

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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

Appeal No. 1999-0863
Application 08/674,727¹

ON BRIEF

Before KRASS, BARRETT, and BLANKENSHIP, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

¹ Application for patent filed July 2, 1996, entitled "Surface Acoustic Wave Resonator Filter," which is a continuation of Application 08/419,764, filed April 10, 1995, now U.S. Patent 5,592,040, issued January 7, 1997, which is a continuation of Application 08/110,997, filed August 24, 1993, now abandoned, which claims the foreign filing priority benefit under 35 U.S.C. § 119 of Japanese Application 223698/1992, filed August 24, 1992.

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DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 10, 11, and 17-21.

We affirm-in-part.

BACKGROUND

The disclosed invention relates to a surface acoustic wave (SAW) band-pass filter with a widened pass band.

Claim 17 is reproduced below.

17. A surface acoustic wave resonator filter comprising:

a first longitudinal mode coupling type resonator connected to an input terminal; and

a second longitudinal mode coupling type resonator connected to an output terminal and acoustically coupled to said first longitudinal mode coupling type resonator;

said first longitudinal mode coupling type resonator and said second longitudinal mode coupling type resonator each comprising interdigital electrodes, wherein at least one of said interdigital electrodes of said first longitudinal mode coupling type resonator and of said second longitudinal mode coupling type resonator is a dummy electrode, comprising electrically shorted interdigital electrodes.

The Examiner relies on the following prior art:

Mitchell	4,178,571	December 11, 1979
Ehata (Japanese Kokai)	61-142812	June 30, 1986

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Ruile et al. (Ruile) WO 91/09465 June 27, 1991
(PCT publication)

Takema² 03-278608 December 10, 1991
(Japanese Kokai)

Translations of Ehata, Ruile, and Takema have been prepared by the U.S. Patent and Trademark Office and accompany this opinion.

Claims 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ehata or Ruile or Mitchell.

Claims 17-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by any of Ehata, Ruile, Mitchell, or Takema.

We refer to the final rejection (Paper No. 7) (pages referred to as "FR__") for a statement of the Examiner's position. The examiner's answer (Paper No. 14) (pages referred to as "EA__") merely refers back to and incorporates the final rejection. We refer to the brief (Paper No. 13) (pages referred to as "Br__") and the reply brief (Paper No. 15) for a statement of Appellant's arguments thereagainst.

² The translation spells the inventor's name as "Takeuma." We use the spelling "Takema" used in the prosecution.

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OPINION

Grouping of claims

The Examiner errs in stating that claims 10, 11, and 17-21 stand or fall together because the brief does not include a statement that this grouping of claims does not stand or fall together and does not provide reasons in support thereof (EA2).

The brief clearly points out five groups of claims (Br4): (1) claim 10; (2) claim 11; (3) claims 17-19; (4) claim 20; and (5) claim 21. Separate arguments are provided for each of the claim groupings as noted in the reply brief. Thus, these are the groups to be considered.

35 U.S.C. § 103(a)

The dispositive issue is whether Ehata, Ruile, and Mitchell teach or suggest the following functional limitations of claim 10: (1) "said first and second longitudinal mode coupling type resonators are arranged to match a longitudinal mode resonance of an even symmetric mode and a longitudinal mode resonance of an odd symmetric mode"; (2) "said first longitudinal mode coupling type resonator being arranged to generate two longitudinal mode resonations"; and (3) "said second longitudinal mode coupling type resonator being arranged to generate two longitudinal mode resonations."

The Examiner states (FR3; FR4; FR5):

It is not clear that [Ehata's, Ruile's, or Mitchell's] first and second longitudinal mode coupling type resonators are arranged to match a longitudinal mode resonance of an even symmetric mode and a longitudinal mode resonance of an odd symmetric mode. The Applicants note that two longitudinal mode resonances are "accomplished by appropriately selecting the number of IDT pairs, the longitudinal mutual interval between the IDT electrodes and the longitudinal distance between the IDT and the reflector". It would have been obvious to one having ordinary skill in the art at the time of the invention to arrange [Ehata's or Ruiles' or Mitchell's] first and second longitudinal mode coupling type resonators so that they are arranged to match a longitudinal mode resonance of an even symmetric mode and a longitudinal mode resonance of an odd symmetric mode since it has been held that rearranging parts of an

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invention involves only routine skill in the art.
In re Japikse, 86 USPQ 70.

We assume this reasoning is intended to apply to all three limitations. Because the Examiner does not address claim 11, the same reasoning must apply to claim 11.

Appellant argues that the theory of rearranging parts in Japikse, which dealt with relocating the position of a switch, does not apply here because any modification to Ehata, Ruile, or Mitchell which would result in some form of the claimed invention would be more than simply relocating the position of parts. It is argued that there is no motivation to modify the references to provide the functional limitations.

We agree. Japikse, to the extent it is good law, is inapplicable to the present rejection. The Examiner proposes more than just moving parts around: he proposes making changes in the structure of the surface acoustic wave filter so as to provide the claimed operational characteristics. There is absolutely no suggestion for providing the claimed functional characteristics (1), (2), or (3) in Ehata, Ruile, or Mitchell and, thus, the obviousness rejection must fail. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification

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obvious unless the prior art suggested the desirability of the modification." In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992), citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The Examiner has failed to establish a prima facie case of obviousness as to limitations (1), (2), and (3); therefore, it is not necessary to address the other deficiencies in the Examiner's rejections. The obviousness rejections of claims 10 and 11 over Ehata, Ruile, and Mitchell are reversed.

35 U.S.C. § 102(b)

Claims 17-19

Appellant argues that Ehata, Ruile, Mitchell, and Takema fail to teach or suggest "a filter which includes first and second longitudinal resonators each comprising interdigital electrodes where at least one of the electrodes is electrically shorted, as required in claims 17 and 21 and illustrated in Figure 3A (2A and 2B)" (Br15: Br17).

The Examiner's position is that Ehata, Ruile, and Mitchell each show "'dummy' electrodes, which are their respective reflector electrodes" (FR6). Appellant does not address this finding in the brief or reply brief.

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The reflectors 13 and 23 in Ehata have electrically shorted interdigital electrodes and are part of first and second longitudinal mode coupling type resonators. Appellant provides no arguments why a reflector electrode cannot be a "dummy" electrode and, absent an argument of error, we will not provide any special interpretation of the term "dummy." The rejection of claims 17-19 over Ehata is sustained.

The reflector structure 6 illustrated in Ruile, Fig. 1, and the reflector structures R1, R2 in Mitchell, Fig. 1, do not have electrically shorted interdigital electrodes. Evidently not all grating reflectors have electrically shorted interdigital electrodes. The rejections of claims 17-19 over Ruile and Mitchell are reversed.

The Examiner finds that Fig. 3 of Takema shows "at least one of said interdigital electrodes is a 'dummy' electrode, comprising shorted interdigital electrodes (3)" (FR6). Appellant does not address the Examiner's finding in the brief or reply brief.

The two grounded interdigital electrodes 2 in Takema, positioned one above the other in Fig. 2 and positioned on a diagonal line in Fig. 3, have both sets of fingers connected

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to the same ground potential. Thus, the interdigital electrodes are shorted to each other in the electrical sense. Claim 17 does not define over this structure. The rejection of claims 17-19 over Takema is sustained.

Claims 20 and 21

Because the rejections of independent claim 17 over Ruile and Mitchell have been reversed, the rejections of dependent claim 20 over Ruile and Mitchell are reversed.

Claim 21 contains the same limitation of "a dummy electrode, comprising electrically shorted interdigital electrodes" as claim 17. This limitation is not found in Ruile and Mitchell, as discussed in connection with claim 17. Thus, the rejection of claim 21 over Ruile and Mitchell is reversed.

Claim 20 further recites "wherein said first longitudinal mode coupling type resonator and said second longitudinal mode coupling type resonator each generate two resonance frequencies, wherein a higher resonance frequency of said first longitudinal mode coupling type resonator is equal to a lower resonance frequency of said second longitudinal mode

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coupling type resonator." Claim 21 contains an almost identical limitation, except that "generate" is "generates."

The Examiner finds (FR6): "Given that the entire claimed structure is shown by the Takema invention, the device thus inherently meets the goals of the invention also described in the claims." Although not expressly stated, it is apparently also the Examiner's position that the functional limitations of claims 20 and 21 are inherent in Ehata.

Appellant notes that a claimed feature which is said to be inherent must necessarily flow from the teachings of reference. It is argued that Takema does not inherently teach or suggest the limitations. This same argument would apply to Ehata.

There is absolutely no indication that the functional characteristics of claims 20 and 21 are inherent in Ehata or Takema. The operational characteristics of surface acoustic wave filters depend on the selection of IDT pairs, the longitudinal mutual interval between the IDT electrodes, and the longitudinal distance between the IDT and the reflector, among other factors, and there is no indication in Ehata or Takema that these structural features have been selected to

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provide the claimed characteristics. The rejections of claims 20 and 21 over Ehata and Takema are reversed.

CONCLUSION

The rejections of claims 10 and 11 under 35 U.S.C. § 103(a) over Ehata or Ruile or Mitchell are reversed.

The rejections of claim 17-19 under § 102(b) over Ehata or Takema are sustained. The rejections of claims 20 and 21 under § 102(b) over Ehata or Takema are reversed. The rejections of claims 17-21 under § 102(b) over Ruile or Mitchell are reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

ERROL A. KRASS)	
Administrative	Patent Judge)
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)	BOARD OF PATENT
LEE E. BARRETT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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HOWARD B. BLANKENSHIP)
Administrative Patent Judge)

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SUGHRUE, MION, ZINN, MacPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037