

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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

Ex parte JIBIN YANG and SIAVASH ESHGHY

Appeal No. 2001-0151
Application No. 08/850,981

ON BRIEF

Before McQUADE, CRAWFORD, and BAHR, Administrative Patent Judges.
CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 6, 8 to 9, 19 and 20. Claims 28 to 30, 32 and 33 are allowed. Claims 10 to 12, 21, and 22 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all the limitations of the base claims and any intervening claims. Claims 7, 13 to 18, 23 to 27, 31 and 34 have been cancelled.

The appellants' invention relates to an arrangement for sealing an interface between a rotating shaft and a stationary housing (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The prior art

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

Hornberger	4,721,312	Jan. 26, 1988
Antonini et al. (Antonini)	4,844,484	July 4, 1989
Heinzen	5,201,529	Apr. 13, 1993
Katzensteiner	5,211,406	May 18, 1993

The rejections

Claims 1 to 5 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hornberger in view of Antonini.

Claim 6 stands rejected under 35 U.S.C. § 103 as being unpatentable over Hornberger in view of Antonini and further in view of Heinzen

Claims 8, 9 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hornberger in view of Antonini and further in view of Katzensteiner.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the final rejection (Paper No. 7, mailed April 8, 1999) and the answer (Paper No. 12, mailed November 4, 1999) for the examiner's complete reasoning in support of the rejections,

and to the brief (Paper No. 11, filed August 27, 1999) and reply brief (Paper No. 13, filed January 4, 2000) 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.

We turn first to the examiner's rejection of claim 1 to 5 and 19 under 35 U.S.C. § 103 as being unpatentable over Hornberger in view of Antonini. In the examiner's view Hornberger discloses the subject matter of claim 1 except that Hornberger does not disclose the seal having a flexible bellows-like connecting portion extending in a radial direction relative to the shaft longitudinal axis. The examiner relies on Antonini for teaching supplying a bellows-like connecting portion 28 extending in a radial direction relative to the shaft longitudinal axis to permit the seal to flex radially. The examiner concludes:

. . . it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the flexible connecting portion of Hornberger to include a bellows-like portion to improve the radial flexibility of the seal [final rejection at page 4].

Appellants argue that one skilled in the art would not have found it obvious to combine the references as suggested by the examiner. We agree.

The examiner has stated that it would have been obvious to modify the generally flexible connecting portion of Hornberger to include a bellows-like portion to improve the radial flexibility of the seal. However, in our view, Antonini would not suggest the proposed modification of the examiner because that portion of the Antonini seal between two contact portions 14 and 48 does not include bellows. Rather, Antonini's seal has bellows in an extended portion of the seal which extends in a radial direction from the shaft. No such extended portion in the radial direction exists in the Hornberger seal and as such we are at a loss to ascertain how the Hornberger seal can be modified so as to have a bellows portion as is taught by Antonini. In addition, even if the Hornberger seal were modified so as to have a bellows portion, the Hornberger seal does not have a second end that includes a contact surface that contacts a peripheral surface of the shaft, as is recited in claim 1. Rather, the Hornberger seal contacts the sleeve 8 rather than the shaft.

For the foregoing reasons, we will not sustain the examiner's rejection of claims 1 to 5 and 19 under 35 U.S.C. § 103. In addition, we will not sustain the remaining two rejections as these rejections rely on the combination of Hornberger and Antonini and the remaining references do not cure the deficiencies we have noted above in regard to the combination of Hornberger and Antonini.

The decision of the examiner is reversed.

REVERSED

JOHN P. McQUADE
Administrative Patent Judge

MURRIEL E. CRAWFORD
Administrative Patent Judge

JENNIFER D. BAHR
Administrative Patent Judge

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