

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte GLENN GEE

Appeal No. 2003-0291
Application No. 09/569,074

ON BRIEF

Before ABRAMS, STAAB, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 5, 7 to 11, 16 and 17, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellant's invention relates in general to an improved fixture for restraining workpieces, and in particular to improving the flatness control of a workpiece during a lapping process (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Kitta	4,918,869	Apr. 24, 1990
Hasegawa et al. (Hasegawa)	5,913,719	June 22, 1999
Ball et al. (Ball)	6,120,360	Sep. 19, 2000
Pandey et al. (Pandey)	6,225,224	May 1, 2001

Claims 1 to 4 and 7 to 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hasegawa.

Claims 1 to 4 and 7 to 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Ball.

Claims 5 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Kitta.

Claims 10, 16 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Pandey.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the final rejection (Paper No. 5, mailed February 7, 2002) and the answer (Paper No. 10, mailed August 7, 2002) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 9, filed June 11, 2002) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of

claims 1 to 5, 7 to 11, 16 and 17 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

The appellant argues (brief, pp. 3-6) that the applied prior art does not suggest the claimed subject matter. We agree.

The claims under appeal are drawn to a fixture for restraining a workpiece comprising, inter alia, (1) a base having a surface and an internal cavity with an opening in the surface; (2) a flexible membrane extending across the cavity adjacent to the opening; (3) fluid located within the cavity to provide the membrane with a resilient outer surface; and (4) adhesive on the outer surface of the membrane for substantially restraining the workpiece from movement in a direction tangential to the membrane

strictly via adhesive bonding with a tangential force in a tension axis of the membrane. However, these limitations are not suggested by the applied prior art.

Hasegawa teaches a workpiece holding mechanism including a holding plate 6, an elastic membrane 7 bonded to the bottom surface of the holding plate 6, a holding membrane 8 bonded to the bottom surface of the elastic membrane 7 and a template 9 bonded to the holding membrane 8. A fluid confinement space 11 is formed inside the holding plate 6. The fluid confinement space 11 includes a reservoir space 11a formed in the bottom surface of the holding plate 6 and having a predetermined depth, a vertical bore 11b for supplying an incompressible fluid such as water into the reservoir space 11a and a horizontal bore 11c which communicates with the vertical bore 11b at an intermediate position thereof. The reservoir space 11a is covered with the elastic membrane 7 on at least the bottom side thereof. The holding membrane 8 made of polyurethane foam which when pressed against a wafer will be held by the holding membrane 8 as if it were sucked by the holding membrane 8. The template 9 is provided with a hole 9a having substantially the same shape as that of the wafer W inserted within the hole 9a and is adapted to prevent the wafer W from shifting.

Hasegawa does not teach or suggest using an adhesive on the outer surface of the elastic membrane 7 for substantially restraining the wafer from movement in a

direction tangential to the membrane strictly via adhesive bonding with a tangential force in a tension axis of the membrane. In the rejection under 35 U.S.C. § 103 based on Hasegawa alone, the examiner made a determination (final rejection, p. 3) that this difference would have been an obvious matter of design to an artisan since the appellant has not disclosed the use of the claimed adhesive solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with other forms of attachments such as that taught by Hasegawa. However, this determination of obviousness of the claimed subject matter has not been supported by any evidence¹ that would have led an artisan to have modified Hasegawa to arrive at the claimed invention. While the appellant may not have specifically set forth that the use of the claimed adhesive solves a stated problem (it is self-evident that the adhesive is applied to restrain workpieces (i.e., is for a particular purpose)), such is not a fatal flaw when the applied prior art fails to suggest the claimed subject matter. Likewise, the mere fact that the claimed invention may perform equally well if the claimed adhesive

¹ Evidence of a suggestion, teaching, or motivation to modify a reference may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), Para-Ordinance Mfg., Inc. v. SGS Importers Int'l., Inc., 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), cert. denied, 117 S. Ct. 80 (1996), although "the suggestion more often comes from the teachings of the pertinent references," In re Rouffet, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). The range of sources available, however, does not diminish the requirement for actual evidence. A broad conclusory statement regarding the obviousness of modifying a reference, standing alone, is not "evidence." Thus, when an examiner relies on general knowledge to negate patentability, that knowledge must be articulated and placed on the record. See In re Lee, 277 F.3d 1338, 1342-45, 61 USPQ2d 1430, 1433-35 (Fed. Cir. 2002). See also In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

were to be replaced with another form of attachment such as that taught by Hasegawa does not in and of itself make the claimed subject matter obvious at the time the invention was made to a person of ordinary skill in the art from the teachings of Hasegawa. As set forth previously, it is the examiner's burden under 35 U.S.C. § 103 to present evidence establishing why it would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified the primary reference (i.e., Hasegawa) to arrive at the claimed invention.

For the reasons set forth above, the decision of the examiner to reject claims 1 to 4 and 7 to 9 under 35 U.S.C. § 103 as being unpatentable over Hasegawa is reversed.

We have also reviewed the references to Kitta and Pandey additionally applied in the rejection of claims 5, 10, 11, 16 and 17 but find nothing therein which makes up for the deficiencies of Hasegawa discussed above. Accordingly, (1) the decision of the examiner to reject claims 5 and 11 under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Kitta is reversed; and (2) the decision of the examiner to reject claims 10, 16 and 17 under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Pandey is reversed.

Lastly, we turn to the rejection of claims 1 to 4 and 7 to 9 under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Ball. Ball teaches in Figures 8 and 9 a wafer holding table 100 having a support surface 102 and a double sticky film frame 104. The film frame 104 has a generally circular configuration with a diameter at least as great as that of the wafer 20. The film frame 104 adheres firmly to the surface 102 of the wafer holding table 100. In operation, a wafer 20 is diced into individual die 110, 112, 114, 116, 118, 120, 122 by a segmenting apparatus 42 of the type shown in Figure 1. Then, the segmented die 110-122 are individually moved to the wafer holding table 100 by suitable pick and place equipment (not illustrated) and adhered firmly to the film 104. Then, all of the die 110-122 are simultaneously ground down to the desired thickness by one or more grinding wheels 40 of the type shown in Figure 5.

In the rejection based upon Hasegawa and Ball, the examiner determined (final rejection, p. 4) that the adhesive of Ball and the holding means of Hasegawa (i.e., holding membrane 8 and template 9) were art recognized functional equivalents and that the substitution of one for other would have been obvious to one of ordinary skill in the art at the time the invention was made.

In our opinion, the teachings of Hasegawa and Ball do not establish that the adhesive of Ball and the holding means of Hasegawa (i.e., holding membrane 8 and

template 9) are art recognized functional equivalents due to the disparate nature of Hasegawa's and Ball's inventions.² Thus, the substitution of one for other would not have been obvious to one of ordinary skill in the art at the time the invention was made. In our view, the only suggestion for modifying Hasegawa in the manner proposed by the examiner to arrive at the claimed invention stems from hindsight knowledge derived from the appellant's own disclosure.³

For the reasons set forth above, the decision of the examiner to reject claims 1 to 4 and 7 to 9 under 35 U.S.C. § 103 as being unpatentable over Hasegawa in view of Ball is reversed.

² Hasegawa's invention is a holding mechanism for holding a semiconductor wafer while the wafer is being polished while Ball's invention is a holding mechanism for holding a plurality of dies which are simultaneously being ground down by one or more grinding wheels.

³ The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 5, 7 to 11, 16 and 17 under 35 U.S.C. § 103 is reversed.

REVERSED

NEAL E. ABRAMS
Administrative Patent Judge

LAWRENCE J. STAAB
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

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