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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte UDO UNGER
and
WOLFRAM DURR

_____

Appeal No. 1998-1805
Application No. 08/596,734

_____

ON BRIEF

_____

Before CALVERT, ABRAMS, and BAHR, **Administrative Patent Judges**.

ABRAMS, **Administrative Patent Judge**.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 1-4, which at that point constituted all of the claims of record in the application. Subsequent to the final rejection, the appellants canceled claim 2, and

therefore claims 1, 3, and 4 remain before us on appeal.

The appellants' invention is directed to a device for impregnation of webs of porous materials. The invention is illustrated by reference to claim 1, which reads as follows:

> 1. A device for impregnation of webs of porous materials with a liquid impregnating medium under increased pressure, comprising a roller rotatable about a horizontal axis; a trough arranged so that said roller is partially inserted in said trough to form a chamber between an inner surface of said trough and an outer surface of said roller; means for supplying an impregnating medium into said chamber; and means forming an inlet slot for introducing a web to be impregnated into said chamber and an outlet slot for withdrawing the impregnated medium from said chamber, said chamber having a cross-section which over a path from said inlet slot to said outlet slot narrows and again increases many times; and sealing means for sealing said inlet slot and said outlet slot.

THE REFERENCES

The references relied upon by the examiner to support the final rejection are:

Fornelli	2,779,183	Jan. 29, 1957
Long	4,702,943	Oct. 27, 1987

THE REJECTION

Claims 1, 3, and 4 stand rejected under 35 U.S.C. § 103

as being unpatentable over Long in view of Fornelli.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejection and the conflicting viewpoints advanced by the examiner and the appellants, we make reference to the Examiner's Answer (Paper No. 14) and to the Appellants' Brief (Paper No. 13).

OPINION

In reaching our decision on the issues raised in this appeal, we have carefully assessed the claims, the prior art applied against the claims, and the respective views of the examiner and the appellants as set forth in the Answer and the Brief. As a result of our review, and applying the guidance provided by our reviewing court, we have determined that the rejection should not be sustained. Our reasoning in support of this conclusion follows.

All of the claims stand rejected as being unpatentable 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 appellants' disclosure. ***See, for example***, ***Uniroyal, Inc. v. Rudkin-Wiley Corp.***, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

The appellants' invention relates to a device for impregnating a moving web with a medium under pressure in a manner that is an improvement over the prior art devices. As manifested in claim 1, the invention comprises a chamber defined on the top by the surface of a roller rotatable about a horizontal axis and at the bottom by a trough. The chamber has an inlet and an outlet, each of which is equipped with

sealing means, and means for supplying an impregnating medium. The chamber also has a cross-section which over a path from the inlet to the outlet "narrows and again increases many times." According to the appellants, the narrowings and increases provide a location-dependent dynamic pressure component which is superimposed upon the static pressure component present in the means for applying the impregnating medium, so as the web moves through the chamber it is repeatedly compressed and released, causing the impregnating medium to be intensely pressed into the pores of the web (specification, page 9).

Long, the primary reference, discloses a web impregnating device that appears to be the type over which the appellants believe their invention to be an improvement (see specification, page 2). The difference between the Long apparatus and that of claim 1 is that Long lacks a plurality of narrowing and expanding portions in the chamber. In Long, the chamber narrows in from the inlet to the outlet, and therefore has only one narrowing portion. It is the examiner's view, however, that to modify Long so that it has a plurality of narrowed portions would have been obvious to one

of ordinary skill in the art in view of the showing of Fornelli.

Fornelli discloses an apparatus for dying a continuous web of fabric. It comprises a vertically oriented chamber filled with dye or the like through which the web is passed. Both the inner and the outer walls of the chamber are provided with saw-tooth configurations so, as shown in detail in Figure 2, there is a succession of narrowings and widenings in the width of the chamber. The impregnating fluid is not under static pressure in the chamber, which is not sealed at the ends. Significantly, Fornelli's objective is to produce "turbulence in the treating liquid" (column 1, lines 16-17; column 2, line 34) in order to better penetrate the web with the dye (column 2, lines 36-37). Notwithstanding the fact that Fornelli does not use the term "pressure" anywhere in the reference, the examiner insists that "Fornelli teaches using a surface with multiple serrations to produce a dynamic pressure drop to provide better penetration of the coating fluid into the web" (Answer, page 4).

The appellants have challenged this conclusion, and have engaged in a discussion with the examiner regarding such

factors as the Bernoulli equation and Reynolds numbers. In the final analysis, however, we are persuaded by the disclosed structure and operation of the Fornelli apparatus, the absence of an explicit teaching of "pressure" as an influence in the operation of the Fornelli device, and the lack of evidence that an increased pressure inherently would be present at the narrowed portions, that a conclusion that the pressure increases at the narrowed portions is mere speculation. Thus, Fornelli does not support the examiner's position and, on that basis, from our perspective the artisan would not have been motivated to alter the Long structure in the manner suggested by the examiner. Moreover, even if one considered, *arguendo*, that pressure is present in the appropriate places in the Fornelli system, 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). We fail to perceive any teaching, suggestion or incentive in the disclosure of the non-pressurized chamber system of Fornelli which would have led

one of ordinary skill in the art to modify the pressurized chamber system of Long by installing additional narrowed portions, such as, for example, an explicit or implicit teaching that this would provide an improvement over the single narrowed portion that is disclosed.

It is our conclusion that the combined teachings of the two applied references fail to establish a *prima facie* case of obviousness with regard to the subject matter recited in claim 1. We therefore will not sustain the rejection of claim 1 or, it follows, of claims 3 and 4, which depend therefrom.

SUMMARY

The rejection is not sustained.

The decision of the examiner is reversed.

REVERSED

IAN A. CALVERT Administrative Patent Judge	)	
NEAL E. ABRAMS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)	

NEA:hh

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Striker, Striker & Stenby
103 East Neck Road
Huntington, NY 11743