

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CLINTON W. HILL
and ROBERT M. CRANDALL

Appeal No. 95-2286
Application 07/988,475¹

ON BRIEF

MAILED

DEC 19 1995

PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Before STONER, Acting Chief Administrative Patent Judge, ABRAMS
and STAAB, Administrative Patent Judges.

ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 1 through 11 and 13 through 28, which constitute all of the claims remaining of record in the application.

¹ Application for patent filed December 10, 1992.

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Appellants' invention is directed to a link assembly for a vehicle wheel suspension system or the like, and to a bushing usable therewith. The subject matter before us on appeal is illustrated by reference to claim 1, which reads as follows:

1. A link assembly connectable to a member and adapted for rotary motion and conical deflection relative to said connectable member comprising:

an elongated rigid member having an opening therethrough for receiving said connectable member therein; and

a bushing disposed in said opening, said bushing being formed of a thermoplastic polyurethane material and having an opening therethrough providing a cylindrical wall therein, said cylindrical wall having a plurality of dimples.

THE REFERENCES

The references relied upon by the examiner to support the final rejection are:

Tarr	1,958,119	May 8, 1934
Hufferd	2,099,209	Nov. 16, 1937
Simpson	3,230,000	Jan. 18, 1966
Griffen	3,762,747	Oct. 2, 1973

THE REJECTIONS

Claims 1 through 11 and 13 through 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hufferd in view of Simpson and Tarr.

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Claim 28 stands rejected under 35 U.S.C. § 103 as being unpatentable over Hufferd in view of Simpson and Tarr as applied to claims 1 through 11 and 13 through 27, and further in view of Griffen.

The rejections are explained in the Examiner's Answer.

The opposing viewpoints of appellants are set forth in the Brief.

OPINION

Appellants' invention is directed to a link assembly of the type commonly found in vehicle suspension systems. The link assembly comprises a link member that is elongate and rigid, and a synthetic rubber bushing retained within an opening in the link member. A cylindrical sleeve member can be retained within an opening in the bushing for connection to a separate member. A plurality of dimples are located on the inner cylindrical surface of the bushing.

The essence of appellants' invention lies in the dimples on the inner cylindrical wall of the opening in the bushing. According to the explanation on pages 1 through 5 of the specification, the dimples provide three major improvements over the prior art link assemblies: (1) more uniform loading on the sleeve member due to an increase in the "footprint" of the bushing on the sleeve opening over that provided by the raised

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"pimples" utilized in the prior art; (2) reduction of internal stress on the bushing; and (3) reduction of noise and abrasion attendant to friction from rotation and conical motion of the connected member. In furtherance of these aims, independent claim 1 contains the requirement that the bushing have "an opening therethrough providing a cylindrical wall therein, said cylindrical wall having a plurality of dimples." Independent claim 15 contains a similar expression of this limitation.

The examiner has rejected both of the independent claims as being unpatentable over Hufferd in view of Simpson and Tarr. It is axiomatic that 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 *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In establishing a *prima facie* case of obviousness under 35 USC § 103, 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 (BPAI 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 appellants' disclosure. See, for example, *Uniroyal*,

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Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

Hufferd discloses a link member 15 having a transverse opening within which is installed a synthetic rubber bushing 19. The bushing has a central opening for receiving a connectable member 18. As admitted by the examiner, Hufferd fails to show a plurality of dimples on the inner cylindrical surface of the opening in the bushing as required in applicants' independent claims 1 and 15. However, Hufferd is concerned with the problem of maintaining the free movement of the connectable member in the bushing in which it is mounted, and solves the problem by providing a lubricating fluid between the inner and outer surfaces of the bushing and the surfaces of the other components which are adjacent thereto. The fluid prevents the bushing from becoming vulcanized to the link member or to the connectable member. See column 1, lines 12 through 26, and column 3, lines 6 through 32.

The relevance of Simpson resides in its teaching of press-fitting a resilient bushing into a cylindrical member in such a manner as to form upstanding lips at each end (Figure 4, 31 and 72).

Tarr is directed to a mounting for an outboard motor for a boat. As shown in Figure 2, the mounting comprises an outer cylindrical sleeve 25 within which is installed a

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cylindrical resilient bushing 26, which may be "recessed at one or more zones, as indicated at 27a, 27a, to render the rubber cushion more absorbtive [sic] of vibrations" (page 1, lines 73 through 75). An inner sleeve 24 receives a connectable member 18. The bushing is not movable with respect to either of the sleeves (page 1, lines 89 through 93).

It is the examiner's position that "it would have been obvious. . .to use the evenly spaced dimples of Tarr in Hufferd . . .to reduce vibration between the inner and outer members" (Answer, page 4). As to the fact that Tarr's "dimples" are in the outer surface of the bushing while the claim requires them to be on the inner surface, the examiner states "[w]hether the dimples are on the outside or the inside of the bushing is held to constitute merely an unpatentable difference in positioning" (Answer, page 6).

As we pointed out above, Hufferd teaches providing lubrication between outer surface 18 of connectable member 14 and the inner surface of bushing 19, and between the outer surface of the bushing and the inner surface 11 of link 10 (column 3, lines 6 through 32). The purpose of the lubricant is to keep the components from becoming vulcanized together, thus inhibiting free movement of one relative to the others. Tarr teaches the opposite, that is, in the Tarr system bushing 26 is "held under compression between the sleeves [24 and 25], or by vulcanized

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adhesion to the sleeves" (page 1, lines 89 through 93). Thus, unlike Hufferd and unlike the appellants' device, Tarr teaches providing no rotational movement between the outer cylinder (the link) and the bushing, on the one hand, or between the bushing and the inner cylinder (the connectable member) on the other hand. Tarr's device functions in such a manner as "to restrain the inner sleeve from transverse movement while permitting relative vibrating movement of the outer sleeve under the resilient resistance of the rubber" (page 1, lines 83 through 86). This is permitted by voids 27a, in order to dampen the vibrations, and especially the transverse vibrations, between outer cylinder 25, upon which the outboard motor is mounted, and shaft 18, which is attached to the boat. There is no mention of placing a lubricant in the voids, and to do so would appear to be contrary to the manner in which the device is intended to operate and thus be useless.

With regard to the examiner's rejection, we fail to perceive any teaching, suggestion or incentive which would have motivated one of ordinary skill in the art to modify Hufferd by placing dimples on the inner surface of the bushing. We begin our rationale in support of such a conclusion by voicing our belief that the voids 27a disclosed by Tarr do not define "dimples" within the common meaning of the term, but are annular voids. Moreover, the only explicit teachings as to the placement

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of these voids is that they be on the outer surface of a bushing and that there be no movement present between them and the surface against which they are installed. Since the Hufferd device requires that there be movement between the bushing and the surfaces on both sides with which it is in contact, it appears to us that the application of Tarr's teaching of no movement would render the Hufferd device inoperable for the purpose intended, thus presenting a disincentive to the modification proposed by the examiner, whether installed on the inner surface or the outer surface. Furthermore, the examiner's conclusion that it matters not whether the dimples are on the inner or the outer surface of the bushing is not supported by evidence, and the fact that the voids are placed only on the outer surface in the Tarr bushing erodes support for the examiner's position. Also of import here is the assertion by the appellants that the placement of the dimples on the inner surface provides the improvement over the prior art systems (specification, pages 1 through 5).

According to our reviewing court:

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention"

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(citations omitted). *In re Fritch*, 972 F.2d
1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir.
1992).

It is our view that this is what happened in the present case.

The teachings of Simpson fail to alleviate the shortcomings discussed above in the basic combination of references.

A *prima facie* case of obviousness therefore has not been established with regard to the subject matter recited in independent claims 1 and 15 or, it follows, of claims 2 through 11, 13, 14 and 16 through 27, which depend therefrom. We therefore will not sustain the rejection of these claims.

Claim 28 has been rejected on the basis of the references cited against the other claims, taken further in view of Griffen. The teachings of this reference also fail to overcome the problems with Hufferd and Tarr, and this rejection will not be sustained.

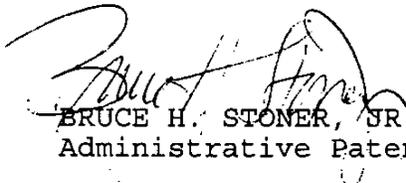
Finally, rather than enter a new rejection under 35 USC § 112, second paragraph, at this stage of the proceedings, we shall simply point out two errors in the claims which are worthy of correction. In the preamble of claim 15 reference is made to "said connectable member," however, such has not previously been recited and therefore the phrase has no proper antecedent basis. It would appear that this should read --a connectable member--.

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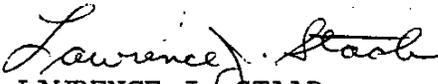
It also would appear that "said connectable member opening," which appears in line 2 of claim 19, should read --said connectable member **receiving** opening--.

The decision of the examiner is reversed.

REVERSED


BRUCE H. STONER, SR. Acting Chief)
Administrative Patent Judge)


NEAL E. ABRAMS)
Administrative Patent Judge)


LAWRENCE J. STAAB)
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