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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENICHI KOTANI

Appeal No. 95-3001
Application No. 08/195,844[1]

HEARD: May 7, 1998

Before HAIRSTON, KRASS and FLEMING, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 4. In an Amendment After Final (paper number 15), claim 5 was added to the application. Accordingly, claims 1 through 5 are on appeal.

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[1] Application for patent filed February 14, 1994. According to the appellant, the application is a continuation of Application No. 07/998,602 filed December 30, 1992, now abandoned.

The disclosed invention relates to a piezoelectric resonance device in which the width of the dielectric substrate of a capacitor portion of the device is larger than the width of adjacent portions of terminals.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A piezoelectric resonance device comprising:

a piezo-resonator which has oscillation electrodes provided on front and back sides of a piezoelectric substrate and vibrates in a shear mode;

an input terminal and an output terminal for supporting the piezo-resonator, each of the input terminal and the output terminal having cup portions connected with the oscillation electrodes electrically;

a capacitor which has a common electrode on one side of a dielectric substrate, and opposed electrodes on the other side of the dielectric substrate spaced from one another along a first dimension of the dielectric substrate, the opposed electrodes being connected electrically with an outer side of the cup portions of the terminals along said first dimension and along a second dimension, the second dimension of the dielectric substrate being larger than that of the cup portions of the terminals; and

a grounding terminal which is connected electrically with the common electrode of the capacitor.

The references relied on by the examiner are:

Yoshida	5,091,671	Feb. 25, 1992
Yoshinaga	5,184,043	Feb. 2, 1993 (filed Dec. 17, 1991)
Japanese patent publication	1-133816	Sept. 12, 1989

Claims 1 through 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Yoshida, the Japanese patent publication or Yoshinaga.

Reference is made to the brief, the final rejection (paper number 14), and the answer for the respective positions of the appellant and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejection of claims 1 through 5.

According to the examiner (paper number 14):

> Each reference teaches the claimed piezoelectric resonance device except for the specific width of the capacitor dielectric substrate. The size of the dielectric and the electrode area are functions of the desired properties of the capacitor; with the values dictated by job requirements. Selecting optimum values for a known device has long been held to be within the skill expected of the routineer, and therefore a manipulation that would have been obvious to one of ordinary skill in the art. Note that Yoshida (fig. 1) shows the capacitor equal in width to the cup terminal width, while Japan (figs. 2-4) shows the capacitor substrate is wider than the common (ground) terminal.

Appellant argues (Brief, page 10) that "[t]he Yoshida patent at best discloses matching the second dimension of dielectric plate 8a to that of cup portions 2a and 3a," "[t]he Yoshinaga patent discloses forming the second dimension of the capacitor

dielectric 11 **smaller** than that of U-shaped holding parts 21/31," and "[t]he Japanese '816 document, like the Yoshinaga patent, discloses a capacitor dielectric having a second dimension which is **smaller** than that of U-shaped terminals 5a/6a." With respect to the examiner's statement that "Japan (figs. 2-4) shows the capacitor substrate is wider than the common (ground) terminal," appellant argues (Brief, page 10) that the T-shaped grounding terminal 7 in the Japanese reference does not correspond to the claimed input and output terminals, and that the T-shaped grounding terminal does not include cup-shaped portions as required by the claims on appeal. In rebuttal to the examiner's position concerning optimization, appellant argues (Brief, page 9) that:

> [T]he Yoshida, Yoshinaga and Japanese '816 documents, taken either alone or in combination, at best, merely disclose sizing a dielectric substrate as a function of circuit requirements. Those skilled in the art desiring increased capacitance would have been motivated to **laterally** increase the dielectric or capacitor electrode size, or increase the size of the overall device (i.e., maintain the relative dimensions of the terminals and the dielectric substrate).

We agree. The obviousness rejection is reversed because nothing in the record supports the examiner's position that the skilled artisan seeking optimum capacitance would have sized the

dielectric with respect to the size of the cup-shaped portions of the terminals.

DECISION

The decision of the examiner rejecting claims 1 through 5 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)
ERROL A. KRASS Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
MICHAEL R. FLEMING Administrative Patent Judge	)

Platon N. Mandros
Burns, Doane, Swecker & Mathis
P.O. Box 1404
Alexandria, VA 22313-1404

KWH/jrg

APPEAL NO. 95-3001 - JUDGE HAIRSTON
APPLICATION NO. 08/195,844

APJ HAIRSTON

APJ FLEMING

APJ KRASS

DECISION: REVERSED

Typed By: Jenine Gillis

DRAFT TYPED: 11 May 98

FINAL TYPED:

3 Member Conf. Yes No