

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

KIMBERLY-CLARK WORLDWIDE, INC.
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing (day/month/year)	02/08/2021
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Applicant's or agent's file reference KCX-2006-PCT	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/US2021/025052	International filing date (day/month/year) 31/03/2021	Priority date (day/month/year)
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International Patent Classification (IPC) See Supplemental Box

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 43*bis*.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 Examination 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 66.1*bis*(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/SG  Intellectual Property Office of Singapore 1 Paya Lebar Link, #11-03 PLQ 1, Paya Lebar Quarter Singapore 408533 Email: pct@ipos.gov.sg	Date of completion of this opinion 02/08/2021 (day/month/year)	Authorized officer <u>Hong</u> Lei (Dr) IPOS Customer Service Tel. No.: (+65) 6339 8616
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INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2021/025052

Supplemental Box
(International Patent Classification (IPC))

Int. Cl.

E05B 19/00 (2006.01)

H04W 12/06 (2021.01)

B60R 25/24 (2013.01)

H04L 9/32 (2006.01)

H04W 4/80 (2018.01)

E05B 49/00 (2006.01)

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Box No. I 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 purpose 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*.1(b)).
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*.1(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*.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13*ter*.1(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 in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the applicable time limit:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest and, where applicable, the protest fee.
 - ☐ paid additional fees under protest but the applicable protest fee was not paid.
 - ☒ not paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☒ not complied with for the following reasons:

PCT Rule 13.2, first sentence, states that unity of invention is only fulfilled when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. PCT Rule 13.2, second sentence, defines a special technical feature as a feature which makes a contribution over the prior art. When there is no special technical feature common to all the claimed inventions there is no unity of invention.

This Authority has found that there are different inventions based on the following features that separate the claims into distinct groups:

Group 1: Claims 1-18 relate to a key for interfacing with a dispenser to unlock the dispenser.

Group 2: Claims 19-20 relate to a method for securing a lost beacon device incorporated into a key.

In the above groups of claims, the only feature common to all of the claimed inventions and which provides a technical relationship among them is a beacon device.

However this feature does not make a contribution over the prior art because it is disclosed in:

US 2018/0255981 A1 (ROSPIERSKI J. ET AL.) 13 September 2018

In light of this document, this common feature cannot be a special technical feature. The other identified features may have the potential to make a contribution over the prior art but are not common to all the claimed inventions and therefore cannot provide the required technical relationship.

Therefore there is no special technical feature common to all the claimed inventions and the requirements for unity of invention are consequently not satisfied a posteriori.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-18

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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

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-18	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims	NONE	NO

2. Citations and explanations:

The following citations are referred to in this written opinion. Full bibliographic details are provided in the International Search Report:

D1 – US 2018/0255981 A1

D2 – US 2020/0137570 A1

D3 – US 2016/0171811 A1

D4 – US 5575515 A

D5 – DE 102012105365 A1

(a machine translation was used for the purpose of establishing the written opinion)

D6 – US 2013/0285814 A1

D7 – CN 108541324 A

(the original non-English language document was used for the purpose of establishing the written opinion)

D8 – US 2020/0216025 A1

D6 discloses a sanitization compliance monitoring system.

D7 discloses a method of unlocking an electronic lock device.

D8 discloses a method for providing access to a system using a wireless access device.

D6-D8 are related to describe the general background art and will not be further discussed in this report.

1. Novelty

Claims 1-18 are not novel and therefore do not comply with PCT Article 33(2).

D1 discloses, using the wording of claim 1 (references in parentheses refer to D1):

A key for interfacing with a dispenser in a commercial facility (**Figs. 7-8, 16; Paras. [0049]-[0050]**: a key for unlocking the touch free dispenser), the key comprising:

- a body (**Figs. 7-8, 16**: a body);
- key hardware configured to unlock the dispenser (**Figs. 7-8, 21; Para. [0038], [0046]**: a locking mechanism 5, it implies a key hardware to unlock the dispenser); and
- a beacon device incorporated into the body, the beacon device configured to transmit beacon data comprising an identity of the beacon device (**Figs. 7-8, 21; Para. [0050]**: The beacon module 50 may be further configured to wirelessly communicate (both transmit and receive) with one or more uniquely assigned healthcare worker identification badges).

Therefore, the subject matter of claim 1 is not novel.

Similarly, D2-D5 discloses a key for interfacing with a dispenser as defined in claim 1:

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

D2: Paras. [0019]-[0077]: a system for verifying the identity of a user of a nicotine dispenser. The system can include a nicotine dispenser configured to remain locked until the receipt of a signal, and a personal communication device configured to communicate with the nicotine dispenser via a wireless communication link.

D3: Paras. [0021]-[0052]: a user verification component may be associated with a dispenser that is configured to dispense material, such as a sanitizer dispenser configured to dispense sanitizer. The user verification component may obtain user identification information associated with a user attempting to invoke the dispenser to perform a dispense event of material. The user identification information may be evaluated against a dispense access model to determine whether to facilitate or restrict the dispense event.

D4: Cols. 3-5: A door locking apparatus of the invention is suitable for locking and unlocking a door of a dispenser and a case thereof. The apparatus includes a door lock mechanism situated between the door and the case for latching the door at a locked position, a solenoid mounted inside the door for releasing the door lock mechanism, a receiver mounted inside the door and connected to the solenoid, and a transmitter for sending an ID signal from an outside of the door to the receiver. When the receiver receives the ID signal from the transmitter, the solenoid actuates to release the door lock mechanism.

D5: Pages 2-13: The system has a portable identification (ID)-transmitter (60), which is carried by a user (10), the ID-transmitter has a unit for storing a unique identification code. A hygienic device is provided with a dispenser (20), which is adapted to a disinfectant (30) outputting to the user. A hygiene device control unit (50) is coupled with a hygiene device transmitting unit (40) to produce a signal coupling between the ID-transmitter and the hygienic device control unit by initiating a communication between the hygiene device with the ID-transmitter, during the usage. An independent claim is included for a method for monitoring use of hygiene devices.

Therefore, the subject matter of claim 1 is also not novel in light of any of D2-D5.

The same reasoning applies, *mutatis mutandis*, to claim 7 which is directed to a method with the subject matter corresponding to that of claim 1 with the additional feature of periodically emitted by the beacon device which is also disclosed (**D1: Para. [0066]:** the unlock signal can unlock the nicotine dispenser for a predetermined period of time. **D2: Para. [0065]:** dispense events on a periodic basis). Therefore, the subject matter of claim 7 is also not novel in light of D1 or D2.

The features further defined in claims 2-6 and 8-18 are also disclosed in D1 or D2:

Claim 2, 8: (**D1: Paras. [0038], [0055]:** Touch free dispenser 70 includes a base 71, a cover 73, and an electromechanical gearbox 73 that includes a communications connector 77; a locking mechanism);

Claim 3, 9: (**D1: Para. [0074]:** touch free dispenser beacon module 150 electronically communicates with a touch free dispenser module 170 via communication link(s) 171);

Claim 4: (**D2: Para. [0021]:** The communication link 122 can include a wired connection, Bluetooth);

Claim 5: (**D2: Para. [0021]:** The communication link 122 can include a wired connection, Bluetooth, Wi-Fi, or radio frequency identification (RFID), among others. The communication link 122 can include a short-range protocol or a long-range protocol.);

Claim 6: (**D1: Para. [0051]:** a controller; two antennas, a high frequency antenna 67A and a low frequency coil antenna 67B);

Claim 10: (**D1: Paras. [0038], [0055], [0074]:** it implies that the beacon device acts as the electronic key);

Claim 11: (**D1: Para. [0054]:** Bottle presence trigger 58 also allows for hand hygiene compliance personnel to identify when a dispenser is being used without any hand hygiene product; **Para. [0114]:** the controller wirelessly transmits the dispense event data to a remote computing device);

Claim 12: (**D1: Para. [0050]:** The beacon module 50 may be further configured to wirelessly communicate (both transmit and receive) with one or more uniquely assigned healthcare worker identification badges.);

Claim 13: (**D1: Para. [0114]:** the controller wirelessly transmits the dispense event data to a remote computing device);

Claim 14: (**D2: Para. [0060]:** personal communication device can extract candidate identification information from the personal identification document such as name);

Claim 15: (**D2: Para. [0021]:** The communication link 122 can include a wired connection, Bluetooth);

Claim 16: (**D2: Para. [0063]:** a list of the unique identifiers belonging to the nicotine dispensers, **Para. [0018]:** The nicotine dispensing device can scan identification information about the user, and compare the identification data to a user profile including information);

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Claim 17: (D1: Figs. 7-8, 16; Paras. [0049]-[0050]: the beacon device is either integrally or removably to the key);

Claim 18: (D1: Fig. 21; Para. [0094]-[0097]: it implies that the verification that an identity of the beacon device is on-network is prior to transmit the identity of the beacon device to the server system.).

Therefore, the subject matter of claims 2-6 and 8-18 is also not novel.

2. Inventive step

Claims 1-18 do not involve an inventive step and therefore do not comply with PCT Article 33(3).

Given the above novelty objection, claims 1-18 do not involve an inventive step.

Notwithstanding the novelty objection for the subject matter of claims 2-18, the subject matter of those claims is commonly known in the art (D1: Paras. [0049]-[0114]. D2: Paras. [0019]-[0077]:). Therefore, the subject matter of claims 2-18 is also not inventive in light of any of D1-D5.

3. Industrial applicability

Claims 1-18 are industrially applicable and therefore comply with PCT Article 33(4).