have supported a proposition of appellant that is asserted in arguing against the examiner's stated rejections. Consequently, Ritchie is part of the evidence of record that we consider because of appellant's reliance thereon in opposition to the examiner's stated rejections. CF., In re Hedges 783 F.2d 1038, 1039-40, 228 USPQ 685, 686 (Fed. Cir. 1986).

Claims 9-12 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henley in view of Winningstad. Claims 11 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Henley in view of Winningstad and Shiomi.

We refer to the brief and reply brief and to the answer for a complete exposition of the opposing viewpoints expressed by appellant and the examiner concerning the issues before us on this appeal.

OPINION

Having carefully considered each of appellant's arguments set forth in the brief and reply brief, appellant has not persuaded us of reversible error on the part of the examiner. Accordingly, we will affirm the examiner's rejections for substantially the reasons set forth by the examiner in the answer. We add the following for emphasis and completeness.

Concerning the examiner's first stated rejection, appellant (brief, page 3) states that "claims 10 and 11 rise or fall with claim 9" and that claim 12 stands separately, with claim 14 rising or falling therewith. See page 3 of the brief. Consequently, we select claim 9 as representative of a first group of claims including claims 9-11 and claim 12 as

representative of a second claim grouping including claims 12 and 14.

As correctly pointed out by the examiner, Henley discloses the use of multiple digital cameras to form panoramic images therefrom. Appellant does not dispute that finding of the examiner. Indeed, appellant acknowledges the prior art formation of panoramic scenes from image data obtained from a plurality of cameras at page 1 of the specification.²

The examiner relies on Winningstad for disclosing that a camera can be worn by a user and that a recorder can be used for storing the captured images. In this regard, Winningstad (column 5, lines 15-23) discloses that a camera can be attached to a jacket or vest and a cable (electrical conductive connections) can be sewn inside a jacket lining. Moreover, Winningstad (column 2, lines 30-36) teaches that a user activated switch can be employed to operate the camera. Winningstad (sentence bridging columns 6 and 7) further teaches that such a user mounted camera has the advantage that the operator's hands are

² The starting point for appellant's invention, for purposes of 35 U.S.C. § 103, is what appellant admits to be prior art. See In re Facius, 408 F.2d 1396, 1406, 161 USPQ 294, 302 (CCPA 1969); In re Davis, 305 F.2d 501, 503, 134 USPQ 256, 258 (CCPA 1962).

free so that other tasks can be performed by that person while operating the camera.

As stated by the examiner (answer, pages 4 and 5), one of ordinary skill in the art at the time of the invention would have been motivated "to look to Winningstad[] ... to make Henley's plurality of digital cameras wearable for the same purpose of giving these portable cameras (as small as possible) to policemen or investigators to record objects and events surrounding the areas being imaged."

In so doing, one of ordinary skill in the art would have recognized the option of attaching the individual cameras to a garment, such as a jacket or vest, that is worn by the camera user as taught by Winningstad. We note that Henley teaches that the cameras must be located so as to provide overlapping fields of view. Hence, in mounting such cameras on a person, one of ordinary skill in the art would have been led to employ enough cameras arranged on the garment worn by the person and in a fashion so as to provide overlapping fields of view over a 360° degree panoramic field of view based on the combined teachings of the applied references. Thus, we agree with the examiner that the combined teachings of Winningstad and Henley would have led one of ordinary skill in the art to employ multiple user mounted

cameras to obtain image data that can be used to produce a panoramic image of the area surrounding the camera operator.

We note that representative claim 9 calls for a non-rigid support for the digital cameras on the garment whereas representative claim 12 calls for using a rigid frame that can be mounted to the garment for detachably mounting the cameras via that frame to the garment. Regarding those alternatively claimed camera mounting techniques, we observe that Winningstad (column 5, lines 31-55) teaches or suggests that the camera, as well as other portable components, such as a recorder, should be securely attached to the user's clothing to accommodate the physical activity of the person wearing the garment. As such, we agree with the examiner that one of ordinary skill in the art would have been led to employ a variety of camera fastening and attachment techniques depending on the occupation and particular type of garments worn by a user. For example, in the case of a police officer, as referred to at column 6, lines 10-39 of Winningstad, the officer would be expected to encounter a variety of demanding physical tasks. Consequently, in such a case, one of ordinary skill in the art would have recognized the option of using a more rigid and secure camera mounting arrangement, such as by using a rigid strap or holster type device that securely

wraps around the user as a frame for mounting the cameras. In other situations, such as in the case of a person desiring to take pictures of a child at play (see column 6, lines 51-65 of Winningstad), one of ordinary skill in the art would have recognized that a less rigid camera attaching arrangement could be used, such as using Velcro to attach the camera to the garment. After all, in an obviousness assessment, skill is presumed on the part of the artisan, rather than the lack thereof. In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985). Moreover, insofar as the applied references themselves are concerned, we are bound to consider the disclosure of each for what it fairly teaches one of ordinary skill in the art, including the inferences which one of ordinary skill in the art would reasonably have been expected to draw therefrom. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966) and In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Based on the above and for reasons further articulated in the answer, we determine that the examiner has made out a prima facie case of obviousness with respect to the subject matter embraced by representative claim 9 and representative claim 12.

Appellant does not dispute that panoramic camera systems are known or that mounting single cameras on a user is known. Rather

appellant argues that "one of ordinary skill in the art would not have been motivated to mount cameras around the garment or user in attempting to capture a panoramic image, let alone mounting them non-rigidly to a flexible garment" (brief, page 5). In this regard, appellant asserts that:

Henley would have taught away from separating the cameras from its specifically predisposed configuration for obvious reasons that moving the cameras would interfere with [the] carefully planned mounting positions of the cameras, which positions are critical to its operation. The only place that [they] could be possibly mounted to the user without the user interference would be the top of the user's head. Since the only feasible place that [the cameras] could be mounted is on the head, the combination thus would have taught away from mounting cameras on the user's garments worn below the user's head to capture a panoramic image.

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

Here, based on the combined teachings of the applied references, we find ample support for the examiner's position that Henley does not teach away from mounting cameras that are used in securing a panoramic image on articles of clothing to be

worn by a person using cameras. In this regard, the silence of Henley with respect to such a garment-mounted camera arrangement does not constitute a teaching away. Indeed, Henley teaches that the cameras can have overlapping fields of view and that the digital output from such cameras can be processed for digital separation of redundant pixels and removal of distortions therefrom. See, e.g., column 3, lines 13-22 and column 4, lines 3-10 of Henley. That disclosure of Henley does not suggest that the cameras of Henley must be mounted in an absolutely precise fashion relative to each other for the product signals of each camera to be used to form a panoramic image. Thus, a body mounting arrangement via a garment, as here contemplated, would not be specifically taught away from by Henley. Nor does the teaching in the preferred embodiments of Henley with respect to arranging the cameras in a housing amount to a teaching away from other camera arrangements that would have commended themselves to one of ordinary skill in the art based on the combined teachings of the references for reasons explained by the examiner in the answer. In our view, appellant's arguments herein simply do not take into account the proposition that all of the disclosures in the applied references, including non-preferred embodiments, must be evaluated for what they fairly teach one of ordinary skill in

the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). It is well established that a suggestion for the modification of references ". . . may come from the nature of the problem to be solved, leading inventors to look to references relating to possible solutions to that problem." See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), citing In re Rinehart, 531 F.2d 1048, 1054, 189 USPQ 143, 149 (CCPA 1976) (considering the problem to be solved in a determination of obviousness). Moreover, a guarantee of success is not required. See In re O'Farrell, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). Rather, "[f]or obviousness under § 103, all that is required is a reasonable expectation of success." Id. at 904, 7 USPQ2d at 1681.

Appellant's contention that "Henley would have taught away from mounting to a user wearable garment because mounting its cameras in a manner disclosed by Winningstad would destroy the panoramic capability" (reply brief, page 3) is not fairly supported by the evidence of record.³ In particular, appellant's

³ Indeed, appellant's specification undercuts that argument by not revealing any particular technical problems that appellant overcame in fashioning a clothing mounted camera system to obtain usable panoramic images therefrom. In this regard, we note that

reliance on Ritchey (U.S. Patent No. 5,130,794) in support of appellant's argument (reply brief, page 4) that "the cameras need to be supported above the person's head to take a panoramic image" and be "fixedly predisposed relative to each other" is not well taken. This is so because Ritchey, which is not relied upon by the examiner in the stated rejections, does not explicitly teach that other user attached camera arrangements are not workable. In fact, Ritchey does not refute the evidence of record regarding the obviousness of locating cameras on a user's clothing rather than in an over the head position. Compare drawing Figures 1 and 2 of Winningstad.

For reasons discussed above and in the answer, the relied upon evidence reasonably suggests that other alternative camera positions, including non-rigid garment mounted arrangements, would be expected to be functional in forming a panoramic image given that misalignments and distortions are correctable as suggested by Henley.

Concerning representative claim 12, appellant further maintains that the claim 12 requirement for a rigid frame that is

appellant seemingly acknowledges that prior art techniques were available at the time of the invention to compensate for camera misalignment. See, e.g., page 7, lines 7-9 of appellant's specification.

mounted to the user's garment is not suggested by the combined teachings of the references. However, as pointed out above and by the examiner (answer, page 8), Winningstad teaches that user mounted camera systems are useful for police officers who normally wear a bullet proof vest. Consequently, for reasons expressed above and in the answer, we agree with the examiner that the claim 12 requirement for a rigid frame for mounting the cameras onto a garment does not patentably distinguish over the combined teachings of the applied references. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)(The claimed invention need not be expressly suggested in any one or all of the references, rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.).

It follows that we will affirm the examiner's § 103(a) rejection of claims 9-12 and 14 over Henley in view of Winningstad.

As for the examiner's separate rejection of claims 11 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Henley in view of Winningstad and Shiomi, we note that appellant does not furnish any additional arguments thereagainst. Consequently, we

shall affirm the later rejection for the reasons discussed above and in the answer.

CONCLUSION

The decision of the examiner to reject claims 9-12 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Henley in view of Winningstad and to reject claims 11 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Henley in view of Winningstad and Shiomi 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

CHARLES F. WARREN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
PETER F. KRATZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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ROMULO H. DELMENDO)	
Administrative Patent Judge)	

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