

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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

Appeal No. 2006-0845  
Application No. 10/113,524

ON BRIEF

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 through 4. Claims 5 through 9, the only other claims remaining in the application, have been withdrawn from further consideration as being drawn to non-elected species.

Appellant's invention relates to a wedge mechanism (e.g., Fig. 2) and means therein for realizing a greater mechanical advantage while assuring a reduced sensitivity to vibratory movements, eliminating the need for lubrication, and making the wedge mechanism largely insensitive to contamination by environmental

contaminants such as water and other fluids, dirt, and abrasive particles, etc. The invention also eliminates the need for making contact surfaces in wedge mechanisms with high hardness and high geometrical accuracy, thereby allowing the use of lighter materials for the structural parts of the wedge mechanism. Independent claim 1 is representative of the subject matter on appeal and a copy of that claim can be found in Appendix A of appellant's brief.

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

Rivin '540                            5,595,540                            Jan. 21, 1997

Appellant's admitted prior art -- the basic conventional wedge mechanism of Figure 1 and the description thereof on pages 1-3 of the specification (hereinafter, the AAPA)

Claims 1 through 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Rivin '540.

Rather than reiterate the examiner's commentary regarding the above-noted obviousness rejection and the conflicting viewpoints advanced by the examiner and appellant concerning that rejection, we make reference to the examiner's answer (mailed October 4, 2005) for the reasoning in support of the rejection, and to appellant's

second revised brief (filed July 19, 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, 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 position concerning the rejection of claims 1 through 4 under 35 U.S.C. § 103(a) is set forth on pages 3-5 of the answer. Essentially, the examiner points out that the basic conventional wedge mechanism of AAPA Figure 1 is responsive to the structural components set forth in claim 1 on appeal, except that the AAPA does not describe, teach or suggest at least one of the surface contacts between the wedge member (2) and the base member (1) or the output member (3) "being maintained through a thin constant thickness shim... comprising at least one thin layer of

elastomeric material so that the relative motion between the contact surfaces is accommodated by internal shear in said elastomeric layers," and wherein the thin elastomeric layers have length-to-thickness and width-to-thickness ratios that are greater than approximately 10.

The examiner looks to the torsional connection and improved "Oldham" coupling in the power transmission system of Riven '540, and specifically to the laminated elements (109, 110, 111, 112) in the holding structures (105a, 105b) interconnecting the intermediate members (103a, 103b) of the rotary coupling as teaching elastomeric shim members (layers 114) similar to those set forth in the claims on appeal. Given the advantages associated with the improved torque transmitting coupling of Riven '540 over a conventional "Oldham" coupling, wherein the sliding connections between the hubs and the intermediate member characteristic of a conventional "Oldham" coupling are replaced with the holding members and laminated elements noted above, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to modify the contact surfaces of the basic conventional wedge mechanism of appellant's admitted

prior art Figure 1 by providing elastomeric shims therein in order to provide the advantages noted in Rivin '540.

Like appellant (brief, pages 3-5), we find no reasonable suggestion or motivation in the applied prior art supporting the examiner's proposed modification of the simple basic wedge mechanism of the AAPA in view of the clearly unrelated and structurally distinct improved "Oldham" coupling in the rotary power transmission system of Rivin '540. While the broad concepts alluded to by the examiner in Rivin '540, when viewed through the prism of hindsight, might appear to make the proposed combination plausible, we do not believe that one of ordinary skill in the art at the time of the present invention, absent the hindsight benefit of appellant's teachings in the present case, would have been led to consider the complex rotary coupling of Rivin '540 when evaluating the issue of minimizing friction between the contact surfaces of the simple wedge mechanism of the AAPA. Like appellant, we do not consider that there are adequate similarities in either structure or function that would have led one of ordinary skill in the art to look to torsional couplings for misaligned rotary shafts to solve a problem relating to friction in a simple wedge mechanism like that of the AAPA.

In light of the foregoing, we agree with appellant that the examiner has failed to meet his burden of establishing a *prima facie* case of obviousness. For that reason, we refuse to sustain the examiner's rejection of claims 1 through 4 under 35 U.S.C. § 103(a). Accordingly, the decision of the examiner is reversed.

REVERSED

**Comment [jvn1]:** Type or Paste Address

Evgeny I. Riven  
4227 Fox Pointe Drive  
West Bloomfield, MI 48323

CEF/ki