UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN DANIEL HARGES and RODNEY DALE PATCH

Appeal 2006-3345
Application 10/256,982
Technology Center 3700

Decided: March 15, 2007

Before STUART S. LEVY, ROBERT E. NAPPI, and LINDA E. HORNER, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Steven Daniel Harges et al. ("Appellants") seek our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1-18. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM-IN-PART.

THE INVENTION

Appellants invented a system for sealing an opening of a package within a vacuum chamber (Specification 1: [0001]). Claims 1, 9, and 14, reproduced below, are representative of the subject matter on appeal.

> 1. A vacuum packaging machine comprising:
>
> a chamber;
>
> a vacuum generator operable to generate which generates a vacuum within said chamber;
>
> a sealing mechanism disposed within said chamber and including opposing sealing bars arranged to receive the open end of a package disposed within said chamber and operable to close the sealing bars about the open end of the package; and
>
> means for continuously heating at least one sealing bar when said vacuum generator is operated to generate said vacuum and said sealing mechanism is operated to close said sealing bars about the open end of the package.
>
> 9. A method for vacuum sealing a package comprising the steps of:
>
> supporting a package within a vacuum chamber with the open end of the
>
> package between sealing bars of a sealing mechanism disposed within the chamber;
>
> generating a vacuum in the chamber;

closing the sealing bars about the open end of the package after generating the vacuum; and

continuously heating at least one sealing bar during each of the supporting, generating, and closing steps.

14. A vacuum packaging machine comprising:

a chamber;

a vacuum generator which generates a vacuum within said chamber;

a sealing mechanism disposed within said chamber and including opposing sealing bars arranged to receive the open end of a package disposed within said chamber and operable to close the sealing bars about the open end of the package; and

a heater which is continuously connected to a source of current to generate heat with at least one of said opposing sealing bars when (i) said vacuum generator is operated to generate said vacuum, and (ii) said sealing mechanism is operated to close said opposing sealing bars about the open end of the package.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Kujubu	US 3,958,391	May 25, 1976
Kristen	US 4,941,310	Jul. 17, 1990

The following rejections are before us for review.

1. Claims 1, 2, 4-9, 11-14, and 16-18 stand rejected under 35 U.S.C. § 102(b) as anticipated by Kujubu.

2. Claims 3, 10, and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kujubu and Kristen.
3. Claims 1-8, 13, and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.[1]

PRIOR ART REJECTIONS

ISSUE

Appellants contend that the Examiner erred in rejecting claims 1, 2, 4-9, and 11-13 as anticipated by Kujubu and claims 3 and 10 as obvious in view of Kujubu and Kristen, because Kujubu does not disclose a sealing bar that is continuously heated during each of the supporting, generating, and closing steps, as required by claim 9 (Br. 6-9). Appellants further contend that the Examiner erred in rejecting claims 14 and 16-18 as anticipated by Kujubu and claim 15 as obvious in view of Kujubu and Kristen, because Kujubu does not disclose a heater for a sealing bar continuously connected to a source of current to generate heat with at least one

[1] The Examiner withdrew the rejection under 35 U.S.C. § 112, second paragraph, of independent claim 14 and its dependent claims 16-18 (Answer 6). The Examiner also partially withdrew the rejection under 35 U.S.C. § 112, second paragraph, of claim 1 based on the use of the word "operable"; however, claim 1 and its dependent claims 2-8 remain rejected under 35 U.S.C. § 112, second paragraph, on other grounds (Answer 6). Although the Examiner stated in the Final Office Action that claims 9-12 were rejected under 35 U.S.C. § 112, second paragraph, the Examiner did not provide any explanation of the basis for the rejection of these claims. As such, to the extent that the Examiner intended to reject these claims, we decline to sustain the rejection.

opposing sealing bar when the sealing mechanism is operated to close the opposing sealing bars about the open end of a package, as required by claim 14. The Examiner found that Kujubu discloses that its sealing bar is continuously heated during the closing step from the time the bag is clamped to the time the bag is sealed and cut while the bag is still supported, the vacuum is still being generated, and the bag is still clamped by the sealing bars (Answer 5). The Examiner also found that Kujubu's sealing machine must necessarily be continuously connected to a source of current in order to work and thus the heater must also inherently be continuously connected to the same source of current to generate heat with one of the sealing bars, as required by claim 14 (Answer 4). The issue before us is whether Appellants have shown that the Examiner erred in finding that Kujubu discloses continuously heating the sealing bar as the package is supported within a vacuum chamber, the vacuum is generated, and the sealing bars are being closed.

FINDINGS OF FACT

A preponderance of the evidence establishes the following facts:

Kujubu discloses a vacuum packaging machine having a heater head 51 with a heater strip 72 and a heater wire 74 (Kujubu, col. 6, ll. 30-38 and 41-47).

Kujubu discloses that heater strip 72 and heater wire 74 are connected through lead wires 77a, 77b, 79a, and 79b to terminals 80 installed in an air-tight manner through the wall of the vacuum box 22 and connected at their outside ends to slide rings 27 and 28 (Kujubu, col. 6, ll. 52-56).

Kujubu discloses that the slide rings 27 and 28 are connected to a power source by way of carbon terminals suspended from a support member 29 fixed to the hollow shaft 19, limit switches, and other parts (Kujubu, col. 6, ll. 57-61).

Kujubu discloses that the slide ring 27 is divided into equal divisions of the same number as the number of vacuum boxes 22 and is adapted to distribute power to only parts necessary for an impulse seal power source (Kujubu, col. 6, ll. 61-64).

Kujubu discloses that the machine, in operation, forms a vacuum box 22 and evacuates the interior of the vacuum box 22 (Kujubu, col. 8, ll. 35-40).

Kujubu discloses that "when the desired degree of vacuum within the bag 1 has been obtained," "the heater head 51 descends and clamps the bag 1 between itself and the elastic seat 47." (Kujubu, col. 9, ll. 11-20).

Kujubu discloses that after the bag has been clamped by the heater head 51, the limit switch, which controls the connection of the lead wires of the heater components to the power source, is turned "ON" so that electric current is passed through the heater strip 72 and the heater wire 74, whereupon the bag 1 is heat sealed (Kujubu, col. 9, ll. 21-24).

Thus, Kujubu discloses that the heater head 51, heater strip 72, and heater wire 74 are connected to a source of current to generate heat only when the limit switch is turned "ON."

Kujubu discloses that the limit switch is turned on after the vacuum box 22 has been evacuated and after the heater head 51 has closed and clamped the bag for sealing.

PRINCIPLES OF LAW

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 827 (1987).

"To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) (internal quotation marks omitted).

ANALYSIS

Appellants argue claims 1-13 as a first group and claims 14-18 as a second group. We select claim 9 as a representative claim from the first group and claim 14 as a representative claim from the second group.

Claim 9, directed to a method for vacuum sealing a package, requires "continuously heating at least one sealing bar during each of the supporting, generating, and closing steps." The generating step recites "generating a vacuum in the chamber." Thus, we interpret the heating step to require continuous heating of the sealing bar while the vacuum is being generated.

As stated *supra*, Kujubu's heater head 51, heater strip 72, and heater wire 74 are heated only after the vacuum box 22 has been evacuated. As such, Kujubu does not disclose continuously heating the sealing bar while the vacuum is being generated. The Examiner found that Kujubu discloses that its sealing bar is continuously heated during the closing step from the time the bag is clamped to the time the bag is sealed and cut while the bag is still supported, the vacuum is still being generated, and the bag is still clamped by the sealing bars (Answer 5). The claim, however, requires that the sealing bar is continuously heated during the generating step. As stated *supra*, Kujubu does not turn on the limit switch to heat its heater head 51 until *after* "the desired degree of vacuum within the bag 1 has been obtained" (i.e., the vacuum has been generated). As such, Kujubu does not disclose continuously heating at least one sealing bar "during" this generating step.

Claim 14, directed to a vacuum packaging machine, recites "a heater which is continuously connected to a source of current to generate heat with at least one of said opposing sealing bars when (i) said vacuum generator is operated to generate said vacuum, and (ii) said sealing mechanism is operated to close said opposing sealing bars about the open end of the package." As stated *supra*, Kujubu discloses that after the desired degree of vacuum within the bag 1 has been obtained and after the bag has been clamped by the heater head 51, the limit switch, which controls the connection of the lead wires of the heater components to the power source, is turned "ON" so that electric current is passed through the heater strip 72 and the heater wire 74, whereupon the bag 1 is heat sealed. Thus, Kujubu discloses that the heater head 51, heater strip 72, and heater wire 74 are

connected to a source of current to generate heat only *after* the vacuum box 22 has been evacuated.

The Examiner found that Kujubu's heater must inherently be continuously connected to a source of current in order to generate heat with one of the sealing bars. We disagree. Kujubu clearly discloses that the connection between the heater head 51 and the power source occurs only when the limit switch is "on." As such, when the limit switch is "off," i.e., during the generation of the vacuum, the heater head 51 is not connected to a source of current to generate heat.

We also do not find any suggestion or motivation in Kujubu or Kristen, which was relied upon by the Examiner to show use of a temperature sensor to monitor the temperature of the sealing bar, to modify the machine of Kujubu to continuously heat the heater head 51.

Accordingly, we find that Kujubu does not anticipate representative claims 9 and 14 and that Kujubu and Kristen do not render obvious dependent claims 3, 10, and 15.

CONCLUSIONS OF LAW

We conclude that the Examiner erred in rejecting claims 1, 2, 4-9, 11-14, and 16-18 as anticipated by Kujubu and erred in rejecting claims 3, 10, and 15 as obvious in view of Kujubu and Kristen.

INDEFINITENESS REJECTION

Claims 1-8, 13, and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention. Appellants do not contest the Examiner's rejection of claims 1, along with dependent claims 2-8, and claim 15 on the basis of typographical errors (Br. 12). As such, we sustain the rejection of claims 1-8 and 15 for indefiniteness. Pursuant to our authority under 37 C.F.R. § 41.50(c), we find that Appellants would overcome this rejection if they amended claim 1 to delete the language "operable to generate" and amended claim 15 to replace "said element" (first occurrence) with "an element" and to replace "the element temperature" with "an element temperature."

Appellants contend that the metes and bounds of the present invention are clearly ascertainable from claim 13 as presently written (Br. 12). The Examiner found that "releasing the sealing bars from the open end of the package after a pre-determined dwell time" is indefinite because it is unclear whether or not the package has been sealed after the predetermined dwell time (Answer 6).

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986) (citations omitted).

Claim 13 further limits claim 9 and adds a step of releasing the sealing bars after a predetermined amount of time. We find that the scope of the claim would

be clear on its face to one skilled in the art and requires only that the sealing bars remain closed a predetermined amount of time as opposed to an indeterminate time period. Whether or not the bag has been sealed after the predetermined time period is irrelevant to the understanding of the claim. As such, we do not sustain the Examiner's rejection of claim 13 under 35 U.S.C. § 112, second paragraph.

DECISION

The Examiner's rejection of claims 1, 2, 4-9, 11-14, and 16-18 under 35 U.S.C. § 102(b), claims 3, 10, and 15 under 35 U.S.C. § 103(a), and claims 9-14 and 16-18 under 35 U.S.C. § 112, second paragraph are not sustained. The Examiner's rejection of claims 1-8 and 15 under 35 U.S.C. § 112, second paragraph, is sustained; however, Appellants can overcome this rejection by amending claims 1-8 and 15 as explained *supra*.

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) (2006).

AFFIRMED-IN-PART

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