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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HISATO MAEKAWA, KAZUHIKO YAMATO,
REIZI MAHIGASHI and YOSHITAKA ABE

Appeal No. 2000-1628
Application No. 09/163,013

ON BRIEF

Before CALVERT, ABRAMS, and McQUADE, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Hisato Maekawa et al. appeal from the final rejection of claims 14 through 18, all of the claims pending in the application.[1]

THE INVENTION

---

[1] Claim 14 has been amended subsequent to final rejection.

The invention relates to “a metal gasket to be installed between the cylinder block and cylinder head of an engine” (specification, page 1). Representative claim 14 reads as follows:

14. A metal gasket comprising at least a first gasket-constituting plate composed of an elastic metal plate having an opening corresponding to the cylinder hole of the engine, said gasket constituting plate including:

an annular stopper formed by folding back the peripheral portion of said first gasket-constituting plate on an annular pressure receiver portion of said first gasket-constituting plate around the periphery of said opening, and

an annular bead formed in said first gasket-constituting plate along the outer periphery of the stopper, said bead projecting toward the side of said first gasket-constituting plate on which the stopper is formed, wherein an inner periphery of said bead functions as a stepped part to prevent an overall deformation of said first gasket-constituting plate,

wherein a raised spacer layer is formed by pattern printing with a heat-resistant, compression-resistant material between said stopper and said annular pressure receiver portion of said gasket-constituting plate opposite said stopper, and

wherein said heat-resistant compression-resistant material adheres to said first gasket-constituting plate.

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

Czernik et al. (Czernik)	3,794,333	Feb. 26, 1974
Ohashi et al. (Ohashi)	4,265,679	May 5, 1981
Yoshino	4,836,562	June 6, 1989
Kawaguchi et al. (Kawaguchi)	5,286,039	Feb. 15, 1994

THE REJECTIONS

Claims 14 through 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi in view of Czernik.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi in view of Czernik and Ohashi.

Claims 14 through 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshino in view of Czernik.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshino in view of Czernik and Ohashi.

Attention is directed to the appellants' brief (Paper No. 17) and to the examiner's answer (Paper No. 18) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.[2]

DISCUSSION

As framed by the appellants (see pages 8 through 10 in the brief), the dispositive issue in this appeal is whether the applied prior art teaches or would have suggested a metal gasket meeting the "raised spacer layer" limitations in representative claim 14. As indicated above, claim 14 requires the raised spacer layer to be formed by pattern printing with a heat-resistant, compression-resistant material between the stopper and annular pressure receiver portion of the gasket-constituting plate opposite the stopper, wherein the heat-resistant compression-resistant material adheres to the first gasket-constituting plate.

[2] In the final rejection (Paper No. 9), claims 14 through 18 also stood rejected under 35 U.S.C. § 112, second paragraph. In response to the amendment subsequent to final rejection (see n.1, supra), the examiner (see page 5 in the answer) has withdrawn this rejection.

Kawaguchi and Yoshino, the examiner's primary references, disclose metal gaskets for use between the cylinder block and cylinder head of an internal combustion engine.

The examiner (see pages 3 and 4 in the answer) considers that the Kawaguchi gasket includes a "raised spacer layer" in the form of a "soft" member 50 (see Figure 10), and that the Yoshino gasket includes a "raised spacer layer" in the form of an edge portion 52e of intermediate plate 52 (see Figure 5). Kawaguchi teaches that member 50 "may be a soft metal sheet, a heat-insulating graphite sheet, an aramide type heater sheet, a resin or a rubber" (column 10, lines 9 and 10), which functions to improve deformability of adjacent stop portion 35, absorb irregularities of the opposed block and head fitting surfaces and absorb vibration between the head and block during operation of the engine (see column 10, lines 15 through 23). Yoshino teaches that intermediate plate 52 is made of material which is "softer" than that of gasket base plates 4 and 6 (see column 8, lines 33 through 36).

Under one theory, advanced for the first time in the answer, the examiner submits that claim 14 "could be considered to be met by either Kawaguchi et al. or Yoshino

alone [because] [c]learly, the spacer layer of each of these references will adhere to the gasket plates, to a certain degree, by a frictional bond" (answer, pages 5 and 6). This position is untenable. Aside from the question of whether the "spacer layer" disclosed by Kawaguchi or Yoshino is a heat-resistant, compression-resistant material as required by claim 14, neither reference provides any factual support for the examiner's conjecture about a frictional bond. The examiner's main theory, set forth in the final rejection and restated in the answer (see pages 3 and 4), rests on the conclusion that it would have been obvious in view of Czernik to make the spacer layer disclosed by either Kawaguchi or Yoshino of an epoxy resin to limit compression of associated gasket sealing beads, thereby meeting the "raised spacer layer" limitations in claim 14. Czernik discloses a metal gasket for use between a cylinder block and cylinder head wherein the gasket includes silk-screened sealing patterns 26 made of elastomeric material and silk-screened control patterns 32 made of a relatively incompressible material such as an epoxy resin. The relatively incompressible control patterns prevent destructive compression of the sealing

patterns. Of the control pattern material, Czernik explains that

> [t]he structural or control material has been referred to as being relatively incompressible, which it is insofar as it compares to the structural strength of the sealing material it is used to protect. It is not, however, incompressible in an absolute sense, as is clear from the foregoing description and from FIG. 3. The important fact is that it is less compressible and more resistant to crushing than the elastomeric materials it protects against destructive compression [column 5, lines 38 through 46].

The appellants argue (see pages 8 through 10 in the brief) that the foregoing reference combinations are improper because Kawaguchi and Yoshino emphasize the “softness” of the spacer material, and therefore teach away from using the relatively incompressible material disclosed by Czernik for the spacer layer.

Given Czernik’s explanation of the relative nature of the term “incompressible,” it is arguable that one of ordinary skill in the art would not view either Kawaguchi or Yoshino as teaching away from the use of Czernik’s relatively incompressible control material as a “soft” spacer layer. Nonetheless, there is nothing in the collective teachings of the respective reference combinations that would have

suggested this modification either. Czernik's control material has the specific purpose of preventing destructive compression of sealing patterns made of elastomeric material. There are no such sealing patterns in the gaskets disclosed by Kawaguchi and Yoshino. Although the Kawaguchi and Yoshino gaskets do include sealing beads, they are made of metal, and there is nothing in either reference indicating that such beads might be subject to destructive compression. In this light, it is evident that the only suggestion for the proposed combinations of either Kawaguchi or Yoshino in view of Czernik stems from hindsight knowledge impermissibly derived from the appellants' own disclosure. Ohashi, the examiner's fourth reference, affords no cure for this deficiency in the basic reference combinations.

Hence, the examiner's determination that the subject matter recited in claim 14, and in claims 15 through 18 which depend therefrom, would have been obvious within the meaning of 35 U.S.C. § 103(a) is not well founded. Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 14 through 16 and 18 as being unpatentable over Kawaguchi in view of Czernik, the standing 35 U.S.C. § 103(a)

rejection of claim 17 as being unpatentable over Kawaguchi in view of Czernik and Ohashi, the standing 35 U.S.C. § 103(a) rejection of claims 14 through 16 and 18 as being unpatentable over Yoshino in view of Czernik, or the standing 35 U.S.C. § 103(a) rejection of claim 17 as being unpatentable over Yoshino in view of Czernik and Ohashi.

Finally, upon return of the application to the technology center, the examiner should evaluate whether the appellants' specification complies with the written description requirement of 35 U.S.C. § 112, first paragraph, with respect to the subject matter recited in claim 18.

The decision of the examiner is reversed.

REVERSED

IAN A. CALVERT Administrative Patent Judge	)	
NEAL E. ABRAMS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOHN P. McQUADE Administrative Patent Judge	)	

JPM/gjh

WILLIAM L. BROOKS
ARMSTRONG, WESTERMAN, HATTORI,
McLELAND & NAUGHTON
1725 K STREET N.W.
SUITE 1000
WASHINGTON, D.C. 20006

GJH

Appeal No. 2000-1628
Application No. 09/163,013

APJ McQUADE

APJ ABRAMS

APJ CALVERT

REVERSED

Prepared: January 11, 2002