



(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
14.12.2022 Bulletin 2022/50

(51) International Patent Classification (IPC):
B24D 9/08 (2006.01) **B24D 18/00 (2006.01)**

(43) Date of publication A2:
14.09.2022 Bulletin 2022/37

(52) Cooperative Patent Classification (CPC):
B24D 9/08; B24D 18/009

(21) Application number: **22158633.2**

(22) Date of filing: **24.02.2022**

(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 MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(30) Priority: **08.03.2021 EP 21161306**

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(54) BACKING PAD FOR A HAND-GUIDED POLISHING OR SANDING POWER TOOL

(57) The invention refers to a backing pad (2) for a hand-guided polishing or sanding power tool, comprising - a support layer (4) made of a rigid material, the support layer (4) comprising a connection element (6) on its top surface (8) for connection of the backing pad (2) to a driving shaft (18) or an eccentric element of the polishing or sanding power tool, - a damping layer (10) made of a resilient material, the damping layer (10) being fixedly attached to a bottom surface (12) of the support layer (4), and - an adhesive layer (14) for releasable attachment of a polishing or sanding member to the backing pad (2), the adhesive layer (14) being fixedly attached to a bottom surface (16) of the damping layer (10), wherein the bottom surface (12) of the support layer (4) is provided with reinforcement elements (24, 26, 28; 46; 50, 52) for enhancing flexural rigidity of the support layer (4), and the bottom surface (12) of the support layer (4) is further provided with recesses (30) formed between and at least partially limited by the reinforcement elements (24, 26, 28; 46; 50, 52),

It is suggested that the reinforcement elements comprise reinforcement ribs (24, 26, 28) comprising a plurality of polygonal geometric elements (36), each element (36) having an essentially polygonal rib design and neighbouring elements (36) being located next to each other and/or offset in respect to each other, wherein during manufacture of the backing pad (2) the resilient material of the damping layer (10) enters into the recesses (30) and after curing of the resilient material entirely fills the recesses (30).

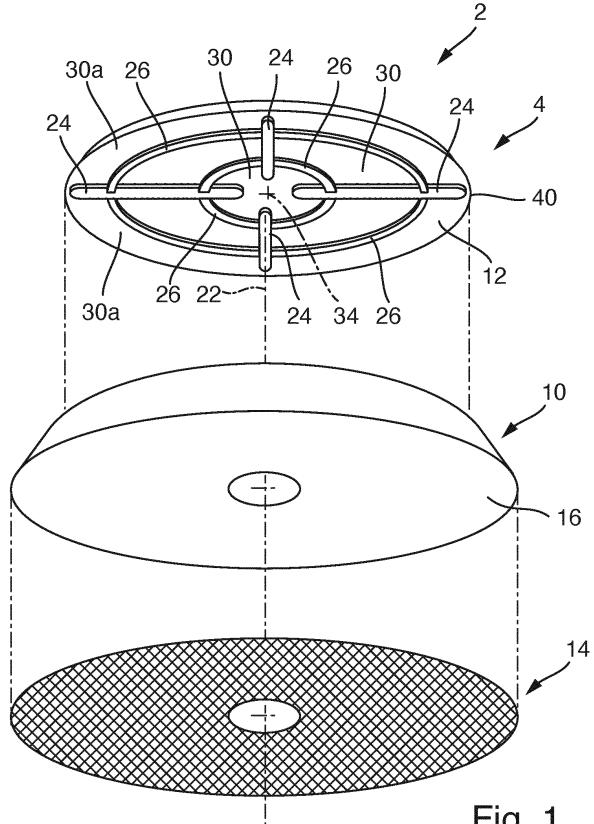


Fig. 1



EUROPEAN SEARCH REPORT

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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 9 039 496 B2 (KOLTHOFF & CO [CH]; KOLTHOFF GABROVO EOOD [BG]) 26 May 2015 (2015-05-26) * claims 1, 2, 5, 8-13 * * column 4, lines 10-35 * * column 5, lines 25-40 * * figures 1, 2, 7-10, 13, 14 * -----	1-11	INV. B24D9/08 B24D18/00
15	A US 2016/052102 A1 (SATO TSUKIO [JP]) 25 February 2016 (2016-02-25) * claims 1, 4, 5 * * paragraphs [0025], [0050] - [0056] * * figures 2, 11-15 * -----	1-11	
20	A US 2004/127151 A1 (TAKIZAWA TOSHIAKI [JP] ET AL) 1 July 2004 (2004-07-01) * claims 1, 2, 5, 10-16 * * figures 2, 8-10 * -----	1-11	
25	A EP 0 397 624 A2 (ROMANINI FRANCO [IT]) 14 November 1990 (1990-11-14) * claims 1-5 * * figures 1, 4-6 * -----	1-11	TECHNICAL FIELDS SEARCHED (IPC)
30	A US 2011/045749 A1 (HARRIS JENNIFER R [US] ET AL) 24 February 2011 (2011-02-24) * claims 2-5 * * paragraphs [0043], [0048] * * figures 1, 3 * -----	1-11	B24D
35	A US 2005/124275 A1 (WUENSCH STEFFEN [DE] ET AL) 9 June 2005 (2005-06-09) * claims 1, 2, 4 * * figures 1-4 * -----	1-11	
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45			
50	2 The present search report has been drawn up for all claims		
55	Place of search The Hague	Date of completion of the search 2 August 2022	Examiner Stanic, Franjo
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			



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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.

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:

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:

1-11

50 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

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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:

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1. claims: 1-11

Potential Invention Group 1: Claims 1-11
A backing pad with a support layer comprising reinforcement elements, characterised in that the reinforcement elements are polygon-shaped (Claim 1).

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Objective Technical Problem to be Solved: Increase the stiffness of the backing pad

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2. claims: 12, 13

Potential Invention Group 1: Claims 12, 13
A method for manufacturing a backing pad characterised in that the damping layer is chronologically injection moulded on top of the bottom surface of the support layer.

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Objective Technical Problem to be Solved: Provide a safer and a tighter attachment of the damping layer to the support layer

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

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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.

02-08-2022

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