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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SEBASTIEN NALIN and SCOTT L. HUNTZINGER

Appeal 2019-003710
Application 13/873,822
Technology Center 3700

Before EDWARD A. BROWN, BRANDON J. WARNER, and PAUL J. KORNICZKY, *Administrative Patent Judges*.

KORNICZKY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE[1]

Pursuant to 35 U.S.C. § 134(a), Appellant[2] appeals from the Examiner's decision to reject claims 1–5, 11, 12, 17, 19, and 28–34. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claims are directed to a system and method for applying a coating to a workpiece. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A system for applying a coating to a workpiece, the system comprising:
>
> a spray applicator head comprising a chamber and a feed inlet located within the chamber to introduce a water-based liquid into the chamber, the chamber comprising an applicator opening and being maintained at a vacuum, the applicator head configured to spray the water-based liquid onto the workpiece and to remove excess liquid through the chamber by the maintained vacuum; and
>
> a humidifying apparatus operably coupled to a steam source, the humidifying apparatus comprising first and second steam exhausts located external to the chamber and configured to direct steam toward the applicator head,
>
> wherein the first steam exhaust is located at a first angular position relative to an axis of the applicator head, and the second steam exhaust is located at a second angular position relative to

[1] In this Decision, we refer to (1) the Examiner's Final Office Action dated May 16, 2018 ("Final Act.") and Answer dated February 11, 2019 ("Ans."), and (2) Appellant's Appeal Brief dated October 16, 2018 ("Appeal Br.") and Reply Brief dated April 9, 2019 ("Reply Br.").

[2] We use the term "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Armstrong World Industries. Appeal Br. 2.

the axis of the applicator head, the first angular position being different than the second angular position.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Schiele	US 5,298,072	Mar. 29, 1994
Kohl	US 6,171,653 B1	Jan. 9, 2001

REJECTION

Claims 1–5, 11, 12, 17, 19, and 28–34 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schiele and Kohl. Final Act. 2.

OPINION

Appellant argues claims 1–5, 11, 12, 17, 19, and 28–34 as a group. Appeal Br. 4. We select independent claim 1 as the representative claim, and claims 2–5, 11, 12, 17, 19, and 28–34 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Schiele, which is directed to an apparatus for coating the edges of workpiece (Schiele, 1:6–7), discloses all of the limitations of claim 1 except for the limitation reciting a "humidifying apparatus comprising first and second steam exhausts located external to the chamber." Final Act. 2–5, 13–14; Ans. 3–5. Figure 2 of Schiele is reproduced below.

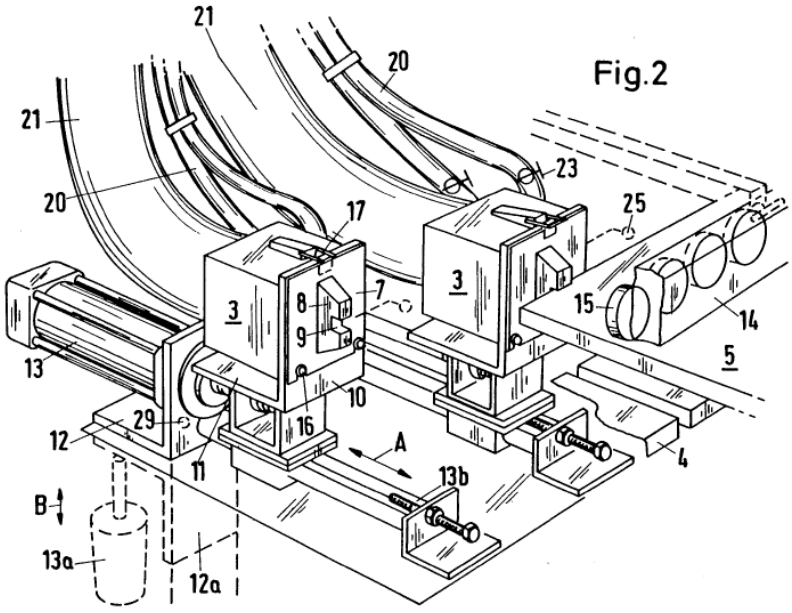

Figure 2 illustrates a "diagrammatic perspective view of a detail of [Schiele's] edge-coating apparatus." Schiele, 3:38–39. Figure 2 illustrates two separate edge-coating heads 3 which are arranged to receive workpieces 5 whose edges are to be coated. *Id*. at 3:51–55. Each head 3 has a coating nose 8 that is formed with notch 9 shaped to conform to a workpiece edge to be coated. *Id.* at 3:61–66. More specifically, the Examiner finds that Schiele discloses the recited spray applicator (i.e., head 3) and a chamber (i.e., notch 9). Final Act. 2.

The Examiner finds that Kohl discloses the missing "humidifying apparatus comprising first and second steam exhausts located external to the chamber." Final Act. 3–5. Figure 1A of Kohl is reproduced below.

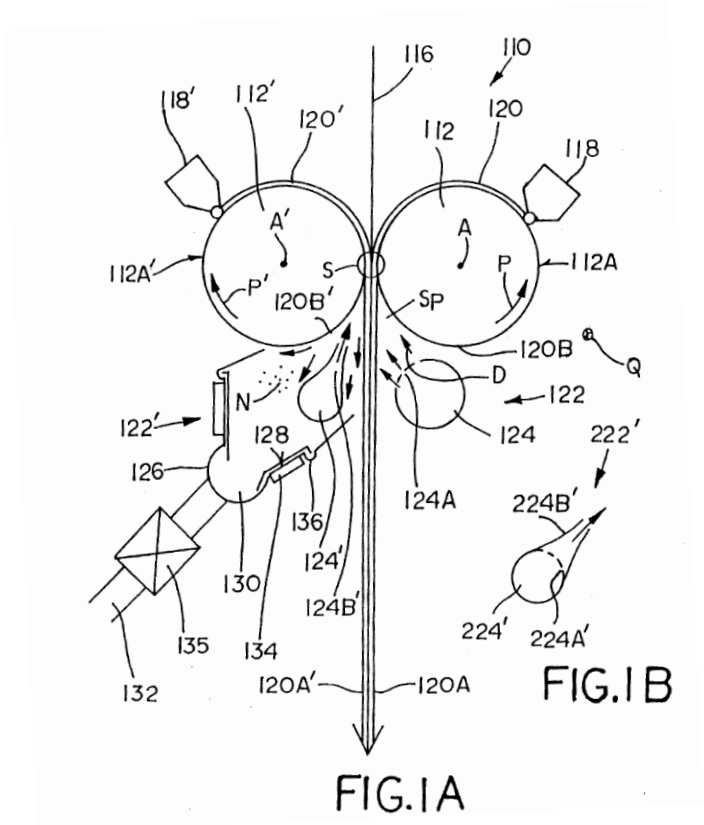

Figure 1A is a side, schematic view of Kohl's coating apparatus which applies a coating onto a material web, and shows "two embodiments of a steam-generating apparatus and/or the steam supply apparatus," one on either side of the material web. Kohl, 4:28–32. Kohl teaches passing web 116 of material between two applicator rolls 112, 112' that are pre-coated with coating medium 120, 120'. *Id.* at 4:61–5:7. As web 116 passes through a coating location S, coating medium 120, 120' is transferred from applicator rolls 112, 112' to the surface of web 116. *Id.*

Kohl discloses that steam may be applied to one or both sides of the web material. Kohl, 3:62–4:4. "In the case of the two-sided application of the coating medium onto the material web, each side of the material web is equipped with a steam-generating apparatus and/or the steam supply apparatus." *Id.* Referring to Figure 1A above, a "steam-generating

apparatus and/or the steam supply apparatus 122 and 122' is provided on each side of the material web 116, and is positioned in the spray or splash area, adjacent to coating location S, on the downstream side relative to the movement L of the material web 116." *Id.* at 5:16–20. A first embodiment of the "steam-generating apparatus and/or steam supply apparatus122 shown on the right side of FIG. 1a includes a steam supply line 124 positioned directionally perpendicular Q to the material web 116." *Id.* at 5:21–24. A second embodiment of "the steam-generating apparatus and/or the steam supply apparatus [122'] shown on the left side of FIG. 1[A] uses excess steam, provided via the steam supply line 124' and expelled into the spray through a nozzle-shaped steam exit slot 124b'." *Id.* at 5:33–42. A "flow of steam exits the spray area Sp, as indicated in FIG. 1[A] by the two arrows on each side of the slot-type nozzle 124b', even when the material web 116 and applicator roll 112' are stationary." *Id.*

The Examiner finds that Kohl discloses "a steam exhaust (122) located external to a chamber (126) and configured to direct steam toward an applicator head . . ., wherein the first steam exhaust (124) is located at a first angular position relative to an axis of the applicator head." Final Act. 3 (citing Kohl 2:54–61, Figure 1A). The Examiner reasons that it would have been obvious to one having ordinary skill in the art

> to modify Schiele with disclosures of Kohl, further providing a humidifying apparatus (Kohl, 122) operably coupled to a steam source, the humidifying apparatus (Kohl, 122) comprising a first steam exhaust (Kohl, 122) located external to the chamber (Schiele, 9) and configured to direct steam toward the applicator head (Schiele, 3), wherein the first steam exhaust (Kohl, 122) is located at a first angular position relative to an axis of the applicator head (Schiele, 3), in order to provide for slowing of a

> drying process, and a more uniform coating, as disclosed by Kohl (Column 2, lines 44–51).

Final Act. 3.

The Examiner further finds that "Schiele alone or in combination with Kohl fails to disclose a humidifying apparatus includ[ing] a second steam exhaust external to a chamber," as recited in claim 1. Final Act. 4. The Examiner presents two reasons to modify the combination of Schiele and Kohl to include a second steam exhaust, as recited. In the first, the Examiner reasons that it would have been obvious to one having ordinary skill in the art "to modify Schiele in view of Kohl, replacing the steam supply apparatus 122' of Kohl with an additional steam supply apparatus 122, in order to provide for minimized residual spray mist in the system as suggested by Kohl." *Id.* (citing Kohl, 5:34–60).

Appellant argues that the Examiner's rejection is erroneous for several reasons. Appeal Br. 10–15. First, Appellant argues that the Examiner erroneously reasons that "adding the steam exhausts of Kohl to the coating system of Schiele would help slow drying, thereby resulting in a more uniform coating on the edge of the workpiece of Schiele." *Id.* at 10. According to Appellant, the "coatings of Schiele are applied to a vertically oriented edge of a workpiece," and "[u]nder this configuration, the applied coating also has a vertical orientation." *Id.* Appellant argues that "[e]xtending the drying time of such vertically oriented coatings is undesirable because, under the effects of gravity, [] it causes the wet-coating composition to run downward resulting in a <u>non-uniform</u> edge coating," and it would not be obvious "to add the humidifying apparatus of Kohl to the system of Schiele because doing so extends the drying-time of the coating of

Schiele, and one having ordinary skill in the art would look away from increasing the drying time as that would result in non-uniform edge coatings." *Id.*

Appellant's arguments are not persuasive. Contrary to Appellant's argument that Schiele's system would provide for non-uniform edge coating, as the provision of steam exhausts would increase drying time, Kohl discloses that the increased drying time provides for a more uniform coating and that the increased drying time allows for the paint to bleed into the material web, thereby providing a more uniform coating. Kohl, 2:2:44–51. Referring to Figure 1A, reproduced above, we also note that Kohl discloses a vertically-oriented web material and coating system but does not disclose problems related to the coating running downward and resulting in non-uniform coatings.

Second, Appellant argues that Kohl teaches away from combination with Schiele because, "while Schiele and Kohl both generally disclose coating systems, . . . one having ordinary skill in the art would understand that the proposed combination is improper because the spray-application of atomized paint in Schiele and the roller transfer-coat application of viscous liquids in Kohl have conflicting technical limitations." Appeal Br. 10. Appellant argues that Schiele "requires that the coating medium to be atomized into a fine mist and indirectly transferred from a reservoir to the workpiece through the air, whereas Kohl requires the coating medium to be transferred from a reservoir to the substrate as a viscous liquid via direct-contact with a roll-coater 112, 112'." *Id.* (citing Schiele, code (57); Kohl, Figure 1A, 2:5–18). Appellant further argues that "Kohl explicitly teaches away from the atomized paint of Schiele as Kohl states it is undesirable for

the coating medium to be present as a 'spray mist,'" and "Schiele requires the coating head 8 have a specific geometry D that forms an exact fit around the workpiece 5 being coated (see Figure 7 of Kohl), whereas the coating head in Kohl (as interpreted by the Final Rejection) loosely surrounds the substrate that is to be coated." *Id.* (citing Schiele, 4:51–61; Kohl, 6:37–50, Figures 1A and 7).

Appellant's arguments are not persuasive. Just because better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes. *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). "The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another." *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000). In addition, a "reference does not teach away . . . if it merely expresses a general preference for an alternative invention but does not 'criticize, discredit, or otherwise discourage' investigation into the invention claimed." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004)).

Here, Kohl does not actually criticize, discredit, or otherwise discourage the Examiner's proposed combination of Schiele and Kohl. *Fulton*, 391 F.3d at 1201. Kohl does not criticize, discredit, or otherwise discourage the Examiner's proposed use of Kohl's steam-generating apparatus 122 in Schiele's coating system. Contrary to Appellant's arguments, the Examiner does not propose combining or bodily

incorporating Kohl's roller application system and Schiele's spray mist system.

Third, Appellant argues that the Examiner erroneously reasons that "adding a second steam exhaust would be obvious because 'where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.'" Appeal Br. 11 (citing Final Act. 3–5, 13–14). Appellant's argument is not persuasive because it does not addresses the Examiner's first rationale for combining Schiele and Kohl, which we find sufficient.

The Examiner persuasively reasons that it would have been obvious to one having ordinary skill in the art "to modify Schiele in view of Kohl, replacing the steam supply apparatus 122' of Kohl with an additional steam supply apparatus 122, in order to provide for minimized residual spray mist in the system as suggested by Kohl." Final Act. 4 (citing Kohl, 5:34–60); Ans. 4. Kohl discloses that steam may be applied to one or both sides of the web material. Kohl, 3:62–4:4. Kohl explains that, "[i]n the case of the two-sided application of the coating medium onto the material web, each side of the material web is equipped with a steam-generating apparatus and/or the steam supply apparatus." *Id.* Figure 1A above shows "two embodiments of the steam-generating apparatus and/or the steam supply apparatus . . . on either side of the material web." Kohl, 4:28–32. The first embodiment of the "steam-generating apparatus and/or steam supply apparatus122 shown on the right side of FIG. 1[A] includes a steam supply line 124 positioned directionally perpendicular Q to the material web 116." *Id.* at 5:21–24. The second embodiment of "the steam-generating apparatus and/or the steam supply apparatus [122'] shown on the left side of FIG. 1[A] uses excess

steam, provided via the steam supply line 124' and expelled into the spray through a nozzle-shaped steam exit slot 124b'." *Id.* at 5:33–42. We agree with the Examiner that a person of ordinary skill in the art would understand that either one or both of the steam-generating apparatus 122, 122' could be used. More specifically, a person of ordinary skill in the art would understand that steam-generating apparatus 122, located outside the chamber 9, could be used on both sides of the chamber, as recited in claim 1. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 420–21 (2007) (stating that "in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle" and that a "person of ordinary skill is also a person of ordinary creativity, not an automaton"). We find the Examiner's rationale to combine the teachings of Schiele and Kohl has rational underpinnings.

For the reasons above, the rejection of independent claim 1 is sustained. Because Appellant does not argue claims 2–5, 11, 12, 17, 19, and 28–34 separately from claim 1, the rejection of these claims is also sustained.

CONCLUSION

The Examiner's decision to reject claims 1–5, 11, 12, 17, 19, and 28–34 is AFFIRMED.

DECISION SUMMARY

In summary:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–5, 11, 12, 17, 19, 28–34	103	Schiele, Kohl	1–5, 11, 12, 17, 19, 28–34	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED