

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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte DAVID L. BOWERS, ROBERT J. BROWN, ROYCE CHAFFIN,  
DONNIE R. HAMMOCK and GERALD P. MCDERMOTT

---

Appeal No. 1999-0055  
Application No. 08/703,545

---

HEARD: AUGUST 14, 2001

---

Before ABRAMS, FRANKFORT, and PATE, Administrative Patent Judges.  
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 16-23 and 25-44, which are all of the claims pending in this application.

We REVERSE AND REMAND TO THE EXAMINER.

Appeal No. 1999-0055  
Application No. 08/703,545

BACKGROUND

The appellants' invention relates to a plug valve assembly (claims 30-44) and to a plug valve assembly which comprises seat members made by a particular process (claims 16-23 and 25-29). An understanding of the invention can be derived from a reading of exemplary claim 30, which appears in the appendix to the Brief.

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

Freed	3,326,519	Jun. 20, 1967
Conley <u>et al.</u> (Conley)	5,154,396	Oct. 13, 1992

Claims 16-23 and 25-44 stand rejected under 35 U.S.C. § 103 as being unpatentable over Freed in view of Conley.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the Answer (Paper No. 14) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 12) 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 rejection is one of obviousness under 35 U.S.C. § 103. The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See, for example, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a prima facie case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

Claim 30 is the broadest claim, and we shall consider it first. This claim is directed to a plug valve comprising a valve body having an internal chamber, a plug disposed in the chamber and having a port therethrough for alignment with ports in the valve internal chamber and being adapted to rotate between an open position and a closed position, an adjustment mechanism for adjusting the plug vertically, and

seat members disposed in the chamber for supporting the plug, the seat members comprising a rigid, solid support frame encapsulated in a polymeric material.

It is the examiner's view that all of the subject matter recited in this claim is disclosed or taught by Freed, except for the fact that the seat members have a perforated frame instead of the solid one required by the claim. However, it is the examiner's position that because Conley teaches that a valve body can be reinforced by either a solid frame or a perforated one, it would have been obvious to one of ordinary skill in the art to modify the Freed valve seat members by replacing the perforated frame with a solid one, because "they will both increase the strength of the body in which they are encapsulated" (Answer, page 4) and "because one can directly observe the equivalence of the two structures and apply the teaching to the analogous equivalence of a solid reinforcement to the perforated reinforcement of Freed" (Answer, page 6).

Freed discloses a valve structure of the same general type as that which is recited in claim 30. However, the seat members are provided with perforated support frames (see Figure 5). These perforations have a purpose in addition to reinforcing the seat members, and that is to allow integral portions of the resin material in which they are encapsulated to flow through. The sections of the seat members overlying the imperforate portions of the support frames thus are of a density greater than that of the sections overlying the perforate portions, thereby providing a density differential. Under load

conditions, the plastic material of the seat members will flow from the more dense (imperforate) portions to the less dense (perforated) portions, which allows considerable pressure to be applied normal to the surface without significantly altering the overall dimensions of the seat members. See column 5, line 53 et seq.

Conley is directed to a plastic valve body which is molded around a cylindrical metal reinforcing frame that is aligned with the openings in the valve body. In a first embodiment, as shown in Figures 3-5, the reinforcing frame comprises an imperforate sleeve. An alternative embodiment is shown in Figures 17 and 18, wherein the sleeve is provided with a plurality of perforations. It is Conley's teaching of using imperforate or perforate sleeves to reinforce the valve body that the examiner seeks to apply to the valve seat members. However, as far as valve seat assemblies are concerned, Conley teaches utilizing a relatively soft seat element 312 reinforced by a relatively harder support element 314. The reinforcing element is a separate entity and is not encapsulated in the valve seat element.

We find ourselves in agreement with the appellants that the teachings of the two applied references would not have rendered the claimed invention obvious. It is our opinion that whereas Conley would have suggested to one of ordinary skill in the art that valve body members be reinforced by either perforate or imperforate frames encapsulated in the plastic, it would have taught that valve seat members be reinforced by backing the soft seating element with a harder separate reinforcing element. The

mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). This being the case, we fail to perceive any teaching, suggestion or incentive in Conley which would have led one of ordinary skill in the art to modify the Freed valve seat members in the manner proposed by the examiner, other than the hindsight afforded one who first viewed the appellants' disclosure. This, of course, is not a proper basis for a rejection under Section 103. In re Fritch, 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Moreover, since one of the objectives of the Freed invention is to preclude significant altering of the dimensions of the seat member in the presence of high applied pressures by allowing cold flow of the plastic in the valve seat body from more dense portions to less dense portions, which is accomplished by the perforated reinforcing frame, it is our view that replacing the perforated frame with a solid frame would cause the Freed valve seat members not to perform in accordance with the invention. From our perspective, this would have operated as a disincentive to the artisan to make the change.

It is our conclusion that the combined teachings of Freed and Conley fail to establish a prima facie case of obviousness with regard to the subject matter recited in

claim 30. We therefore will not sustain the rejection of claim 30 or of claims 31-44, which depend therefrom.

We reach the same conclusion with regard to independent claim 16, which contains the same structural limitations but defines the valve seat members in terms of a product-by-process recitation. Nevertheless, the resulting structure of the valve seat members is the same as in claim 30, and the same reasoning applies with regard to the propriety of the rejection.

The rejection of independent claim 16 and dependent claims 17-23 and 25-29 is not sustained.

#### REMAND TO THE EXAMINER

It would appear that the novelty of this invention resides in the combination of a valve body with a seal of particular construction. However, there is no indication that a search was conducted in Class 277, joint packing, and the application is remanded to the examiner for this purpose.

#### SUMMARY

The rejection of claims 16-23 and 25-44 as being unpatentable over Freed and Conley is not sustained.

The decision of the examiner is reversed.

This application is remanded to the examiner for action in accordance with the above comments.

This application, by virtue of its "special" status, requires an immediate action, M.P.E.P § 708.01(d). It is important that the Board be informed promptly of any action affecting the appeal in this case.

REVERSED AND REMANDED TO THE EXAMINER

NEAL E. ABRAMS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
CHARLES E. FRANKFORT	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
	)	
	)	
WILLIAM F. PATE, III	)	
Administrative Patent Judge	)	

NEA:lbg

Appeal No. 1999-0055  
Application No. 08/703,545

Page 9

KILLWORTH, GOTTMAN, HAGAN & SCHAEFF  
ONE DAYTON CENTRE  
ONE SOUTH MAIN STREET  
SUITE 500  
DAYTON , OH 45402-2023

APPEAL NO. 1999-0055 - JUDGE ABRAMS  
APPLICATION NO. 08/703,545

APJ ABRAMS

APJ PATE

APJ FRANKFORT

**DECISION: REVERSED AND  
REMANDED TO THE EXAMINER**

Prepared By:

**DRAFT TYPED:** 24 Jun 02

**FINAL TYPED:**