

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ROGER SEELI,  
MAURO PEDRAZZINI,  
and  
VOLKER DERFLINGER

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Appeal No. 2005-1089  
Application No. 09/947,454

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ON BRIEF

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Before OWENS, TIMM, and DELMENDO, Administrative Patent Judges.  
DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 (2004) from the examiner's final rejection of claims 1 through 25 (final Office action mailed on October 23, 2003) in the above-identified application. Claims 26 and 27, the only other pending claims, have been withdrawn from further consideration pursuant to 37 CFR § 1.142(b) (2003)(effective Dec. 22, 1959). (Id. at 5-6.)

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The subject matter on appeal relates to a vacuum system for the treatment of work pieces. Further details of this appealed subject matter are recited in representative claim 1, the sole independent claim on appeal, reproduced below:

1. A vacuum system for the treatment of work pieces comprising in combination:
  - a. an evacuable treatment chamber having a bottom wall and having a central axis substantially perpendicular to said bottom wall, said treatment chamber also having at least one lateral wall;
  - b. a low voltage arc discharge arrangement disposed within said treatment chamber substantially along the central axis thereof;
  - c. a receiving device extending through the bottom wall of said treatment chamber about the central axis of said treatment chamber, the receiving device having opposing upper and lower ends, the upper end of said receiving device being disposed within said treatment chamber;
  - d. a work piece support on which work pieces are mounted, said work piece support resting upon, and being separably linked to the upper end of said receiving device for allowing the work piece support, and the work pieces mounted thereto, to be lifted vertically relative to the receiving device, said work piece support having a cross section; and
  - e. said treatment chamber having a laterally-extending closeable opening, said closeable opening having a cross section that is greater than the cross section of said work piece support so that said work piece support, and the work pieces mounted thereto, can be removed from said treatment chamber through said closeable opening by raising said work piece support off of the upper end of said receiving device.

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The examiner relies on the following prior art references as evidence of unpatentability:

Ramalingam et al. (Ramalingam)	4,673,477	Jun. 16, 1987
Ramm et al. (Ramm)	5,192,578	Mar. 9, 1993
Straemke	5,216,223	Jun. 1, 1993
Song et al. (Song)	5,885,355	Mar. 23, 1999
Blalock et al. (Blalock)	6,056,850	May 2, 2000

The appealed claims stand rejected as follows:

- I. claims 1 through 3, 5 through 8, 19, and 21 under 35 U.S.C. § 102(b) as anticipated by Ramm (answer at 4);
- II. claims 1 through 8, 12, 14, and 19 through 21 under 35 U.S.C. § 103(a) as unpatentable over Ramm (id. at 4-5);
- III. claims 9 through 11 and 15 under 35 U.S.C. § 103(a) as unpatentable over Ramm in view of Straemke (id. at 5-6);
- IV. claim 13 under 35 U.S.C. § 103(a) as unpatentable over Ramm in view of Song (id. at 6);

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V. claims 16 through 18 under 35 U.S.C. § 103(a) as unpatentable over Ramm in view of Blalock (id. at 6-7); and

VI. claims 22 through 25 under 35 U.S.C. § 103(a) as unpatentable over Ramm in view of Ramalingam (id. at 7).

We reverse these rejections.

Regarding the examiner's rejections of appealed claim 1 over Ramm, the principal prior art reference, the appellants argue (substitute appeal brief filed on July 1, 2004 at 7):

In contrast [to the claimed invention], the Ramm patent does not disclose a work piece support which is: 1) separably linked to a receiving device; 2) removable from the treatment chamber via a laterally-extending closeable opening; and wherein 3) the work piece support is separated from the receiving device by raising it off the upper end of the receiving device, as provided in claim 1 of the application. Indeed, in Ramm, it appears that the electrically conducting supports (35) that are used to rotatably support the work pieces (3) are never separable from the rotary table (37) to which they are coupled, that the rotary table is never separable from the vacuum chamber, and that Ramm's vacuum chamber lacks any laterally-extending closeable opening through which any of such components could be removed.

(See also id. at 6 and reply brief filed on October 4, 2004.)

The examiner, on the other hand, alleges: "Regarding 'separably linked' it is inherent that the work support could be

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separated from the receiving device." (Answer at 4.) The examiner further contends: "Even if the applicant were [sic] not persuaded that Ramm et al inherently disclose the work piece support being separable, it could at least be said that one of ordinary skill in the art would have found it obvious to make them separable for the advantage of operability and maintainability." (Id. at 9.) As to the "laterally-extending closeable opening" limitation recited in appealed claim 1 and the appellants' arguments based thereon, the examiner states that Ramm's annulus 50 is such an opening and that the "issue [raised by the appellants with respect to the recited opening] is not commensurate with the scope of the claim." (Id. at 4 and 9.) In what appears to be an alternative theory, the examiner contends (id. at 8-9):

Ramm et al disclose that the work piece support Fig 3-35 has a guide pin like structure in a hole. Work piece support is not shown one piece with receiving part 37. Also, if taken out, it would be more convenient to use the opening where targets are installed (Fig 4-49) during processing, in a manner as disclosed in Fig 2 of applicant's specification.

We hold that the examiner has not established a prima facie case of unpatentability against the appealed claims. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

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Ramm describes a vapor deposition installation including: a vacuum chamber 19 with an evacuation port 20 and a bottom 29; a low-voltage arc 52; six electrically conducting supports 35 disposed rotatably about the chamber axis on a rotary table 37 and connected in an electrically conducting manner to holders 36; crucible 30; and a target 51 positioned within an annulus 50. (Column 2, line 52 to column 3, line 35; Figures 3 and 4.)

Even assuming that Ramm's six electrically conducting supports 35 are separable from rotary table 37, there is no teaching in the reference as to any opening that would permit supports 35 to be removed from the vacuum chamber 19, let alone a laterally-extending closeable opening through which the support may be removed by raising the support off of an upper end of a receiving device as recited in appealed claim 1. While the examiner appears to identify the area in proximity to Ramm's element 49 as a possible laterally-extending closeable opening (answer at 9), element 49 is described as one of six devices with a heat exchanger for cooling. (Column 3, lines 26-29.) Because the examiner has not adequately accounted for this difference, we cannot affirm.

The remaining prior art references, namely Straemke, Song, Blalock, and Ramalingam, have been cited for purposes other than

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element "e" of appealed claim 1. Accordingly, we do not have to address them.

In sum, we reverse the examiner's rejections under: (i) 35 U.S.C. § 102(b) of appealed claims 1 through 3, 5 through 8, 19, and 21 as anticipated by Ramm; (ii) 35 U.S.C. § 103(a) of appealed claims 1 through 8, 12, 14, and 19 through 21 as unpatentable over Ramm; (iii) 35 U.S.C. § 103(a) of appealed claims 9 through 11 and 15 as unpatentable over Ramm in view of Straemke; (iv) 35 U.S.C. § 103(a) of appealed claim 13 as unpatentable over Ramm in view of Song; (v) 35 U.S.C. § 103(a) of appealed claims 16 through 18 as unpatentable over Ramm in view of Blalock; and (vi) 35 U.S.C. § 103(a) of appealed claims 22 through 25 as unpatentable over Ramm in view of Ramalingam.

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The decision of the examiner is reversed.

REVERSED

Terry J. Owens	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
Catherine Timm	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
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	)	
Romulo H. Delmendo	)	
Administrative Patent Judge	)	

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