

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS W. PARKER

Appeal No. 97-0970
Application 08/307,348¹

ON BRIEF

Before CALVERT, FRANKFORT and STAAB, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 4, 6, 12 and 15 through 17. Claims 10, 11, 13 and 14 have been canceled. Claims 5 and 7 through 9, the only other claims pending in the application,

¹Application for patent filed September 16, 1994.

Appeal No. 97-0970
Application 08/307,348

were objected

to, but have been indicated to be allowable if rewritten in independent form.

Appellant's invention relates to a reversing valve, such as that found in a vapor compression refrigeration system (e.g., a heat pump system). Of importance to appellant is that the reversing valve be so constructed and arranged that the valve member "is relieved from system fluid pressure forcing it against its seat as it moves between alternative flow directing positions along a path of travel by which it is separated from its seat, thereby avoiding substantial friction forces opposing valve member motion and enabling use of simple, low force valve actuators" (specification, page 4, lines 17-23). Independent claims 1, 6, 12, 15 and 17 are representative of the subject matter on appeal and a copy of those claims may be found in Appendix A of appellant's brief.

The sole prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Appeal No. 97-0970
Application 08/307,348

Van Allen et al. (Van Allen) 2,855,000 Oct. 07, 1958

Claims 1 through 4, 6, 12, 15 and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Van Allen.

Claim 17 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In the examiner's view, the recitation in claim 17, subparagraph d), of the valve member being reciprocated about its axis appears to be inaccurate.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above rejections, we make reference to the examiner's answer (Paper No. 15, mailed May 9, 1996) and the supplemental examiner's answer (Paper No. 18, mailed July 29, 1996) for the examiner's complete reasoning in support of the rejections, and to appellant's brief (Paper No. 14, filed February 29, 1996) and reply brief (Paper No. 17, filed July 11, 1996) for appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given

Appeal No. 97-0970
Application 08/307,348

careful consideration to appellant's specification and claims, to the applied prior art Van Allen reference, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determination that the examiner's rejections cannot be sustained. Our reasons follow.

Looking first at the examiner's rejection of claim 17 under 35 U.S.C. § 112, second paragraph, we must agree with appellant (brief, pages 14-15) that the language employed in claim 17 on appeal is reasonably definite and accurately defines appellant's invention, since it is apparent from appellant's specification that the reversing valve member (24) is "reciprocated" (i.e., moved alternatively back and forth) between the first and second positions defined in claim 17. The fact that there may be a significant time delay between movement of the valve member to the second position and any return movement of the valve member back to the first position, and vice versa, is of no moment, since movement from

Appeal No. 97-0970
Application 08/307,348

a first position to a second position and back to the first position in the manner described in appellant's specification clearly results in "reciprocation" of the valve member. Accordingly, the rejection of claim 17 under 35 U.S.C. § 112, second paragraph, will not be sustained.

With regard to the examiner's rejection of claims 1 through 4, 6, 12, 15 and 16 under 35 U.S.C. § 102(b) as being anticipated by Van Allen, we are in full agreement with appellant's position as set forth on pages 7 through 14 of the brief and in the reply

brief. Independent claims 1 and 6 on appeal expressly require that the actuator therein be operable to reverse the direction of the net differential pressure force acting on the valve member to permit unseating of the valve member so that it may be moved from one position to the other. Independent claim 12 requires an actuator for

moving said valve member relative to said seat structure between said first and second positions along a path of travel where said valve member and

Appeal No. 97-0970
Application 08/307,348

said seat structure are spaced apart (emphasis added),

and that the actuator include pressure control valving for "dissipating" the pressure differential which would normally act on the valve member to force the valve member and the seat into sealing engagement, to thereby enable disengaging of said valve member and seat structure. Claim 15 on appeal recites an actuator "for unseating the valve member and moving it away from said surface" (emphasis added). After a careful review of the reversing valve arrangement in Van Allen it is clear to us that this reference does not disclose, teach or suggest a reversing valve as set forth in appellant's claims on appeal.

Even though it appears possible that a portion of the high pressure side of the valve member (38) of Van Allen might move

out of engagement with the header (16) under some given set of circumstances if the ports (52) and (68) were sized to permit a sufficient reduction of the high pressure in the chamber (11), any such movement of the valve member is contrary to the

Appeal No. 97-0970
Application 08/307,348

clear intent of Van Allen. In this regard, we again agree with the arguments made by appellant on pages 7 through 14 of the brief, in the reply brief, and also in paragraphs 9 through 14 of the declaration filed November 24, 1995 (as an attachment to Paper No. 9), which declaration was entered and considered by the examiner (see the advisory action, Paper No. 10, mailed December 5, 1995).

Construing subparagraph d) of appellant's claims 1, 6 and 15, and subparagraph e) of claim 12 in light of appellant's disclosure, we understand each of these claim recitations to require that the actuator therein cause the entirety of the valve member (24) to be unseated (i.e., moved out of engagement with the seating face or surface (61)) prior to shifting of the valve member to the other position. Note particularly, page 9, lines 15-17, of appellant's specification, wherein it is indicated that the valve member "moves to its second position by shifting

axially away from the port plate 36," rotating 90 degrees about the longitudinal housing assembly axis (70) and then shifting back into engagement with the port plate (36). In the paragraph bridging pages 15 and 16 of appellant's specification, it is again emphasized that the valve member (24) is unseated and shifted axially away from the port plate (36), with the result that the valve member is "freely rotatable relative to the guide member 72 and slide 102 so that negligible frictional resistance to valve member rotation about the axis 70 exists." Like appellant, we note that there is nothing in the disclosure of the Van Allen patent concerning the valve member (38) therein being "unseated" in the manner required in appellant's disclosed and claimed invention, i.e., there is nothing in Van Allen from which to conclude that the patent discloses anything other than merely reducing the down force applied to the valving member and rotating the valving member while the reduced force is applied to it and the seal desired in Van Allen (col. 2, lines 32-35) is maintained.

Appeal No. 97-0970
Application 08/307,348

In light of the foregoing, the examiner's rejection of claims 1 through 4, 6, 12, 15 and 16 under 35 U.S.C. § 102(b) as being anticipated by Van Allen is reversed.

To summarize our decision, the examiner's rejection of claim 17 under 35 U.S.C. § 112, second paragraph and the examiner's rejection of claims 1 through 4, 6, 12, 15 and 16 under 35 U.S.C. § 102(b) have been reversed

REVERSED

IAN A. CALVERT)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
CHARLES E. FRANKFORT)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
)	
)	
LAWRENCE J. STAAB)	
Administrative Patent Judge)	

vsh

Appeal No. 97-0970
Application 08/307,348

Appeal No. 97-0970
Application 08/307,348

Watts, Hoffmann, Fisher & Heinke Co.
P.O. Box 99839
Cleveland, OH 44199-0839