

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: JENNINGS, JASON A. DORITY & MANNING, P.A. P O BOX 1449 GREENVILLE SC 29602-1449 USA
--

Date of mailing (day/month/year)	15 December 2015 (15.12.2015)
-------------------------------------	--------------------------------------

Applicant's or agent's file reference 64964748PC03		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/US2015/048461	International filing date (day/month/year) 04 September 2015 (04.09.2015)	Priority date(day/month/year) 26 September 2014 (26.09.2014)	
International Patent Classification (IPC) or both national classification and IPC A47L 13/256(2006.01)i			
Applicant KIMBERLY-CLARK WORLDWIDE, INC.			

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the opinion |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☒ | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR International Application Division Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea Facsimile No. +82-42-472-7140	Date of completion of this opinion 11 December 2015 (11.12.2015)	Authorized officer KIM, Sung Gon Telephone No. +82-42-481-8746
---	---	--



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2015/048461

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*. I(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13*ter*. I(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*. I(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*. I(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2015/048461

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: JP 2005-143616 A (SURUGA CO., LTD.) 09 June 2005

D2: US 2006-0230567 A1 (RICHARD MICHAEL HARPER et al.) 19 October 2006

1. Novelty and Inventive Step

1.1. Claims 1-14

1.1.1 Independent claim 1

D1, which is considered to be the closest prior art to the subject matter of independent claim 1, discloses a cleaning implement comprising: a handle body (5) (see paragraph [0012] and figures 1-2 in D1); the handle body (5) provided to a subject (3) (see paragraph [0012] and figures 1-2 in D1); an attachment component (4) provided to the subject's (3) upper section, wherein the attachment component (4) consists of a receiving hole part (7), and lock bodies (9a-9b) are made to form in a base substance (8) provided so that the receiving hole part (7) might be covered (see paragraphs [0006]-[0018] and figures 3-7(b) in D1); slits (10) formed on both ends of the lock bodies (9a-9b), wherein the lock bodies (9a-9b) are disposed adjacent to each other (see paragraphs [0016]-[0017] and figures 3-7(b) in D1); and a curved deformation of the second lock body (9b) which can be carried out ahead of the first lock body (9a) by providing a reinforcing rib (12) to the first lock body (9a) (see paragraph [0025] and figure 7(b) in D1).

Claim 1 differs from D1 in a plurality of buttresses extending within a cavity between a gripper face and a sidewall. However, it is virtually suggested by the feature of D1 considering providing the reinforcing rib (12) to the first lock body (9a) (see paragraph [0025] and figure 7(b) in D1). Accordingly, claim 1 would have been obvious over D1. Therefore, claim 1 lacks an inventive step under PCT Article 33(3).

Continued on Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2015/048461

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 10 is worded in reference to "the connecting wall" of claim 13. However, "the connecting wall" has not been worded in claim 13. Therefore, claim 10 does not meet the requirements of PCT Article 6.

(Note: Referring to the description, claim 10 seems to refer to claim 9.)

Claims 4-7, 15, 17-20 are unclear, because the vague and imprecise statement "about" in said claims makes it difficult to determine the subject matter for which protection is sought (PCT Article 6).

Claim 19 is worded in reference to "Gurley stiffness" of claim 15. However, the feature of "Gurley stiffness" has not been worded in claim 15. Therefore, claim 19 does not meet the requirements of PCT Article 6.

(Note: This written opinion has been established on the assumption that claim 19 refers to claim 18).

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of : Box No. V

1.1.2 Dependent claims 2-14

This written opinion has been established on the assumption that claim 10 refers to claim 9 (See Box No. VIII).

The additional feature of claim 2 is virtually suggested by the feature of D2, considering that a suitable, compressible, and substantially non-absorbent material includes ethylene vinyl acetate foam, Polyurethane foam, Polyethylene foam, and any mixtures thereof (see paragraphs [0042]-[0045] and figures 3-5 in D2).

The additional features of claims 3-4 are virtually suggested by the feature of D2, considering the material having a durometer of preferably between about 20 and about 35, more preferably between about 25 and about 30 Shore A (See paragraphs [0041]-[0045] and figures 3-5 in D2).

Claim 5 further specifies that a polymeric material has a Gurley stiffness of less than about 11,000 mgf. However, the additional feature of claim 5 is merely a matter of design option when general knowledge in the relevant field of the art is used.

Claim 6 further specifies that the Gurley stiffness ranges from about 8000 mgf to about 10,500 mgf. However, the additional feature of claim 6 is merely a matter of design option when general knowledge in the relevant field of the art is used.

Accordingly, claims 2-6 would have been obvious over a combination of D1 and D2. Therefore, claims 2-6 lack an inventive step under PCT Article 33(3).

Claim 7 further specifies that a sheet gripping mechanism has a Penetration Index ranging from about 1600 gf to about 2400 gf. However, the additional feature of claim 7 is merely a matter of design option when general knowledge in the relevant field of the art is used.

The additional feature of claim 8 is virtually suggested by the feature of D1, considering that the reinforcing rib (12) changes strength and elastic force of the first lock body (9a) and the second lock body (9b) (see paragraph [0025] and figure 7(b) in D1).

The additional feature of claim 9 is virtually suggested by the feature of D1, considering providing the reinforcing rib (12) to the first lock body (9a) (see paragraph [0025] and

Continued on The Next Page

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of : Previous Page

figure 7(b) in D1). In addition, claim 9 further comprises that each buttress includes a pair of opposed sidewalls extending outwardly from the sidewall and the gripper face and a connecting wall extending between the opposed sidewalls. However, it is merely a matter of design option when general knowledge in the relevant field of the art is used.

The additional feature of claim 10 is virtually suggested by the feature of D1, considering providing the reinforcing rib (12) to the first lock body (9a) (see paragraph [0025] and figure 7(b) in D1). In addition, claim 10 further comprises that the connecting wall comprises an angled portion that terminates at the gripper face at a location at or adjacent to a slit. However, it is merely a matter of design option when general knowledge in the relevant field of the art is used.

The additional features of claims 11-12 are virtually suggested by the feature of D1, considering that slits (10) are formed on the both ends of the first lock body (9a) and the second lock body (9b), and the curved deformation of the second lock body (9b) can be carried out ahead of the first lock body (9a) by providing the reinforcing rib (12) to the first lock body (9a) (See paragraphs [0016], [0025] and figures 5, 7(b) in D1).

Claim 13 further specifies that a central portion corresponds to a section of the slit spaced apart from a first end or a second end by a distance ranging from about 25% to about 75% of a length between the first and second ends. However, the additional feature of claim 13 is merely a matter of design option when general knowledge in the relevant field of the art is used.

Accordingly, claims 7-13 would have been obvious over D1. Therefore, claims 7-13 lack an inventive step under PCT Article 33(3).

The additional feature of claim 14 is virtually suggested by the feature of D2, considering that an upper leading region (220B) includes openings (1220) for allowing attachment structures (320) (see paragraph [0078] and figures 5-6B in D2). Accordingly, claim 14 would have been obvious over a combination of D1 and D2. Therefore, claim 14 lacks an inventive step under PCT Article 33(3).

1.2 Claims 15-20

1.2.1 Independent claim 15

D1, which is considered to be the closest prior art to the subject matter of claim 15,

Continued on The Next Page

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of : Previous Page

discloses a cleaning implement comprising: a handle body (5) (see paragraph [0012] and figures 1-2 in D1); the handle body (5) provided to a subject (3) (see paragraph [0012] and figures 1-2 in D1); an attachment component (4) provided to the subject's (3) upper section, wherein the attachment component (4) consists of a receiving hole part (7), and lock bodies (9a-9b) are made to form in a base substance (8) provided so that the receiving hole part (7) might be covered (see paragraphs [0006]-[0018] and figures 3-7(b) in D1); and slits (10) formed at both ends of the lock bodies (9a-9b), wherein the lock bodies (9a-9b) are disposed adjacent to each other (see paragraphs [0016]-[0017] and figures 3-7(b) in D1). Claim 15 differs from D1 in that a gripper face is formed from a polymeric material having a Shore A hardness ranging from about 20 to about 90. However, it is virtually suggested by the feature of D2 considering a material having a durometer of preferably between about 20 and about 35, more preferably between about 25 and about 30 Shore A (see paragraphs [0041]-[0045] and figures 3-5 in D2). Accordingly, claim 15 would have been obvious over a combination of D1 and D2. Therefore, claim 15 lacks an inventive step under PCT Article 33(3).

1.2.2 Dependent claim 16-20

The additional feature of claim 16 is virtually suggested by the feature of D2 considering that a lower piece (120) can be thermo-formed via a process (see paragraph [0085] and figures 3-6B in D2). In addition, claim 16 further comprises the polymeric material comprising a thermoplastic elastomer. However, it is merely a matter of design option when general knowledge in the relevant field of the art is used.

The additional feature of claim 17 is virtually suggested by the feature of D2, considering the material having the durometer of preferably between about 20 and about 35, more preferably between about 25 and about 30 Shore A (See paragraphs [0041]-[0045] and figures 3-5 in D2).

Claim 18 further specifies that the polymeric material has a Gurley stiffness of less than about 11,000 mgf. However, the additional feature of claim 18 is merely a matter of design option when general knowledge in the relevant field of the art is used.

Claim 19 further specifies that the Gurley stiffness ranges from about 8000 mgf to about 10,500 mgf. However, the additional feature of claim 19 is merely a matter of design option when general knowledge in the relevant field of the art is used.

Claim 20 further specifies that a sheet gripping mechanism has a Penetration Index

Continued on The Next Page

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2015/048461

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of : Previous Page

ranging from about 1600 gf to about 2400 gf. However, the additional feature of claim 20 is merely a matter of design option when general knowledge in the relevant field of the art is used.

Accordingly, claims 16-20 would have been obvious over a combination of D1 and D2. Therefore, claims 16-20 lack an inventive step under PCT Article 33(3).

2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).