

Cheryl

Paper No. 24

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(2) is not binding precedent of the Board.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

MAILED

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

APR 30 1997

Ex parte DARRELL J. KUTCHMAREK
AND JAMES H. STAUFFACHER

PAT.&T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Appeal No. 93-3521
Application 07/577,680¹

ON BRIEF

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

McQUADE, Administrative Patent Judge.

¹ Application for patent filed September 4, 1990.
According to appellants, this application is a continuation-
in-part of Application 07/502,575, filed March 30, 1990, now
Patent No. 5,160,563, issued November 3, 1992, which is a
continuation-in-part of Application 07/417,725, filed October 5,
1989, now abandoned.

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DECISION ON APPEAL

This appeal was taken from the final rejection of claims 1 through 22.² The examiner has since withdrawn all rejections of claims 12, 21 and 22 and indicated that these claims now stand allowed. Accordingly, the appeal as to claims 12, 21 and 22 is hereby dismissed, leaving for review the standing rejections of claims 1 through 11 and 13 through 20.

The invention relates to

a method for forming an expandable and collapsible shade product from a single web of material, in which the shade product can be formed with different physical characteristics at opposite sides of the shade product without the physical characteristics at one side of the shade product adversely affecting the appearance or physical characteristics of the other side of the shade product [specification, page 2].

Claim 1 is illustrative and reads as follows:

1. A process for the manufacture of a pleated cellular shade product for use in a shade and having different physical characteristics, on opposite sides of the shade product comprising:

a) providing an elongated web having alternate first and second stripe areas extending crosswise of the web at a preselected repeat distance, the first and second stripe areas having different physical characteristics and each having a width greater than one third of the repeat distance;

² Claims 1, 8, 9, 12, 13, 21 and 22 have been amended subsequent to final rejection.

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b) accordion folding the web crosswise of the length of the web alternately in a first direction along a first fold line intermediate side edges of each first stripe areas and in a second direction along a second fold line intermediate the side edges of each second stripe area to form a plurality of sidewise adjacent panels each having width substantially one-half the repeat distance and serially united in alternate succession along respective first and second fold lines with each panel having a portion of a first stripe area contiguous to the associated first fold line and a portion of a second stripe area contiguous to the associated second fold line;

c) joining faces of sidewise adjacent panels that are united along the first fold lines in a first band parallel to and spaced from the associated first fold line a distance greater than one-half the fold spacing and within the second stripe areas such that only portions of the second stripe areas are exposed to view at a second side of the shade product, and joining faces of sidewise adjacent panels that are united along the second fold lines in a second band parallel to and spaced from the associated second fold line a distance greater than one-half the fold spacing and within the first stripe areas such that only portions of the first stripe areas are exposed to view at a first side of the shade product.

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

Brown	4,347,887	Sept. 7, 1982
Anderson	4,685,986	Aug. 11, 1987
Tsuru et al. (Tsuru)	4,950,218	Aug. 21, 1990
		(filed Nov. 7, 1988)

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Corey et al. (Corey)³ 5,015,317 — May 14, 1991
(filed Dec. 22, 1988)

The claims on appeal stand rejected under 35 U.S.C. § 103 as follows:⁴

a) claims 1 through 11 as being unpatentable over either Brown or Corey in view of Anderson; and

b) claims 13 through 20 as being unpatentable over either Brown or Corey in view of Anderson, and further in view of Tsuru.

Reference is made to the main and reply briefs (Paper Nos. 14 and 20) and to the main and supplemental answers (Paper Nos. 19 and 21) for full statements of the respective positions of the appellants and the examiner with regard to the propriety of these rejections.

The primary references to Brown and Corey both relate to the manufacture of cellular shade products.

³ The Corey patent matured from an application which is the grandparent of an application which matured into U.S. Patent No. 5,193,601. The record in the appellants' grandparent Application 07/417,725 indicates that it was involved in an interference with U.S. Patent No. 5,193,601. The decision in the interference was adverse to the appellants.

⁴ The examiner has withdrawn the 35 U.S.C. § 112, second paragraph, rejection which was set forth in the final rejection (see the advisory action dated May 28, 1992, Paper No. 12).

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Brown discloses a cellular shade or shutter 10 formed from a single sheet 22. As described by Brown,

[t]he sheet 22 may be of any type of heat insulating material. Although the material may be opaque or translucent if so desired, the preferred embodiment utilizes a transparent sheet of plastic as the sheet material 22. In the present invention, only one continuous sheet is used which is bonded to itself, as shown in FIG. 4, to create a double row of cells 32 and 34 [column 2, lines 45 through 51].

Corey discloses a process for the manufacture of a pleated cellular shade from a single continuous web. The web consists of any flexible sheet of woven or unwoven material having any degree of opacity from fully transparent to fully opaque. As described by Corey,

[i]nitially, web is cast off from a supply roller, which meters out the web at a controlled rate. Next, the webbing encounters a tensioner mechanism just prior to entering the first screen printing machine. As the pre-tensioned web sheet is introduced to the first screen printing mechanism, various coatings and/or laminations, to effect color and hue, as well as reflecting characteristics, are laid down on one or both sides of the web fabric. Immediately thereafter, the web is introduced to the first curing station where the coatings providing color, insulation, reflection etc. are subjected to a full cure which reduces the porosity of the web fabric. After coatings have been applied and cured by one or more such coating and curing stations,

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the web is passed to the second or final screen printing station which applies adhesive stripes, transverse the web fabric, in proper and precise relationship (registry) with the coating scheme. Also provided is detection means according to known art, that is, means which affords the process controller data relative to the phase relationship between discrete coatings (and adhesive stripes) and transverse folds (or pleats) which are to effect partially the physical geometry of the desired product.

* * *

After passing the last curing station and having applied coatings in the requisite state of cure, the web passes between a pair of pleating rollers which, by design, perform alternately as a creasing roller and a nip roller. By means described later, these pleating rollers also cooperate with the phase detection means to assure correct registration between the coating with adhesive patterns and the pleat folds. Exiting the pleater, the web having been folded first in one direction, and then in the other, enters the folding station. The folding station comprises an air knife pair and batcher box. * * * With both air knives operating uniformly, in a predetermined phase relationship, the pleated web is urged into a pleat fold as it enters the batcher box. The batcher box, in turn, is under a partial vacuum which further enhances the folding, i.e. the pleating process by drawing the folded stack more tightly into the batcher box. Consequently, the web, having disposed thereon the desired, partially cured bonding line patterns, is physically folded into the requisite pleat array and, by its collection into a stack in the batcher box, is accreted into one of the two (or more) patterns taught

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hereinafter in this disclosure [column 7,
lines 4 through 68].

Anderson discloses a cellular shade made from two continuous webs of pleated material. In discussing the background of the invention, Anderson states that

[a] difficulty with all of the prior art constructions is the ability to manufacture the honeycomb cells with opposite faces of different physical characteristics. This is sometimes desirable either for aesthetic of [sic, or] mechanical reasons. For example, thermal insulation against heat or cold, besides that given by the cell structure, can be provided by appropriate surfacing of the material of the structure which faces the elements. With the prior art constructions, * * * where a single piece of material is used to form the cells, different portions of the material which will ultimately define the opposite sides of the structure have to be separately processed prior to the formation of the honeycomb configuration. Problems of alignment of the differently treated surfaces can result in an inferior or unacceptable product. More particularly, the material must be fed accurately and folded accurately along its length. Also, it must be secured to the adjacent cell in such a way as to cover the line of demarcation separating the two differently treated surfaces. Otherwise, the different surfaces will show through from one side of the structure to the other [column 1, lines 30 through 51].

Tsuru discloses a method of making a honeycomb structure which defines a plurality of pots for raising and transplanting seedlings. The process includes the sequential steps of

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accordion folding a web of material, unfolding the web, applying adhesive to the web and then refolding the web and applying pressure thereto to bond the web at the adhesive sites.

With regard to the standing 35 U.S.C. § 103 rejection of claims 1 through 11, the examiner is of the opinion that it would have been obvious to one of ordinary skill in the art

to provide the web of Brown or Corey with alternate first and second stripe areas as desired (for aesthetic, mechanical reasons) to provide a shade having different physical characteristics on opposite sides thereof since Anderson teaches such to be known when forming a pleated cellular shade and Corey teaches controlled coating at predesignated locations on both sides of the web to achieve a desired aesthetical and/or reflecting result for the shade [main answer, page 6].

As for the standing 35 U.S.C. § 103 rejection of claims 13 through 20, the examiner is of the view that it would have been further obvious to one of ordinary skill in the art "to use the fold/unfold/refold technique as shown by Tsuru in the processes of Brown or Corey to insure accurate placement of the adhesive stripes with respect to the folds" (main answer, page 7).

We shall not sustain these rejections to the extent they are based on Brown as the primary reference. Brown provides little detail as to how the cellular shade disclosed therein is made, and is not concerned with providing such shade with different

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physical characteristics ~~on its~~ opposite sides or with fold lines or creased folds as recited in the rejected claims. Anderson and/or Tsuru do not overcome these deficiencies.

The rejections based on Corey as the primary reference are, however, a different matter.

The shade making method disclosed by Corey generally corresponds to that recited in claim 1, but does not meet the claim limitations requiring the production of a shade product having different physical characteristics on its opposite sides, or the limitations relating to the first and second stripe areas on the web which lead to such a product. Corey does contemplate, however, providing a shade web with various coatings to effect desired color, reflecting and/or insulating characteristics and folding the web in phased relationship or registration with these coatings. Anderson teaches that it is desirable to provide the opposite sides of cellular shades with different physical characteristics (e.g., color, insulation, reflectivity). Such is accomplished by suitably treating the surfaces of the shade material and then aligning the differently treated surfaces so that they do not show through from one side of the shade to the other. This teaching would have provided the artisan with ample suggestion to adapt Corey's web coating and folding steps so as

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to attain a shade product having different physical characteristics on its opposite sides. Given the basic structure of Corey's shade product and the manner in which it is made, the modification would entail the utilization of stripe areas of the type recited in claim 1. The stripe area details recited in this claim (e.g., stripe width, repeat distance, and relation to fold lines and joining adhesives) would have been obvious matters of design choice well within the level of ordinary skill in the art depending on the specifically desired features of the shade product.

The appellants' argument that Anderson's teachings are not applicable to the particular cellular shade disclosed by Corey because they are set forth in the context of prior art patents relating to different types of cellular shades (see, for example, pages 13 through 16 in the main brief) is not well taken. Anderson clearly states that providing shades with different physical characteristics on their opposite sides is desirable for either aesthetic or mechanical reasons. It is not apparent, nor have the appellants persuasively explained, why one of ordinary skill in the art would not have readily appreciated this feature to be applicable to Corey's shade.

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The additional argument (see, for example, page 4 in the reply brief) that the applied prior art does not recognize the problem sought to be overcome by the appellants' invention, i.e., to form a shade product with different physical characteristics on its opposite sides without the physical characteristics on one side adversely affecting the appearance or physical characteristics on the other side, is also unpersuasive. The excerpt from the Anderson patent reproduced above clearly indicates a concern in the art that the different physical characteristics on each side of a shade not show through to the other side.

In light of the foregoing, the differences between the subject matter recited in claim 1 and the teachings of Corey and Anderson are such that the subject matter as a whole would have been obvious at the time of the invention to a person having ordinary skill in the art. Therefore, we shall sustain the standing 35 U.S.C. § 103 rejection of this claim to the extent it is based on Corey in view of Anderson.

We shall also sustain the standing 35 U.S.C. § 103 rejections of claims 2 through 8 to the extent they are based on Corey in view of Anderson since the appellants, stating that

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"claims 1-8 stand or fall together" (main brief, page 11), have not argued separately the patentability of these claims (see In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978)).

Claim 9 sets forth process steps generally similar to those recited in claim 1, and additionally requires the web accordion folding step to be performed in an "accordion folding apparatus." Claim 9 also recites the further step of controlling the advance of the web to the accordion folding apparatus to maintain the fold lines at certain locations within the stripe areas. The combined teachings of Corey and Anderson would have suggested such subject matter.

The appellants' argument that "Corey does not fold the web in an accordion folding apparatus" (main brief, page 17) is not well taken. Corey's pleating assembly 400, folding station air knife subassembly 500 and batcher subassembly 600 collectively constitute such an apparatus. In addition, the concern voiced by both Corey and Anderson regarding accurate registration between the folds and coatings/surface treatments of a shade web belies the appellants' argument (see, for example, page 17 in the main brief) that these references would not have suggested the rather broadly stated web advance controlling step recited in claim 9.

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Thus, we shall sustain the standing ~~35~~ U.S.C. § 103 rejection of claim 9 to the extent it is based on Corey in view of Anderson.

We shall not sustain the standing 35 U.S.C. § 103 rejections of claims 10 and 11, which depend from claim 9, to the extent they are based on Corey in view of Anderson.⁵ In short, these references do not teach and would not have suggested the more specific web advance controlling steps recited in these claims.

Claim 13 also sets forth a process generally similar to that recited in claim 1, but requires the steps of accordion folding the web, unfolding the web, applying adhesive thereto and refolding the web to adhesively join certain portions thereof. This differs from the method disclosed by Corey wherein adhesive is applied to the web before it is accordion folded. Tsuru demonstrates, however, that the claimed sequence of steps in question is conventional. Although the appellants correctly point out that Tsuru's method produces a product which differs from those produced by Corey and Anderson (see, for example, page

⁵ Although the appellants indicate on page 11 of the main brief that "claims 9-11 stand or fall together," they do in fact argue these claims separately (see, for example, pages 16 and 17 in the main brief). It is therefore presumed that the appellants' stand or fall statement with respect to these claims was inadvertent.

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19 in the main brief), the artisan would have appreciated Tsuru's manufacturing process to be relevant to that disclosed by Corey since the two have much in common. In this light, it would have been obvious to one of ordinary skill in the art to provide the method disclosed by Corey as modified in view of Anderson with the sequence of folding, unfolding, adhesive applying and refolding steps disclosed by Tsuru and recited in claim 13 as a simple and straightforward matter of manufacturing process design choice.

Accordingly, we shall sustain the standing 35 U.S.C. § 103 rejection of claim 13 to the extent it is based on Corey in view of Anderson.

Finally, we shall sustain the standing 35 U.S.C. § 103 rejections of claims 14 through 20 to the extent they are based on Corey in view of Anderson since the appellants, stating that "claims 13-20 stand or fall together" (main brief, page 11), have not argued separately the patentability of these claims (see In re Wood, supra).

In summary and for the above reasons, the decision of the examiner:

a) to reject claims 1 through 11 under 35 U.S.C. § 103 as being unpatentable over Brown in view of Anderson is reversed;

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b) to reject claims 13 through 20 under 35 U.S.C. § 103 as being unpatentable over Brown in view of Anderson, and further in view of Tsuru is reversed;

c) to reject claims 1 through 11 under 35 U.S.C. § 103 as being unpatentable over Corey in view of Anderson is affirmed with respect to claims 1 through 9 and reversed with respect to claims 10 and 11; and

d) to reject claims 13 through 20 under 35 U.S.C. § 103 as being unpatentable over Corey in view of Anderson, and further in view of Tsuru is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART


HARRISON E. MCCANDLISH, Senior)
Administrative Patent Judge)

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