

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte, JUN KONDO

Appeal No. 2006-1815
Application No. 10/178,767

HEARD: August 10, 2006

Before FRANKFORT, OWENS, and NAPPI, Administrative Patent Judges.
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2, 11 and 12, all of the claims remaining in the application. Claim 3 has been canceled and claims 4 through 10 have been withdrawn from further consideration.

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Appellant's invention relates to an improved structure of a fuel injection pump for use in internal combustion engines which results in an increase in service life of the fuel injection pump. More specifically, it is an objective of the invention to provide an improved structure of a fuel injection pump which is designed to minimize undesirable wear of bearing surfaces of the fuel injection pump (page 2, lines 9-11), particularly those located at either side of the cam (42) and including washers (50, 60) as shown in Figures 2(a) through 3(b) of the application drawings. Independent claim 1 is representative of the subject matter on appeal and a copy of that claim can be found in the Claims Appendix attached to appellant's brief.

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

Higginbotham et al. (Higginbotham)	5,183,340	Feb. 02, 1993
Shinohara et al. (Shinohara)	6,289,875	Sep. 18, 2001

Claims 1, 2, 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara in view Higginbotham.

Rather than reiterate the examiner's commentary regarding the above-noted obviousness rejection and the conflicting viewpoints advanced by the examiner and appellant regarding the rejection, we make reference to the final rejection

(mailed October 28, 2004) and the examiner's answer (mailed June 7, 2005) for the

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reasoning in support of the rejection, and to appellant's brief (filed March 17, 2005) and reply brief (filed July 27, 2005) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determination that the examiner's above-noted rejection under 35 U.S.C. § 103(a) will not be sustained. Our reasons follow.

The examiner's basic position concerning the rejection of claims 1, 2, 11 and 12 is set forth on pages 2-4 of the final rejection and pages 3-9 of the answer.

Essentially, the examiner is of the view that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to use two pins, spaced at equiangular intervals in a circumferential direction, to fix each of the thrust washers seen at either side of the cam (17) in Figures 1 and 2 of Shinohara within their respective washer chambers, as taught by Higginbotham "as a matter of engineering expediency" (final rejection, pages 3-4). In reaching this conclusion, the examiner has determined that there is inherently a clearance gap between an outer circumference of the washer and an inner circumference of the washer

chamber such that the washer is subject to movement within the washer chamber

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following revolution of the cam mechanism, as set forth in claim 1 on appeal. According to the examiner, otherwise there would be no need for the pin shown in Shinohara for anchoring each washer in its respective washer chamber.

In the examiner's view, the only question to be answered is whether one of ordinary skill in the art would understand the need for a second pin for holding the thrust bearing of Shinohara in place. The examiner urges that Higginbotham answers that question by indicating (e.g., at col. 4, lines 36-42) that one of ordinary skill, dealing with pins holding thrust bearings in place, would preferably use two pins (even though only one is shown). From this, the examiner concludes that since Shinohara has a thrust bearing with a pin holding it in place, and Higginbotham teaches using two pins to hold a thrust bearing in place, it is appropriate to apply the teaching of Higginbotham to the pump of Shinohara (final rejection, pages 2-3).

After a consideration of the collective teachings of the applied patents, we must agree with appellant that there is no reasonable teaching, suggestion or motivation in either Shinohara or Higginbotham, considered individually or collectively, for making the particular combination asserted by the examiner. More particularly, we find nothing in these patents to establish that applying a second securing pin to each of the thrust washers of Shinohara would have been a matter of "engineering expediency," as urged by the examiner. In the final analysis, it is our view that the

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examiner is using the hindsight benefit of appellant's own disclosure to combine the two angularly spaced pins of Higginbotham, used with a circular thrust bearing (50) of a rotating screen bowl centrifugal, with the fuel injection pump of Shinohara.

From our perspective, the examiner has merely used appellant's claimed invention as an instruction manual or "template" in an attempt to piece together disparate teachings of the prior art so that the claimed invention is rendered obvious. This approach to a determination of obviousness is improper and cannot be sanctioned by this Board. See In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed Cir. 1991) and Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

In formulating the rejection on appeal, the examiner appears to have lost sight of the fact that when determining the patentability of a claimed invention which relies on the combination of two known elements, the question to be answered is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. In this case, we find that there is simply nothing in the disparate teachings of the applied prior art patents which would have indicated a desirability for their combination and thus have led one of ordinary skill in the art at the time of appellant's invention to such a combination. Because Shinohara does not teach or suggest that there is a gap

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between the washer and the washer chamber of his assembly that would permit movement of the washer within the washer chamber following revolution of the cam mechanism¹ and does not otherwise discuss or address in any way the problem of washer movement and wear addressed by appellant's disclosure, we see no reason to provide such a gap and/or to add two angularly spaced pins to the washers of Shinohara's pump assembly. Moreover, since Higginbotham does not relate to an assembly in any way corresponding to the fuel injection pump of Shinohara and does not teach or suggest that there is any problem or deficiency in Shinohara, we see no reason why one of ordinary skill in the art would have been motivated by Higginbotham to modify Shinohara.

Since we have determined that the teachings and suggestions found in Shinohara and Higginbotham would not have made the subject matter as a whole of independent claim 1 on appeal obvious to one of ordinary skill in the art at the

¹ In that regard, we note that the thrust washers of Shinohara pointed to by the examiner in Figures 1 and 2 of that patent appear to be the same as those seen in appellant's application Figures 6(a) and 6(b), wherein the thrust washer (90) is polygonal in external shape and engages the walls of a similarly shaped washer chamber (37) in such a way that relative motion between washer (90) and the cam cover (30) is avoided. Note particularly, page 12 of appellant's specification where that embodiment is described.

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time of appellant's invention, we must refuse to sustain the examiner's rejection of that claim, and claims 2, 11 and 12 dependent therefrom, under 35 U.S.C. § 103(a).

In light of the foregoing, the decision of the examiner is reversed.

REVERSED

CHARLES E. FRANKFORT)
Administrative Patent Judge)
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) BOARD OF PATENT
TERRY J. OWENS) APPEALS
Administrative Patent Judge) AND
) INTERFERENCES
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