

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Andrew Stephens	)	
	)	Confirmation No. 1690
Application No.: 15/245,948	)	
	)	Group Art Unit: 1783
Filed: August 24, 2016	)	
	)	Examiner: DILLON, Daniel P.
For: WOOD-GRAINED POLYMER SUBSTRATE	)	

AMENDMENT AND RESPONSE TO OFFICE ACTION

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Commissioner:

In response to the Office Action mailed July 13, 2018, please consider the following:

Amendments to the Claims begin on page 2 of this paper; and

Remarks begin on page 8 of this paper.

Amendments to the Claims:

The following claims shall replace all previous versions of the claims:

1. (Currently Amended) A simulated natural wood-grained polymer board having a first side and a second side spaced apart from the first side, the spacing between the first and second sides defining one of a width or a height of the board, the first and second sides extending along a length direction between a first end and a second end, the first and second ends defining a length of the board, the board comprising:

a first set of polymer layers ~~generally~~ extending along the length direction and containing a first colorant, a majority of the first set of polymer layers extending along the length of the entire board;

a second set of polymer layers ~~generally~~ extending along the length direction and containing a second colorant different than the first colorant, a majority of the second set of polymer layers extending along the length of the entire board; and

wherein a plurality of individual layers of the first and second sets of polymer layers alternate within the board and extend along a substantially uninterrupted curvilinear path originating proximate the first side of the board and terminating proximate the second side of the board.

2. (Currently Amended) The board of claim 1, wherein the layers of the first set of polymer layers are ~~generally~~ thinner than the layers of the second set of polymer layers.

3. (Original) The board of claim 1, wherein a portion of at least one of the first side and second side of the board is removed to expose portions of the first and second sets of polymer layers along the length direction.

4. (Previously Presented) The board of claim 3, wherein the exposed portions of the first and second sets of polymer layers form a burlled grain pattern.

5. (Original) The board of claim 1, wherein at least one of the first and second sides of the board is embossed with a wood grain pattern.

6. (Previously Presented) The board of claim 1, wherein the first and second sets of polymer layers are formed from high density polyethylene.

7. (Original) The board of claim 6, wherein the first and second sets of polymer layers further include at least one of a UV inhibitor and a foaming agent.

8. (Original) The board of claim 6, wherein one of the first and second sets of polymer layers further includes a foaming agent.

9. (Original) The board of claim 1, wherein the board is formed to define a polygonal cross-section along a length of the board.

10. (Currently Amended) A simulated natural wood-grained polymer substrate extending along a first direction, the substrate having a first side and a second side spaced apart from the first side along a second direction different than the first direction, the first and second sides defining a width of the substrate, the first and second sides extending along the first direction, a core of the substrate extending between the first and second sides and along the first direction, the substrate comprising:

a first set of polymer layers ~~generally~~ extending along the first direction and containing a first colorant, a majority of the first set of polymer layers being substantially continuous along the first direction; and

a second set of polymer layers ~~generally~~ extending along the first direction and containing a second colorant different than the first colorant, a majority of the second set of polymer layers being substantially continuous along the first direction;

wherein individual layers of the first and second sets of polymer layers alternate within the core of the substrate to form a natural wood-grained appearance throughout the core of the substrate; and

wherein a plurality of the individual layers of one of the first and second sets of polymer layers extend along a substantially uninterrupted curvilinear path in the second direction originating proximate the first side and terminating proximate the second side.

11. (Currently Amended) The substrate of claim 10, wherein the layers of the first set of polymer layers are ~~generally~~ thinner than the layers of the second set of polymer layers.

12. (Previously Presented) The substrate of claim 10, wherein the first and second sets of polymer layers are formed from high density polyethylene.

13. (Original) The substrate of claim 12, wherein the first and second sets of polymer layers further include at least one of a UV inhibitor and a foaming agent.

14. (Original) The substrate of claim 12, wherein one of the first and second sets of polymer layers further includes a foaming agent.

15. (Previously Presented) The substrate of claim 10, wherein the substrate is formed to define a polygonal cross-section along a length of the substrate.

16. (Cancelled)

17. (Previously Presented) The board of claim 6, wherein the core is substantially free of natural wood materials.

18. (Previously Presented) The board of claim 1, further comprising a third side and a fourth side spaced apart from the third side along a height direction different than the length

direction and width direction, wherein the third and fourth sides define a height of the board, wherein the third and fourth sides extend along the length direction between the first and second ends, wherein the core of the board extends between the first, second, third, and fourth sides and between the first and second ends, and wherein the individual layers of the first and second sets of polymer layers alternate within the core of the board along the height direction.

19. (Previously Presented) The substrate of claim 12, wherein the core is substantially free of natural wood materials.

20. (Previously Presented) The substrate of claim 10, further comprising a third side and a fourth side spaced apart from the third side along a third direction different than the first and second directions, wherein the third and fourth sides define a height of the substrate, wherein the third and fourth sides extend along the first direction, wherein the core of the substrate extends between the first, second, third, and fourth sides and along the first direction, and wherein individual layers of the first and second sets of polymer layers alternate within the core of the substrate along the third direction.

21. (Currently Amended) A simulated natural wood-grained polymer substrate having a length defined along a first direction, a width defined along a second direction perpendicular to the first direction, and a height defined along a third direction perpendicular to both the first and second directions, the substrate comprising:

a first set of polymer layers ~~generally~~ extending along the first direction and containing a first colorant, a majority of the first set of polymer layers being substantially continuous along the first direction; and

a second set of polymer layers ~~generally~~ extending along the first direction and containing a second colorant different than the first colorant, a majority of the second set of polymer layers being substantially continuous along the first direction;

wherein individual layers of the first and second sets of polymer layers alternate within the substrate along the third direction to form a natural wood-grained appearance throughout the substrate; and

wherein a plurality of the individual layers of one of the plurality of the first and second sets of polymer layers extend along a substantially uninterrupted curvilinear path in the second direction originating proximate an outer surface of a first portion of the substrate and terminating proximate an outer surface of a second portion of the substrate.

22. (Currently Amended) The substrate of claim 21, wherein the layers of the first set of polymer layers are ~~generally~~ thinner than layers of the second set of polymer layers.

23. (Previously Presented) The substrate of claim 21, wherein the first and second sets of polymer layers are formed from high density polyethylene.

24. (Previously Presented) The substrate of claim 23, wherein the core is substantially free of natural wood materials.

25. (Currently Amended) A simulated natural wood-grained polymer board comprising:

a polymer core having a first side and a second side spaced apart from the first side, spacing between the first and second sides defining one of a width or a height of the core, the first and second sides extending along a length direction of the core between a first end and a second end, the first and second ends defining a length of the core;

a first set of polymer layers ~~generally~~ extending along the length direction and containing a first colorant, a majority of the first set of polymer layers extending along the entire length of the core;

a second set of polymer layers ~~generally~~ extending along the length direction and containing a second colorant different than the first colorant, a majority of the second set of polymer layers extending along the entire length of the core; and

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wherein a plurality of individual layers of the first and second sets of polymer layers alternate within the core and extend along a substantially uninterrupted curvilinear path originating from proximate the first side of the core and terminating proximate the second side of the core.

REMARKS

I. CLAIM STATUS

Claims 1-15 and 17-25 are pending in this case. Claims 1, 2, 10, 11, 21, 22, and 25 have been amended herein solely in response to the rejections under § 112. No new matter has been added with these amendments.

II. EXAMINER INTERVIEW

Examiners Dillon and Ewald are thanked for the interview of August 3, 2018 where the pending rejections and cited references were discussed. While no agreement was reached, differences between the currently claimed subject matter and the cited references were presented along with deficiencies in the rejections.

III. CLAIM REJECTIONS

35 U.S.C. § 112

Claims 1, 2, 10, 11, 17, 19, 21, 22, and 24-25 are rejected under 35 U.S.C. § 112(b) as indefinite. In particular, the Office Action objects to the words “generally” and “substantially” as used in the claims. The word “generally” has been removed from the claims as shown above. The term “substantially” as used in the claims is intended to account for minor variations that would otherwise not be literally covered by the claims without the use of such term. *See also* MPEP 2173.05(b). Accordingly, withdrawal of the rejection and reconsideration of the claims is respectfully requested.

35 U.S.C. § 103

Claims 1-15 and 17-25 are rejected under 35 U.S.C. § 103 over various combinations of U.S. Pat. No. 7,204,944 to Piedboeuf (“Piedboeuf”) with U.S. Pat. App. Pub. No. 2011/0177291 to Sudano et al. (“Sudano”), U.S. Pat. App. Pub. No. 2003/0021915 to Rohatgi et al. (“Rohatgi”), and U.S. Pat. App. Pub. No. 2004/0038002 to Franco et al. (“Franco”). The rejections are respectfully traversed.

Prior rejections based on Rohatgi and Franco were overcome as stated in the currently pending Office Action. Likewise, the newly cited Piedboeuf and Sudano references also fail to

teach all of the elements of the claims. In particular, the Office Action relies on supposed similarities in the processes of the cited references and the present application as evidence that the resulting structures formed by the processes would be the same. It is noted, however, that no process is currently claimed, and, rather, “simulated natural wood-grained polymer” boards and substrates of particular structure are claimed. In any event, reliance on similarities between the processes of the cited references and the present application in rejection of the currently pending claims is misplaced. The United States Supreme Court summarized the concept over 150 years ago:

“A machine may be new, and the product or manufacture proceeding from it may be old. In that case the former would be patentable and the latter not. The machine may be substantially old and the product new. In that event the latter, and not the former, would be patentable. Both may be new, or both may be old. In the former case, both would be patentable; in the latter neither.”

Providence Rubber Co. v. Goodyear, 76 U.S. 788, 796, 19 L. Ed. 566 (1869).

Here, the Office Action fails to make a *prima facie* case of obviousness by not considering all of the claim limitations and misconstruing the same. *See* MPEP 2143.03. Specifically, the Office Action makes a blanket conclusion, without support in the cited references or otherwise, that the result of the process described in Piedboeuf “would ultimately result” in the claimed structures of the present application. Yet, the Office Action admits that the cited references fail to show these specific structures. The Office Action also fails to describe how one skilled in the art could arrive at the claimed structures simply by reviewing the processes of the cited references without undue experimentation or the benefit of hindsight bias from the disclosure of the present application. Indeed, hindsight bias is clear as “knowledge gleaned only from applicant’s disclosure” is used in the rejections of the claims. MPEP 2145(X)(A); *see also* MPEP § 2142 (“impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.”). Specifically, the Office Action concludes, incorrectly, that “the system taught by Piedboeuf is nearly identical to ... the system as **defined by applicant’s specification**” as evidence that Piedboeuf’s system must be capable of producing the claimed structures. However, such structures are only taught in

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the present application, and, in any event, there are distinct differences between the processes of the cited references and the present application as evident through a comparison of the same. To be clear, no process is presently claimed and should not be seen as limiting of the currently pending claims.

Therefore, Piedboeuf, Sudano, Rohatgi, and Franco, whether alone or in combination, fail to teach, show, or suggest, or otherwise make obvious, all of the elements of claims 1, 10, 21, and 25. Accordingly, withdrawal of the rejections and allowance of claims 1, 10, 21, and 25, and claims 2-9, 11-15, 17-20, and 22-24 dependent thereon, is respectfully requested.

IV. CONCLUSION

In view of the forgoing, it is submitted that this application is in condition for allowance. Allowance is respectfully requested. If the Examiner believes that a telephonic interview would expedite the allowance of this application, the Examiner is requested to contact the undersigned for prompt resolution of any outstanding issues.

It is respectfully requested that this paper, if necessary, be considered as a Petition for Extension of Time sufficient to effect a timely response and that shortages in fees, if any, be charged, or any overpayment in fees credited, to the Account of Barnes & Thornburg, Deposit Account No. 12-0913 with reference to file 64844-256633.

Respectfully submitted,

Date: September 13, 2018

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First Named Inventor/Applicant Name:	Andrew Stephens
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1	Applicant Arguments/Remarks Made in an Amendment	256633_Response.pdf	44852	no	10
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Warnings:

TANGENT EXHIBIT T2013

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