

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. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TOBIN A. ROBERTSON and LAWRENCE L. WELCH III

Appeal No. 2001-0735
Application No. 09/135,390

ON BRIEF

Before COHEN, FRANKFORT, 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, 2 and 4, which are all of the claims pending in this application.¹

¹ In the status of claims section of the brief (p. 2), the appellants canceled claims 5 and 6. The examiner indicated in the answer (p. 2) that the status of the claims contained in the brief was correct, which we understand to be the examiner's approval of the cancellation of claims 5 and 6. We note that this cancellation of claims 5 and 6 has not been clerically performed.

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We REVERSE.

BACKGROUND

The appellants' invention relates to vacuum pumps. A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

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

Osada et al. (Osada)	5,222,878	June 29,
1993		

The appellants' admission of prior art (specification, page 1, line 17 to page 3, line 8; Figures 1-2) relating to a vacuum unit (Admitted Prior Art).

Claims 1, 2 and 4 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Admitted Prior Art in view of Osada.

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. 11, mailed September 19, 2000) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper

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No. 10, filed August 11, 2000) 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, and to the respective positions articulated by the appellants 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, 2 and 4 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 teachings of the Admitted Prior Art are adequately summarized on page 3 of the answer.

Osada's invention is related to an electromagnetic reciprocating pump, and particularly to an electromagnetic reciprocating pump which enables the piston drive section to be cooled with a simple structure and the pump to be manufactured at a low cost. An inlet port for introducing the fluid is provided so as to open to the side of the initial position of the piston biased by a spring, the main shaft is formed into a hollow cylinder and the inside and outside of the casing communicate with each other through the central through hole of the hollow main shaft and the inlet port, and the piston is provided with suction ports and suction valves for sucking the fluid into the pressure chamber, whereby the fluid introduced into the casing can be guided to the rear part of the casing through the internal passage of the hollow main shaft, thereafter caused to pass by the electromagnet and armature,

and then introduced into the suction ports of the piston. The fluid introduced into the closed casing is not directly introduced into the pressure chamber, but guided to the integral passage of the hollow main shaft, and it is caused to pass through the hollow main shaft in the axial direction to cool it, thereby it prevents the temperature of the hollow main shaft itself from increasing. The fluid having passed through the hollow main shaft is then guided around the electromagnetic circuit arranged on the outer periphery of the hollow main shaft and cools the electromagnetic circuit to suppress its temperature increase, and thereafter it is guided into the pressure chamber to be compressed and discharged as in the conventional electromagnetic reciprocating pump.

Osada teaches (column 8, lines 2-10) that

[t]he direction of the fluid flow in the pump may be reversed. That is, it is possible that the directions of the suction valves, discharge valve and the like are reversed, and the fluid is sucked from the closed tank 51B (in this case, not closed) and the pressurized fluid is discharged from the air introducing chamber 51A (in this case, it should be closed). This has an advantage that the pulsation of the pressurized fluid is smoothed by the resistance of the fluid passage 5A.

Osada further teaches (column 8, lines 30-40) that

Since the fluid is introduced into the closed casing through the hollow main shaft or the pressurized fluid is discharged through the hollow main shaft, the distance between the fluid introducing portion/pressurized fluid discharging portion and the pressure chamber is longer as compared with the conventional electromagnetic reciprocating pump, which produces a pulsation absorption effect, and the pulsation sound of the fluid generated in compression/attraction of the fluid less often leaks out, which can contribute to the noise eliminating effect.

The real issue presented in this appeal is whether or not it would have been obvious at the time the invention was made to a person of ordinary skill in the art to have reversed the direction of the fluid flow in the vacuum unit of the Admitted Prior Art in view of the teachings of Osada. On this issue, we find ourselves in agreement with the position of the appellant as set forth in the brief. In our view, Osada, at best, would have made it obvious at the time the invention was made to a person of ordinary skill in the art to reverse the direction of the fluid flow in a pump only if this would result in the pulsation of the pressurized fluid being smoothed by the resistance of a fluid passage similar to the fluid passage 5A in Osada's hollow main shaft 5. Since the plenum base 16 in the vacuum unit of the Admitted Prior Art

already, in our opinion, functions to smooth pulsation of the pressurized fluid being discharged from port 20, there would be no motivation from the teachings of Osada for a person of ordinary skill in the art to have reversed the flow in the vacuum unit of the Admitted Prior Art.

In our opinion, the only suggestion for modifying the vacuum unit of the Admitted Prior Art in the manner proposed by the examiner to arrive at the claimed invention stems from hindsight knowledge derived from the appellants' own disclosure. 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). It follows that we cannot sustain the examiner's rejections of claims 1, 2 and 4.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 2 and 4 under 35 U.S.C. § 103 is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JEFFREY V. NASE)	
Administrative Patent Judge)	

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