



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/323,683	07/03/2014	Jeongchull AHN	SDISA.283AUS	5080
20995	7590	11/04/2019	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			GATEWOOD, DANIEL S	
			ART UNIT	PAPER NUMBER
			1729	
			NOTIFICATION DATE	DELIVERY MODE
			11/04/2019	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

efiling@knobbe.com  
jayna.cartee@knobbe.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* JEONGCHULL AHN and SEONGJA NOH

---

Appeal 2019-003196  
Application 14/323,683  
Technology Center 1700

---

Before JEFFREY T. SMITH, N. WHITNEY N. WILSON, and  
MONTÉ T. SQUIRE, *Administrative Patent Judges*.

SQUIRE, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

Appellant<sup>2</sup> appeals under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1–4, 7, 8, 10, and 12–20, which are all of the claims pending in this application.<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

---

<sup>1</sup> In this Decision, we refer to the Specification filed July 3, 2014 (“Spec.”); Final Office Action dated July 20, 2018 (“Final Act.”); Appeal Brief filed Nov. 9, 2018 (“Appeal Br.”); Examiner’s Answer dated Jan. 18, 2019 (“Ans.”); and Reply Brief filed Mar. 18, 2019 (“Reply Brief”).

<sup>2</sup> We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Samsung SDI Co., Ltd. as the real party in interest. Appeal Br. 3.

<sup>3</sup> Claims 5, 6, 9, and 11 are canceled. Appeal Br. 16–17.

We AFFIRM.

### CLAIMED SUBJECT MATTER

Appellant's disclosure relates to a jelly roll tape for a rechargeable battery and a rechargeable battery having the same. Spec. ¶ 2; Abstract. Claim 1 is illustrative of the claimed subject matter on appeal and is reproduced below from the Claims Appendix to the Appeal Brief:

1. A jelly roll tape for an electrode assembly of a rechargeable battery, the jelly roll tape comprising:

a first adhesive layer configured to develop an adhesive property based at least in part on a reaction with an electrolytic solution, the first adhesive layer having a tensile strength in the range of about 200 kgf/cm<sup>2</sup> to about 600 kgf/cm<sup>2</sup>;

an electrolyte insoluble film adhered to and in direct contact with at least one surface of the first adhesive layer;  
and

a second adhesive layer formed on the electrolyte insoluble film opposite the first adhesive layer, wherein the second adhesive layer is formed at least 70 wt% of a rubber-based material having a thickness of at least 5 μm,

wherein the electrolyte insoluble film is at least approximately 6 μm thick and ***the jelly roll tape is between 20 μm and 40 μm thick.***

Appeal Br. 15 (key disputed claim language italicized and bolded).

## REFERENCES

The Examiner relies on the following prior art references as evidence in rejecting the claims on appeal:

Kim (“Kim ’674”)	US 2008/0241674 A1	Oct. 2, 2008
Iwata et al. (“Iwata”)	US 2012/0107573 A1	May 3, 2012
Kim (“Kim ’025”)	US 2012/0115025 A1	May 10, 2012
Kim (“Kim ’053”)	KR20130124053 (A)	Nov. 13, 2013

## REJECTIONS

On appeal, the Examiner maintains (Ans. 3) the following rejections:

1. Claims 1–4, 7, 8, 10, 12–15, and 18–20 are rejected under 35 U.S.C. § 103 as being unpatentable over Kim ’025 and Kim ’053 and further in view of Iwata (“Rejection 1”). Ans. 5.

2. Claims 16 and 17 are rejected under 35 U.S.C. § 103 as being unpatentable over Kim ’025 and Kim ’053 and further in view of Iwata as applied to claim 1 above, and further in view of Kim ’674 (“Rejection 2”). *Id.* at 11.

## OPINION

Having considered the respective positions advanced by the Examiner and Appellant in light of this appeal record, we affirm the Examiner’s rejections based essentially on the fact-finding and reasoning set forth in the Answer and Final Office Action. We add the following primarily for emphasis.

### *Rejection 1*

Appellant argues claims 1–4, 7, 8, 10, 12–15, and 18–20 as a group. Appeal Br. 9. We select claim 1 as representative and the remaining claims

subject to the Examiner's rejection stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner determines that the combination of Kim '025, Kim '053, and Iwata suggests a jelly roll tape satisfying all of the limitations of claim 1 and concludes the combination would have rendered the claim obvious. Ans. 5–9 (citing Kim '025 ¶¶ 4, 6, 40, 45, 63, Figs. 1, 4, 8; Kim '053 ¶¶ 1, 61, claim 1; Iwata ¶¶ 35, 40, 48, 97 (Table 1), Fig. 1.). Regarding “the jelly roll tape is between 20  $\mu\text{m}$  and 40  $\mu\text{m}$  thick” recitation of the claim, the Examiner finds that the thickness of the jelly roll tape is recognized in the art as a result-effective variable and one of ordinary skill in the art would have optimized the parameter via routine experimentation to arrive at the claimed range. *Id.* at 8–9 (citing Kim '025 ¶ 63; Iwata ¶ 35, 97 (Table 1)).

Appellant argues the Examiner's rejection of claim 1 should be reversed because the cited art does not teach or suggest that “the jelly roll tape is between 20  $\mu\text{m}$  and 40  $\mu\text{m}$  thick,” as recited in the claim. Appeal Br. 9; Reply Br. 4. Appellant contends that, contrary to the Examiner's determination, the thickness of the jelly roll tape is not a result-effective variable. Appeal Br. 9–12; Reply Br. 4–8. In particular, Appellant contends that the jelly roll tape thickness is not recognized by any of the cited references as a result-effective variable or discussed in any of the references as being varied or optimized to achieve a recognized result. Appeal Br. 9–11; *see also* Reply Br. 4–5 (contending “that the jelly roll tape thickness is not recognized by any of the references as a variable that when altered achieves a certain result”).

We do not find Appellant’s argument persuasive of reversible error in the Examiner’s rejection based on the fact-finding and for the well-stated reasoning provided by the Examiner at pages 5–9 and 13–17 of the Answer. Contrary to what Appellant argues, we find a preponderance of the evidence supports the Examiner’s finding (Ans. 8–9, 13–16) that the thickness of the jelly roll tape is recognized in the art as a result-effective variable and determination that one of ordinary skill in the art would have optimized the parameter via routine experimentation to obtain a desired thickness depending on the size and manufacturing process of the battery. Kim ’025 ¶ 63; Iwata ¶ 35, 97 (Table 1).

“A recognition in the prior art that a property is affected by the variable is sufficient to find the variable result-effective.” *In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012). “[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.” *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980)). For example, as the Examiner finds (Ans. 8–9, 13–14), paragraph 63 of Kim ’025 explicitly teaches

the substrate layer **140** may have various thicknesses according to the size or manufacturing process of the secondary battery, the size of the electrode assembly, the thicknesses of the first adhesive layer **110** and the second adhesive layer **120**, the presence or thickness of the protective layer **130**, the capacity of the battery case, or the like. For example, the thickness of the substrate layer **140** may be determined so that the entire thickness of the first adhesive layer **110**, the substrate layer **140** and the second adhesive layer **120** becomes **50**  $\mu\text{m}$ .

Because the cited art teaches that certain properties, for example, the size of the battery, size of the electrode assembly, and capacity of the battery

case (Kim '025 ¶ 63), are affected by varying the thickness of the layers that make up the total thickness of the jelly roll tape, we find that the thickness of the jelly roll tape is, indeed, an art-recognized, result-effective variable. As the Examiner explains (Ans. 16), when the thickness of any or all of the tape's layers is varied, the overall thickness of the tape is varied.

Thus, as the Examiner determines (Ans. 8–9, 13–14), it follows that one of ordinary skill in the art would have optimized the thickness of the jelly roll tape via routine experimentation to obtain a desired result depending on the size and manufacturing process of the battery and/or other properties of the electrode assembly to arrive at the claimed range. *Boesch*, 617 F.2d at 276.

Appellant's arguments do not reveal any reversible error in the Examiner's factual findings or analysis in this regard. *Cf. SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006) (“[M]ere statements of disagreement . . . as to the existence of factual disputes do not amount to a developed argument.”).

Accordingly, we affirm the Examiner's rejection of claims 1–4, 7, 8, 10, 12–15, and 18–20 under 35 U.S.C. § 103 as obvious over the combination of Kim '025, Kim '053, and Iwata.

### *Rejection 2*

In response to the Examiner's rejection of claims 16 and 17 under 35 U.S.C. § 103 as obvious over the combination of Kim '025, Kim '053, Iwata, and Kim '674, which we refer to above as Rejection 2, Appellant does not present any new or additional substantive arguments. Rather, Appellant relies on principally the same arguments previously presented

above in response to the Examiner's rejection of claim 1 as obvious over the combination of Kim '025, Kim '053, and Iwata. *See* Appeal Br. 13.

Thus, based on the findings and technical reasoning provided by the Examiner, and for principally the same reasons discussed above for affirming the Examiner's rejection of claim 1, we affirm the Examiner's rejection of claims 16 and 17 under 35 U.S.C. § 103 as obvious over the combination of Kim '025, Kim '053, Iwata, and Kim '674 (Rejection 2).

### CONCLUSION

In summary:

<b>Claim(s) Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-4, 7, 8, 10, 12-15, 18-20	103	Kim '025, Kim '053, Iwata	1-4, 7, 8, 10, 12-15, 18-20	
16, 17	103	Kim '025, Kim '053, Iwata, Kim '674	16, 17	
<b>Overall Outcome</b>			<b>1-4, 7, 8, 10, 12-20</b>	

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**