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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte HANS-WERNER SCHWERDT and HELMUT LAU

_____

Appeal No. 1997-1722
Application 08/385,256[1]

_____

ON BRIEF

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Before KIMLIN, GARRIS and KRATZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 3, 4, 6, 8, 10, 12 and 14-23, all the claims remaining in the present application. A copy of illustrative claim 1 is appended to this decision.

[1] Application for patent filed February 8, 1995.

The examiner relies upon the following references as evidence of obviousness:

Somerville	2,909,204	Oct. 20, 1959
Troyer	3,054,305	Sep.18, 1962
McGuire	4,182,138	Jan. 08, 1980
Ferguson	4,849,047	Jul. 18, 1989
Thiry (British Patent)	GB 461,478	Feb. 17, 1937

Appellants' claimed invention is directed to a process for making a pressed-in torsional vibration damper which comprises adhesively bonding an elastomeric spacer ring into the annular gap between a metal hub ring and a metal flywheel ring. The adhesive utilized is initially non-adhesive and is cured or activated "without heating it to a temperature greater than 90° C." The adhesive is selected from the group recited in claim 1. Because of the strength of the adhesive bond, "it is possible to compress the elastomeric spacer ring in the radial direction by as little as 20% down to essentially 0% . . . [which] reduces or eliminates the risk of resonance occurring during use of the torsional vibration damper." (page 4 of brief).

Appealed claims 1, 3, 4, 6, 8, 10, 12, 14-21 and 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Thiry in view of McGuire and Somerville. Also, claims 1, 3, 4, 6, 8, 10, 12 and 14-23 stand rejected under 35 U.S.C. § 103 as being unpatentable over either Troyer or McGuire in view of Ferguson and Somerville.

Upon careful consideration of the opposing arguments presented on appeal, we agree with appellants that the prior art cited by the examiner fails to support a prima facie case of obviousness for the claimed subject matter. Accordingly, for essentially the reasons expressed by appellants, we will not sustain the examiner's rejections.

Thiry, Troyer and Ferguson, the references directed to vibration dampers, fail to teach or suggest employing an adhesive that is cured "without heating it to a temp-erature greater than 90° C" as required by the appealed claims. Thiry discloses proceeding with hot vulcanization of imperfectly vulcanized india-rubber in order to effect adhesion to the metallic sleeve (page 2, lines 29, et seq). In addition, Thiry does not disclose any one of the claimed adhesives which are initially non-adhesive. Troyer adds very little by simply disclosing that a "suitable bonding agent may be applied to the elastic element and the driving and driven members" (column 2, lines 19 and 20). Ferguson, on the other hand, although disclosing the use of a dried adhesive film that is non-tacky, discloses that "[t]he adhesive is thermosetting and will bond to the rubber and meatal surfaces at approximately 200° F." (column 5, lines 13-15).

The failure of Thiry, Troyer and Ferguson to disclose adhesives of the type claimed for making vibration dampers is not remedied by the disclosures of McGuire and Somerville. Appellants set forth at page 14 of the brief how McGuire and

Somerville are not directed to a torsional vibration damper and, therefore, are not pertinent to one of ordinary skill in the art looking for a suitable adhesive to replace those of Thiry and Ferguson in manufacturing a torsional vibration damper. The examiner, on the other hand, has not addressed this argument of appellants. Hence, while appellants are correct in stating that neither McGuire nor Somerville expressly teaches the use of an adhesive which is initially non-adhesive, even if the examiner was accurate in finding that "the epoxy and halogenated rubber adhesives . . . disclosed in Somerville and McGuire are held/seen to be initially non-adhesive" (page 8 of answer), the examiner has failed to establish that one of ordinary skill in the art of manufacturing a pressed-in torsional vibration damper would have considered selecting an adhesive like the type claimed from the disclosures of McGuire and Somerville. Assuming that the presently claimed adhesives were not novel at the time of filing the present application, it seems that the examiner has, at most, indicated that it would have been obvious for one of ordinary skill in the art to try the adhesives of appellants' invention. Manifestly, this is not the proper standard for establishing obviousness under 35 U.S.C. § 103.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN Administrative Patent Judge	)	
BRADLEY R. GARRIS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PETER F. KRATZ Administrative Patent Judge	)	

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Kenyon & Kenyon
One Broadway
New York, NY 10004

Appendix A
Claim 1

1. A process for manufacturing a pressed-in torsional vibration damper, comprising the steps of:

concentrically arranging a metal hub ring and a metal flywheel ring spaced apart from one another to define an annular gap therebetween, each metal ring having a surface which can contact a contact surface of an elastomeric spacer ring pressed into the annular gap;

coating the contact surfaces of the spacer ring or the contact surface of the hub ring and flywheel ring or the contact surfaces of the spacer ring, the hub ring and the flywheel ring with a cold-curable adhesive or a catalytically activated adhesive or a mixture thereof, the adhesives being initially non-adhesive;

inserting the spacer ring into the annular gap between the hub ring and flywheel ring, while the adhesive is initially non-adhesive, to engage the contact surface of the hub ring and the flywheel ring with a contact surface of the spacer ring; and

subsequently curing or activating the adhesive without heating it to a temperature greater than 90°C to bond the rings together and form the torsional vibration damper, wherein the adhesive is selected from the group consisting of:

chlorine rubbers with P-dinitrosobenzene, a copper or nickel catalyst, and an isocyanate additive,

catalyzed single-component epoxy resins that spontaneously crosslink by means of -onium salts of BF_4^-, PF_6^-, AsF_6^- or SbF_6^-,

silicone adhesives, modified with a tin-containing catalyst, which are cold-curable and can be activated by the action of heat at up to 70°C,

(cont.)

cyanoacrylates,

polyacrylates that form a cross-linked adhesive film with catalytically active transition metal ions, after the spacer ring is inserted into the annular gap,

cold-curable two-component epoxy resins,

polyacrylates that form a cross-linked adhesive film with catalytically active transition metal ions after the spacer ring is inserted into the annular gap, together with a polyacrylate with no double bonds and with styrene,

polyacrylates that form a cross-linked adhesive film with catalytically active transition metal ions after the spacer ring is inserted into the annular gap, together with a polyacrylate with no double bonds and with styrene, and with dibenzoyl peroxide and maleic anhydride,

two-component acrylate adhesives which include one amine-containing and one peroxide-containing component.