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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GREGORY CLIFFORD GAGNON,
YU-CHANG HONG, and MENG-KAI SHIH

Appeal 2019-006361
Application 14/077,922
Technology Center 3700

Before JOHN C. KERINS, KEVIN F. TURNER, and
BENJAMIN D. M. WOOD, *Administrative Patent Judges*.

KERINS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 7–11 and 14–17. Claims 1–6, 12, 13, and 18–21 are canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ The term “Appellant” is used herein to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Corning Incorporated. Appeal Br. 3.

THE CLAIMED SUBJECT MATTER

Appellant's invention relates to a method for separating a glass sheet from a glass ribbon. Claim 7 is illustrative, and is reproduced below:

7. A method for separating a glass sheet from a glass ribbon, the method comprising:

moving the glass ribbon along a conveyance pathway;

directing the glass ribbon through a separation apparatus comprising a support nosing and a scoring device, wherein the conveyance pathway is positioned between the support nosing, a passive support device, and the scoring device, the passive support device comprising a plurality of contact points individually coupled to a plurality of air cylinders;

engaging a nosing material of the support nosing with at least a portion of a first surface of the glass ribbon, the nosing material directly attached to a beam, the beam supporting the nosing material along a length of the nosing material;

engaging a second surface of the glass ribbon with the plurality of contact points;

engaging the scoring device with the second surface of the glass ribbon along an intended line of separation, wherein the intended line of separation lies along the support nosing;

flattening the glass ribbon against the nosing material with the scoring device while maintaining the beam in a linearly fixed position, whereby the beam in the linearly fixed position maintains the nosing material in a flat orientation;

traversing the scoring device over the second surface of the glass ribbon on the intended line of separation to introduce a partial vent in the second surface of the glass ribbon, wherein:

the nosing material is maintained in the flat orientation with the beam as the scoring device is traversed over the second surface of the glass ribbon;

the nosing material has a sufficiently low coefficient of friction relative to the first surface of the glass such that lateral edges of the glass ribbon slide against the nosing material in a lateral direction and the first surface of the glass ribbon contacts the nosing material as the scoring device traverses over the second surface of the glass ribbon; and

the nosing material has a sufficiently high hardness such that the partial vent extends across the entire width of the glass ribbon; and

subsequent to engaging the scoring device with the second surface of the glass ribbon and flattening the glass ribbon, applying a bending moment to the glass ribbon to propagate the partial vent through a thickness of the glass ribbon.

THE REJECTIONS

The Examiner rejects:

(i) claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Lu (US 2011/0277507 A1, published Nov. 17, 2011) in view of Chalk (US 2008/0276646 A1, published Nov. 13, 2008);

(ii) claims 8 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Lu in view of Chalk and Onzuka (US 5,844,051, issued Dec. 1, 1998);

(iii) claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Lu in view of Chalk and Cox (US 2006/0261118 A1, published Nov. 23, 2006);
and

(iv) claims 11 and 14–17 under 35 U.S.C. § 103(a) as being unpatentable over Lu in view of Chalk, Onzuka, and Cox.

ANALYSIS

Claim 7--§ 103(a)--Lu/Chalk

The Examiner finds that Lu discloses all elements of method claim 7, with the exception of providing a passive support device comprising a plurality of contact points individually coupled to a plurality of air cylinders, and the claimed step of engaging a second surface of a glass ribbon with the plurality of contact points. Final Act. 4–5. The Examiner cites to Chalk as disclosing a method for separating a glass sheet from a glass ribbon, the apparatus for which includes passive support device 330a comprising a plurality of contact points 334 individually coupled to a plurality of air cylinders 332, and a step of engaging a second surface of a glass ribbon with the plurality of contact points. *Id.* at 5, citing Chalk, Fig. 3K and ¶ 30. The Examiner identifies that paragraph 30 of Chalk discloses that its passive support device aids in minimizing motion of the glass sheet. *Id.* The Examiner concludes that it would have been obvious to add a passive support device of the type disclosed in Chalk to the device and method of Lu, to engage a second surface of the glass ribbon with the contact points of the passive support device, and that “[d]oing so would allow the passive support device to minimize the motion of the glass sheet and help reduce the stress within the glass sheet.” *Id.* at 5–6, citing Chalk, Abstract.

Appellant argues that the proposed modification to Lu is redundant of components in Lu that perform the same function, i.e., minimizing the motion of the glass ribbon as the ribbon is scored in the process of forming glass sheets from the ribbon. Appeal Br. 20. Appellant explains that Lu employs a nosing having a vacuum system operating in concert therewith to create pressure zones to position and support a glass ribbon at a second

surface thereof, opposite a first surface across which scoring device traverses to score or vent the first surface. *Id.* at 19–20. Appellant points out that, in Chalk, the passive support structure cited by the Examiner performs the same function as does the vacuum system and pressure zones of Lu, i.e., applies a force against the glass ribbon, pushing the glass ribbon against a flexible beam, with the result that motion and vibration in the glass caused by the scoring process are minimized. *Id.* at 20. As such, Appellant argues, a person of ordinary skill in the art would not have reason to modify Lu as proposed by the Examiner, because adding a passive support device as disclosed in Chalk would be redundant. *Id.*

The Examiner responds that “[a]dding the passive support device of Chalk would provide additional vibration reduction, therefore would not be redundant.” Ans. 3. Appellant responds that “the Office provides no evidence or argument to support the claim that the passive support device of Chalk would provide ‘additional vibration reduction’ and there is no teaching in either reference that indicates such an assertion is true.” Reply Br. 2. Appellant correctly notes that Lu is silent on this point, and that Chalk provides no indication that its passive support device would be a useful addition to a device that already has multiple components designed to keep a glass ribbon positioned against a support nosing and to thereby reduce vibration. *Id.*

Appellant has the better position here. Whereas the Examiner reiterates in the Answer that “the combination of Lu in view of Chalk is adding only the passive support device to the device of Lu” (Ans. 3), it appears that the passive support device, as it is disclosed for use in Chalk, is for the same purpose as that for which the vacuum system is provided in the

nosing of Lu. Thus, although substitution of the passive support system of Chalk for the nosing including the vacuum system of Lu might possibly be determined to be an obvious modification, that is not the basis for the rejection before us, nor would that modification by itself render obvious the entire method set forth in claim 7.

Accordingly, the rejection of claim 7 as being unpatentable over Lu and Chalk is not sustained.

Claims 8 and 10--§ 103(a)--Lu/Chalk/Onzuka

The Examiner does not rely on Onzuka in any manner that cures the deficiency in the proposed combination of Lu and Chalk. The rejection of claims 8 and 10 is not sustained.

Claim 9--§ 103(a)--Lu/Chalk/Cox

The Examiner does not rely on Cox in any manner that cures the deficiency in the proposed combination of Lu and Chalk. The rejection of claim 9 is not sustained.

Claims 11 and 14-17--§ 103(a)--Lu/Chalk/Onzuka/Cox

Claim 11 depends indirectly from independent claim 7, and the Examiner does not rely on Onzuka or Cox in any manner that cures the deficiency in the proposed combination of Lu and Chalk. The rejection of claim 11 is not sustained.

Independent claim 14 is rejected using, as a start, the same proposed combination of Lu and Chalk as presented in rejecting claim 7. The Examiner does not rely on Onzuka or Cox in any manner that cures the

deficiency noted in the proposed combination of Lu and Chalk. The rejection of independent claim 14, and of claims 15–17 depending therefrom, is not sustained.

DECISION

The rejections of claims 7–11 and 14–17 under 35 U.S.C. § 103(a) are reversed.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
7	103(a)	Lu, Chalk		7
8, 10	103(a)	Lu, Chalk, Onzuka		8, 10
9	103(a)	Lu, Chalk, Cox		9
11, 14–17	103(a)	Lu, Chalk, Onzuka, Cox		11, 14–17
Overall Outcome				7–11, 14–17

REVERSED