

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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte MARY REINER and RICHARD W. AMBS

---

Appeal No. 1998-1373  
Application No. 08/377,473

---

ON BRIEF

---

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

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-13 and 20-27. Claims 14-19 and 28-30 have been canceled, and claims 31-39 have been allowed.

We AFFIRM.

Appeal No. 1998-1373  
Application No. 08/377,473

### BACKGROUND

The appellants' invention relates to an apparatus for filtering the particulate material from bags that have been charged for further material handling. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears 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:

Heyl	4,889,452	Dec. 26, 1989
Clark	5,141,706	Aug. 25, 1992
Jelich et al. (Jelich)	5,348,572	Sep. 20, 1994
Hough	5,397,371	Mar. 14, 1995

(filed Dec. 16, 1993)

Claims 1-3, 7-13, 20, 21, 23, 24, 26 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Heyl in view of Clark.

Claims 4-6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Heyl in view of Clark and Jelich.

Claims 22 and 25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Heyl in view of Clark and Hough.<sup>1</sup>

---

<sup>1</sup>A rejection of claim 5 under 35 U.S.C. § 112, first paragraph, was withdrawn by the examiner in the Answer.

Appeal No. 1998-1373  
Application No. 08/377,473

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 17 ) for the examiner's complete reasoning in support of the rejections, and to the Revised Brief (Paper No. 16 ) for the appellants' arguments thereagainst.

#### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The guidance provided by our reviewing court with regard to evaluating the issue of the obviousness of the appealed claims in the light of the applied prior art is as follows: A *prima facie* case of obviousness is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art (see *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). This is not to say, however, that the claimed invention must expressly be suggested in any one or all of the references, rather, the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art (see *Cable Elec. Prods. v. Genmark, Inc.*, 770 F.2d 1015, 1025, 226 USPQ 881, 886-87 (Fed. Cir. 1985)), considering that a conclusion of obviousness may be made from common

Appeal No. 1998-1373  
Application No. 08/377,473

knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference (see *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)). Insofar as the references themselves are concerned, we are bound to consider the disclosure of each for what it fairly teaches one of ordinary skill in the art, including not only the specific teachings, but also the inferences which one of ordinary skill in the art would reasonably have been expected to draw therefrom (see *In re Boe*, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966) and *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968)).

The appellants' invention is directed to an apparatus in which particulate material contents of rupturable bags may be charged for further handling. As recited in independent claim 1, the invention comprises a first filter unit having an inlet communicating with the hopper into which the material may be charged and a second filter unit having an inlet communicating with the outlet of the first filter unit. Claim 1 stands rejected as being unpatentable over Heyl in view of Clark. Heyl was cited by the appellants on page 1 of their specification as being an example of the type of filter apparatus known in the prior art. The appellants have not disputed the examiner's contention that all of the subject matter recited in claim 1 is disclosed by Heyl, except for the secondary filter unit. It is the examiner's position, however, that Clark discloses a filtering apparatus having two

Appeal No. 1998-1373  
Application No. 08/377,473

filter stages in series, and it would have been obvious to one of ordinary skill in the art to provide the Heyl apparatus with a second filter stage in view of this teaching.

Clark discloses an apparatus for removing particles from the air (Abstract). It discloses a housing (11) that is partitioned by a plate (21) on which is mounted a motorized impeller (16). A first filter unit (41) is positioned on the downstream side of the partition, and a second filter unit (63) is located upstream of the partition with its inlet in communication with the outlet of the first filter unit. The impeller causes air to move through the two filter units. The second filter unit receives the air that has passed through the first filter unit, and comprises a HEPA filter which traps sub-micron particles (column 5, line 62 et seq.).

From our perspective, one of ordinary skill in the art would have been taught by Clark that the use of a second filter unit in series with the first results in more effective filtration, and therefore would have found it obvious to add a second filter unit to the Heyl apparatus. Suggestion for such a modification is found not only in the explicit teaching of Clark that a second filter will improve the efficiency of the filtering process, but also in the self evident advantages of passing a product to be filtered through a plurality of filters arranged serially, which would have been known to the artisan.<sup>2</sup> It therefore is our

---

<sup>2</sup>Skill is presumed on the part of the artisan, rather than the lack thereof (see *In re Sovish*, 769 F.2d 738, 742, 226 USPQ 771, 774 (Fed Cir. 1995)).

Appeal No. 1998-1373  
Application No. 08/377,473

conclusion that the combined teachings of Heyl and Clark establish a *prima facie* case of obviousness with regard to the subject matter recited in claim 1, and the rejection is sustained.

The appellants have chosen to group together claims 1-3, 7-13, 20, 21, 23, 24, 26 and 27,<sup>3</sup> and have not argued the merits of any of these claims apart from the others in the group. Therefore, the rejection of these claims is sustained along with representative claim 1. See 37 CFR § 1.192(c)(7) and Section 1206 of the Manual of Patent Examining Procedure.

Dependent claims 4-6 stand rejected on the basis of Heyl, Clark and Jelich. Claim 4 adds to claim 1 the requirement that there be means for detecting a clogging condition of the second filter unit, which means is not shown in the drawings but is described on page 10 of the specification as comprising "a conventional pressure differential gauge." Jelich is directed to a device for filtering dust from gases. One of ordinary skill in the art would have been appraised by Jelich of the problem of malfunctioning filters, and would have been taught to utilize sensors to determine whether this condition exists, whereupon the filter is reverse flushed with a blast of air to remove the particles that have clogged it.

---

<sup>3</sup>While claims 22 and 25 were included in this group, they were rejected on different grounds, and the appellants argued that they were separately patentable on page 9 of the Brief.

Appeal No. 1998-1373  
Application No. 08/377,473

Jelich teaches using pressure sensors for measuring pressure differential to detect this condition. See column 2, line 35 et seq. It is our view that one of ordinary skill in the art would have found it obvious, in view of the teachings of Jelich, to add pressure sensors to the modified Heyl apparatus to measure the pressure differential across the filters to detect a filter whose effectiveness has diminished due to being clogged. The rejection of claim 4 therefore is sustained, along with the rejection of claims 5 and 6, which depend from claim 4 and were grouped therewith.

Claims 22 and 25 have been found by the examiner to be unpatentable over the combined teachings of Heyl, Clark and Hough, the latter being cited for its teaching of a substantially vertically oriented first air plenum and first filter element. Of the three references applied, Heyl discloses horizontally oriented elements, Hough discloses vertically oriented elements, and Clark discloses both vertically and horizontally oriented elements. In our opinion, this is evidence that vertical and horizontal orientations of filter elements and the plenums in which they are installed were known alternatives in the art at the time of the appellants' invention, the selection of which would have been within the skill of the artisan for the self evident advantages of each. In this regard, we observe that the appellants have not argued in their Brief that the claimed vertical arrangement solves any stated problem, provides an unexpected result, or is critical to the operation of the system. The rejection of claims 22 and 25 is sustained.

Appeal No. 1998-1373  
Application No. 08/377,473

We have, of course, carefully considered all of the arguments raised by the appellants. However, they have not convinced us that the decision of the examiner was in error. Our position with respect to the arguments should be apparent from the rationale we have set forth above in sustaining the rejections. In addition, with regard to the assertion that Clark is nonanalogous art, we point out that the test for analogous art is first whether the art is within the field of the inventor's endeavor and, if not, whether it is reasonably pertinent to the problem with which the inventor was involved. See *In re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979). A reference is reasonably pertinent if, even though it may be in a different field of endeavor, it logically would have commended itself to an inventor's attention in considering his problem because of the matter with which it deals. See *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992). Even if it were considered that Clark is not in the field of the appellants' endeavors, it is our opinion that it is reasonably pertinent to the problem because it filters air to trap particulate matter (column 5, line 47 to column 6, line 6), and therefore would have commended itself to the attention of one working in this field. In addition, with regard to Clark, we do not agree that the only teaching one of ordinary skill in the art would have taken from this reference is that all of the filters must be used; from our perspective, the examiner is correct in his opinion that Clark teaches using multiple filters in series, which would have motivated the artisan to add a second filter to the Heyl system.

Appeal No. 1998-1373  
Application No. 08/377,473

CONCLUSION

The rejection of claims 1-3, 7-13, 20, 21, 23, 24, 26 and 27 under 35 U.S.C. § 103 as being unpatentable over Heyl in view of Clark is sustained.

The rejection of claims 4-6 under 35 U.S.C. § 103 as being unpatentable over Heyl in view of Clark and Jelich is sustained.

The rejection of claims 22 and 25 under 35 U.S.C. § 103 as being unpatentable over Heyl in view of Clark and Hough is sustained.

The decision of the examiner is affirmed.

Appeal No. 1998-1373  
Application No. 08/377,473

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

AFFIRMED

IAN A. CALVERT	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
NEAL E. ABRAMS	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
JEFFREY V. NASE	)	
Administrative Patent Judge	)	

Appeal No. 1998-1373  
Application No. 08/377,473

PETER N LALOS  
LALOS AND KEEGAN  
1146 NINETEENTH STREET N W  
WASHINGTON , DC 20036-3703

NEA/jlb