

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 9

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT C. KERR and JAMES N. ROCKWELL

Appeal No. 2000-0570
Application No. 09/028,943

ON BRIEF

Before McCANDLISH, Senior Administrative Patent Judge, and
McQUADE and GONZALES, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Robert C. Kerr et al. appeal from the final rejection of claims 1, 5 and 6, all of the claims pending in the application. We reverse and remand.

THE INVENTION

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The invention relates to "floor mats wherein an antimicrobial agent has been incorporated into at least one of either the pile surface or backing and is preferably present in both" (specification, page 1). Claim 1 is illustrative and reads as follows:

1. A launderable dust control mat having antimicrobial properties, the mat comprising: a pile fiber upper surface and a polymer backing surface disposed beneath said pile fiber upper surface, wherein said pile fiber upper surface comprises a plurality of tufts formed from solution dyed nylon yarns incorporating a metal based antimicrobial agent disposed throughout all portions of said yarns and said backing surface includes a metal based antimicrobial agent encapsulated therein, such that both said pile fiber upper surface and said polymer backing surface contribute to the antimicrobial properties of said mat.

THE PRIOR ART

The references relied upon by the examiner as evidence of obviousness are:

Wilson	4,679,859	Jul. 14, 1987
Osborn et al. (Osborn)	4,701,518	Oct. 20, 1987
Nagahama et al. (Nagahama)	5,305,565	Apr. 26, 1994

THE REJECTIONS

Claims 1 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilson in view of Osborn.

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Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilson in view of Osborn and Nagahama.

Attention is directed to the appellants' brief (Paper No. 7) and to the examiner's answer (Paper No. 8) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.

DISCUSSION

Wilson, the examiner's primary reference, pertains to dust control products such as mops and floor mats which include antimicrobial agents to inhibit the growth of undesirable organisms. In general, the floor mat embodiment 20 consists of a backing 21 and a plurality of yarns 22 projecting therefrom (see Figure 5). The backing may be made of rubber and the yarns of nylon, and each may be fully impregnated with an antimicrobial compound during its manufacturing process (see column 2, lines 35 through 54; and column 6, line 20, through column 7, line 60).

As conceded by the examiner (see page 2 in the answer), the Wilson floor mat does not meet the limitation in claim 1 requiring the nylon yarns to be "solution dyed." Although the underlying specification does not define the term "solution

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dyed," the appellants are on record (see Paper No. 4) as stating that one of ordinary skill in the art would have understood this term in accordance with the definition set forth in Dictionary of Fiber & Textile Technology¹ which indicates that solution dyeing is "[a] term to describe a manufactured fiber (yarn, staple, or tow) that has been colored by the introduction of pigments or insoluble dyes into the polymer melt or spinning solution prior to extrusion" and that "[u]sually, the colors are fast to most destructive agents."

Osborn discloses that "[a]ntimicrobial activity is imparted to nylon during its preparation by adding to the nylon forming monomer(s), a zinc compound . . . and a phosphorus compound . . . [and that] [f]ibers made from the resulting nylon contain the reaction product uniformly dispersed therein and have antimicrobial activity of a permanent nature" (Abstract). Of particular interest is Osborn's description of carpets made of such fibers which were "blank dyed" (column 2, line 57) to produce test samples.

¹ A copy of the relevant dictionary pages is appended to Paper No. 4.

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In rejecting claim 1 under 35 U.S.C. § 103(a), the examiner found that "OSBORN et al. teaches that it is known in the art to solution dye 'Nylon 6,6' fibers impregnated with a metal based antimicrobial agent" (answer, page 2). Based on this finding, the examiner concluded that it would have been obvious to a person having ordinary skill in the art at the time the invention was made

to solution dye the mat and backing of WILSON with the zinc based antimicrobial agent of OSBORN et al. in order to produce a dust mat; wherein the antimicrobial agent is evenly dispersed, thereby promoting the dye-fastness and permanent retention of the antimicrobial activity of the mat and backing [answer, page 2].

The record, however, does not provide any factual support for the examiner's apparent position that Osborn's addition of an antimicrobial agent to nylon melt constitutes, or would have been recognized by the artisan as, a solution dyeing step. The only dyeing step disclosed by Osborn is the blank dyeing step performed on carpets made of nylon fibers impregnated with antimicrobial material. This blank dyeing step clearly does not respond to the unchallenged definition of "solution dyeing" which has been advanced by the appellants. Thus, Osborn does not cure Wilson's failure to

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meet the limitation in claim 1 requiring the nylon yarns to be "solution dyed."

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claim 1, or of claim 5 which depends therefrom, as being unpatentable over Wilson in view of Osborn.

Since Nagahama also fails to overcome the above noted deficiency of Wilson, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claim 6, which depends from claim 1, as being unpatentable over Wilson in view of Osborn and Nagahama.

REMAND

The dictionary definition of the term "solution dyeing" which is of record and appellants' comments with respect thereto indicate that the solution dyeing of polymer fibers and its colorfast advantages were known in the art at the time of appellants' invention. This application is hereby remanded to the examiner to consider whether this information, when considered in conjunction with the teachings Wilson, Osborn and Nagahama, would have rendered the subject matter recited

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in the appealed claims obvious within the meaning of 35 U.S.C.
§ 103(a).

SUMMARY

The decision of the examiner to reject claims 1, 5 and 6
under 35 U.S.C. § 103(a) is reversed and the application is
remanded to the examiner for further consideration.

REVERSED AND REMANDED

	HARRISON E. McCANDLISH)	
	Senior Administrative Patent Judge)	
)	
)	
)	
)	
	JOHN P. McQUADE)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
	JOHN F. GONZALES)	
	Administrative Patent Judge)	

JPM:clm

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