

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GARY W. MAIER
and OMAR D. BROWN

Appeal No. 96-2170
Application 08/236,570¹

ON BRIEF

Before COHEN, MEISTER AND ABRAMS, *Administrative Patent Judges*.
ABRAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claim 1, which is the only claim of record in the

¹ Application for patent filed April 29, 1994.

Appeal No. 96-2170
Application 08/236,570

application.

The appellants' invention is directed to a die coating apparatus. The claim on appeal reads as follows:

1. A die coating apparatus for coating fluid coating onto a surface comprising:

a die having an upstream bar with an upstream lip and a downstream bar with a downstream lip, wherein the upstream lip is formed as a land and the downstream lip is formed as a sharp edge having an edge radius no greater than 10 microns;

a passageway running through the die between the upstream and downstream bars, wherein the passageway comprises a slot defined by the upstream and downstream lips, wherein coating fluid exits the die from the slot to form a continuous coating bead between the upstream die lip, the downstream die lip, and the surface being coated; and

a low surface energy covering applied to the surface of the downstream bar adjacent to the sharp edge, and a low surface energy covering applied to the land, adjacent to its downstream edge to present a generally undulating surface, wherein the low surface energy coverings do not extend completely to the edges of the downstream bar and the land.

THE REFERENCES

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

Japan

1-57629

Dec. 6, 1989

Appellant's Admitted Prior Art Statement cited in the Information Disclosure Statement filed 7/21/94 (Paper #3).

Appeal No. 96-2170
Application 08/236,570

THE REJECTION

Claim 1 stands rejected under 35 U.S.C. § 103 as being unpatentable over the admitted prior art in view of the Japanese reference.

The rejection is explained in the Examiner's Answer.

The opposing viewpoints of the appellants are set forth in the Brief.

OPINION

The appellants' invention is an improvement to coating machines in which the coating to be applied to a web issues from a passageway running through a die. The claim states that the die terminates at the web in an upstream bar with a lip formed as a land and a downstream bar with a lip formed as a sharp edge, and that the passageway is a slot defined by these upstream and downstream lips. According to the appellants' specification, a common problem in this type of device is the occurrence of streaks in the coated layer, caused by dried liquid residue collected on the lips of the die near the coating bead. The appellants assert that this is cured by their invention, which is set forth in the claim as

a low surface energy covering applied to the surface of

Appeal No. 96-2170
Application 08/236,570

the downstream bar adjacent to the sharp edge, and a low surface energy covering applied to the land, adjacent to its downstream edge to present a generally undulating surface, wherein the low surface energy coverings do not extend completely to the edges of the downstream bar and the land.

This portion of the claim is illustrated in Figure 16 and described on page 13 of the specification.

Claim 1 stands rejected as being unpatentable over the combined teachings of the admitted prior art and the Japanese reference. After describing the applicable portions of the admitted prior art, the examiner acknowledges that it fails to teach placing a low surface energy coating on the surface of the downstream bar (Answer, page 4, lines 1 through 3). The examiner then focuses upon the Japanese reference, explaining that it teaches placing a low energy surface coating on the upstream lip of the die in a die coating apparatus for the purpose of preventing disruption of the coating bead (Answer, page 4, lines 8 through 10). Again, the examiner acknowledges shortcomings, admitting that, as compared to the appellants' claim, the Japanese reference

fails to teach a low energy covering applied to the surface of the downstream bar or . . . which does not extend completely to the edges of the upstream and downstream bars of the die (Answer, page 4, lines 15

Appeal No. 96-2170
Application 08/236,570

through 18).

However, from the dissertation provided on pages 4 and 5 of the Answer, it is the examiner's position that one of ordinary skill in the art would have found it obvious from the teachings of the Japanese reference to modify the device of the admitted prior art in the following manner:

(1) Apply a low energy surface covering to the land of the downstream bar, in view of the fact that the Japanese reference discloses applying the covering to "selected areas" to prevent undesired buildup of coating material.

(2) Apply a low energy surface coating to the upstream bar as well, because it would provide greater control of the coating operation.

(3) Terminate the coating short of the edges of both of the bars, since the Japanese reference "clearly shows in Figure 2 versus Figure 4 the alternative of not extending the covering to the tip."

The appellants argue in rebuttal that the references fail to suggest providing a low surface energy coating on more than one side of a die lip, that is, on both the upstream and the downstream bars of the die, or that the coating not extend completely to the edge of the bars (Brief, pages 5 and 6).

Of course, 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 *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a *prima facie*

Appeal No. 96-2170
Application 08/236,570

case of obviousness under 35 U.S.C. § 103, 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. of 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, 1052 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

It is our view that the combined teachings of the prior art relied upon fail to suggest that a low surface energy covering be applied to both the upstream bar **and** the downstream bar of a die coating apparatus of the type claimed. The Japanese reference discloses several embodiments of die coating devices having only an upstream bar (Figures 1 through 4), and one embodiment having both an upstream bar and a downstream bar (Figure 5). A low surface energy covering is illustrated upon the surface of the

Appeal No. 96-2170
Application 08/236,570

upstream bar in all of the embodiments. However, important to our conclusion, no such covering is shown also on the downstream bar of the Figure 5 embodiment, which is the only one that has both bars. Nor is the use of this covering on the downstream bar set forth in the text. From our perspective, therefore, it would appear that the only suggestion to provide a low surface energy covering on the downstream bar as well as the upstream bar is found via the hindsight accorded one who first viewed the appellants' disclosure. This, of course, is not a proper basis.

See In re Fritch, 972 F.2d 1260, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). We are not persuaded otherwise by the examiner's assertion that this reference discloses applying the covering to "selected areas" (Answer, page 4, line 22), and that this would have suggested both the downstream bar and the upstream bar, for we find no support for such in the document.

It is our further opinion that even assuming, *arguendo*, that the combined teachings of the references would have suggested the use of the covering on both bars, they fail to teach that the low energy surface covering not extend completely to the edges of the bars. The examiner's position is that this is shown in Figure 2

Appeal No. 96-2170
Application 08/236,570

of the Japanese reference (Answer, page 5, lines 10 and 11). However, the specification of the reference is silent as to such a limitation, and our inspection of Figures 2, 4 and 5, which show the covering, indicate that it extends **to** the edge of the bar, rather than stopping short.

For the reasons expressed in the preceding paragraphs, it is our view that the combined teachings of the references fail to establish a *prima facie* case of obviousness with respect to the subject matter recited in the claim, and the rejection will not be sustained.

Appeal No. 96-2170
Application 08/236,570

The decision of the examiner is reversed.

REVERSED

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IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JAMES M. MEISTER)	
Administrative Patent Judge)	APPEALS AND
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Appeal No. 96-2170
Application 08/236,570

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