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EXAMINER

TRAN, THIEN S

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JENS PLHA, MARTIN KOCH, STEFAN WISCHMANN,
BERHARD NACKE, ALEXANDER NIKANOROV,
HOLGER SCHÜLBE, MARIO SCHMIDT, and
HENNING VON LÖHNEYSSEN

Appeal 2015-007228¹
Application 12/162,565²
Technology Center 3700

Before BIBHU R. MOHANTY, PHILIP J. HOFFMANN, and
AMEE A. SHAH, *Administrative Patent Judges*.

HOFFMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1–17. We have jurisdiction under 35 U.S.C. § 6(b).

¹ Our decision references Appellants’ Specification (“Spec.,” filed July 29, 2008), Appeal Brief (“Appeal Br.,” filed Feb. 9, 2015), and Reply Brief (“Reply Br.,” filed July 28, 2015), as well as the Final Office Action (“Final Action,” mailed Sept. 9, 2014) and Examiner’s Answer (“Answer,” mailed May 29, 2015).

² Under the Appeal Brief heading Real Party in Interest, Appellants identify “WISCO Tailored Blanks GmbH.” Appeal Br. 2.

We REVERSE.

According to Appellants, “[t]he invention relates to a method for the inductive radiofrequency welding of at least two metal products.” Spec. 1, ll. 5–6. Claims 1 and 10 are the only independent claims on appeal. Appeal Br., Claims App. We reproduce claim 1, below, as illustrative of the appealed claims.

1. Method for inductive radiofrequency welding of metal products, in which edge regions to be welded of the metal products are heated by inducing radiofrequency currents with use of at least one induction conductor, the metal products and a welding zone are moved relative to one another, the edge regions to be welded are brought in contact in the welding zone and are welded together to form a weld seam, wherein an induction conductor is used which comprises at least two mutually separable induction conductor components that are assigned to a respective metal product and are arranged relative thereto, and the edge regions to be welded are heated up, by induced radiofrequency current and a trajectory of the induced radiofrequency current in the metal product, to a welding temperature by each mutually separable induction conductor component in a manner that is adjusted separately for the respective metal product.

Id.

REJECTIONS AND PRIOR ART

The Examiner rejects claims 1–3, 5–8, 10–15, and 17³ under 35 U.S.C. § 103(a) as unpatentable over Rudd (US 2,938,993, iss. May 31,

³ Although it is not clear based on the heading on page 3 of the Final Office Action that the Examiner rejects each of claims 1–3, 5–8, 10–15, and 17 as unpatentable over Rudd, Schoen, and Seulen, the subsequent description of the rejected claims clarifies that the Examiner rejects each of these claims. *See* Final Action 3–10.

1960), Schoen (US 4,554,029, iss. Nov. 19, 1985), and Seulen (DE 975 798, pub. Aug. 30, 1962).

The Examiner rejects claims 4 and 12 under 35 U.S.C. § 103(a) as unpatentable over Rudd, Schoen, Seulen, and Schafer (US 3,701,871, iss. Oct. 31, 1972).

The Examiner rejects claims 9 and 16 under 35 U.S.C. § 103(a) as unpatentable over Rudd, Schoen, Seulen, and Ross (US 4,694,134, iss. Sept. 15, 1987).

ANALYSIS

Obviousness rejection of claims 1–3, 5–8, 10–15, and 17

As set forth above, independent claim 1 recites, among other recitations,

the edge regions to be welded are brought in contact in the welding zone and are welded together to form a weld seam, wherein an induction conductor is used which comprises at least two mutually separable induction conductor components that are assigned to a respective metal product and are arranged relative thereto, and *the edge regions to be welded are heated up, by induced radiofrequency current and a trajectory of the induced radio frequency current in the metal product, to a welding temperature by each mutually separable induction conductor component.*

Appeal Br., Claims App. (emphasis added). Although the Examiner finds that Rudd discloses numerous features of claim 1, the Examiner does not find that Rudd teaches heating metal edges, by induced radiofrequency current, to a welding temperature. *See, e.g.*, Final Action 3–4.

The Examiner finds, however, that

Schoen discloses [that] the conductor [is] an induction [conductor] (Figs[.] 4, 5, conductor 13, [c]ol[.] 7, [I]ine 50

through] [c]ol 8, [l]ine 5, radio frequency induction heating device) that heats the edge regions (Figs[.] 2[–]5, strip 1, strip 12, [c]ols[.] 6, 7) by induced radiofrequency current ([c]ol[.] 7, [l]ine 65 through] [c]ol[.] 8, [l]ine 5, local heating is accomplished due to the induced eddy currents) or a resistance heating conductor (Figs[.] 2, 3, conductor 5, [c]ol[.] 7, [l]ines 12[–]30) is known in the art.

Id. at 4. The Examiner further determines that

[i]t would have been obvious . . . to modify the method for inductive radiofrequency welding of metal products having at least two mutually separable resistance heating conductors of Rudd with the conductor being an induction conductor that heats the edge regions by induced radiofrequency current for the purpose of forming a conductor that rapidly heats regions of a steel sheet by radio frequency currents

as taught by Schoen (*id.* at 5 (citation omitted)), because the relied-upon teaching of Schoen is a “simple substitution” for Rudd’s heating conductor (*id.*). We agree with Appellants, however, that the Examiner does not establish adequately that either Rudd or Schoen teaches heating metal edges, by induced radiofrequency current, to a welding temperature. Appeal Br. 5–6. We note that in reply to Appellants’ arguments in the Appeal Brief that “Schoen teaches the use of inductive heating as a means for heat treating, not heating *to a welding temperature* as required by the claims” (*id.* at 6 (emphasis added)), the Examiner does not address adequately claim 1’s recitation relating to the “welding temperature” (Answer 6). Specifically, the Examiner determines in a conclusory manner, without further discussion or explanation, that “[t]herefore, Rudd in view of Schoen and Seulen fully discloses ‘mutually separable induction conductor components which are used to heat up a metal product to a welding temperature[.]’ given the

broadest reasonable interpretation of the claims.” *Id.* Similarly, the Examiner determines later in the Answer that

Rudd discloses using a resistance conductor to heat up the edge regions of a metal product to a welding temperature. Schoen discloses substituting the resistance heating conductor of Rudd with an induction conductor. Modifying the welding system of Rudd in view of the induction conduct[or] of Schoen would provide a welding system that has “an induction conductor used to heat up the edge regions of a metal product to a welding temperature.”

Answer 8. This determination is also conclusory and lacks adequate explanation.

Thus, based on the foregoing, we do not sustain the rejection of claim 1, or the rejection of claims 2, 3, and 5–8 that depend from claim 1. Independent claim 10 recites a similar limitation, and the Examiner rejects claim 10 for reasons similar to those discussed above for claim 1. Thus, we also do not sustain the rejection of claim 10 or its dependent claims 11–15 and 17.

Obviousness rejections of claims 4, 9, 12, and 16

Inasmuch as the Examiner does not establish adequately that any other reference remedies the above-discussed deficiencies in the rejection of independent claims 1 and 10, we do not sustain the rejections of dependent claims 4, 9, 12, and 16.

Appeal 2015-007228
Application 12/162,565

DECISION

We REVERSE the Examiner's obviousness rejections of claims 1–17.

REVERSED