



(11)

EP 4 397 810 A3

(12)

## EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
04.09.2024 Bulletin 2024/36

(51) International Patent Classification (IPC):  
**E01H 5/09 (2006.01)**

(43) Date of publication A2:  
10.07.2024 Bulletin 2024/28

(52) Cooperative Patent Classification (CPC):  
**E01H 5/045; E01H 5/098**

(21) Application number: **23215436.9**

(22) Date of filing: **11.12.2023**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB  
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL  
NO PL PT RO RS SE SI SK SM TR**  
Designated Extension States:  
**BA**  
Designated Validation States:  
**KH MA MD TN**

(30) Priority: **12.12.2022 US 202263431763 P**

(71) Applicant: **Milwaukee Electric Tool Corporation  
Brookfield, WI 53005-2550 (US)**  
  
 (72) Inventor: **Reaker, Tyler  
Brookfield, WI 53005-2550 (US)**  
  
 (74) Representative: **Grünecker Patent- und  
Rechtsanwälte  
PartG mbB  
Leopoldstraße 4  
80802 München (DE)**

### (54) SNOW BLOWER WITH NON CLOGGING CHUTE

(57) A snow blower may include a frame, a rotatable auger, one or more wheels, and a chute. The rotatable auger may be mounted to the frame. The one or more wheels may be mounted to the frame apart from the rotatable auger to support the snow blower. The chute may

extend from the frame above the rotatable auger. One or more features such as an active heater, a resilient chute body, or a controller configured to direct a blowing operation may further be provided.

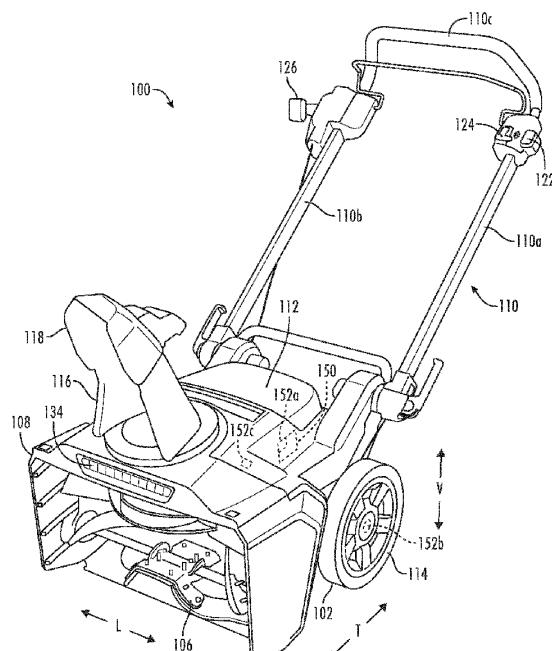


FIG. 1



## EUROPEAN SEARCH REPORT

Application Number

EP 23 21 5436

5

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
10	X US 5 438 770 A (MILLER DONALD L [US]) 8 August 1995 (1995-08-08) * the whole document * -----	1,3	INV. E01H5/09
15	X US 9 032 649 B1 (VILLANUEVA JORGE I [US]) 19 May 2015 (2015-05-19) * the whole document * -----	1,3	
20	Y US 2021/262183 A1 (FAVORITO PAUL [US] ET AL) 26 August 2021 (2021-08-26) * the whole document * -----	2	
25			
30			TECHNICAL FIELDS SEARCHED (IPC)
35			E01H
40			
45			
50	The present search report has been drawn up for all claims		
55	Place of search The Hague	Date of completion of the search 30 April 2024	Examiner Kerouach, May
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document			



Europäisches  
Patentamt  
European  
Patent Office  
Office européen  
des brevets

Application Number  
EP 23 21 5436

5

## CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

10

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

15

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

20

## LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

25

see sheet B

30

All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

35

As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

40

Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

45

None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1 - 3

50

55

The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION  
SHEET B**Application Number  
EP 23 21 5436

5

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

10

1. claims: 1-3

Snow blower with heating device in thermal communication with the chute, in particular with electric heating device.  
---

15

2. claims: 4, 5

Snow blower with vibration means  
---

20

3. claim: 6

Snow blower with breaker blade  
---

25

4. claim: 7

Snow blower with open transverse channel  
---

30

5. claims: 8, 10-15

Snow blower with resilient chute body  
---

35

6. claim: 9

Snow blower with a controller operating with an operational sensor  
---

40

45

50

55

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 23 21 5436

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30 - 04 - 2024

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	US 5438770 A 08-08-1995		NONE	
15	US 9032649 B1 19-05-2015		NONE	
	US 2021262183 A1 26-08-2021	CA 3173042 A1 US 2021262183 A1 WO 2021168215 A1		26-08-2021 26-08-2021 26-08-2021
20				
25				
30				
35				
40				
45				
50				
55				

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82