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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/734,186	04/16/2010	Tsuyoshi Koshidaka	HIR-020	1615
32628	7590	10/28/2016	EXAMINER	
KANESAKA BERNER AND PARTNERS LLP 2318 Mill Road Suite 1400 ALEXANDRIA, VA 22314-2848			MATHEW, FENN C	
			ART UNIT	PAPER NUMBER
			3781	
			NOTIFICATION DATE	DELIVERY MODE
			10/28/2016	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TSUYOSHI KOSHIDAKA and MASAMICHI SUDO

Appeal 2014-002998
Application 12/734,186
Technology Center 3700

Before CYNTHIA L. MURPHY, KENNETH G. SCHOPFER, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants¹ appeal under 35 U.S.C. § 134 from the Examiner's rejections of claims 1–6 and 8–15. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

We AFFIRM.

¹ The Appellants identify the real party in interest as “DAIKYO SEIKO, LTD.” (Appeal Br. 2.)

STATEMENT OF THE CASE

The Appellants' invention "relates to a rubber stopper used to seal an opened portion of vials and syringes as medical vessels." (Spec. 1.)

*Illustrative Claim*²

1. A vial rubber stopper, comprising:

a disc-like top portion;

a cylindrical leg portion having a smaller diameter than a diameter of the disc-like top portion, which is protruded from a bottom surface of the disc-like top portion to form a flange on an upper part thereof;

an under-flange ring portion extending from the bottom surface and disposed on an outer peripheral surface of the cylindrical leg portion; and

at least one ring-shape raised portion arranged below the under-flange ring portion in a circumferential direction, and having a continuous annular ring-shape, said at least one ring-shape raised portion including a first ring-shape raised portion,

wherein an upper surface of the disc-like top portion including a flange-upper surface, a maximum diametral portion of a flange-peripheral surface, the bottom surface of the disc-like top portion located inside of the cylindrical leg portion, a surface of the cylindrical leg portion other than the under-flange ring portion, and the first ring-shape raised portion are laminated with a synthetic resin film to leave the bottom surface and a surface of the under-flange ring portion as a naked rubber stock,

only an upper end part of the cylindrical leg portion laminated with the synthetic resin film and the under-flange ring portion in the naked rubber stock are present between the first ring-shape raised portion and the bottom surface of the disc-like top portion, and

² This illustrative claim is quoted from the Claims Appendix ("Claims App.") set forth on pages 10–13 of the Appeal Brief.

the upper end part of the cylindrical leg portion laminated with the synthetic resin film and the under-flange ring portion in the naked rubber stock present between the first ring-shape raised portion and the bottom surface of the disc-like top portion extend substantially linearly in a longitudinal direction of the cylindrical leg portion and curve in a circumferential direction thereof.

References

Gillon	US 3,025,991	Mar. 20, 1962
Ikeda	US 3,898,046	Aug. 5, 1975
Tatsumi	US 4,915,243	Apr. 10, 1990
Iidaka	US 5,857,580	Jan. 12, 1999
Okuda	EP 0 294 127 B1	Nov. 09, 1994

Rejections

I. The Examiner rejects claims 1, 2, 4–6, 8, and 12–14 under 35 U.S.C. § 103(a) as unpatentable Okuda and Iidaka. (Final Action 2.)³

II. The Examiner rejects claim 3 under 35 U.S.C. § 103(a) as unpatentable Okuda, Iidaka, and Ikeda. (*Id.* at 8.)

III. The Examiner rejects claim 9 under 35 U.S.C. § 103(a) as unpatentable Okuda, Iidaka, and Tatsumi. (*Id.* at 9.)

IV. The Examiner rejects claims 10, 11, and 15 under 35 U.S.C. § 103(a) as unpatentable Okuda, Iidaka, and Gillon. (*Id.* at 10.)⁴

³ We consider the Examiner’s non-listing of claims 12–14 in the opening paragraph of this rejection as inadvertent given the specific detailed findings provided for each of these claims. (*See* Final Action 2, 7–8; *see also* Appeal Br. 4.))

⁴ We consider the Examiner’s non-listing of claim 15 in the opening paragraph as inadvertent given the specific detailed findings provided for this claim. (*See* Final Action 10, 11; *see also* Appeal Br. 8.)

ANALYSIS

Independent Claim 1

Independent claim 1 recites a “rubber stopper” comprising a “disc-like top portion,” a “cylindrical leg portion,” an “under-flange ring portion extending from the bottom surface [of the top portion],” and a “ring-shape raised portion arranged below the under-flange ring portion.” (Claims App.) The Examiner finds that Okuda discloses a rubber stopper comprising such portions. (*See* Final Action 2–3.) Okuda discloses a rubber stopper comprising a disc-like head portion 1, a cylindrical body portion 2, a sealing surface 6, and protrusions 10. (*See* Okuda Fig. 8.) In Okuda’s rubber stopper, sealing surface 6 extends from a bottom surface 5 of head portion 1 and protrusions 10 are arranged below sealing surface 6. (*Id.*)

Independent claim 1 also requires that “only an upper end part of the cylindrical leg portion laminated with the synthetic resin film and the under-flange ring portion in the naked rubber stock are present between the first ring-shape raised portion and the bottom surface of the disc-like top portion.” (Claims App.) The Examiner finds that Okuda discloses such laminated and non-laminated parts. (*See* Final Action 3–4.) In Okuda, an upper part of body portion 2 is shown situated between the bottom edge of sealing surface 6 and the top edge of protrusions 10. (*See* Okuda, Fig. 8.) Okuda discloses that “some or all of the body portion can be laminated with a fluorine resin film” and sealing surface 6 can have an “exposed rubber surface[.]” (Okuda, 3, lines 28, 43–45.)

The Appellants argue that Okuda’s sealing surface 6 is “closest” to bottom surface 5 of head portion 1 and is “a wide non-laminated portion.” (Appeal Br. 5.) We are not persuaded by this argument because the

Examiner's findings implicate that Okuda's sealing surface 6 is considered to be the claimed under-flange ring portion in naked rubber stock. (*See* Final Action 4; *see also* Answer 13.) The Appellants do not point, with particularity, to claim limitations precluding this non-laminated part from being wide. And the Appellants do not adequately address why Okuda does not show only this non-laminated part 6 and the just-below laminated body part being present between protrusions 10 and the bottom surface 6 of head portion 1. (*See* Okuda, Fig. 8.)

Independent claim 1 additionally requires that “the upper end part of the cylindrical leg portion laminated with the synthetic resin film and the under-flange ring portion in the naked rubber stock present between the first ring-shape raised portion and the bottom surface of the disc-like top portion extend substantially linearly in a longitudinal direction of the cylindrical leg portion and curve in a circumferential direction thereof.” (Claims App.) The Examiner finds that the corresponding elements in Okuda extend and curve in this manner. (*See* Final Action 4.) Okuda shows sealing surface 6 extending parallel to a longitudinal axis 7 of body portion 2 except for a lower edge section that ramps inwardly. (*See* Okuda Fig. 8.) Okuda also shows the just-below body part extending parallel to the longitudinal axis 7, although at a smaller diameter than the non-ramped part of sealing surface 6. (*See id.*)

The Appellants argue that, in Okuda, “the sealing surface 6 is bulged (or outwardly expanded) and fails to extend substantially linearly in the longitudinal direction and to curve in the circumferential direction.” (Appeal Br. 4.) We are not persuaded by this argument because the claim language requires the under-flange ring portion to extend “substantially”

linear in the longitudinal direction and, as discussed above, the non-ramped section of Okuda's sealing surface 6 extends parallel to longitudinal axis 7. As noted by the Examiner, "the majority" of sealing surface 6 "extends linearly" while "only a small portion" provides a ramp. (Answer 13.) As also noted by the Examiner, independent claim 1 does not require the under-flange ring portion and the upper leg part to have the same diameter. (*See id.*)

Independent claim 1 further requires the raised portion to have a "continuous annular ring-shape." (Claims App.) The Examiner finds that Iidaka shows that "the use of continuous annular ring-shaped protrusions on stopper-type closures is known in the art." (Final Action 4.) The Examiner determines that it would have been obvious to form Okada's protrusions 10 as a continuous annular ring-shape in order "to create a liquid tight seal with a container neck when the stopper is fully inserted into the container neck." (Final Action 5.)

The Appellants argue that Okuda does not disclose a continuous annular ring and that Iidaka is silent with respect to laminated and non-laminated parts. (*See* Appeal Br. 5.) We are not persuaded by this argument because "non-obviousness cannot be established by attacking references individually where the rejection is based on the teachings of a combination of references." *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986.) Here, the Examiner's rejection is based upon a combination of Okuda's teachings regarding laminated/non-laminated parts and Iidaka's teachings regarding a continuous annular ring.

The Appellants also advance arguments premised upon the "good slidability" and the "excellent sealing performances" achieved by their

invention. (Appeal Br. 4.) According to the Appellants, “a skilled artisan would not have found any reason or motivation to combine Okuda and Iidaka to achieve the aforementioned slidability and sealing performances.” (*Id.* at 6.) We are not persuaded by these arguments because, as noted by the Examiner, the proposed combination of the prior art does not have to “solve the same problem” addressed by the Appellants. (Answer 14.) Instead, “any need or problem known in the field of endeavor at the time of invention” can provide “a reason for combining the elements in the manner claimed.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 419–20 (2007.) Here, the Examiner’s reason for the combination involves the need for a liquid tight seal (*see* Final Action 5) and Iidaka teaches that a continuous annular protrusion can provide such a seal (*see* Iidaka col. 3, lines 36–39).

Accordingly, we are unpersuaded by the Appellants’ arguments alleging Examiner error with respect to the rejection of independent claim 1. Thus, we sustain the rejection of independent claim 1 under 35 U.S.C. § 103(a) as unpatentable over Okuda and Iidaka (Rejection I).

Independent Claim 15

Independent claim 15 recites the same rubber-stopper portions discussed above in connection with independent claim 1; and further recites “a second ring-shape raised portion disposed on the cylindrical leg portion in a circumferential direction thereof, under the first ring-shape raised portion with a space therebetween, and having the continuous annular ring-shape.” (Claims App.) The Examiner finds that “the stopper disclosed by Okuda in view of Iidaka and Gillon meets all the limitations [of independent claim 15].” (Final Action 11.)

The Appellants argue that, irrespective of Gillon’s teachings on multiple ring-like raised portions, the Examiner’s rejection is untenable for the same reasons discussed above in connection with independent claim 1. (*See* Appeal Br. 8–9.) As the Appellants do not establish that the Examiner errs in the rejection of independent claim 1, we are not persuaded by these arguments.

As indicated above, independent claim 15 recites rubber-stopper portions that are the same or similar to those recited in independent claim 1. However, while independent claim 1 recites that the rubber stopper “comprises” these portions, independent claim 15 recites that the rubber stopper “consists essentially of” a disc-like top portion, a cylindrical leg portion, an under-flange ring portion, a first ring-shaped raised portion, and a second-ring-shape raised portion. (Claims App.) The Examiner finds that the “[t]he additional structures of the proposed combination do not materially affect the basic and novel characteristics of the claimed invention.” (Answer 15.)

The Appellants argue that “[n]one of the cited references discloses or suggests that a vial rubber stopper that *consists* of a disc-like top portion, a cylindrical leg portion, an under-flange ring portion, a first ring-shape raised portion, and a second ring-shape raised portion, as claimed.” (Appeal Br. 9.) We are not persuaded by this argument because the transitional phrase in independent claim 15 is not “consists of,” but rather “consists essentially of.” As such, independent claim 15 covers a rubber stopper having the recited portions and also additional structure that “do[es] not affect the basic and novel properties of the invention.” *PPG Indus. Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354 (Fed. Cir. 1998). And the Appellants do not

challenge the Examiner's finding that the additional structure in the proposed combination of the prior art does not affect the basic and novel characteristics of the rubber stopper recited in independent claim 15.

Accordingly, we are unpersuaded by the Appellants' arguments alleging Examiner error with respect to the rejection of independent claim 15. Thus, we sustain the rejection of independent claim 15 under 35 U.S.C. § 103(a) as unpatentable over Okuda, Iidaka, and Gillon. (Rejection IV).

Dependent Claims 2–6 and 12–14

With respect to dependent claims 2, 4–6, 8, and 12–14, the Appellants do not argue these claims separately from independent claim 1 (*see* Appeal Br. 4–6) and so they fall with independent claim 1. With respect to dependent claims 3, 9, 10, and 11, the Appellants argue only that the Examiner's rejection is untenable for the same reasons discussed above in connection with independent claim 1 (*see* Appeal Br. 6–9) and so they also fall with independent claim 1.

Thus, we sustain the Examiner's rejection of 2, 4–6, 8, and 12–14 under 35 U.S.C. § 103(a) as unpatentable Okuda and Iidaka (Rejection I); we sustain the Examiner's rejection of claim 3 under 35 U.S.C. § 103(a) as unpatentable over Okuda, Iidaka, and Ikeda (Rejection II); we sustain the Examiner's rejection of claim 9 under 35 U.S.C. § 103(a) as unpatentable over Okuda, Iidaka, and Tatsumi (Rejection III), and we sustain the Examiner's rejection of claims 10 and 11 under 35 U.S.C. § 103(a) as unpatentable over Okuda, Iidaka, and Gillon (Rejection IV).

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DECISION

We AFFIRM the Examiner's rejections of claims 1–6 and 8–15.

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

AFFIRMED