

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

To: Essity Hygiene and Health AB Essity IP Department 405 03 Göteborg SUÈDE		Date of mailing (day/month/year) 31.01.2025	
Applicant's or agent's file reference P12538WO		IMPORTANT NOTIFICATION	
International application No. PCT/EP2023/054225	International filing date (day/month/year) 20.02.2023	Priority date (day/month/year)	
Applicant Essity Hygiene and Health Aktiebolag			

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:  European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040	Authorized Officer Van den Heuvel, M Tel. +31 70 340-4430	
---	---	---

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P12538WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2023/054225	International filing date (day/month/year) 20.02.2023	Priority date (day/month/year)	
International Patent Classification (IPC) or national classification and IPC INV. A47K5/08			
Applicant Essity Hygiene and Health Aktiebolag			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. ☒ a total of <u>7</u> sheets, as follows: ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions). ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2). ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No. I and the Supplemental Box (see Rule 70.16(b)). b. ☐ a separate electronic file containing a sequence listing (<i>sent to the International Bureau only</i>)			
4. This report contains indications relating to the following items: ☒ Box No. I Basis of the report ☐ 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 Article 35(2) with regard to novelty, inventive step or 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			
Date of submission of the demand 18.12.2024		Date of completion of this report 31.01.2025	
Name and mailing address of the international preliminary examining authority:  European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040		Authorized officer Boyer, Olivier Telephone No. +31 70 340-8422	



Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ 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 (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a) and (b))
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-28 as originally filed

Claims, Numbers

1-27 filed with the demand for preliminary international examination

Drawings, Sheets

1/19-19/19 as originally filed

- ☐ a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and (c-bis)):
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
5. ☐ This report has been established:
- ☐ taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).
 - ☐ without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91(Rules 66.4bis and 70.2(e)).

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2023/054225

6. ☒ With regard to top-up searches (Rules 66.1 *ter* and 70.2(f)):
- ☒ A top-up search was carried out by this Authority on 16.01.2025 (all discovered documents are listed in the Supplemental Box Relating to Top-up Search).
 - ☐ Additional relevant documents have been discovered during the top-up search.
 - ☐ No top-up search was carried out by this Authority because it would serve no useful purpose.
7. ☐ Supplementary international search report(s) from Authority(ies) has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).

* If item 4 applies, some or all of those sheets may be marked "superseded".

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-27</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-27</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-27</u>
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

D1 US 3 051 352 A (GREENE JOHN P) (1962-08-28)

D2 US 3 226 110 A (GREENE JOHN P) (1965-12-28)

D3 US 3 151 771 A (GREENE JOHN P) (1964-10-06)

2 Independent claim 1

2.1 Document D1 is regarded as being the prior art closest to the subject-matter of claim 1 and discloses in figures 1, 2 and 6-8:

A dispenser (11) for dispensing soap strips (13) provided in a stack (12), the stack having an uppermost strip and a lowermost strip (see PCT GL PART II, 5.23 for italic text), the dispenser comprising:
a housing (19), having a compartment (in 19) for receiving the stack and having a dispensing opening (25) beneath the compartment through which an individual strip can be dispensed downwards to a user;
an engagement element (16), movably mounted with respect to the housing to engage the lowermost strip and separate the strip from the stack, such that the strip can exit through the dispensing opening; and
an actuator (32), arranged to cause movement of the engagement element to dispense one or more strips into the hand of a user; and the dispenser comprising a shield (23 or 54-56) for reducing or avoiding caking of the engagement element, wherein the shield comprises a tubular section below the dispensing opening having a length from an exposed surface of the engagement element to a lowest point of the housing.

2.2 The subject-matter of claim 1 therefore differs from this known dispenser (application, fig. 2 and 4, (10)) in that a dispensing opening (15) is beneath the compartment (30) and in that the shield (76) comprises a tubular section below the dispensing opening having a length from an exposed surface of the engagement element (60, 560) to a lowest point of the housing (12).

2.3 The problem to be solved by the present invention may therefore be regarded as how to modify the dispenser to avoid entry of moisture into the dispenser and further alleviated problems associated with wet soap strips (see original application, [005]).

2.4 D1 does not disclose that a dispensing opening (application, fig. 2 and 4, (15)) is beneath the compartment (30) and in that the shield (76) comprises a tubular section below the dispensing opening having a length from an exposed surface of the engagement element (60, 560) to a lowest point of the housing (12), because the dispensing opening (fig. 1-2, (25)) of D1 is in front of the compartment (in 19) and the shield (23 or 54-56) comprises flat surfaces. A dispensing opening beneath the compartment of D1 would require substantial design modifications, because the soap strips are dispensed forwards by the feed roller (16) that already occupies the bottom of the compartment.

The skilled person would not combine features of D2 in the invention of D1, because D2 solves an other problem (see D2, col. 1, lines 17-21, "the problem arises how to dispense the leaves one at a time, in a convenient manner and without wastage"). In addition even if the skilled person would wrongly combine features of D2 in the invention of D1, he would not arrive at the subject-matter of claim 1, because D2 does also not disclose that the dispensing opening (fig. 1, 4 and 17, (35, 125)) is beneath the compartment (in 24) (see D2, fig. 1 and 17, dispensing opening (35, 125) in front of compartment (in 24)).

The skilled person would not combine features of D3 in the invention of D1, because D3 also solves the same problem than D2 (see D3, col. 1, lines 15-20, "the problem arises as to how to dispense such leaves one at a time to users, in a convenient manner and without wastage"). In addition, the skilled person would not combine unambiguously features of D3 in the invention of D1, because D3 doesn't disclose any engagement element, actuator and shield.

2.5 Thus, the subject-matter of claim 1 involves an inventive step and satisfies the criterion set forth in Articles 33 (1) and (3) PCT.

3 Independent claim 24

A similar reasoning applies mutatis mutandis to the features of claim 24 (see paragraph 3 above).

Thus, the subject-matter of claim 24 involves an inventive step and satisfies the criterion set forth in Articles 33 (1) and (3) PCT.

4 Dependent claims 2-23 and 25-27

As independent claims 1 and 24 involve an inventive step, the subject-matter of dependent claims 2-23 and 25-27 also satisfies the criterion set forth in Articles 33 (1) and (3) PCT.

Re Item VII

5 **Certain defects in the international application**

- 5.1 Independent claims 1 and 24 are not in the two-part form in accordance with Rule 6.3(b) PCT.
- 5.2 The features of claims 1-27 should be provided with reference signs placed in parentheses to increase the intelligibility of the claims. For information reference signs may be removed by an other designated Office (Rule 6.2 (b) PCT).
- 5.3 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1 and D2 is not mentioned in the description, nor is this background art identified therein.

European Patent Office
80298 MUNICH
Germany

(via online filing)

WO application number: PCT/EP2023/054225
Applicant: Essity Hygiene and Health Aktiebolag

Dear Madam/Sir,

In relation to the above-referenced patent application, International Preliminary Examination under Art. 31 PCT is hereby requested. Payment of the preliminary examination fee is indicated in the enclosed request form.

In response to the objections raised in the Written Opinion accompanying the International Search Report, we herewith file an amended set of claims (one clean version and one version with mark-ups), which is to become the subject of the International Preliminary Examination. In support of the patentability of these claims we observe the following.

Basis for the amendments

Claim 1 has been amended to include the feature of claim 4 that the shield comprises a tubular section below the dispensing opening having a length from an exposed surface of the engagement element to a lowest point of the housing. Additionally the feature of claim 24 has been included to specify that the dispensing opening is beneath the compartment whereby an individual strip can be dispensed downwards to a user.

In claim 24 it has been emphasised that the strip is dispensed downwards through the dispensing opening to fall into the hand of the user. Additional basis may be found at [0030] and [0031].

Novelty

According to the Written Opinion, the Examiner had previously indicated that the subject matter of claim 4 would be novel over the cited references. Claim 1 is thus now believed to be novel by virtue of the inclusion of these features.

Regarding claim 24, the Examiner has considered that documents US 3051352A1 (D1) and US 3226110A1 (D2) would fully anticipate the claimed features. We must respectfully disagree, since claim 24 includes at least the distinguishing feature "a dispensing opening beneath the compartment through which an individual strip can be dispensed downwards to a user". This feature is not present in either D1 or D2, since in both of these devices the leaflets are dispensed

forwards through a slot in the front wall as shown in Figure 3 of D1 and Fig 6 of D2. At least on this point, and with the present additional clarification, we believe that claim 24 is distinguished over D1 and D2.

We respectfully request that the Examiner reconsiders the novelty of the claimed subject matter and can issue a positive opinion on this point.

Inventive step

According to the Written Opinion, the features introduced from claim 4 were considered to be insignificant structural changes. Even if this were the case (which we find questionable), there would still need to be a relevant basis for making such changes.

The device of D1 dispenses leaves of soap through a slot 25 in the front wall 23 of a housing 19 (see col. 3, line 13 to line 19). In all embodiments, delivery of the leaves is through the front wall. A user has line of sight access both through the slot 25 and through a notch 26 at its centre.

As also explained at col. 4, line 2 to line 11, downward movement of the cover 32 to cause dispensing is limited such as to cause a leaf to be only partially fed outwards. A user is thus intended to grasp the leaf to remove it from the dispenser. This is also understandable, since operation is by pulling downwards on the top portion 34 of the cover 32 and for single handed operation a hand cannot both be above and beneath the dispenser.

Also, the slot 25 is above the level of the roller 16, which engages with the leaves. Thus any water or moisture entering the slot can run downwards onto the roller and hence introduce moisture back to the soap strips on the subsequent rotation.

The dispenser as presently claimed in claim 1 and its method of operation according to claim 24 specifically avoid the need for a user to place a (wet) hand anywhere in the vicinity of the soap strips in the stack or the engagement element. According to claim 1, the tubular section of the shield avoids a user's hand from coming into contact with the engagement element. Even if drips or moisture are present, it is unlikely that this can transfer upwards into the shield and arrive at the engagement element. The strips can thus simply drop into a user's hand without requiring tactile engagement.

Clearly, the skilled person could have redesigned the dispenser of D1 or D2 but this would not usually be considered as a mere workshop modification. Adapting the mechanism to dispense downwards rather than forwards is a fundamental change. Neither D1 nor D2 suggests that the ingress of drops is a problem and there would thus be no motivation to make any changes and certainly not such changes as would lead to the presently claimed solution. Furthermore, this would have required a change of actuation from the top of the cover to another location where the hand could still receive the leaf below the dispensing opening.

For all of the above reasons, we respectfully request the Examiner to reconsider the non-obvious nature of the differences over D1 and D2 and recognise the inventive step present in the subject matter of claims 1 and 24.

Further issues

Other issues mentioned under Item VII will be dealt with in the relevant national/regional phase as may be required.

Concluding remarks

In view of the above, we submit that the claims as currently presented fulfil the requirements for patentability. Should the International Preliminary Examining Authority not consider the present amendments and the above observations to be persuasive and not intend to issue a favourable IPRP, a further opportunity to file amendments is requested under Rule 66.4 PCT. Additionally, an interview by telephone is requested under Rule 66.6 PCT.

Finally, it is noted that the present response and the enclosed submissions do not imply the abandonment of any subject matter originally filed, and the applicant reserves the right to reinstate any cancelled subject-matter either in the present application or in a divisional application.

Yours Sincerely,
Essity Hygiene and Health AB, Association No. 850

Ronney Wiklund
European Patent Attorney
Professional Representative

Encl.: - Amended claims (clean and marked-up)

CLAIMS

1. A dispenser for dispensing soap strips provided in a stack, the stack having an uppermost strip and a lowermost strip, the dispenser comprising:
 - a housing, having a compartment for receiving the stack and having a dispensing opening beneath the compartment through which an individual strip can be dispensed downwards to a user;
 - an engagement element, movably mounted with respect to the housing to engage the lowermost strip and separate the strip from the stack, such that the strip can exit through the dispensing opening;
 - an actuator, arranged to cause movement of the engagement element to dispense one or more strips into the hand of a user; and
 - a shield for reducing or avoiding caking of the engagement element, wherein the shield comprises a tubular section below the dispensing opening having a length from an exposed surface of the engagement element to a lowest point of the housing.
2. The dispenser according to claim 1, wherein the shield is arranged to avoid water droplets from reaching the engagement element.
3. The dispenser according to claim 1 or claim 2, wherein the shield is arranged to avoid contact between wet fingers and the soap strips or the engagement element.
4. The dispenser according to any one of the preceding claims, wherein the length of the tubular section is greater than 2 cm.
5. The dispenser according to any one of the preceding claims, wherein the shield comprises portions of the actuator that surround the dispensing opening.

6. The dispenser according to any one of the preceding claims, wherein the shield comprises a horizontal shield portion extending below the engagement element.
- 5 7. The dispenser according to any one of the preceding claims, wherein the shield comprises a scraper arranged to remove soap residue from the engagement element.
8. The dispenser according to claim 7, wherein the engagement element
10 has a profiled surface and the scraper has a complementary profiled edge.
9. The dispenser according to any one of the preceding claims, wherein the engagement element comprises a frictional surface for frictionally
15 engaging and moving the strip.
10. The dispenser according to any one of the preceding claims, wherein the engagement element comprises a roller, rotatably mounted with respect to the housing.
- 20 11. The dispenser according to any one of the preceding claims, wherein the engagement element is arranged to move the strip over a dispensing stroke, preferably corresponding to at least 25% of the length of the strip, or half of the length of the strip.
- 25 12. The dispenser according to any one of the preceding claims, further comprising a retaining element positioned within the housing, sized and arranged to engage a portion of the stack to retain the remaining strips and prevent them from exiting together with the lowermost strip.

13. The dispenser according to claim 12, wherein the retaining element comprises a post, that can be received within an aperture passing through the stack from the lowermost strip to the uppermost strip.
- 5 14. The dispenser according to any one of the preceding claims, wherein the engagement element is arranged to exert a force on the strip sufficient to tear a trailing edge of the strip away from the stack.
- 10 15. The dispenser according to any one of the preceding claims, wherein the actuator is mounted at a front side of the housing and the dispensing opening is located behind the actuator.
- 15 16. The dispenser according to any one of the preceding claims, wherein the actuator is pivotably connected to the housing, preferably about a laterally extending, horizontal axis.
- 20 17. The dispenser according to any one of the preceding claims, wherein the actuator is biased to complete a return stroke and dispensing of the strip preferably takes place during a forward stroke.
- 25 18. The dispenser according to any one of the preceding claims, further comprising a cover that can be opened to provide access to the compartment.
- 30 19. The dispenser according to claim 18, wherein the cover is pivotably connected to the housing, preferably about a laterally extending horizontal axis located below the dispensing opening.
20. The dispenser according to any one of the preceding claims, wherein the compartment can be refilled by placing a fresh stack of soap strips into the compartment, before the uppermost strip has been dispensed.

21. The dispenser according to any one of the preceding claims, further comprising a bias element for biasing the stack towards the engagement element.
- 5 22. The dispenser according to claim 21, wherein the bias element can be retracted for refilling of the dispenser and, preferably, automatically released on completion of the refill operation.
23. The dispenser according to any one of the preceding claims, wherein
10 the compartment can be inclined forwards from an operational position to a filling position for refilling of the dispenser.
24. A method of dispensing soap strips from a soap strip dispenser comprising a housing having a compartment for receiving a stack of
15 soap strips and a dispensing opening beneath the compartment through which an individual strip can be dispensed downwards to a user, the method comprising:
moving an engagement element to engage with and dispense one or more strips downwards through the dispensing opening to fall into the
20 hand of the user, the method further comprising moving the engagement element past a shield to remove any adhered portion of a soap strip from the engagement element.
25. The method according to claim 24, wherein the engagement element
25 comprises a roller, rotatably mounted with respect to the housing and movement of the actuator causes rotation of the roller.
26. The method of claim 25, wherein the shield comprises a scraper past which a surface of the roller is moved.
- 30 27. The method according to claim 26, wherein the roller has a profiled surface and the scraper has a complementary profiled edge.