

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(2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM H. BURGESS
and
JOHN P. THELMAN

Appeal No. 97-4161
Application 08/397,408¹

ON BRIEF

Before ABRAMS, FRANKFORT and MCQUADE, *Administrative Patent Judges*.

ABRAMS, *Administrative Patent Judge*.

¹ Application for patent filed March 2, 1995.

Appeal No. 97-4161
Application 08/397,408

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 1, 3-11 and 13-20, which constitute all of the claims remaining of record in the application.²

The appellants' invention is directed to a method and apparatus for embossing a pattern on an absorbent paper product. The subject matter before us on appeal is illustrated by reference to claims 1 and 11, which can be found in an appendix to the Brief.

THE REFERENCES

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

Scherf	860,697	July 23, 1907
Thomas	3,868,205	Feb. 25, 1975
Schulz	4,376,671	Mar. 15, 1983
Bauernfeind (`728)	4,483,728	Nov. 20, 1984
Burt	4,671,983	June 9, 1987
Bauernfeind (`967)	4,759,967	July 26, 1988
Burgess et al. (Burgess)	4,921,034	May 1, 1990

The admitted prior art found at page 5, lines 28-31 and page 6, lines 19-22 of the appellants' specification.

² The final rejection, the Brief and the Examiner's Answer erroneously state in some places that claims 1 and 3-20 have been finally rejected. However, claim 12 was canceled in Paper 8.

Appeal No. 97-4161
Application 08/397,408

THE REJECTIONS

The following rejections stand under 35 U.S.C. § 103:

- (1) Claims 1, 3, 4, 11, 13 and 14 on the basis of Bauernfeind '728.
- (2) Claims 1, 3, 4, 11, 13 and 14 on the basis of Bauernfeind '728 and Burgess, Bauernfeind '967, Schulz, Thomas, Burt or Scherf.
- (3) Claims 1, 4-10, 11 and 14-20 on the basis of Bauernfeind '728 and the appellants' admitted prior art (specification, page 5, lines 28-31 and page 6, lines 19-22).

The rejections are explained in the Examiner's Answer.

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

OPINION

In rejections 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)), which is established when the teachings of the prior art itself would appear to have

Appeal No. 97-4161
Application 08/397,408

suggested the claimed subject matter to one of ordinary skill in the art (see *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). 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. & Inter. 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).

The appellants begin the explanation of their invention by pointing out that it is common to emboss an absorbent paper base sheet in order to increase its bulk, improve absorbency and roll building characteristics, and to create an attractive pattern. One of the problems which accompanies this, they

Appeal No. 97-4161
Application 08/397,408

state, is bursting of the pillow areas creating by the embossing due to the stress of the embossing process. The invention seeks to solve this problem by providing an initial step in which a relatively fine preparatory base pattern of pin-like displacements is embossed onto the web, which is followed by placing a second embossed pattern onto the web, such that the second pattern defines pillow-like areas. As manifested in both the method and the apparatus claims, the first pattern contains 35-400 displacements per square inch, and each of the pillow-like areas contains from 1 to 100 of the pin-like displacements.

The first rejection set forth by the examiner is that independent claims 1 and 11 are unpatentable in view of Bauernfeind '728, which discloses a system for making a multi layer embossed roll product in which each of two webs is provided with a first embossing pattern, after which glue is applied to at least one web prior to the webs being joined together by a marrying roll. The marrying roll impresses a different pattern than the first embossing, the result of which is that the webs are joined at irregular points. This, according to the patent, results in a more bulky product. See

column 4 and Figure 8; compare Figures 6 and 7. One of the marrying roll patterns (Figures 4 and 9) is described as "raised dots" which "have a substantial open area between each . . . [so that] there is sufficient space for the sheet to pucker slightly without causing unacceptable creasing of the web" (column 3, line 32 *et seq.*). The density of the dot pattern is described in terms of the surface area of the marrying roller, in the broad sense between 0 and 100%, with the preferred degree being 10-40% (column 3, lines 60-67). The diameter of each dot is not stated, with the only clue being the fact that the lamination of the plies to one another is dependent upon the total area that these dots contact the webs, with more than 40% contact causing unnecessary debulking, while less than 10% fails to provide adequate lamination (column 4, lines 1-6). It is clear that in the Bauernfeind system the "dot" embossing step must occur subsequent to the other embossing step, in that it is the "dot" step that causes the webs to be laminated together in the manner which constitutes the thrust of the invention.

Our understanding of this rejection is that the required "pillow-like areas" comprise the areas 32 in Figure 9 of

Appeal No. 97-4161
Application 08/397,408

Bauernfeind and the "pin-like displacements" comprise areas 94. Apparently conceding that the reference fails to disclose or teach the claimed "35 to 400 pin-like displacements per inch" and that the pillow-like areas contain "from 1 to 100 of the pin-like displacements," the examiner takes the position that these values would have been discoverable by the exercise of routine skill in the art (Answer, page 4).

A major difference between the claimed subject matter and that taught by the reference is that the sequence of steps is reversed. In independent claim 1, the second step is "passing the absorbent web *having the preparatory base pattern impressed in step (a)* [the pin-like pattern] through a second pair of embossing rollers" (emphasis added), that is, the "pin-like" embossing must come first. In contradistinction, in the reference, the pattern which the examiner has designated to be pin-like must be applied after the other embossing pattern, or else the inventive method will not be operative. In independent claim 11, a first pair of rollers impresses a "preparatory base pattern" on the web, and second rollers impress a second pattern which defines areas in which a specified range of the pin-like displacements of the first

Appeal No. 97-4161
Application 08/397,408

pattern is captured. The arrangement is not taught by the reference, for there the rolls must be so arranged as to create the pillow-like areas first.

In addition, the appellants have explained that by first impressing a "relatively fine preparatory base pattern" upon the web, a "stretchability" is created which allows the pillow pattern then to be impressed without the danger of bursting (specification, pages 3 and 4). In furtherance of this, they have gone on to state that the number of pin-like depressions which optimally will accomplish this is 35-400 per square inch (page 5), providing that there at least one of these pin-like depressions is present in each pillow-like area (specification, page 7). Even if one considers areas 32 of Bauernfeind '728 to be the required "pillow-like" areas, there is no teaching in the reference that there be at least one pin-like displacement in each, nor would such a requirement appear to have any function or bearing upon the invention set forth in the patent. We therefore cannot agree with the examiner that the numerical requirements would have been obvious to the artisan from the teachings of the reference.

Appeal No. 97-4161
Application 08/397,408

Finally, we do not agree with the examiner that the "dots" disclosed in Bauernfeind '728, which are for the purpose of pressing the plies together over such an area that they are adequately laminated, qualify as being "pin-like displacements" as required by the claims. The preparatory pattern is defined in the specification as being "relatively fine" (pages 3, 4) "pin like projections" (page 5), numbering between 35 and 400 to the square inch of web (page 5), which indicates that each is of small cross-sectional area. This is confirmed by the drawings (Figures 6 and 7). Moreover, the common definition of "pin" is a small and pointed object³ which, as shown in Figures 4 and 9 of the reference, the "dot" is not.

For the reasons set forth above, it is our view that Bauernfeind '728 fails to establish a *prima facie* case of obviousness with respect to the subject matter recited in independent claims 1 and 11. This being the case, we will not sustain this rejection.

Claims 1 and 11 also stand rejected as being unpatentable

³ See, for example, *Merriam Webster's Collegiate Dictionary*, Tenth Edition, 1996, page 882.

Appeal No. 97-4161
Application 08/397,408

over Bauernfeind '728 in view of any one of six secondary references. Even considering that each of these references teaches embossing a material with a plurality of "pin-like" displacements, the mere fact that the prior art structure could be modified in the manner proposed by the examiner 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). Here, we fail to perceive any teaching, suggestion or incentive which would have led one of ordinary skill in the art to modify Bauernfeind '728 by replacing the "dot" displacements with a continuous pattern of "pin-like" displacements, for to do so would cause the two webs to be bonded together in a manner which nullifies the inventive concept (see column 4, line 49 *et seq.*). This, in our view, would have acted as a disincentive to the artisan to combine the references in the manner set forth by the examiner, and thus the required *prima facie* case of obviousness is not established. We, therefore, will not sustain this rejection.

The third rejection of the two independent claims is that

Appeal No. 97-4161
Application 08/397,408

they would have been obvious on the basis of Bauernfeind '728 in view the prior art admitted by the appellants in the specification at page 5, lines 28-31 and page 6, lines 19-22. The primary reference has been discussed above. The prior art admitted by the appellants at these two locations in their specification has to do with the materials from which the rollers have been made, and does not alleviate the several problems pointed out above with regard to Bauernfeind '728. Again, a *prima facie* case of obviousness is lacking as to the two independent claims, and we cannot sustain this rejection.

It follows, of course, that if the rejections of the independent claims cannot be sustained, neither can those of the claims which depend from them.

Appeal No. 97-4161
Application 08/397,408

SUMMARY

None of the three rejections is sustained.
The decision of the examiner is reversed.

REVERSED

	NEAL E. ABRAMS)	
	Administrative Patent Judge)	
)	
)	
)	
	CHARLES E. FRANKFORT)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
	JOHN P. MCQUADE)	
	Administrative Patent Judge)	

Appeal No. 97-4161
Application 08/397,408

Gregory E. Croft
Kimberly-Clark Corp.
401 North Lake Street
Neenah, WI 54957-0349

NEA/cam