

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)**

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2018/056779

International filing date (day/month/year)
05.09.2018

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05.09.2017

International Patent Classification (IPC) or both national classification and IPC
INV. A01D34/685 A01D34/76 A01D43/063 ADD. A01D34/71

Applicant
HUSQVARNA AB

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 usually 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:




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Date of completion of this opinion

see form PCT/ISA/210

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Box No. I Basis of the 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 43bis.1(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 13ter.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 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.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 forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of

the entire international application

claims Nos. 9-13, 15-21

because:

the said international application, or the said claims Nos. relate to the following subject matter which does not require an international search (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

no international search report has been established for the whole application or for said claims Nos. 9-13, 15-21

a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

furnish a sequence listing in the form of an Annex C/ST.25 text file, and such listing was not available to the International Searching Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.

furnish a sequence listing on paper or in the form of an image file complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.

pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13ter.1(a) or (b).

See Supplemental Box for further details

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:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- all parts.
 - the parts relating to claims Nos. 1-8, 14

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) | Yes: Claims | |
| | No: Claims | <u>1-8, 14</u> |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | <u>1-8, 14</u> |
| Industrial applicability (IA) | Yes: Claims | <u>1-8, 14</u> |
| | No: Claims | |
2. Citations and explanations
- 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

1 **Re Item IV**

Lack of unity of invention

- 1.1 This Authority considers that the application does not meet the requirements of unity of invention and that there are 2 inventions covered by the claims indicated as follows:

claims: 1-8, 14

lawn mower comprising two discharge tunnels

claims: 9-13, 15-21

lawn mower comprising a specific power transfer assembly

- 1.2 The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows:

The common matter linking together the independent claims 1 and 15 is the following: a power transfer assembly of a lawn mower to control timing of two cutting blades.

This common matter does not comprise a single general inventive concept, based on same or corresponding special technical features within the meaning of Rule 13.2 PCT, because document D1 discloses a lawn mower (Fig. 10 (2)) comprising a power transfer assembly (description col. 8, l. 11-16), which controls the timing of two cutting elements (Fig. 16 (226)) rotating in opposite directions (see arrows B for the directions in Fig. 10) and having an overlapping orbits (description col. 7, l. 58-60).

Hence, the following separate inventions or groups of inventions are not so linked as to form a single general inventive concept:

Group A: claims 1-14

Group B: claims 15-21

The following special technical features can be identified:

Group A: claim 1: lawn mower further comprising two discharge tunnels and a bagging assembly; apparently these special technical features solve the problem of how to transport grass clippings from a blade housing to a bagging assembly;

Group B: claim 15: power transfer assembly comprising a drive belt; apparently this special technical feature solves the problem of how to transmit power to an implement of a lawn mower.

From the above analysis it is obvious that the special technical features of the 2 groups are not the same and do not either correspond with respect to a single general inventive idea. Likewise it is clear that the problems to be solved are different and that the technical effects caused by the special technical features are different.

Furthermore the subject-matter of independent claims 1 and 15 is already known (see the grounds for this objection). The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of dependent claims:

Group 1: claims 2-8, 14

Group 2: claims 9-13, 16-21

The following special technical features can be identified:

Group 1: lawn mower further comprising specific mounting of the two discharge tunnels and guide vanes and baffles to direct grass clippings; apparently these special technical features solve the problem of how to direct grass clippings into the discharge outlets;

Group 2: power transfer assembly comprising a drive belt, and transmission gears; apparently these special technical features solve the problem of how to selectively transmit power to the cutting blades of the lawn mower.

From the above analysis it is obvious that the special technical features of the 2 groups are not the same and do not either correspond with respect to a single general inventive idea. Likewise it is clear that the problems to be solved are different and that the technical effects caused by the special technical features are different.

Hence, the claims comprise neither the same, nor corresponding special technical features, so the technical relationship between the subject matter of the claims required by Rule 13.2 PCT is lacking and the claims are not so linked as to form a single general inventive concept as required by Rule 13.1 PCT.

Consequently the application does not meet the requirement for unity of invention.

2 **Re Item V**

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

Reference is made to the following documents:

- D1 US 4 335 567 A (COMER ROBERT C) 22 June 1982
(1982-06-22)
- D2 US 5 214 906 A (SAKI MITSUO [JP] ET AL) 1 June 1993
(1993-06-01)
- D3 US 3 157 014 A (BOTTENBERG WARREN E) 17 November
1964 (1964-11-17)
- D4 US 2 926 478 A (IVAR JEPSON) 1 March 1960 (1960-03-01)

----- [lack of novelty] -----

The present application does not meet the criteria of Article 33(2) PCT, because the subject-matter of claim 1 is not new.

Document D1 discloses a lawn mower (Fig. 10 (102)) comprising:
a blade housing (Fig. 8 (104));
a power source (Fig. 7 (76), description col. 8, l. 11-16) supported at least in part by the blade housing to selectively rotate a drive shaft;
a mobility assembly comprising a first set of wheels and second set of wheels (Fig. 8 (142)) operably coupled to the blade housing;
a first cutting blade and a second cutting blade (Fig. 10 (108)), even though a cutting line is disclosed it is a normal option to use a cutting blade, as in D2-D4) disposed to be rotatable within the blade housing in a same plane such that respective blade orbits of the first cutting blade (Fig. 10 (108)) and the second cutting blade (Fig. 10 (108)) at least partially overlap at an overlap region (description col. 7, l. 58-60); and
a power transfer assembly (description col. 8, l. 11-16) operably coupled to the drive shaft and configured to drive the first cutting blade and the second cutting blade to rotate within the blade housing in opposite directions (see arrows B in Fig. 10 for the direction of the cutting blades) and control timing of

passage of the first cutting blade and the second cutting blade through the overlap region (description col. 7, l. 58-60), wherein the blade housing is configured to be operably coupled to a bagging attachment (Fig. 10 (114)) via a first discharge tunnel (Fig. 10 (138)) disposed proximate to the first cutting blade and a second discharge tunnel (Fig. 10 (138)) disposed proximate to the second cutting blade, and wherein the first cutting blade rotates to generate a first flow path along a first side of the blade housing toward the first discharge tunnel and the second cutting blade rotates to generate a second flow path along a second side of the blade housing toward the second discharge tunnel (description col. 10, l. 32-53).

----- [dependent claims, negative assessment] -----

Dependent claims 2-8, 14 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

D1 further discloses all technical features of dependent claim 2 (see Fig. 8, 10), of dependent claims 3 and 4 (discharge tunnels removable: Fig. 8 (206); discharge tunnels fixedly mounted: Fig. 10 (138); see also description col. 10, l. 54-63), of dependent claim 5 (guide vanes in the blade housing: ramps (130) in Fig. 10), of dependent claim 6 (full length baffles: cutting chambers (22, 24) serve as full length baffles), of dependent claim 7 (partial length baffle: Fig. (200)), of dependent claim 8 (drive shaft for each cutting element: Fig. 11 (62)), and of dependent claim 14 (walk-behind lawn mower: Fig. 1 (95)).

3 **Re Item VII**

Certain defects in the international application

- 3.1 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 document identified therein.

- 3.2 Independent claim 1 should be drafted in the two-part form in accordance with Rule 6.3(b) PCT, with those features known in combination from the prior art in D1 or D2 being placed in the preamble (Rule 6.3(b)(i) PCT) and the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).